VIA E-MAIL: *Oil_and_Gas_PT@EPA.GOV*

February 11, 2015

U.S. Environmental Protection Agency

RE: Manufacturer's Control Device Certification Report – BGR Model BGR-18
Pursuant to 40 CFR 60.5420(b)(8), 40 CFR 63.775, and 40 CFR 63.1285
Black Gold Rush Industries LTD

To Whom It May Concern:

Black Gold Rush Industries LTD (BGR), a manufacturer of enclosed combustors, respectfully submits the enclosed stack test report and supplemental information demonstrating compliance with the manufacturer's control device certification provisions of New Source Performance Standards (NSPS) Subpart OOOO and National Emission Standards for Hazardous Air Pollutants (NESHAP) Subparts HH and HHH. This letter, METCO Environmental test report, and supplemental information are submitted electronically to the U.S. Environmental Protection Agency (EPA) via electronic mail at Oil_and_Gas_PT@EPA.GOV pursuant to 40 CFR 60.5420(b)(8). The certification test report demonstrates that the Model BGR-18 can be used by owners and operators to demonstrate compliance with NSPS Subpart OOOO and NESHAP Subparts HH and HHH.

As shown on page 3 of the certification test report, the results demonstrate that Combustor Model BGR-18 meets the requirements of NSPS Subpart OOOO and NESHAP Subparts HH and HHH utilizing propylene as the inlet fuel. Total hydrocarbon destruction was in excess of 99.9% for all conditions; outlet carbon monoxide concentration was $\leq$4.76 ppmv for all conditions; total outlet hydrocarbon concentration (measured as propane) was $\leq$0.65 ppmv for all conditions; and outlet excess air was $\geq$210.1 percent for all conditions. The inlet fuel rate tested for the 90-100% of maximum condition was 7.5 scfm or 10,800 scfd (including the pilot burner). Other test conditions were 30%-70-30% and 0-30-0% of the maximum inlet flow condition (including the pilot burner).

December 18-21, 2014, METCO Environmental (METCO) was engaged by BGR to complete manufacturer's certification testing in Midland, Texas pursuant to NSPS Subpart OOOO and NESHAP Subparts HH and HHH. The final METCO report was received February 10, 2015. This report has been submitted as soon as practically possible.

The following table provides a list of all of the items required by 40 CFR 60.5413(d) and 60.5420 in the report. Most of these items are addressed in the METCO report, with specific pages of the report referenced in the table. A few items were not included in the METCO report, but are provided in the table.

BLACK GOLD Rush INDUSTRIES LTD.

Table 1. 40 CFR 60.5413(d) Report Items

40 CFR 60.5413(d) Report Items	Value/Item	Comment
A full schematic of the control device and dimensions of the device components	Schematic drawings are provided in the METCO report and are attached	See Appendix I of METCO report plus the enclosed schematics
The maximum net heating value of the device	0.99 MMBTU/hr (including the pilot burner).	2,200 BTU/scf[1]* 7.5 scfm * 60 min/hr * 1 MMBTU/1,000,000 BTU
The test fuel gas flow range (in both mass and volume). Include the maximum allowable inlet gas flow rate.	Maximum inlet rate = 7.5 scfm. All rates below include the pilot burner. Condition I – 49.19 lb/hr; 7.5 scfm Condition II – 42.33 lb/hr; 5.4 to 7.7 scfm (70-100%) Condition III – 24.92 lb/hr or 2.1 to 5.0 scfm (30-70%) Condition IV – 9.84 lb/hr or 0.7 to 2.6 scfm (0-30%)	See the Summary of Results tables and Appendix H of the METCO report
The air/steam injection/assist ranges, if used	N/A	Not used
Fuel gas delivery pressure and temperature	See comments	Temperatures and pressures are provided in the METCO report in Operational Data, Appendix H.
Fuel gas moisture range	0	Fuel was 100% purchased propylene gas.
Purge gas usage range	N/A	Not used
Condensate (liquid fuel) separation range	N/A	Fuel was 100% purchased propylene gas
Combustion zone temperature range	N/A	Not measured in this combustor
Excess combustion air range	Range was from 236.5 to 436.8%.	See the Summary of Results tables on page 3 of the METCO report.
Flame arrestor(s)	Inline flame arrestor was used as a part of the enclosed combustor.	See the schematic in the METCO report

[1] Calculated by METCO from the lab data. The value determined was 2,200 BTU/scf higher heating value. This value is used in the calculation.

Burner manifold	Enclosed combustor consists of 5 total burners	5 total burners[2]
Pilot flame indicator	Yes	Flame ionization pilot flame detector as a part of the ACL3200 controller (see Appendix I of the METCO report)
Pilot flame design fuel and calculated or measured fuel usage	The total fuel flow to all 5 burners was measured as one rate. The pilot burner (1 of the 5) was operated to burn the propylene test fuel.	Pilot burner is a #27 orifice burner capable of approximately 3,150 scfd at the highest operating pressure.
Tip velocity range	28 to 264 ft/sec through the burners 264 ft/sec at 7.5 scfm 28 ft/sec at 0.7 scfm	There are 1 #27 orifice burners and 4 #30 orifice burners (0.1440" and 0.1285" diameter respectively).
Momentum flux ratio	N/A	Not applicable due to this being an enclosed combustor
Exit temperature range	897 ^{o}F to 1,291 ^{o}F	See the Summary of Results tables in the METCO report.
Exit flow rate	See comments	See the Summary of Results tables in the METCO report
Wind velocity and direction	See comments	See Appendix G, Visible Emissions Data per EPA Method 22 in the METCO report

[2] Burner configuration is the standard Black Gold Rush Model BGR-18 enclosed combustor.

The test report must include all calibration quality assurance/quality control data, calibration gas values, gas cylinder certification, strip charts, or other graphic presentations of the data annotated with test times and calibration values	See comments	See graphs in Appendices C, D, E, and F of the METCO report.

Additionally, schematic drawings of the combustor, inlet fuel photographs, and operating manuals are provided with this letter.

If you have any questions or comments about the certification test, this letter, or enclosed information, please do not hesitate to call me at (405) 203-3557 or email me at ron@bgrindustries.com.

Sincerely,

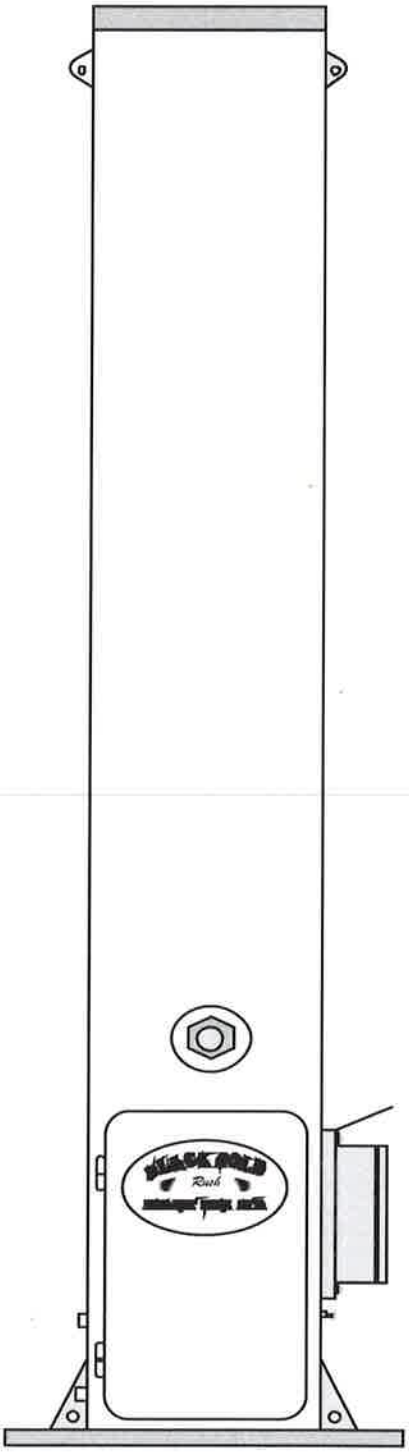


Ron Truelove
V.P. of U.S. Operations
Black Gold Rush Industries LTD

Enclosures: Electronic file of the METCO stack test report; BGR schematics; photographs
cc: Chris Aldrich, Black Gold Rush Industries LTD
Marcia Mya, US EPA
Ned Shappley, METCO (cover letter only)

BGR- LP COMBUSTOR
MODEL: BGR-18

Patent Pending



BGR Low Pressure Vapor Combustor

The BGR-18 is a highly versatile, low cost vapor combustor designed to destruct volatile organic compounds (VOC's) and other vapors produced from oil storage tanks, dehys, and condensate & water storage tanks eliminating the need to install expensive vapor recovery units (VRU) and associated equipment.

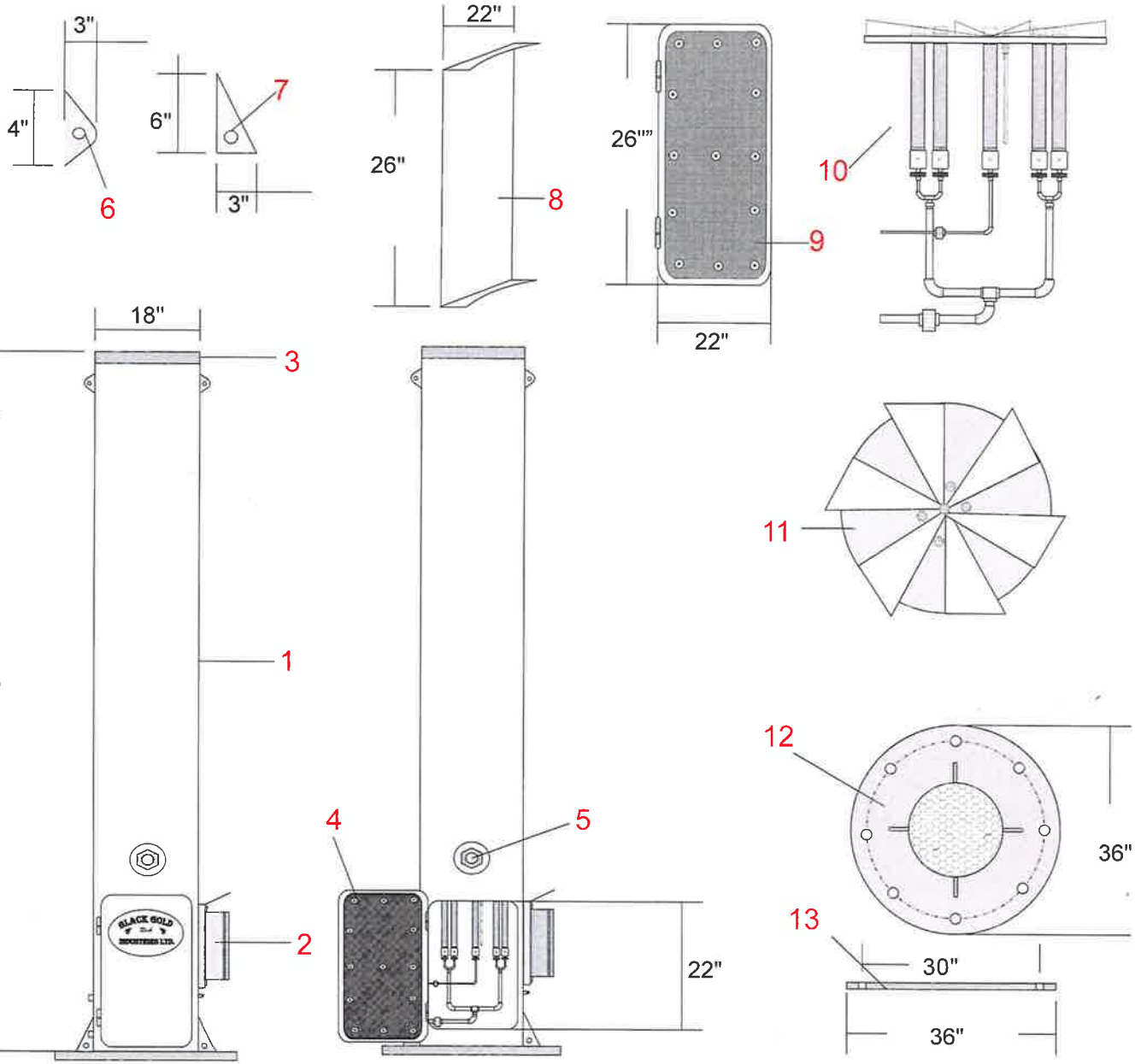
The patented high efficiency burner inside the combustor chamber provides low pressure continuous burning capabilities, high combustion efficiency, low emissions, zero odors and increased flame stability with excellent turndown ratios for low pressure applications.

For more information see product specification sheet on reverse

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901 Main Ave East - Box 1898 - Sundre, AB, Canada T0M 1X0 – Phone (403) 638-2287 – Fax (403) 638-2281

Website: bgrindustries.com



BILL OF MATERIALS

ITEM	QTY	DESCRIPTION	MATERIAL
1	1	10' x 18" SS Fire Tube	
2	1	ACL 3200 Controller	
3	1	Bird Cage	
4	1	26" x 22" 12GA Door	
5	1	1" SS Sight Port	
6	3	3/8" x 4" x 3" 304L SS Lifting Lugs	
7	4	1/2"x6"x3" SS Gussets	
8	1	Door Shield	
9	1	24" x 20" 304L SS #14 Screen Door Mesh	
10	1	Burner Internals	
11	1	18" Burner Plate	
12	1	Top View Combustor and Base Plate	
13	1	5/8" x 36" Base Plate	

BLACK GOLD Rush INDUSTRIES LTD.

REV	DATE	REVISION	BY	APP
0	14-05-13	ISSUED FOR CONSTRUCTION		

CLIENT:

DATE:	14-05-13
JOB NO:	
DRAWN BY:	
CHECKED BY:	
APP BY:	

BGR-18 COMBUSTOR

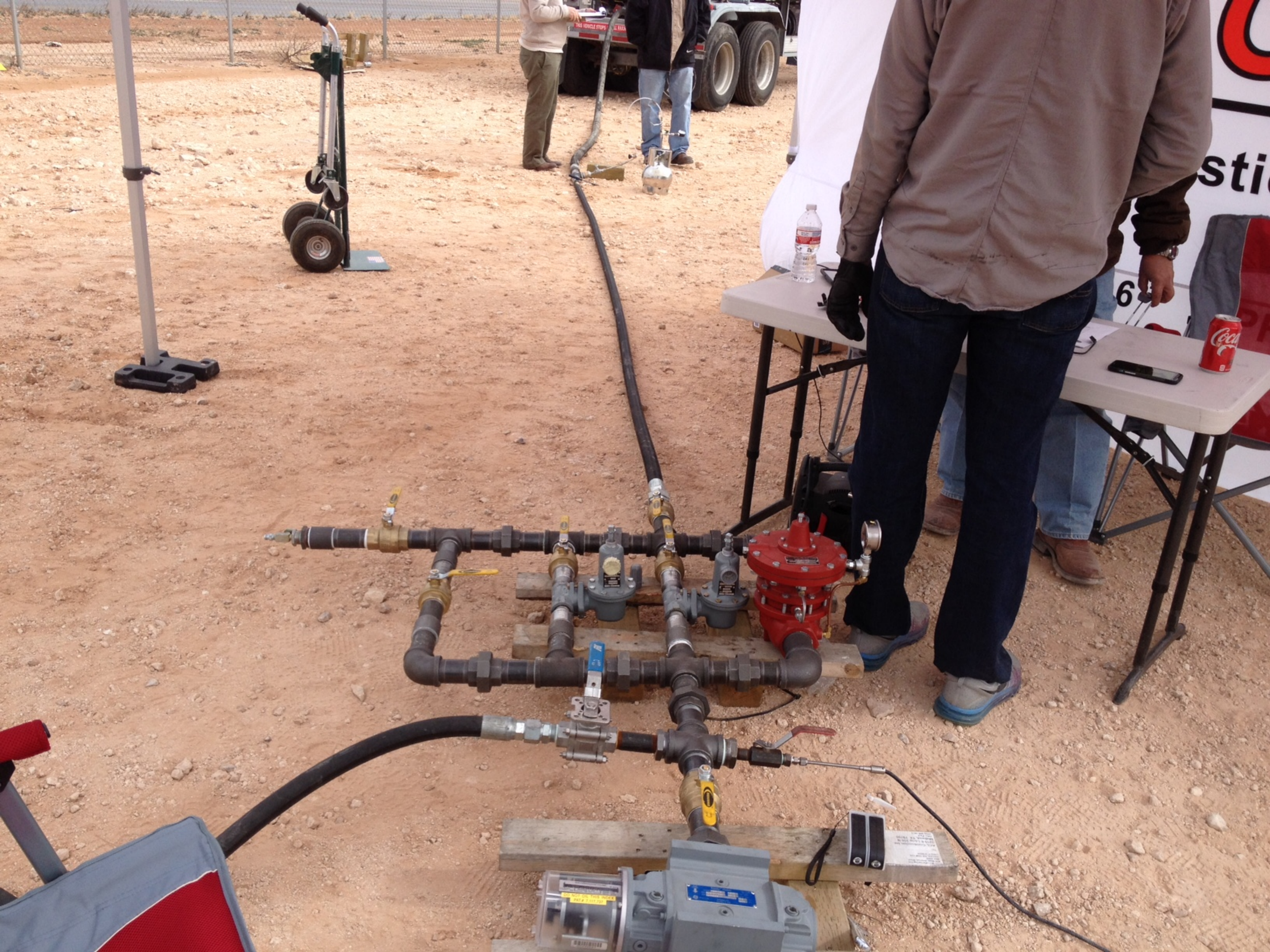
PROPYLENE

1077
2

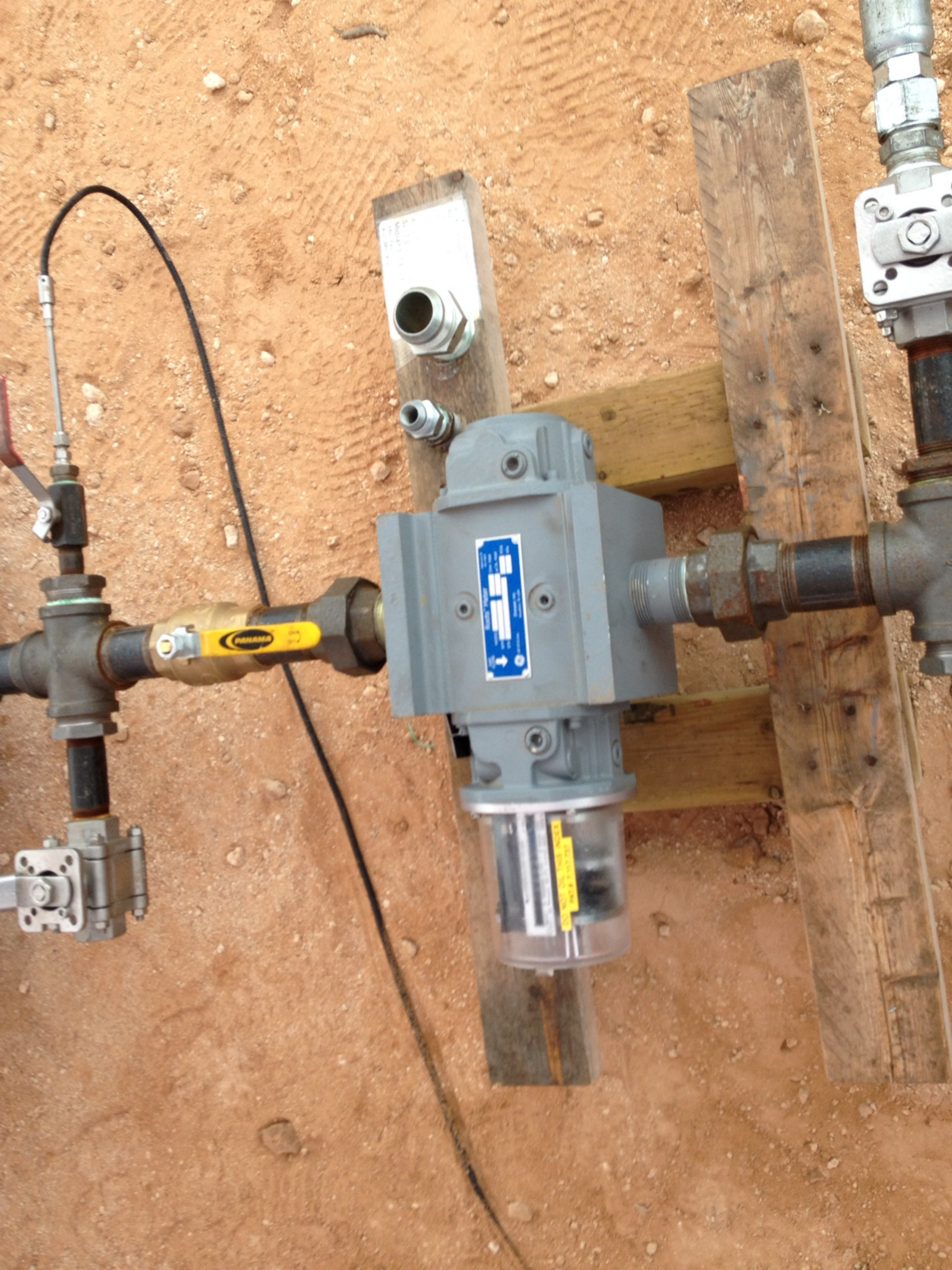
High Purity Gas

SAFETY FIRST
WESTERN






PULSAR
PULSAR


PANAMA

GAS FLOW

Roots™ Meter

Approval # AG-0463

MODEL 15C175 — 1500 CFH MAX

B/M 053141-001 — 42.5 m³/h MAX

S/N 1443266 — 175 PSIG

1200 kPa

GE Oil & Gas

Dresser, Inc.
Houston, TX USA

ACL

Manufacturing Inc.

ACL 3200 Flare Stack/Incinerator Ignition System



ACL 3200 PI /FI/ I / HE Ignition System

The ACL 3200 controller is configurable for our Pilot Ignition System **(PI),** Flame Ionization system **(FI),** Ignitor Only System **(I),** and our High Energy Sparking System **(HE)**.

The ACL 3200 Pilot Ignition System **(PI)** is a continuous pilot which uses a high voltage spark to light the pilot. The pilot is then monitored by a thermocouple. The thermocouple is used for alarming purposes or to turn off the sparking when the pilot is lit.

The ACL Flame Ionization System **(FI)** uses a continuous pilot and high voltage sparker to light the pilot. It uses a single ignitor/flame rod to provide both flame acknowledgment and ignition. Maybe used with ACL 1500 pilot/flame rod assembly.

The ACL 3200 Ignitor Only System **(I)** is a continuous sparking system that provides a high voltage spark that will continually spark at a user defined interval set by an onboard timer. For use where pilot gas is not available

The ACL 3200 High Energy System **(HE)** is a continuous sparking system which uses a high energy excitor. There is no pilot required as this unit will continually spark at a user defined interval set by an onboard timer. For use in wet or severe service.

System Features

CSA Approved C22.2 No 199-M89
CSA Approved for Class I, Div 2 Locations
10-30 VDC operation
Low power consumption for solar operation
4-20mA transmitter output
Weatherproof enclosure
No programming necessary
On board adjustable timer for on/off settings
Onboard scaled thermocouple adjustments with relay outputs
Fail safe alarm output
Modbus communication onboard
Onboard solenoid drivers
Stainless steel construction
Fully retractable
1400lb winch and 5/32 SST aircraft hoisting cable

Pilot Ignition System Features

Continuous gas pilot
Air/Fuel mixer
Automatic relight
Alarm provided by thermocouple sensing

Flame Ignition System Features

Continuous gas pilot
Continuous spark
Automatic relight
Alarm sensing through flame ionization

Ignitor Only System Features

Continuous high voltage
Spark ignition
No gas required, or where fuel gas is not available

High Energy System Features

Continuous spark ignition
Alarm provided by electronic sensing of spark integrity
Ignitor sparks in extreme wet conditions
No gas required

Installation Manual

for the

ACL3200 Flare Stack / Incinerator Ignition Systems

WARNING

This manual must be read in its entirety before installation of this controller. Installation must be performed by a qualified technician and must adhere to the standards set by the local regulatory authorities.

ACL is not responsible for the misuse or incorrect application of this product.

V 0.2g

805 Main Ave. West – Box 2002 Sundre, Alberta T0M 1X0 – Phone: (877) 638-5234 – Fax: (403) 638-4973 – Email: aclmfg@telus.net

Website: www.aclmfg.com

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Introduction

The ACL3200 is a flare stack/incinerator control system that provides control for both high-energy sparking ignitors (HE mode) and high voltage Pilot Ignition (PI mode) or non-Pilot Ignition (I mode) sparking ignition systems. A Flame Ionization mode (FI) is also available for use with ACL ignition modules incorporating the extra Alarm and Valve signals for flame detection.

These systems can incorporate a continuous pilot as well as run on continuous or intermittent ignition. All systems are fully retractable.

ACL3200 Pilot Ignition (PI) System

The ACL3200 Pilot Ignition (PI) System uses a continuous pilot and a high voltage sparker to light the pilot. A thermocouple is used for measuring the temperature of the pilot's flame. An alarm will signal if the ACL3200 detects that the pilot is out (temperature is below the setpoint temperature). Once the Start button is pressed on the front of the unit, the ACL3200 will automatically start sparking in regular intervals based on the onboard timer settings until it detects that the pilot is lit and up to temperature.

ACL3200 Ignition (I) System

The ACL3200 Ignition (I) System is a continuous sparking system used in an application where fuel gas is not available. Once the Start button is pressed, it will periodically turn on the sparker output based on the onboard timer settings providing a high voltage spark to light the flare.

ACL3200 High Energy (HE) System

The ACL3200 High Energy (HE) System is a continuous sparking system that uses a high-energy exciter. There is no pilot required as this unit will continually spark at a user defined interval set by the onboard timer. This high-energy exciter delivers a strong spark that is capable of lighting under water, in severe weather conditions, and where no fuel gas is available for a pilot.

ACL3200 Flame Ionization (FI) System

The ACL3200 Flame Ionization (FI) System uses a continuous pilot and a high voltage sparker to light the pilot. It uses a single ignitor/flame rod to provide both flame acknowledgment and ignition. An alarm will signal if the ACL3200 detects that the pilot is out, or if the flame failed to light. Once the Start button is pressed on the front of the unit, the ACL3200 will automatically start sparking in regular intervals based on the onboard timer settings until it detects that the pilot is lit.

The two independent thermocouple temperature set points can be adjusted with the six Hex rotary DIP switches on the top of the ACL3200's circuit board: three for each temperature setpoint. The setpoint switches are organized as a hundreds increment (0 to 1100°C (or 1500°F or 2000°F) in steps of 100), a tens increment (0 to 90 in steps of 10), and a ones increment (0 to 9).

Additional user preferences can be configured through DIP switches including TC1/2 enable, shutdown latch control, solenoid driver power setting, 4-20mA output select, and dead band range selection.

The ACL3200 Controllers are able to communicate remotely with Modbus Master Devices. A Modbus Master Device may be a Programmable Logic Controller, a PC, or another device. The ACL3200 Controller is a Modbus Slave Device that implements the Modbus RTU protocol on an RS-485, half-duplex, physical connection. The default Modbus communication parameters are 9600 baud, 8 data bits, no parity bits, one stop bit (“8N1”), Modbus Slave ID (Modbus address) 2.

The ACL3200 has a hardware revision of 4A and firmware revision 0.4 (minimum).

ACL3200 Features

ACL3200 Controller Features List	
•	No Programming required
•	12/24VDC operation. Solar capable as well.
•	Low power consumption
•	CSA approved for Class I, Div 2 locations
•	Operational ambient temperature of -40° to +60° Celsius
•	CSA approved C22.2 No 199-M89. Combustion safety controls and solid-state Ignitors for Gas & Oil burning equipment
•	CSA B149.3 - 10 compliant, meets NFPA standards
•	Type 4x enclosure, corrosive resistant and weatherproof
•	Modbus RTU (over RS485) communications capability
•	100% fail safe design
•	Local and Remote On/Off (Start/Stop) controls
•	Brownout Protection. ACL3200 will continue in previous state if a brownout/blackout condition is detected.
•	Onboard solenoid driver option for power reduction to solenoids and peak-hold solenoids
•	Onboard solenoid output short circuit detection and notification (via Alarm Status)
•	Two adjustable type-K thermocouple inputs for monitoring two separate temperature points (flame temp. and process temp.)
•	Provides control logic for **PI**, **HE**, **FI**, and **I** ignition systems
•	Two Shutdown inputs: Remote On/Off and Shutdown. Both require normally closed (NC) dry contacts
•	Onboard adjustable timer for ignitor On/Off control
•	Onboard scaled thermocouple adjustments
•	Adjustable dead band from 1, 2, 3 and 5 degrees C (°C) or 2, 4, 6 and 10 degrees F (°F)

Operation Summary

Supply 12 or 24VDC to the Main Input Power connections on the ACL3200 Controller referring to the wiring diagram "Figure 5 - ACL3200 Wiring Diagram - PI Mode".

Set the onboard ignition timer to the desired On and Off times using the "IGN Timer-ON" and "IGN Timer-OFF" rotary DIP switches. Select the desired thermocouples to enable: TC1, or TC2, or both using the "TC1 E/D" and "TC2 E/D" DIP switches. The temperature setpoint rotary hex DIP switches set the desired setpoint for each respective thermocouple. Once the temperature setpoints are set to the proper values for the desired process (flare stack, incinerator, etc.), the system is ready for turning on. The green System On LED on the front panel of the ACL3200 should be on, indicating that power is on but waiting to be started. Once the Start button is pushed, the ACL3200 will automatically begin the sparking timer (confirmed by the Pilot On LED flashing).

A flashing System On LED indicates a power failure has occurred. Reset this condition by pressing the Stop button, toggling the Remote On/Off terminal (switch) input, or by issuing a Modbus Remote Stop, then Start, command.

In Pilot Ignition (PI) Mode, when the main input power is present, the controller does not sense a pilot flame, and is calling for heat (measured temperatures are below the setpoint temperatures), the controller will attempt ignition and the pilot (or "Valve") solenoid output will provide voltage to the pilot solenoid valve (if used), providing pilot gas for ignition. The Remote On/Off and Shutdown terminals must be in a permissive state for this to occur. An automatic timer controls the ignition On and Off times, allowing the controller to restart the ignition sequence if there is a failure to light within the set ignition On time. The automatic timer can be overridden and the ignitor turned on for a longer period of time by manually holding in the Start button.

THIS EQUIPMENT IS SUITABLE FOR USE IN CLASS1 DIVISION 2, GROUPS A,B,C & D OR NONHAZARDOUS LOCATIONS ONLY

WARNING - EXPLOSION HAZARD - SUBSTITUTION OF COMPONENTS MAY IMPAIR THE SUITABILITY FOR CLASS 1 DIVISION 2

WARNING: EXPOSURE TO SOME CHEMICALS MAY DEGRADE THE SEALING PROPERTIES OF MATERIALS USED IN THE FOLLOWING DEVICES:

Relays K1 – K6
Twelve-position DIP switch S6
Four-position DIP switch S8

Additional Documents

The following additional documents for the ACL3200 Combustion Safety Controller are available. Contact an ACL representative to obtain this document.

Document Filename	Document Description
ACL3200_Rev_4A_Modbus_Installation_Manual.pdf	Modbus documentation containing more in-depth register descriptions and additional technical details.

Quickstart Installation Procedure

ACL3200 Flare Stack / Incinerator Ignition System

The Quickstart Installation Instructions assumes the user has some familiarity with Flare Stack / Incinerator Ignition System Installations.

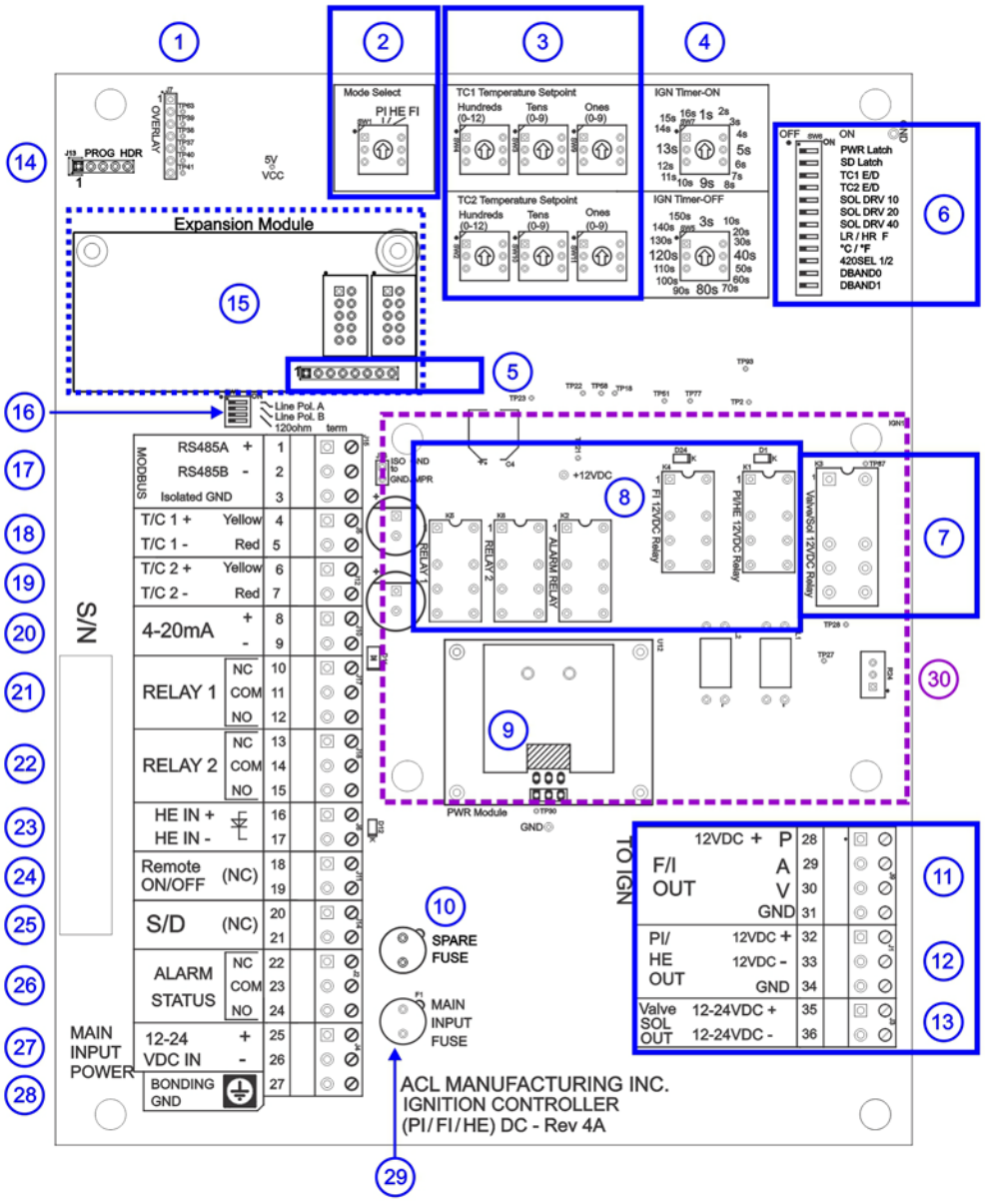
Pilot Ignitor (PI)
Continuous gas pilot
Timer operated ignitor with thermocouple temperature shutoff
Air/Fuel mixer
Automatic pilot with relight
Alarm provided by thermocouple sensing
Fully retractable
Stainless Steel construction
1400lb winch and 5/32 SST aircraft hoisting cable

High Energy Spark Ignitor (HE)
Continuous spark ignition (adjustable, periodic on/off time)
Timer operated ignitor
Alarm provided by electronic sensing of spark integrity
Ignitor provides a spark in extremely severe conditions
No gas required
Fully retractable
Stainless Steel construction
1400lb winch and 5/32 SST aircraft hoisting cable

Flame Ionization (FI)
Continuous gas pilot
Timer operated ignitor with thermocouple temperature shutoff
Air/Fuel mixer
Automatic pilot with relight
Alarm provided by flame ionization
Fully retractable
Stainless Steel construction
1400lb winch and 5/32 SST aircraft hoisting cable

Ignitor (I) (Set to "HE" mode)
Continuous spark ignition (adjustable, periodic on/off time)
Timer operated ignitor
No gas required
Fully retractable
Stainless Steel construction
1400lb winch and 5/32 SST aircraft hoisting cable

Figure 1 – ACL3200 Controller Main Board, Top View



#	Name	Category	Mode	Description
1	Overlay (Keypad) Header	Inputs/Control	All	7-pin Header connector that the flex cable from the Keypad overlay on the front panel connects to.
2	Mode Select Rotary DIP Switch	Inputs/Control	All	Main Mode Select Switch: 0 - Pilot Ignitor (PI), 1 - High Energy Exciter / Ignitor only (HE / I), or 2 - Flame Ionization (FI) modes. Wiring setup and operation is different for each mode.
3	Temperature Setpoint Rotary DIP Switches	Inputs/Control	All	Rotary DIP switches for setting Temperature Setpoints for TC1 and TC2. Each switch controls either the Hundreds (0-15), the Tens (0-9), or the Ones (0-9) digits. PI: TC1 is for flame detection, TC2 is for process temp HE: TC1 and TC2 are for process temp only (do not affect igniter operation) FI: TC1 and TC2 are for process temp only (do not affect igniter operation)

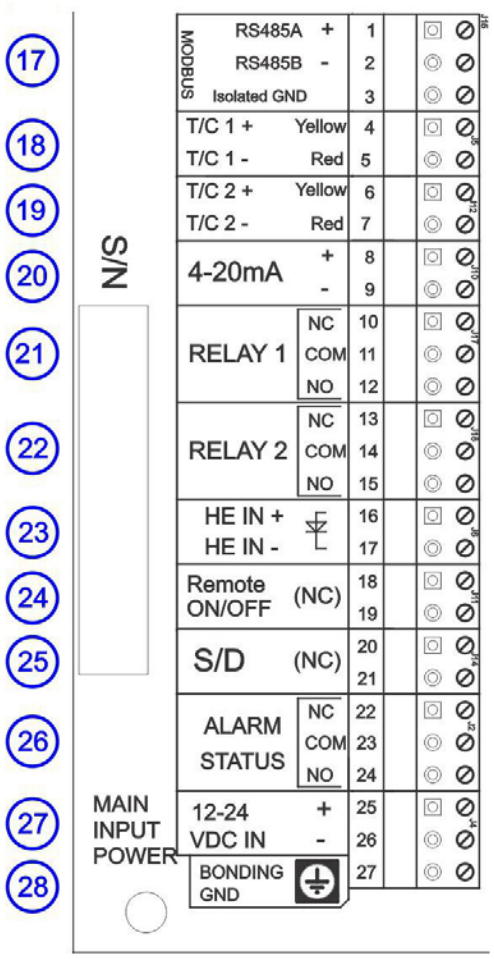
4	Igniter Auto Timer Rotary DIP Switches	Inputs/Control	All	Rotary DIP switches for setting the Igniter's automatic timer ON and OFF times for all modes.
5	Display Header	Display	All	8-pin header connector that the ACL3200 display flex cable connects to. (The ACL3200 display is optional).
6	Main DIP Switches	Inputs/Control	All	DIP switches for user options configuration and for Low Power solenoid driver settings for the Valve solenoid terminal output (see "DIP Switch Option Settings" section).
7	Valve Solenoid Relay	Output Solenoid	All	Relay used for controlling power delivery to the solenoid valve. Double-pole double-throw relays are connected in series to add an extra measure of safety in case one set of contacts fails while in the normally open position.
8	Control Relays	Inputs/Control	All	Relays used for controlling power switching to ignition module and for alarm status.
9	Input Power to 12VDC Power Module	Power	All	Power regulator that converts 10-30VDC input voltage to a stable 12VDC output voltage for control. (This 12VDC output is not used for outputting to solenoids).
10	Spare Fuse	Power	All	Spare 2A fuse for field servicing.
11	"To IGN" Ignition Module Terminals for FI mode	Control	FI	Input/Output terminal connections for the ACL Ignition Module in Flame Ionization (FI) mode: "P"ower, "A"larm, "V"alve, Ground. (Jumper "P" to "V" for PI and HE modes to use the Valve solenoid output for these modes)
12	PI/HE/I Igniter Output Terminals	Control	PI, HE, I	Output terminal connections for the Igniter in Pilot Ignition (PI), Ignition (I), or High Energy (HE) mode. "12VDC+" outputs a regulated 12VDC. "12VDC -" and "GND" are both connected to ground.
13	Solenoid Valve Terminal	Output Solenoid	All	Solenoid output terminal for Pilot/Valve. The output is current limited to 2A maximum.
14	Programming Header	Programming	N/A	Programming header (factory use only) for reprogramming the onboard microcontroller.
15	Expansion Module Location	Expansion	All	Location for future expansion modules
16	Modbus DIP Switch	Modbus/RS485	All	DIP switches for selecting termination options for the Modbus/RS485 communications cable (See ACL3200 Modbus manual)
17	Modbus Terminals	Modbus/RS485	All	Terminals for connecting a Modbus/RS485 communications cable. ACL3200 is a Modbus RTU slave in a 8N1, 9600 baud default configuration. Active in all modes.
18	Thermocouple 1	Inputs/Control	PI	Thermocouple 1 input terminal connections. Ensure proper polarity for correct operation. Use ungrounded thermocouples. TC1 is for flame sensing in PI mode and process monitoring in HE, FI, and I modes. TC1 controls dry contact Relay 1. - "NC" and "COM" are connected together if TC1 measurement is lower than the setpoint. - "NO" and "COM" are connected together if TC1 measurement is higher than the setpoint.
19	Thermocouple 2	Inputs/Control	All	Thermocouple 2 input terminal connections. Ensure proper polarity for correct operation. Use ungrounded thermocouples. TC2 is used for process monitoring. TC2 controls dry contact Relay 2. - "NC" and "COM" are connected together if TC2 measurement is lower than the setpoint. - "NO" and "COM" are connected together if TC2 measurement is higher than the setpoint.
20	4-20mA Output	Output Status	All	The 4-20mA output generates an isolated current output relative to the measured temperature on either TC1 or TC2.

				Selectable via DIP switch "420SEL 1/2": - "OFF" = TC1 measurement is output on 4-20mA output - "ON" = TC2 measurement is output on 4-20mA output
21	Relay 1 Output (dry contacts)	Control	PI	Relay 1 is present to allow users to control external valves, switches, or other controls based on the TC1 measurement. TC1 controls dry contact Relay 1 switching. - "NC" and "COM" are connected together if TC1 measurement is lower than the setpoint. - "NO" and "COM" are connected together if TC1 measurement is higher than the setpoint.
22	Relay 2 Output (dry contacts)	Control	All	Relay 2 is present to allow users to control external valves, switches, or other controls based on the TC2 measurement. TC2 controls dry contact Relay 2 switching. - "NC" and "COM" are connected together if TC2 measurement is lower than the setpoint. - "NO" and "COM" are connected together if TC2 measurement is higher than the setpoint.
23	High Energy Exciter Diode Terminals	Inputs/Control	HE	The High Energy Exciter Diode terminals are used to monitor the sparking of the High Energy Exciter and determine when the sparker tip needs replacing.
24	Remote On/Off (NC)	Inputs/Control	All	Remote On/Off input terminal connections. Keep wire jumper in place if not used.
25	Shutdown (NC)	Inputs/Control	All	Shutdown input terminal connections. Keep wire jumper in place if not used.
26	Alarm Status	Alarm (Dry Contacts)	All	Alarm Status input terminal connections Alarm indicated when "NC" and "COM" are connected. No Alarm indicated when "NO" and "COM" are connected.
27	Main Power Input Terminals	Power	All	Main 12-24VDC input terminal connections
28	Extra Earth Ground Terminal	Power	All	Extra earth ground terminal connection to assist in providing stable ground connections for solenoids, ignition modules, or other hardware
29	Main Input Fuse	Power	All	Main 2A input fuse
30	Ignition Module Mounting Location	Hardware	FI (optional)	The Ignition Module Mounting Location indicates the area where the ACL Ignition Module may be installed.

Input and Control Connections

Refer to the below diagram when reading the Input and Control Connections section.

Figure 2 - ACL3200 Input and Control Connections



The following table outlines control inputs and outputs that are dry contacts (no voltage) and ones that require connection to dry contacts (if used):

Input and Control Connections Requiring Dry Contacts	Voltage on Control Inputs	Output and Control Connections That Are Dry Contacts
Remote On/Off	12VDC	
Shutdown	12VDC	
	N/A	Relay 1
	N/A	Relay 2
Alarm Status	N/A	Alarm Status

Interruption or disconnection of the Remote On/Off or Shutdown inputs will turn off or prevent power delivered to the ACL Ignition Module and turn off power to the solenoid. A jumper should be installed in the Remote On/Off (terminals 18 and 19) and Shutdown (S/D) (terminals 20 and 21) terminals when not in use.

27 Main Power Input

The ACL3200 Ignition System Controller operates on an input voltage range between 10 and 30 Volts DC. Typical input voltages are 12VDC and 24VDC. Whatever input voltage is delivered to the ACL3200 on the Main Power Input terminals is the same voltage delivered to the solenoid valve output. Solenoids attached to the solenoid output on the ACL3200 ("Valve SOL Out") need to have matching control voltages (Eg. all 12VDC or all 24VDC) that also match the input voltage. The solenoid output can supply a maximum of 2 amps to attached solenoids.

Although the ACL3200 will operate with input voltages as low as 10VDC, some larger solenoid valves may not operate on such a low voltage. For this reason, try to maintain the input voltage as close to (or slightly higher than) the required voltage for the desired solenoids.

The Main Power Input terminals are:

Terminal Number	Description	Typical Input Values	Allowable Input Range
25	VDCIN + (positive)	12VDC or 24VDC	10 VDC (min) - 30 VDC (max)
26	VDCIN - (negative)	0V (GND)	0V (GND)
27	Ground	0V (GND)	0V (GND)

The VDCIN - (negative) terminal is connected to ground internally on the ACL3200 printed circuit board.

The Main power inputs (VDCIN + and VDCIN -) are protected against reverse polarity. The ACL3200 will not operate if the main input power wires are reversed and it will not cause damage to the ACL3200 electronics.

17 Modbus / RS485 Communication Connections

The three Modbus/RS485 terminals are used for connecting the ACL3200 Controller to a Modbus communications channel. The ACL3200 Controller is a Modbus Slave Device that implements the Modbus RTU protocol on an RS-485, half-duplex, physical connection. The default Modbus communication parameters are 9600 baud, 8 data bits, no parity bits, one stop bit (“8N1”), Modbus Slave ID (Modbus address) 2.

The RS485 signal naming convention used in this document and by many RS485 transceiver vendors is reversed from what the EIA/TIA-485 specification states:

ACL3200 Modbus/RS485 Documentation	EIA/TIA-485 Naming Convention	Modbus Specification Name	Description
A (“RS485 A +” or "D0 A+")	B	D1	Non-Inverting, Transceiver Terminal 1, V1 voltage (V1 > V0 for binary 1 (OFF) state
B (“RS485 B –” or "D1 B-")	A	D0	Inverting, Transceiver Terminal 0, V0 voltage (V0 > V1 for binary 0 (ON) state
Isolated GND (or common GND)	C	Common	Signal and Optional Power Supply common ground

Due to the potential for large amounts of noise on the Modbus communication cable, the “Isolated Ground” terminal is connected to earth ground on the ACL3200 board to improve noise immunity.

Refer to the document "ACL3200_Rev_3A_Modbus_Installation_Manual.pdf" for additional details on additional Modbus registers, programming, testing, and troubleshooting.

18 19 Thermocouple 1 and 2 Inputs ("T/C1" or "TC1", "T/C2" or "TC2")

The ACL3200 controller accepts two type-K (ungrounded) thermocouples. They are clearly marked on the board for each thermocouple and polarity (See wiring diagrams).

Terminal Number	Description	Temperature Range
4	T/C 1 Yellow +	0°C to 1100°C (32°F to 2012°F)
5	T/C 1 Red -	
6	T/C 2 Yellow +	0°C to 1100°C (32°F to 2012°F)
7	T/C 2 Red -	

The temperature range for each thermocouple is 0°C to 1100°C (32°F to 2012°F).

In PI mode, Thermocouple 1 is used as a flame sense temperature measurement input and controls Relay 1 switching. Thermocouple 2 is used as a process temperature measurement and controls Relay 2 switching.

In HE mode, Thermocouple 1 and Thermocouple 2 are used as process temperature measurements and control Relay 1 and Relay 2 switching, respectively.

In FI mode, Thermocouple 1 and Thermocouple 2 are used as process temperature measurements and control Relay 1 and Relay 2 switching, respectively.

20 4-20mA Terminals

The 4-20mA terminals provide a loop-powered, isolated, 4mA to 20mA converter that generates a current output proportional to the measured temperature on either TC1 or TC2 (selectable via DIP switch).

21 Relay 1 Input

Relay 1 is present to allow users to control external valves, switches, or other controls based on the Thermocouple 1 (TC1) measurement. In all modes, Relay 1 is turned off ("NC" is connected to "COM") when the ACL3200 system is off. If TC1 is enabled via DIP switch "TC1 E/D", it needs to be attached to a Type-K thermocouple to operate properly. The Alarm LED will flash quickly and the system will be turned off if there is an open fault detected with the thermocouple (if enabled).

In all modes (PI, HE, FI, I), TC1 controls the dry contact Relay 1 switching. "NC" is connected (shorted) to "COM" if TC1 measurement is lower than the TC1 setpoint temperature. "NO" is connected (shorted) to "COM" if TC1 measurement is higher than the TC1 setpoint temperature.

Terminal Number	Terminal Name	Mode	Relay 1 Operational Description
10	NC - Normally Closed	All	"NC" is connected (shorted) to "COM" if TC1 measurement is lower than the TC1 setpoint temperature
11	COM - Common	All	Common connection in both Relay 1 switched states
12	NO - Normally Open	All	"NO" is connected (shorted) to "COM" if TC1 measurement is higher than the TC1 setpoint temperature



Relay 2 Input

Relay 2 is present to allow users to control external valves, switches, or other controls based on the Thermocouple 2 (TC2) measurement. In all modes, Relay 2 is turned off ("NC" is connected to "COM") when the ACL3200 system is off. If TC2 is enabled via DIP switch "TC2 E/D", it needs to be attached to a Type-K thermocouple to operate properly. The Alarm LED will flash quickly and the system will be turned off if there is an open fault detected with the thermocouple (if enabled).

In all modes (PI, HE, FI, I), TC2 controls the dry contact Relay 2 switching. "NC" is connected (shorted) to "COM" if the TC2 temperature measurement is lower than the TC2 setpoint temperature. "NO" is connected (shorted) to "COM" if TC2 measurement is higher than the TC2 setpoint temperature.

Terminal Number	Terminal Name	Mode	Relay 2 Operational Description
10	NC - Normally Closed	All	"NC" is connected (shorted) to "COM" if TC2 measurement is lower than the TC2 setpoint temperature
11	COM - Common	All	Common connection in both Relay 2 switched states
12	NO - Normally Open	All	"NO" is connected (shorted) to "COM" if TC2 measurement is higher than the TC2 setpoint temperature



HE IN Input

The HE IN terminals ("HE IN +" and "HE IN -") are used in HE mode for connecting to the HE ignitor's matching diode connections. The HE IN terminals are used for sensing the pulsing of the HE tip to detect when tip replacement is required. Leaving the HE IN terminals unconnected while in HE mode prevents the ACL3200 from determining when tip replacement is required and will reduce the system's efficiency (and may prevent proper operation) by not giving it the ability to detect when the HE tip needs replacing.



Remote On/Off (NC) Input

The Remote On/Off switch allows the user to hard wire a remote switch or relay for controlling the ACL3200. These terminals must be wired to dry contacts of a remote switch or relay when used. The Remote On/Off switch directly turns on and off the power delivered to either of the ignition module outputs (PI/HE and FI). The Remote On/Off switch is one of three methods for controlling whether the system state is On or Off, in all modes, as long as all other shutdowns are closed. The other two methods are the Stop/Reset and Start buttons on the overlay, and the Modbus Stop/Start commands. A wire jumper must remain across the Remote On/Off terminals when not in use.

Like the main Start and Stop/Reset overlay buttons, the Remote On/Off switch also acts as a reset to clear any latched shut downs that have tripped and been detected by the ACL3200. A shutdown configured as a latched shutdown prevents the

system from automatically restarting after it detects any interruption in continuity on the Shutdown input terminals. If a latched shutdown trips, then quickly resets itself, the ACL3200 will detect this, prevent the system from automatically restarting, and alert the user on the LED display (and via Modbus) by slowly flashing the Alarm LED.

The ACL3200 overlay will slowly flash the Alarm LED when the Remote On/Off input has been tripped and/or remains open.

Terminal Number	Description	Allowable Input Range	Voltage on Remote On/Off Contacts
18	Remote On/Off + (NC)	None: use dry contacts	12VDC when closed, ground when open
19	Remote On/Off - (NC)	None: use dry contacts	12VDC regardless of open/closed status



Shutdown Input

The Shutdown switch input allows the user to hard-wire a remote switch or relay for controlling the ACL3200. These terminals must be wired to dry contacts of a remote switch (level, pressure, or auxiliary switch) or relay when used. The Shutdown switch directly turns on and off the power delivered to either of the ignition module outputs (PI/HE and FI). If more than one shutdown switch is used, they must be wired in series. The Shutdown switch controls the power delivered to the ignition module as long as the Remote On/Off switch is closed. A wire jumper must remain across the Shutdown terminals when not in use.

Opening of any switch attached to the Shutdown input will shut off the ignition module and de-energize the valve solenoid inputs. The Shutdown inputs are tied into the control logic for the S/D Latch DIP switch. If the S/D Latch DIP switch is off, then it is in "Unlatched S/D" mode which means that the ACL3200 will attempt to restart ignition when any switch attached to the S/D inputs clears. If the S/D Latch DIP switch is on, then it is in "Latched S/D" mode. A shutdown configured as a latched shutdown prevents the system from automatically restarting after it detects any interruption in continuity on the input terminals for the selected shutdown. If a latched shutdown trips, then quickly resets itself, the ACL3200 will detect this, prevent the system from automatically restarting, and alert the user by slowly flashing the Alarm LED (and via Modbus).

The ACL3200 Alarm LED will flash slowly when the Shutdown input has been tripped and/or remains open.

Terminal Number	Description	Allowable Input Range
20	Shutdown +	None: use dry contacts
21	Shutdown -	None: use dry contacts



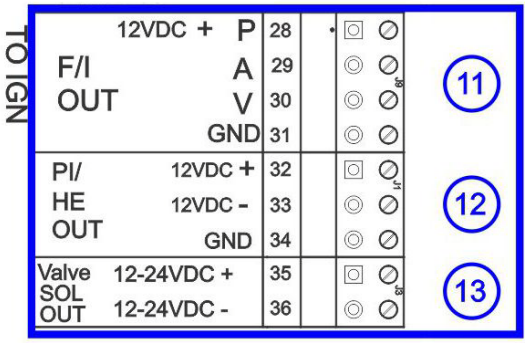
Alarm Status Output

The Alarm Status outputs provides remote indication of an Alarm condition on the ACL3200. When power to the ACL3200 is off, the Alarm Status contacts are open between "NO" and "COM" and closed between "NC" and "COM", indicating an Alarm condition. The contacts are also in an Alarm condition when the ACL3200 is in a shutdown state. Eg: the Shutdown switch or the Remote On/Off switch is open. This provides a complete fail-safe indicator to a remote control center of the status of the ACL3200 controller.

Terminal Number	Description	Max Contact Rating
22	Alarm Status "NC"	Power: 60W, 62.5VA Voltage: 220VDC, 250VAC
23	Alarm Status "COM"	Power: 60W, 62.5VA Voltage: 220VDC, 250VAC
24	Alarm Status "NO"	Power: 60W, 62.5VA Voltage: 220VDC, 250VAC

#	Mode	Possible Alarm Conditions
1	All	Power is off
2	All	Overlay unplugged
3	All	Remote On/Off switch is open
4	All	Shutdown switch is open
5	All	Shutdown Latch condition
6	All	Power Fail Latch condition
7	All	Short detected on solenoid valve output terminals
8	All	Modbus Stop command received
#	Mode	Mode Specific Alarm Conditions
9	PI	TC1 below TC1 setpoint (Pilot flame not present)
10	PI	Thermocouple 1 (TC1) fault/open
11	PI	Thermocouple 2 (TC2) fault/open (if enabled)
12	HE	HE IN signal not pulsing, HE tip replacement needed
13	HE	Thermocouple 1 (TC1) fault/open (if enabled)
14	HE	Thermocouple 2 (TC2) fault/open (if enabled)
15	FI	Flame Fail (Alarm signal from ACL Ignition Module)
16	FI	Thermocouple 1 (TC1) fault/open (if enabled)
17	FI	Thermocouple 2 (TC2) fault/open (if enabled)

Output Connections (Ignitor and Valve Solenoid) 11 12 13



11 Flame Ionization (FI) Ignition Module Inputs & Outputs

The four terminals marked as "To IGN" on the main circuit board need to be wired directly to the ACL Ignition Module using an FI wiring harness if FI mode is chosen. This provides two-way communication between the ACL3200 and the ignition module, creating a complete combustion safety control and burner ignition system. (See wiring diagram for FI mode)

All of the below signals need to be attached between the ACL3200 and the ignition module for the ACL3200 system to work properly in FI mode.

Terminal Number	Designation	Description	Direction
28	P	Power (12VDC)	Power output to Ignition Module
29	A	Alarm	Input signal from Ignition Module
30	V	Valve	Input signal from Ignition Module
31	GND	Ground	Ground

12 Pilot Ignition (PI) / High Energy (HE) / Ignition (I) Module Outputs

The three terminals marked as "PI/HE OUT" on the main circuit board need to be wired directly to the ACL PI Ignition Box. This allows the ACL3200 to provide auto-timer functionality to the ignition box. (See wiring diagram for PI, HE, or I mode depending on user's install requirements).

All of the below signals need to be attached between the ACL3200 and the ignition module for the flare stack / incinerator system to work properly.

Terminal Number	Designation	Description	Direction
32	12VDC +	Power, 12VDC +	Power output "+" to PI Ignition Box
33	12VDC -	Power, 12VDC -	Power output "-" to PI Ignition Box (ground)
34	GND	Ground	Ground

13 Valve (Pilot) Solenoid Outputs

The solenoid valve output connection is designed for driving an external solenoid valve (or two). The valve output is rated for a maximum of 2A current output. The main input voltage (either 12VDC or 24VDC) is fused and then directed through a relay, a current sense circuit, a low power driver circuit, and then output to the solenoid valve terminal.

The Valve (Pilot) Solenoid terminals provide power to the Valve solenoid (if used). The valve allows gas to flow for initial ignition and flame sensing. During normal operation, in all modes, the ACL3200 turns on the valve solenoid while attempting to light the flame.

For the valve solenoid to work properly in PI, HE, and I modes, the "P" and "V" terminals (28 and 30) in the "F/I OUT" input/output section need a wire jumper installed between them.

The valve output has a low power solenoid feature provided by an onboard solenoid driver circuit. This circuit can reduce power consumption of the solenoids by as much as 80%. This circuit also helps eliminate any noise that may be produced by some solenoids, and helps extend the life of the solenoids.

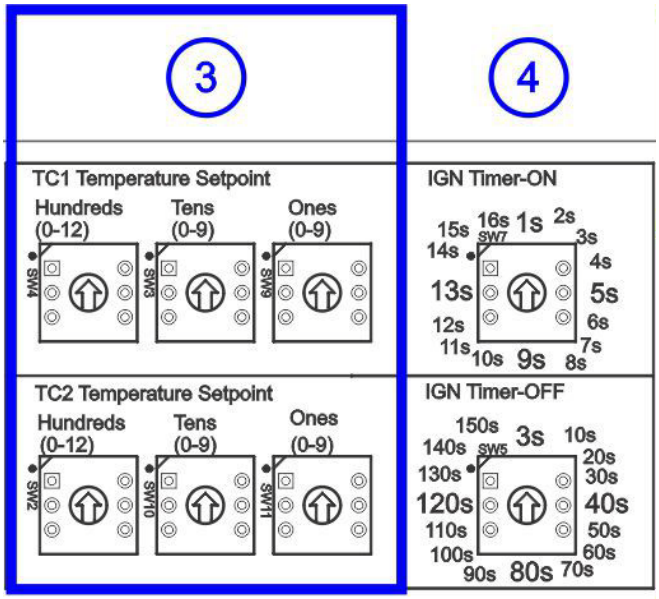
The Low Power Solenoid DIP switches need to be set to the setting required to ensure that the solenoid(s) with the highest power requirement remain open when desired. For more information on the Low Power Solenoid Driver, see the Low Power Solenoid (Solenoid Driver) DIP Switches on page 21.

Adjusting Temperature Setpoints and Ignitor On/Off Times

The ACL3200 Controller provides a simple control interface to the user on the ACL3200 main circuit board for setting temperature setpoints. Three rotary DIP switches are provided for setting each temperature setpoint. The setpoint switches are organized as a hundreds increment (0 to 1100°C (or 1500°F or 2000°F) in steps of 100), a tens increment (0 to 90 in steps of 10), and a ones increment (0 to 9).

These settings can be overridden by modbus temperature setpoint commands.

Figure 3 - ACL3200 Controller Setpoint Rotary DIP Switches



#	Rotary DIP Switches	Description
3	Thermocouple 1 (TC1) and Thermocouple 2 (TC2) Temperature Setpoint Rotary DIP Switches	Rotary DIP switches for setting Temperature Setpoints for TC1 and TC2. Each switch controls either the Hundreds (0-11), the Tens (0-9), or the Ones (0-9) digits. PI: TC1 is for flame detection, TC2 is for process temp HE: TC1 is for process temp, TC2 is for process temp FI: TC1 is for process temp, TC2 is for process temp
4	Ignitor Timer On and Off Rotary DIP Switches	Rotary DIP switches for setting the Igniter's automatic timer ON and OFF times for all modes.

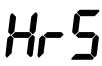
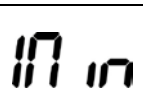
The following Temperature Setpoint Setting Table lists the result of each rotary DIP switch setting on the temperature setpoint for each thermocouple. The three setpoint values, one for each dial, are summed together.

LR / HR F	°C / °F	Hundreds Setting	Temperature Setpoint Contribution	Tens Setting	Temperature Setpoint Contribution	Ones Setting	Temperature Setpoint Contribution
Not Applicable	°C	0	0	0	0	0	0
		1	100	1	10	1	1
		2	200	2	20	2	2
		3	300	3	30	3	3
		4	400	4	40	4	4
		5	500	5	50	5	5
		6	600	6	60	6	6

		7	700	7	70	7	7
		8	800	8	80	8	8
		9	900	9	90	9	9
		A	1000	A	90	A	9
		B	1100	B	90	B	9
		C	1100	C	90	C	9
		D	1100	D	90	D	9
		E	1100	E	90	E	9
		F	1100	F	90	F	9
		Range is 0 - 1100°C (maximum is 1100°C)					
LR ("OFF") Low Range F	°F	0	0	0	0	0	0
		1	100	1	10	1	1
		2	200	2	20	2	2
		3	300	3	30	3	3
		4	400	4	40	4	4
		5	500	5	50	5	5
		6	600	6	60	6	6
		7	700	7	70	7	7
		8	800	8	80	8	8
		9	900	9	90	9	9
		A	1000	A	90	A	9
		B	1100	B	90	B	9
		C	1200	C	90	C	9
		D	1300	D	90	D	9
		E	1400	E	90	E	9
		F	1500	F	90	F	9
		Range is 0 - 1599°F (maximum is 2012°F)					
HR ("ON") High Range F	°F	0	500	0	0	0	0
		1	600	1	10	1	1
		2	700	2	20	2	2
		3	800	3	30	3	3
		4	900	4	40	4	4
		5	1000	5	50	5	5
		6	1100	6	60	6	6
		7	1200	7	70	7	7
		8	1300	8	80	8	8
		9	1400	9	90	9	9
		A	1500	A	90	A	9
		B	1600	B	90	B	9
		C	1700	C	90	C	9
		D	1800	D	90	D	9
		E	1900	E	90	E	9
		F	2000	F	90	F	9
		Range is 500 - 2012°F (maximum is 2012°F)					

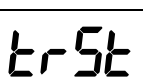
ACL3200 Controller Valve Solenoid Timer On Message Sequence

The ACL3200 measures the total time that the Valve Solenoid has been on. This can be used to help users calculate heat or energy output for the valve controlled by the Valve Solenoid. The measured time can be read out of the ACL3200 via Modbus. The time can also be displayed on the 4-digit display (if installed) by holding down the Stop button for more than 5 seconds to start the following sequence:

Sequence State Number	TMain Solenoid Timer On Messages	Description
1		"Solenoid" - T/Main Solenoid Display mode starts
2		Time on
3	 (Eg: Time in days)	T/Main on time in days (0 to 9999)
4		"Days"
5	 (Eg: Time in hours)	T/Main on time in hours (0 to 23)
6		"Hours"
7	 (Eg: Time in minutes)	T/Main on time in minutes (0 to 59)
8		"Minutes"
9	(Sequence is Complete)	Current Temperature will then be displayed for the selected thermocouple

To reset the Valve Solenoid "ON" time (to all zeros) using the keypad, perform the following sequence:

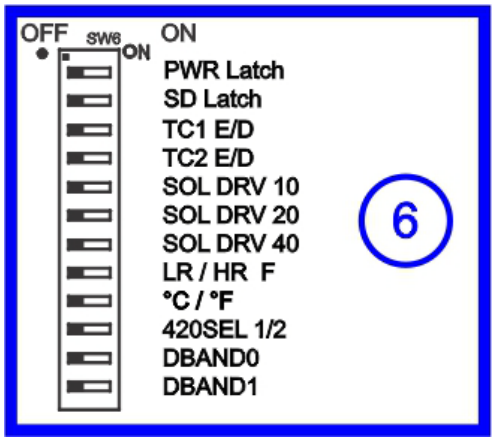
- Hold the "Stop" button in for five seconds until the "SOL" message shows on the display.
- Continue holding the "Stop" button while now pressing and holding the "Start" button for another 4 seconds.
- The following sequence will occur to inform you that the T/Main solenoid "ON" time was reset:

Sequence State Number	TMain Solenoid Timer Reset	Description
1		"Solenoid" - T/Main Solenoid
2		Time reset to all zeros for Day, Hours, Minutes
	(Done)	Current Temperature will then be displayed for the selected thermocouple

DIP Switch Option Settings

Main DIP Switch (SW6, 12-pin)

For the main DIP switches, an "OFF" setting means the DIP switch is moved to the left. An "ON" setting means the DIP switch is moved to the right.



DIP Switch Number	Name on Circuit Board	Description	OFF	ON	Operation
12	PWR LATCH	Power Fail Latch			Power Fail Latch mode is Off. The ACL3200 will attempt ignition restart automatically after powerup sequence is done, provided that all shutdowns are clear and no other issues are detected.
				(Default)	Power Fail Latch mode is On. The ACL3200 will wait in Power Fail Latch mode and not attempt ignition restart until the On/Off switch, Remote On/Off terminal, or Modbus Remote Stop/Start is toggled Off, then On.
11	SD LATCH	Shutdown Latch	(Default)		Shutdown Latch mode is Off. The ACL3200 will attempt ignition restart automatically after the Shutdown has cleared, provided that all other On/Off or POC terminals are clear and no other issues are detected.
					Shutdown Latch mode is On. The ACL3200 will wait in Shutdown mode and not attempt ignition restart until the On/Off switch, Remote On/Off terminal, or Modbus Remote Stop/Start is toggled Off, then On.
10	TC1 E/D	Thermocouple 1 Enable/Disable	(Default)		Thermocouple 1 (TC1) Enabled for use (Default).
					Thermocouple 1 (TC1) Disabled. Relay 1 will not switch based on Thermocouple 1 measurements.
9	TC2 E/D	Thermocouple 2 Enable/Disable			Thermocouple 2 (TC2) Enabled for use.
				(Default)	Thermocouple 2 (TC2) Disabled (Default). Relay 2 will not switch based on Thermocouple 2 measurements.
8	SOL DRV 10	Solenoid Low Power Drive, 10%	(Default)		When DIP switch is off, the ACL3200 does not add 10% to the cycle time sum for driving the solenoids.

<table>
<tr><td></td><td></td><td></td><td></td><td></td><td>ACL3200 adds 10% to the total cycle time sum for driving the solenoids.</td></tr>
<tr><td>7</td><td>SOL DRV 20</td><td>Solenoid Low Power Drive, 20%</td><td>(Default)</td><td></td><td>When DIP switch is off, the ACL3200 does not add 20% to the cycle time sum for driving the solenoids.</td></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td>ACL3200 adds 20% to the total cycle time sum for driving the solenoids.</td></tr>
<tr><td>6</td><td>SOL DRV 40</td><td>Solenoid Low Power Drive, 40%</td><td>(Default)</td><td></td><td>When DIP switch is off, the ACL3200 does not add 40% to the cycle time sum for driving the solenoids.</td></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td>ACL3200 adds 40% to the total cycle time sum for driving the solenoids.</td></tr>
<tr><td>5</td><td>LR / HR F</td><td>HE mode select 0 switch</td><td>(Default)</td><td></td><td rowspan="2">One DIP switch is used to select between the Low Range and High Range Fahrenheit Temperature setting for the "Hundreds" digits for the setpoints. This is used to set the Temperature setpoint scale to use when Fahrenheit temperature scale is selected (DIP Switch 4, "°C / °F ").

<table><tr><th>LR / HR F</th><th>Temperature Range</th></tr><tr><td>OFF</td><td>Low Range: 0°F - 1599°F</td></tr><tr><td>ON</td><td>High Range: 500°F - 2012°F (max)</td></tr></table></td></tr>
<tr><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>4</td><td>°C / °F</td><td>Degrees Celsius / Degrees Fahrenheit Select Switch</td><td>(Default)</td><td></td><td>When DIP switch is OFF, temperature setpoints are used in degrees Celsius.</td></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td>When DIP switch is ON, temperature setpoints are used in degrees Fahrenheit.</td></tr>
<tr><td>3</td><td>420SEL 1/2</td><td>4-20mA Select 1/2</td><td></td><td></td><td>Selects the Thermocouple 1 temperature measurement to output on the 4-20mA output.</td></tr>
<tr><td></td><td></td><td></td><td></td><td>(Default)</td><td>Selects the Thermocouple 2 temperature measurement to output on the 4-20mA output.</td></tr>
<tr><td>2</td><td>DBAND0</td><td>Deadband 0</td><td>(Default)</td><td></td><td rowspan="3">Two DIP switches are used to select the desired deadband temperature range around the setpoint temp where the ACL3200's decisions are made.

<table><tr><th>DBAND1</th><th>DBAND0</th><th>°C</th><th>°F</th></tr><tr><td>OFF</td><td>OFF</td><td>1</td><td>2</td></tr><tr><td>OFF</td><td>ON</td><td>2</td><td>4</td></tr><tr><td>ON</td><td>OFF</td><td>3</td><td>6</td></tr><tr><td>ON</td><td>ON</td><td>5</td><td>10</td></tr></table>
A larger deadband range prevents the igniter from turning on if the measured temperature hovers around the setpoint.</td></tr>
<tr><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>1</td><td>DBAND1</td><td>Deadband 1</td><td>(Default)</td><td></td></tr>
</table>

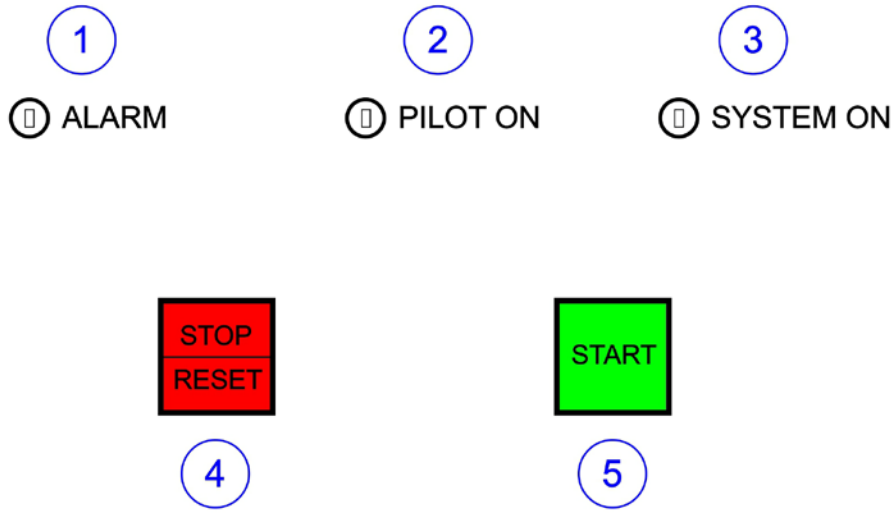
Low Power Solenoid (Solenoid Driver) DIP Switches (# 6-8)

The Low Power Solenoid Drivers are individual control circuits added to each solenoid output that saves power drawn by the solenoid by altering the cycle time that power is delivered to the solenoid once it is driven fully on. Larger solenoids require more power to keep them open, therefore needing a larger cycle time (eg: 40%). The cycle time percentage is determined by adding the contribution of each DIP switch. For example, to drive the solenoids at 60% cycle time, turn on DIP switches marked "40" and "20". To drive the solenoids at 30% cycle time, turn on DIP switches marked "20" and "10". If all "SOL DRV x" DIP Switches are "OFF", then the valve solenoid is driven at fully on (100% cycle time).

Front Panel Buttons and LED Status Indicators

The ACL3200 Controller provides a simple status and control interface to the user on the overlay mounted on the front of the ACL3200's box. Three status LEDs provide status and feedback while two membrane push buttons provide Start/Stop control.

Figure 4 - ACL3200 Controller Front Panel Overlay



#	Indicator LED(s)	Mode	Description
1	Alarm LED	PI	Red LED indicating that there's an Alarm. LED On, Flashing Quickly = a Thermocouple fault or open is present LED On, Flashing Slowly = a Shutdown occurred LED On Solid = a Flame Fail occurred
		HE	Red LED indicating that there's an Alarm. LED On, Flashing Quickly = a Thermocouple fault or open is present LED On, Flashing Slowly = a Shutdown occurred LED On, Short Single Flash (while PI/HE relay is on) = HE sparking tip may need replacement
		FI	Red LED indicating that there's an Alarm. LED On, Flashing Quickly = a Thermocouple fault or open is present LED On, Flashing Slowly = a Shutdown occurred LED On Solid = a Flame Fail occurred
		I	Red LED indicating that there's an Alarm. LED On, Flashing Quickly = a Thermocouple fault or open is present LED On, Flashing Slowly = a Shutdown occurred
2	Pilot On LED	PI	Amber LED indicating that the Pilot flame is present or that the system is sparking the ignitor. LED On, Flashing Quickly = system is on and sparking the ignitor in a timed sequence (PI/HE relay is off currently) LED On Solid = PI/HE Relay is on (sparking)
		HE	Amber LED indicating that the Pilot flame is present or that the system is sparking the ignitor. LED On, Flashing Quickly = system is on and sparking the ignitor in a timed sequence (PI/HE relay is off currently) LED On Solid = PI/HE Relay is on (sparking)
		FI	Amber LED indicating that the Pilot flame is present or that the system is sparking the ignitor.

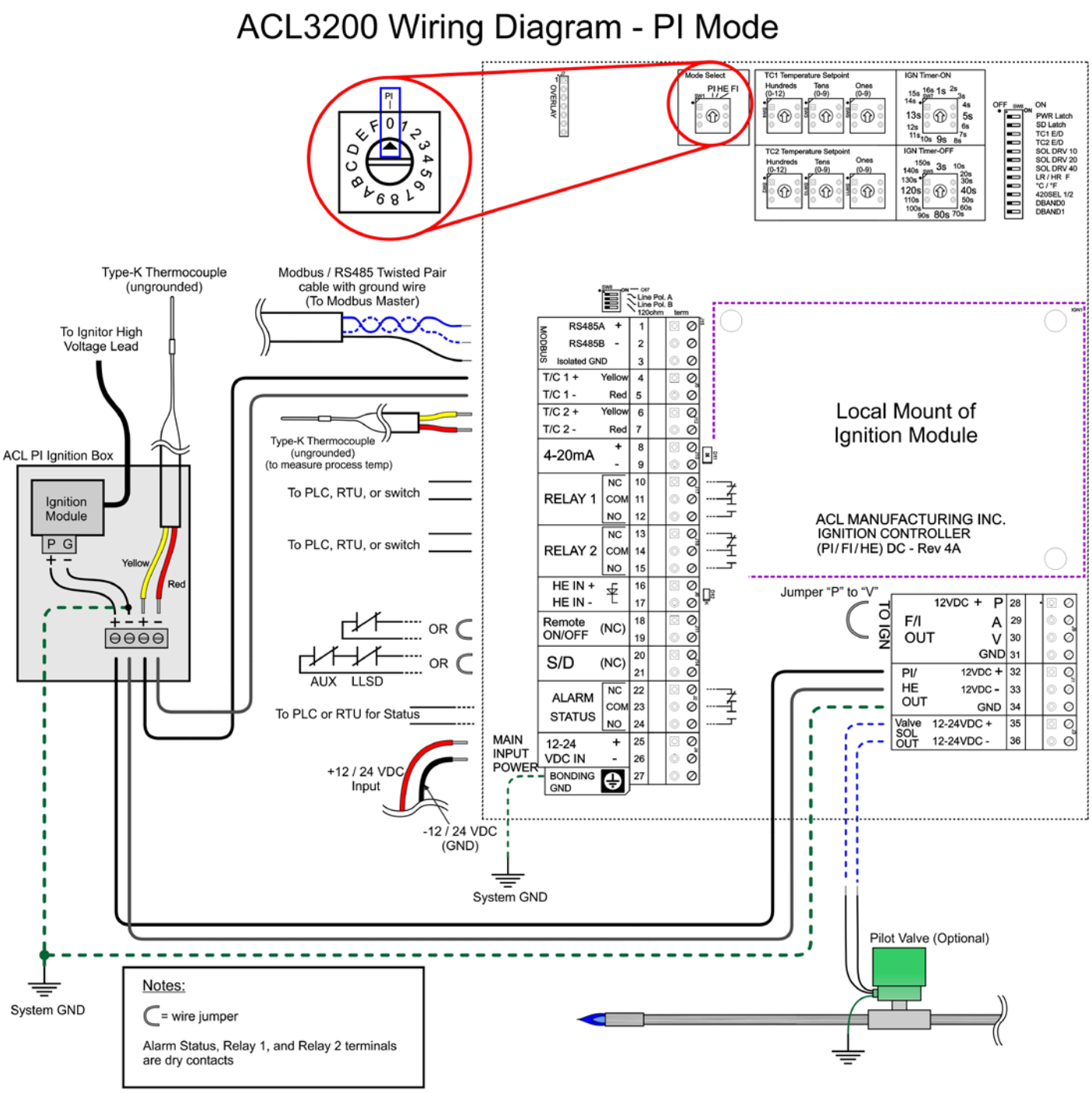
			LED On, Flashing Quickly = system is on and sparking the ignitor in a timed sequence (PI/HE relay is off currently) LED On Solid = Pilot flame is detected
		I	Amber LED indicating that the Pilot flame is present or that the system is sparking the ignitor. LED On, Flashing Quickly = system is on and sparking the ignitor in a timed sequence (PI/HE relay is off currently) LED On Solid = PI/HE Relay is on (sparking)
3	System On LED	PI	Green LED indicating that the controller is On. LED On Flashing = a Power Failure occurred LED On Solid = Power is On
		HE	Green LED indicating that the controller is On. LED On Flashing = a Power Failure occurred LED On Solid = Power is On
		FI	Green LED indicating that the controller is On. LED On Flashing = a Power Failure occurred LED On Solid = Power is On
		I	Green LED indicating that the controller is On. LED On Flashing = a Power Failure occurred LED On Solid = Power is On

#	Overlay Button	Mode	Description
4		All	Pressing the Stop Button will cause the system to stop: power to ignitor outputs will be shutoff. Valve solenoid power output will be turned off. Pressing the Stop button will also clear any shutdown indicators present on the LED display. Other methods of shutting off the system include: - Remote On/Off in the Off position (open contacts) - Modbus Remote Stop command - Shutdown terminals (system will restart automatically if SD terminals close again and the SD Latch DIP switch is off)
5		All	Pressing the Start button will cause the system to start Pressing the Start button will also clear any shutdown indicators present on the LED display. Other methods of turning on the system include: - Remote On/Off toggled Off, then On again (open contacts, then close contacts again) - Modbus Remote Start command

Pilot Ignitor (PI) Connection Diagram

The following diagram shows the wiring connections for the ACL3200 Flare Stack / Incinerator Ignition System in PI mode.

Figure 5 - ACL3200 Wiring Diagram - PI Mode



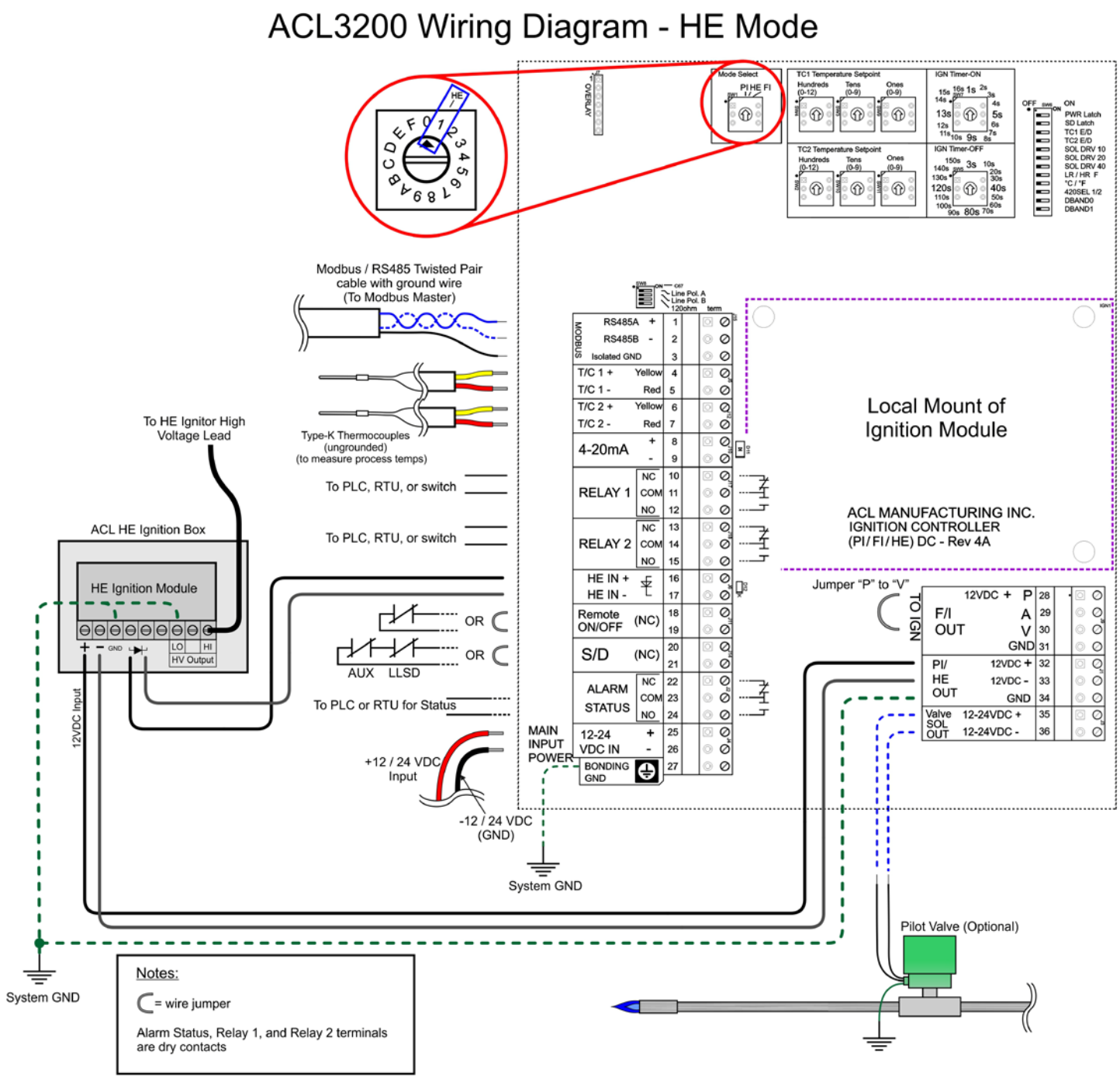
Minimum Required Wiring Connections - PI Mode
Thermocouple 1, ACL3200 to PI Ignition box and Type-K TC
PI / HE Out to ACL PI Ignition Box: 12VDC+, 12VDC-, GND
Main Input Power (+12/24VDC, -12/24VDC)
Ignitor High Voltage Lead

Optional or Additional Functionality Connections - PI Mode
Thermocouple 2 (Set "TC2 E/D" DIP switch to Disabled if not used)
Remote On/Off switch (jumper if not used)
Shutdown (jumper if not used)
Alarm Status (dry contacts)
Valve (Pilot) Solenoid Output (Connect a wire jumper from "FI Out" "P" terminal to "V" if Valve Solenoid Output is desired in HE mode)
Relay 1 dry contacts (controlled by TC1)
Relay 2 dry contacts (controlled by TC2)
4-20mA output (TC1 or TC2 selectable)
Modbus RTU, RS485

High Energy Ignitor (HE) Connection Diagram

The following diagram shows the wiring connections for the ACL3200 High Energy Ignition System in HE mode.

Figure 6 - ACL3200 Wiring Diagram - HE Mode



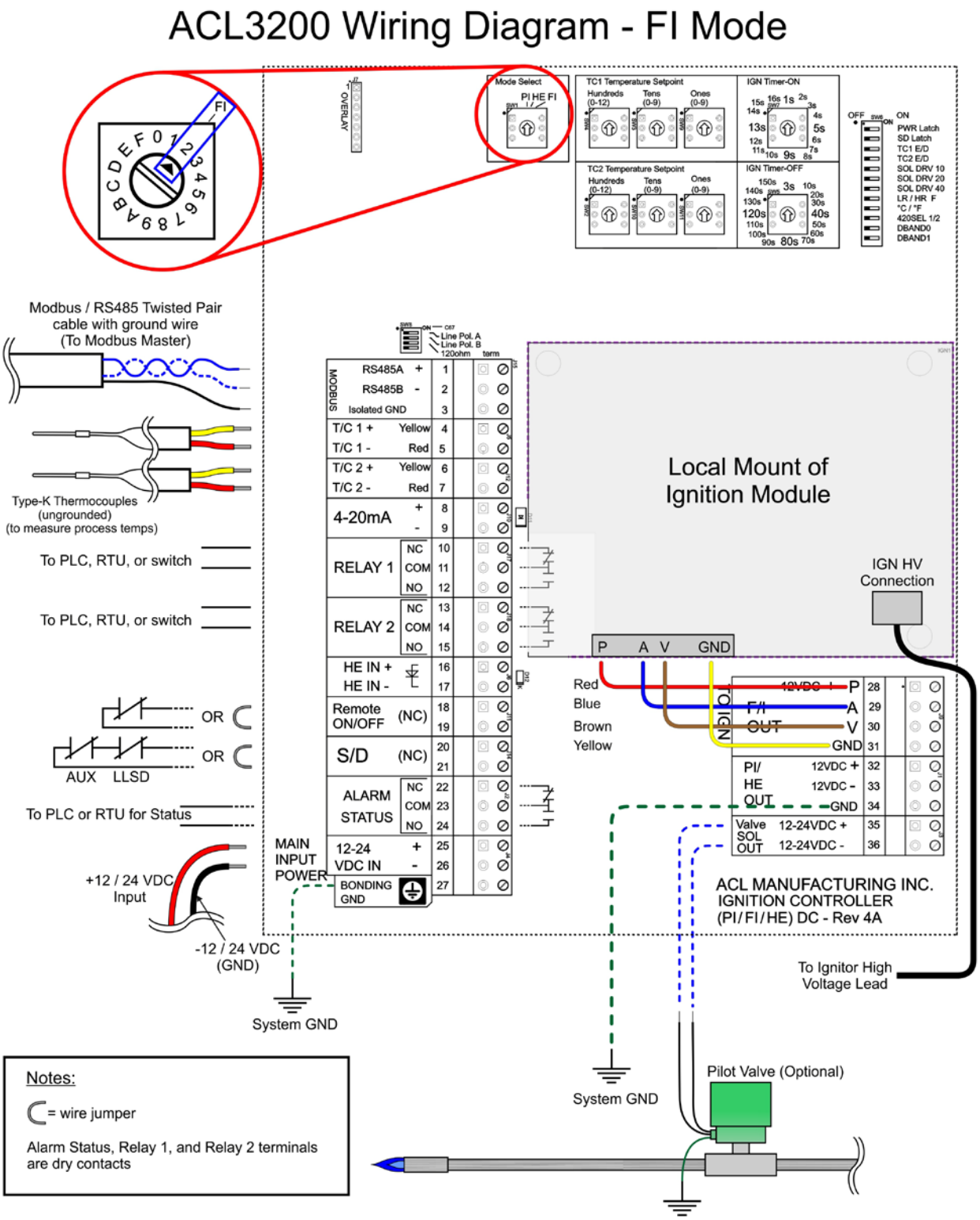
Minimum Required Wiring Connections - HE Mode
PI / HE Out to ACL HE Ignition Box: 12VDC+, 12VDC-, GND
ACL HE Ignition Box Diode Anode and Cathode to "HE IN +" (Anode) and "HE IN -" (Cathode)
Main Input Power (+12/24VDC, -12/24VDC)
Ignitor High Voltage Lead

Optional or Additional Functionality Connections - HE Mode
Thermocouple 1, ACL3200 to Type-K TC (Set "TC1 E/D" DIP switch to Disabled if not used)
Thermocouple 2, ACL3200 to Type-K TC (Set "TC2 E/D" DIP switch to Disabled if not used)
Remote On/Off switch (jumper if not used)
Shutdown (jumper if not used)
Alarm Status (dry contacts)
Valve (Pilot) Solenoid Output (Connect a wire jumper from "FI Out" "P" terminal to "V" if Valve Solenoid Output is desired in HE mode)
Relay 1 dry contacts (controlled by TC1)
Relay 2 dry contacts (controlled by TC2)
4-20mA output (TC1 or TC2 selectable)
Modbus RTU, RS485

Flame Ionization (FI) Connection Diagram

The following diagram shows the wiring connections for the ACL3200 Flame Ionization Ignition System in FI mode.

Figure 7 - ACL3200 Wiring Diagram - FI Mode



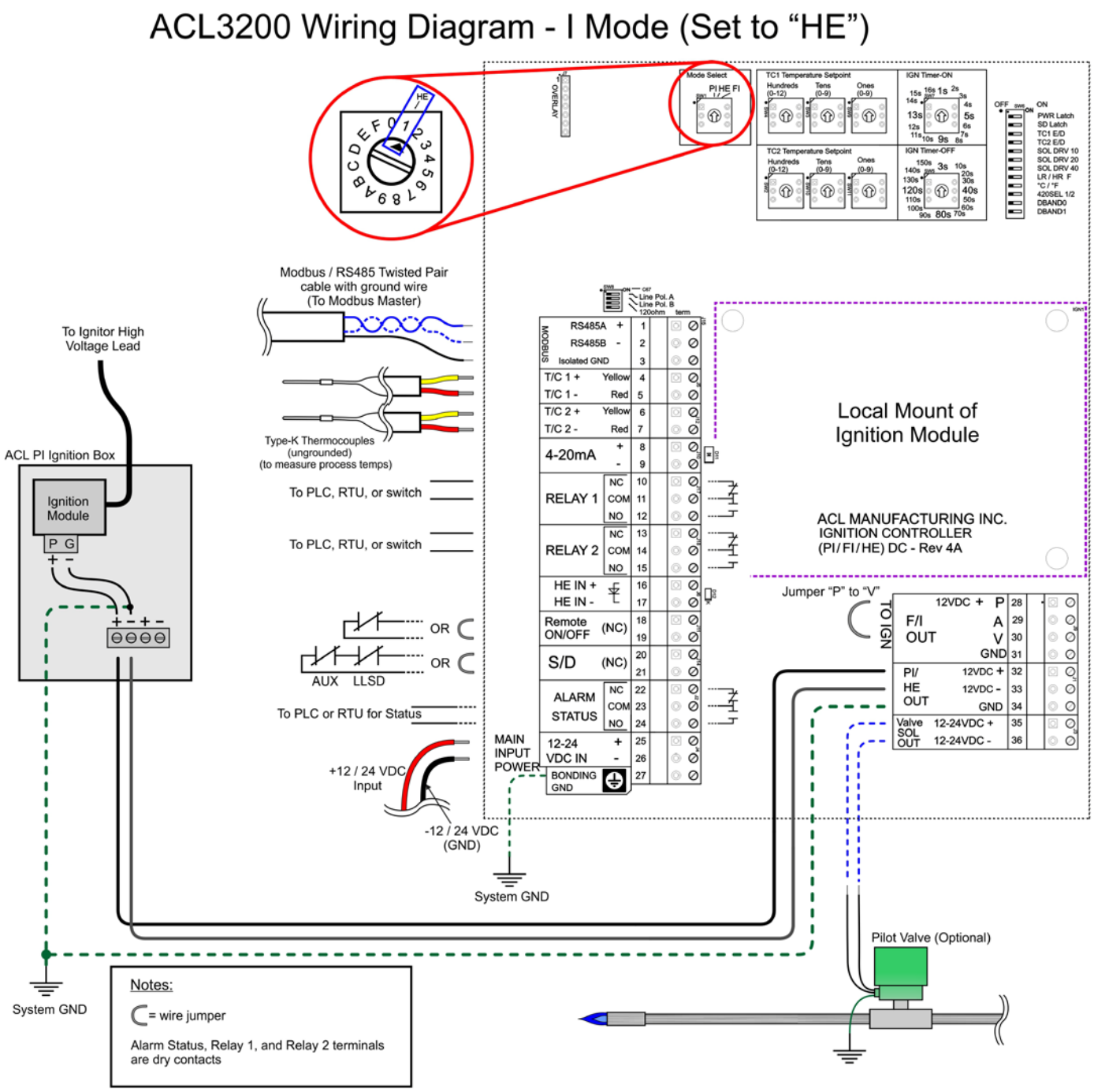
Minimum Required Wiring Connections - FI Mode
FI Out to ACL FI Ignition Box: 12VDC + (P)ower, (A)larm, (V)alve, GND
Main Input Power (+12/24VDC, -12/24VDC)
Ignitor High Voltage Lead

Optional or Additional Functionality Connections - FI Mode
Thermocouple 1, ACL3200 to Type-K TC (Set "TC1 E/D" DIP switch to Disabled if not used)
Thermocouple 2, ACL3200 to Type-K TC (Set "TC2 E/D" DIP switch to Disabled if not used)
Remote On/Off switch (jumper if not used)
Shutdown (jumper if not used)
Alarm Status (dry contacts)
Valve (Pilot) Solenoid Output
Relay 1 dry contacts (controlled by TC1)
Relay 2 dry contacts (controlled by TC2)
4-20mA output (TC1 or TC2 selectable)
Modbus RTU, RS485

Ignitor Only (I) Connection Diagram

The following diagram shows the wiring connections for the ACL3200 Ignitor Only Ignition System in I mode.

Figure 8 - ACL3200 Wiring Diagram - I Mode



Minimum Required Wiring Connections - I Mode
PI / HE Out to ACL I Ignition Box: 12VDC+, 12VDC-, GND
Main Input Power (+12/24VDC, -12/24VDC)
Ignitor High Voltage Lead

Optional or Additional Functionality Connections - I Mode
Thermocouple 1, ACL3200 to Type-K TC (Set "TC1 E/D" DIP switch to Disabled if not used)
Thermocouple 2, ACL3200 to Type-K TC (Set "TC2 E/D" DIP switch to Disabled if not used)
Remote On/Off switch (jumper if not used)
Shutdown (jumper if not used)
Alarm Status (dry contacts)
Valve (Pilot) Solenoid Output (Connect a wire jumper from "FI Out" "P" terminal to "V" if Valve Solenoid Output is desired in HE mode)
Relay 1 dry contacts (controlled by TC1)
Relay 2 dry contacts (controlled by TC2)
4-20mA output (TC1 or TC2 selectable)
Modbus RTU, RS485

Appendix A - Applicable Standard and Code Requirements

CSA Standard C22.2 No.0-10 - General Requirements-Canadian Electrical Code Part II

CAN/CSA-C22.2 No. 0.4-04 - Bonding of Electrical Equipment

CSA Standard C22.2 No. 94-M91 - Special Purpose Enclosures

CSA Standard C22.2 No. 142-M1987 - Process Control Equipment

CSA C22.2 No. 199-M89 - Combustion Safety Controls and Solid-State Ignitors for Gas and Oil Burning Equipment

CSA Standard C22.2 No. 213-M1987 - Non-Incendive Electrical Equipment for Use in Class I, Division 2 Hazardous Locations

UL Standard 50, 12th Edition- Industrial Control Equipment for Use in Hazardous (Classified) Locations

UL746C, 6th Edition - Standard for Polymeric Materials - Use in Electrical Equipment Evaluations

UL 508, 17th Edition - Industrial Control Equipment

ANSI/UL 698 13th Edition- Industrial Control Equipment for use in Hazardous (Classified) Locations

ANSI Z21.20-2005 - Automatic Gas Ignition Systems and Components

ANSI ISA 12.12.01-2007- Non Incendive Electrical Equipment for Use in Class I and II, Division 2 and Class III, Divisions 1 and 2 Hazardous (Classified) Locations

Appendix B - ACL3200 Rev 4A Technical Specifications

General Notes:

- All components on the ACL3200 Controller are RoHS compliant.

Modbus Notes:

- Receivers are designed to fail-safe to a logic high output state if inputs (terminals A and B) are left un-driven or shorted. If the bus is un-driven for long periods of time, the receivers are designed to not require line polarization on the bus (adding a pullup resistor to "A" and a pulldown resistor to "B"). Line polarization may be enabled (via the two DIP switches on the top of the ACL3200 Controller) for use with other devices on the same RS-485 bus.
- Drivers are protected from excess current flow caused by bus contention or output short-circuits by both an internal current limit and a thermal-overload shutdown.
- RS-485 inputs (terminals A and B) are protected against ESD (Electrostatic Discharge) events up to +/- 15kV (Air-Gap and Human Body Model) and up to +/- 8kV Contact Discharge (IEC61000-4-2).

Specification	Default Value	Possible Values or Range
Modbus Protocol	Modbus RTU	Modbus RTU
Modbus Slave ID (address)	2	1 - 247
Modbus/RS-485 Serial Settings:		
Baud rate	9600	300, 1200, 2400, 4800, 9600, 19200, 38400
Number of data bits	8	8
Parity bit setting	None	None, Even, Odd
Stop bits	1	1, 2 (only with parity set to "None")
Operating Temperature		-40°C to 60°C
RS-485 (Modbus) Signals:		
Input voltage on A and B signals		-7 VDC to +12 VDC
Driver Short Circuit Current Limit		+/- 250mA maximum
Differential Driver Output, No Load		5 VDC
Differential Driver Output, R_L = 54ohms		1.5 VDC minimum 2.7 VDC typical 5 VDC maximum
Receiver Input Resistance		96kohm minimum (1/8th of a Modbus "Unit Load")
Receiver Differential Threshold (VA – VB)		-200mV minimum -125mV typical -40mV maximum
Receiver Input Hysteresis		25mV typical
Termination		None or 120ohms (2-pin jumper may be installed by user)
Line Polarization Resistors		560 ohms +/- 1%, selectable by user via two DIP switches
Line Polarization Pullup voltage		5 VDC +/- 1% (5% max)
Line Polarization Pulldown voltage		RS-485 Isolated or Common GND (0V)

Inputs and Control Outputs:		
Main Power Input, Voltage Range		10VDC (minimum) to 29VDC (maximum)
System Current Draw, no solenoid outputs on		300mA Max, x mA typical (at 12VDC)
System Current Draw, Pilot solenoid output on, no Low Power solenoid drivers engaged		
Solenoid Outputs:		
Voltage Output on Solenoid terminals (12VDC main input)		Main Power Input minus a small voltage drop that is dependent on current draw and temperature: Solenoid outputs are 11.8V to 11.98V (approx.)
Voltage Output on Solenoid terminals (24VDC main input)		Main Power Input minus a small voltage drop that is dependent on current draw and temperature: Solenoid outputs are 23.8V to 23.98V (approx.)
Voltage Output on Solenoid terminals (10VDC main input)		Main Power Input minus a small voltage drop that is dependent on current draw and temperature: Solenoid outputs are 9.8V to 9.98V (approx.)
Physical Dimensions:		
Length		8.750” (222.25mm)
Width		7.000” (177.8mm)
Height, maximum (from bottom of components on bottom layer to top of components on top layer)		1.130” (28.70mm)

Appendix C - Troubleshooting

Flare Stack / Incinerator Troubleshooting

#	Issue	Possible Reason	Corrective Action
1	Fails to attempt ignition	Blown fuse	Check if the System On LED is on or blinking: it should always be lit or blinking, regardless of mode. If System On LED is off, replace fuse with a 2A max fuse
		Supply voltage too low	Ensure that the minimum input voltage is 11.5VDC (measured with a volt meter) for use with 1 solenoid output
		Poor power connections	Check all connections on the terminal strips. Ensure that there are no short circuits, that the wires are tightly gripped inside the terminals, and that the screws on each terminal are tight.
		Shutdown terminal not closed	Ensure that Shutdown terminals are closed: 12VDC should be present on both the S/D+ and S/D- terminals
		Remote On/Off terminal not closed	Ensure that Remote On/Off terminals are closed: 12VDC should be present on both the S/D+ and S/D- terminals
2	Attempts ignition but pilot doesn't light	Fuel gas supply to Pilot may be too high or too low	Pilot fuel gas supply should be set at 5 pounds
		Gap setting on ignitor/flame rod not correct	Gap should be approximately 1/8" (3.175mm) and rod tip needs to be cut to a sharp point
		Ignition cable defective or insulation worn	Check continuity through the ignition cable. Multimeter should read close to zero ohms. If not, cable needs to be replaced.
		Poor ground connection	Ensure that good, thick ground connections are made at the ACL3200 and at the Pilot/burner valve
		Pilot solenoid failure	Check supply power to solenoid. Check gas flow through solenoid
		Plugged orifice on Pilot	Clean out Pilot orifice (Do Not redrill!)
3	Weak or Erratic Spark	Gap setting too wide or rod not cut to a point	Shorten gap setting to approximately 1/8" (3.175mm) and recut the ignitor rod tip
		Ignition cable defective or insulation worn	Check continuity through the ignition cable. Multimeter should read close to zero ohms. If not, cable needs to be replaced.
		Poor ground connection	Ensure that good, thick ground connections are made at the ACL3200 and at the ignitor tip
		Contaminated ignitor rod or Pilot nozzle	Remove Pilot assembly, clean rod and nozzle, and reinstall
4	Solenoid valve not opening	PI/I/HE modes: F/I Out "P" and "V" not shorted	A wire jumper is required between the "P" and "V" terminals to use the Valve solenoid output in PI/I/HE modes.
		FI mode:	Recheck all connections are tightly screwed into the F/I OUT terminals and that there are no short circuits.
5	Solenoid valve opens but then closes again	Wrong Low Power Solenoid Driver setting for the attached	Verify that the Low Power Solenoid Driver DIP switch settings are matched to the solenoid valves

	(intermittent operation)	solenoids	connected to the ACL3200. (See DIP switch section under "SOL DRV x" DIP switches)
		Voltage droop on input	Some larger solenoid valves rated for 12VDC require an output voltage very near to 12VDC. Measure the output voltage on the solenoid terminals to ensure that it's sufficient (approx. >= 11.5VDC). Higher current drawn on each solenoid output will cause slightly higher voltage drops which may interfere with solenoid operation. Input voltage may need to be boosted to 12.5VDC if multiple large solenoids are attached to one solenoid output.

Notes:

ACL

Manufacturing Inc.

Website: www.aclmfg.com

Limited Warranty

Seller warrants that the product hereby purchased is, upon delivery, free from defects in material and workmanship and that any product which is found to be defective in such workmanship or material will be repaired or replaced by Seller for a period of one year from purchase date. Warranty of such items do not include shipping, installation or set-up.

Liability Statement

ACL Manufacturing Inc. Shall not be liable for any special, indirect, consequential or other damages of a like general nature, including, without limitation, loss of profits or production, or loss of expenses of any nature incurred by the buyer or any third party.

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E-mail: aclmfg@telus.net

SOURCE EMISSIONS SURVEY
OF
BLACK GOLD RUSH INDUSTRIES LTD.
18” THERMAL COMBUSTOR INLET DUCT
AND OUTLET STACK
MIDLAND, TEXAS

DECEMBER 2014

TESTING COMPANY: METCO ENVIRONMENTAL
3226 COMMANDER DR.
CARROLLTON, TEXAS 75006
972-931-7127
FILE NUMBER 14-388A(OH)

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SOURCE EMISSIONS SURVEY
BLACK GOLD RUSH
18" THERMAL COMBUSTOR INLET DUCT
AND OUTLET STACK
MIDLAND, TEXAS
FILE NUMBER 14-388A(OH)

INTRODUCTION

METCO Environmental, 3226 Commander Dr., Carrollton, Texas, conducted an NSPS Subpart OOOO manufacturer certification test of Black Gold Rush Industries LTD (Black Gold Rush) 18" Combustor, located in Midland, Texas, on December 18 through 21, 2014. The purpose of these tests was to determine the concentrations of carbon monoxide and total hydrocarbon being emitted to the atmosphere via the 18" Thermal Combustor Outlet Stack, in order to meet the requirements of 40 CFR 60 Subpart OOOO. The visible emissions were also determined. The concentrations of total hydrocarbon were also determined at the 18" Thermal Combustor Inlet Duct in order to determine the removal efficiency. The testing was performed at four different operating conditions. Condition I was performed while the unit was operating at 90-100% of the maximum design rate; Condition II at 70-100%; Condition III at 30-70%; and Condition IV at 0-30%. The fuel used during the testing was 100% propylene gas.

METCO Environmental is an accredited Air Emission Testing Body (AETB) having demonstrated conformance to the ASTM D-7036-04 standard by the Stack Accreditation Council (Certificate Number 2007.003.0113.1217). The sampling was performed by the following METCO personnel: Shane Lee – Project Supervisor, Ned Shappley, Robert Adams. Brandon Hopper, and Phillip Froeman. Shane Lee served as the Qualified Individual on-site. The credentials for the Qualified Individual can be found in Appendix K of the report.

The sampling was performed according to Sampling Protocol 14-388A(OH) following the procedures set forth in the Code of Federal Regulations, Title 40, Chapter I, Part 60,

Appendix A, Methods 1, 2, 3C, 4, 10, 18, 22, and 25A; and Subpart OOOO. Any modifications are described in the Sampling and Analytical Procedures section of the report.

SUMMARY OF RESULTS

18" Thermal Combustor Outlet Stack

Emission Parameter	Condition-Run Number I-1	Condition-Run Number I-2	Condition-Run Number I-3	Average	Allowable Parameter
Carbon Monoxide Emissions – ppmvd[1]	4.35	4.76	3.77	4.29	≤ 10
Total Hydrocarbon Emissions as Propane – ppmvw[1]	0.13	0.52	0.37	0.34	≤ 10
Excess Air @ Sampling Point - %	260.5	303.0	210.1	254.9	≥ 150
Total Hydrocarbon Destruction Efficiency - %	>99.99	99.99	99.99	>99.99	≥ 95

Emission Parameter	Condition-Run Number II-1	Condition-Run Number II-2	Condition-Run Number II-4	Average	Allowable Parameter
Carbon Monoxide Emissions – ppmvd[1]	2.13	1.86	2.13	2.04	≤ 10
Total Hydrocarbon Emissions as Propane – ppmvw[1]	0.12	0.06	0.13	0.10	≤ 10
Excess Air @ Sampling Point - %	266.7	236.5	260.5	254.6	≥ 150
Total Hydrocarbon Destruction Efficiency - %	>99.99	>99.99	>99.99	>99.99	≥ 95

Emission Parameter	Condition-Run Number III-1	Condition-Run Number III-2	Condition-Run Number III-3	Average	Allowable Parameter
Carbon Monoxide Emissions – ppmvd[1]	3.10	3.50	2.85	3.15	≤ 10
Total Hydrocarbon Emissions as Propane – ppmvw[1]	0.39	0.56	0.12	0.36	≤ 10
Excess Air @ Sampling Point - %	312.5	295.5	295.5	301.1	≥ 150
Total Hydrocarbon Destruction Efficiency - %	>99.99	99.99	>99.99	>99.99	≥ 95

Emission Parameter	Condition-Run Number IV-1	Condition-Run Number IV-2	Condition-Run Number IV-3	Average	Allowable Parameter
Carbon Monoxide Emissions – ppmvd[1]	2.62	2.63	2.54	2.60	≤ 10
Total Hydrocarbon Emissions as Propane – ppmvw[1]	0.01	0.03	0.65	0.23	≤ 10
Excess Air @ Sampling Point - %	420.7	436.8	408.1	421.9	≥ 150
Total Hydrocarbon Destruction Efficiency - %	99.99	99.99	99.97	99.98	≥ 95

[1] Corrected to 3% carbon dioxide.

SUMMARY OF RESULTS

18” Thermal Combustor Outlet Stack

Condition-Run Number	Date	Time	Visible Emissions (min:sec)
I-1	12/19/14	0935-1050	00:00
I-2	12/19/14	1115-1225	00:00
I-3	12/19/14	1235-1345	00:00
Average			00:00
II-1	12/19/14	1420-1530	00:00
II-2	12/19/14	1540-1650	00:00
II-3	12/19/14	1700-1810	00:00
Average			00:00
III-1	12/20/14	1115-1225	00:00
III-2	12/20/14	1233-1343	00:00
III-3	12/20/14	1355-1505	00:00
Average			00:00
IV-1	12/20/14	1520-1630	00:00
IV-2	12/20/14	1640-1750	00:00
IV-3	12/21/14	0942-1052	00:00
Average			00:00
Allowable Visible Emissions			02:00

SUMMARY OF RESULTS

18" Thermal Combustor

Condition-Run Number	Inlet Duct Average Total Hydrocarbon Concentration as Propylene (lbs/hr)	Outlet Stack Average Total Hydrocarbon Emissions as Propylene (lbs/hr)	Destruction Efficiency (%)
I-1	49.185	0.001	> 99.99
I-2	49.185	0.003	99.99
I-3	49.185	0.003	99.99
Average	49.185	0.002	> 99.99
II-1	42.332	0.001	> 99.99
II-2	42.332	< 0.001	> 99.99
II-3	42.332	0.001	> 99.99
Average	42.332	< 0.001	> 99.99
III-1	24.920	0.002	99.99
III-2	24.920	0.003	99.99
III-3	24.920	0.001	> 99.99
Average	24.920	< 0.001	> 99.99
IV-1	9.837	< 0.001	> 99.99
IV-2	9.837	< 0.001	> 99.99
IV-3	9.837	0.003	99.97
Average	9.837	< 0.002	99.98

Note: Only one canister sample was collected over the duration of the testing condition.

SUMMARY OF RESULTS

18” Thermal Combustor Inlet Duct

Condition-Run Number	I-1	I-2	I-3	Average
Date	12/19/14	12/19/14	12/19/14	----
Time	0935-1055	1115-1225	1235-1345	----
Flow Rate – SCFM[1]	7.5	7.5	7.5	7.5
% Carbon Dioxide - % Vol. (Canister)	----	----	----	< 0.0544
% Hydrogen - % Vol. (Canister)	----	----	----	< 0.0510
% Carbon Monoxide - % Vol. (Canister)	----	----	----	< 0.0380
% Nitrogen - % Vol. (Canister)	----	----	----	0.658
% Oxygen - % Vol. (Canister)	----	----	----	0.181
% Methane - % Vol. (Canister)	----	----	----	<0.0305
Higher Heating Value – Btu/scf	----	----	----	2,200
Duct Temperature -°F	42	47	51	47
Total Hydrocarbon Concentration as Propylene - ppmv	----	----	----	1,016,219[2]
Total Hydrocarbon Concentration as Propylene - lbs/hr	----	----	----	49.185

[1] Provided by Black Gold Rush, and represents approximately 90% of the maximum rate."
[2] Calculated Results were greater than 1 million, 1 million used for calculation purposes.
Note: Only one canister sample was collected over the duration of the testing condition.

SUMMARY OF RESULTS

18” Thermal Combustor Outlet Stack

Condition-Run Number	I-1	I-2	I-3	Average
Date	12/19/14	12/19/14	12/19/14	----
Time	0935-1052	1115-1225	1235-1345	----
Stack Flow Rate – ACFM	2,215	2,037	2,181	2,144
Stack Flow Rate – DSCFM[1]	611	571	594	592
% Water Vapor - % Volume	5.76	6.14	6.33	6.10
% Carbon Dioxide - % Vol.[2]	4.8	4.4	5.4	4.9
% Oxygen - % Vol.[2]	15.3	15.9	14.4	15.2
% Nitrogen - % Vol.[2]	79.9	79.8	80.2	80.0
% Methane - % Vol.	<0.0310	<0.0310	<0.0310	<0.0310
Molecular Weight – lb/lb-mole	28.72	28.67	28.72	28.70
% Excess Air @ Sampling Point	260.5	303.0	210.1	254.8
Stack Temperature -°F	1,291	1,188	1,196	1,178
Stack Pressure - "Hg	27.18	27.18	27.16	27.17

[1] 29.92 "Hg, 68°F (760 mm Hg, 20°C)
[2] Method 3C analytical results are normalized to 100%

SUMMARY OF RESULTS

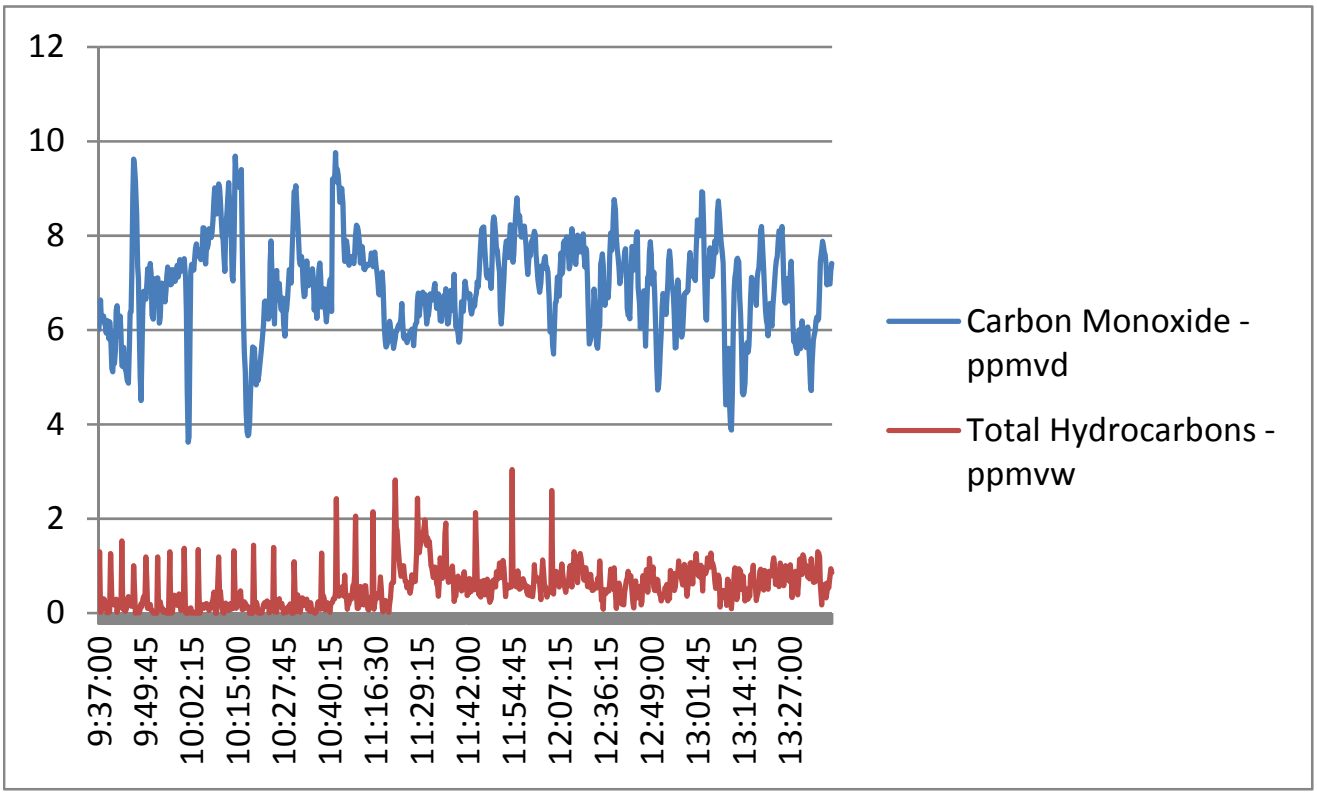
18" Thermal Combustor Outlet Stack

Condition-Run Number	I-1	I-2	I-3	Average
Date	12/19/14	12/19/14	12/19/14	----
Time	0937-1040	1114-1217	1235-1338	----
Stack Flow Rate – DSCFM[1]	611	571	594	591
% Carbon Dioxide - % Vol. (Int. Bag)	4.8	4.4	5.4	4.9
% Water Vapor - % Volume	5.76	6.14	6.33	6.10
Carbon Monoxide Emissions - ppmvd	6.96	6.98	6.79	6.91
Carbon Monoxide Emissions - ppmvd[2]	4.35	4.76	3.77	4.29
Carbon Monoxide Emissions - lbs/hr	0.019	0.017	0.018	0.018
Total Hydrocarbon Emissions as Propane - ppmvw	0.20	0.76	0.67	0.54
Total Hydrocarbon Emissions as Propane - ppmvw[2]	0.13	0.52	0.37	0.34
Total Hydrocarbon Emissions as Propane - ppmvd	0.21	0.81	0.72	0.58
Total Hydrocarbon Emissions as Propylene - lbs/hr	0.001	0.003	0.003	0.002

[1] 29.92 "Hg, 68°F (760 mm Hg, 20°C)
[2] Corrected to 3% carbon dioxide

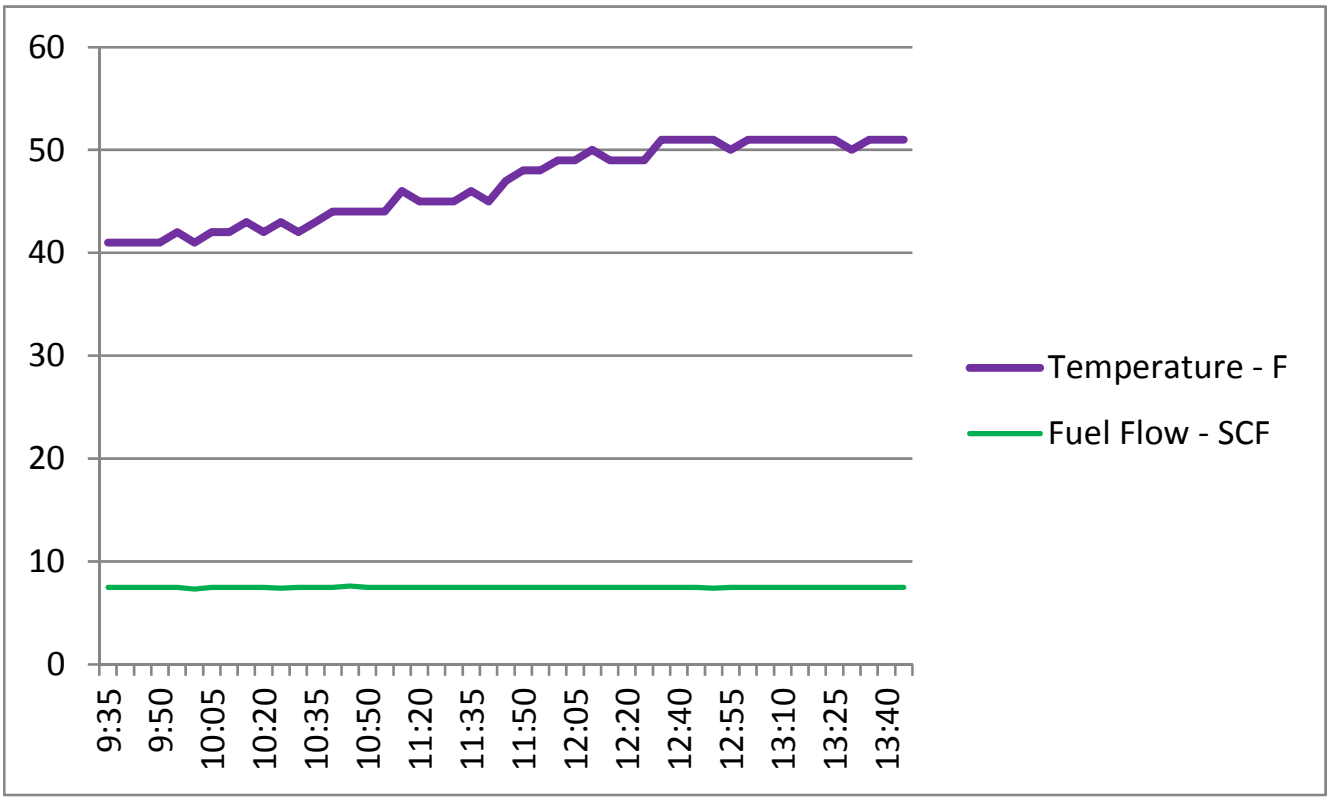
SUMMARY OF RESULTS

Reference Method Monitors CO and THC Graph Summary



SUMMARY OF RESULTS

Plant Operational Data Graph Summary



SUMMARY OF RESULTS

18" Thermal Combustor Inlet Duct

Condition-Run Number	II-1	II-2	II-3	Average
Date	12/19/14	12/19/14	12/19/14	----
Time	1420-1530	1540-1650	1700-1810	----
Flow Rate – SCFM[1]	6.6	6.5	6.5	6.5
% Carbon Dioxide - % Vol. (Canister)	----	----	----	<0.0544
% Hydrogen - % Vol. (Canister)	----	----	----	<0.0510
% Carbon Monoxide - % Vol. (Canister)	----	----	----	<0.0380
% Nitrogen - % Vol. (Canister)	----	----	----	0.319
% Oxygen - % Vol. (Canister)	----	----	----	0.0627
% Methane - % Vol. (Canister)	----	----	----	<0.0305
Higher Heating Value – Btu/scf	----	----	----	2,142
Duct Temperature -°F	68	68	50	62
Total Hydrocarbon Concentration as Propylene - ppmv	----	----	----	993,076
Total Hydrocarbon Concentration as Propylene - lbs/hr	---	----	----	42.332

[1] Provided by Black Gold Rush. The value in the table represents the average rate over the 70-100% condition, which ranged from 5.4 to 7.7 SCFM.
Note: Only one canister sample was collected over the duration of the testing condition.

SUMMARY OF RESULTS

18" Thermal Combustor Outlet Stack

Condition-Run Number	II-1	II-2	II-3	Average
Date	12/19/14	12/19/14	12/19/14	----
Time	1420-1530	1540-1650	1700-1810	----
Stack Flow Rate – ACFM	1,750	1,865	1,984	1,866
Stack Flow Rate – DSCFM[1]	503	530	570	534
% Water Vapor - % Volume	5.97	6.05	5.56	5.86
% Carbon Dioxide - % Vol.[2]	4.7	5.0	4.8	4.8
% Oxygen - % Vol.[2]	15.4	14.9	15.3	15.2
% Nitrogen - % Vol.[2]	79.9	80.0	79.9	79.9
% Methane - % Vol.	<0.0310	<0.0310	<0.0310	<0.0310
Molecular Weight – lb/lb-mole	28.69	28.68	28.75	28.71
% Excess Air @ Sampling Point	266.7	236.5	260.5	254.6
Stack Temperature -°F	1,111	1,128	1,120	1,120
Stack Pressure - "Hg	27.11	27.12	27.13	27.12

[1] 29.92 "Hg, 68°F (760 mm Hg, 20°C)
[2] Method 3C analytical results are normalized to 100%

SUMMARY OF RESULTS

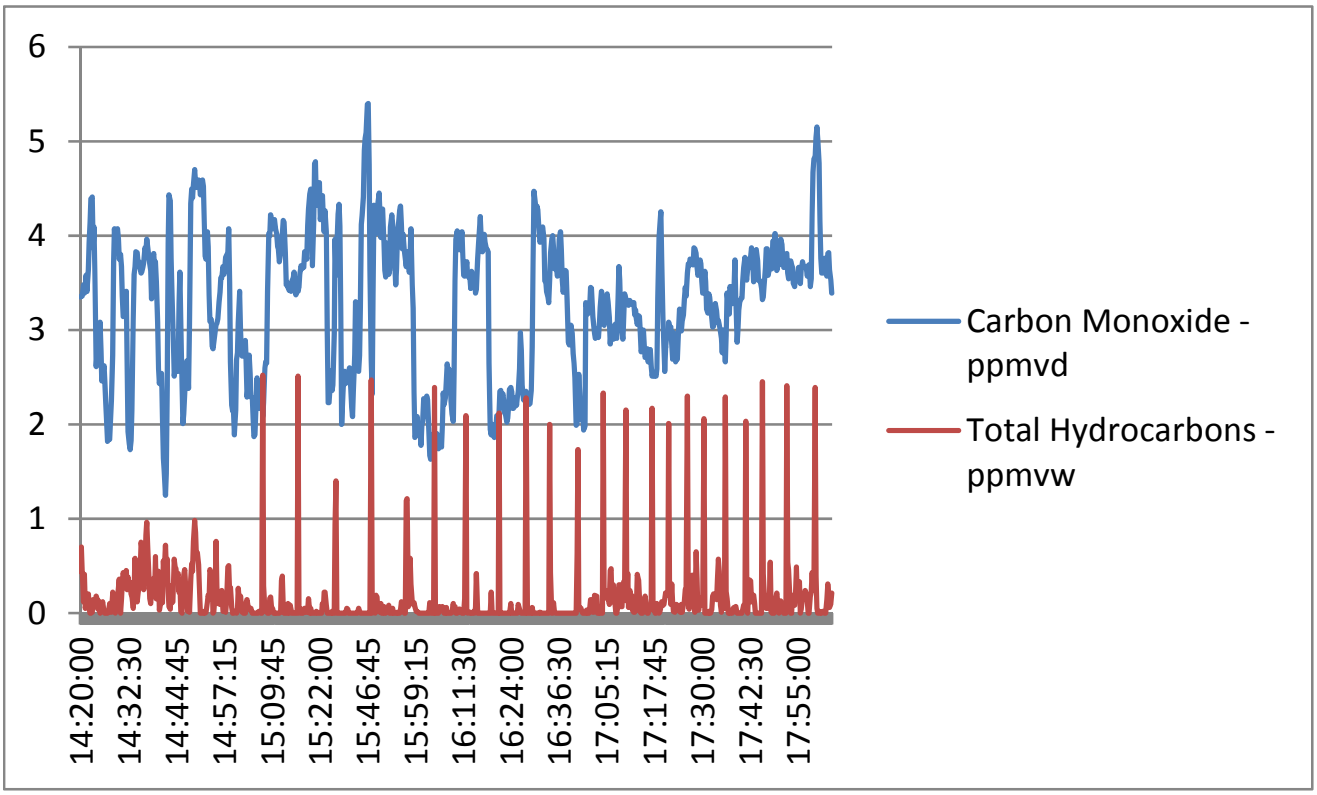
18" Thermal Combustor Outlet Stack

Condition-Run Number	II-1	II-2	II-3	Average
Date	12/19/14	12/19/14	12/19/14	----
Time	1420-1523	1541-1644	1700-1803	----
Stack Flow Rate – DSCFM[1]	503	530	570	534
% Carbon Dioxide - % Vol. (Int. Bag)	4.7	5.0	4.8	4.8
% Water Vapor - % Volume	5.97	6.05	5.56	5.86
Carbon Monoxide Emissions - ppmvd	3.33	3.10	3.40	3.28
Carbon Monoxide Emissions - ppmvd[2]	2.13	1.86	2.13	2.04
Carbon Monoxide Emissions - lbs/hr	0.007	0.007	0.008	0.007
Total Hydrocarbon Emissions as Propane - ppmvw	0.19	0.10	0.21	0.17
Total Hydrocarbon Emissions as Propane - ppmvw[2]	0.12	0.06	0.13	0.10
Total Hydrocarbon Emissions as Propane - ppmvd	0.20	0.11	0.22	0.18
Total Hydrocarbon Emissions as Propylene - lbs/hr	0.001	<0.001	0.001	<0.001

[1] 29.92 "Hg, 68°F (760 mm Hg, 20°C)
[2] Corrected to 3% carbon dioxide

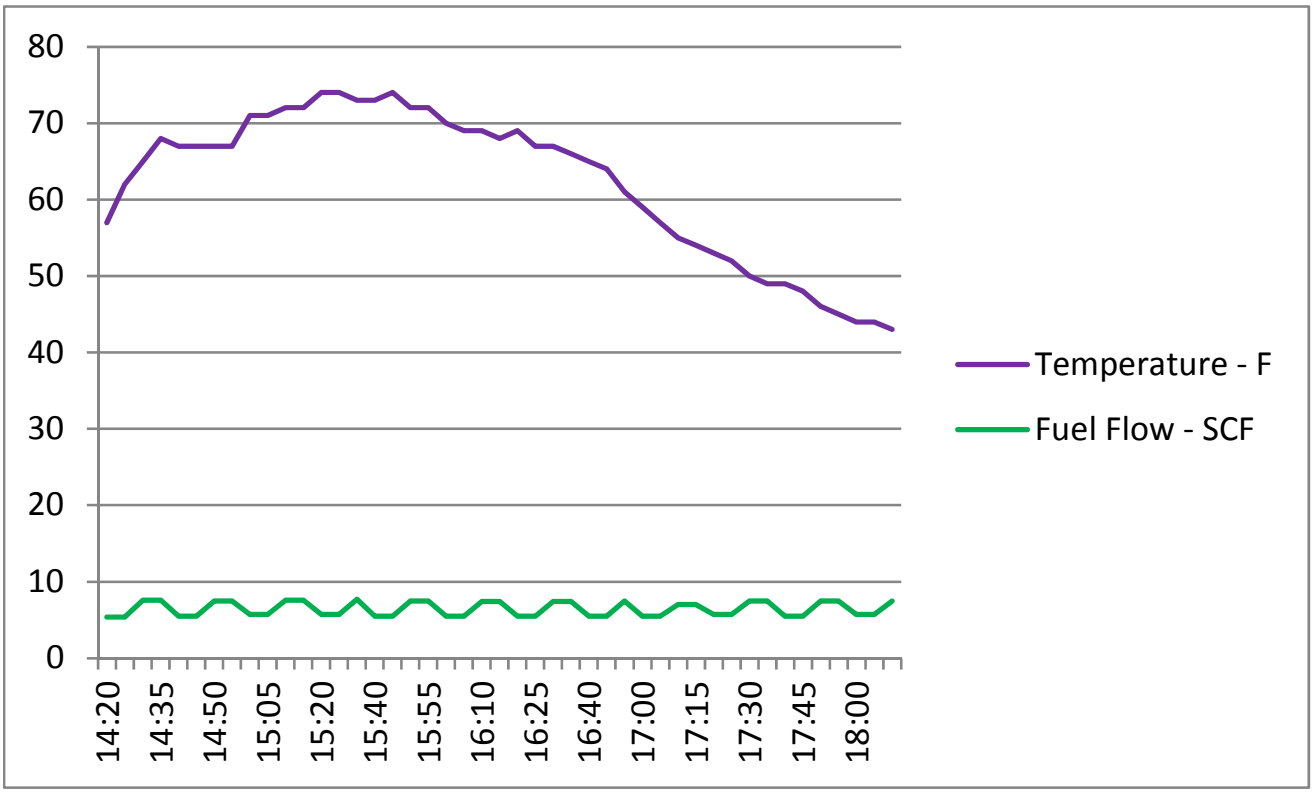
SUMMARY OF RESULTS

Reference Method Monitors CO and THC Graph Summary



SUMMARY OF RESULTS

Plant Operational Data Graph Summary



SUMMARY OF RESULTS

18" Thermal Combustor Inlet Duct

Condition-Run Number	III-1	III-2	III-3	Average
Date	12/20/14	12/20/14	12/20/14	----
Time	1115-1225	1233-1343	1355-1500	----
Flow Rate – SCFM[1]	4.2	3.6	3.5	3.8
% Carbon Dioxide - % Vol. (Canister)	----	----	----	<0.0544
% Hydrogen - % Vol. (Canister)	----	----	----	<0.0510
% Carbon Monoxide - % Vol. (Canister)	----	----	----	<0.0380
% Nitrogen - % Vol. (Canister)	----	----	----	0.901
% Oxygen - % Vol. (Canister)	----	----	----	0.251
% Methane - % Vol. (Canister)	----	----	----	<0.0305
Higher Heating Value – Btu/scf	----	----	----	2,233
Duct Temperature -°F	49	63	69	60
Total Hydrocarbon Concentration as Propylene - ppmv	----	----	----	1,033,765[2]
Total Hydrocarbon Concentration as Propylene - lbs/hr	----	----	----	24.920

[1] Provided by Black Gold Rush. The value in the table represents the average over a range of 30-70%, or 2.2 to 7.2 SCFM.
[2] Calculated Results were greater than 1 million, 1 million used for calculation purposes.
Note: Only one canister sample was collected over the duration of the testing condition.

SUMMARY OF RESULTS

18" Thermal Combustor Outlet Stack

Condition-Run Number	III-1	III-2	III-3	Average
Date	12/20/14	12/20/14	12/20/14	----
Time	1115-1225	1233-1343	1355-1505	----
Stack Flow Rate – ACFM	1,863	1,514	1,908	1,762
Stack Flow Rate – DSCFM[1]	576	458	569	534
% Water Vapor - % Volume	5.51	5.64	5.30	5.48
% Carbon Dioxide - % Vol.[2]	4.3	4.4	4.4	4.4
% Oxygen - % Vol.[2]	16.0	15.8	15.8	15.9
% Nitrogen - % Vol.[2]	79.7	79.8	79.8	79.8
% Methane - % Vol.	<0.0310	<0.0310	<0.0310	<0.0310
Molecular Weight – lb/lb-mole	28.70	28.70	28.74	28.71
% Excess Air @ Sampling Point	312.5	295.5	295.5	301.1
Stack Temperature -°F	1,010	1030	1,061	1,036
Stack Pressure - "Hg	27.16	27.09	27.05	27.10

[1] 29.92 "Hg, 68°F (760 mm Hg, 20°C)
[2] Method 3C analytical results are normalized to 100%

SUMMARY OF RESULTS

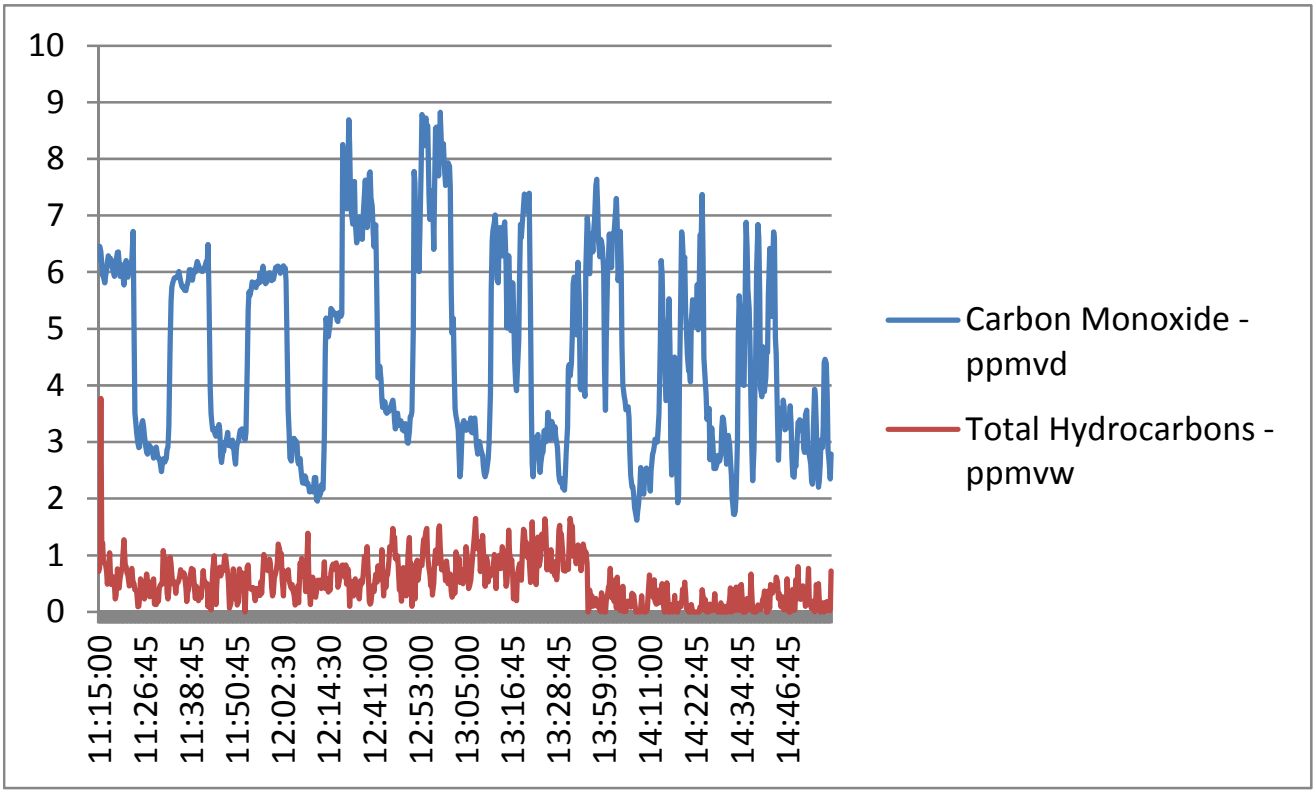
18" Thermal Combustor Outlet Stack

Condition-Run Number	III-1	III-2	III-3	Average
Date	12/20/14	12/20/14	12/20/14	----
Time	1115-1218	1234-1337	1355-1458	----
Stack Flow Rate – DSCFM[1]	576	458	569	534
% Carbon Dioxide - % Vol.	4.3	4.4	4.4	4.4
% Water Vapor - % Volume	5.51	5.64	5.30	5.48
Carbon Monoxide Emissions - ppmvd	4.45	5.13	4.18	4.59
Carbon Monoxide Emissions - ppmvd[2]	3.10	3.50	2.85	3.15
Carbon Monoxide Emissions - lbs/hr	0.011	0.010	0.010	0.010
Total Hydrocarbon Emissions as Propane - ppmvw	0.56	0.82	0.18	0.52
Total Hydrocarbon Emissions as Propane - ppmvw[2]	0.39	0.56	0.12	0.36
Total Hydrocarbon Emissions as Propane - ppmvd	0.59	0.87	0.19	0.55
Total Hydrocarbon Emissions as Propylene - lbs/hr	0.002	0.003	0.001	0.002

[1] 29.92 "Hg, 68°F (760 mm Hg, 20°C)
[2] Corrected to 3% carbon dioxide

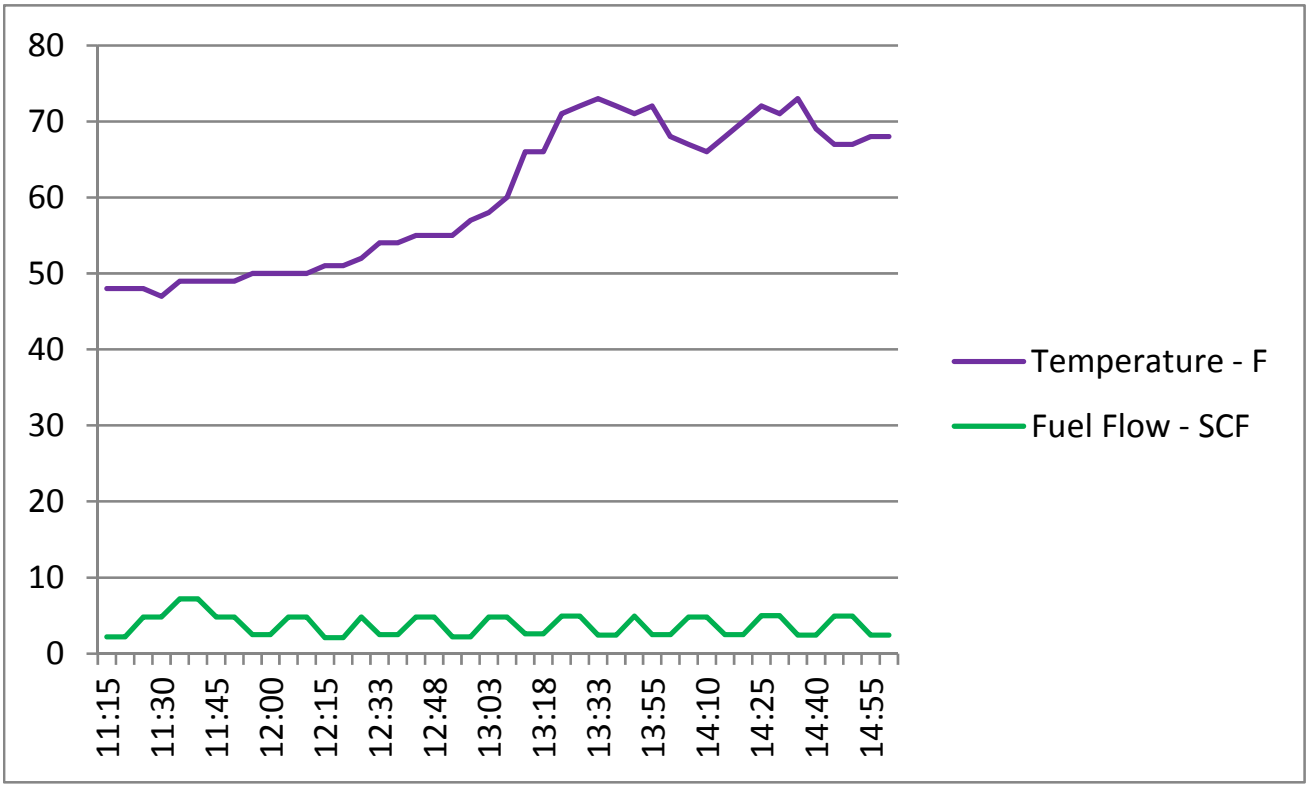
SUMMARY OF RESULTS

Reference Method Monitors CO and THC Graph Summary



SUMMARY OF RESULTS

Plant Operational Data Graph Summary



SUMMARY OF RESULTS

18" Thermal Combustor Inlet Duct

Condition-Run Number	IV-1	IV-2	IV-3	Average
Date	12/20/14	12/20/14	12/21/14	----
Time	1520-1625	1640-1750	0942-1047	----
Flow Rate – SCFM[1]	1.5	1.6	1.5	1.5
% Carbon Dioxide - % Vol. (Canister)	----	----	----	<0.0544
% Hydrogen - % Vol. (Canister)	----	----	----	<0.0510
% Carbon Monoxide - % Vol. (Canister)	----	----	----	<0.0380
% Nitrogen - % Vol. (Canister)	----	----	----	0.437
% Oxygen - % Vol. (Canister)	----	----	----	0.0785
% Methane - % Vol. (Canister)	----	----	----	<0.0305
Higher Heating Value – Btu/scf	----	----	----	2,264
Duct Temperature -°F	70	60	61	64
Total Hydrocarbon Concentration as Propylene - ppmv	----	----	----	1,049,083[2]
Total Hydrocarbon Concentration as Propylene - lbs/hr	----	----	----	9.837

[1] Provided by Black Gold Rush. The value in the table represents the average rate over the 0-30% condition, which ranged from 0.7 to 2.6 SCFM.
[2] Calculated Results were greater than 1 million, 1 million used for calculation purposes.
Note: Only one canister sample was collected over the duration of the testing condition.

SUMMARY OF RESULTS

18" Thermal Combustor Outlet Stack

Condition-Run Number	IV-1	IV-2	IV-3	Average
Date	12/20/14	12/20/14	12/21/14	----
Time	1520-1630	1640-1750	0942-1052	----
Stack Flow Rate – ACFM	1,500	1,588	1,475	1,521
Stack Flow Rate – DSCFM[1]	507	527	479	504
% Water Vapor - % Volume	4.28	4.88	5.15	4.77
% Carbon Dioxide - % Vol.[2]	3.6	3.6	3.7	3.6
% Oxygen - % Vol.[2]	17.0	17.1	16.9	17.0
% Nitrogen - % Vol.[2]	79.4	79.3	79.4	79.37
% Methane - % Vol.	<0.0310	<0.0310	<0.0310	<0.0310
Molecular Weight – lb/lb-mole	28.77	28.71	28.69	28.72
% Excess Air @ Sampling Point	420.7	436.8	408.1	421.9
Stack Temperature -°F	897	912	935	915
Stack Pressure - "Hg	27.03	27.03	26.97	27.01

[1] 29.92 "Hg, 68°F (760 mm Hg, 20°C)
[2] Method 3C analytical results are normalized to 100%

SUMMARY OF RESULTS

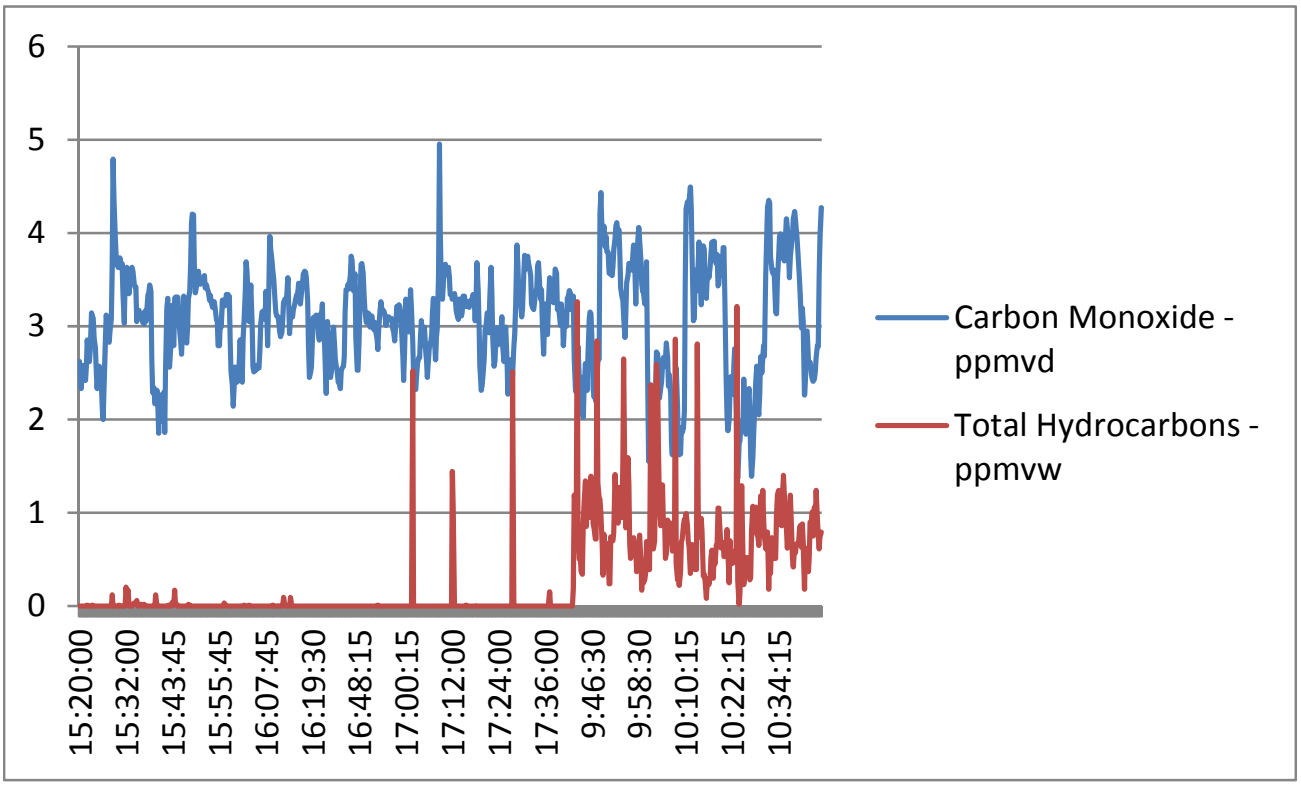
18" Thermal Combustor Outlet Stack

Condition-Run Number	IV-1	IV-2	IV-3	Average
Date	12/20/14	12/20/14	12/21/14	----
Time	1520-1623	1640-1743	0942-1045	----
Stack Flow Rate – DSCFM[1]	507	527	479	4.77
% Carbon Dioxide - % Vol.	3.6	3.6	3.7	3.6
% Water Vapor - % Volume	4.28	4.88	5.15	4.77
Carbon Monoxide Emissions - ppmvd	3.14	3.15	3.13	3.14
Carbon Monoxide Emissions - ppmvd[2]	2.62	2.63	2.54	2.60
Carbon Monoxide Emissions - lbs/hr	0.007	0.007	0.007	0.007
Total Hydrocarbon Emissions as Propane - ppmvw	0.01	0.03	0.80	0.28
Total Hydrocarbon Emissions as Propane - ppmvw[2]	0.01	0.03	0.65	0.23
Total Hydrocarbon Emissions as Propane - ppmvd	0.01	0.03	0.84	0.29
Total Hydrocarbon Emissions as Propylene - lbs/hr	<0.001	<0.001	0.003	<0.002

[1] 29.92 "Hg, 68°F (760 mm Hg, 20°C)
[2] Corrected to 3% carbon dioxide

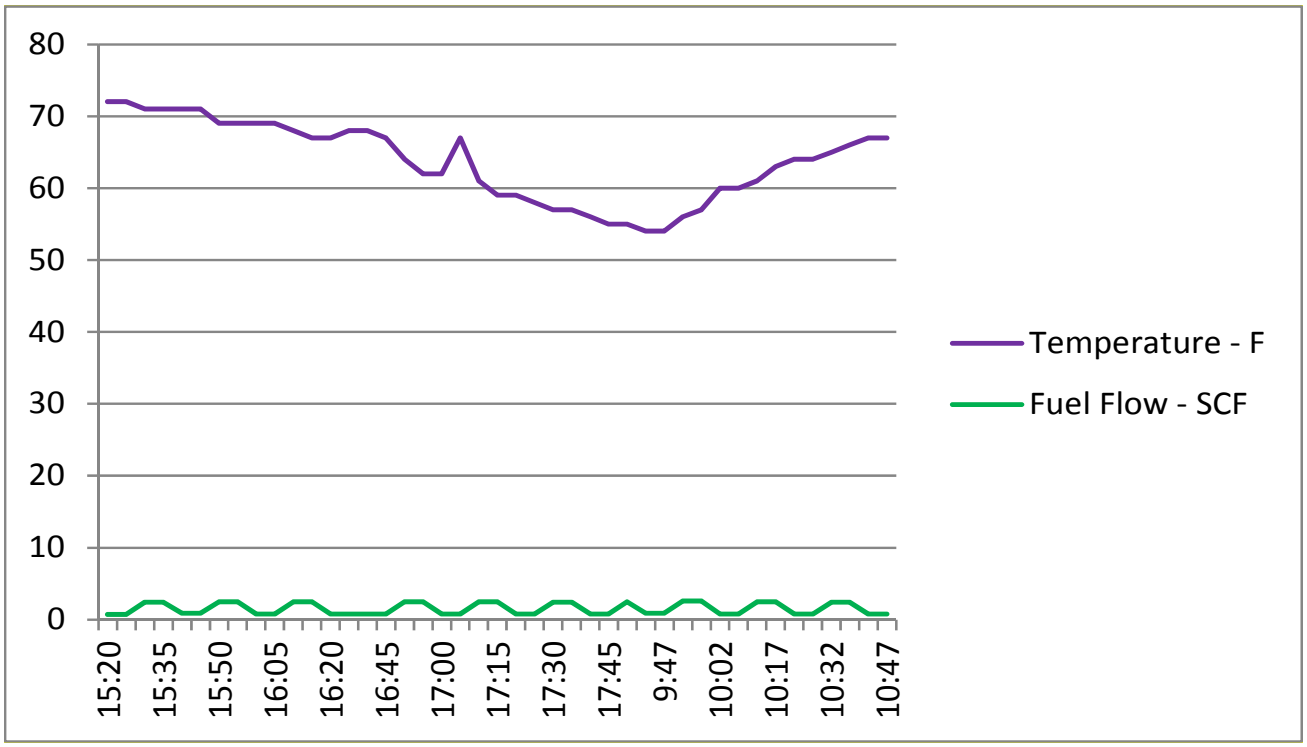
SUMMARY OF RESULTS

Reference Method Monitors CO and THC Graph Summary



SUMMARY OF RESULTS

Plant Operational Data Graph Summary



DISCUSSION OF RESULTS

18" Thermal Combustor Inlet Duct

The test for total hydrocarbons and fixed gases at each of the four operating conditions appeared to be valid representations of the actual inlet duct hydrocarbons amounts during the tests. All leak checks performed on the canister sampling system showed no leaks before or after each test.

18" Thermal Combustor Outlet Stack

Condition I

The three tests for carbon monoxide, total hydrocarbons, and fixed gases appeared to be valid representations of the actual emissions during the tests. All leak checks performed on the sampling train, the pitot tubes, the integrated bag sampling system, and the reference method monitors sampling systems showed no leaks before or after each test. The zero and calibration drift tests of the reference method monitors were stable with no variations greater than 3.0 percent. The calibration error check and the sampling system bias check performed on the reference method monitors prior to testing were valid. The indicative parameters calculated from the field data were in close agreement. The moisture percentages for the three tests were within 5.2 percent of the mean value. The measured flow rates (Q_s) for the tests were within 3.5 percent of the mean value.

The calculated emissions (pounds per hour) of carbon monoxide for the three tests showed a range of -5.6 percent to +5.6 percent variation from the mean value.

The calculated emissions (pounds per hour) of total hydrocarbons for the three tests showed a range of -57.1 percent to +28.6 percent variation from the mean value.

Condition II

The three tests for carbon monoxide, total hydrocarbons, and fixed gases appeared to be valid representations of the actual emissions during the tests. All leak checks performed on the sampling train, the pitot tubes, the integrated bag sampling system, and the reference method monitors sampling systems showed no leaks before or after each test. The zero and calibration drift tests of the reference method monitors were stable with no variations greater than 3.0 percent. The calibration error check and the sampling system bias check performed on the reference method monitors prior to testing were valid. The indicative parameters calculated from the field data were in close agreement. The moisture percentages for the three tests were within 5.1 percent of the mean value. The measured flow rates (Q_s) for the tests were within 6.7 percent of the mean value.

The calculated emissions (pounds per hour) of carbon monoxide for the three tests showed a range of -4.5 percent to +9.1 percent variation from the mean value.

The calculated emissions (pounds per hour) of total hydrocarbons for the three tests showed no variation from the mean value.

Condition III

The three tests for carbon monoxide, total hydrocarbons, and fixed gases appeared to be valid representations of the actual emissions during the tests. All leak checks performed on the sampling train, the pitot tubes, the integrated bag sampling system, and the reference method monitors sampling systems showed no leaks before or after each test. The zero and calibration drift tests of the reference method monitors were stable with no variations greater than 3.0 percent. The calibration error check and the sampling system bias check performed on the reference method monitors prior to testing were valid. The indicative parameters calculated from the field data were in close agreement. The moisture percentages for the three tests were within 3.3 percent of the mean value. The measured flow rates (Q_s) for the tests were within 14.3 percent of the mean value.

The calculated emissions (pounds per hour) of carbon monoxide for the three tests showed a range of -3.2 percent to +6.5 percent variation from the mean value.

The calculated emissions (pounds per hour) of total hydrocarbons for the three tests showed a range of -50.0 percent to +50.0 percent variation from the mean value.

Condition IV

The three tests for carbon monoxide, total hydrocarbons, and fixed gases appeared to be valid representations of the actual emissions during the tests. All leak checks performed on the sampling train, the pitot tubes, the integrated bag sampling system, and the reference method monitors sampling systems showed no leaks before or after each test. The zero and calibration drift tests of the reference method monitors were stable with no variations greater than 3.0 percent. The calibration error check and the sampling system bias check performed on the reference method monitors prior to testing were valid. The indicative parameters calculated from the field data were in close agreement. The moisture percentages for the three tests were within 10.3 percent of the mean value. The measured flow rates (Q_s) for the tests were within 5.0 percent of the mean value.

The calculated emissions (pounds per hour) of carbon monoxide for the three tests showed n variation from the mean value.

The calculated emissions (pounds per hour) of total hydrocarbons for the three tests showed a range of -40.0 percent to +80.0 percent variation from the mean value. The large variation is due to the low concentrations measured

DESCRIPTION OF PROCESS

BGR HP/LP Vapor Combustor Model BGR-18

The BGR-18 is designed to destruct volatile organic compounds (VOCs) and other vapors produced from oil storage tanks, dehys, produced condensate & water storage tanks, as well as depressuring vessels, and pipelines. The high pressure 3" line on the outside of the combustor chamber provides high pressure blow down capabilities

The patented high efficiency burner inside the combustor chamber provides low pressure continuous burning capabilities, low emissions, zero odors and increased flame stability with excellent turndown ratios for low pressure applications, such as from NSPS Subpart OOOO regulated storage tanks and NESHAP Subparts HH and HHH regulated glycol dehydration units. Information about the enclosed combustor and its associated controller is provided in Appendix H.

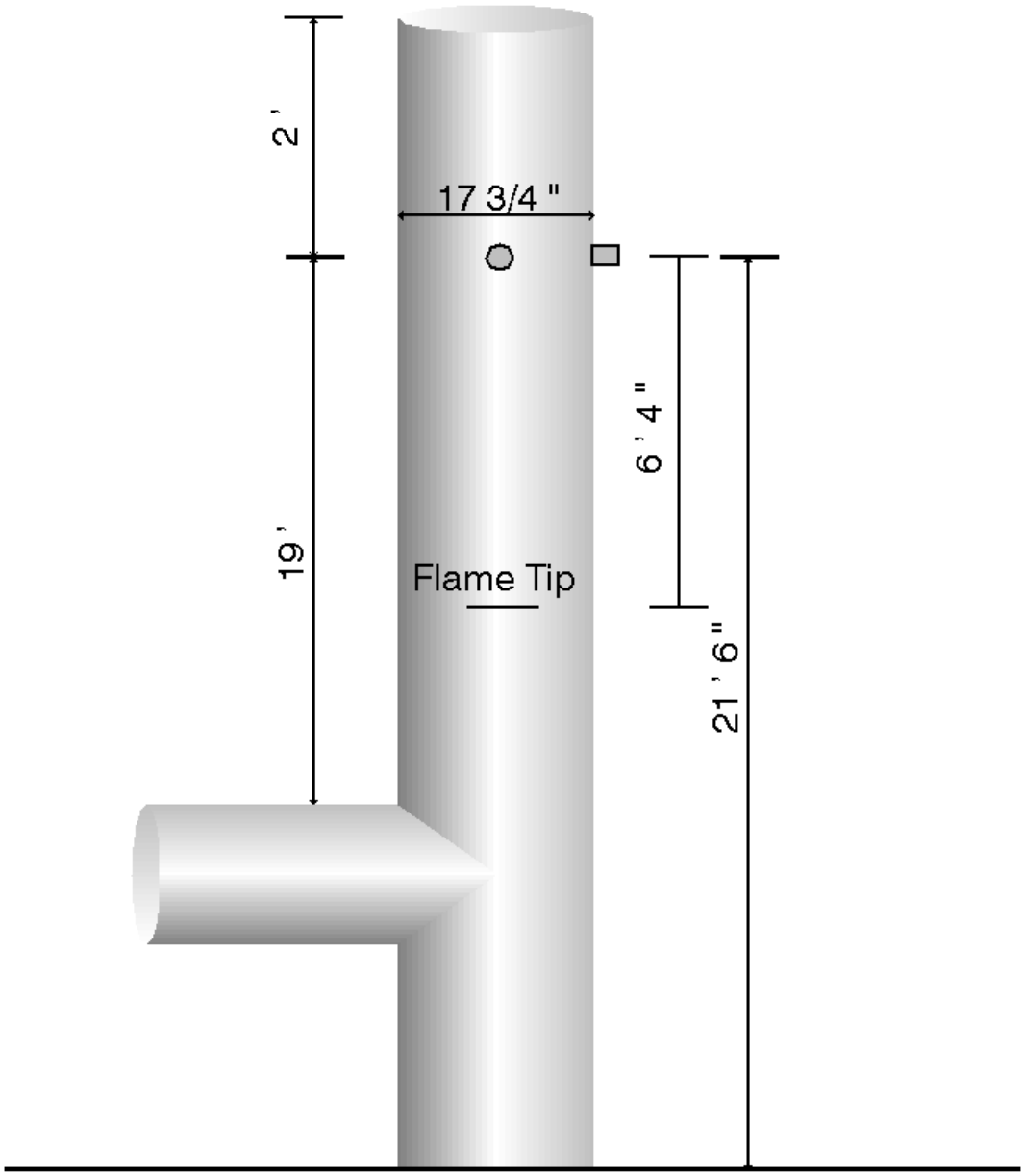
DESCRIPTION OF SAMPLING LOCATIONS

The sampling location on the 18” Thermal Combustor Inlet is located at ground level. The inlet sample location was approximately 15 feet from the propylene trailer and approximately 21 feet upstream of the inlet flow meter. The inlet flow meter was located approximately 21 feet upstream of the combustor. The inlet hose from the propylene trailer to the combustor was a combination of 1 3/8-inch and 2-inch hose. From the propylene trailer to the inlet sampling location, the hose was 2 inches in diameter. After the inlet sampling location, the hose was 1 3/8 inches in diameter.

The sampling location on the 18” Thermal Combustor Outlet Stack is 21 feet 6 inches above the ground. The sampling ports are located 19 feet (12.85 stack diameters) downstream from the inlet to the stack and 2 feet (1.35 stack diameters) upstream from the outlet to the stack. The sampling ports are also located 6 feet 4 inches (4.28 stack diameters) downstream from the top of the flame in the stack.

SAMPLING LOCATION

18” Thermal Combustor Outlet Stack



Not to Scale

SAMPLING AND ANALYTICAL PROCEDURES

The sampling followed the procedures set forth in the Code of Federal Regulations, Title 40, Chapter I, Part 60, Appendix A, Methods 1, 2, 3C, 4, 10, 18, 22, and 25A; and Subpart OOOO.

A velocity traverse was made at each of the two ports on the 18" Thermal Combustor Outlet Stack, in order to determine the uniformity and magnitude of the flow during each test. All traverse points were checked for cyclonic flow and the average angle of flow was equal to 0.0 degrees. Alternate procedures would be required if the angle of flow was greater than 20 degrees. Eight traverse points were sampled from each of the two ports for a total of sixteen traverse points.

The sampling trains were leak-checked before each test and again after each test. This was done to predetermine the possibility of a diluted sample.

The pitot tube lines were checked for leaks before and after each test under both a vacuum and a pressure. The lines were also checked for clearance and the manometer was zeroed before each test.

The reference method monitors sampling system was leak checked prior to testing.

Moisture

Triplicate samples for moisture were collected from the stack at each of the four operating conditions. The samples were taken according to EPA Methods 1, 2, 3C, and 4. For each run, samples of four-minute duration were taken at each of the sixteen traverse points for a total sampling time of 64 minutes.

The " front-half " of the sampling train contained the following components:

Stainless Steel Probe w/ glass wool plug
Teflon Sample Line

The " back-half " of the sampling train contained the following components:

Impinger Number	Contents	Amount	Parameter Collected
1	Deionized Water	100 ml	Moisture
2	Deionized Water	100 ml	Moisture
3	Empty	----	Moisture
4	Silica Gel	200 g	Moisture

Fixed Gases

Triplicate samples for fixed gases were collected from the stack at each of the four operating conditions. The samples were taken according to EPA Method 3C. For each run, samples of four-minute duration were taken at each of the sixteen traverse points for a total sampling time of 64 minutes. The reference method sampling system consisted of a stainless steel probe, Teflon sample line, Pump, and a Tedlar bag. The samples were analyzed by GC/TCD by Enthalpy's Analytical Laboratory in Durham, North Carolina. The analytical report can be found in Appendix E.

Total Hydrocarbon and Fixed Gases

One integrated sample for total hydrocarbon and fixed gases was collected from the inlet duct at each of the four operating conditions. The samples were taken according to EPA Method 18. The reference method sampling system consisted of a stainless steel probe, Teflon sample line, and an evacuated canister. The samples were analyzed by GC/FID by Enthalpy's Analytical Laboratory in Durham, North Carolina. The analytical report can be found in Appendix E.

Carbon Monoxide

The carbon monoxide sampling was performed according to EPA Method 10 using the

continuous sampling procedure. A Thermo Environmental Model 48I Carbon Monoxide Analyzer (Serial Number 1125049419) was used to monitor the concentrations of carbon monoxide during each run. The reference method analyzer was operated at a range of 0 to 10 parts per million, with a calibration span of 9.17 parts per million. A multi-point calibration was performed on the reference method analyzer prior to testing. An analyzer calibration error check and a sampling system bias check were also conducted prior to testing. After each run, the zero and calibration drift of the reference method monitor was checked. The calibration gases were as follows:

Zero Nitrogen
5.13 ppm CO in N_2 (CC 66094)
9.17 ppm CO in N_2 (AAL 5790)

The reference method sampling system consisted of a stainless steel, probe, heated Teflon line, chilled condenser, and a Teflon sample line. The calibration gases for the bias and drift checks were introduced upstream of the chilled condenser.

Calibration gas certifications are included in Appendix C.

Total Hydrocarbon

The total hydrocarbon sampling was performed according to EPA Method 25A. A Total Hydrocarbon Model 51i Analyzer (Serial Number 1033744940) was used to monitor the concentrations of total hydrocarbons during each run. The reference method analyzer was operated at a range of 10 parts per million. A multi-point calibration was performed on the reference method analyzer prior to testing. An analyzer calibration error check and a sampling system bias check were also conducted prior to testing. After each run, the zero and calibration drift of the reference method monitor was checked. The calibration gases were as follows:

Zero Nitrogen

3.01 ppm C_3H_8 in N_2 (BLM 2982)

5.06 ppm C_3H_8 in N_2 (LL107680)

8.72 ppm C_3H_8 in N_2 (LL67700)

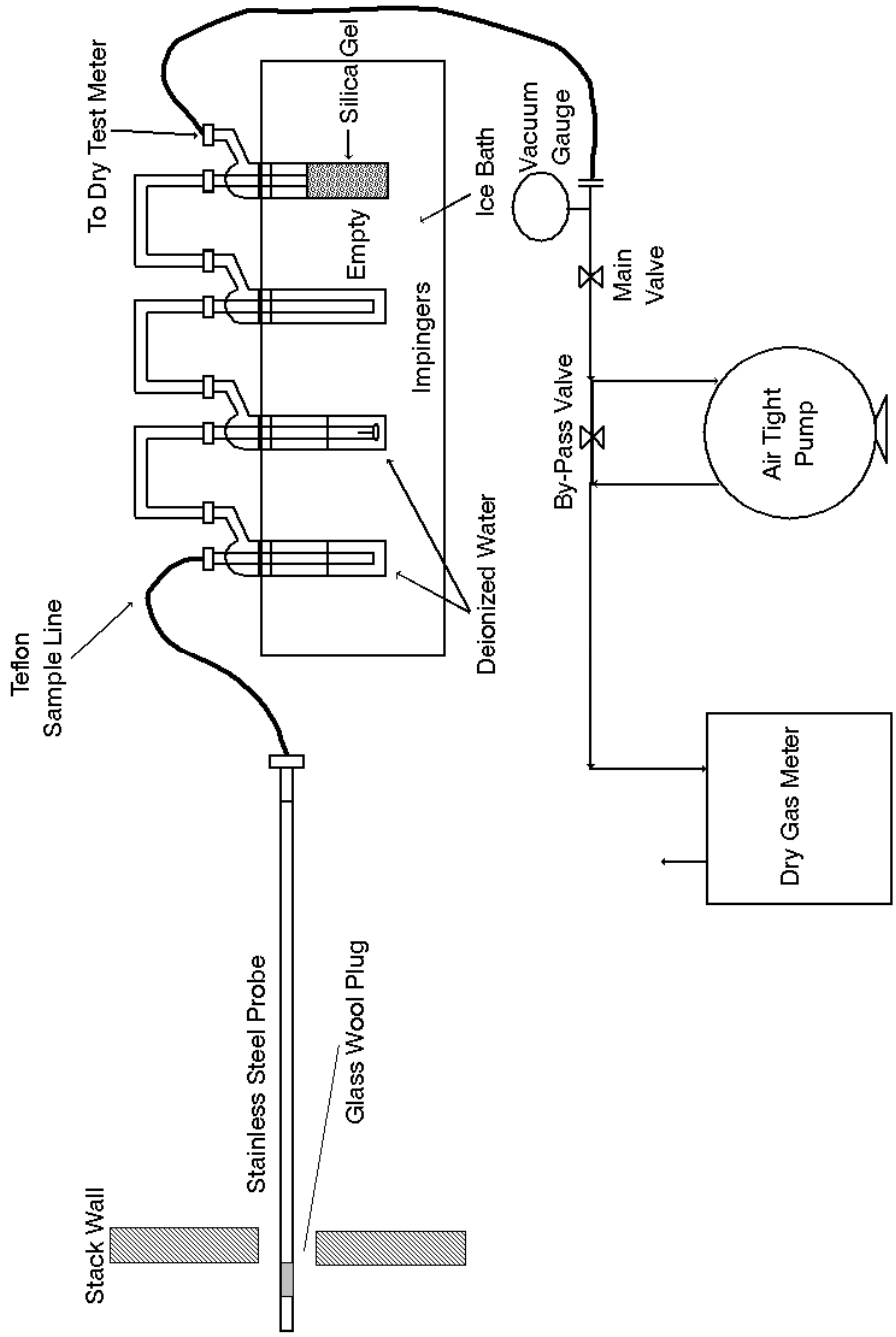
The reference method sampling system consisted of a stainless steel probe and a heated Teflon sample line. The calibration gases for the bias and drift checks were introduced upstream of the heated Teflon sample line.

Calibration gas certifications are included in Appendix C.

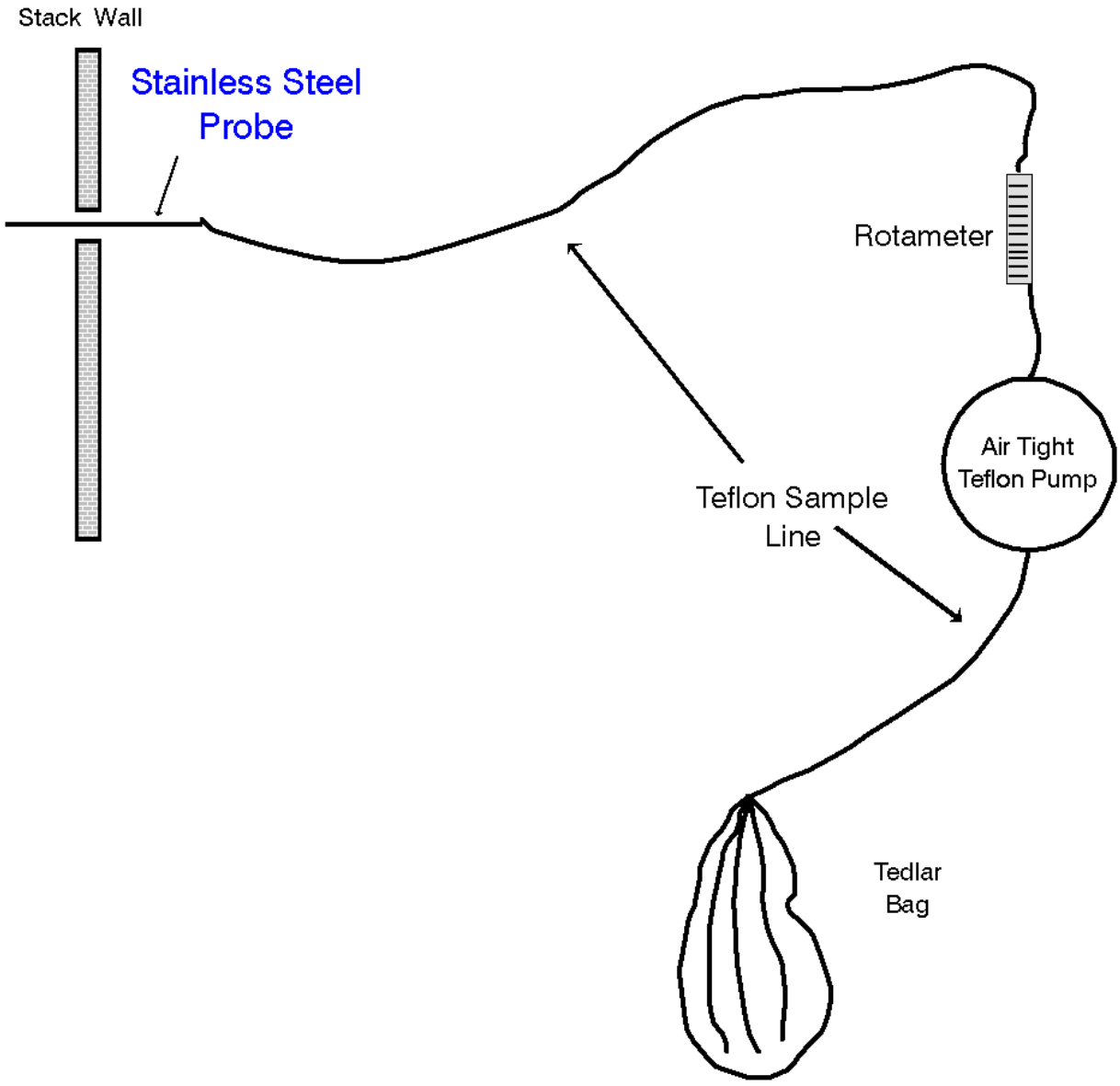
Visible Emissions

Visible emissions observations were taken according to EPA Method 22. For each of the three runs at each of the four operating conditions, visible emissions were observed over at least one-hour period. No visible emissions were observed during any of the test runs.

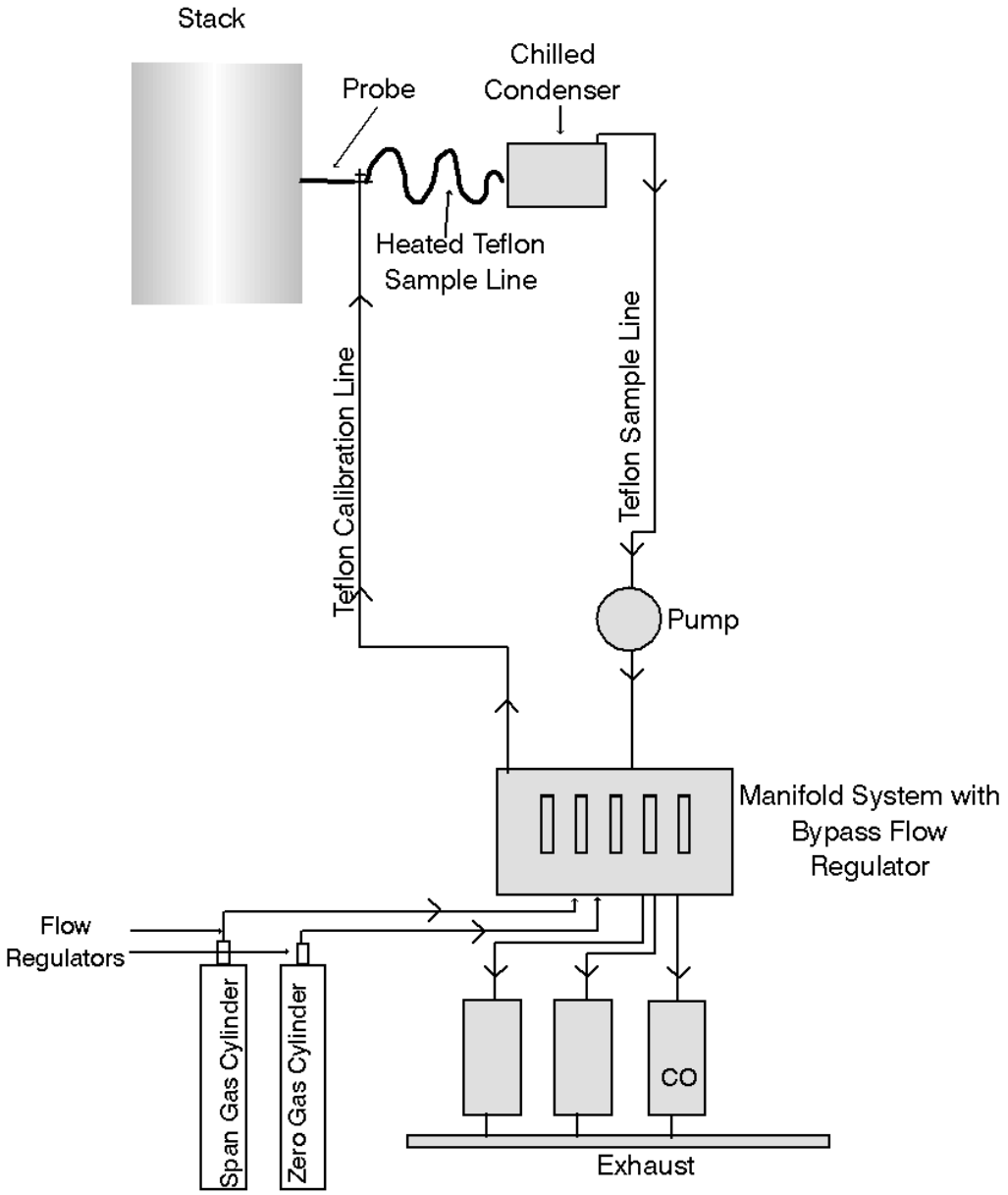
Schematic Diagram of the EPA Method 4
Sampling Train



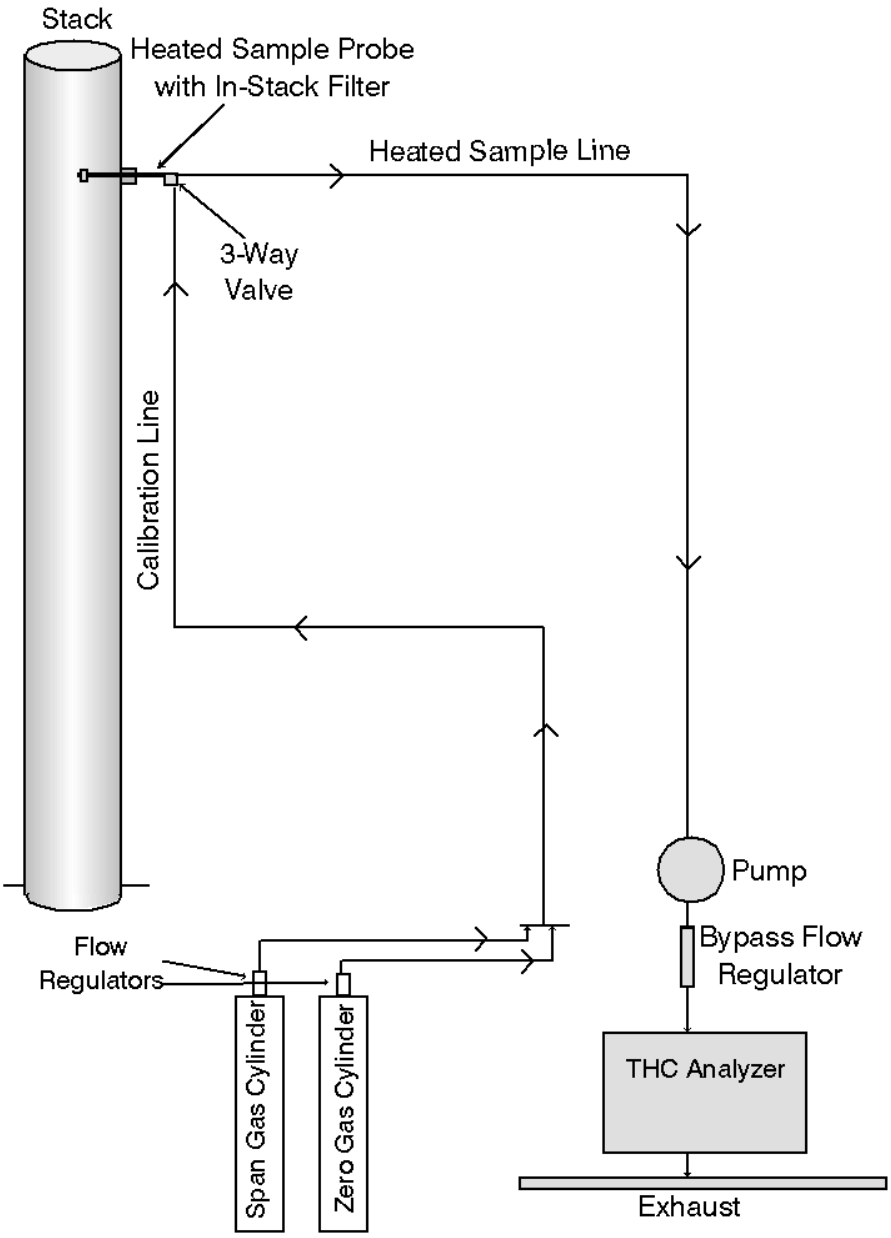
EPA Method 3C (Integrated Bag) Sampling Train



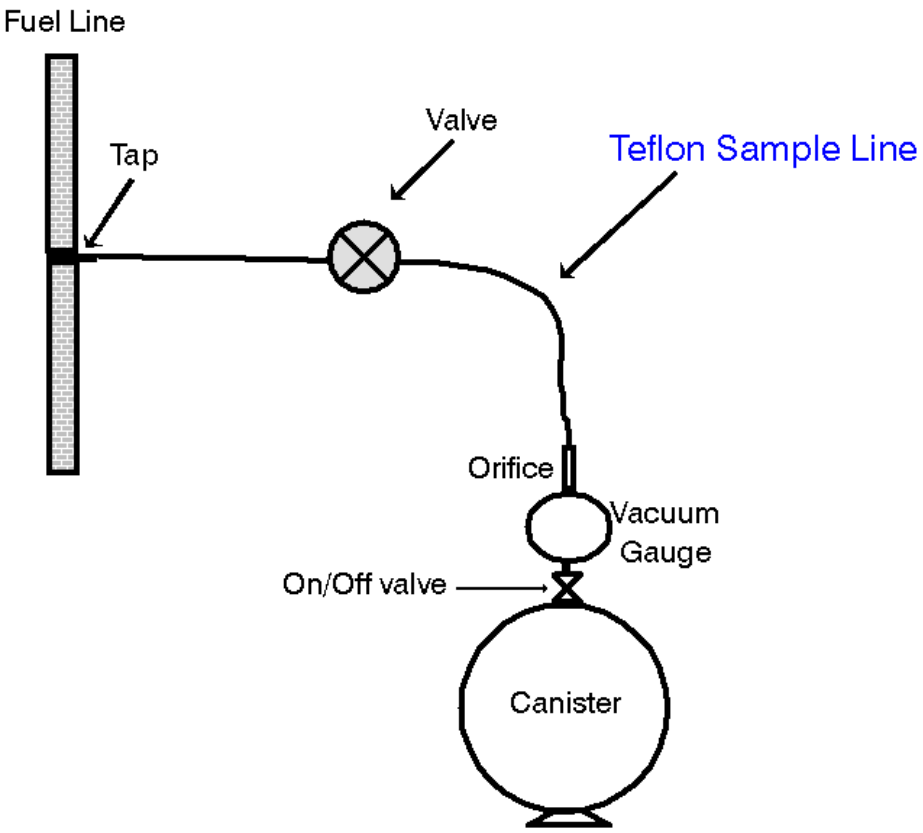
Reference Method Monitors Sampling System (EPA Method 10)



Total Hydrocarbon CEMs
(EPA Method 25A)



Method 18 Canister Sampling System
on the Inlet (Fuel Line)



DESCRIPTION OF TESTS

Personnel from METCO Environmental arrived at the plant at 4:30 p.m. on Thursday, December 18, 2014. After meeting with plant personnel and attending a brief safety orientation, the equipment was moved onto the 18" Thermal Combustor Inlet Duct and Outlet Stack. The equipment was secured for the night and all work was completed at 6:45 p.m.

On Friday, December 19, work began at 6:45 a.m. The reference method monitors were calibrated and the equipment was prepared for testing. The first set of tests (Condition I) for carbon monoxide, total hydrocarbon, fixed gases, and visible emissions on the stack; and for total hydrocarbon and fixed gases on the inlet duct began at 9:35 a.m. Testing continued until completion of the third set of tests (Condition I) at 1:45 p.m. Testing was delayed until the unit was operating at the desired testing condition. The first set of tests (Condition II) for carbon monoxide, total hydrocarbon, fixed gases, and visible emissions on the stack; and for total hydrocarbon and fixed gases on the inlet duct began at 4:20 p.m. Testing continued until completion of the third set of tests (Condition II) at 6:10 p.m. The reference method monitors were calibrated and the samples were recovered. The equipment was secured for the night and all work was completed at 7:00 p.m.

On Saturday, December 20, work began at 6:45 a.m. The reference method monitors were calibrated and the equipment was prepared for testing. The first set of tests (Condition III) for carbon monoxide, total hydrocarbon, fixed gases, and visible emissions on the stack; and for total hydrocarbon and fixed gases on the inlet duct began at 11:15 a.m. Testing continued until completion of the third set of tests (Condition III) at 3:05 p.m. Testing was delayed until the unit was operating at the desired testing condition. The first set of tests (Condition IV) for carbon monoxide, total hydrocarbon, fixed gases, and visible emissions on the stack; and for total hydrocarbon and fixed gases on the inlet duct began at 3:20 p.m. Testing continued until completion

of the second set of tests (Condition IV) at 5:50 p.m. The reference method monitors were calibrated and the samples were recovered. The equipment was secured for the night and all work was completed at 7:00 p.m.

On Sunday, December 21, work began at 6:45 a.m. The reference method monitors were calibrated and the equipment was prepared for testing. The third set of tests (Condition IV) for carbon monoxide, total hydrocarbon, fixed gases, and visible emissions on the stack; and for total hydrocarbon and fixed gases on the inlet duct began at 9:42 a.m. and was completed at 10:52 a.m.

The reference method monitors were calibrated and secured for transport. The equipment was moved off of the sampling locations and loaded into the sampling van. The samples were recovered and transported to METCO Environmental's laboratory in Carrollton, Texas, for analysis and evaluation.

Field operations at Black Gold Rush, 18" Thermal Combustor Inlet Duct and Outlet Stack, located in Midland, Texas, were completed at 6:30 p.m. on Sunday, December 21, 2014.

APPENDICES

A. Location of Sampling Points
B. Source Emissions Calculations
C. Calibration Data
D. Field Testing Data
E. Analytical Data
F. Reference Method Monitors Data
G. Visible Emissions Data
H. Plant Operational Data
I. BGR HP/LP Combustor Model BGR-18 Spec Sheet
J. Chain of Custody
K. Resumes of Test Personnel

APPENDIX A

Location of Velocity and Method 3C Sampling Points
18” Thermal Combustor Outlet Stack

The sampling ports are located 19 feet (12.85 stack diameters) downstream from the inlet to the stack and 2 feet (1.35 stack diameters) upstream from the outlet to the stack. The sampling ports are also located 6 feet 4 inches (4.28 stack diameters) downstream from the top of the flame in the stack. The locations of the sampling points were calculated as follows:

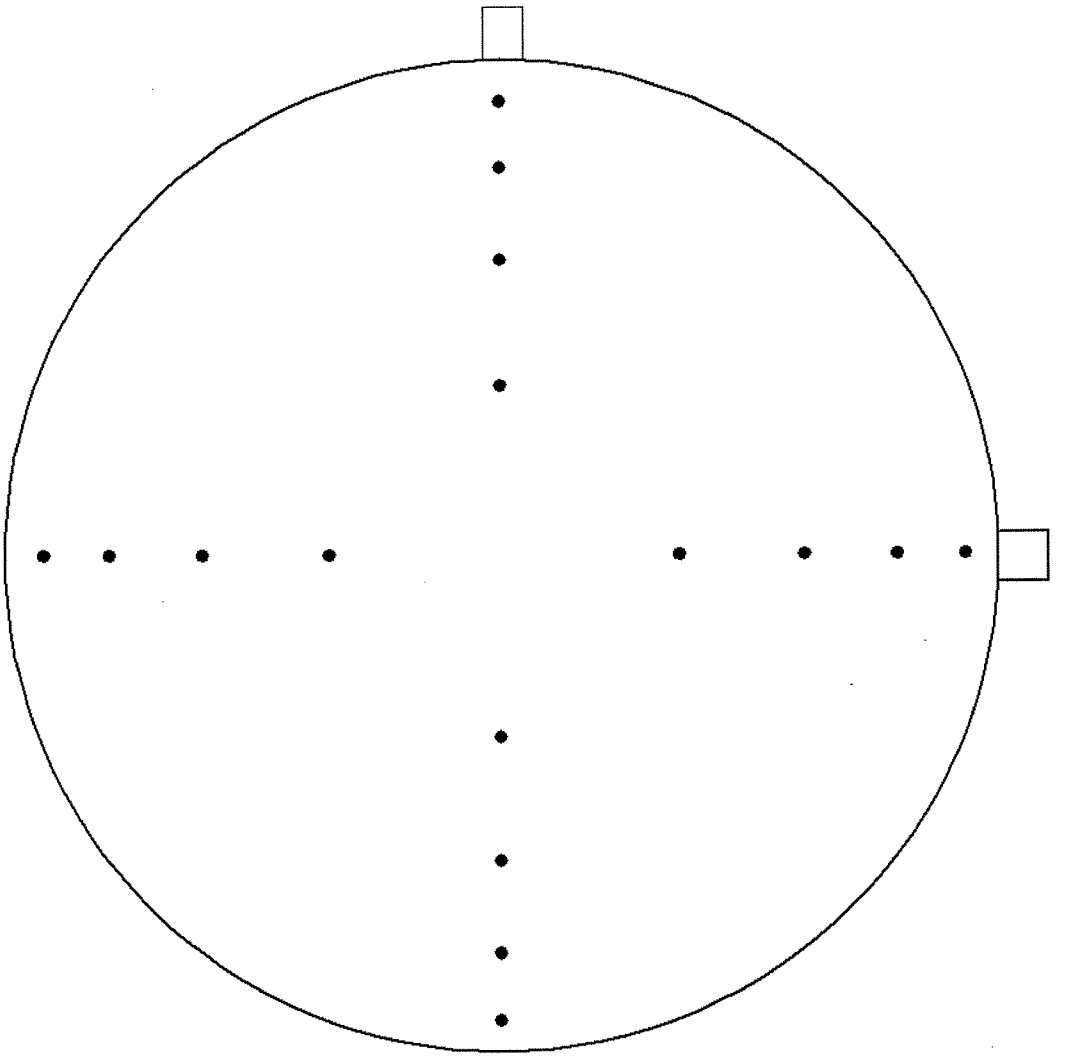
Port and Wall Thickness = 2 1/2 inches
Inside Stack Diameter = 17 3/4 inches

Point Number	Percent of Diameter From Wall	Distance From Wall
1	3.2	9/16 "
2	10.5	1 7/8 "
3	19.4	3 7/16 "
4	32.3	5 3/4 "
5	67.7	12 "
6	80.6	14 5/16 "
7	89.5	15 7/8 "
8	96.8	17 3/16 "

APPENDIX A

Location of Velocity and Method 3C Sampling Points

18" Thermal Combustor Outlet Stack



APPENDIX A

Location of Reference Method Monitors Sampling Points
18" Thermal Combustor Outlet Stack

The sampling ports are located 19 feet (12.85 stack diameters) downstream from the inlet to the stack and 2 feet (1.35 stack diameters) upstream from the outlet to the stack. The sampling ports are also located 6 feet 4 inches (4.28 stack diameters) downstream from the top of the flame in the stack. The locations of the sampling points were calculated as follows:

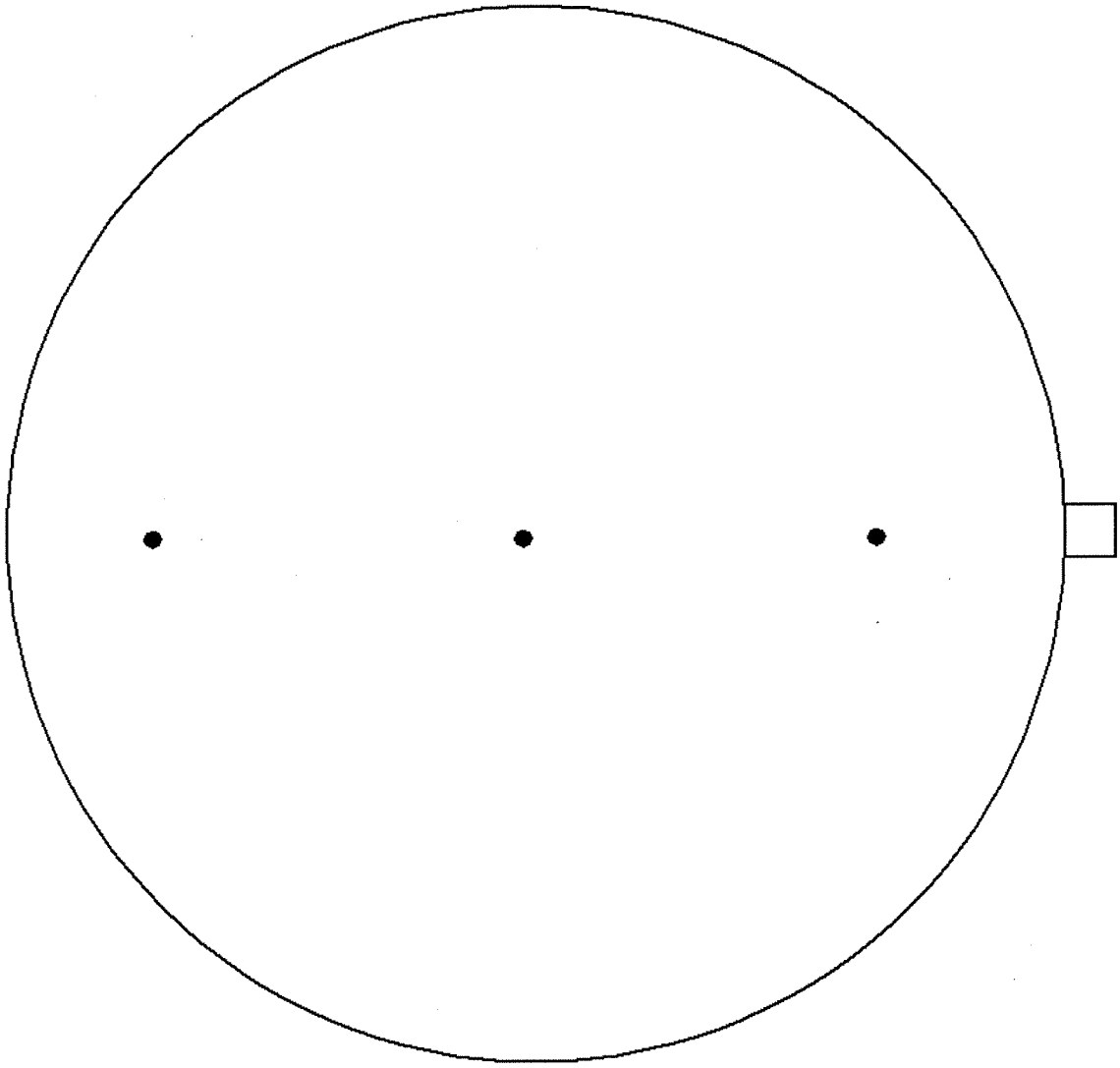
Port and Wall Thickness = 2 1/2 inches
Inside Stack Diameter = 17 3/4 inches

Point Number	Percent of Diameter From Wall	Distance From Wall
1	16.7	2 15/16 "
2	50.0	8 7/8 "
3	83.3	14 13/16 "

APPENDIX A

Location of Reference Method Monitors Sampling Points

18" Thermal Combustor Outlet Stack



APPENDIX B

Nomenclature and Equations
for Calculation of Source Emissions

NOMENCLATURE FOR FLOW RATE CALCULATIONS

Symbol	English Units	Metric Units	Description
A_s	$in.^2$	m^2	Stack Area
C_p			Pitot Tube Calibration Factor
%EA			Percent Excess Air @ Sampling Point
g	32.174 ft/sec^2		Acceleration of Gravity
%M			Percent Moisture in the stack gas by Volume
M_d			Mole fraction of dry gas
M_{water}	18 lb/lb-mole		Molecular Weight of water
MW	lb/lb-mole	g/g-mole	Molecular Weight of stack gas
MW_{air}	28.96 lb/lb-mole		Molecular Weight of air
MW_d	lb/lb-mole	g/g-mole	Molecular Weight of dry stack gas
P_b	"Hg Absolute	mm Hg	Barometric Pressure
P_m	"H_2O	mm H_2O	Orifice Pressure Drop
Ps	"Hg Absolute	mm Hg	Stack Pressure
ΔP	"H_2O	mm H_2O	Velocity Head of stack gas
P_{std}	29.92"Hg	760 mmHg	Standard Barometric Pressure
Q_a	ACFM	m^3/hr	Stack Gas Volume at actual stack conditions
Q_s	DSCFM*	dscm/hr*	Stack Gas Volume at 29.92"Hg, 528°R, dry
R	21.83 "Hg-ft^3/lb-mole °R		Universal Gas Constant
T_m	°F	°C	Average Gas Meter Temperature
T_t	min	min	Net time of test
T_s	°F	°C	Stack Temperature
T_{std}	528°R	293°K	Standard Temperature

* 29.92 "Hg, 68°F (760 mm Hg, 20°C)

Symbol	English Units	Metric Units	Description
V_m	ft^3	m^3	Volume of dry gas sampled @ meter conditions
Vm_{std}	dscf*	dscm*	Volume of dry gas sampled @ standard conditions
V_s	fpm	m/sec	Stack velocity @ stack conditions
V_w	ml	ml	Total water collected in impingers and silica gel
Vw_{gas}	scf*	scm*	Volume of water vapor collected @ standard conditions
ρ_{air}	0.0752 lbs/ ft^3		Density of Air
ρ_{water}	1 g/ml		Density of Water
ρ_{man}	62.32 lbs/ft^3		Density of Manometer Oil

* 29.92 "Hg, 68°F (760 mm Hg, 20°C)

EXAMPLE CALCULATIONS

1. Volume of dry gas sampled at standard conditions.*

$$Vm_{std} = Vm\left(\frac{T_{std}}{T_m + 460}\right)\left[\frac{P_b + \frac{P_m}{13.6}}{P_{std}}\right]$$

$$Vm_{std} = 17.65\,Vm\left[\frac{P_b + \frac{P_m}{13.6}}{T_m + 460}\right] = \text{dscf}\ *$$

$$Vm_{std} = \text{dscf} \times 0.028317 = \text{dscm}\ *$$

2. Volume of water vapor collected at standard conditions.*

$$Vw_{gas} = \frac{\left(V_w - \text{grams } SO_2\ **\right) \times \rho_{water} \times R \times T_{std}}{P_{std} \times M_{water} \times 453.6}$$

$$Vw_{gas} = 0.0472\left(V_w - \text{grams } SO_2\ **\right) = \text{scf}\ *$$

$$Vw_{gas} = \text{scf} \times 0.028317 = \text{scm}\ *$$

3. Percent moisture in stack gas.

$$\%M = \left(\frac{Vw_{gas}}{Vm_{std} + Vw_{gas}}\right) \times 100 = \%$$

* 29.92 "Hg, 68°F (760 mm Hg, 20°C)

** Grams SO_2 subtracted only when SO_2 is collected in the sampling train being used to determine the volume of water vapor collected.

4. Mole fraction of dry gas.

$$M_d = \left(\frac{100 - \%M}{100}\right)$$

5. Average molecular weight of dry stack gas.

$$MW_d = \left[\%CO_2 \times \frac{44}{100}\right] + \left[\%O_2 \times \frac{32}{100}\right] + \left[\%N_2 \times \frac{28}{100}\right] + \left[\%CO \times \frac{28}{100}\right] = lb/lb-mole$$

$$= g/g\text{-}mole$$

6. Molecular weight of stack gas.

$$MW = MW_d \times M_d + 18\left(1 - M_d\right) = \frac{lb}{lb-mole} = g/g-mole$$

7. Percent excess air at sampling point.

$$\%EA = \frac{100\left[\%O2 - (0.5\%CO)\right]}{0.265\ (\%N_2) - \left[\%O_2 - (0.5\%CO)\right]}$$

8. Stack Pressure.

$$P_s = P_b + \frac{\text{Stack Pressure } "H_2O}{13.6} = "Hg \text{ Absolute}$$

$$P_s = "Hg \text{ Abs.} \times 25.4 = mm\,Hg$$

9. Stack velocity at stack conditions.

$$V_s = C_p \times 60\left[\frac{2g \times \rho_{man} \times P_{std} \times MW_{air} \times (T_s + 460)}{12 \times \rho_{air} \times P_s \times MW \times T_{std}}\right]^{1/2} \times \sqrt{\Delta P}\ \text{average}$$

$$V_s = 5{,}123.8 \times C_p \left[\frac{(T_s + 460)}{P_s \times MW}\right]^{1/2} \times \sqrt{\Delta P}\ \text{average} = fpm$$

$$V_s = fpm \times 0.00508 = m/sec$$

10. Dry stack gas volume at standard conditions.*

$$Q_s = \frac{1}{144} V_s \times A_s \times M_d \times \frac{T_{std}}{T_s + 460} \times \frac{P_s}{P_{std}}$$

$$Q_s = \frac{0.123 V_s \times A_s \times M_d \times P_s}{T_s + 460} = \text{DSCFM}$$

$$Q_s = \text{DSCFM} \times 1.6990 = \text{dscm/hr}$$

11. Actual stack gas volume at stack conditions.

$$Q_a = \frac{V_s \times A_s}{144} = \text{ACFM}$$

$$Q_a = \text{ACFM} \times 1.6990 = m^3/\text{hr}$$

* 29.92 "Hg, 68°F (760 mm Hg, 20°C)

EXAMPLE CALCULATIONS

$$lbs/hr = ppm \times CF \times 60\ min/hr \times DSCFM^*$$

*CF = Conversion Factor for ppm to lbs/scf**

Compound	Conversion Factor
CO	7.273×10^{-8}
THC as Propylene	1.093×10^{-7}

$$ppmvd = \frac{ppmvw}{M_d}$$

M_d = mole fraction of dry gas

* 29.92 "Hg, 68°F (760 mm Hg, 20°C)

EXAMPLE CALCULATIONS

$$E\ corr. = E\ meas. \times \frac{3\%CO_2}{(\%CO_2\ meas.)}$$

E corr. = *Emission Rate corrected for Carbon Dioxide*

E meas. = *Emission Rate measured*

% CO_2 corr. = *The Carbon Dioxide content to be corrected to (ie. 3.0%CO_2)*

% CO_2 meas. = *The Carbon Dioxide content measured*

EXAMPLE CALCULATIONS

$$\% \text{ DRE} = \frac{\text{mass rate of pollutant in (lbs/hr)} - \text{mass rate of pollutant emitted (lbs/hr)}}{\text{mass rate of pollutant in (lbs/hr)}} \times 100$$

% DRE = percent destruction removal efficiency.
mass rate of pollutant in (lbs/hr) = mass rate of pollutant into the unit as determined by the applicable testing method and flow rate determination.
mass rate of pollutant out (lbs/hr) = mass rate of pollutant emitted from the unit as determined by the applicable testing method and flow rate determination.

EXAMPLE CALCULATIONS

MJ/scm = ppmv x Kcal/g mole x K

MJ/scm = Net heating value of sample component

ppmv = concentration of sample component in ppm on a wet basis

Kcal/g mole = Net heat of combustion of sample component

K = constant 1.740 x 10^{-7} (1/ppm) (g mole/scm) (MJ/Kcal)

For Example: Condition 1 - (TVOC as Propylene)

MJ/scm = 999,989 ppmv x 492.06 Kcal/g mole x 1.740 x 10^{-7} (1/ppm) (g mole/scm) (MJ/Kcal)

*TVOC as Propylene = 85.617 MJ/scm**

** 29.92 "Hg, 68°F (760 mm Hg, 20°C)*

EXAMPLE CALCULATIONS

Compound	Molecular Weight (g/mole)	Net Heat of Combustion (Btu/lb**)	Net Heat of Combustion (kcal/g-mole)
Methane	16.04	21,510	191.68
Propylene	42.08	21,048	492.06
Ethane	30.07	20,425	341.21
Propane	44.10	19,920	488.04
Butanes	58.12	19,657	634.70
Pentanes	72.15	19,495	781.42
Hexanes^{+}*	86.18	19,391	928.40
Hydrogen	2.02	51,625	57.93
Hydrogen Sulfide	34.08	6,537	123.77
Nitrogen	28.01	----	----
Oxygen	32.00	----	----
Carbon Dioxide	44.01	----	----

* As hexane.

** At 25° C, Table 10, " Gas Tables - Thermodynamic Properties of Air Products of Combustion and Component Gases, Second Edition".

(Btu/lb)(0.252 kcal/Btu)(1 lb/453.6 g)(MW g mole) = kcal/gmole

Example for methane:

(21,510 Btu/lb)(0.252 kcal/Btu)(1 lb/453.6 g)(16.04 g mole) = 191.68 kcal/gmole

EXAMPLE CALCULATIONS

Equation 7E-5

$$C_{gas} = (\overline{C} - C_o) \frac{C_{ma}}{C_m - C_o}$$

Where: C_{gas} = *Effluent gas concentration - dry basis (ppm)*

$\overline{C}$ = *Average gas concentration indicated by gas analyzer - dry basis (ppm)*

C_o = *Average of initial and final system calibration bias check responses for the zero gas (ppm)*

C_m = *Average of initial and final system calibration bias check responses for the upscale calibration gas (ppm)*

C_{ma} = *Actual concentration of the upscale calibration gas (ppm)*

METCO ENVIRONMENTAL

SOURCE EMISSION SURVEY

JOB NUMBER: 14-388
JOB NAME: BGR
LOCATION: Midland, TX
UNIT TESTED: 18" Combustor - Cond. 1

SOURCE EMISSION CALCULATIONS

SYMBOL	DESCRIPTION	UNITS	RUN NUMBER 1	2	3
DATE			12/19/14	12/19/14	12/19/14
BEGIN TIME			0935	1115	1235
END TIME			1052	1225	1345
P(b)	BAROMETRIC PRESSURE	"Hg Abs.	27.18	27.18	27.16
		(mm Hg)	(690.00)	(690.00)	(690.00)
P(m)	ORIFICE PRESSURE DROP	"H2O	1.000	1.000	1.000
		(mm H2O)	(25.400)	(25.400)	(25.400)
	DGM CALIBRATION FACTOR		1.002	1.002	1.002
V(m)	VOLUME DRY GAS SAMPLED	ft.^3	37.688	37.377	37.609
	@ METER CONDITIONS	(m^3)	(1.067)	(1.058)	(1.065)
	LEAK CHECK VOLUME	ft.^3	0.000	0.000	0.000
T(m)	AVERAGE GAS METER	DEG.F	61	69	73
	TEMPERATURE	(DEG.C)	(16)	(21)	(23)
V(m[std])*	VOLUME DRY GAS SAMPLED	DSCF	34.796	33.987	33.917
	@ STANDARD CONDITIONS*	(DSCM)	(0.985)	(0.962)	(0.960)
V(w)	TOTAL WATER COLLECTED,	ml	45.1	47.1	48.6
	IMPINGERS & SILICA GEL				
V(w[gas])	VOLUME WATER VAPOR	SCF	2.129	2.223	2.294
	COLLECTED @ STANDARD	(SCM)	(0.060)	(0.063)	(0.065)
	CONDITIONS*				
%M	MOISTURE IN STACK GAS	%	5.76	6.14	6.33
	BY VOLUME				
Md	MOL FRACTION OF DRY GAS		0.9424	0.9386	0.9367
Tt	NET TIME OF TEST	MINUTES	64	64	64

* 68 Deg.F, 29.92 "Hg (20 Deg.C, 760 mm Hg)

METCO ENVIRONMENTAL

SOURCE EMISSION CALCULATIONS

JOB NUMBER: 14-388
JOB NAME: BGR
LOCATION: Midland, TX
UNIT TESTED: 18" Combustor - Cond. 1

			RUN NUMBER		
SYMBOL	DESCRIPTION	UNITS	1	2	3
CO2		%	4.8	4.4	5.4
O2		%	15.3	15.9	14.4
CO		%	0.0	0.0	0.0
N2		%	79.9	79.8	80.2
%EA	EXCESS AIR @ SAMPLING POINT	%	260.5	303.0	210.1
MWd	MOLECULAR WEIGHT OF DRY STACK GAS	LB/LB-MOLE (g/g-MOLE)	29.38 (29.38)	29.37 (29.37)	29.44 (29.44)
MW	MOLECULAR WEIGHT OF STACK GAS	LB/LB-MOLE (g/g-MOLE)	28.72 (28.72)	28.67 (28.67)	28.72 (28.72)
Cp	PITOT TUBE CALIBRATION		0.839	0.839	0.839
DELTA P	VELOCITY HEAD OF STACK GAS	"H2O (mm H20)	0.043 (1.100)	0.038 (1.000)	0.042 (1.100)
DELTA P ^(1/2)		"H2O	0.207	0.192	0.203
Ts	STACK TEMPERATURE	DEG. F (DEG. C)	1,184 (640)	1,153 (623)	1,196 (647)
Ps	STACK PRESSURE	"Hg Abs. (mm Hg) "H20	27.18 (690.00) 0.00	27.18 (690.00) 0.00	27.16 (690.00) 0.00
Vs	STACK VELOCITY @ STACK CONDITIONS	FPM (m/SEC.)	1,291 (7)	1,188 (6)	1,272 (6)
As	STACK AREA	(SQ.INCHES) (SQ.METERS)	247 (0)	247 (0)	247 (0)
Qs	DRY STACK GAS VOLUME @ STANDARD CONDITIONS* WET STACK GAS VOLUME @ STANDARD CONDITIONS*	DSCFM (DSCM/HR) WSCFH	611 (1,038) 38,901	571 (970) 36,501	594 (1,009) 38,048
Qa	ACTUAL STACK GAS VOLUME @ STACK CONDITIONS	ACFM (m^3/HR)	2,215 (3,763)	2,037 (3,461)	2,181 (3,706)
Dn	SAMPLING NOZZLE DIAM.	IN. (m)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
%I	PERCENT ISOKINETIC	%	----	----	----

* 68 Deg.F, 29.92 "Hg (20 Deg.C, 760 mm Hg)

METCO ENVIRONMENTAL

SOURCE EMISSION SURVEY

JOB NUMBER: 14-388
JOB NAME: BGR
LOCATION: Midland, TX
UNIT TESTED: 18" Combustor - Cond. 2

SOURCE EMISSION CALCULATIONS

			RUN NUMBER		
SYMBOL	DESCRIPTION	UNITS	1	2	3
DATE			12/19/14	12/19/14	12/19/14
BEGIN TIME			1420	1540	1700
END TIME			1530	1650	1810
P(b)	BAROMETRIC PRESSURE	"Hg Abs.	27.11	27.12	27.13
		(mm Hg)	(689.00)	(689.00)	(689.00)
P(m)	ORIFICE PRESSURE DROP	"H2O	1.000	1.000	1.000
		(mm H2O)	(25.400)	(25.400)	(25.400)
	DGM CALIBRATION FACTOR		1.002	1.002	1.002
V(m)	VOLUME DRY GAS SAMPLED	ft.^3	37.780	37.763	37.921
	@ METER CONDITIONS	(m^3)	(1.070)	(1.069)	(1.074)
	LEAK CHECK VOLUME	ft.^3	0.000	0.000	0.000
T(m)	AVERAGE GAS METER	DEG.F	75	76	76
	TEMPERATURE	(DEG.C)	(24)	(24)	(24)
V(m[std])*	VOLUME DRY GAS SAMPLED	DSCF	33.881	33.815	33.969
	@ STANDARD CONDITIONS*	(DSCM)	(0.959)	(0.958)	(0.962)
V(w)	TOTAL WATER COLLECTED,	ml	45.6	46.1	42.4
	IMPINGERS & SILICA GEL				
V(w[gas])	VOLUME WATER VAPOR	SCF	2.152	2.176	2.001
	COLLECTED @ STANDARD	(SCM)	(0.061)	(0.062)	(0.057)
	CONDITIONS*				
%M	MOISTURE IN STACK GAS	%	5.97	6.05	5.56
	BY VOLUME				
Md	MOL FRACTION OF DRY GAS		0.9403	0.9395	0.9444
Tt	NET TIME OF TEST	MINUTES	64	64	64

* 68 Deg.F, 29.92 "Hg (20 Deg.C, 760 mm Hg)

METCO ENVIRONMENTAL

SOURCE EMISSION CALCULATIONS

JOB NUMBER: 14-388
JOB NAME: BGR
LOCATION: Midland, TX
UNIT TESTED: 18" Combustor - Cond. 2

			RUN NUMBER		
SYMBOL	DESCRIPTION	UNITS	1	2	3
CO2		%	4.7	5.0	4.8
O2		%	15.4	14.9	15.3
CO		%	0.0	0.0	0.0
N2		%	79.9	80.0	79.9
%EA	EXCESS AIR @ SAMPLING POINT	%	266.7	236.5	260.5
MWd	MOLECULAR WEIGHT OF DRY STACK GAS	LB/LB-MOLE (g/g-MOLE)	29.37 (29.37)	29.37 (29.37)	29.38 (29.38)
MW	MOLECULAR WEIGHT OF STACK GAS	LB/LB-MOLE (g/g-MOLE)	28.69 (28.69)	28.68 (28.68)	28.75 (28.75)
Cp	PITOT TUBE CALIBRATION		0.839	0.839	0.839
DELTA P	VELOCITY HEAD OF STACK GAS	"H2O (mm H20)	0.029 (0.700)	0.032 (0.800)	0.036 (0.900)
DELTA P ^(1/2)		"H2O	0.167	0.177	0.189
Ts	STACK TEMPERATURE	DEG. F (DEG. C)	1,111 (599)	1,128 (609)	1,120 (604)
Ps	STACK PRESSURE	"Hg Abs. (mm Hg) "H20	27.11 (689.00) 0.00	27.12 (689.00) 0.00	27.13 (689.00) 0.00
Vs	STACK VELOCITY @ STACK CONDITIONS	FPM (m/SEC.)	1,020 (5)	1,087 (6)	1,156 (6)
As	STACK AREA	(SQ.INCHES) (SQ.METERS)	247 (0)	247 (0)	247 (0)
Qs	DRY STACK GAS VOLUME @ STANDARD CONDITIONS* WET STACK GAS VOLUME @ STANDARD CONDITIONS*	DSCFM (DSCM/HR) WSCFH	503 (855) 32,096	530 (900) 33,848	570 (968) 36,213
Qa	ACTUAL STACK GAS VOLUME @ STACK CONDITIONS	ACFM (m^3/HR)	1,750 (2,973)	1,865 (3,169)	1,984 (3,371)
Dn	SAMPLING NOZZLE DIAM.	IN. (m)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
%I	PERCENT ISOKINETIC	%	----	----	----

* 68 Deg.F, 29.92 "Hg (20 Deg.C, 760 mm Hg)

METCO ENVIRONMENTAL

SOURCE EMISSION SURVEY

JOB NUMBER: 14-388
JOB NAME: BGR
LOCATION: Midland, Tx
UNIT TESTED: 18" Combustor Stack - Cond. 3

SOURCE EMISSION CALCULATIONS

			RUN NUMBER		
SYMBOL	DESCRIPTION	UNITS	1	2	3
DATE			12/20/14	12/20/14	12/20/14
BEGIN TIME			1115	1233	1355
END TIME			1225	1343	1505
P(b)	BAROMETRIC PRESSURE	"Hg Abs.	27.16	27.09	27.05
		(mm Hg)	(690.00)	(688.00)	(687.00)
P(m)	ORIFICE PRESSURE DROP	"H2O	1.000	1.000	1.000
		(mm H2O)	(25.400)	(25.400)	(25.400)
	DGM CALIBRATION FACTOR		1.002	1.002	1.002
V(m)	VOLUME DRY GAS SAMPLED	ft.^3	37.684	37.594	37.941
	@ METER CONDITIONS	(m^3)	(1.067)	(1.065)	(1.074)
	LEAK CHECK VOLUME	ft.^3	0.000	0.000	0.000
T(m)	AVERAGE GAS METER	DEG.F	68	73	77
	TEMPERATURE	(DEG.C)	(20)	(23)	(25)
V(m[std])*	VOLUME DRY GAS SAMPLED	DSCF	34.306	33.816	33.824
	@ STANDARD CONDITIONS*	(DSCM)	(0.971)	(0.958)	(0.958)
V(w)	TOTAL WATER COLLECTED,	ml	42.4	42.8	40.1
	IMPINGERS & SILICA GEL				
V(w[gas])	VOLUME WATER VAPOR	SCF	2.001	2.020	1.893
	COLLECTED @ STANDARD	(SCM)	(0.057)	(0.057)	(0.054)
	CONDITIONS*				
%M	MOISTURE IN STACK GAS	%	5.51	5.64	5.30
	BY VOLUME				
Md	MOL FRACTION OF DRY GAS		0.9449	0.9436	0.9470
Tt	NET TIME OF TEST	MINUTES	64	64	64

* 68 Deg.F, 29.92 "Hg (20 Deg.C, 760 mm Hg)

METCO ENVIRONMENTAL

SOURCE EMISSION CALCULATIONS

JOB NUMBER: 14-388
JOB NAME: BGR
LOCATION: Midland, Tx
UNIT TESTED: 18" Combustor Stack - Cond. 3

			RUN NUMBER		
SYMBOL	DESCRIPTION	UNITS	1	2	3
CO2		%	4.3	4.4	4.4
O2		%	16.0	15.8	15.8
CO		%	0.0	0.0	0.0
N2		%	79.7	79.8	79.8
%EA	EXCESS AIR @ SAMPLING POINT	%	312.5	295.5	295.5
MWd	MOLECULAR WEIGHT OF DRY STACK GAS	LB/LB-MOLE (g/g-MOLE)	29.33 (29.33)	29.34 (29.34)	29.34 (29.34)
MW	MOLECULAR WEIGHT OF STACK GAS	LB/LB-MOLE (g/g-MOLE)	28.70 (28.70)	28.70 (28.70)	28.74 (28.74)
Cp	PITOT TUBE CALIBRATION		0.839	0.839	0.839
DELTA P	VELOCITY HEAD OF STACK GAS	"H2O (mm H20)	0.034 (0.900)	0.023 (0.600)	0.035 (0.900)
DELTA P ^(1/2)		"H2O	0.184	0.148	0.185
Ts	STACK TEMPERATURE	DEG. F (DEG. C)	1,010 (543)	1,036 (558)	1,061 (572)
Ps	STACK PRESSURE	"Hg Abs. (mm Hg) "H20	27.16 (690.00) 0.00	27.09 (688.00) 0.00	27.05 (687.00) 0.00
Vs	STACK VELOCITY @ STACK CONDITIONS	FPM (m/SEC.)	1,086 (6)	883 (4)	1,112 (6)
As	STACK AREA	(SQ.INCHES) (SQ.METERS)	247 (0)	247 (0)	247 (0)
Qs	DRY STACK GAS VOLUME @ STANDARD CONDITIONS* WET STACK GAS VOLUME @ STANDARD CONDITIONS*	DSCFM (DSCM/HR) WSCFH	576 (979) 36,575	458 (778) 29,123	569 (967) 36,051
Qa	ACTUAL STACK GAS VOLUME @ STACK CONDITIONS	ACFM (m^3/HR)	1,863 (3,165)	1,514 (2,572)	1,908 (3,242)
Dn	SAMPLING NOZZLE DIAM.	IN. (m)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
%I	PERCENT ISOKINETIC	%	----	----	----

* 68 Deg.F, 29.92 "Hg (20 Deg.C, 760 mm Hg)

METCO ENVIRONMENTAL

SOURCE EMISSION SURVEY

JOB NUMBER: 14-388
JOB NAME: BGR
LOCATION: Midland, Tx
UNIT TESTED: 18" Combustor - Cond. 4

SOURCE EMISSION CALCULATIONS

			RUN NUMBER		
SYMBOL	DESCRIPTION	UNITS	1	2	3
DATE			12/20/14	12/20/14	12/21/14
BEGIN TIME			1520	1640	0942
END TIME			1630	1750	1052
P(b)	BAROMETRIC PRESSURE	"Hg Abs.	27.03	27.03	26.97
		(mm Hg)	(687.00)	(687.00)	(685.00)
P(m)	ORIFICE PRESSURE DROP	"H2O	1.000	1.000	1.000
		(mm H2O)	(25.400)	(25.400)	(25.400)
	DGM CALIBRATION FACTOR		1.002	1.002	1.002
V(m)	VOLUME DRY GAS SAMPLED	ft.^3	38.367	37.977	37.640
	@ METER CONDITIONS	(m^3)	(1.086)	(1.075)	(1.066)
	LEAK CHECK VOLUME	ft.^3	0.000	0.000	0.000
T(m)	AVERAGE GAS METER	DEG.F	76	74	63
	TEMPERATURE	(DEG.C)	(24)	(23)	(17)
V(m[std])*	VOLUME DRY GAS SAMPLED	DSCF	34.242	34.021	34.352
	@ STANDARD CONDITIONS*	(DSCM)	(0.970)	(0.963)	(0.973)
V(w)	TOTAL WATER COLLECTED,	ml	32.4	37.0	39.5
	IMPINGERS & SILICA GEL				
V(w[gas])	VOLUME WATER VAPOR	SCF	1.529	1.746	1.864
	COLLECTED @ STANDARD	(SCM)	(0.043)	(0.049)	(0.053)
	CONDITIONS*				
%M	MOISTURE IN STACK GAS	%	4.28	4.88	5.15
	BY VOLUME				
Md	MOL FRACTION OF DRY GAS		0.9572	0.9512	0.9485
Tt	NET TIME OF TEST	MINUTES	64	64	64

* 68 Deg.F, 29.92 "Hg (20 Deg.C, 760 mm Hg)

METCO ENVIRONMENTAL

SOURCE EMISSION CALCULATIONS

JOB NUMBER: 14-388
JOB NAME: BGR
LOCATION: Midland, Tx
UNIT TESTED: 18" Combustor - Cond. 4

			RUN NUMBER		
SYMBOL	DESCRIPTION	UNITS	1	2	3
CO2		%	3.6	3.6	3.7
O2		%	17.0	17.1	16.9
CO		%	0.0	0.0	0.0
N2		%	79.4	79.3	79.4
%EA	EXCESS AIR @ SAMPLING POINT	%	420.7	436.8	408.1
MWd	MOLECULAR WEIGHT OF DRY STACK GAS	LB/LB-MOLE (g/g-MOLE)	29.26 (29.26)	29.26 (29.26)	29.27 (29.27)
MW	MOLECULAR WEIGHT OF STACK GAS	LB/LB-MOLE (g/g-MOLE)	28.77 (28.77)	28.71 (28.71)	28.69 (28.69)
Cp	PITOT TUBE CALIBRATION		0.839	0.839	0.839
DELTA P	VELOCITY HEAD OF STACK GAS	"H2O (mm H20)	0.024 (0.600)	0.027 (0.700)	0.022 (0.600)
DELTA P ^(1/2)		"H2O	0.154	0.162	0.149
Ts	STACK TEMPERATURE	DEG. F (DEG. C)	897 (481)	912 (489)	935 (502)
Ps	STACK PRESSURE	"Hg Abs. (mm Hg) "H20	27.03 (687.00) 0.00	27.03 (687.00) 0.00	26.97 (685.00) 0.00
Vs	STACK VELOCITY @ STACK CONDITIONS	FPM (m/SEC.)	875 (4)	926 (5)	860 (4)
As	STACK AREA	(SQ.INCHES) (SQ.METERS)	247 (0)	247 (0)	247 (0)
Qs	DRY STACK GAS VOLUME @ STANDARD CONDITIONS* WET STACK GAS VOLUME @ STANDARD CONDITIONS*	DSCFM (DSCM/HR) WSCFH	507 (861) 31,780	527 (895) 33,242	479 (814) 30,300
Qa	ACTUAL STACK GAS VOLUME @ STACK CONDITIONS	ACFM (m^3/HR)	1,500 (2,549)	1,588 (2,698)	1,475 (2,506)
Dn	SAMPLING NOZZLE DIAM.	IN. (m)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
%I	PERCENT ISOKINETIC	%	----	----	----

* 68 Deg.F, 29.92 "Hg (20 Deg.C, 760 mm Hg)

Normalization of Method 3C Data - 18" Combustor

Condition 1

	Run 1 Actual	Run 1 Normalized	Run 2 Actual	Run 2 Normalized	Run 3 Actual	Run 3 Normalized
Hydrogen	0	0	0	0	0	0
Oxygen	14.8	15.3	15.3	15.9	13.8	14.4
Nitrogen	77.5	79.9	76.8	79.8	77.1	80.2
Carbon Monoxide	0	0	0	0	0	0
Methane	0	0	0	0	0	0
Carbon Dioxide	4.67	4.8	4.2	4.4	5.2	5.4
Total	96.97	100	96.3	100.1	96.1	100

Condition 2

	Run 1 Actual	Run 1 Normalized	Run 2 Actual	Run 2 Normalized	Run 3 Actual	Run 3 Normalized
Hydrogen	0	0	0	0	0	0
Oxygen	14.8	15.4	14.4	14.9	14.6	15.3
Nitrogen	76.9	79.9	77.2	80	76.5	79.9
Carbon Monoxide	0	0	0	0	0	0
Methane	0	0	0	0	0	0
Carbon Dioxide	4.57	4.7	4.85	5	4.59	4.8
Total	96.27	100	96.45	99.9	95.69	100

Condition 3

	Run 1 Actual	Run 1 Normalized	Run 2 Actual	Run 2 Normalized	Run 3 Actual	Run 3 Normalized
Hydrogen	0	0	0	0	0	0
Oxygen	15.4	16	15	15.8	15	15.8
Nitrogen	76.6	79.7	75.9	79.8	75.8	79.8
Carbon Monoxide	0	0	0	0	0	0
Methane	0	0	0	0	0	0
Carbon Dioxide	4.09	4.3	4.22	4.4	4.21	4.4
Total	96.09	100	95.12	100	95.01	100

Condition 4

	Run 1 Actual	Run 1 Normalized	Run 2 Actual	Run 2 Normalized	Run 3 Actual	Run 3 Normalized
Hydrogen	0	0	0	0	0	0
Oxygen	16.1	17	16.1	17.1	16	16.9
Nitrogen	75	79.4	74.5	79.3	75	79.4
Carbon Monoxide	0	0	0	0	0	0
Methane	0	0	0	0	0	0
Carbon Dioxide	3.41	3.6	3.34	3.6	3.51	3.7
Total	94.51	100	93.94	100	94.51	100

Fd Factor Calculations
Canister 1186

	Specific Gravity	Btu/ft3	%Vol.	Specific Gravity Ratio	(% wt.)	O2%	C%	H%	S%
Hydrogen	0.0696	324.9	0.0000	0.0000	0.00			100.0	
Oxygen	1.1100		0.1800	0.0020	0.14	100.0			
Nitrogen	0.9672		0.6600	0.0064	0.46				
Carbon Monoxide	0.9671	321.3	0.0000	0.0000	0.00	57.1	42.9		
Carbon Dioxide	1.5194		0.0000	0.0000	0.00	72.7	27.3		
Hydrogen Sulfide	1.1765	638.6	0.0000	0.0000	0.00			5.9	94.1
Methane (C1)	0.5539	1012.0	0.0000	0.0000	0.00		75.0	25.0	
Ethane (C2)	1.0382	1772.9	0.0000	0.0000	0.00		80.0	20.0	
Ethylene (C2=)	0.9686	1602.9	0.0000	0.0000	0.00		85.7	14.3	
Propane (C3)	1.5224	2523.0	0.0000	0.0000	0.00		81.8	18.2	
Propylene (C3=)	1.4528	2339.0	95.7400	1.3909	99.40		85.7	14.3	
Butanes (IC4+NC4+Other)	2.0067	3265.0	0.0000	0.0000	0.00		82.8	17.2	
Butenes (IC4=+TC4=2+CC4=2)	1.9371	3080.1	0.0000	0.0000	0.00		85.7	14.3	
Butadiene (C4=13)	1.8675	2887.7	0.0000	0.0000	0.00		88.9	11.1	
Pentanes (IC5+NC5)	2.4910	4014.0	0.0000	0.0000	0.00		83.3	16.7	
Pentenes (C5=+)	2.4214	3824.0	0.0000	0.0000	0.00		85.6	14.4	
Hexanes+ (C6+)	2.9753	4758.0	0.0000	0.0000	0.00		83.7	16.3	
Cyclohexane	2.9056	4397.0	0.0000	0.0000	0.00		85.6	14.3	
Acetylene	0.8990	1476.2	0.0000	0.0000	0.00		92.3	7.7	
Benzene	2.6968	3750.6	0.0000	0.0000	0.00		92.3	7.7	
Toluene	3.1820	4485.2	0.0000	0.0000	0.00	91.3		8.7	
H2O	0.0622		0.0000	0.0000	0.00	85.7		14.3	
COS	2.0715	594.0		0.0000	0.00	26.7	20.0		53.3
Sum =			96.5800	1.3993	100.00				
Specific Gravity =	1.3993					C% =	85.19		
Btu/ft3* =	2200					H% =	14.21		
Btu/lb* =	21,246					O% =	0.14		
						N% =	0.46		
						S% =	0.00		
						Sum =	100.00		

$$\text{Fd factor} = \frac{1{,}000{,}000[3.64(\%H)+1.53(\%C)+0.57(\%S)+0.14(\%N)-0.46(\%O)}{\text{Btu/lb}}$$

Fd factor = 8,569 dscf*/million Btu

*29.92 "Hg, 68 Deg.F (760 mm Hg, 20 Deg.C)

Fd Factor Calculations
Canister 1310

	Specific Gravity	Btu/ft3	%Vol.	Specific Gravity Ratio	(% wt.)	O2%	C%	H%	S%
Hydrogen	0.0696	324.9	0.0000	0.0000	0.00			100.0	
Oxygen	1.1100		0.0600	0.0007	0.05	100.0			
Nitrogen	0.9672		0.3200	0.0031	0.23				
Carbon Monoxide	0.9671	321.3	0.0000	0.0000	0.00	57.1	42.9		
Carbon Dioxide	1.5194		0.0000	0.0000	0.00	72.7	27.3		
Hydrogen Sulfide	1.1765	638.6	0.0000	0.0000	0.00			5.9	94.1
Methane (C1)	0.5539	1012.0	0.0000	0.0000	0.00		75.0	25.0	
Ethane (C2)	1.0382	1772.9	0.0000	0.0000	0.00		80.0	20.0	
Ethylene (C2=)	0.9686	1602.9	0.0000	0.0000	0.00		85.7	14.3	
Propane (C3)	1.5224	2523.0	0.0000	0.0000	0.00		81.8	18.2	
Propylene (C3=)	1.4528	2339.0	93.2200	1.3543	99.72		85.7	14.3	
Butanes (IC4+NC4+Other)	2.0067	3265.0	0.0000	0.0000	0.00		82.8	17.2	
Butenes (IC4=+TC4=2+CC4=2)	1.9371	3080.1	0.0000	0.0000	0.00		85.7	14.3	
Butadiene (C4=13)	1.8675	2887.7	0.0000	0.0000	0.00		88.9	11.1	
Pentanes (IC5+NC5)	2.4910	4014.0	0.0000	0.0000	0.00		83.3	16.7	
Pentenes (C5=+)	2.4214	3824.0	0.0000	0.0000	0.00		85.6	14.4	
Hexanes+ (C6+)	2.9753	4758.0	0.0000	0.0000	0.00		83.7	16.3	
Cyclohexane	2.9056	4397.0	0.0000	0.0000	0.00		85.6	14.3	
Acetylene	0.8990	1476.2	0.0000	0.0000	0.00		92.3	7.7	
Benzene	2.6968	3750.6	0.0000	0.0000	0.00		92.3	7.7	
Toluene	3.1820	4485.2	0.0000	0.0000	0.00	91.3		8.7	
H2O	0.0622		0.0000	0.0000	0.00	85.7		14.3	
COS	2.0715	594.0		0.0000	0.00	26.7	20.0		53.3
Sum =			93.6000	1.3581	100.00				
Specific Gravity =	1.3581					C% =	85.46		
Btu/ft3* =	2142					H% =	14.26		
Btu/lb* =	21,314					O% =	0.05		
						N% =	0.23		
						S% =	0.00		
						Sum =	100.00		

$$\text{Fd factor} = \frac{1{,}000{,}000[3.64(\%H)+1.53(\%C)+0.57(\%S)+0.14(\%N)-0.46(\%O)}{\text{^Btu/lb}}$$

Fd factor = 8,570 dscf*/million Btu

*29.92 "Hg, 68 Deg.F (760 mm Hg, 20 Deg.C)

Fd Factor Calculations
Canister 1044

	Specific Gravity	Btu/ft3	%Vol.	Specific Gravity Ratio	(% wt.)	O2%	C%	H%	S%
Hydrogen	0.0696	324.9	0.0000	0.0000	0.00			100.0	
Oxygen	1.1100		0.2500	0.0028	0.20	100.0			
Nitrogen	0.9672		0.9000	0.0087	0.61				
Carbon Monoxide	0.9671	321.3	0.0000	0.0000	0.00	57.1	42.9		
Carbon Dioxide	1.5194		0.0000	0.0000	0.00	72.7	27.3		
Hydrogen Sulfide	1.1765	638.6	0.0000	0.0000	0.00			5.9	94.1
Methane (C1)	0.5539	1012.0	0.0000	0.0000	0.00		75.0	25.0	
Ethane (C2)	1.0382	1772.9	0.0000	0.0000	0.00		80.0	20.0	
Ethylene (C2=)	0.9686	1602.9	0.0000	0.0000	0.00		85.7	14.3	
Propane (C3)	1.5224	2523.0	0.0000	0.0000	0.00		81.8	18.2	
Propylene (C3=)	1.4528	2339.0	97.1900	1.4120	99.19		85.7	14.3	
Butanes (IC4+NC4+Other)	2.0067	3265.0	0.0000	0.0000	0.00		82.8	17.2	
Butenes (IC4=+TC4=2+CC4=2)	1.9371	3080.1	0.0000	0.0000	0.00		85.7	14.3	
Butadiene (C4=13)	1.8675	2887.7	0.0000	0.0000	0.00		88.9	11.1	
Pentanes (IC5+NC5)	2.4910	4014.0	0.0000	0.0000	0.00		83.3	16.7	
Pentenes (C5=+)	2.4214	3824.0	0.0000	0.0000	0.00		85.6	14.4	
Hexanes+ (C6+)	2.9753	4758.0	0.0000	0.0000	0.00		83.7	16.3	
Cyclohexane	2.9056	4397.0	0.0000	0.0000	0.00		85.6	14.3	
Acetylene	0.8990	1476.2	0.0000	0.0000	0.00		92.3	7.7	
Benzene	2.6968	3750.6	0.0000	0.0000	0.00		92.3	7.7	
Toluene	3.1820	4485.2	0.0000	0.0000	0.00	91.3		8.7	
H2O	0.0622		0.0000	0.0000	0.00	85.7		14.3	
COS	2.0715	594.0		0.0000	0.00	26.7	20.0		53.3
Sum =			98.3400	1.4235	100.00				
Specific Gravity =	1.4235					C% =	85.01		
Btu/ft3* =	2233					H% =	14.18		
Btu/lb* =	21,198					O% =	0.20		
						N% =	0.61		
						S% =	0.00		
						Sum =	100.00		

$$\text{Fd factor} = \frac{1{,}000{,}000[3.64(\%H)+1.53(\%C)+0.57(\%S)+0.14(\%N)-0.46(\%O)}{\text{^Btu/lb}}$$

Fd factor = 8,570 dscf*/million Btu

*29.92 "Hg, 68 Deg.F (760 mm Hg, 20 Deg.C)

Fd Factor Calculations
Canister 1340

	Specific Gravity	Btu/ft3	%Vol.	Specific Gravity Ratio	(% wt.)	O2%	C%	H%	S%
Hydrogen	0.0696	324.9	0.0000	0.0000	0.00			100.0	
Oxygen	1.1100		0.0800	0.0009	0.06	100.0			
Nitrogen	0.9672		0.4300	0.0042	0.29				
Carbon Monoxide	0.9671	321.3	0.0000	0.0000	0.00	57.1	42.9		
Carbon Dioxide	1.5194		0.0000	0.0000	0.00	72.7	27.3		
Hydrogen Sulfide	1.1765	638.6	0.0000	0.0000	0.00			5.9	94.1
Methane (C1)	0.5539	1012.0	0.0000	0.0000	0.00		75.0	25.0	
Ethane (C2)	1.0382	1772.9	0.0000	0.0000	0.00		80.0	20.0	
Ethylene (C2=)	0.9686	1602.9	0.0000	0.0000	0.00		85.7	14.3	
Propane (C3)	1.5224	2523.0	0.0000	0.0000	0.00		81.8	18.2	
Propylene (C3=)	1.4528	2339.0	98.5100	1.4312	99.64		85.7	14.3	
Butanes (IC4+NC4+Other)	2.0067	3265.0	0.0000	0.0000	0.00		82.8	17.2	
Butenes (IC4=+TC4=2+CC4=2)	1.9371	3080.1	0.0000	0.0000	0.00		85.7	14.3	
Butadiene (C4=13)	1.8675	2887.7	0.0000	0.0000	0.00		88.9	11.1	
Pentanes (IC5+NC5)	2.4910	4014.0	0.0000	0.0000	0.00		83.3	16.7	
Pentenes (C5=+)	2.4214	3824.0	0.0000	0.0000	0.00		85.6	14.4	
Hexanes+ (C6+)	2.9753	4758.0	0.0000	0.0000	0.00		83.7	16.3	
Cyclohexane	2.9056	4397.0	0.0000	0.0000	0.00		85.6	14.3	
Acetylene	0.8990	1476.2	0.0000	0.0000	0.00		92.3	7.7	
Benzene	2.6968	3750.6	0.0000	0.0000	0.00		92.3	7.7	
Toluene	3.1820	4485.2	0.0000	0.0000	0.00	91.3		8.7	
H2O	0.0622		0.0000	0.0000	0.00	85.7		14.3	
COS	2.0715	594.0		0.0000	0.00	26.7	20.0		53.3
Sum =			99.0200	1.4363	99.99				
Specific Gravity =	1.4363					C% =	85.39		
Btu/ft3* =	2264					H% =	14.25		
Btu/lb* =	21,301					O% =	0.06		
						N% =	0.29		
						S% =	0.00		
						Sum =	99.99		

$$\text{Fd factor} = \frac{1{,}000{,}000[3.64(\%H)+1.53(\%C)+0.57(\%S)+0.14(\%N)-0.46(\%O)}{\text{^Btu/lb}}$$

Fd factor = 8,569 dscf*/million Btu

*29.92 "Hg, 68 Deg.F (760 mm Hg, 20 Deg.C)

APPENDIX C

Calibration Data

Equipment	Calibration Factor	Calibration Date
Pitot Tube #PG66	0.839	12/11/14
Dry Gas Meter #7-1	1.002	09/22/14
Stack Unit Orifice #7-1		09/29/14
Digital Temperature Indicator #7-1		09/22/14
Barometer #7-2		12/16/14

METCO ENVIRONMENTAL

Pitot Tube Calibration

Date: 12/11/14 Time: 1130

Pitot No: PGGG T_s: 70

Pitot Dimensions: 8' 1/4" C_{pstd}: 0.990

Pitot Inspections

Pitot tips level and perpendicular (YES) / NO

Pitot tips free from obstruction (YES) / NO

Pitot tips damaged YES / (NO)

Motor Setting	fps mark	Calibration Standard Start	Calibration Standard End	√Standard Average	High	√High	Cal. Factor	Low	√Low	Cal. Factor
7	20	0.10	0.10	0.316	0.14	0.374	0.837	0.14	0.374	0.837
14	30	0.20	0.20	0.447	0.28	0.529	0.837	0.28	0.529	0.837
20	40	0.36	0.36	0.600	0.51	0.714	0.832	0.50	0.707	0.840
28	50	0.56	0.56	0.748	0.77	0.877	0.844	0.79	0.889	0.834
35	60	0.80	0.80	0.894	1.10	1.049	0.844	1.10	1.049	0.844
41	70	1.10	1.10	1.049	1.55	1.245	0.834	1.60	1.265	0.821
50	80	1.40	1.40	1.183	1.90	1.378	0.850	2.05	1.432	0.818
62	90	1.80	1.80	1.342	2.55	1.597	0.832	2.50	1.581	0.840
28*	**50***	0.56	0.56	0.748	0.77	0.877	0.844	0.79	0.889	0.834
28*	**50***	0.56	0.56	0.748	0.77	0.877	0.844	0.79	0.889	0.834
Average							0.839			0.834

***not included in average**

$$C_p = C_{pstd}\left(\frac{\sqrt{\Delta P_{std}}}{\sqrt{\Delta P}}\right)$$

Summary of Results:

Normal high side calibration factor 0.839

variation + 1.31 variation - 0.83

Normal low side calibration factor 0.834

variation ~~+~~ 1.20 variation - 1.92

Calibrator: Morrison

Office: Dallas

QA/QC Check

Completeness ✓ Legibility ✓ Accuracy ✓ Specifications ✓ Reasonableness ✓

Checked by:

METCO ENVIRONMENTAL

Dry Gas Meter Calibration

Dry Gas Meter Number 7-1

Date: 9/22/14

ΔH ("H_2O)	C_{dg}
0.50	1.004
1.00	1.003
1.50	1.000
2.00	0.998
3.00	1.004
4.00	1.002
Average	1.002

Variation: + 0.20 %

- -0.40 %

Adjustment Required: Yes_____ No ✓

Calibrator: Morrison

Office: Dallas

QA/QC Check
Completeness ✓ Legibility ✓ Accuracy ✓ Specifications ✓ Reasonableness ✓

Checked by: [signature]

METCO ENVIRONMENTAL

DRY GAS METER CALIBRATION

Meter Number: 7-1 Wet Test Meter No : 7-1

Date: 9/22/14 Calibrator: Morrison

$$\text{Wet Test Meter } VM_{std} = 17.65 \times V_m \frac{P_b + \frac{P_m}{13.6}}{T_m + 460} \times C_f = ____ \text{ scfm}$$

$$\text{Dry Test Meter } VM_{std} = 17.65 \times V_m \frac{P_b + \frac{P_m}{13.6}}{T_m + 460} = ____ \text{ scfm}$$

Run No: 10 4.0 "H_2O P_b: 30.02 "Hg

Wet Test Meter C_f: 1.000 Control Module Vacuum: 5 "Hg

Wet Test Meter

	Time	Meter Reading	T_m	P_m
End	907	10.110	77 °F	-3.9 "H_2O
Start	0.000	0.000	77 °F	-3.9 "H_2O
		10.110 cf^{Δ}	77 °F$_{avg}$	-3.9 "H_2O_{avg}

Dry Gas Meter

	Meter Reading	T_m Inlet	T_m Outlet	P_m
End	158.246	85 °F	80 °F	4.0 "H_2O
Start	148.253	84 °F	80 °F	4.0 "H_2O
	~~10.067~~ 9.993 cf^{Δ}	82 °F$_{avg}$		4.0 "H_2O_{avg}

$cf^{\Delta} = V_m$

$$\text{Wet Test Meter } VM_{std} = 17.65 \times 10.110 \frac{30.02 + \frac{-3.9}{13.6}}{77 + 460} \times 1.000 \, C_f = 9.890 \text{ scfm}$$

$$\text{Dry Gas Meter } VM_{std} = 17.65 \times 9.993 \frac{30.02 + \frac{4.0}{13.6}}{82 + 460} = 9.865 \text{ scfm}$$

$$\text{Calibration Factor } (C_{dg}) = \frac{\text{Wet Test Meter } VM_{std}}{\text{Dry Gas Meter } VM_{std}} \quad C_{dg} = \frac{9.890}{9.865} = 1.002$$

QA/QC Check Completeness ✓ Legibility ✓ Accuracy ✓ Specifications ✓ Reasonableness ✓

Checked by: Kris

METCO ENVIRONMENTAL

DRY GAS METER CALIBRATION

Meter Number: 7-1 Wet Test Meter No : 4.

Date: 9/22/14 Calibrator: Morrison

$$\text{Wet Test Meter } VM_{std} = 17.65 \times V_m \frac{P_b + \frac{P_m}{13.6}}{T_m + 460} \times C_f = ____ \text{ scfm}$$

$$\text{Dry Test Meter } VM_{std} = 17.65 \times V_m \frac{P_b + \frac{P_m}{13.6}}{T_m + 460} = ____ \text{ scfm}$$

Run No: 1@0.50 "H_2O P_b: 30.02 "Hg

Wet Test Meter C_f: 1.000 Control Module Vacuum: 5 "Hg

	Wet Test Meter				Dry Gas Meter			
	Time	Meter Reading	T_m	P_m	Meter Reading	T_m Inlet	T_m Outlet	P_m
End	15.29	6.065	77 °F	-1.2 "H_2O	107.764	79 °F	78 °F	0.5 "H_2O
Start	0.00	0.000	77 °F	-1.2 "H_2O	101.723	79 °F	78 °F	0.5 "H_2O
		6.065 cf^{Δ}	77 °F_{avg}	-1.2 "H_2O_{avg}	6.041 cf^{Δ}	79 °F_{avg}		"H_2O_{avg}

$cf^{\Delta} = V_m$

$$\text{Wet Test Meter } VM_{std} = 17.65 \times 6.065 \frac{30.02 + \frac{-1.2}{13.6}}{77 + 460} \times 1.000 \; C_f = 5.967 \text{ scfm}$$

$$\text{Dry Gas Meter } VM_{std} = 17.65 \times 6.041 \frac{30.02 + \frac{0.5}{13.6}}{79 + 460} = 5.946 \text{ scfm}$$

$$\text{Calibration Factor } (C_{dg}) = \frac{\text{Wet Test Meter } VM_{std}}{\text{Dry Gas Meter } VM_{std}} \quad C_{dg} = \frac{5.967}{5.946} = 1.004$$

QA/QC Check
Completeness ✓ Legibility ✓ Accuracy ✓ Specifications ✓ Reasonableness ✓

Checked by: Kevin Dill

Version 2
January 2009

METCO ENVIRONMENTAL

DRY GAS METER CALIBRATION

Meter Number: 7-1 Wet Test Meter No : 4

Date: 9/22/14 Calibrator: Morrison

$$\text{Wet Test Meter } VM_{std} = 17.65 \times V_m \frac{P_b + \frac{P_m}{13.6}}{T_m + 460} \times C_f = ____ \text{ scfm}$$

$$\text{Dry Test Meter } VM_{std} = 17.65 \times V_m \frac{P_b + \frac{P_m}{13.6}}{T_m + 460} = ____ \text{ scfm}$$

Run No: @ 1.00 "H_2O P_b: 30.02 "Hg

Wet Test Meter C_f: 1.000 Control Module Vacuum: 5 "Hg

Wet Test Meter

	Time	Meter Reading	T_m	P_m
End	9:5038	5.536	77 °F	-1.6 "H_2O
Start	0:00	0.000	77 °F	-1.6 "H_2O
		5.536 cf^{Δ}	77 °F_{avg}	-1.6 "H_2O_{avg}

Dry Gas Meter

	Meter Reading	T_m Inlet	T_m Outlet	P_m
End	113.698	79 °F	79 °F	1.0 "H_2O
Start	108.201	79 °F	79 °F	1.0 "H_2O
	5.497 cf^{Δ}	79 °F_{avg}		1.0 "H_2O_{avg}

$cf^{\Delta} = V_m$

Wet Test Meter VM_{std} = 17.65 x 5.536 $\frac{30.02 + \frac{-1.6}{13.6}}{77 + 460}$ X 1.000 C_f = 5.435 scfm

Dry Gas Meter VM_{std} = 17.65 x 5.497 $\frac{30.02 + \frac{1.0}{13.6}}{79 + 460}$ = 5.417 scfm

Calibration Factor (C_{dg}) = $\frac{\text{Wet Test Meter } VM_{std}}{\text{Dry Gas Meter } VM_{std}}$ $C_{dg} = \frac{5.435}{5.417} = 1.003$

QA/QC Check
Completeness ✓ Legibility ✓ Accuracy ✓ Specifications ✓ Reasonableness ✓

Checked by: Kevin O'M

METCO ENVIRONMENTAL

DRY GAS METER CALIBRATION

Meter Number: 7-1 Wet Test Meter No : 4

Date: 9/22/14 Calibrator: Morrison

$$\text{Wet Test Meter } VM_{std} = 17.65 \times V_m \frac{P_b + \frac{P_m}{13.6}}{T_m + 460} \times C_f = ____ \text{ scfm}$$

$$\text{Dry Test Meter } VM_{std} = 17.65 \times V_m \frac{P_b + \frac{P_m}{13.6}}{T_m + 460} = ____ \text{ scfm}$$

Run No: 1 @ 1.50 "H_2O P_b: 30.02 "Hg

Wet Test Meter C_f: 1.000 Control Module Vacuum: 5 "Hg

Wet Test Meter

Time	Meter Reading	T_m	P_m
End 15:25:27	10.590	77 °F	-2.0 "H_2O
Start 0:00	0.000	77 °F	-2.0 "H_2O
	10.590 cf^{Δ}	77 $°F_{avg}$	-2.0 "H_2O_{avg}

Dry Gas Meter

Meter Reading	T_m Inlet	T_m Outlet	P_m
124.629	79 °F	79 °F	1.5 "H_2O
114.092	79 °F	79 °F	1.5 "H_2O
10.537 cf^{Δ}	79 $°F_{avg}$		1.5 "H_2O_{avg}

$cf^{\Delta} = V_m$

$$\text{Wet Test Meter } VM_{std} = 17.65 \times 10.590 \frac{30.02 + \frac{-2.0}{13.6}}{77 + 460} \times 1.000 C_f = 10.398 \text{ scfm}$$

$$\text{Dry Gas Meter } VM_{std} = 17.65 \times 10.537 \frac{30.02 + \frac{1.5}{13.6}}{79 + 460} = 10.394 \text{ scfm}$$

$$\text{Calibration Factor } (C_{dg}) = \frac{\text{Wet Test Meter } VM_{std}}{\text{Dry Gas Meter } VM_{std}} \quad C_{dg} = \frac{10.398}{10.394} = 1.000$$

QA/QC Check
Completeness ✓ Legibility ✓ Accuracy ✓ Specifications ✓ Reasonableness ✓

Checked by: [signature]

METCO ENVIRONMENTAL

DRY GAS METER CALIBRATION

Meter Number: 7-1 Wet Test Meter No : 4

Date: 9/22/14 Calibrator: Morrison

$$\text{Wet Test Meter } VM_{std} = 17.65 \times V_m \frac{P_b + \frac{P_m}{13.6}}{T_m + 460} \times C_f = ____ \text{ scfm}$$

$$\text{Dry Test Meter } VM_{std} = 17.65 \times V_m \frac{P_b + \frac{P_m}{13.6}}{T_m + 460} = ____ \text{ scfm}$$

Run No: 1@2.0 "H_2O P_b: 30.02 "Hg

Wet Test Meter C_f: 1.000 Control Module Vacuum: 5 "Hg

Wet Test Meter

	Time	Meter Reading	T_m	P_m	
End	12470	10.140	77 °F	-2.4	"H_2O
Start	0.00	0.000	77 °F	-2.4	"H_2O
		10.140 cf^{Δ}	77 °F$_{avg}$		"H_2O_{avg}

Dry Gas Meter

	Meter Reading	T_m Inlet	T_m Outlet	P_m	
End	135.252	80 °F	79 °F		"H_2O
Start	125.140	80 °F	77 °F	2.0	"H_2O
	10.112 cf^{Δ}	80 °F$_{avg}$			"H_2O_{avg}

$cf^{\Delta} = V_m$

$$\text{Wet Test Meter } VM_{std} = 17.65 \times \frac{10.140}{77 + 460} \frac{30.02 + \frac{-2.4}{13.6}}{} \times 1.000 C_f = 9.946 \text{ scfm}$$

$$\text{Dry Gas Meter } VM_{std} = 17.65 \times \frac{10.112}{80 + 460} \frac{30.02 + \frac{2.0}{13.6}}{} = 9.970 \text{ scfm}$$

$$\text{Calibration Factor } (C_{dg}) = \frac{\text{Wet Test Meter } VM_{std}}{\text{Dry Gas Meter } VM_{std}} \quad C_{dg} = \frac{9.946}{9.970} = 0.998$$

QA/QC Check
Completeness ✓ Legibility ✓ Accuracy ✓ Specifications ✓ Reasonableness ✓

Checked by: [signature]

METCO ENVIRONMENTAL

DRY GAS METER CALIBRATION

Meter Number: 7-1 Wet Test Meter No: ~~7-4~~ 4

Date: 9/22/14 Calibrator: Morrison

$$\text{Wet Test Meter } VM_{std} = 17.65 \times V_m \frac{P_b + \frac{P_m}{13.6}}{T_m + 460} \times C_f = ____ \text{ scfm}$$

$$\text{Dry Test Meter } VM_{std} = 17.65 \times V_m \frac{P_b + \frac{P_m}{13.6}}{T_m + 460} = ____ \text{ scfm}$$

Run No: 1@3.0 "H_2O P_b: 30.02 "Hg

Wet Test Meter C_f: 1.000 Control Module Vacuum: 5 "Hg

	Wet Test Meter				Dry Gas Meter			
	Time	Meter Reading	T_m	P_m	Meter Reading	T_m Inlet	T_m Outlet	P_m
End	1045	10.435	77°F	-3.8 "H_2O	147.191	86 °F	79 °F	3.0 "H_2O
Start	0.000	0.000	77 °F	-3.8 "H_2O	136.860	80 °F	79 °F	3.0 "H_2O
		10.435 cf^{Δ}	77 °F_{avg}	-3.8 "H_2O_{avg}	10.331 cf^{Δ}	83 °F_{avg}		3.0 "H_2O_{avg}

$cf^{\Delta} = V_m$

$$\text{Wet Test Meter } VM_{std} = 17.65 \times 10.435 \frac{30.02 + \frac{-3.8}{13.6}}{77 + 460} \times 1.000 C_f = 10.200 \text{ scfm}$$

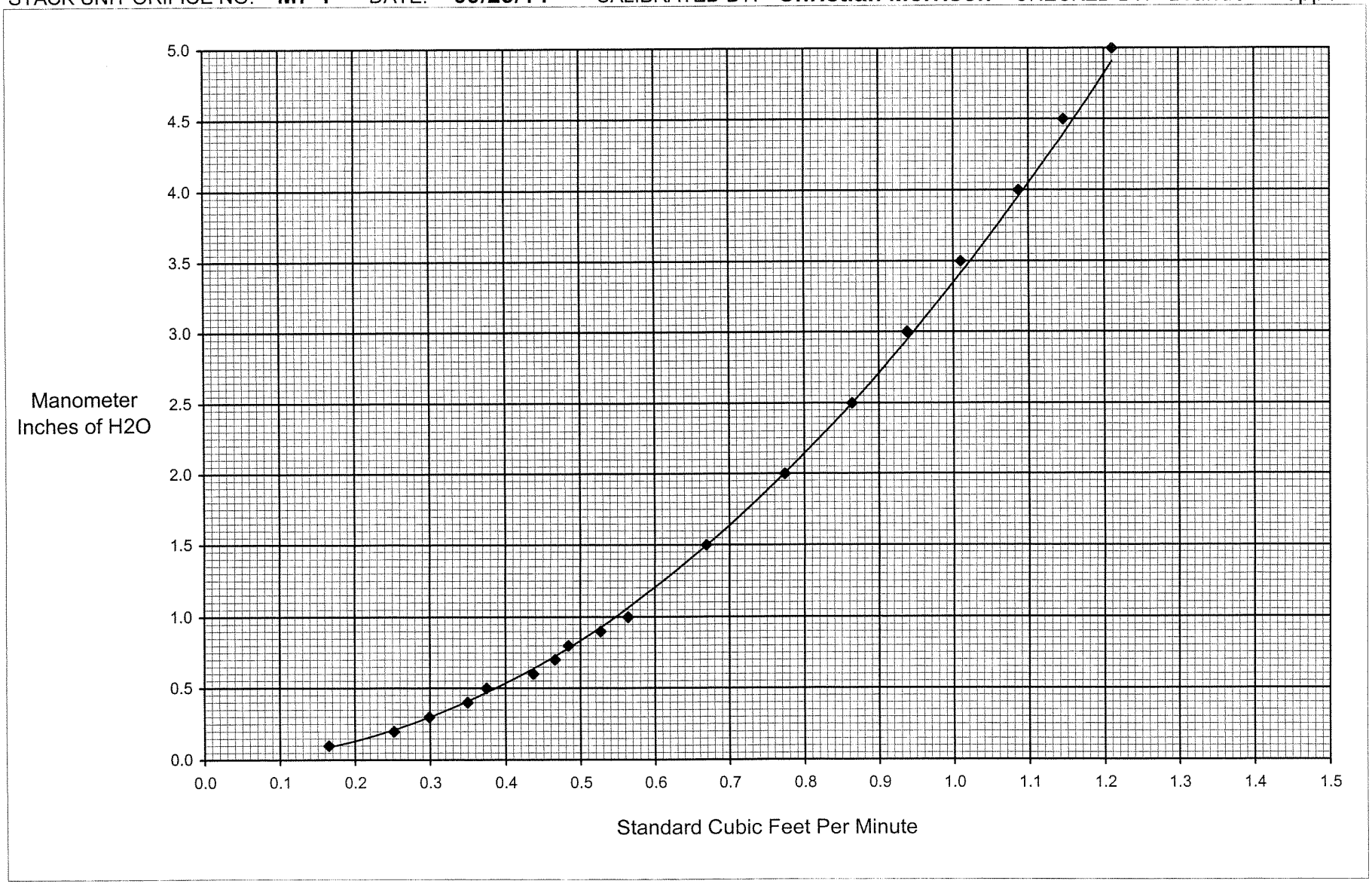
$$\text{Dry Gas Meter } VM_{std} = 17.65 \times 10.331 \frac{30.02 + \frac{3.0}{13.6}}{83 + 460} = 10.155 \text{ scfm}$$

$$\text{Calibration Factor } (C_{dg}) = \frac{\text{Wet Test Meter } VM_{std}}{\text{Dry Gas Meter } VM_{std}} \quad C_{dg} = \frac{10.200}{10.155} = 1.004$$

QA/QC Check
Completeness ✓ Legibility ✓ Accuracy ✓ Specifications ✓ Reasonableness ✓

Checked by: [signature]

STACK UNIT ORIFICE NO: **M7-1** DATE: **09/29/14** CALIBRATED BY: **Christian Morrison** CHECKED BY: Brandon Hopper



METCO
ENVIRONMENTAL

Digital Temperature Indicator No. 7-1

Calibration Data

Date: 9/22/14

Reference Thermometer No. Dallas

Media	Time	Reference Thermometer (°F)	DTI (°F)
Ambient Air	900	70	70
Ice Bath	902	32	32
Boiling Water	905	223	223
Oven	909	248	250
Oven	915	348	350
Oven	920	374	375
Oven	925	299	300

Meter Adjusted? YES _____ NO ✓

Calibrator Morrison

Office: Dallas

QA/QC Check
Completeness ✓ Legibility ✓ Accuracy ✓ Specifications ✓ Reasonableness ✓

Checked by: [signature]

Version 2
February 2008

M7-2
Barometer Cal

- barometric pressure at lat. 32.04829, lon. -102.00666 at 2795 ft. = 30.24

- absolute pressure at lat. 32.04829, lon. -102.00666 = ~~27.47~~ 27.45

- barometer reading (after adjusting) = 27.44

- variation = 0.01

Barometer adjusted (yes)

- 12/16/14
- 1011

Shane Lee

AIR LIQUIDE Air Liquide America Specialty Gases LLC | Scott™

RATA CLASS

Dual-Analyzed Calibration Standard

1290 COMBERMERE STREET, TROY, MI 48083 Phone: 248-589-2950 Fax: 248-589-2134

CERTIFICATE OF ACCURACY: EPA Protocol Gas

Assay Laboratory - PGVP Vendor ID: A22013

AIR LIQUIDE AMERICA SPECIALTY GASES LLC
1290 COMBERMERE STREET
TROY, MI 48083

P.O. No.: 60505-71-65000
Document # : 50538822-001

Customer
CLEAN AIR ENGINEERING

GARY ZAPEL
500 WEST WOOD STREET
PALATINE IL 60067
US

ANALYTICAL INFORMATION Gas Type : NONE

This certification was performed according to EPA Traceability Protocol For Assay & Certification of Gaseous Calibration Standards; Procedure G-1; September, 1997.

Cylinder Number: CC66094 **Certification Date:** 14May2013 **Exp. Date:** 15May2021
Cylinder Pressure*:** 2000 PSIG **Batch No:** TRO0081918

COMPONENT	CERTIFIED CONCENTRATION (Moles)	ACCURACY**	TRACEABILITY
CARBON MONOXIDE	5.13 PPM	+/- 1%	Direct NIST and VSL
NITROGEN	BALANCE		

*** Do not use when cylinder pressure is below 150 psig.
** Analytical accuracy is based on the requirements of EPA Protocol Procedure G1, September 1997.

REFERENCE STANDARD

TYPE/SRM NO.	EXPIRATION DATE	CYLINDER NUMBER	CONCENTRATION	COMPONENT
NTRM 1677	14Mar2018	KAL003992	9.855 PPM	CARBON MONOXIDE

INSTRUMENTATION

INSTRUMENT/MODEL/SERIAL#	DATE LAST CALIBRATED	ANALYTICAL PRINCIPLE
SIEMENS I/ULTRAMAT 6E/N1-VN-0545	06May2013	NDIR

ANALYZER READINGS

(Z=Zero Gas R=Reference Gas T=Test Gas r=Correlation Coefficient)

First Triad Analysis

CARBON MONOXIDE
Date: 07May2013 Response Unit: MV
Z1=0.00000 R1=25.40000 T1=4.78000
R2=25.40000 Z2=0.00000 T2=4.78000
Z3=0.00000 T3=4.78000 R3=25.40000
Avg. Concentration: 5.131 PPM

Second Triad Analysis

Date: 14May2013 Response Unit: MV
Z1=0.00000 R1=9.83000 T1=4.93000
R2=9.80000 Z2=0.00000 T2=4.95000
Z3=0.00000 T3=4.97000 R3=9.83000
Avg. Concentration: 5.135 PPM

Calibration Curve

Concentration=A+Bx+Cx2+Dx3+Ex4
r=0.999999
Constants: A=0.0016069
B=1.14035876 C=-0.0290384
D=0.001494587 E=0

Special Notes: DELIVERY DOC# IS 50538813

APPROVED BY: _____
JEFF CROTEAU

AIR LIQUIDE Air Liquide America Specialty Gases LLC | Scott

RATA CLASS

Guaranteed +/- 1% Accuracy

1290 COMBERMERE STREET, TROY, MI 48083 Phone: 248-589-2950 Fax: 248-589-2134

CERTIFICATE OF ACCURACY: EPA Protocol Gas

Assay Laboratory - PGVP Vendor ID: A22014
AIR LIQUIDE AMERICA SPECIALTY GASES LLC
1290 COMBERMERE STREET
TROY, MI 48083

P.O. No.: 61517-70-65000
Document # : 56532412-001

Customer
CLEAN AIR ENGINEERING
500 WEST WOOD STREET
PALATINE IL 60067
US

ANALYTICAL INFORMATION Gas Type : CO,BALN

This certification was performed according to EPA Traceability Protocol For Assay & Certification of Gaseous Calibration Standards; Procedure G-1. EPA/600/R 12/531; May 2012. Do not use this standard if pressure is less than 100 psig.

Cylinder Number: ALM005790 **Certification Date:** 29Aug2014 **Exp. Date:** 30Aug2022
Cylinder Pressure: 2015 PSIG **Batch No:** TRO0116531

COMPONENT	CERTIFIED CONCENTRATION (Moles)	ACCURACY (ABSOLUTE / RELATIVE)
CARBON MONOXIDE	9.17 PPM	0.1 PPM / 1.0 %
NITROGEN	BALANCE	

TRACEABILITY

REFERENCE STANDARD

COMPONENT	CONCENTRATION	UNCERTAINTY	CYLINDER	TYPE/SRM SAMPLE	EXP. DATE
CARBON MONOXIDE	48.6000 PPM	0.2400 PPM	KAL003772	NTRM 1678	14Nov2017

ANALYTICAL METHOD

1st Analysis: 29Aug2014

COMPONENT	INSTRUMENT	ANALYTICAL/PRINCIPLE	CALIBRATED	CONCENTRATION
CARBON MONOXIDE	MKS/2030/0928621	FOURIER-TRANSFORM IR	07Aug2014	9.170 PPM

APPROVED BY: _____
ROBERT MCCRANDALL

AIR LIQUIDE Air Liquide America Specialty Gases LLC | Scott™

RATA CLASS

Dual-Analyzed Calibration Standard

1290 COMBERMERE STREET, TROY, MI 48083 Phone: 248-589-2950 Fax: 248-589-2134

CERTIFICATE OF ACCURACY: EPA Protocol Gas

Assay Laboratory

AIR LIQUIDE AMERICA SPECIALTY GASES LLC
1290 COMBERMERE STREET
TROY, MI 48083

P.O. No.: 625980
Document # : 42550495-001

Customer

TESTAMERICA AIR EMISSIONS DALLAS

RECERT CYLINDERS
3226 COMMANDER DR.
CARROLLTON TX 75006
US

ANALYTICAL INFORMATION Gas Type : PPN,BALN

This certification was performed according to EPA Traceability Protocol For Assay & Certification of Gaseous Calibration Standards; Procedure G-1; September, 1997.

Cylinder Number:	**BLM002982**	**Certification Date:**	27Jul2011	**Exp. Date:**	28Jul2019
Cylinder Pressure*:**	1300 PSIG	**Prev Certification Date:**	04Aug2008	**Batch No:**	TRO0039035

COMPONENT	CERTIFIED CONCENTRATION (Moles)	ACCURACY**	TRACEABILITY
PROPANE	3.01 PPM	+/- 1%	Direct NIST and VSL
NITROGEN	BALANCE		

*** Do not use when cylinder pressure is below 150 psig.
** Analytical accuracy is based on the requirements of EPA Protocol Procedure G1, September 1997.

REFERENCE STANDARD

TYPE/SRM NO.	EXPIRATION DATE	CYLINDER NUMBER	CONCENTRATION	COMPONENT
NTRM 1668	02Oct2013	ALM008717	99.50 PPM	PROPANE

INSTRUMENTATION

INSTRUMENT/MODEL/SERIAL#	DATE LAST CALIBRATED	ANALYTICAL PRINCIPLE
VARIAN/3400/7506	14Jul2011	TCD/FID

ANALYZER READINGS

(Z=Zero Gas R=Reference Gas T=Test Gas r=Correlation Coefficient)

First Triad Analysis

PROPANE

Date: 27Jul2011 Response Unit: AREA
Z1=0.00000 R1=2566026. T1=76925.00
R2=2565393. Z2=0.00000 T2=77063.00
Z3=0.00000 T3=77023.00 R3=2564867.
Avg. Concentration: 3.010 PPM

Second Triad Analysis

Calibration Curve

Concentration = A + Bx + Cx2 + Dx3 + Ex4
r=0.999998
Constants: A=0.01960696
B=3.8912E-05 C=0
D=0 E=0

Special Notes: The expiration date has been extended without re-assay per EPA 600/R23-23/542.
Supplemental to test report 05-98246-001 for BLM002982. Amended 07-30-2014, Thatcher.

APPROVED BY: _____
ROBERT LESNIAK

Page 1 of 1

AIR LIQUIDE Air Liquide America Specialty Gases LLC

Intertek

RATA CLASS

Guaranteed +/- 1% Accuracy

8832 DICE ROAD, SANTA FE SPRINGS, CA 90670-2516 Phone: 800-323-2212 Fax: 562-464-5262

CERTIFICATE OF ACCURACY: EPA Protocol Gas

Assay Laboratory - PGVP Vendor ID: A52014
AIR LIQUIDE AMERICA SPECIALTY GASES LLC
8832 DICE ROAD
SANTA FE SPRINGS, CA 90670-2516

P.O. No.: 766226
Document # : 54902120-006
Folio #:FOLIO# 0910

Customer
TESTAMERICA AIR EMISSIONS DALLAS
3226 COMMANDER DR.
CARROLLTON TX 75006
US

ANALYTICAL INFORMATION Gas Type : PPN,BALN

This certification was performed according to EPA Traceability Protocol For Assay & Certification of Gaseous Calibration Standards; Procedure G-1. EPA/600/R-12/531; May 2012. Do not use this standard if pressure is less than 100 psig.

Cylinder Number: LL107680✓
Cylinder Pressure: 2000 PSIG
Certification Date: 02May2014
Exp. Date: 03May2022
Batch No: SB00091944

COMPONENT	CERTIFIED CONCENTRATION (Moles)	ACCURACY (ABSOLUTE / RELATIVE)
PROPANE	5.06 PPM	0.05 PPM / 1.0 %
NITROGEN	BALANCE	

TRACEABILITY

REFERENCE STANDARD

COMPONENT	CONCENTRATION	UNCERTAINTY	CYLINDER	TYPE/SRM SAMPLE	EXP. DATE
PROPANE	9.6000 PPM	0.0600 PPM	K013408	NTRM 1666/063009	24Feb2016

ANALYTICAL METHOD

1st Analysis: 02May2014

COMPONENT	INSTRUMENT	ANALYTICAL/PRINCIPLE	CALIBRATED	CONCENTRATION
PROPANE	HP/5890A/3336A54620	FID& TCD	30Apr2014	5.064 PPM

APPROVED BY: _____
DC

AIR LIQUIDE Air Liquide America Specialty Gases LLC | Scott

RATA CLASS

Dual-Analyzed Calibration Standard

11426 FAIRMONT PKWY, LA PORTE, TX 77571 Phone: 800-248-1427 Fax: 281-474-8419

CERTIFICATE OF ACCURACY: EPA Protocol Gas

Assay Laboratory - PGVP Vendor ID: A32010

AIR LIQUIDE AMERICA SPECIALTY GASES LLC
11426 FAIRMONT PKWY
LA PORTE, TX 77571

P.O. No.: 581815
Document # : 39267766-009
Folio #:0915

Customer
METCO TESTAMERICA

FOLIO ITEM # 0930
6655 COMPLEX DR
BATON ROUGE LA 70809
US

ANALYTICAL INFORMATION Gas Type : PPN,BALN

This certification was performed according to EPA Traceability Protocol For Assay & Certification of Gaseous Calibration Standards; Procedure G-1; September, 1997.

Cylinder Number: LL67700
Cylinder Pressure*:** 2000 PSIG
Certification Date: 01Nov2010
Exp. Date: 02Nov2018
Batch No: LAP0027877

COMPONENT	CERTIFIED CONCENTRATION (Moles)	ACCURACY**	TRACEABILITY
PROPANE	8.72 PPM	+/- 1%	Direct NIST and VSL
NITROGEN	BALANCE		

*** Do not use when cylinder pressure is below 150 psig.
** Analytical accuracy is based on the requirements of EPA Protocol Procedure G1, September 1997.

REFERENCE STANDARD

TYPE/SRM NO.	EXPIRATION DATE	CYLINDER NUMBER	CONCENTRATION	COMPONENT
NTRM 1668	02Oct2012	ALM013540	98.80 PPM	PROPANE

INSTRUMENTATION

INSTRUMENT/MODEL/SERIAL#	DATE LAST CALIBRATED	ANALYTICAL PRINCIPLE
HP-Y/HP 6890/US00000974	18Oct2010	GAS CHROMATOGRAPHY

ANALYZER READINGS

(Z = Zero Gas R = Reference Gas T = Test Gas r = Correlation Coefficient)

First Triad Analysis

PROPANE

Date: 01Nov2010 Response Unit: PPM
Z1 = 0.00000 R1 = 37902.00 T1 = 3379.000
R2 = 37934.00 Z2 = 0.00000 T2 = 3352.000
Z3 = 0.00000 T3 = 3355.000 R3 = 37969.00
Avg. Concentration: 8.723 PPM

Second Triad Analysis

Calibration Curve

Concentration = A + Bx + Cx2 + Dx3 + Ex4
r = 0.999999783
Constants: A = -0.03338694
B = 0.002674472 C =
D = E =

Special Notes: FOLIO ITEM # 0915 The expiration date has been extended without re-assay per EPA 600/R23-23/542.

APPROVED BY: _____ for
ROGER NGUYEN

APPENDIX D

Field Testing Data

14-388A(OH)

D-2

METCO Environmental

H

Job Number	14-388 OH		1-4	Field Data	
Job Name	Black Gold Rush Ind Ltd	Balance ID	M7.1	Ambient Temperature - °F	40
Run Number	1 cond. 1	Check Weight ID	2000.1	Assumed Moisture - %	5
Unit	18" TO outlet stack	Actual Mass (g)	2000.0	Probe Length	5
Date	12/19/14	Measured Mass (g)	2000.1	C Factor	— to reference
Operator	Hoffer/Lee/Frahman	Difference (g)*	0.1	Initial Leak @ 15.00 "Hg =	0.000 cfm
Sample Box #	H4-1 Meter # 7-1	Pitot Leak Check: Initial	✓ Final ✓	Final Leak @ 17.00 "Hg =	0.000 cfm
Purge To (cf):	—	Purge Time	—	Pitot Tips Damaged during Test?	Yes/No

Note: Read and record at the start of each test point

* must be equal to or less than 0.5 g

Multi 36 Run Lim

			ΔP		P_m		T_s					T_m			
Point	Clock Time	Dry Gas Meter (cf)	Pitot "H_2O"	Orifice ΔH "H_2O Desired	Orifice ΔH "H_2O Actual	Pump Vacuum "Hg	Stack Temp. °F	Probe Temp. °F	Oven/ Filter Temp. °F	Effluent Temp. °F	Dry Gas Inlet Temp. °F	Dry Gas Outlet Temp. °F	Aux Temp. °F	Remarks	
A 8	935	125.080	0.053	1.00	1.00	3.0	1199	—	—	45	57	57	—	FC0510	0.1
7	939	127.21	0.052	1.00	1.00	3.0	1236	—	—	48	57	57	—	Micromanometer	0.2
6	943	129.57	0.039	1.00	1.00	3.0	1276	—	—	48	58	57	—	S/n: 202163	0.2
5	947	132.87	0.051	1.00	1.00	3.0	1227	—	—	48	58	58	—		0.2
4	951	135.09	0.052	1.00	1.00	3.0	1225	—	—	49	59	58	—	inst. H: 0002094	0.2
3	955	137.12	0.056	1.00	1.00	3.0	1270	—	—	50	59	59	—		0.2
2	959	139.33	0.040	1.00	1.00	3.0	1186	—	—	50	60	59	—		0.2
1	1003	141.51	0.041	1.00	1.00	3.0	1198	—	—	49	60	60	—		0.2
End	1007	143.71	—	—	—	—	—	—	—	—	—	—	—		
B 8	1020	143.71	0.042	1.00	1.00	3.0	1173	—	—	48	62	61	—		0.2
7	1024	146.01	0.044	1.00	1.00	3.0	1183	—	—	49	63	62	—		0.2
6	1028	148.41	0.038	1.00	1.00	3.0	1184	—	—	49	63	62	—		0.2
5	1032	151.00	0.040	1.00	1.00	3.0	1169	—	—	49	63	63	—		0.2
4	1036	153.45	0.035	1.00	1.00	3.0	1160	—	—	49	63	64	—		0.2
3	1040	155.72	0.037	1.00	1.00	3.0	1099	—	—	49	63	64	—		0.2
2	1044	158.00	0.037	1.00	1.00	3.0	1121	—	—	49	63	64	—		0.2
1	1048	160.43	0.038	1.00	1.00	3.0	1134	—	—	49	64	64	—		0.2
End	1052	162.693	—	—	—	—	—	—	—	—	—	—	—		0.2

C_p Pitot Tube Cal. Factor	0.839	Pitot Tube #	PG66	Barometer #	M7.2	Nozzle #	—
V_m Volume Collected - cf	37.688	P_b Barometric Pressure – "Hg	27.18	Total Volume of leak checks after start – cf			
V_w Water Collected - ml	45.1	D_n Nozzle Diameter – in.	—	V_m = (DGM Cal Factor)	1.002	x (Net Volume Collected)	37.613
T_t Time of Test – min.	64	%CO_2	5.3 48	%CO	0.0	A_s = Area of Stack – in^2	Ø 45" 247
P_s Stack Pressure – "H_2O	0.6	%O_2	13.4 153	%N_2	81.3 799	{Dry Gas Meter Reading ____ ft3 – (Tt ____ min. X Leak Rate ____ cfm)}	

QA/QC Check Completeness ✓ Legibility ✓ Accuracy ✓ Specification ✓ Reasonableness ✓ Checked By

Version 3
April 2013

Impinger Box No. 4-1

			Water Weight Gain	
Impinger 1	Final Weight	821.4		Impinger 1 33.0
	Initial Weight	788.4		
	Increase			Impinger 2 4.7
Impinger 2	Final Weight	763.3		Impinger 3 1.4
	Initial Weight	759.1	SO_2 correction (if applicable)	
	Increase			Impinger 4 6.5
Impinger 3	Final Weight	669.5	V_w =	Impinger 5 —
	Initial Weight	668.1	g SO_2 -	
	Increase		V_w =	Impinger 6 —
Impinger 4	Final Weight	1023.2		Impinger 7 —
	Initial Weight	1016.7		
	Increase			Total 45.1 = V_w
Impinger 5	Final Weight			
	Initial Weight			
	Increase			
Impinger 6	Final Weight			
	Initial Weight			
	Increase			
Impinger 7	Final Weight			
	Initial Weight			
	Increase			

P_b =	27.18	$\%CO_2$ =	~~5.3~~ 4.8
V_m =	37.688	$\%O_2$ =	~~13.4~~ 15.3
V_w =	45.1	%CO =	— 0.0
P_m =	1.000	% N_2 =	~~81.3~~ 79
Avg ΔP =	0.043	A_s =	~~4.4~~ 3.47
		D_n =	—
Avg $\sqrt{\Delta P}$ =	0.207	T_t =	64
C_p =	0.834		
P_s =	6.0 "H_2O		27.18 "Hg
T_m =	61 °F		521 °R
T_s =	1184 ~~1544~~ °F		1644 °R

11/6/15 as

Moisture Content: %M = 5.76 M_d = 0.9424 MW_d = 29.384 MW = 28.728 11/27/15

$$Vm_{std} = 17.65 \times V_m \left| \frac{Pm}{Pb + 13.6} \right| = 17.65 \times 37.688 \times \left| \frac{27.18 + \frac{1.000}{13.6}}{61 + 460} \right| = \frac{34.796}{0.544} \text{ sft}^3 \text{ scfm}$$

$$Vw_{gas} = 0.0472 \times V_w = 0.0472 \times 45.1 = 2.1287 \text{ sft}^3$$

$$\% \text{ Moisture} = \frac{Vw_{gas}}{Vm_{std} + Vw_{gas}} \times 100 = \frac{2.1287}{34.796 + 2.1287} \times 100 = 5.76 \%$$

$$V_s = 5123.8 \times 0.207 \sqrt{\frac{1644}{27.18 \times 28.732}} \times 0.834 = 1791 \text{ fpm}$$

ACFM = 2214.5

SCFM = 611

$$\%I = \frac{1039 \times \quad \times \quad \times \quad \times (\quad)^2}{\quad} = \quad \%$$

— 11/6/15 as

%EA = — 200E

$$V_s = 5123.8 \times \text{Avg } \sqrt{\Delta P} \times \sqrt{\frac{Ts(R)}{Ps(\text{"}Hg) \times MW}} \times C_p = \text{fpm}$$

$$ACFM = (V_s \times A_s)/144$$

$$SCFM = \frac{0.123 \times V_s \times A_s \times M_d \times P_s}{T_s}$$

$$\%I = \frac{1039 \times Vm_{std} \times T_s(^\circ R)}{P_s(\text{"}Hg) \times M_d \times V_s \times T_t \times (D_n)^2}$$

Version 2
July 2011

14-388A(OH)

D-4

METCO Environmental

Job Number	14-388 OH	Field Data	9-4	Ambient Temperature - °F	45
Job Name	Black Gold Rust Inst.	Balance ID	M7-1	Assumed Moisture - %	4
Run Number	2 cond 1	Check Weight ID	2000.1	Probe Length	5
Unit	18" To Outlet stack	Actual Mass (g)	2000.0	C Factor	— to reference
Date	12/19/14	Measured Mass (g)	2000.1	Initial Leak @ 17:00	"Hg = 0.000 cfm
Operator	Hopfer / Lee / Frohman	Difference (g)*	0.1	Final Leak @ 11:00	"Hg = 0.000 cfm
Sample Box #	5+2 Meter # 7-1	Pitot Leak Check: Initial	✓ Final ✓	Pitot Tips Damaged during Test?	Yes/No
Purge To (cf):	—	Purge Time	—		

Note: Read and record at the start of each test point

* must be equal to or less than 0.5 g

Point	Clock Time	Dry Gas Meter (cf)	ΔP Pitot "H_2O"	Orifice ΔH "H_2O" Desired	Orifice ΔH "H_2O" Actual	P_m Pump Vacuum "Hg	T_s Stack Temp. °F	Probe Temp. °F	Oven/ Filter Temp. °F	T_m Effluent Temp. °F	Dry Gas Inlet Temp. °F	Dry Gas Outlet Temp. °F	Aux Temp. °F	Remarks	Meter Rate L/r
B 6	~~1105~~	~~163.005~~ 164.340	~~0.024~~	1.00	1.00	3.0	1166	—	—	52	67	67	—	FC 0516	0.2
7	~~1109~~ 1114	166.70	0.033	1.06	1.06	3.0	1130	—	—	51	66	67	—	micromanometer	0.2
6	~~1113~~ 1123	168.83	0.031	1.06	1.06	3.0	1137	—	—	51	66	67	—		0.2
5	~~1117~~ 1127	171.30	0.030	1.06	1.06	3.0	1106	—	—	51	66	67	—	S/n: 702163	0.2
4	~~1121~~ 1131	173.51	0.031	1.06	1.06	3.0	1104	—	—	51	67	67	—		0.2
3	~~1125~~ 1135	176.01	0.036	1.06	1.06	3.0	1148	—	—	51	67	67	—	Inst. # 00702094	0.2
2	~~1129~~ 1134	178.24	0.021	1.06	1.06	3.0	1108	—	—	52	67	67	—		0.2
1	~~1133~~ 1143	180.54	0.026	1.06	1.06	3.0	1120	—	—	52	67	67	—		0.2
A End	~~1137~~ 1147	183.00	—	—	—	—	—	—	—	—	—	—	—		
8	1153	183.00	0.048	1.00	1.00	3.0	1197	—	—	53	70	69	—		0.2
7	1157	185.24	0.051	1.00	1.00	3.0	1215	—	—	54	70	69	—		0.2
6	1201	187.87	0.045	1.00	1.00	3.0	1181	—	—	55	70	69	—		0.2
5	1205	190.11	0.056	1.00	1.00	3.0	1230	—	—	56	70	70	—		0.2
4	1209	192.31	0.045	1.00	1.00	3.0	1175	—	—	55	71	70	—		0.2
3	1213	194.49	0.051	1.00	1.00	3.0	1194	—	—	55	72	71	—		0.2
2	1217	197.01	0.049	1.00	1.00	3.0	1173	—	—	57	71	71	—		0.2
1	1221	199.37	0.026	1.00	1.00	3.0	1177	—	—	57	71	71	—		0.2
End	1225	201.612	—	—	—	—	—	—	—	—	—	—	—		0.2

C_p Pitot Tube Cal. Factor	0.839 ✓	Pitot Tube #	PG-66 ✓	Barometer #	M7-2 ✓	Nozzle #	—
V_m Volume Collected - cf	37.377 ✓	P_b Barometric Pressure – "Hg	27.18 ✓	Total Volume of leak checks after start – cf	—		
V_w Water Collected - ml	47.1 ✓	D_n Nozzle Diameter – in.	—	V_m = (DGM Cal Factor)	1.002 ✓	x (Net Volume Collected)	37.302
T_t Time of Test – min.	64 ✓	%CO_2	~~5.2~~ 4.4	%CO	0.0	A_s = Area of Stack – in^2	~~113~~ 247 ✓
P_s Stack Pressure – "H_2O	0.0 ✓	%O_2	~~13.4~~ 15.9	%N_2	~~81.4~~ 79.6	{Dry Gas Meter Reading_____ft3 – (Tt _____ min. X Leak Rate _____cfm)}	

QA/QC Check Completeness ✓ Legibility ✓ Accuracy ✓ Specification ✓ Reasonableness ✓ Checked By JS

Version 3
April 2013

Impinger Box No. 547 Black Bucket #

Impinger 1	Final Weight	776.7	
	Initial Weight	744.2	
	Increase		
Impinger 2	Final Weight	744.5	
	Initial Weight	739.6	
	Increase		
Impinger 3	Final Weight	671.4	
	Initial Weight	669.8	
	Increase		
Impinger 4	Final Weight	1025.9	
	Initial Weight	1017.8	
	Increase		
Impinger 5	Final Weight		
	Initial Weight		
	Increase		
Impinger 6	Final Weight		
	Initial Weight		
	Increase		
Impinger 7	Final Weight		
	Initial Weight		
	Increase		

Water Weight Gain

Impinger 1	32.5
Impinger 2	4.9
Impinger 3	1.6
Impinger 4	8.1
Impinger 5	–
Impinger 6	–
Impinger 7	
Total	47.1 = V_w

SO_2 correction (if applicable)

V_w = _____
g SO_2 - _____
V_w = _____

P_b =	27.18	%CO_2 =	5.7 4.4
V_m =	37.377	%O_2 =	13.4 15.9
V_w =	47.1	%CO =	– 0.2
P_m =	1.601	% N_2 =	81.4 79.8
Avg ΔP =	0.038	A_s =	24
		D_n =	–
Avg √ΔP =	0.192	T_t =	64
C_p =	0.834		
P_s =	0.00	"H_2O	27.18 "Hg
T_m =	69	°F	529 °R
T_s =	1153	°F	1613 °R

1/15/15 rs

Moisture Content: %M = 6.14 M_d = 0.9386 MW_d = 29.368 MW = 28.67

$$Vm_{std} = 17.65 \times V_m \left| \frac{Pm}{Pb + 13.6} \right| = 17.65 \times 37.377 \times \left| \frac{27.18 + \frac{1.601}{13.6}}{69 + 460} \right| = \frac{33.987}{0.531} \text{ sft}^3 \text{ scfm}$$

$$Vw_{gas} = 0.0472 \times V_w = 0.0472 \times 47.1 = 2.2231 \text{ sft}^3$$

$$\% \text{ Moisture} = \frac{Vw_{gas}}{Vm_{std} + Vw_{gas}} \times 100 = \frac{2.2231}{33.987 + 2.2231} \times 100 = 6.14 \%$$

$$V_s = 5123.8 \times 0.192 \sqrt{\frac{1613}{27.18 \times 28.67}} \times 0.834 = 1188 \text{ fpm}$$

ACFM = 2038 1/15/15 rs

SCFM = 571

%EA = 303.0

$$\%I = \frac{1039 \times \quad \times \quad \times \quad \times \quad \times (\quad)^2}{\quad} = \quad \%$$

$$V_s = 5123.8 \times \text{Avg } \sqrt{\Delta P} \times \sqrt{\frac{Ts(R)}{Ps(\text{"Hg}) \times MW}} \times C_p = \text{fpm}$$

$$ACFM = (V_s \times A_s)/144$$

$$SCFM = \frac{0.123 \times V_s \times A_s \times M_d \times P_s}{T_s}$$

$$\%I = \frac{1039 \times Vm_{std} \times T_s(^\circ R)}{P_s(\text{"Hg}) \times M_d \times V_s \times T_t \times (D_n)^2}$$

Version 2
July 2011

14-388A(OH)

D-6

METCO Environmental

Job Number	14-388 OH	1-4	Field Data	Ambient Temperature - °F	50
Job Name	Black Gold Rush Ind Ltd	Balance ID	M7-1	Assumed Moisture - %	5
Run Number	3 Cond. 1	Check Weight ID	2000-1	Probe Length	5
Unit	18" To outlet Stack	Actual Mass (g)	2000.0	C Factor	— to reference
Date	12/15/14	Measured Mass (g)	2000.1	Initial Leak @	13.0 "Hg = 0.000 cfm
Operator	Hopper / Lee / Fashman	Difference (g)*	0.1	Final Leak @	12.0 "Hg = 0.000 cfm
Sample Box #	7+8 9+2	Meter # 7-1	Pitot Leak Check: Initial ✓	Final ✓	Pitot Tips Damaged during Test? Yes/No
Purge To (cf):	—		Purge Time —		

Note: Read and record at the start of each test point

* must be equal to or less than 0.5 g

Point	Clock Time	Dry Gas Meter (cf)	ΔP Pitot "H_2O"	Orifice ΔH "H_2O Desired	Orifice ΔH "H_2O Actual	P_m Pump Vacuum "Hg	T_s Stack Temp. °F	Probe Temp. °F	Oven/ Filter Temp. °F	Effluent Temp. °F	T_m Dry Gas Inlet Temp. °F	Dry Gas Outlet Temp. °F	Aux Temp. °F	Remarks	Meter Box Leak Rate L/r
A 8	1235	202.378	0.052	1.00	1.06	3.6	1176	—	—	54	73	72	—	FC 0516	0.2
7	1239	204.90	0.051	1.00	1.00	3.6	1210	—	—	54	73	72	—	Macromanometer	0.2
6	1243	207.30	0.050	1.00	1.00	3.6	1206	—	—	56	73	73	—	S/n: 707163	0.2
5	1247	209.53	0.047	1.00	1.00	3.6	1218	—	—	56	73	73	—		0.2
4	1251	211.79	0.045	1.00	1.00	3.6	1212	—	—	56	72	72	—	instrument #:	0.2
3	1255	213.99	0.046	1.00	1.00	3.6	1199	—	—	56	72	73	—	00070094	0.2
2	1259	216.31	0.040	1.00	1.00	3.6	1164	—	—	57	72	73	—		0.2
1	1303	218.72	0.030	1.00	1.00	3.6	1201	—	—	57	72	73	—		0.2
End	1307	221.070	—	—	—	—	—	—	—	—	—	—	—		
B 8	1313	221.070	0.041	1.00	1.00	3.6	1203	—	—	57	74	74	—		0.2
7	1317	223.30	0.043	1.00	1.00	3.6	1188	—	—	57	73	74	—		0.2
6	1321	225.71	0.042	1.00	1.00	3.6	1181	—	—	57	73	74	—		0.2
5	1325	228.01	0.035	1.00	1.00	3.6	1178	—	—	57	73	74	—		0.2
4	1329	230.31	0.037	1.00	1.00	3.6	1203	—	—	58	72	74	—		0.2
3	1333	232.56	0.035	1.00	1.00	3.6	1193	—	—	59	72	74	—		0.2
2	1337	234.92	0.039	1.00	1.00	3.6	1207	—	—	59	72	74	—		0.2
1	1341	237.161	0.032	1.00	1.00	3.6	1200	—	—	59	73	74	—		0.2
End	1345	239.862	—	—	—	—	—	—	—	—	—	—	—		0.2

C_p Pitot Tube Cal. Factor	0.839 ✓	Pitot Tube #	PG66	Barometer #	M7-2 ✓	Nozzle #	—		
V_m Volume Collected - cf	37.604 ✓	P_b Barometric Pressure – "Hg	27.16	Total Volume of leak checks after start – cf	—				
V_w Water Collected - ml	48.6 ✓	D_n Nozzle Diameter – in.	—	$17.65/V_m$ =	(DGM Cal Factor) 1.002	x (Net Volume Collected)	37.534		
T_t Time of Test – min.	64 ✓	%CO_2 ~~5.3~~ 5.4	%CO 0.0 ✓	A_s = Area of Stack – in^2	247				
P_s Stack Pressure – "H_2O	0.0 ✓	%O_2 ~~13.3~~ 14.4	%N_2 ~~81.4~~ 80.2	{Dry Gas Meter Reading ____ ft3 – (Tt ____ min. X Leak Rate ____ cfm)}					

QA/QC Check Completeness ✓ Legibility ✓ Accuracy ✓ Specification ✓ Reasonableness ✓ Checked By KS

Version 3
April 2013

Impinger Box No. 74.2

			Water Weight Gain		
Impinger 1	Final Weight	856.7		Impinger 1	35.3
	Initial Weight	821.4		Impinger 2	3.3
	Increase			Impinger 3	1.6
Impinger 2	Final Weight	766.6	SO_2 correction	Impinger 4	8.4
	Initial Weight	763.3	(if applicable)	Impinger 5	~~48.6~~
	Increase			Impinger 6	–
Impinger 3	Final Weight	671.1	V_w =	Impinger 7	–
	Initial Weight	669.5	g SO_2 -		
	Increase		V_w =	Total	48.6 = V_w
Impinger 4	Final Weight	1031.6			
	Initial Weight	1673.2			
	Increase				
Impinger 5	Final Weight				
	Initial Weight				
	Increase				
Impinger 6	Final Weight				
	Initial Weight				
	Increase				
Impinger 7	Final Weight				
	Initial Weight				
	Increase				

P_b =	27.16	%CO_2 =	~~15.3~~ 5.4	
V_m =	37.609	%O_2 =	~~13.3~~ 14.4	
V_w =	48.6	%CO =	– 0.0	1/15/15
P_m =	1.000	% N_2 =	~~81.4~~ 80.2	
Avg ΔP =	0.042	A_s =	347	
		D_n =	–	
Avg $\sqrt{\Delta P}$ =	0.203	T_t =	440	
C_p =	0.834			
P_s =	0.0 "H_2O		27.16 "Hg	
T_m =	73 °F		533 °R	
T_s =	1196 °F		1656 °R	1/27/15

Moisture Content: %M = 6.33 M_d = 0.9367 MW_d = 29.388 MW = 28.66 1/27/15 72

$$Vm_{std} = 17.65 \times V_m \left| \frac{Pm}{Pb + 13.6} \right| = 17.65 \times 37.609 \times \left| \frac{27.16 + 13.6}{73 + 460} \right| = 33.917 \text{ sft}^3 = 0.536 \text{ scfm}$$ 1/15/15

$$Vw_{gas} = 0.0472 \times V_w = 0.0472 \times 48.6 = 2.2939 \text{ sft}^3$$

$$\% \text{ Moisture} = \frac{Vw_{gas}}{Vm_{std} + Vw_{gas}} \times 100 = \frac{2.2939}{33.917 + 2.2939} \times 100 = 6.33 \%$$ 1/27/15

$$V_s = 5123.8 \times 0.203 \sqrt{\frac{1656}{27.16 \times 2866}} \times 0.834 = 1273 \text{ fpm}$$ 1/27/15

ACFM = 2184

SCFM = 594

$$\%I = \frac{1039 \times \quad \times}{\times \quad \times \quad \times \quad \times (\quad)^2} = \quad \%$$

%EA = -210.1

$$V_s = 5123.8 \times \text{Avg } \sqrt{\Delta P} \times \sqrt{\frac{Ts(R)}{Ps(\text{"}Hg) \times MW}} \times C_p = \text{fpm}$$

$$ACFM = (V_s \times A_s)/144$$

$$SCFM = \frac{0.123 \times V_s \times A_s \times M_d \times P_s}{T_s}$$

$$\%I = \frac{1039 \times Vm_{std} \times T_s(^\circ R)}{P_s(\text{"Hg}) \times M_d \times V_s \times T_t \times (D_n)^2}$$

Version 2
July 2011

14-388A(OH)

Low Volume Field Data

Job Number: 14-388 | Method: 18 | Probe Length: NA

Job Name: Black Gold Rush | Operator: Adams | Sample Point: 18" Combustor Fuel in Ln

Run Number: Cond 1 (90-100) | Ambient Temp (°F): 50 | Barometric Pressure (P_b): 27.16 "Hg

Location: 18" Combustor Fuel Line | Date: 12/19/14 | Initial Leak Check @ 24 "Hg= — Δ"Hg

Barometer Number: — | Meter Number: — | Final Leak Check @ — "Hg= — Δ"Hg

Canister or Bag Number: — | Orifice or Rotometer Number: — | Orifice Rate or Meter Calibration Factor: _____

Point	Clock Time	Dry Gas Meter (liters)	Dry Gas Meter Pressure ("H_2O) (P_m)	Rotometer Reading	Vacuum Pressure ("Hg)	Stack Temperature (°F)	Probe Temperature (°F)	Dry Gas Temperature (°F) Inlet (T_m)	Dry Gas Temperature (°F) Outlet	Remarks
	0935		27.00							
	1035		19.00							
	1115		19.00							
	1215		9.40							
	1235		8.00							
	1335		+10.00							

D-8

V_m = Meter Calibration Factor _____ x _____ = _____ Collected Condensate + Rinse = — ml

$$Vm_{std} = 17.65 \times V_m \times \frac{P_b + (P_m/13.6)}{(T_m + 460)} = 17.65 \times ____ \times \frac{____ + (____/13.6)}{____ + 460} = ____ \text{ liters}$$

Volume Collected = Avg. Rotometer Reading (l/min) x Time of Test (min) = _____ x _____ = — liters or

Volume Collected = Orifice Rate (l/min) x Time of Test (min) = _____ x _____ = _____ liters

QA/QC Check
Completeness ✓ Legibility ✓ Accuracy ✓ Specifications ✓ Reasonableness ✓ Checked by: RS

Version 1

14-388A(OH)

D-9

METCO Environmental

Job Number 14.388 OH
Job Name Black Gold Kush Ind Ltd.
Run Number 1 cond 2
Unit 18" To Outlet Stack
Date 12/19/14
Operator Hoffer/Lee/Frohmen
Sample Box # 54-2 Meter # 7-1
Purge To (cf): —

1-4 Field Data

Balance ID M7-1
Check Weight ID 2000-1
Actual Mass (g) 2000.0
Measured Mass (g) 2000.1
Difference (g)* 0.1
Pitot Leak Check: Initial ✓ Final ✓
Purge Time —

Ambient Temperature - °F 55
Assumed Moisture - % 5
Probe Length 5'
C Factor — to reference
Initial Leak @ 13.50 "Hg = 0.000 cfm
Final Leak @ 10 inHg "Hg = 0.000 cfm
Pitot Tips Damaged during Test? Yes/No

Note: Read and record at the start of each test point

* must be equal to or less than 0.5 g

Meth 3C

Point	Clock Time	Dry Gas Meter (cf)	ΔP Pitot "H_2O"	Orifice ΔH "H_2O" Desired	Orifice ΔH "H_2O" Actual	P_m Pump Vacuum "Hg	T_s Stack Temp. °F	Probe Temp. °F	Oven/ Filter Temp. °F	T_m Effluent Temp. °F	Dry Gas Inlet Temp. °F	Dry Gas Outlet Temp. °F	Aux Temp. °F	Remarks	Rate L/m
Start	1420	240.483	0.036	1.00	1.00	3.0	1166	—	—	51	75	75	—	FC 0516	0.2
7	1424	242.81	0.020	1.00	1.00	3.0	1101	—	—	58	73	74	—	Micromanometer	0.2
6	1428	245.27	0.032	1.00	1.00	3.0	1113	—	—	58	73	74	—	S/n: 202163	0.2
5	1432	247.31	0.030	1.00	1.00	3.0	1134	—	—	58	73	74	—		0.2
4	1436	249.71	0.014	1.00	1.00	3.0	1116	—	—	58	73	74	—	115L. #00070944	0.2
3	1440	251.96	0.013	1.00	1.00	3.0	1080	—	—	60	74	75	—		0.2
2	1444	254.59	0.025	1.00	1.00	3.0	1040	—	—	61	74	75	—		0.2
1	1448	257.01	0.014	1.00	1.00	3.0	1057	—	—	61	74	75	—		0.2
End	1452	259.417	—	—	—	—	—	—	—	—	—	—	—		
A Start	1458	259.417	0.032	1.00	1.00	3.0	1140	—	—	54	75	75	—		0.2
7	1502	261.81	0.032	1.00	1.00	3.0	1160	—	—	53	75	75	—		0.2
6	1506	264.00	0.028	1.00	1.00	3.0	1110	—	—	52	75	75	—		0.2
5	1510	266.31	0.095	1.00	1.00	3.0	1144	—	—	51	75	75	—		0.2
4	1514	268.47	0.038	1.00	1.00	3.0	1166	—	—	50	74	75	—		0.2
3	1518	270.71	0.029	1.00	1.01	3.0	1103	—	—	51	76	75	—		0.2
2	1522	273.41	0.034	1.00	1.00	3.0	1104	—	—	52	76	75	—		0.2
1	1526	275.52	0.032	1.00	1.00	3.0	1097	—	—	52	76	75	—		0.2
End	1530	278.188	—	—	—	—	—	—	—	—	—	—	—		0.2

C_p Pitot Tube Cal. Factor 0.839 ✓ Pitot Tube # PG66 Barometer # M7-2 Nozzle # —

V_m Volume Collected - cf 37.705 ~~37.705~~ 16614s P_b Barometric Pressure – "Hg 27.11 Total Volume of leak checks after start – cf —

V_w Water Collected - ml 45.6 D_n Nozzle Diameter – in. — 1/27 15 V_m = (DGM Cal Factor) 1.002 x (Net Volume Collected) 37.705

T_t Time of Test – min. 64 %CO_2 4.9 4.7 %CO 0.0 ✓ A_s = Area of Stack – in² 247

P_s Stack Pressure – "H_2O 0.0 %O_2 13.9 15.4 %N_2 ~~81.2~~ 79

{Dry Gas Meter Reading_____ft3 – (Tt _____ min. X Leak Rate _____cfm)]

QA/QC Check Completeness ✓ Legibility ✓ Accuracy ✓ Specification ✓ Reasonableness ✓ Checked By

Version 3
April 2013

Impinger Box No. 54.2

			Water Weight Gain	
Impinger 1	Final Weight	808.5		Impinger 1 31.8
	Initial Weight	776.7		
	Increase			Impinger 2 3.1
Impinger 2	Final Weight	747.6		
	Initial Weight	744.5	SO_2 correction (if applicable)	Impinger 3 1.1
	Increase			
Impinger 3	Final Weight	672.5	V_w =	Impinger 4 9.6
	Initial Weight	671.4	g SO_2 -	
	Increase		V_w =	Impinger 5 -
Impinger 4	Final Weight	1035.5		
	Initial Weight	~~1017.5~~ 1025.9 e		Impinger 6 -
	Increase			
Impinger 5	Final Weight			Impinger 7 ✓
	Initial Weight			
	Increase			Total 45.6 = V_w
Impinger 6	Final Weight		P_b = 27.11 ✓	$\%CO_2$ = ~~4.9~~ 4.7 ✓
	Initial Weight		V_m = 37.705 780	$\%O_2$ = ~~13.9~~ 13.4
	Increase		V_w = 45.6 ✓	%CO = ~~-~~ 0.0 1/15/15
Impinger 7	Final Weight		P_m = 1.420 ✓	$\%N_2$ = ~~81.2~~ 79.7 ✓
	Initial Weight		Avg ΔP = 0.629 ✓	A_s = 247
	Increase			D_n = -
			Avg $\sqrt{\Delta P}$ = 0.167 ✓	T_t = 64 ✓
			C_p = 0.839 ✓	
			P_s = 0.0 ✓ "H_2O	27.11 ✓ "Hg
			T_m = 75 ✓ °F	534 ✓ °R
			T_s = 111 °F	1571 ✓ °R

Moisture Content: %M = 5.987 M_d = 0.94013 MW_d = 29.346 MW = 28.669 1/15/15

$$Vm_{std} = 17.65 \times V_m \left| \frac{Pm}{\frac{Pb + 13.6}{Tm + 460}} \right| = 17.65 \times 37.705 \times \left| \frac{27.11 + \frac{1}{13.6}}{75 + 460} \right| = 33.814 \text{ sft}^3 \quad 0.525 \text{ scfm}$$

$$Vw_{gas} = 0.0472 \times V_w = 0.0472 \times 45.6 = 2.1523 \text{ sft}^3$$

$$\% \text{ Moisture} = \frac{Vw_{gas}}{Vm_{std} + Vw_{gas}} \times 100 = \frac{2.1523}{33.814 + 2.1523} \times 100 = 5.987 \%$$

$$V_s = 5123.8 \times 0.167 \sqrt{\frac{1571}{27.11 \times 28.66}} \times 0.839 = 1021 \text{ fpm} \quad ACFM = 175$$

$$\%I = \frac{1039 \times \quad \times \quad \times}{\quad \times \quad \times \quad \times (\quad)^2} = \quad \%$$

SCFM = 503

%EA = 266.7

$$V_s = 5123.8 \times \text{Avg } \sqrt{\Delta P} \times \sqrt{\frac{Ts(R)}{Ps(\text{"Hg}) \times MW}} \times C_p = \text{fpm}$$

$$ACFM = (V_s \times A_s)/144$$

$$\%I = \frac{1039 \times Vm_{std} \times Ts(°R)}{Ps(\text{"Hg}) \times M_d \times V_s \times T_t \times (D_n)^2}$$

$$SCFM = \frac{0.123 \times V_s \times A_s \times M_d \times P_s}{T_s}$$

Version 2
July 2011

METCO Environmental

14-388A(OH)

D-11

Job Number	14-388, OH	Field Data	
Job Name	Black Gold Rush Ind Ltd.	Balance ID	M7-1
Run Number	2 cond 2	Check Weight ID	7000.1
Unit	18" TO outlet Stack	Actual Mass (g)	7000.0
Date	12/19/14	Measured Mass (g)	7000.1
Operator	Hoffer/Lee/Fahmy	Difference (g)*	0.1
Sample Box #	G192 Meter # 7-1	Pitot Leak Check: Initial	✓ Final
Purge To (cf):	✓	Purge Time	✓

Ambient Temperature - °F	66
Assumed Moisture - %	4
Probe Length	5
C Factor	— to reference
Initial Leak @	13.0 "Hg = 0.000 cfm
Final Leak @	"Hg = cfm
Pitot Tips Damaged during Test?	Yes (No)

Note: Read and record at the start of each test point

* must be equal to or less than 0.5 g

Point	Clock Time	Dry Gas Meter (cf)	ΔP Pitot "H_2O"	Orifice ΔH "H_2O" Desired	Orifice ΔH "H_2O" Actual	P_m Pump Vacuum "Hg	T_s Stack Temp. °F	Probe Temp. °F	Oven/ Filter Temp. °F	Effluent Temp. °F	T_m Dry Gas Inlet Temp. °F	Dry Gas Outlet Temp. °F	Aux Temp. °F	Remarks	moth 3c Rich 4m
8	1540	278.625	0.035	1.00	1.00	3.0	1177	—	—	58	76	75	—	FCO510	0.2
7	1544	288.91	0.041	1.00	1.00	3.0	1113	—	—	55	76	75	—	Micromanometer	0.2
6	1548	283.31	0.046	1.00	1.00	3.0	1148	—	—	55	76	75	—	S/n: 207163	0.2
5	1552	285.52	0.033	1.00	1.00	3.0	1170	—	—	53	76	75	—		0.2
4	1556	288.60	0.040	1.00	1.00	3.0	1152	—	—	53	76	75	—	Inst. #: 00080944	0.2
3	1600	290.41	0.028	1.00	1.00	3.0	1159	—	—	52	77	75	—		0.2
2	1604	292.41	0.028	1.00	1.00	3.0	1178	—	—	51	77	75	—		0.2
1	1608	295.00	0.034	1.00	1.00	3.0	1131	—	—	52	77	75	—		0.2
End	1612	297.527	—	—	—	—	—	—	—	—	—	—	—		
A 8	1618	297.527	0.035	1.00	1.00	3.0	1149	—	—	51	76	76	—		0.2
7	1622	299.74	0.021	1.00	1.00	3.0	1098	—	—	52	77	76	—		0.2
6	1626	302.52	0.025	1.00	1.00	3.0	1091	—	—	51	77	76	—		0.2
5	1630	304.89	0.042	1.00	1.00	3.0	1190	—	—	50	77	76	—		0.2
4	1634	307.11	0.030	1.00	1.00	3.0	1142	—	—	49	77	76	—		0.2
3	1638	309.34	0.031	1.00	1.00	3.0	1138	—	—	50	77	76	—		0.2
2	1642	311.69	0.021	1.00	1.00	3.0	1100	—	—	50	77	76	—		0.2
1	1646	313.91	0.020	1.00	1.00	3.0	1074	—	—	50	77	77	—		0.2
End	1650	316.313	—	—	—	—	—	—	—	—	—	—	—		0.2

C_p Pitot Tube Cal. Factor	0.839 ✓	Pitot Tube #	PG66	Barometer #	M7-2	Nozzle #	—
V_m Volume Collected - cf	32.763 ✓	P_b Barometric Pressure – "Hg	27.12 ✓	Total Volume of leak checks after start – cf	—		
V_w Water Collected - ml	46.1 ✓	D_n Nozzle Diameter – in.	—	V_m = (DGM Cal Factor)	1.002	x (Net Volume Collected)	37.688
T_t Time of Test – min.	64 ✓	%CO_2 ~~5.0~~ 5.4	%CO ~~0.0~~ 0.1 ✓ 12/7/15	A_s = Area of Stack – in²	247		
P_s Stack Pressure – "H_2O	0.0 ✓	%O_2 ~~14~~ 13.8	%N_2 ~~81~~ 80.0 ✓	{Dry Gas Meter Reading ____ ft3 – (Tt ____ min. X Leak Rate ____ cfm)}			

QA/QC Check Completeness ✓ Legibility ✓ Accuracy ✓ Specification ✓ Reasonableness ✓ Checked By

Version 3
April 2013

Impinger Box No. F4-2

Impinger 1	Final Weight	773.7
	Initial Weight	741.3
	Increase	
Impinger 2	Final Weight	770.6
	Initial Weight	766.6
	Increase	
Impinger 3	Final Weight	672.2
	Initial Weight	671.1
	Increase	
Impinger 4	Final Weight	989.2
	Initial Weight	980.6
	Increase	
Impinger 5	Final Weight	
	Initial Weight	
	Increase	
Impinger 6	Final Weight	
	Initial Weight	
	Increase	
Impinger 7	Final Weight	
	Initial Weight	
	Increase	

Water Weight Gain

Impinger 1	32.4
Impinger 2	4.0
Impinger 3	1.1
Impinger 4	8.6
Impinger 5	—
Impinger 6	—
Impinger 7	—
Total	46.1 = V_w

SO_2 correction (if applicable)

V_w = _____
g SO_2 - _____
V_w = _____

P_b =	27.12	%CO_2 =	4.9 / 5.0
V_m =	37.763	%O_2 =	~~13.5~~ 14.9
V_w =	46.1	%CO =	— 0.0
P_m =	1.000	% N_2 =	~~81.3~~ 80.0
Avg ΔP =	0.032	A_s =	247
		D_n =	—
Avg $\sqrt{\Delta P}$ =	0.177	T_t =	64
C_p =	0.839		
P_s =	0.0 "H_2O		27.12 "Hg
T_m =	76 °F		536 °R
T_s =	1128 °F	68	1588 °R 68 1/15/14

Moisture Content: %M = 6.05 M_d = 0.9395 MW_d = 29.336 MW = 28.66

$$Vm_{std} = 17.65 \times V_m \left| \frac{Pm}{Pb + 13.6} \right| = 17.65 \times 37.763 \times \left| \frac{27.12 + 1.000}{76 + 460} \right| = 33.815 \text{ sft}^3$$

0.588 scfm

$$Vw_{gas} = 0.0472 \times V_w = 0.0472 \times 46.1 = 2.1759 \text{ sft}^3$$

$$\% \text{ Moisture} = \frac{Vw_{gas}}{Vm_{std} + Vw_{gas}} \times 100 = \frac{2.1759}{33.815 + 2.1759} \times 100 = 6.05 \%$$

$$V_s = 5123.8 \times 0.177 \sqrt{\frac{1588}{27.12 \times 28.66}} \times 0.839 = 1088 \text{ fpm} \quad 7\ 1/15/14$$

ACFM = 1866 5 1/15/14

SCFM = 531

$$\%I = \frac{1039 \times \quad \times \quad \times \quad \times (\quad)^2}{\quad} = \quad \%$$

%EA = — 236.5

$$V_s = 5123.8 \times \text{Avg } \sqrt{\Delta P} \times \sqrt{\frac{Ts(R)}{Ps(\text{"}Hg) \times MW}} \times C_p = \text{fpm}$$

$$ACFM = (V_s \times A_s)/144$$

$$SCFM = \frac{0.123 \times V_s \times A_s \times M_d \times P_s}{T_s}$$

$$\%I = \frac{1039 \times Vm_{std} \times T_s(^\circ R)}{P_s(\text{"}Hg) \times M_d \times V_s \times T_t \times (D_n)^2}$$

Version 2
July 2011

14-388A(OH)

D-13

METCO Environmental

Job Number	14-388 04	1-4 Field Data		Ambient Temperature - °F	66
Job Name	Black Gold Rush Ind Ltd	Balance ID	M7.1	Assumed Moisture - %	10
Run Number	3 and 2	Check Weight ID	2 000.1	Probe Length	5
Unit	18" To outlet stack	Actual Mass (g)	2000.0	C Factor	— to reference
Date	12/19/14	Measured Mass (g)	2000.1	Initial Leak @ 14:00 "Hg =	0.000 cfm
Operator	Hopper/Lee/Fahrney	Difference (g)*	0.1	Final Leak @ 11:00 "Hg =	0.000 cfm
Sample Box #	54-2 Meter # 7-1	Pitot Leak Check: Initial ✓	Final ✓	Pitot Tips Damaged during Test?	Yes/No
Purge To (cf):	—	Purge Time ✓			

Note: Read and record at the start of each test point

* must be equal to or less than 0.5 g

meth 3C Back 4hr

			ΔP		P_m		T_s					T_m			
Point	Clock Time	Dry Gas Meter (cf)	Pitot "H_2O"	Orifice ΔH "H_2O Desired	Orifice ΔH "H_2O Actual	Pump Vacuum "Hg	Stack Temp. °F	Probe Temp. °F	Oven/ Filter Temp. °F	Effluent Temp. °F	Dry Gas Inlet Temp. °F	Dry Gas Outlet Temp. °F	Aux Temp. °F	Remarks	
8	1760	316.815	0.074	1.00	1.00	3.0	1085	—	-	58	77	77	-	PC056	0.2
7	1764	318.99	0.032	1.00	1.00	3.0	1103	-	-	55	77	77	-	Micromanometer	0.2
6	1708	321.09	0.028	1.00	1.00	3.0	1103	-	-	54	77	77	-	S/n: 202163	0.2
5	1712	324.13	0.088	1.00	1.00	3.0	1139	-	-	54	77	77	-		0.2
4	1716	326.43	0.037	1.00	1.00	3.0	1055	-	-	53	77	77	-	Inst. #: 0002094	0.2
3	1720	328.80	0.088	1.00	1.00	3.0	1087	-	-	53	77	77	-		0.2
2	1724	330.99	0.025	1.00	1.00	3.0	1095	-	-	53	77	77	-		0.2
1	1728	333.21	0.085	1.01	1.00	3.0	1085	-	-	54	77	77	-		0.2
End	1732	335.891	-	-	-	-	-	-	-	-	-	-	-		
8	1738	335.891	0.051	1.00	1.00	3.0	1208	-	-	51	77	76	-		0.2
7	1742	338.27	0.043	1.00	1.00	3.0	1136	-	-	50	76	76	-		0.2
6	1746	340.37	0.046	1.00	1.00	3.0	1158	-	-	50	75	76	-		0.2
5	1750	342.61	0.048	1.00	1.00	3.0	1196	-	-	50	75	76	-		0.2
4	1754	345.67	0.045	1.00	1.00	3.0	1201	-	-	50	75	76	-		0.2
3	1758	347.71	0.046	1.00	1.00	3.0	1093	-	-	50	75	76	-		0.2
2	1802	350.11	0.034	1.00	1.00	3.0	1096	-	-	49	74	76	-		0.2
1	1806	352.32	0.039	1.00	1.00	3.0	1070	-	-	50	74	76	-		0.2
End	1810	354.660	-	-	-	-	-	-	-	-	-	-	-		0.2

C_p Pitot Tube Cal. Factor	0.839 ✓	Pitot Tube #	PG66	Barometer #	M7.2	Nozzle #	—
V_m Volume Collected - cf	37.921 ✓	P_b Barometric Pressure – "Hg	27.13 ✓	Total Volume of leak checks after start – cf	—		
V_w Water Collected - ml	42.4 ✓	D_n Nozzle Diameter – in.	—	V_m = (DGM Cal Factor)	1.008	x (Net Volume Collected)	37.84/5
T_t Time of Test – min.	64 ✓	%CO_2	4.8 ✓	%CO	0.0 ✓	A_s = Area of Stack – in^2	247
P_s Stack Pressure – "H_2O	0.0 ✓	%O_2	14.0 15.3	%N_2	81.2 79.9 ✓	{Dry Gas Meter Reading_____ft3 – (Tt _____ min. X Leak Rate _____cfm)}	

QA/QC Check Completeness	✓	Legibility	✓	Accuracy	✓	Specification		Reasonableness	✓

Checked By

Version 3
April 2013

Impinger Box No. 54.2

			Water Weight Gain	
Impinger 1	Final Weight	840.3		Impinger 1 31.8
	Initial Weight	808.5		
	Increase			Impinger 2 1.7
Impinger 2	Final Weight	749.3		Impinger 3 0.9
	Initial Weight	747.6	SO_2 correction (if applicable)	
	Increase			Impinger 4 8.0
Impinger 3	Final Weight	673.4	V_w =	Impinger 5 –
	Initial Weight	672.5	g SO_2 -	
	Increase		V_w =	Impinger 6 –
Impinger 4	Final Weight	1043.5		Impinger 7 –
	Initial Weight	1035.5		
	Increase			Total 42.4 = V_w
Impinger 5	Final Weight		P_b = 27.13	$\%CO_2$ = 4.8
	Initial Weight		V_m = 37.971	$\%O_2$ = 15.3
	Increase		V_w = 42.4	%CO = 0.0
Impinger 6	Final Weight		P_m = 1.000	% N_2 = 79.9
	Initial Weight		Avg ΔP = 0.036	A_s = 247
	Increase			D_n = –
			Avg $\sqrt{\Delta P}$ = 0.189	T_t = 64
Impinger 7	Final Weight		C_p = 0.834	
	Initial Weight		P_s = 0.0 "H_2O	27.13 "Hg
	Increase		T_m = 76 °F	536 °R
			T_s = 1180 °F	1580 °R

Moisture Content: %M = 5.56 M_d = 0.9444 MW_d = 29.328 MW = 28.705

$$Vm_{std} = 17.65 \times V_m \left| \frac{Pm}{Pb + 13.6} \right| = 17.65 \times 37.971 \times \left| \frac{27.13 + 13.6}{76 + 460} \right| = 33.969 \text{ sft}^3 = 0.531 \text{ scfm}$$

$$Vw_{gas} = 0.0472 \times V_w = 0.0472 \times 42.4 = 2.0013 \text{ sft}^3$$

$$\% \text{ Moisture} = \frac{Vw_{gas}}{Vm_{std} + Vw_{gas}} \times 100 = \frac{2.0013}{33.969 + 2.0013} \times 100 = 5.56 \%$$

$$V_s = 5123.8 \times 0.189 \sqrt{\frac{1580}{27.13 \times 28.705}} \times 0.834 = 457 \text{ fpm}$$

ACFM = 1985

SCFM = 570

$$\%I = \frac{1039 \times \quad \times \quad \times \quad \times (\quad)^2}{\quad \times \quad \times \quad \times \quad} = \quad \%$$

%EA = 260.5

$$V_s = 5123.8 \times \text{Avg } \sqrt{\Delta P} \times \sqrt{\frac{Ts(R)}{Ps(\text{"}Hg) \times MW}} \times C_p = \text{fpm}$$

$$ACFM = (V_s \times A_s)/144$$

$$SCFM = \frac{0.123 \times V_s \times A_s \times M_d \times P_s}{T_s}$$

$$\%I = \frac{1039 \times Vm_{std} \times T_s(^\circ R)}{P_s(\text{"}Hg) \times M_d \times V_s \times T_t \times (D_n)^2}$$

Version 2
July 2011

14-388A(OH)

Low Volume Field Data

Job Number: 14-388
Job Name: Black Gold Rush
Run Number: C II
Location: Midland, TX, 18" Combustion Fuel line
Barometer Number: -
Canister or Bag Number: -

Method: 18
Operator: Adams
Ambient Temp (°F): 60
Date: 12/19/14
Meter Number: -
Orifice or Rotometer Number: -

Probe Length: -
Sample Point: 18" Combustor Fuel Inlet
Barometric Pressure (P_b): 27.13 "Hg
Initial Leak Check @ 28 "Hg= 00 Δ"Hg
Final Leak Check @ - "Hg= - Δ"Hg
Orifice Rate or Meter Calibration Factor: -

Point	Clock Time	Dry Gas Meter (liters)	Dry Gas Meter Pressure ("H_2O) (P_m)	Rotometer Reading	Vacuum Pressure ("Hg)	Stack Temperature (°F)	Probe Temperature (°F)	Dry Gas Temperature (°F) Inlet (T_m)	Dry Gas Temperature (°F) Outlet	Remarks
	1420		28.00							
	1520		19.00							
	1540		19.00							
	1640		5.00							
	1700		5.00							
	1800		+10.00							

Collected Condensate + Rinse = - ml

V_m = Meter Calibration Factor ____ x ____ = ____

$$Vm_{std} = 17.65 \times V_m \times \frac{P_b + (P_m/13.6)}{(T_m + 460)} = 17.65 \times ____ \times \frac{____ (____/13.6)}{____ + 460} = ____ \text{ liters}$$

Volume Collected = Avg. Rotometer Reading (l/min) x Time of Test (min) = ____ x ____ = ____ liters or

Volume Collected = Orifice Rate (l/min) x Time of Test (min) = ____ x ____ = ____ liters

QA/QC Check
Completeness ✓ Legibility ✓ Accuracy ✓ Specifications ✓ Reasonableness ✓ Checked by: NS

Version 1

14-388A(OH)

D-16

METCO Environmental

Job Number	14-388 01f	1-4	Field Data
Job Name	Black Gold Rush Ind. Htg	Balance ID	M7.2
Run Number	1 cond. 3	Check Weight ID	2000-1
Unit	18" To. 3rd outlet Stack	Actual Mass (g)	2000.6
Date	12/20/14	Measured Mass (g)	2000.1
Operator	Hoffer / Lee / Frahmon	Difference (g)*	0.1
Sample Box #	54.2 Meter # 7-1	Pitot Leak Check: Initial ✓	Final
Purge To (cf):		Purge Time	

Note: Read and record at the start of each test point

Ambient Temperature - °F	46
Assumed Moisture - %	4
Probe Length	5'
C Factor	— to reference
Initial Leak @ 16.00 "Hg =	0.000 cfm
Final Leak @ 7.00 "Hg =	0.009 cfm
Pitot Tips Damaged during Test?	Yes/No

* must be equal to or less than 0.5 g

Point	Clock Time	Dry Gas Meter (cf)	ΔP Pitot "H_2O"	Orifice ΔH "H_2O Desired	P_m Orifice ΔH "H_2O Actual	Pump Vacuum "Hg	T_s Stack Temp. °F	Probe Temp. °F	Oven/ Filter Temp. °F	T_m Effluent Temp. °F	Dry Gas Inlet Temp. °F	Dry Gas Outlet Temp. °F	Aux Temp. °F	Remarks	Meth 3C Rat L/M
B 8	1115	369.748	0.031	1.00	1.00	3.0	847	—	—	45	67	67	—	FC0516	0.2
7	1119	371.94	0.033	1.00	1.00	3.0	916	—	—	46	66	67	—	M: Chromatograph	0.3
6	1123	374.13	0.034	1.00	1.00	3.0	974	—	—	46	66	67	—	S/n: 202163	0.2
5	1127	376.31	0.043	1.00	1.00	3.0	2091	—	—	46	65	66	—		0.2
4	1131	379.81	0.044	1.00	1.00	3.0	1157	—	—	46	65	66	—	Inst. H: 000 8094	0.2
3	1135	381.22	0.029	1.00	1.00	3.0	963	—	—	47	65	67	—		0.2
2	1139	383.90	0.031	1.00	1.00	3.0	994	—	—	49	66	68	—		0.2
1	1143	386.07	0.041	1.00	1.00	3.0	1088	—	—	48	66	68	—		0.2
End	1147	388.43	—	—	—	—	—	—	—	—	—	—	—		
A 8	1153	388.43	0.027	1.00	1.00	3.00	967	—	—	48	68	69	—		0.2
1	1157	390.90	0.033	1.00	1.00	3.00	994	—	—	48	68	69	—		0.2
6	1201	393.04	0.038	1.00	1.00	3.00	1072	—	—	48	68	69	—		0.2
5	1205	395.56	0.040	1.00	1.00	3.00	1155	—	—	46	69	69	—		0.2
4	1209	397.65	0.035	1.00	1.00	3.00	1162	—	—	47	69	69	—		0.2
3	1213	400.10	0.030	1.00	1.00	3.00	933	—	—	46	69	69	—		0.2
2	1217	402.52	0.026	1.00	1.00	3.00	1000	—	—	46	69	69	—		0.2
1	1221	404.88	0.028	1.00	1.00	3.00	955	—	—	46	69	69	—		0.2
End	1225	407.357	—	—	—	—	—	—	—	—	—	—	—		0.2

C_p Pitot Tube Cal. Factor	0.839 ✓	Pitot Tube #	P66	Barometer #	M7.2
V_m Volume Collected - cf	37.687 ✓	P_b Barometric Pressure – "Hg	27.16	Nozzle #	—
V_w Water Collected - ml	42.4 ✓	D_n Nozzle Diameter – in.		Total Volume of leak checks after start – cf	0.09 12/27/15
T_t Time of Test – min.	64 ✓	%CO_2 4.4 4.3	%CO 0.0 12/27/15	V_m = (DGM Cal Factor) 1.002 x (Net Volume Collected)	37.687
P_s Stack Pressure – "H_2O	0.6	%O_2 14.5 16.0	%N_2 81.1 75.7	A_s = Area of Stack – in²	247

{Dry Gas Meter Reading _____ ft3 – (Tt _____ min. X Leak Rate _____ cfm)]

QA/QC Check Completeness	✓	Legibility	✓	Accuracy	✓	Specification	✓	Reasonableness	✓

Checked By ✓

Version 3
April 2013

Impinger Box No. 542

			Water Weight Gain	
Impinger 1	Final Weight	870.1		Impinger 1 29.8
	Initial Weight	840.3		
	Increase			Impinger 2 3.1
Impinger 2	Final Weight	752.4		Impinger 3 1.3
	Initial Weight	749.3	SO_2 correction (if applicable)	Impinger 4 8.2
	Increase			
Impinger 3	Final Weight	674.7	V_w =	Impinger 5 —
	Initial Weight	673.4	g SO_2 -	
	Increase		V_w =	Impinger 6 —
Impinger 4	Final Weight	1011.6		Impinger 7 —
	Initial Weight	1003.4		
	Increase			Total 42.4 = V_w
Impinger 5	Final Weight			
	Initial Weight			
	Increase			
Impinger 6	Final Weight			
	Initial Weight			
	Increase			
Impinger 7	Final Weight			
	Initial Weight			
	Increase			

P_b =	27.16	$\%CO_2$ =	4.4 43
V_m =	37.687 4	$\%O_2$ =	~~14.5~~ 16.0
V_w =	42.4	%CO =	— 0.0
P_m =	1.000	% N_2 =	~~81.1~~ 79.7
Avg ΔP =	0.034	A_s =	247
		D_n =	—
Avg $\sqrt{\Delta P}$ =	0.184	T_t =	64
C_p =	0.839		
P_s =	0.0 "H_2O		27.16 "Hg
T_m =	68 °F		528 °R
T_s =	~~940~~ ~~189~~ °F 1010		~~1400~~ 1470 °R

Moisture Content: %M = 5.51 M_d = 0.9449 MW_d = 29.284 MW = 28.670

$$Vm_{std} = 17.65 \times V_m \left| \frac{Pm}{Pb + 13.6} \right| = 17.65 \times 37.687 \times \left| \frac{27.16 \quad 1.000}{68 + 460} \right| = \frac{34.309}{0.536} \text{ sft}^3 \text{ scfm}$$

$$Vw_{gas} = 0.0472 \times V_w = 0.0472 \times 42.4 = 2.0013 \text{ sft}^3$$

$$\% \text{ Moisture} = \frac{Vw_{gas}}{Vm_{std} + Vw_{gas}} \times 100 = \frac{2.0013}{34.309 + 2.0013} \times 100 = 5.51 \%$$

$$V_s = 5123.8 \times 0.184 \sqrt{\frac{1400 \quad 1470}{27.16 \times 2866 \quad 2870}} \times 0.839 = 1060 \text{ fpm}$$

ACFM = 1826

SCFM = 5976

$$\%I = \frac{1039 \times \quad \times \quad \times \quad \times (\quad)^2}{\quad} = \quad \%$$

%EA = 3125

$$V_s = 5123.8 \times \text{Avg } \sqrt{\Delta P} \times \sqrt{\frac{Ts(R)}{Ps(\text{"Hg}) \times MW}} \times C_p = \text{fpm}$$

$$ACFM = (V_s \times A_s)/144$$

$$SCFM = \frac{0.123 \times V_s \times A_s \times M_d \times P_s}{T_s}$$

$$\%I = \frac{1039 \times Vm_{std} \times T_s(^\circ R)}{P_s(\text{"Hg}) \times M_d \times V_s \times T_t \times (D_n)^2}$$

Version 2
July 2011

METCO Environmental

Job Number	14388 OH		1-4	Field Data	
Job Name	Black Gold Rush DW-LH	Balance ID	M7.1	Ambient Temperature - °F	45
Run Number	2 and 3	Check Weight ID	2000.1	Assumed Moisture - %	4
Unit	18" T-0 outlet stack	Actual Mass (g)	2000.0	Probe Length	5
Date	12/20/14	Measured Mass (g)	2000.1	C Factor —	to reference
Operator	Hoffer/Lee/Frohman	Difference (g)*	0.1	Initial Leak @ 17.00 "Hg =	0.000 cfm
Sample Box #	H-2 Meter # 7-1	Pitot Leak Check: Initial ✓	Final ✓	Final Leak @ 7.00 "Hg =	0.000 cfm
Purge To (cf):	—	Purge Time —		Pitot Tips Damaged during Test?	Yes/No

Note: Read and record at the start of each test point

* must be equal to or less than 0.5 g

Meth 3C

			ΔP		Pm		Ts			Tm					Flow Rate L/m
Point	Clock TIme	Dry Gas Meter (cf)	Pitot "H2O"	Orifice ΔH "H2O Desired	Orifice ΔH "H2O Actual	Pump Vacuum "Hg	Stack Temp. °F	Probe Temp. °F	Oven/ Filter Temp. °F	Effluent Temp. °F	Dry Gas Inlet Temp. °F	Dry Gas Outlet Temp. °F	Aux Temp. °F	Remarks	
A 8	1238	407.976	0.041	1.00	1.00	3.00	970	—	—	54	71	71	—	FC0516	0.2
7	1237	410.20	0.042	1.00	1.00	3.00	988	—	—	55	71	71	—	Micromanometer	0.2
6	1241	412.51	0.033	1.00	1.00	3.00	941	—	—	50	71	71	—	S/n: 202163	0.2
5	1245	414.71	0.016	1.00	1.00	3.00	1156	—	—	56	71	71	—		0.2
4	1249	416.91	0.015	1.00	1.00	3.0	1013	—	—	50	71	71	—	Inst. #: 00020914	0.2
3	1253	419.65	0.011	1.00	1.00	3.0	995	—	—	51	71	72	—		0.2
2	1257	422.21	0.009	1.00	1.00	3.0	988	—	—	50	71	73	—		0.2
1	1301	424.32	0.003	1.00	1.00	3.0	1017	—	—	50	72	72	—		0.2
End	1305	426.762	—	—	—	—	—	—	—	—	—	—	—		
B 8	1311	426.762	0.020	1.00	1.00	3.0	1031	—	—	55	74	74	—		0.2
7	1315	428.83	0.026	1.00	1.00	3.0	1016	—	—	55	74	74	—		0.2
6	1319	431.36	0.027	1.00	1.00	3.0	1027	—	—	54	75	74	—		0.2
5	1323	433.46	0.037	1.00	1.00	3.0	1146	—	—	54	76	75	—		0.2
4	1327	435.91	0.021	1.00	1.00	3.0	1131	—	—	54	76	76	—		0.2
3	1331	439.00	0.023	1.00	1.00	3.0	1175	—	—	54	76	76	—		0.2
2	1335	440.91	0.026	1.00	1.00	3.0	1030	—	—	54	76	76	—		0.2
1	1339	443.04	0.025	1.00	1.00	3.0	984	—	—	54	77	76	—		0.2
End	1343	445.495	—	—	—	—	—	—	—	—	—	—	—		0.2

C_p Pitot Tube Cal. Factor	0.839 ✓	Pitot Tube #	PC-66 ✓	Barometer #	M7.2 ✓	Nozzle #	—
V_m Volume Collected - cf	37.594 ✓	P_b Barometric Pressure – "Hg	27.09 ✓	Total Volume of leak checks after start – cf		—	
V_w Water Collected - ml	475 ✓	D_n Nozzle Diameter – in.	—	V_m = (DGM Cal Factor)	1.002 ✓	x (Net Volume Collected)	37.519
T_t Time of Test – min.	64 ✓	%CO_2	4.8 4.4	%CO	0.0	A_s = Area of Stack – in²	247 ✓
P_s Stack Pressure – "H_2O	6.0 ✓	%O_2	14.56	%N_2	81.2 80.8	{Dry Gas Meter Reading_____ft3 – (Tt _____ min. X Leak Rate _____cfm)}	

1/15/15

QA/QC Check Completeness	✓	Legibility	✓	Accuracy	✓	Specification	✓	Reasonableness	✓
Checked By	KS								

Impinger Box No. 74.2 Black Bucket

			Water Weight Gain	
Impinger 1	Final Weight	809.4		Impinger 1 30.7
	Initial Weight	773.7		
	Increase			Impinger 2 36
Impinger 2	Final Weight	774.3		Impinger 3 1.3
	Initial Weight	710.7	SO_2 correction (if applicable)	Impinger 4 7.2
	Increase			
Impinger 3	Final Weight	673.5	V_w =	Impinger 5 —
	Initial Weight	672.2	g SO_2 -	
	Increase		V_w =	Impinger 6 —
Impinger 4	Final Weight	996.4		Impinger 7 —
	Initial Weight	989.2		
	Increase			Total 42.8 = V_w
Impinger 5	Final Weight		P_b = 27.09	$\%CO_2$ = 4.8 → 4.4
	Initial Weight		V_m = 37.594	$\%O_2$ = 14.0 → 15.8
	Increase		V_w = 42.8	%CO = — → 0.3
Impinger 6	Final Weight		P_m = 1.000	% N_2 = 81.2 → 79.8
	Initial Weight		Avg ΔP = 0.073	A_s = 247
	Increase			D_n = —
			Avg √ΔP = 0.148	T_t = 69
Impinger 7	Final Weight		C_p = 0.839	
	Initial Weight		P_s = 6.0 "H_2O	27.09 "Hg
	Increase		T_m = 73 °F	533 °R
			T_s = 1036 °F	29.336 1496 °R

11/15/15

Moisture Content: %M = 5.64 M_d = 0.9436 MW_d = 28.970 MW = 28.690

$$Vm_{std} = 17.65 \times V_m \left| \frac{Pm}{Pb + 13.6} \right| = 17.65 \times 37.594 \times \left| \frac{1.000}{27.09 + 13.6} \right| = 33.816 \text{ sft}^3$$

$$\frac{33.816}{73 + 460} = 0.578 \text{ scfm}$$

$$Vw_{gas} = 0.0472 \times V_w = 0.0472 \times 42.8 = 2.0202 \text{ sft}^3$$

$$\% \text{ Moisture} = \frac{Vw_{gas}}{Vm_{std} + Vw_{gas}} \times 100 = \frac{2.0202}{33.816 + 2.0202} \times 100 = 5.64 \%$$

$$V_s = 5123.8 \times 0.148 \sqrt{\frac{1496}{27.09 \times 29.70}} \times 0.839 = 883 \text{ fpm}$$

ACFM = 1514 11/15/15

SCFM = 458

%EA = 295.5

$$\%I = \frac{1039 \times \quad \times \quad \times \quad \times \quad}{\times \quad \times \quad \times \quad \times (\quad)^2} = \quad \%$$

$$V_s = 5123.8 \times \text{Avg } \sqrt{\Delta P} \times \sqrt{\frac{Ts(R)}{Ps(\text{"}Hg) \times MW}} \times C_p = \text{fpm}$$

$$ACFM = (V_s \times A_s)/144$$

$$SCFM = \frac{0.123 \times V_s \times A_s \times M_d \times P_s}{T_s}$$

$$\%I = \frac{1039 \times Vm_{std} \times T_s(^\circ R)}{P_s(\text{"}Hg) \times M_d \times V_s \times T_t \times (D_n)^2}$$

Version 2
July 2011

14-388A(OH)

D-20

METCO Environmental

Job Number	14-388 OH	1-4	Field Data	Ambient Temperature - °F	45
Job Name	Black Gold Rush Ent Ltd	Balance ID	M7-1	Assumed Moisture - %	4
Run Number	3 Cond 3	Check Weight ID	700-1	Probe Length	5
Unit	18" To outlet stack	Actual Mass (g)	700.0	C Factor	— to reference
Date	12/20/14	Measured Mass (g)	2000 g	Initial Leak @	13.00 "Hg = 0.000 cfm
Operator	Hopper/Keel/Frohman	Difference (g)*	0.1	Final Leak @	17.00 "Hg = 0.000 cfm
Sample Box #	Temp 547 Meter # 7-1	Pitot Leak Check: Initial	✓ Final ✓	Pitot Tips Damaged during Test?	Yes/No
Purge To (cf):	—	Purge Time	—		

Note: Read and record at the start of each test point

* must be equal to or less than 0.5 g

Moth 3C

Point	Clock Time	Dry Gas Meter (cf)	ΔP Pitot "H_2O"	Orifice ΔH "H_2O Desired	Orifice ΔH "H_2O Actual	P_m Pump Vacuum "Hg	T_s Stack Temp. °F	Probe Temp. °F	Oven/ Filter Temp. °F	T_m Effluent Temp. °F	Dry Gas Inlet Temp. °F	Dry Gas Outlet Temp. °F	Aux Temp. °F	Remarks	Flow rate L/m
8	1355	446.135	0.027	1.00	1.00	3.0	1015	—	—	60	77	77	—	PG0510	0.2
7	1359	448.81	0.032	1.00	1.00	3.0	1009	—	—	58	76	77	—	Micromanometer	0.2
6	1403	450.91	0.024	1.00	1.00	3.0	1004	—	—	58	76	77	—	Sn: 707163	0.2
5	1407	453.30	0.035	1.00	1.00	3.0	1186	—	—	56	76	77	—		0.2
4	1411	455.61	0.048	1.00	1.00	3.0	1021	—	—	55	75	76	—	instr. #: 0607094	0.2
3	1414	457.86	0.032	1.00	1.00	3.0	1001	—	—	56	75	76	—		0.2
2	1419	462.37	0.027	1.00	1.00	3.0	1025	—	—	57	76	76	—		0.2
1	1423	462.51	0.048	1.00	1.00	3.0	1178	—	—	58	76	77	—		0.2
End	1427	464.953	—	—	—	—	—	—	—	—	—	—	—		
8	1433	464.953	0.042	1.00	1.00	3.0	1058	—	—	58	77	76	—		0.2
7	1437	467.13	0.034	1.00	1.00	3.0	1025	—	—	57	77	77	—		0.2
6	1441	469.75	0.038	1.00	1.00	3.0	1005	—	—	57	77	77	—		0.2
5	1445	472.03	0.048	1.00	1.00	3.0	1178	—	—	56	77	77	—		0.2
4	1449	474.62	0.050	1.00	1.00	3.0	1177	—	—	58	78	78	—		0.2
3	1453	476.86	0.031	1.00	1.00	3.0	1096	—	—	58	78	78	—		0.2
2	1457	479.03	0.029	1.00	1.00	3.0	1056	—	—	58	78	78	—		0.2
1	1501	481.34	0.021	1.00	1.00	3.0	999	—	—	59	78	78	—		0.2
End	1505	484.00	—	—	—	—	—	—	—	—	—	—	—		0.2

C_p Pitot Tube Cal. Factor	0.839 ✓	Pitot Tube #	PG66 ✓	Barometer #	M7-2 ✓	Nozzle #	—
V_m Volume Collected - cf	37.941 ✓	P_b Barometric Pressure – "Hg	27.05 ✓	Total Volume of leak checks after start – cf	—		
V_w Water Collected - ml	40.1 ✓	D_n Nozzle Diameter – in.	—	V_m = (DGM Cal Factor)	1.007 ✓	x (Net Volume Collected)	37.865
T_t Time of Test – min.	64 ✓	%CO_2	~~5.0~~ 4.9	%CO	0.0	A_s = Area of Stack – in^2	24 ✓
P_s Stack Pressure – "H_2O	0.0 ✓	%O_2	~~13.8~~ 15.6	%N_2	~~81.7~~ 79.5 @ 1/15/15	{Dry Gas Meter Reading ____ ft3 – (Tt ____ min. X Leak Rate ____ cfm)}	

QA/QC Check Completeness	✓	Legibility	✓	Accuracy	✓	Specification	✓	Reasonableness	✓	Checked By	✓

Version 3
April 2013

Impinger Box No. 54-2

			Water Weight Gain		
Impinger 1	Final Weight	759.4		Impinger 1	27.1
	Initial Weight	732.3		Impinger 2	3.5
	Increase			Impinger 3	0.5
Impinger 2	Final Weight	755.4	SO_2 correction (if applicable)	Impinger 4	9.0
	Initial Weight	752.4		Impinger 5	—
	Increase		V_w =	Impinger 6	—
Impinger 3	Final Weight	675.2	g SO_2 -	Impinger 7	✓
	Initial Weight	674.7	V_w =		
	Increase				
Impinger 4	Final Weight	1080.6		Total	46.1 = V_w
	Initial Weight	1011.6			
	Increase				
Impinger 5	Final Weight		P_b = 27.05	$\%CO_2$ = ~~5.0~~ 4.4	
	Initial Weight		V_m = 37.941	$\%O_2$ = ~~13.8~~ 15.8	11/15/15 ms
	Increase		V_w = 46.1	%CO = — 0.0	
Impinger 6	Final Weight		P_m = 1.00	% N_2 = ~~81.2~~ 79.8	
	Initial Weight		Avg ΔP = 0.035	A_s = 347	
	Increase			D_n = —	
			Avg $\sqrt{\Delta P}$ = 0.185	T_t = 64	
Impinger 7	Final Weight		C_p = 0.839		
	Initial Weight		P_s = 0.0 "H_2O	27.05 "Hg	
	Increase		T_m = 77 °F	537 °R	
			T_s = 1061 °F	1521 °R	

Moisture Content: %M = 5.30 M_d = 0.9470 MW_d = 29.352 MW = 28.754 11/15/15

$$Vm_{std} = 17.65 \times V_m \left| \frac{Pm}{Pb + 13.6} \right| = 17.65 \times 37.941 \times \left| \frac{1.00}{27.05 + 13.6} \right| = \frac{33.824}{0.529} \frac{sft^3}{scfm}$$

$$Vw_{gas} = 0.0472 \times V_w = 0.0472 \times 46.1 = 1.8927\ sft^3$$

$$\%\ Moisture = \frac{Vw_{gas}}{Vm_{std} + Vw_{gas}} \times 100 = \frac{1.8927}{33.824 + 1.8927} \times 100 = 5.30\ \%$$

$$V_s = 5123.8 \times 0.185 \sqrt{\frac{1521}{27.05 \times 29.352}} \times 0.839 = 1112\ fpm \quad ACFM = 1908$$

$$SCFM = 569$$

$$\%I = \frac{1039 \times \quad \times \quad \times \quad \times (\quad)^2}{\quad} = \quad \% \qquad \%EA = 295.5 \quad 11/15/15$$

$$V_s = 5123.8 \times Avg\ \sqrt{\Delta P} \times \sqrt{\frac{Ts(R)}{Ps("Hg) \times MW}} \times C_p = fpm$$

$$ACFM = (V_s \times A_s)/144$$

$$SCFM = \frac{0.123 \times V_s \times A_s \times M_d \times P_s}{T_s}$$

$$\%I = \frac{1039 \times Vm_{std} \times T_s(°R)}{P_s("Hg) \times M_d \times V_s \times T_t \times (D_n)^2}$$

Version 2
July 2011

Low Volume Field Data

14-388A(OH)

Job Number: 14-358
Job Name: Black Gold Rush
Run Number: CTII
Location: Midland, Tx 18" Combustor Fuel Lift
Barometer Number: -
Canister or Bag Number: -

Method: 18
Operator: Adams
Ambient Temp (°F): -
Date: 12/20/14
Meter Number: -
Orifice or Rotometer Number: -

Probe Length: -
Sample Point: 18" Combustor Fuel Lift
Barometric Pressure (P_b): 27.05 "Hg
Initial Leak Check @ 27.0 "Hg= 0.0 Δ"Hg
Final Leak Check @ - "Hg= - Δ"Hg
Orifice Rate or Meter Calibration Factor: -

Point	Clock Time	Dry Gas Meter (liters)	Dry Gas Meter Pressure ("H_2O) (P_m)	Rotometer Reading	Vacuum Pressure ("Hg)	Stack Temperature (°F)	Probe Temperature (°F)	Dry Gas Temperature (°F) (T_m) Inlet	Dry Gas Temperature (°F) (T_m) Outlet	Remarks
	1115		24.0							
	1215		16.0							
	1253		16.0							
	1333		4.0							
	1355		4.0							
	1455		+10.0							

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V_m = Meter Calibration Factor ____ x ____ = -

Collected Condensate + Rinse = ____ ml

$$Vm_{std} = 17.65 \times V_m \times \frac{P_b + (P_m/13.6)}{(T_m + 460)} = 17.65 \times ____ \times \frac{____ + (____/13.6)}{____ + 460} = ____ \text{ liters}$$

Volume Collected = Avg. Rotometer Reading (l/min) x Time of Test (min) = ____ x ____ = - liters or

Volume Collected = Orifice Rate (l/min) x Time of Test (min) = ____ x ____ = - liters

QA/QC Check
Completeness ~ Legibility ✓ Accuracy ✓ Specifications ____ Reasonableness ✓ Checked by: ~

Version 1

METCO Environmental

Job Number	14-388 OH	1-4	Field Data	Ambient Temperature - °F	60
Job Name	Black Gold Rush Ind. Lf	Balance ID	M7-1	Assumed Moisture - %	5
Run Number	1 cond 4	Check Weight ID	2000 g	Probe Length	5'
Unit	18" T.O outlet stack	Actual Mass (g)	2000.0	C Factor	— to reference
Date	12/20/14	Measured Mass (g)	2000.1	Initial Leak @ 17.00 "Hg =	0.000 cfm
Operator	Hepler / Lee / Frohman	Difference (g)*	0.1	Final Leak @ 13.00 "Hg =	0.000 cfm
Sample Box #	14-7 Meter # 7a1	Pitot Leak Check: Initial	✓ Final ✓	Pitot Tips Damaged during Test?	Yes/No
Purge To (cf):	—	Purge Time	—		

Note: Read and record at the start of each test point

* must be equal to or less than 0.5 g

			ΔP		P_m		T_s				T_m			
Point	Clock TIme	Dry Gas Meter (cf)	Pitot "H_2O"	Orifice ΔH "H_2O Desired	Orifice ΔH "H_2O Actual	Pump Vacuum "Hg	Stack Temp. °F	Probe Temp. °F	Oven/ Filter Temp. °F	Effluent Temp. °F	Dry Gas Inlet Temp. °F	Dry Gas Outlet Temp. °F	Aux Temp. °F	Remarks
1) 8	1520	484.795	0.029	1.00	1.00	3.0	906	—	-	60	78	78	-	FCO#16
7	1524	487.02	0.030	1.00	1.00	3.0	875	—	-	58	77	77	—	Micromanometer
6	1528	489.31	0.034	1.00	1.00	3.0	848	—	-	57	76	77	—	S/n: 207163
5	1532	491.56	0.033	1.00	1.00	3.0	905	—	-	57	76	77	—	
4	1536	493.79	0.033	1.00	1.00	3.0	916	—	-	60	76	77	—	inst. #: 8007e94
3	1540	496.20	0.031	1.00	1.00	3.0	889	—	-	61	77	77	—	
2	1544	498.73	0.030	1.00	1.00	3.0	777	—	-	68	76	76	—	
1	1548	501.21	0.033	1.00	1.00	3.0	750	—	-	67	76	76	—	
End	1552	503.373	—	—	—	—	—	—	-	—	—	—	—	
A 6	1558	503.373	0.027	1.00	1.00	3.0	909	—	-	60	76	76	—	
7	1602	505.77	0.027	1.00	1.00	3.0	877	—	-	59	76	76	—	
6	1606	508.41	0.026	1.00	1.00	3.0	871	—	-	58	76	76	—	
5	1610	510.61	0.031	1.00	1.00	3.0	976	—	-	56	76	76	—	
4	1614	513.40	0.033	1.00	1.00	3.0	967	—	-	57	76	76	—	
3	1618	515.91	0.031	1.00	1.00	3.0	971	—	-	57	76	76	—	
2	1622	518.30	0.018	1.00	1.00	3.0	901	—	-	55	76	76	—	
1	1626	520.63	0.022	1.00	1.00	3.0	909	—	-	56	76	76	—	
End	1630	523.085	—	—	—	—	—	—	-	—	—	—	—	

C_p Pitot Tube Cal. Factor	0.834 ✓	Pitot Tube #	PO66 ✓	Barometer #	M7-7 ✓	Nozzle #	—
V_m Volume Collected - cf	38.367 ✓	P_b Barometric Pressure – "Hg	27.03 ✓	Total Volume of leak checks after start – cf	—		
V_w Water Collected - ml	37.4 ✓	D_n Nozzle Diameter – in.	—	V_m = (DGM Cal Factor)	1.007 ✓	x (Net Volume Collected)	38.290
T_t Time of Test – min.	64 ✓	%CO_2	3.2 ✓	%CO	0.0 ✓	A_s = Area of Stack – in²	947 ✓
P_s Stack Pressure – "H_2O	0.0	%O_2	~~15.4~~ 17.0	%N_2	~~80.7~~ 79.4	{Dry Gas Meter Reading ____ ft3 – (Tt ____ min. X Leak Rate ____ cfm)}	

QA/QC Check Completeness ____ ✓ Legibility ____ ✓ Accuracy ____ ✓ Specification ____ ✓ Reasonableness ____ ✓ Checked By ____

Version 3
April 2013

14-388A(OH)

D-23

Impinger Box No. H1-7

			Water Weight Gain	
Impinger 1	Final Weight	824.4		Impinger 1 70.0
	Initial Weight	804.4		
	Increase			Impinger 2 1.1
Impinger 2	Final Weight	775.4		Impinger 3 0.7
	Initial Weight	774.3	SO_2 correction	
	Increase		(if applicable)	Impinger 4 10.6
Impinger 3	Final Weight	674.2	V_w =	Impinger 5 ✓
	Initial Weight	673.5	g SO_2 -	
	Increase		V_w =	Impinger 6 ✓
Impinger 4	Final Weight	1007.0		Impinger 7 ✓
	Initial Weight	996.4		
	Increase			Total 324 ✓ = V_w
Impinger 5	Final Weight			
	Initial Weight		P_b = 27.03 ✓	$\%CO_2$ = ~~3.4~~ 3.6 ✓
	Increase		V_m = 38.367 ✓	$\%O_2$ = ~~15.4~~ 17.0 ✓ 1/15/15
			V_w = 32.4 ✓	%CO = ~~-~~ 0.0 ✓ 1/15/15 NS
Impinger 6	Final Weight		P_m = 1.000 ✓	% N_2 = ~~80~~ 79.4 ✓
	Initial Weight		Avg ΔP = 0.024 ✓	A_s = 247 ✓
	Increase			D_n = - ✓
			Avg $\sqrt{\Delta P}$ = 0.154 ✓	T_t = 64 ✓
Impinger 7	Final Weight		C_p = 0.834 ✓	
	Initial Weight		P_s = 0.6 ✓ "H_2O	27.03 ✓ "Hg
	Increase		T_m = 76 ✓ °F	536 ✓ °R
			T_s = 897 ✓ °F	1357 ✓ °R

Moisture Content: %M = 4.28 ✓ M_d = 0.9572 ✓ MW_d = ~~29.248~~ 28.756 ✓ MW = 28.767 ✓ 1/15/15 NS

$$Vm_{std} = 17.65 \times V_m \left| \frac{Pm}{\frac{Pb + 13.6}{Tm + 460}} \right| = 17.65 \times 38.367 \times \left| \frac{27.03 + \frac{1.000}{13.6}}{76 + 460} \right| = \frac{34.242}{0.9957} \text{ sft}^3 \text{ scfm}$$

$Vw_{gas} = 0.0472 \times V_w = 0.0472 \times$ ~~1.5293~~ 32.4 ✓ = 1.5293 ✓ sft^3

$$\% \text{ Moisture} = \frac{Vw_{gas}}{Vm_{std} + Vw_{gas}} \times 100 = \frac{1.5293}{1.5293 + 34.242} \times 100 = 4.28 \%$$ 1/15/15 NS

$$V_s = 5123.8 \times 0.154 \sqrt{\frac{1357}{27.03 \times 28.767}} \times 0.834 = 875 \text{ fpm}$$ ACFM = 1500 ✓

SCFM = 507 ✓

$$\%I = \frac{1039 \times \quad \times \quad \times \quad \times (\quad)^2}{\quad \times \quad \times \quad \times \quad} = \quad \%$$ %EA = 420.7 ✓

$$V_s = 5123.8 \times \text{Avg } \sqrt{\Delta P} \times \sqrt{\frac{Ts(R)}{Ps(\text{"}Hg) \times MW}} \times C_p = \text{fpm}$$

$ACFM = (V_s \times A_s)/144$

$$SCFM = \frac{0.123 \times V_s \times A_s \times M_d \times P_s}{T_s}$$

$$\%I = \frac{1039 \times Vm_{std} \times T_s(^\circ R)}{P_s(\text{"}Hg) \times M_d \times V_s \times T_t \times (D_n)^2}$$

Version 2
July 2011

14-388A(OH)

D-25

METCO Environmental

Job Number	14-388 OH	Field Data	
Job Name	Black Gold Rush Ind Lls	Balance ID	M7-7
Run Number	2 cond 4	Check Weight ID	2000-1
Unit	18" T.O. at Hot Stack	Actual Mass (g)	2000.0
Date	12/26/14	Measured Mass (g)	2000.1
Operator	Hayes / Lee / Frahman	Difference (g)*	0.1
Sample Box #	M43 Meter # 7-1	Pitot Leak Check: Initial ✓ Final ✓	
Purge To (cf):	—	Purge Time	—

Note: Read and record at the start of each test point

Ambient Temperature - °F	60		
Assumed Moisture - %	5		
Probe Length	4		
C Factor	—	to reference	
Initial Leak @ 17.00 "Hg =	0.00	cfm	
Final Leak @ 17.00 "Hg =	0.00	cfm	
Pitot Tips Damaged during Test?	Yes/No		

* must be equal to or less than 0.5 g

Meth 3C rate vlm 0.7 0.8

			ΔP		P_m		T_s			T_m				
Point	Clock TIme	Dry Gas Meter (cf)	Pitot "H_2O"	Orifice ΔH "H_2O Desired	Orifice ΔH "H_2O Actual	Pump Vacuum "Hg	Stack Temp. °F	Probe Temp. °F	Oven/ Filter Temp. °F	Effluent Temp. °F	Dry Gas Inlet Temp. °F	Dry Gas Outlet Temp. °F	Aux Temp. °F	Remarks
A 8	1640	533.537	0.021	1.00	1.00	3.0	868	—	—	58	76	74	—	FCO 516
7	1644	535.91	0.025	1.00	1.00	3.0	859	—	—	56	75	74	—	Micromanometer
6	1648	538.39	0.030	1.00	1.00	3.0	941	—	—	54	74	75	—	S/n: 207163
5	1652	540.91	0.030	1.00	1.00	3.0	980	—	—	54	74	74	—	
4	1656	543.11	0.026	1.00	1.00	3.0	974	—	—	53	74	74	—	Insta. Δ = 0.002004
3	1700	545.39	0.030	1.00	1.00	3.0	883	—	—	54	74	74	—	
2	1704	547.76	0.021	1.00	1.00	3.0	882	—	—	53	73	74	—	
1	1708	550.97	0.027	1.00	1.00	3.0	902	—	—	53	73	73	—	
End	1712	552.500	—	—	—	—	—	—	—	—	—	—	—	
B 8	1718	552.500	0.032	1.00	1.00	3.0	919	—	—	56	73	73	—	
7	1722	554.71	0.025	1.00	1.00	3.0	887	—	—	53	73	73	—	
6	1726	557.31	0.025	1.00	1.00	3.0	884	—	—	54	73	73	—	
5	1730	559.65	0.035	1.00	1.00	3.0	954	—	—	53	74	73	—	
4	1734	562.29	0.030	1.00	1.00	3.0	987	—	—	54	74	74	—	
3	1738	564.31	0.028	1.00	1.00	3.0	975	—	—	53	74	74	—	
2	1742	566.75	0.024	1.00	1.00	3.0	878	—	—	53	74	74	—	
1	1746	569.01	0.025	1.00	1.00	3.0	860	—	—	53	74	74	—	
End	1750	571.438	—	—	—	—	—	—	—	—	—	—	—	

C_p Pitot Tube Cal. Factor	0.834 ✓	Pitot Tube #	P66	Barometer #	M7-2
V_m Volume Collected - cf	37.977 ✓	P_b Barometric Pressure – "Hg	27.03	Nozzle #	—
V_w Water Collected - ml	37.0 ✓	D_n Nozzle Diameter – in.	—	Total Volume of leak checks after start – cf	
T_t Time of Test – min.	64 ✓	%CO_2	4.0 3.6	%CO	0.0 ✓
P_s Stack Pressure – "H_2O	8.0 ✓	%O_2	15.3 17.1	%N_2	80.7 79.3

V_m = (DGM Cal Factor) 1.067 x (Net Volume Collected) 37.901 — 1/27/15

A_s = Area of Stack – in^2 247

(Dry Gas Meter Reading_____ft3 – (Tt _____ min. X Leak Rate _____cfm)]

QA/QC Check Completeness ✓ Legibility ✓ Accuracy ✓ Specification ✓ Reasonableness ✓ Checked By

Version 3
April 2013

Impinger Box No. _____

			Water Weight Gain		
Impinger 1	Final Weight	783.3		Impinger 1	23.9
	Initial Weight	759.4			
	Increase			Impinger 2	2.5
Impinger 2	Final Weight	758.4		Impinger 3	1.1
	Initial Weight	755.9	SO_2 correction		
	Increase		(if applicable)	Impinger 4	9.5
Impinger 3	Final Weight	676.3	V_w =	Impinger 5	—
	Initial Weight	675.2	g SO_2 -		
	Increase		V_w =	Impinger 6	—
Impinger 4	Final Weight	1030.1		Impinger 7	✓
	Initial Weight	1020.6			
	Increase			Total	37.0 = V_w
Impinger 5	Final Weight				
	Initial Weight				
	Increase				
Impinger 6	Final Weight				
	Initial Weight				
	Increase				
Impinger 7	Final Weight				
	Initial Weight				
	Increase				

P_b =	27.03 ✓	%CO_2 =	~~4.0~~ ~~4.0~~ 3.6	✓
V_m =	37.977 ✓	%O_2 =	~~4.~~ ~~15.3~~ 17.	1/15/15 MS
V_w =	37.0 ✓	%CO =	— 0.2	
P_m =	1.000 ✓	% N_2 =	~~80.7~~ 79.3	
Avg ΔP =	0.087 ✓	A_s =	247	
		D_n =	—	
Avg $\sqrt{\Delta P}$ =	0.162 ✓	T_t =	64 ✓	
C_p =	0.839 ✓			
P_s =	6.6 ✓ "H_2O		27.03 ✓	"Hg
T_m =	74 ✓ °F		534	°R
T_s =	912 ✓ °F		1372 ✓	°R

Moisture Content: %M = 4.88 M_d = 0.9512 MW_d = 29.252 60 MW = 28.708 71 1/15/15 MS

$$Vm_{std} = 17.65 \times V_m \left| \frac{Pm}{Pb + 13.6} \right| = 17.65 \times 37.977 \times \left| \frac{27.03 + 13.6}{74 + 460} \right| = 34.021 \text{ sft}^3 = 0.532 \text{ scfm}$$

$$Vw_{gas} = 0.0472 \times V_w = 0.0472 \times 37 = 1.7464 \text{ sft}^3$$

$$\% \text{ Moisture} = \frac{Vw_{gas}}{Vm_{std} + Vw_{gas}} \times 100 = \frac{1.7464}{34.021 + 1.7464} \times 100 = 4.88 \%$$

$$V_s = 5123.8 \times 0.162 \sqrt{\frac{1372}{27.03 \times 28.708}} \times 0.839 = 926 \text{ fpm}$$ 28.71 MS

ACFM = 1589 5 1/15/15 MS

SCFM = 527

%I = 1039 x ___ x ___ x ___ x ( )² = ___ %

%EA = ___

$$V_s = 5123.8 \times \text{Avg } \sqrt{\Delta P} \times \sqrt{\frac{Ts(R)}{Ps(\text{"}Hg) \times MW}} \times C_p = \text{fpm}$$

$$ACFM = (V_s \times A_s)/144$$

$$SCFM = \frac{0.123 \times V_s \times A_s \times M_d \times P_s}{T_s}$$

$$\%I = \frac{1039 \times Vm_{std} \times T_s(^\circ R)}{P_s(\text{"}Hg) \times M_d \times V_s \times T_t \times (D_n)^2}$$

Version 2
July 2011

METCO Environmental

Job Number	14-388, 04	6-4 Field Data	Ambient Temperature - °F: 45
Job Name	Black Gold Rush Ind/Cll	Balance ID: M7-1	Assumed Moisture - %: 4
Run Number	3 and 4	Check Weight ID: 2000-1	Probe Length: 5'
Unit	18" T.O Outlet stack	Actual Mass (g): 2000.0	C Factor: — to reference
Date	12/21/14	Measured Mass (g): 2000.1	Initial Leak @ 14:00 "Hg = 0.000 cfm
Operator	Hoyer/Lee/Fahrman	Difference (g)*: 0.1	Final Leak @ 10:00 "Hg = 0.000 cfm
Sample Box #	F11-2 Meter # 7-1	Pitot Leak Check: Initial ✓ Final ✓	Pitot Tips Damaged during Test? Yes/No
Purge To (cf):	—	Purge Time —	* must be equal to or less than 0.5 g

Note: Read and record at the start of each test point

Point	Clock Time	Dry Gas Meter (cf)	ΔP Pitot "H_2O"	Orifice ΔH "H_2O" Desired	Orifice ΔH "H_2O" Actual	P_m Pump Vacuum "Hg	T_s Stack Temp. °F	Probe Temp. °F	Oven/ Filter Temp. °F	Effluent Temp. °F	T_m Dry Gas Inlet Temp. °F	Dry Gas Outlet Temp. °F	Aux Temp. °F	Remarks	Meter Flow L/m
A 8	942	562.075	0.020	1.06	1.00	3.0	804	—	—	47	62	63	—	FC0510	0.0
7	946	564.35	0.016	1.00	1.00	3.0	866	—	—	48	62	63	—	Micromanometer	0.0
6	950	566.53	0.027	1.00	1.00	3.0	951	—	—	48	62	63	—	S/n: 207163	0.0
5	954	569.27	0.026	1.00	1.00	3.0	992	—	—	49	62	63	—		0.0
4	958	571.63	0.025	1.00	1.00	3.0	984	—	—	49	61	63	—	Inst. #: 000094	0.0
3	1002	573.70	0.015	1.00	1.00	3.0	912	—	—	50	61	63	—		0.0
2	1006	575.98	0.014	1.00	1.00	3.0	913	—	—	49	61	63	—		0.0
1	1010	578.41	0.024	1.00	1.00	3.0	939	—	—	49	61	63	—		0.0
End	1014	580.800	—	—	—	—	—	—	—	—	—	—	—		
B 8	1020	580.800	0.026	1.00	1.00	3.0	936	—	—	50	62	63	—		0.0
7	1024	582.99	0.023	1.00	1.00	3.0	966	—	—	50	62	63	—		0.0
6	1028	585.60	0.023	1.00	1.00	3.0	937	—	—	49	62	63	—		0.0
5	1032	587.91	0.024	1.00	1.00	3.0	1005	—	—	50	62	63	—		0.0
4	1036	590.12	0.024	1.00	1.00	3.0	980	—	—	50	62	64	—		0.0
3	1040	592.72	0.022	1.00	1.00	3.0	948	—	—	51	63	64	—		0.0
2	1044	594.91	0.025	1.00	1.00	3.0	910	—	—	52	64	65	—		0.0
1	1048	596.32	0.025	1.00	1.00	3.0	970	—	—	52	63	64	—		0.0
End	1052	599.646	—	—	—	—	—	—	—	—	—	—	—		

C_p Pitot Tube Cal. Factor	0.839 ✓	Pitot Tube #	P666	Barometer #	M7-2
V_m Volume Collected - cf	37.646 ✓	P_b Barometric Pressure – "Hg	26.97	Nozzle #	—
V_w Water Collected - ml	39.5 ✓	D_n Nozzle Diameter – in.	—	Total Volume of leak checks after start – cf	—
T_t Time of Test – min.	64 ✓	%CO_2 3.5 3.7 %CO 0.2	12/17/15	V_m = (DGM Cal Factor) 1.007 x (Net Volume Collected)	57.565
P_s Stack Pressure – "H_2O	0.6 ✓	%O_2 14.6 16.6 %N_2 81.9 79.4		A_s = Area of Stack – in²	.247
				{Dry Gas Meter Reading ____ ft3 – (Tt ____ min. X Leak Rate ____ cfm)}	

QA/QC Check Completeness ____ Legibility ____ Accuracy ____ Specification ____ Reasonableness ____ Checked By ____

Version 3
April 2013

14-388A(OH)

D-27

Impinger Box No. 74.2

			Water Weight Gain	
Impinger 1	Final Weight	852.1		Impinger 1 28.0
	Initial Weight	824.4		
	Increase			Impinger 2 1.8
Impinger 2	Final Weight	777.2		Impinger 3 1.4
	Initial Weight	775.4	SO_2 correction	
	Increase		(if applicable)	Impinger 4 8.3
Impinger 3	Final Weight	675.6	V_w =	Impinger 5 —
	Initial Weight	674.2	g SO_2 -	
	Increase		V_w =	Impinger 6 —
Impinger 4	Final Weight	1015.4		Impinger 7 ✓
	Initial Weight	1007.1		
	Increase			Total 39.5 = V_w
Impinger 5	Final Weight		P_b = 26.97	$\%CO_2$ = 3.5, 3.7
	Initial Weight		V_m = 37.646	$\%O_2$ = 14.6, 16.9
	Increase		V_w = 875	%CO = — 0.0 1/15/14
Impinger 6	Final Weight		P_m = 1.00	$\%N_2$ = 81.4, 79.4
	Initial Weight		Avg ΔP = 0.672	A_s = 247
	Increase			D_n = —
			Avg √ΔP = 0.819	T_t = 64
Impinger 7	Final Weight		C_p = 0.839	
	Initial Weight		P_s = 0.6 "H_2O	26.97 "Hg
	Increase		T_m = 63 °F	523 °R
			T_s = 935 °F	1395 °R

Moisture Content: %M = 5.15 M_d = 0.9485 MW_d = 29.144 (29.166) MW = 28.552 (28.569) 1/15/15

$$Vm_{std} = 17.65 \times V_m \left| \frac{Pm}{Pb + 13.6} \right| = 17.65 \times 37.646 \times \left| \frac{26.97 + \frac{1.00}{13.6}}{63 + 460} \right| = \frac{34.352}{0.539} \text{ sft}^3 \text{ scfm}$$

$$Vw_{gas} = 0.0472 \times V_w = 0.0472 \times 39.5 = 1.8644 \text{ sft}^3$$

$$\% \text{ Moisture} = \frac{Vw_{gas}}{Vm_{std} + Vw_{gas}} \times 100 = \frac{1.8644}{1.8644 + 34.352} \times 100 = 5.15 \%$$

$$V_s = 5123.8 \times 0.149 \sqrt{\frac{1395}{26.97 \times \frac{28.57}{28.69}}} \times 0.839 = 862 \text{ fpm} \quad (866\ 1/15/15)$$

ACFM = 1478.5 1/15/15

SCFM = 48079

$$\%I = \frac{1039 \times \quad \times \quad \times \quad \times \quad \times (\quad)^2}{\quad \times \quad \times \quad \times \quad \times (\quad)^2} = \quad \%$$

%EA = — 406.1

$$V_s = 5123.8 \times \text{Avg } \sqrt{\Delta P} \times \sqrt{\frac{Ts(R)}{Ps(\text{"Hg}) \times MW}} \times C_p = \text{fpm}$$

$$ACFM = (V_s \times A_s)/144$$

$$SCFM = \frac{0.123 \times V_s \times A_s \times M_d \times P_s}{T_s}$$

$$\%I = \frac{1039 \times Vm_{std} \times T_s(^\circ R)}{P_s(\text{"Hg}) \times M_d \times V_s \times T_t \times (D_n)^2}$$

Version 2
July 2011

14-388A(OH)

Low Volume Field Data

Job Number: 14-3586 | Method: 18 | Probe Length: _____

Job Name: Black Gold Rig 4 | Operator: Adams | Sample Point: 18" Combustor, Fuel Duct

Run Number: CTV | Ambient Temp (°F): - | Barometric Pressure (P_b): 26.97 "Hg

Location: Midland Tx 18" Combustor Fuel | Date: 12/20/14 | Initial Leak Check @ 27 "Hg= 0.0 Δ"Hg

Barometer Number: - | Meter Number: - | Final Leak Check @ - "Hg= - Δ"Hg

Canister or Bag Number: - | Orifice or Rotometer Number: - | Orifice Rate or Meter Calibration Factor: _____

Point	Clock Time	Dry Gas Meter (liters)	Dry Gas Meter Pressure ("H_2O) (P_m)	Rotometer Reading	Vacuum Pressure ("Hg)	Stack Temperature (°F)	Probe Temperature (°F)	Dry Gas Temperature (°F) Inlet (T_m)	Dry Gas Temperature (°F) Outlet	Remarks
	1520		24							12/20/14
	1620		12							
	1640		12							
	1740		0							
										12/21/14
	0942		0 Red							
	1042		+158							

Collected Condensate + Rinse = ✓ ml

V_m = Meter Calibration Factor _____ x _____ = _____

$Vm_{std} = 17.65 \times V_m \times \frac{P_b + (P_m/13.6)}{(T_m + 460)} = 17.65 \times$ _____ x $\frac{\text{_____} + (\text{_____}/13.6)}{\text{_____} + 460}$ = - liters

Volume Collected = Avg. Rotometer Reading (l/min) x Time of Test (min) = _____ x _____ = _____ liters or

Volume Collected = Orifice Rate (l/min) x Time of Test (min) = _____ x _____ = - liters

QA/QC Check
Completeness ✓ Legibility ✓ Accuracy ✓ Specifications ✓ Reasonableness ✓ Checked by: AS

Version 1

D-29

PRELIMINARY VELOCITY TRAVERSE DATA
AND
SAMPLING LOCATION DATA

Job Number 14-388(OH)
Job Name BGR
Sampling Location 18" TO Outlet Stack
Date _____ Time _____

Stack Height 21'6" ft.
Sampling Port Height Above Ground 19 ft.

	Port A	Port B	Port C	Port D	Average
Port & Inside Diameter (in.)					20 1/4
Port & Wall Thickness (in.)					2 1/2
Inside Stack Diameter (in.)					17 3/4

Sampling Ports are 6 ft. 4 in. (4.28 stack diameters) downstream from disturbance (inlet, constriction, bend, expansion) flare

Sampling Ports are 2 ft. — in. (1.35 stack diameters) upstream from disturbance (outlet, constriction, bend, expansion)

Point Number	Percent Diameter	Distance from Ref. Point (decimal in.)	Distance from Ref. Point (fractional in.)	Port A $\Delta P/T_s\alpha$	Port B $\Delta P/T_s\alpha$	Port C $\Delta P/T_s\alpha$	Port D $\Delta P/T_s\alpha$
1	3.2	.5680	9/16"	illegible	illegible	/ /	/ /
2	10.5	1.8638	1 7/8	illegible	illegible	/ /	/ /
3	19.4	3.4435	3 7/16	illegible	illegible	/ /	/ /
4	32.3	5.7333	5 3/4	illegible	illegible	/ /	/ /
5	67.7	12.0168	12	illegible	illegible	/ /	/ /
6	80.6	14.3065	14 5/16	illegible	illegible	/ /	/ /
7	89.5	15.8863	15 7/8	illegible	illegible	/ /	/ /
8	96.8	17.1820	17 3/16	illegible	illegible	/ /	/ /
9				/ /	/ /	/ /	/ /
10				/ /	/ /	/ /	/ /
11				/ /	/ /	/ /	/ /
12				/ /	/ /	/ /	/ /
13				/ /	/ /	/ /	/ /
14				/ /	/ /	/ /	/ /
15				/ /	/ /	/ /	/ /
16				/ /	/ /	/ /	/ /
17				/ /	/ /	/ /	/ /
18				/ /	/ /	/ /	/ /
19				/ /	/ /	/ /	/ /
20				/ /	/ /	/ /	/ /
21				/ /	/ /	/ /	/ /
22				/ /	/ /	/ /	/ /
23				/ /	/ /	/ /	/ /
24				/ /	/ /	/ /	/ /

Pitot Tube No. PG66
C_p = 0.839
P_b = _____ "Hg
P_s = _____ "H_2O _____ "Hg
A_s = 247 in.^{2}

Average ΔP _____
Average $\Delta P^{1/2}$ _____
Average T_s _____ °F
Average α 0 degrees

APPENDIX E

Analytical Data

METCO Environmental

3226 Commander Drive
Carrollton, TX 75006

Black Gold Rush – 18” & 24”

Midland, TX
Client # 14-388 (OH)

Analytical Report
(1214-29R)

EPA Method 3C (Bags)

Hydrogen, Oxygen, Nitrogen, Carbon monoxide, Methane, Carbon dioxide

ASTM D1946-90 (Canisters)

Hydrogen, Oxygen, Nitrogen, Carbon monoxide, Methane, Carbon dioxide

EPA Method 18-Type (Canisters)

Methane, Ethane, Propane, Butane, Pentane, Hexane,
Benzene, Propylene, Others as Cx Compounds,
Total VOCs as Propane, Total VOCs as Propylene

Enthalpy Analytical, Inc.

Phone: (919) 850 - 4392 / Fax: (919) 850 - 9012 / www.enthalpy.com
800-1 Capitola Drive Durham, NC 27713-4385

I certify that to the best of my knowledge all analytical data presented in this report:

- Have been checked for completeness
- Are accurate, error-free, and legible
- Have been conducted in accordance with approved protocol, and that all deviations and analytical problems are summarized in the appropriate narrative(s)

This analytical report was prepared in Portable Document Format (.PDF) and contains ??? pages.

Report Issued: xx/xx/xxxx

Summary of Results



Company	METCO Environmental		Client #	14-388 (OH)
Analyst	TBO		Job #	1214-29
Parameters	EPA Method 3C		# Samples	25 Tedlar bags

Compound	Sample ID / Sample Concentration (ppm)		
	18" TO Outlet Stack Cond I		
	Run 1	***Run 2***	***Run 3***
Hydrogen	0.104 ND	0.104 ND	0.104 ND
Oxygen	14.8	15.3	13.8
Nitrogen	77.5	76.8	77.1
Carbon monoxide	0.0380 ND	0.0380 ND	0.0380 ND
Methane	0.0310 ND	0.0310 ND	0.0310 ND
Carbon dioxide	4.67	4.20	5.20
	18" TO Outlet Stack Cond II		
	Run 1	***Run 2***	***Run 3***
Hydrogen	0.104 ND	0.104 ND	0.104 ND
Oxygen	14.8	14.4	14.6
Nitrogen	76.9	77.2	76.5
Carbon monoxide	0.0380 ND	0.0380 ND	0.0380 ND
Methane	0.0310 ND	0.0310 ND	0.0310 ND
Carbon dioxide	4.57	4.85	4.59
	18" TO Outlet Stack Cond III		
	Run 1	***Run 2***	***Run 3***
Hydrogen	0.104 ND	0.104 ND	0.104 ND
Oxygen	15.4	15.0	15.0
Nitrogen	76.6	75.9	75.8
Carbon monoxide	0.0380 ND	0.0380 ND	0.0380 ND
Methane	0.0310 ND	0.0310 ND	0.0310 ND
Carbon dioxide	4.09	4.22	4.21
	18" TO Outlet Stack Cond IV		
	Run 1	***Run 2***	***Run 3***
Hydrogen	0.104 ND	0.104 ND	0.104 ND
Oxygen	16.1	16.1	16.0
Nitrogen	75.0	74.5	75.0
Carbon monoxide	0.0380 ND	0.0380 ND	0.0380 ND
Methane	0.0310 ND	0.0310 ND	0.0310 ND
Carbon dioxide	3.41	3.34	3.51

Company	METCO Environmental		Client #	14-388 (OH)
Analyst	TBO		Job #	1214-29
Parameters	EPA Method 3C		# Samples	25 Tedlar bags

Compound	Sample ID / Sample Concentration (ppm)			
	24" TO Outlet Stack Cond I			
	Run 1	***Run 2***	***Run 3***	
Hydrogen	0.104 ND	0.104 ND	0.104 ND	
Oxygen	14.6	14.4	14.7	
Nitrogen	76.7	77.2	77.5	
Carbon monoxide	0.0380 ND	0.0380 ND	0.0380 ND	
Methane	0.0310 ND	0.0310 ND	0.0310 ND	
Carbon dioxide	4.46	4.57	4.53	
	24" TO Outlet Stack Cond II			
	Run 1	***Run 2***	***Run 3***	***Run 4***
Hydrogen	0.104 ND	0.104 ND	0.104 ND	0.104 ND
Oxygen	15.2	15.6	15.9	14.7
Nitrogen	75.7	77.4	76.7	78.4
Carbon monoxide	0.0380 ND	0.0380 ND	0.0380 ND	0.0380 ND
Methane	0.0310 ND	0.0310 ND	0.0310 ND	0.0310 ND
Carbon dioxide	4.01	4.10	3.86	4.88
	24" TO Outlet Stack Cond III			
	Run 1	***Run 2***	***Run 3***	
Hydrogen	0.104 ND	0.104 ND	0.104 ND	
Oxygen	16.1	15.9	17.1	
Nitrogen	76.9	77.6	78.7	
Carbon monoxide	0.0380 ND	0.0380 ND	0.0380 ND	
Methane	0.0310 ND	0.0310 ND	0.0310 ND	
Carbon dioxide	3.75	3.99	3.38	
	24" TO Outlet Stack Cond IV			
	Run 1	***Run 2***	***Run 3***	
Hydrogen	0.104 ND	0.104 ND	0.104 ND	
Oxygen	19.6	18.4	17.6	
Nitrogen	79.6	78.0	74.8	
Carbon monoxide	0.0380 ND	0.0380 ND	0.0380 ND	
Methane	0.0310 ND	0.0310 ND	0.0310 ND	
Carbon dioxide	2.05	2.48	2.43	

Enthalpy Analytical

Company: METCO Environmental
Client No. 14-388 (OH)
Job No. 1214-29

Parameters: ASTM D1946-90 Canister Analysis
Samples 9 Runs
Analyst Justin Guenzler

Fixed Gasses Summary Table

Location / Condition / Can # / Concentrations (%)

18" TO Inlet Duct

	Condition I	Condition II	Condition III	Condition IV
Compound	1186	1310	1044	1340
Hydrogen	0.0510 ND	0.0510 ND	0.0510 ND	0.0510 ND
Oxygen	0.181 J	0.0627 J	0.251 J	0.0785 J
Nitrogen	0.658	0.319 J	0.901	0.437
Carbon monoxide	0.0380 ND	0.0380 ND	0.0380 ND	0.0380 ND
Methane	0.0305 ND	0.0305 ND	0.0305 ND	0.0305 ND
Carbon dioxide	0.0544 ND	0.0544 ND	0.0544 ND	0.0544 ND

Location / Condition / Can # / Concentrations (%)

24" TO Inlet Duct

	Condition I	Condition II	Condition III	Condition IV	Cond II, Run 4
Compound	1049	1334	1324	1453	1308
Hydrogen	0.0510 ND	0.0510 ND	0.121 ND	0.0947 ND	0.0510 ND
Oxygen	0.288 J	0.252 J	3.07	4.37	0.0971 J
Nitrogen	1.06	1.05	11.4	16.4	0.528
Carbon monoxide	0.0380 ND	0.0380 ND	0.0903 ND	0.0706 ND	0.0380 ND
Methane	0.0305 ND	0.0305 ND	0.0725 ND	0.0567 ND	0.0305 ND
Carbon dioxide	0.0544 ND	0.0544 ND	0.129 ND	0.101 ND	0.0380 ND

Company	METCO Environmental
Analyst	TBO
Parameters	EPA Method 18-Type

Client #	14-388 (OH)
Job #	1214-29
# Samples	9 Canisters

Compound	Condition / Can # / Sample Concentration (ppm)				
18" TO Inlet Duct	***Condition I***	***Condition II***	***Condition III***	***Condition IV***	
	1186	***1310***	***1044***	***1340***	
Methane	2.50 J	2.98 J	2.40 J	2.42 J	
Ethane	15.9	16.8	15.8	15.7	
C2 as Ethane	0.231 ND	0.231 ND	0.231 ND	0.231 ND	
Propane	0.231 ND	0.231 ND	0.231 ND	0.231 ND	
C3 as Propane	954,739	932,194	971,940	985,133	
Butane	0.265 ND	0.265 ND	0.265 ND	0.265 ND	
C4 as Butane	0.265 ND	0.265 ND	0.265 ND	0.265 ND	
Pentane	0.294 ND	0.294 ND	0.294 ND	0.294 ND	
C5 as Pentane	0.294 ND	0.294 ND	0.294 ND	0.294 ND	
Hexane	0.236 ND	0.236 ND	0.236 ND	0.236 ND	
C6 as Hexane	0.236 ND	0.236 ND	0.236 ND	0.236 ND	
Benzene	0.515 ND	0.515 ND	0.515 ND	0.515 ND	
Propylene	1,011,724	989,116	1,029,766	1,044,995	
Total VOC as Propane	956,680	933,575	973,845	987,015	
Total VOC as Propylene	1,016,219	993,076	1,033,765	1,049,083	
24" TO Inlet Duct	***Condition I***	***Condition II***	***Condition III***	***Condition IV***	***Condition II Run 4***
	1049	***1334***	***1324***	***1453***	***1308***
Methane	3.16 J	2.55 J	2.33 J	2.42 J	1.98 J
Ethane	16.9	12.5	8.53	9.17	12.2
C2 as Ethane	0.231 ND	0.231 ND	0.231 ND	0.231 ND	0.231 ND
Propane	0.231 ND	0.231 ND	0.231 ND	0.231 ND	0.231 ND
C3 as Propane	968,099	993,650	689,253	550,485	953,403
Butane	0.265 ND	0.265 ND	0.265 ND	0.265 ND	0.265 ND
C4 as Butane	0.265 ND	0.265 ND	0.265 ND	0.265 ND	0.265 ND
Pentane	0.294 ND	0.294 ND	0.294 ND	0.294 ND	0.294 ND
C5 as Pentane	0.294 ND	0.294 ND	0.349 J	0.294 ND	0.294 ND
Hexane	0.236 ND	0.236 ND	0.236 ND	0.236 ND	0.236 ND
C6 as Hexane	0.236 ND	0.236 ND	0.236 ND	0.236 ND	0.236 ND
Benzene	0.515 ND	0.515 ND	0.515 ND	0.515 ND	0.515 ND
Propylene	1,027,297	1,047,510	728,208	581,598	996,726
Total VOC as Propane	969,409	995,354	689,254	550,489	954,655
Total VOC as Propylene	1,031,245	1,051,610	728,209	581,601	1,000,640

Results



Company	METCO Environmental
Analyst	TBO
Parameters	EPA Method 3C

Client #	14-388 (OH)
Job #	1214-29
# Samples	25 Tedlar bags

MDL 0.104 (ppm)
LOQ 0.305 (ppm)
Compound Hydrogen

Lower Curve Limit 0.305 (ppm)
Upper Curve Limit 8.00 (ppm)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Sample Conc (ppm)	Qual
24-C1 Run1	008F0301.D	008F0302.D	008F0303.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.104	0.104	0.104	0.0	0.104	1	0.104	ND
24-C1 Run2	010F0401.D	010F0402.D	010F0403.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.104	0.104	0.104	0.0	0.104	1	0.104	ND
24-C1Run3	008F1101.D	008F1102.D	008F1103.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.104	0.104	0.104	0.0	0.104	1	0.104	ND
18-C1 Run1	010F1201.D	010F1202.D	010F1203.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.104	0.104	0.104	0.0	0.104	1	0.104	ND
18-C1 Run2	013F1301.D	013F1302.D	013F1303.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.104	0.104	0.104	0.0	0.104	1	0.104	ND
18-C1 Run3	008F1401.D	008F1402.D	008F1403.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.104	0.104	0.104	0.0	0.104	1	0.104	ND
18-C2 Run1	010F1501.D	010F1502.D	010F1503.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.104	0.104	0.104	0.0	0.104	1	0.104	ND
18-C2 Run2	013F1601.D	013F1602.D	013F1603.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.104	0.104	0.104	0.0	0.104	1	0.104	ND
18-C2 Run3	015F1701.D	015F1702.D	015F1703.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.104	0.104	0.104	0.0	0.104	1	0.104	ND
18-C3 Run1	003F1801.D	003F1802.D	003F1803.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.104	0.104	0.104	0.0	0.104	1	0.104	ND
18-C3 Run2	004F2201.D	004F2202.D	004F2203.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.104	0.104	0.104	0.0	0.104	1	0.104	ND
18-C3 Run3	005F2301.D	005F2302.D	005F2303.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.104	0.104	0.104	0.0	0.104	1	0.104	ND
18-C4 Run1	006F2401.D	006F2402.D	006F2403.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.104	0.104	0.104	0.0	0.104	1	0.104	ND
18-C4 Run2	007F2501.D	007F2502.D	007F2503.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.104	0.104	0.104	0.0	0.104	1	0.104	ND
18-C4 Run3	014F2601.D	014F2602.D	014F2603.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.104	0.104	0.104	0.0	0.104	1	0.104	ND

Company	METCO Environmental
Analyst	TBO
Parameters	EPA Method 3C

Client #	14-388 (OH)
Job #	1214-29
# Samples	25 Tedlar bags

MDL 0.104 (ppm)
LOQ 0.305 (ppm)
Compound Hydrogen

Lower Curve Limit 0.305 (ppm)
Upper Curve Limit 8.00 (ppm)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Sample Conc (ppm)	Qual
24-C2 Run1	004F2801.D	004F2802.D	004F2803.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.104	0.104	0.104	0.0	0.104	1	0.104	ND
24-C2 Run2	005F2901.D	005F2902.D	005F2903.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.104	0.104	0.104	0.0	0.104	1	0.104	ND
24-C2 Run3	006F3001.D	006F3002.D	006F3003.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.104	0.104	0.104	0.0	0.104	1	0.104	ND
24-C2 Run4	007F3301.D	007F3302.D	007F3303.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.104	0.104	0.104	0.0	0.104	1	0.104	ND
24-C3 Run1	008F3401.D	008F3402.D	008F3403.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.104	0.104	0.104	0.0	0.104	1	0.104	ND
24-C3 Run2	010F3501.D	010F3502.D	010F3503.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.104	0.104	0.104	0.0	0.104	1	0.104	ND
24-C3 Run3	013F3601.D	013F3602.D	013F3603.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.104	0.104	0.104	0.0	0.104	1	0.104	ND
24-C4 Run1	014F3701.D	014F3702.D	014F3703.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.104	0.104	0.104	0.0	0.104	1	0.104	ND
24-C4 Run2	015F3801.D	015F3802.D	015F3803.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.104	0.104	0.104	0.0	0.104	1	0.104	ND
24-C4 Run3	003F2701.D	003F2702.D	003F2703.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.104	0.104	0.104	0.0	0.104	1	0.104	ND
He blank #LB	001F2101.D	001F2102.D	001F2103.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.104	0.104	0.104	0.0	0.104	1	0.104	ND

Company	METCO Environmental
Analyst	TBO
Parameters	EPA Method 3C

Client #	14-388 (OH)
Job #	1214-29
# Samples	25 Tedlar bags

MDL 0.0441 (ppm)
LOQ 0.544 (ppm)
Compound Oxygen

Lower Curve Limit 0.544 (ppm)
Upper Curve Limit 99.9 (ppm)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Sample Conc (ppm)	Qual
24-C1 Run1	008F0301.D	008F0302.D	008F0303.D	BETTYP112_FGA_LIQN2.M	8.71	8.72	8.72	0.0	14.6	14.5	14.6	0.5	14.6	1	14.6	
24-C1 Run2	010F0401.D	010F0402.D	010F0403.D	BETTYP112_FGA_LIQN2.M	8.72	8.72	8.72	0.0	14.5	14.3	14.3	0.8	14.4	1	14.4	
24-C1Run3	008F1101.D	008F1102.D	008F1103.D	BETTYP112_FGA_LIQN2.M	8.72	8.72	8.72	0.0	14.7	14.7	14.7	0.1	14.7	1	14.7	
18-C1 Run1	010F1201.D	010F1202.D	010F1203.D	BETTYP112_FGA_LIQN2.M	8.71	8.72	8.72	0.1	14.9	14.7	14.8	0.6	14.8	1	14.8	
18-C1 Run2	013F1301.D	013F1302.D	013F1303.D	BETTYP112_FGA_LIQN2.M	8.71	8.71	8.72	0.0	15.3	15.3	15.3	0.1	15.3	1	15.3	
18-C1 Run3	008F1401.D	008F1402.D	008F1403.D	BETTYP112_FGA_LIQN2.M	8.73	8.73	8.73	0.0	13.9	13.7	13.8	0.7	13.8	1	13.8	
18-C2 Run1	010F1501.D	010F1502.D	010F1503.D	BETTYP112_FGA_LIQN2.M	8.72	8.72	8.72	0.0	14.8	14.8	14.8	0.3	14.8	1	14.8	
18-C2 Run2	013F1601.D	013F1602.D	013F1603.D	BETTYP112_FGA_LIQN2.M	8.73	8.72	8.73	0.0	14.4	14.4	14.4	0.3	14.4	1	14.4	
18-C2 Run3	015F1701.D	015F1702.D	015F1703.D	BETTYP112_FGA_LIQN2.M	8.72	8.72	8.72	0.0	14.6	14.6	14.7	0.2	14.6	1	14.6	
18-C3 Run1	003F1801.D	003F1802.D	003F1803.D	BETTYP112_FGA_LIQN2.M	8.71	8.72	8.72	0.1	15.5	15.3	15.4	0.5	15.4	1	15.4	
18-C3 Run2	004F2201.D	004F2202.D	004F2203.D	BETTYP112_FGA_LIQN2.M	8.73	8.72	8.72	0.0	15.0	15.0	15.1	0.2	15.0	1	15.0	
18-C3 Run3	005F2301.D	005F2302.D	005F2303.D	BETTYP112_FGA_LIQN2.M	8.73	8.73	8.73	0.0	14.9	15.2	15.0	1.2	15.0	1	15.0	
18-C4 Run1	006F2401.D	006F2402.D	006F2403.D	BETTYP112_FGA_LIQN2.M	8.71	8.72	8.72	0.1	16.1	16.1	16.0	0.2	16.1	1	16.1	
18-C4 Run2	007F2501.D	007F2502.D	007F2503.D	BETTYP112_FGA_LIQN2.M	8.72	8.72	8.72	0.0	16.1	16.1	16.0	0.6	16.1	1	16.1	
18-C4 Run3	014F2601.D	014F2602.D	014F2603.D	BETTYP112_FGA_LIQN2.M	8.72	8.72	8.72	0.0	16.0	15.9	16.0	0.4	16.0	1	16.0	

Company	METCO Environmental
Analyst	TBO
Parameters	EPA Method 3C

Client #	14-388 (OH)
Job #	1214-29
# Samples	25 Tedlar bags

MDL 0.0441 (ppm)
LOQ 0.544 (ppm)
Compound Oxygen

Lower Curve Limit 0.544 (ppm)
Upper Curve Limit 99.9 (ppm)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Sample Conc (ppm)	Qual
24-C2 Run1	004F2801.D	004F2802.D	004F2803.D	BETTYP112_FGA_LIQN2.M	8.73	8.72	8.72	0.0	15.2	15.3	15.2	0.5	15.2	1	15.2	
24-C2 Run2	005F2901.D	005F2902.D	005F2903.D	BETTYP112_FGA_LIQN2.M	8.73	8.71	8.72	0.2	15.4	16.0	15.5	2.1	15.6	1	15.6	
24-C2 Run3	006F3001.D	006F3002.D	006F3003.D	BETTYP112_FGA_LIQN2.M	8.72	8.72	8.72	0.1	15.9	15.8	15.8	0.3	15.9	1	15.9	
24-C2 Run4	007F3301.D	007F3302.D	007F3303.D	BETTYP112_FGA_LIQN2.M	8.72	8.74	8.73	0.2	15.2	14.5	14.5	3.2	14.7	1	14.7	
24-C3 Run1	008F3401.D	008F3402.D	008F3403.D	BETTYP112_FGA_LIQN2.M	8.72	8.72	8.72	0.0	16.1	16.0	16.1	0.4	16.1	1	16.1	
24-C3 Run2	010F3501.D	010F3502.D	010F3503.D	BETTYP112_FGA_LIQN2.M	8.72	8.72	8.72	0.0	15.9	15.9	15.9	0.0	15.9	1	15.9	
24-C3 Run3	013F3601.D	013F3602.D	013F3603.D	BETTYP112_FGA_LIQN2.M	8.71	8.71	8.70	0.1	17.0	17.0	17.4	1.5	17.1	1	17.1	
24-C4 Run1	014F3701.D	014F3702.D	014F3703.D	BETTYP112_FGA_LIQN2.M	8.67	8.67	8.67	0.0	19.6	19.6	19.5	0.3	19.6	1	19.6	
24-C4 Run2	015F3801.D	015F3802.D	015F3803.D	BETTYP112_FGA_LIQN2.M	8.69	8.68	8.69	0.0	18.3	18.6	18.4	0.7	18.4	1	18.4	
24-C4 Run3	003F2701.D	003F2702.D	003F2703.D	BETTYP112_FGA_LIQN2.M	8.70	8.71	8.70	0.1	17.5	17.5	17.7	0.9	17.6	1	17.6	
He blank #LB	001F2101.D	001F2102.D	001F2103.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.0441	0.0441	0.0441	0.0	0.0441	1	0.0441	ND

Company	METCO Environmental
Analyst	TBO
Parameters	EPA Method 3C

Client #	14-388 (OH)
Job #	1214-29
# Samples	25 Tedlar bags

MDL 0.0390 (ppm)
LOQ 0.382 (ppm)
Compound Nitrogen

Lower Curve Limit 0.382 (ppm)
Upper Curve Limit 100 (ppm)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Sample Conc (ppm)	Qual
24-C1 Run1	008F0301.D	008F0302.D	008F0303.D	BETTYP112_FGA_LIQN2.M	9.55	9.55	9.55	0.0	76.8	76.4	76.8	0.4	76.7	1	76.7	
24-C1 Run2	010F0401.D	010F0402.D	010F0403.D	BETTYP112_FGA_LIQN2.M	9.55	9.55	9.55	0.0	77.1	77.0	77.4	0.3	77.2	1	77.2	
24-C1Run3	008F1101.D	008F1102.D	008F1103.D	BETTYP112_FGA_LIQN2.M	9.55	9.55	9.55	0.0	77.6	77.5	77.4	0.1	77.5	1	77.5	
18-C1 Run1	010F1201.D	010F1202.D	010F1203.D	BETTYP112_FGA_LIQN2.M	9.55	9.55	9.55	0.1	77.9	77.1	77.4	0.6	77.5	1	77.5	
18-C1 Run2	013F1301.D	013F1302.D	013F1303.D	BETTYP112_FGA_LIQN2.M	9.56	9.56	9.56	0.0	76.7	76.9	76.7	0.2	76.8	1	76.8	
18-C1 Run3	008F1401.D	008F1402.D	008F1403.D	BETTYP112_FGA_LIQN2.M	9.55	9.56	9.56	0.1	77.2	76.7	77.2	0.4	77.1	1	77.1	
18-C2 Run1	010F1501.D	010F1502.D	010F1503.D	BETTYP112_FGA_LIQN2.M	9.56	9.56	9.56	0.0	76.9	76.8	77.0	0.1	76.9	1	76.9	
18-C2 Run2	013F1601.D	013F1602.D	013F1603.D	BETTYP112_FGA_LIQN2.M	9.56	9.56	9.56	0.0	76.9	77.3	77.4	0.4	77.2	1	77.2	
18-C2 Run3	015F1701.D	015F1702.D	015F1703.D	BETTYP112_FGA_LIQN2.M	9.56	9.56	9.56	0.1	76.6	76.4	76.6	0.1	76.5	1	76.5	
18-C3 Run1	003F1801.D	003F1802.D	003F1803.D	BETTYP112_FGA_LIQN2.M	9.56	9.56	9.56	0.0	77.0	76.1	76.5	0.6	76.6	1	76.6	
18-C3 Run2	004F2201.D	004F2202.D	004F2203.D	BETTYP112_FGA_LIQN2.M	9.57	9.57	9.57	0.0	75.8	76.0	75.8	0.2	75.9	1	75.9	
18-C3 Run3	005F2301.D	005F2302.D	005F2303.D	BETTYP112_FGA_LIQN2.M	9.57	9.57	9.57	0.0	75.1	76.7	75.6	1.2	75.8	1	75.8	
18-C4 Run1	006F2401.D	006F2402.D	006F2403.D	BETTYP112_FGA_LIQN2.M	9.57	9.57	9.58	0.1	75.1	75.0	74.9	0.2	75.0	1	75.0	
18-C4 Run2	007F2501.D	007F2502.D	007F2503.D	BETTYP112_FGA_LIQN2.M	9.57	9.58	9.58	0.0	74.9	74.6	74.1	0.5	74.5	1	74.5	
18-C4 Run3	014F2601.D	014F2602.D	014F2603.D	BETTYP112_FGA_LIQN2.M	9.57	9.58	9.57	0.0	75.1	74.8	75.1	0.3	75.0	1	75.0	

Company	METCO Environmental
Analyst	TBO
Parameters	EPA Method 3C

Client #	14-388 (OH)
Job #	1214-29
# Samples	25 Tedlar bags

MDL 0.0390 (ppm)
LOQ 0.382 (ppm)
Compound Nitrogen

Lower Curve Limit 0.382 (ppm)
Upper Curve Limit 100 (ppm)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Sample Conc (ppm)	Qual
24-C2 Run1	004F2801.D	004F2802.D	004F2803.D	BETTYP112_FGA_LIQN2.M	9.57	9.57	9.57	0.1	75.4	76.0	75.7	0.4	75.7	1	75.7	
24-C2 Run2	005F2901.D	005F2902.D	005F2903.D	BETTYP112_FGA_LIQN2.M	9.56	9.55	9.57	0.2	76.3	79.3	76.8	2.4	77.4	1	77.4	
24-C2 Run3	006F3001.D	006F3002.D	006F3003.D	BETTYP112_FGA_LIQN2.M	9.56	9.57	9.57	0.1	76.9	76.5	76.5	0.4	76.7	1	76.7	
24-C2 Run4	007F3301.D	007F3302.D	007F3303.D	BETTYP112_FGA_LIQN2.M	9.54	9.57	9.57	0.3	80.9	77.0	77.2	3.3	78.4	1	78.4	
24-C3 Run1	008F3401.D	008F3402.D	008F3403.D	BETTYP112_FGA_LIQN2.M	9.57	9.57	9.57	0.0	76.8	76.8	77.1	0.3	76.9	1	76.9	
24-C3 Run2	010F3501.D	010F3502.D	010F3503.D	BETTYP112_FGA_LIQN2.M	9.57	9.57	9.56	0.1	77.5	77.8	77.6	0.3	77.6	1	77.6	
24-C3 Run3	013F3601.D	013F3602.D	013F3603.D	BETTYP112_FGA_LIQN2.M	9.56	9.56	9.55	0.1	78.2	78.2	79.6	1.2	78.7	1	78.7	
24-C4 Run1	014F3701.D	014F3702.D	014F3703.D	BETTYP112_FGA_LIQN2.M	9.54	9.54	9.54	0.0	79.6	79.9	79.4	0.4	79.6	1	79.6	
24-C4 Run2	015F3801.D	015F3802.D	015F3803.D	BETTYP112_FGA_LIQN2.M	9.55	9.55	9.55	0.0	77.6	78.4	77.9	0.5	78.0	1	78.0	
24-C4 Run3	003F2701.D	003F2702.D	003F2703.D	BETTYP112_FGA_LIQN2.M	9.57	9.57	9.57	0.1	74.5	74.4	75.5	0.9	74.8	1	74.8	
He blank #LB	001F2101.D	001F2102.D	001F2103.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.0390	0.0390	0.0390	0.0	0.0390	1	0.0390	ND

Company	METCO Environmental
Analyst	TBO
Parameters	EPA Method 3C

Client #	14-388 (OH)
Job #	1214-29
# Samples	25 Tedlar bags

MDL 0.0380 (ppm)
LOQ 0.380 (ppm)
Compound Carbon monoxide

Lower Curve Limit 0.380 (ppm)
Upper Curve Limit 9.95 (ppm)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Sample Conc (ppm)	Qual
24-C1 Run1	008F0301.D	008F0302.D	008F0303.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.0380	0.0380	0.0380	0.0	0.0380	1	0.0380	ND
24-C1 Run2	010F0401.D	010F0402.D	010F0403.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.0380	0.0380	0.0380	0.0	0.0380	1	0.0380	ND
24-C1Run3	008F1101.D	008F1102.D	008F1103.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.0380	0.0380	0.0380	0.0	0.0380	1	0.0380	ND
18-C1 Run1	010F1201.D	010F1202.D	010F1203.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.0380	0.0380	0.0380	0.0	0.0380	1	0.0380	ND
18-C1 Run2	013F1301.D	013F1302.D	013F1303.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.0380	0.0380	0.0380	0.0	0.0380	1	0.0380	ND
18-C1 Run3	008F1401.D	008F1402.D	008F1403.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.0380	0.0380	0.0380	0.0	0.0380	1	0.0380	ND
18-C2 Run1	010F1501.D	010F1502.D	010F1503.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.0380	0.0380	0.0380	0.0	0.0380	1	0.0380	ND
18-C2 Run2	013F1601.D	013F1602.D	013F1603.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.0380	0.0380	0.0380	0.0	0.0380	1	0.0380	ND
18-C2 Run3	015F1701.D	015F1702.D	015F1703.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.0380	0.0380	0.0380	0.0	0.0380	1	0.0380	ND
18-C3 Run1	003F1801.D	003F1802.D	003F1803.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.0380	0.0380	0.0380	0.0	0.0380	1	0.0380	ND
18-C3 Run2	004F2201.D	004F2202.D	004F2203.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.0380	0.0380	0.0380	0.0	0.0380	1	0.0380	ND
18-C3 Run3	005F2301.D	005F2302.D	005F2303.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.0380	0.0380	0.0380	0.0	0.0380	1	0.0380	ND
18-C4 Run1	006F2401.D	006F2402.D	006F2403.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.0380	0.0380	0.0380	0.0	0.0380	1	0.0380	ND
18-C4 Run2	007F2501.D	007F2502.D	007F2503.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.0380	0.0380	0.0380	0.0	0.0380	1	0.0380	ND
18-C4 Run3	014F2601.D	014F2602.D	014F2603.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.0380	0.0380	0.0380	0.0	0.0380	1	0.0380	ND

Company	METCO Environmental
Analyst	TBO
Parameters	EPA Method 3C

Client #	14-388 (OH)
Job #	1214-29
# Samples	25 Tedlar bags

MDL 0.0380 (ppm)
LOQ 0.380 (ppm)
Compound Carbon monoxide

Lower Curve Limit 0.380 (ppm)
Upper Curve Limit 9.95 (ppm)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Sample Conc (ppm)	Qual
24-C2 Run1	004F2801.D	004F2802.D	004F2803.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.0380	0.0380	0.0380	0.0	0.0380	1	0.0380	ND
24-C2 Run2	005F2901.D	005F2902.D	005F2903.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.0380	0.0380	0.0380	0.0	0.0380	1	0.0380	ND
24-C2 Run3	006F3001.D	006F3002.D	006F3003.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.0380	0.0380	0.0380	0.0	0.0380	1	0.0380	ND
24-C2 Run4	007F3301.D	007F3302.D	007F3303.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.0380	0.0380	0.0380	0.0	0.0380	1	0.0380	ND
24-C3 Run1	008F3401.D	008F3402.D	008F3403.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.0380	0.0380	0.0380	0.0	0.0380	1	0.0380	ND
24-C3 Run2	010F3501.D	010F3502.D	010F3503.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.0380	0.0380	0.0380	0.0	0.0380	1	0.0380	ND
24-C3 Run3	013F3601.D	013F3602.D	013F3603.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.0380	0.0380	0.0380	0.0	0.0380	1	0.0380	ND
24-C4 Run1	014F3701.D	014F3702.D	014F3703.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.0380	0.0380	0.0380	0.0	0.0380	1	0.0380	ND
24-C4 Run2	015F3801.D	015F3802.D	015F3803.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.0380	0.0380	0.0380	0.0	0.0380	1	0.0380	ND
24-C4 Run3	003F2701.D	003F2702.D	003F2703.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.0380	0.0380	0.0380	0.0	0.0380	1	0.0380	ND
He blank #LB	001F2101.D	001F2102.D	001F2103.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.0380	0.0380	0.0380	0.0	0.0380	1	0.0380	ND

Company	METCO Environmental
Analyst	TBO
Parameters	EPA Method 3C

Client #	14-388 (OH)
Job #	1214-29
# Samples	25 Tedlar bags

MDL 0.0310 (ppm)
LOQ 0.305 (ppm)
Compound Methane

Lower Curve Limit 0.305 (ppm)
Upper Curve Limit 8.00 (ppm)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Sample Conc (ppm)	Qual
24-C1 Run1	008F0301.D	008F0302.D	008F0303.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.0310	0.0310	0.0310	0.0	0.0310	1	0.0310	ND
24-C1 Run2	010F0401.D	010F0402.D	010F0403.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.0310	0.0310	0.0310	0.0	0.0310	1	0.0310	ND
24-C1Run3	008F1101.D	008F1102.D	008F1103.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.0310	0.0310	0.0310	0.0	0.0310	1	0.0310	ND
18-C1 Run1	010F1201.D	010F1202.D	010F1203.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.0310	0.0310	0.0310	0.0	0.0310	1	0.0310	ND
18-C1 Run2	013F1301.D	013F1302.D	013F1303.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.0310	0.0310	0.0310	0.0	0.0310	1	0.0310	ND
18-C1 Run3	008F1401.D	008F1402.D	008F1403.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.0310	0.0310	0.0310	0.0	0.0310	1	0.0310	ND
18-C2 Run1	010F1501.D	010F1502.D	010F1503.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.0310	0.0310	0.0310	0.0	0.0310	1	0.0310	ND
18-C2 Run2	013F1601.D	013F1602.D	013F1603.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.0310	0.0310	0.0310	0.0	0.0310	1	0.0310	ND
18-C2 Run3	015F1701.D	015F1702.D	015F1703.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.0310	0.0310	0.0310	0.0	0.0310	1	0.0310	ND
18-C3 Run1	003F1801.D	003F1802.D	003F1803.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.0310	0.0310	0.0310	0.0	0.0310	1	0.0310	ND
18-C3 Run2	004F2201.D	004F2202.D	004F2203.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.0310	0.0310	0.0310	0.0	0.0310	1	0.0310	ND
18-C3 Run3	005F2301.D	005F2302.D	005F2303.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.0310	0.0310	0.0310	0.0	0.0310	1	0.0310	ND
18-C4 Run1	006F2401.D	006F2402.D	006F2403.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.0310	0.0310	0.0310	0.0	0.0310	1	0.0310	ND
18-C4 Run2	007F2501.D	007F2502.D	007F2503.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.0310	0.0310	0.0310	0.0	0.0310	1	0.0310	ND
18-C4 Run3	014F2601.D	014F2602.D	014F2603.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.0310	0.0310	0.0310	0.0	0.0310	1	0.0310	ND

Company	METCO Environmental
Analyst	TBO
Parameters	EPA Method 3C

Client #	14-388 (OH)
Job #	1214-29
# Samples	25 Tedlar bags

MDL 0.0310 (ppm)
LOQ 0.305 (ppm)
Compound Methane

Lower Curve Limit 0.305 (ppm)
Upper Curve Limit 8.00 (ppm)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Sample Conc (ppm)	Qual
24-C2 Run1	004F2801.D	004F2802.D	004F2803.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.0310	0.0310	0.0310	0.0	0.0310	1	0.0310	ND
24-C2 Run2	005F2901.D	005F2902.D	005F2903.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.0310	0.0310	0.0310	0.0	0.0310	1	0.0310	ND
24-C2 Run3	006F3001.D	006F3002.D	006F3003.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.0310	0.0310	0.0310	0.0	0.0310	1	0.0310	ND
24-C2 Run4	007F3301.D	007F3302.D	007F3303.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.0310	0.0310	0.0310	0.0	0.0310	1	0.0310	ND
24-C3 Run1	008F3401.D	008F3402.D	008F3403.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.0310	0.0310	0.0310	0.0	0.0310	1	0.0310	ND
24-C3 Run2	010F3501.D	010F3502.D	010F3503.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.0310	0.0310	0.0310	0.0	0.0310	1	0.0310	ND
24-C3 Run3	013F3601.D	013F3602.D	013F3603.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.0310	0.0310	0.0310	0.0	0.0310	1	0.0310	ND
24-C4 Run1	014F3701.D	014F3702.D	014F3703.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.0310	0.0310	0.0310	0.0	0.0310	1	0.0310	ND
24-C4 Run2	015F3801.D	015F3802.D	015F3803.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.0310	0.0310	0.0310	0.0	0.0310	1	0.0310	ND
24-C4 Run3	003F2701.D	003F2702.D	003F2703.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.0310	0.0310	0.0310	0.0	0.0310	1	0.0310	ND
He blank #LB	001F2101.D	001F2102.D	001F2103.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.0310	0.0310	0.0310	0.0	0.0310	1	0.0310	ND

Company	METCO Environmental
Analyst	TBO
Parameters	EPA Method 3C

Client #	14-388 (OH)
Job #	1214-29
# Samples	25 Tedlar bags

MDL 0.0420 (ppm)
LOQ 0.544 (ppm)
Compound Carbon dioxide

Lower Curve Limit 0.544 (ppm)
Upper Curve Limit 10.0 (ppm)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Sample Conc (ppm)	Qual
24-C1 Run1	008F0301.D	008F0302.D	008F0303.D	BETTYP112_FGA_LIQN2.M	19.49	19.49	19.49	0.0	4.47	4.45	4.47	0.3	4.46	1	4.46	
24-C1 Run2	010F0401.D	010F0402.D	010F0403.D	BETTYP112_FGA_LIQN2.M	19.48	19.48	19.48	0.0	4.61	4.56	4.55	0.7	4.57	1	4.57	
24-C1Run3	008F1101.D	008F1102.D	008F1103.D	BETTYP112_FGA_LIQN2.M	19.48	19.48	19.49	0.0	4.55	4.53	4.52	0.4	4.53	1	4.53	
18-C1 Run1	010F1201.D	010F1202.D	010F1203.D	BETTYP112_FGA_LIQN2.M	19.48	19.48	19.48	0.0	4.70	4.65	4.65	0.7	4.67	1	4.67	
18-C1 Run2	013F1301.D	013F1302.D	013F1303.D	BETTYP112_FGA_LIQN2.M	19.49	19.49	19.49	0.0	4.19	4.22	4.19	0.4	4.20	1	4.20	
18-C1 Run3	008F1401.D	008F1402.D	008F1403.D	BETTYP112_FGA_LIQN2.M	19.47	19.48	19.48	0.0	5.21	5.19	5.21	0.2	5.20	1	5.20	
18-C2 Run1	010F1501.D	010F1502.D	010F1503.D	BETTYP112_FGA_LIQN2.M	19.48	19.49	19.49	0.0	4.59	4.53	4.58	0.8	4.57	1	4.57	
18-C2 Run2	013F1601.D	013F1602.D	013F1603.D	BETTYP112_FGA_LIQN2.M	19.48	19.48	19.48	0.0	4.84	4.86	4.84	0.3	4.85	1	4.85	
18-C2 Run3	015F1701.D	015F1702.D	015F1703.D	BETTYP112_FGA_LIQN2.M	19.49	19.49	19.49	0.0	4.58	4.58	4.60	0.4	4.59	1	4.59	
18-C3 Run1	003F1801.D	003F1802.D	003F1803.D	BETTYP112_FGA_LIQN2.M	19.49	19.50	19.49	0.0	4.12	4.07	4.09	0.6	4.09	1	4.09	
18-C3 Run2	004F2201.D	004F2202.D	004F2203.D	BETTYP112_FGA_LIQN2.M	19.50	19.50	19.50	0.0	4.22	4.21	4.23	0.2	4.22	1	4.22	
18-C3 Run3	005F2301.D	005F2302.D	005F2303.D	BETTYP112_FGA_LIQN2.M	19.50	19.50	19.50	0.0	4.18	4.25	4.19	1.0	4.21	1	4.21	
18-C4 Run1	006F2401.D	006F2402.D	006F2403.D	BETTYP112_FGA_LIQN2.M	19.51	19.51	19.51	0.0	3.42	3.41	3.41	0.2	3.41	1	3.41	
18-C4 Run2	007F2501.D	007F2502.D	007F2503.D	BETTYP112_FGA_LIQN2.M	19.51	19.51	19.51	0.0	3.36	3.34	3.33	0.4	3.34	1	3.34	
18-C4 Run3	014F2601.D	014F2602.D	014F2603.D	BETTYP112_FGA_LIQN2.M	19.51	19.51	19.51	0.0	3.52	3.50	3.52	0.3	3.51	1	3.51	

Company	METCO Environmental
Analyst	TBO
Parameters	EPA Method 3C

Client #	14-388 (OH)
Job #	1214-29
# Samples	25 Tedlar bags

MDL 0.0420 (ppm)
LOQ 0.544 (ppm)
Compound Carbon dioxide

Lower Curve Limit 0.544 (ppm)
Upper Curve Limit 10.0 (ppm)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Sample Conc (ppm)	Qual
24-C2 Run1	004F2801.D	004F2802.D	004F2803.D	BETTYP112_FGA_LIQN2.M	19.50	19.50	19.50	0.0	3.99	4.04	4.00	0.6	4.01	1	4.01	
24-C2 Run2	005F2901.D	005F2902.D	005F2903.D	BETTYP112_FGA_LIQN2.M	19.50	19.50	19.50	0.0	4.06	4.20	4.05	2.3	4.10	1	4.10	
24-C2 Run3	006F3001.D	006F3002.D	006F3003.D	BETTYP112_FGA_LIQN2.M	19.50	19.50	19.50	0.0	3.86	3.86	3.85	0.2	3.86	1	3.86	
24-C2 Run4	007F3301.D	007F3302.D	007F3303.D	BETTYP112_FGA_LIQN2.M	19.49	19.49	19.49	0.0	5.05	4.78	4.80	3.6	4.88	1	4.88	
24-C3 Run1	008F3401.D	008F3402.D	008F3403.D	BETTYP112_FGA_LIQN2.M	19.51	19.51	19.50	0.0	3.75	3.75	3.76	0.2	3.75	1	3.75	
24-C3 Run2	010F3501.D	010F3502.D	010F3503.D	BETTYP112_FGA_LIQN2.M	19.50	19.50	19.50	0.0	4.00	3.98	3.98	0.3	3.99	1	3.99	
24-C3 Run3	013F3601.D	013F3602.D	013F3603.D	BETTYP112_FGA_LIQN2.M	19.51	19.51	19.50	0.1	3.37	3.36	3.41	0.8	3.38	1	3.38	
24-C4 Run1	014F3701.D	014F3702.D	014F3703.D	BETTYP112_FGA_LIQN2.M	19.53	19.53	19.53	0.0	2.04	2.05	2.05	0.3	2.05	1	2.05	
24-C4 Run2	015F3801.D	015F3802.D	015F3803.D	BETTYP112_FGA_LIQN2.M	19.52	19.52	19.52	0.0	2.47	2.50	2.47	0.8	2.48	1	2.48	
24-C4 Run3	003F2701.D	003F2702.D	003F2703.D	BETTYP112_FGA_LIQN2.M	19.53	19.53	19.53	0.0	2.42	2.42	2.44	0.6	2.43	1	2.43	
He blank #LB	001F2101.D	001F2102.D	001F2103.D	BETTYP112_FGA_LIQN2.M	NA	NA	NA	NA	0.0420	0.0420	0.0420	0.0	0.0420	1	0.0420	ND

Enthalpy Analytical

Company: METCO Environmental
Client No. 14-388 (OH)
Job No. 1214-29

Parameters: ASTM D1946-90 Canister Analysis
Samples 9 Runs
Analyst Justin Guenzler

Hydrogen

Enthalpy ID	Filename #1	Filename #2	Analysis Method	Curve Min	Curve Max	MDL	Ret Time (min)	Ret Time (min)	%dif RT	DF	Conc #1	Conc #2	%dif conc	Units	Avg	Corr. conc %	Flag
Can.1044	005F0601.D	005F0602.D	BETTYP119_FGA.M	0.310	25.0	0.0510	NA	NA	NA	1	0.0510	0.0510	0.0	%	0.0510	0.0510	ND
Can.1049	006F0701.D	006F0702.D	BETTYP119_FGA.M	0.310	25.0	0.0510	NA	NA	NA	1	0.0510	0.0510	0.0	%	0.0510	0.0510	ND
Can.1186	007F0801.D	007F0802.D	BETTYP119_FGA.M	0.310	25.0	0.0510	NA	NA	NA	1	0.0510	0.0510	0.0	%	0.0510	0.0510	ND
Can.1308	004F0901.D	004F0902.D	BETTYP119_FGA.M	0.310	25.0	0.0510	NA	NA	NA	1	0.0510	0.0510	0.0	%	0.0510	0.0510	ND
Can.1310	014F0601.D	014F0602.D	BETTYP119_FGA.M	0.310	25.0	0.0510	NA	NA	NA	1	0.0510	0.0510	0.0	%	0.0510	0.0510	ND
Can.1324	014F2301.D	014F2302.D	BETTYP126_FGA.M	0.310	25.0	0.0510	NA	NA	NA	2.376	0.0510	0.0510	0.0	%	0.0510	0.121	ND
Can.1334	007F0401.D	007F0402.D	BETTYP119_FGA.M	0.310	25.0	0.0510	NA	NA	NA	1	0.0510	0.0510	0.0	%	0.0510	0.0510	ND
Can.1340	012F0901.D	012F0902.D	BETTYP119_FGA.M	0.310	25.0	0.0510	NA	NA	NA	1	0.0510	0.0510	0.0	%	0.0510	0.0510	ND
Can.1453	006F0301.D	006F0302.D	BETTYP119_FGA.M	0.310	25.0	0.0510	NA	NA	NA	1.859	0.0510	0.0510	0.0	%	0.0510	0.0947	ND

Oxygen

Enthalpy ID	Filename #1	Filename #2	Analysis Method	Curve Min	Curve Max	MDL	Ret Time (min)	Ret Time (min)	%dif RT	DF	Conc #1	Conc #2	%dif conc	Units	Avg	Corr. conc %	Flag
Can.1044	005F0601.D	005F0602.D	BETTYP119_FGA.M	0.544	99.9	0.0544	4.51	4.50	0.1	1	0.248	0.250	0.4	%	0.249	0.251	J
Can.1049	006F0701.D	006F0702.D	BETTYP119_FGA.M	0.544	99.9	0.0544	4.49	4.48	0.1	1	0.289	0.282	1.3	%	0.286	0.288	J
Can.1186	007F0801.D	007F0802.D	BETTYP119_FGA.M	0.544	99.9	0.0544	4.47	4.47	0.1	1	0.182	0.178	1.1	%	0.180	0.181	J
Can.1308	004F0901.D	004F0902.D	BETTYP119_FGA.M	0.544	99.9	0.0544	4.53	4.53	0.0	1	0.0981	0.0948	1.7	%	0.0964	0.0971	J
Can.1310	014F0601.D	014F0602.D	BETTYP119_FGA.M	0.544	99.9	0.0544	4.54	4.54	0.1	1	0.0601	0.0644	3.4	%	0.0623	0.0627	J
Can.1324	014F2301.D	014F2302.D	BETTYP126_FGA.M	0.544	99.9	0.0544	4.53	4.53	0.0	2.376	1.31	1.28	0.0	%	1.29	3.07	
Can.1334	007F0401.D	007F0402.D	BETTYP119_FGA.M	0.544	99.9	0.0544	4.53	4.52	0.1	1	0.263	0.239	4.8	%	0.251	0.252	J
Can.1340	012F0901.D	012F0902.D	BETTYP119_FGA.M	0.544	99.9	0.0544	4.54	4.53	0.1	1	0.0754	0.0805	3.3	%	0.0779	0.0785	J
Can.1453	006F2401.D	006F2402.D	BETTYP126_FGA.M	0.544	99.9	0.0544	4.52	4.51	0.0	1.859	2.35	2.36	0.0	%	2.35	4.37	

Enthalpy Analytical

Company: METCO Environmental
Client No. 14-388 (OH)
Job No. 1214-29

Parameters: ASTM D1946-90 Canister Analysis
Samples 9 Runs
Analyst Justin Guenzler

Nitrogen

Enthalpy ID	Filename #1	Filename #2	Analysis Method	Curve Min	Curve Max	MDL	Ret Time (min)	Ret Time (min)	%dif RT	DF	Conc #1	Conc #2	%dif conc	Units	Avg	Corr. conc %	Flag
Can.1044	005F0601.D	005F0602.D	BETTYP119_FGA.M	0.380	99.9	0.0382	4.86	4.85	0.1	1	0.889	0.901	0.7	%	0.895	0.901	
Can.1049	006F0701.D	006F0702.D	BETTYP119_FGA.M	0.380	99.9	0.0382	4.83	4.82	0.1	1	1.07	1.04	1.2	%	1.06	1.06	
Can.1186	007F0801.D	007F0802.D	BETTYP119_FGA.M	0.380	99.9	0.0382	4.81	4.80	0.1	1	0.654	0.654	0.1	%	0.654	0.658	
Can.1308	004F0901.D	004F0902.D	BETTYP119_FGA.M	0.380	99.9	0.0382	4.87	4.87	0.0	1	0.527	0.521	0.6	%	0.524	0.528	
Can.1310	014F0601.D	014F0602.D	BETTYP119_FGA.M	0.380	99.9	0.0382	4.89	4.88	0.1	1	0.318	0.317	0.1	%	0.317	0.319	J
Can.1324	014F2301.D	014F2302.D	BETTYP126_FGA.M	0.380	99.9	0.0382	4.86	4.86	0.0	2.376	4.80	4.76	0.0	%	4.78	11.4	
Can.1334	007F0401.D	007F0402.D	BETTYP119_FGA.M	0.380	99.9	0.0382	4.88	4.86	0.1	1	1.09	0.988	5.0	%	1.04	1.05	
Can.1340	012F0901.D	012F0902.D	BETTYP119_FGA.M	0.380	99.9	0.0382	4.89	4.88	0.1	1	0.434	0.435	0.2	%	0.435	0.437	
Can.1453	006F2401.D	006F2402.D	BETTYP126_FGA.M	0.380	99.9	0.0382	4.83	4.83	0.0	1.859	8.82	8.84	0.0	%	8.83	16.4	

Carbon monoxide

Enthalpy ID	Filename #1	Filename #2	Analysis Method	Curve Min	Curve Max	MDL	Ret Time (min)	Ret Time (min)	%dif RT	DF	Conc #1	Conc #2	%dif conc	Units	Avg	Corr. conc %	Flag
Can.1044	005F0601.D	005F0602.D	BETTYP119_FGA.M	0.380	99.5	0.0380	NA	NA	NA	1	0.0380	0.0380	0.0	%	0.0380	0.0380	ND
Can.1049	006F0701.D	006F0702.D	BETTYP119_FGA.M	0.380	99.5	0.0380	NA	NA	NA	1	0.0380	0.0380	0.0	%	0.0380	0.0380	ND
Can.1186	007F0801.D	007F0802.D	BETTYP119_FGA.M	0.380	99.5	0.0380	NA	NA	NA	1	0.0380	0.0380	0.0	%	0.0380	0.0380	ND
Can.1308	004F0901.D	004F0902.D	BETTYP119_FGA.M	0.380	99.5	0.0380	NA	NA	NA	1	0.0380	0.0380	0.0	%	0.0380	0.0380	ND
Can.1310	014F0601.D	014F0602.D	BETTYP119_FGA.M	0.380	99.5	0.0380	NA	NA	NA	1	0.0380	0.0380	0.0	%	0.0380	0.0380	ND
Can.1324	005F0601.D	005F0602.D	BETTYP119_FGA.M	0.380	99.5	0.0380	NA	NA	NA	2.376	0.0380	0.0380	0.0	%	0.0380	0.0903	ND
Can.1334	007F0401.D	007F0402.D	BETTYP119_FGA.M	0.380	99.5	0.0380	NA	NA	NA	1	0.0380	0.0380	0.0	%	0.0380	0.0380	ND
Can.1340	012F0901.D	012F0902.D	BETTYP119_FGA.M	0.380	99.5	0.0380	NA	NA	NA	1	0.0380	0.0380	0.0	%	0.0380	0.0380	ND
Can.1453	006F0301.D	006F0302.D	BETTYP119_FGA.M	0.380	99.5	0.0380	NA	NA	NA	1.859	0.0380	0.0380	0.0	%	0.0380	0.0706	ND

Enthalpy Analytical

Company: METCO Environmental
Client No. 14-388 (OH)
Job No. 1214-29

Parameters: ASTM D1946-90 Canister Analysis
Samples 9 Runs
Analyst Justin Guenzler

Methane

Enthalpy ID	Filename #1	Filename #2	Analysis Method	Curve Min	Curve Max	MDL	Ret Time (min)	Ret Time (min)	%dif RT	DF	Conc #1	Conc #2	%dif conc	Units	Avg	Corr. conc %	Flag
Can.1044	005F0601.D	005F0602.D	BETTYP119_FGA.M	0.310	100	0.0305	NA	NA	NA	1	0.0305	0.0305	0.0	%	0.0305	0.0305	ND
Can.1049	006F0701.D	006F0702.D	BETTYP119_FGA.M	0.310	100	0.0305	NA	NA	NA	1	0.0305	0.0305	0.0	%	0.0305	0.0305	ND
Can.1186	007F0801.D	007F0802.D	BETTYP119_FGA.M	0.310	100	0.0305	NA	NA	NA	1	0.0305	0.0305	0.0	%	0.0305	0.0305	ND
Can.1308	004F0901.D	004F0902.D	BETTYP119_FGA.M	0.310	100	0.0305	NA	NA	NA	1	0.0305	0.0305	0.0	%	0.0305	0.0305	ND
Can.1310	014F0601.D	014F0602.D	BETTYP119_FGA.M	0.310	100	0.0305	NA	NA	NA	1	0.0305	0.0305	0.0	%	0.0305	0.0305	ND
Can.1324	005F0601.D	005F0602.D	BETTYP119_FGA.M	0.310	100	0.0305	NA	NA	NA	2.376	0.0305	0.0305	0.0	%	0.0305	0.0725	ND
Can.1334	007F0401.D	007F0402.D	BETTYP119_FGA.M	0.310	100	0.0305	NA	NA	NA	1	0.0305	0.0305	0.0	%	0.0305	0.0305	ND
Can.1340	012F0901.D	012F0902.D	BETTYP119_FGA.M	0.310	100	0.0305	NA	NA	NA	1	0.0305	0.0305	0.0	%	0.0305	0.0305	ND
Can.1453	006F0301.D	006F0302.D	BETTYP119_FGA.M	0.310	100	0.0305	NA	NA	NA	1.859	0.0305	0.0305	0.0	%	0.0305	0.0567	ND

Carbon dioxide

Enthalpy ID	Filename #1	Filename #2	Analysis Method	Curve Min	Curve Max	MDL	Ret Time (min)	Ret Time (min)	%dif RT	DF	Conc #1	Conc #2	%dif conc	Units	Avg	Corr. conc %	Flag
Can.1044	005F0601.D	005F0602.D	BETTYP119_FGA.M	0.540	99.8	0.0544	NA	NA	NA	1	0.0544	0.0544	0.0	%	0.0544	0.0544	ND
Can.1049	006F0701.D	006F0702.D	BETTYP119_FGA.M	0.540	99.8	0.0544	NA	NA	NA	1	0.0544	0.0544	0.0	%	0.0544	0.0544	ND
Can.1186	007F0801.D	007F0802.D	BETTYP119_FGA.M	0.540	99.8	0.0544	NA	NA	NA	1	0.0544	0.0544	0.0	%	0.0544	0.0544	ND
Can.1308	004F0901.D	004F0902.D	BETTYP119_FGA.M	0.540	99.8	0.0544	NA	NA	NA	1	0.0544	0.0544	0.0	%	0.0544	0.0544	ND
Can.1310	014F0601.D	014F0602.D	BETTYP119_FGA.M	0.540	99.8	0.0544	NA	NA	NA	1	0.0544	0.0544	0.0	%	0.0544	0.0544	ND
Can.1324	005F0601.D	005F0602.D	BETTYP119_FGA.M	0.540	99.8	0.0544	NA	NA	NA	2.376	0.0544	0.0544	0.0	%	0.0544	0.129	ND
Can.1334	007F0401.D	007F0402.D	BETTYP119_FGA.M	0.540	99.8	0.0544	NA	NA	NA	1	0.0544	0.0544	0.0	%	0.0544	0.0544	ND
Can.1340	012F0901.D	012F0902.D	BETTYP119_FGA.M	0.540	99.8	0.0544	NA	NA	NA	1	0.0544	0.0544	0.0	%	0.0544	0.0544	ND
Can.1453	006F0301.D	006F0302.D	BETTYP119_FGA.M	0.540	99.8	0.0544	NA	NA	NA	1.859	0.0544	0.0544	0.0	%	0.0544	0.101	ND

Company	METCO Environmental
Analyst	TBO
Parameters	EPA Method 18-Type

Client #	14-388 (OH)
Job #	1214-29
# Samples	9 Canisters

MDL 0.387 (ppm)
LOQ 5.01 (ppm)
Compound Methane

Lower Curve Limit 5.01 (ppm)
Upper Curve Limit 51,300 (ppm)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Sample Conc (ppm)	Qual
1044	011F0401.D	011F0402.D	011F0403.D	EDITHP121F_C1-C6_BENZENE.M	1.55	1.55	1.55	0.0	2.05	2.30	2.85	18.7	2.40	1	2.40	J
1049	011F0201.D	011F0202.D	011F0203.D	EDITHP121F_C1-C6_BENZENE.M	1.55	1.55	1.55	0.0	3.04	3.82	2.60	21.1	3.16	1	3.16	J
1186	011F0201.D	011F0202.D	011F0203.D	EDITHP121F_C1-C6_BENZENE.M	1.55	1.55	1.55	0.1	2.96	2.08	2.46	18.2	2.50	1	2.50	J
1308	011F0601.D	011F0602.D	011F0603.D	EDITHP121F_C1-C6_BENZENE.M	1.55	1.55	1.55	0.0	2.04	1.86	2.03	6.2	1.98	1	1.98	J
1310	011F0301.D	011F0302.D	011F0303.D	EDITHP121F_C1-C6_BENZENE.M	1.55	1.55	1.55	0.0	2.73	2.77	3.43	15.3	2.98	1	2.98	J
1324	011F0401.D	011F0402.D	011F0403.D	EDITHP121F_C1-C6_BENZENE.M	1.55	1.55	1.55	0.0	2.09	2.94	1.97	26.0	2.33	1	2.33	J
1334	011F0301.D	011F0302.D	011F0303.D	EDITHP121F_C1-C6_BENZENE.M	1.55	1.55	1.55	0.0	2.56	2.93	2.15	15.6	2.55	1	2.55	J
1340	011F0101.D	011F0102.D	011F0103.D	EDITHP121F_C1-C6_BENZENE.M	1.55	1.55	1.55	0.1	2.90	2.53	1.82	24.8	2.42	1	2.42	J
1453	011F0501.D	011F0502.D	011F0503.D	EDITHP121F_C1-C6_BENZENE.M	1.55	1.55	1.55	0.0	2.69	2.08	2.49	13.9	2.42	1	2.42	J
zero air blank	003F3501.D	003F3502.D	003F3503.D	EDITHP121F_C1-C6_BENZENE.M	1.55	1.56	1.56	0.1	0.702	0.620	0.532	13.9	0.618	1	0.618	J
zero air blank	003F2501.D	003F2502.D	003F2503.D	EDITHP121F_C1-C6_BENZENE.M	NA	NA	NA	NA	0.387	0.387	0.387	0.0	0.387	1	0.387	ND

Company	METCO Environmental
Analyst	TBO
Parameters	EPA Method 18-Type

Client #	14-388 (OH)
Job #	1214-29
# Samples	9 Canisters

MDL 0.231 (ppm)
LOQ 5.01 (ppm)
Compound Ethane

Lower Curve Limit 5.01 (ppm)
Upper Curve Limit 51,300 (ppm)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Sample Conc (ppm)	Qual
1044	011F0401.D	011F0402.D	011F0403.D	EDITHP121F_C1-C6_BENZENE.M	1.69	1.69	1.69	0.1	15.6	15.8	15.9	0.9	15.8	1	15.8	
1049	011F0201.D	011F0202.D	011F0203.D	EDITHP121F_C1-C6_BENZENE.M	1.69	1.69	1.69	0.1	16.9	17.2	16.5	2.3	16.9	1	16.9	
1186	011F0201.D	011F0202.D	011F0203.D	EDITHP121F_C1-C6_BENZENE.M	1.70	1.69	1.69	0.1	15.9	15.8	15.9	0.4	15.9	1	15.9	
1308	011F0601.D	011F0602.D	011F0603.D	EDITHP121F_C1-C6_BENZENE.M	1.69	1.69	1.69	0.1	12.6	11.8	12.2	3.5	12.2	1	12.2	
1310	011F0301.D	011F0302.D	011F0303.D	EDITHP121F_C1-C6_BENZENE.M	1.69	1.69	1.69	0.0	17.0	16.5	17.1	2.2	16.8	1	16.8	
1324	011F0401.D	011F0402.D	011F0403.D	EDITHP121F_C1-C6_BENZENE.M	1.69	1.69	1.69	0.0	8.61	8.53	8.44	1.0	8.53	1	8.53	
1334	011F0301.D	011F0302.D	011F0303.D	EDITHP121F_C1-C6_BENZENE.M	1.69	1.69	1.69	0.0	12.7	12.5	12.3	1.7	12.5	1	12.5	
1340	011F0101.D	011F0102.D	011F0103.D	EDITHP121F_C1-C6_BENZENE.M	1.69	1.69	1.69	0.1	16.0	15.9	15.3	2.6	15.7	1	15.7	
1453	011F0501.D	011F0502.D	011F0503.D	EDITHP121F_C1-C6_BENZENE.M	1.69	1.69	1.69	0.0	9.57	8.82	9.14	4.3	9.17	1	9.17	
zero air blank	003F3501.D	003F3502.D	003F3503.D	EDITHP121F_C1-C6_BENZENE.M	NA	NA	NA	NA	0.231	0.231	0.231	0.0	0.231	1	0.231	ND
zero air blank	003F2501.D	003F2502.D	003F2503.D	EDITHP121F_C1-C6_BENZENE.M	NA	NA	NA	NA	0.231	0.231	0.231	0.0	0.231	1	0.231	ND

Company	METCO Environmental
Analyst	TBO
Parameters	EPA Method 18-Type

Client #	14-388 (OH)
Job #	1214-29
# Samples	9 Canisters

MDL 0.231 (ppm)
LOQ 5.01 (ppm)
Compound C2 as Ethane

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Sample Conc (ppm)	Qual
1044	011F0401.D	011F0402.D	011F0403.D	EDITHP121F_C1-C6_BENZENE.M	0.231	0.231	0.231	0.0	0.231	1	0.231	ND
1049	011F0201.D	011F0202.D	011F0203.D	EDITHP121F_C1-C6_BENZENE.M	0.231	0.231	0.231	0.0	0.231	1	0.231	ND
1186	011F0201.D	011F0202.D	011F0203.D	EDITHP121F_C1-C6_BENZENE.M	0.231	0.231	0.231	0.0	0.231	1	0.231	ND
1308	011F0601.D	011F0602.D	011F0603.D	EDITHP121F_C1-C6_BENZENE.M	0.231	0.231	0.231	0.0	0.231	1	0.231	ND
1310	011F0301.D	011F0302.D	011F0303.D	EDITHP121F_C1-C6_BENZENE.M	0.231	0.231	0.231	0.0	0.231	1	0.231	ND
1324	011F0401.D	011F0402.D	011F0403.D	EDITHP121F_C1-C6_BENZENE.M	0.231	0.231	0.231	0.0	0.231	1	0.231	ND
1334	011F0301.D	011F0302.D	011F0303.D	EDITHP121F_C1-C6_BENZENE.M	0.231	0.231	0.231	0.0	0.231	1	0.231	ND
1340	011F0101.D	011F0102.D	011F0103.D	EDITHP121F_C1-C6_BENZENE.M	0.231	0.231	0.231	0.0	0.231	1	0.231	ND
1453	011F0501.D	011F0502.D	011F0503.D	EDITHP121F_C1-C6_BENZENE.M	0.231	0.231	0.231	0.0	0.231	1	0.231	ND
zero air blank	003F3501.D	003F3502.D	003F3503.D	EDITHP121F_C1-C6_BENZENE.M	0.231	0.231	0.231	0.0	0.231	1	0.231	ND
zero air blank	003F2501.D	003F2502.D	003F2503.D	EDITHP121F_C1-C6_BENZENE.M	0.231	0.231	0.231	0.0	0.231	1	0.231	ND

Company	METCO Environmental
Analyst	TBO
Parameters	EPA Method 18-Type

Client #	14-388 (OH)
Job #	1214-29
# Samples	9 Canisters

MDL 0.231 (ppm)
LOQ 5.02 (ppm)
Compound Propane

Lower Curve Limit 5.02 (ppm)
Upper Curve Limit 51,300 (ppm)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Sample Conc (ppm)	Qual
1044	011F0401.D	011F0402.D	011F0403.D	EDITHP121F_C1-C6_BENZENE.M	NA	NA	NA	NA	0.231	0.231	0.231	0.0	0.231	1	0.231	ND
1049	011F0201.D	011F0202.D	011F0203.D	EDITHP121F_C1-C6_BENZENE.M	NA	NA	NA	NA	0.231	0.231	0.231	0.0	0.231	1	0.231	ND
1186	011F0201.D	011F0202.D	011F0203.D	EDITHP121F_C1-C6_BENZENE.M	NA	NA	NA	NA	0.231	0.231	0.231	0.0	0.231	1	0.231	ND
1308	011F0601.D	011F0602.D	011F0603.D	EDITHP121F_C1-C6_BENZENE.M	NA	NA	NA	NA	0.231	0.231	0.231	0.0	0.231	1	0.231	ND
1310	011F0301.D	011F0302.D	011F0303.D	EDITHP121F_C1-C6_BENZENE.M	NA	NA	NA	NA	0.231	0.231	0.231	0.0	0.231	1	0.231	ND
1324	011F0401.D	011F0402.D	011F0403.D	EDITHP121F_C1-C6_BENZENE.M	NA	NA	NA	NA	0.231	0.231	0.231	0.0	0.231	1	0.231	ND
1334	011F0301.D	011F0302.D	011F0303.D	EDITHP121F_C1-C6_BENZENE.M	NA	NA	NA	NA	0.231	0.231	0.231	0.0	0.231	1	0.231	ND
1340	011F0101.D	011F0102.D	011F0103.D	EDITHP121F_C1-C6_BENZENE.M	NA	NA	NA	NA	0.231	0.231	0.231	0.0	0.231	1	0.231	ND
1453	011F0501.D	011F0502.D	011F0503.D	EDITHP121F_C1-C6_BENZENE.M	NA	NA	NA	NA	0.231	0.231	0.231	0.0	0.231	1	0.231	ND
zero air blank	003F3501.D	003F3502.D	003F3503.D	EDITHP121F_C1-C6_BENZENE.M	NA	NA	NA	NA	0.231	0.231	0.231	0.0	0.231	1	0.231	ND
zero air blank	003F2501.D	003F2502.D	003F2503.D	EDITHP121F_C1-C6_BENZENE.M	NA	NA	NA	NA	0.231	0.231	0.231	0.0	0.231	1	0.231	ND

Company	METCO Environmental
Analyst	TBO
Parameters	EPA Method 18-Type

Client #	14-388 (OH)
Job #	1214-29
# Samples	9 Canisters

MDL 0.231 (ppm)
LOQ 5.02 (ppm)
Compound C3 as Propane

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Sample Conc (ppm)	Qual
1044	006F2801.D	006F2802.D	006F2803.D	EDITHP121F_C1-C6_BENZENE.M	1,937	1,943	1,940	0.2	1,940	501	971,940	
1049	008F3001.D	008F3002.D	008F3003.D	EDITHP121F_C1-C6_BENZENE.M	1,927	1,933	1,937	0.3	1,932	501	968,099	
1186	004F2601.D	004F2602.D	004F2603.D	EDITHP121F_C1-C6_BENZENE.M	1,901	1,904	1,912	0.3	1,906	501	954,739	
1308	016F3401.D	016F3402.D	016F3403.D	EDITHP121F_C1-C6_BENZENE.M	1,908	1,905	1,896	0.4	1,903	501	953,403	
1310	005F2701.D	005F2702.D	005F2703.D	EDITHP121F_C1-C6_BENZENE.M	1,861	1,860	1,861	0.0	1,861	501	932,194	
1324	013F3201.D	013F3202.D	013F3203.D	EDITHP121F_C1-C6_BENZENE.M	Please see Summary page and Narrative Summary							
1334	009F3101.D	009F3102.D	009F3103.D	EDITHP121F_C1-C6_BENZENE.M	1,987	1,984	1,979	0.2	1,983	501	993,650	
1340	007F2901.D	007F2902.D	007F2903.D	EDITHP121F_C1-C6_BENZENE.M	1,967	1,963	1,969	0.2	1,966	501	985,133	
1453	014F3301.D	014F3302.D	014F3303.D	EDITHP121F_C1-C6_BENZENE.M	Please see Summary page and Narrative Summary							
zero air blank	003F3501.D	003F3502.D	003F3503.D	EDITHP121F_C1-C6_BENZENE.M	0.231	0.231	0.231	0.0	0.231	1	0.231	ND
zero air blank	003F2501.D	003F2502.D	003F2503.D	EDITHP121F_C1-C6_BENZENE.M	0.639	0.665	0.589	6.7	0.631	1	0.631	J

Company	METCO Environmental
Analyst	TBO
Parameters	EPA Method 18-Type

Client #	14-388 (OH)
Job #	1214-29
# Samples	9 Canisters

MDL 0.265 (ppm)
LOQ 5.01 (ppm)
Compound Butane

Lower Curve Limit 5.01 (ppm)
Upper Curve Limit 10,300 (ppm)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Sample Conc (ppm)	Qual
1044	011F0401.D	011F0402.D	011F0403.D	EDITHP121F_C1-C6_BENZENE.M	NA	NA	NA	NA	0.265	0.265	0.265	0.0	0.265	1	0.265	ND
1049	011F0201.D	011F0202.D	011F0203.D	EDITHP121F_C1-C6_BENZENE.M	NA	NA	NA	NA	0.265	0.265	0.265	0.0	0.265	1	0.265	ND
1186	011F0201.D	011F0202.D	011F0203.D	EDITHP121F_C1-C6_BENZENE.M	NA	NA	NA	NA	0.265	0.265	0.265	0.0	0.265	1	0.265	ND
1308	011F0601.D	011F0602.D	011F0603.D	EDITHP121F_C1-C6_BENZENE.M	NA	NA	NA	NA	0.265	0.265	0.265	0.0	0.265	1	0.265	ND
1310	011F0301.D	011F0302.D	011F0303.D	EDITHP121F_C1-C6_BENZENE.M	NA	NA	NA	NA	0.265	0.265	0.265	0.0	0.265	1	0.265	ND
1324	011F0401.D	011F0402.D	011F0403.D	EDITHP121F_C1-C6_BENZENE.M	NA	NA	NA	NA	0.265	0.265	0.265	0.0	0.265	1	0.265	ND
1334	011F0301.D	011F0302.D	011F0303.D	EDITHP121F_C1-C6_BENZENE.M	NA	NA	NA	NA	0.265	0.265	0.265	0.0	0.265	1	0.265	ND
1340	011F0101.D	011F0102.D	011F0103.D	EDITHP121F_C1-C6_BENZENE.M	NA	NA	NA	NA	0.265	0.265	0.265	0.0	0.265	1	0.265	ND
1453	011F0501.D	011F0502.D	011F0503.D	EDITHP121F_C1-C6_BENZENE.M	NA	NA	NA	NA	0.265	0.265	0.265	0.0	0.265	1	0.265	ND
zero air blank	003F3501.D	003F3502.D	003F3503.D	EDITHP121F_C1-C6_BENZENE.M	NA	NA	NA	NA	0.265	0.265	0.265	0.0	0.265	1	0.265	ND
zero air blank	003F2501.D	003F2502.D	003F2503.D	EDITHP121F_C1-C6_BENZENE.M	NA	NA	NA	NA	0.265	0.265	0.265	0.0	0.265	1	0.265	ND

Company	METCO Environmental
Analyst	TBO
Parameters	EPA Method 18-Type

Client #	14-388 (OH)
Job #	1214-29
# Samples	9 Canisters

MDL 0.265 (ppm)
LOQ 5.01 (ppm)
Compound C4 as Butane

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Sample Conc (ppm)	Qual
1044	011F0401.D	011F0402.D	011F0403.D	EDITHP121F_C1-C6_BENZENE.M	0.265	0.265	0.265	0.0	0.265	1	0.265	ND
1049	011F0201.D	011F0202.D	011F0203.D	EDITHP121F_C1-C6_BENZENE.M	0.265	0.265	0.265	0.0	0.265	1	0.265	ND
1186	011F0201.D	011F0202.D	011F0203.D	EDITHP121F_C1-C6_BENZENE.M	0.265	0.265	0.265	0.0	0.265	1	0.265	ND
1308	011F0601.D	011F0602.D	011F0603.D	EDITHP121F_C1-C6_BENZENE.M	0.265	0.265	0.265	0.0	0.265	1	0.265	ND
1310	011F0301.D	011F0302.D	011F0303.D	EDITHP121F_C1-C6_BENZENE.M	0.265	0.265	0.265	0.0	0.265	1	0.265	ND
1324	011F0401.D	011F0402.D	011F0403.D	EDITHP121F_C1-C6_BENZENE.M	0.265	0.265	0.265	0.0	0.265	1	0.265	ND
1334	011F0301.D	011F0302.D	011F0303.D	EDITHP121F_C1-C6_BENZENE.M	0.265	0.265	0.265	0.0	0.265	1	0.265	ND
1340	011F0101.D	011F0102.D	011F0103.D	EDITHP121F_C1-C6_BENZENE.M	0.265	0.265	0.265	0.0	0.265	1	0.265	ND
1453	011F0501.D	011F0502.D	011F0503.D	EDITHP121F_C1-C6_BENZENE.M	0.265	0.265	0.265	0.0	0.265	1	0.265	ND
zero air blank	003F3501.D	003F3502.D	003F3503.D	EDITHP121F_C1-C6_BENZENE.M	0.265	0.265	0.265	0.0	0.265	1	0.265	ND
zero air blank	003F2501.D	003F2502.D	003F2503.D	EDITHP121F_C1-C6_BENZENE.M	0.265	0.265	0.265	0.0	0.265	1	0.265	ND

Company	METCO Environmental
Analyst	TBO
Parameters	EPA Method 18-Type

Client #	14-388 (OH)
Job #	1214-29
# Samples	9 Canisters

MDL 0.294 (ppm)
LOQ 5.00 (ppm)
Compound Pentane

Lower Curve Limit 5.00 (ppm)
Upper Curve Limit 5,200 (ppm)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Sample Conc (ppm)	Qual
1044	011F0401.D	011F0402.D	011F0403.D	EDITHP121F_C1-C6_BENZENE.M	NA	NA	NA	NA	0.294	0.294	0.294	0.0	0.294	1	0.294	ND
1049	011F0201.D	011F0202.D	011F0203.D	EDITHP121F_C1-C6_BENZENE.M	NA	NA	NA	NA	0.294	0.294	0.294	0.0	0.294	1	0.294	ND
1186	011F0201.D	011F0202.D	011F0203.D	EDITHP121F_C1-C6_BENZENE.M	NA	NA	NA	NA	0.294	0.294	0.294	0.0	0.294	1	0.294	ND
1308	011F0601.D	011F0602.D	011F0603.D	EDITHP121F_C1-C6_BENZENE.M	NA	NA	NA	NA	0.294	0.294	0.294	0.0	0.294	1	0.294	ND
1310	011F0301.D	011F0302.D	011F0303.D	EDITHP121F_C1-C6_BENZENE.M	NA	NA	NA	NA	0.294	0.294	0.294	0.0	0.294	1	0.294	ND
1324	011F0401.D	011F0402.D	011F0403.D	EDITHP121F_C1-C6_BENZENE.M	NA	NA	NA	NA	0.294	0.294	0.294	0.0	0.294	1	0.294	ND
1334	011F0301.D	011F0302.D	011F0303.D	EDITHP121F_C1-C6_BENZENE.M	NA	NA	NA	NA	0.294	0.294	0.294	0.0	0.294	1	0.294	ND
1340	011F0101.D	011F0102.D	011F0103.D	EDITHP121F_C1-C6_BENZENE.M	NA	NA	NA	NA	0.294	0.294	0.294	0.0	0.294	1	0.294	ND
1453	011F0501.D	011F0502.D	011F0503.D	EDITHP121F_C1-C6_BENZENE.M	NA	NA	NA	NA	0.294	0.294	0.294	0.0	0.294	1	0.294	ND
zero air blank	003F3501.D	003F3502.D	003F3503.D	EDITHP121F_C1-C6_BENZENE.M	NA	NA	NA	NA	0.294	0.294	0.294	0.0	0.294	1	0.294	ND
zero air blank	003F2501.D	003F2502.D	003F2503.D	EDITHP121F_C1-C6_BENZENE.M	NA	NA	NA	NA	0.294	0.294	0.294	0.0	0.294	1	0.294	ND

Company	METCO Environmental
Analyst	TBO
Parameters	EPA Method 18-Type

Client #	14-388 (OH)
Job #	1214-29
# Samples	9 Canisters

MDL 0.294 (ppm)
LOQ 5.00 (ppm)
Compound C5 as Pentane

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Sample Conc (ppm)	Qual
1044	011F0401.D	011F0402.D	011F0403.D	EDITHP121F_C1-C6_BENZENE.M	0.294	0.294	0.294	0.0	0.294	1	0.294	ND
1049	011F0201.D	011F0202.D	011F0203.D	EDITHP121F_C1-C6_BENZENE.M	0.294	0.294	0.294	0.0	0.294	1	0.294	ND
1186	011F0201.D	011F0202.D	011F0203.D	EDITHP121F_C1-C6_BENZENE.M	0.294	0.294	0.294	0.0	0.294	1	0.294	ND
1308	011F0601.D	011F0602.D	011F0603.D	EDITHP121F_C1-C6_BENZENE.M	0.294	0.294	0.294	0.0	0.294	1	0.294	ND
1310	011F0301.D	011F0302.D	011F0303.D	EDITHP121F_C1-C6_BENZENE.M	0.294	0.294	0.294	0.0	0.294	1	0.294	ND
1324	011F0401.D	011F0402.D	011F0403.D	EDITHP121F_C1-C6_BENZENE.M	0.458	0.294	0.294	31.3	0.349	1	0.349	J
1334	011F0301.D	011F0302.D	011F0303.D	EDITHP121F_C1-C6_BENZENE.M	0.294	0.294	0.294	0.0	0.294	1	0.294	ND
1340	011F0101.D	011F0102.D	011F0103.D	EDITHP121F_C1-C6_BENZENE.M	0.294	0.294	0.294	0.0	0.294	1	0.294	ND
1453	011F0501.D	011F0502.D	011F0503.D	EDITHP121F_C1-C6_BENZENE.M	0.294	0.294	0.294	0.0	0.294	1	0.294	ND
zero air blank	003F3501.D	003F3502.D	003F3503.D	EDITHP121F_C1-C6_BENZENE.M	0.294	0.294	0.294	0.0	0.294	1	0.294	ND
zero air blank	003F2501.D	003F2502.D	003F2503.D	EDITHP121F_C1-C6_BENZENE.M	0.294	0.294	0.294	0.0	0.294	1	0.294	ND

Company	METCO Environmental
Analyst	TBO
Parameters	EPA Method 18-Type

Client #	14-388 (OH)
Job #	1214-29
# Samples	9 Canisters

MDL 0.236 (ppm)
LOQ 5.01 (ppm)
Compound Hexane

Lower Curve Limit 5.01 (ppm)
Upper Curve Limit 4,100 (ppm)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Sample Conc (ppm)	Qual
1044	011F0401.D	011F0402.D	011F0403.D	EDITHP121F_C1-C6_BENZENE.M	NA	NA	NA	NA	0.236	0.236	0.236	0.0	0.236	1	0.236	ND
1049	011F0201.D	011F0202.D	011F0203.D	EDITHP121F_C1-C6_BENZENE.M	NA	NA	NA	NA	0.236	0.236	0.236	0.0	0.236	1	0.236	ND
1186	011F0201.D	011F0202.D	011F0203.D	EDITHP121F_C1-C6_BENZENE.M	NA	NA	NA	NA	0.236	0.236	0.236	0.0	0.236	1	0.236	ND
1308	011F0601.D	011F0602.D	011F0603.D	EDITHP121F_C1-C6_BENZENE.M	NA	NA	NA	NA	0.236	0.236	0.236	0.0	0.236	1	0.236	ND
1310	011F0301.D	011F0302.D	011F0303.D	EDITHP121F_C1-C6_BENZENE.M	NA	NA	NA	NA	0.236	0.236	0.236	0.0	0.236	1	0.236	ND
1324	011F0401.D	011F0402.D	011F0403.D	EDITHP121F_C1-C6_BENZENE.M	NA	NA	NA	NA	0.236	0.236	0.236	0.0	0.236	1	0.236	ND
1334	011F0301.D	011F0302.D	011F0303.D	EDITHP121F_C1-C6_BENZENE.M	NA	NA	NA	NA	0.236	0.236	0.236	0.0	0.236	1	0.236	ND
1340	011F0101.D	011F0102.D	011F0103.D	EDITHP121F_C1-C6_BENZENE.M	NA	NA	NA	NA	0.236	0.236	0.236	0.0	0.236	1	0.236	ND
1453	011F0501.D	011F0502.D	011F0503.D	EDITHP121F_C1-C6_BENZENE.M	NA	NA	NA	NA	0.236	0.236	0.236	0.0	0.236	1	0.236	ND
zero air blank	003F3501.D	003F3502.D	003F3503.D	EDITHP121F_C1-C6_BENZENE.M	NA	NA	NA	NA	0.236	0.236	0.236	0.0	0.236	1	0.236	ND
zero air blank	003F2501.D	003F2502.D	003F2503.D	EDITHP121F_C1-C6_BENZENE.M	NA	NA	NA	NA	0.236	0.236	0.236	0.0	0.236	1	0.236	ND

Company	METCO Environmental
Analyst	TBO
Parameters	EPA Method 18-Type

Client #	14-388 (OH)
Job #	1214-29
# Samples	9 Canisters

MDL 0.236 (ppm)
LOQ 5.01 (ppm)
Compound C6 as Hexane

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Sample Conc (ppm)	Qual
1044	011F0401.D	011F0402.D	011F0403.D	EDITHP121F_C1-C6_BENZENE.M	0.236	0.236	0.236	0.0	0.236	1	0.236	ND
1049	011F0201.D	011F0202.D	011F0203.D	EDITHP121F_C1-C6_BENZENE.M	0.236	0.236	0.236	0.0	0.236	1	0.236	ND
1186	011F0201.D	011F0202.D	011F0203.D	EDITHP121F_C1-C6_BENZENE.M	0.236	0.236	0.236	0.0	0.236	1	0.236	ND
1308	011F0601.D	011F0602.D	011F0603.D	EDITHP121F_C1-C6_BENZENE.M	0.236	0.236	0.236	0.0	0.236	1	0.236	ND
1310	011F0301.D	011F0302.D	011F0303.D	EDITHP121F_C1-C6_BENZENE.M	0.236	0.236	0.236	0.0	0.236	1	0.236	ND
1324	011F0401.D	011F0402.D	011F0403.D	EDITHP121F_C1-C6_BENZENE.M	0.236	0.236	0.236	0.0	0.236	1	0.236	ND
1334	011F0301.D	011F0302.D	011F0303.D	EDITHP121F_C1-C6_BENZENE.M	0.236	0.236	0.236	0.0	0.236	1	0.236	ND
1340	011F0101.D	011F0102.D	011F0103.D	EDITHP121F_C1-C6_BENZENE.M	0.236	0.236	0.236	0.0	0.236	1	0.236	ND
1453	011F0501.D	011F0502.D	011F0503.D	EDITHP121F_C1-C6_BENZENE.M	0.236	0.236	0.236	0.0	0.236	1	0.236	ND
zero air blank	003F3501.D	003F3502.D	003F3503.D	EDITHP121F_C1-C6_BENZENE.M	0.236	0.236	0.236	0.0	0.236	1	0.236	ND
zero air blank	003F2501.D	003F2502.D	003F2503.D	EDITHP121F_C1-C6_BENZENE.M	0.236	0.236	0.236	0.0	0.236	1	0.236	ND

Company	METCO Environmental
Analyst	TBO
Parameters	EPA Method 18-Type

Client #	14-388 (OH)
Job #	1214-29
# Samples	9 Canisters

MDL 0.515 (ppm)
LOQ 5.15 (ppm)
Compound Benzene

Lower Curve Limit 5.15 (ppm)
Upper Curve Limit 531 (ppm)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Sample Conc (ppm)	Qual
1044	011F0401.D	011F0402.D	011F0403.D	EDITHP121F_C1-C6_BENZENE.M	NA	NA	NA	NA	0.515	0.515	0.515	0.0	0.515	1	0.515	ND
1049	011F0201.D	011F0202.D	011F0203.D	EDITHP121F_C1-C6_BENZENE.M	NA	NA	NA	NA	0.515	0.515	0.515	0.0	0.515	1	0.515	ND
1186	011F0201.D	011F0202.D	011F0203.D	EDITHP121F_C1-C6_BENZENE.M	NA	NA	NA	NA	0.515	0.515	0.515	0.0	0.515	1	0.515	ND
1308	011F0601.D	011F0602.D	011F0603.D	EDITHP121F_C1-C6_BENZENE.M	NA	NA	NA	NA	0.515	0.515	0.515	0.0	0.515	1	0.515	ND
1310	011F0301.D	011F0302.D	011F0303.D	EDITHP121F_C1-C6_BENZENE.M	NA	NA	NA	NA	0.515	0.515	0.515	0.0	0.515	1	0.515	ND
1324	011F0401.D	011F0402.D	011F0403.D	EDITHP121F_C1-C6_BENZENE.M	NA	NA	NA	NA	0.515	0.515	0.515	0.0	0.515	1	0.515	ND
1334	011F0301.D	011F0302.D	011F0303.D	EDITHP121F_C1-C6_BENZENE.M	NA	NA	NA	NA	0.515	0.515	0.515	0.0	0.515	1	0.515	ND
1340	011F0101.D	011F0102.D	011F0103.D	EDITHP121F_C1-C6_BENZENE.M	NA	NA	NA	NA	0.515	0.515	0.515	0.0	0.515	1	0.515	ND
1453	011F0501.D	011F0502.D	011F0503.D	EDITHP121F_C1-C6_BENZENE.M	NA	NA	NA	NA	0.515	0.515	0.515	0.0	0.515	1	0.515	ND
zero air blank	003F3501.D	003F3502.D	003F3503.D	EDITHP121F_C1-C6_BENZENE.M	NA	NA	NA	NA	0.515	0.515	0.515	0.0	0.515	1	0.515	ND
zero air blank	003F2501.D	003F2502.D	003F2503.D	EDITHP121F_C1-C6_BENZENE.M	NA	NA	NA	NA	0.515	0.515	0.515	0.0	0.515	1	0.515	ND

Company	METCO Environmental
Analyst	TBO
Parameters	EPA Method 18-Type

Client #	14-388 (OH)
Job #	1214-29
# Samples	9 Canisters

MDL 0.134 (ppm)
LOQ 1.25 (ppm)
Compound Propylene

Lower Curve Limit 1.25 (ppm)
Upper Curve Limit 4,200 (ppm)

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Ret Time (min)	Ret Time (min)	Ret Time (min)	% Diff Ret	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Tank Dilution	Sample Conc (ppm)	Qual
1044	022B2801.D	022B2802.D	022B2803.D	EDITHP052R_HRVOC_PROPYLENE.M	2.03	2.03	2.03	0.1	2,052	2,059	2,056	0.2	2,055	501	1	1,029,766	
1049	024B3001.D	024B3002.D	024B3003.D	EDITHP052R_HRVOC_PROPYLENE.M	2.03	2.03	2.03	0.1	2,054	2,052	2,045	0.3	2,050	501	1	1,027,297	
1186	020B2601.D	020B2602.D	020B2603.D	EDITHP052R_HRVOC_PROPYLENE.M	2.03	2.03	2.03	0.0	2,008	2,019	2,031	0.6	2,019	501	1	1,011,724	
1308	032B3401.D	032B3402.D	032B3403.D	EDITHP052R_HRVOC_PROPYLENE.M	2.02	2.02	2.02	0.1	1,996	1,986	1,986	0.3	1,989	501	1	996,726	
1310	021B2701.D	021B2702.D	021B2703.D	EDITHP052R_HRVOC_PROPYLENE.M	2.04	2.04	2.04	0.0	1,979	1,974	1,970	0.2	1,974	501	1	989,116	
1324	029B3201.D	029B3202.D	029B3203.D	EDITHP052R_HRVOC_PROPYLENE.M	2.03	2.02	2.03	0.2	616	607	612	0.8	612	501	2.376	728,208	
1334	025B3101.D	025B3102.D	025B3103.D	EDITHP052R_HRVOC_PROPYLENE.M	2.03	2.02	2.02	0.2	2,106	2,083	2,084	0.7	2,091	501	1	1,047,510	
1340	023B2901.D	023B2902.D	023B2903.D	EDITHP052R_HRVOC_PROPYLENE.M	2.03	2.03	2.03	0.1	2,084	2,082	2,091	0.3	2,086	501	1	1,044,995	
1453	030B3301.D	030B3302.D	030B3303.D	EDITHP052R_HRVOC_PROPYLENE.M	2.03	2.03	2.03	0.1	621	623	629	0.7	624	501	1.859	581,598	
zero air blank	019B2501.D	019B2502.D	019B2503.D	EDITHP052R_HRVOC_PROPYLENE.M	2.11	2.13	2.14	1.0	0.445	0.383	0.356	12.7	0.395	1	1	0.395	J
zero air blank	019B3801.D	019B3802.D	019B3803.D	EDITHP052R_HRVOC_PROPYLENE.M	2.12	2.13	2.14	0.7	0.247	0.207	0.201	13.3	0.218	1	1	0.218	J

Company	METCO Environmental
Analyst	TBO
Parameters	EPA Method 18-Type

Client #	14-388 (OH)
Job #	1214-29
# Samples	9 Canisters

MDL 0.231 (ppm)
LOQ 5.02 (ppm)
Compound Total VOC as Propane

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Sample Conc (ppm)	Qual
1044	006F2801.D	006F2802.D	006F2803.D	EDITHP121F_C1-C6_BENZENE.M	1,939	1,946	1,946	0.2	1,944	501	973,845	
1049	008F3001.D	008F3002.D	008F3003.D	EDITHP121F_C1-C6_BENZENE.M	1,930	1,936	1,939	0.3	1,935	501	969,409	
1186	004F2601.D	004F2602.D	004F2603.D	EDITHP121F_C1-C6_BENZENE.M	1,905	1,907	1,916	0.3	1,910	501	956,680	
1308	016F3401.D	016F3402.D	016F3403.D	EDITHP121F_C1-C6_BENZENE.M	1,911	1,908	1,898	0.4	1,905	501	954,655	
1310	005F2701.D	005F2702.D	005F2703.D	EDITHP121F_C1-C6_BENZENE.M	1,864	1,863	1,864	0.0	1,863	501	933,575	
1324	013F3201.D	013F3202.D	013F3203.D	EDITHP121F_C1-C6_BENZENE.M	Please see Summary page and Narrative Summary							
1334	009F3101.D	009F3102.D	009F3103.D	EDITHP121F_C1-C6_BENZENE.M	1,989	1,989	1,982	0.2	1,987	501	995,354	
1340	007F2901.D	007F2902.D	007F2903.D	EDITHP121F_C1-C6_BENZENE.M	1,970	1,966	1,974	0.2	1,970	501	987,015	
1453	014F3301.D	014F3302.D	014F3303.D	EDITHP121F_C1-C6_BENZENE.M	Please see Summary page and Narrative Summary							
zero air blank	003F2501.D	003F2502.D	003F2503.D	EDITHP121F_C1-C6_BENZENE.M	1.80	1.80	1.72	3.1	1.77	1	1.77	J

Company	METCO Environmental
Analyst	TBO
Parameters	EPA Method 18-Type

Client #	14-388 (OH)
Job #	1214-29
# Samples	9 Canisters

MDL 0.134 (ppm)
LOQ 1.25 (ppm)
Compound Total VOC as Propylene

Sample ID	Lab ID # 1	Lab ID # 2	Lab ID # 3	Analysis Method	Conc # 1 (ppm)	Conc # 2 (ppm)	Conc # 3 (ppm)	% Diff Conc	Avg Conc (ppm)	DF	Tank Dilution	Sample Conc (ppm)	Qual
1044	022B2801.D	022B2802.D	022B2803.D	EDITHP052R_HRVOC_PROPYLENE.M	2,060	2,067	2,064	0.2	2,063	501	1	1,033,765	
1049	024B3001.D	024B3002.D	024B3003.D	EDITHP052R_HRVOC_PROPYLENE.M	2,062	2,060	2,053	0.3	2,058	501	1	1,031,245	
1186	020B2601.D	020B2602.D	020B2603.D	EDITHP052R_HRVOC_PROPYLENE.M	2,017	2,027	2,040	0.6	2,028	501	1	1,016,219	
1308	032B3401.D	032B3402.D	032B3403.D	EDITHP052R_HRVOC_PROPYLENE.M	2,004	1,994	1,994	0.3	1,997	501	1	1,000,640	
1310	021B2701.D	021B2702.D	021B2703.D	EDITHP052R_HRVOC_PROPYLENE.M	1,987	1,982	1,978	0.2	1,982	501	1	993,076	
1324	029B3201.D	029B3202.D	029B3203.D	EDITHP052R_HRVOC_PROPYLENE.M	616	607	612	0.8	612	501	2.376	728,209	
1334	025B3101.D	025B3102.D	025B3103.D	EDITHP052R_HRVOC_PROPYLENE.M	2,114	2,091	2,092	0.7	2,099	501	1	1,051,610	
1340	023B2901.D	023B2902.D	023B2903.D	EDITHP052R_HRVOC_PROPYLENE.M	2,092	2,090	2,099	0.3	2,094	501	1	1,049,083	
1453	030B3301.D	030B3302.D	030B3303.D	EDITHP052R_HRVOC_PROPYLENE.M	621	623	629	0.7	624	501	1.859	581,601	
zero air blank	019B2501.D	019B2502.D	019B2503.D	EDITHP052R_HRVOC_PROPYLENE.M	0.445	0.383	0.356	12.7	0.395	1	1	0.395	J
zero air blank	019B3801.D	019B3802.D	019B3803.D	EDITHP052R_HRVOC_PROPYLENE.M	0.247	0.207	0.201	13.3	0.218	1	1	0.218	J

Company	METCO Environmental
Analyst	JKG
Parameters	Canister Pressurizations

Client #	14-388 (OH)
Job #	1214-29
# Samples	2 of 9

				Pre-sample			Post-sample			Final		
Can #	Press. Factor	Canister Size	Sample Vol (L) at STP	Temp Field (°F)	P_{bar} Field (mmHg)	Gauge Field (mmHg)	Temp Lab/Field (°F)	P_{bar} Lab/Field (mmHg)	Gauge Lab/Field (mmHg)	Temp Lab (°F)	P_{bar} Lab (mmHg)	Gauge Lab (mmHg)
1453	1.859	6.00	5.30	68.5	762.5	-752.5	71.0	752.9	-67.8	71.0	752.9	502.0
1324	2.376	6.00	4.26	68.5	762.5	-752.5	70.5	752.1	-200.4	70.5	759.7	527.4

The canister pressurization factors are calculated using the following formula:

$$\frac{\frac{GaugeLab + PbarLab}{TempLab + 460}}{\frac{GaugeLab\ /\ Field + PbarLab\ /\ Field}{TempLab\ /\ Field + 460} - \frac{GaugeField + PbarField}{TempField + 460}}$$

Narrative Summary



Enthalpy Analytical Narrative Summary

Company	METCO Environmental	**Client #**	14-388 (OH)
Analyst	TBO	**Job #**	1214-29
Parameters	EPA Method 3C	**# Samples**	25 Tedlar Bags

Custody	Summer Mims received 3 of the sample bags on 12/18/14. Bryan Tyler received the other 22 bags on 12/23/14 and 12/24/14. All the bags were received at ambient temperature and in good condition, after being relinquished by METCO Environmental. Prior to, during, and after analysis, the samples were kept under lock with access only to authorized personnel by Enthalpy Analytical, Inc.
Analysis	The samples were analyzed for hydrogen, oxygen, nitrogen, carbon monoxide, methane, and carbon dioxide using the analytical procedures in EPA Method 3C, Determination of Carbon Dioxide, Methane, Nitrogen, and Oxygen from Stationary Sources. The samples and standards were introduced directly to the column using an automated multi-port Valco gas sampling valve equipped with a stainless steel loop. All target analytes were referenced to certified gas phase standards. The Agilent Technologies Model 6890N, Gas Chromatograph "Betty" (S/N US10430048) was used for these analyses.
Calibration	The calibration curve is included in the Raw Data section of this report. The data analysis method is referenced in the Analysis Method column on the Detailed Results page. For each calibration curve used, the first page of the curve contains all method specific parameters (i.e., curve type, origin, weight, etc.) used to quantify the samples. The calibration curve section also includes a table with the Retention Time (RetTime), Level (Lvl), Amount (corresponding units), Area, Response Factor (Amt/Area) and the analyte Name. The calibration table is used to identify (by retention time) and quantify each target compound.
Chromatographic Conditions	The acquisition method BETTYP017_CAL.M is included in the Raw Data section of this report.
QC Notes	The analysis of the laboratory helium blank did not contain any of the analytes of interest at levels above the detection limit.

Enthalpy Analytical Narrative Summary
(continued)

Reporting Notes

The analysis of the primary bag for ***24" TO Outlet Stack Condition I Run 3*** was compromised due to a hardware issue at the instrument at the time of analysis. The back-up bag for this sample was analyzed and has been reported in its place.

These analyses met the requirements of the TNI Standard. Any deviations from the requirements of the reference method or TNI Standard have been stated above.

The results presented in this report are representative of the samples as provided to the laboratory.

Enthalpy Analytical Narrative Summary

Company	METCO Environmental	**Client #**	14-388 (OH)
Analyst	JKG	**Job #**	1214-29
Parameters	ASTM D1946-90	**# Samples**	9 Canisters

Custody

Summer Mims received the samples on 12/29/14 after being relinquished by METCO Environmental. The samples were received at ambient temperature in good condition. Prior to, during, and after analysis, the samples were kept under lock with access only to authorized personnel by Enthalpy Analytical, Inc.

Analysis

The samples were analyzed for hydrogen, oxygen, nitrogen, carbon monoxide, methane, and carbon dioxide using the analytical procedures in ASTM D1946 – 90 (Reapproved 2000), Standard Practice for Analysis of Reformed Gas by Gas Chromatography.

The samples were analyzed following the procedures in Section 8.0, Procedure.

All samples and standards were introduced directly to the column using an automated multi-port Valco gas sampling valve equipped with a stainless steel loop. All analytes were referenced to certified gas phase standards.

Upon receipt, canister pressures are normally measured and recorded. The canisters are then pressurized and a dilution ratio is calculated for each can. These canisters were received at high pressure, so no laboratory pressurization or dilution was needed.

The Agilent Technologies Model 6890N, Gas Chromatograph "Betty" (S/N US10430048) was used for these analyses.

Calibration

The calibration data is included in the Raw Data section of this report. The data analysis method is referenced in the Analysis Method column on the Detailed Results page.

For each calibration curve used, the first page of the curve contains all method specific parameters (i.e., curve type, origin, weight, etc.) used to quantify the samples. The calibration curve section also includes a table with the Retention Time (RetTime), Level (Lvl), Amount (corresponding units), Area, Response Factor (Amt/Area) and the analyte Name. The calibration table is used to identify (by retention time) and quantify each target compound.

Enthalpy Analytical Narrative Summary
(continued)

Chromatographic Conditions	The acquisition method (GC142P133_CAL.M) is included in the Raw Data section of this report.
QC Notes	The analysis of the laboratory helium blank did not contain any of analytes of interest at levels above the LOQ. Nitrogen was the only analyte present in this blank with a concentration above the MDL.
Reporting Notes	These analyses met the requirements of the TNI Standard. Any deviations from the requirements of the reference method or TNI Standard have been stated above. The results presented in this report are representative of the samples as provided to the laboratory.

Enthalpy Analytical Narrative Summary

Company	METCO Environmental
Analyst	JKG
Parameters	EPA Method 18-Type

Client #	14-388 (OH)
Job #	1214-29
# Samples	9 Canisters

Custody

Summer Mims received the samples on 12/29/14 after being relinquished by METCO Environmental. The samples were received at ambient temperature in good condition. Prior to, during, and after analysis, the samples were kept under lock with access only to authorized personnel by Enthalpy Analytical, Inc.

Analysis

The samples were analyzed for methane, ethane, propane, butane, pentane, hexane, others as Cx compounds, benzene, propylene, TVOC as propane, and TVOC as propylene using the general analytical procedures in EPA Method 18, Measurement of Gaseous Organic Compound Emissions by Gas Chromatography (40 CFR Part 60, Appendix A).

Upon receipt, canister pressures are normally measured and recorded. The canisters are then pressurized and a dilution ratio is calculated for each can. These canisters were received at high pressure, so no laboratory pressurization or dilution ratio was initially needed. Two of the canisters required reanalyses, and those cans did need to be pressurized before the reanalyses.

Each of these cans did require that an aliquot be removed and diluted for additional analysis, to bring propylene results within the instrument's calibration range.

All samples and standards were introduced directly to the column using an automated multi-port Valco gas sampling valve equipped with a stainless steel loop. The C_1-C_6 n-alkanes, benzene and propylene were referenced to certified gas phase standards.

The n-alkane retention times were used to generate retention time windows for other hydrocarbons, which were reported 'as' the nearest n-alkane. For example, the areas for all peaks between 3.7 and 5.2 minutes (except the n-pentane peak) were summed, the total referenced to the calibrated n-pentane response, and then the result is labeled 'C5 as pentane'.

TVOC as propane results were determined by referencing the areas for all peaks to the calibrated propane response, and summing the results.

Enthalpy Analytical Narrative Summary
(continued)

Analysis (continued)	TVOC as propylene results were determined by referencing the areas for all peaks to the calibrated propylene response, and summing the results. The Agilent Technologies Model 7890A, Gas Chromatograph "Edith" (S/N CN10722006) was used for these analyses.
Chromatographic Conditions	The acquisition method GC139P039_HRVOC.M is included in the Raw Data section of this report.
Calibration	The calibration data is included in the Raw Data section of this report. The data analysis method is referenced in the Analysis Method column on the Detailed Results page. For each calibration curve used, the first page of the curve contains all method specific parameters (i.e., curve type, origin, weight, etc.) used to quantify the samples. The calibration curve section also includes a table with the Retention Time (RetTime), Level (Lvl), Amount (corresponding units), Area, Response Factor (Amt/Area) and the analyte Name. The calibration table is used to identify (by retention time) and quantify each target compound.
QC Notes	No target analytes were detected in the analysis of the laboratory zero air blank at concentrations greater than the LOQ.
Reporting Notes	The reanalyses for propylene in canisters 1324 and 1453 have been used as the results for the C3 as propane results, using a ratio of the response values for propane and propylene, thus these values are calculated on the summary page and not on the detailed results page. TVOC as propane was similarly determined. These analytical results are reported on a wet basis. The user of this report should determine the percent moisture in the sample and correct the reported value to ppmvd as appropriate. The results presented in this report are representative of the samples as provided to the laboratory.

General Reporting Notes

The following are general reporting notes that are applicable to all Enthalpy Analytical, Inc. data reports, unless specifically noted otherwise.

- Any analysis which refers to the method as ***"Type"*** represents a planned deviation from the reference method. For instance a Hydrogen Sulfide assay from a Tedlar bag would be labeled as "EPA Method 16-Type" because Tedlar bags are not mentioned as one of the collection options in EPA Method 16.
- The acronym ***MDL*** represents the Minimum Detection Limit. Below this value the laboratory cannot determine the presence of the analyte of interest reliably.
- The acronym ***LOQ*** represents the Limit of Quantification. Below this value the laboratory cannot quantitate the analyte of interest within the criteria of the method.
- The acronym ***ND*** following a value indicates a non-detect or analytical result below the MDL.
- The letter ***J*** in the Qualifier or Flag column in the results indicates that the value is between the MDL and the LOQ. The laboratory can positively identify the analyte of interest as present, but the value should be considered an estimate.
- The letter ***E*** in the Qualifier or Flag column indicates an analytical result exceeding 100% of the highest calibration point. The associated value should be considered as an estimate.
- The acronym ***DF*** represents Dilution Factor. This number represents dilution of the sample during the preparation and/or analysis process. The analytical result taken from a laboratory instrument is multiplied by the DF to determine the final undiluted sample results.
- The addition of ***MS*** to the Sample ID represents a Matrix Spike. An aliquot of an actual sample is spiked with a known amount of analyte so that a percent recovery value can be determined. The MS analysis indicates what effect the sample matrix may have on the target analyte, i.e. whether or not anything in the sample matrix interferes with the analysis of the analyte(s).
- The addition of ***MSD*** to the Sample ID represents a Matrix Spike Duplicate. Prepared in the same manner as a MS, the use of duplicate matrix spikes allows further confirmation of laboratory quality by showing the consistency of results gained by performing the same steps multiple times.
- The addition of ***LD*** to the Sample ID represents a Laboratory Duplicate. The analyst prepares an additional aliquot of sample for testing and the results of the duplicate analysis are compared to the initial result. The result should have a difference value of within 10% of the initial result (if the results of the original analysis are greater than the LOQ).
- The addition of ***AD*** to the Sample ID represents an Alternate Dilution. The analyst prepares an additional aliquot at a different dilution factor (usually double the initial factor). This analysis helps confirm that no additional compound is present and coeluting or sharing absorbance with the analyte of interest, as they would have a different response/absorbance than the analyte of interest.

General Reporting Notes

(continued)

- The Sample ID ***LCS*** represents a Laboratory Control Sample. Clean matrix, similar to the client sample matrix, prepared and analyzed by the laboratory using the same reagents, spiking standards and procedures used for the client samples. The LCS is used to assess the control of the laboratory's analytical system. Whenever spikes are prepared for our client projects, two spikes are retained as LCSs. The LCSs are labeled with the associated project number and kept in-house at the appropriate temperature conditions. When the project samples are received for analysis, the LCSs are analyzed to confirm that the analyte could be recovered from the media, separate from the samples which were used on the project and which may have been affected by source matrix, sample collection and/or sample transport.
- **Significant Figures**: Where the reported value is much greater than unity (1.00) in the units expressed, the number is rounded to a whole number of units, rather than to 3 significant figures. For example, a value of 10,456.45 ug catch is rounded to 10,456 ug. There are five significant digits displayed, but no confidence should be placed on more than two significant digits.
- **Manual Integration**: The data systems used for processing will flag manually integrated peaks with an "M". There are several reasons a peak may be manually integrated. These reasons will be identified by the following two letter designations on sample chromatograms, if provided in the report. The peak was ***not integrated*** by the software **"NI"**, the peak was ***integrated incorrectly*** by the software **"II"** or the ***wrong peak*** was integrated by the software **"WP"**. These codes will accompany the analyst's manual integration stamp placed next to the compound name on the chromatogram.

Sample Custody



MECO Environmental

CHAIN OF CUSTODY RECORD

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Job No.: 14-388 (OH)
Job Name: Black Gold Rush
Location: Midland, Tx
Unit: 18" TO Outlet Stack

Project Manager: B. Adams
Project Supervisor: S Lee

Method: 3C

SAMPLE I.D.	DATE	TIME	# OF CONT.	Absorb. Solution	Initial Vol.	SAMPLE ANALYSIS REQUIRED: PART	HCL	CL2	SO2	SO3		Archive	Recovered by	REMARKS (Specific Compounds/Methods)
Cond I														Mol. weight, O_2, CO_2, Methane, N_2, excess air
Run 1 bag	12/19/14	1042	1										S Lee	✓
Run 1 backup bag	↓	↓	1									✓	↓	✓
Run 2 bag		1220	1											✓
Run 2 backup bag		↓	1									✓		✓
Run 3 bag		1340	1											✓
Run 3 backup bag	↓	↓	1									✓		✓

		Date	Time
Samples Received for Transport/Shipment by:		12/19/14	1345
Samples Received for Transport/Shipment by:		12/22/14	1045
Samples Received for Transport/Shipment by:			
Samples Shipped Via:	FED EX → ENTHALPY	12-22-14	1530
Samples Received at Laboratory by:		12/22/14	1530
Samples Analyzed by:	12/23/14 TO 12/24/14 @1000		
Samples Analyzed by:			
Data Checked by:			

MECO Environmental

CHAIN OF CUSTODY RECORD

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Job No.: 14-388 (OH)
Job Name: Black Gold Rush
Location: Midland, Tx
Unit: 18" TO Outlet Stack

Project Manager: B. Adams
Project Supervisor: S Lee

Method: 3C

SAMPLE I.D. Conc. II	DATE	TIME	# OF CONT.	Absorb. Solution	Initial Vol.	SAMPLE ANALYSIS REQUIRED: PART	HCL	CL2	SO2	SO3		Archive	Recovered by	Mol. weight, O2, CO2, Methane, N2, excess air REMARKS (Specific Compounds/Methods)
Run 1 bag	12/19/14	1525	1										S Lee	✓
Run 1 backup bag		↓	1									✓		✓
Run 2 bag		1645	1											✓
Run 2 backup bag		↓	1									✓		✓
Run 3 bag		1805	1											✓
Run 3 backup bag		↓	1									✓		✓
	✓												↓	

Samples Received for Transport/Shipment by:		Date: 12/19/14	Time: 1815
Samples Received for Transport/Shipment by:		Date: 12/21/14	Time: 1045
Samples Received for Transport/Shipment by:		Date:	Time:
Samples Shipped Via:	FED EX → ENTHALPY	Date: 12-22-14	Time: 1530
Samples Received at Laboratory by:		Date: 12/22/14	Time: 1530
Samples Analyzed by:	12/23/14 - 12/24/14 @1000	Date:	Time:
Samples Analyzed by:		Date:	Time:
Data Checked by:		Date:	Time:

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MECO Environmental

CHAIN OF CUSTODY RECORD

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Job No.: 14-388(OH)
Job Name: Black Gold Rush
Location: Midland, Tx
Unit: 18" TO Outlet Stack

Project Manager: B. Adams
Project Supervisor: S. Lee

Method: 30

SAMPLE I.D. Cond III	DATE	TIME	# OF CONT.	Absorb. Solution	Initial Vol.	SAMPLE ANALYSIS REQUIRED: PART	HCL	CL2	SO2	SO3		Archive	Recovered by	REMARKS (Specific Compounds/Methods)
Run 1 bag	12/20/14	1220	1										S. Lee	Mol. weight, O_2, CO_2, Methane, N_2, excess air ✓
Run 1 backup bag	↓	↓	1									✓	↓	✓
Run 2 bag		1340	1											✓
Run 2 backup bag		↓	1									✓		✓ Flat BDT 12/23/14
Run 3 bag		1500	1											✓
Run 3 backup bag	↓	↓	1									✓		✓
													↓	

Samples Received for Transport/Shipment by:		Date:	12/20/14	Time: 1518
Samples Received for Transport/Shipment by:		Date:	12/21/14	Time: 1045
Samples Received for Transport/Shipment by:		Date:		Time:
Samples Shipped Via:	FED EX Priority OS	Date:	12-22-14	Time: 1530
Samples Received at Laboratory by:		Date:	12/22/14	Time: 1530
Samples Analyzed by:	12/23/14 + 12/24/14 @1000	Date:		Time:
Samples Analyzed by:		Date:		Time:
Data Checked by:		Date:		Time:

MEECO Environmental

CHAIN OF CUSTODY RECORD

Page of

Job No.: 14-388 (OH)
Job Name: Black Gold Rush
Location: Midland, Tx
Unit: 18" TO Outlet Stack

Project Manager: B. Adams
Project Supervisor: S Lee

Method: 3C

SAMPLE I.D. Conc IV	DATE	TIME	# OF CONT.	Absorb. Solution	Initial Vol.	SAMPLE ANALYSIS REQUIRED: PART	HCL	CL2	SO2	SO3		Archive	Recovered by	REMARKS (Specific Compounds/Methods): Mol. weight, O2, CO2, Methane, N2, excess air
Run 1 bag	12/20/14	1624	1											✓
Run 1 backup bag	12/20/14	1624	1									✓		✓
Run 2 bag	12/20/14	1743	1											✓
Run 2 backup bag	12/20/14	1743	1									✓		✓
Run 3 bag	12/21/14	1045	1											✓
Run 3 backup bag	12/21/14	1045	1									✓		✓

Samples Received for Transport/Shipment by:		Date: 12/21/14	Time: 1045
Samples Received for Transport/Shipment by:		Date:	Time:
Samples Received for Transport/Shipment by:		Date:	Time:
Samples Shipped Via:	FED EX → ENTHALPY DC	Date: 12-22-14	Time: 1520
Samples Received at Laboratory by:		Date: 12/22/14	Time: 1530
Samples Analyzed by:	12/23/14 12/24/14 @ 1000	Date:	Time:
Samples Analyzed by:		Date:	Time:
Data Checked by:		Date:	Time:

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10 MARCH 2003

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CHAIN OF CUSTODY RECORD

Page of

Job No.: 14-388 (OH)	Project Manager: B. Adams	Method: 18 & 3C	
Job Name: Black Gold Rush	Project Supervisor: S Lee		
Location: Midland, Tx			
Unit: 24" TO Outlet Stack			

SAMPLE I.D.	DATE	TIME	# OF CONT.	Absorb. Solution	Initial Vol.	SAMPLE ANALYSIS REQUIRED: PART	HCL	CL2	SO2	SO3		Archive	Recovered by	REMARKS (Specific Compounds/Methods)
Cond I														Mol. weight, O_2, CO_2, Methane, N_2, excess air
Run 1 bag	12/16/14	1405	1										S. Lee	✓
Run 1 backup bag	↓	1405	1									✓	↓	✓
Run 2 bag		1540	1											✓
Run 2 backup bag		1540	1									✓		✓
Run 3 bag		1700	1											✓
Run 3 backup bag	↓	1700	1									✓	↓	✓

Samples Received for Transport/Shipment by:	FED EX: N. Shappley	Date:	12/17/14	Time:	0900
Samples Received for Transport/Shipment by:		Date:		Time:	
Samples Received for Transport/Shipment by:		Date:		Time:	
Samples Shipped Via:		Date:		Time:	
Samples Received at Laboratory by:	Temp: Ambient	Date:	12-18-14	Time:	915
Samples Analyzed by:		Date:		Time:	
Samples Analyzed by:		Date:		Time:	
Data Checked by:		Date:		Time:	

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CHAIN OF CUSTODY RECORD

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Job No.: 14-388 (OH)
Job Name: Black Gold Rush
Location: Midland, Tx
Unit: 24" TO Outlet Stack

Project Manager: B. Adams
Project Supervisor: S Lee

Method: 3C

SAMPLE I.D. Cond II	DATE	TIME	# OF CONT	Absorb. Solution	Initial Vol.	SAMPLE ANALYSIS REQUIRED: PART	HCL	CL2	SO2	SO3		Archive	Recovered by	REMARKS (Specific Compounds/Methods)
Run 1 bag	12/17/14	1150	1										S Lee	✓ Mol. weight, O2, CO2, Methane, N2, Excess air
✓ Run 1 backup bag		↓	1									✓		✓
Run 2 bag		1310	1											✓
✓ Run 2 backup bag		↓	1									✓		✓
Run 3 bag		1430	1											✓
✓ Run 3 backup bag		↓	1									✓		✓
Run 4 bag		1605	1											✓
✓ Run 4 backup bag		↓	1									✓		✓

Samples Received for Transport/Shipment by:		Date:	12/17/14 Time: 1615
Samples Received for Transport/Shipment by:		Date:	Time:
Samples Received for Transport/Shipment by:		Date:	Time:
Samples Shipped Via:	FED EX 7 ENTHALPY	Date:	12-22-14 Time: 1530
Samples Received at Laboratory by:		Date:	12/22/14 Time: 1530
Samples Analyzed by:	12/23/14 + 12/24/14 @ 1000	Date:	Time:
Samples Analyzed by:		Date:	Time:
Data Checked by:		Date:	Time:

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MEtCO Environmental

CHAIN OF CUSTODY RECORD

Page of

Job No.: 14-388 (OH)
Job Name: Black Gold Rust
Location: Midland, Tx
Unit: 24" TO Outlet Stack

Project Manager: B. Adams
Project Supervisor: S. Lee

Method: 3C

SAMPLE I.D. Conch III	DATE	TIME	# OF CONT	Absorb. Solution	Initial Vol.	SAMPLE ANALYSIS REQUIRED: PART	HCL	CL2	SO2	SO3		Archive	Recovered by	REMARKS (Specific Compounds/Methods)
Run 1 bag	12/17/14	1815	1										S Lee	✓ Mol. weight, O_2, CO_2, Methane, N_2, excess air
✓ Run 1 backup bag	↓	↓	1									✓		✓
Run 2 bag	12/18/14	0910	1											✓
✓ Run 2 backup bag		↓	1									✓		✓
Run 3 bag		1035	1											✓
✓ Run 3 backup bag		↓	1									✓		✓

Samples Received for Transport/Shipment by:		Date: 12/18/14	Time: 1055
Samples Received for Transport/Shipment by:	Shawn Hibbs	Date: ~~12/20~~ 12/21/14	Time: 1045
Samples Received for Transport/Shipment by:		Date:	Time:
Samples Shipped Via:	FED EX → ENTHALPY	Date: 12-22-14	Time: 1530
Samples Received at Laboratory by:		Date: 12/22/14	Time: 1530
Samples Analyzed by:	12/22/14 12/24/14 @ 1500	Date:	Time:
Samples Analyzed by:		Date:	Time:
Data Checked by:		Date:	Time:

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CHAIN OF CUSTODY RECORD

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Job No.: 14-388 (OH)
Job Name: Black Gold Rush
Location: Midland, Tx
Unit: 24" TO Outlet Stack

Project Manager: B. Adams
Project Supervisor: S Lee

Method: 3C

SAMPLE I.D. Cond IV	DATE	TIME	# OF CONT.	Absorb. Solution	Initial Vol.	SAMPLE ANALYSIS REQUIRED: PART	HCL	CL2	SO2	SO3		Archive	Recovered by	REMARKS (Specific Compounds/Methods)
Run 1 bag	12/18/14	1200	1										S Lee	✓
✓ Run 1 backup bag		↓	1									✓		✓
Run 2 bag		1320	1											✓
✓ Run 2 backup bag		↓	1									✓		✓
✓ Run 3 bag		1600	1											✓
✓ Run 3 backup bag	↓	↓	1									✓	↓	✓

Mol. weight, O_2, CO_2, Methane, N_2, excess air

Samples Received for Transport/Shipment by:		Date: 12/18/14	Time: 1615
Samples Received for Transport/Shipment by:		Date: 12/21/14	Time: 1045
Samples Received for Transport/Shipment by:		Date:	Time:
Samples Shipped Via:	FED EX → ENTHALPY	Date: 12-22-14	Time: 1530
Samples Received at Laboratory by:		Date: 12/22/14	Time: 1530
Samples Analyzed by:	12/23/14 & 12/24/14 @1000	Date:	Time:
Samples Analyzed by:		Date:	Time:
Data Checked by:		Date:	Time:

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CHAIN OF CUSTODY RECORD

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Job No.:	14-388 (OH)
Job Name:	Black Gold Rush
Location:	Midland, Tx
Unit:	24" TO Inlet Duct
Project Manager:	B. Adams
Project Supervisor:	S Lee
Method:	18

SAMPLE I.D.	DATE	TIME	# OF CONT.	Absorb. Solution	Initial Vol.	SAMPLE ANALYSIS REQUIRED: PART	HCL	CL2	SO2	SO3	Cl-G, H2S, Benzene, O2	CO, CO2, HHV, propylene	Recovered by	REMARKS (Specific Compounds/Methods)
Canister # 1049 Cond I	12/16/14	1700	1								✓	✓	R Adams	ASTM 1945-03, ASTM D3588-98 ✓
Canister # 1334 Cond II	12/17/14	1440	1								✓	✓	R Adams	✓
Canister # 1324 Cond III	12/18/14	1045	1								✓	✓	R. Adams	✓
Canister # 1453 Cond IV	12/18/14	1610	1								✓	✓	R Adams	✓
Canister # 1308 Cond IV RA	12/17/14	1645	✓								✓	✓	R Adams	✓

Samples Received for Transport/Shipment by:	Brandon Hoffer	Date:	12/19/14
Samples Received for Transport/Shipment by:		Date:	12/21/14
Samples Received for Transport/Shipment by:		Date:	
Samples Shipped Via:		Date:	
Samples Received at Laboratory by:	Temp = Amb	Date:	12-29-14
Samples Analyzed by:		Date:	
Samples Analyzed by:		Date:	
Data Checked by:		Date:	

Time:	1400
Time:	1130 Am
Time:	
Time:	
Time:	
Time:	1400
Time:	
Time:	
Time:	

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10 MARCH 2003

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CHAIN OF CUSTODY RECORD

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Job No.: 14-388 (OH)	Project Manager: B. Adams	Method: 18	
Job Name: Black Gold Rush	Project Supervisor: S Lee		
Location: Midland, Tx			
Unit: 18" TO Inlet Duct			

SAMPLE I.D.	DATE	TIME	# OF CONT.	Absorb. Solution	Initial Vol.	SAMPLE ANALYSIS REQUIRED: PART	HCL	CL2	SO2	SO3	C1-C5, HAP, Benzene, BTEX	CO, CO2, HHV, Propylene	Recovered by	ASTM 1945-03, ASTM D3588-98 REMARKS (Specific Compounds/Methods)
Canister # 1186 Cond I	12/19/14	1350	1								✓	✓	R Adams	✓
Canister # 1310 Cond II	12/19/14	1815	1								✓	✓	R Adams	✓
Canister # 1044 Cond III	12/21/14	1510	1								✓	✓	R Adams	✓
Canister # 1340 Cond IV	12/21/14	1100	1								✓	✓	R Adams	✓

Samples Received for Transport/Shipment by:	Brandon Hopper	Date: 12/21/14	Time: 1130	AM
Samples Received for Transport/Shipment by:		Date:	Time:	
Samples Received for Transport/Shipment by:		Date:	Time:	
Samples Shipped Via:		Date:	Time:	
Samples Received at Laboratory by:	Temp=Amb	Date: 12-29-14	Time: 1400	
Samples Analyzed by:		Date:	Time:	
Samples Analyzed by:		Date:	Time:	
Data Checked by:		Date:	Time:	

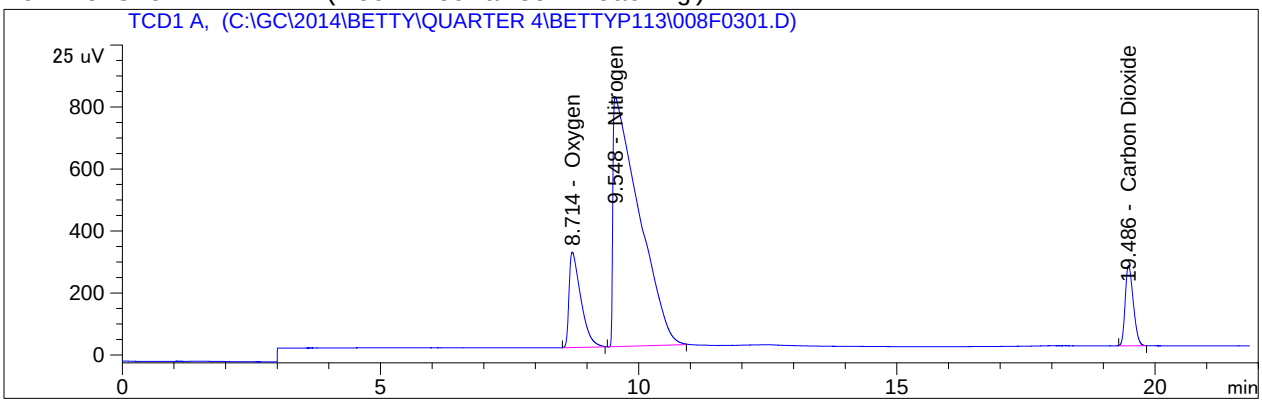
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Raw Data



Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\008F0301.D
Sample Name: 1214-29.Run1.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :   3
Acq. Instrument : Betty                           Location : Vial 8
Injection Date  : 12/22/2014 4:25:05 PM                Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -          -          -         Hydrogen
  8.714 BB     4874.43115 2.99687e-3   14.60805    Oxygen
  9.548 BB     2.80111e4  2.74077e-3   76.77196    Nitrogen
 12.646            -          -          -         Carbon monoxide
 16.456            -          -          -         Methane
 19.486 BB     2814.93896 1.58754e-3    4.46884    Carbon Dioxide

Totals :                                95.84886

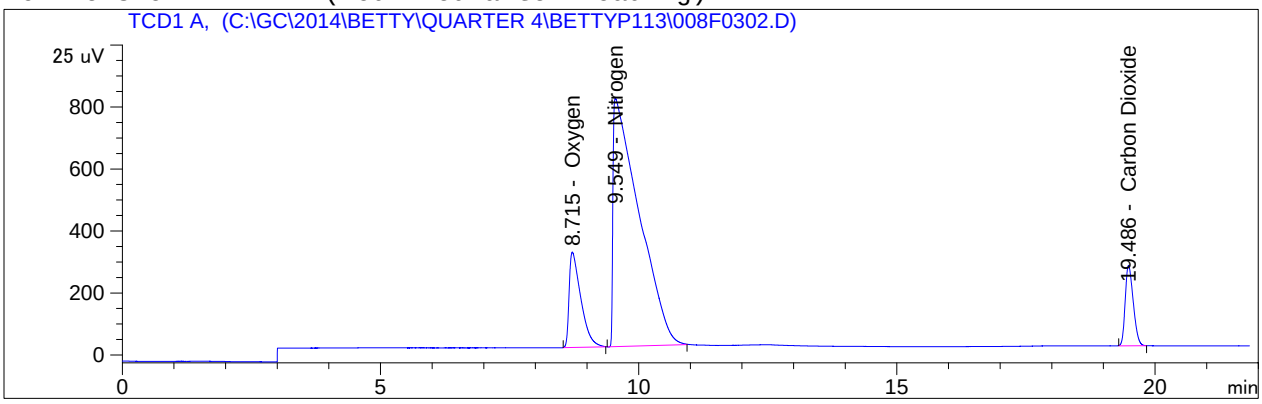

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\008F0302.D
Sample Name: 1214-29.Run1.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :   3
Acq. Instrument : Betty                           Location : Vial 8
Injection Date  : 12/22/2014 4:52:26 PM               Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -          -          -         Hydrogen
  8.715 BB     4838.23340 2.99683e-3   14.49934    Oxygen
  9.549 BB     2.78629e4  2.74076e-3   76.36576    Nitrogen
 12.646            -          -          -         Carbon monoxide
 16.456            -          -          -         Methane
 19.486 BB     2804.09863 1.58750e-3    4.45150    Carbon Dioxide

Totals :                                95.31660

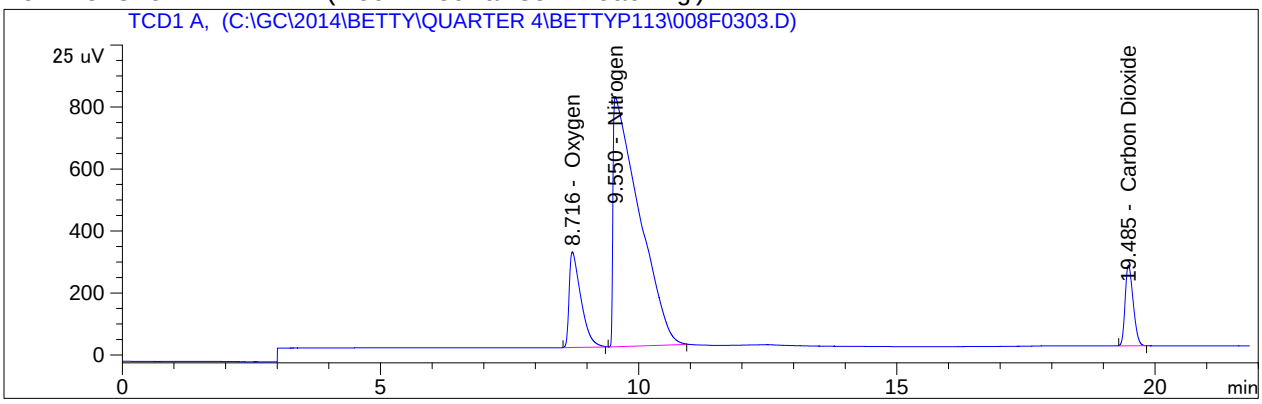

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\008F0303.D
Sample Name: 1214-29.Run1.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :   3
Acq. Instrument : Betty                           Location : Vial 8
Injection Date  : 12/22/2014 5:20:26 PM                Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -          -          -         Hydrogen
  8.716 BB     4874.20117 2.99687e-3   14.60736    Oxygen
  9.550 BB     2.80384e4  2.74077e-3   76.84682    Nitrogen
 12.646            -          -          -         Carbon monoxide
 16.456            -          -          -         Methane
 19.485 BB     2815.53613 1.58755e-3    4.46980    Carbon Dioxide

Totals :                                95.92398

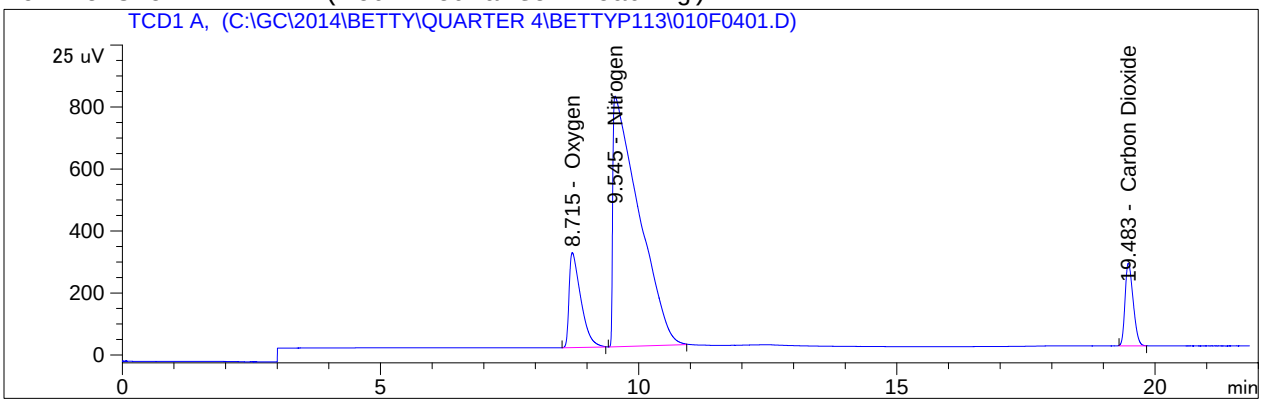

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\010F0401.D
Sample Name: 1214-29.Run2.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :   4
Acq. Instrument : Betty                           Location : Vial 10
Injection Date  : 12/22/2014 5:48:15 PM                Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034           -          -          -         Hydrogen
  8.715 BB     4833.52881 2.99682e-3   14.48521    Oxygen
  9.545 BB     2.81351e4  2.74077e-3   77.11193    Nitrogen
 12.646           -          -          -         Carbon monoxide
 16.456           -          -          -         Methane
 19.483 BB     2901.56519 1.58791e-3    4.60743    Carbon Dioxide

Totals :                                96.20458

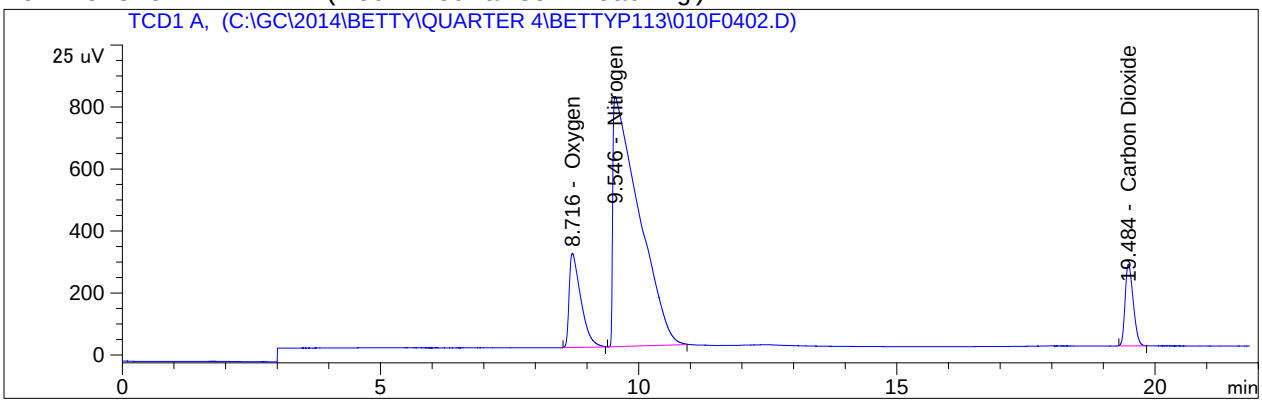

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\010F0402.D
Sample Name: 1214-29.Run2.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :   4
Acq. Instrument : Betty                           Location : Vial 10
Injection Date  : 12/22/2014 6:15:54 PM                Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -          -          -         Hydrogen
  8.716 BB     4779.57275 2.99675e-3   14.32317    Oxygen
  9.546 BB     2.81015e4  2.74077e-3   77.01990    Nitrogen
 12.646            -          -          -         Carbon monoxide
 16.456            -          -          -         Methane
 19.484 BB     2871.59790 1.58779e-3    4.55949    Carbon Dioxide

Totals :                                95.90256

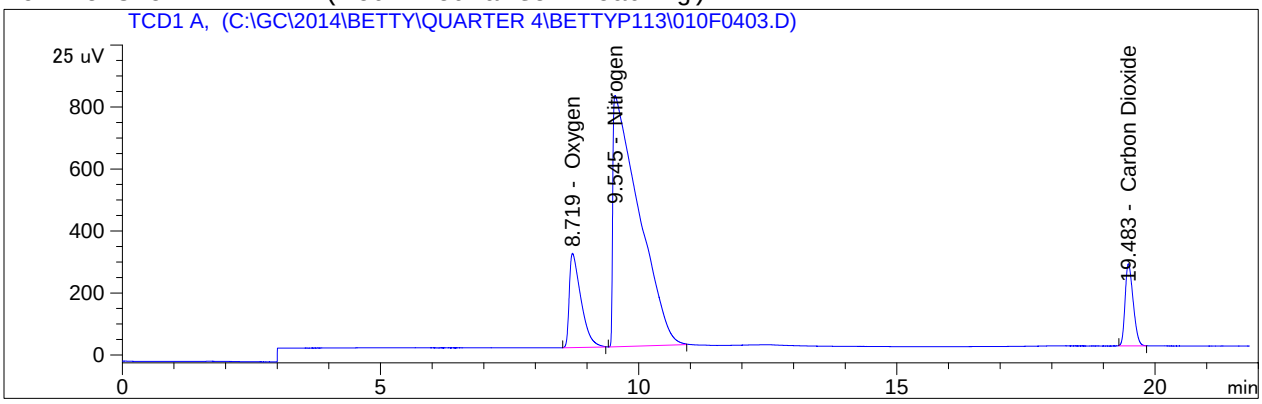

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\010F0403.D
Sample Name: 1214-29.Run2.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :   4
Acq. Instrument : Betty                           Location : Vial 10
Injection Date  : 12/22/2014 6:43:32 PM                Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -          -          -         Hydrogen
  8.719 BB     4778.20508 2.99674e-3   14.31906    Oxygen
  9.545 BB     2.82414e4  2.74078e-3   77.40343    Nitrogen
 12.646            -          -          -         Carbon monoxide
 16.456            -          -          -         Methane
 19.483 BB     2868.56982 1.58778e-3    4.55464    Carbon Dioxide

Totals :                                96.27713

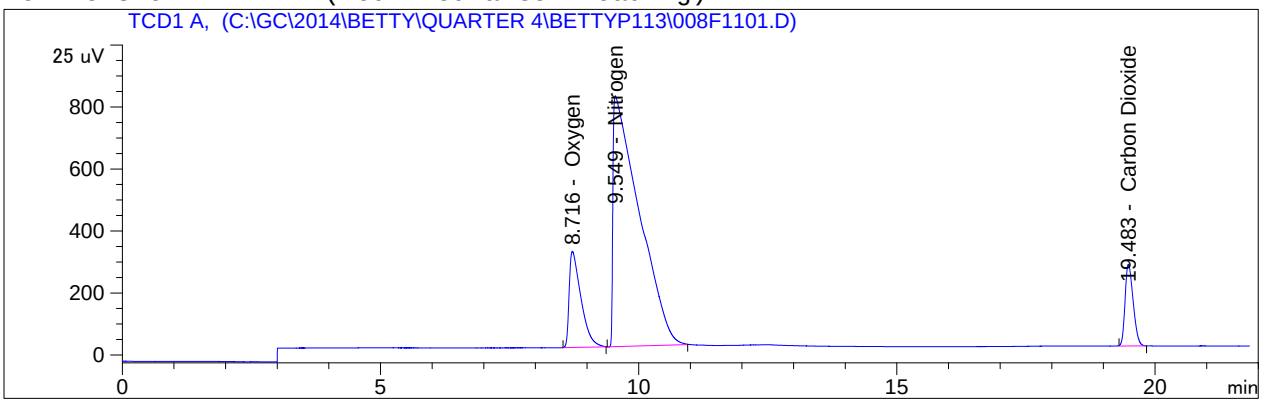

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\008F1101.D
Sample Name: 1214-29.Run3.Bag backup

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  11
Acq. Instrument : Betty                           Location : Vial 8
Injection Date  : 12/23/2014 11:37:02 AM               Inj :   1
                                                  Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -          -          -         Hydrogen
  8.716 BB     4909.72900 2.99692e-3   14.71406    Oxygen
  9.549 BB     2.83027e4  2.74078e-3   77.57144    Nitrogen
 12.646            -          -          -         Carbon monoxide
 16.456            -          -          -         Methane
 19.483 BB     2866.26343 1.58777e-3    4.55095    Carbon Dioxide

Totals :                                96.83645

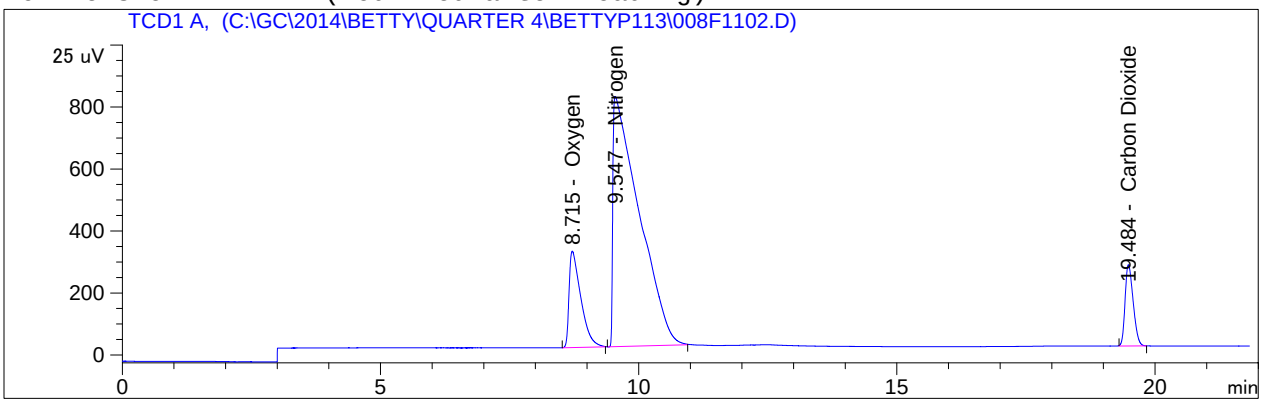

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\008F1102.D
Sample Name: 1214-29.Run3.Bag backup

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  11
Acq. Instrument : Betty                           Location : Vial 8
Injection Date  : 12/23/2014 12:05:20 PM               Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -          -          -         Hydrogen
  8.715 BB     4918.17871 2.99693e-3   14.73944    Oxygen
  9.547 BB     2.82749e4  2.74078e-3   77.49532    Nitrogen
 12.646            -          -          -         Carbon monoxide
 16.456            -          -          -         Methane
 19.484 BB     2852.06982 1.58771e-3    4.52825    Carbon Dioxide

Totals :                                96.76300

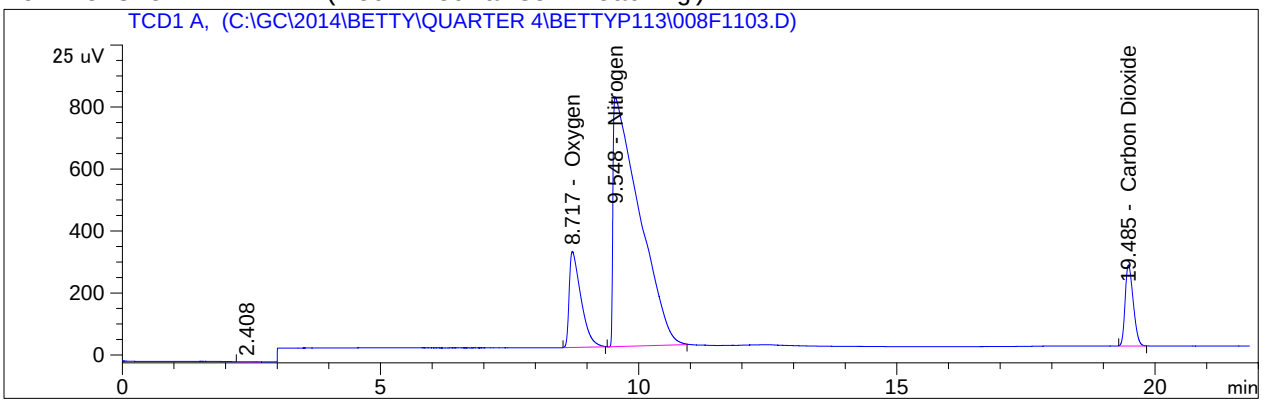

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\008F1103.D
Sample Name: 1214-29.Run3.Bag backup

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  11
Acq. Instrument : Betty                           Location : Vial 8
Injection Date  : 12/23/2014 12:33:25 PM               Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034           -          -          -         Hydrogen
  8.717 BB     4905.29346 2.99691e-3   14.70074    Oxygen
  9.548 BB     2.82334e4  2.74078e-3   77.38140    Nitrogen
 12.646           -          -          -         Carbon monoxide
 16.456           -          -          -         Methane
 19.485 BB     2848.24194 1.58769e-3    4.52212    Carbon Dioxide

Totals :                                96.60426


1 Warnings or Errors :

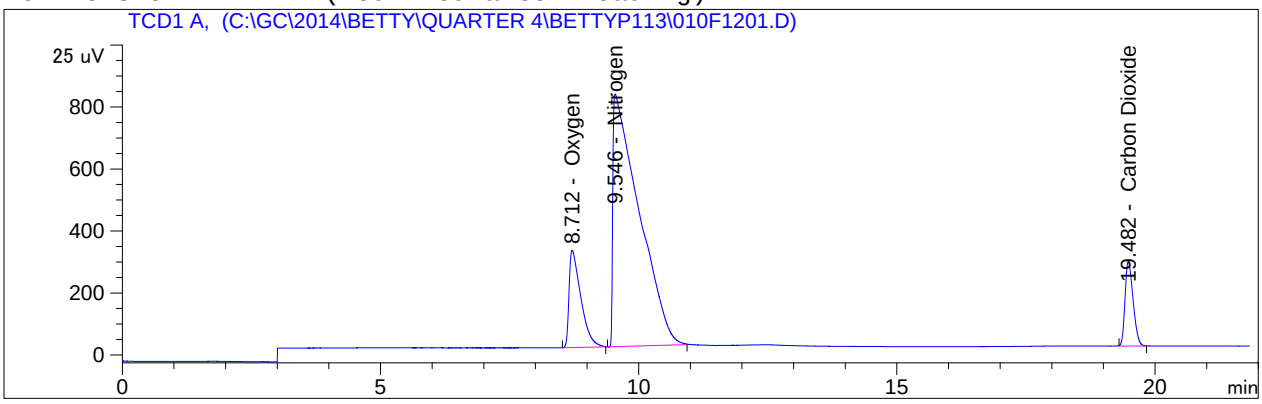
Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\010F1201.D
Sample Name: 1214-29.18-C1 Run1.Bag

==========

Acq. Operator : disconnected Seq. Line : 12
Acq. Instrument : Betty Location : Vial 10
Injection Date : 12/23/2014 1:01:11 PM Inj : 1
Inj Volume : 250 µl
Acq. Method : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server : http://ecm-server/enthalpy
ECM Operator : Thorne Gregory
ECM Path : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version : 1 (modified after loading)



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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 12/26/2014 9:21:19 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime [min]	Type	Area [25 uV*s]	Amt/Area	Amount [%]	Grp	Name
2.034		-	-	-		Hydrogen
8.712	BB	4962.75146	2.99699e-3	14.87330		Oxygen
9.546	BB	2.84311e4	2.74078e-3	77.92340		Nitrogen
12.646		-	-	-		Carbon monoxide
16.456		-	-	-		Methane
19.482	BB	2957.68018	1.58814e-3	4.69721		Carbon Dioxide

Totals : 97.49391

1 Warnings or Errors :

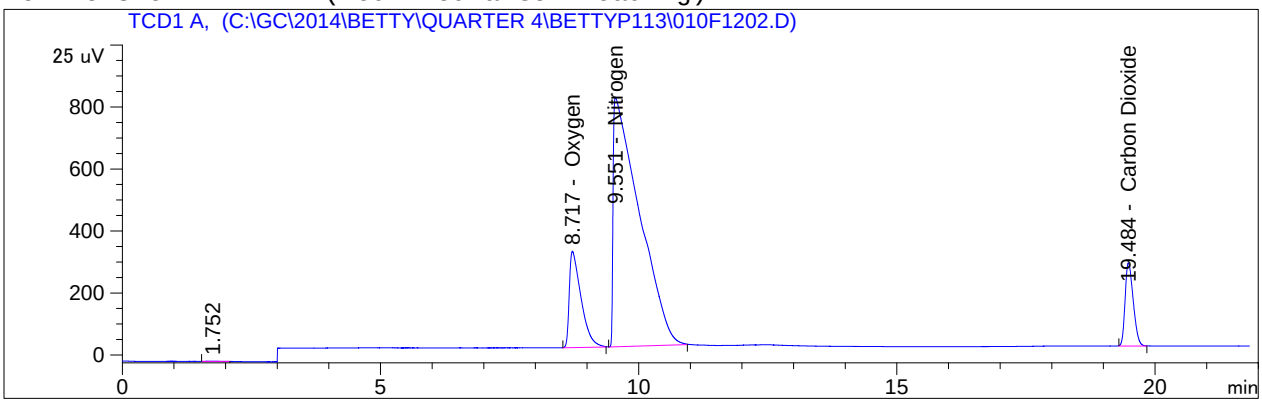
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\010F1202.D
Sample Name: 1214-29.18-C1 Run1.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  12
Acq. Instrument : Betty                           Location : Vial 10
Injection Date  : 12/23/2014 1:29:00 PM                Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




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==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -          -          -         Hydrogen
  8.717 BB     4909.30322 2.99692e-3   14.71278    Oxygen
  9.551 BB     2.81326e4  2.74077e-3   77.10512    Nitrogen
 12.646            -          -          -         Carbon monoxide
 16.456            -          -          -         Methane
 19.484 BB     2929.25342 1.58803e-3    4.65173    Carbon Dioxide

Totals :                                96.46964

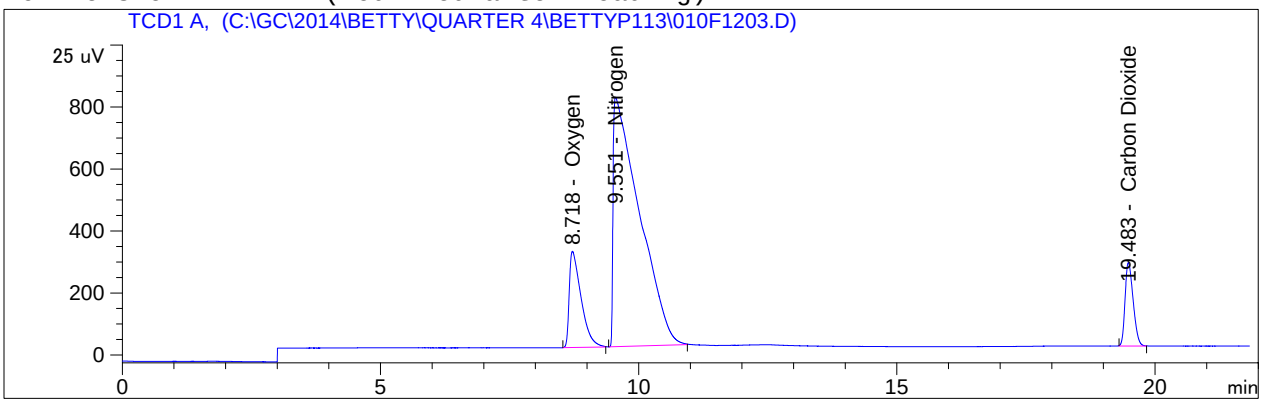

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\010F1203.D
Sample Name: 1214-29.18-C1 Run1.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  12
Acq. Instrument : Betty                           Location : Vial 10
Injection Date  : 12/23/2014 1:56:47 PM                Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034           -          -          -         Hydrogen
  8.718 BB     4939.75049 2.99696e-3   14.80422    Oxygen
  9.551 BB     2.82568e4  2.74078e-3   77.44569    Nitrogen
 12.646           -          -          -         Carbon monoxide
 16.456           -          -          -         Methane
 19.483 BB     2926.47900 1.58802e-3    4.64729    Carbon Dioxide

Totals :                                96.89720

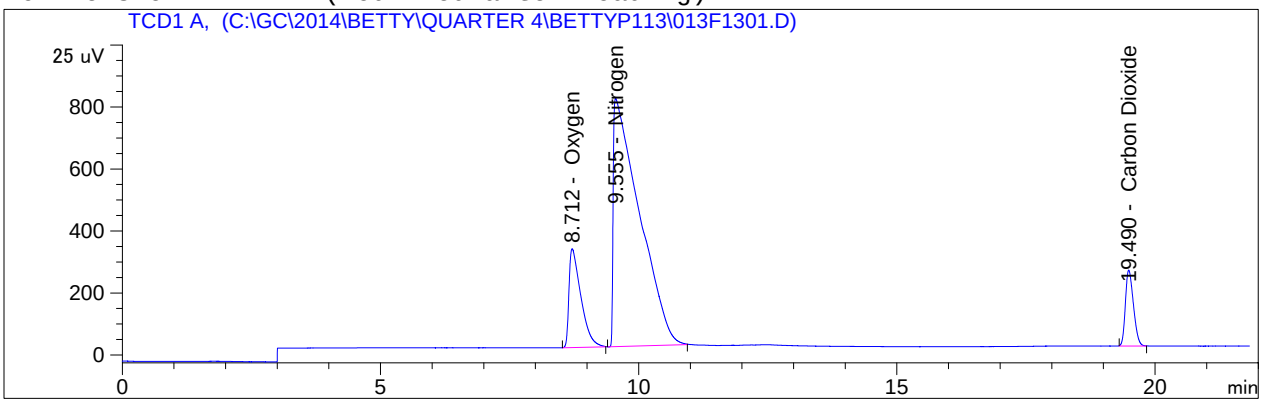

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\013F1301.D
Sample Name: 1214-29.18-C1 Run2.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  13
Acq. Instrument : Betty                           Location : Vial 13
Injection Date  : 12/23/2014 2:24:36 PM                Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034           -          -          -         Hydrogen
  8.712 BB     5101.24268 2.99716e-3   15.28922    Oxygen
  9.555 BB     2.79720e4  2.74077e-3   76.66467    Nitrogen
 12.646           -          -          -         Carbon monoxide
 16.456           -          -          -         Methane
 19.490 BB     2643.67310 1.58674e-3    4.19483    Carbon Dioxide

Totals :                                96.14872

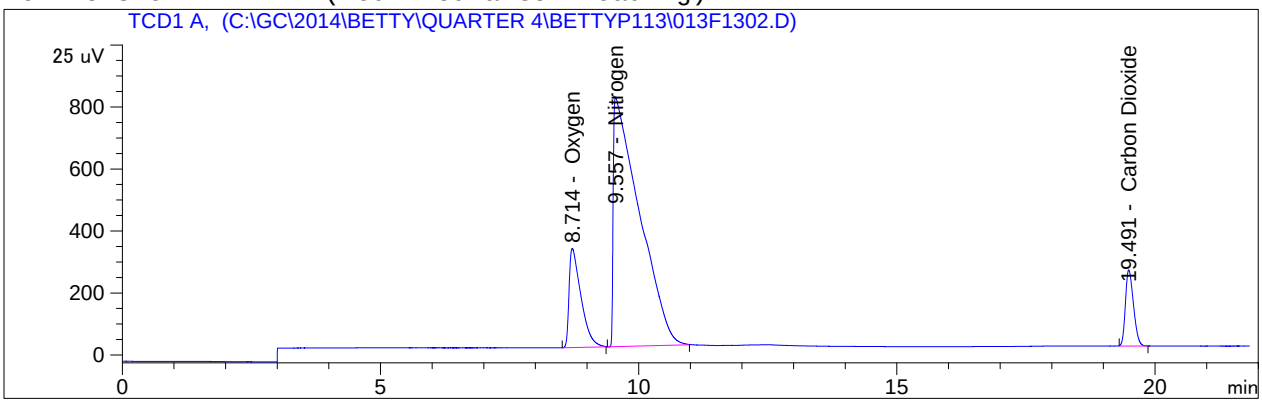

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\013F1302.D
Sample Name: 1214-29.18-C1 Run2.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  13
Acq. Instrument : Betty                           Location : Vial 13
Injection Date  : 12/23/2014 2:52:47 PM                Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -          -          -         Hydrogen
  8.714 BB     5106.55469 2.99716e-3   15.30518    Oxygen
  9.557 BB     2.80629e4  2.74077e-3   76.91387    Nitrogen
 12.646            -          -          -         Carbon monoxide
 16.456            -          -          -         Methane
 19.491 BB     2657.16553 1.58681e-3    4.21642    Carbon Dioxide

Totals :                                96.43547

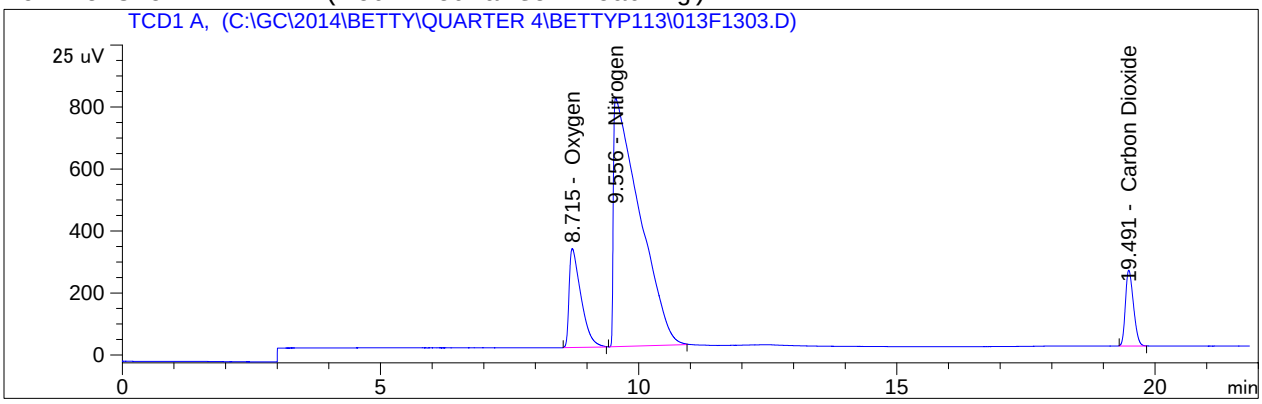

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\013F1303.D
Sample Name: 1214-29.18-C1 Run2.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  13
Acq. Instrument : Betty                           Location : Vial 13
Injection Date  : 12/23/2014 3:21:00 PM                Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -          -          -         Hydrogen
  8.715 BB     5103.18262 2.99716e-3   15.29505    Oxygen
  9.556 BB     2.79883e4  2.74077e-3   76.70952    Nitrogen
 12.646            -          -          -         Carbon monoxide
 16.456            -          -          -         Methane
 19.491 BB     2640.37524 1.58673e-3    4.18955    Carbon Dioxide

Totals :                                96.19413

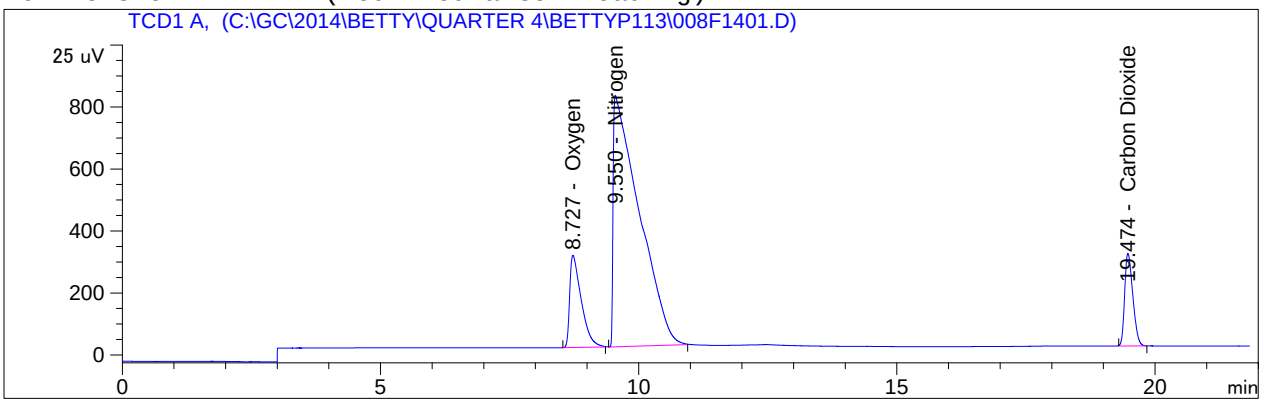

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\008F1401.D
Sample Name: 1214-29.18-C1 Run3.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  14
Acq. Instrument : Betty                           Location : Vial 8
Injection Date  : 12/23/2014 3:48:50 PM                Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034           -          -          -         Hydrogen
  8.727 BB     4633.64941 2.99654e-3   13.88493    Oxygen
  9.550 BB     2.81741e4  2.74077e-3   77.21892    Nitrogen
 12.646           -          -          -         Carbon monoxide
 16.456           -          -          -         Methane
 19.474 BB     3277.00537 1.58929e-3    5.20810    Carbon Dioxide

Totals :                                96.31195

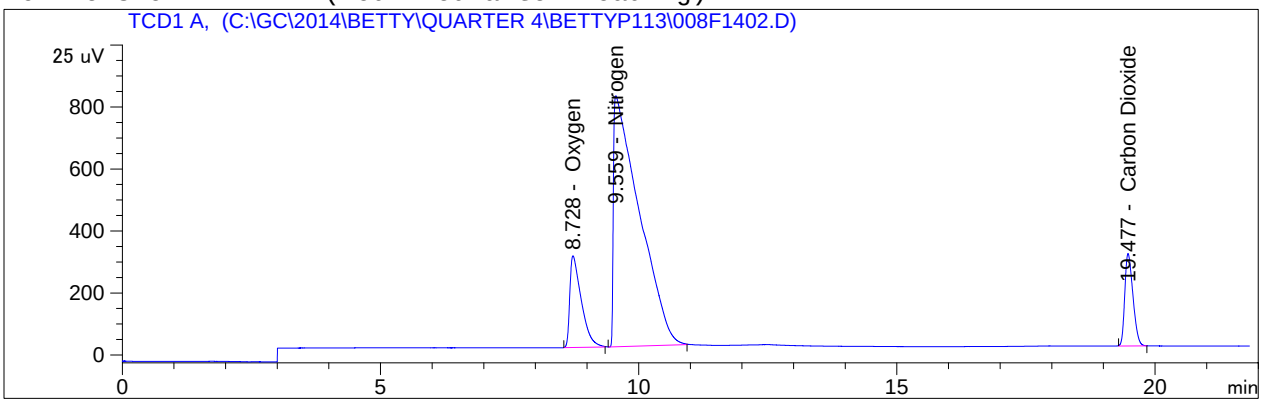

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\008F1402.D
Sample Name: 1214-29.18-C1 Run3.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  14
Acq. Instrument : Betty                           Location : Vial 8
Injection Date  : 12/23/2014 4:16:28 PM                Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -          -          -         Hydrogen
  8.728 BB     4576.67383 2.99646e-3   13.71381    Oxygen
  9.559 BB     2.79976e4  2.74077e-3   76.73492    Nitrogen
 12.646            -          -          -         Carbon monoxide
 16.456            -          -          -         Methane
 19.477 BB     3265.98022 1.58925e-3    5.19046    Carbon Dioxide

Totals :                                95.63920

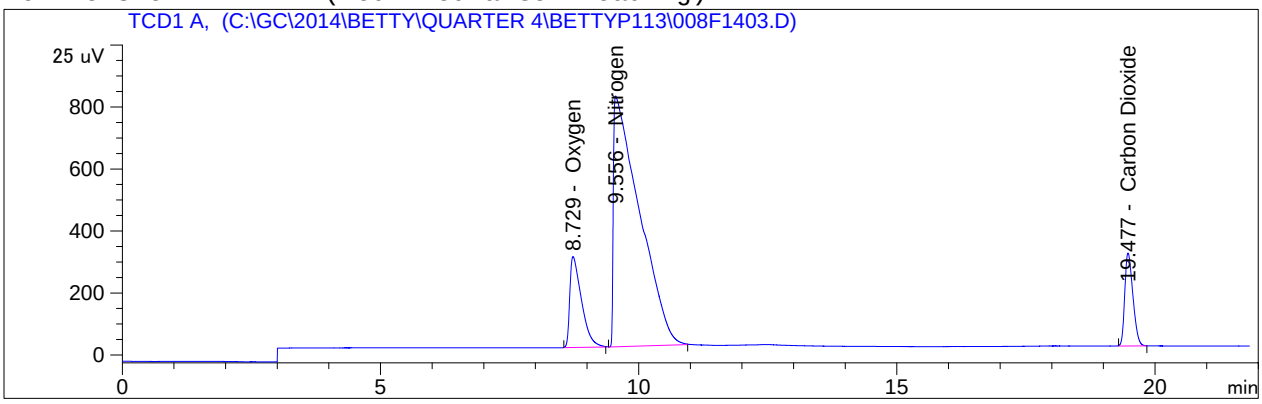

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\008F1403.D
Sample Name: 1214-29.18-C1 Run3.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  14
Acq. Instrument : Betty                           Location : Vial 8
Injection Date  : 12/23/2014 4:44:08 PM                Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034           -          -          -         Hydrogen
  8.729 BB     4613.38086 2.99651e-3   13.82405    Oxygen
  9.556 BB     2.81688e4  2.74077e-3   77.20445    Nitrogen
 12.646           -          -          -         Carbon monoxide
 16.456           -          -          -         Methane
 19.477 BB     3278.04565 1.58929e-3    5.20977    Carbon Dioxide

Totals :                                96.23827

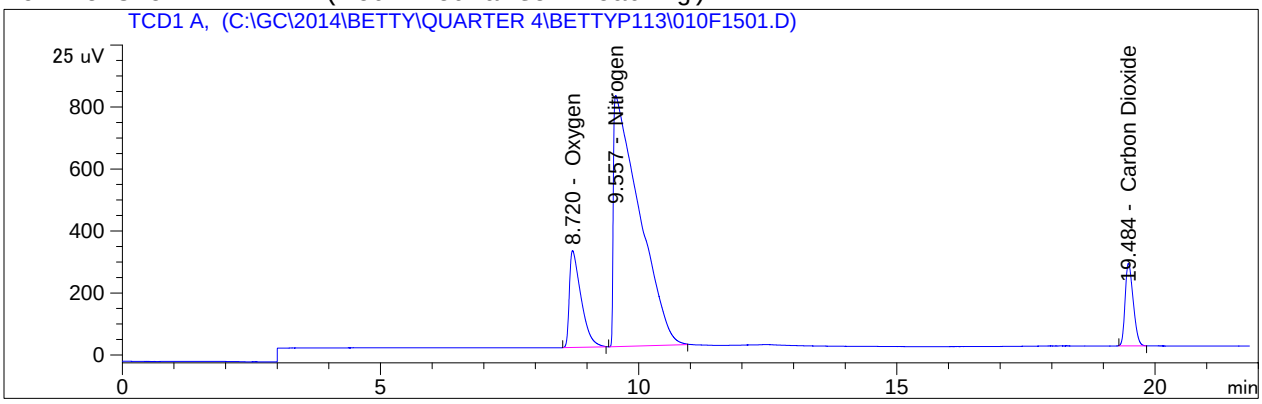

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\010F1501.D
Sample Name: 1214-29.18-C2 Run1.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  15
Acq. Instrument : Betty                           Location : Vial 10
Injection Date  : 12/23/2014 5:11:44 PM                Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -          -          -         Hydrogen
  8.720 BB     4932.79834 2.99695e-3   14.78334    Oxygen
  9.557 BB     2.80470e4  2.74077e-3   76.87045    Nitrogen
 12.646            -          -          -         Carbon monoxide
 16.456            -          -          -         Methane
 19.484 BB     2892.57227 1.58788e-3    4.59305    Carbon Dioxide

Totals :                                96.24684

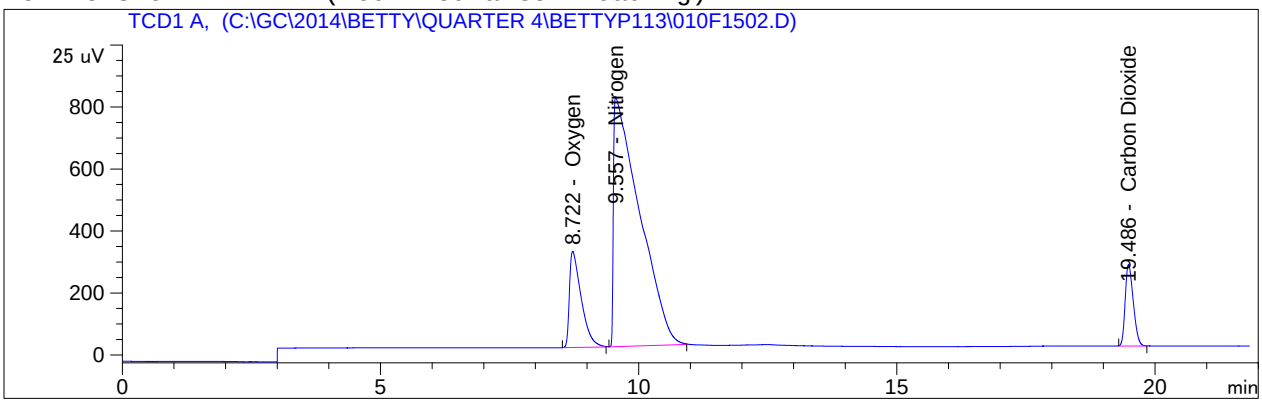

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\010F1502.D
Sample Name: 1214-29.18-C2 Run1.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  15
Acq. Instrument : Betty                           Location : Vial 10
Injection Date  : 12/23/2014 5:39:24 PM                Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034           -          -          -         Hydrogen
  8.722 BB     4925.00879 2.99694e-3   14.75995    Oxygen
  9.557 BB     2.80077e4  2.74077e-3   76.76270    Nitrogen
 12.646            -          -          -         Carbon monoxide
 16.456            -          -          -         Methane
 19.486 BB     2855.98364 1.58772e-3    4.53451    Carbon Dioxide

Totals :                                96.05716

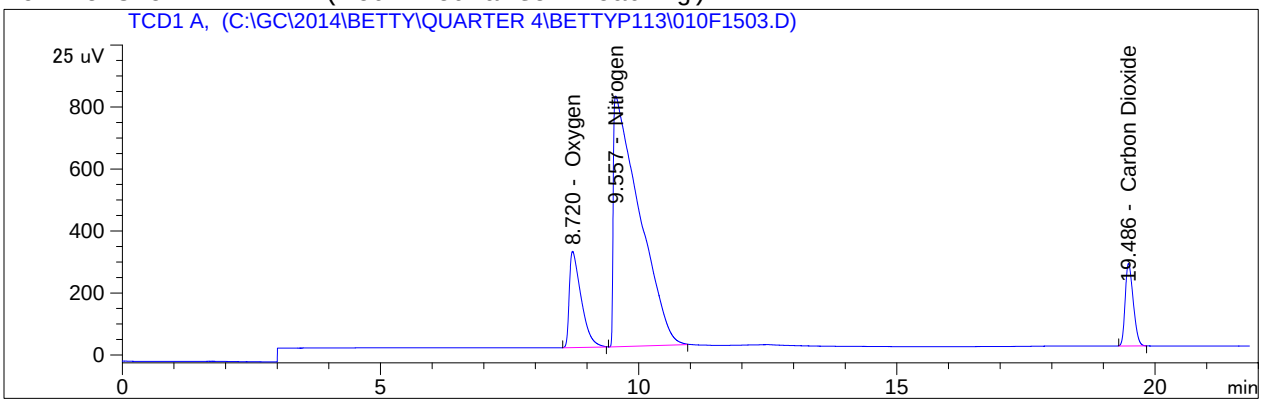

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\010F1503.D
Sample Name: 1214-29.18-C2 Run1.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  15
Acq. Instrument : Betty                           Location : Vial 10
Injection Date  : 12/23/2014 6:07:01 PM                Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034           -          -          -         Hydrogen
  8.720 BB     4947.69434 2.99697e-3   14.82808    Oxygen
  9.557 BB     2.80892e4  2.74077e-3   76.98599    Nitrogen
 12.646           -          -          -         Carbon monoxide
 16.456           -          -          -         Methane
 19.486 BB     2883.82202 1.58784e-3    4.57905    Carbon Dioxide

Totals :                                96.39312

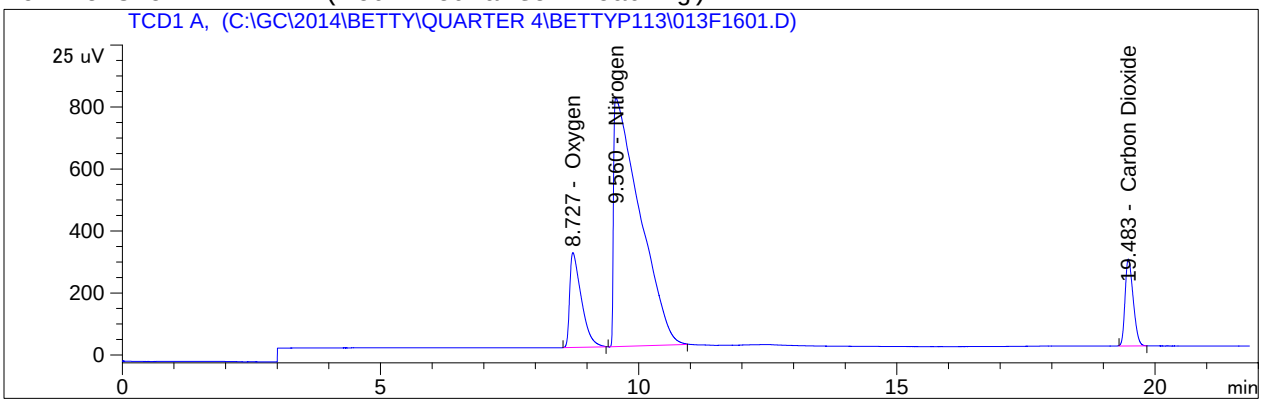

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\013F1601.D
Sample Name: 1214-29.18-C2 Run2.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  16
Acq. Instrument : Betty                           Location : Vial 13
Injection Date  : 12/23/2014 6:34:40 PM                Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                 [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -          -          -         Hydrogen
  8.727 BB     4796.41016 2.99677e-3   14.37374    Oxygen
  9.560 BB     2.80574e4  2.74077e-3   76.89882    Nitrogen
 12.646            -          -          -         Carbon monoxide
 16.456            -          -          -         Methane
 19.483 BB     3049.40234 1.58849e-3    4.84396    Carbon Dioxide

Totals :                                96.11652

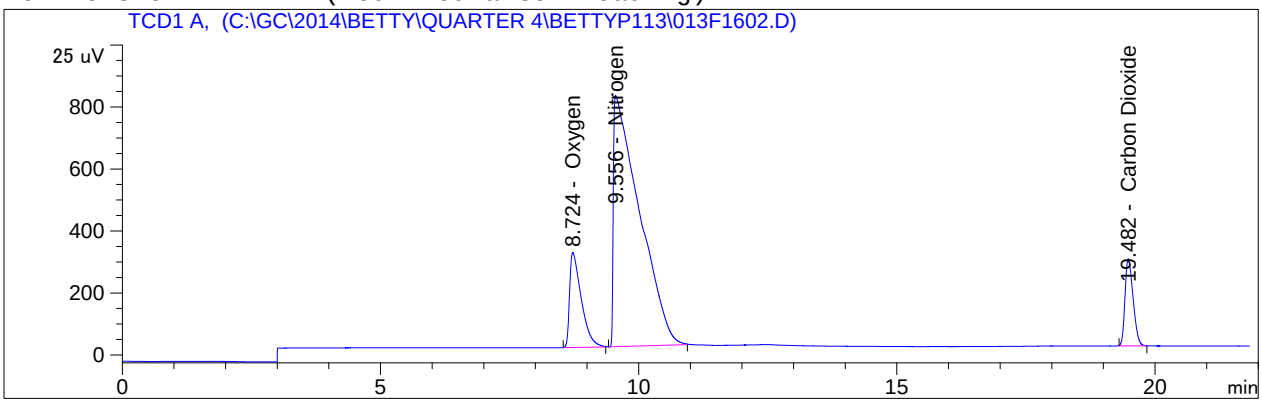

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\013F1602.D
Sample Name: 1214-29.18-C2 Run2.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  16
Acq. Instrument : Betty                           Location : Vial 13
Injection Date  : 12/23/2014 7:02:20 PM                Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -          -          -         Hydrogen
  8.724 BB     4812.70947 2.99679e-3   14.42269    Oxygen
  9.556 BB     2.82005e4  2.74077e-3   77.29110    Nitrogen
 12.646            -          -          -         Carbon monoxide
 16.456            -          -          -         Methane
 19.482 BB     3060.14087 1.58853e-3    4.86114    Carbon Dioxide

Totals :                                96.57492

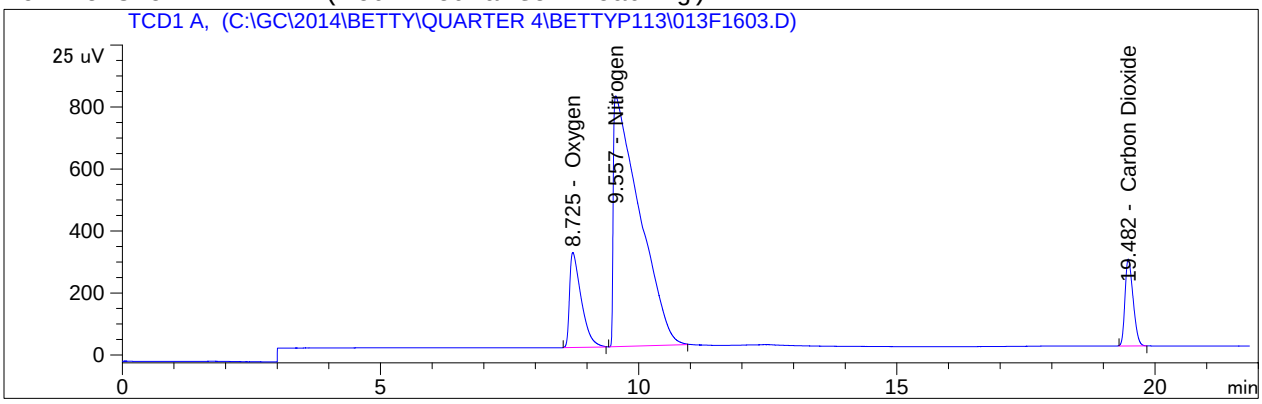

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\013F1603.D
Sample Name: 1214-29.18-C2 Run2.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  16
Acq. Instrument : Betty                           Location : Vial 13
Injection Date  : 12/23/2014 7:29:55 PM                Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -          -          -         Hydrogen
  8.725 BB     4819.12061 2.99680e-3   14.44194    Oxygen
  9.557 BB     2.82482e4  2.74078e-3   77.42187    Nitrogen
 12.646            -          -          -         Carbon monoxide
 16.456            -          -          -         Methane
 19.482 BB     3046.93994 1.58849e-3    4.84002    Carbon Dioxide

Totals :                                96.70383

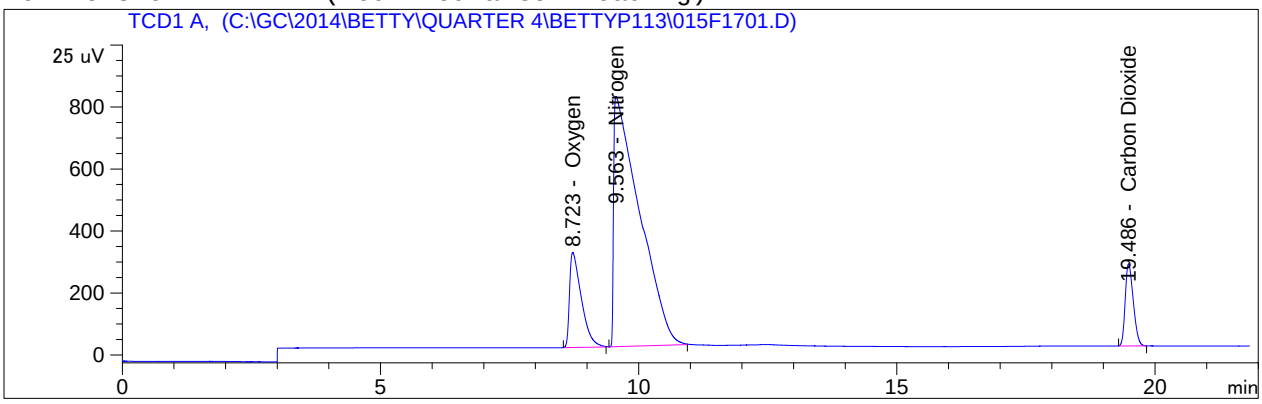

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\015F1701.D
Sample Name: 1214-29.18-C2 Run3.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  17
Acq. Instrument : Betty                           Location : Vial 15
Injection Date  : 12/23/2014 7:57:33 PM                Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034           -          -          -         Hydrogen
  8.723 BB     4877.95898 2.99688e-3   14.61865    Oxygen
  9.563 BB     2.79331e4  2.74077e-3   76.55813    Nitrogen
 12.646           -          -          -         Carbon monoxide
 16.456           -          -          -         Methane
 19.486 BB     2881.60547 1.58783e-3    4.57550    Carbon Dioxide

Totals :                                95.75228

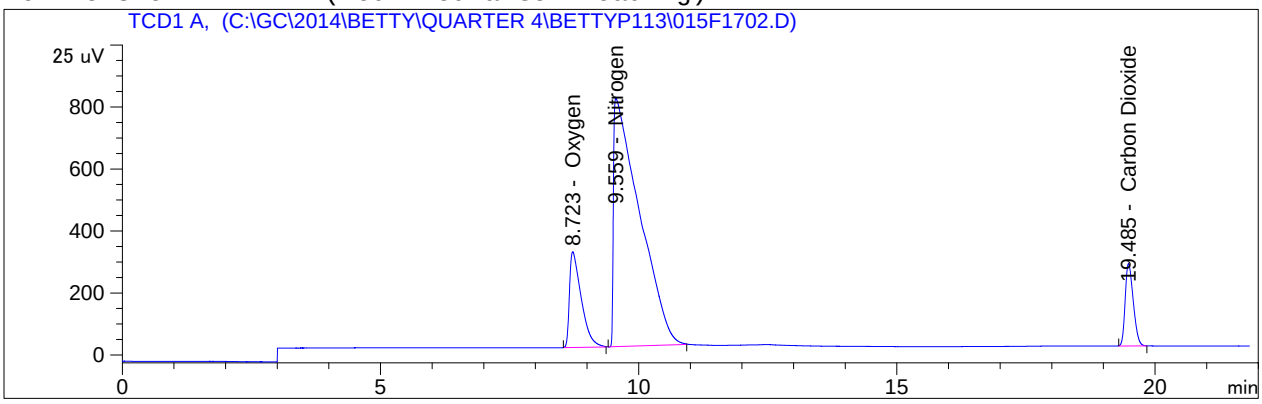

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\015F1702.D
Sample Name: 1214-29.18-C2 Run3.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  17
Acq. Instrument : Betty                           Location : Vial 15
Injection Date  : 12/23/2014 8:25:10 PM                Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034           -          -          -         Hydrogen
  8.723 BB     4875.91992 2.99688e-3   14.61252    Oxygen
  9.559 BB     2.78776e4  2.74077e-3   76.40592    Nitrogen
 12.646           -          -          -         Carbon monoxide
 16.456           -          -          -         Methane
 19.485 BB     2883.33179 1.58784e-3    4.57826    Carbon Dioxide

Totals :                                95.59671

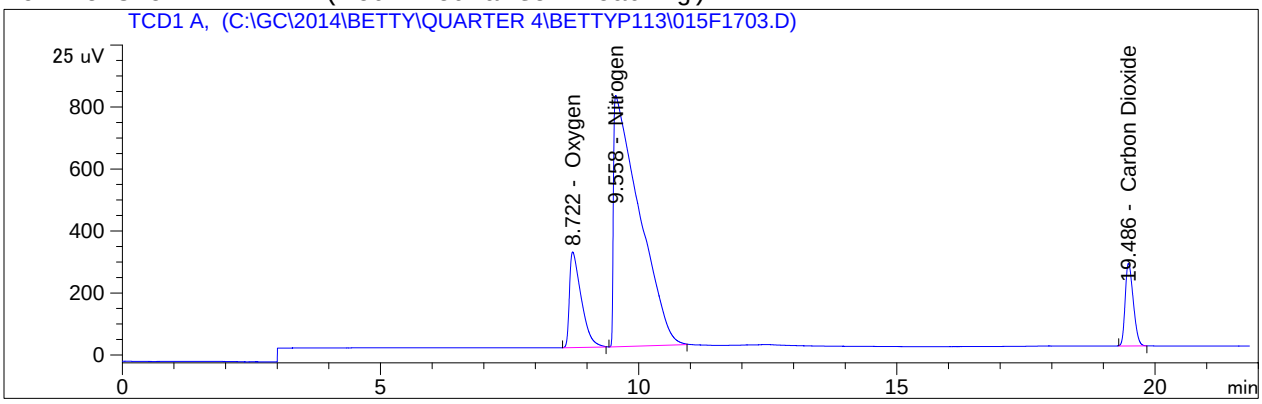

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\015F1703.D
Sample Name: 1214-29.18-C2 Run3.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  17
Acq. Instrument : Betty                           Location : Vial 15
Injection Date  : 12/23/2014 8:52:50 PM                Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                 [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -          -          -         Hydrogen
  8.722 BB     4894.71777 2.99690e-3   14.66898    Oxygen
  9.558 BB     2.79324e4  2.74077e-3   76.55633    Nitrogen
 12.646            -          -          -         Carbon monoxide
 16.456            -          -          -         Methane
 19.486 BB     2898.60938 1.58790e-3    4.60270    Carbon Dioxide

Totals :                                95.82801

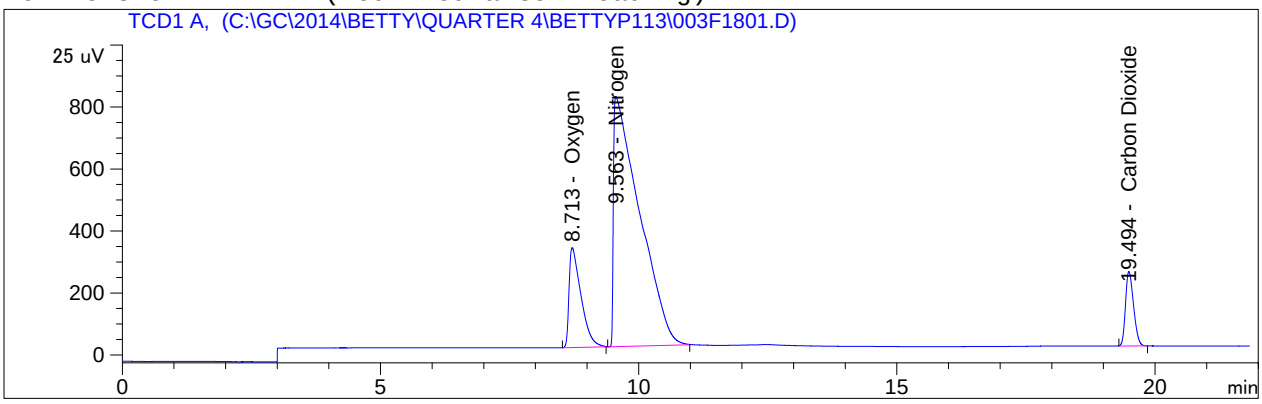

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\003F1801.D
Sample Name: 1214-29.18-C3 Run1.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  18
Acq. Instrument : Betty                           Location : Vial 3
Injection Date  : 12/23/2014 9:20:37 PM                Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -          -          -         Hydrogen
  8.713 BB     5163.11426 2.99723e-3   15.47504    Oxygen
  9.563 BB     2.80850e4  2.74077e-3   76.97445    Nitrogen
 12.646            -          -          -         Carbon monoxide
 16.456            -          -          -         Methane
 19.494 BB     2596.30396 1.58650e-3    4.11904    Carbon Dioxide

Totals :                                96.56853

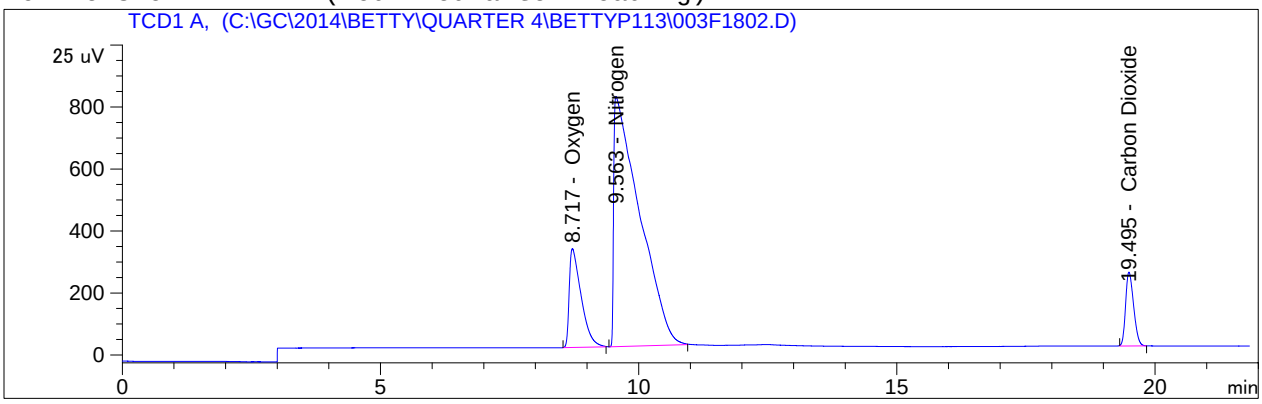

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\003F1802.D
Sample Name: 1214-29.18-C3 Run1.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  18
Acq. Instrument : Betty                           Location : Vial 3
Injection Date  : 12/23/2014 9:48:15 PM                Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -          -          -         Hydrogen
  8.717 BB     5118.03857 2.99718e-3   15.33967    Oxygen
  9.563 BB     2.77840e4  2.74076e-3   76.14938    Nitrogen
 12.646            -          -          -         Carbon monoxide
 16.456            -          -          -         Methane
 19.495 BB     2564.89746 1.58634e-3    4.06880    Carbon Dioxide

Totals :                                95.55785

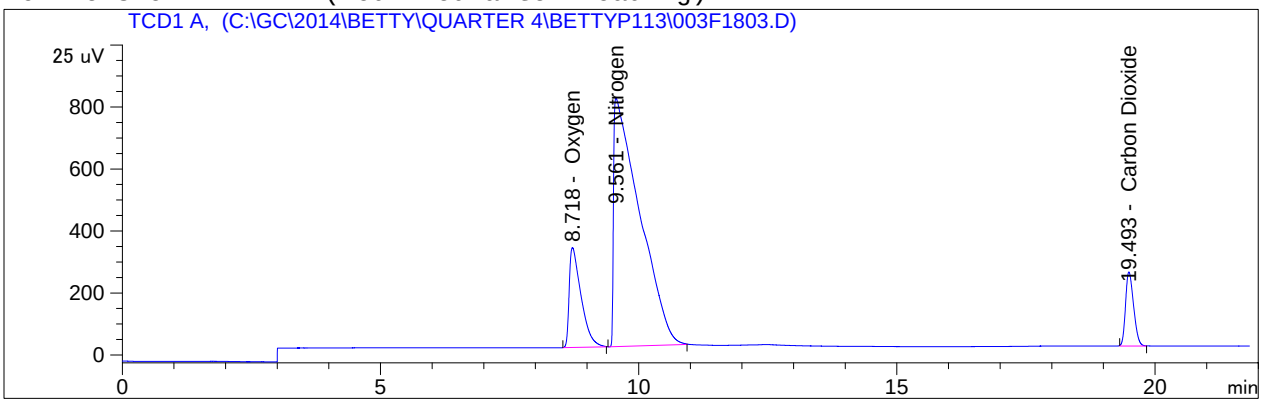

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\003F1803.D
Sample Name: 1214-29.18-C3 Run1.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  18
Acq. Instrument : Betty                           Location : Vial 3
Injection Date  : 12/23/2014 10:15:52 PM               Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -          -          -         Hydrogen
  8.718 BB     5146.83252 2.99721e-3   15.42614    Oxygen
  9.561 BB     2.79224e4  2.74077e-3   76.52889    Nitrogen
 12.646            -          -          -         Carbon monoxide
 16.456            -          -          -         Methane
 19.493 BB     2579.15381 1.58641e-3    4.09161    Carbon Dioxide

Totals :                                96.04663

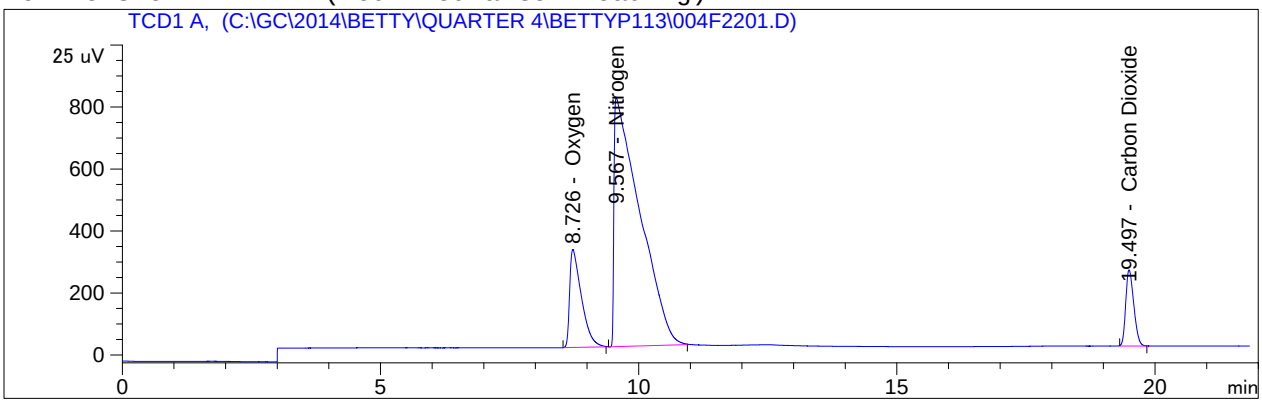

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\004F2201.D
Sample Name: 1214-29.18-C3 Run2.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  22
Acq. Instrument : Betty                           Location : Vial 4
Injection Date  : 12/24/2014 3:08:12 AM                Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -          -          -         Hydrogen
  8.726 BB     5009.27734 2.99705e-3   15.01303    Oxygen
  9.567 BB     2.76733e4  2.74076e-3   75.84589    Nitrogen
 12.646            -          -          -         Carbon monoxide
 16.456            -          -          -         Methane
 19.497 BB     2657.39502 1.58681e-3    4.21678    Carbon Dioxide

Totals :                                95.07571

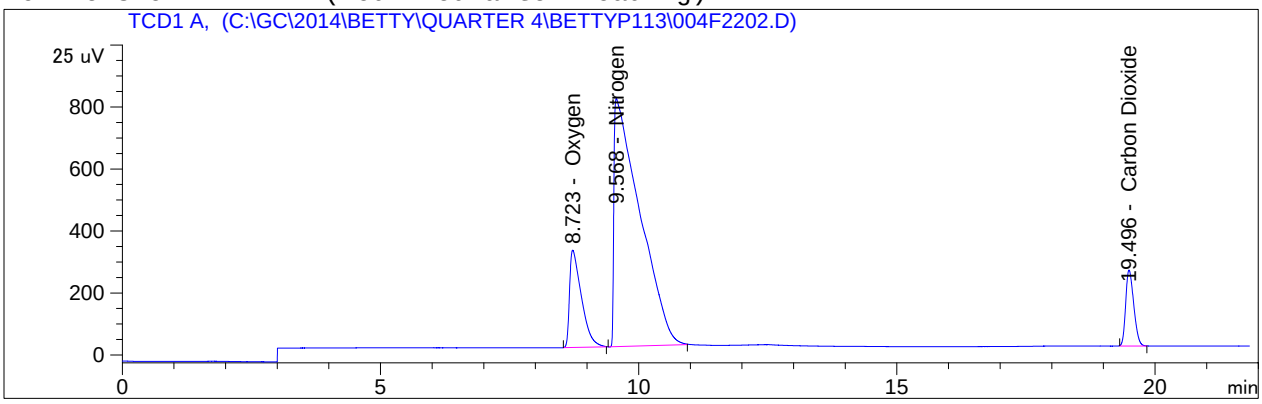

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\004F2202.D
Sample Name: 1214-29.18-C3 Run2.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  22
Acq. Instrument : Betty                           Location : Vial 4
Injection Date  : 12/24/2014 3:35:48 AM                Inj :  2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034           -          -          -         Hydrogen
  8.723 BB     5015.22607 2.99705e-3   15.03090    Oxygen
  9.568 BB     2.77369e4  2.74076e-3   76.02025    Nitrogen
 12.646           -          -          -         Carbon monoxide
 16.456           -          -          -         Methane
 19.496 BB     2655.52808 1.58680e-3    4.21380    Carbon Dioxide

Totals :                                95.26494

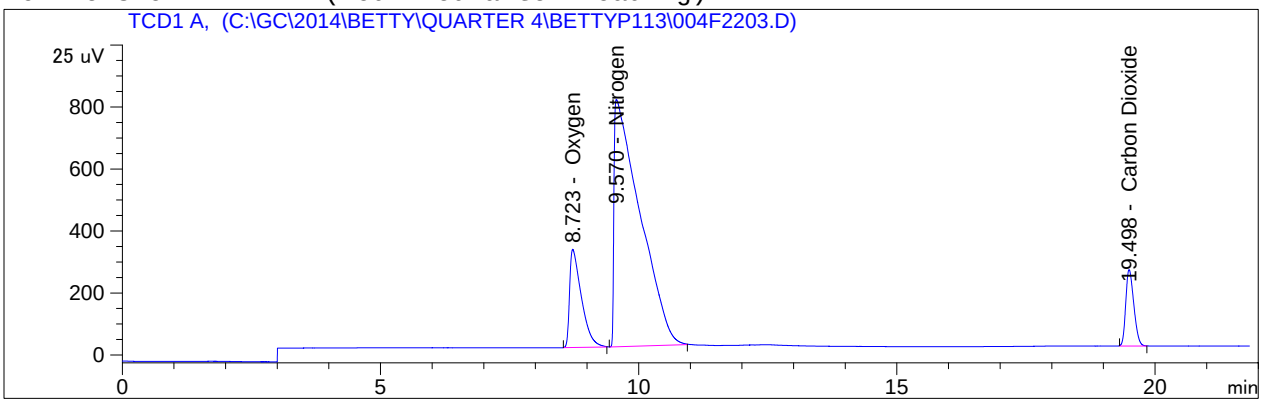

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\004F2203.D
Sample Name: 1214-29.18-C3 Run2.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  22
Acq. Instrument : Betty                           Location : Vial 4
Injection Date  : 12/24/2014 4:03:24 AM                Inj :  3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         [25 uV*s]                 [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -           -          -         Hydrogen
  8.723 BB     5026.35791 2.99707e-3   15.06433     Oxygen
  9.570 BB     2.76620e4  2.74076e-3   75.81476     Nitrogen
 12.646            -           -          -         Carbon monoxide
 16.456            -           -          -         Methane
 19.498 BB     2665.75073 1.58685e-3    4.23015     Carbon Dioxide

Totals :                                 95.10924

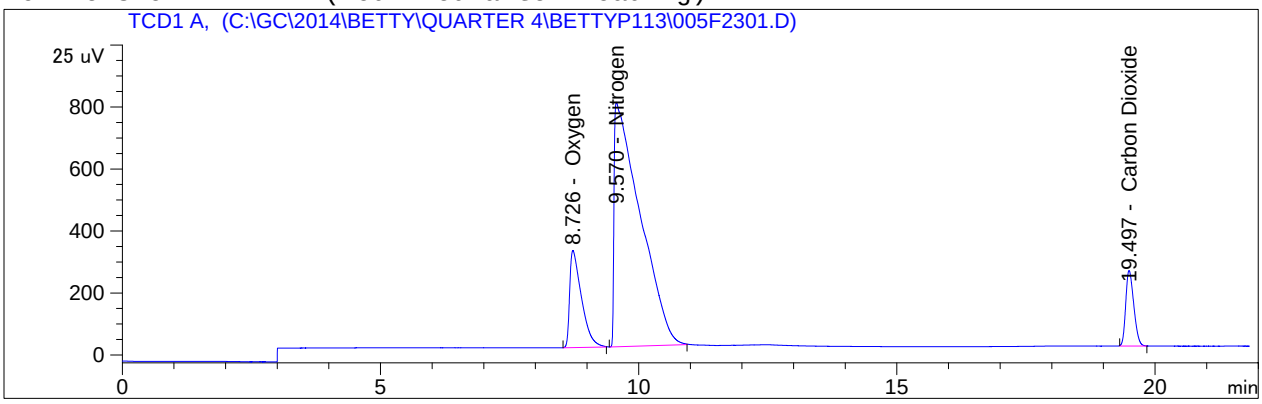

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\005F2301.D
Sample Name: 1214-29.18-C3 Run3.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  23
Acq. Instrument : Betty                           Location : Vial 5
Injection Date  : 12/24/2014 4:31:00 AM                Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034           -          -          -         Hydrogen
  8.726 BB     4970.08594 2.99700e-3   14.89533    Oxygen
  9.570 BB     2.74027e4  2.74075e-3   75.10397    Nitrogen
 12.646           -          -          -         Carbon monoxide
 16.456           -          -          -         Methane
 19.497 BB     2632.64722 1.58669e-3    4.17719    Carbon Dioxide

Totals :                                94.17649

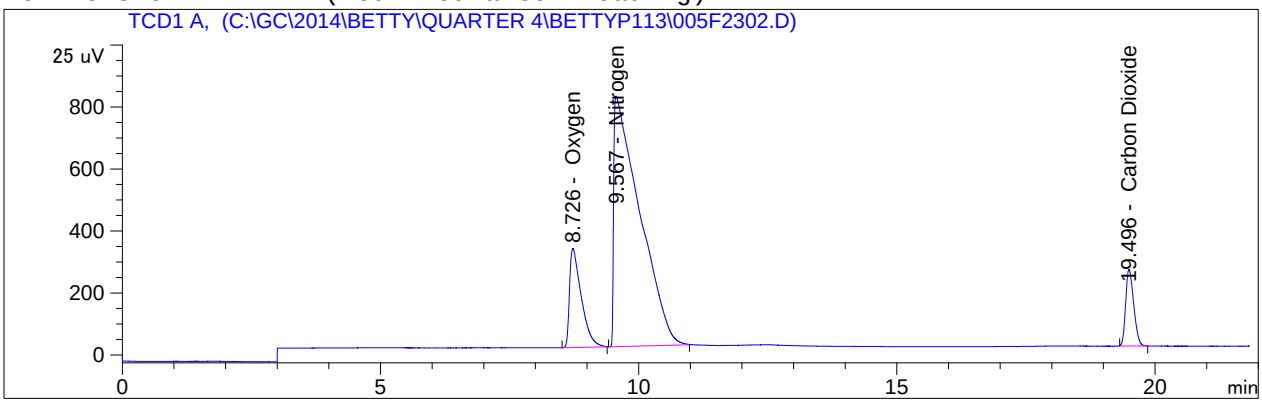

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\005F2302.D
Sample Name: 1214-29.18-C3 Run3.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  23
Acq. Instrument : Betty                           Location : Vial 5
Injection Date  : 12/24/2014 4:58:36 AM                Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -          -          -         Hydrogen
  8.726 BB     5072.79932 2.99712e-3   15.20380    Oxygen
  9.567 BB     2.79963e4  2.74077e-3   76.73150    Nitrogen
 12.646            -          -          -         Carbon monoxide
 16.456            -          -          -         Methane
 19.496 BB     2676.54639 1.58691e-3    4.24743    Carbon Dioxide

Totals :                                96.18273

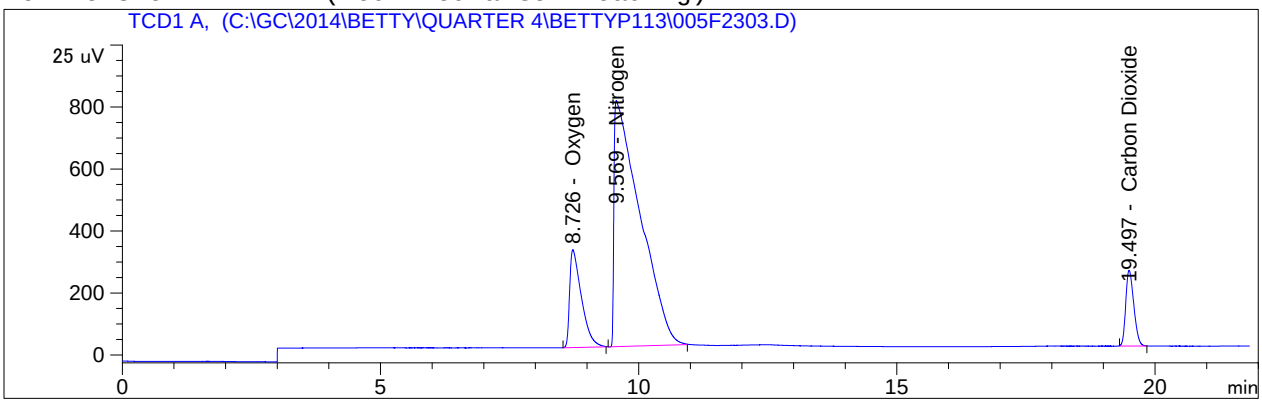

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\005F2303.D
Sample Name: 1214-29.18-C3 Run3.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  23
Acq. Instrument : Betty                           Location : Vial 5
Injection Date  : 12/24/2014 5:26:20 AM                Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         [25 uV*s]                 [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -          -          -         Hydrogen
  8.726 BB     4992.42627 2.99702e-3   14.96242    Oxygen
  9.569 BB     2.75856e4  2.74076e-3   75.60534    Nitrogen
 12.646            -          -          -         Carbon monoxide
 16.456            -          -          -         Methane
 19.497 BB     2642.87036 1.58674e-3    4.19355    Carbon Dioxide

Totals :                                94.76131

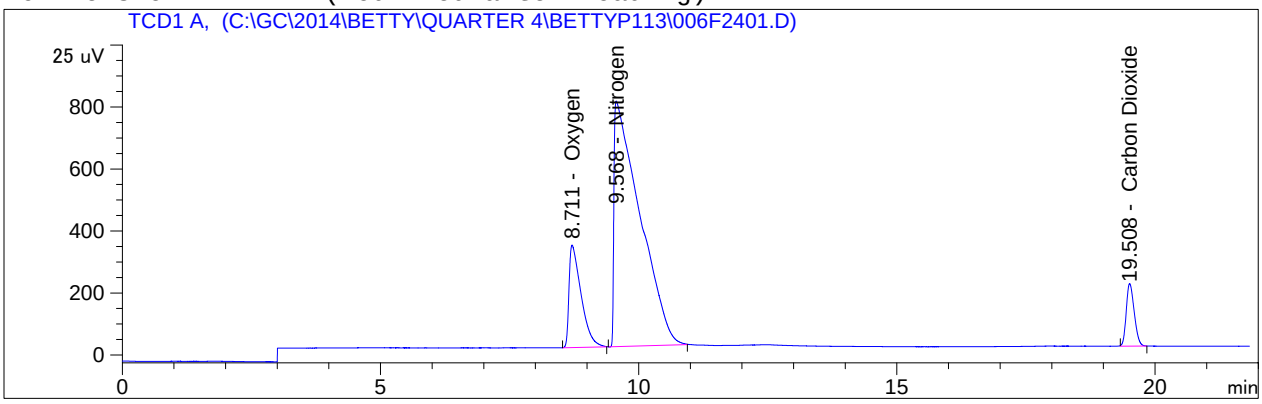

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\006F2401.D
Sample Name: 1214-29.18-C4 Run1.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  24
Acq. Instrument : Betty                           Location : Vial 6
Injection Date  : 12/24/2014 5:53:55 AM                Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -          -          -         Hydrogen
  8.711 BB     5357.83496 2.99745e-3   16.05984    Oxygen
  9.568 BB     2.73902e4  2.74075e-3   75.06958    Nitrogen
 12.646            -          -          -         Carbon monoxide
 16.456            -          -          -         Methane
 19.508 BB     2158.42236 1.58378e-3    3.41848    Carbon Dioxide

Totals :                                94.54790

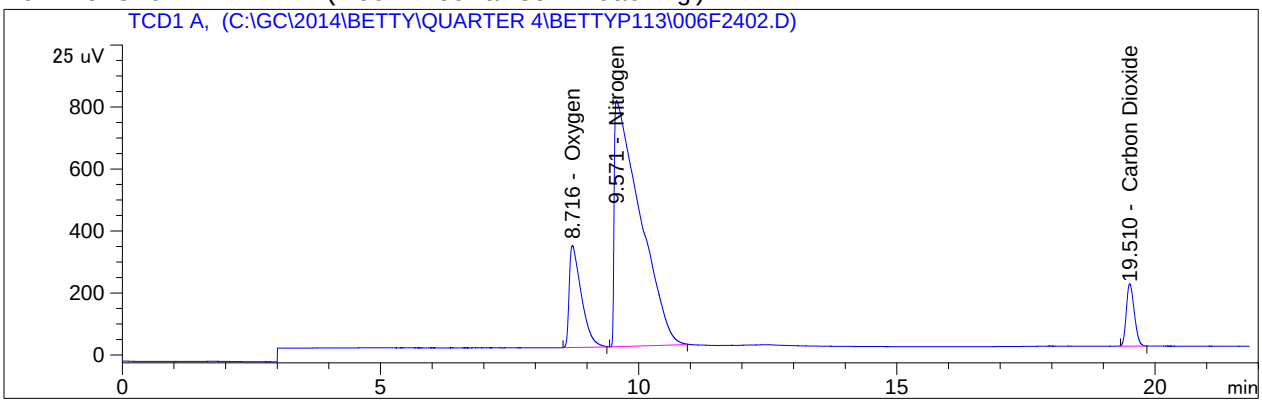

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\006F2402.D
Sample Name: 1214-29.18-C4 Run1.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  24
Acq. Instrument : Betty                           Location : Vial 6
Injection Date  : 12/24/2014 6:21:33 AM                Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -          -          -         Hydrogen
  8.716 BB     5367.50586 2.99746e-3   16.08888    Oxygen
  9.571 BB     2.73755e4  2.74075e-3   75.02925    Nitrogen
 12.646            -          -          -         Carbon monoxide
 16.456            -          -          -         Methane
 19.510 BB     2151.92310 1.58374e-3    3.40808    Carbon Dioxide

Totals :                                94.52621

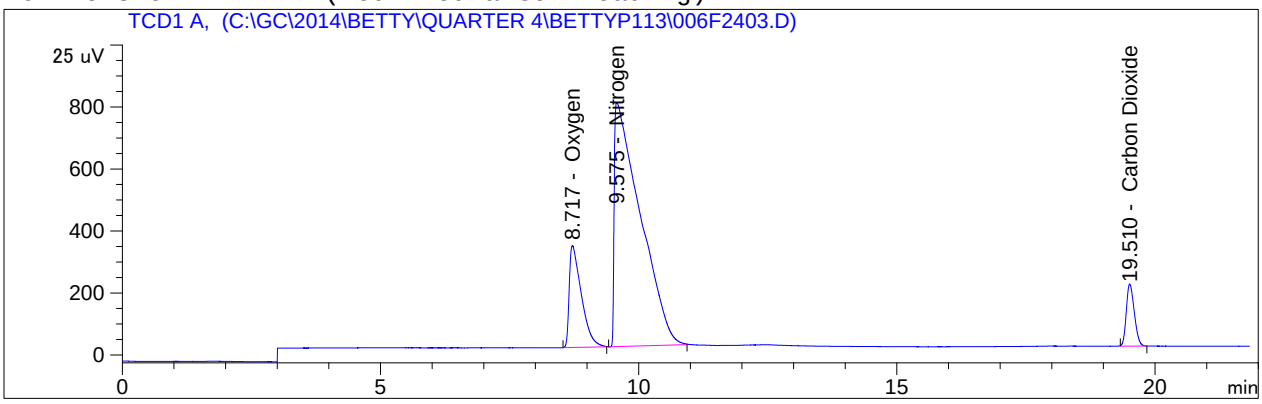

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\006F2403.D
Sample Name: 1214-29.18-C4 Run1.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  24
Acq. Instrument : Betty                           Location : Vial 6
Injection Date  : 12/24/2014 6:49:11 AM                Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         [25 uV*s]                 [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -           -          -         Hydrogen
  8.717 BB     5352.99365 2.99744e-3   16.04530    Oxygen
  9.575 BB     2.73208e4  2.74075e-3   74.87929    Nitrogen
 12.646            -           -          -         Carbon monoxide
 16.456            -           -          -         Methane
 19.510 BB     2150.21021 1.58372e-3    3.40534    Carbon Dioxide

Totals :                                94.32993

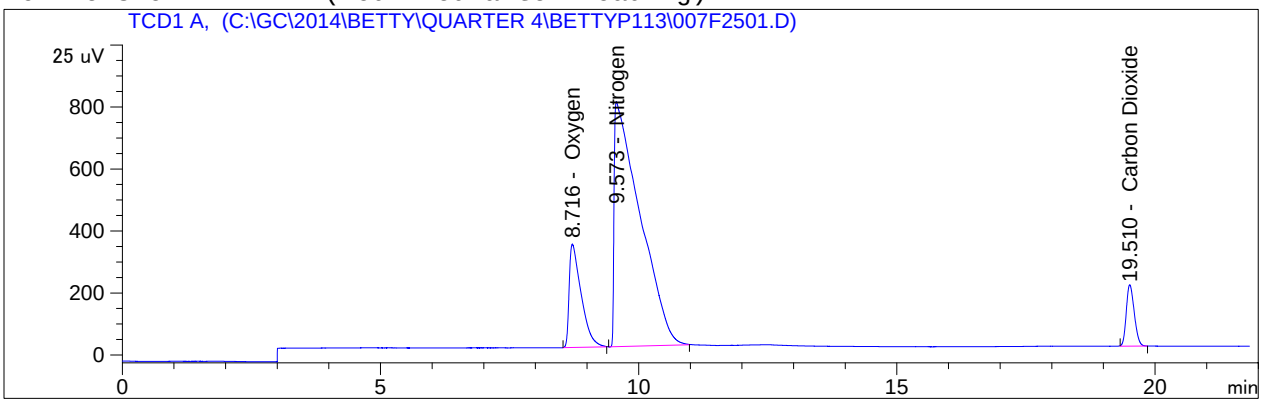

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\007F2501.D
Sample Name: 1214-29.18-C4 Run2.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  25
Acq. Instrument : Betty                           Location : Vial 7
Injection Date  : 12/24/2014 7:16:44 AM                Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -          -          -         Hydrogen
  8.716 BB     5376.65430 2.99747e-3   16.11636    Oxygen
  9.573 BB     2.73141e4  2.74075e-3   74.86093    Nitrogen
 12.646            -          -          -         Carbon monoxide
 16.456            -          -          -         Methane
 19.510 BB     2120.05615 1.58349e-3    3.35709    Carbon Dioxide

Totals :                                94.33437

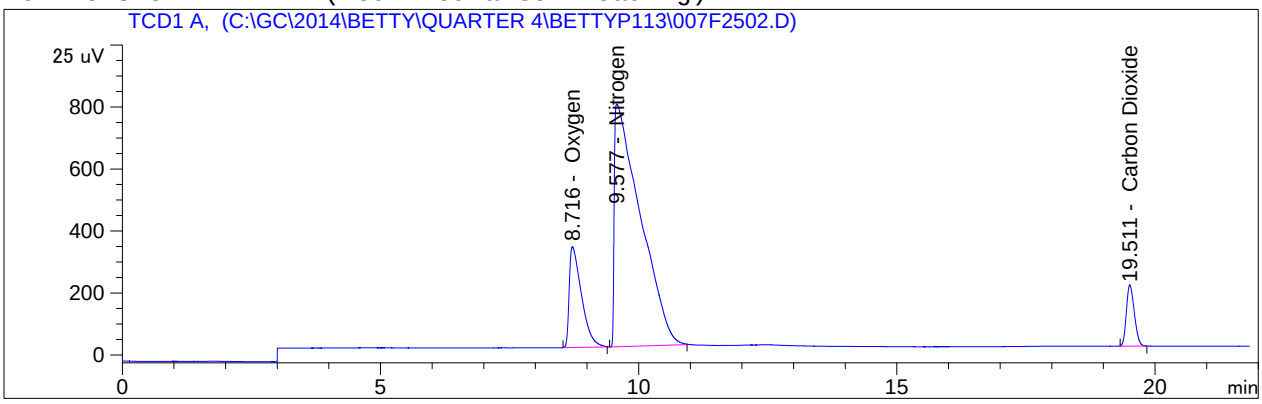

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\007F2502.D
Sample Name: 1214-29.18-C4 Run2.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  25
Acq. Instrument : Betty                           Location : Vial 7
Injection Date  : 12/24/2014 7:44:23 AM                Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                 [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -           -          -         Hydrogen
  8.716 BB     5367.86670 2.99746e-3   16.08996    Oxygen
  9.577 BB     2.72106e4  2.74074e-3   74.57741    Nitrogen
 12.646            -           -          -         Carbon monoxide
 16.456            -           -          -         Methane
 19.511 BB     2109.69238 1.58341e-3    3.34051    Carbon Dioxide

Totals :                                94.00789

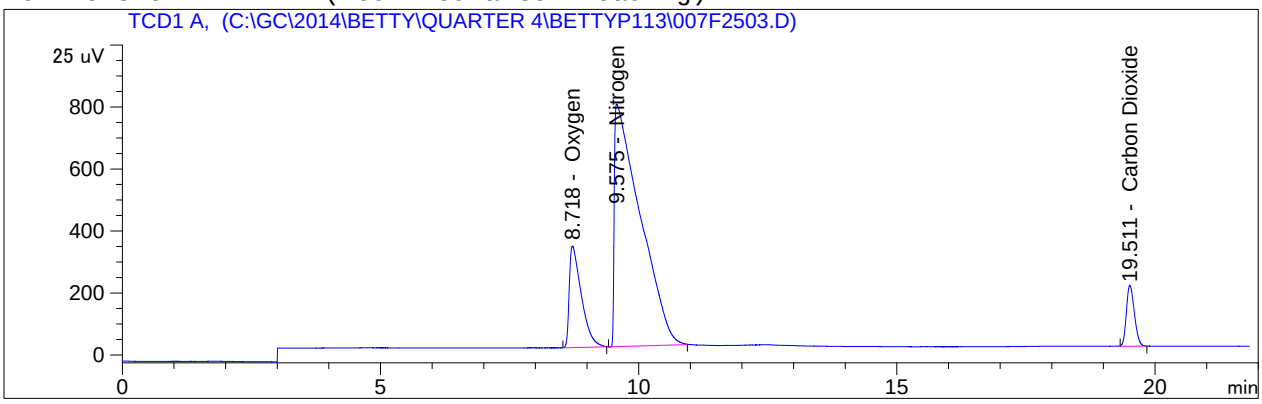

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\007F2503.D
Sample Name: 1214-29.18-C4 Run2.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  25
Acq. Instrument : Betty                           Location : Vial 7
Injection Date  : 12/24/2014 8:12:01 AM                Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -          -          -         Hydrogen
  8.718 BB     5327.42871 2.99742e-3   15.96852    Oxygen
  9.575 BB     2.70449e4  2.74074e-3   74.12309    Nitrogen
 12.646            -          -          -         Carbon monoxide
 16.456            -          -          -         Methane
 19.511 BB     2104.26733 1.58337e-3    3.33183    Carbon Dioxide

Totals :                                93.42344

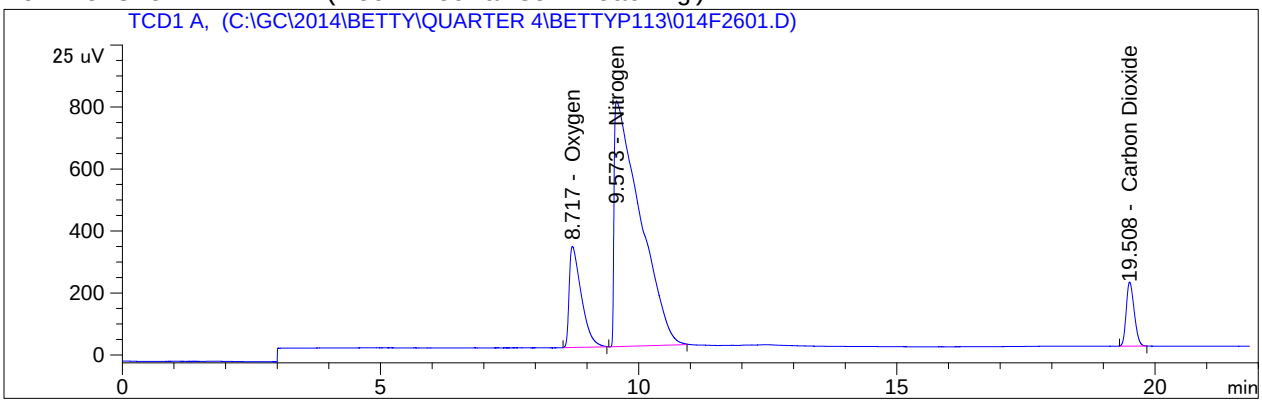

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\014F2601.D
Sample Name: 1214-29.18-C4 Run3.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  26
Acq. Instrument : Betty                           Location : Vial 14
Injection Date  : 12/24/2014 8:39:40 AM                Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034           -          -          -         Hydrogen
  8.717 BB     5327.07031 2.99742e-3   15.96744    Oxygen
  9.573 BB     2.74018e4  2.74075e-3   75.10135    Nitrogen
 12.646           -          -          -         Carbon monoxide
 16.456           -          -          -         Methane
 19.508 BB     2219.34937 1.58423e-3    3.51595    Carbon Dioxide

Totals :                                94.58475

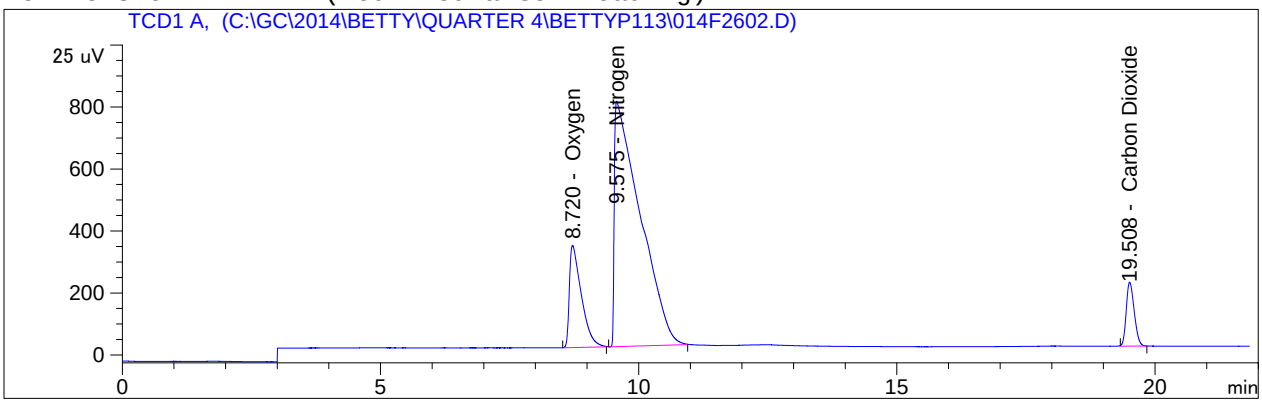

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\014F2602.D
Sample Name: 1214-29.18-C4 Run3.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  26
Acq. Instrument : Betty                           Location : Vial 14
Injection Date  : 12/24/2014 9:07:20 AM                Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -          -          -         Hydrogen
  8.720 BB     5304.55713 2.99739e-3   15.89983    Oxygen
  9.575 BB     2.72789e4  2.74075e-3   74.76448    Nitrogen
 12.646            -          -          -         Carbon monoxide
 16.456            -          -          -         Methane
 19.508 BB     2211.40845 1.58417e-3    3.50325    Carbon Dioxide

Totals :                                94.16755

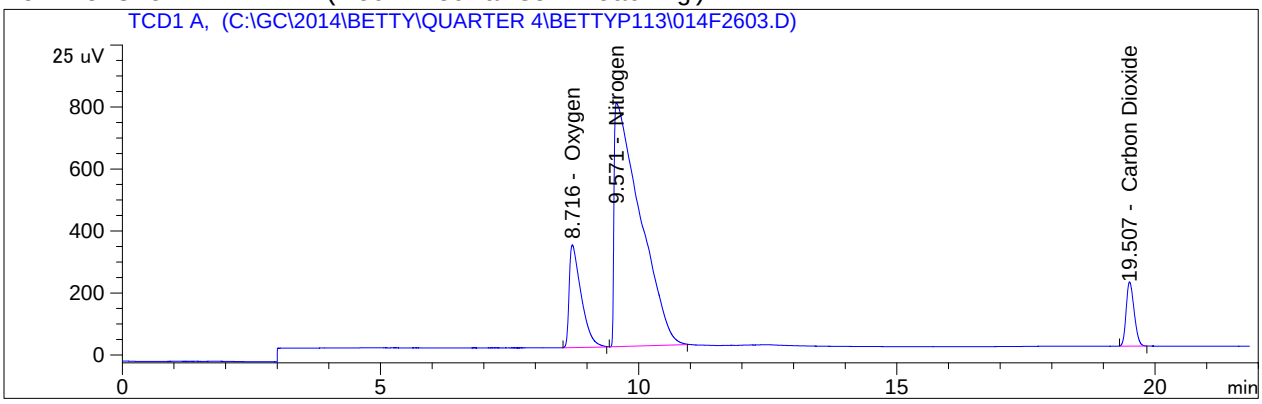

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\014F2603.D
Sample Name: 1214-29.18-C4 Run3.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  26
Acq. Instrument : Betty                           Location : Vial 14
Injection Date  : 12/24/2014 9:34:58 AM                Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         [25 uV*s]                 [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -           -          -         Hydrogen
  8.716 BB     5341.40234 2.99743e-3   16.01048    Oxygen
  9.571 BB     2.73942e4  2.74075e-3   75.08075    Nitrogen
 12.646            -           -          -         Carbon monoxide
 16.456            -           -          -         Methane
 19.507 BB     2220.99707 1.58424e-3    3.51859    Carbon Dioxide

Totals :                                 94.60982

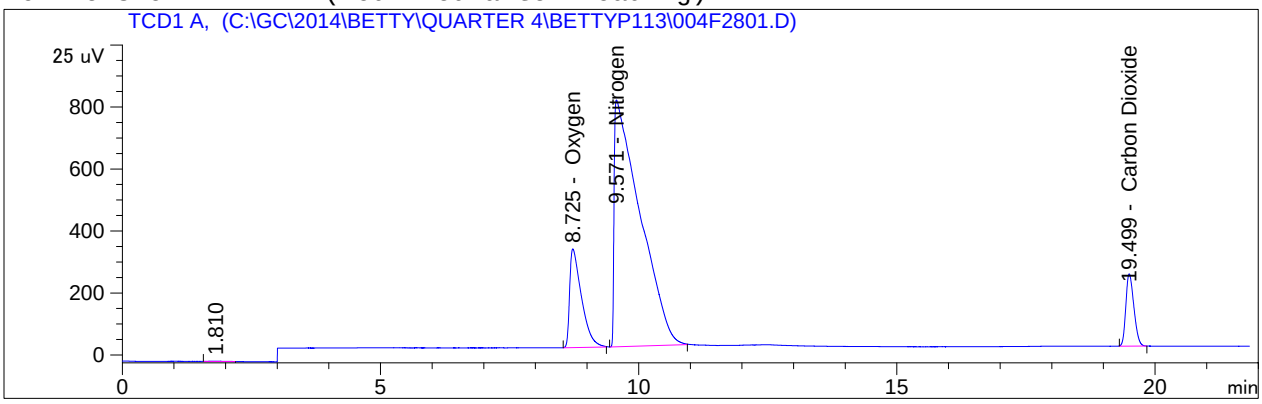

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\004F2801.D
Sample Name: 1214-29.24-C2 Run1.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  28
Acq. Instrument : Betty                           Location : Vial 4
Injection Date  : 12/24/2014 11:26:04 AM               Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -          -          -         Hydrogen
  8.725 BB     5069.30957 2.99712e-3   15.19332    Oxygen
  9.571 BB     2.74986e4  2.74075e-3   75.36690    Nitrogen
 12.646            -          -          -         Carbon monoxide
 16.456            -          -          -         Methane
 19.499 BB     2517.68091 1.58608e-3    3.99326    Carbon Dioxide

Totals :                                94.55348

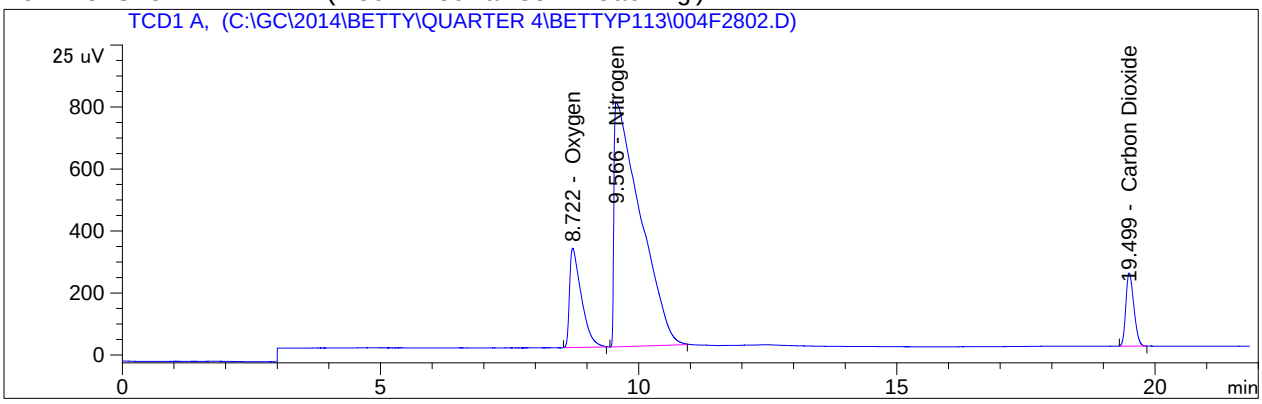

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\004F2802.D
Sample Name: 1214-29.24-C2 Run1.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  28
Acq. Instrument : Betty                           Location : Vial 4
Injection Date  : 12/24/2014 11:53:53 AM               Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -          -          -         Hydrogen
  8.722 BB     5106.47412 2.99716e-3   15.30494    Oxygen
  9.566 BB     2.77161e4  2.74076e-3   75.96319    Nitrogen
 12.646            -          -          -         Carbon monoxide
 16.456            -          -          -         Methane
 19.499 BB     2545.02295 1.58623e-3    4.03700    Carbon Dioxide

Totals :                                95.30513

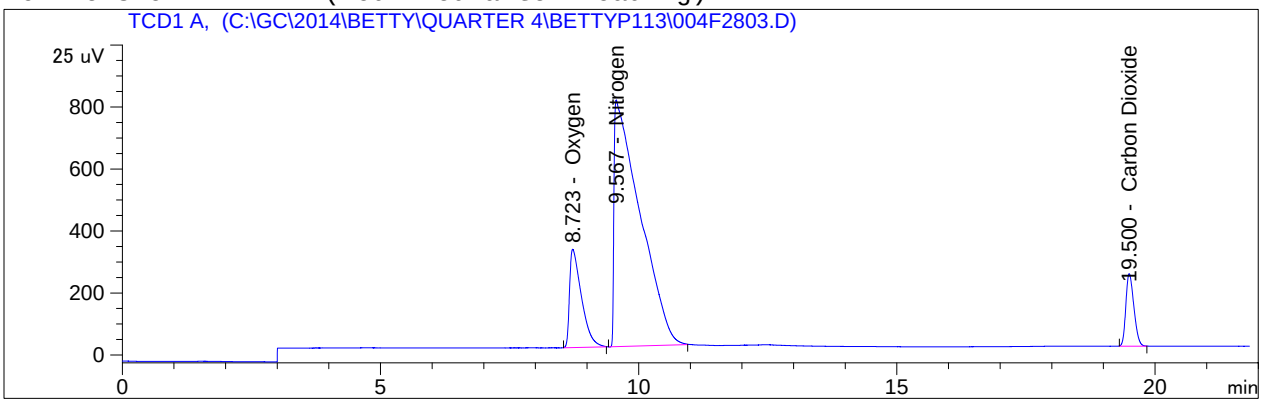

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\004F2803.D
Sample Name: 1214-29.24-C2 Run1.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  28
Acq. Instrument : Betty                           Location : Vial 4
Injection Date  : 12/24/2014 12:21:57 PM               Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]         [25 uV*s]                 [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -           -          -         Hydrogen
  8.723 BB     5073.36523 2.99712e-3   15.20550    Oxygen
  9.567 BB     2.76242e4  2.74076e-3   75.71117    Nitrogen
 12.646            -           -          -         Carbon monoxide
 16.456            -           -          -         Methane
 19.500 BB     2524.59082 1.58612e-3    4.00431    Carbon Dioxide

Totals :                                94.92099

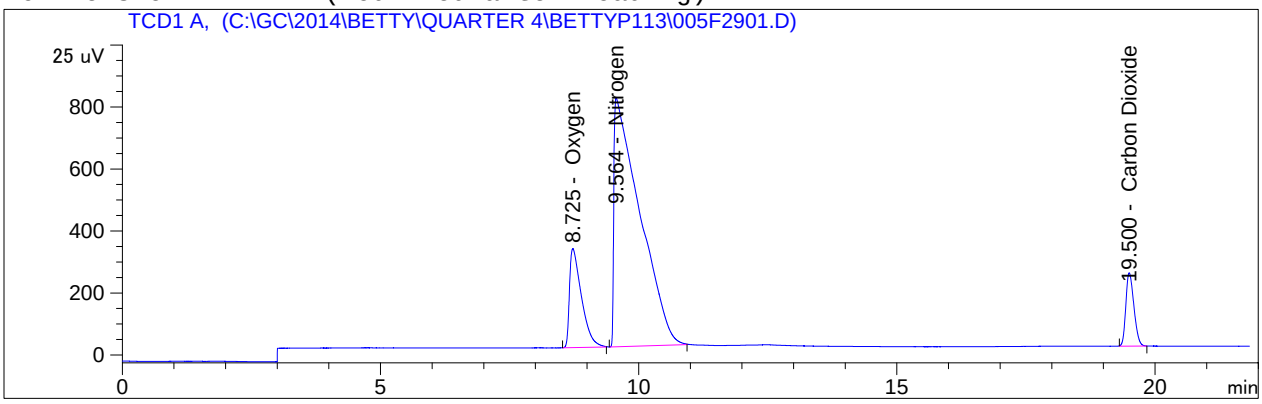

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\005F2901.D
Sample Name: 1214-29.24-C2 Run2.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  29
Acq. Instrument : Betty                           Location : Vial 5
Injection Date  : 12/24/2014 12:49:39 PM               Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -          -          -         Hydrogen
  8.725 BB     5154.33203 2.99722e-3   15.44867    Oxygen
  9.564 BB     2.78300e4  2.74076e-3   76.27532    Nitrogen
 12.646            -          -          -         Carbon monoxide
 16.456            -          -          -         Methane
 19.500 BB     2558.46875 1.58631e-3    4.05851    Carbon Dioxide

Totals :                                95.78250

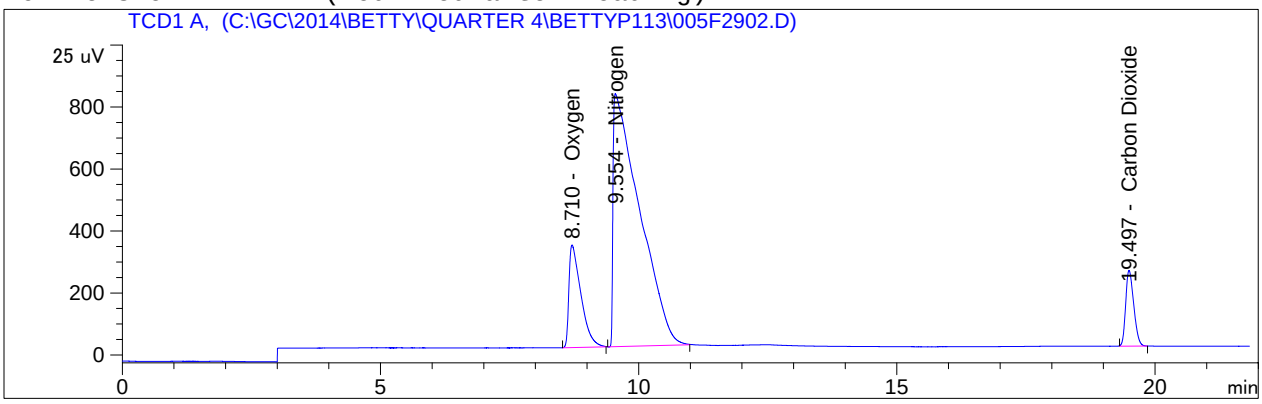

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\005F2902.D
Sample Name: 1214-29.24-C2 Run2.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  29
Acq. Instrument : Betty                           Location : Vial 5
Injection Date  : 12/24/2014 1:17:27 PM                Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -          -          -         Hydrogen
  8.710 BB     5329.90674 2.99742e-3   15.97596    Oxygen
  9.554 BB     2.89165e4  2.74080e-3   79.25433    Nitrogen
 12.646            -          -          -         Carbon monoxide
 16.456            -          -          -         Methane
 19.497 BB     2646.27856 1.58676e-3    4.19900    Carbon Dioxide

Totals :                                99.42929

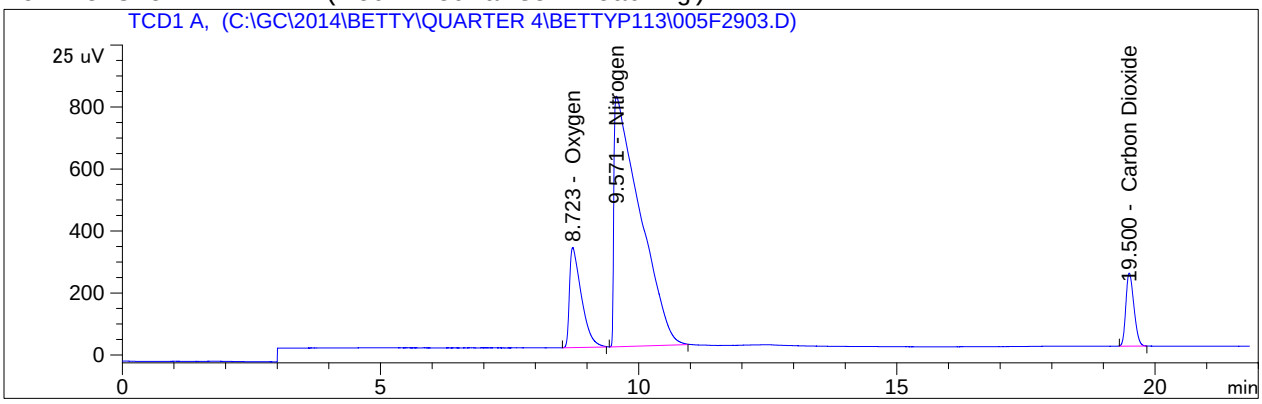

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\005F2903.D
Sample Name: 1214-29.24-C2 Run2.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  29
Acq. Instrument : Betty                           Location : Vial 5
Injection Date  : 12/24/2014 1:45:16 PM                Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -          -          -         Hydrogen
  8.723 BB     5179.19189 2.99725e-3   15.52333    Oxygen
  9.571 BB     2.80039e4  2.74077e-3   76.75216    Nitrogen
 12.646            -          -          -         Carbon monoxide
 16.456            -          -          -         Methane
 19.500 BB     2555.36694 1.58629e-3    4.05355    Carbon Dioxide

Totals :                                96.32904

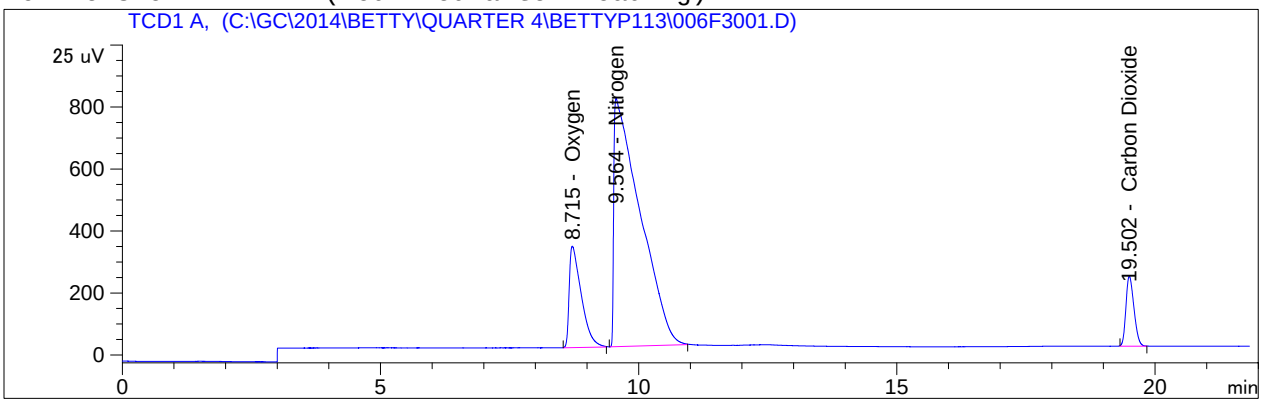

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\006F3001.D
Sample Name: 1214-29.24-C2 Run3.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  30
Acq. Instrument : Betty                           Location : Vial 6
Injection Date  : 12/24/2014 2:13:23 PM                Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                 [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -           -          -         Hydrogen
  8.715 BB     5307.60107 2.99739e-3   15.90897    Oxygen
  9.564 BB     2.80679e4  2.74077e-3   76.92776    Nitrogen
 12.646            -           -          -         Carbon monoxide
 16.456            -           -          -         Methane
 19.502 BB     2436.71460 1.58563e-3    3.86372    Carbon Dioxide

Totals :                                 96.70045

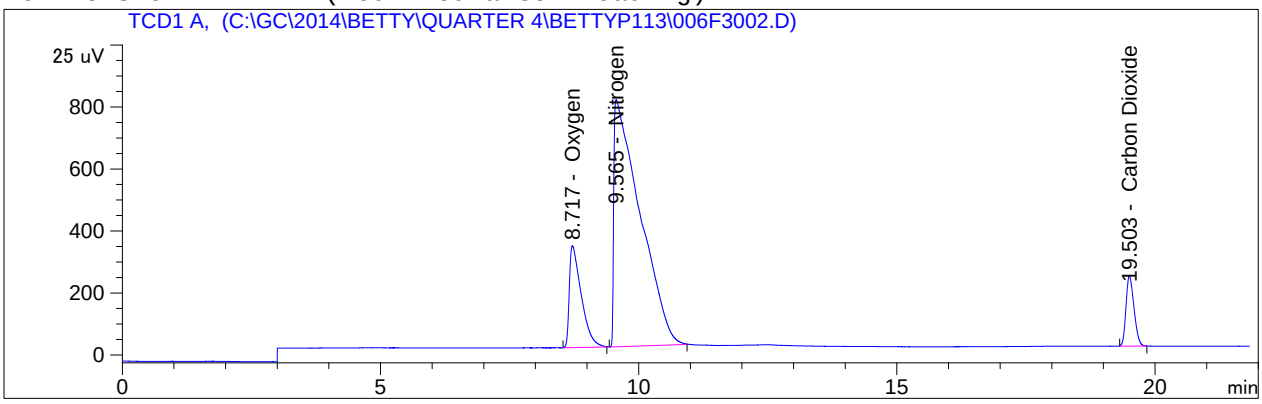

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\006F3002.D
Sample Name: 1214-29.24-C2 Run3.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  30
Acq. Instrument : Betty                           Location : Vial 6
Injection Date  : 12/24/2014 2:41:20 PM                Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                 [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -           -          -         Hydrogen
  8.717 BB     5287.01025 2.99737e-3   15.84713    Oxygen
  9.565 BB     2.79247e4  2.74077e-3   76.53497    Nitrogen
 12.646            -           -          -         Carbon monoxide
 16.456            -           -          -         Methane
 19.503 BB     2434.10034 1.58561e-3    3.85953    Carbon Dioxide

Totals :                                 96.24164

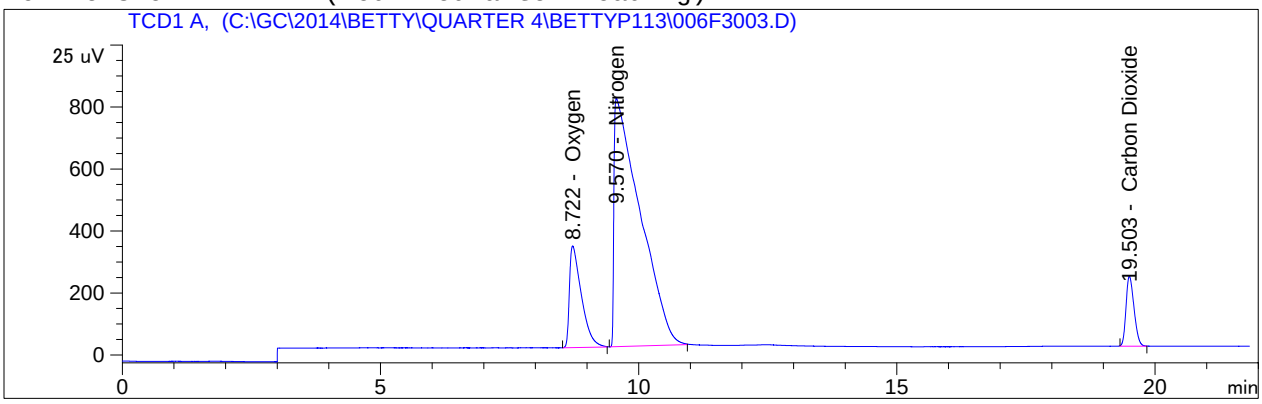

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\006F3003.D
Sample Name: 1214-29.24-C2 Run3.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  30
Acq. Instrument : Betty                           Location : Vial 6
Injection Date  : 12/24/2014 3:09:01 PM                Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -          -          -         Hydrogen
  8.722 BB     5279.69824 2.99736e-3   15.82517    Oxygen
  9.570 BB     2.79157e4  2.74077e-3   76.51030    Nitrogen
 12.646            -          -          -         Carbon monoxide
 16.456            -          -          -         Methane
 19.503 BB     2428.54199 1.58558e-3    3.85064    Carbon Dioxide

Totals :                                96.18611

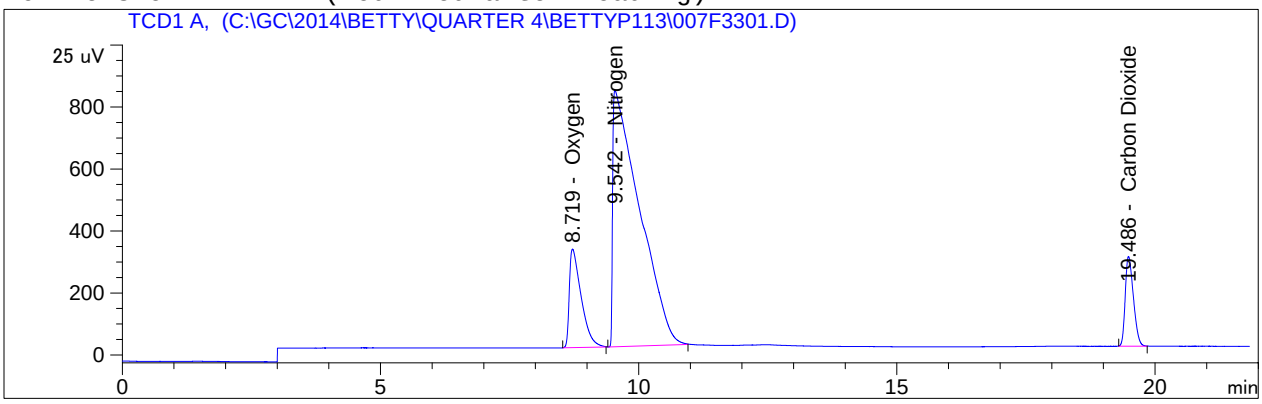

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\007F3301.D
Sample Name: 1214-29.24-C2 Run4.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  33
Acq. Instrument : Betty                           Location : Vial 7
Injection Date  : 12/24/2014 6:39:20 PM                Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -          -          -         Hydrogen
  8.719 BB     5066.05127 2.99711e-3   15.18354    Oxygen
  9.542 BB     2.95297e4  2.74081e-3   80.93545    Nitrogen
 12.646            -          -          -         Carbon monoxide
 16.456            -          -          -         Methane
 19.486 BB     3180.81006 1.58897e-3    5.05420    Carbon Dioxide

Totals :                                101.17319

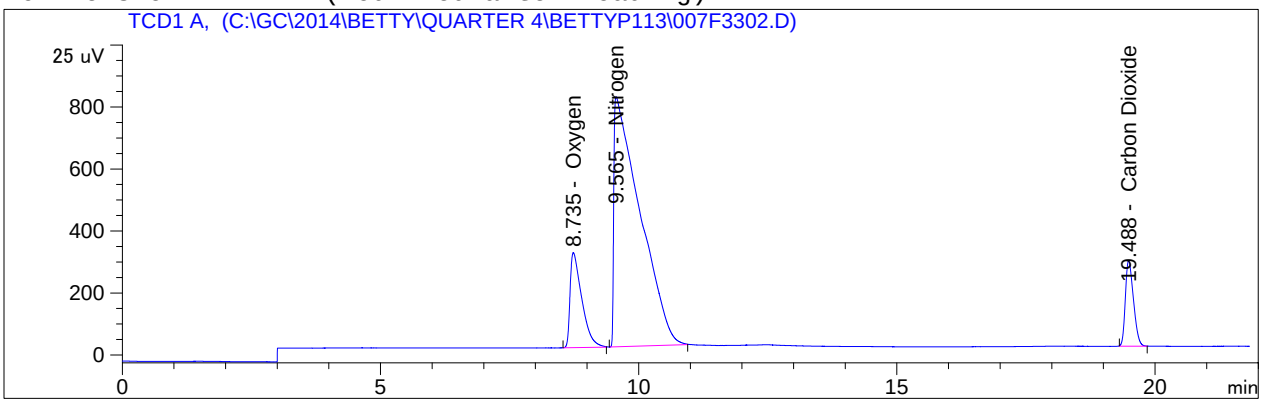

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\007F3302.D
Sample Name: 1214-29.24-C2 Run4.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  33
Acq. Instrument : Betty                           Location : Vial 7
Injection Date  : 12/24/2014 7:07:23 PM                Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034           -          -          -         Hydrogen
  8.735 BB     4831.47803 2.99682e-3   14.47905    Oxygen
  9.565 BB     2.80986e4  2.74077e-3   77.01173    Nitrogen
 12.646           -          -          -         Carbon monoxide
 16.456           -          -          -         Methane
 19.488 BB     3008.71484 1.58834e-3    4.77886    Carbon Dioxide

Totals :                                96.26965

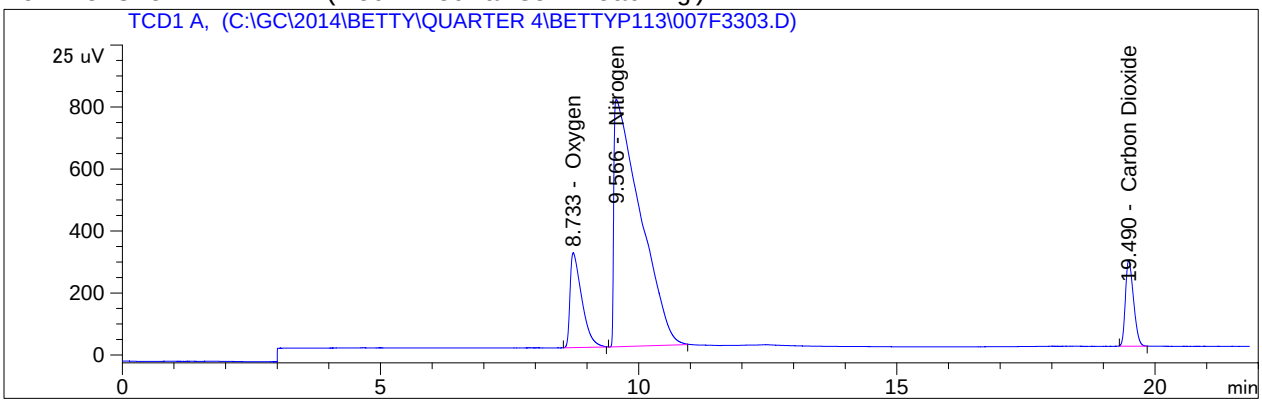

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\007F3303.D
Sample Name: 1214-29.24-C2 Run4.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  33
Acq. Instrument : Betty                           Location : Vial 7
Injection Date  : 12/24/2014 7:35:10 PM                Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034           -          -          -         Hydrogen
  8.733 BB     4836.66357 2.99682e-3   14.49463    Oxygen
  9.566 BB     2.81522e4  2.74077e-3   77.15872    Nitrogen
 12.646           -          -          -         Carbon monoxide
 16.456           -          -          -         Methane
 19.490 BB     3023.35547 1.58840e-3    4.80229    Carbon Dioxide

Totals :                                96.45563

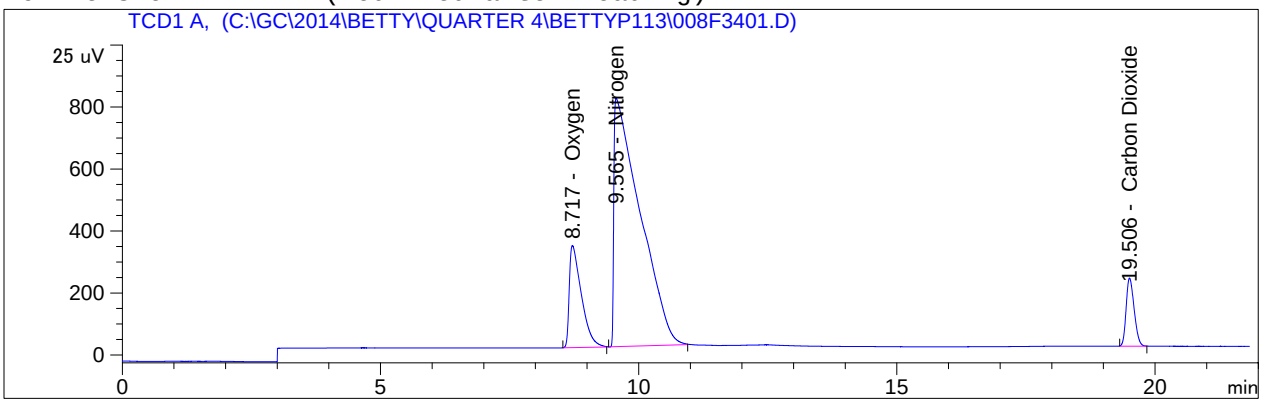

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\008F3401.D
Sample Name: 1214-29.24-C3 Run1.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  34
Acq. Instrument : Betty                           Location : Vial 8
Injection Date  : 12/24/2014 8:02:55 PM                Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -          -          -         Hydrogen
  8.717 BB     5356.17773 2.99745e-3   16.05486    Oxygen
  9.565 BB     2.80191e4  2.74077e-3   76.79384    Nitrogen
 12.646            -          -          -         Carbon monoxide
 16.456            -          -          -         Methane
 19.506 BB     2364.57544 1.58519e-3    3.74830    Carbon Dioxide

Totals :                                96.59700

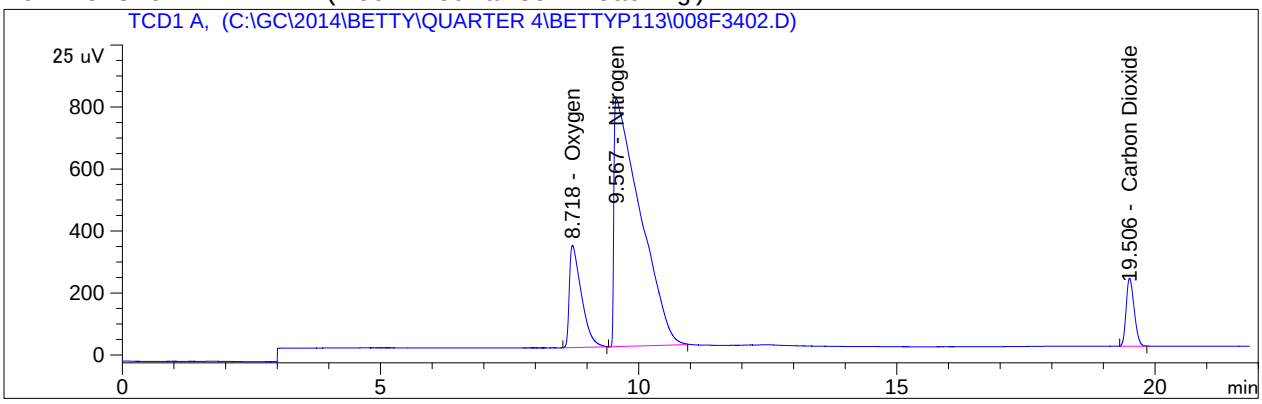

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\008F3402.D
Sample Name: 1214-29.24-C3 Run1.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  34
Acq. Instrument : Betty                           Location : Vial 8
Injection Date  : 12/24/2014 8:30:40 PM                Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034           -          -          -         Hydrogen
  8.718 BB     5353.30225 2.99744e-3   16.04622    Oxygen
  9.567 BB     2.80361e4  2.74077e-3   76.84047    Nitrogen
 12.646           -          -          -         Carbon monoxide
 16.456           -          -          -         Methane
 19.506 BB     2364.86377 1.58519e-3    3.74876    Carbon Dioxide

Totals :                                96.63546

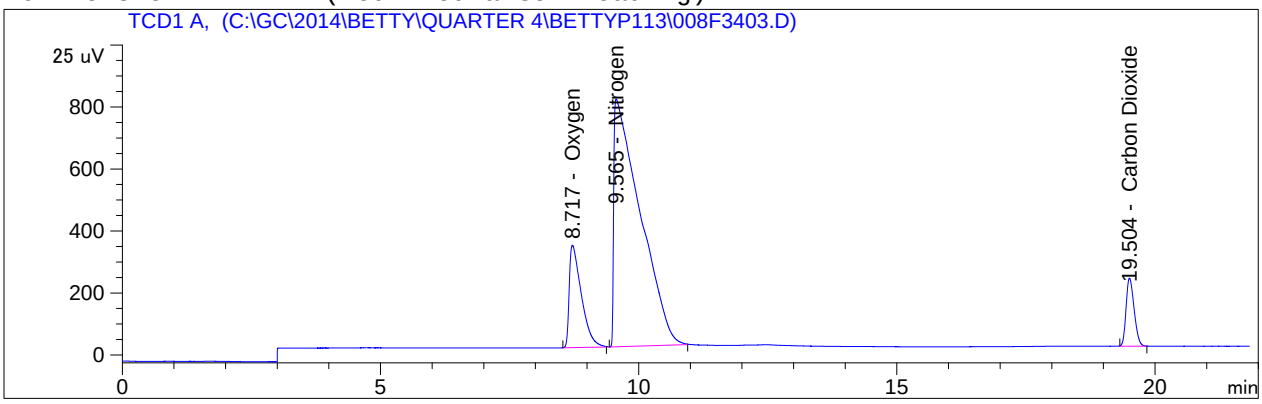

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\008F3403.D
Sample Name: 1214-29.24-C3 Run1.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  34
Acq. Instrument : Betty                           Location : Vial 8
Injection Date  : 12/24/2014 8:58:29 PM                Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -          -          -         Hydrogen
  8.717 BB     5384.08105 2.99748e-3   16.13866    Oxygen
  9.565 BB     2.81354e4  2.74077e-3   77.11264    Nitrogen
 12.646            -          -          -         Carbon monoxide
 16.456            -          -          -         Methane
 19.504 BB     2372.18188 1.58524e-3    3.76047    Carbon Dioxide

Totals :                                97.01177

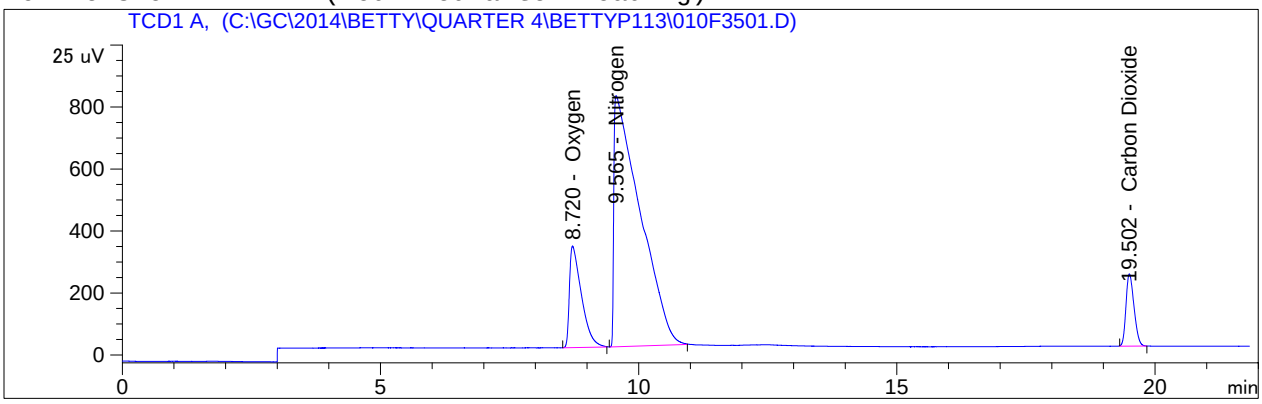

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\010F3501.D
Sample Name: 1214-29.24-C3 Run2.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  35
Acq. Instrument : Betty                           Location : Vial 10
Injection Date  : 12/24/2014 9:26:16 PM                Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034           -          -          -         Hydrogen
  8.720 BB     5295.47119 2.99738e-3   15.87254    Oxygen
  9.565 BB     2.82777e4  2.74078e-3   77.50277    Nitrogen
 12.646           -          -          -         Carbon monoxide
 16.456           -          -          -         Methane
 19.502 BB     2519.27661 1.58609e-3    3.99581    Carbon Dioxide

Totals :                                97.37112

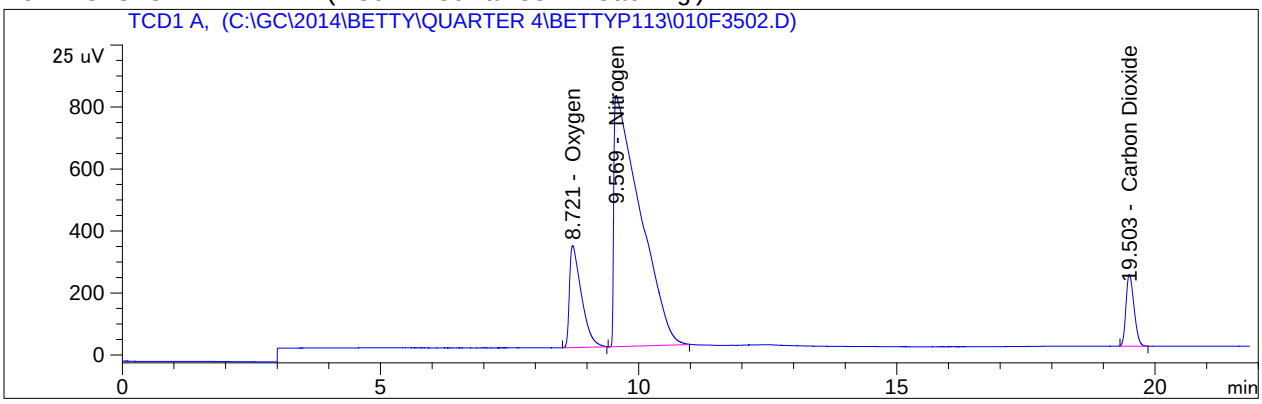

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\010F3502.D
Sample Name: 1214-29.24-C3 Run2.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  35
Acq. Instrument : Betty                           Location : Vial 10
Injection Date  : 12/24/2014 9:54:17 PM                Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -          -          -         Hydrogen
  8.721 BB     5296.75537 2.99738e-3   15.87640    Oxygen
  9.569 BB     2.84003e4  2.74078e-3   77.83906    Nitrogen
 12.646            -          -          -         Carbon monoxide
 16.456            -          -          -         Methane
 19.503 BB     2508.46533 1.58603e-3    3.97851    Carbon Dioxide

Totals :                                97.69397

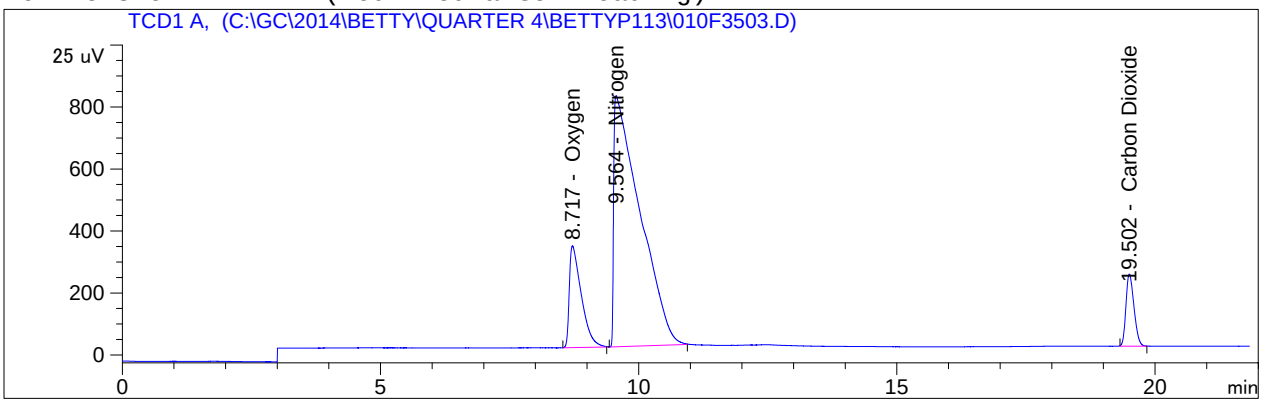

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\010F3503.D
Sample Name: 1214-29.24-C3 Run2.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  35
Acq. Instrument : Betty                           Location : Vial 10
Injection Date  : 12/24/2014 10:22:04 PM               Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034           -          -          -         Hydrogen
  8.717 BB     5295.25977 2.99738e-3   15.87191    Oxygen
  9.564 BB     2.83011e4  2.74078e-3   77.56714    Nitrogen
 12.646           -          -          -         Carbon monoxide
 16.456           -          -          -         Methane
 19.502 BB     2509.95435 1.58604e-3    3.98089    Carbon Dioxide

Totals :                                97.41994

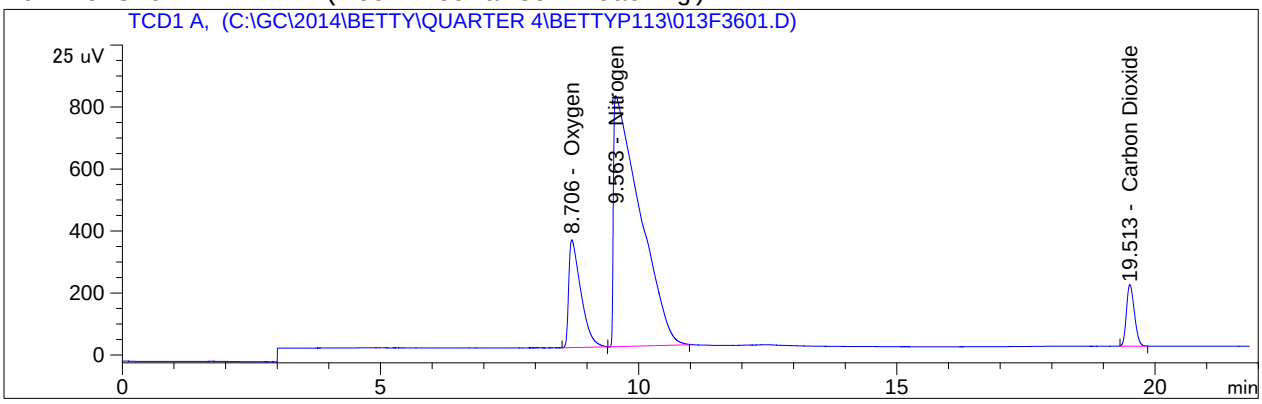

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\013F3601.D
Sample Name: 1214-29.24-C3 Run3.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  36
Acq. Instrument : Betty                           Location : Vial 13
Injection Date  : 12/24/2014 10:49:55 PM               Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -          -          -         Hydrogen
  8.706 BB     5675.49609 2.99777e-3   17.01385    Oxygen
  9.563 BB     2.85412e4  2.74079e-3   78.22527    Nitrogen
 12.646            -          -          -         Carbon monoxide
 16.456            -          -          -         Methane
 19.513 BB     2128.70654 1.58356e-3    3.37093    Carbon Dioxide

Totals :                                98.61005

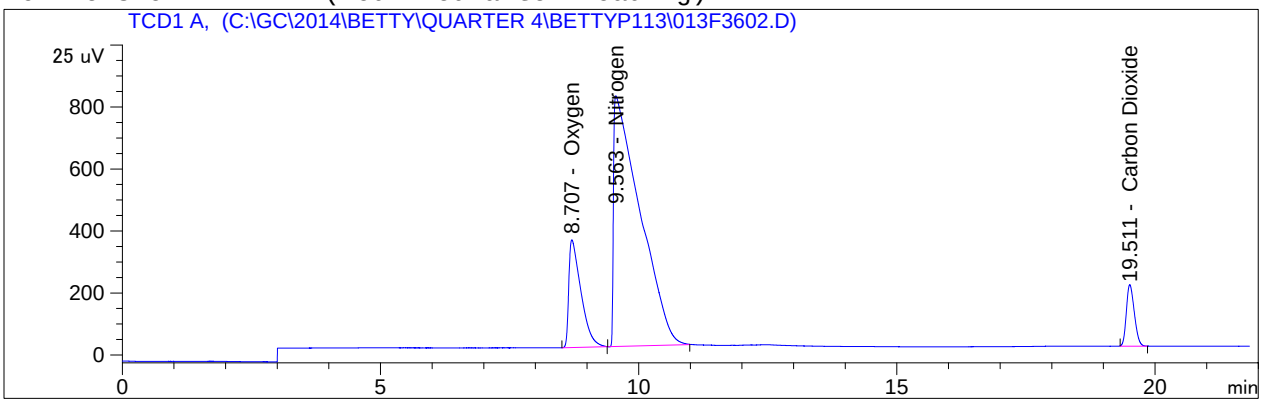

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\013F3602.D
Sample Name: 1214-29.24-C3 Run3.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  36
Acq. Instrument : Betty                           Location : Vial 13
Injection Date  : 12/24/2014 11:17:45 PM               Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034           -          -          -         Hydrogen
  8.707 BB     5681.84619 2.99778e-3   17.03292    Oxygen
  9.563 BB     2.85385e4  2.74079e-3   78.21797    Nitrogen
 12.646           -          -          -         Carbon monoxide
 16.456           -          -          -         Methane
 19.511 BB     2124.80298 1.58353e-3    3.36469    Carbon Dioxide

Totals :                                98.61558

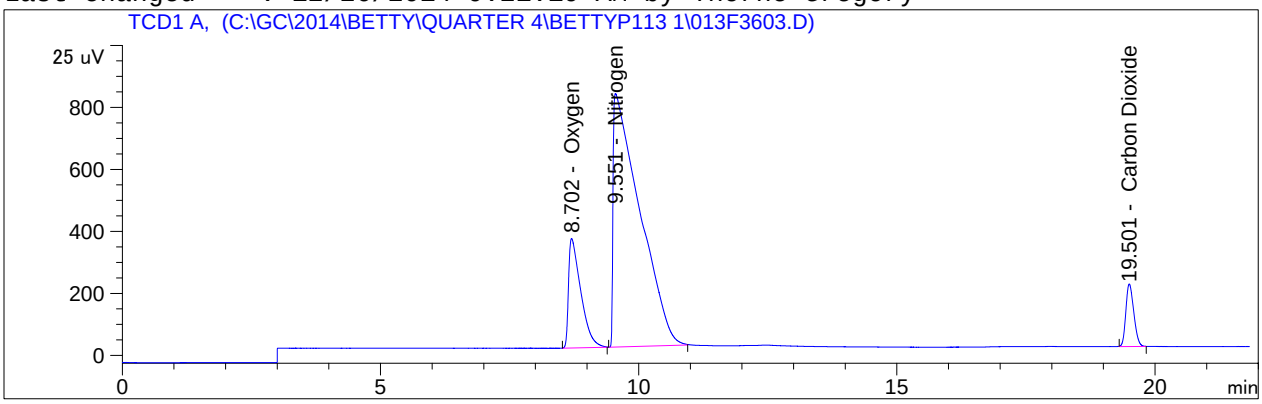

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113 1\013F3603.D
Sample Name: 1214-29.24-C3 Run3.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  36
Acq. Instrument : Betty                           Location : Vial 13
Injection Date  : 12/25/2014 6:05:14 PM                Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113 1\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034           -          -          -         Hydrogen
  8.702 BB     5804.43701 2.99790e-3   17.40109    Oxygen
  9.551 BB     2.90400e4  2.74080e-3   79.59271    Nitrogen
 12.646           -          -          -         Carbon monoxide
 16.456           -          -          -         Methane
 19.501 BB     2151.68872 1.58373e-3    3.40770    Carbon Dioxide

Totals :                                100.40151

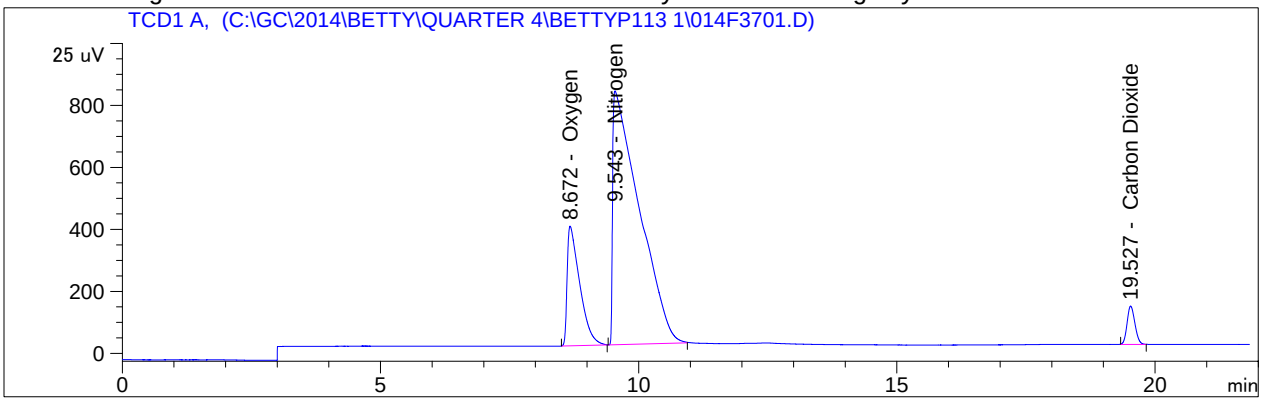

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113 1\014F3701.D
Sample Name: 1214-29.24-C4 Run1.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  37
Acq. Instrument : Betty                           Location : Vial 14
Injection Date  : 12/25/2014 6:33:17 PM                Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113 1\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034           -          -          -         Hydrogen
  8.672 BB     6521.75977 2.99848e-3   19.55539    Oxygen
  9.543 BB     2.90321e4  2.74080e-3   79.57104    Nitrogen
 12.646           -          -          -         Carbon monoxide
 16.456           -          -          -         Methane
 19.527 BB     1298.90015 1.57312e-3    2.04332    Carbon Dioxide

Totals :                                101.16976


1 Warnings or Errors :

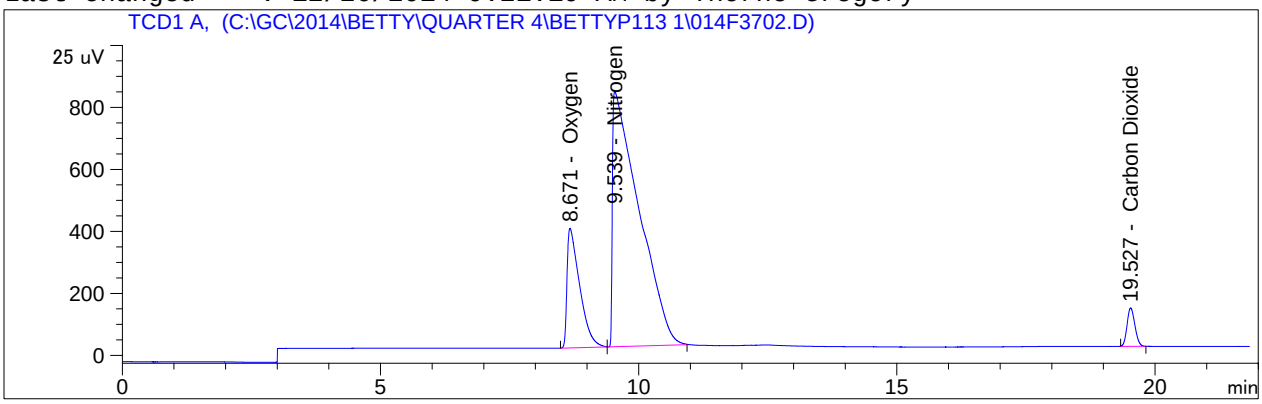
Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113 1\014F3702.D
Sample Name: 1214-29.24-C4 Run1.Bag

==========

Acq. Operator : disconnected Seq. Line : 37
Acq. Instrument : Betty Location : Vial 14
Injection Date : 12/25/2014 7:01:18 PM Inj : 2
Inj Volume : 250 µl
Acq. Method : C:\GC\2014\BETTY\QUARTER 4\BETTYP113 1\BETTYP017_CAL.M
Last changed : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed : 12/26/2014 9:21:19 AM by Thorne Gregory



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External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 12/26/2014 9:21:19 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime [min]	Type	Area [25 uV*s]	Amt/Area	Amount [%]	Grp	Name
2.034		-	-	-		Hydrogen
8.671	BB	6542.27197	2.99850e-3	19.61700		Oxygen
9.539	BB	2.91635e4	2.74080e-3	79.93150		Nitrogen
12.646		-	-	-		Carbon monoxide
16.456		-	-	-		Methane
19.527	BB	1306.07837	1.57326e-3	2.05480		Carbon Dioxide

Totals : 101.60331

1 Warnings or Errors :

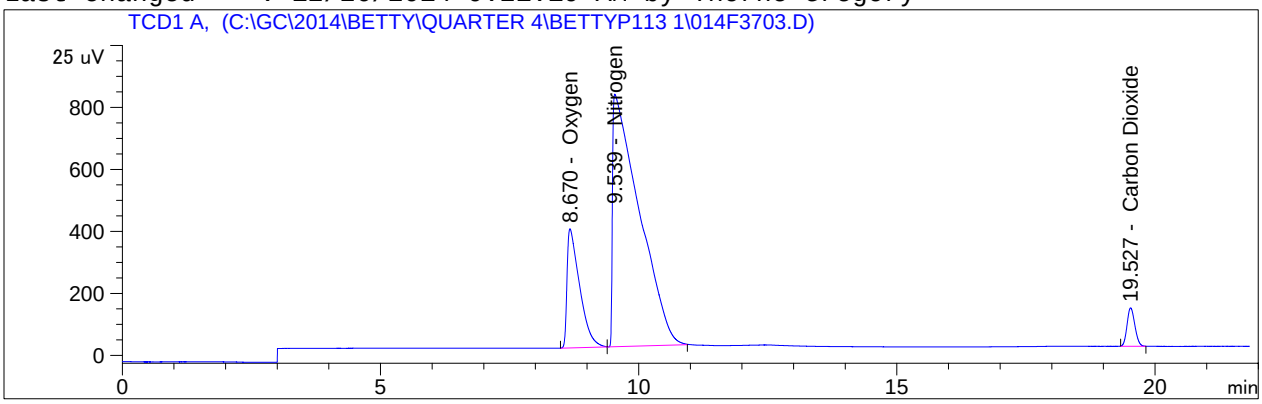
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113 1\014F3703.D
Sample Name: 1214-29.24-C4 Run1.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  37
Acq. Instrument : Betty                           Location : Vial 14
Injection Date  : 12/25/2014 7:29:17 PM                Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113 1\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                 [%]
-------|------|----------|----------|----------|--|------------------
  2.034           -          -          -         Hydrogen
  8.670 BB     6501.46387 2.99847e-3   19.49444    Oxygen
  9.539 BB     2.89806e4  2.74080e-3   79.43004    Nitrogen
 12.646           -          -          -         Carbon monoxide
 16.456           -          -          -         Methane
 19.527 BB     1303.87390 1.57322e-3    2.05128    Carbon Dioxide

Totals :                               100.97576

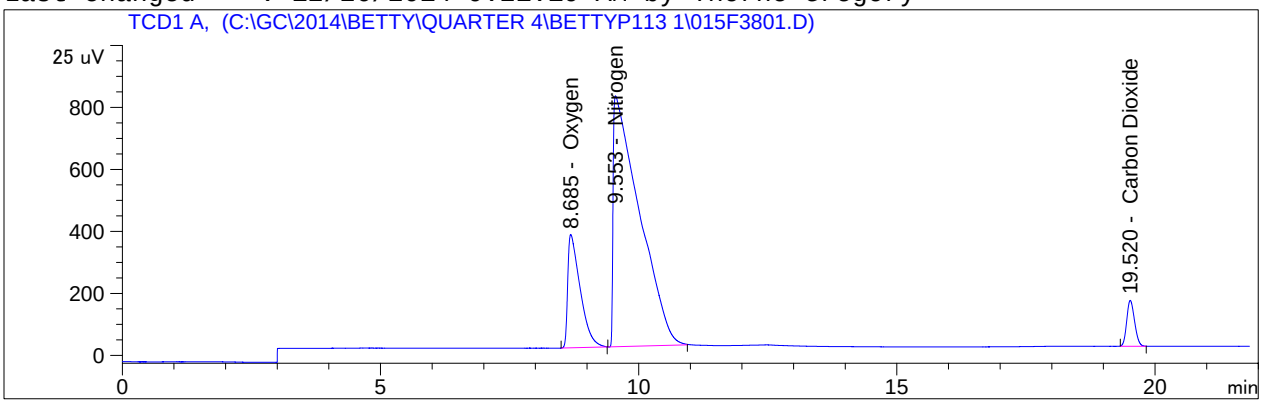

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113 1\015F3801.D
Sample Name: 1214-29.24-C4 Run2.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  38
Acq. Instrument : Betty                           Location : Vial 15
Injection Date  : 12/25/2014 7:57:16 PM                Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113 1\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                 [%]
-------|------|----------|----------|----------|--|------------------
  2.034           -           -          -         Hydrogen
  8.685 BB     6119.12451 2.99817e-3   18.34618    Oxygen
  9.553 BB     2.83201e4  2.74078e-3   77.61899    Nitrogen
 12.646           -           -          -         Carbon monoxide
 16.456           -           -          -         Methane
 19.520 BB     1562.80408 1.57764e-3    2.46554    Carbon Dioxide

Totals :                                98.43071

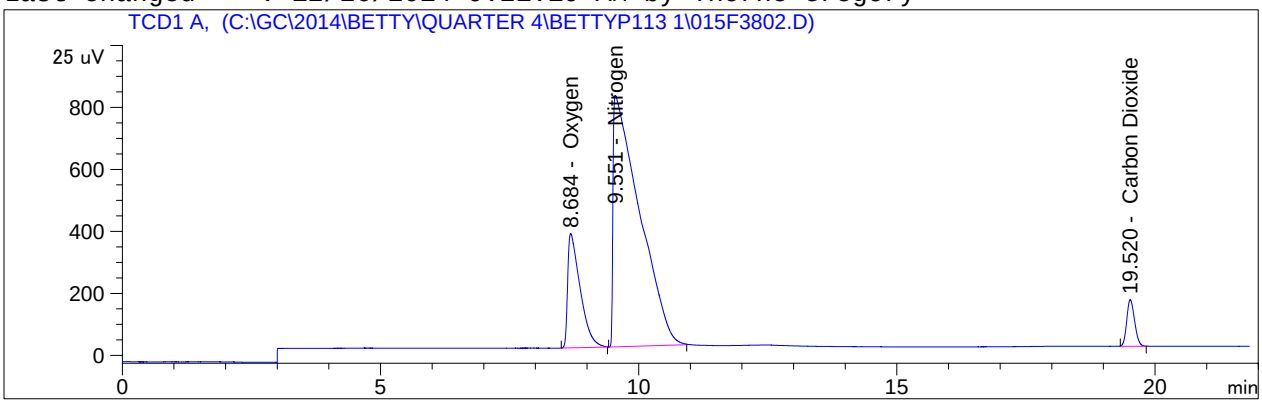

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113 1\015F3802.D
Sample Name: 1214-29.24-C4 Run2.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  38
Acq. Instrument : Betty                           Location : Vial 15
Injection Date  : 12/25/2014 8:25:14 PM                Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113 1\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                 [%]
-------|------|----------|----------|----------|--|------------------
  2.034           -          -          -         Hydrogen
  8.684 BB     6188.71875 2.99823e-3   18.55519    Oxygen
  9.551 BB     2.85872e4  2.74079e-3   78.35137    Nitrogen
 12.646           -          -          -         Carbon monoxide
 16.456           -          -          -         Methane
 19.520 BB     1584.33594 1.57794e-3    2.49999    Carbon Dioxide

Totals :                                99.40655


1 Warnings or Errors :

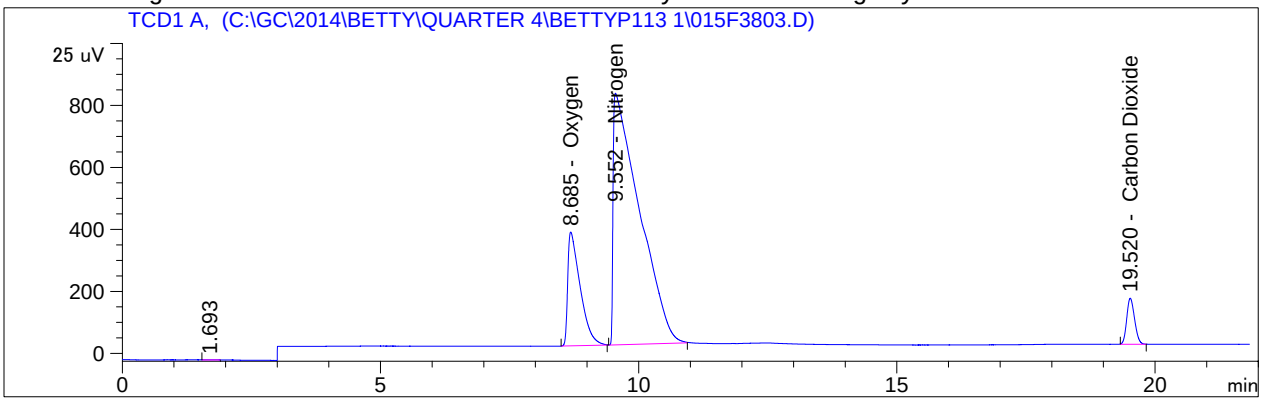
Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113 1\015F3803.D
Sample Name: 1214-29.24-C4 Run2.Bag

==========

Acq. Operator : disconnected Seq. Line : 38
Acq. Instrument : Betty Location : Vial 15
Injection Date : 12/25/2014 8:53:13 PM Inj : 3
Inj Volume : 250 µl
Acq. Method : C:\GC\2014\BETTY\QUARTER 4\BETTYP113 1\BETTYP017_CAL.M
Last changed : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed : 12/26/2014 9:21:19 AM by Thorne Gregory



==========

External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 12/26/2014 9:21:19 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime [min]	Type	Area [25 uV*s]	Amt/Area	Amount [%]	Grp	Name
2.034		-	-	-		Hydrogen
8.685	BB	6133.16162	2.99818e-3	18.38834		Oxygen
9.552	BB	2.84258e4	2.74078e-3	77.90888		Nitrogen
12.646		-	-	-		Carbon monoxide
16.456		-	-	-		Methane
19.520	BB	1567.39233	1.57771e-3	2.47288		Carbon Dioxide

Totals : 98.77010

1 Warnings or Errors :

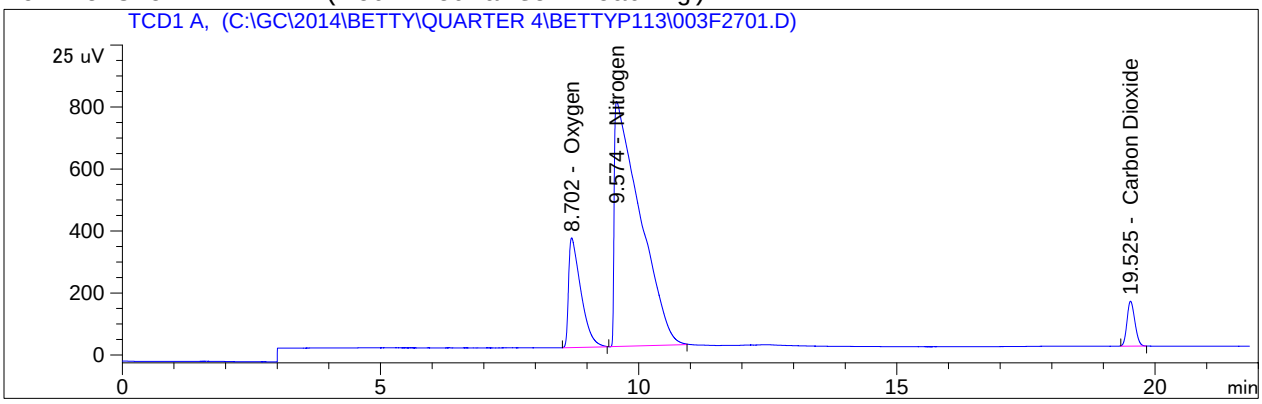
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\003F2701.D
Sample Name: 1214-29.24-C4 Run3.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  27
Acq. Instrument : Betty                           Location : Vial 3
Injection Date  : 12/24/2014 10:02:47 AM               Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034           -          -          -         Hydrogen
  8.702 BB     5845.57568 2.99793e-3   17.52464    Oxygen
  9.574 BB     2.71959e4  2.74074e-3   74.53711    Nitrogen
 12.646           -          -          -         Carbon monoxide
 16.456           -          -          -         Methane
 19.525 BB     1534.81812 1.57723e-3    2.42077    Carbon Dioxide

Totals :                                94.48252

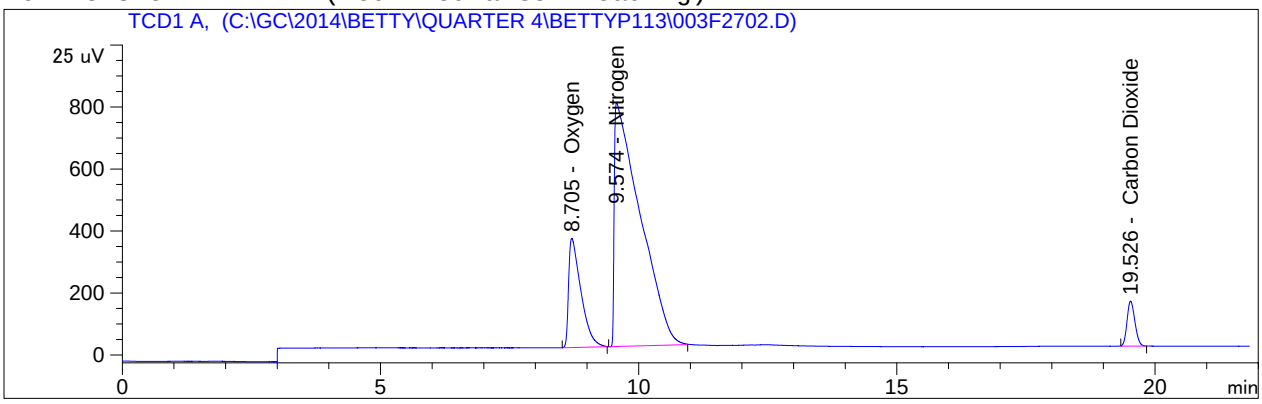

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\003F2702.D
Sample Name: 1214-29.24-C4 Run3.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  27
Acq. Instrument : Betty                           Location : Vial 3
Injection Date  : 12/24/2014 10:30:25 AM               Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                 [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -           -          -         Hydrogen
  8.705 BB     5832.22705 2.99792e-3   17.48455    Oxygen
  9.574 BB     2.71558e4  2.74074e-3   74.42712    Nitrogen
 12.646            -           -          -         Carbon monoxide
 16.456            -           -          -         Methane
 19.526 BB     1534.17773 1.57722e-3    2.41974    Carbon Dioxide

Totals :                                 94.33142

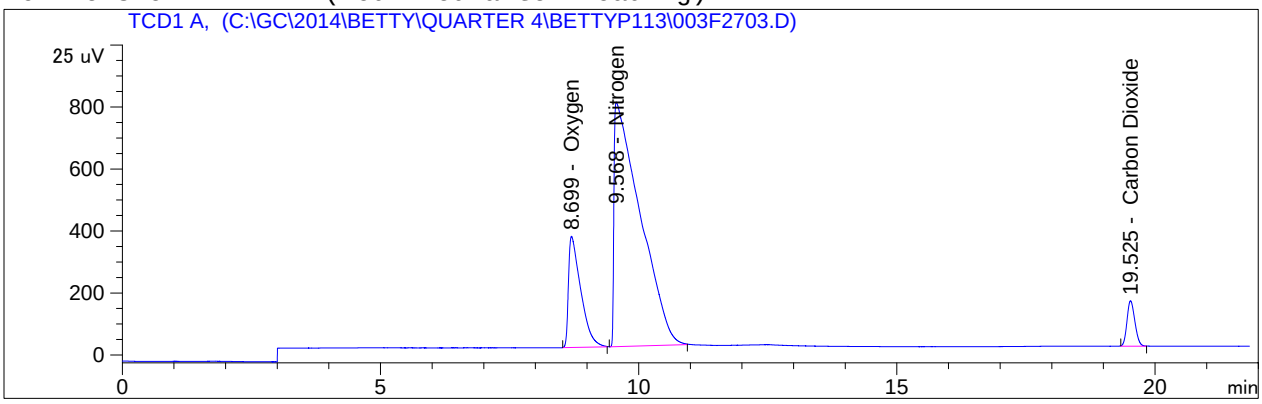

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\003F2703.D
Sample Name: 1214-29.24-C4 Run3.Bag

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  27
Acq. Instrument : Betty                           Location : Vial 3
Injection Date  : 12/24/2014 10:58:17 AM               Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -          -          -         Hydrogen
  8.699 BB     5916.25195 2.99800e-3   17.73690    Oxygen
  9.568 BB     2.75542e4  2.74075e-3   75.51936    Nitrogen
 12.646            -          -          -         Carbon monoxide
 16.456            -          -          -         Methane
 19.525 BB     1548.29968 1.57743e-3    2.44234    Carbon Dioxide

Totals :                                95.69859

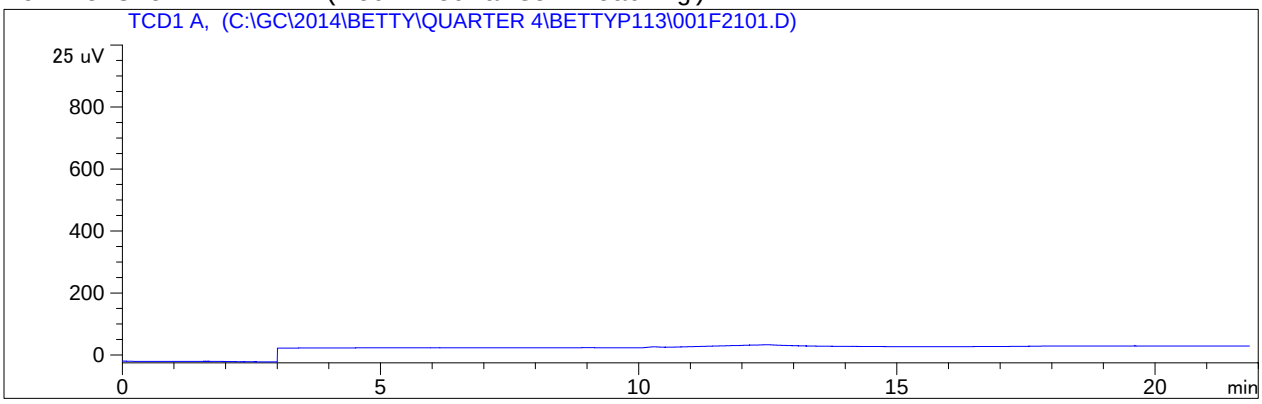

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\001F2101.D
Sample Name: He blank #LB

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  21
Acq. Instrument : Betty                           Location : Vial 1
Injection Date  : 12/24/2014 1:45:11 AM                Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -          -          -         Hydrogen
  8.900            -          -          -         Oxygen
  9.500            -          -          -         Nitrogen
 12.646            -          -          -         Carbon monoxide
 16.456            -          -          -         Methane
 19.559            -          -          -         Carbon Dioxide

Totals :                                 0.00000

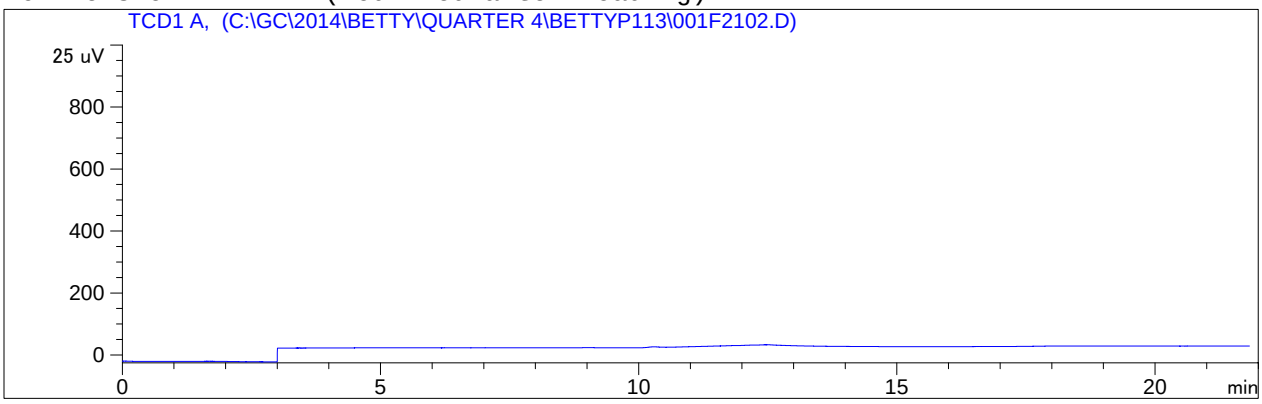

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\001F2102.D
Sample Name: He blank #LB

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  21
Acq. Instrument : Betty                           Location : Vial 1
Injection Date  : 12/24/2014 2:12:48 AM                Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -          -          -         Hydrogen
  8.900            -          -          -         Oxygen
  9.500            -          -          -         Nitrogen
 12.646            -          -          -         Carbon monoxide
 16.456            -          -          -         Methane
 19.559            -          -          -         Carbon Dioxide

Totals :                                 0.00000

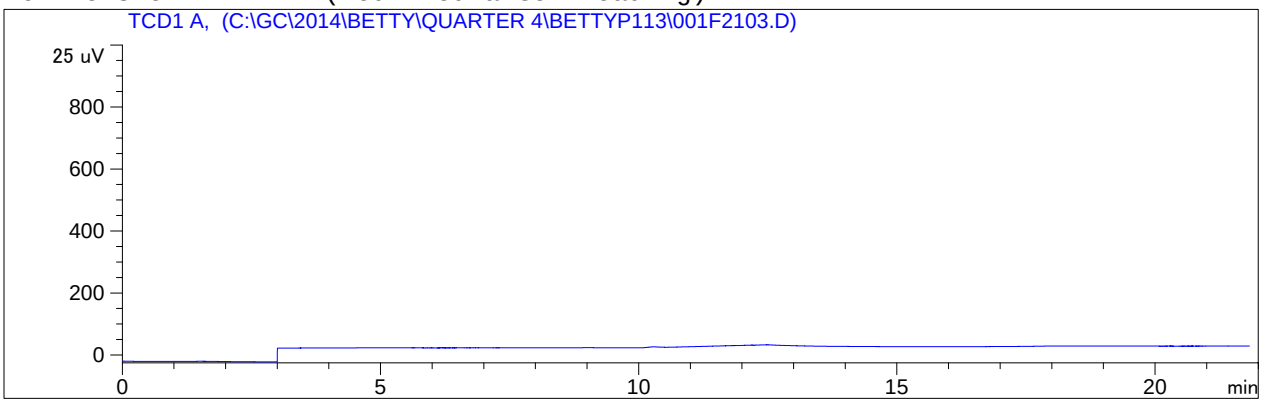

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\001F2103.D
Sample Name: He blank #LB

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  21
Acq. Instrument : Betty                           Location : Vial 1
Injection Date  : 12/24/2014 2:40:37 AM                Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:21:19 AM by Thorne Gregory
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:21:19 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -          -          -         Hydrogen
  8.900            -          -          -         Oxygen
  9.500            -          -          -         Nitrogen
 12.646            -          -          -         Carbon monoxide
 16.456            -          -          -         Methane
 19.559            -          -          -         Carbon Dioxide

Totals :                                 0.00000


1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
```

Calibration Table

Calib. Data Modified : 12/24/2014 2:21:31 PM

Rel. Reference Window : 2.000 %
Abs. Reference Window : 0.000 min
Rel. Non-ref. Window : 2.000 %
Abs. Non-ref. Window : 0.200 min
Uncalibrated Peaks : not reported
Partial Calibration : Yes, identified peaks are recalibrated
Correct All Ret. Times: No, only for identified peaks

Curve Type : Linear
Origin : Connected
Weight : Quadratic (Amnt)

Recalibration Settings:
Average Response : Average all calibrations
Average Retention Time: Floating Average New 75%

Calibration Report Options :
Printout of recalibrations within a sequence:
Calibration Table after Recalibration
Normal Report after Recalibration
If the sequence is done with bracketing:
Results of first cycle (ending previous bracket)

Signal 1: TCD1 A,
Signal 2: FID2 B,

RetTime [min]	Sig	Lvl	Amount [%]	Area	Amt/Area	Ref	Grp	Name
2.034	1	5	3.05000e-1	2.83188	1.07702e-1			Hydrogen
		6	7.66000e-1	7.85992	9.74565e-2			
		7	2.69600	28.44503	9.47793e-2			
		8	8.00000	83.60534	9.56877e-2			
9.000	1	1	5.44000e-1	188.92215	2.87949e-3			Oxygen
		2	1.33000	465.60165	2.85652e-3			
		3	4.81000	1653.63265	2.90875e-3			
		4	10.01000	3342.40470	2.99485e-3			
		23	99.99900	3.19901e4	3.12594e-3			
9.500	1	5	3.82000e-1	146.53528	2.60688e-3			Nitrogen
		6	9.57000e-1	365.56909	2.61784e-3			
		7	3.37000	1270.28288	2.65295e-3			
		8	10.00000	3618.35978	2.76368e-3			
		22	100.00000	3.55089e4	2.81619e-3			
12.646	1	5	3.80000e-1	181.10759	2.09820e-3			Carbon monoxide
		6	9.53000e-1	447.78924	2.12823e-3			
		7	3.35300	1561.99650	2.14661e-3			
		8	9.95000	4364.97152	2.27951e-3			
16.456	1	5	3.05000e-1	119.79428	2.54603e-3			Methane
		6	7.66000e-1	304.01298	2.51963e-3			
		7	2.69600	1063.22461	2.53568e-3			
		8	8.00000	2987.65063	2.67769e-3			
19.559	1	1	5.44000e-1	357.84846	1.52020e-3			Carbon Dioxide
		2	1.33000	876.90462	1.51670e-3			
		3	4.81000	3065.41252	1.56912e-3			
		4	10.01000	6093.48389	1.64274e-3			

More compound-specific settings:

Compound: Hydrogen
  Time Window : From 1.916 min To 2.152 min

Compound: Oxygen
  Time Window : From 8.717 min To 9.156 min

Compound: Nitrogen
  Time Window : From 9.160 min To 9.700 min

Compound: Carbon monoxide
  Time Window : From 12.046 min To 12.796 min

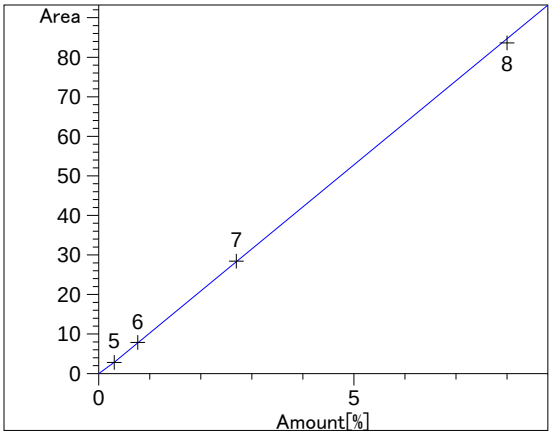
Compound: Methane
  Time Window : From 16.038 min To 16.806 min

Compound: Carbon Dioxide
  Time Window : From 18.944 min To 19.789 min

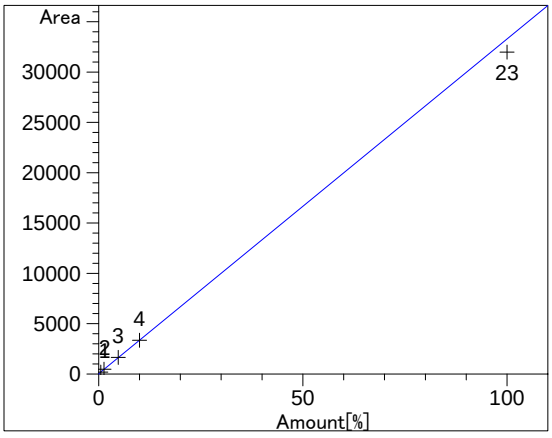
Peak Sum Table

No Entries in table

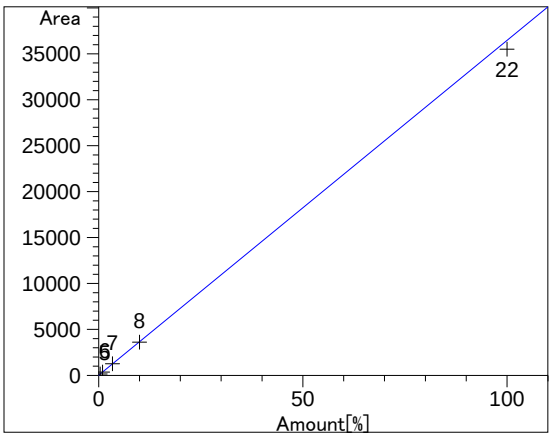
Calibration Curves



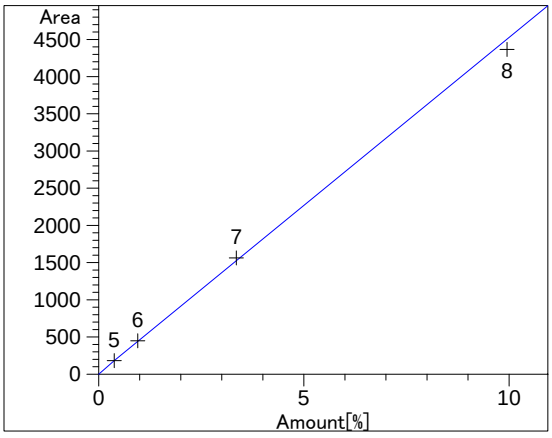
Hydrogen at exp. RT: 2.034
TCD1 A,
Correlation: 0.99990
Residual Std. Dev.: 0.80193
Formula: y = mx + b
m: 10.63996
b: -3.96160e-1
x: Amount
y: Area
Calibration Level Weights:
Level 5 : 1
Level 6 : 0.158541
Level 7 : 0.012799
Level 8 : 0.001454



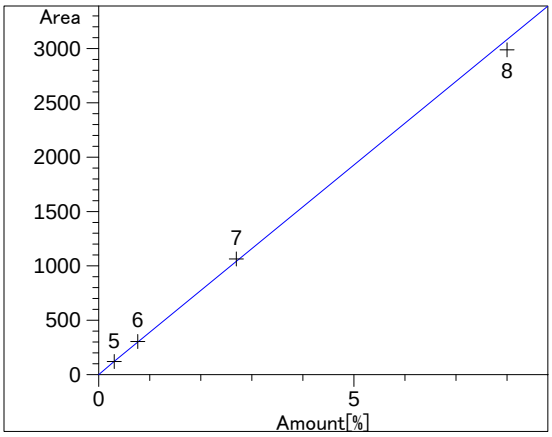
Oxygen at exp. RT: 9.000
TCD1 A,
Correlation: 0.99944
Residual Std. Dev.: 760.89251
Formula: y = mx + b
m: 332.97255
b: 10.35047
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.167299
Level 3 : 0.012791
Level 4 : 0.002953
Level 23 : 0.00003



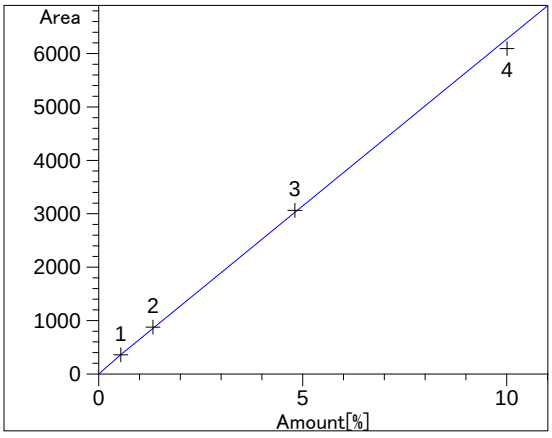
Nitrogen at exp. RT: 9.500
TCD1 A,
Correlation: 0.99964
Residual Std. Dev.: 563.38296
Formula: y = mx + b
m: 364.74673
b: 8.77890
x: Amount
y: Area
Calibration Level Weights:
Level 5 : 1
Level 6 : 0.159332
Level 7 : 0.012849
Level 8 : 0.001459
Level 22 : 0.000015



Carbon monoxide at exp. RT: 12.646
TCD1 A,
Correlation: 0.99953
Residual Std. Dev.: 103.43490
Formula: y = mx + b
m: 451.84219
b: 10.69813
x: Amount
y: Area
Calibration Level Weights:
Level 5 : 1
Level 6 : 0.158994
Level 7 : 0.012844
Level 8 : 0.001459



Methane at exp. RT: 16.456
TCD1 A,
Correlation: 0.99952
Residual Std. Dev.: 69.93771
Formula: y = mx + b
m: 385.07476
b: 3.38190
x: Amount
y: Area
Calibration Level Weights:
Level 5 : 1
Level 6 : 0.158541
Level 7 : 0.012799
Level 8 : 0.001454



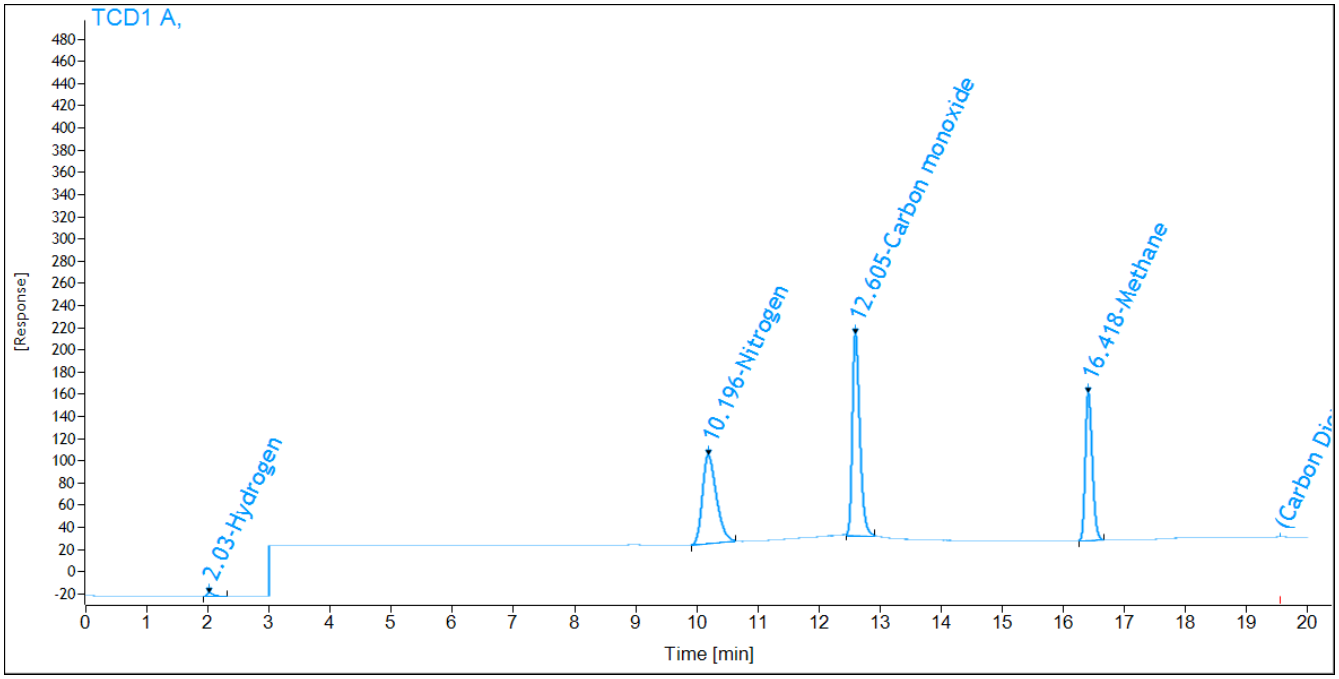
Carbon Dioxide at exp. RT: 19.559
TCD1 A,
Correlation: 0.99948
Residual Std. Dev.: 134.44868
Formula: y = mx + b
m: 625.03671
b: 21.74983
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.167299
Level 3 : 0.012791
Level 4 : 0.002953

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP112\009F1001.D
Sample name: BettyP070 #FG7 ENV(1=530,3=319.08)
File_Location \GC\2014\Betty\Quarter 4
Injection date: 12/19/2014 10:00:18 PM
Acq. method: BETTYP017_CAL.M
Analysis method: BETTYP112_FGA_LIQN2.M
Last changed: 12/24/2014 10:52:59 AM
Instrument: Betty
Sequence_Name BETTYP112
Acq. operator: disconnected

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 1 of 4
File_Version 3



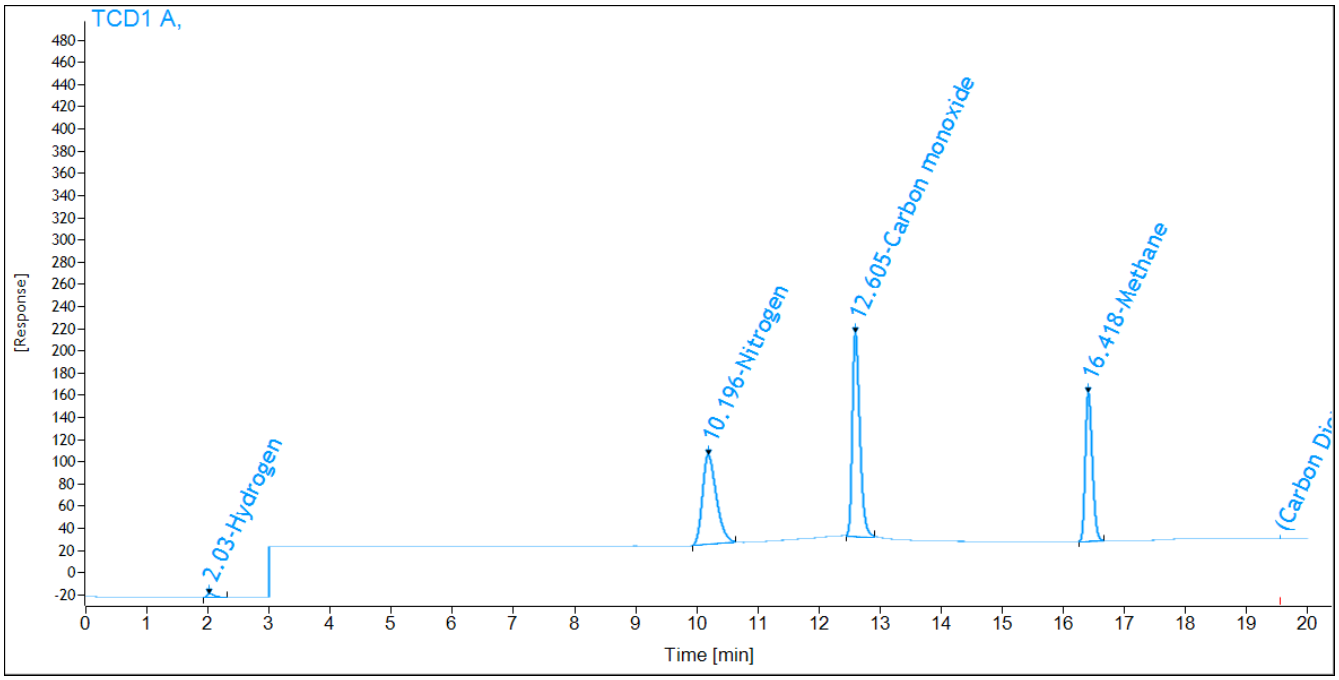
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen	BB	2.03	28.2771	1	2.69	2.695	%
Oxygen				1	0.00		%
Nitrogen	BB	10.20	1268.2457	1	3.45	3.453	%
Carbon monoxide	BB	12.61	1555.2452	1	3.42	3.418	%
Methane	BB	16.42	1058.8898	1	2.74	2.741	%
Carbon Dioxide				1	0.00		%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP112\009F1002.D
Sample name: BettyP070 #FG7 ENV(1=530,3=319.08)
File_Location \GC\2014\Betty\Quarter 4
Injection date: 12/19/2014 10:30:15 PM
Acq. method: BETTYP017_CAL.M
Analysis method: BETTYP112_FGA_LIQN2.M
Last changed: 12/24/2014 10:52:59 AM
Instrument: Betty
Sequence_Name BETTYP112
Acq. operator: disconnected

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 2 of 4
File_Version 3



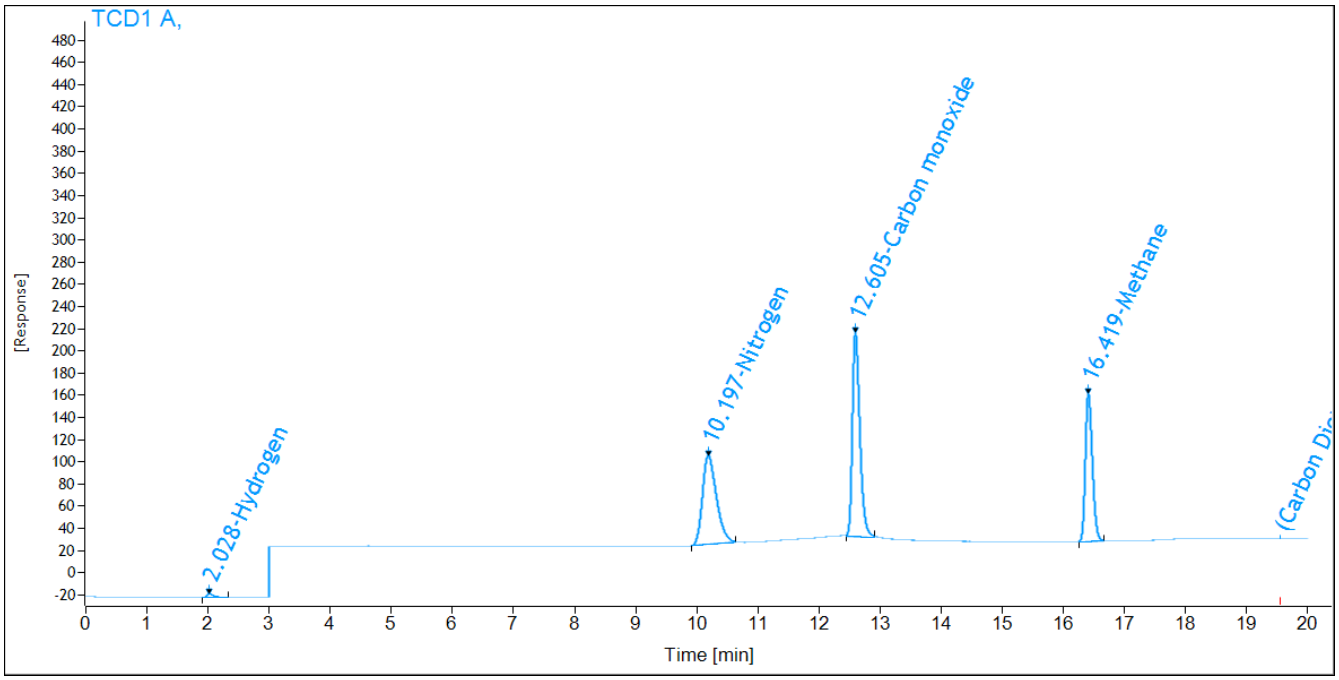
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen	BB	2.03	28.5262	1	2.72	2.718	%
Oxygen				1	0.00		%
Nitrogen	BB	10.20	1274.7716	1	3.47	3.471	%
Carbon monoxide	BB	12.60	1569.7894	1	3.45	3.451	%
Methane	BB	16.42	1070.6825	1	2.77	2.772	%
Carbon Dioxide				1	0.00		%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP112\009F1003.D
Sample name: BettyP070 #FG7 ENV(1=530,3=319.08)
File_Location \GC\2014\Betty\Quarter 4
Injection date: 12/19/2014 11:00:08 PM
Acq. method: BETTYP017_CAL.M
Analysis method: BETTYP112_FGA_LIQN2.M
Last changed: 12/24/2014 10:52:59 AM
Instrument: Betty
Sequence_Name BETTYP112
Acq. operator: disconnected

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 3 of 4
File_Version 3



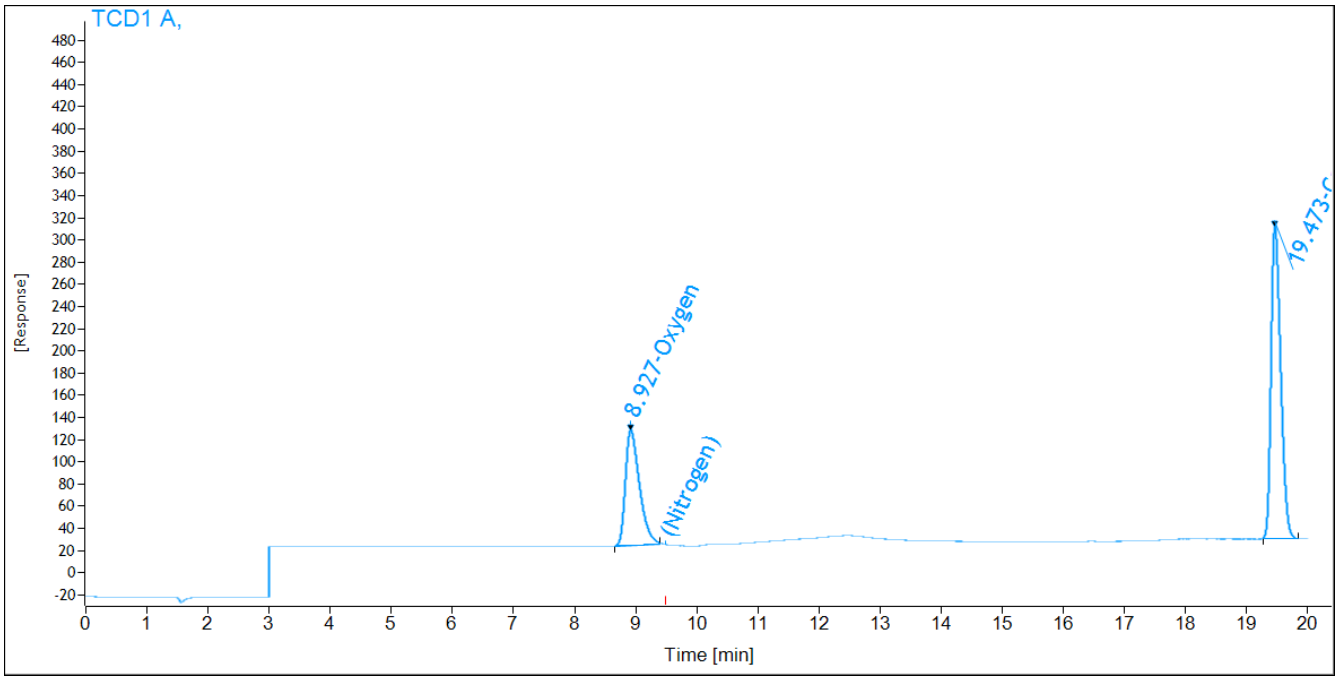
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen	BB	2.03	28.5318	1	2.72	2.719	%
Oxygen				1	0.00		%
Nitrogen	BB	10.20	1267.8313	1	3.45	3.452	%
Carbon monoxide	BB	12.61	1560.9548	1	3.43	3.431	%
Methane	BB	16.42	1060.1016	1	2.74	2.744	%
Carbon Dioxide				1	0.00		%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP112\009F1101.D
Sample name: BettyP070 #FG3 ENV(1=374.56,2=391.17)
File_Location \GC\2014\Betty\Quarter 4
Injection date: 12/19/2014 11:59:47 PM
Acq. method: BETTYP017_CAL.M
Analysis method: BETTYP112_FGA_LIQN2.M
Last changed: 12/24/2014 10:52:59 AM
Instrument: Betty
Sequence_Name BETTYP112
Acq. operator: disconnected

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 1 of 4
File_Version 3



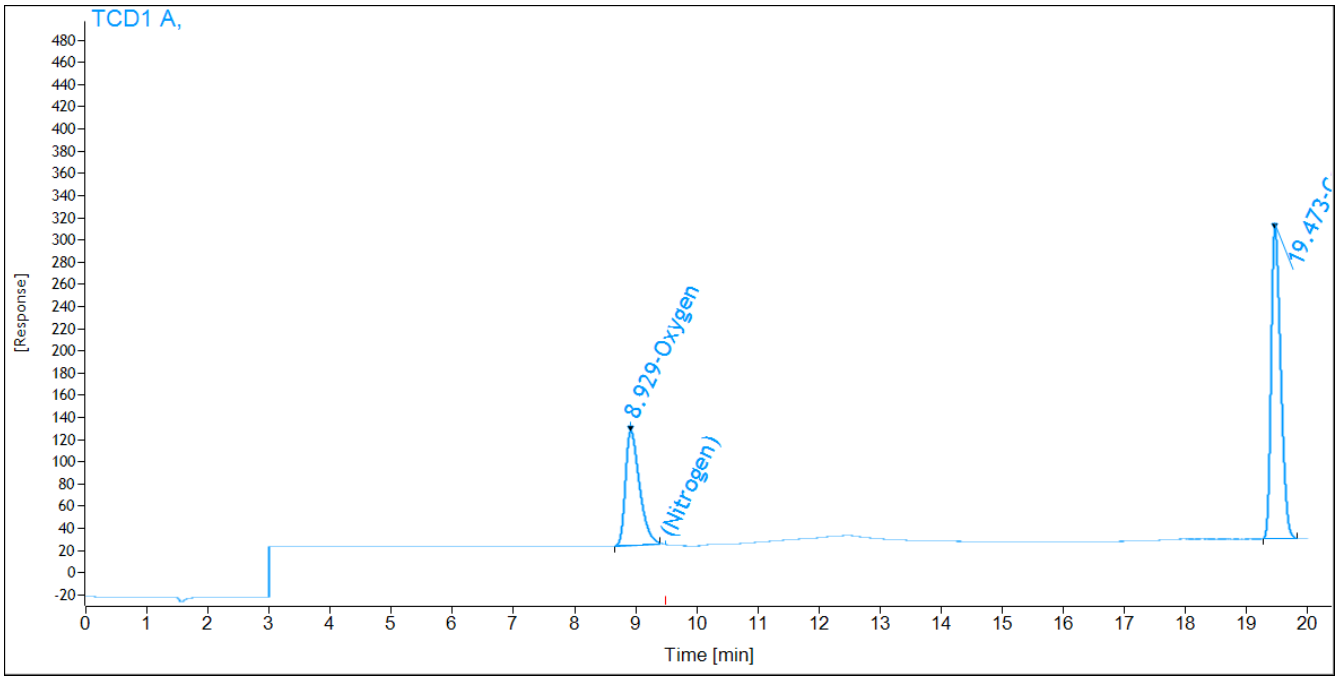
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BB	8.93	1656.5831	1	4.94	4.944	%
Nitrogen				1	0.00		%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide	BB	19.47	3077.5769	1	4.89	4.889	%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP112\009F1102.D
Sample name: BettyP070 #FG3 ENV(1=374.56,2=391.17)
File_Location \GC\2014\Betty\Quarter 4
Injection date: 12/20/2014 12:29:37 AM
Acq. method: BETTYP017_CAL.M
Analysis method: BETTYP112_FGA_LIQN2.M
Last changed: 12/24/2014 10:52:59 AM
Instrument: Betty
Sequence_Name BETTYP112
Acq. operator: disconnected

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 2 of 4
File_Version 3



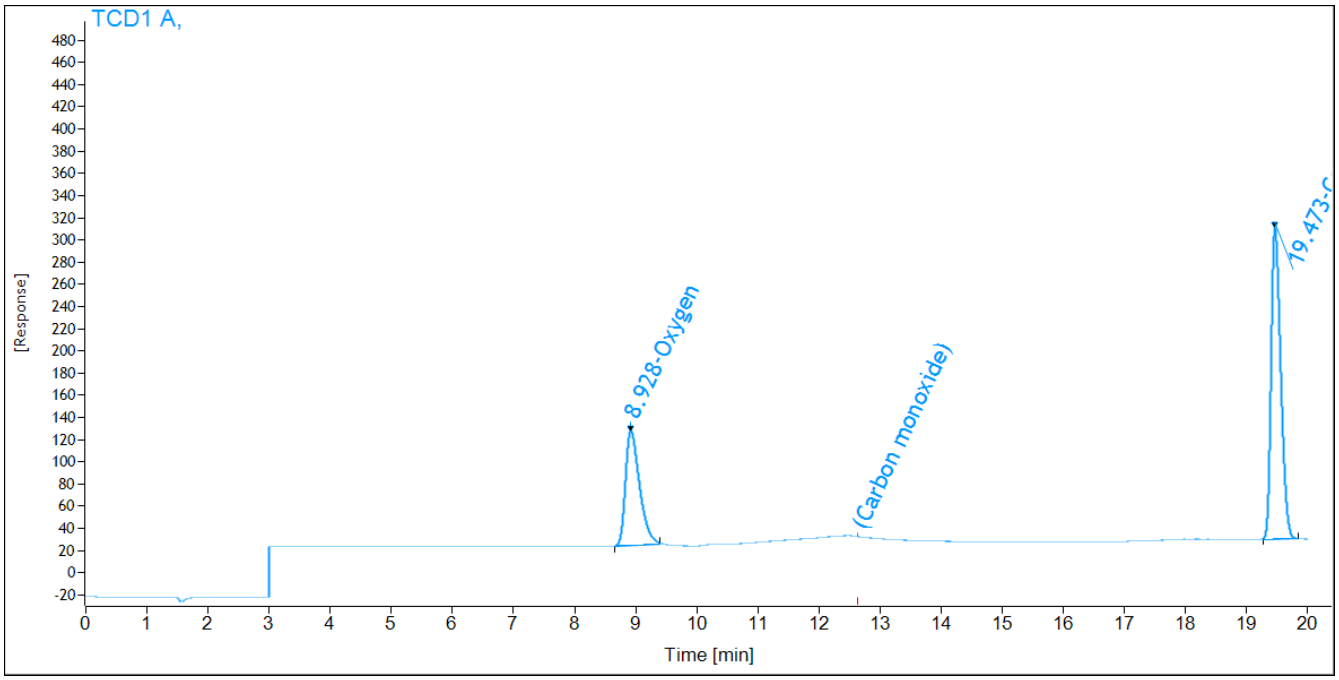
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BB	8.93	1651.0906	1	4.93	4.928	%
Nitrogen				1	0.00		%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide	BB	19.47	3060.6018	1	4.86	4.862	%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP112\009F1103.D
Sample name: BettyP070 #FG3 ENV(1=374.56,2=391.17)
File_Location \GC\2014\Betty\Quarter 4
Injection date: 12/20/2014 12:59:28 AM
Acq. method: BETTYP017_CAL.M
Analysis method: BETTYP112_FGA_LIQN2.M
Last changed: 12/24/2014 10:52:59 AM
Instrument: Betty
Sequence_Name BETTYP112
Acq. operator: disconnected

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 3 of 4
File_Version 3



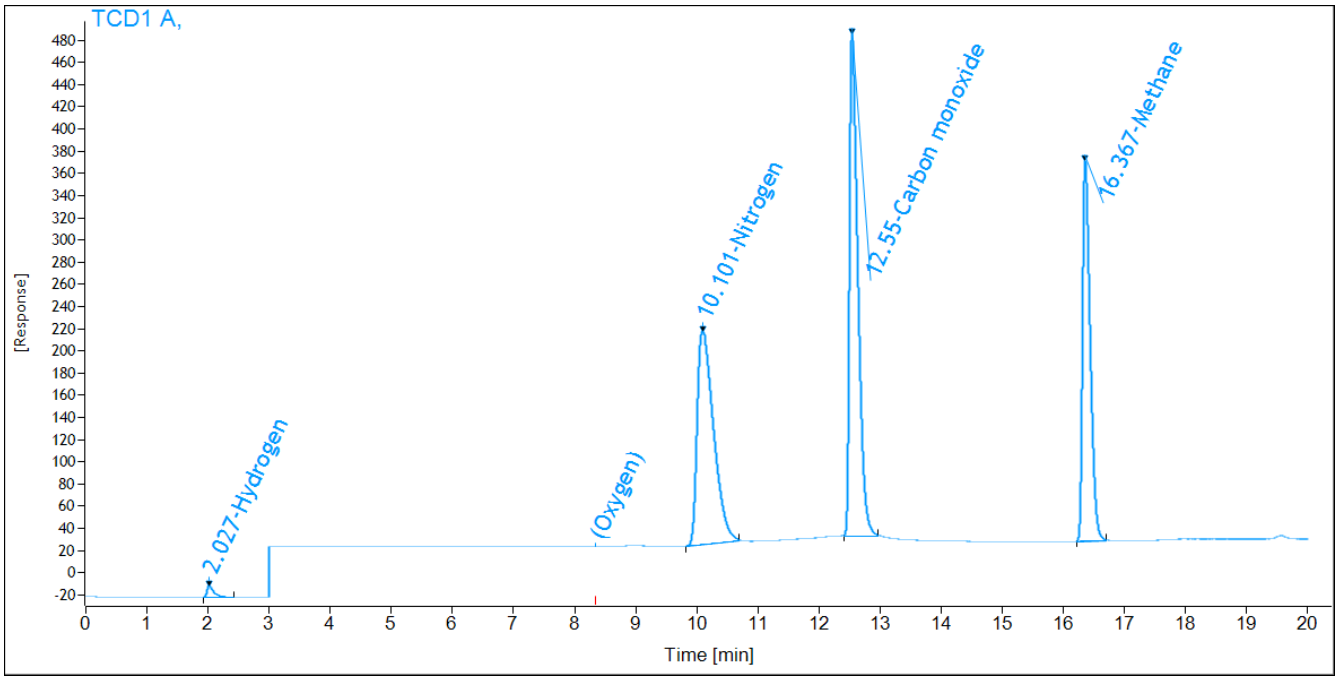
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BB	8.93	1653.2242	1	4.93	4.934	%
Nitrogen				1	0.00		%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide	BB	19.47	3058.0588	1	4.86	4.858	%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP112\009F1201.D
Sample name: BettyP070 #FG8 ENV(1=0,3=319.08)
File_Location \GC\2014\Betty\Quarter 4
Injection date: 12/20/2014 1:59:03 AM
Acq. method: BETTYP017_CAL.M
Analysis method: BETTYP112_FGA_LIQN2.M
Last changed: 12/24/2014 10:52:59 AM
Instrument: Betty
Sequence_Name BETTYP112
Acq. operator: disconnected

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 1 of 4
File_Version 3



Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen	BB	2.03	83.4448	1	7.88	7.880	%
Oxygen				1	0.00		%
Nitrogen	BB	10.10	3589.6621	1	9.82	9.817	%
Carbon monoxide	BB	12.55	4336.8872	1	9.57	9.575	%
Methane	BB	16.37	2974.1050	1	7.71	7.715	%
Carbon Dioxide				1	0.00		%

Chromatogram Report

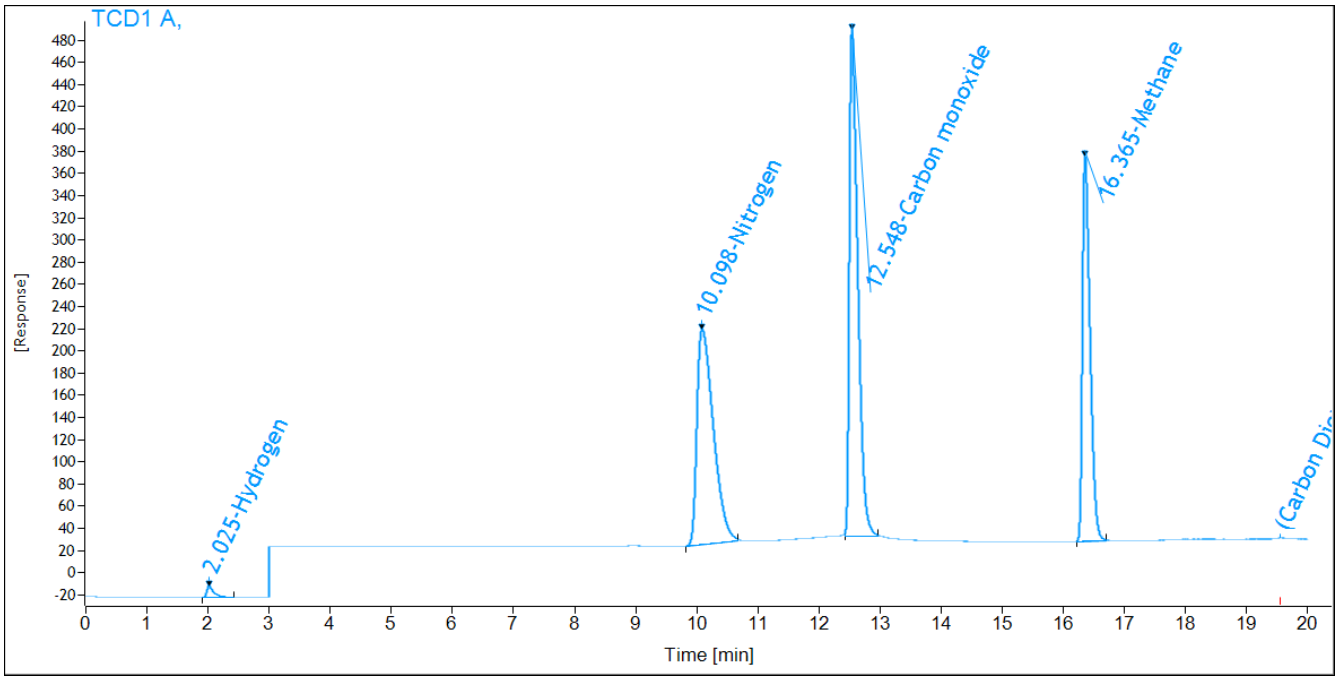
Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP112\009F1202.D
Sample name: BettyP070 #FG8 ENV(1=0,3=319.08)
File_Location \GC\2014\Betty\Quarter 4

Injection date: 12/20/2014 2:28:51 AM
Acq. method: BETTYP017_CAL.M
Analysis method: BETTYP112_FGA_LIQN2.M
Last changed: 12/24/2014 10:52:59 AM

Instrument: Betty
Sequence_Name BETTYP112
Acq. operator: disconnected

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 2 of 4
File_Version 3



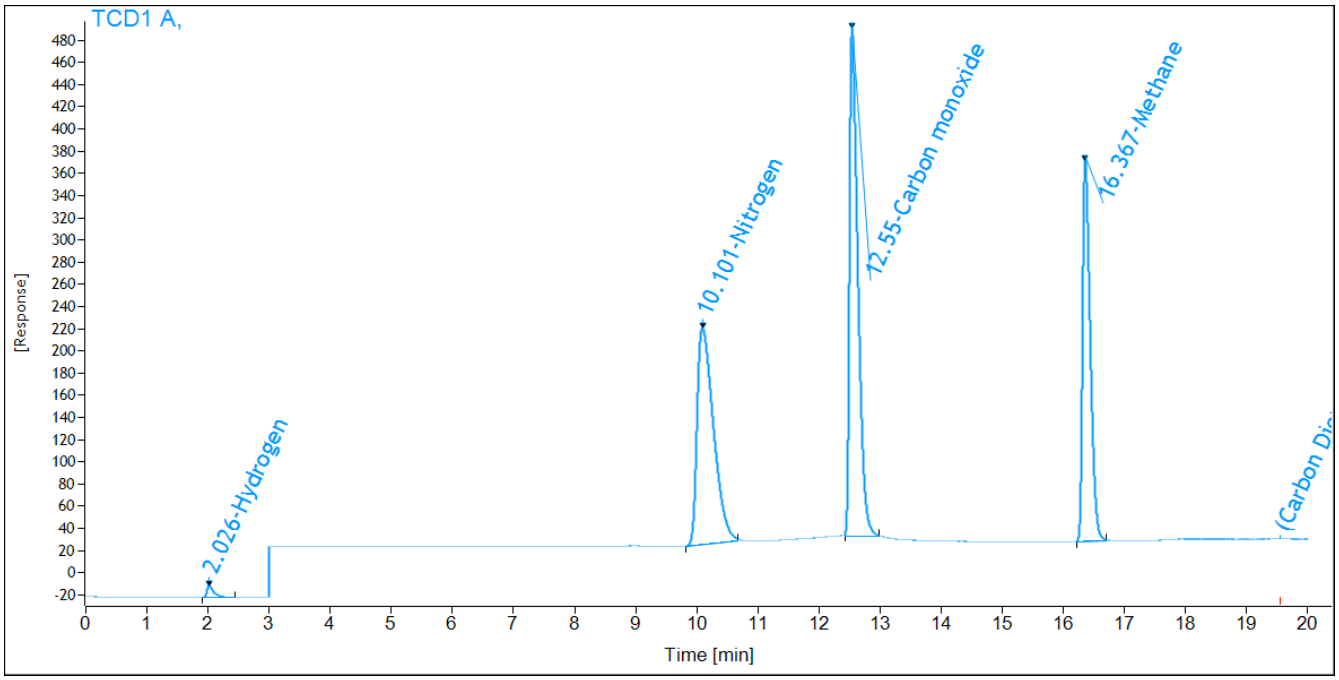
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen	BB	2.03	83.5422	1	7.89	7.889	%
Oxygen				1	0.00		%
Nitrogen	BB	10.10	3628.2839	1	9.92	9.923	%
Carbon monoxide	BB	12.55	4377.5850	1	9.66	9.665	%
Methane	BB	16.36	2996.7695	1	7.77	7.774	%
Carbon Dioxide				1	0.00		%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP112\009F1203.D
Sample name: BettyP070 #FG8 ENV(1=0,3=319.08)
File_Location \GC\2014\Betty\Quarter 4
Injection date: 12/20/2014 2:58:39 AM
Acq. method: BETTYP017_CAL.M
Analysis method: BETTYP112_FGA_LIQN2.M
Last changed: 12/24/2014 10:52:59 AM
Instrument: Betty
Sequence_Name BETTYP112
Acq. operator: disconnected

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 3 of 4
File_Version 3



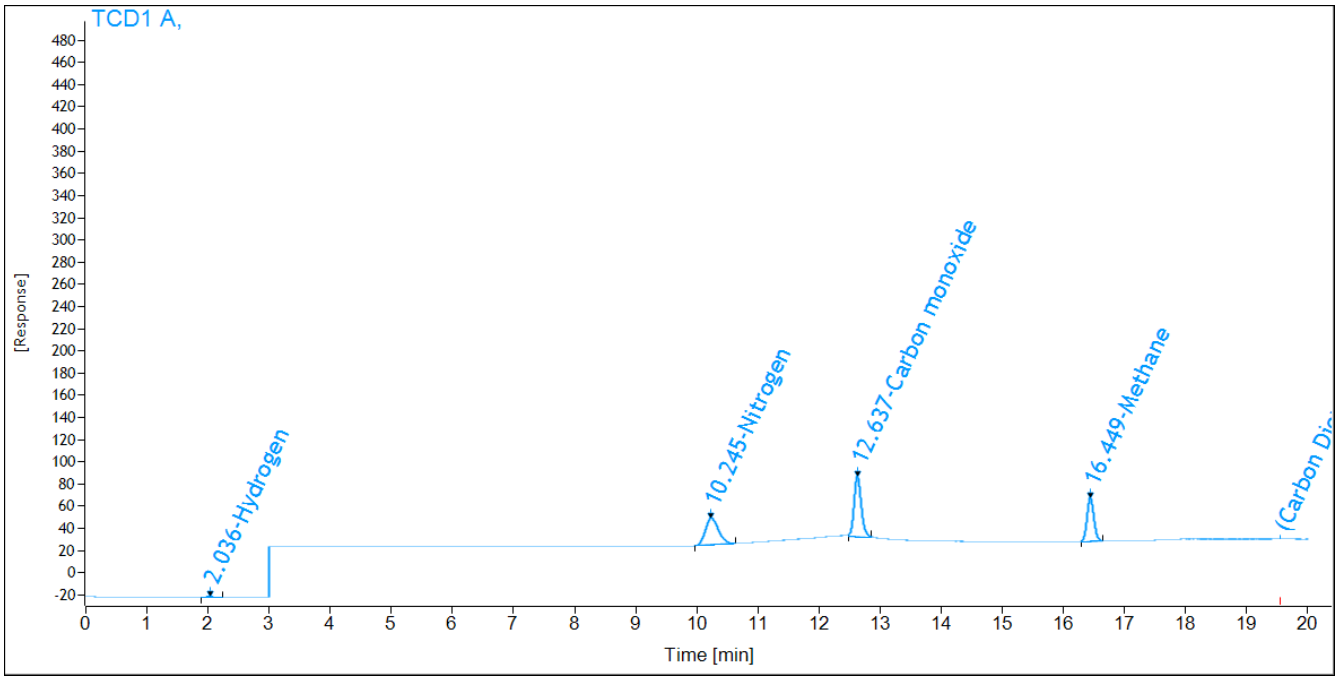
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen	BB	2.03	83.8290	1	7.92	7.916	%
Oxygen				1	0.00		%
Nitrogen	BB	10.10	3637.1333	1	9.95	9.948	%
Carbon monoxide	BB	12.55	4380.4424	1	9.67	9.671	%
Methane	BB	16.37	2992.0774	1	7.76	7.761	%
Carbon Dioxide				1	0.00		%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP112\009F1301.D
Sample name: BettyP070 #FG6 ENV(1=1271.99,3=159.54)
File_Location \GC\2014\Betty\Quarter 4
Injection date: 12/20/2014 3:58:16 AM
Acq. method: BETTYP017_CAL.M
Analysis method: BETTYP112_FGA_LIQN2.M
Last changed: 12/24/2014 10:52:59 AM
Instrument: Betty
Sequence_Name BETTYP112
Acq. operator: disconnected

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 1 of 4
File_Version 3



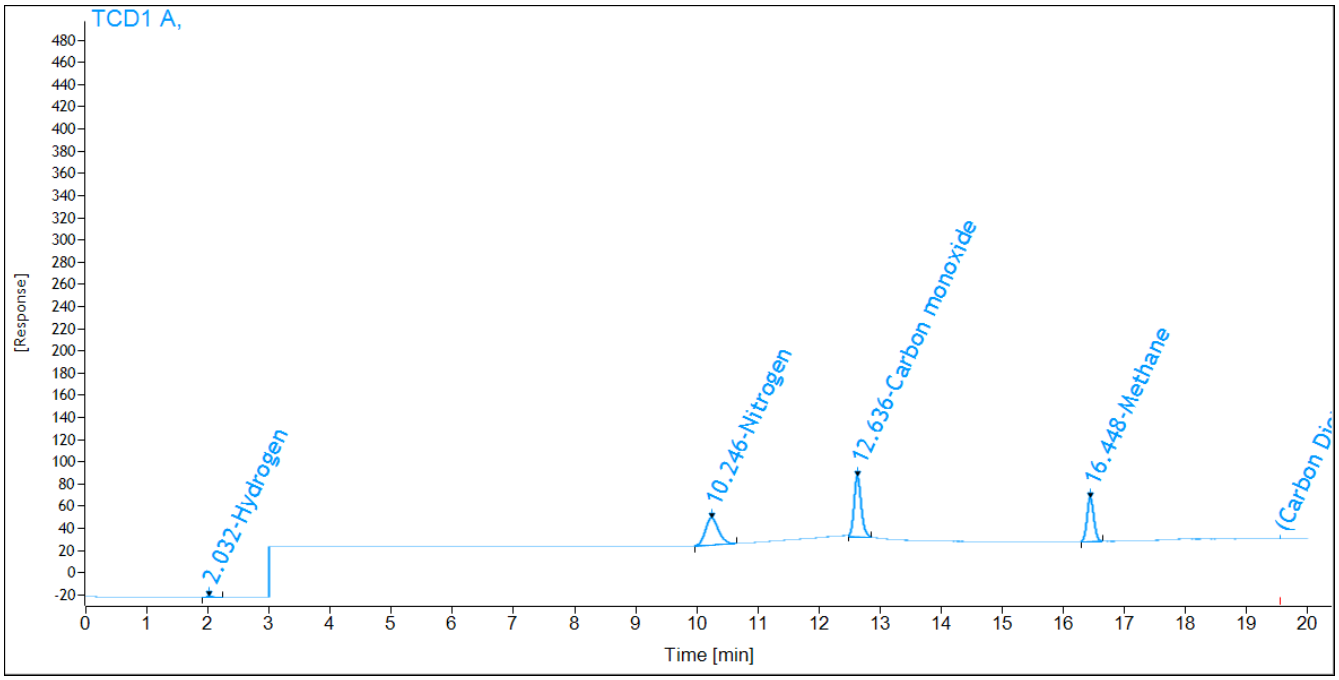
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen	BB	2.04	7.5743	1	0.75	0.749	%
Oxygen				1	0.00		%
Nitrogen	BB	10.25	361.6840	1	0.97	0.968	%
Carbon monoxide	BB	12.64	446.6281	1	0.96	0.965	%
Methane	BB	16.45	303.9723	1	0.78	0.781	%
Carbon Dioxide				1	0.00		%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP112\009F1302.D
Sample name: BettyP070 #FG6 ENV(1=1271.99,3=159.54)
File_Location \GC\2014\Betty\Quarter 4
Injection date: 12/20/2014 4:28:03 AM
Acq. method: BETTYP017_CAL.M
Analysis method: BETTYP112_FGA_LIQN2.M
Last changed: 12/24/2014 10:52:59 AM
Instrument: Betty
Sequence_Name BETTYP112
Acq. operator: disconnected

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 2 of 4
File_Version 3



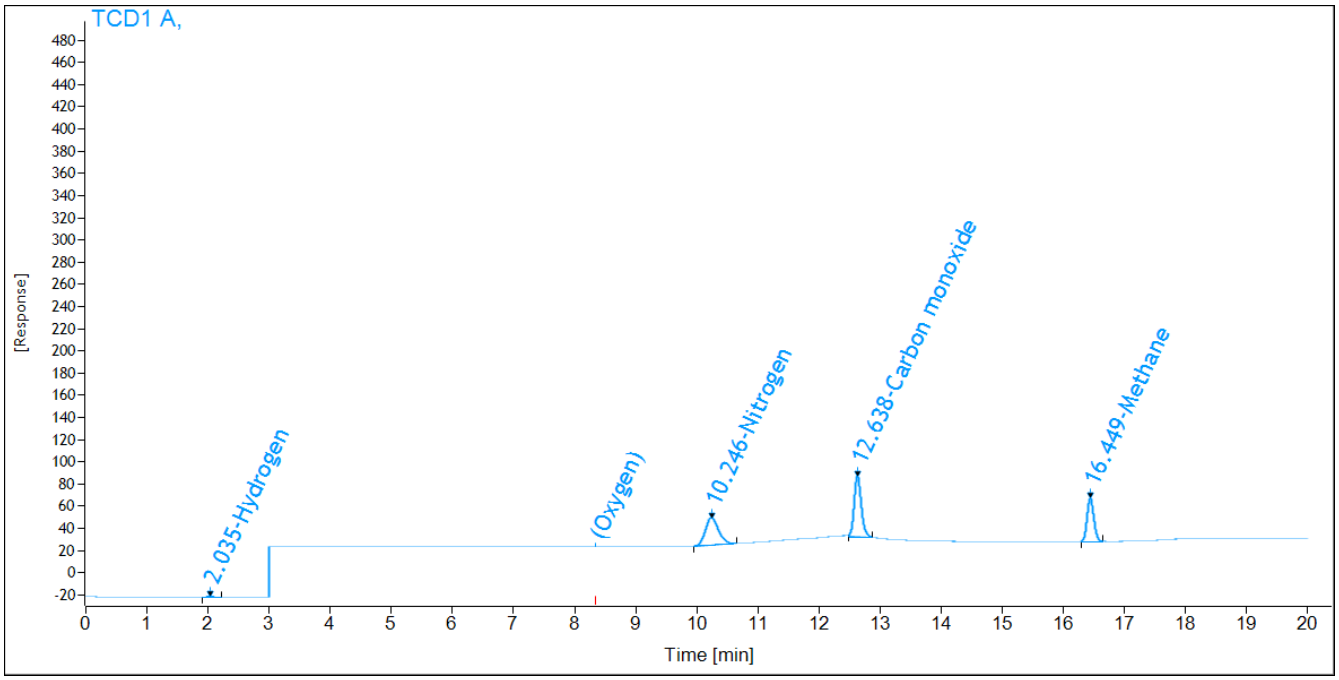
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen	BB	2.03	7.9022	1	0.78	0.780	%
Oxygen				1	0.00		%
Nitrogen	BB	10.25	366.0228	1	0.98	0.979	%
Carbon monoxide	BB	12.64	447.3362	1	0.97	0.966	%
Methane	BB	16.45	305.2495	1	0.78	0.784	%
Carbon Dioxide				1	0.00		%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP112\009F1303.D
Sample name: BettyP070 #FG6 ENV(1=1271.99,3=159.54)
File_Location \GC\2014\Betty\Quarter 4
Injection date: 12/20/2014 4:57:53 AM
Acq. method: BETTYP017_CAL.M
Analysis method: BETTYP112_FGA_LIQN2.M
Last changed: 12/24/2014 10:52:59 AM
Instrument: Betty
Sequence_Name BETTYP112
Acq. operator: disconnected

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 3 of 4
File_Version 3



Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen	BB	2.03	8.1033	1	0.80	0.799	%
Oxygen				1	0.00		%
Nitrogen	BB	10.25	369.0005	1	0.99	0.988	%
Carbon monoxide	BB	12.64	449.4035	1	0.97	0.971	%
Methane	BB	16.45	302.8172	1	0.78	0.778	%
Carbon Dioxide				1	0.00		%

Chromatogram Report

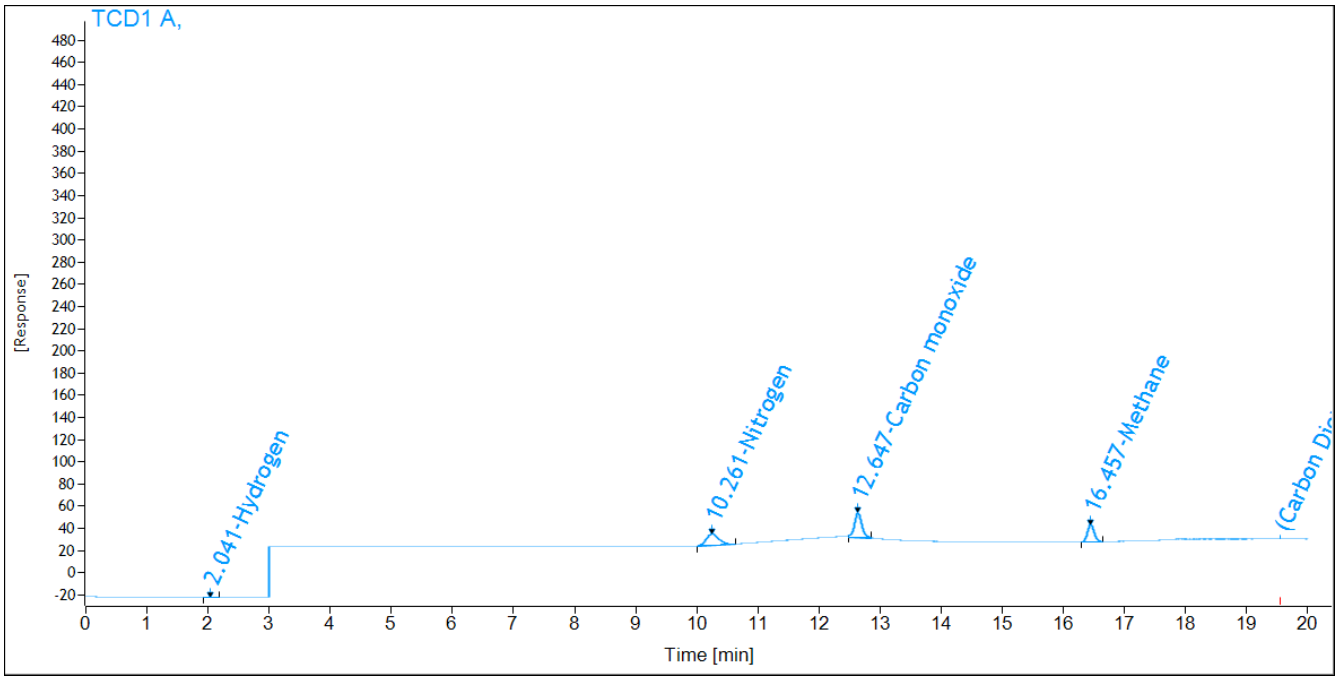
Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP112\009F1401.D
Sample name: BettyP070 #FG5 ENV(1=3391.99,3=159.54)
File_Location \GC\2014\Betty\Quarter 4

Injection date: 12/20/2014 5:57:28 AM
Acq. method: BETTYP017_CAL.M
Analysis method: BETTYP112_FGA_LIQN2.M
Last changed: 12/24/2014 10:52:59 AM

Instrument: Betty
Sequence_Name BETTYP112
Acq. operator: disconnected

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 1 of 4
File_Version 3



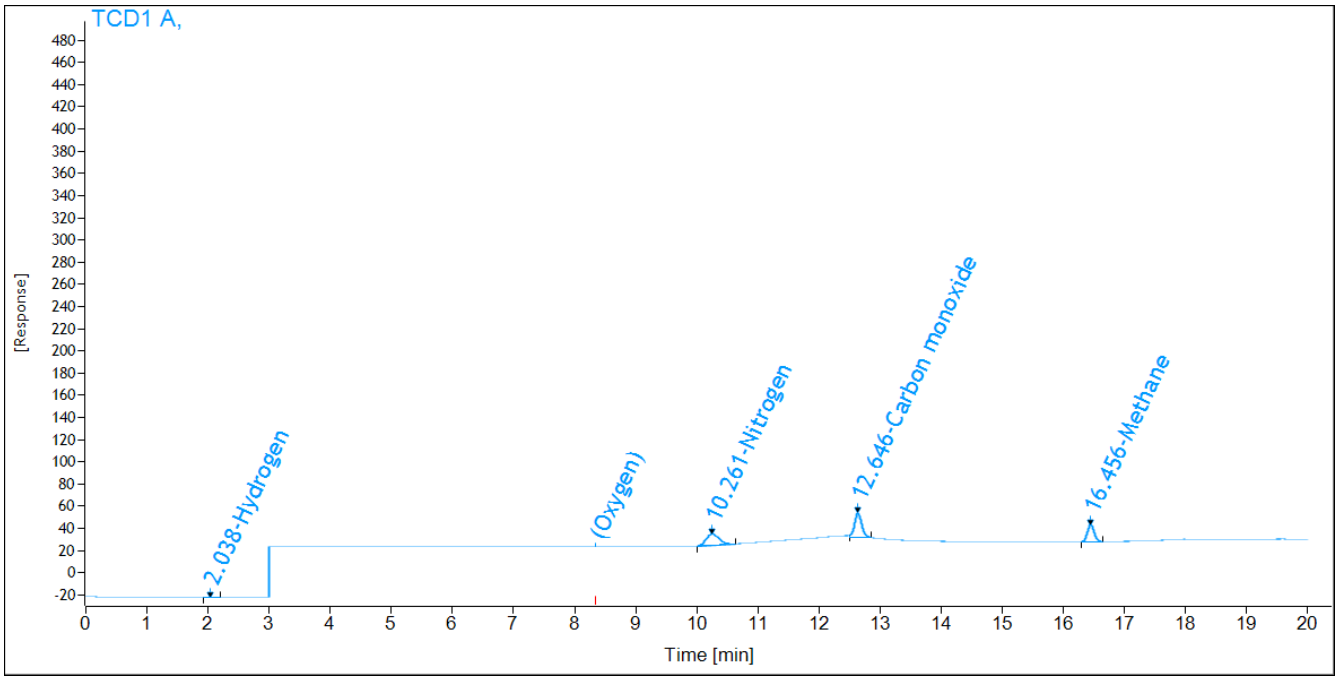
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen	BB	2.04	2.7824	1	0.30	0.298	%
Oxygen				1	0.00		%
Nitrogen	BB	10.26	144.9499	1	0.37	0.374	%
Carbon monoxide	BB	12.65	181.4955	1	0.38	0.378	%
Methane	BB	16.46	119.1009	1	0.30	0.301	%
Carbon Dioxide				1	0.00		%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP112\009F1402.D
Sample name: BettyP070 #FG5 ENV(1=3391.99,3=159.54)
File_Location \GC\2014\Betty\Quarter 4
Injection date: 12/20/2014 6:27:18 AM
Acq. method: BETTYP017_CAL.M
Analysis method: BETTYP112_FGA_LIQN2.M
Last changed: 12/24/2014 10:52:59 AM
Instrument: Betty
Sequence_Name BETTYP112
Acq. operator: disconnected

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 2 of 4
File_Version 3



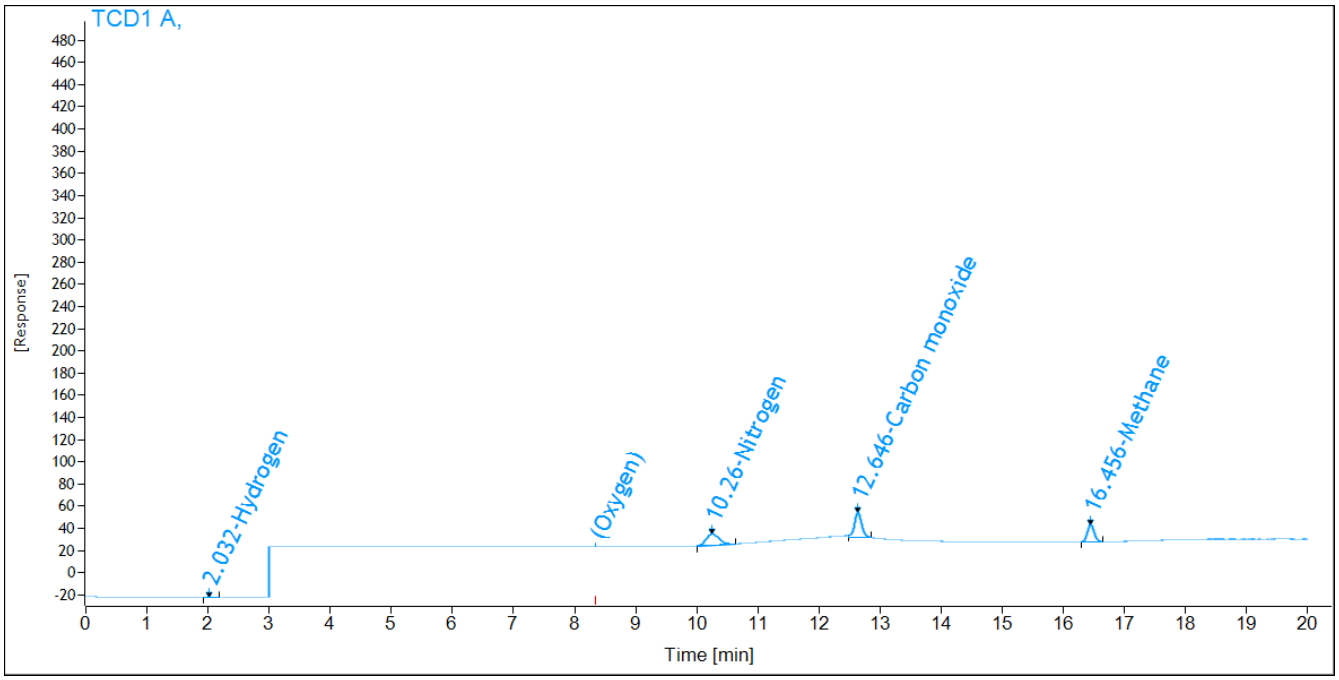
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen	BB	2.04	2.8568	1	0.31	0.306	%
Oxygen				1	0.00		%
Nitrogen	BB	10.26	147.5000	1	0.38	0.380	%
Carbon monoxide	BB	12.65	179.4115	1	0.37	0.374	%
Methane	BB	16.46	119.7130	1	0.30	0.302	%
Carbon Dioxide				1	0.00		%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP112\009F1403.D
Sample name: BettyP070 #FG5 ENV(1=3391.99,3=159.54)
File_Location \GC\2014\Betty\Quarter 4
Injection date: 12/20/2014 6:57:09 AM
Acq. method: BETTYP017_CAL.M
Analysis method: BETTYP112_FGA_LIQN2.M
Last changed: 12/24/2014 10:52:59 AM
Instrument: Betty
Sequence_Name BETTYP112
Acq. operator: disconnected

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 3 of 4
File_Version 3



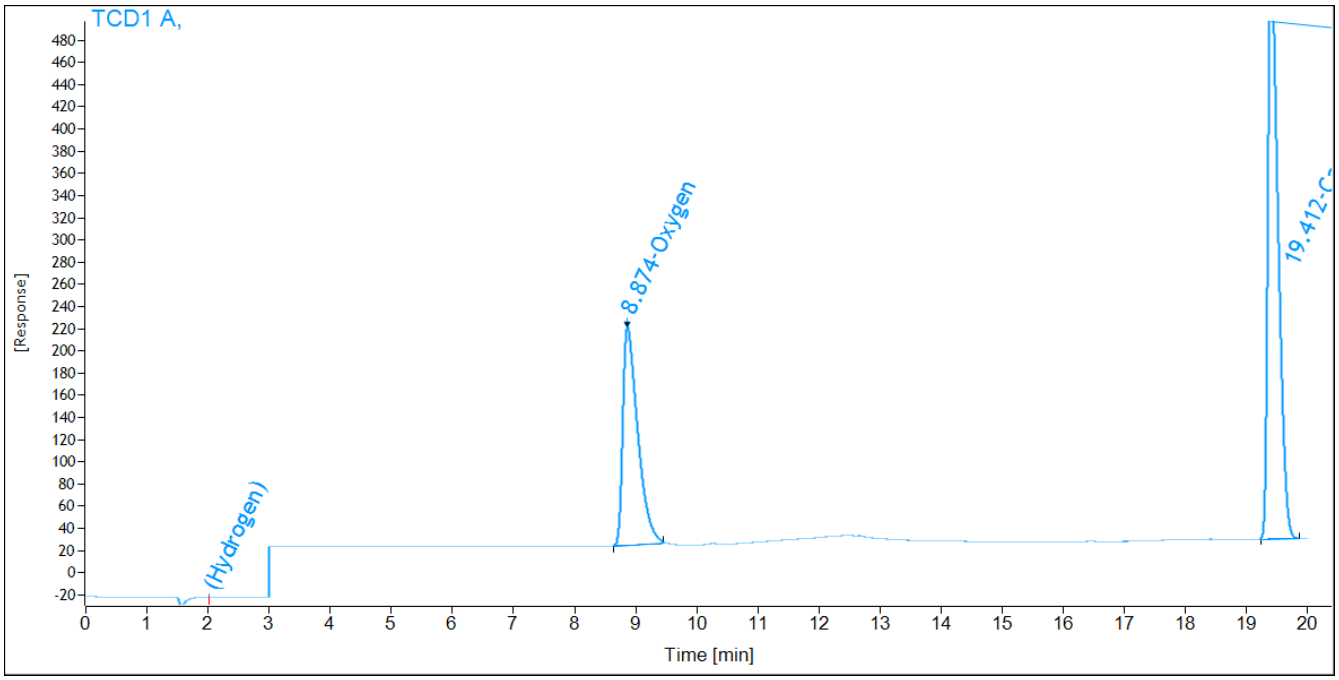
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen	BB	2.03	2.8565	1	0.31	0.306	%
Oxygen				1	0.00		%
Nitrogen	BB	10.26	147.1559	1	0.38	0.380	%
Carbon monoxide	BB	12.65	182.4157	1	0.38	0.380	%
Methane	BB	16.46	120.5690	1	0.30	0.304	%
Carbon Dioxide				1	0.00		%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP112\009F1501.D
Sample name: BettyP070 #FG4 ENV(1=0,2=465.55)
File_Location \GC\2014\Betty\Quarter 4
Injection date: 12/20/2014 7:56:46 AM
Acq. method: BETTYP017_CAL.M
Analysis method: BETTYP112_FGA_LIQN2.M
Last changed: 12/24/2014 10:52:59 AM
Instrument: Betty
Sequence_Name BETTYP112
Acq. operator: disconnected

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 1 of 4
File_Version 3



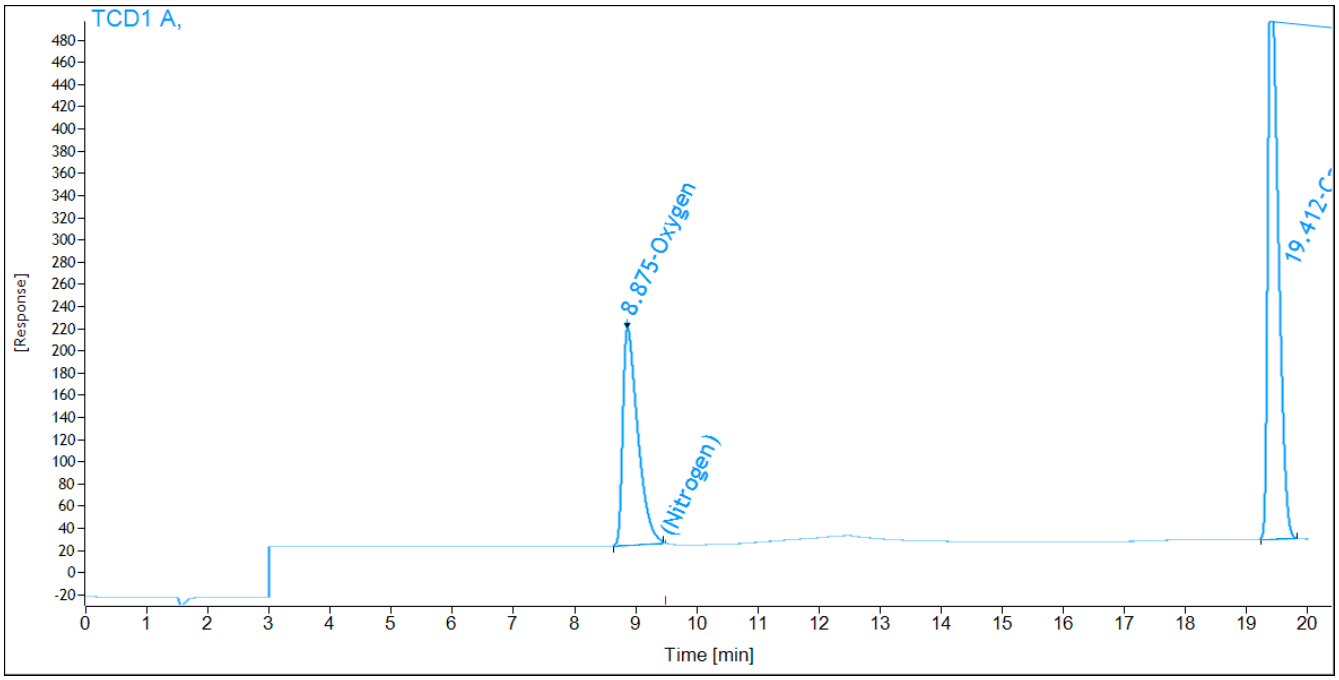
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BB	8.87	3343.3164	1	10.01	10.010	%
Nitrogen				1	0.00		%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide	BB	19.41	6102.6567	1	9.73	9.729	%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP112\009F1502.D
Sample name: BettyP070 #FG4 ENV(1=0,2=465.55)
File_Location \GC\2014\Betty\Quarter 4
Injection date: 12/20/2014 8:26:34 AM
Acq. method: BETTYP017_CAL.M
Analysis method: BETTYP112_FGA_LIQN2.M
Last changed: 12/24/2014 10:52:59 AM
Instrument: Betty
Sequence_Name BETTYP112
Acq. operator: disconnected

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 2 of 4
File_Version 3



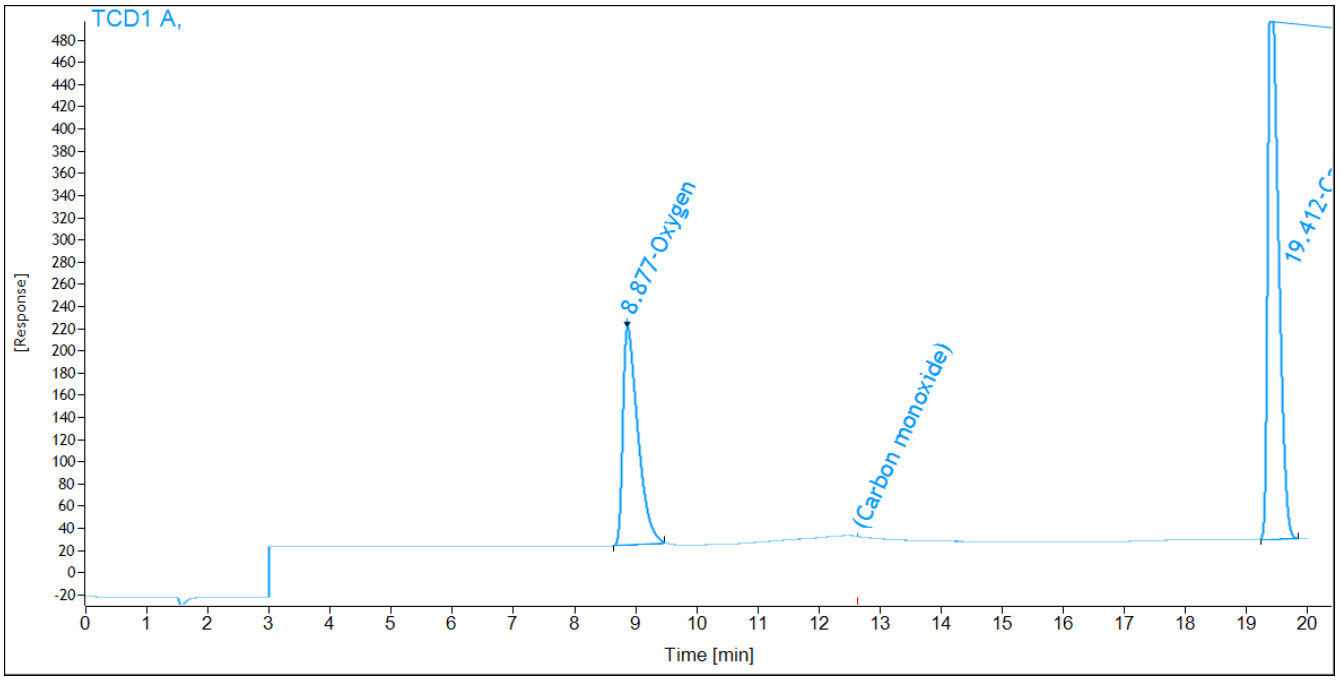
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BB	8.88	3341.1008	1	10.00	10.003	%
Nitrogen				1	0.00		%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide	BB	19.41	6081.3149	1	9.69	9.695	%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP112\009F1503.D
Sample name: BettyP070 #FG4 ENV(1=0,2=465.55)
File_Location \GC\2014\Betty\Quarter 4
Injection date: 12/20/2014 8:56:23 AM
Acq. method: BETTYP017_CAL.M
Analysis method: BETTYP112_FGA_LIQN2.M
Last changed: 12/24/2014 10:52:59 AM
Instrument: Betty
Sequence_Name BETTYP112
Acq. operator: disconnected

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 3 of 4
File_Version 3



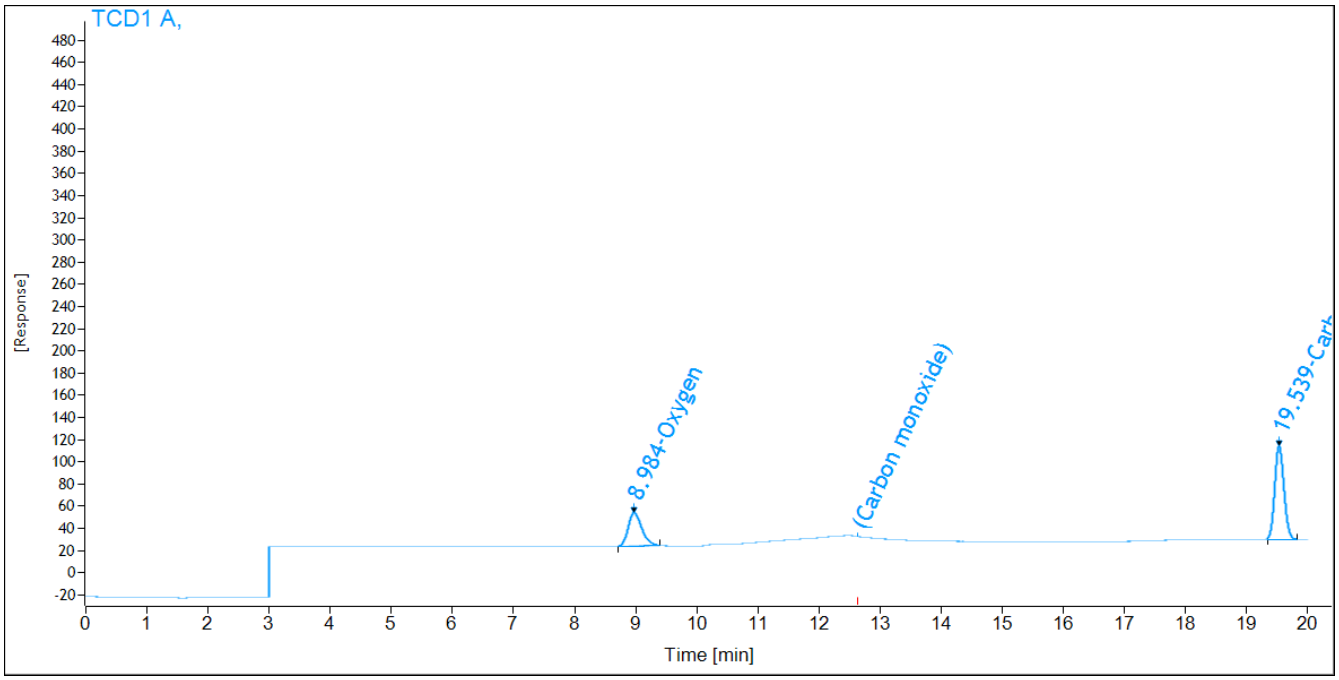
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BB	8.88	3342.7969	1	10.01	10.008	%
Nitrogen				1	0.00		%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide	BB	19.41	6096.4800	1	9.72	9.719	%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP112\009F1601.D
Sample name: BettyP070 #FG2 ENV(1=1272.08,2=219.95)
File_Location \GC\2014\Betty\Quarter 4
Injection date: 12/20/2014 9:55:58 AM
Acq. method: BETTYP017_CAL.M
Analysis method: BETTYP112_FGA_LIQN2.M
Last changed: 12/24/2014 10:52:59 AM
Instrument: Betty
Sequence_Name BETTYP112
Acq. operator: disconnected

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 1 of 4
File_Version 3



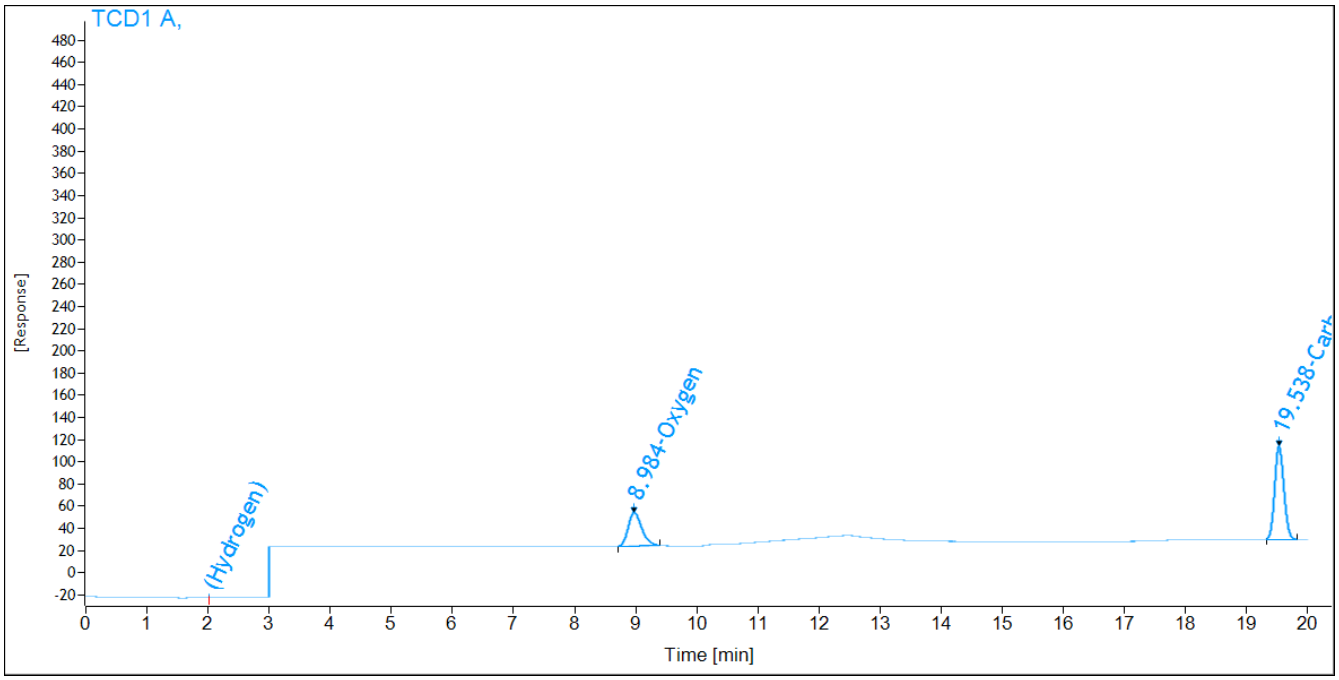
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BB	8.98	465.2189	1	1.37	1.366	%
Nitrogen				1	0.00		%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide	BB	19.54	877.5289	1	1.37	1.369	%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP112\009F1602.D
Sample name: BettyP070 #FG2 ENV(1=1272.08,2=219.95)
File_Location \GC\2014\Betty\Quarter 4
Injection date: 12/20/2014 10:25:43 AM
Acq. method: BETTYP017_CAL.M
Analysis method: BETTYP112_FGA_LIQN2.M
Last changed: 12/24/2014 10:52:59 AM
Instrument: Betty
Sequence_Name BETTYP112
Acq. operator: disconnected

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 2 of 4
File_Version 3



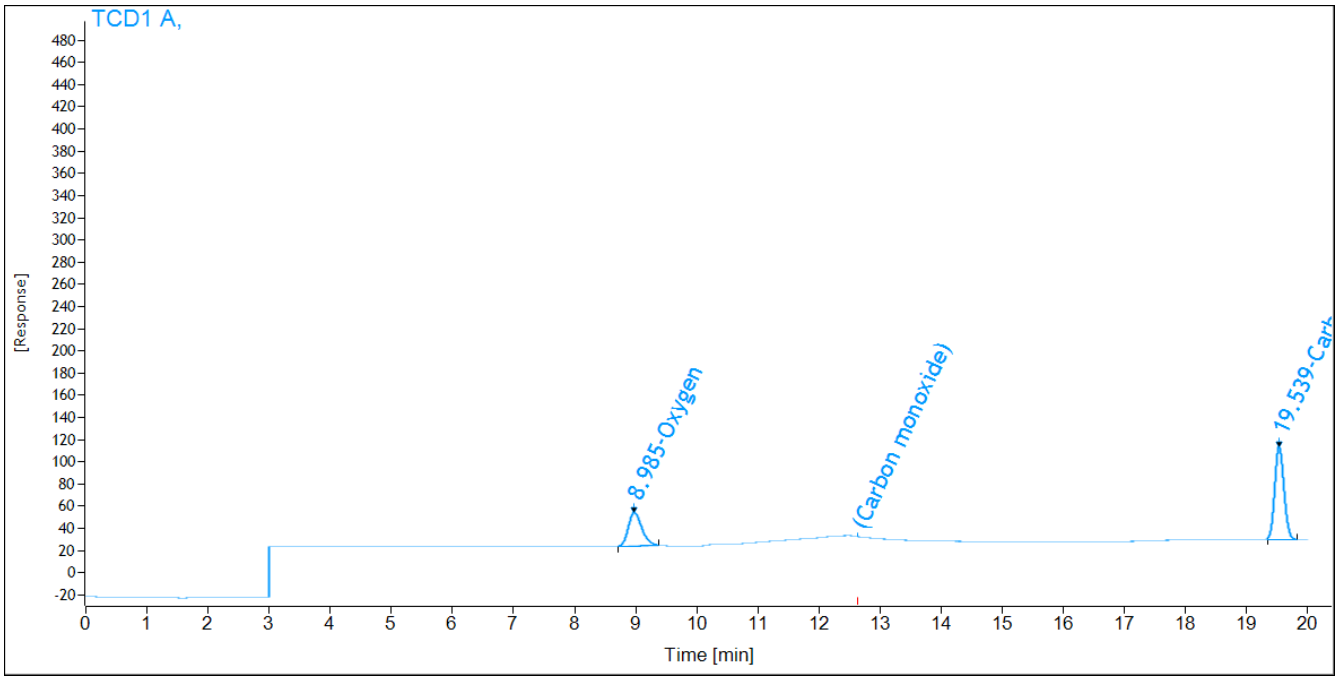
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BB	8.98	465.9715	1	1.37	1.368	%
Nitrogen				1	0.00		%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide	BB	19.54	877.2392	1	1.37	1.369	%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP112\009F1603.D
Sample name: BettyP070 #FG2 ENV(1=1272.08,2=219.95)
File_Location \GC\2014\Betty\Quarter 4
Injection date: 12/20/2014 10:55:33 AM
Acq. method: BETTYP017_CAL.M
Analysis method: BETTYP112_FGA_LIQN2.M
Last changed: 12/24/2014 10:52:59 AM
Instrument: Betty
Sequence_Name BETTYP112
Acq. operator: disconnected

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 3 of 4
File_Version 3



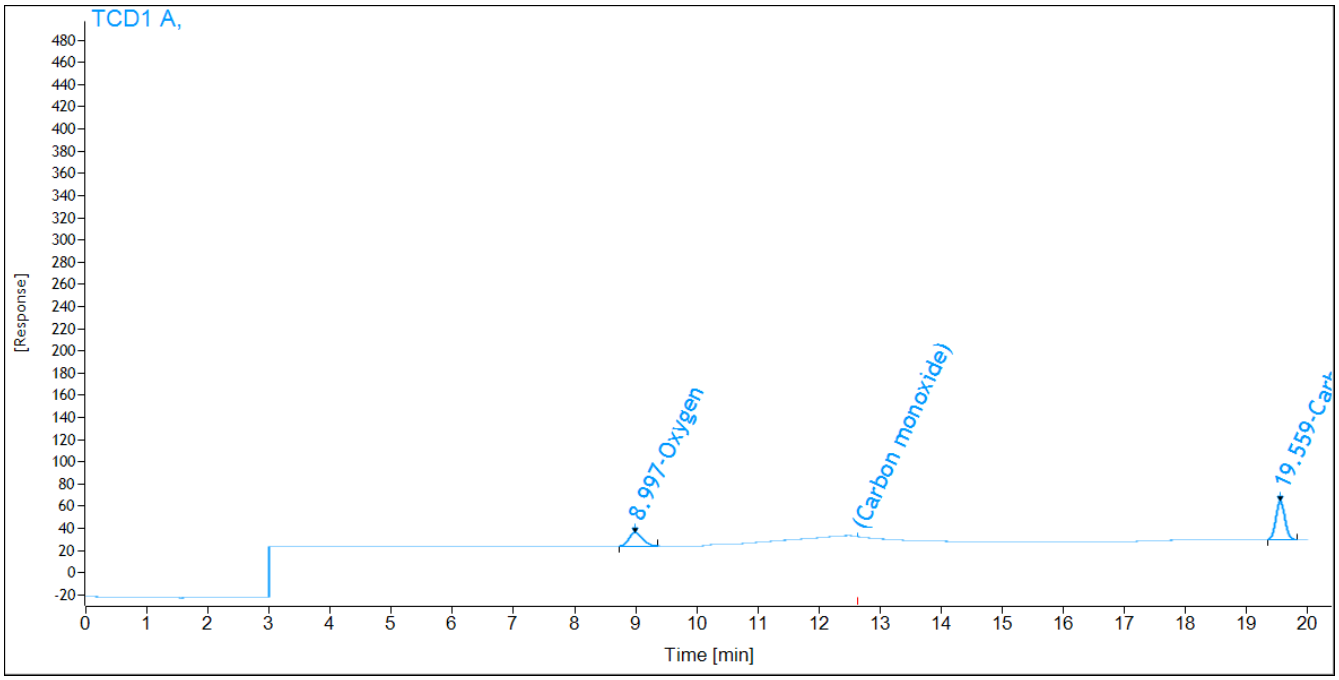
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BB	8.98	465.6146	1	1.37	1.367	%
Nitrogen				1	0.00		%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide	BB	19.54	875.9458	1	1.37	1.367	%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP112\009F1701.D
Sample name: BettyP070 #FG1 ENV(1=3392.23,2=219.95)
File_Location \GC\2014\Betty\Quarter 4
Injection date: 12/20/2014 11:55:08 AM
Acq. method: BETTYP017_CAL.M
Analysis method: BETTYP112_FGA_LIQN2.M
Last changed: 12/24/2014 10:52:59 AM
Instrument: Betty
Sequence_Name BETTYP112
Acq. operator: disconnected

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 1 of 4
File_Version 3



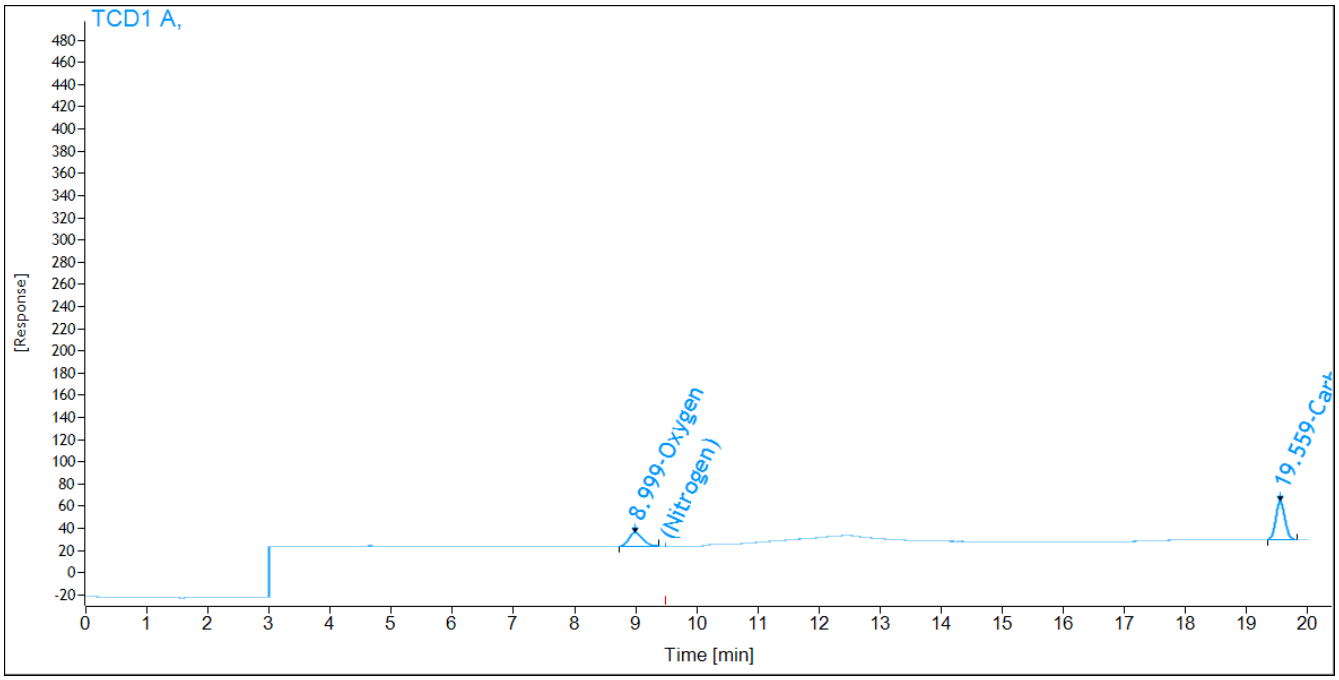
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BB	9.00	188.1913	1	0.53	0.535	%
Nitrogen				1	0.00		%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide	BB	19.56	357.7095	1	0.54	0.538	%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP112\009F1702.D
Sample name: BettyP070 #FG1 ENV(1=3392.23,2=219.95)
File_Location \GC\2014\Betty\Quarter 4
Injection date: 12/20/2014 12:24:54 PM
Acq. method: BETTYP017_CAL.M
Analysis method: BETTYP112_FGA_LIQN2.M
Last changed: 12/24/2014 10:52:59 AM
Instrument: Betty
Sequence_Name BETTYP112
Acq. operator: disconnected

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 2 of 4
File_Version 3



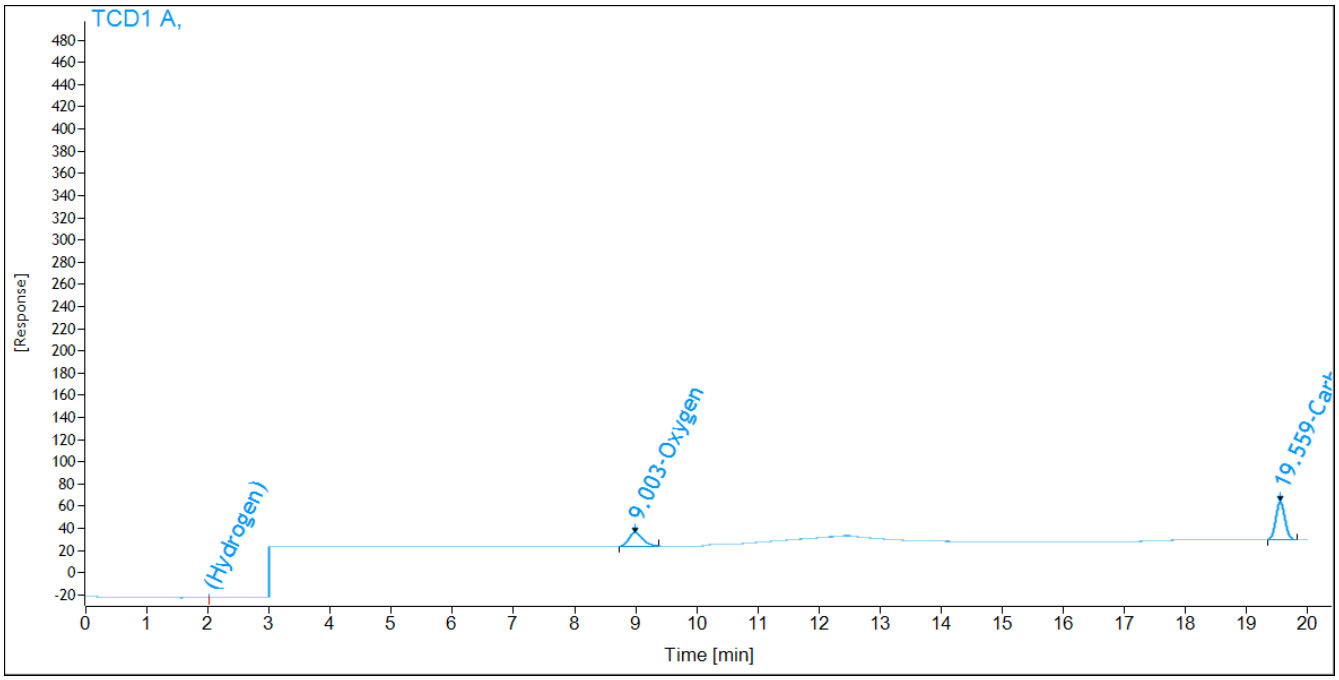
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BB	9.00	188.8359	1	0.54	0.536	%
Nitrogen				1	0.00		%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide	BB	19.56	359.1188	1	0.54	0.540	%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP112\009F1703.D
Sample name: BettyP070 #FG1 ENV(1=3392.23,2=219.95)
File_Location \GC\2014\Betty\Quarter 4
Injection date: 12/20/2014 12:54:40 PM
Acq. method: BETTYP017_CAL.M
Analysis method: BETTYP112_FGA_LIQN2.M
Last changed: 12/24/2014 10:52:59 AM
Instrument: Betty
Sequence_Name BETTYP112
Acq. operator: disconnected

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 3 of 4
File_Version 3



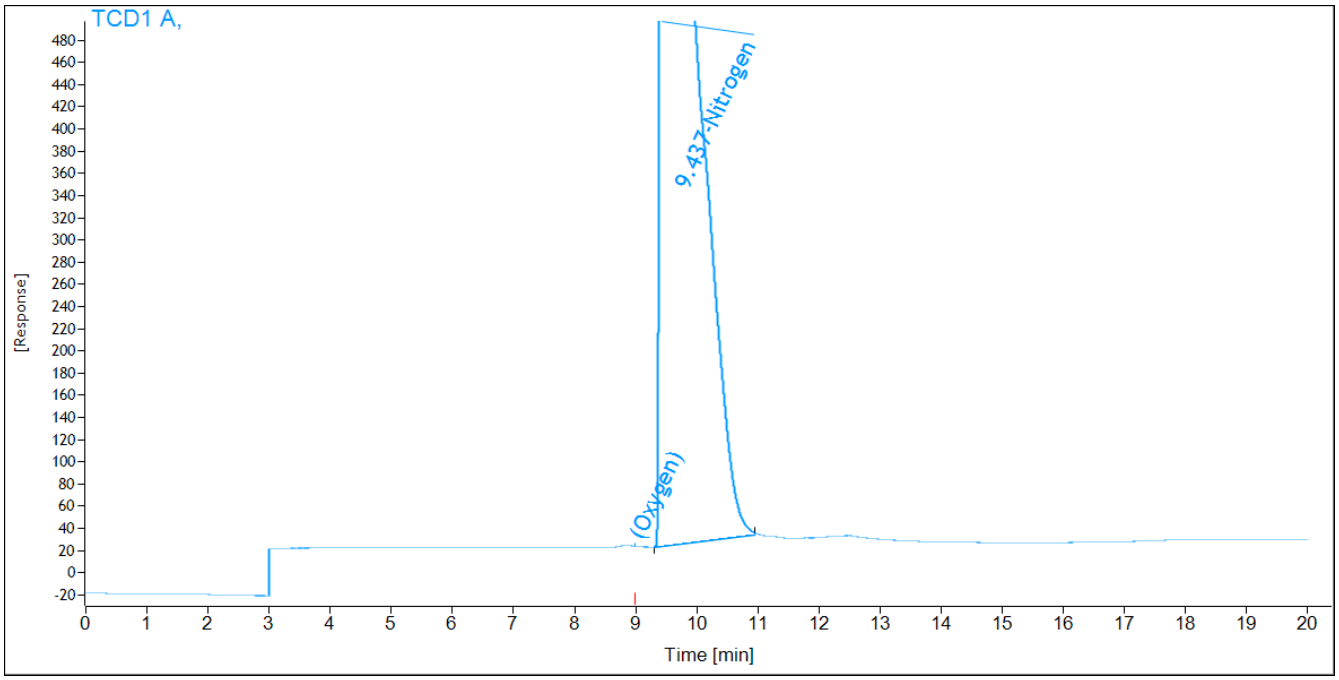
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BB	9.00	189.7393	1	0.54	0.539	%
Nitrogen				1	0.00		%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide	BB	19.56	356.7170	1	0.54	0.536	%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP112\012F1901.D
Sample name: 100% N2 #22
File_Location \GC\2014\Betty\Quarter 4
Injection date: 12/21/2014 5:32:12 PM
Acq. method: BETTYP017_CAL.M
Analysis method: BETTYP112_FGA_LIQN2.M
Last changed: 12/24/2014 10:52:59 AM
Instrument: Betty
Sequence_Name BETTYP112
Acq. operator: disconnected

Sample type: Calibration
Location: Vial 12
Injection volume: 250.000
Injection: 1 of 4
File_Version 3



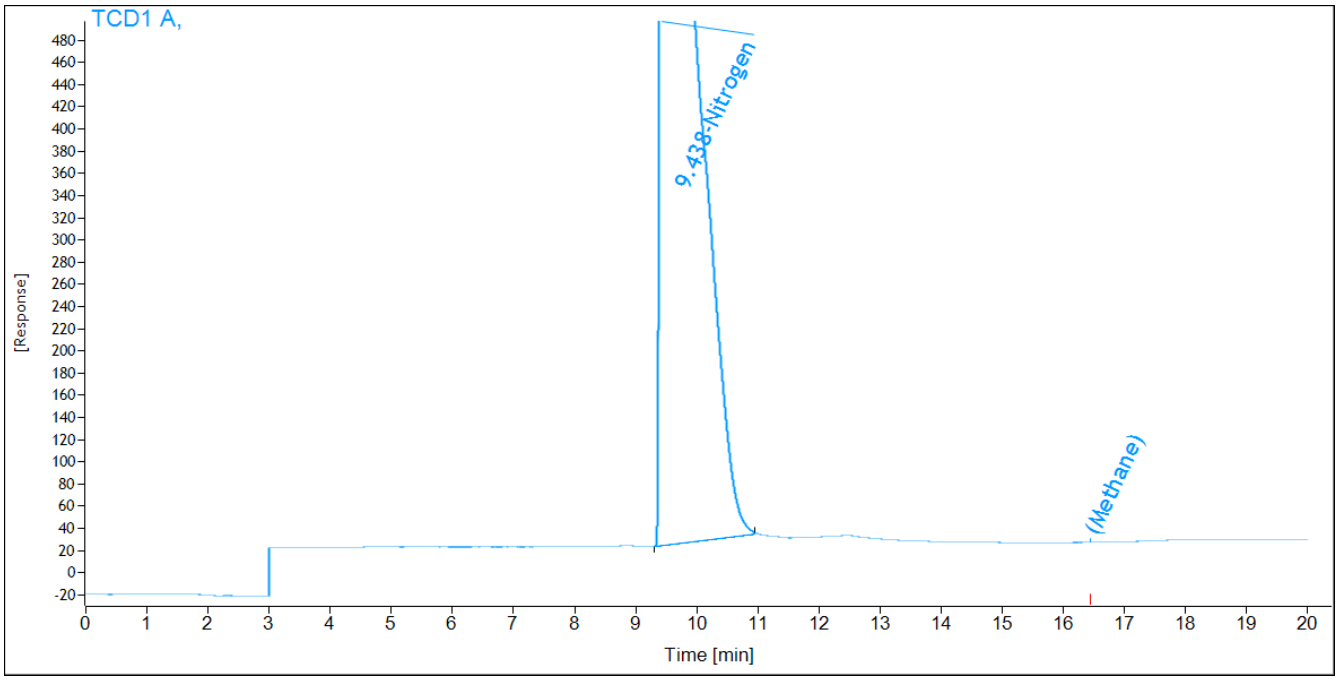
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen				1	0.00		%
Nitrogen	BB	9.44	35572.5820	1	97.50	97.503	%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide				1	0.00		%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP112\012F1902.D
Sample name: 100% N2 #22
File_Location \GC\2014\Betty\Quarter 4
Injection date: 12/21/2014 5:59:40 PM
Acq. method: BETTYP017_CAL.M
Analysis method: BETTYP112_FGA_LIQN2.M
Last changed: 12/24/2014 10:52:59 AM
Instrument: Betty
Sequence_Name BETTYP112
Acq. operator: disconnected

Sample type: Calibration
Location: Vial 12
Injection volume: 250.000
Injection: 2 of 4
File_Version 3



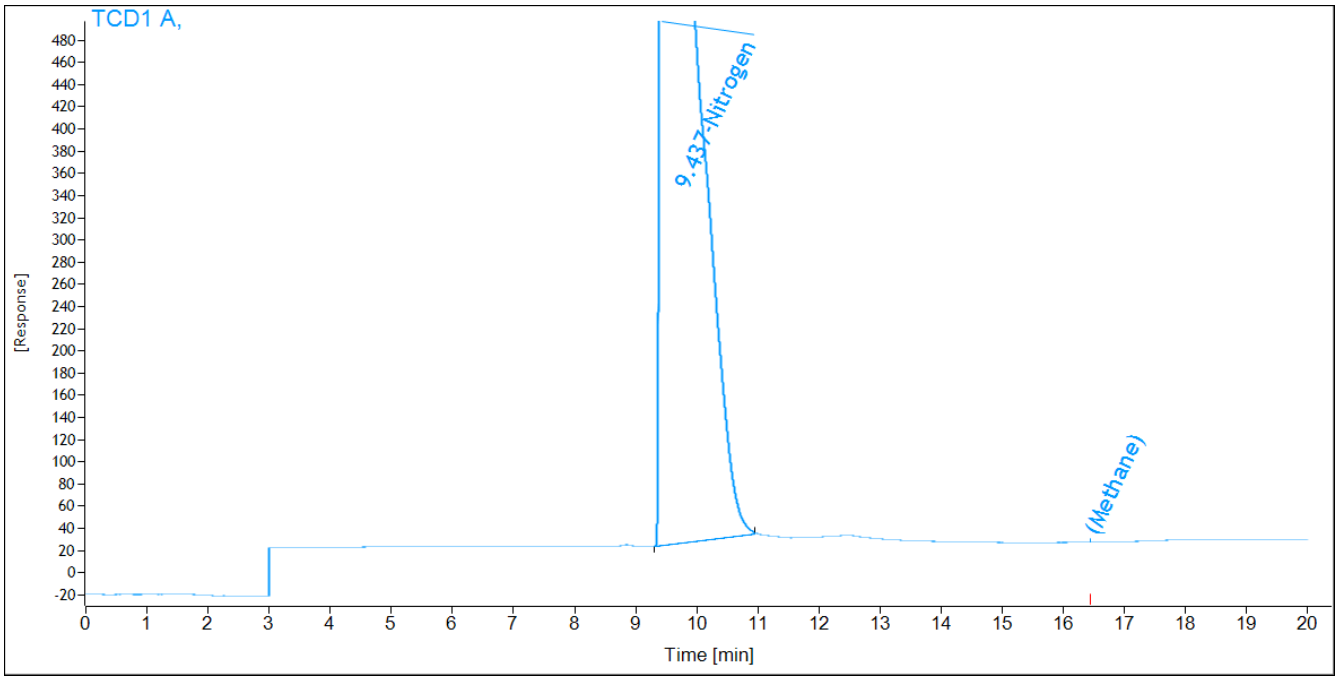
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen				1	0.00		%
Nitrogen	BB	9.44	35470.0781	1	97.22	97.222	%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide				1	0.00		%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP112\012F1903.D
Sample name: 100% N2 #22
File_Location \GC\2014\Betty\Quarter 4
Injection date: 12/21/2014 6:27:06 PM
Acq. method: BETTYP017_CAL.M
Analysis method: BETTYP112_FGA_LIQN2.M
Last changed: 12/24/2014 10:52:59 AM
Instrument: Betty
Sequence_Name BETTYP112
Acq. operator: disconnected

Sample type: Calibration
Location: Vial 12
Injection volume: 250.000
Injection: 3 of 4
File_Version 3



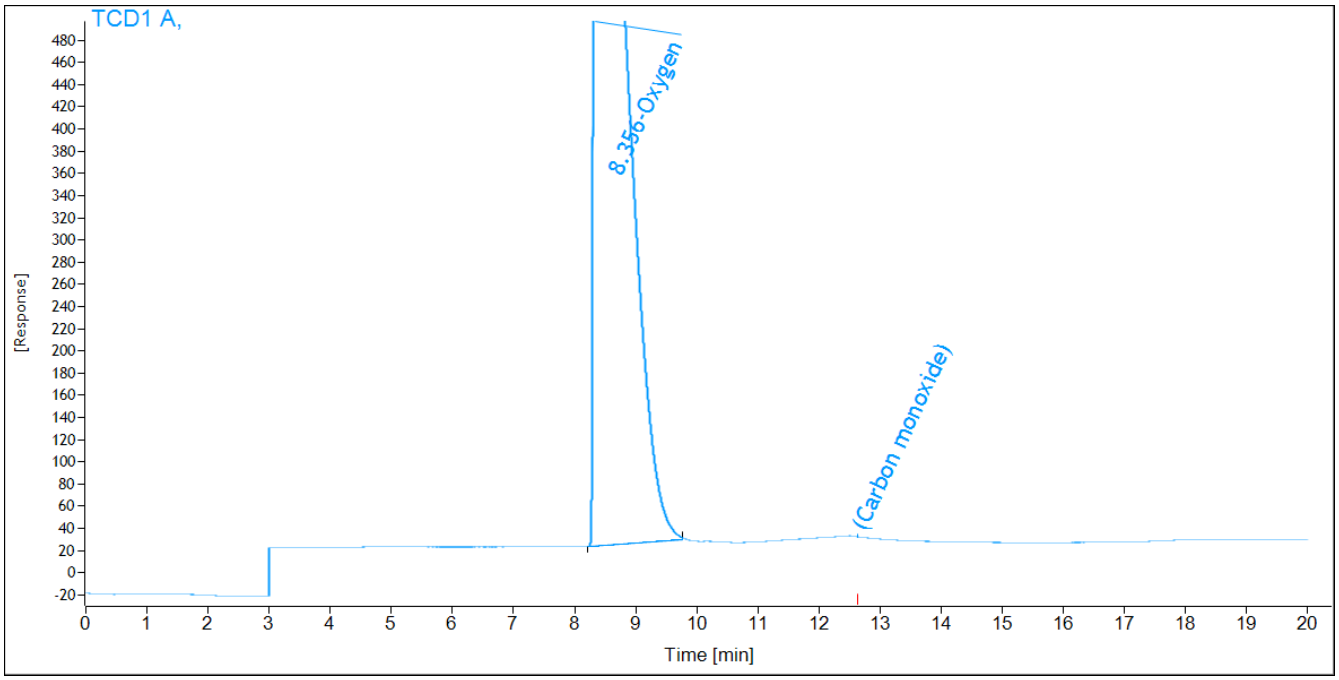
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen				1	0.00		%
Nitrogen	BB	9.44	35484.1797	1	97.26	97.260	%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide				1	0.00		%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP112\016F2401.D
Sample name: 99.999% O2 #23
File_Location \GC\2014\Betty\Quarter 4
Injection date: 12/22/2014 10:09:51 AM
Acq. method: BETTYP017_CAL.M
Analysis method: BETTYP112_FGA_LIQN2.M
Last changed: 12/24/2014 10:52:59 AM
Instrument: Betty
Sequence_Name BETTYP112
Acq. operator: disconnected

Sample type: Calibration
Location: Vial 16
Injection volume: 250.000
Injection: 1 of 4
File_Version 3



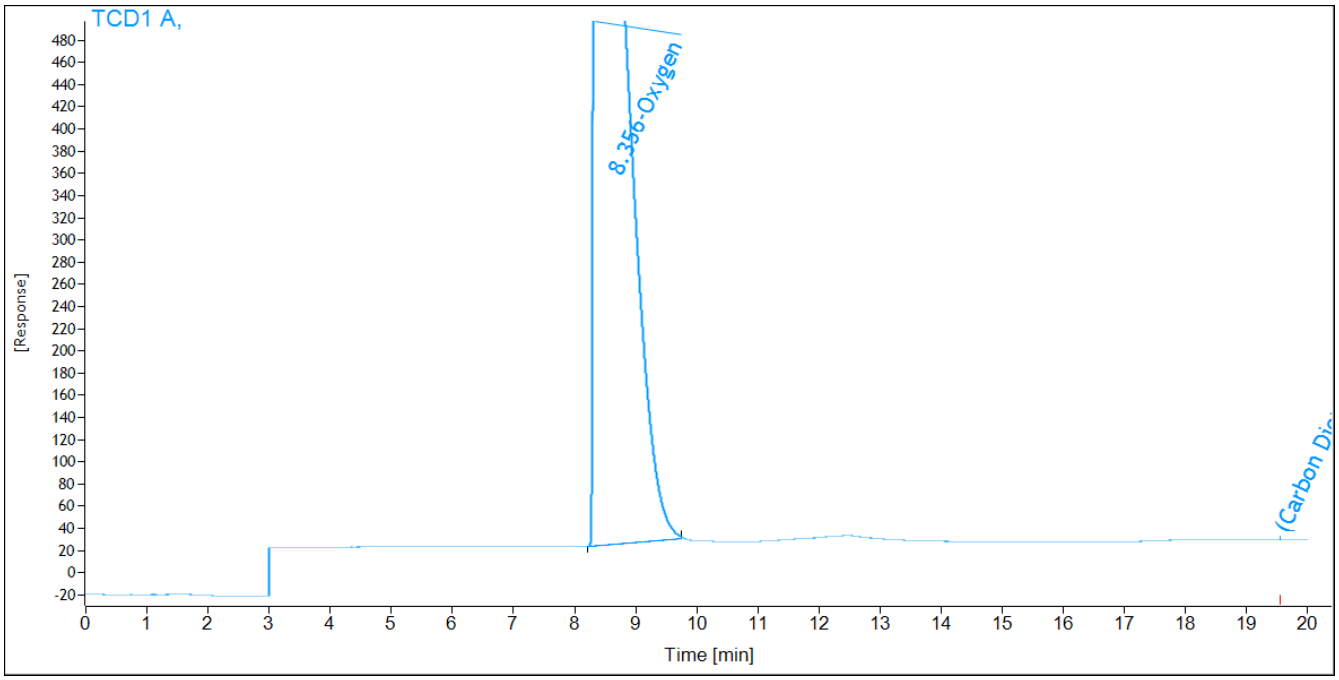
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BB	8.36	31866.0664	1	95.67	95.671	%
Nitrogen				1	0.00		%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide				1	0.00		%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP112\016F2402.D
Sample name: 99.999% O2 #23
File_Location \GC\2014\Betty\Quarter 4
Injection date: 12/22/2014 10:37:21 AM
Acq. method: BETTYP017_CAL.M
Analysis method: BETTYP112_FGA_LIQN2.M
Last changed: 12/24/2014 10:52:59 AM
Instrument: Betty
Sequence_Name BETTYP112
Acq. operator: disconnected

Sample type: Calibration
Location: Vial 16
Injection volume: 250.000
Injection: 2 of 4
File_Version 3



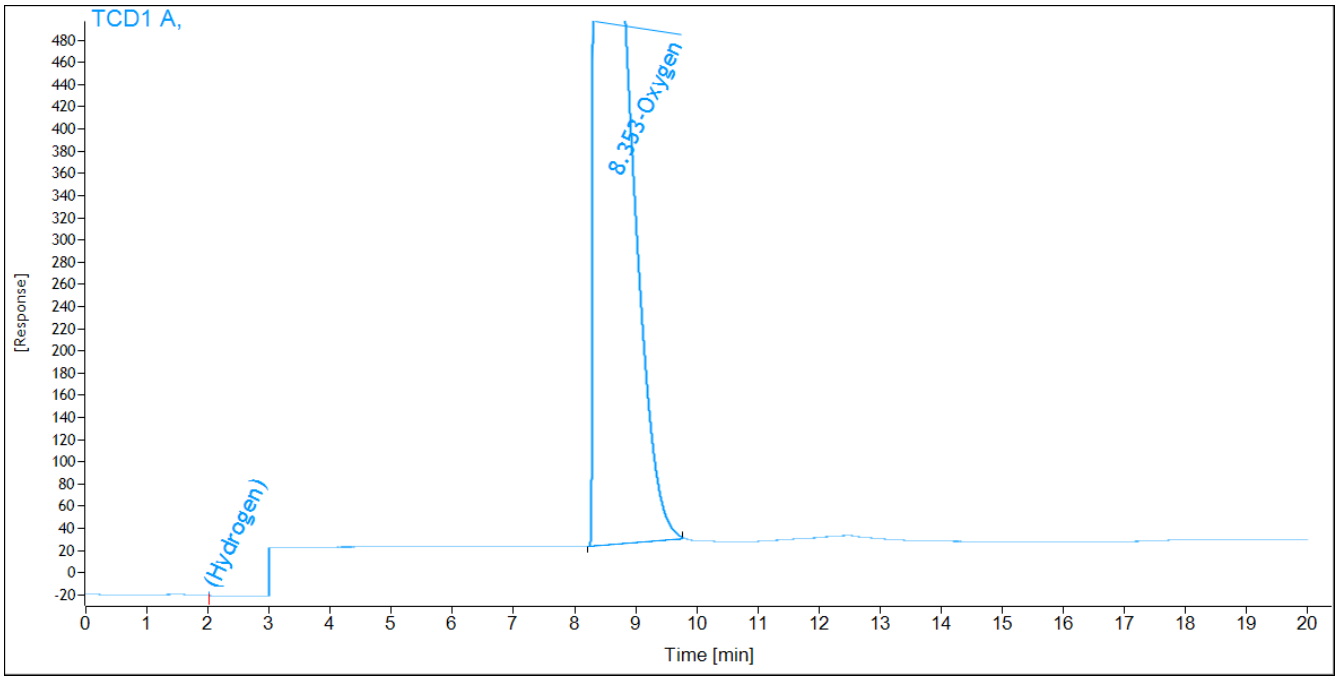
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BB	8.36	31905.5840	1	95.79	95.789	%
Nitrogen				1	0.00		%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide				1	0.00		%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP112\016F2403.D
Sample name: 99.999% O2 #23
File_Location \GC\2014\Betty\Quarter 4
Injection date: 12/22/2014 11:04:48 AM
Acq. method: BETTYP017_CAL.M
Analysis method: BETTYP112_FGA_LIQN2.M
Last changed: 12/24/2014 10:52:59 AM
Instrument: Betty
Sequence_Name BETTYP112
Acq. operator: disconnected

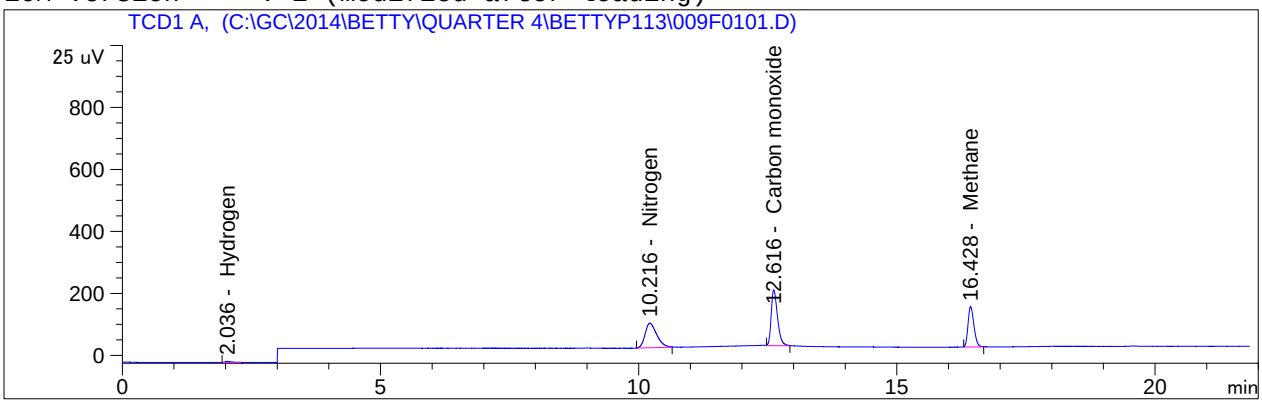
Sample type: Calibration
Location: Vial 16
Injection volume: 250.000
Injection: 3 of 4
File_Version 3



Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BB	8.35	32198.6152	1	96.67	96.669	%
Nitrogen				1	0.00		%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide				1	0.00		%

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\009F0101.D
Sample Name: BettyP070 #FG7 ENV(1=530,3=319.08)

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :   1
Acq. Instrument : Betty                          Location : Vial 9
Injection Date  : 12/22/2014 1:28:28 PM               Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:48:43 AM by Thorne Gregory
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:48:41 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.036 BB       27.68007 9.53304e-2    2.63875    Hydrogen
  8.900            -          -          -         Oxygen
 10.216 BB     1237.71936 2.72218e-3    3.36930    Nitrogen
 12.616 BB     1518.27893 2.19757e-3    3.33652    Carbon monoxide
 16.428 BB     1035.03345 2.58841e-3    2.67909    Methane
 19.559            -          -          -         Carbon Dioxide

Totals :                                12.02367

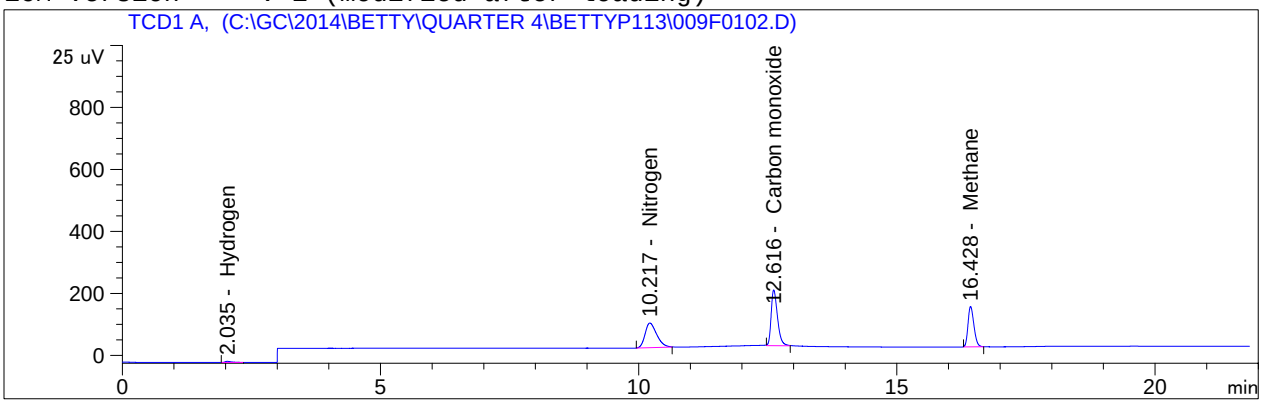

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\009F0102.D
Sample Name: BettyP070 #FG7 ENV(1=530,3=319.08)

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :   1
Acq. Instrument : Betty                          Location : Vial 9
Injection Date  : 12/22/2014 1:58:22 PM               Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:48:43 AM by Thorne Gregory
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:48:41 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                 [%]
-------|------|----------|----------|----------|--|------------------
  2.035 BB       29.00863 9.52688e-2    2.76362    Hydrogen
  8.900            -          -          -         Oxygen
 10.217 BB     1247.40662 2.72233e-3    3.39586    Nitrogen
 12.616 BB     1524.55688 2.19763e-3    3.35041    Carbon monoxide
 16.428 BB     1039.22668 2.58845e-3    2.68998    Methane
 19.559            -          -          -         Carbon Dioxide

Totals :                                12.19987

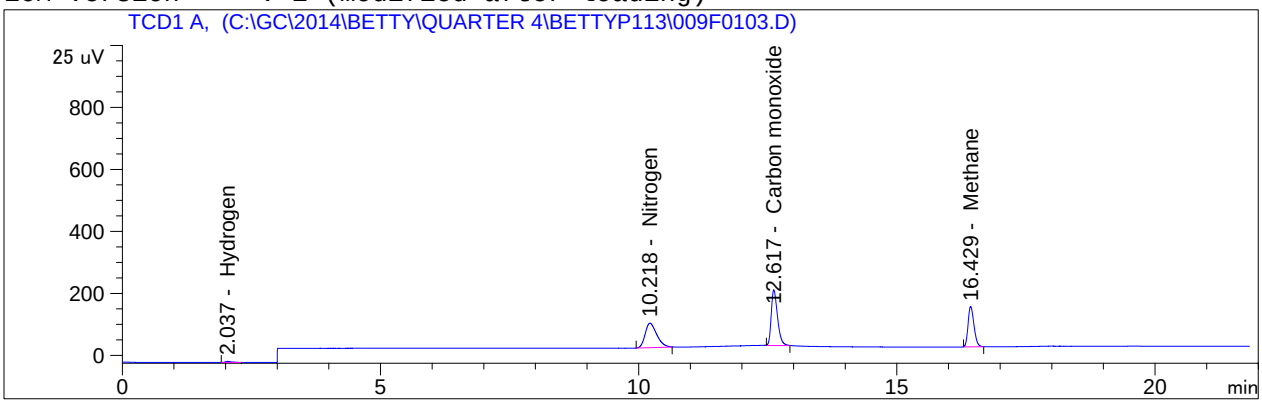

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\009F0103.D
Sample Name: BettyP070 #FG7 ENV(1=530,3=319.08)

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :   1
Acq. Instrument : Betty                          Location : Vial 9
Injection Date  : 12/22/2014 2:28:15 PM               Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:48:43 AM by Thorne Gregory
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:48:41 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.037 BB       27.73342 9.53278e-2    2.64377    Hydrogen
  8.900            -          -          -         Oxygen
 10.218 BB     1239.90808 2.72222e-3    3.37530    Nitrogen
 12.617 BB     1519.75378 2.19758e-3    3.33978    Carbon monoxide
 16.429 BB     1038.18689 2.58844e-3    2.68728    Methane
 19.559            -          -          -         Carbon Dioxide

Totals :                                12.04613

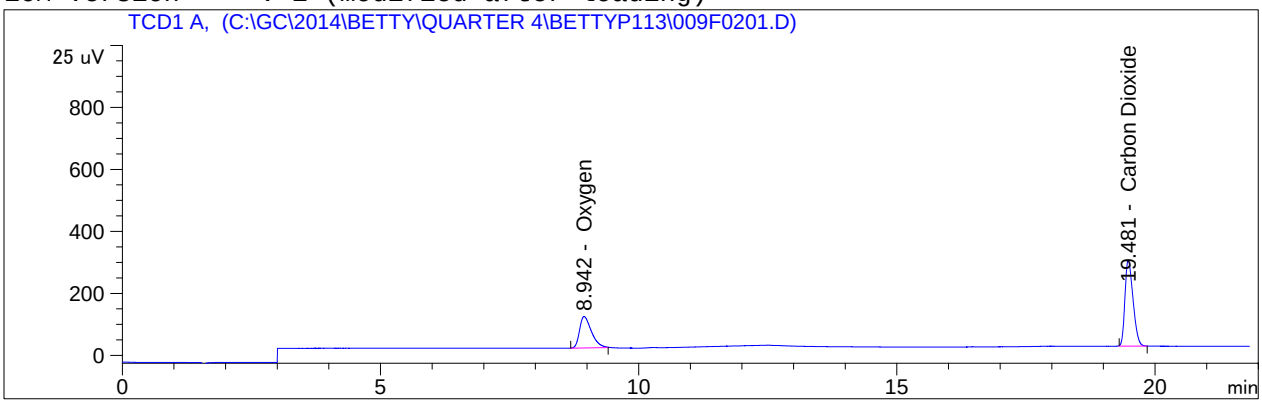

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\009F0201.D
Sample Name: BettyP070 #FG3 ENV(1=374.56,2=391.17)

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :   2
Acq. Instrument : Betty                          Location : Vial 9
Injection Date  : 12/22/2014 2:58:05 PM               Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:48:43 AM by Thorne Gregory
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:48:41 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -          -          -         Hydrogen
  8.942 BB     1622.14026 2.98409e-3    4.84061    Oxygen
 10.100            -          -          -         Nitrogen
 12.646            -          -          -         Carbon monoxide
 16.456            -          -          -         Methane
 19.481 BB     3013.68945 1.58836e-3    4.78682    Carbon Dioxide

Totals :                                 9.62743

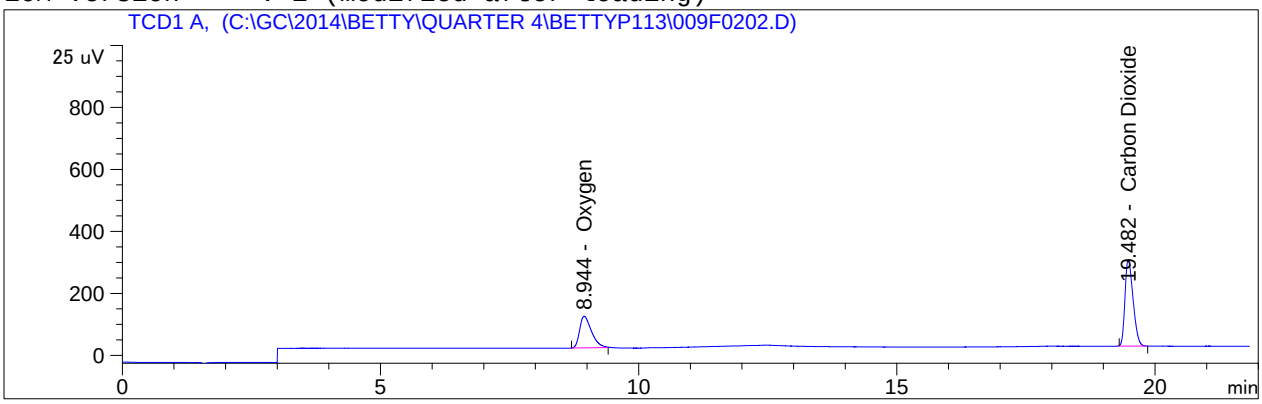

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\009F0202.D
Sample Name: BettyP070 #FG3 ENV(1=374.56,2=391.17)

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :   2
Acq. Instrument : Betty                          Location : Vial 9
Injection Date  : 12/22/2014 3:27:52 PM               Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:48:43 AM by Thorne Gregory
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:48:41 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -          -          -         Hydrogen
  8.944 BB     1633.17932 2.98422e-3    4.87376    Oxygen
 10.100            -          -          -         Nitrogen
 12.646            -          -          -         Carbon monoxide
 16.456            -          -          -         Methane
 19.482 BB     3039.21582 1.58846e-3    4.82766    Carbon Dioxide

Totals :                                 9.70142

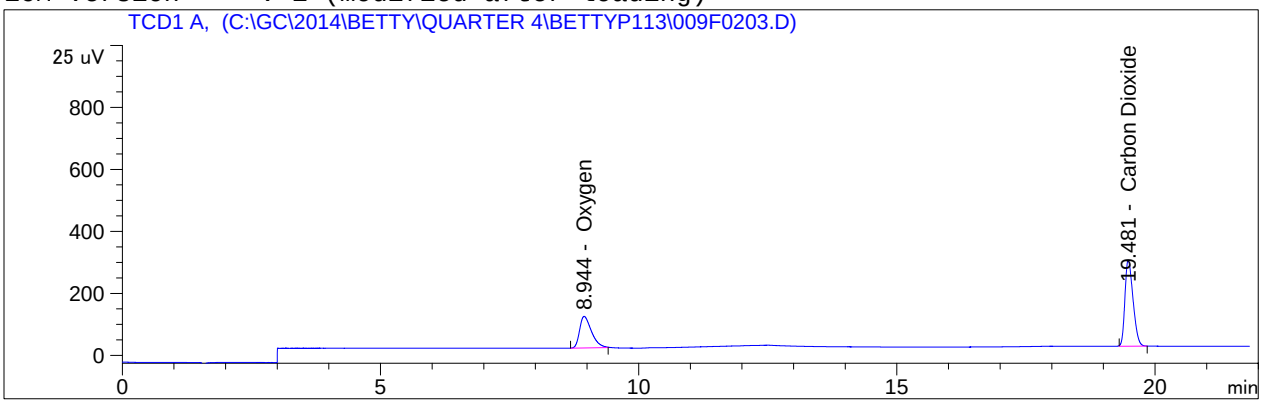

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\009F0203.D
Sample Name: BettyP070 #FG3 ENV(1=374.56,2=391.17)

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :   2
Acq. Instrument : Betty                          Location : Vial 9
Injection Date  : 12/22/2014 3:57:42 PM               Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:48:43 AM by Thorne Gregory
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:48:41 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -          -          -         Hydrogen
  8.944 BB     1628.76575 2.98417e-3    4.86051    Oxygen
 10.100            -          -          -         Nitrogen
 12.646            -          -          -         Carbon monoxide
 16.456            -          -          -         Methane
 19.481 BB     3025.25122 1.58840e-3    4.80532    Carbon Dioxide

Totals :                                 9.66583

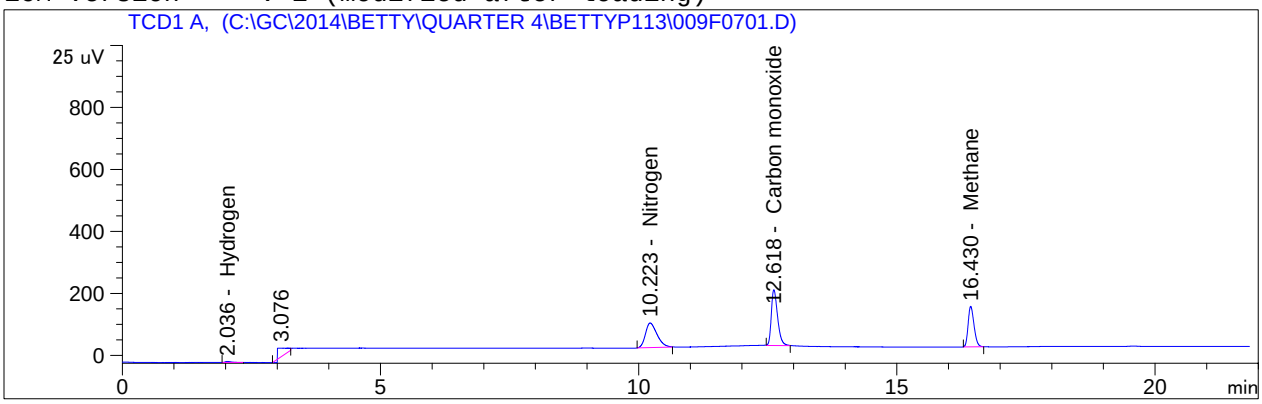

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\009F0701.D
Sample Name: BettyP070 #FG7 ENV(1=530,3=319.08)

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :   7
Acq. Instrument : Betty                          Location : Vial 9
Injection Date  : 12/22/2014 9:59:25 PM               Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:48:43 AM by Thorne Gregory
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:48:41 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.036 BB       28.46972 9.52931e-2    2.71297    Hydrogen
  8.900            -          -           -        Oxygen
 10.223 BB     1239.18860 2.72221e-3    3.37333    Nitrogen
 12.618 BB     1524.42151 2.19763e-3    3.35012    Carbon monoxide
 16.430 BB     1040.19373 2.58846e-3    2.69249    Methane
 19.559            -          -           -        Carbon Dioxide

Totals :                                12.12890

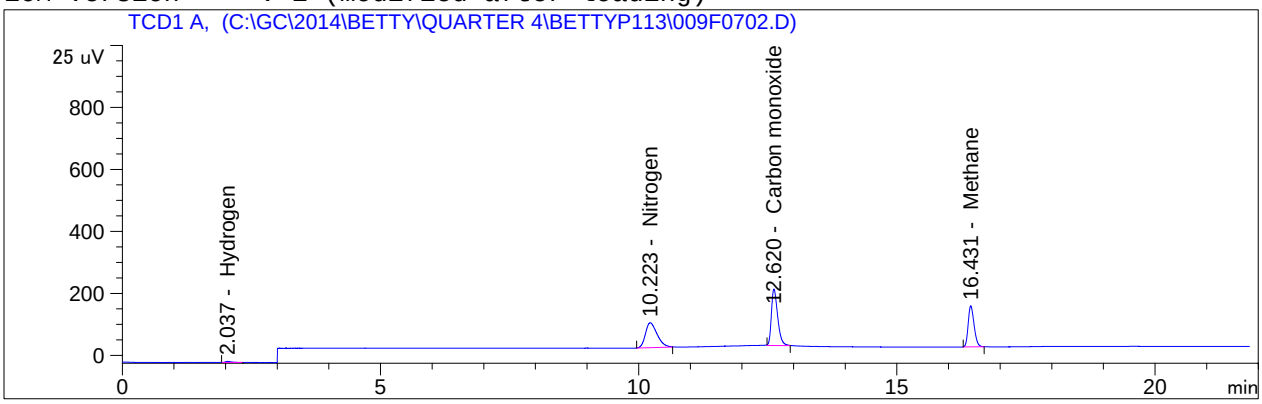

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                           *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\009F0702.D
Sample Name: BettyP070 #FG7 ENV(1=530,3=319.08)

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :   7
Acq. Instrument : Betty                          Location : Vial 9
Injection Date  : 12/22/2014 10:29:31 PM              Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:48:43 AM by Thorne Gregory
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:48:41 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.037 BB       28.90414 9.52734e-2    2.75380    Hydrogen
  8.900            -          -          -         Oxygen
 10.223 BB     1259.44128 2.72252e-3    3.42885    Nitrogen
 12.620 BB     1538.98267 2.19778e-3    3.38234    Carbon monoxide
 16.431 BB     1051.32056 2.58854e-3    2.72139    Methane
 19.559            -          -          -         Carbon Dioxide

Totals :                                12.28638

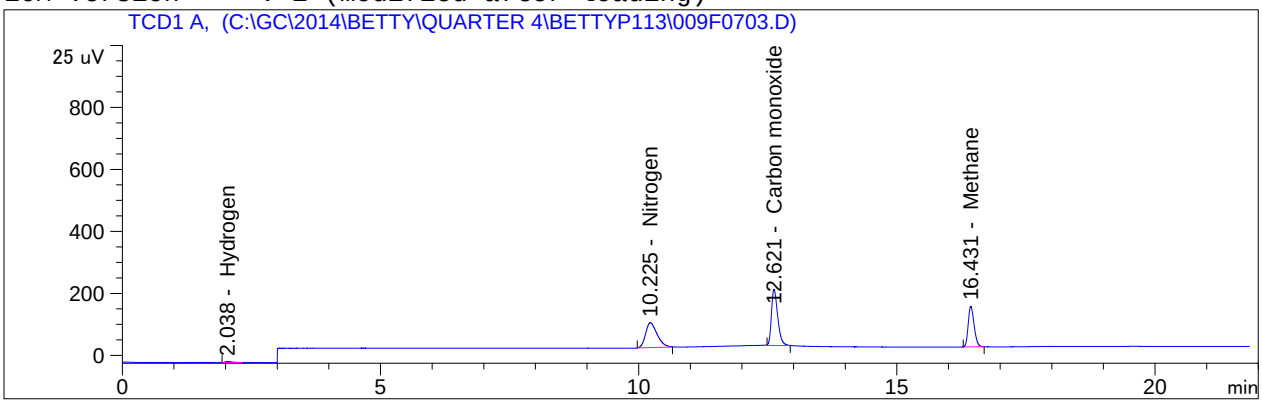

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\009F0703.D
Sample Name: BettyP070 #FG7 ENV(1=530,3=319.08)

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :   7
Acq. Instrument : Betty                          Location : Vial 9
Injection Date  : 12/22/2014 10:59:35 PM              Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:48:43 AM by Thorne Gregory
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:48:41 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.038 BB       28.91711 9.52729e-2    2.75502    Hydrogen
  8.900            -          -          -         Oxygen
 10.225 BB     1248.60950 2.72235e-3    3.39915    Nitrogen
 12.621 BB     1533.08191 2.19772e-3    3.36928    Carbon monoxide
 16.431 BB     1043.58191 2.58848e-3    2.70129    Methane
 19.559            -          -          -         Carbon Dioxide

Totals :                                12.22475

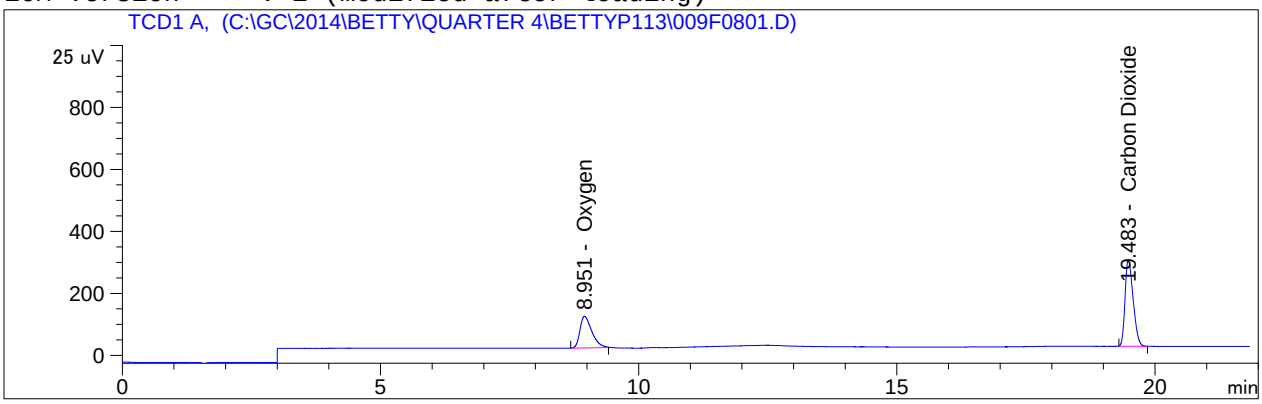

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\009F0801.D
Sample Name: BettyP070 #FG3 ENV(1=374.56,2=391.17)

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :   8
Acq. Instrument : Betty                          Location : Vial 9
Injection Date  : 12/22/2014 11:29:39 PM              Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:48:43 AM by Thorne Gregory
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:48:41 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -          -          -         Hydrogen
  8.951 BB     1633.18542 2.98422e-3    4.87378    Oxygen
 10.100            -          -          -         Nitrogen
 12.646            -          -          -         Carbon monoxide
 16.456            -          -          -         Methane
 19.483 BB     3043.39990 1.58847e-3    4.83436    Carbon Dioxide

Totals :                                 9.70814

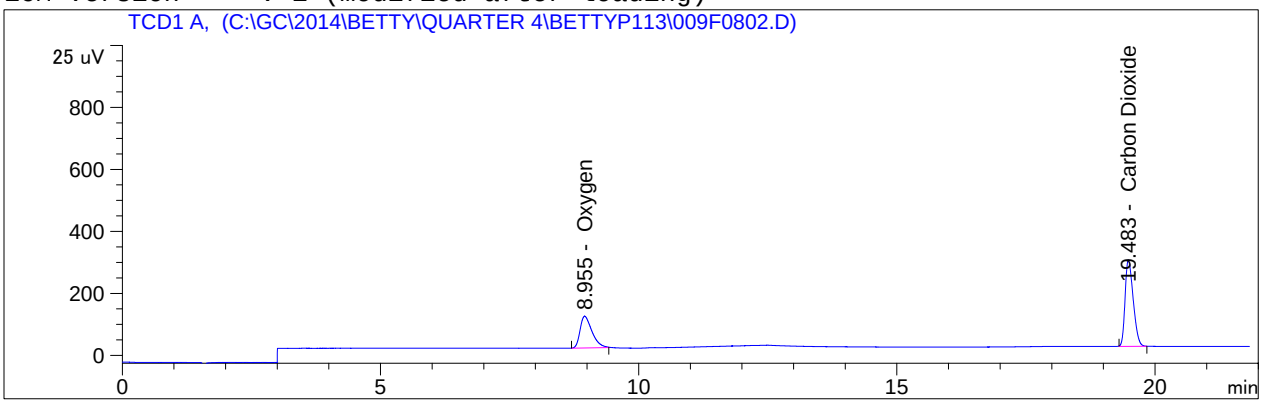

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\009F0802.D
Sample Name: BettyP070 #FG3 ENV(1=374.56,2=391.17)

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :   8
Acq. Instrument : Betty                          Location : Vial 9
Injection Date  : 12/22/2014 11:59:39 PM              Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:48:43 AM by Thorne Gregory
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:48:41 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -          -          -         Hydrogen
  8.955 BB     1636.24841 2.98425e-3    4.88298    Oxygen
 10.100            -          -          -         Nitrogen
 12.646            -          -          -         Carbon monoxide
 16.456            -          -          -         Methane
 19.483 BB     3042.19946 1.58847e-3    4.83244    Carbon Dioxide

Totals :                                 9.71541

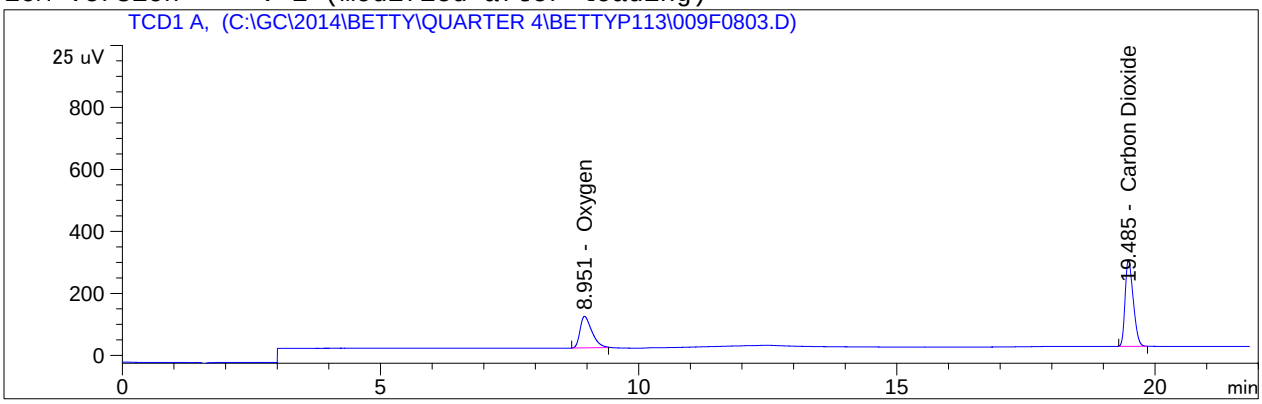

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\009F0803.D
Sample Name: BettyP070 #FG3 ENV(1=374.56,2=391.17)

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :   8
Acq. Instrument : Betty                          Location : Vial 9
Injection Date  : 12/23/2014 12:29:39 AM               Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:48:43 AM by Thorne Gregory
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:48:41 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -          -          -         Hydrogen
  8.951 BB     1623.86829 2.98411e-3    4.84580    Oxygen
 10.100            -          -          -         Nitrogen
 12.646            -          -          -         Carbon monoxide
 16.456            -          -          -         Methane
 19.485 BB     3032.03149 1.58843e-3    4.81617    Carbon Dioxide

Totals :                                 9.66197

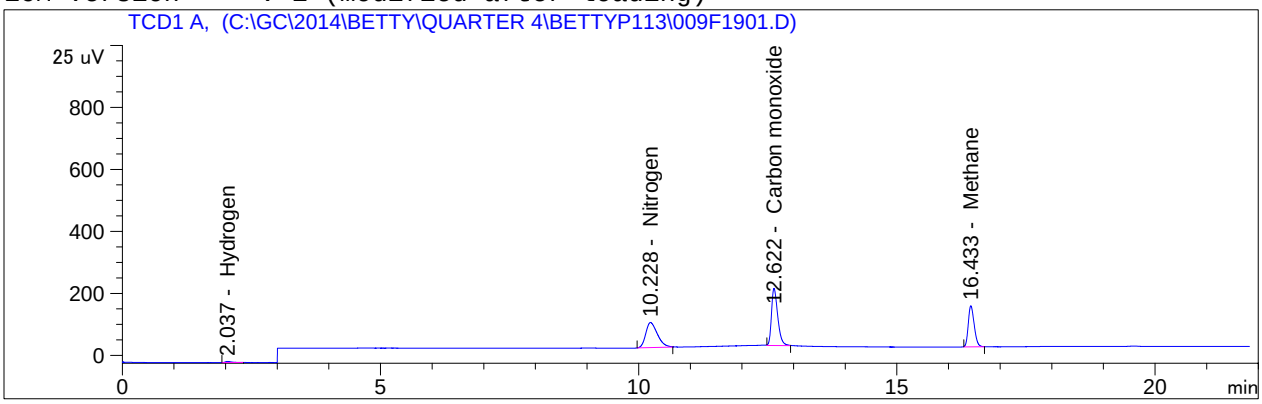

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\009F1901.D
Sample Name: BettyP070 #FG7 ENV(1=530,3=319.08)

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  19
Acq. Instrument : Betty                          Location : Vial 9
Injection Date  : 12/23/2014 10:46:14 PM              Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:48:43 AM by Thorne Gregory
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:48:41 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.037 BB       29.08084 9.52656e-2    2.77040    Hydrogen
  8.900            -          -          -         Oxygen
 10.228 BB     1266.16431 2.72262e-3    3.44728    Nitrogen
 12.622 BB     1549.02026 2.19788e-3    3.40456    Carbon monoxide
 16.433 BB     1056.55774 2.58859e-3    2.73499    Methane
 19.559            -          -          -         Carbon Dioxide

Totals :                                12.35723

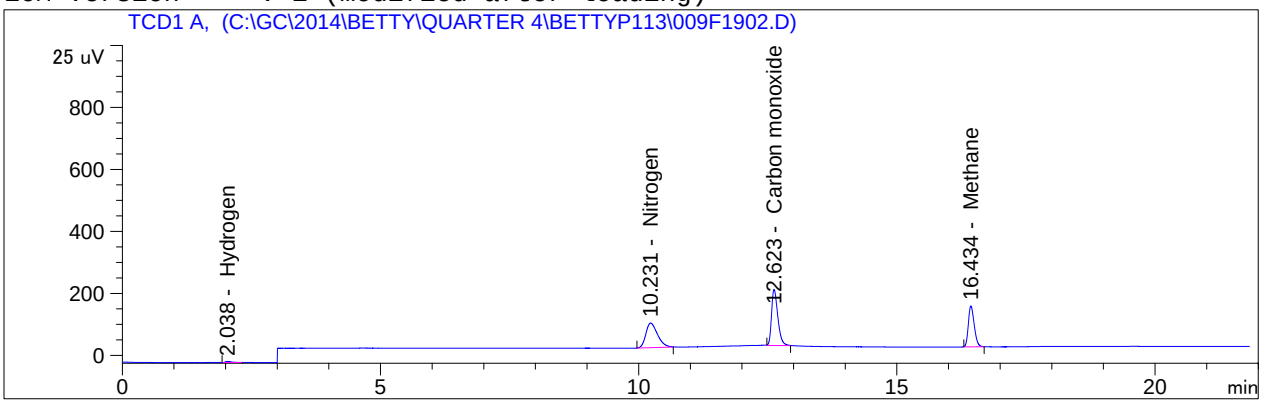

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\009F1902.D
Sample Name: BettyP070 #FG7 ENV(1=530,3=319.08)

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  19
Acq. Instrument : Betty                          Location : Vial 9
Injection Date  : 12/23/2014 11:16:25 PM              Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:48:43 AM by Thorne Gregory
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:48:41 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.038 BB       28.51819 9.52909e-2    2.71752    Hydrogen
  8.900            -          -          -         Oxygen
 10.231 BB     1249.45190 2.72237e-3    3.40146    Nitrogen
 12.623 BB     1529.23767 2.19768e-3    3.36077    Carbon monoxide
 16.434 BB     1045.25928 2.58850e-3    2.70565    Methane
 19.559            -          -          -         Carbon Dioxide

Totals :                                12.18541

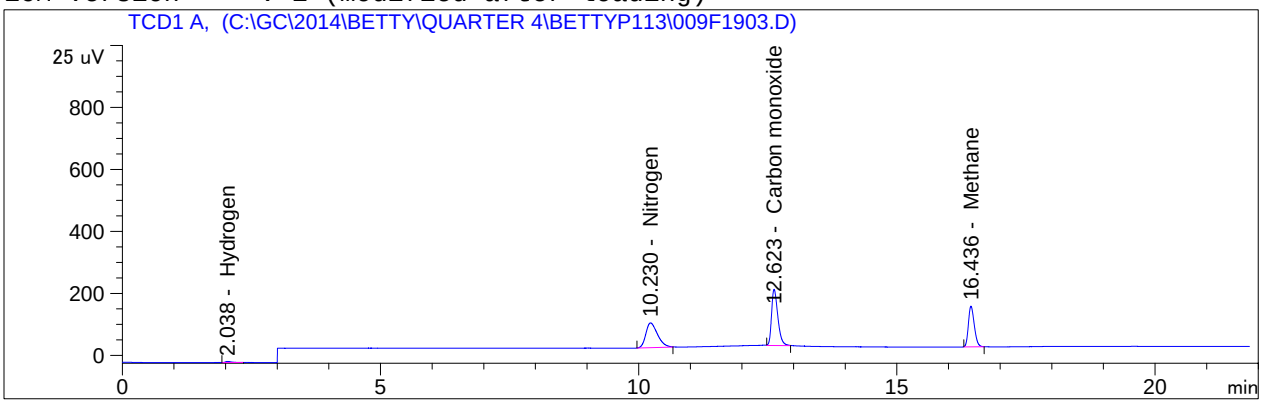

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\009F1903.D
Sample Name: BettyP070 #FG7 ENV(1=530,3=319.08)

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  19
Acq. Instrument : Betty                          Location : Vial 9
Injection Date  : 12/23/2014 11:46:52 PM              Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:48:43 AM by Thorne Gregory
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:48:41 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.038 BB       28.24343 9.53036e-2    2.69170    Hydrogen
  8.900            -          -          -         Oxygen
 10.230 BB     1251.97144 2.72240e-3    3.40837    Nitrogen
 12.623 BB     1531.95642 2.19771e-3    3.36679    Carbon monoxide
 16.436 BB     1043.71887 2.58848e-3    2.70165    Methane
 19.559            -          -          -         Carbon Dioxide

Totals :                                12.16851

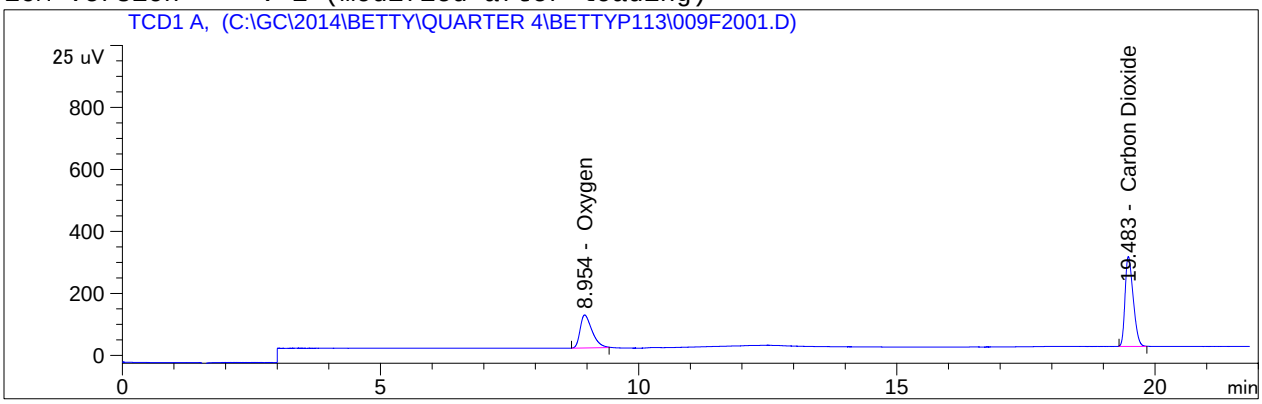

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\009F2001.D
Sample Name: BettyP070 #FG3 ENV(1=374.56,2=391.17)

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  20
Acq. Instrument : Betty                          Location : Vial 9
Injection Date  : 12/24/2014 12:17:05 AM               Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:48:43 AM by Thorne Gregory
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:48:41 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -          -          -         Hydrogen
  8.954 BB     1703.02148 2.98500e-3    5.08352    Oxygen
 10.100            -          -          -         Nitrogen
 12.646            -          -          -         Carbon monoxide
 16.456            -          -          -         Methane
 19.483 BB     3163.19775 1.58891e-3    5.02602    Carbon Dioxide

Totals :                                10.10954

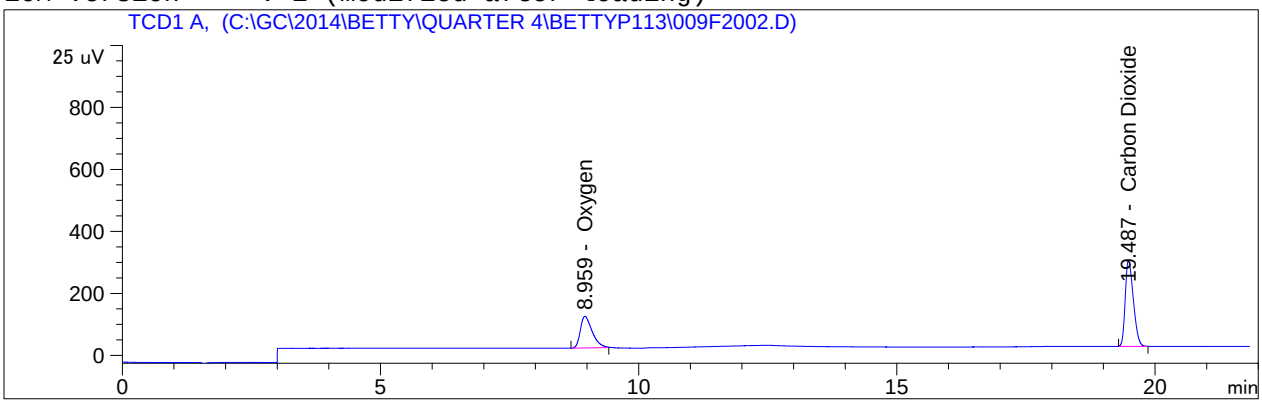

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\009F2002.D
Sample Name: BettyP070 #FG3 ENV(1=374.56,2=391.17)

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  20
Acq. Instrument : Betty                          Location : Vial 9
Injection Date  : 12/24/2014 12:47:18 AM              Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:48:43 AM by Thorne Gregory
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:48:41 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -          -          -         Hydrogen
  8.959 BB     1626.56885 2.98414e-3    4.85391    Oxygen
 10.100            -          -          -         Nitrogen
 12.646            -          -          -         Carbon monoxide
 16.456            -          -          -         Methane
 19.487 BB     3029.24390 1.58842e-3    4.81171    Carbon Dioxide

Totals :                                 9.66562

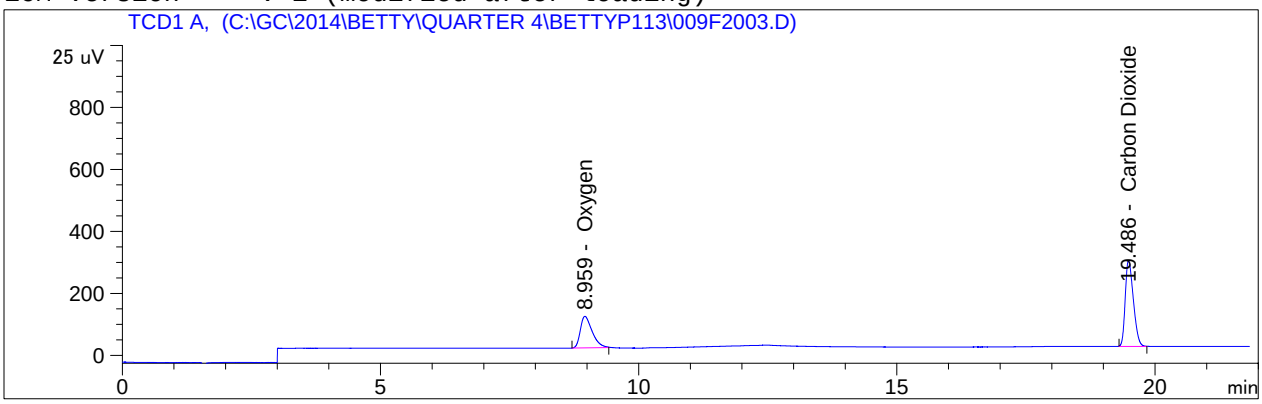

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\009F2003.D
Sample Name: BettyP070 #FG3 ENV(1=374.56,2=391.17)

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  20
Acq. Instrument : Betty                          Location : Vial 9
Injection Date  : 12/24/2014 1:17:31 AM               Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:48:43 AM by Thorne Gregory
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:48:41 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -          -          -         Hydrogen
  8.959 BB     1620.10706 2.98406e-3    4.83450    Oxygen
 10.100            -          -          -         Nitrogen
 12.646            -          -          -         Carbon monoxide
 16.456            -          -          -         Methane
 19.486 BB     3023.79199 1.58840e-3    4.80299    Carbon Dioxide

Totals :                                 9.63749

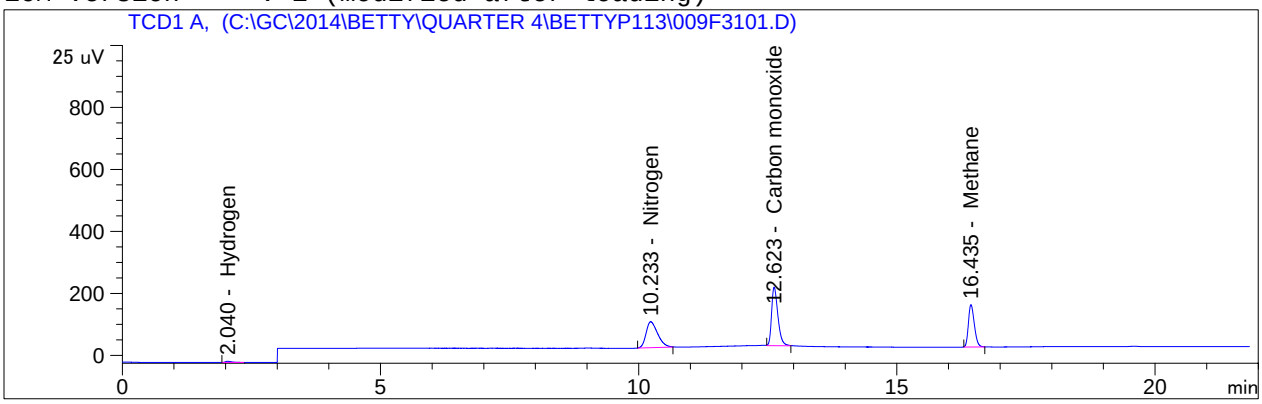

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\009F3101.D
Sample Name: BettyP070 #FG7 ENV(1=530,3=319.08)

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  31
Acq. Instrument : Betty                          Location : Vial 9
Injection Date  : 12/24/2014 3:39:12 PM               Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:48:43 AM by Thorne Gregory
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:48:41 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.040 BB       30.59419 9.52023e-2    2.91264    Hydrogen
  8.900            -          -          -         Oxygen
 10.233 BB     1304.10229 2.72317e-3    3.55130    Nitrogen
 12.623 BB     1601.04187 2.19837e-3    3.51969    Carbon monoxide
 16.435 BB     1092.39172 2.58886e-3    2.82805    Methane
 19.559            -          -          -         Carbon Dioxide

Totals :                                12.81167

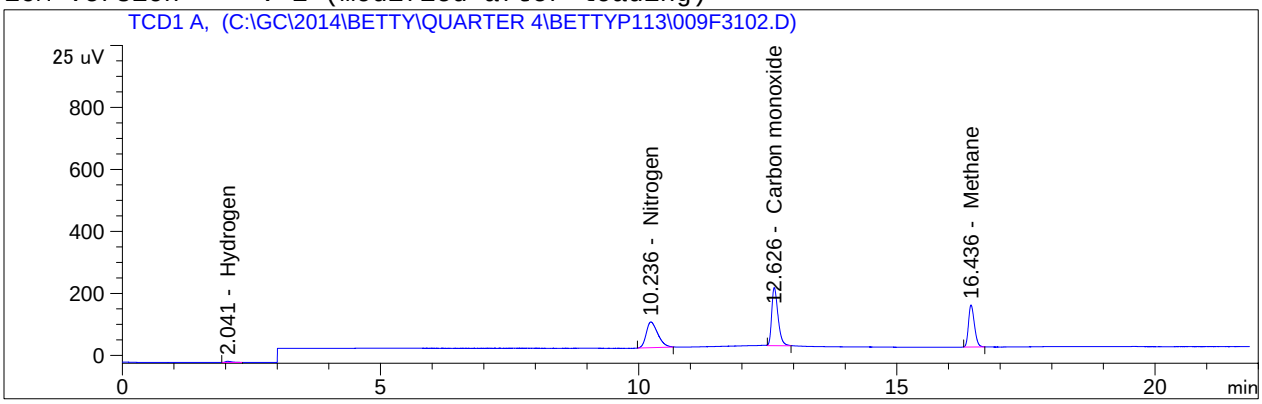

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\009F3102.D
Sample Name: BettyP070 #FG7 ENV(1=530,3=319.08)

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  31
Acq. Instrument : Betty                          Location : Vial 9
Injection Date  : 12/24/2014 4:09:34 PM               Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:48:43 AM by Thorne Gregory
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:48:41 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.041 BB       30.09840 9.52223e-2    2.86604    Hydrogen
  8.900            -          -          -         Oxygen
 10.236 BB     1297.14795 2.72307e-3    3.53223    Nitrogen
 12.626 BB     1587.19519 2.19824e-3    3.48904    Carbon monoxide
 16.436 BB     1083.31653 2.58879e-3    2.80448    Methane
 19.559            -          -          -         Carbon Dioxide

Totals :                                12.69179

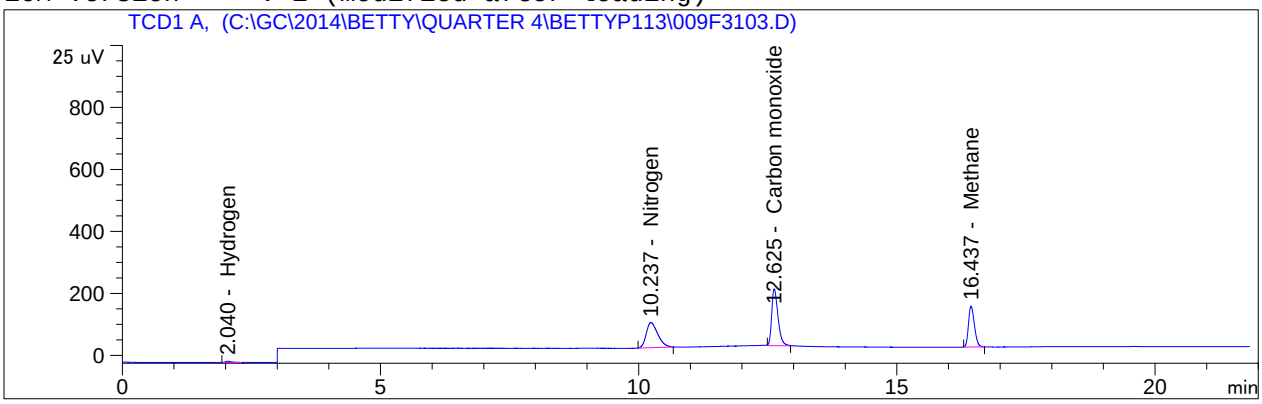

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\009F3103.D
Sample Name: BettyP070 #FG7 ENV(1=530,3=319.08)

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  31
Acq. Instrument : Betty                          Location : Vial 9
Injection Date  : 12/24/2014 4:39:59 PM               Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:48:43 AM by Thorne Gregory
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:48:41 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.040 BB       29.38481 9.52524e-2    2.79897    Hydrogen
  8.900            -          -          -         Oxygen
 10.237 BB     1260.61499 2.72254e-3    3.43207    Nitrogen
 12.625 BB     1548.11414 2.19787e-3    3.40255    Carbon monoxide
 16.437 BB     1055.84009 2.58858e-3    2.73313    Methane
 19.559            -          -          -         Carbon Dioxide

Totals :                                12.36672

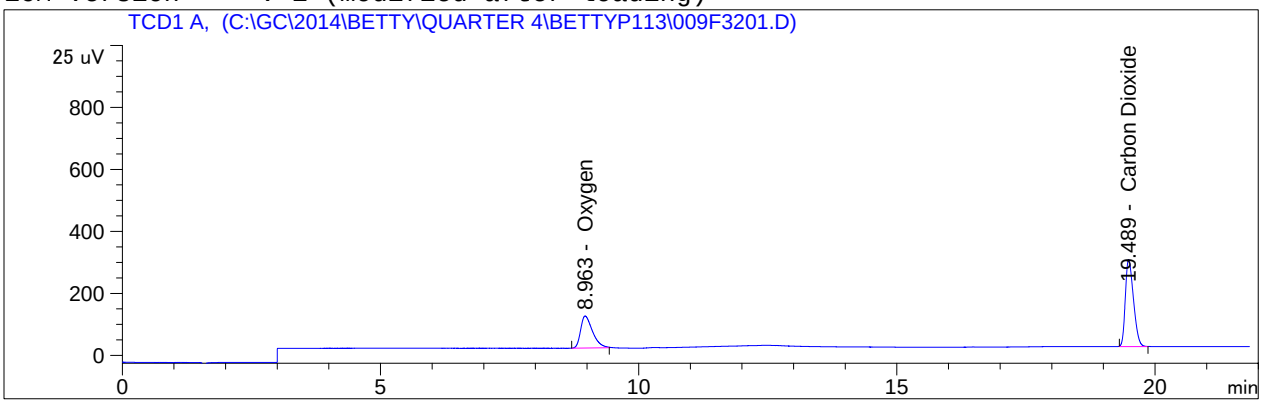

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\009F3201.D
Sample Name: BettyP070 #FG3 ENV(1=374.56,2=391.17)

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  32
Acq. Instrument : Betty                          Location : Vial 9
Injection Date  : 12/24/2014 5:10:25 PM               Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:48:43 AM by Thorne Gregory
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:48:41 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -          -          -         Hydrogen
  8.963 BB     1647.35864 2.98438e-3    4.91635    Oxygen
 10.100            -          -          -         Nitrogen
 12.646            -          -          -         Carbon monoxide
 16.456            -          -          -         Methane
 19.489 BB     3066.55811 1.58856e-3    4.87141    Carbon Dioxide

Totals :                                 9.78775

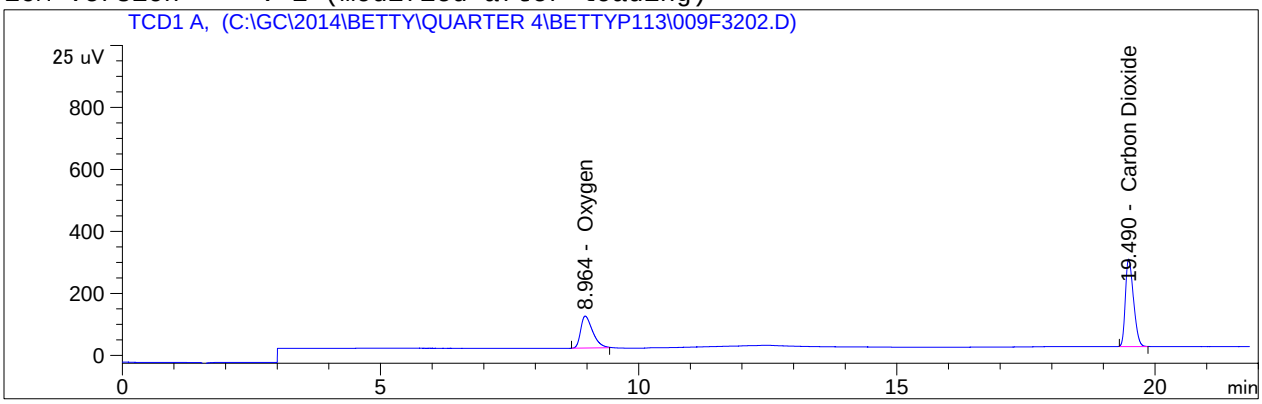

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\009F3202.D
Sample Name: BettyP070 #FG3 ENV(1=374.56,2=391.17)

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  32
Acq. Instrument : Betty                          Location : Vial 9
Injection Date  : 12/24/2014 5:40:56 PM               Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:48:43 AM by Thorne Gregory
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:48:41 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -          -          -         Hydrogen
  8.964 BB     1657.26733 2.98449e-3    4.94610    Oxygen
 10.100            -          -          -         Nitrogen
 12.646            -          -          -         Carbon monoxide
 16.456            -          -          -         Methane
 19.490 BB     3081.45288 1.58861e-3    4.89524    Carbon Dioxide

Totals :                                 9.84134

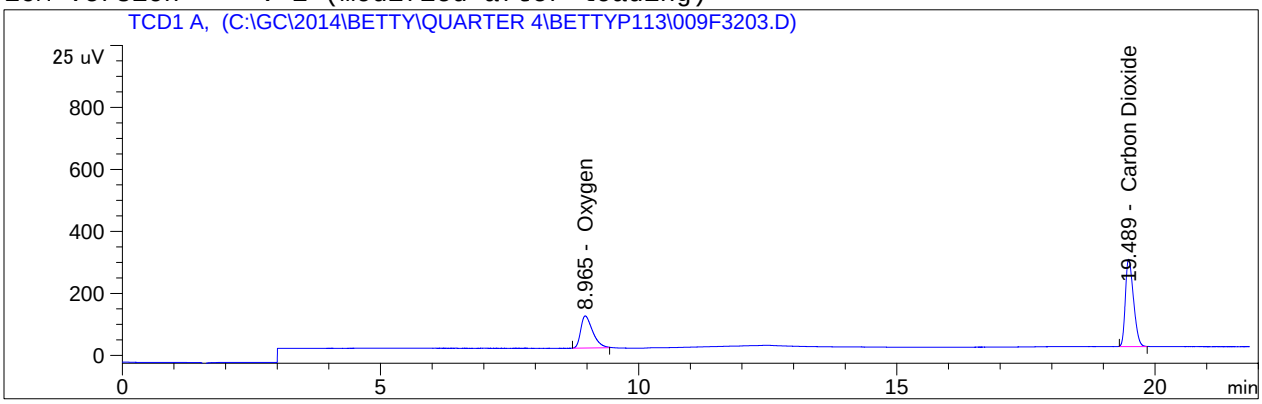

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\009F3203.D
Sample Name: BettyP070 #FG3 ENV(1=374.56,2=391.17)

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  32
Acq. Instrument : Betty                          Location : Vial 9
Injection Date  : 12/24/2014 6:11:21 PM               Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:48:43 AM by Thorne Gregory
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:48:41 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -          -          -         Hydrogen
  8.965 BB     1654.25085 2.98446e-3    4.93704    Oxygen
 10.100            -          -          -         Nitrogen
 12.646            -          -          -         Carbon monoxide
 16.456            -          -          -         Methane
 19.489 BB     3079.82153 1.58861e-3    4.89263    Carbon Dioxide

Totals :                                 9.82967

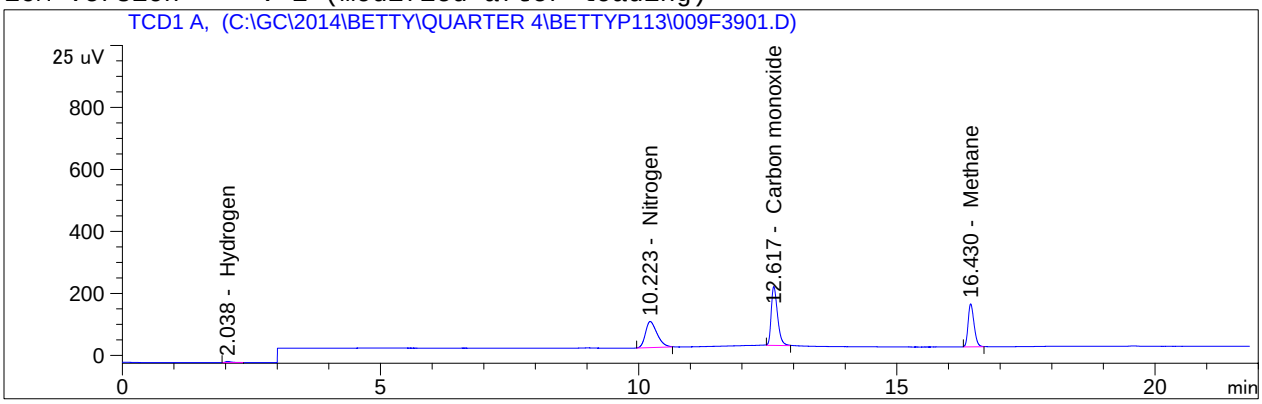

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\009F3901.D
Sample Name: BettyP070 #FG7 ENV(1=530,3=319.08)

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  39
Acq. Instrument : Betty                          Location : Vial 9
Injection Date  : 12/25/2014 9:23:38 PM               Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113 1\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:48:43 AM by Thorne Gregory
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:48:41 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.038 BB       29.33780 9.52544e-2    2.79455    Hydrogen
  8.900            -          -          -         Oxygen
 10.223 BB     1315.93335 2.72334e-3    3.58373    Nitrogen
 12.617 BB     1616.57349 2.19852e-3    3.55406    Carbon monoxide
 16.430 BB     1103.27612 2.58894e-3    2.85631    Methane
 19.559            -          -          -         Carbon Dioxide

Totals :                                12.78866

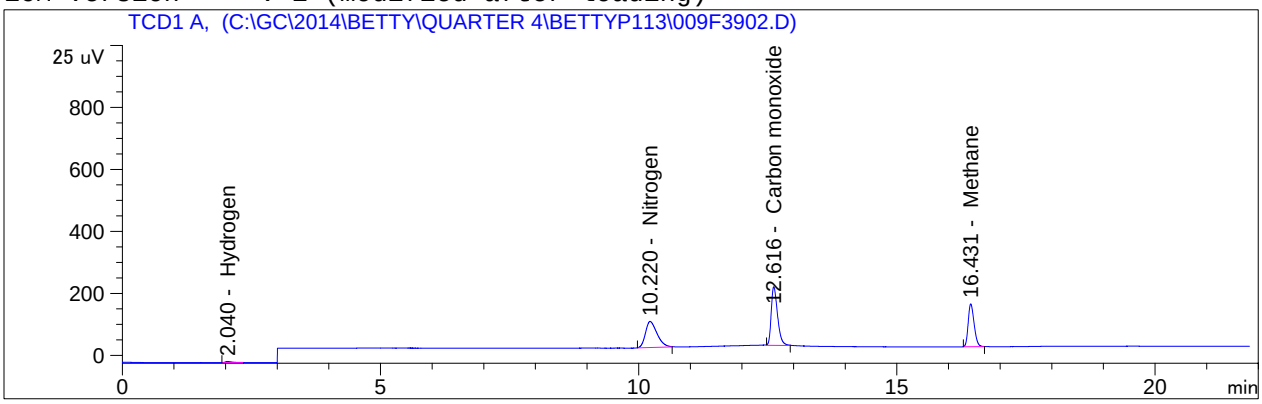

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\009F3902.D
Sample Name: BettyP070 #FG7 ENV(1=530,3=319.08)

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  39
Acq. Instrument : Betty                          Location : Vial 9
Injection Date  : 12/25/2014 9:54:04 PM               Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113 1\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:48:43 AM by Thorne Gregory
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:48:41 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.040 BB       29.24055 9.52586e-2    2.78541    Hydrogen
  8.900            -          -          -         Oxygen
 10.220 BB     1304.68384 2.72318e-3    3.55289    Nitrogen
 12.616 BB     1609.69226 2.19845e-3    3.53883    Carbon monoxide
 16.431 BB     1102.33508 2.58893e-3    2.85387    Methane
 19.559            -          -          -         Carbon Dioxide

Totals :                                12.73101

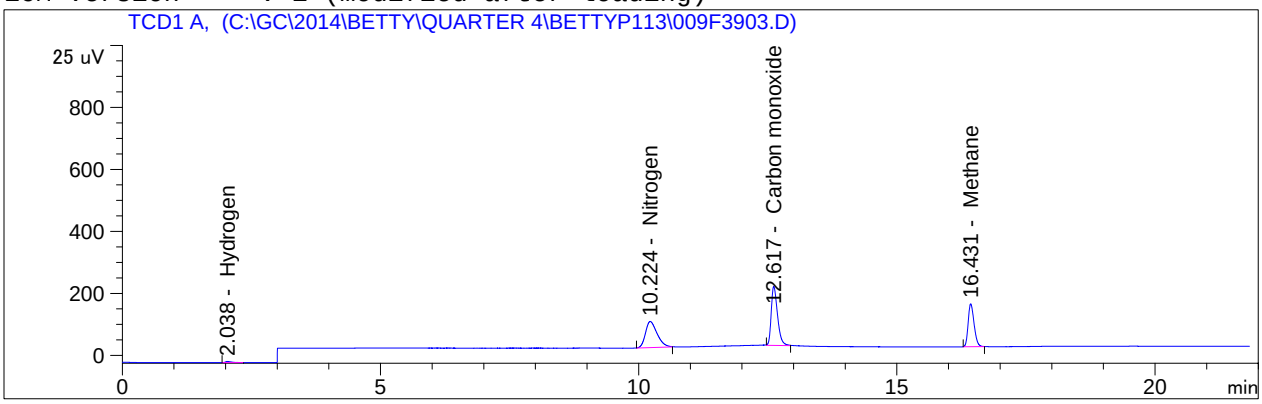

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\009F3903.D
Sample Name: BettyP070 #FG7 ENV(1=530,3=319.08)

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  39
Acq. Instrument : Betty                          Location : Vial 9
Injection Date  : 12/25/2014 10:24:27 PM              Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113 1\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:48:43 AM by Thorne Gregory
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:48:41 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.038 BB       29.44527 9.52498e-2    2.80466    Hydrogen
  8.900            -          -          -         Oxygen
 10.224 BB     1317.01343 2.72335e-3    3.58669    Nitrogen
 12.617 BB     1610.75708 2.19846e-3    3.54119    Carbon monoxide
 16.431 BB     1104.70227 2.58895e-3    2.86002    Methane
 19.559            -          -          -         Carbon Dioxide

Totals :                                12.79255

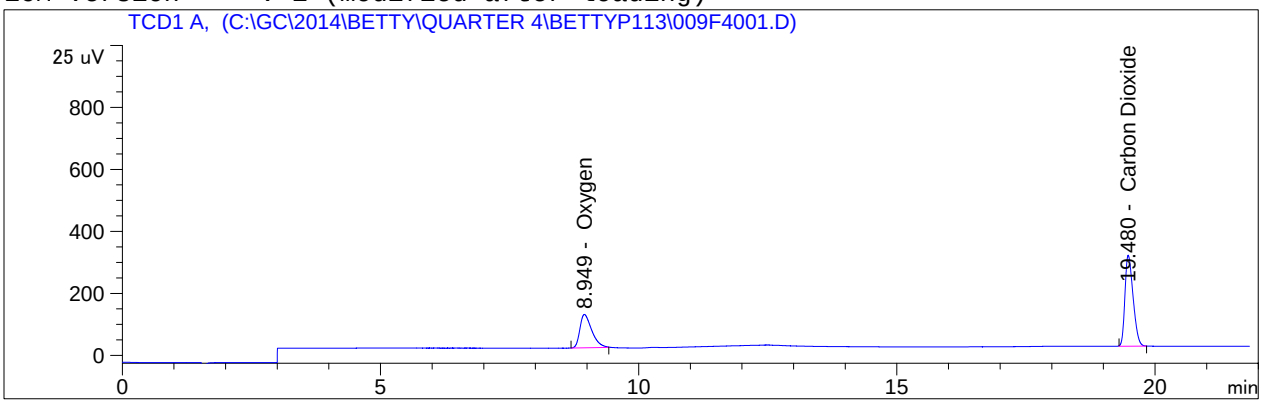

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\009F4001.D
Sample Name: BettyP070 #FG3 ENV(1=374.56,2=391.17)

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  40
Acq. Instrument : Betty                          Location : Vial 9
Injection Date  : 12/25/2014 10:54:48 PM              Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113 1\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:48:43 AM by Thorne Gregory
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:48:41 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -          -          -         Hydrogen
  8.949 BB     1724.42065 2.98522e-3    5.14778    Oxygen
 10.100            -          -          -         Nitrogen
 12.646            -          -          -         Carbon monoxide
 16.456            -          -          -         Methane
 19.480 BB     3204.15039 1.58905e-3    5.09154    Carbon Dioxide

Totals :                                10.23932

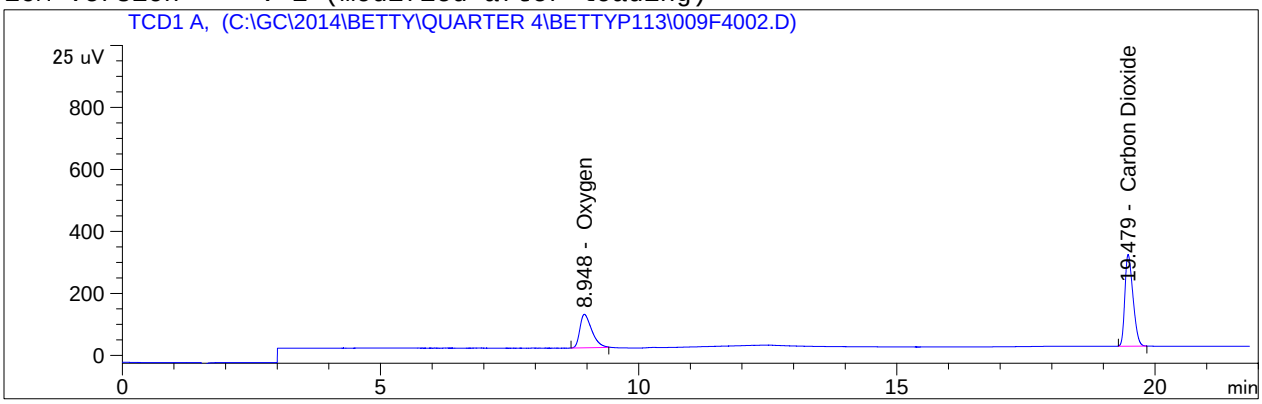

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\009F4002.D
Sample Name: BettyP070 #FG3 ENV(1=374.56,2=391.17)

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  40
Acq. Instrument : Betty                          Location : Vial 9
Injection Date  : 12/25/2014 11:25:11 PM               Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113 1\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:48:43 AM by Thorne Gregory
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:48:41 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -          -          -         Hydrogen
  8.948 BB     1734.33862 2.98533e-3    5.17757    Oxygen
 10.100            -          -          -         Nitrogen
 12.646            -          -          -         Carbon monoxide
 16.456            -          -          -         Methane
 19.479 BB     3219.38281 1.58910e-3    5.11591    Carbon Dioxide

Totals :                                10.29348

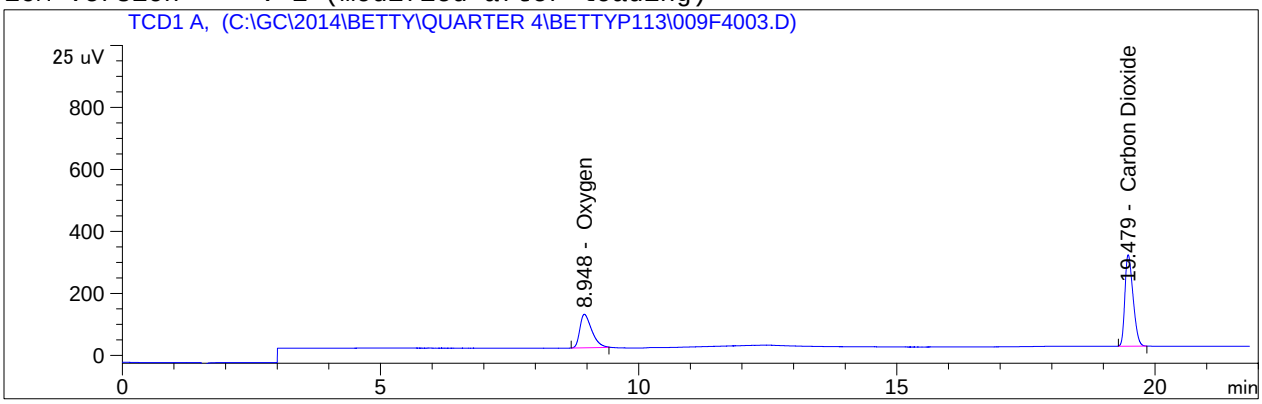

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113\009F4003.D
Sample Name: BettyP070 #FG3 ENV(1=374.56,2=391.17)

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  40
Acq. Instrument : Betty                          Location : Vial 9
Injection Date  : 12/25/2014 11:55:34 PM              Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113 1\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:48:43 AM by Thorne Gregory
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:48:41 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -          -          -         Hydrogen
  8.948 BB     1735.55872 2.98534e-3    5.18123    Oxygen
 10.100            -          -          -         Nitrogen
 12.646            -          -          -         Carbon monoxide
 16.456            -          -          -         Methane
 19.479 BB     3227.46802 1.58912e-3    5.12885    Carbon Dioxide

Totals :                                10.31008

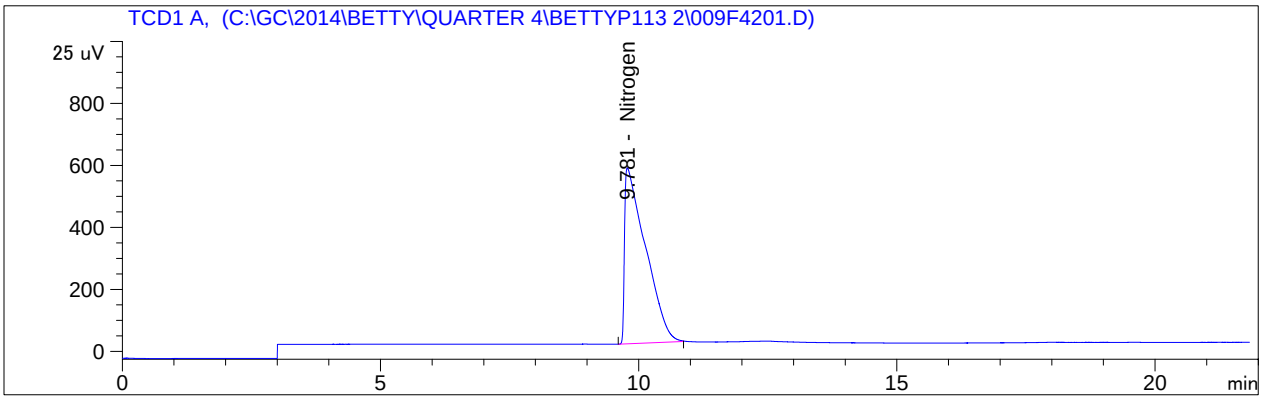

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113 2\009F4201.D
Sample Name: BettyP113 #N2-40 ENV(1=508.8,5=485)

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  42
Acq. Instrument : Betty                          Location : Vial 9
Injection Date  : 12/26/2014 9:55:53 AM               Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113 2\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:48:43 AM by Thorne Gregory
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113 2.SC.SSIzip
ECM Version     : 1
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:48:41 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -          -          -         Hydrogen
  8.900            -          -          -         Oxygen
  9.781 BB     1.59059e4  2.74012e-3   43.58413    Nitrogen
 12.646            -          -          -         Carbon monoxide
 16.456            -          -          -         Methane
 19.559            -          -          -         Carbon Dioxide

Totals :                               43.58413

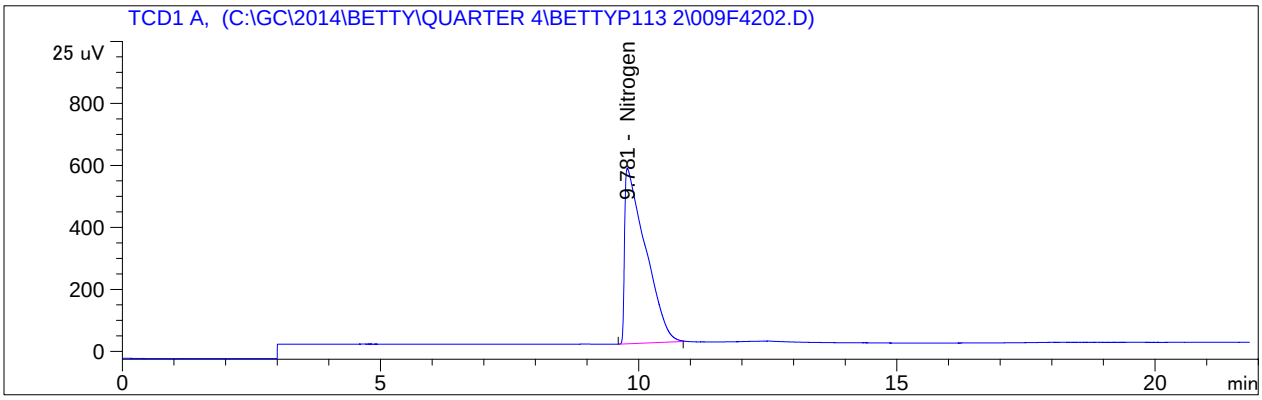

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113 2\009F4202.D
Sample Name: BettyP113 #N2-40 ENV(1=508.8,5=485)

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  42
Acq. Instrument : Betty                          Location : Vial 9
Injection Date  : 12/26/2014 10:26:30 AM               Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113 2\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:48:43 AM by Thorne Gregory
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113 2.SC.SSIzip
ECM Version     : 1
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:48:41 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount    Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -          -          -         Hydrogen
  8.900            -          -          -         Oxygen
  9.781 BB     1.57499e4  2.74010e-3   43.15626    Nitrogen
 12.646            -          -          -         Carbon monoxide
 16.456            -          -          -         Methane
 19.559            -          -          -         Carbon Dioxide

Totals :                               43.15626

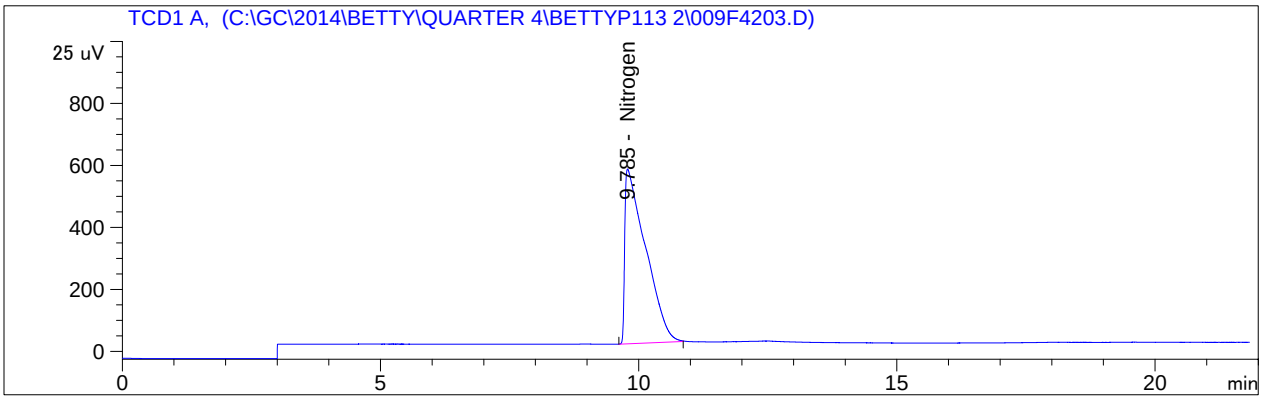

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2014\BETTY\QUARTER 4\BETTYP113 2\009F4203.D
Sample Name: BettyP113 #N2-40 ENV(1=508.8,5=485)

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  42
Acq. Instrument : Betty                          Location : Vial 9
Injection Date  : 12/26/2014 10:56:59 AM              Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\BETTY\QUARTER 4\BETTYP113 2\BETTYP017_CAL.M
Last changed    : 6/30/2014 5:46:14 PM by Thorne Gregory
Analysis Method : C:\GC\2014\BETTY\METHODS\BETTYP112_FGA_LIQN2.M
Last changed    : 12/26/2014 9:48:43 AM by Thorne Gregory
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Thorne Gregory
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP113 2.SC.SSIzip
ECM Version     : 1
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      12/26/2014 9:48:41 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  2.034            -          -          -         Hydrogen
  8.900            -          -          -         Oxygen
  9.785 BB     1.56865e4  2.74009e-3   42.98240    Nitrogen
 12.646            -          -          -         Carbon monoxide
 16.456            -          -          -         Methane
 19.559            -          -          -         Carbon Dioxide

Totals :                               42.98240


1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

method: C:\GC\2014\BETTY\METHODS\BETTYP017_CAL.M
Modified on: 6/30/2014 at 5:46:14 PM

==========

6890 GC METHOD

==========

OVEN
- Initial temp: -15 C (On)
- Initial time: 10.00 min
- Ramps:

#	Rate	Final temp	Final time
1	30.00	220	4.00
2	0 (Off)		

- Post temp: 40 C
- Post time: 0.00 min
- Run time: 21.83 min
- Maximum temp: 250 C
- Equilibration time: 0.50 min

CRYO (N2)
- Cryo: On
- Cryo fault: On
- Cryo timeout: 40.00 min (On)
- Quick cryo cool: Off
- Ambient temp: 30 C

FRONT INLET (SPLIT/SPLITLESS)
- Mode: Splitless
- Initial temp: 200 C (On)
- Pressure: 58.0 psi (On)
- Purge flow: 0.0 mL/min
- Purge time: 0.00 min
- Total flow: 12.3 mL/min
- Gas saver: Off
- Gas type: Helium

BACK INLET (SPLIT/SPLITLESS)
- Mode: Split
- Initial temp: 200 C (On)
- Pressure: 9.0 psi (On)
- Split ratio: 5:1
- Split flow: 12.3 mL/min
- Total flow: 17.6 mL/min
- Gas saver: Off
- Gas type: Helium

COLUMN 1
- Packed Column
- Model Number: 19808
- Description: Rt-ShinCarbon 2m x 1mm I
- Max temperature: 250 C
- Mode: constant pressure
- Pressure: 58.0 psi
- Inlet: Front Inlet
- Outlet: Front Detector
- Outlet pressure: ambient

COLUMN 2
- Capillary Column
- Model Number: 10198
- Description: Rtx-1 30m x 0.32mm x 4um
- Max temperature: 250 C
- Nominal length: 30.0 m
- Nominal diameter: 320.00 um
- Nominal film thickness: 4.00 um
- Mode: constant flow
- Initial flow: 2.5 mL/min
- Nominal init pressure: 9.0 psi
- Average velocity: 35 cm/sec
- Inlet: Back Inlet
- Outlet: (other)
- Outlet pressure: ambient

FRONT DETECTOR (TCD)
- Temperature: 275 C (On)
- Reference flow: 20.0 mL/min (On)
- Mode: Constant makeup flow
- Makeup flow: 10.0 mL/min (On)
- Makeup Gas Type: Helium
- Filament: On
- Negative polarity: On

BACK DETECTOR (FID)
- Temperature: 250 C (On)
- Hydrogen flow: 60.0 mL/min (On)
- Air flow: 450.0 mL/min (On)
- Mode: Constant makeup flow
- Makeup flow: 40.0 mL/min (On)
- Makeup Gas Type: Nitrogen
- Flame: On
- Electrometer: On
- Lit offset: 2.0

SIGNAL 1
- Data rate: 20 Hz
- Type: front detector
- Save Data: On

SIGNAL 2
- Data rate: 20 Hz
- Type: back detector
- Save Data: On

THERMAL AUX 1
- Use: Valve Box Heater
- Initial temp: 130 C (On)

VALVES
- Valve 1 Gas Sampling
  - Loop Volume: 0.250 mL

POST RUN
- Post Time: 0.00 min

method: C:\GC\2014\BETTY\METHODS\BETTYP017_CAL.M
Modified on: 6/30/2014 at 5:46:14 PM
Load Time: 0.10 min
Inject Time: 0.50 min
Inlet: Front Inlet
Valve 2 Gas Sampling
Loop Volume: 0.250 mL
Load Time: 0.10 min
Inject Time: 0.50 min
Inlet: Front Inlet

TIME TABLE

Time(min)	Parameter & Setpoint	
3.00	Front Detector Polarity:	Off

CUSTOMGAS
SOLUTIONS

1750 East Club Boulevard
Durham, NC 27704
Phone: (919) 220-2570
Fax: (919) 220-4540

Certificate of Analysis

Customer:

Enthalpy Analytical, Inc. .
800-1 Capitola Drive
Durham, NC 27713

Tel: (919) 595-1377

Cylinder Number: By Lot
Cylinder Size/CGA: LB/180
Fill Pressure: 1465 PSIA
Gas Volume: 44 liters
Date of Mfg: 02/25/13
Expiration Date: 02/25/15

Customer Number	Ship VIA	Job No.	Customer PO	Mixture Type
00127703NC	Pick up	022213-010	02041302	Pure

Component	Nominal Concentration	Actual Concentration*	Grade
Carbon Monoxide	99.5 %	> 99.5 %	CP Grade
Impurities		< 0.5 %	

Authorized Signature:

Joseph A. Ernst

*Every effort has been made to establish the actual concentration of the components using master gas blending technology however, Custom Gas Solutions shall have no liability in excess of the established charge for this material.

SIGMA-ALDRICH®
sigma-aldrich.com
3050 Spruce Street, Saint Louis, MO 63103, USA
Website: www.sigmaaldrich.com
Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

Certificate of Analysis

Product Name:
Carbon dioxide – ≥99.8%

Product Number:	**295108**
Lot Number:	**MKBK0775V**
Brand:	ALDRICH
CAS Number:	124-38-9
Formula:	CO2
Formula Weight:	44.01 g/mol
Quality Release Date:	28 FEB 2012

CO_2

Test	Specification	Result
Vendor Information Guaranteed Purity Of 99.80% (Minimum) By Supplier	Conforms	Conforms

Jamie Gleason

Jamie Gleason, Manager
Quality Control
Milwaukee, Wisconsin US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

SIGMA-ALDRICH®
sigma-aldrich.com
3050 Spruce Street,Saint Louis,MO 63103,USA
Website: www.sigmaaldrich.com
Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

Certificate of Analysis

Product Name:
Methane – ≥99.0%

CH_4

Product Number:	**295477**
Lot Number:	**MKBH2512V**
Brand:	ALDRICH
CAS Number:	74-82-8
Formula:	CH4
Formula Weight:	16.04 g/mol
Quality Release Date:	23 MAY 2011

Test	Specification	Result
Vendor Information Guaranteed Purity Of 99.00% (Minimum) By Supplier	Conforms	Conforms

Jamie Gleason, Manager
Quality Control
Milwaukee, Wisconsin US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.

CUSTOMGAS
SOLUTIONS

1750 East Club Boulevard
Durham, NC 27704
Phone: (919) 220-2570
Fax: (919) 220-4540

Certificate of Analysis

Customer:

Enthalpy Analytical, Inc.
800-1 Capitola Drive
Durham, NC 27713

Tel: (919) 595-1377

Cylinder Number: XC010510B
Cylinder Size/CGA: 150/590
Fill Pressure: 2015 PSIA
Gas Volume:3700 liters
Date of Mfg: 02/04/14
Expiration Date: 02/04/16

Customer Number	Ship VIA	Job No.	Customer PO	Mixture Type
00127703NC	Pick up	011614-004	01151401	Gravimetric

Component	Nominal Concentration	Actual Concentration*	Mixture Type
Oxygen	10 %	10.01 % +/- 0.2 %	Gravimetric Master Gas
Carbon Dioxide	10 %	10.01 % +/- 0.2 %	
Helium	balance	balance	

NOTES:

Blend Tolerance: +/- 2 %

Analytical Tolerance: +/- 2 %

Traceability: NIST by weight set. NIST Traceability No MT5061.
Internal Standards by analysis

Reactive Mixtures: Analyzed twice with required agreement between analyses of 2%.
Required wait time between analyses of >7 days.

Caution: Do not use below 150 PSIG.

Authorized Signature:

Joseph A. Ernst

*Every effort has been made to establish the actual concentration of the components using master gas blending technology however, Custom Gas Solutions shall have no liability in excess of the established charge for this material.

AIR LIQUIDE Air Liquide America Specialty Gases LLC Scott™

CERTIFIED MASTER CLASS

Single-Certified Calibration Standard

6141 EASTON ROAD, BLDG 1, PLUMSTEADVILLE, PA 18949-0310 Phone: 800-331-4953 Fax: 215-766-7226

CERTIFICATE OF ACCURACY: Certified Master Class Calibration Standard

Product Information
Document # : 46221952-001
Item No.: MC500418-P-44
P.O. No.: 05041203

Cylinder Number: 1A023738
Cylinder Size: 44
Certification Date: 29May2012
Expiration Date: 29May2014
Lot Number: PLU0105816

Customer

ENTHALPY ANAYTICAL, INC.
05041203
800 CAPITOLA RD
DURHAM, NC 27703
US

CERTIFIED CONCENTRATION

Component Name	Concentration (Moles)		Accuracy (+/-%)
CARBON MONOXIDE	10.0	%	2
NITROGEN	10.1	%	2
METHANE	8.0	%	2
HYDROGEN	8.1	%	2
HELIUM		BALANCE	

TRACEABILITY

Traceable To

Scott Reference Standard

APPROVED BY: _____
GLENN GUNN

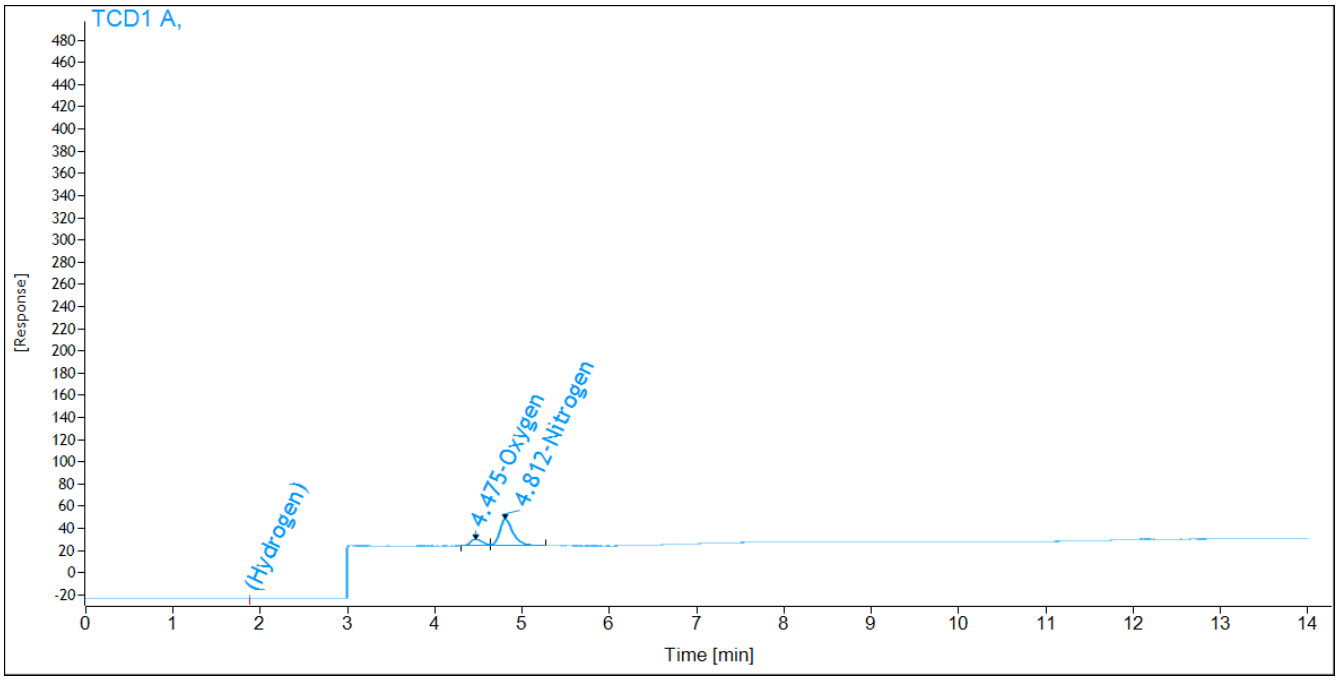
DATE: 5/29/2012

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2015\BETTY\QUARTER 1\BETTYP122A\007F0801.D
Sample name: 1214-29.1186.Can
File_Location \GC\2014\Betty\Quarter 4
Injection date: 1/8/2015 5:45:23 PM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP119_FGA.M
Last changed: 1/6/2015 8:27:05 AM
Instrument: Betty
Sequence_Name BETTYP122A
Acq. operator: Turner Oppy

Sample type: Sample
Location: Vial 7
Injection volume: 250.000
Injection: 1 of 2
File_Version 3



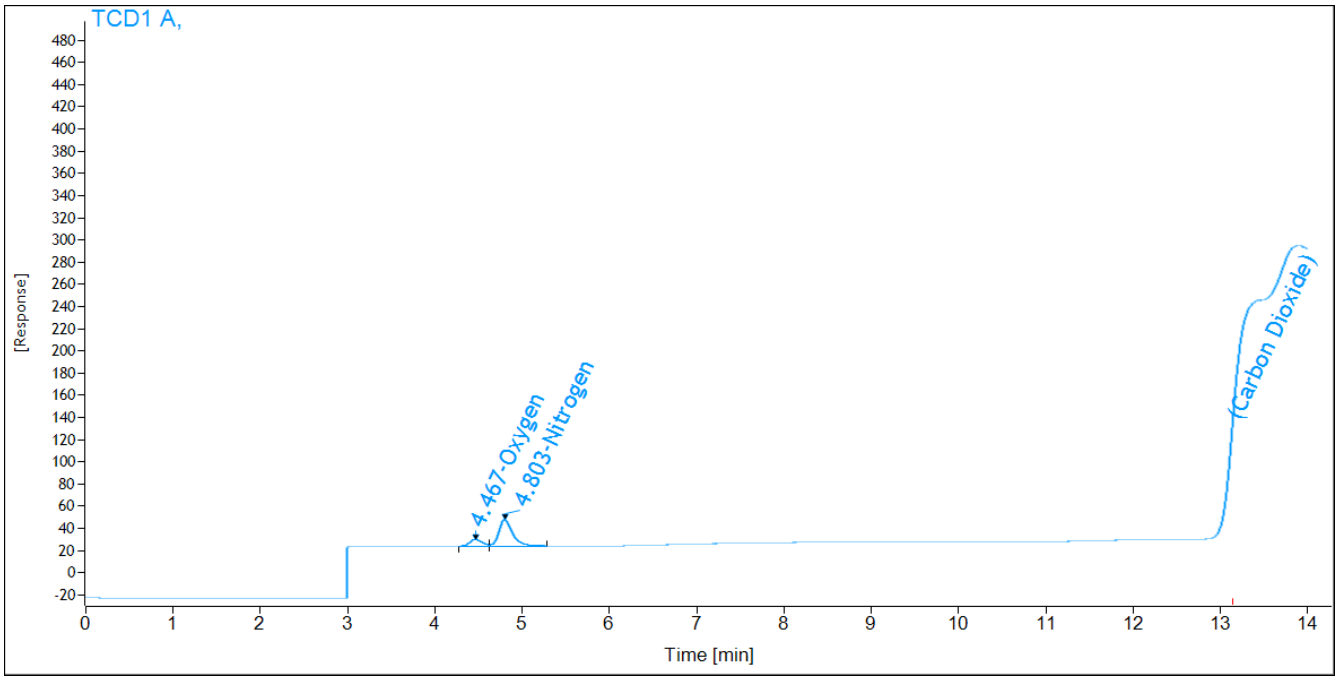
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BV	4.47	59.0196	1	0.18	0.182	%
Nitrogen	VB	4.81	258.3999	1	0.65	0.654	%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide				1	0.00		%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2015\BETTY\QUARTER 1\BETTYP122A\007F0802.D
Sample name: 1214-29.1186.Can
File_Location \GC\2014\Betty\Quarter 4
Injection date: 1/8/2015 6:05:57 PM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP119_FGA.M
Last changed: 1/6/2015 8:27:05 AM
Instrument: Betty
Sequence_Name BETTYP122A
Acq. operator: Turner Oppy

Sample type: Sample
Location: Vial 7
Injection volume: 250.000
Injection: 2 of 2
File_Version 3



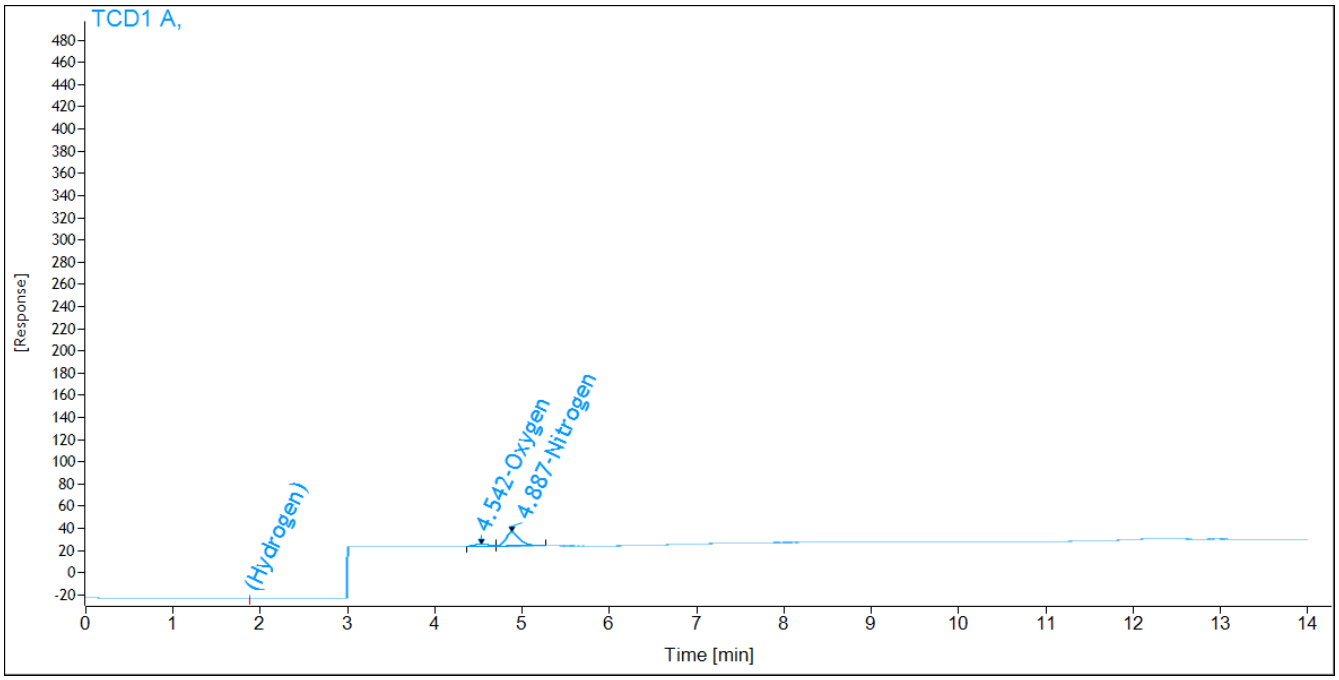
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BV	4.47	57.7460	1	0.18	0.178	%
Nitrogen	VB	4.80	258.6545	1	0.65	0.654	%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide				1	0.00		%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2015\BETTY\QUARTER 1\BETTYP123A\014F0601.D
Sample name: 1214-29.1310.Can
File_Location \GC\2014\Betty\Quarter 4
Injection date: 1/9/2015 5:27:27 PM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP119_FGA.M
Last changed: 1/6/2015 8:27:05 AM
Instrument: Betty
Sequence_Name BETTYP123A
Acq. operator: Justin Guenzler

Sample type: Sample
Location: Vial 14
Injection volume: 250.000
Injection: 1 of 2
File_Version 2



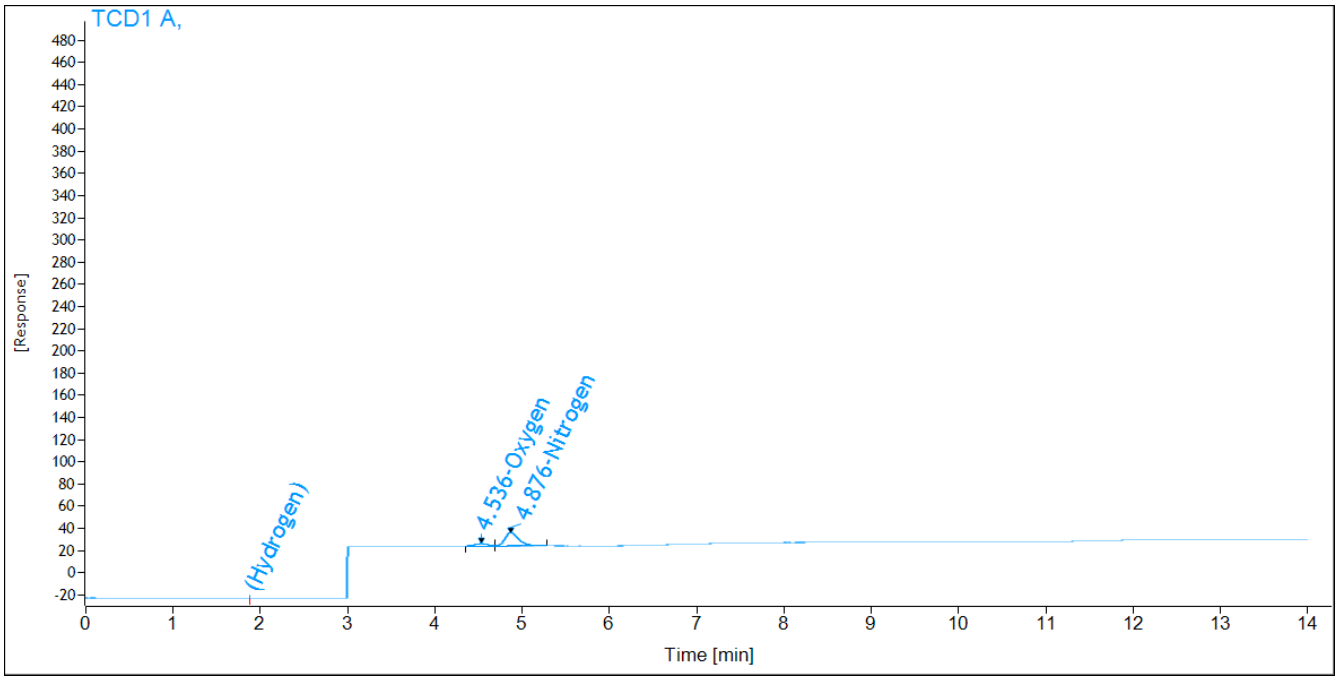
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BV	4.54	19.4873	1	0.06	0.060	%
Nitrogen	VB	4.89	133.2088	1	0.32	0.318	%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide				1	0.00		%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2015\BETTY\QUARTER 1\BETTYP123A\014F0602.D
Sample name: 1214-29.1310.Can
File_Location \GC\2014\Betty\Quarter 4
Injection date: 1/9/2015 5:48:12 PM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP119_FGA.M
Last changed: 1/6/2015 8:27:05 AM
Instrument: Betty
Sequence_Name BETTYP123A
Acq. operator: Justin Guenzler

Sample type: Sample
Location: Vial 14
Injection volume: 250.000
Injection: 2 of 2
File_Version 2



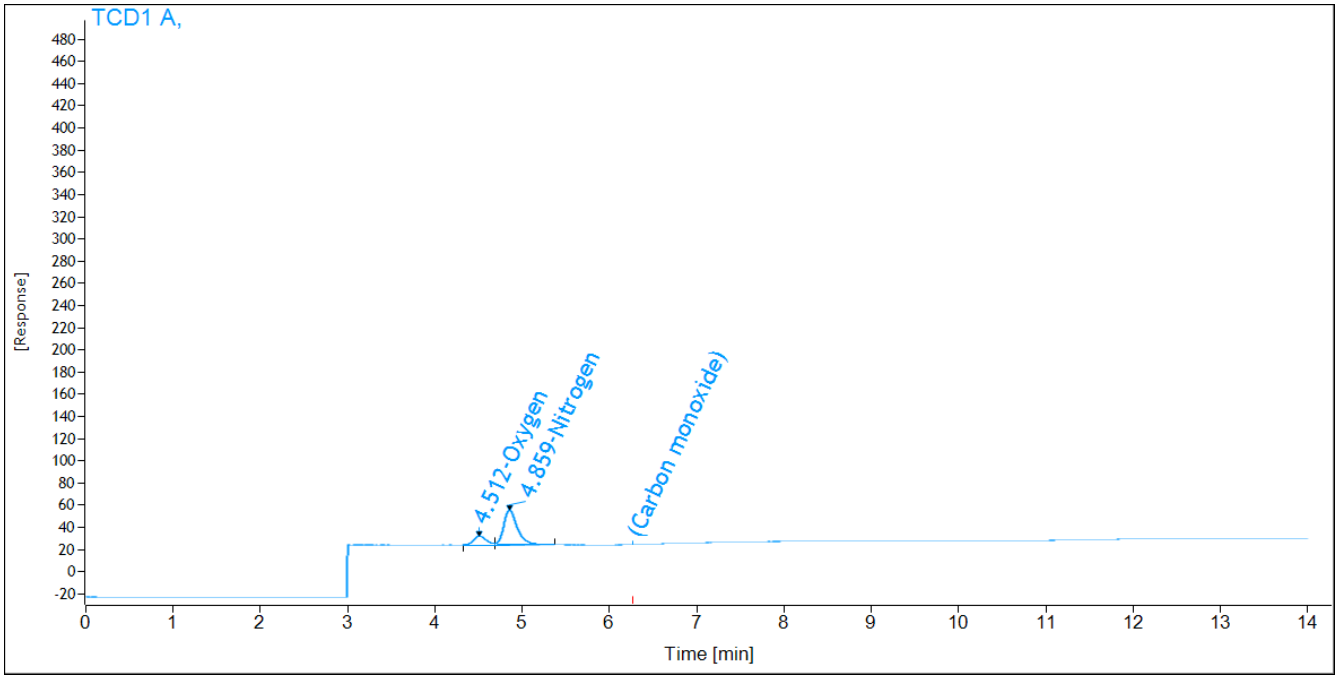
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BV	4.54	20.8661	1	0.06	0.064	%
Nitrogen	VB	4.88	132.9620	1	0.32	0.317	%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide				1	0.00		%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2015\BETTY\QUARTER 1\BETTYP122A\005F0601.D
Sample name: 1214-29.1044.Can
File_Location \GC\2014\Betty\Quarter 4
Injection date: 1/8/2015 4:22:53 PM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP119_FGA.M
Last changed: 1/6/2015 8:27:05 AM
Instrument: Betty
Sequence_Name BETTYP122A
Acq. operator: Justin Guenzler

Sample type: Sample
Location: Vial 5
Injection volume: 250.000
Injection: 1 of 2
File_Version 3



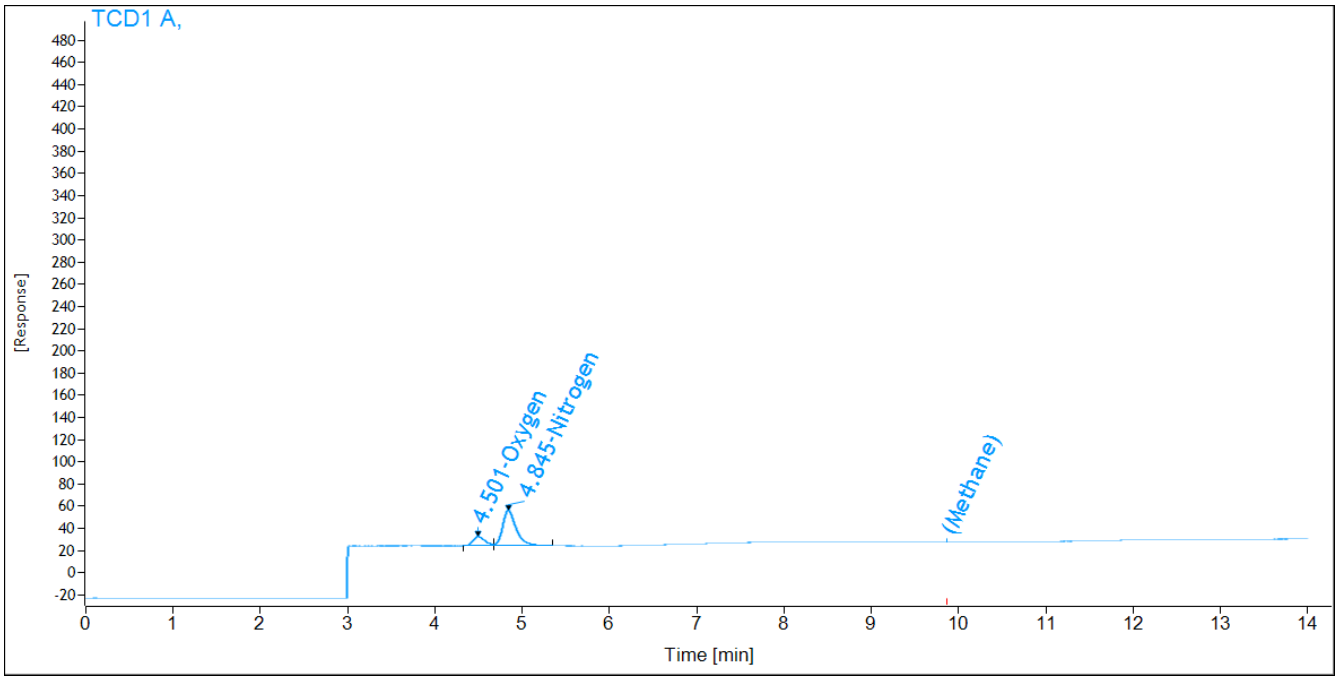
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BV	4.51	80.4472	1	0.25	0.248	%
Nitrogen	VB	4.86	343.4485	1	0.89	0.889	%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide				1	0.00		%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2015\BETTY\QUARTER 1\BETTYP122A\005F0602.D
Sample name: 1214-29.1044.Can
File_Location \GC\2014\Betty\Quarter 4
Injection date: 1/8/2015 4:43:32 PM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP119_FGA.M
Last changed: 1/6/2015 8:27:05 AM
Instrument: Betty
Sequence_Name BETTYP122A
Acq. operator: Justin Guenzler

Sample type: Sample
Location: Vial 5
Injection volume: 250.000
Injection: 2 of 2
File_Version 3



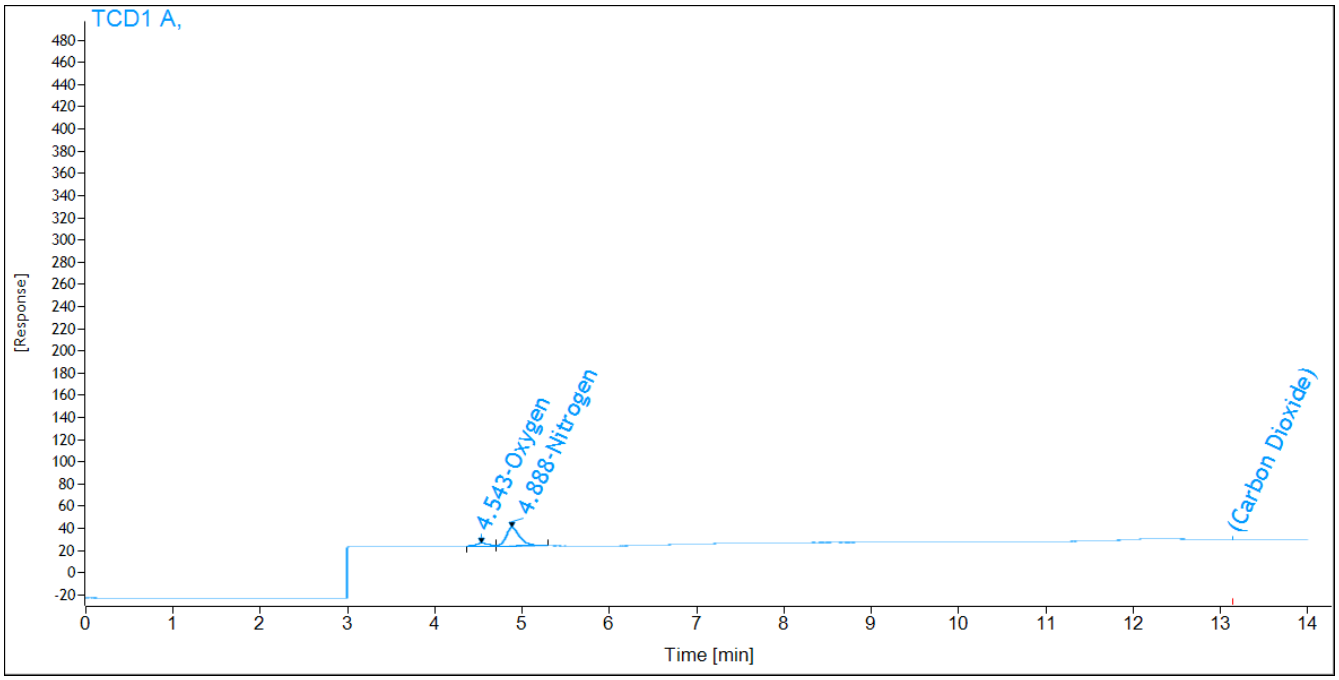
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BV	4.50	81.1525	1	0.25	0.250	%
Nitrogen	VB	4.85	348.0290	1	0.90	0.901	%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide				1	0.00		%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2015\BETTY\QUARTER 1\BETTYP123A\012F0901.D
Sample name: 1214-29.1340.Can
File_Location \GC\2014\Betty\Quarter 4
Injection date: 1/9/2015 7:00:20 PM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP119_FGA.M
Last changed: 1/6/2015 8:27:05 AM
Instrument: Betty
Sequence_Name BETTYP123A
Acq. operator: Justin Guenzler

Sample type: Sample
Location: Vial 12
Injection volume: 250.000
Injection: 1 of 2
File_Version 2



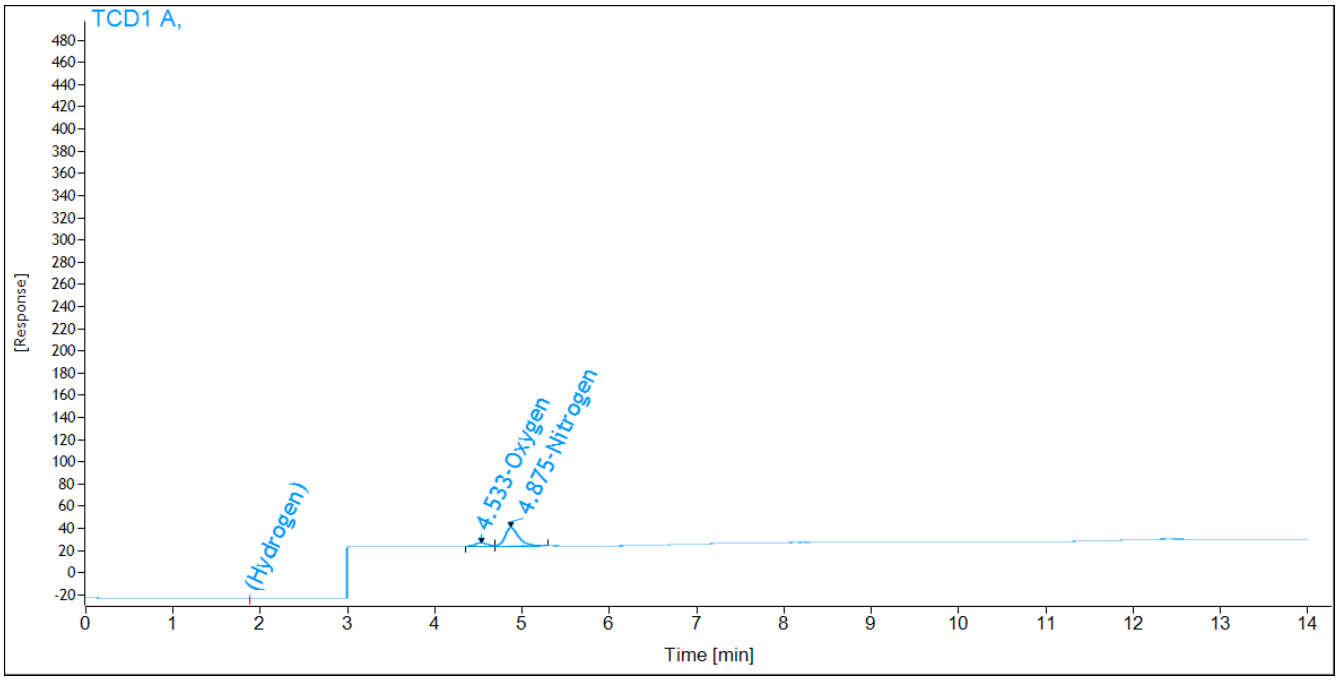
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BV	4.54	24.4363	1	0.08	0.075	%
Nitrogen	VB	4.89	178.7747	1	0.43	0.434	%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide				1	0.00		%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2015\BETTY\QUARTER 1\BETTYP123A\012F0902.D
Sample name: 1214-29.1340.Can
File_Location \GC\2014\Betty\Quarter 4
Injection date: 1/9/2015 7:20:58 PM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP119_FGA.M
Last changed: 1/6/2015 8:27:05 AM
Instrument: Betty
Sequence_Name BETTYP123A
Acq. operator: Justin Guenzler

Sample type: Sample
Location: Vial 12
Injection volume: 250.000
Injection: 2 of 2
File_Version 2



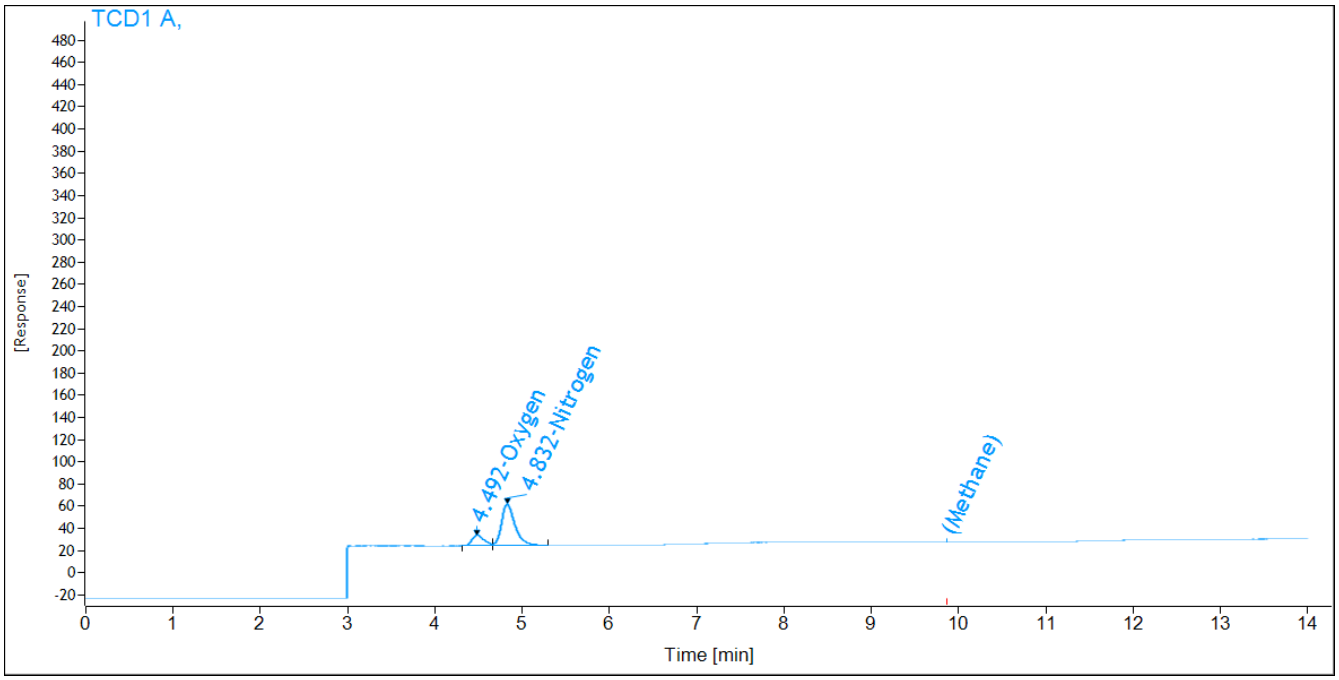
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BV	4.53	26.0793	1	0.08	0.080	%
Nitrogen	VB	4.88	179.4295	1	0.44	0.435	%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide				1	0.00		%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2015\BETTY\QUARTER 1\BETTYP122A\006F0701.D
Sample name: 1214-29.1049.Can
File_Location \GC\2014\Betty\Quarter 4
Injection date: 1/8/2015 5:04:08 PM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP119_FGA.M
Last changed: 1/6/2015 8:27:05 AM
Instrument: Betty
Sequence_Name BETTYP122A
Acq. operator: Turner Oppy

Sample type: Sample
Location: Vial 6
Injection volume: 250.000
Injection: 1 of 2
File_Version 3



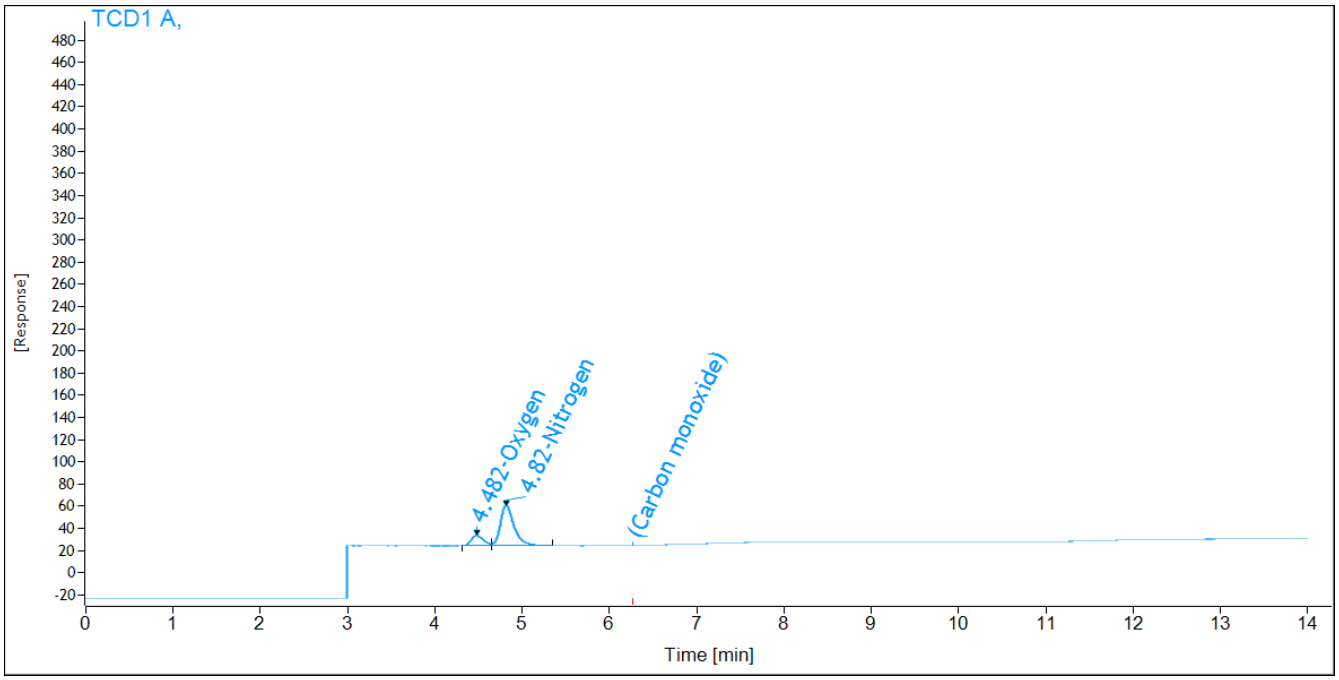
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BV	4.49	93.7329	1	0.29	0.289	%
Nitrogen	VB	4.83	408.5997	1	1.07	1.069	%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide				1	0.00		%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2015\BETTY\QUARTER 1\BETTYP122A\006F0702.D
Sample name: 1214-29.1049.Can
File_Location \GC\2014\Betty\Quarter 4
Injection date: 1/8/2015 5:24:40 PM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP119_FGA.M
Last changed: 1/6/2015 8:27:05 AM
Instrument: Betty
Sequence_Name BETTYP122A
Acq. operator: Turner Oppy

Sample type: Sample
Location: Vial 6
Injection volume: 250.000
Injection: 2 of 2
File_Version 3



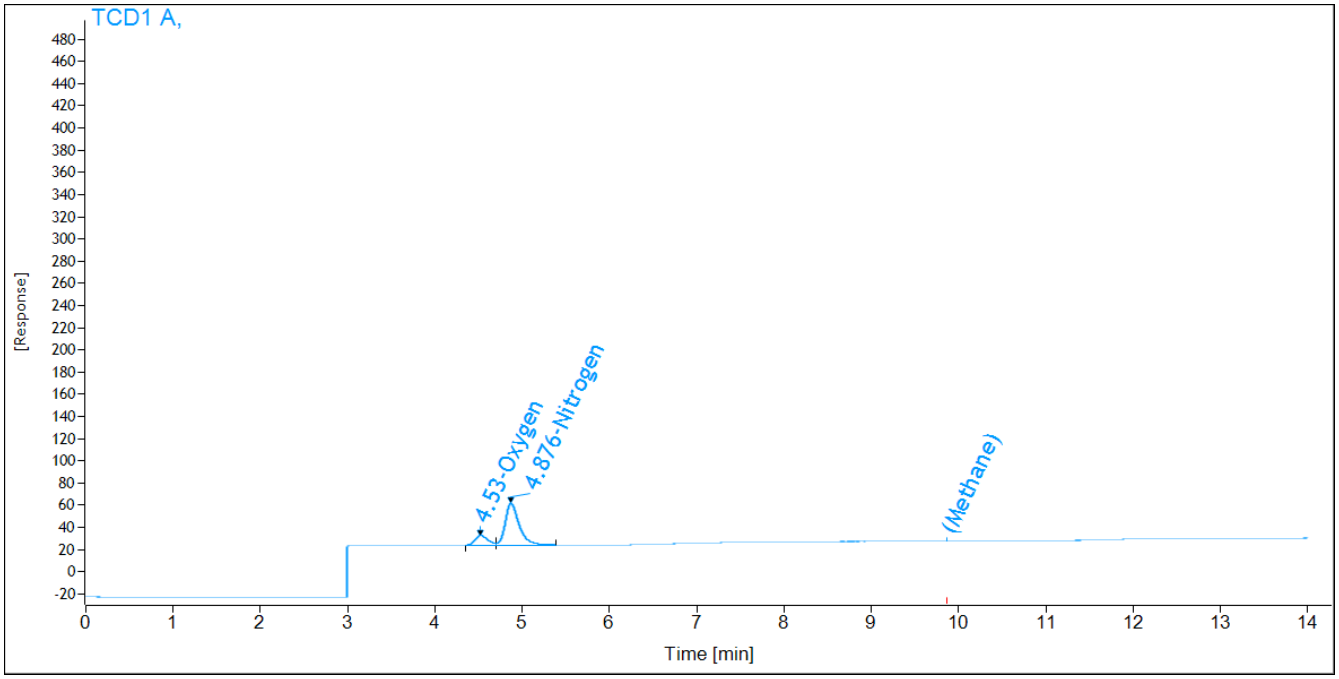
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BV	4.48	91.3753	1	0.28	0.282	%
Nitrogen	VB	4.82	399.1382	1	1.04	1.043	%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide				1	0.00		%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2015\BETTY\QUARTER 1\BETTYP123\007F0401.D
Sample name: 1214-29.1334.Can
File_Location \GC\2014\Betty\Quarter 4
Injection date: 1/9/2015 10:27:06 AM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP119_FGA.M
Last changed: 1/6/2015 8:27:05 AM
Instrument: Betty
Sequence_Name BETTYP123
Acq. operator: Justin Guenzler

Sample type: Sample
Location: Vial 7
Injection volume: 250.000
Injection: 1 of 2
File_Version 3



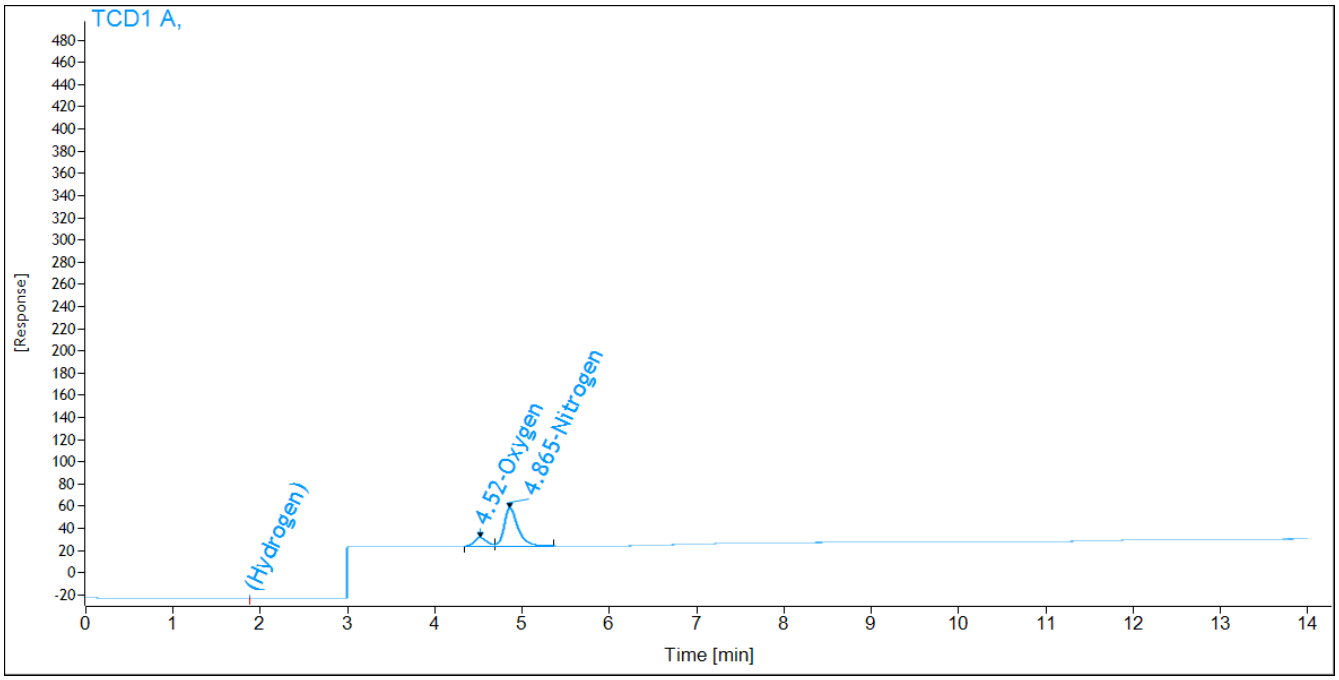
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BV	4.53	85.1161	1	0.26	0.263	%
Nitrogen	VB	4.88	416.6942	1	1.09	1.091	%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide				1	0.00		%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2015\BETTY\QUARTER 1\BETTYP123\007F0402.D
Sample name: 1214-29.1334.Can
File_Location \GC\2014\Betty\Quarter 4
Injection date: 1/9/2015 10:47:46 AM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP119_FGA.M
Last changed: 1/6/2015 8:27:05 AM
Instrument: Betty
Sequence_Name BETTYP123
Acq. operator: Justin Guenzler

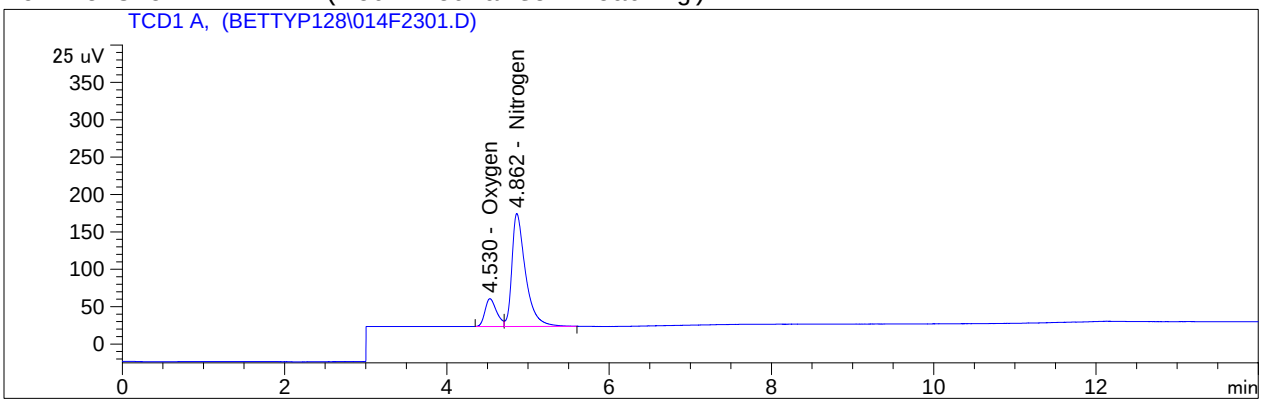
Sample type: Sample
Location: Vial 7
Injection volume: 250.000
Injection: 2 of 2
File_Version 3



Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BV	4.52	77.3486	1	0.24	0.239	%
Nitrogen	VB	4.86	379.3521	1	0.99	0.988	%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide				1	0.00		%

Data File C:\GC\2015\BETTY\QUARTER 1\BETTYP128\014F2301.D
Sample Name: 1214-29.1324 P2.Can

```
==========================================================================
Acq. Operator   : Justin Guenzler               Seq. Line :  23
Acq. Instrument : Betty                          Location : Vial 14
Injection Date  : 1/19/2015 3:43:56 PM                Inj :   1
                                                Inj Volume : 250 µl
Acq. Method     : C:\GC\2015\BETTY\QUARTER 1\BETTYP128\GC142P133_CAL.M
Last changed    : 9/5/2014 7:29:19 AM by disconnected
Analysis Method : C:\GC\2015\BETTY\METHODS\BETTYP126_FGA.M
Last changed    : 1/15/2015 9:52:29 AM by Justin Guenzler
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP128.SC.SSIzip
ECM Version     : 4 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, January 15, 2015 8:48:52 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  1.881            -          -          -         Hydrogen
  4.530 BV      369.39386 3.53500e-3    1.30581    Oxygen
  4.862 VB     1757.95752 2.72932e-3    4.79804    Nitrogen
  6.276            -          -          -         Carbon monoxide
  9.875            -          -          -         Methane
 13.164            -          -          -         Carbon Dioxide

Totals :                                 6.10384

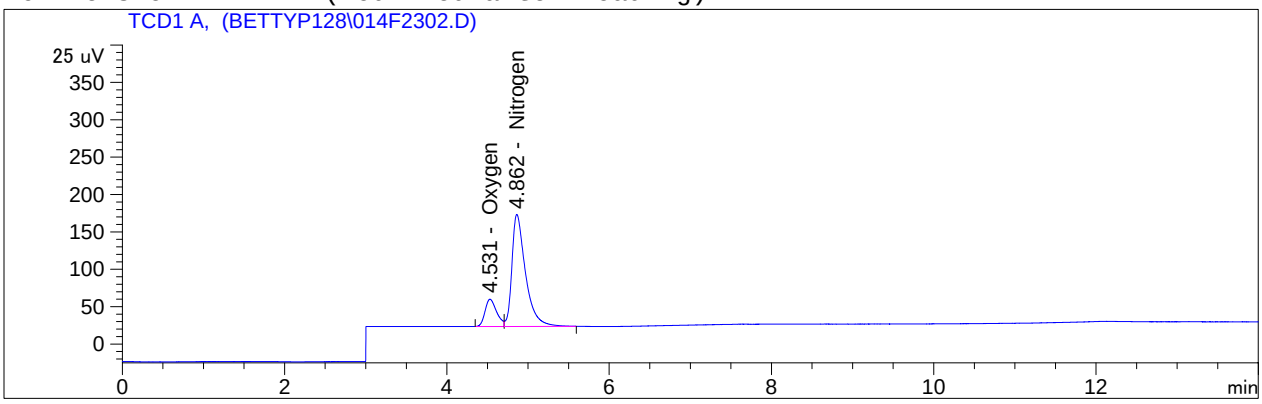

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2015\BETTY\QUARTER 1\BETTYP128\014F2302.D
Sample Name: 1214-29.1324 P2.Can

```
==========================================================================
Acq. Operator   : Justin Guenzler               Seq. Line :  23
Acq. Instrument : Betty                          Location : Vial 14
Injection Date  : 1/19/2015 4:20:02 PM                Inj :   2
                                                Inj Volume : 250 µl
Acq. Method     : C:\GC\2015\BETTY\QUARTER 1\BETTYP128\GC142P133_CAL.M
Last changed    : 9/5/2014 7:29:19 AM by disconnected
Analysis Method : C:\GC\2015\BETTY\METHODS\BETTYP126_FGA.M
Last changed    : 1/15/2015 9:52:29 AM by Justin Guenzler
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP128.SC.SSIzip
ECM Version     : 4 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, January 15, 2015 8:48:52 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  1.881            -          -          -         Hydrogen
  4.531 BV      361.33755 3.53616e-3    1.27775    Oxygen
  4.862 VB     1743.47546 2.72904e-3    4.75801    Nitrogen
  6.276            -          -          -         Carbon monoxide
  9.875            -          -          -         Methane
 13.164            -          -          -         Carbon Dioxide

Totals :                                 6.03576

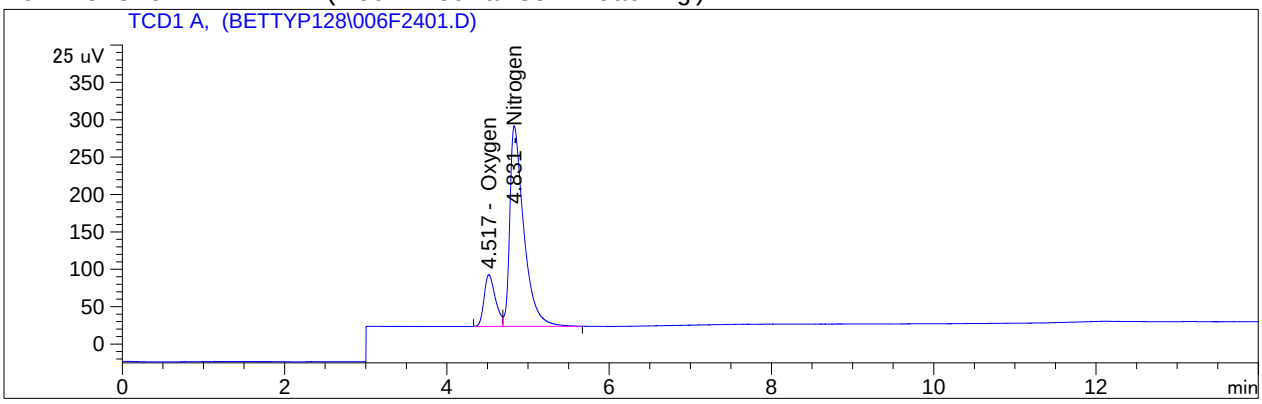

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2015\BETTY\QUARTER 1\BETTYP128\006F2401.D
Sample Name: 1214-29.1453 P2.Can

```
==========================================================================
Acq. Operator   : Justin Guenzler               Seq. Line :  24
Acq. Instrument : Betty                          Location : Vial 6
Injection Date  : 1/19/2015 4:40:57 PM                Inj :   1
                                                Inj Volume : 250 µl
Acq. Method     : C:\GC\2015\BETTY\QUARTER 1\BETTYP128\GC142P133_CAL.M
Last changed    : 9/5/2014 7:29:19 AM by disconnected
Analysis Method : C:\GC\2015\BETTY\METHODS\BETTYP126_FGA.M
Last changed    : 1/15/2015 9:52:29 AM by Justin Guenzler
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP128.SC.SSIzip
ECM Version     : 4 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, January 15, 2015 8:48:52 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,
```

RetTime [min]	Type	Area [25 uV*s]	Amt/Area	Amount [%]	Grp	Name
1.881		-	-	-		Hydrogen
4.517	BV	668.42957	3.51171e-3	2.34733		Oxygen
4.831	VB	3212.33374	2.74490e-3	8.81752		Nitrogen
6.276		-	-	-		Carbon monoxide
9.875		-	-	-		Methane
13.164		-	-	-		Carbon Dioxide

```
Totals :                                11.16486

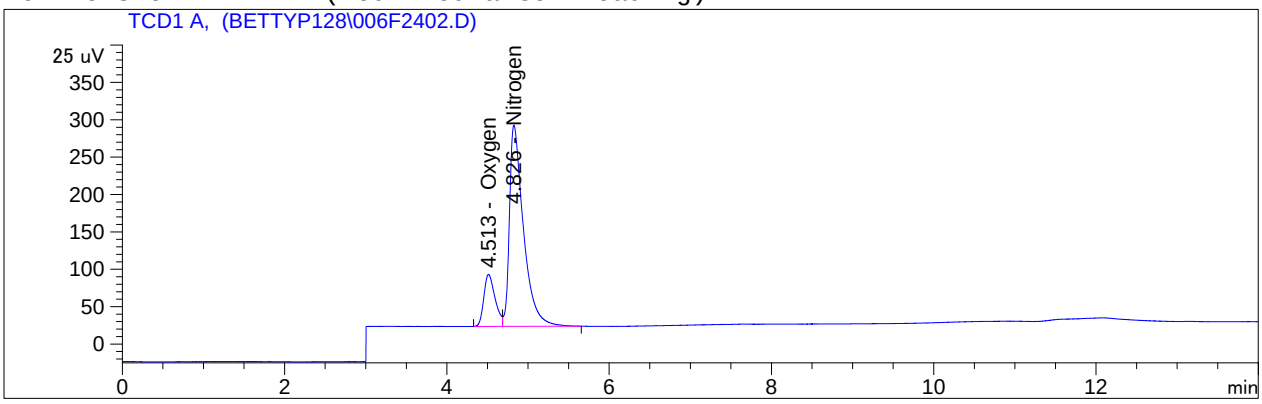

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2015\BETTY\QUARTER 1\BETTYP128\006F2402.D
Sample Name: 1214-29.1453 P2.Can

```
==========================================================================
Acq. Operator   : Justin Guenzler               Seq. Line :  24
Acq. Instrument : Betty                          Location : Vial 6
Injection Date  : 1/19/2015 5:01:54 PM                Inj :   2
                                                Inj Volume : 250 µl
Acq. Method     : C:\GC\2015\BETTY\QUARTER 1\BETTYP128\GC142P133_CAL.M
Last changed    : 9/5/2014 7:29:19 AM by disconnected
Analysis Method : C:\GC\2015\BETTY\METHODS\BETTYP126_FGA.M
Last changed    : 1/15/2015 9:52:29 AM by Justin Guenzler
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP128.SC.SSIzip
ECM Version     : 4 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, January 15, 2015 8:48:52 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,
```

RetTime [min]	Type	Area [25 uV*s]	Amt/Area	Amount [%]	Grp	Name
1.881		-	-	-		Hydrogen
4.513	BV	671.44012	3.51158e-3	2.35782		Oxygen
4.826	VB	3221.17993	2.74495e-3	8.84197		Nitrogen
6.276		-	-	-		Carbon monoxide
9.875		-	-	-		Methane
13.164		-	-	-		Carbon Dioxide

```
Totals :                                 11.19979


2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

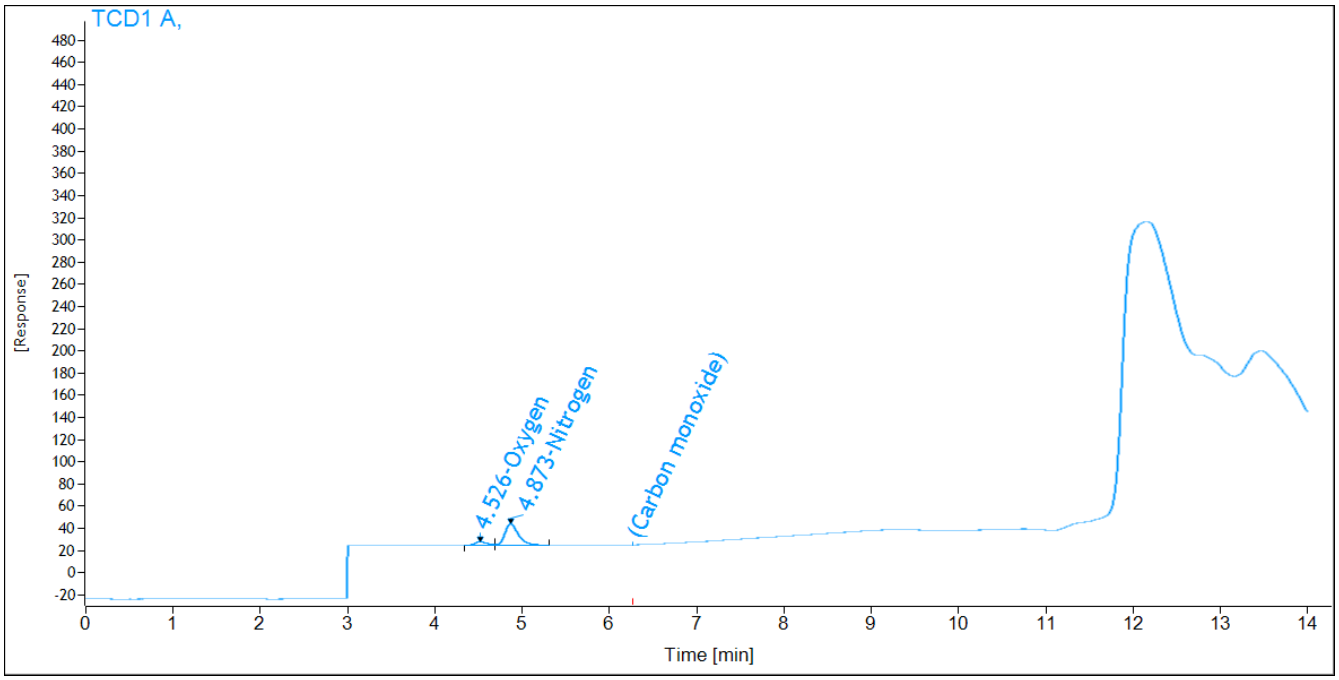
==========================================================================
                          *** End of Report ***
```

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2015\BETTY\QUARTER 1\BETTYP123\004F0901.D
Sample name: 1214-29.1308.Can
File_Location \GC\2014\Betty\Quarter 4
Injection date: 1/9/2015 12:49:22 PM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP119_FGA.M
Last changed: 1/6/2015 8:27:05 AM
Instrument: Betty
Sequence_Name BETTYP123
Acq. operator: Justin Guenzler

Sample type: Sample
Location: Vial 4
Injection volume: 250.000
Injection: 1 of 2
File_Version 3



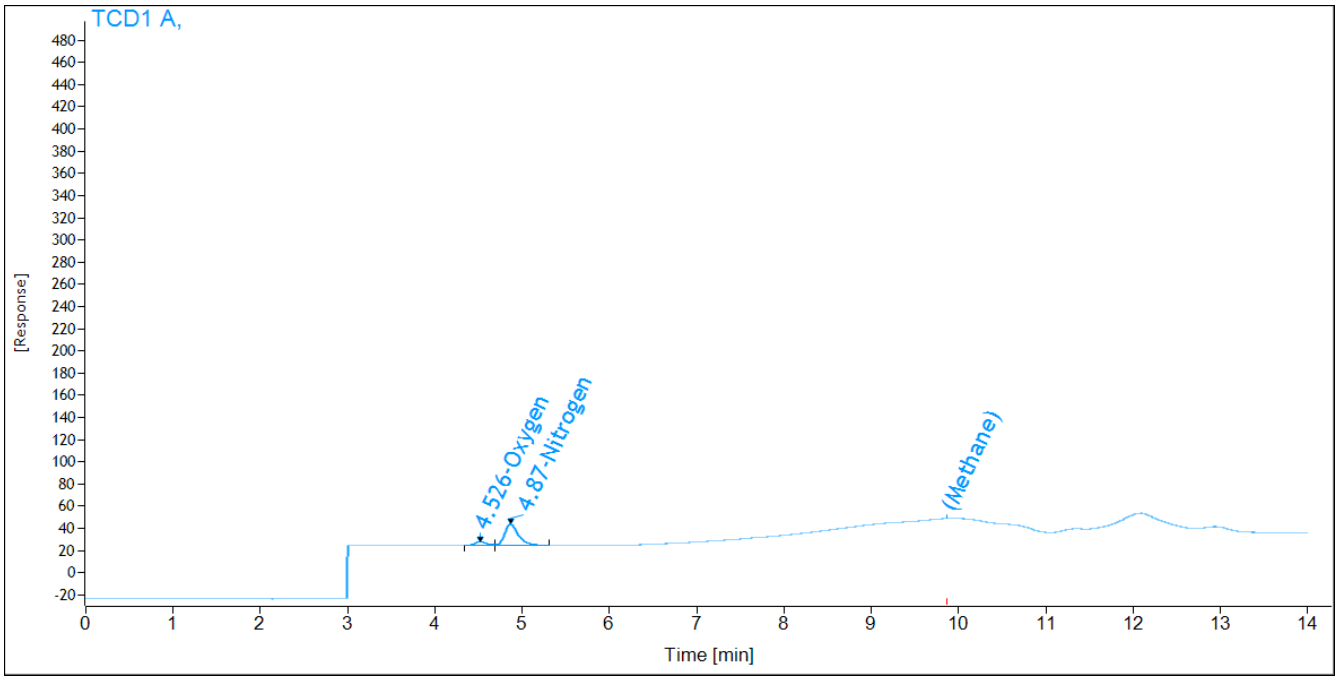
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BV	4.53	31.7740	1	0.10	0.098	%
Nitrogen	VB	4.87	212.6355	1	0.53	0.527	%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide				1	0.00		%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2015\BETTY\QUARTER 1\BETTYP123\004F0902.D
Sample name: 1214-29.1308.Can
File_Location \GC\2014\Betty\Quarter 4
Injection date: 1/9/2015 1:10:08 PM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP119_FGA.M
Last changed: 1/6/2015 8:27:05 AM
Instrument: Betty
Sequence_Name BETTYP123
Acq. operator: Justin Guenzler

Sample type: Sample
Location: Vial 4
Injection volume: 250.000
Injection: 2 of 2
File_Version 3



Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BV	4.53	30.7200	1	0.09	0.095	%
Nitrogen	VB	4.87	210.3976	1	0.52	0.521	%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide				1	0.00		%

Calibration Table

Calib. Data Modified : Wednesday, November 05, 2014 7:49:32 AM

Rel. Reference Window : 2.000 %
Abs. Reference Window : 0.000 min
Rel. Non-ref. Window : 2.000 %
Abs. Non-ref. Window : 0.200 min
Uncalibrated Peaks : not reported
Partial Calibration : Yes, identified peaks are recalibrated
Correct All Ret. Times: No, only for identified peaks

Curve Type : Linear
Origin : Connected
Weight : Quadratic (Amnt)

Recalibration Settings:
Average Response : Average all calibrations
Average Retention Time: Floating Average New 75%

Calibration Report Options :
Printout of recalibrations within a sequence:
Calibration Table after Recalibration
Normal Report after Recalibration
If the sequence is done with bracketing:
Results of first cycle (ending previous bracket)

Signal 1: TCD1 A,
Signal 2: FID2 B,

RetTime [min]	Sig	Lvl	Amount [%]	Area	Amt/Area	Ref	Grp	Name
1.881	1	5	3.05000e-1	4.09248	7.45269e-2			Hydrogen
		6	7.66000e-1	7.76654	9.86282e-2			
		7	2.69600	24.66670	1.09297e-1			
		8	8.00000	69.91390	1.14426e-1			
		28	24.97500	220.15269	1.13444e-1			
4.508	1	1	5.44000e-1	172.97797	3.14491e-3			Oxygen
		2	1.33000	445.32425	2.98659e-3			
		3	4.81000	1573.98584	3.05594e-3			
		4	10.01000	3174.73494	3.15302e-3			
		26	99.90000	3.07641e4	3.24729e-3			
4.832	1	5	3.82000e-1	144.10159	2.65091e-3			Nitrogen
		6	9.57000e-1	348.34468	2.74728e-3			
		7	3.37000	1172.73039	2.87364e-3			
		8	10.00000	3372.63346	2.96504e-3			
		22	99.90000	3.25456e4	3.06954e-3			
6.225	1	5	3.80000e-1	125.63694	3.02459e-3			Carbon monoxide
		6	9.53000e-1	321.38383	2.96530e-3			
		7	3.35300	1122.41992	2.98730e-3			
		8	9.95000	3258.34969	3.05369e-3			
		25	99.50000	3.27472e4	3.03843e-3			
9.828	1	5	3.05000e-1	93.39945	3.26554e-3			Methane
		6	7.66000e-1	231.83964	3.30401e-3			
		7	2.69600	800.56720	3.36761e-3			
		8	8.00000	2285.63493	3.50012e-3			
		24	99.00000	2.90004e4	3.41375e-3			
13.142	1	1	5.40000e-1	290.13497	1.86120e-3			Carbon Dioxide
		2	1.33000	706.35205	1.88291e-3			

RetTime [min]	Sig	Lvl	Amount [%]	Area	Amt/Area	Ref	Grp	Name
	3		4.81000	2518.59172	1.90980e-3			
	4		10.01000	5056.87093	1.97948e-3			
	21		99.80000	4.86712e4	2.05049e-3			

More compound-specific settings:

Compound: Hydrogen
  Time Window : From 1.762 min To 1.999 min

Compound: Oxygen
  Time Window : From 4.225 min To 4.664 min

Compound: Nitrogen
  Time Window : From 4.492 min To 5.032 min

Compound: Carbon monoxide
  Time Window : From 5.625 min To 6.375 min

Compound: Methane
  Time Window : From 9.410 min To 10.178 min

Compound: Carbon Dioxide
  Time Window : From 12.527 min To 13.373 min

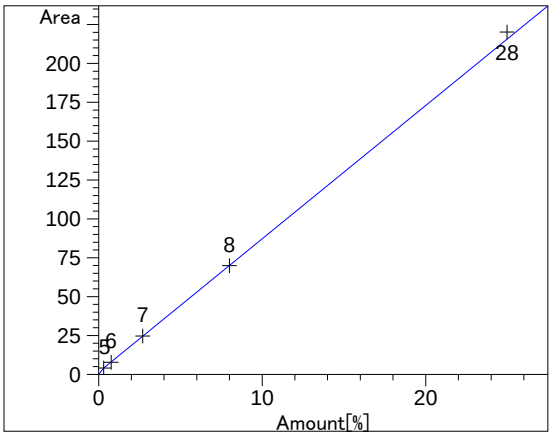
1 Warnings or Errors :

Warning : Overlapping peak time windows at 4.508 min, signal 1

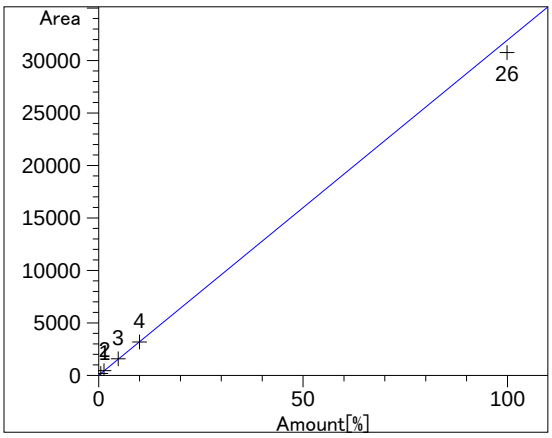
Peak Sum Table

No Entries in table

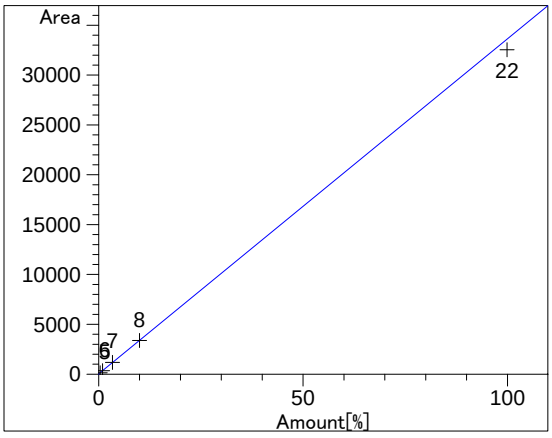
Calibration Curves



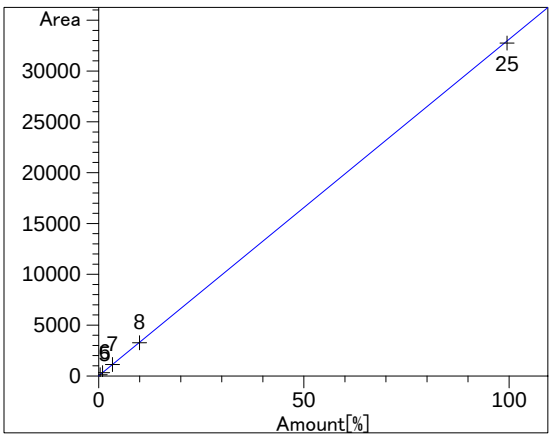
Hydrogen at exp. RT: 1.881
TCD1 A,
Correlation: 0.99965
Residual Std. Dev.: 2.58621
Formula: y = mx + b
m: 8.57836
b: 1.43918
x: Amount
y: Area
Calibration Level Weights:
Level 5 : 1
Level 6 : 0.158541
Level 7 : 0.012799
Level 8 : 0.001454
Level 28 : 0.000149



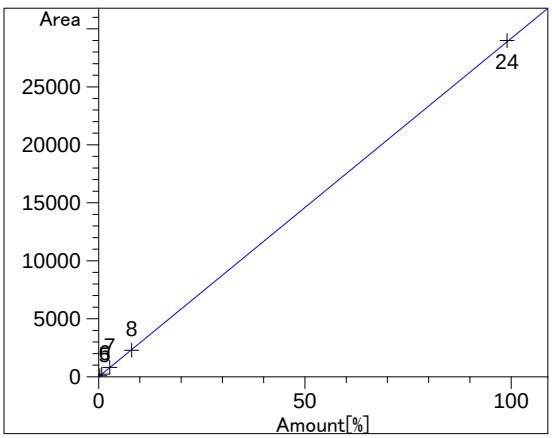
Oxygen at exp. RT: 4.508
TCD1 A,
Correlation: 0.99930
Residual Std. Dev.: 675.82373
Formula: y = mx + b
m: 319.63266
b: 2.39978
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.167299
Level 3 : 0.012791
Level 4 : 0.002953
Level 26 : 0.00003



Nitrogen at exp. RT: 4.832
TCD1 A,
Correlation: 0.99960
Residual Std. Dev.: 619.90273
Formula: y = mx + b
m: 336.35297
b: 17.32337
x: Amount
y: Area
Calibration Level Weights:
Level 5 : 1
Level 6 : 0.159332
Level 7 : 0.012849
Level 8 : 0.001459
Level 22 : 0.000015

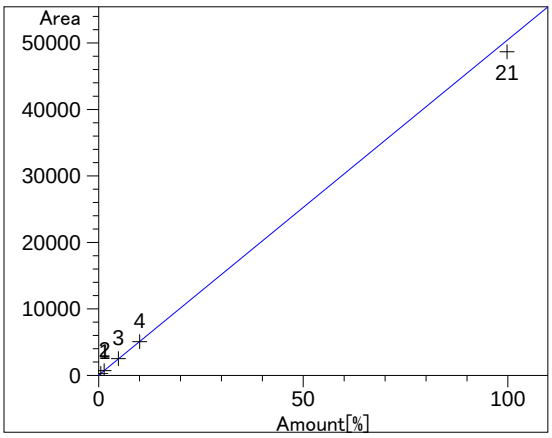


Carbon monoxide at exp. RT: 6.225
TCD1 A,
Correlation: 0.99990
Residual Std. Dev.: 130.74997
Formula: y = mx + b
m: 331.34990
b: 5.98714e-1
x: Amount
y: Area
Calibration Level Weights:
Level 5 : 1
Level 6 : 0.158994
Level 7 : 0.012844
Level 8 : 0.001459
Level 25 : 0.000015



Methane at exp. RT: 9.828
TCD1 A,
Correlation: 0.99984
Residual Std. Dev.: 66.45368
Formula: y = mx + b
m: 291.86181
b: 4.94383
x: Amount
y: Area
Calibration Level Weights:
Level 5 : 1
Level 6 : 0.158541
Level 7 : 0.012799
Level 8 : 0.001454

Level 24 : 9.49138e-006



Carbon Dioxide at exp. RT: 13.142
TCD1 A,
Correlation: 0.99955
Residual Std. Dev.: 1007.73771
Formula: y = mx + b
m: 504.95534
b: 20.56679
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.164848
Level 3 : 0.012604
Level 4 : 0.00291
Level 21 : 0.000029

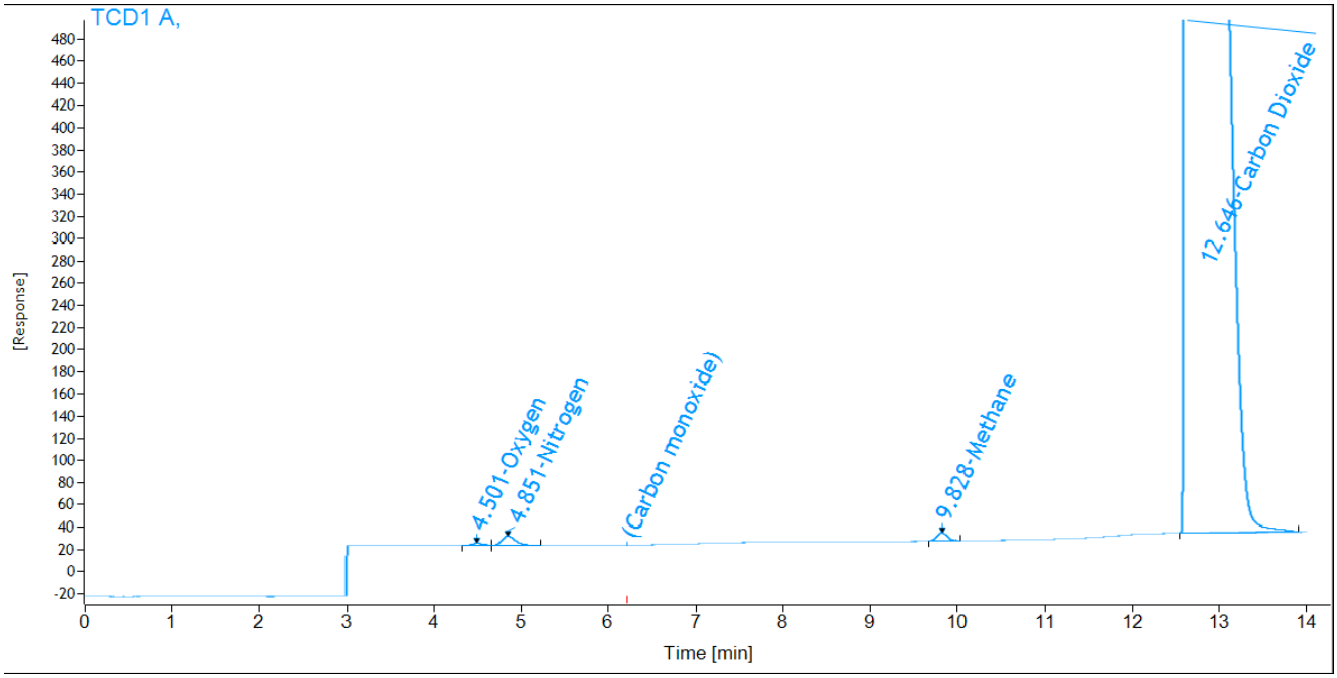
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Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP090\007F0101.D
Sample name: 99.8% CO2 #FGA21
File_Location \GC\2014\Betty\Quarter 4
Injection date: 11/4/2014 8:40:50 AM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP090_FGA.M
Last changed: 11/5/2014 7:50:28 AM
Instrument:
Sequence_Name BETTYP090
Acq. operator: Todd Huml

Sample type: Calibration
Location: Vial 7
Injection volume: 250.000
Injection: 1 of 3
File_Version 3



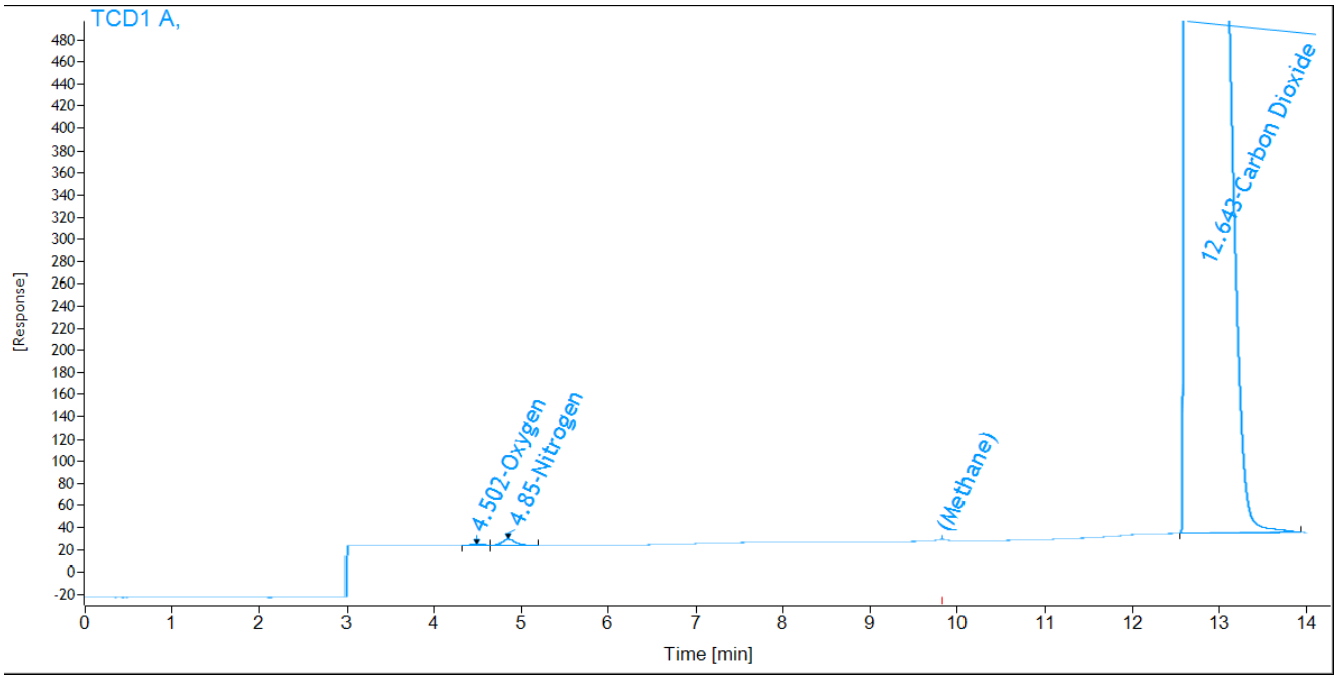
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BV	4.50	19.7571	1	0.06	0.061	%
Nitrogen	VB	4.85	90.1227	1	0.24	0.236	%
Carbon monoxide				1	0.00		%
Methane	BB	9.83	60.8362	1	0.20	0.197	%
Carbon Dioxide	MM	12.65	48658.9922	1	96.32	96.322	%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP090\007F0102.D
Sample name: 99.8% CO2 #FGA21
File_Location \GC\2014\Betty\Quarter 4
Injection date: 11/4/2014 9:01:31 AM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP090_FGA.M
Last changed: 11/5/2014 7:50:28 AM
Instrument:
Sequence_Name BETTYP090
Acq. operator: Todd Huml

Sample type: Calibration
Location: Vial 7
Injection volume: 250.000
Injection: 2 of 3
File_Version 3



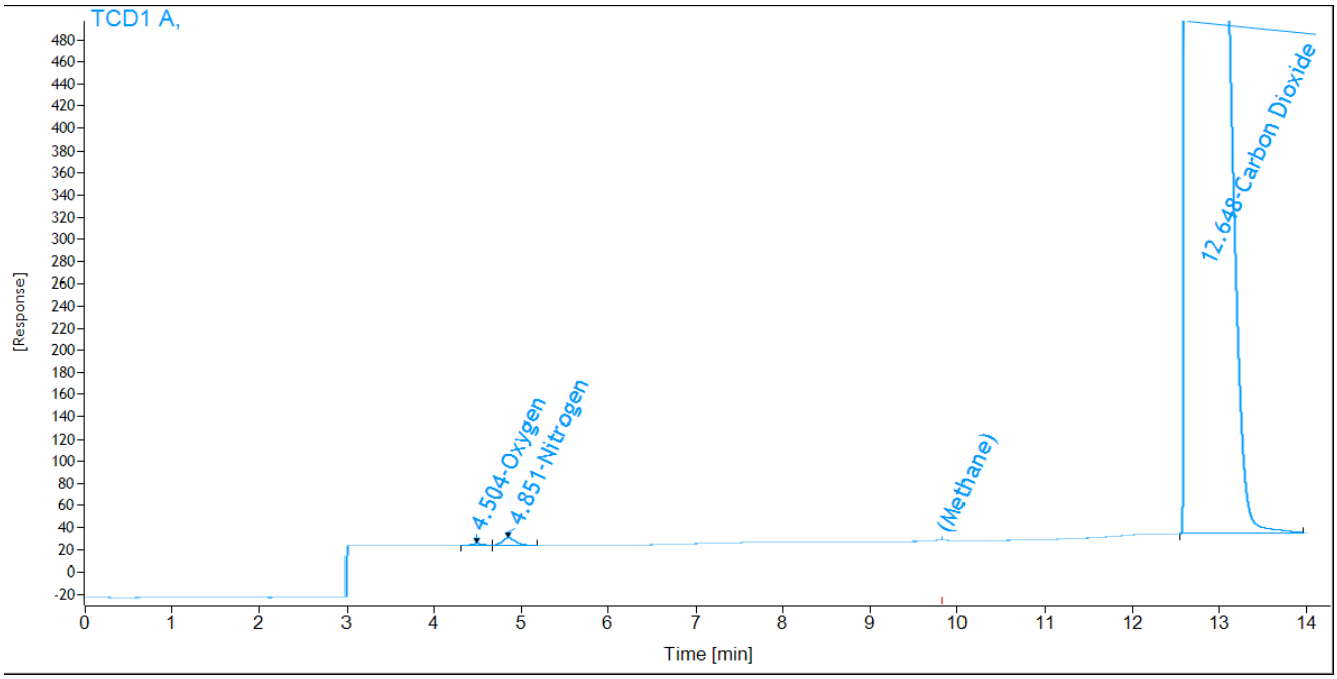
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BV	4.50	13.2649	1	0.04	0.041	%
Nitrogen	VB	4.85	61.6042	1	0.16	0.161	%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide	MM	12.64	49280.9102	1	97.55	97.554	%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP090\007F0103.D
Sample name: 99.8% CO2 #FGA21
File_Location \GC\2014\Betty\Quarter 4
Injection date: 11/4/2014 9:22:47 AM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP090_FGA.M
Last changed: 11/5/2014 7:50:28 AM
Instrument:
Sequence_Name BETTYP090
Acq. operator: Todd Huml

Sample type: Calibration
Location: Vial 7
Injection volume: 250.000
Injection: 3 of 3
File_Version 3



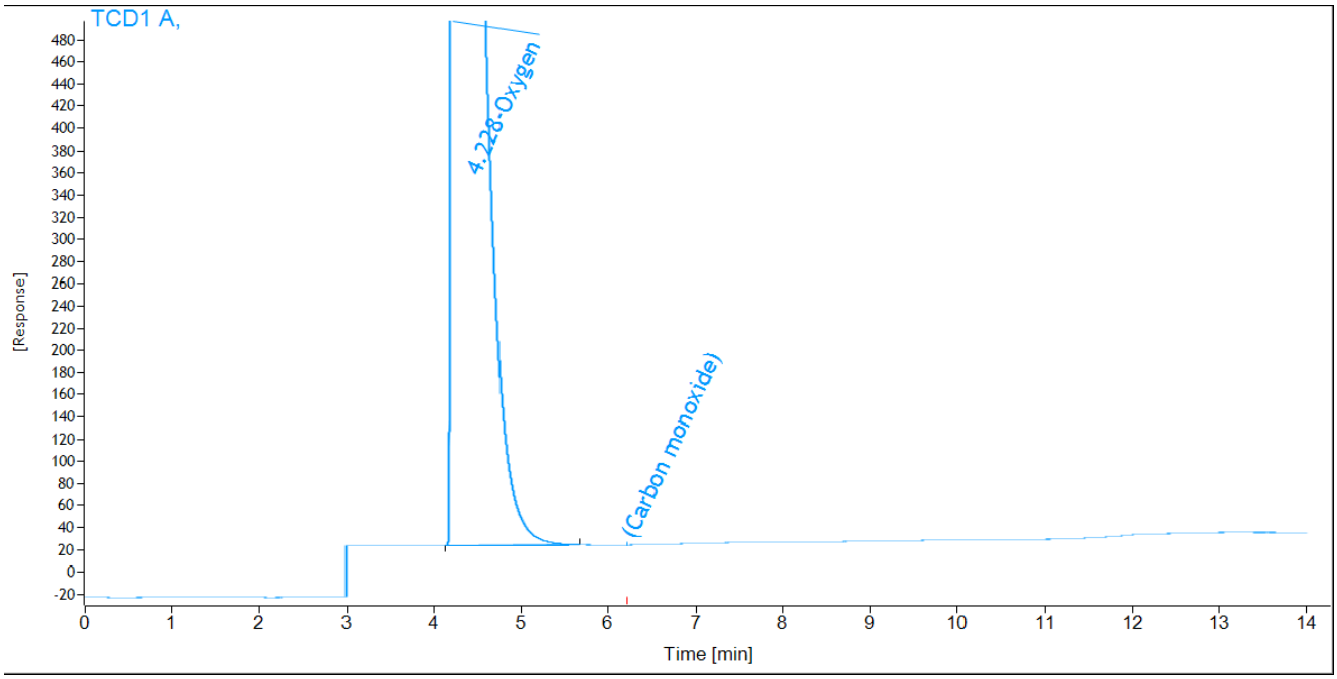
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BV	4.50	17.3274	1	0.05	0.053	%
Nitrogen	VB	4.85	74.8908	1	0.20	0.196	%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide	MM	12.65	48073.6523	1	95.16	95.163	%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP090\015F0201.D
Sample name: 99.9% O2 #FGA26
File_Location \GC\2014\Betty\Quarter 4
Injection date: 11/4/2014 9:44:09 AM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP090_FGA.M
Last changed: 11/5/2014 7:50:28 AM
Instrument:
Sequence_Name BETTYP090
Acq. operator: Todd Huml

Sample type: Calibration
Location: Vial 15
Injection volume: 250.000
Injection: 1 of 3
File_Version 3



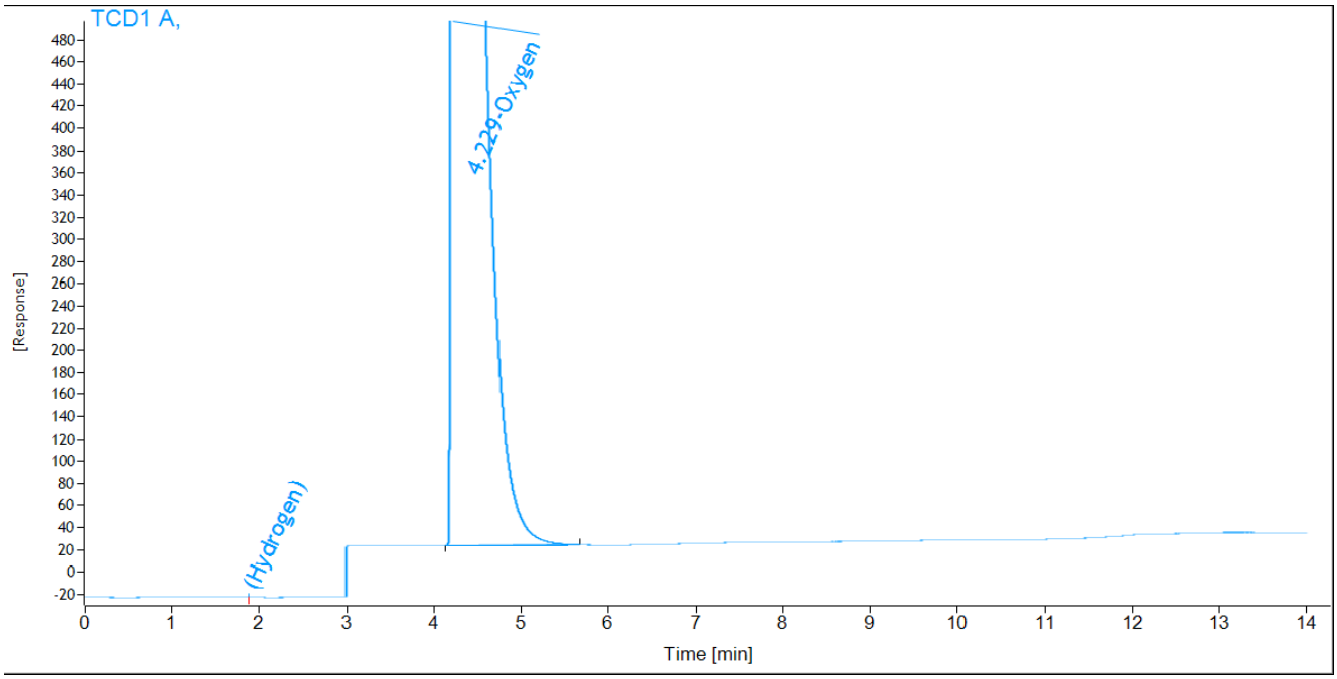
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BB	4.23	30717.9707	1	96.10	96.096	%
Nitrogen				1	0.00		%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide				1	0.00		%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP090\015F0202.D
Sample name: 99.9% O2 #FGA26
File_Location \GC\2014\Betty\Quarter 4
Injection date: 11/4/2014 10:05:02 AM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP090_FGA.M
Last changed: 11/5/2014 7:50:28 AM
Instrument:
Sequence_Name BETTYP090
Acq. operator: Todd Huml

Sample type: Calibration
Location: Vial 15
Injection volume: 250.000
Injection: 2 of 3
File_Version 3



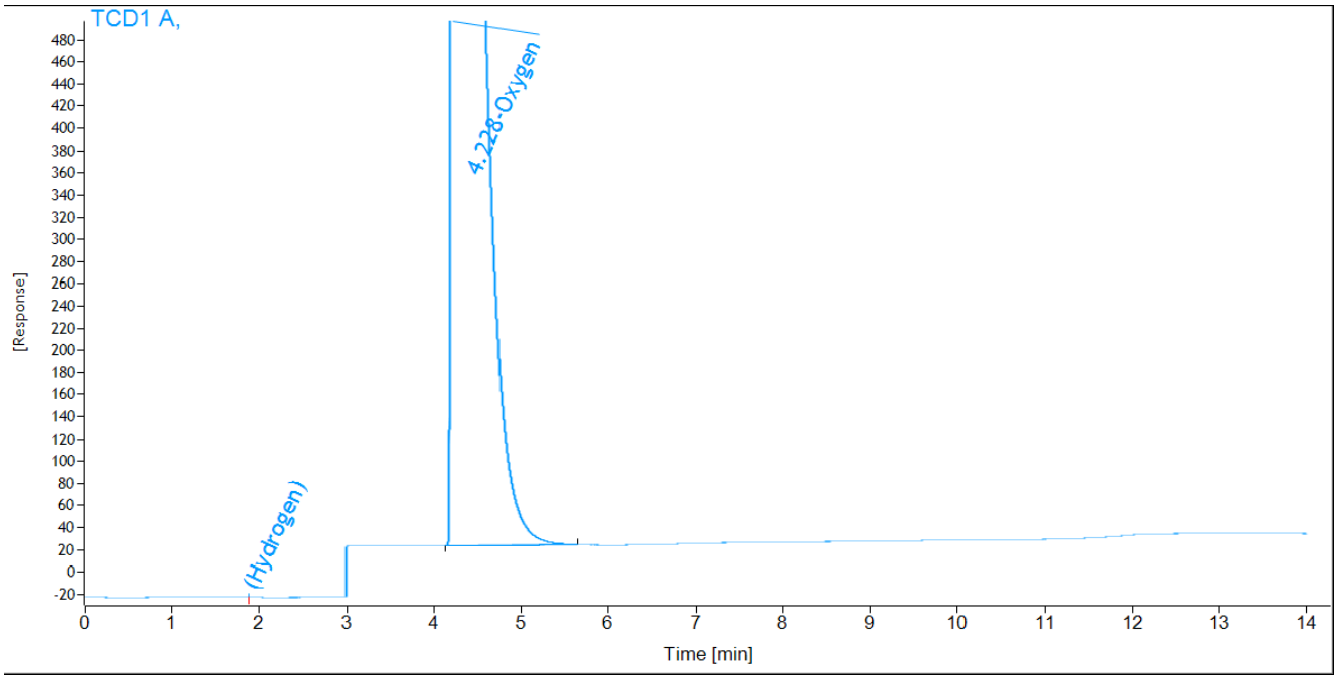
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BB	4.23	30697.7813	1	96.03	96.033	%
Nitrogen				1	0.00		%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide				1	0.00		%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP090\015F0203.D
Sample name: 99.9% O2 #FGA26
File_Location \GC\2014\Betty\Quarter 4
Injection date: 11/4/2014 10:25:58 AM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP090_FGA.M
Last changed: 11/5/2014 7:50:28 AM
Instrument:
Sequence_Name BETTYP090
Acq. operator: Todd Huml

Sample type: Calibration
Location: Vial 15
Injection volume: 250.000
Injection: 3 of 3
File_Version 3



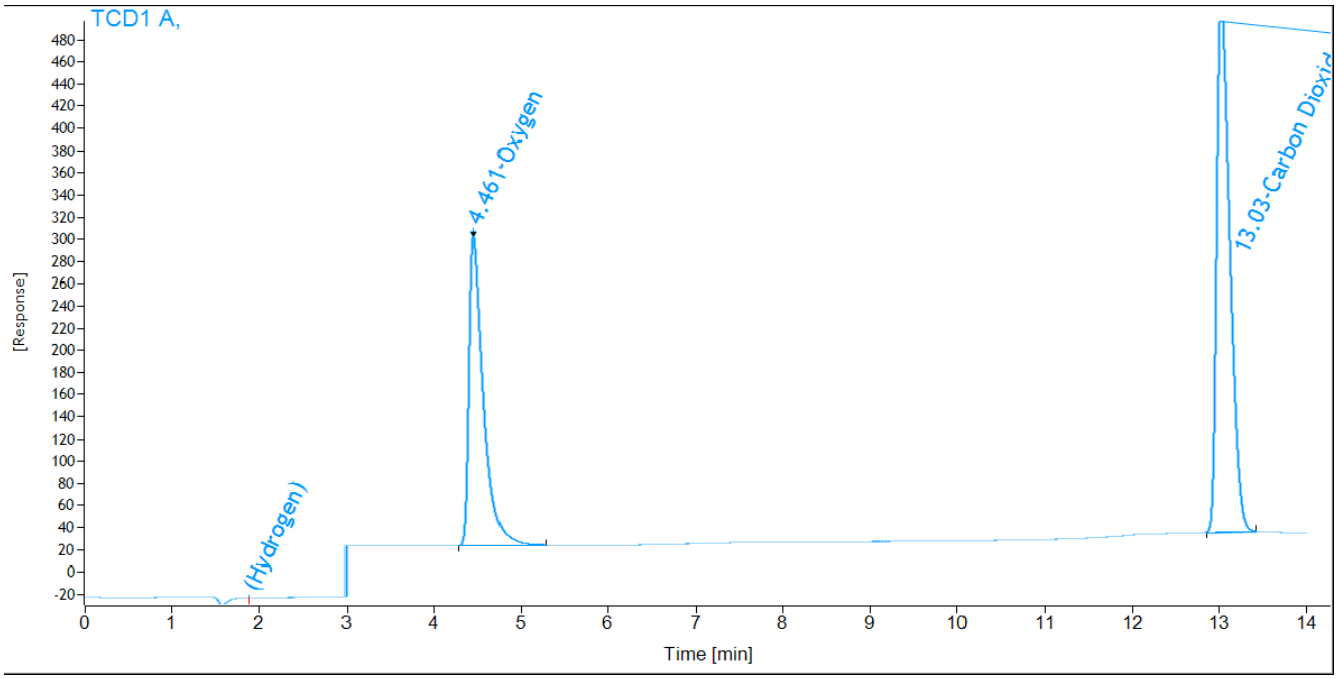
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BB	4.23	30876.5371	1	96.59	96.593	%
Nitrogen				1	0.00		%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide				1	0.00		%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP090\009F0301.D
Sample name: BettyP070 #FG4 ENV(1=0,2=467.26)
File_Location \GC\2014\Betty\Quarter 4
Injection date: 11/4/2014 10:49:27 AM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP090_FGA.M
Last changed: 11/5/2014 7:50:28 AM
Instrument:
Sequence_Name BETTYP090
Acq. operator: Todd Huml

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 1 of 4
File_Version 3



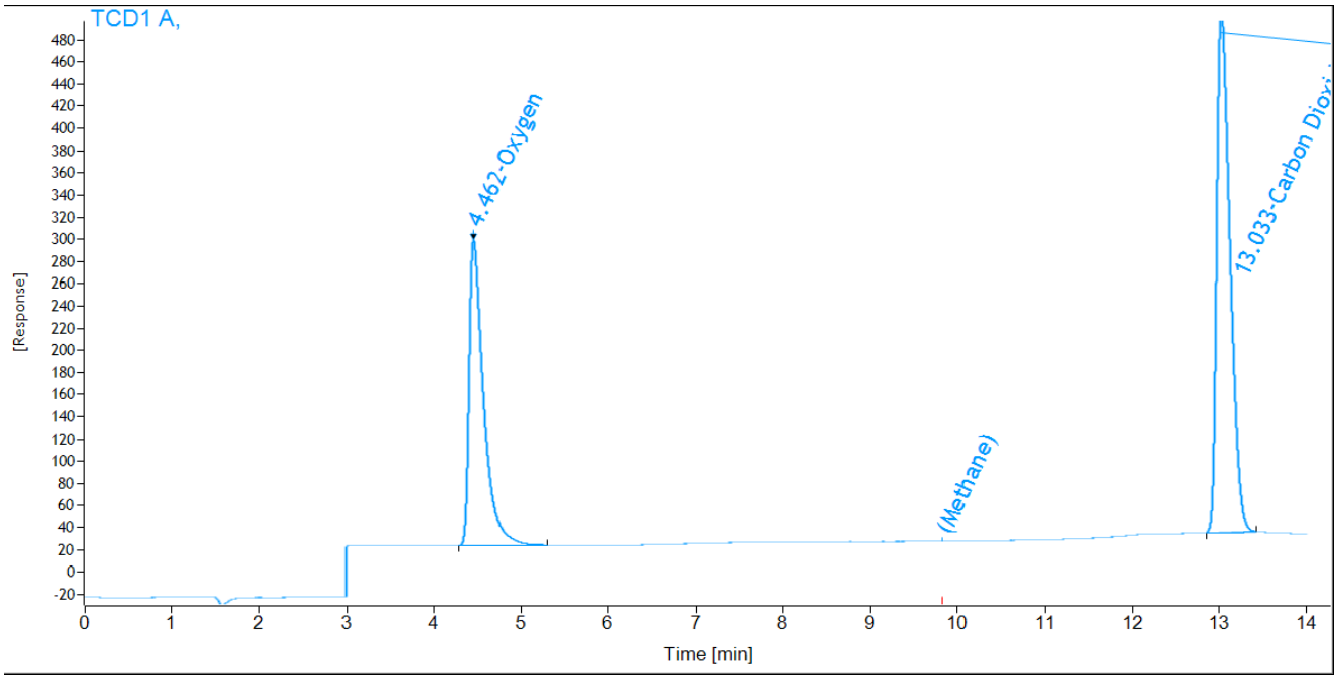
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BB	4.46	3193.4167	1	9.98	9.983	%
Nitrogen				1	0.00		%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide	BB	13.03	5108.3955	1	10.08	10.076	%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP090\009F0302.D
Sample name: BettyP070 #FG4 ENV(1=0,2=467.26)
File_Location \GC\2014\Betty\Quarter 4
Injection date: 11/4/2014 11:12:56 AM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP090_FGA.M
Last changed: 11/5/2014 7:50:28 AM
Instrument:
Sequence_Name BETTYP090
Acq. operator: Todd Huml

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 2 of 4
File_Version 3



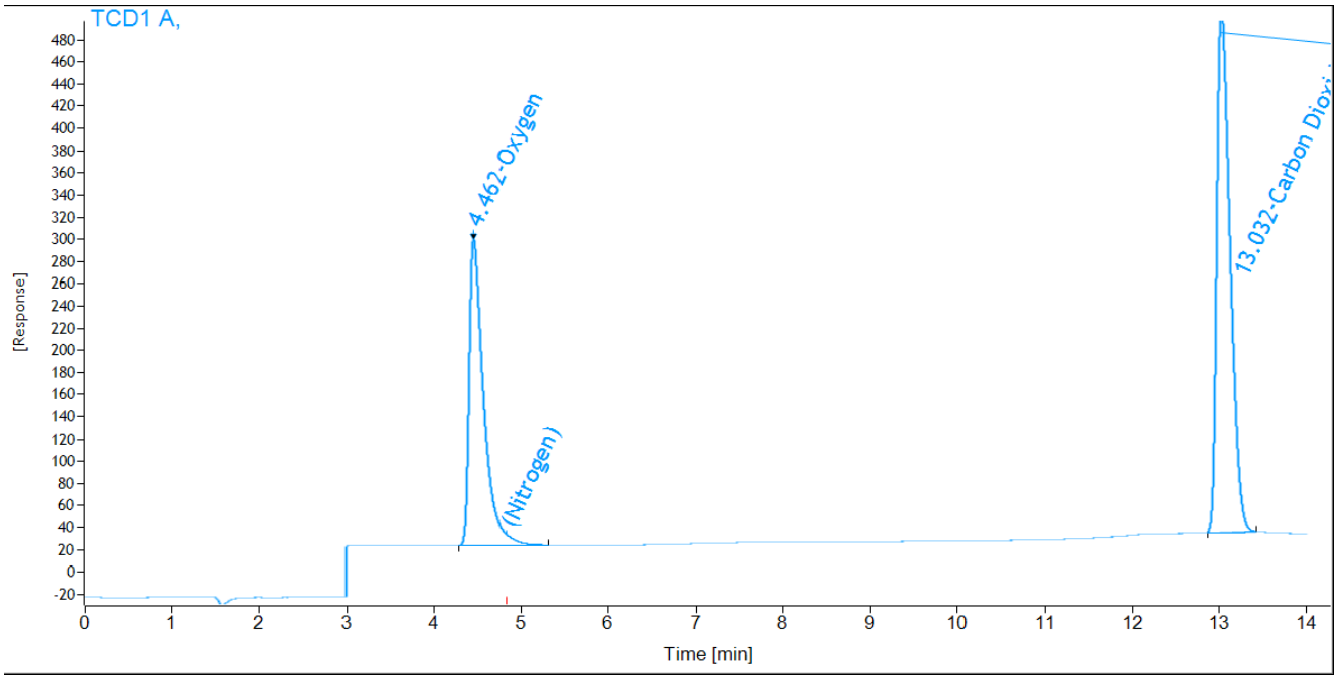
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BB	4.46	3161.5535	1	9.88	9.884	%
Nitrogen				1	0.00		%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide	BB	13.03	5013.7319	1	9.89	9.888	%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP090\009F0303.D
Sample name: BettyP070 #FG4 ENV(1=0,2=467.26)
File_Location \GC\2014\Betty\Quarter 4
Injection date: 11/4/2014 11:36:44 AM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP090_FGA.M
Last changed: 11/5/2014 7:50:28 AM
Instrument:
Sequence_Name BETTYP090
Acq. operator: Todd Huml

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 3 of 4
File_Version 3



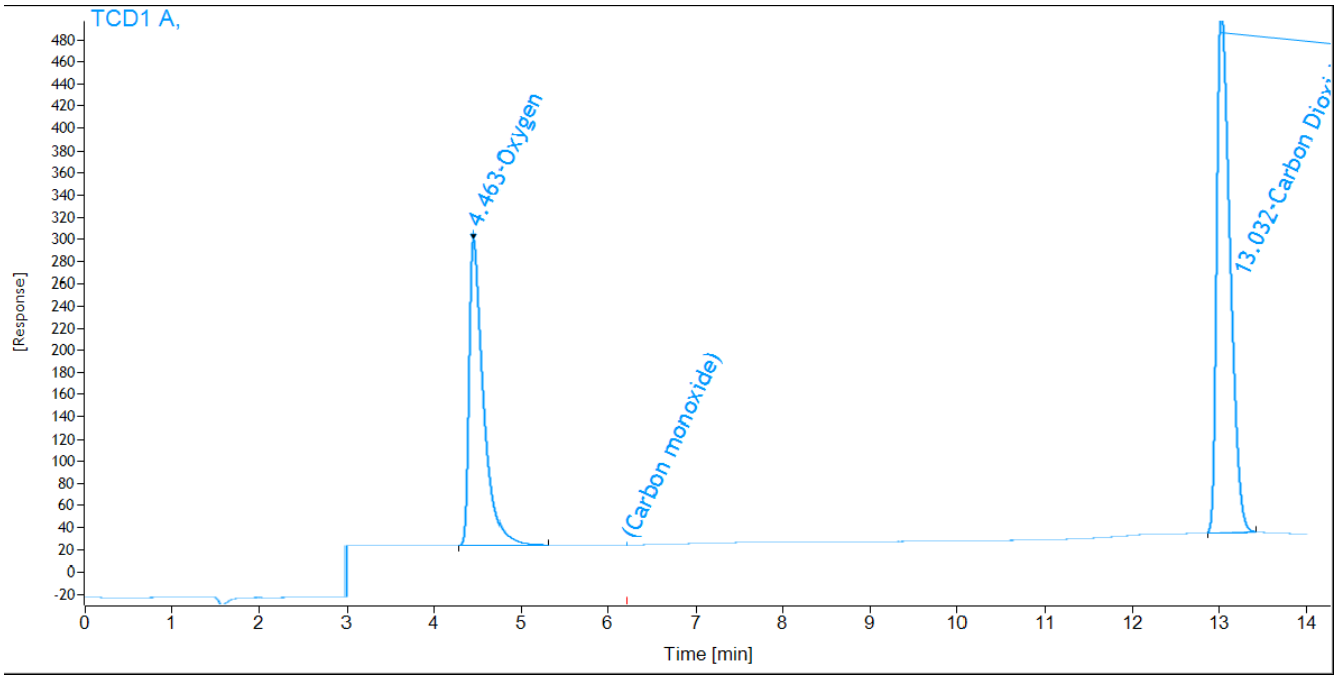
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BB	4.46	3169.2346	1	9.91	9.908	%
Nitrogen				1	0.00		%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide	BB	13.03	5048.4854	1	9.96	9.957	%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP090\009F0304.D
Sample name: BettyP070 #FG4 ENV(1=0,2=467.26)
File_Location \GC\2014\Betty\Quarter 4
Injection date: 11/4/2014 12:00:03 PM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP090_FGA.M
Last changed: 11/5/2014 7:50:28 AM
Instrument:
Sequence_Name BETTYP090
Acq. operator: Todd Huml

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 4 of 4
File_Version 3



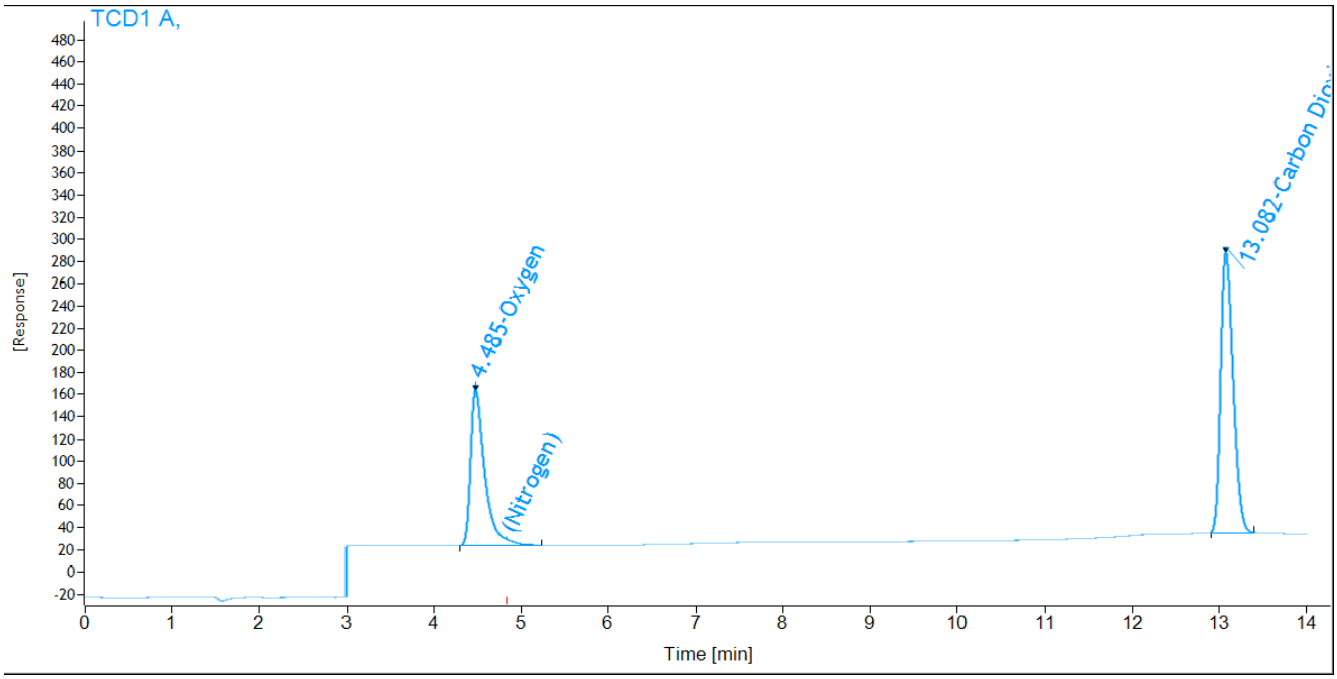
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BB	4.46	3165.5510	1	9.90	9.896	%
Nitrogen				1	0.00		%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide	BB	13.03	5052.2520	1	9.96	9.965	%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP090\009F0401.D
Sample name: BettyP070 #FG3 ENV(1=374.56,2=391.18)
File_Location \GC\2014\Betty\Quarter 4
Injection date: 11/4/2014 12:23:22 PM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP090_FGA.M
Last changed: 11/5/2014 7:50:28 AM
Instrument:
Sequence_Name BETTYP090
Acq. operator: Todd Huml

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 1 of 3
File_Version 3



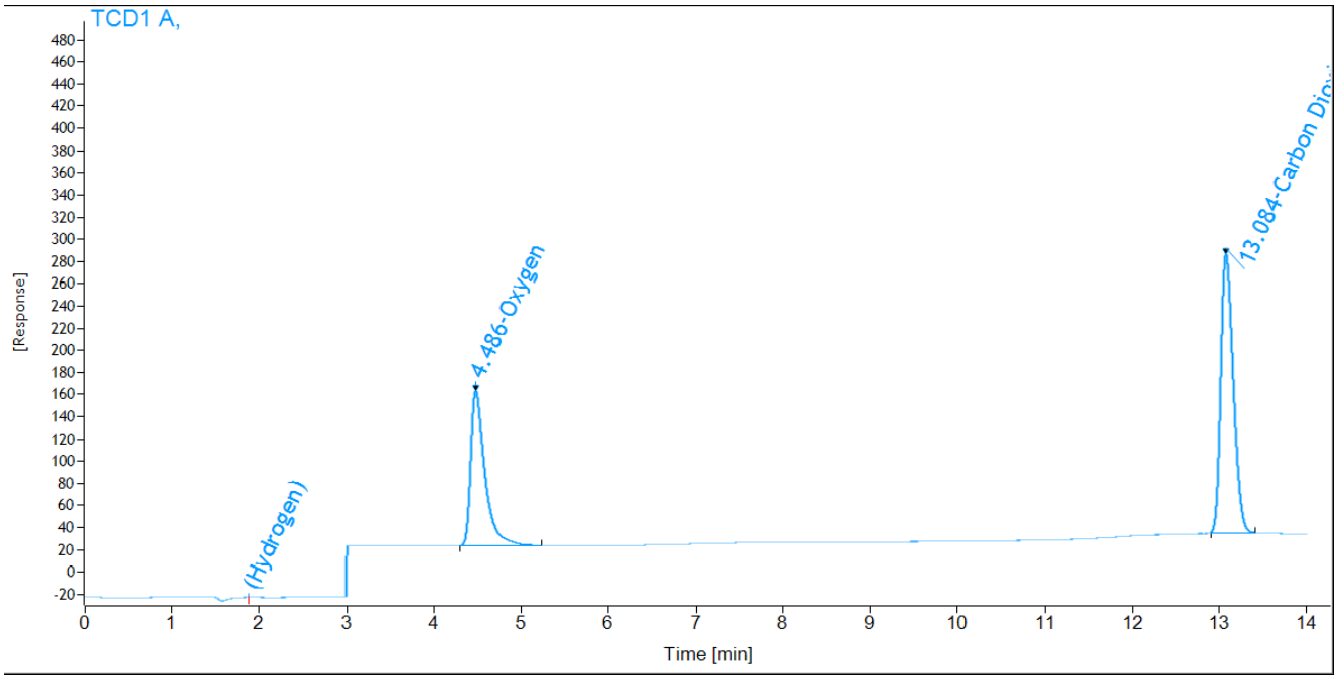
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BB	4.48	1579.4922	1	4.93	4.934	%
Nitrogen				1	0.00		%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide	BB	13.08	2525.1892	1	4.96	4.960	%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP090\009F0402.D
Sample name: BettyP070 #FG3 ENV(1=374.56,2=391.18)
File_Location \GC\2014\Betty\Quarter 4
Injection date: 11/4/2014 12:46:44 PM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP090_FGA.M
Last changed: 11/5/2014 7:50:28 AM
Instrument:
Sequence_Name BETTYP090
Acq. operator: Todd Huml

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 2 of 3
File_Version 3



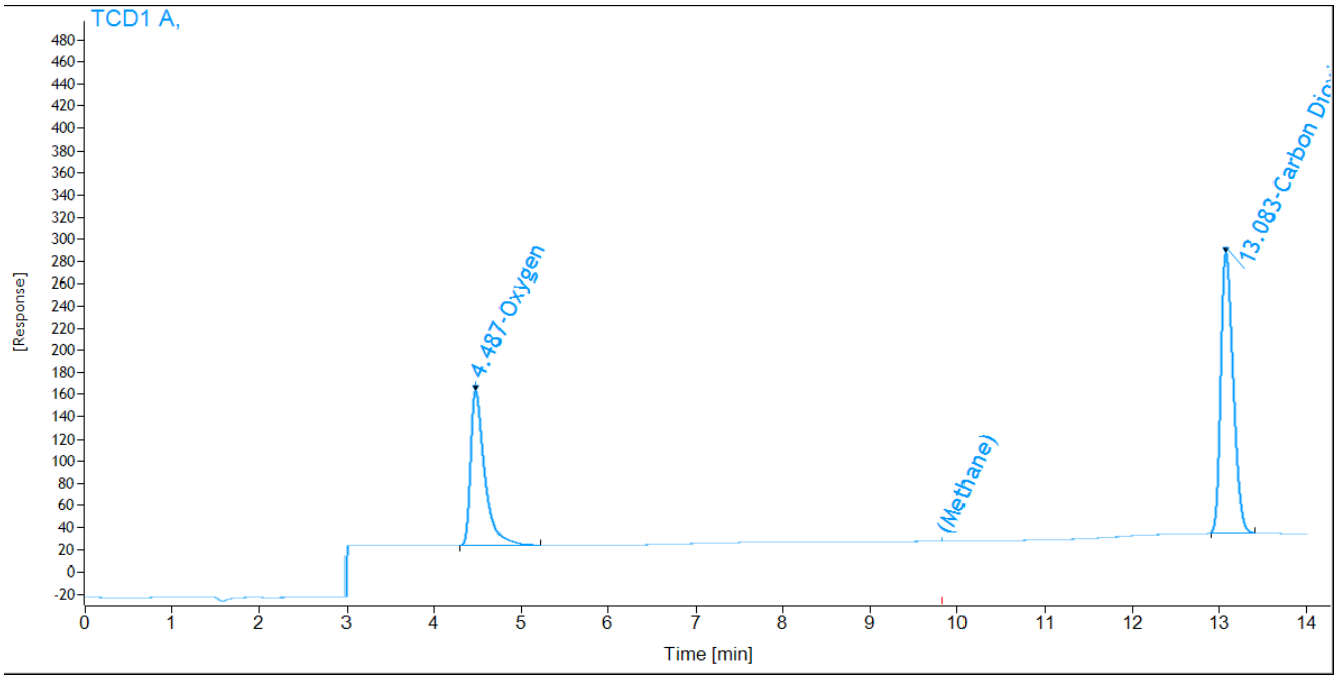
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BB	4.49	1568.6559	1	4.90	4.900	%
Nitrogen				1	0.00		%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide	BB	13.08	2509.0552	1	4.93	4.928	%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP090\009F0403.D
Sample name: BettyP070 #FG3 ENV(1=374.56,2=391.18)
File_Location \GC\2014\Betty\Quarter 4
Injection date: 11/4/2014 1:10:03 PM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP090_FGA.M
Last changed: 11/5/2014 7:50:28 AM
Instrument:
Sequence_Name BETTYP090
Acq. operator: Todd Huml

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 3 of 3
File_Version 3



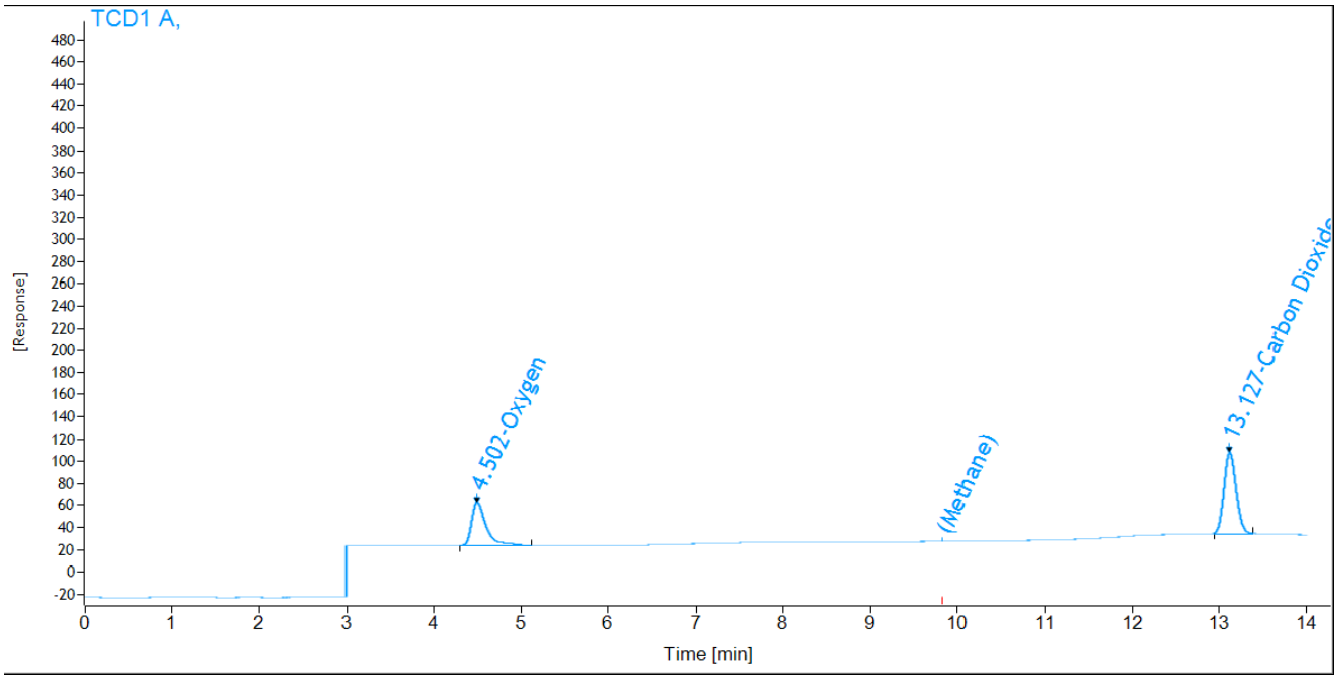
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BB	4.49	1573.8094	1	4.92	4.916	%
Nitrogen				1	0.00		%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide	BB	13.08	2521.5308	1	4.95	4.953	%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP090\009F0501.D
Sample name: BettyP070 #FG2 ENV(1=1272.08,2=219.94)
File_Location \GC\2014\Betty\Quarter 4
Injection date: 11/4/2014 1:33:50 PM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP090_FGA.M
Last changed: 11/5/2014 7:50:28 AM
Instrument:
Sequence_Name BETTYP090
Acq. operator: Todd Huml

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 1 of 3
File_Version 3



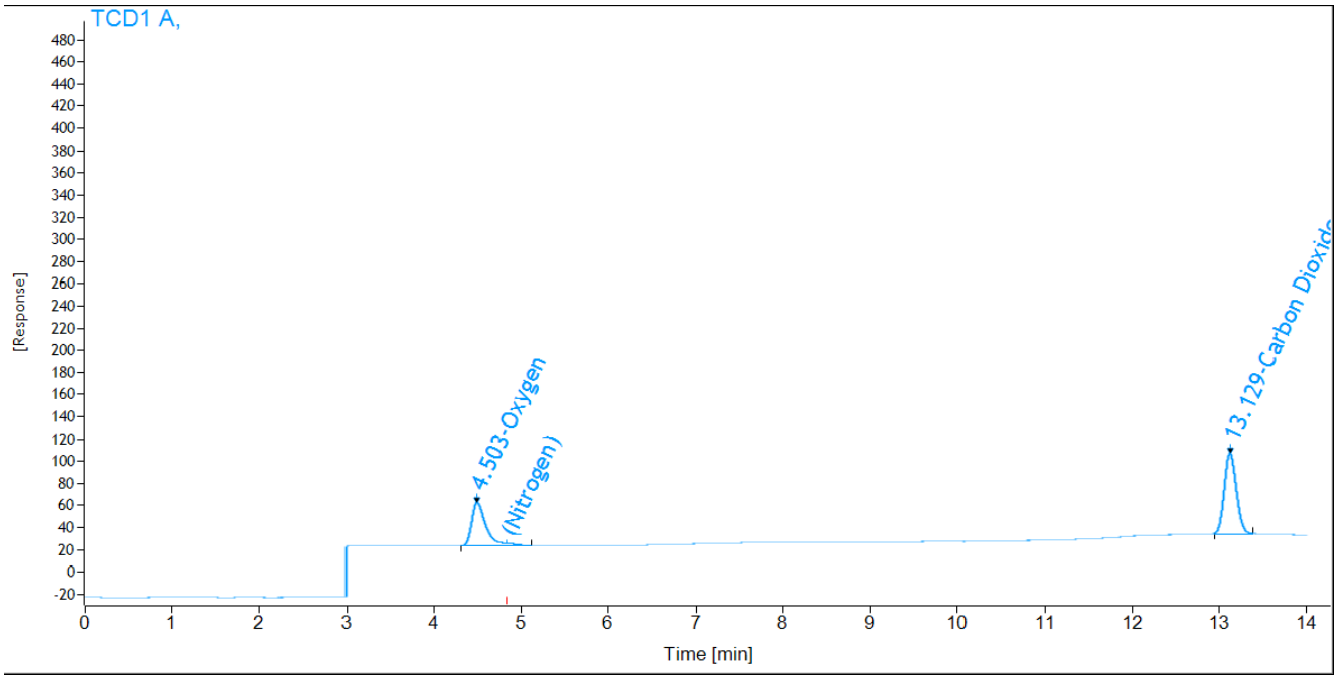
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BB	4.50	446.0598	1	1.39	1.388	%
Nitrogen				1	0.00		%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide	BB	13.13	707.7566	1	1.36	1.361	%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP090\009F0502.D
Sample name: BettyP070 #FG2 ENV(1=1272.08,2=219.94)
File_Location \GC\2014\Betty\Quarter 4
Injection date: 11/4/2014 1:57:05 PM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP090_FGA.M
Last changed: 11/5/2014 7:50:28 AM
Instrument:
Sequence_Name BETTYP090
Acq. operator: Todd Huml

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 2 of 3
File_Version 3



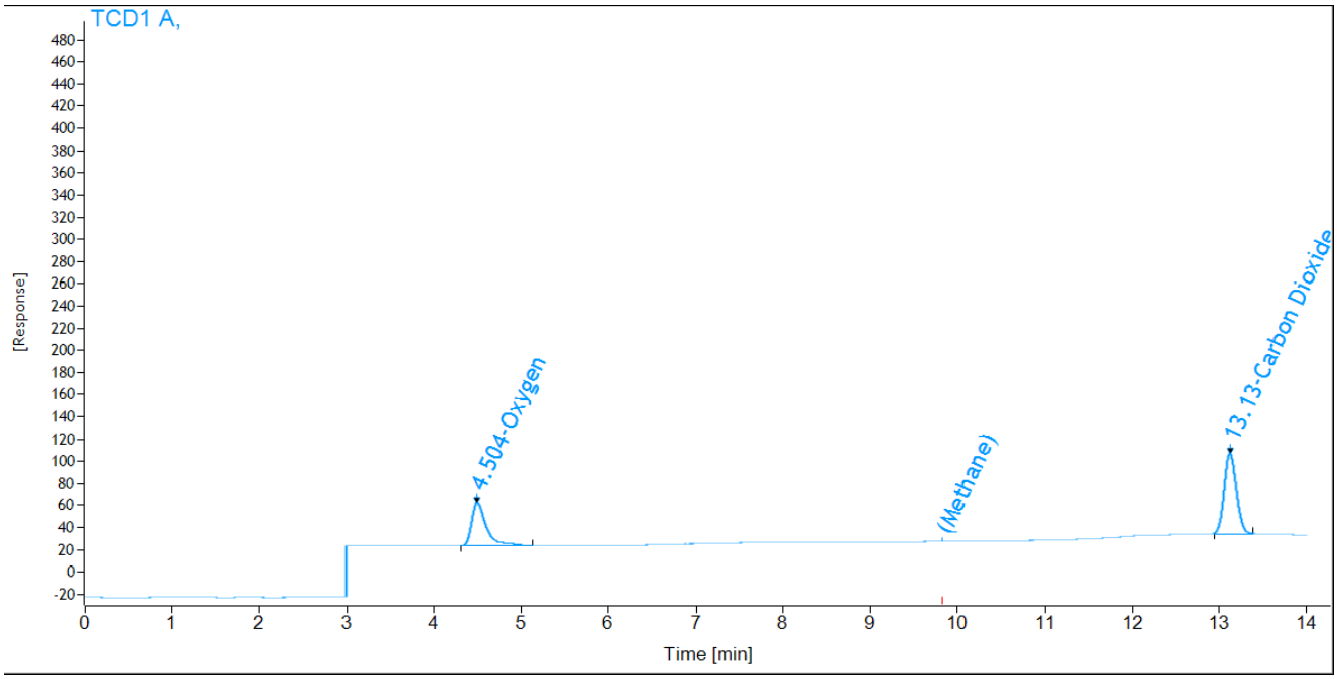
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BB	4.50	444.9116	1	1.38	1.384	%
Nitrogen				1	0.00		%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide	BB	13.13	704.5333	1	1.35	1.355	%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP090\009F0503.D
Sample name: BettyP070 #FG2 ENV(1=1272.08,2=219.94)
File_Location \GC\2014\Betty\Quarter 4
Injection date: 11/4/2014 2:20:25 PM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP090_FGA.M
Last changed: 11/5/2014 7:50:28 AM
Instrument:
Sequence_Name BETTYP090
Acq. operator: Todd Huml

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 3 of 3
File_Version 3



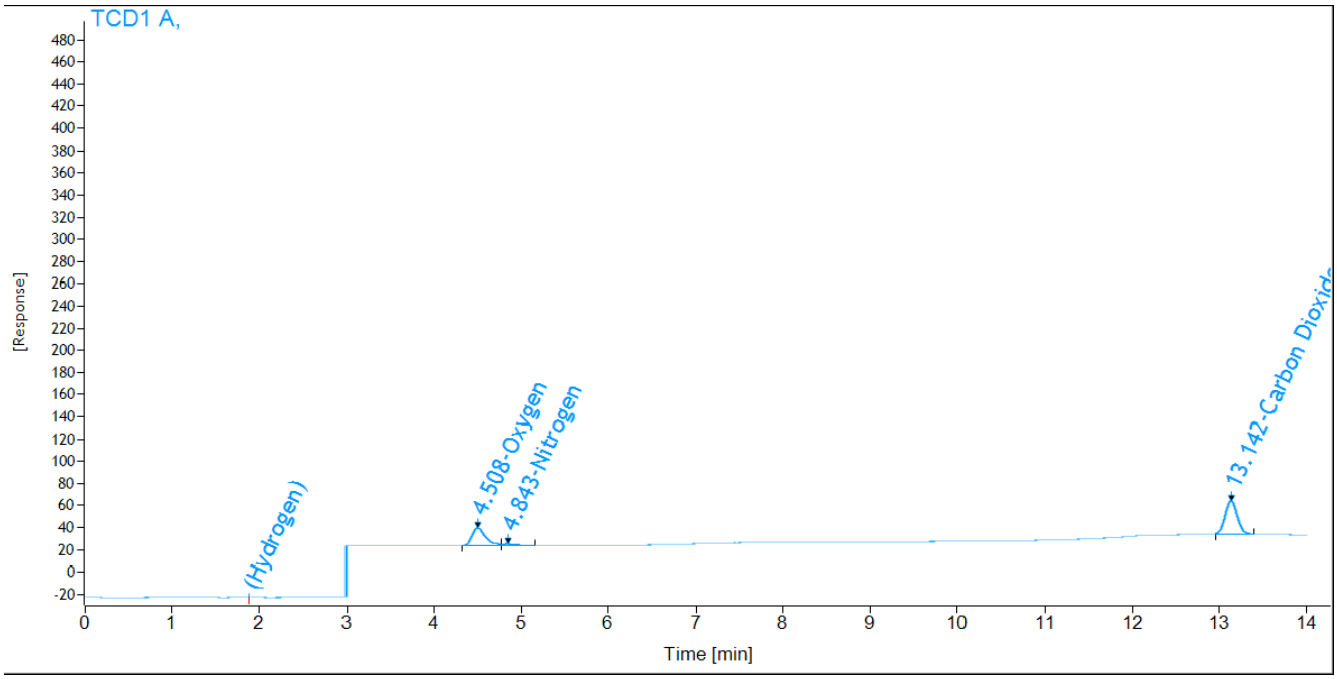
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BB	4.50	445.0014	1	1.38	1.385	%
Nitrogen				1	0.00		%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide	BB	13.13	706.7663	1	1.36	1.359	%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP090\009F0601.D
Sample name: BettyP070 #FG1 ENV(1=3392.23,2=219.94)
File_Location \GC\2014\Betty\Quarter 4
Injection date: 11/4/2014 2:43:40 PM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP090_FGA.M
Last changed: 11/5/2014 7:50:28 AM
Instrument:
Sequence_Name BETTYP090
Acq. operator: Todd Huml

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 1 of 3
File_Version 3



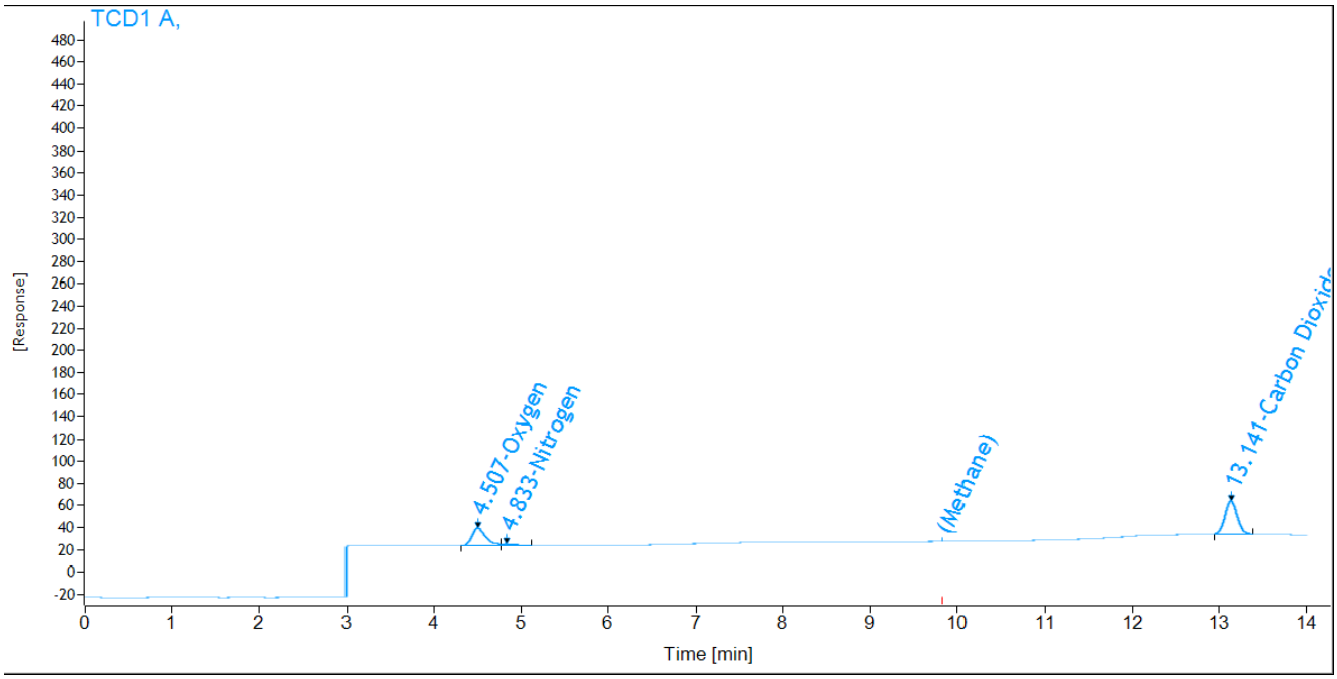
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BV	4.51	173.0479	1	0.53	0.534	%
Nitrogen	VB	4.84	18.6645	1	0.05	0.049	%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide	BB	13.14	289.5229	1	0.53	0.533	%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP090\009F0602.D
Sample name: BettyP070 #FG1 ENV(1=3392.23,2=219.94)
File_Location \GC\2014\Betty\Quarter 4
Injection date: 11/4/2014 3:06:58 PM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP090_FGA.M
Last changed: 11/5/2014 7:50:28 AM
Instrument:
Sequence_Name BETTYP090
Acq. operator: Todd Huml

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 2 of 3
File_Version 3



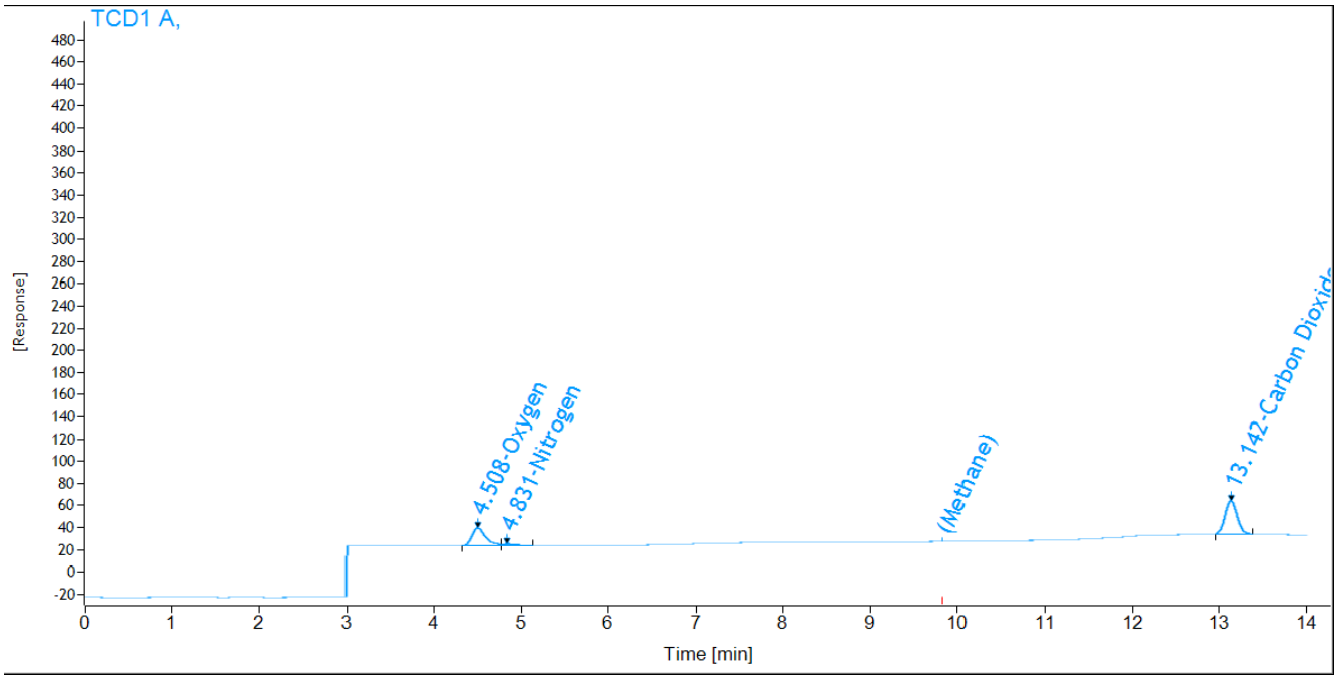
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BV	4.51	172.7397	1	0.53	0.533	%
Nitrogen	VB	4.83	17.0380	1	0.04	0.045	%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide	BB	13.14	290.2270	1	0.53	0.534	%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP090\009F0603.D
Sample name: BettyP070 #FG1 ENV(1=3392.23,2=219.94)
File_Location \GC\2014\Betty\Quarter 4
Injection date: 11/4/2014 3:30:19 PM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP090_FGA.M
Last changed: 11/5/2014 7:50:28 AM
Instrument:
Sequence_Name BETTYP090
Acq. operator: Todd Huml

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 3 of 3
File_Version 3



Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BV	4.51	173.1464	1	0.53	0.534	%
Nitrogen	VB	4.83	17.2488	1	0.05	0.045	%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide	BB	13.14	290.6550	1	0.54	0.535	%

Enthalpy Analytical

Company: METCO Environmental
Client No. 14-388 (OH)
Job No. 1214-29

Parameters: ASTM D1946-90
Samples 9 Runs
Analyst Justin Guenzler

SAMPLE NAME	Filename #1	Filename #2	Analysis Method	Ret Time (min)	Ret Time (min)	%dif RT	Conc # 1	Conc # 2	%dif conc	Units	Avg Conc	Standard Tag	% Tag
Hydrogen -- Calibration Standards, Laboratory Blanks and Controls													
BettyP118 #FG7 ENV(1=530,3=319.02)	009F1901.D	009F1902.D	BETTYP119_FGA.M	1.88	1.88	0.0	2.85	2.80	1.0	%	2.83	2.76	102
He Blank #LB	001F2201.D	001F2202.D	BETTYP119_FGA.M	NA	NA	NA	0.0510	0.0510	0.0	%	0.0510	ND	
BettyP118 #FG7 ENV(1=530,3=319.02)	009F0101.D	009F0102.D	BETTYP119_FGA.M	1.88	1.88	0.0	2.75	2.75	0.0	%	2.75	2.76	99.5
BettyP118 #FG7 ENV(1=530,3=319.02)	009F0101.D	009F0102.D	BETTYP119_FGA.M	1.88	1.88	0.1	2.71	2.81	1.7	%	2.76	2.76	100
He Blank #LB	001F1701.D	001F1702.D	BETTYP126_FGA.M	NA	NA	NA	0.0510	0.0510	0.0	%	0.0510	ND	
BettyP118 #FG7 ENV(1=530,3=319.02)	009F1001.D	009F1002.D	BETTYP126_FGA.M	1.88	1.88	0.0	2.79	2.83	0.0	%	2.81	2.76	102
BettyP118 #FG7 ENV(1=530,3=319.02)	009F1001.D	009F1002.D	BETTYP126_FGA.M	1.88	1.88	0.0	2.80	2.73	0.0	%	2.76	2.76	100
Oxygen -- Calibration Standards, Laboratory Blanks and Controls													
BettyP070 #FG3 ENV(1=374.56,2=391.18)	009F2001.D	009F2002.D	BETTYP119_FGA.M	4.52	4.52	0.0	4.93	4.92	0.1	%	4.92	4.81	102
He Blank #LB	001F2201.D	001F2202.D	BETTYP119_FGA.M	NA	NA	NA	0.0544	0.0544	0.0	%	0.0544	ND	
BettyP070 #FG3 ENV(1=374.56,2=391.18)	009F0301.D	009F0302.D	BETTYP119_FGA.M	4.51	4.52	0.0	4.47	4.41	0.6	%	4.44	4.81	92.3
BettyP070 #FG3 ENV(1=374.56,2=391.18)	009F0201.D	009F0202.D	BETTYP119_FGA.M	4.53	4.52	0.0	4.04	4.07	0.3	%	4.05	4.81	84.3
He Blank #LB	001F1701.D	001F1702.D	BETTYP126_FGA.M	NA	NA	NA	0.0544	0.0544	0.0	%	0.0544	ND	
BettyP070 #FG3 ENV(1=374.56,2=391.18)	009F1101.D	009F1102.D	BETTYP126_FGA.M	4.52	4.52	0.0	4.95	4.90	0.0	%	4.92	4.81	102
BettyP070 #FG3 ENV(1=374.56,2=391.18)	009F1101.D	009F1102.D	BETTYP126_FGA.M	4.52	4.52	0.0	4.90	4.93	0.0	%	4.91	4.81	102
Nitrogen -- Calibration Standards, Laboratory Blanks and Controls													
BettyP118 #FG7 ENV(1=530,3=319.02)	009F1901.D	009F1902.D	BETTYP119_FGA.M	4.88	4.88	0.0	3.48	3.47	0.1	%	3.47	3.37	103
He Blank #LB	001F2201.D	001F2202.D	BETTYP119_FGA.M	4.89	4.89	0.0	0.0867	0.0892	0.0	%	0.0880	J	
BettyP118 #FG7 ENV(1=530,3=319.02)	009F0101.D	009F0102.D	BETTYP119_FGA.M	4.87	4.87	0.0	3.48	3.42	0.9	%	3.45	3.37	102
BettyP118 #FG7 ENV(1=530,3=319.02)	009F0101.D	009F0102.D	BETTYP119_FGA.M	4.88	4.88	0.0	3.45	3.39	0.9	%	3.42	3.37	101
He Blank #LB	001F1701.D	001F1702.D	BETTYP126_FGA.M	4.89	4.89	0.0	0.102	0.104	0.0	%	0.103	J	
BettyP118 #FG7 ENV(1=530,3=319.02)	009F1001.D	009F1002.D	BETTYP126_FGA.M	4.88	4.88	0.0	3.35	3.32	0.0	%	3.33	3.37	98.9
BettyP118 #FG7 ENV(1=530,3=319.02)	009F1001.D	009F1002.D	BETTYP126_FGA.M	4.88	4.88	0.0	3.39	3.35	0.0	%	3.37	3.37	100

Enthalpy Analytical

Company: METCO Environmental
Client No. 14-388 (OH)
Job No. 1214-29

Parameters: ASTM D1946-90
Samples 9 Runs
Analyst Justin Guenzler

SAMPLE NAME	Filename #1	Filename #2	Analysis Method	Ret Time (min)	Ret Time (min)	%dif RT	Conc # 1	Conc # 2	%dif conc	Units	Avg Conc	Standard Tag	% Tag
Carbon monoxide -- Calibration Standards, Laboratory Blanks and Controls													
BettyP118 #FG7 ENV(1=530,3=319.02)	009F1901.D	009F1902.D	BETTYP119_FGA.M	6.26	6.26	0.0	3.42	3.42	0.0	%	3.42	3.37	101
He Blank #LB	001F2201.D	001F2202.D	BETTYP119_FGA.M	NA	NA	NA	0.0380	0.0380	0.0	%	0.0380	ND	
BettyP118 #FG7 ENV(1=530,3=319.02)	009F0101.D	009F0102.D	BETTYP119_FGA.M	6.24	6.25	0.0	3.32	3.33	0.0	%	3.32	3.37	98.6
BettyP118 #FG7 ENV(1=530,3=319.02)	009F0101.D	009F0102.D	BETTYP119_FGA.M	6.26	6.26	0.0	3.26	3.26	0.0	%	3.26	3.37	96.8
He Blank #LB	001F1701.D	001F1702.D	BETTYP126_FGA.M	NA	NA	NA	0.0380	0.0380	0.0	%	0.0380	ND	
BettyP118 #FG7 ENV(1=530,3=319.02)	009F1001.D	009F1002.D	BETTYP126_FGA.M	6.26	6.26	0.0	3.26	3.24	0.0	%	3.25	3.37	96.3
BettyP118 #FG7 ENV(1=530,3=319.02)	009F1001.D	009F1002.D	BETTYP126_FGA.M	6.26	6.26	0.0	3.23	3.25	0.0	%	3.24	3.37	96.1
Methane -- Calibration Standards, Laboratory Blanks and Controls													
BettyP118 #FG7 ENV(1=530,3=319.02)	009F1901.D	009F1902.D	BETTYP119_FGA.M	9.86	9.86	0.0	2.74	2.74	0.1	%	2.74	2.70	102
He Blank #LB	001F2201.D	001F2202.D	BETTYP119_FGA.M	NA	NA	NA	0.0305	0.0305	0.0	%	0.0305	ND	
BettyP118 #FG7 ENV(1=530,3=319.02)	009F0101.D	009F0102.D	BETTYP119_FGA.M	9.85	9.85	0.0	2.64	2.67	0.4	%	2.66	2.70	98.3
BettyP118 #FG7 ENV(1=530,3=319.02)	009F0101.D	009F0102.D	BETTYP119_FGA.M	9.86	9.86	0.0	2.62	2.64	0.4	%	2.63	2.70	97.6
He Blank #LB	001F1701.D	001F1702.D	BETTYP126_FGA.M	NA	NA	NA	0.0305	0.0305	0.0	%	0.0305	ND	
BettyP118 #FG7 ENV(1=530,3=319.02)	009F1001.D	009F1002.D	BETTYP126_FGA.M	9.86	9.86	0.0	2.58	2.60	0.0	%	2.59	2.70	95.9
BettyP118 #FG7 ENV(1=530,3=319.02)	009F1001.D	009F1002.D	BETTYP126_FGA.M	9.86	9.86	0.0	2.58	2.62	0.0	%	2.60	2.70	96.2
Carbon dioxide -- Calibration Standards, Laboratory Blanks and Controls													
BettyP070 #FG3 ENV(1=374.56,2=391.18)	009F2001.D	009F2002.D	BETTYP119_FGA.M	13.13	13.12	0.0	4.92	4.86	0.5	%	4.89	4.81	102
He Blank #LB	001F2201.D	001F2202.D	BETTYP119_FGA.M	NA	NA	NA	0.0544	0.0544	0.0	%	0.0544	ND	
BettyP070 #FG3 ENV(1=374.56,2=391.18)	009F0301.D	009F0302.D	BETTYP119_FGA.M	13.10	13.10	0.0	4.74	4.73	0.1	%	4.74	4.81	98.5
BettyP070 #FG3 ENV(1=374.56,2=391.18)	009F0201.D	009F0202.D	BETTYP119_FGA.M	13.11	13.11	0.0	4.72	4.74	0.1	%	4.73	4.81	98.3
He Blank #LB	001F1701.D	001F1702.D	BETTYP126_FGA.M	NA	NA	NA	0.0544	0.0544	0.0	%	0.0544	ND	
BettyP070 #FG3 ENV(1=374.56,2=391.18)	009F1101.D	009F1102.D	BETTYP126_FGA.M	13.11	13.11	0.0	4.86	4.81	0.0	%	4.83	4.81	100
BettyP070 #FG3 ENV(1=374.56,2=391.18)	009F1101.D	009F1102.D	BETTYP126_FGA.M	13.11	13.11	0.0	4.78	4.83	0.0	%	4.80	4.81	99.9

Calibration Table

Calib. Data Modified : 10/6/2014 1:22:13 PM

Rel. Reference Window : 2.000 %
Abs. Reference Window : 0.000 min
Rel. Non-ref. Window : 2.000 %
Abs. Non-ref. Window : 0.200 min
Uncalibrated Peaks : not reported
Partial Calibration : Yes, identified peaks are recalibrated
Correct All Ret. Times: No, only for identified peaks

Curve Type : Linear
Origin : Connected
Weight : Quadratic (Amnt)

Recalibration Settings:
Average Response : Average all calibrations
Average Retention Time: Floating Average New 75%

Calibration Report Options :
Printout of recalibrations within a sequence:
Calibration Table after Recalibration
Normal Report after Recalibration
If the sequence is done with bracketing:
Results of first cycle (ending previous bracket)

Signal 1: TCD1 A,
Signal 2: FID2 B,

RetTime [min]	Sig	Lvl	Amount [%]	Area	Amt/Area	Ref Grp	Name
1.881	1	5	3.05000e-1	4.09248	7.45269e-2		Hydrogen
		6	7.66000e-1	7.76654	9.86282e-2		
		7	2.69600	24.66670	1.09297e-1		
		8	8.00000	69.91390	1.14426e-1		
		28	24.97500	220.15269	1.13444e-1		
4.450	1	1	5.44000e-1	169.39249	3.21148e-3		Oxygen
		2	1.33000	407.15214	3.26659e-3		
		3	4.81000	1436.66182	3.34804e-3		
		4	10.01000	2894.05347	3.45882e-3		
		26	99.90000	2.87944e4	3.46943e-3		
4.852	1	5	3.82000e-1	144.10159	2.65091e-3		Nitrogen
		6	9.57000e-1	348.34468	2.74728e-3		
		7	3.37000	1172.73039	2.87364e-3		
		8	10.00000	3372.63346	2.96504e-3		
		22	99.90000	3.25456e4	3.06954e-3		
6.225	1	5	3.80000e-1	125.63694	3.02459e-3		Carbon monoxide
		6	9.53000e-1	321.38383	2.96530e-3		
		7	3.35300	1122.41992	2.98730e-3		
		8	9.95000	3258.34969	3.05369e-3		
		25	99.50000	3.27472e4	3.03843e-3		
9.815	1	5	3.05000e-1	93.39945	3.26554e-3		Methane
		6	7.66000e-1	231.83964	3.30401e-3		
		7	2.69600	800.56720	3.36761e-3		
		8	8.00000	2285.63493	3.50012e-3		
		24	99.00000	2.90004e4	3.41375e-3		
13.130	1	1	5.40000e-1	273.94096	1.97123e-3		Carbon Dioxide
		2	1.33000	671.07458	1.98190e-3		

RetTime [min]	Sig	Lvl	Amount [%]	Area	Amt/Area	Ref	Grp	Name
		3	4.81000	2353.49894	2.04377e-3			
		4	10.01000	4744.72461	2.10971e-3			
		21	99.80000	4.61597e4	2.16206e-3			

More compound-specific settings:

Compound: Hydrogen
  Time Window : From 1.762 min To 1.999 min

Compound: Oxygen
  Time Window : From 4.167 min To 4.606 min

Compound: Nitrogen
  Time Window : From 4.512 min To 5.052 min

Compound: Carbon monoxide
  Time Window : From 5.625 min To 6.375 min

Compound: Methane
  Time Window : From 9.397 min To 10.165 min

Compound: Carbon Dioxide
  Time Window : From 12.515 min To 13.360 min

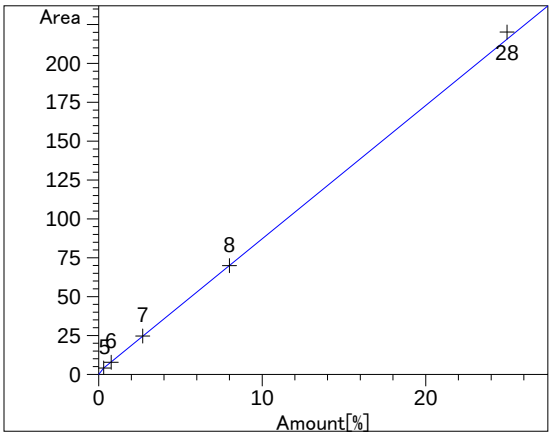
1 Warnings or Errors :

Warning : Cal. table open and changed while report was generated.

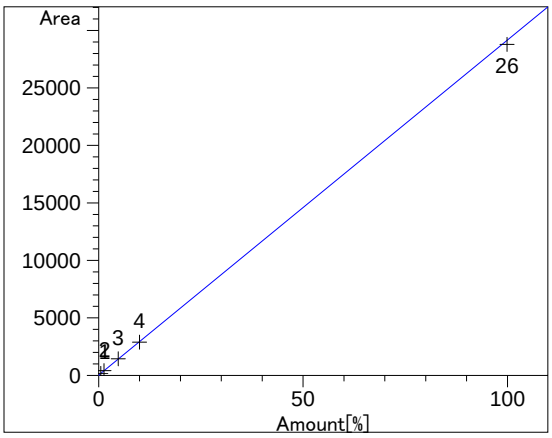
Peak Sum Table

No Entries in table

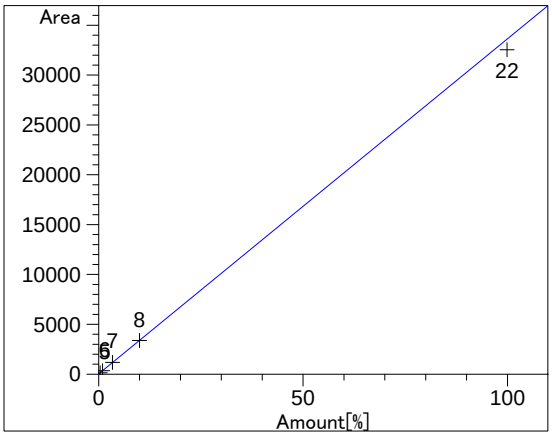
Calibration Curves



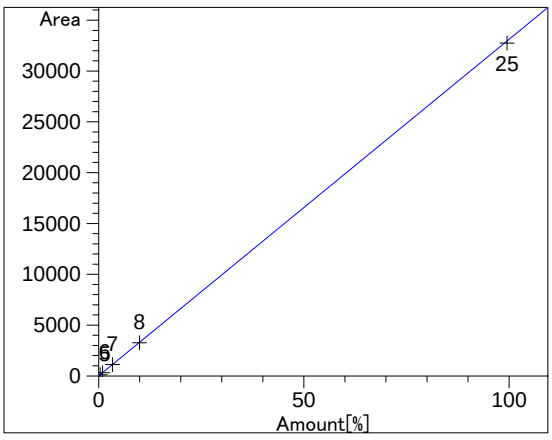
Hydrogen at exp. RT: 1.881
TCD1 A,
Correlation: 0.99965
Residual Std. Dev.: 2.58621
Formula: y = mx + b
m: 8.57836
b: 1.43918
x: Amount
y: Area
Calibration Level Weights:
Level 5 : 1
Level 6 : 0.158541
Level 7 : 0.012799
Level 8 : 0.001454
Level 28 : 0.000149



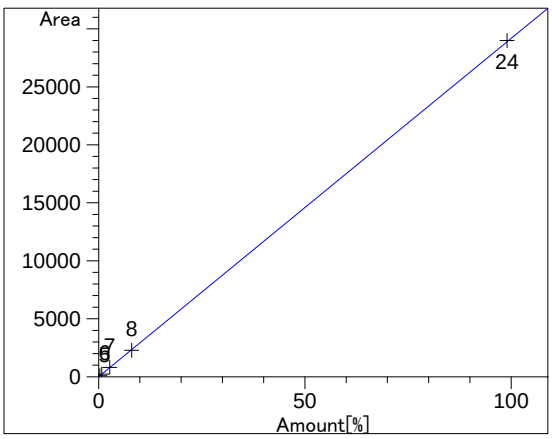
Oxygen at exp. RT: 4.450
TCD1 A,
Correlation: 0.99983
Residual Std. Dev.: 208.35265
Formula: y = mx + b
m: 291.69644
b: 12.05702
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.167299
Level 3 : 0.012791
Level 4 : 0.002953
Level 26 : 0.00003



Nitrogen at exp. RT: 4.852
TCD1 A,
Correlation: 0.99960
Residual Std. Dev.: 619.90273
Formula: y = mx + b
m: 336.35297
b: 17.32337
x: Amount
y: Area
Calibration Level Weights:
Level 5 : 1
Level 6 : 0.159332
Level 7 : 0.012849
Level 8 : 0.001459
Level 22 : 0.000015

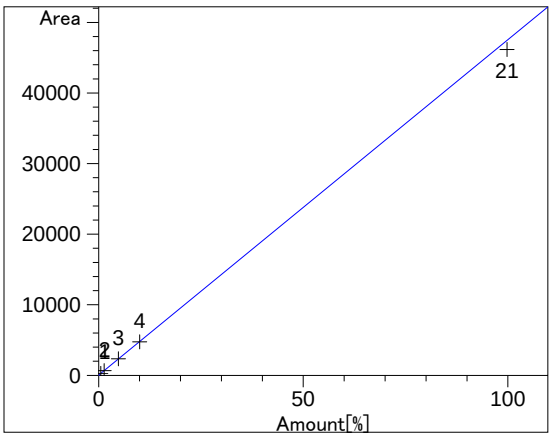


Carbon monoxide at exp. RT: 6.225
TCD1 A,
Correlation: 0.99990
Residual Std. Dev.: 130.74997
Formula: y = mx + b
m: 331.34990
b: 5.98714e-1
x: Amount
y: Area
Calibration Level Weights:
Level 5 : 1
Level 6 : 0.158994
Level 7 : 0.012844
Level 8 : 0.001459
Level 25 : 0.000015



Methane at exp. RT: 9.815
TCD1 A,
Correlation: 0.99984
Residual Std. Dev.: 66.45368
Formula: y = mx + b
m: 291.86181
b: 4.94383
x: Amount
y: Area
Calibration Level Weights:
Level 5 : 1
Level 6 : 0.158541
Level 7 : 0.012799
Level 8 : 0.001454

Level 24 : 9.49138e-006



Carbon Dioxide at exp. RT: 13.130
TCD1 A,
Correlation: 0.99962
Residual Std. Dev.: 761.23638
Formula: y = mx + b
m: 475.51337
b: 20.57542
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.164848
Level 3 : 0.012604
Level 4 : 0.00291
Level 21 : 0.000029

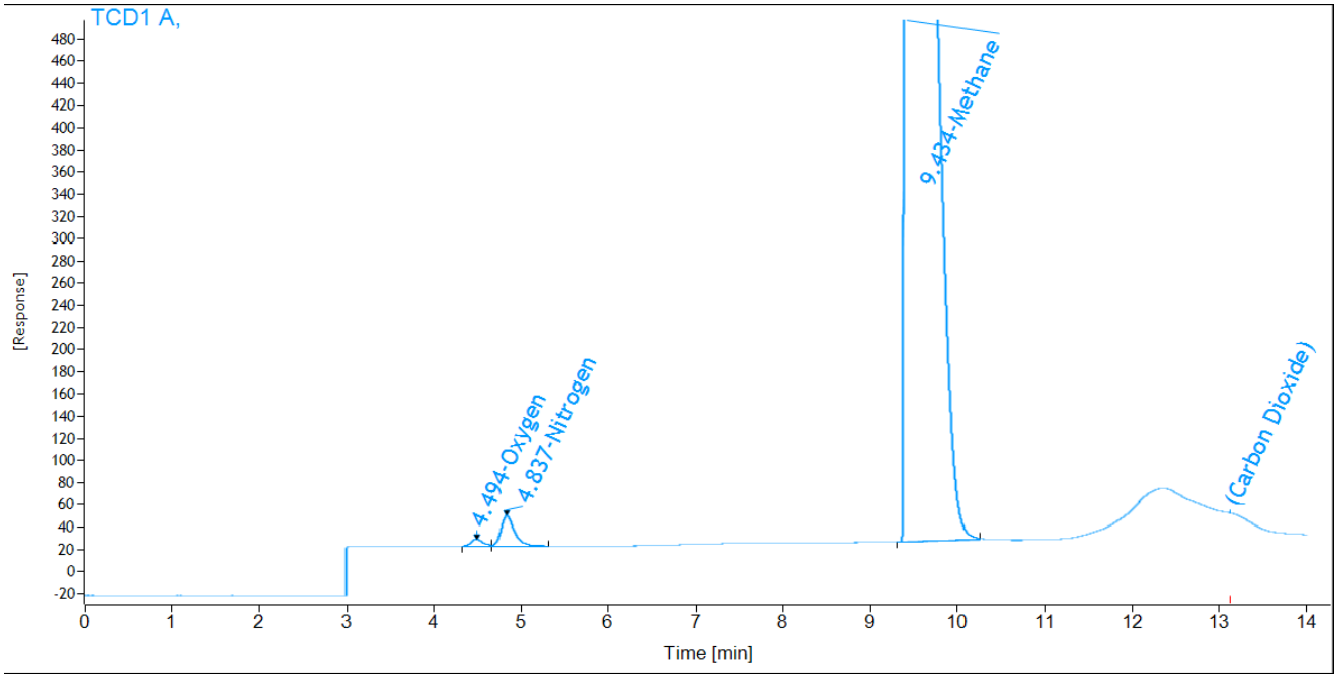
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Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP070\008F0101.D
Sample name: 99.0% CH4 #FGA24
File_Location \GC\2014\Betty\Quarter 4
Injection date: 10/3/2014 12:18:46 PM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP070_FGA.M
Last changed: 10/6/2014 8:38:08 AM
Instrument: Betty
Sequence_Name BETTYP070
Acq. operator: Todd Huml

Sample type: Calibration
Location: Vial 8
Injection volume: 250.000
Injection: 1 of 3
File_Version 3



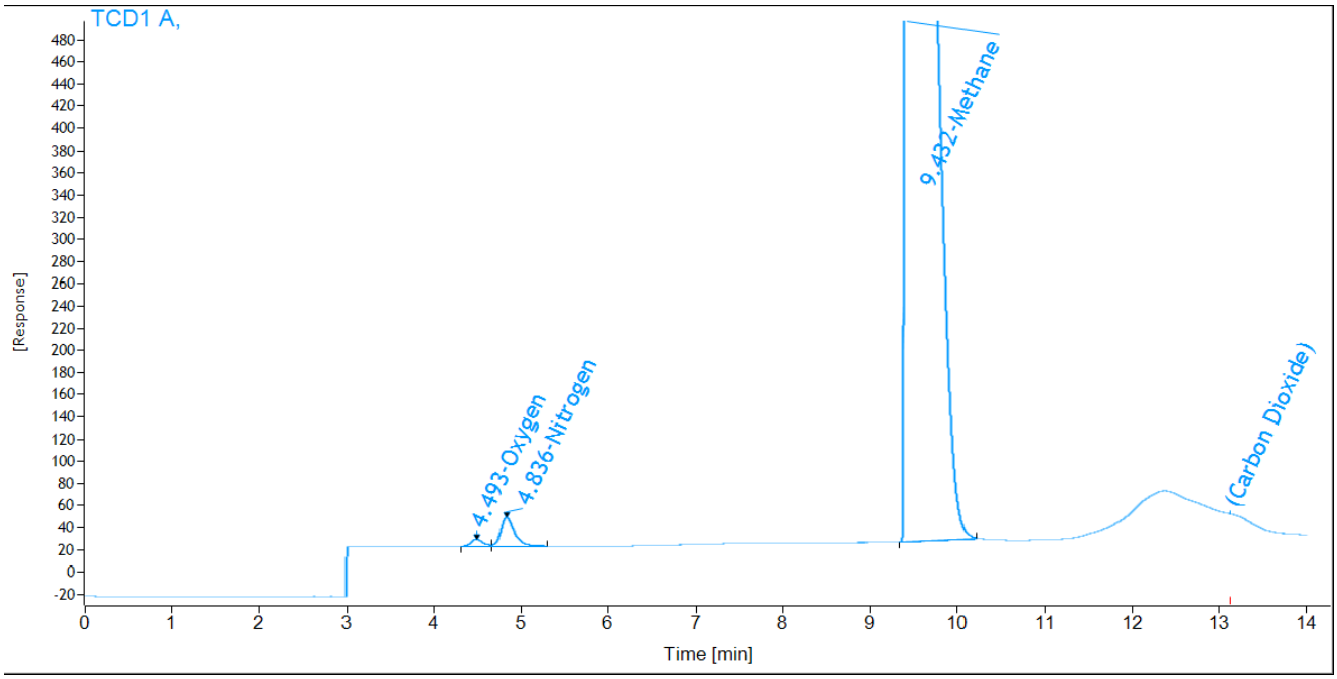
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BV	4.49	59.2307	1	0.19	0.189	%
Nitrogen	VB	4.84	286.0226	1	0.80	0.799	%
Carbon monoxide				1	0.00		%
Methane	BB	9.43	29077.9238	1	99.61	99.612	%
Carbon Dioxide				1	0.00		%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP070\008F0102.D
Sample name: 99.0% CH4 #FGA24
File_Location \GC\2014\Betty\Quarter 4
Injection date: 10/3/2014 12:39:27 PM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP070_FGA.M
Last changed: 10/6/2014 8:38:08 AM
Instrument: Betty
Sequence_Name BETTYP070
Acq. operator: Todd Huml

Sample type: Calibration
Location: Vial 8
Injection volume: 250.000
Injection: 2 of 3
File_Version 3



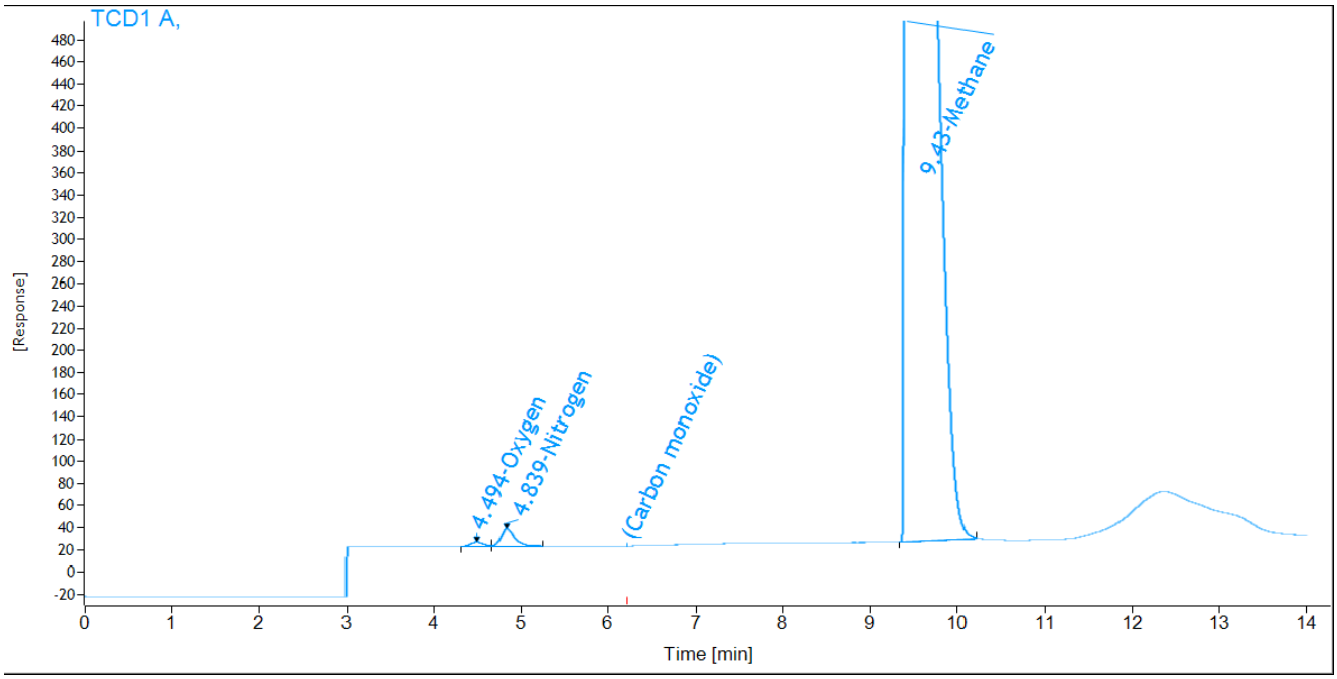
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BV	4.49	58.3427	1	0.19	0.186	%
Nitrogen	VB	4.84	280.3680	1	0.78	0.782	%
Carbon monoxide				1	0.00		%
Methane	BB	9.43	28779.7051	1	98.59	98.590	%
Carbon Dioxide				1	0.00		%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP070\008F0103.D
Sample name: 99.0% CH4 #FGA24
File_Location \GC\2014\Betty\Quarter 4
Injection date: 10/3/2014 1:00:16 PM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP070_FGA.M
Last changed: 10/6/2014 8:38:08 AM
Instrument: Betty
Sequence_Name BETTYP070
Acq. operator: Todd Huml

Sample type: Calibration
Location: Vial 8
Injection volume: 250.000
Injection: 3 of 3
File_Version 3



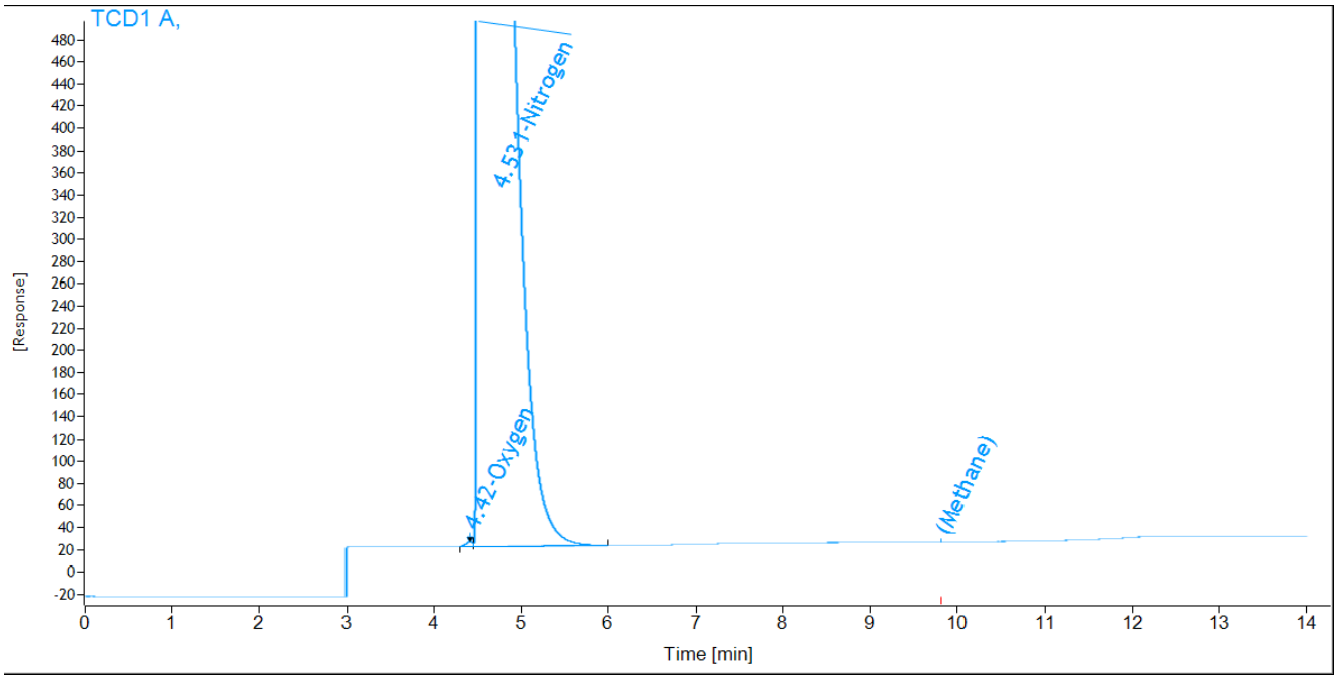
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BV	4.49	34.6003	1	0.11	0.110	%
Nitrogen	VB	4.84	167.3766	1	0.45	0.446	%
Carbon monoxide				1	0.00		%
Methane	BB	9.43	29143.4727	1	99.84	99.837	%
Carbon Dioxide				1	0.00		%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP070\016F0201.D
Sample name: 99.9% N2 #FGA22
File_Location \GC\2014\Betty\Quarter 4
Injection date: 10/3/2014 1:20:59 PM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP070_FGA.M
Last changed: 10/6/2014 8:38:08 AM
Instrument: Betty
Sequence_Name BETTYP070
Acq. operator: Todd Huml

Sample type: Calibration
Location: Vial 16
Injection volume: 250.000
Injection: 1 of 3
File_Version 3



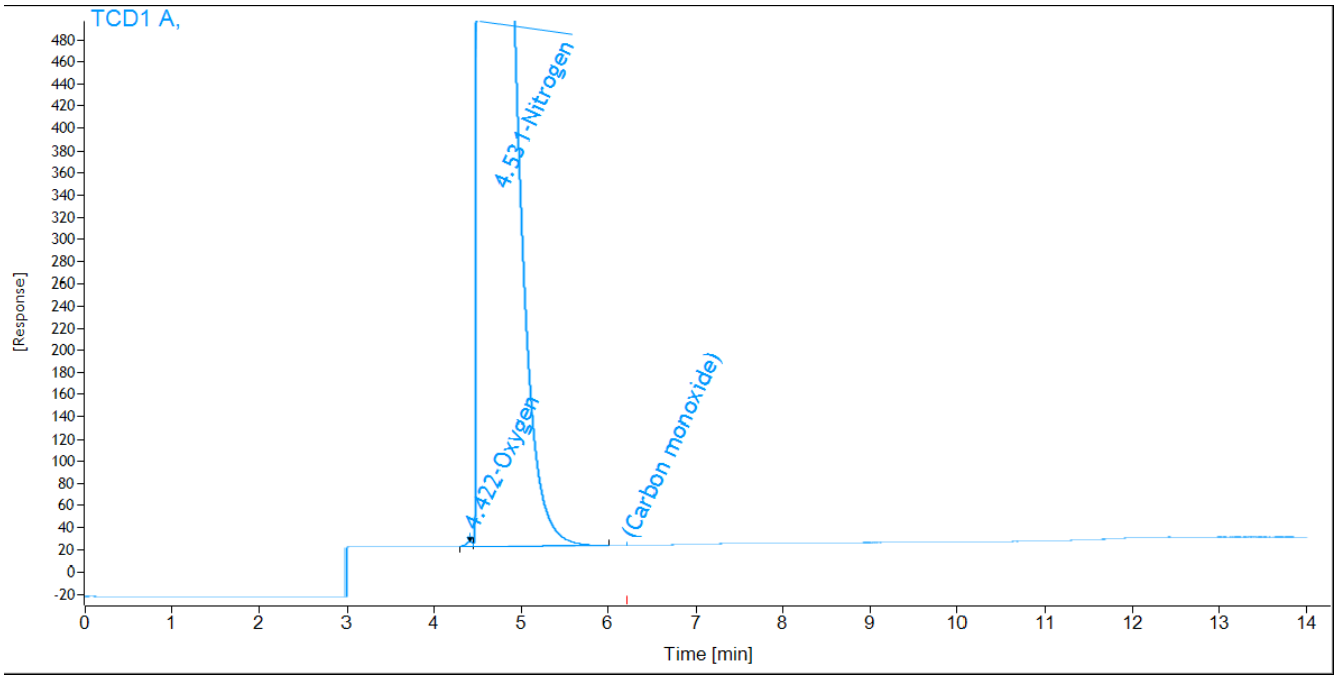
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BV	4.42	19.0268	1	0.06	0.061	%
Nitrogen	VB	4.53	32648.2969	1	97.01	97.014	%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide				1	0.00		%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP070\016F0202.D
Sample name: 99.9% N2 #FGA22
File_Location \GC\2014\Betty\Quarter 4
Injection date: 10/3/2014 1:41:39 PM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP070_FGA.M
Last changed: 10/6/2014 8:38:08 AM
Instrument: Betty
Sequence_Name BETTYP070
Acq. operator: Todd Huml

Sample type: Calibration
Location: Vial 16
Injection volume: 250.000
Injection: 2 of 3
File_Version 3



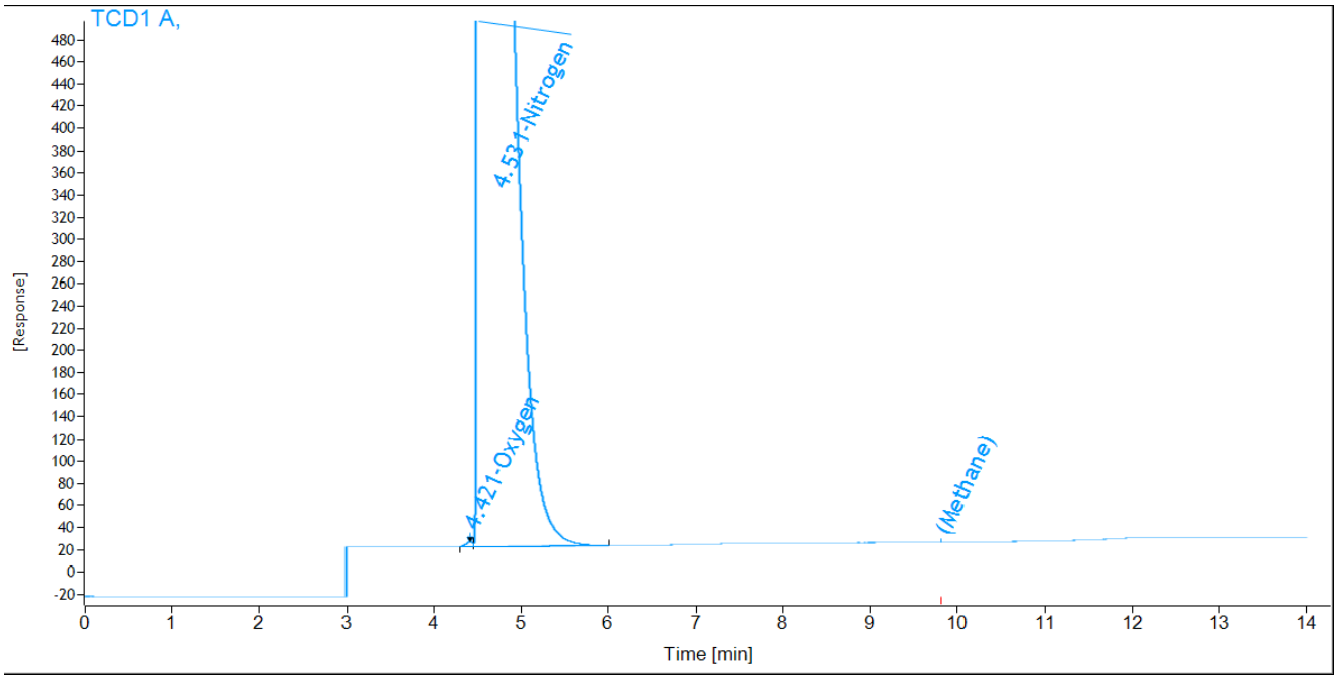
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BV	4.42	18.0915	1	0.06	0.058	%
Nitrogen	VB	4.53	32570.1055	1	96.78	96.782	%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide				1	0.00		%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP070\016F0203.D
Sample name: 99.9% N2 #FGA22
File_Location \GC\2014\Betty\Quarter 4
Injection date: 10/3/2014 2:02:29 PM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP070_FGA.M
Last changed: 10/6/2014 8:38:08 AM
Instrument: Betty
Sequence_Name BETTYP070
Acq. operator: Todd Huml

Sample type: Calibration
Location: Vial 16
Injection volume: 250.000
Injection: 3 of 3
File_Version 3



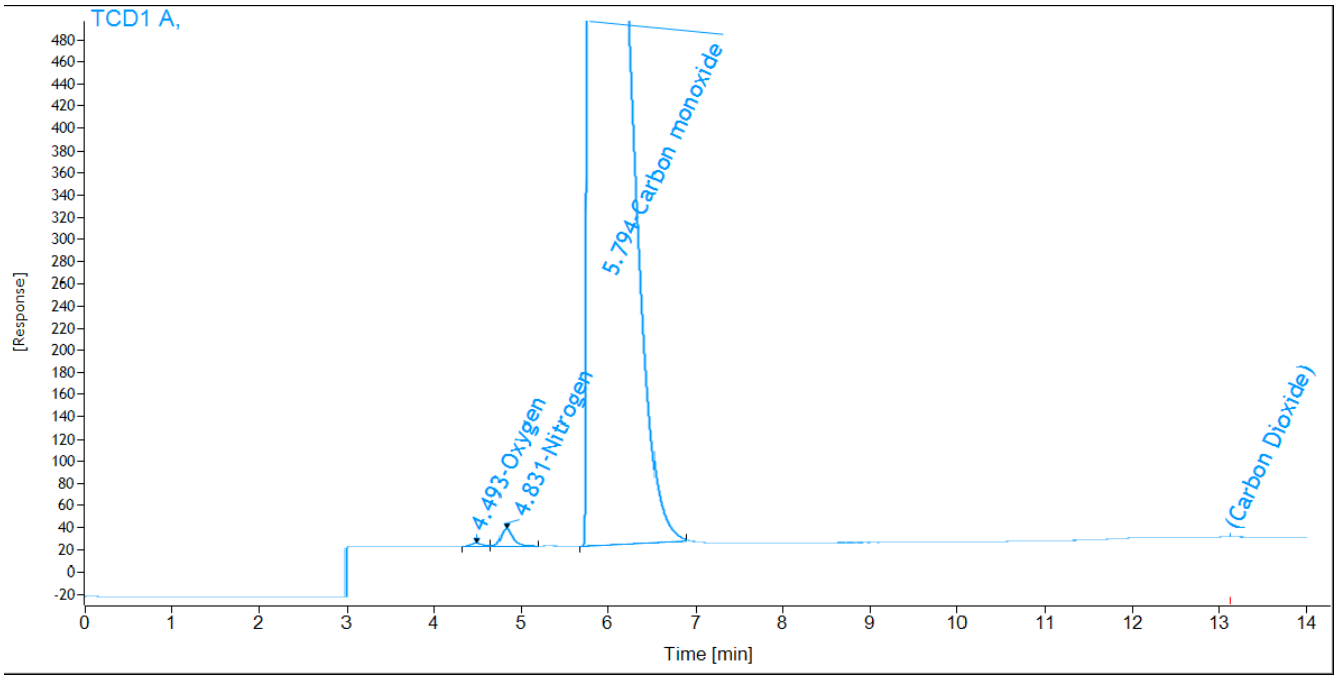
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BV	4.42	17.9101	1	0.06	0.057	%
Nitrogen	VB	4.53	32418.3281	1	96.33	96.330	%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide				1	0.00		%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP070\005F0301.D
Sample name: 99.5% CO #FGA25
File_Location \GC\2014\Betty\Quarter 4
Injection date: 10/3/2014 2:23:21 PM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP070_FGA.M
Last changed: 10/6/2014 8:38:08 AM
Instrument: Betty
Sequence_Name BETTYP070
Acq. operator: Todd Huml

Sample type: Calibration
Location: Vial 5
Injection volume: 250.000
Injection: 1 of 3
File_Version 3



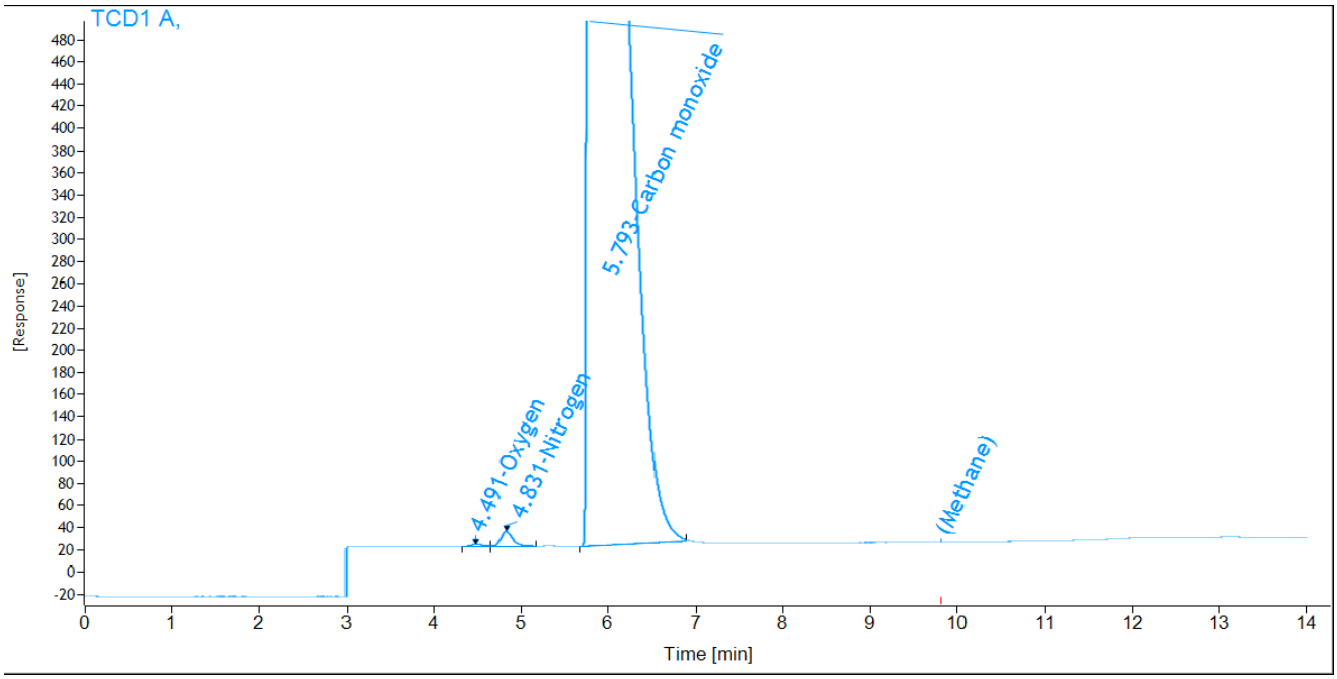
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BV	4.49	24.8252	1	0.08	0.079	%
Nitrogen	VB	4.83	151.6738	1	0.40	0.399	%
Carbon monoxide	BB	5.79	32729.6055	1	98.77	98.775	%
Methane				1	0.00		%
Carbon Dioxide				1	0.00		%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP070\005F0302.D
Sample name: 99.5% CO #FGA25
File_Location \GC\2014\Betty\Quarter 4
Injection date: 10/3/2014 2:44:07 PM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP070_FGA.M
Last changed: 10/6/2014 8:38:08 AM
Instrument: Betty
Sequence_Name BETTYP070
Acq. operator: Todd Huml

Sample type: Calibration
Location: Vial 5
Injection volume: 250.000
Injection: 2 of 3
File_Version 3



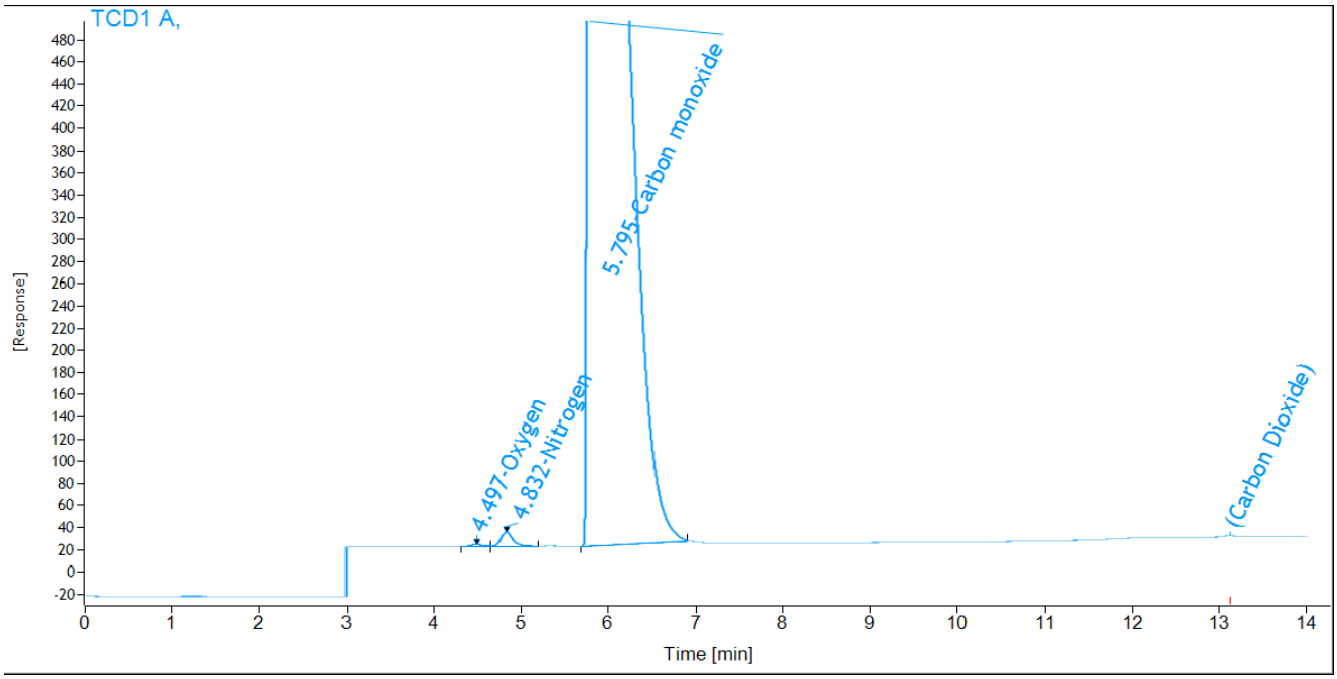
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BV	4.49	18.8908	1	0.06	0.060	%
Nitrogen	VB	4.83	128.5297	1	0.34	0.337	%
Carbon monoxide	BB	5.79	32819.8555	1	99.05	99.047	%
Methane				1	0.00		%
Carbon Dioxide				1	0.00		%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP070\005F0303.D
Sample name: 99.5% CO #FGA25
File_Location \GC\2014\Betty\Quarter 4
Injection date: 10/3/2014 3:04:48 PM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP070_FGA.M
Last changed: 10/6/2014 8:38:08 AM
Instrument: Betty
Sequence_Name BETTYP070
Acq. operator: Todd Huml

Sample type: Calibration
Location: Vial 5
Injection volume: 250.000
Injection: 3 of 3
File_Version 3



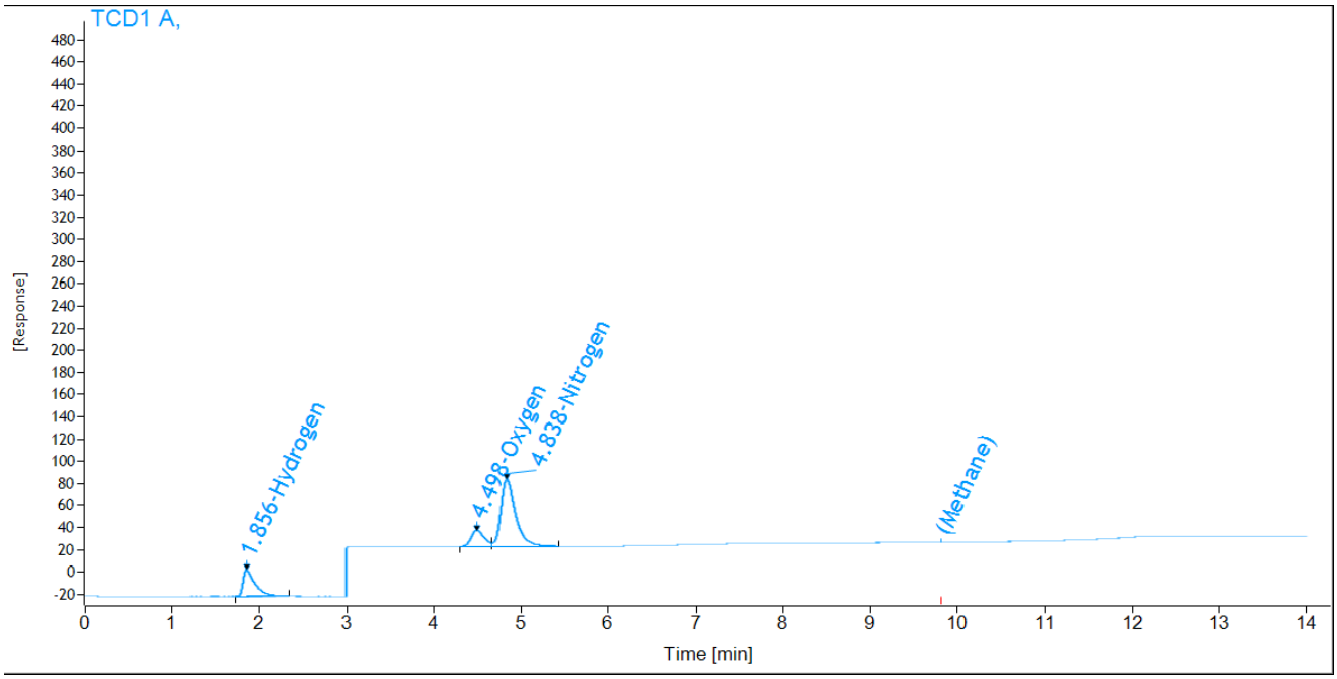
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BV	4.50	16.6190	1	0.05	0.053	%
Nitrogen	VB	4.83	122.7738	1	0.32	0.322	%
Carbon monoxide	BB	5.80	32692.0879	1	98.66	98.662	%
Methane				1	0.00		%
Carbon Dioxide				1	0.00		%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP070\003F0401.D
Sample name: 24.975% H2 #FGA28
File_Location \GC\2014\Betty\Quarter 4
Injection date: 10/3/2014 3:25:38 PM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP070_FGA.M
Last changed: 10/6/2014 8:38:08 AM
Instrument: Betty
Sequence_Name BETTYP070
Acq. operator: Todd Huml

Sample type: Calibration
Location: Vial 3
Injection volume: 250.000
Injection: 1 of 3
File_Version 3



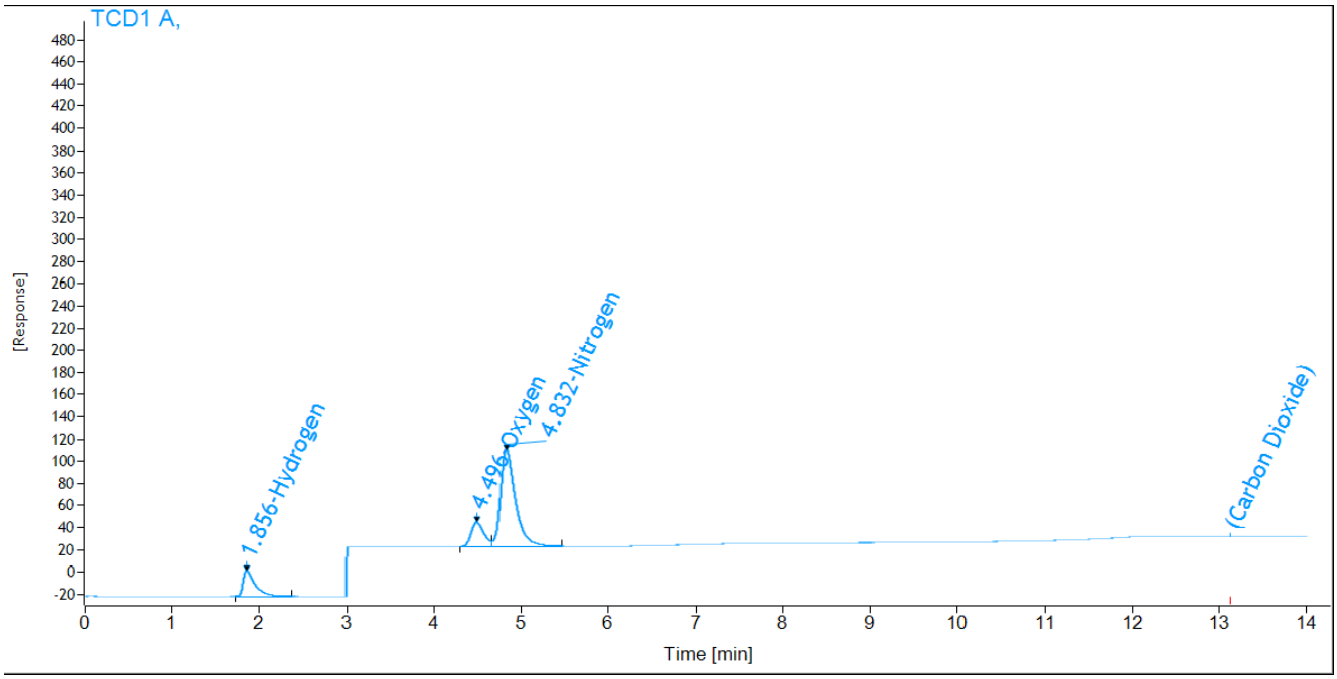
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen	BB	1.86	225.6381	1	26.14	26.135	%
Oxygen	BV	4.50	147.2793	1	0.47	0.469	%
Nitrogen	VB	4.84	701.1094	1	2.03	2.033	%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide				1	0.00		%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP070\003F0402.D
Sample name: 24.975% H2 #FGA28
File_Location \GC\2014\Betty\Quarter 4
Injection date: 10/3/2014 3:46:26 PM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP070_FGA.M
Last changed: 10/6/2014 8:38:08 AM
Instrument: Betty
Sequence_Name BETTYP070
Acq. operator: Todd Huml

Sample type: Calibration
Location: Vial 3
Injection volume: 250.000
Injection: 2 of 3
File_Version 3



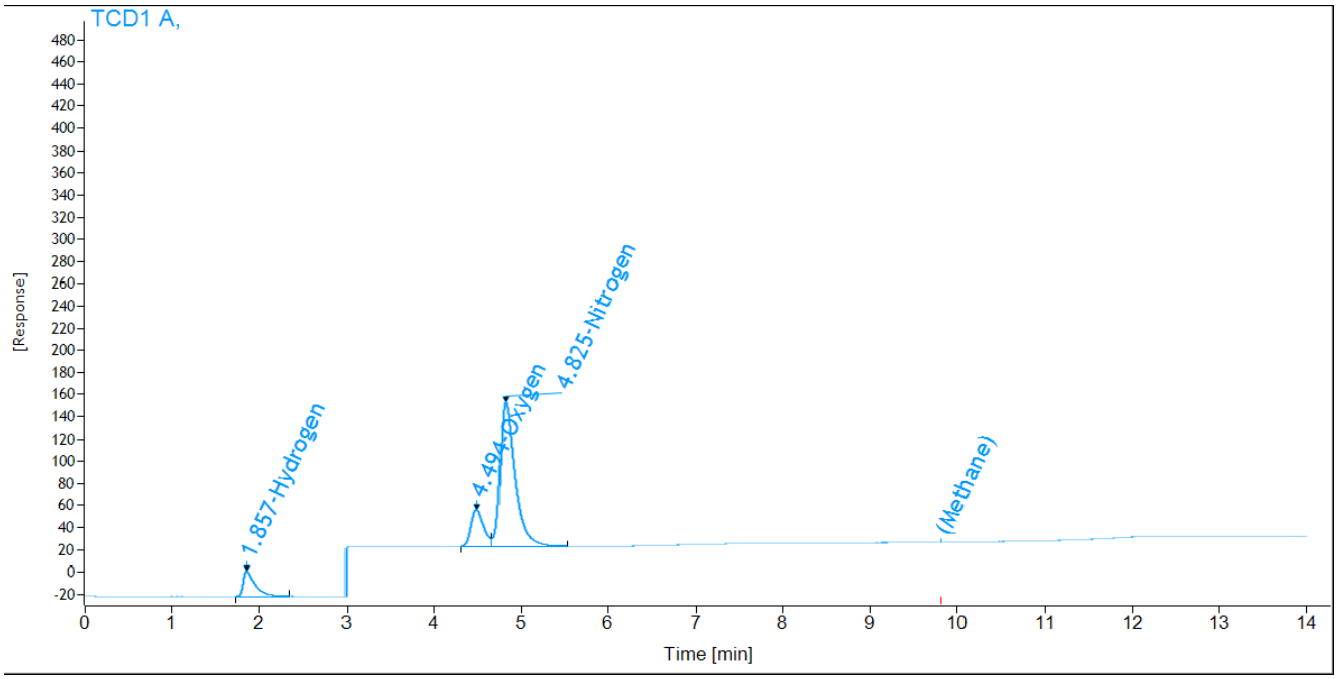
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen	BB	1.86	220.0614	1	25.49	25.485	%
Oxygen	BV	4.50	219.0428	1	0.71	0.710	%
Nitrogen	VB	4.83	1016.1797	1	2.97	2.970	%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide				1	0.00		%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP070\003F0403.D
Sample name: 24.975% H2 #FGA28
File_Location \GC\2014\Betty\Quarter 4
Injection date: 10/3/2014 4:07:11 PM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP070_FGA.M
Last changed: 10/6/2014 8:38:08 AM
Instrument: Betty
Sequence_Name BETTYP070
Acq. operator: Todd Huml

Sample type: Calibration
Location: Vial 3
Injection volume: 250.000
Injection: 3 of 3
File_Version 3



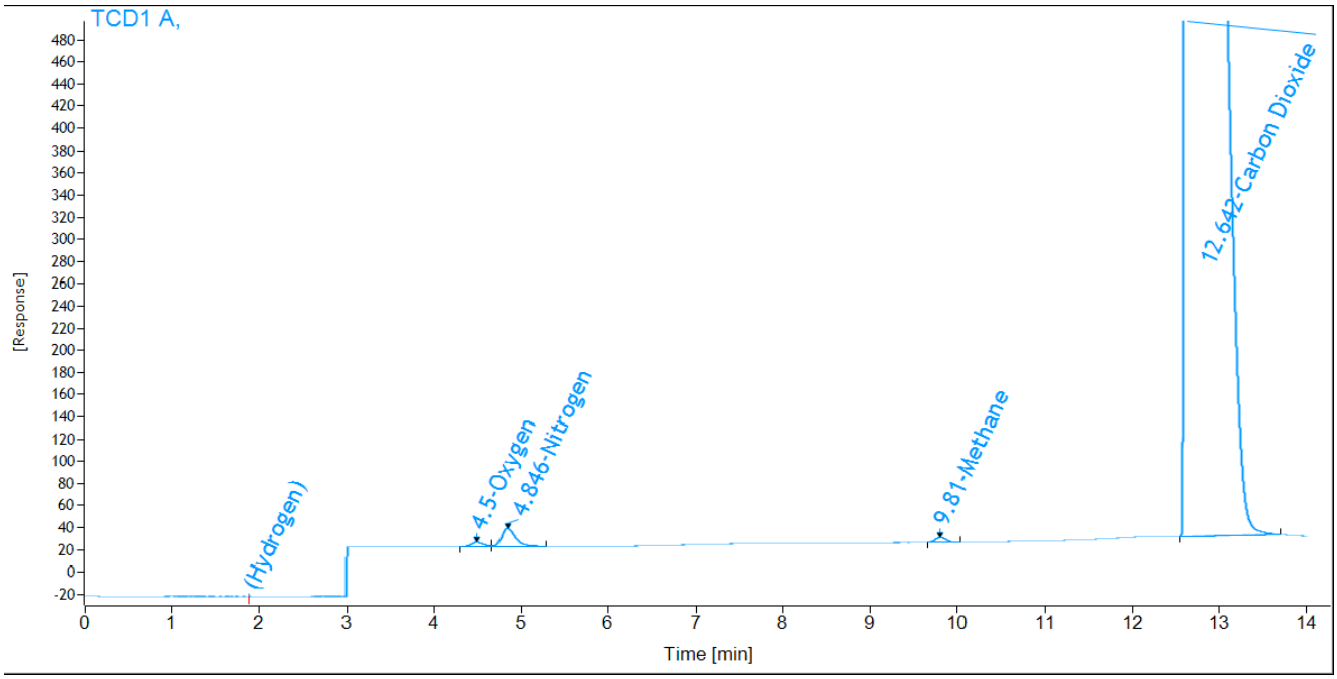
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen	BB	1.86	214.7586	1	24.87	24.867	%
Oxygen	BV	4.49	334.0298	1	1.10	1.104	%
Nitrogen	VB	4.82	1515.9490	1	4.46	4.456	%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide				1	0.00		%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP070\006F0501.D
Sample name: 99.8% CO2 #FGA21
File_Location \GC\2014\Betty\Quarter 4
Injection date: 10/3/2014 4:27:57 PM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP070_FGA.M
Last changed: 10/6/2014 8:38:08 AM
Instrument: Betty
Sequence_Name BETTYP070
Acq. operator: Todd Huml

Sample type: Calibration
Location: Vial 6
Injection volume: 250.000
Injection: 1 of 3
File_Version 3



Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BV	4.50	36.5821	1	0.12	0.117	%
Nitrogen	VB	4.85	177.1516	1	0.48	0.475	%
Carbon monoxide				1	0.00		%
Methane	BB	9.81	37.2593	1	0.12	0.121	%
Carbon Dioxide	MM	12.64	46065.8203	1	96.83	96.833	%

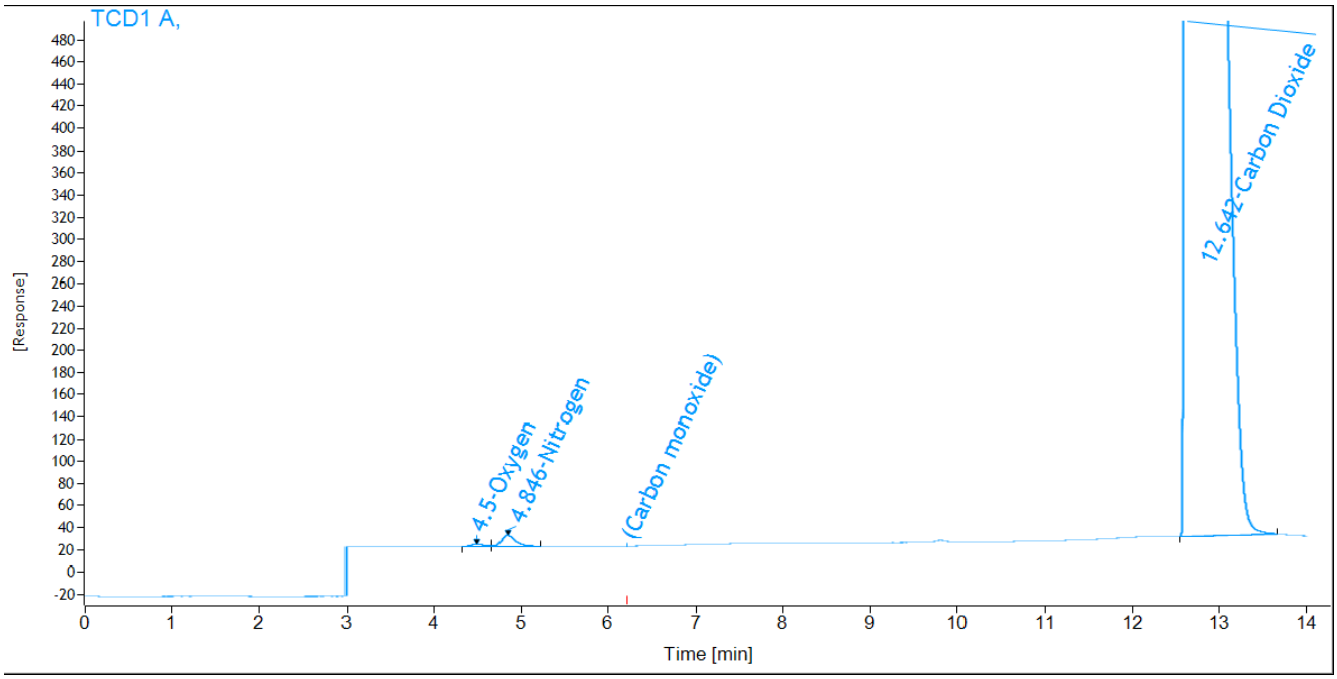
Manual Int. "II" (MTH)

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP070\006F0502.D
Sample name: 99.8% CO2 #FGA21
File_Location \GC\2014\Betty\Quarter 4
Injection date: 10/3/2014 4:48:41 PM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP070_FGA.M
Last changed: 10/6/2014 8:38:08 AM
Instrument: Betty
Sequence_Name BETTYP070
Acq. operator: Todd Huml

Sample type: Calibration
Location: Vial 6
Injection volume: 250.000
Injection: 2 of 3
File_Version 3



Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BV	4.50	22.0989	1	0.07	0.070	%
Nitrogen	VB	4.85	108.1537	1	0.28	0.283	%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide	MM	12.64	46169.1875	1	97.05	97.050	%

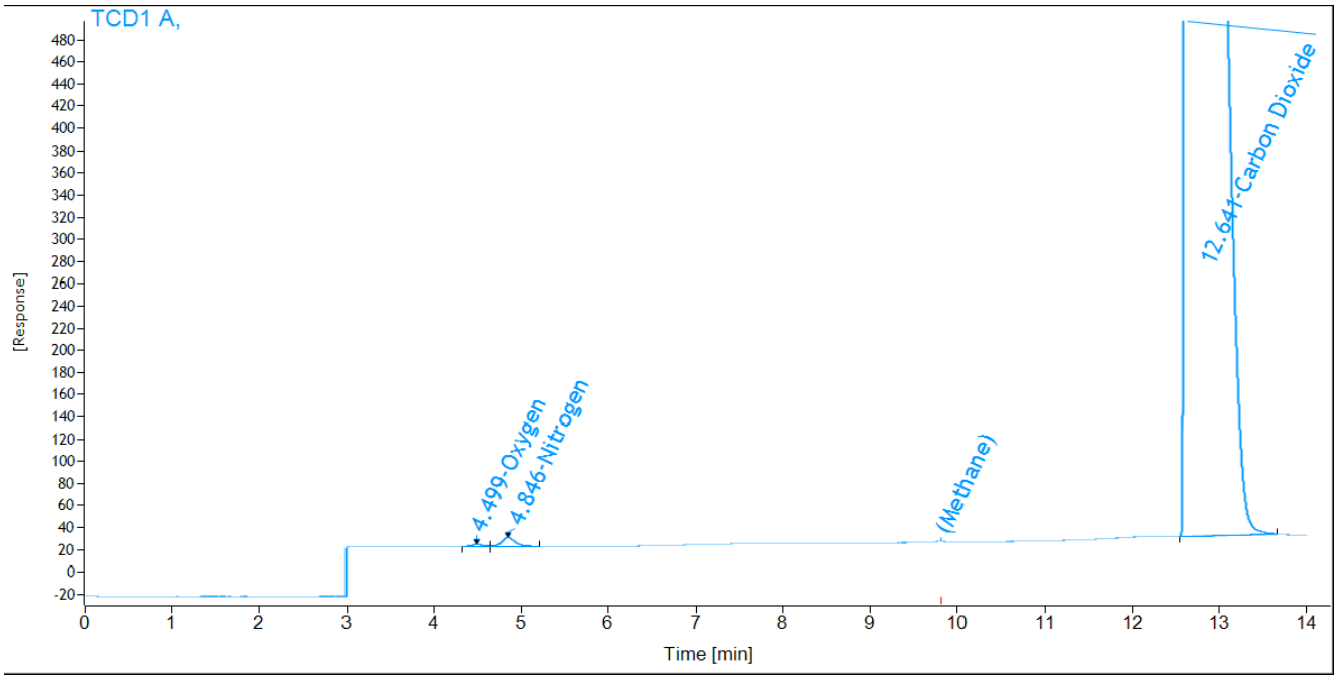
Manual Int. "II" (MTH)

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP070\006F0503.D
Sample name: 99.8% CO2 #FGA21
File_Location \GC\2014\Betty\Quarter 4
Injection date: 10/3/2014 5:09:23 PM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP070_FGA.M
Last changed: 10/6/2014 8:38:08 AM
Instrument: Betty
Sequence_Name BETTYP070
Acq. operator: Todd Huml

Sample type: Calibration
Location: Vial 6
Injection volume: 250.000
Injection: 3 of 3
File_Version 3



Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BV	4.50	17.1693	1	0.05	0.055	%
Nitrogen	VB	4.85	85.1850	1	0.22	0.223	%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide	MM	12.64	46244.1367	1	97.21	97.208	%

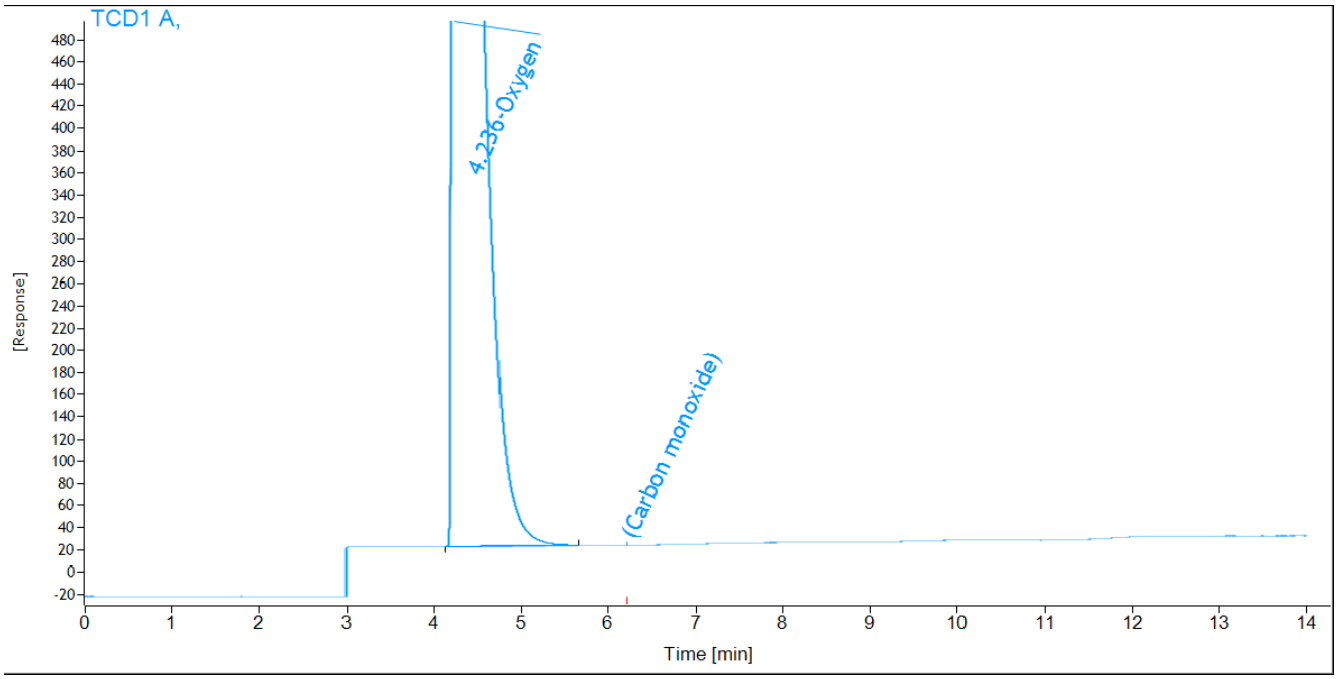
Manual Int. "II" (MTH)

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP070\015F0601.D
Sample name: 99.9% O2 #FGA26
File_Location \GC\2014\Betty\Quarter 4
Injection date: 10/3/2014 5:29:59 PM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP070_FGA.M
Last changed: 10/6/2014 8:38:08 AM
Instrument: Betty
Sequence_Name BETTYP070
Acq. operator: Todd Huml

Sample type: Calibration
Location: Vial 15
Injection volume: 250.000
Injection: 1 of 3
File_Version 3



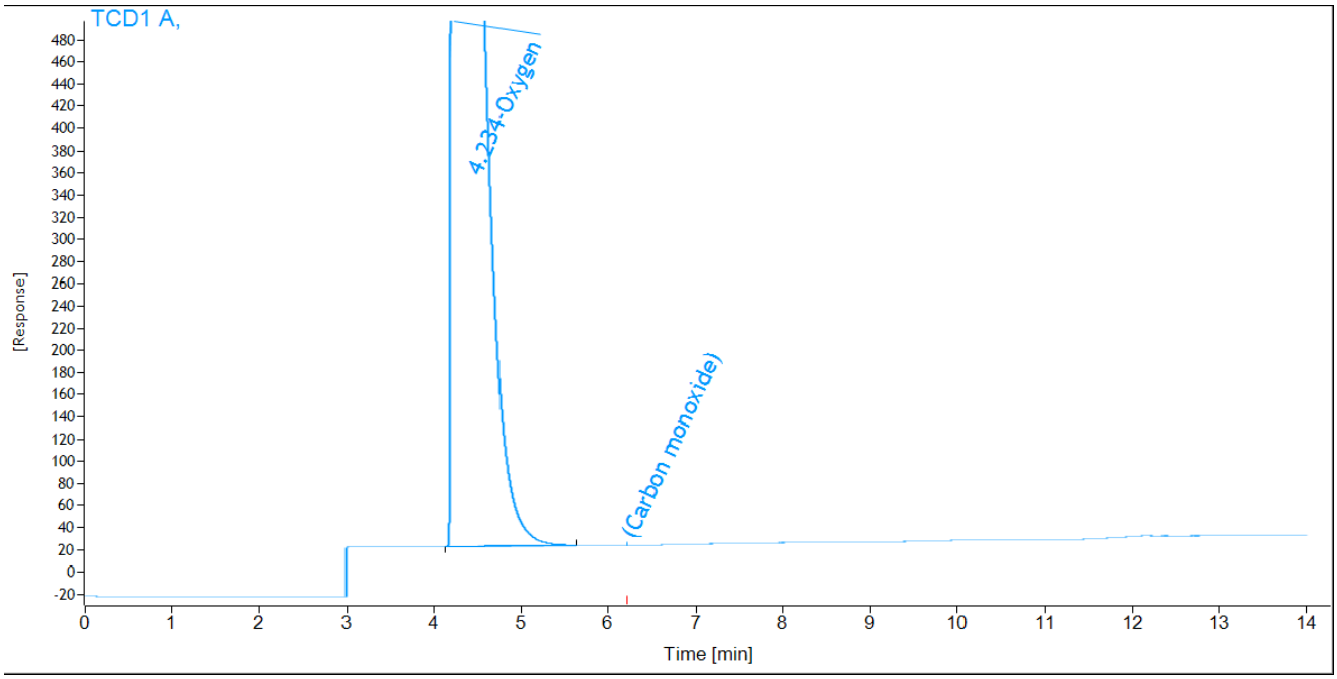
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BB	4.24	28678.1738	1	98.27	98.274	%
Nitrogen				1	0.00		%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide				1	0.00		%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP070\015F0602.D
Sample name: 99.9% O2 #FGA26
File_Location \GC\2014\Betty\Quarter 4
Injection date: 10/3/2014 5:50:40 PM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP070_FGA.M
Last changed: 10/6/2014 8:38:08 AM
Instrument: Betty
Sequence_Name BETTYP070
Acq. operator: Kristen McKinley

Sample type: Calibration
Location: Vial 15
Injection volume: 250.000
Injection: 2 of 3
File_Version 3



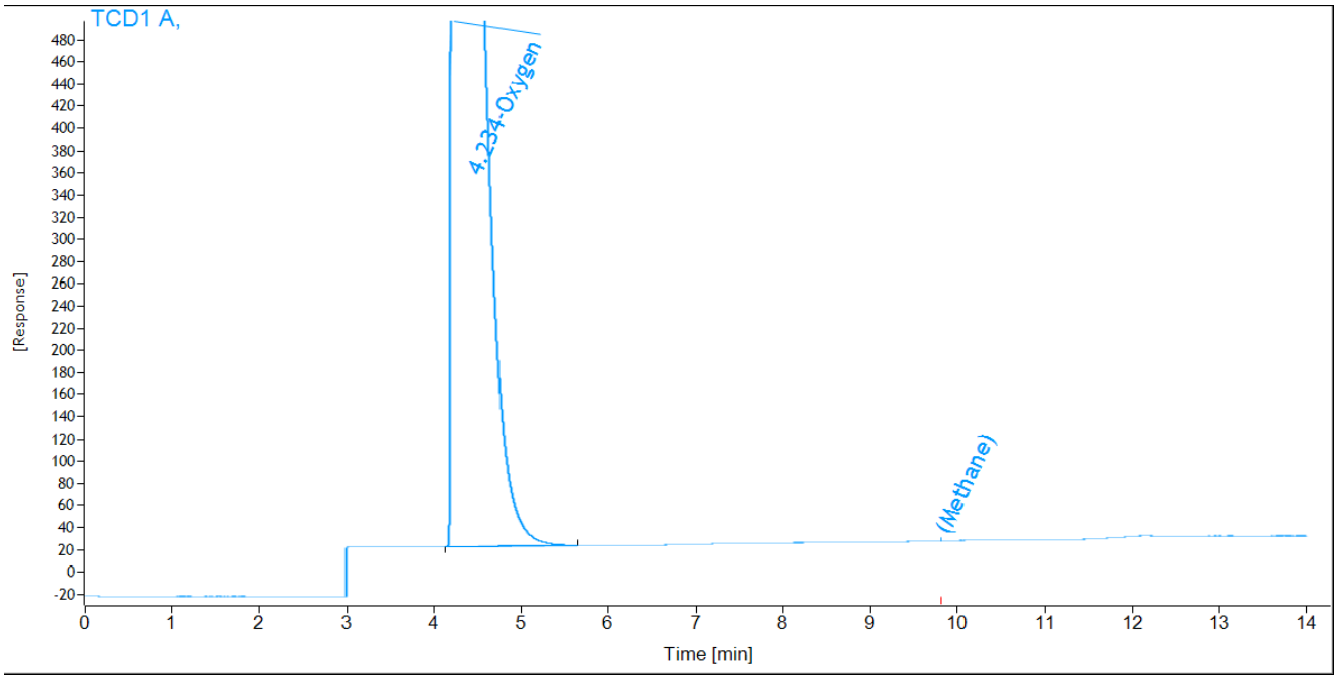
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BB	4.23	28865.1074	1	98.91	98.915	%
Nitrogen				1	0.00		%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide				1	0.00		%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP070\015F0603.D
Sample name: 99.9% O2 #FGA26
File_Location \GC\2014\Betty\Quarter 4
Injection date: 10/3/2014 6:11:26 PM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP070_FGA.M
Last changed: 10/6/2014 8:38:08 AM
Instrument: Betty
Sequence_Name BETTYP070
Acq. operator: Kristen McKinley

Sample type: Calibration
Location: Vial 15
Injection volume: 250.000
Injection: 3 of 3
File_Version 3



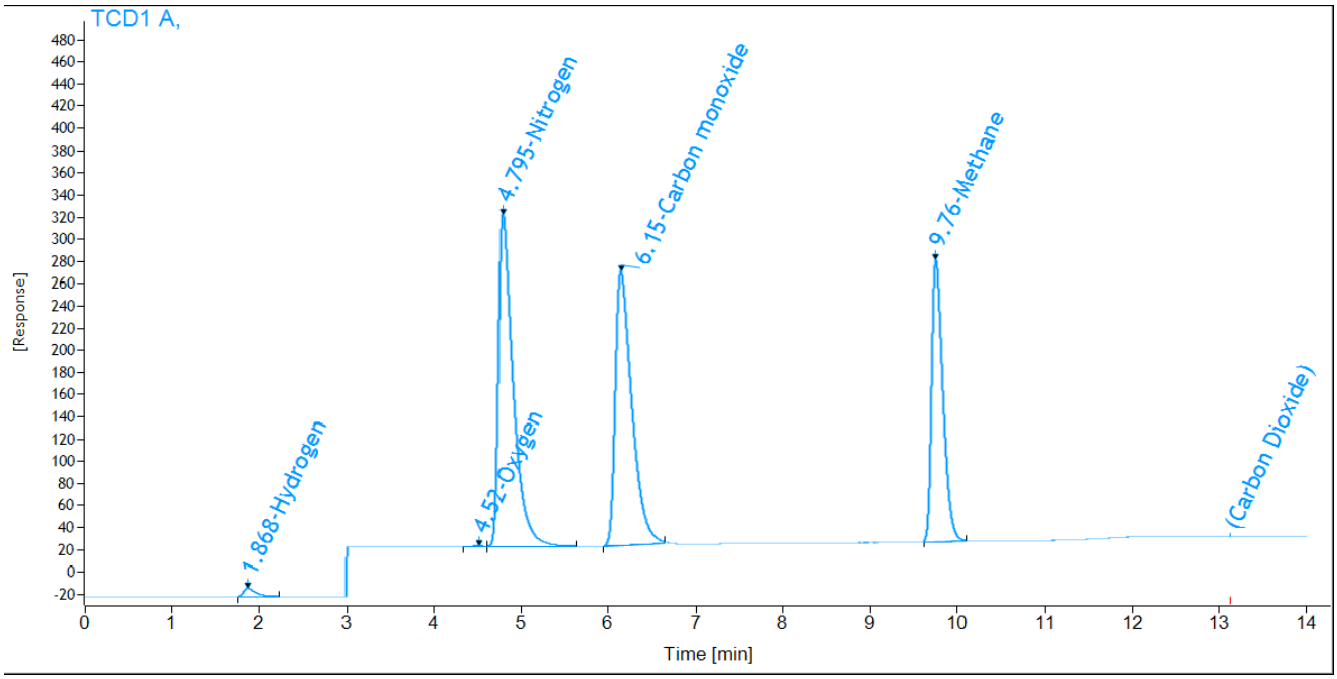
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BB	4.23	28839.8262	1	98.83	98.828	%
Nitrogen				1	0.00		%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide				1	0.00		%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP070\009F0801.D
Sample name: BettyP070 #FG8 ENV(1=0,3=319.08)
File_Location \GC\2014\Betty\Quarter 4
Injection date: 10/3/2014 6:55:19 PM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP070_FGA.M
Last changed: 10/6/2014 8:38:08 AM
Instrument: Betty
Sequence_Name BETTYP070
Acq. operator: Kristen McKinley

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 1 of 4
File_Version 3



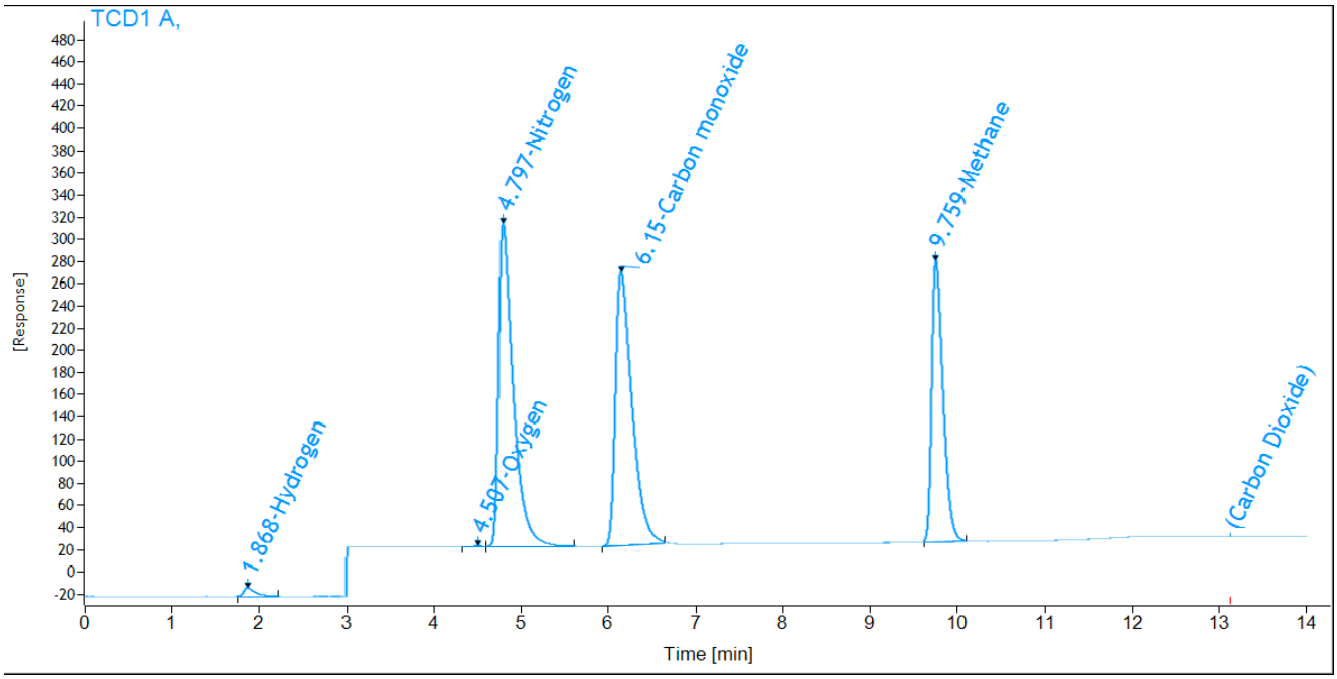
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen	BB	1.87	69.9306	1	7.98	7.984	%
Oxygen	BV	4.52	3.8836	1	0.01	0.012	%
Nitrogen	VB	4.79	3449.9592	1	10.21	10.205	%
Carbon monoxide	BB	6.15	3257.9016	1	9.83	9.830	%
Methane	BB	9.76	2286.3564	1	7.82	7.817	%
Carbon Dioxide				1	0.00		%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP070\009F0802.D
Sample name: BettyP070 #FG8 ENV(1=0,3=319.08)
File_Location \GC\2014\Betty\Quarter 4
Injection date: 10/3/2014 7:18:27 PM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP070_FGA.M
Last changed: 10/6/2014 8:38:08 AM
Instrument: Betty
Sequence_Name BETTYP070
Acq. operator: Kristen McKinley

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 2 of 4
File_Version 3



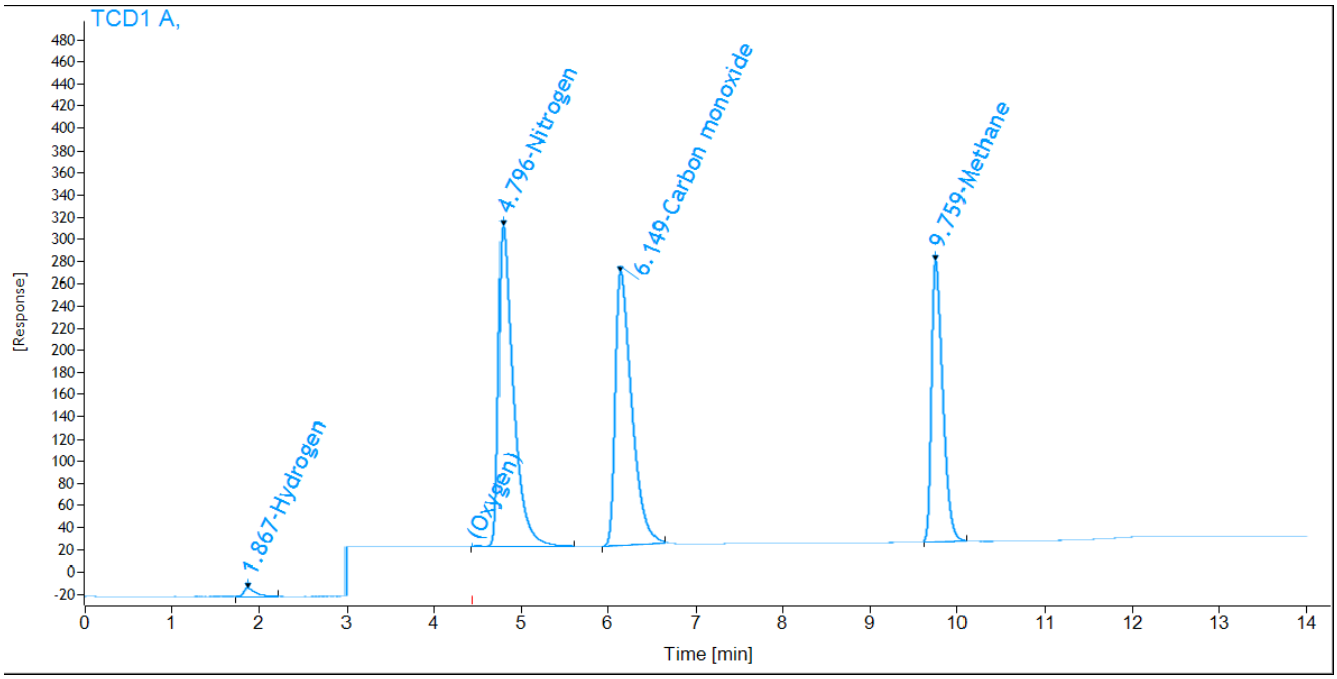
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen	BB	1.87	70.1058	1	8.00	8.005	%
Oxygen	BV	4.51	3.5209	1	0.01	0.011	%
Nitrogen	VB	4.80	3340.6218	1	9.88	9.880	%
Carbon monoxide	BB	6.15	3257.5530	1	9.83	9.829	%
Methane	BB	9.76	2283.5190	1	7.81	7.807	%
Carbon Dioxide				1	0.00		%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP070\009F0803.D
Sample name: BettyP070 #FG8 ENV(1=0,3=319.08)
File_Location \GC\2014\Betty\Quarter 4
Injection date: 10/3/2014 7:41:38 PM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP070_FGA.M
Last changed: 10/6/2014 8:38:08 AM
Instrument: Betty
Sequence_Name BETTYP070
Acq. operator: Kristen McKinley

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 3 of 4
File_Version 3



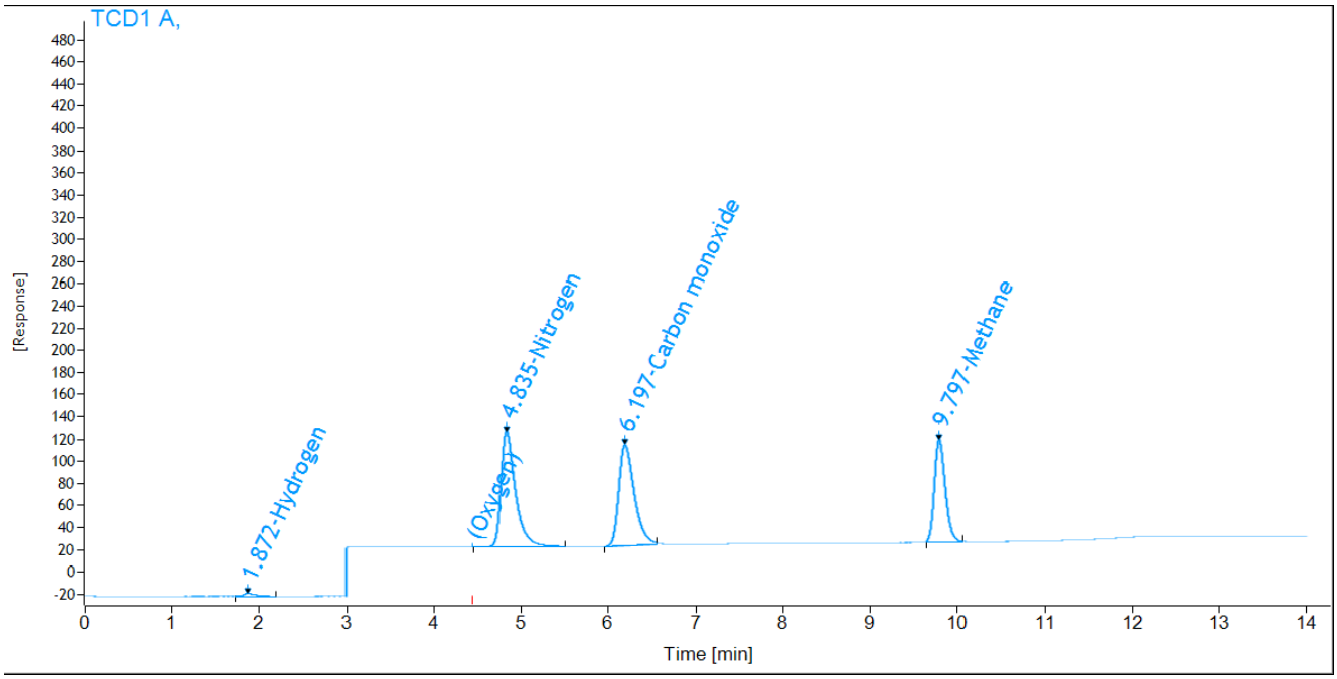
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen	BB	1.87	69.7054	1	7.96	7.958	%
Oxygen				1	0.00		%
Nitrogen	BB	4.80	3327.3193	1	9.84	9.841	%
Carbon monoxide	BB	6.15	3259.5945	1	9.84	9.836	%
Methane	BB	9.76	2287.0293	1	7.82	7.819	%
Carbon Dioxide				1	0.00		%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP070\009F0901.D
Sample name: BettyP070 #FG7 ENV(1=530,3=319.08)
File_Location \GC\2014\Betty\Quarter 4
Injection date: 10/3/2014 8:27:46 PM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP070_FGA.M
Last changed: 10/6/2014 8:38:08 AM
Instrument: Betty
Sequence_Name BETTYP070
Acq. operator: Kristen McKinley

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 1 of 4
File_Version 3



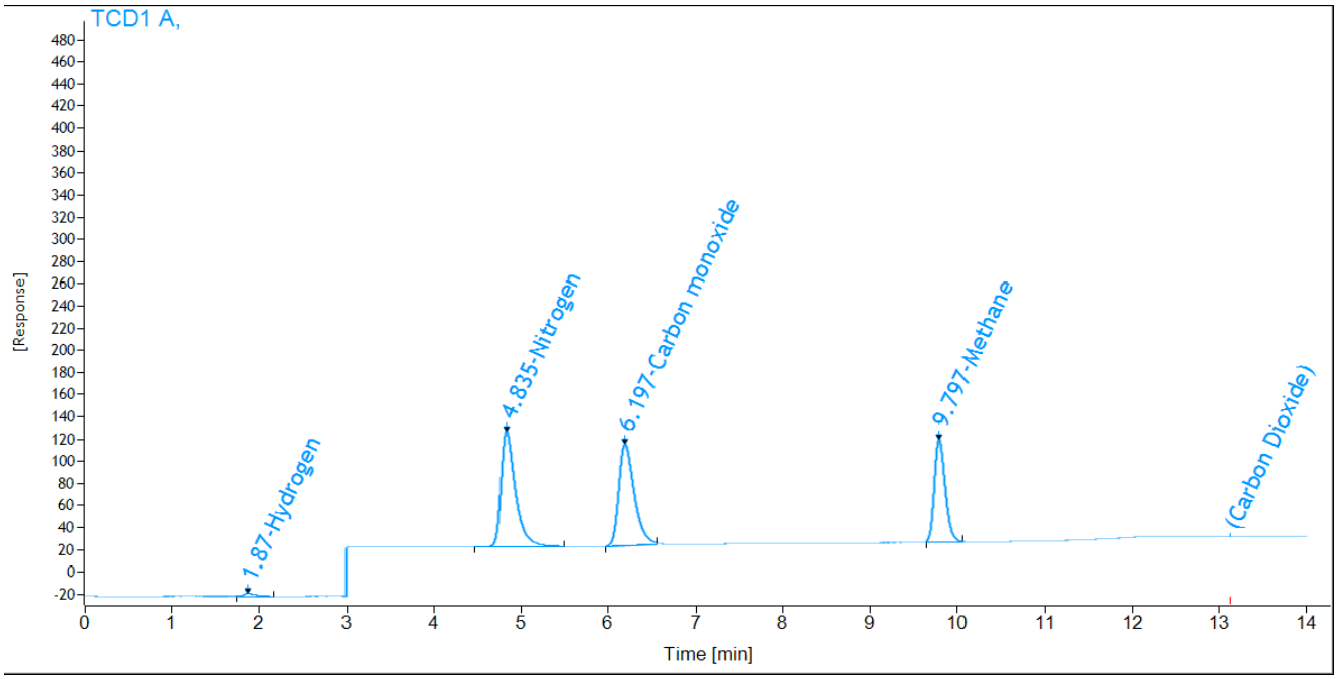
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen	BB	1.87	24.6568	1	2.71	2.707	%
Oxygen				1	0.00		%
Nitrogen	BB	4.83	1173.9417	1	3.44	3.439	%
Carbon monoxide	BB	6.20	1121.4645	1	3.38	3.383	%
Methane	BB	9.80	798.7877	1	2.72	2.720	%
Carbon Dioxide				1	0.00		%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP070\009F0902.D
Sample name: BettyP070 #FG7 ENV(1=530,3=319.08)
File_Location \GC\2014\Betty\Quarter 4
Injection date: 10/3/2014 8:50:56 PM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP070_FGA.M
Last changed: 10/6/2014 8:38:08 AM
Instrument: Betty
Sequence_Name BETTYP070
Acq. operator: Kristen McKinley

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 2 of 4
File_Version 3



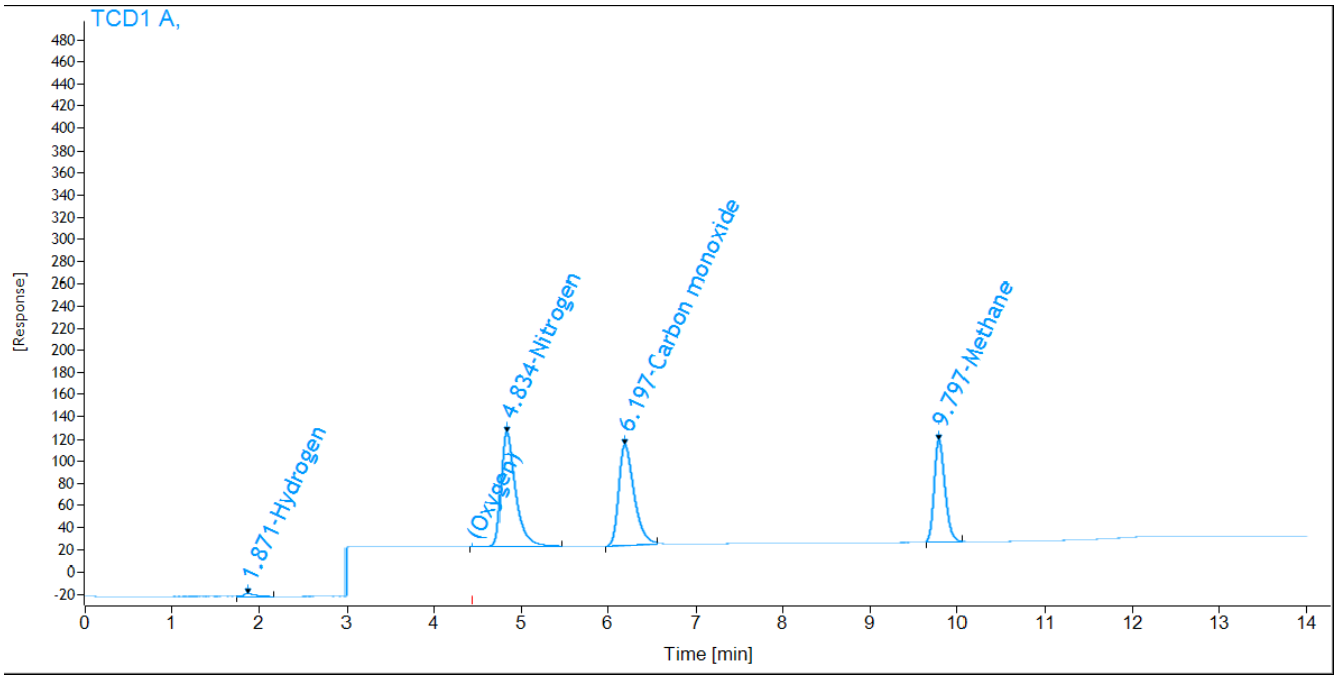
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen	BB	1.87	24.6162	1	2.70	2.702	%
Oxygen				1	0.00		%
Nitrogen	BB	4.83	1172.4453	1	3.43	3.434	%
Carbon monoxide	BB	6.20	1123.5916	1	3.39	3.389	%
Methane	BB	9.80	801.7972	1	2.73	2.730	%
Carbon Dioxide				1	0.00		%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP070\009F0903.D
Sample name: BettyP070 #FG7 ENV(1=530,3=319.08)
File_Location \GC\2014\Betty\Quarter 4
Injection date: 10/3/2014 9:14:01 PM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP070_FGA.M
Last changed: 10/6/2014 8:38:08 AM
Instrument: Betty
Sequence_Name BETTYP070
Acq. operator: Kristen McKinley

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 3 of 4
File_Version 3



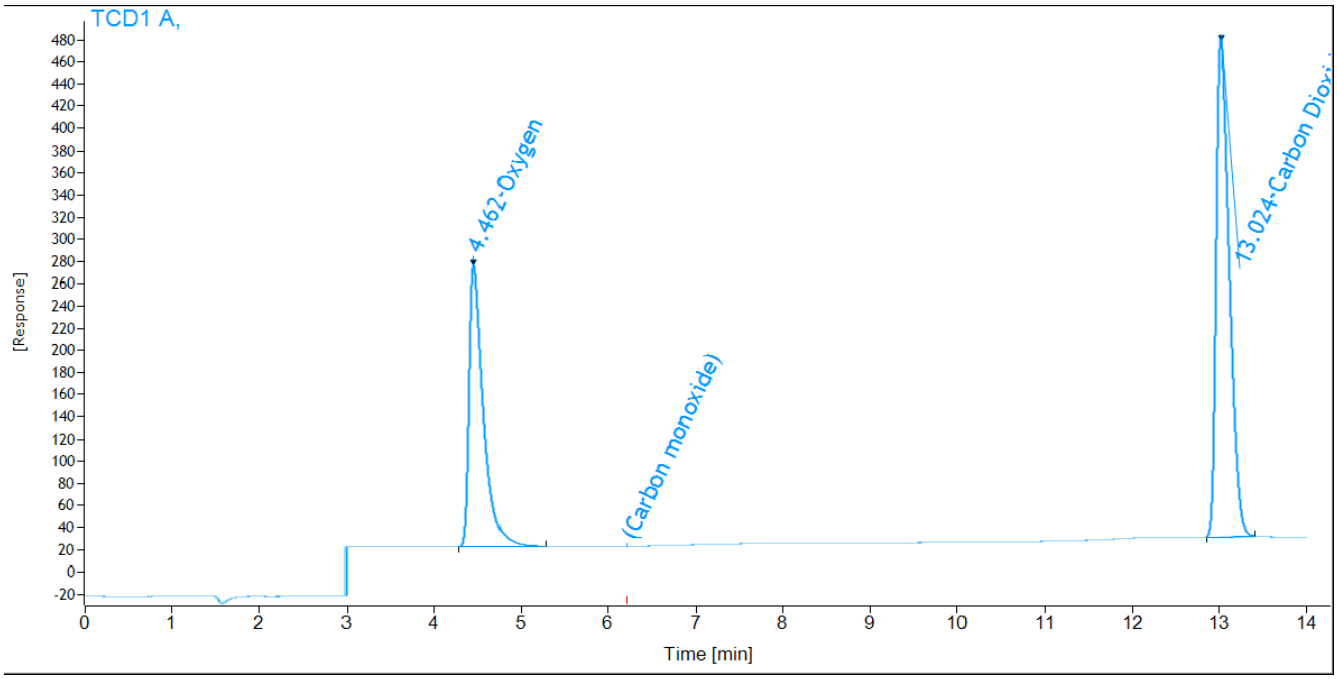
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen	BB	1.87	24.7271	1	2.71	2.715	%
Oxygen				1	0.00		%
Nitrogen	BB	4.83	1171.8042	1	3.43	3.432	%
Carbon monoxide	BB	6.20	1122.2037	1	3.38	3.385	%
Methane	BB	9.80	801.1166	1	2.73	2.728	%
Carbon Dioxide				1	0.00		%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP070\009F1201.D
Sample name: BettyP070 #FG4 ENV(1=0,2=467.26)
File_Location \GC\2014\Betty\Quarter 4
Injection date: 10/4/2014 2:38:04 AM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP070_FGA.M
Last changed: 10/6/2014 8:38:08 AM
Instrument: Betty
Sequence_Name BETTYP070
Acq. operator: Kristen McKinley

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 1 of 4
File_Version 3



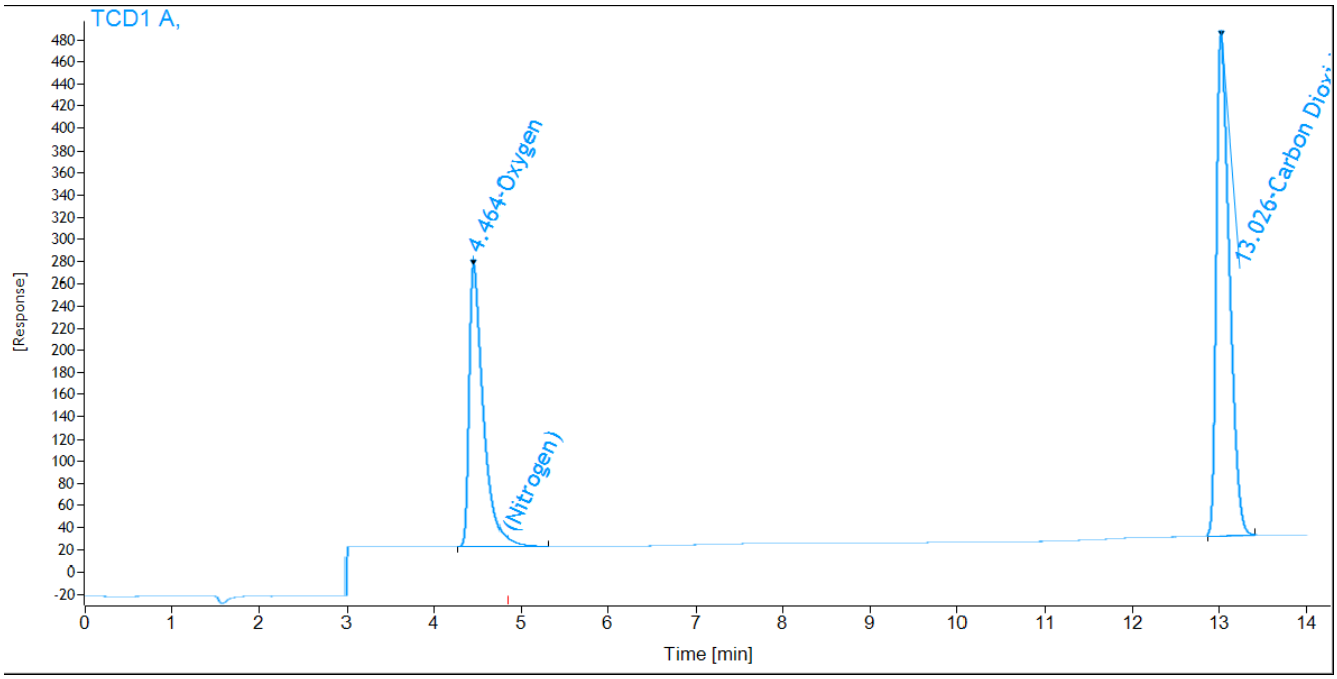
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BB	4.46	2891.0857	1	9.87	9.870	%
Nitrogen				1	0.00		%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide	BB	13.02	4737.5244	1	9.92	9.920	%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP070\009F1202.D
Sample name: BettyP070 #FG4 ENV(1=0,2=467.26)
File_Location \GC\2014\Betty\Quarter 4
Injection date: 10/4/2014 3:01:14 AM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP070_FGA.M
Last changed: 10/6/2014 8:38:08 AM
Instrument: Betty
Sequence_Name BETTYP070
Acq. operator: Kristen McKinley

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 2 of 4
File_Version 3



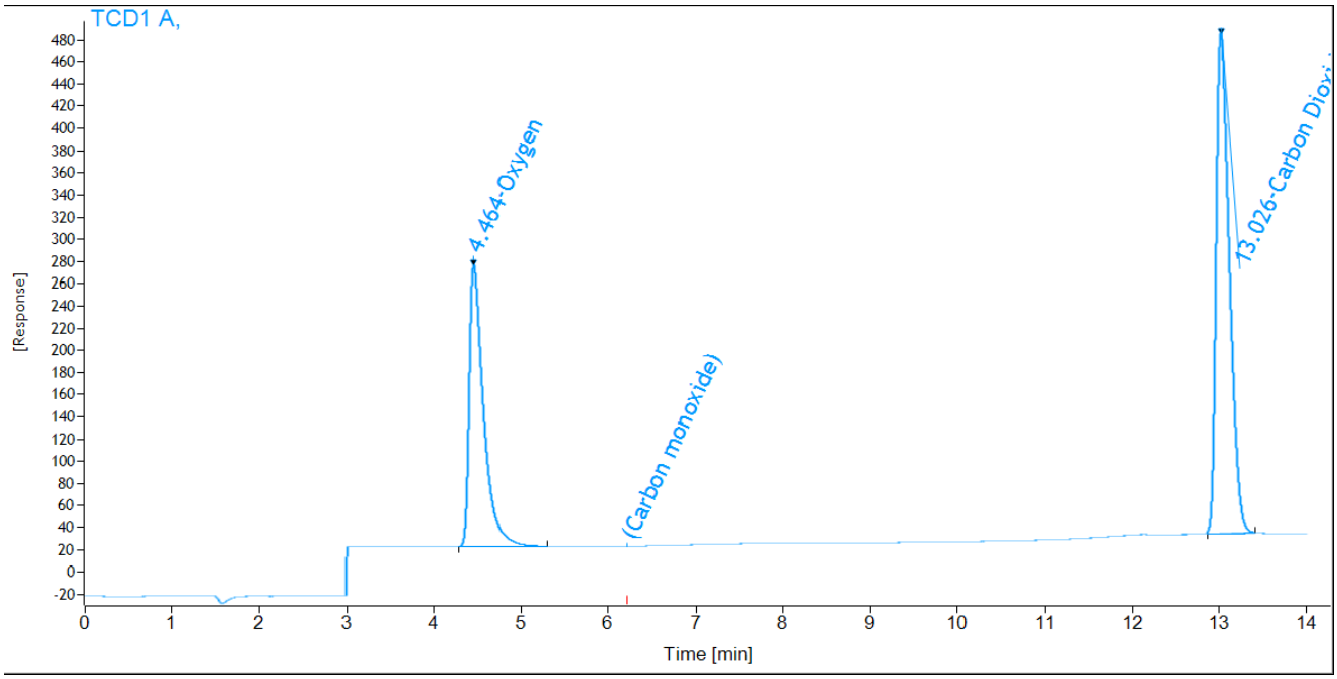
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BB	4.46	2894.3794	1	9.88	9.881	%
Nitrogen				1	0.00		%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide	BB	13.03	4733.4839	1	9.91	9.911	%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP070\009F1203.D
Sample name: BettyP070 #FG4 ENV(1=0,2=467.26)
File_Location \GC\2014\Betty\Quarter 4
Injection date: 10/4/2014 3:24:24 AM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP070_FGA.M
Last changed: 10/6/2014 8:38:08 AM
Instrument: Betty
Sequence_Name BETTYP070
Acq. operator: Kristen McKinley

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 3 of 4
File_Version 3



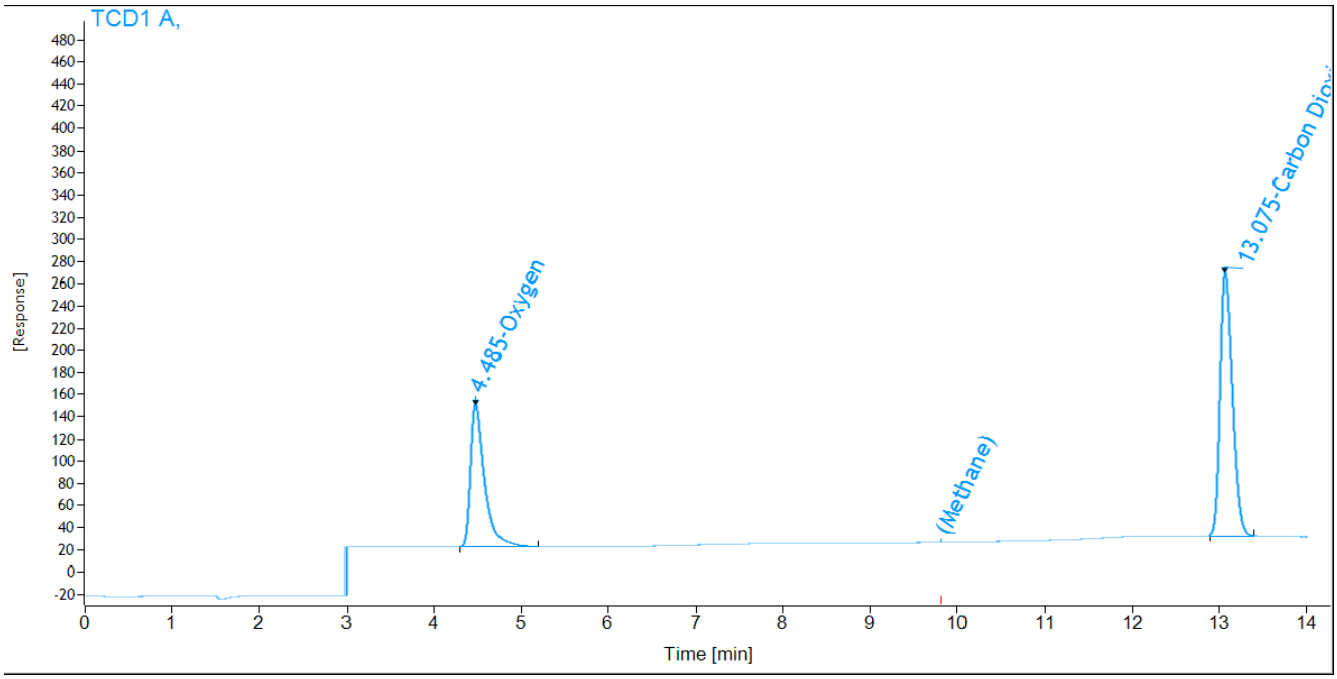
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BB	4.46	2896.6953	1	9.89	9.889	%
Nitrogen				1	0.00		%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide	BB	13.03	4763.1655	1	9.97	9.974	%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP070\009F1301.D
Sample name: BettyP070 #FG3 ENV(1=374.56,2=391.18)
File_Location \GC\2014\Betty\Quarter 4
Injection date: 10/4/2014 4:10:43 AM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP070_FGA.M
Last changed: 10/6/2014 8:38:08 AM
Instrument: Betty
Sequence_Name BETTYP070
Acq. operator: Kristen McKinley

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 1 of 4
File_Version 3



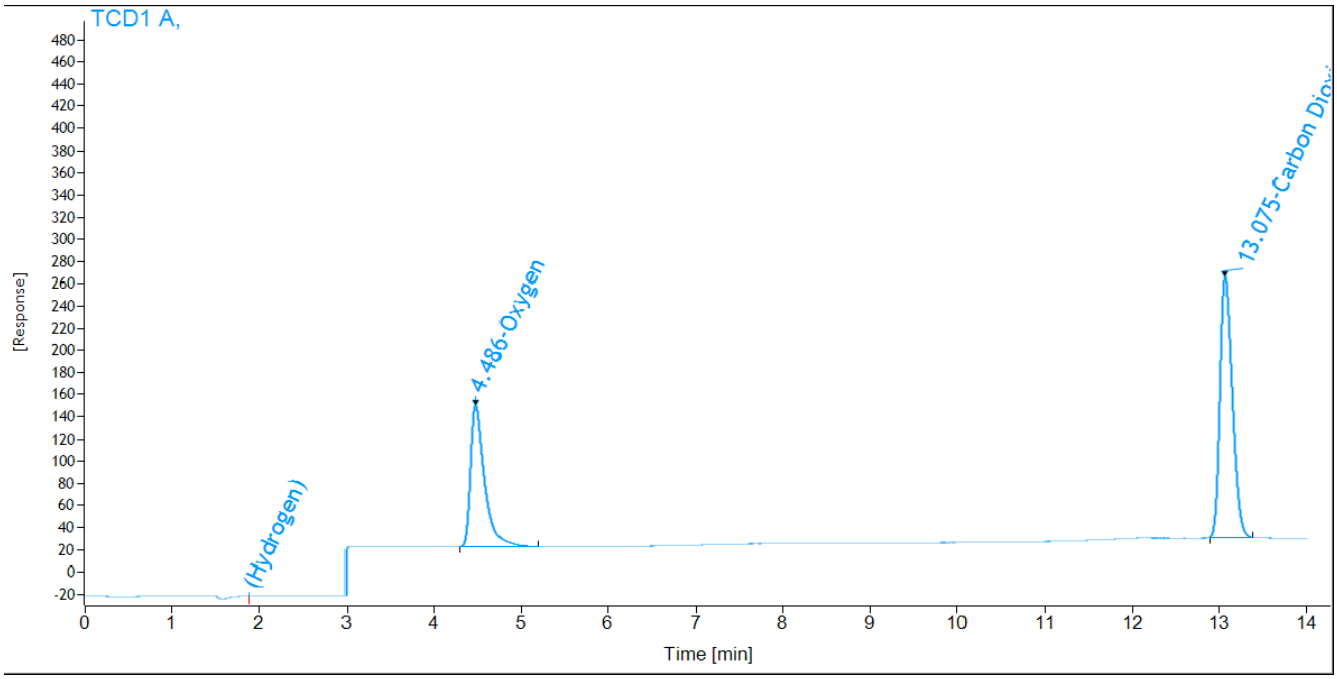
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BB	4.48	1437.4077	1	4.89	4.886	%
Nitrogen				1	0.00		%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide	BB	13.08	2357.7478	1	4.92	4.915	%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP070\009F1302.D
Sample name: BettyP070 #FG3 ENV(1=374.56,2=391.18)
File_Location \GC\2014\Betty\Quarter 4
Injection date: 10/4/2014 4:33:47 AM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP070_FGA.M
Last changed: 10/6/2014 8:38:08 AM
Instrument: Betty
Sequence_Name BETTYP070
Acq. operator: Kristen McKinley

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 2 of 4
File_Version 3



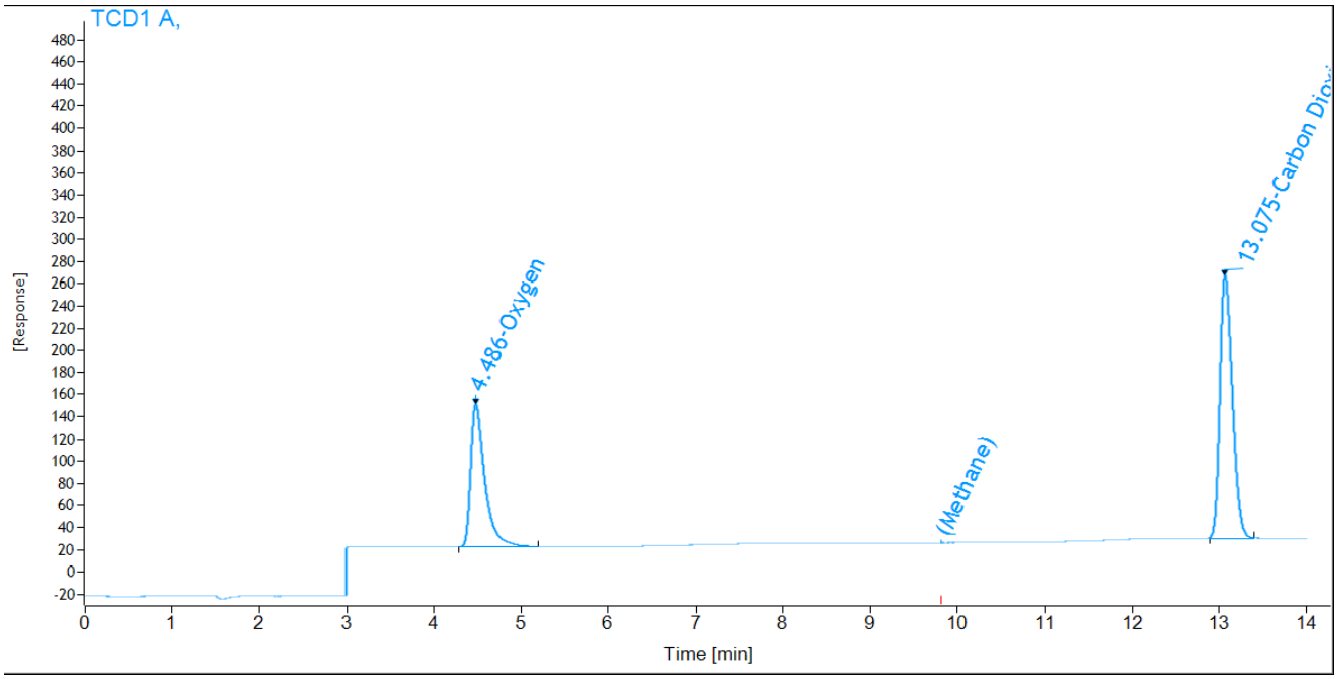
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BB	4.49	1431.4692	1	4.87	4.866	%
Nitrogen				1	0.00		%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide	BB	13.07	2347.7917	1	4.89	4.894	%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP070\009F1303.D
Sample name: BettyP070 #FG3 ENV(1=374.56,2=391.18)
File_Location \GC\2014\Betty\Quarter 4
Injection date: 10/4/2014 4:56:58 AM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP070_FGA.M
Last changed: 10/6/2014 8:38:08 AM
Instrument: Betty
Sequence_Name BETTYP070
Acq. operator: Kristen McKinley

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 3 of 4
File_Version 3



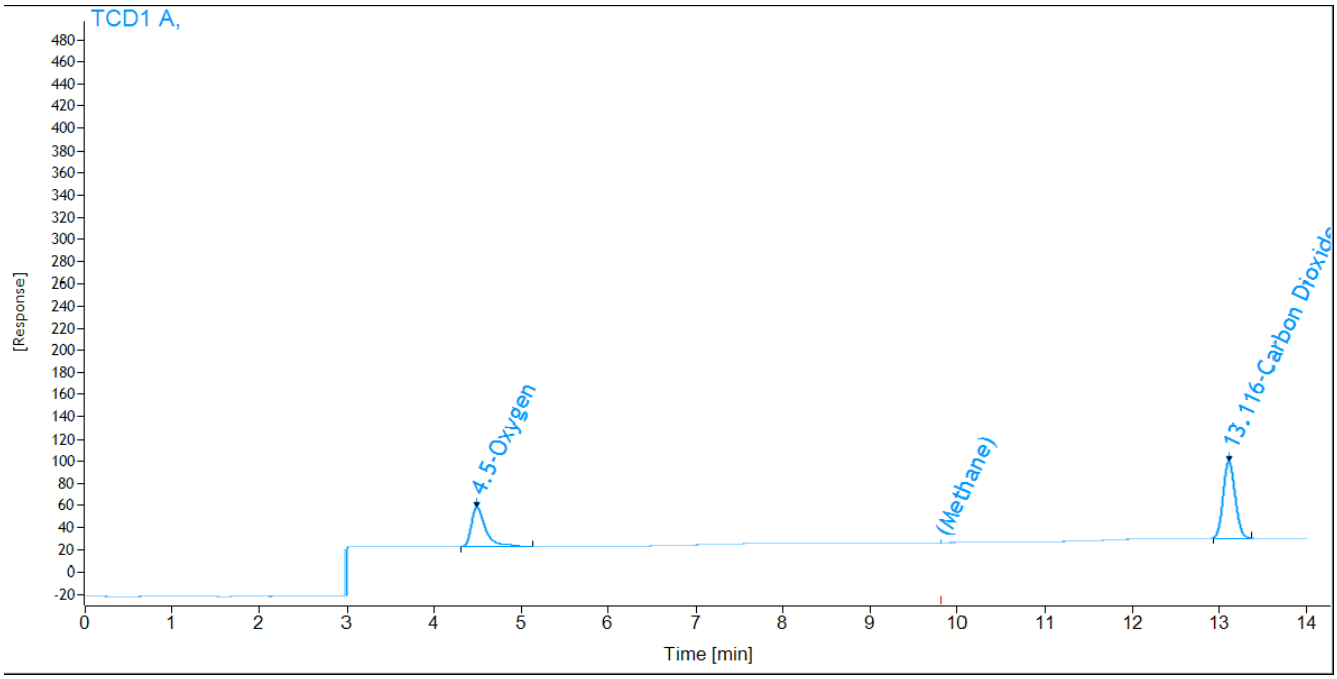
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BB	4.49	1441.1085	1	4.90	4.899	%
Nitrogen				1	0.00		%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide	BB	13.07	2354.9573	1	4.91	4.909	%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP070\009F1401.D
Sample name: BettyP070 #FG2 ENV(1=1272.08,2=219.94)
File_Location \GC\2014\Betty\Quarter 4
Injection date: 10/4/2014 5:43:19 AM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP070_FGA.M
Last changed: 10/6/2014 8:38:08 AM
Instrument: Betty
Sequence_Name BETTYP070
Acq. operator: Kristen McKinley

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 1 of 4
File_Version 3



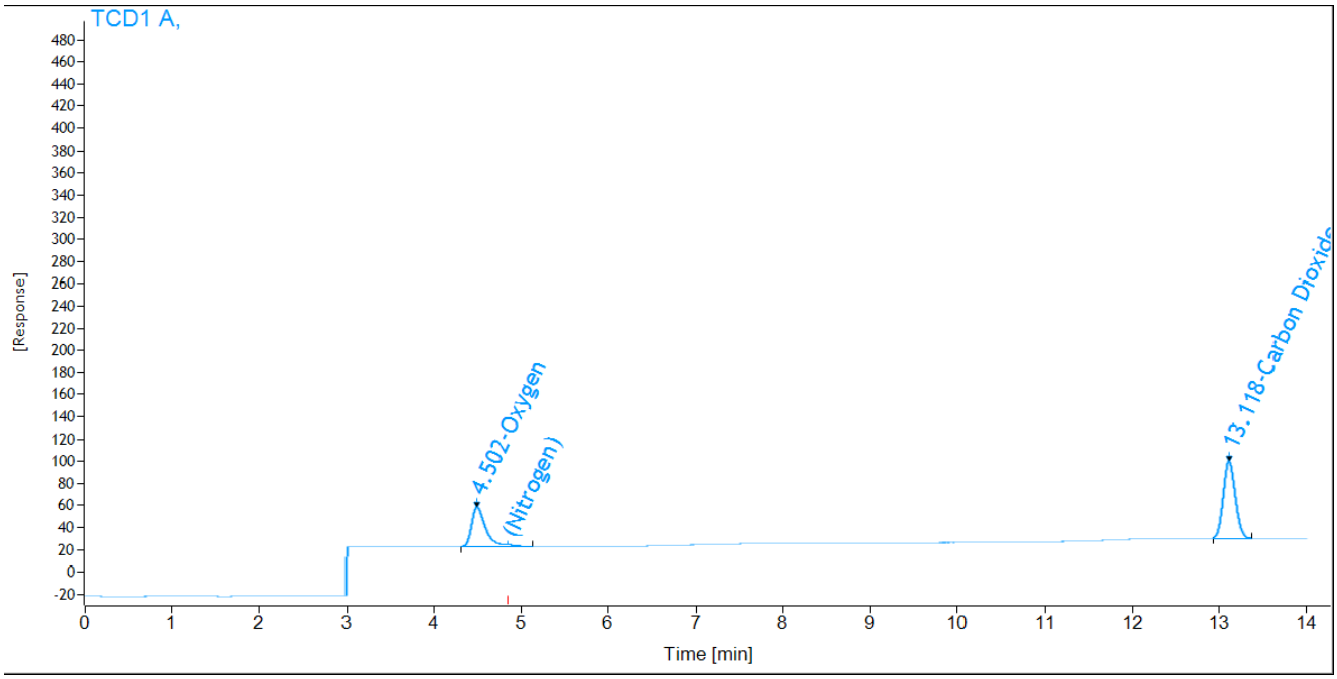
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BB	4.50	407.0206	1	1.35	1.354	%
Nitrogen				1	0.00		%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide	BB	13.12	673.3965	1	1.37	1.373	%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP070\009F1402.D
Sample name: BettyP070 #FG2 ENV(1=1272.08,2=219.94)
File_Location \GC\2014\Betty\Quarter 4
Injection date: 10/4/2014 6:06:26 AM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP070_FGA.M
Last changed: 10/6/2014 8:38:08 AM
Instrument: Betty
Sequence_Name BETTYP070
Acq. operator: Kristen McKinley

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 2 of 4
File_Version 3



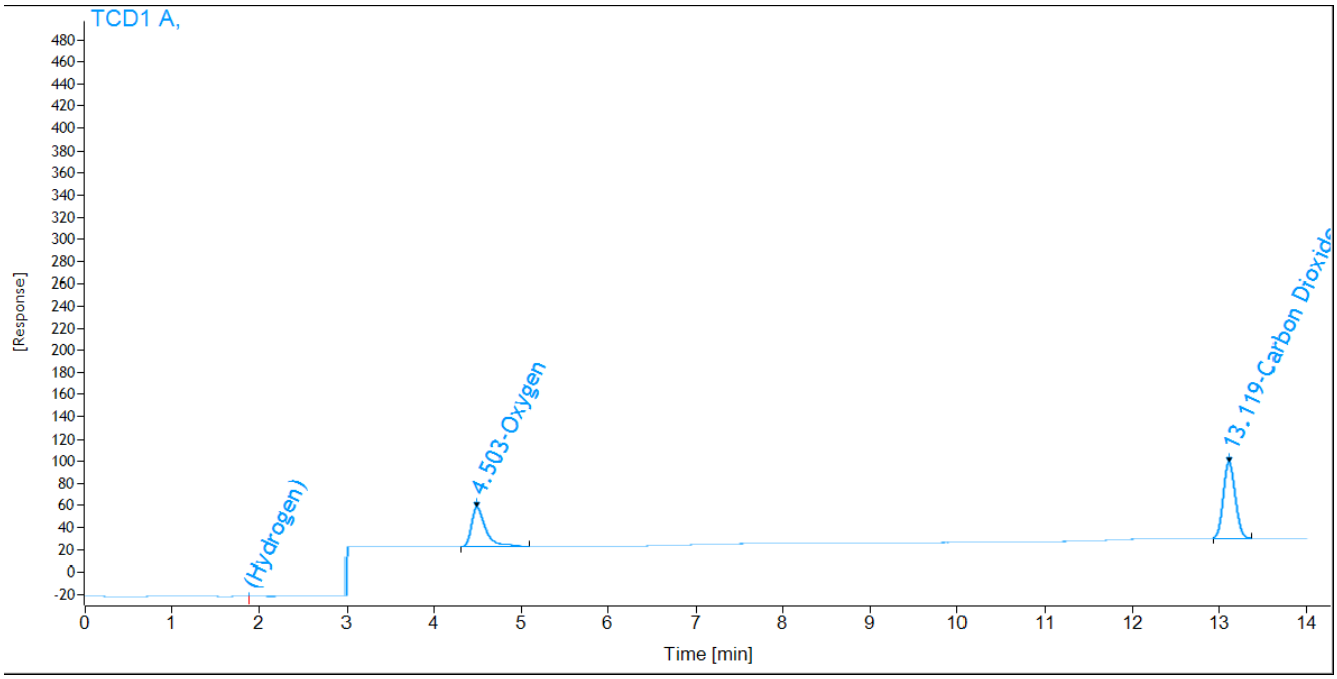
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BB	4.50	408.6049	1	1.36	1.359	%
Nitrogen				1	0.00		%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide	BB	13.12	671.3624	1	1.37	1.369	%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP070\009F1403.D
Sample name: BettyP070 #FG2 ENV(1=1272.08,2=219.94)
File_Location \GC\2014\Betty\Quarter 4
Injection date: 10/4/2014 6:29:36 AM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP070_FGA.M
Last changed: 10/6/2014 8:38:08 AM
Instrument: Betty
Sequence_Name BETTYP070
Acq. operator: Kristen McKinley

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 3 of 4
File_Version 3



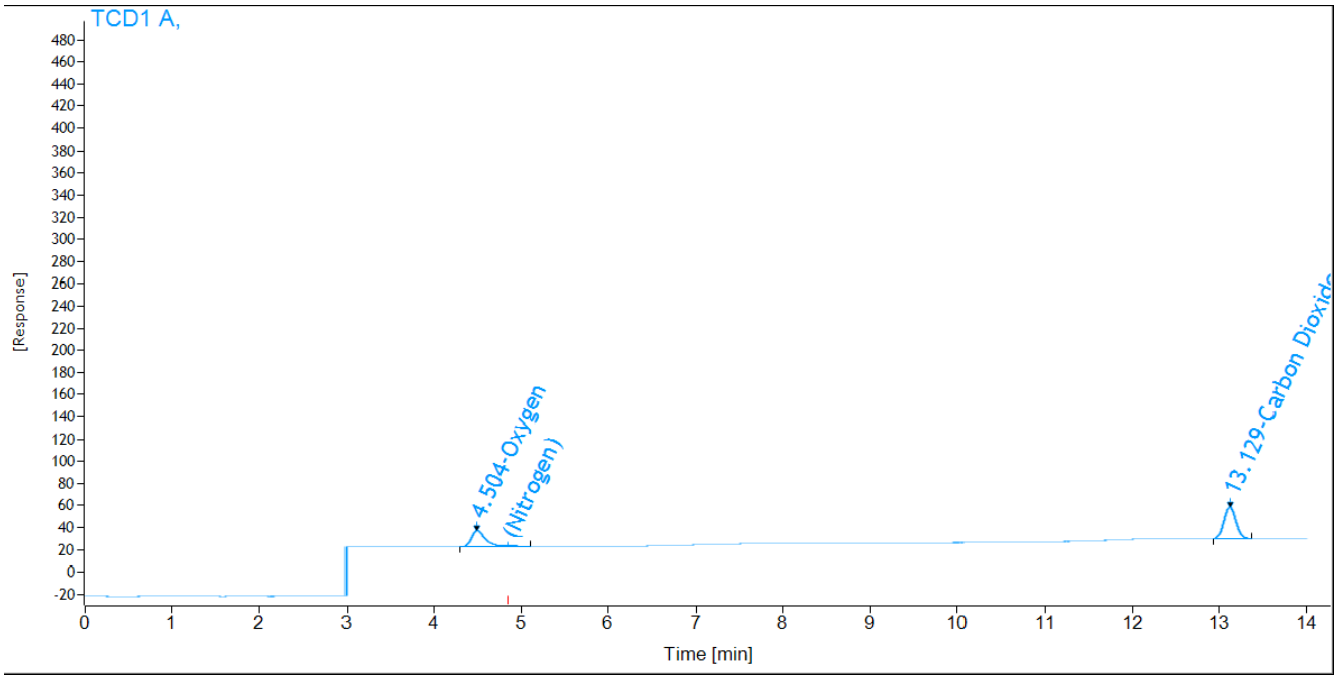
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BB	4.50	405.8309	1	1.35	1.350	%
Nitrogen				1	0.00		%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide	BB	13.12	668.4649	1	1.36	1.363	%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP070\009F1501.D
Sample name: BettyP070 #FG1 ENV(1=3392.23,2=219.94)
File_Location \GC\2014\Betty\Quarter 4
Injection date: 10/4/2014 7:15:55 AM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP070_FGA.M
Last changed: 10/6/2014 8:38:08 AM
Instrument: Betty
Sequence_Name BETTYP070
Acq. operator: Kristen McKinley

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 1 of 8
File_Version 3



Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	MM	4.50	169.4468	1	0.54	0.540	%
Nitrogen				1	0.00		%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide	BB	13.13	274.5003	1	0.53	0.534	%

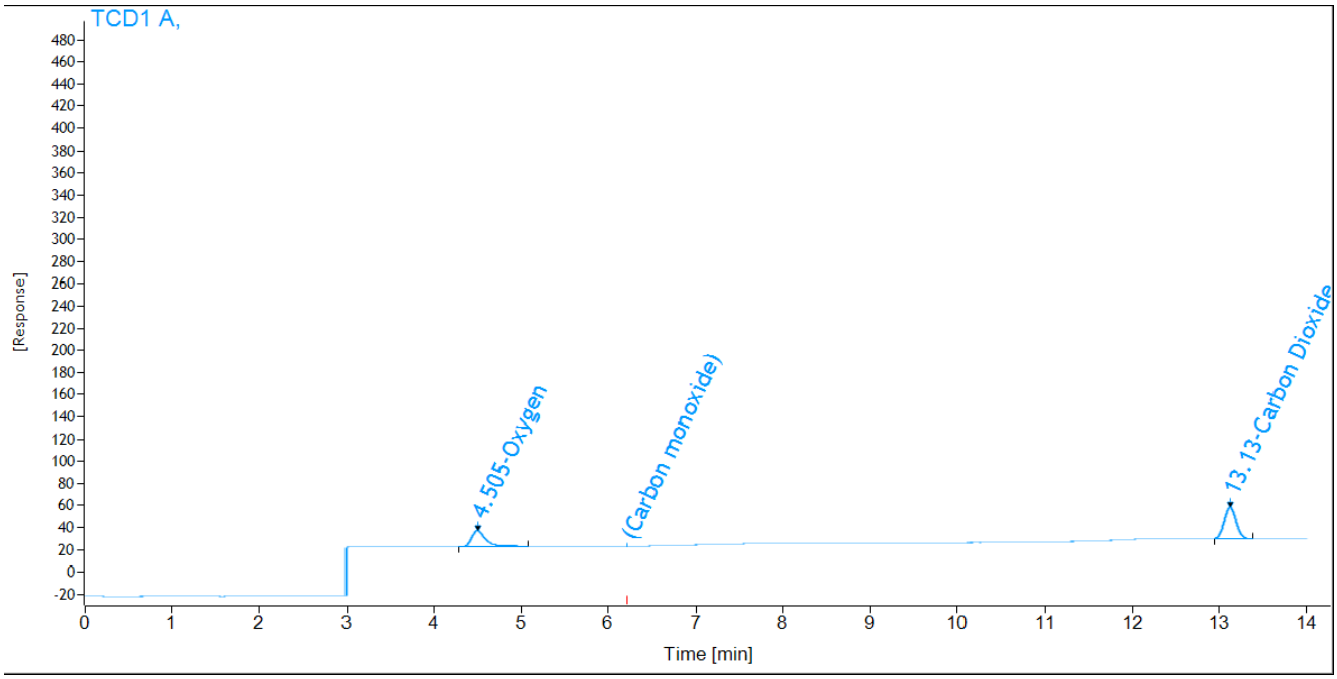
Manual Int. "II" (MTH)

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP070\009F1502.D
Sample name: BettyP070 #FG1 ENV(1=3392.23,2=219.94)
File_Location \GC\2014\Betty\Quarter 4
Injection date: 10/4/2014 7:38:59 AM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP070_FGA.M
Last changed: 10/6/2014 8:38:08 AM
Instrument: Betty
Sequence_Name BETTYP070
Acq. operator: Kristen McKinley

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 2 of 8
File_Version 3



Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	MM	4.51	169.7085	1	0.54	0.541	%
Nitrogen				1	0.00		%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide	BB	13.13	273.1699	1	0.53	0.532	%

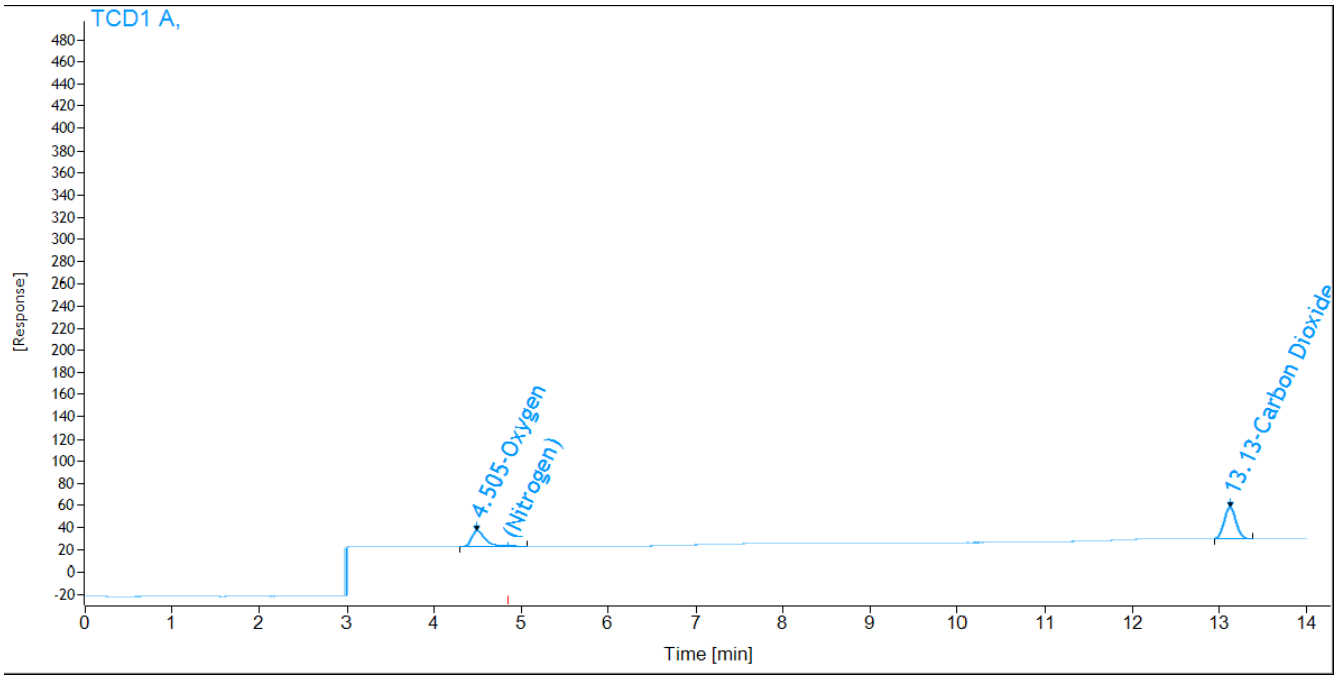
Manual Int. "II" (MTH)

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP070\009F1503.D
Sample name: BettyP070 #FG1 ENV(1=3392.23,2=219.94)
File_Location \GC\2014\Betty\Quarter 4
Injection date: 10/4/2014 8:02:01 AM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP070_FGA.M
Last changed: 10/6/2014 8:38:08 AM
Instrument: Betty
Sequence_Name BETTYP070
Acq. operator: Kristen McKinley

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 3 of 8
File_Version 3



Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	MM	4.51	169.0221	1	0.54	0.539	%
Nitrogen				1	0.00		%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide	BB	13.13	274.1527	1	0.53	0.534	%

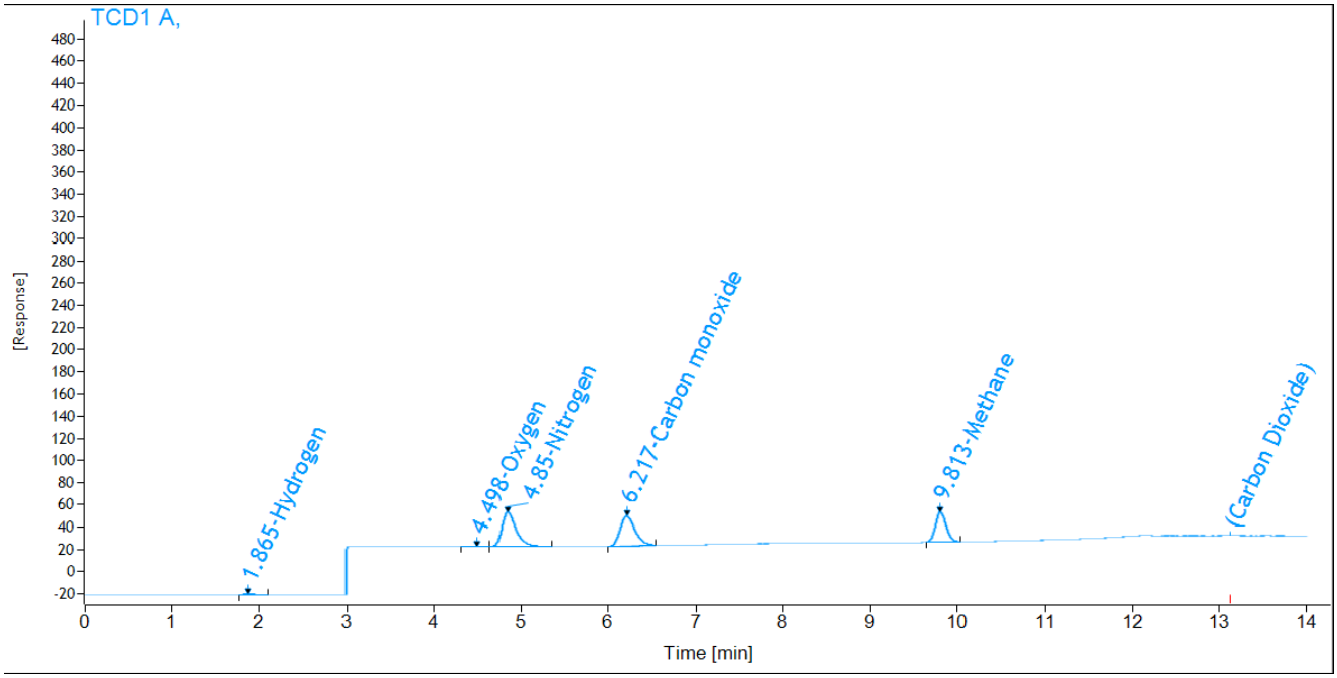
Manual Int. "II" (MTH)

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP070B\009F0101.D
Sample name: BettyP070 #FG6 ENV(1=1271.99,3=159.54)
File_Location \GC\2014\Betty\Quarter 4
Injection date: 10/6/2014 7:22:25 AM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP070_FGA.M
Last changed: 10/6/2014 1:22:16 PM
Instrument: Betty
Sequence_Name BETTYP070B
Acq. operator: Todd Huml

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 1 of 4
File_Version 3



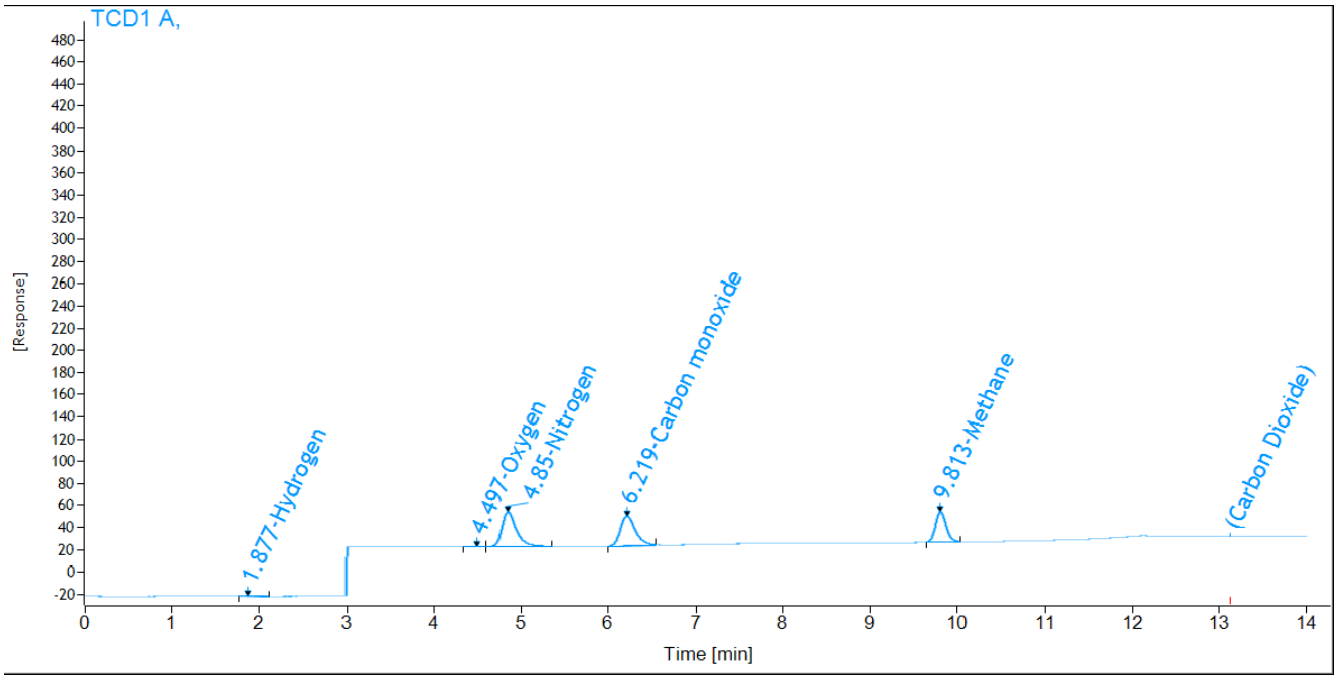
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen	BB	1.86	7.8938	1	0.75	0.752	%
Oxygen	BV	4.50	5.8793	1	0.02	0.019	%
Nitrogen	VB	4.85	348.0300	1	0.98	0.983	%
Carbon monoxide	BB	6.22	319.5601	1	0.96	0.963	%
Methane	BB	9.81	230.2046	1	0.77	0.772	%
Carbon Dioxide				1	0.00		%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP070B\009F0102.D
Sample name: BettyP070 #FG6 ENV(1=1271.99,3=159.54)
File_Location \GC\2014\Betty\Quarter 4
Injection date: 10/6/2014 7:45:30 AM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP070_FGA.M
Last changed: 10/6/2014 1:22:16 PM
Instrument: Betty
Sequence_Name BETTYP070B
Acq. operator: Todd Huml

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 2 of 4
File_Version 3



Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen	MM	1.88	7.4420	1	0.70	0.700	%
Oxygen	BV	4.50	2.4880	1	0.01	0.008	%
Nitrogen	VB	4.85	349.4337	1	0.99	0.987	%
Carbon monoxide	BB	6.22	321.8994	1	0.97	0.970	%
Methane	BB	9.81	232.1213	1	0.78	0.778	%
Carbon Dioxide				1	0.00		%

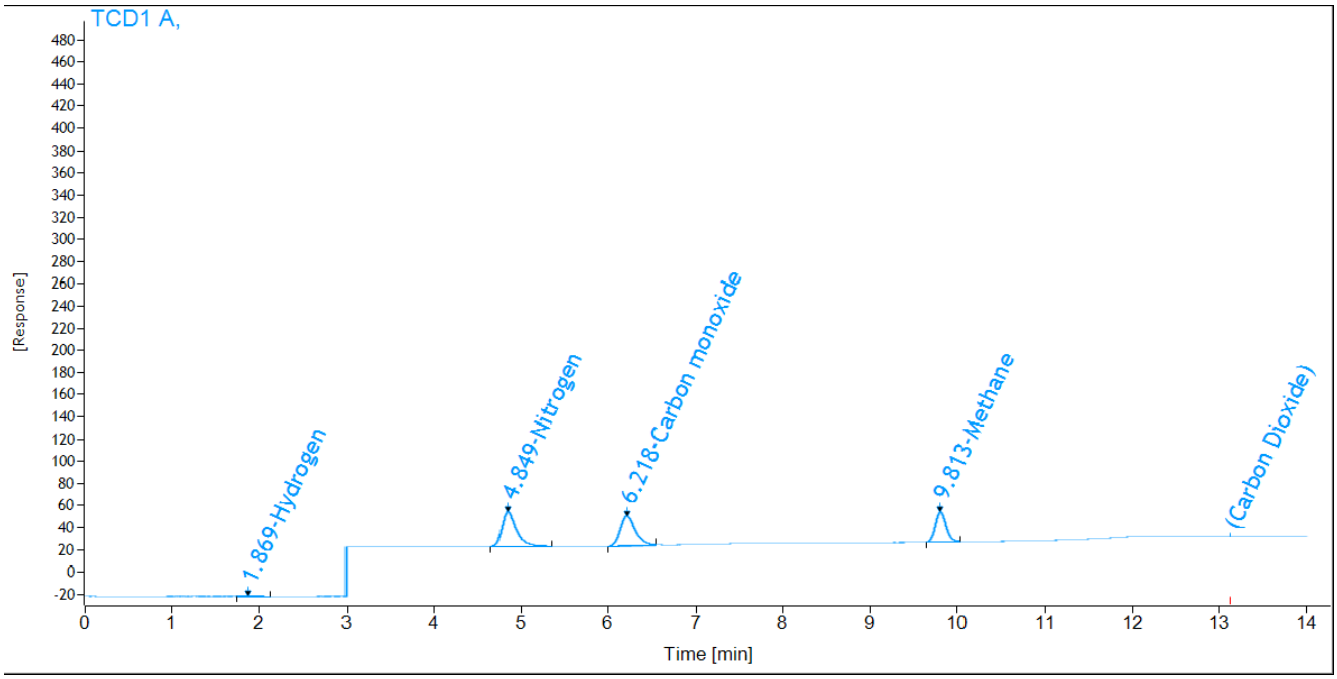
Manual Int. "II" (MTH)

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP070B\009F0103.D
Sample name: BettyP070 #FG6 ENV(1=1271.99,3=159.54)
File_Location \GC\2014\Betty\Quarter 4
Injection date: 10/6/2014 8:08:49 AM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP070_FGA.M
Last changed: 10/6/2014 1:22:16 PM
Instrument: Betty
Sequence_Name BETTYP070B
Acq. operator: Todd Huml

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 3 of 4
File_Version 3



Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen	MM	1.87	7.9638	1	0.76	0.761	%
Oxygen				1	0.00		%
Nitrogen	BB	4.85	347.5703	1	0.98	0.982	%
Carbon monoxide	BB	6.22	322.6920	1	0.97	0.972	%
Methane	BB	9.81	233.1931	1	0.78	0.782	%
Carbon Dioxide				1	0.00		%

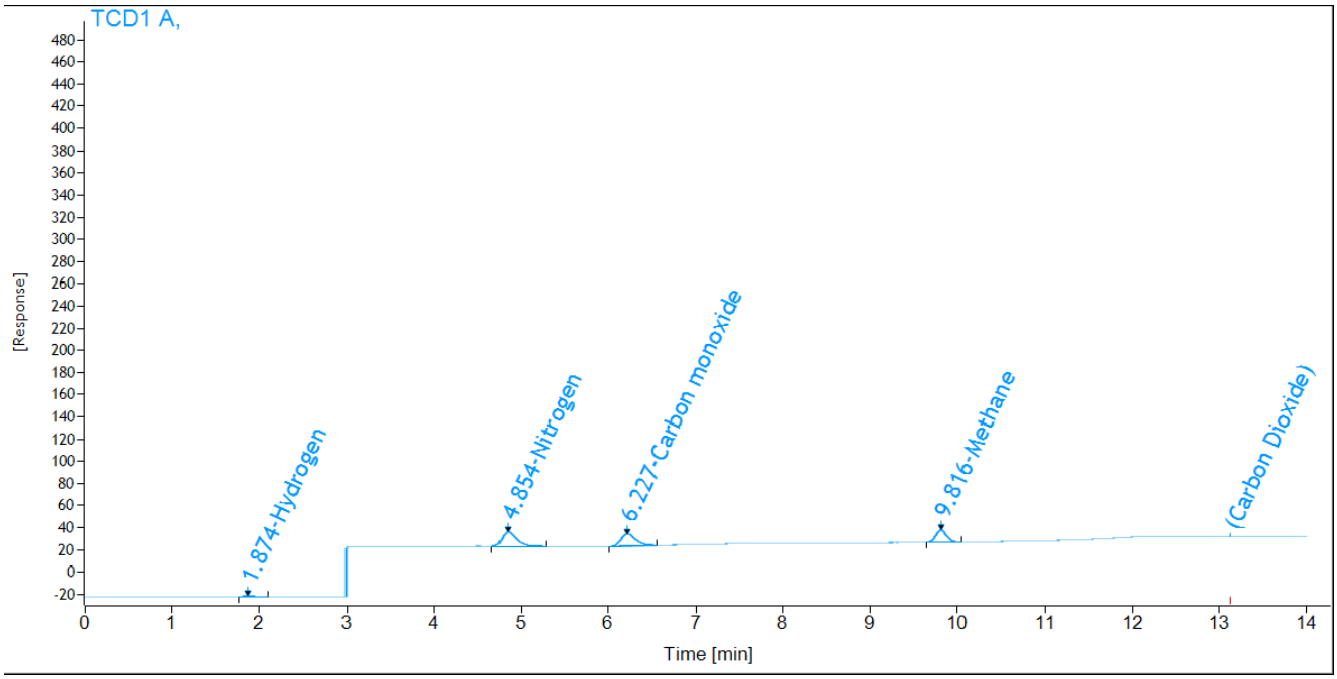
Manual Int. "II" (MTH)

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP070B\009F0201.D
Sample name: BettyP070 #FG5 ENV(1=3391.99,3=159.54)
File_Location \GC\2014\Betty\Quarter 4
Injection date: 10/6/2014 8:55:30 AM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP070_FGA.M
Last changed: 10/6/2014 1:22:16 PM
Instrument: Betty
Sequence_Name BETTYP070B
Acq. operator: Todd Huml

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 1 of 8
File_Version 3



Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen	MM	1.87	4.2650	1	0.33	0.329	%
Oxygen				1	0.00		%
Nitrogen	BB	4.85	145.5517	1	0.38	0.381	%
Carbon monoxide	BB	6.23	126.4903	1	0.38	0.380	%
Methane	BB	9.82	93.8451	1	0.30	0.305	%
Carbon Dioxide				1	0.00		%

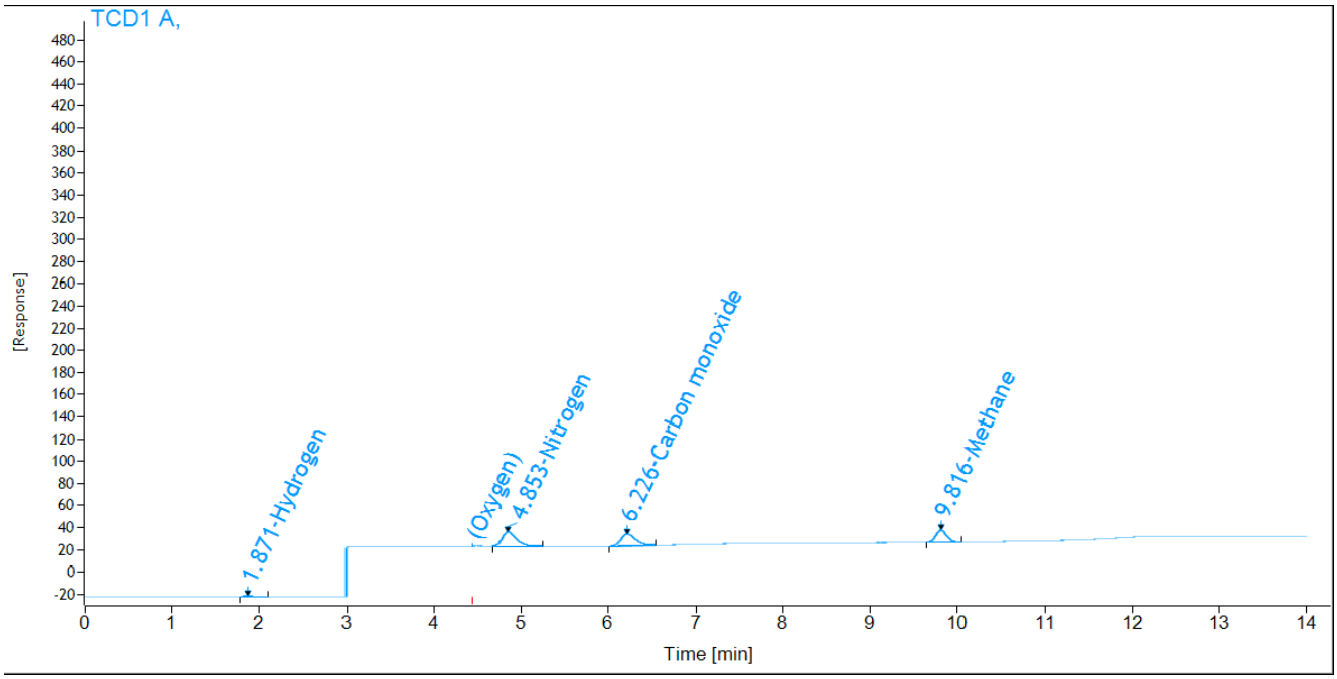
Manual Int. "II" (MTH)

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP070B\009F0202.D
Sample name: BettyP070 #FG5 ENV(1=3391.99,3=159.54)
File_Location \GC\2014\Betty\Quarter 4
Injection date: 10/6/2014 9:18:52 AM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP070_FGA.M
Last changed: 10/6/2014 1:22:16 PM
Instrument: Betty
Sequence_Name BETTYP070B
Acq. operator: Todd Huml

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 2 of 8
File_Version 3



Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen	MM	1.87	3.9524	1	0.30	0.297	%
Oxygen				1	0.00		%
Nitrogen	BB	4.85	143.7895	1	0.38	0.377	%
Carbon monoxide	BB	6.23	125.5482	1	0.38	0.377	%
Methane	BB	9.82	93.4905	1	0.30	0.303	%
Carbon Dioxide				1	0.00		%

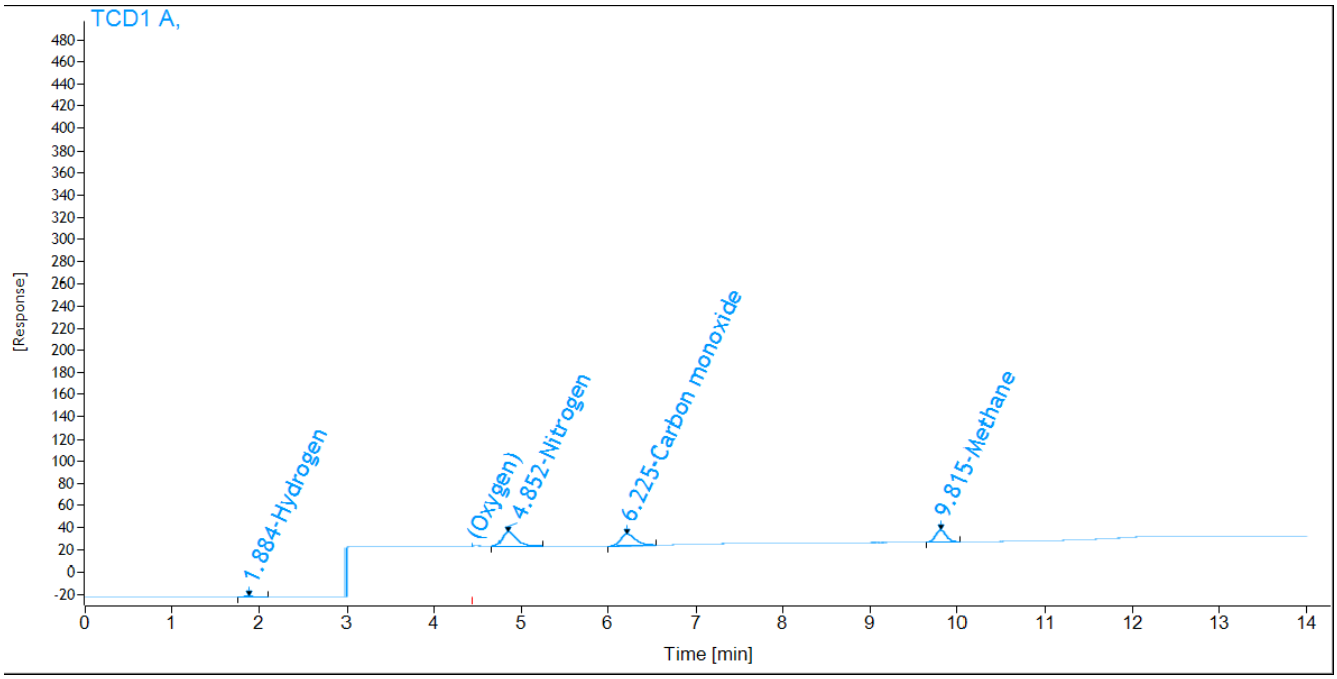
Manual Int. "II" (MTH)

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2014\BETTY\QUARTER 4\BETTYP070B\009F0203.D
Sample name: BettyP070 #FG5 ENV(1=3391.99,3=159.54)
File_Location \GC\2014\Betty\Quarter 4
Injection date: 10/6/2014 9:42:13 AM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP070_FGA.M
Last changed: 10/6/2014 1:22:16 PM
Instrument: Betty
Sequence_Name BETTYP070B
Acq. operator: Todd Huml

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 3 of 8
File_Version 3



Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen	MM	1.88	4.0600	1	0.31	0.306	%
Oxygen				1	0.00		%
Nitrogen	BB	4.85	142.9635	1	0.37	0.375	%
Carbon monoxide	BB	6.22	124.8723	1	0.38	0.375	%
Methane	BB	9.81	92.8628	1	0.30	0.301	%
Carbon Dioxide				1	0.00		%

Manual Int. "II" (MTH)

Chromatogram Report

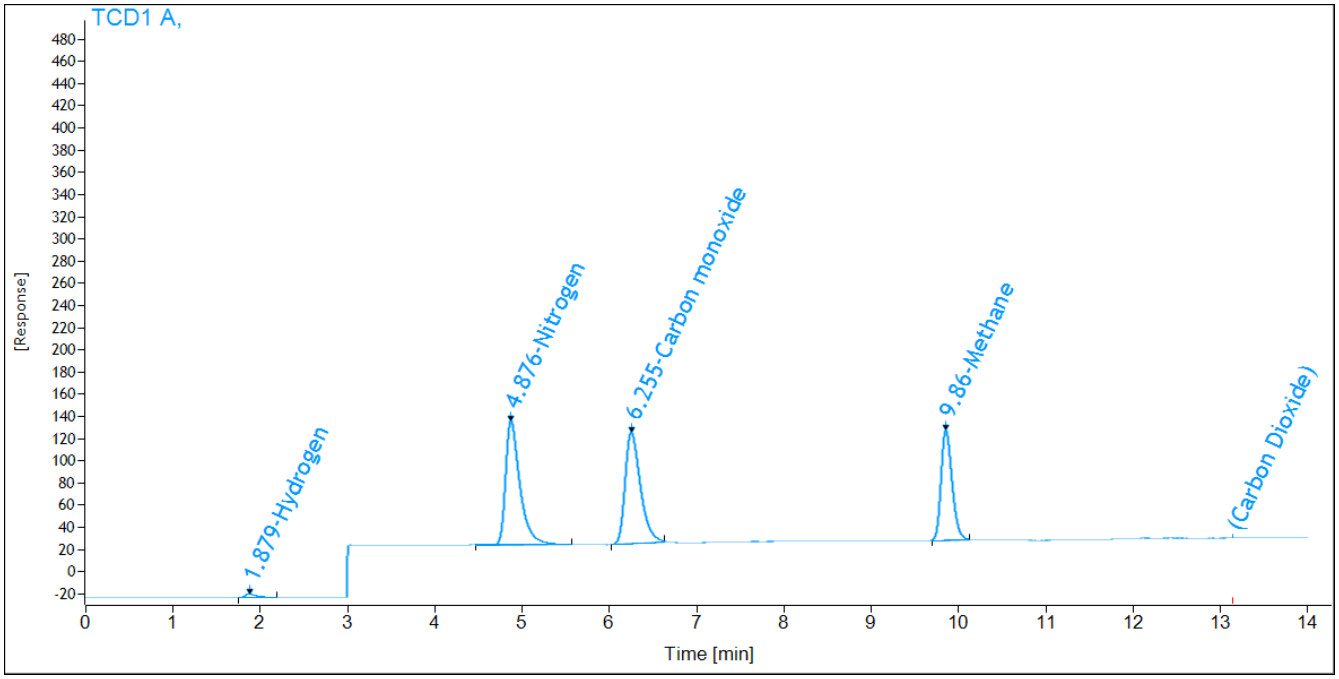
Enthalpy Analytical, Inc.

Data file: C:\GC\2015\BETTY\QUARTER 1\BETTYP121\009F1901.D
Sample name: BettyP118 #FG7 ENV(1=530,3=319.02)
File_Location \GC\2014\Betty\Quarter 4

Injection date: 1/7/2015 9:53:23 PM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP119_FGA.M
Last changed: 1/6/2015 8:27:05 AM

Instrument: Betty
Sequence_Name BETTYP121
Acq. operator: Justin Guenzler

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 1 of 3
File_Version 4



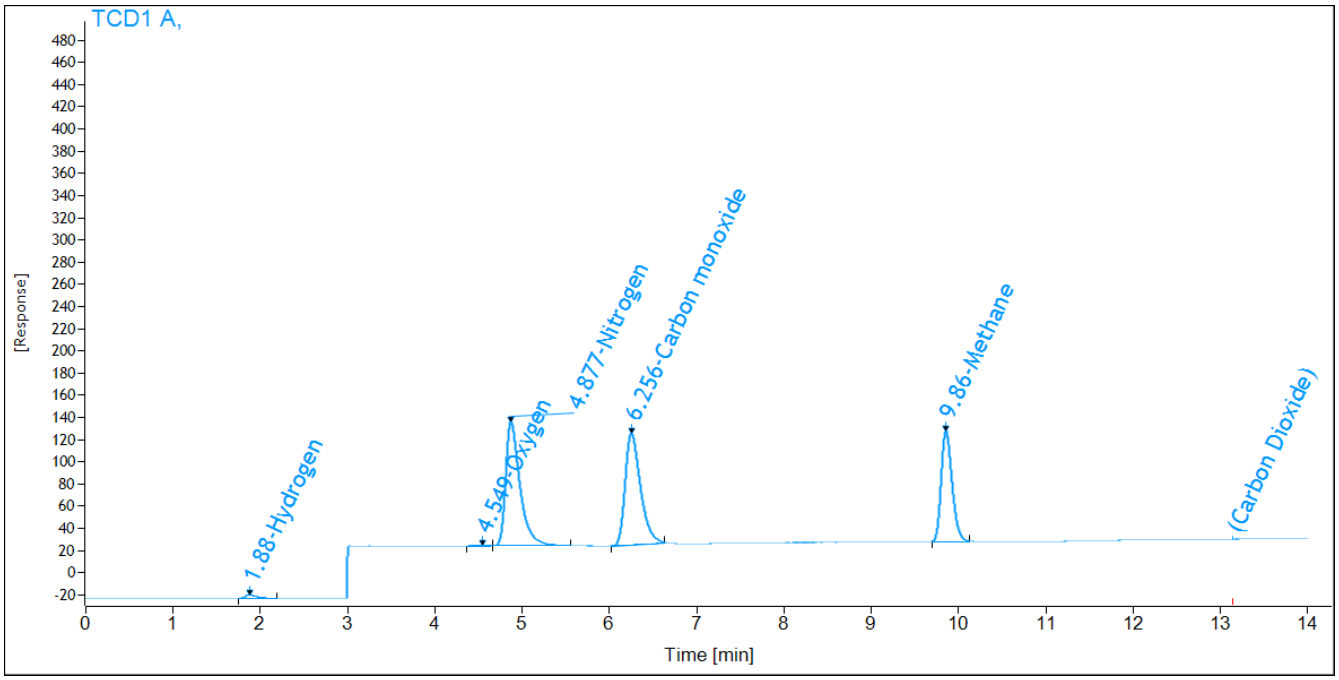
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen	BB	1.88	28.9795	1	2.85	2.854	%
Oxygen				1	0.00		%
Nitrogen	BB	4.88	1279.9569	1	3.48	3.477	%
Carbon monoxide	BB	6.26	1226.6246	1	3.42	3.420	%
Methane	BB	9.86	868.5623	1	2.74	2.739	%
Carbon Dioxide				1	0.00		%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2015\BETTY\QUARTER 1\BETTYP121\009F1902.D
Sample name: BettyP118 #FG7 ENV(1=530,3=319.02)
File_Location \GC\2014\Betty\Quarter 4
Injection date: 1/7/2015 10:16:30 PM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP119_FGA.M
Last changed: 1/6/2015 8:27:05 AM
Instrument: Betty
Sequence_Name BETTYP121
Acq. operator: Justin Guenzler

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 2 of 3
File_Version 4



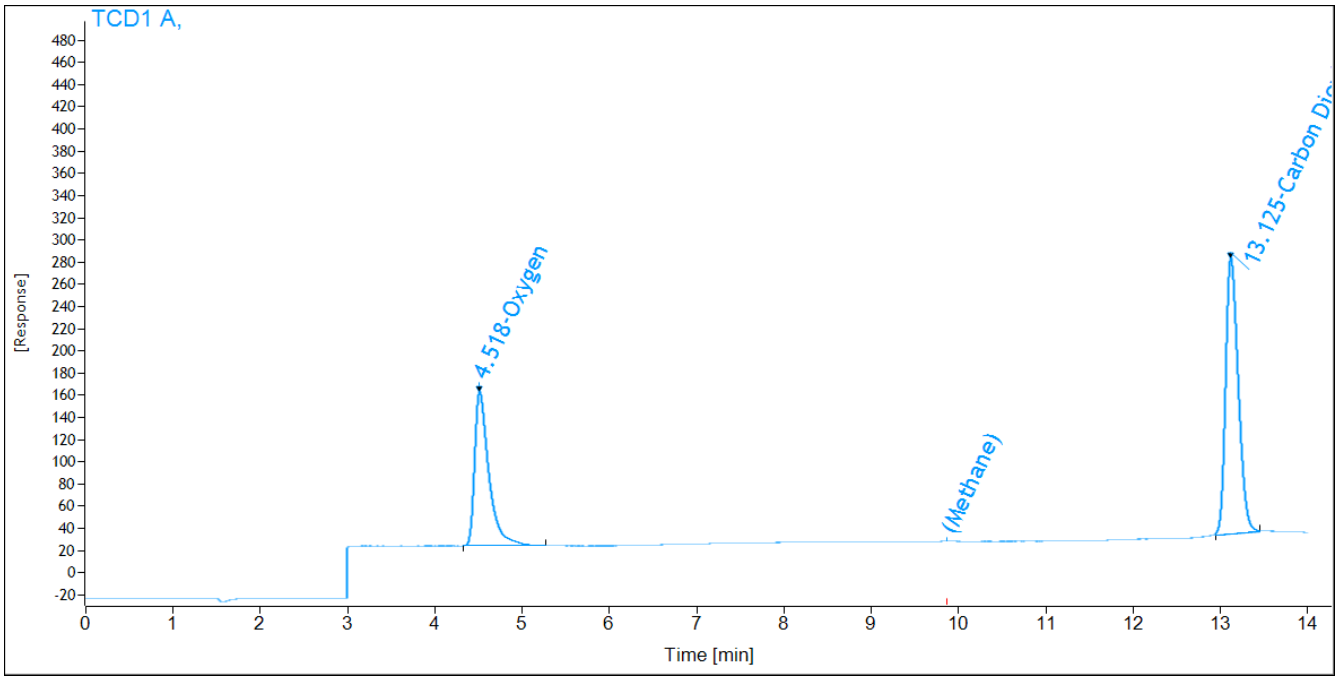
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen	BB	1.88	28.4361	1	2.80	2.797	%
Oxygen	BV	4.55	3.2249	1	0.01	0.010	%
Nitrogen	VB	4.88	1277.5350	1	3.47	3.470	%
Carbon monoxide	BB	6.26	1225.7957	1	3.42	3.417	%
Methane	BB	9.86	870.1363	1	2.74	2.744	%
Carbon Dioxide				1	0.00		%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2015\BETTY\QUARTER 1\BETTYP121\009F2001.D
Sample name: BettyP070 #FG3 ENV(1=374.56,2=391.18)
File_Location \GC\2014\Betty\Quarter 4
Injection date: 1/7/2015 11:02:43 PM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP119_FGA.M
Last changed: 1/6/2015 8:27:05 AM
Instrument: Betty
Sequence_Name BETTYP121
Acq. operator: Justin Guenzler

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 1 of 3
File_Version 4



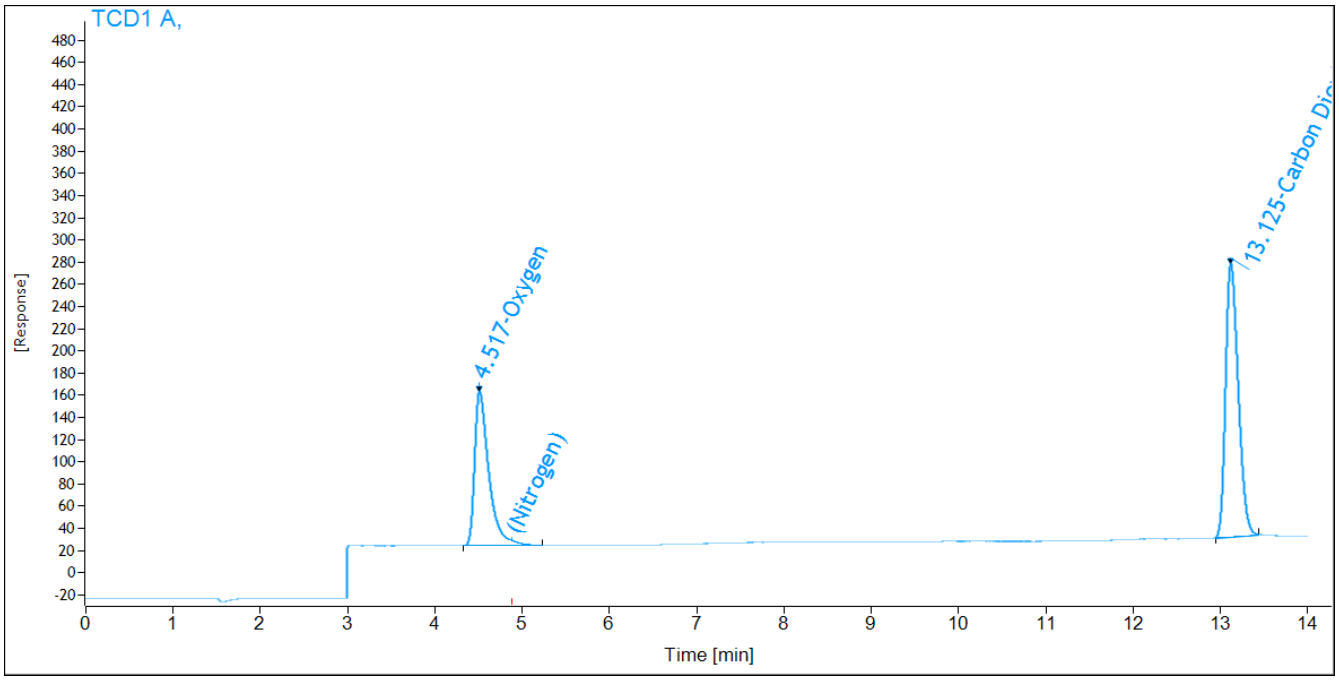
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BB	4.52	1576.9364	1	4.93	4.926	%
Nitrogen				1	0.00		%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide	BB	13.13	2503.1550	1	4.92	4.916	%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2015\BETTY\QUARTER 1\BETTYP121\009F2002.D
Sample name: BettyP070 #FG3 ENV(1=374.56,2=391.18)
File_Location \GC\2014\Betty\Quarter 4
Injection date: 1/7/2015 11:25:47 PM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP119_FGA.M
Last changed: 1/6/2015 8:27:05 AM
Instrument: Betty
Sequence_Name BETTYP121
Acq. operator: Justin Guenzler

Sample type: Calibration
Location: Vial 9
Injection volume: 250.000
Injection: 2 of 3
File_Version 4



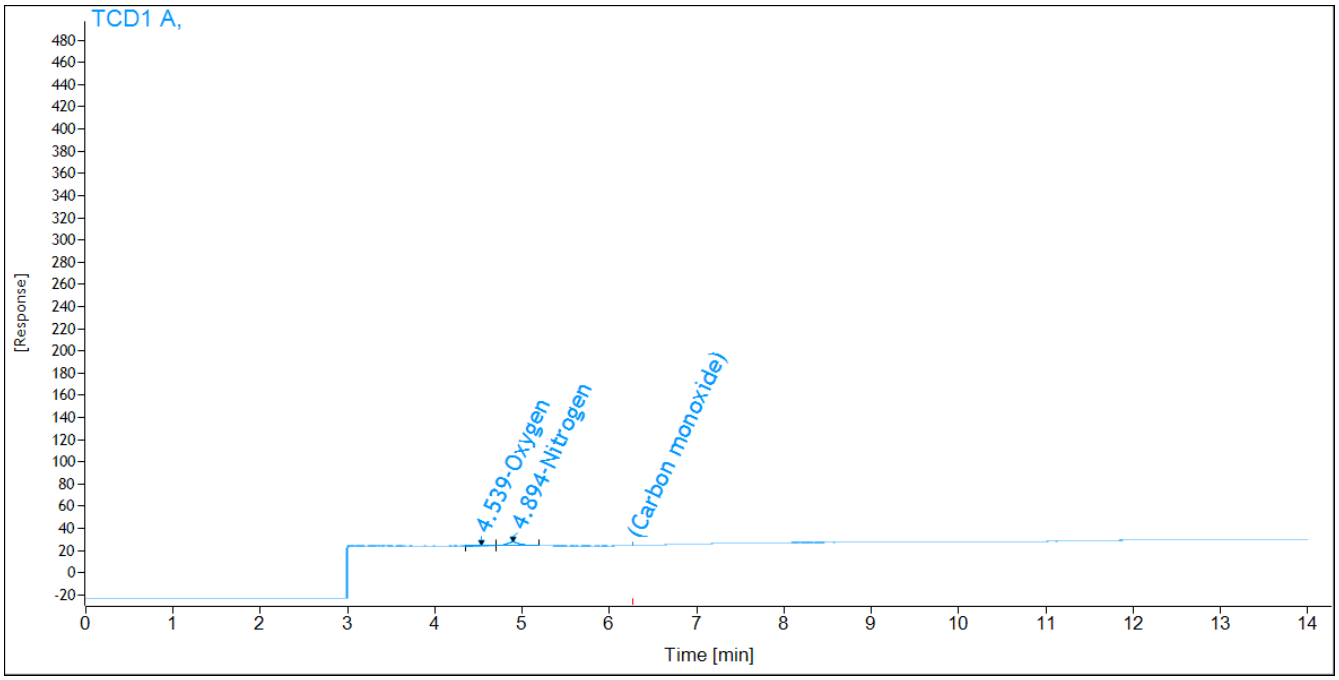
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BB	4.52	1573.7548	1	4.92	4.916	%
Nitrogen				1	0.00		%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide	BB	13.12	2476.8601	1	4.86	4.864	%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2015\BETTY\QUARTER 1\BETTYP121\001F2201.D
Sample name: He Blank #LB
File_Location \GC\2014\Betty\Quarter 4
Injection date: 1/8/2015 1:41:48 AM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP119_FGA.M
Last changed: 1/6/2015 8:27:05 AM
Instrument: Betty
Sequence_Name BETTYP121
Acq. operator: Justin Guenzler

Sample type: Sample
Location: Vial 1
Injection volume: 250.000
Injection: 1 of 3
File_Version 4



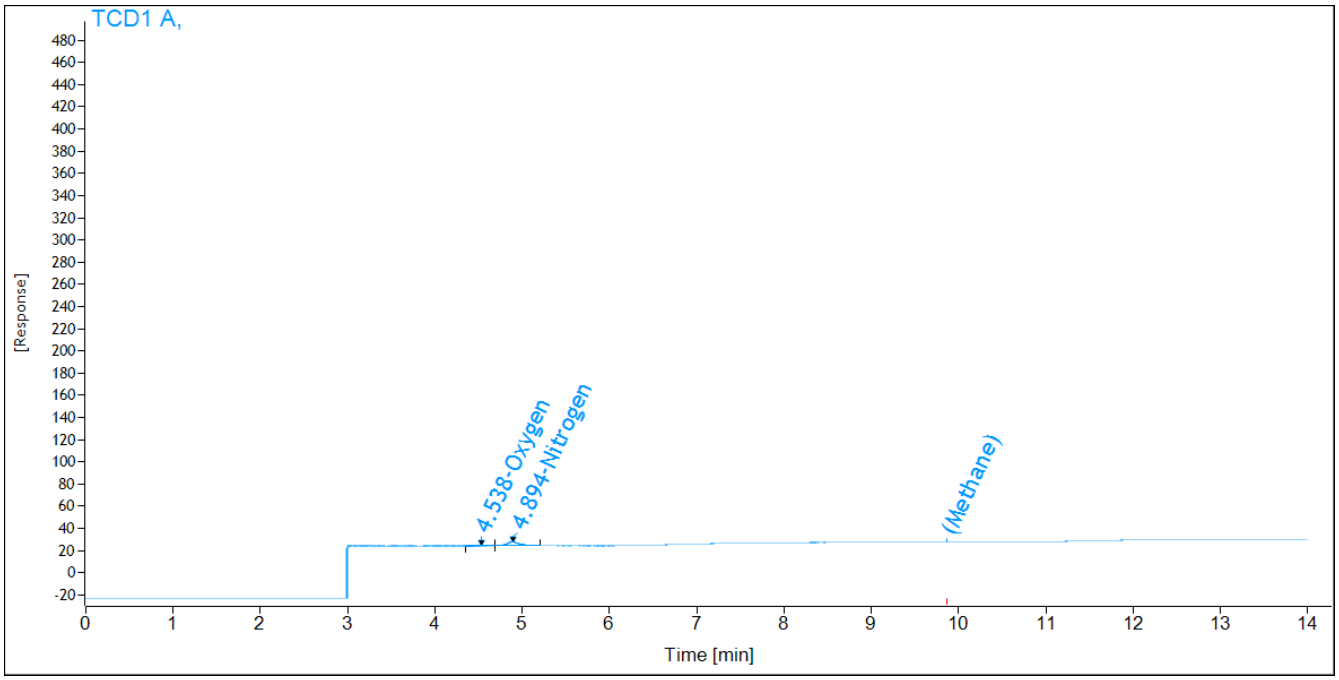
Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BV	4.54	7.8181	1	0.02	0.024	%
Nitrogen	VB	4.89	36.3706	1	0.09	0.087	%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide				1	0.00		%

Chromatogram Report

Enthalpy Analytical, Inc.

Data file: C:\GC\2015\BETTY\QUARTER 1\BETTYP121\001F2202.D
Sample name: He Blank #LB
File_Location \GC\2014\Betty\Quarter 4
Injection date: 1/8/2015 2:02:30 AM
Acq. method: GC142P133_CAL.M
Analysis method: BETTYP119_FGA.M
Last changed: 1/6/2015 8:27:05 AM
Instrument: Betty
Sequence_Name BETTYP121
Acq. operator: Justin Guenzler

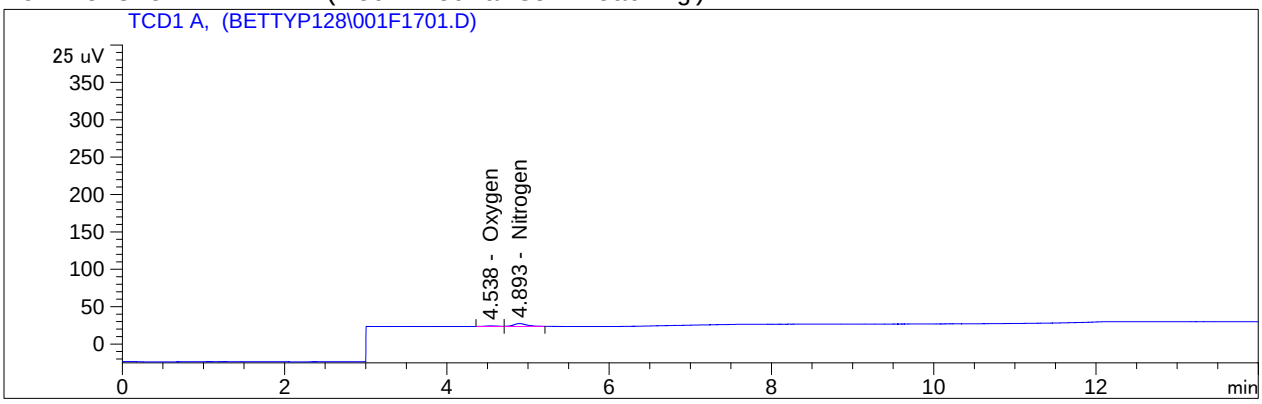
Sample type: Sample
Location: Vial 1
Injection volume: 250.000
Injection: 2 of 3
File_Version 4



Name	Peak_Type	RT [min]	Area	Dil	%	Sample_Amount	Units
Hydrogen				1	0.00		%
Oxygen	BV	4.54	8.0918	1	0.02	0.025	%
Nitrogen	VB	4.89	37.4216	1	0.09	0.089	%
Carbon monoxide				1	0.00		%
Methane				1	0.00		%
Carbon Dioxide				1	0.00		%

Data File C:\GC\2015\BETTY\QUARTER 1\BETTYP128\001F1701.D
Sample Name: He Blank #LB

```
==========================================================================
Acq. Operator   : Justin Guenzler               Seq. Line :  17
Acq. Instrument : Betty                          Location : Vial 1
Injection Date  : 1/19/2015 9:40:46 AM                Inj :   1
                                                Inj Volume : 250 µl
Acq. Method     : C:\GC\2015\BETTY\QUARTER 1\BETTYP128\GC142P133_CAL.M
Last changed    : 9/5/2014 7:29:19 AM by disconnected
Analysis Method : C:\GC\2015\BETTY\METHODS\BETTYP126_FGA.M
Last changed    : 1/15/2015 9:52:29 AM by Justin Guenzler
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP128.SC.SSIzip
ECM Version     : 4 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, January 15, 2015 8:48:52 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  1.881            -          -          -         Hydrogen
  4.538 BV        7.93643 3.61056e-3 2.86550e-2    Oxygen
  4.893 VB       42.72208 2.38433e-3 1.01864e-1    Nitrogen
  6.276            -          -          -         Carbon monoxide
  9.875            -          -          -         Methane
 13.164            -          -          -         Carbon Dioxide

Totals :                            1.30519e-1

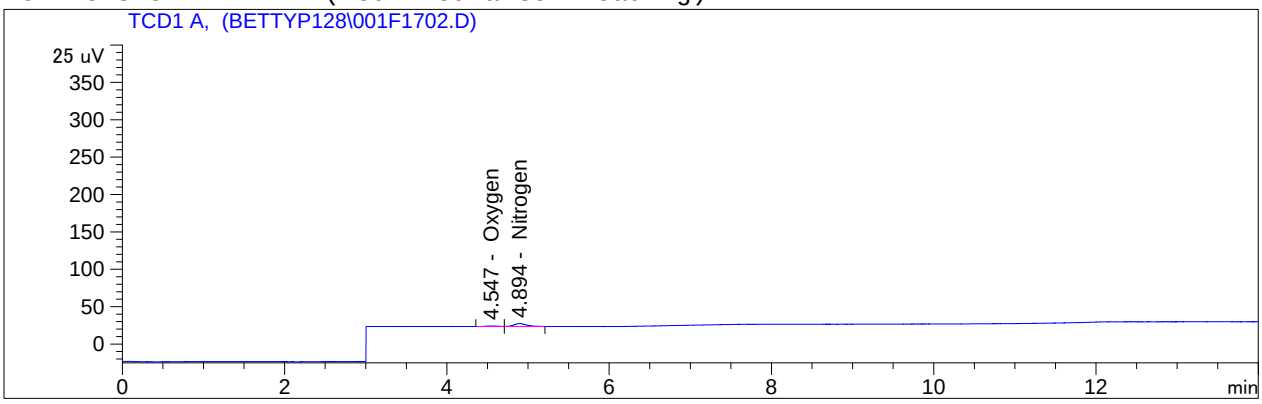

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2015\BETTY\QUARTER 1\BETTYP128\001F1702.D
Sample Name: He Blank #LB

```
==========================================================================
Acq. Operator   : Justin Guenzler               Seq. Line :  17
Acq. Instrument : Betty                          Location : Vial 1
Injection Date  : 1/19/2015 10:01:30 AM               Inj :   2
                                                Inj Volume : 250 µl
Acq. Method     : C:\GC\2015\BETTY\QUARTER 1\BETTYP128\GC142P133_CAL.M
Last changed    : 9/5/2014 7:29:19 AM by disconnected
Analysis Method : C:\GC\2015\BETTY\METHODS\BETTYP126_FGA.M
Last changed    : 1/15/2015 9:52:29 AM by Justin Guenzler
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP128.SC.SSIzip
ECM Version     : 4 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, January 15, 2015 8:48:52 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  1.881            -          -          -         Hydrogen
  4.547 BV       7.91892 3.61056e-3 2.85918e-2    Oxygen
  4.894 VB      43.47594 2.38433e-3 1.03661e-1    Nitrogen
  6.276            -          -          -         Carbon monoxide
  9.875            -          -          -         Methane
 13.164            -          -          -         Carbon Dioxide

Totals :                          1.32253e-1

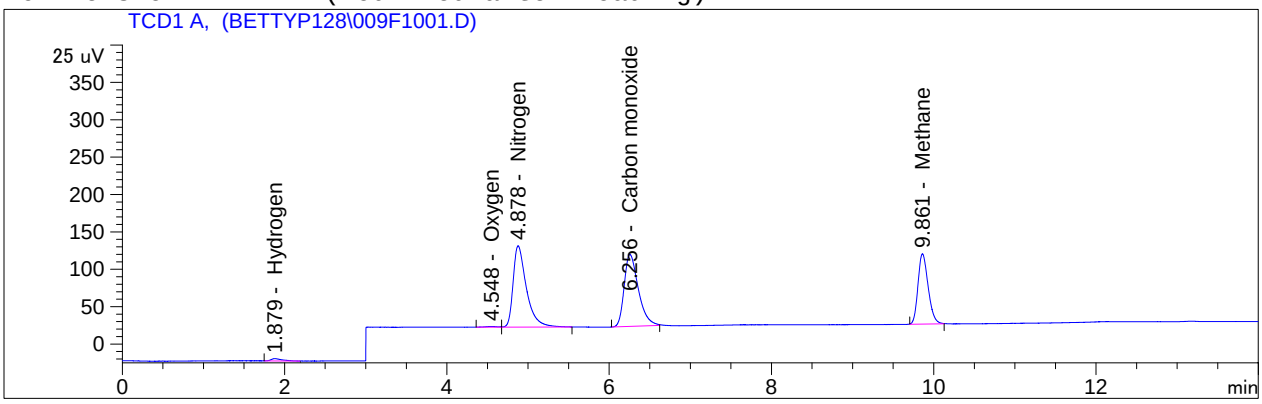

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========================================================================
                         *** End of Report ***
```

Data File C:\GC\2015\BETTY\QUARTER 1\BETTYP128\009F1001.D
Sample Name: BettyP118 #FG7 ENV(1=530,3=319.02)

```
==========================================================================
Acq. Operator   : Justin Guenzler                Seq. Line :  10
Acq. Instrument : Betty                          Location : Vial 9
Injection Date  : 1/18/2015 10:07:11 PM               Inj :   1
                                                Inj Volume : 250 µl
Acq. Method     : C:\GC\2015\BETTY\QUARTER 1\BETTYP128\GC142P133_CAL.M
Last changed    : 9/5/2014 7:29:19 AM by disconnected
Analysis Method : C:\GC\2015\BETTY\METHODS\BETTYP126_FGA.M
Last changed    : 1/15/2015 9:52:29 AM by Justin Guenzler
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP128.SC.SSIzip
ECM Version     : 4 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, January 15, 2015 8:48:52 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                 [%]
-------|------|----------|----------|----------|--|------------------
  1.879 BB       28.38772 9.83412e-2    2.79168    Hydrogen
  4.548 BV        8.02678 3.61056e-3 2.89812e-2    Oxygen
  4.878 VB     1234.07178 2.71472e-3    3.35016    Nitrogen
  6.256 BB     1168.85913 2.78757e-3    3.25828    Carbon monoxide
  9.861 BB      818.33258 3.15318e-3    2.58035    Methane
 13.164            -          -          -         Carbon Dioxide

Totals :                               12.00945

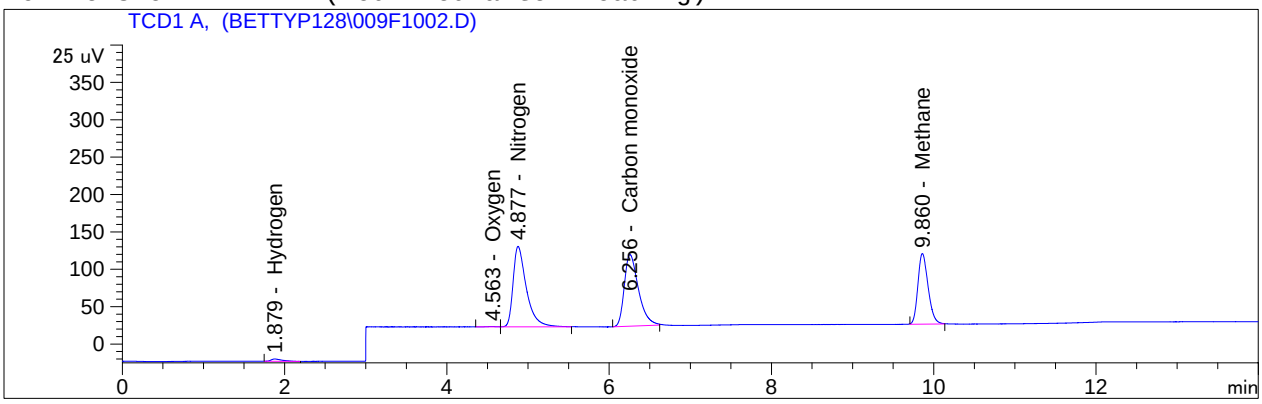

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========================================================================
                         *** End of Report ***
```

Data File C:\GC\2015\BETTY\QUARTER 1\BETTYP128\009F1002.D
Sample Name: BettyP118 #FG7 ENV(1=530,3=319.02)

```
==========================================================================
Acq. Operator   : Justin Guenzler                Seq. Line :  10
Acq. Instrument : Betty                          Location : Vial 9
Injection Date  : 1/18/2015 10:30:25 PM               Inj :   2
                                                Inj Volume : 250 µl
Acq. Method     : C:\GC\2015\BETTY\QUARTER 1\BETTYP128\GC142P133_CAL.M
Last changed    : 9/5/2014 7:29:19 AM by disconnected
Analysis Method : C:\GC\2015\BETTY\METHODS\BETTYP126_FGA.M
Last changed    : 1/15/2015 9:52:29 AM by Justin Guenzler
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP128.SC.SSIzip
ECM Version     : 4 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, January 15, 2015 8:48:52 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  1.879 BB       28.73651 9.84265e-2    2.82843    Hydrogen
  4.563 BV        4.16547 3.61056e-3 1.50397e-2    Oxygen
  4.877 VB     1222.15161 2.71425e-3    3.31722    Nitrogen
  6.256 BB     1160.73328 2.78752e-3    3.23557    Carbon monoxide
  9.860 BB      823.86096 3.15325e-3    2.59784    Methane
 13.164            -          -          -         Carbon Dioxide

Totals :                                11.99410

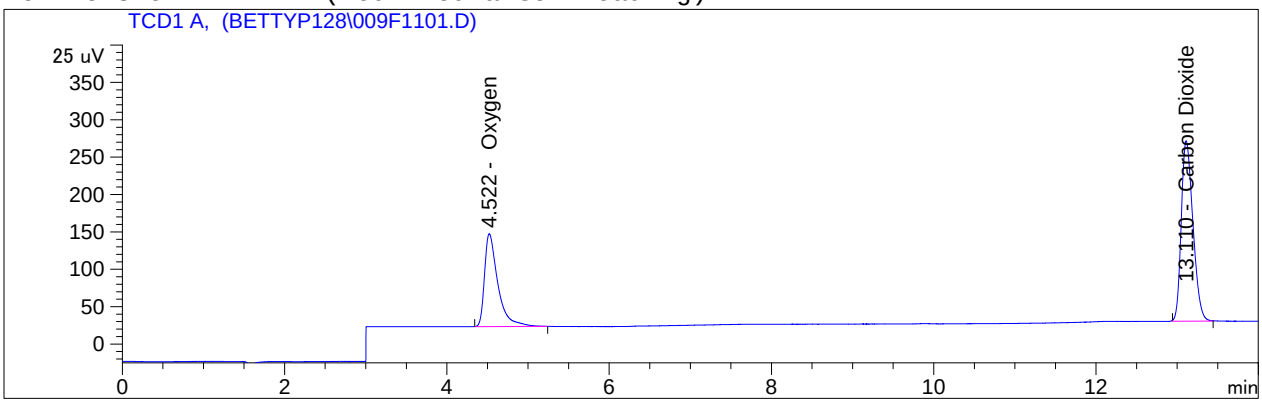

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2015\BETTY\QUARTER 1\BETTYP128\009F1101.D
Sample Name: BettyP070 #FG3 ENV(1=374.56,2=391.18)

```
==========================================================================
Acq. Operator   : Justin Guenzler               Seq. Line :  11
Acq. Instrument : Betty                         Location : Vial 9
Injection Date  : 1/18/2015 11:17:09 PM              Inj :   1
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2015\BETTY\QUARTER 1\BETTYP128\GC142P133_CAL.M
Last changed    : 9/5/2014 7:29:19 AM by disconnected
Analysis Method : C:\GC\2015\BETTY\METHODS\BETTYP126_FGA.M
Last changed    : 1/15/2015 9:52:29 AM by Justin Guenzler
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP128.SC.SSIzip
ECM Version     : 4 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, January 15, 2015 8:48:52 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,
```

RetTime [min]	Type	Area [25 uV*s]	Amt/Area	Amount [%]	Grp	Name
1.881		-	-	-		Hydrogen
4.522	BB	1414.30420	3.49654e-3	4.94517		Oxygen
4.874		-	-	-		Nitrogen
6.276		-	-	-		Carbon monoxide
9.875		-	-	-		Methane
13.110	BB	2407.80151	2.01702e-3	4.85658		Carbon Dioxide

Totals : 9.80175

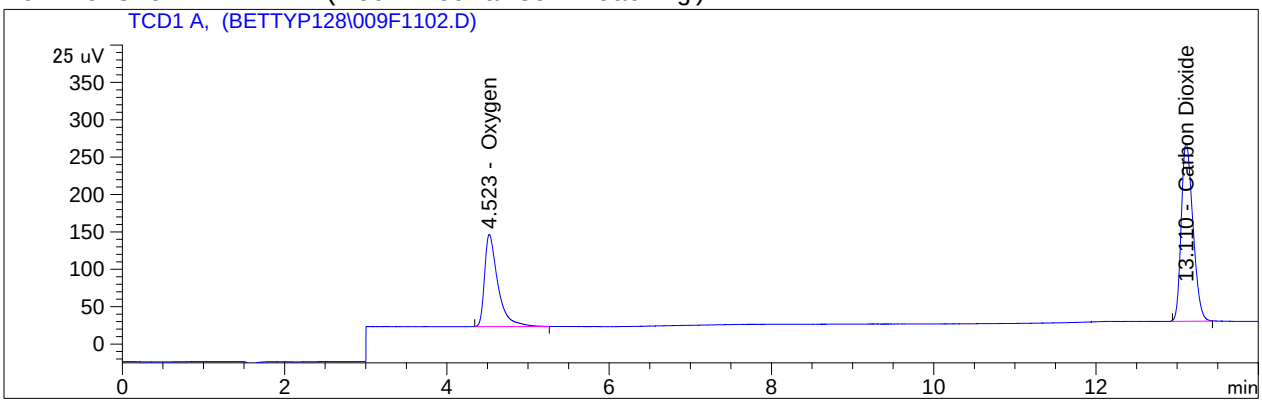
```
2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2015\BETTY\QUARTER 1\BETTYP128\009F1102.D
Sample Name: BettyP070 #FG3 ENV(1=374.56,2=391.18)

```
==========================================================================
Acq. Operator   : Justin Guenzler               Seq. Line :  11
Acq. Instrument : Betty                         Location : Vial 9
Injection Date  : 1/18/2015 11:40:24 PM              Inj :   2
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2015\BETTY\QUARTER 1\BETTYP128\GC142P133_CAL.M
Last changed    : 9/5/2014 7:29:19 AM by disconnected
Analysis Method : C:\GC\2015\BETTY\METHODS\BETTYP126_FGA.M
Last changed    : 1/15/2015 9:52:29 AM by Justin Guenzler
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP128.SC.SSIzip
ECM Version     : 4 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, January 15, 2015 8:48:52 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  1.881            -          -          -         Hydrogen
  4.523 BB     1402.68750 3.49665e-3    4.90471    Oxygen
  4.874            -          -          -         Nitrogen
  6.276            -          -          -         Carbon monoxide
  9.875            -          -          -         Methane
 13.110 BB     2385.04419 2.01684e-3    4.81026    Carbon Dioxide

Totals :                                 9.71497

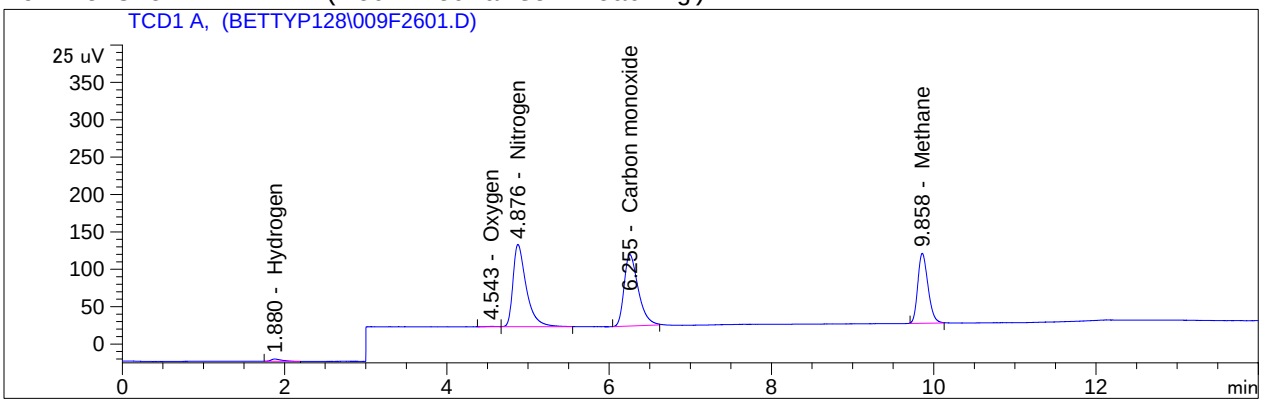

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2015\BETTY\QUARTER 1\BETTYP128\009F2601.D
Sample Name: BettyP118 #FG7 ENV(1=530,3=319.02)

```
==========================================================================
Acq. Operator   : Justin Guenzler               Seq. Line :  26
Acq. Instrument : Betty                         Location : Vial 9
Injection Date  : 1/20/2015 2:07:13 AM               Inj :   1
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2015\BETTY\QUARTER 1\BETTYP128\GC142P133_CAL.M
Last changed    : 9/5/2014 7:29:19 AM by disconnected
Analysis Method : C:\GC\2015\BETTY\METHODS\BETTYP126_FGA.M
Last changed    : 1/15/2015 9:52:29 AM by Justin Guenzler
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP128.SC.SSIzip
ECM Version     : 4 (modified after loading)
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, January 15, 2015 8:48:52 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  1.880 BB       28.43436 9.83527e-2    2.79660    Hydrogen
  4.543 BV        4.15739 3.61056e-3 1.50105e-2    Oxygen
  4.876 VB     1249.91479 2.71534e-3    3.39395    Nitrogen
  6.255 BB     1157.61877 2.78750e-3    3.22686    Carbon monoxide
  9.858 BB      817.13226 3.15316e-3    2.57655    Methane
 13.164            -          -          -         Carbon Dioxide

Totals :                                12.00897

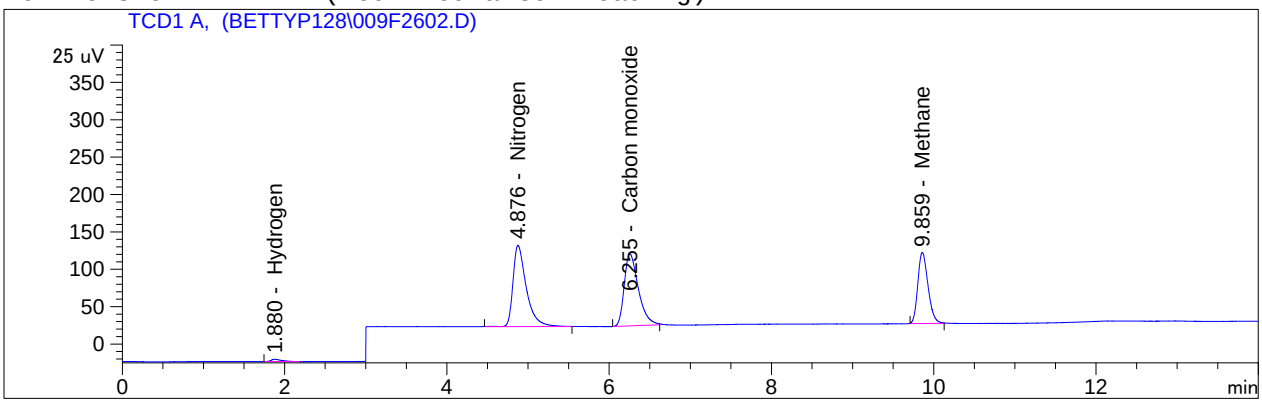

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2015\BETTY\QUARTER 1\BETTYP128\009F2602.D
Sample Name: BettyP118 #FG7 ENV(1=530,3=319.02)

```
==========================================================================
Acq. Operator   : Justin Guenzler                Seq. Line :  26
Acq. Instrument : Betty                          Location : Vial 9
Injection Date  : 1/20/2015 2:30:24 AM                Inj :   2
                                                Inj Volume : 250 µl
Acq. Method     : C:\GC\2015\BETTY\QUARTER 1\BETTYP128\GC142P133_CAL.M
Last changed    : 9/5/2014 7:29:19 AM by disconnected
Analysis Method : C:\GC\2015\BETTY\METHODS\BETTYP126_FGA.M
Last changed    : 1/15/2015 9:52:29 AM by Justin Guenzler
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP128.SC.SSIzip
ECM Version     : 4 (modified after loading)
```




```
==========================================================================
                        External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, January 15, 2015 8:48:52 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|---------|--|------------------
  1.880 BB       27.82751 9.81997e-2    2.73265    Hydrogen
  4.541            -          -          -         Oxygen
  4.876 BB     1235.76819 2.71479e-3    3.35485    Nitrogen
  6.255 BB     1166.51270 2.78755e-3    3.25172    Carbon monoxide
  9.859 BB      830.14056 3.15333e-3    2.61771    Methane
 13.164            -          -          -         Carbon Dioxide

Totals :                                11.95693

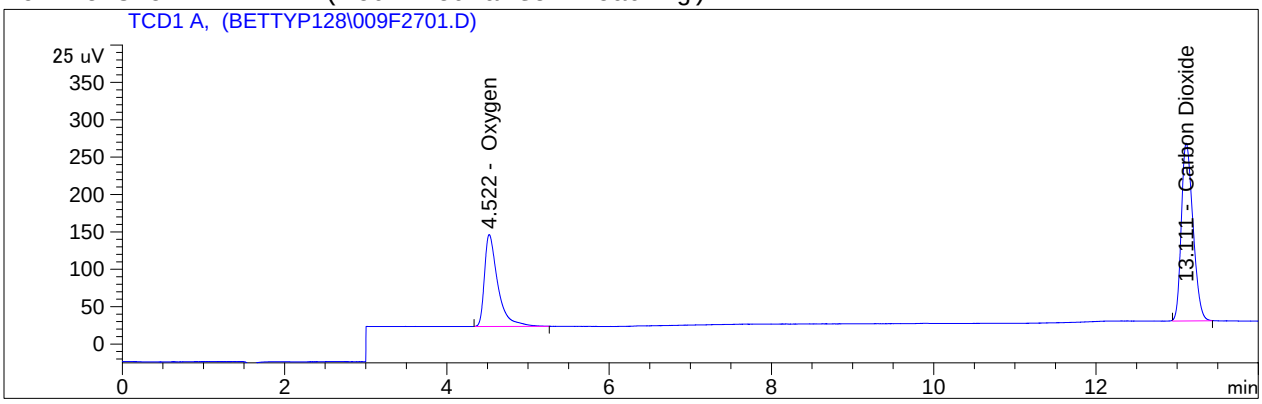

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2015\BETTY\QUARTER 1\BETTYP128\009F2701.D
Sample Name: BettyP070 #FG3 ENV(1=374.56,2=391.18)

```
==========================================================================
Acq. Operator   : Justin Guenzler               Seq. Line :  27
Acq. Instrument : Betty                         Location : Vial 9
Injection Date  : 1/20/2015 2:53:35 AM               Inj :   1
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2015\BETTY\QUARTER 1\BETTYP128\GC142P133_CAL.M
Last changed    : 9/5/2014 7:29:19 AM by disconnected
Analysis Method : C:\GC\2015\BETTY\METHODS\BETTYP126_FGA.M
Last changed    : 1/15/2015 9:52:29 AM by Justin Guenzler
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP128.SC.SSIzip
ECM Version     : 4 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, January 15, 2015 8:48:52 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]         [25 uV*s]                [%]
-------|------|----------|----------|----------|--|------------------
  1.881            -          -          -         Hydrogen
  4.522 BB     1399.90942 3.49668e-3    4.89503    Oxygen
  4.874            -          -          -         Nitrogen
  6.276            -          -          -         Carbon monoxide
  9.875            -          -          -         Methane
 13.111 BB     2371.37012 2.01674e-3    4.78243    Carbon Dioxide

Totals :                                 9.67747

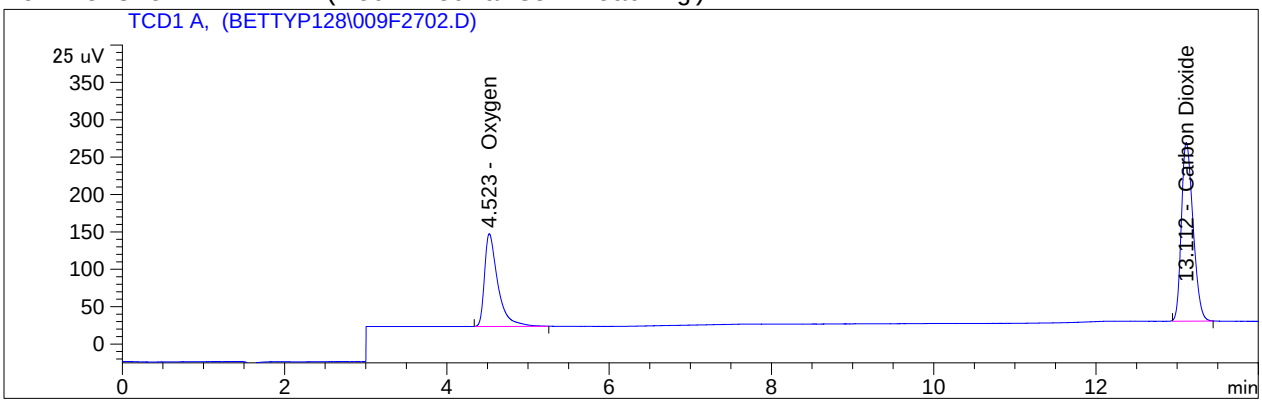

2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

Data File C:\GC\2015\BETTY\QUARTER 1\BETTYP128\009F2702.D
Sample Name: BettyP070 #FG3 ENV(1=374.56,2=391.18)

```
==========================================================================
Acq. Operator   : Justin Guenzler               Seq. Line :  27
Acq. Instrument : Betty                         Location : Vial 9
Injection Date  : 1/20/2015 3:16:48 AM               Inj :   2
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2015\BETTY\QUARTER 1\BETTYP128\GC142P133_CAL.M
Last changed    : 9/5/2014 7:29:19 AM by disconnected
Analysis Method : C:\GC\2015\BETTY\METHODS\BETTYP126_FGA.M
Last changed    : 1/15/2015 9:52:29 AM by Justin Guenzler
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Betty\Quarter 4\BETTYP128.SC.SSIzip
ECM Version     : 4 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      Thursday, January 15, 2015 8:48:52 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: TCD1 A,
```

RetTime [min]	Type	Area [25 uV*s]	Amt/Area	Amount [%]	Grp	Name
1.881		-	-	-		Hydrogen
4.523	BB	1408.70752	3.49659e-3	4.92568		Oxygen
4.874		-	-	-		Nitrogen
6.276		-	-	-		Carbon monoxide
9.875		-	-	-		Methane
13.112	BB	2392.66089	2.01690e-3	4.82577		Carbon Dioxide

Totals : 9.75144

```
2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========================================================================
                          *** End of Report ***
```

method: C:\GC\2014\BETTY\METHODS\GC142P133_CAL.M
Modified on: 9/5/2014 at 7:29:19 AM

==========

6890 GC METHOD

==========

OVEN
- Initial temp: 40 C (On)
- Initial time: 6.00 min
- Ramps:

#	Rate	Final temp	Final time
1	30.00	220	2.00
2	0 (Off)		

- Post temp: 40 C
- Post time: 0.00 min
- Run time: 14.00 min
- Maximum temp: 250 C
- Equilibration time: 0.50 min

CRYO (N2)
- Cryo: Off
- Cryo fault: On
- Cryo timeout: 40.00 min (On)
- Quick cryo cool: Off
- Ambient temp: 30 C

FRONT INLET (SPLIT/SPLITLESS)
- Mode: Splitless
- Initial temp: 200 C (On)
- Pressure: 60.0 psi (On)
- Purge flow: 0.0 mL/min
- Purge time: 0.00 min
- Total flow: 12.3 mL/min
- Gas saver: Off
- Gas type: Helium

BACK INLET (SPLIT/SPLITLESS)
- Mode: Split
- Initial temp: 200 C (On)
- Pressure: 11.6 psi (On)
- Split ratio: 5:1
- Split flow: 12.3 mL/min
- Total flow: 17.6 mL/min
- Gas saver: Off
- Gas type: Helium

COLUMN 1
- Packed Column
- Model Number: 19808
- Description: Rt-ShinCarbon 2m x 1mm I
- Max temperature: 250 C
- Mode: constant pressure
- Pressure: 60.0 psi
- Inlet: Front Inlet
- Outlet: Front Detector
- Outlet pressure: ambient

COLUMN 2
- Capillary Column
- Model Number: 10198
- Description: Rtx-1 30m x 0.32mm x 4um
- Max temperature: 250 C
- Nominal length: 30.0 m
- Nominal diameter: 320.00 um
- Nominal film thickness: 4.00 um
- Mode: constant flow
- Initial flow: 2.5 mL/min
- Nominal init pressure: 11.6 psi
- Average velocity: 39 cm/sec
- Inlet: Back Inlet
- Outlet: (other)
- Outlet pressure: ambient

FRONT DETECTOR (TCD)
- Temperature: 275 C (On)
- Reference flow: 20.0 mL/min (On)
- Mode: Constant makeup flow
- Makeup flow: 10.0 mL/min (On)
- Makeup Gas Type: Helium
- Filament: On
- Negative polarity: On

BACK DETECTOR (FID)
- Temperature: 250 C (On)
- Hydrogen flow: 60.0 mL/min (On)
- Air flow: 450.0 mL/min (On)
- Mode: Constant makeup flow
- Makeup flow: 40.0 mL/min (On)
- Makeup Gas Type: Nitrogen
- Flame: On
- Electrometer: On
- Lit offset: 2.0

SIGNAL 1
- Data rate: 20 Hz
- Type: front detector
- Save Data: On

SIGNAL 2
- Data rate: 20 Hz
- Type: back detector
- Save Data: On

THERMAL AUX 1
- Use: Valve Box Heater
- Initial temp: 130 C (On)

VALVES
- Valve 1 Gas Sampling
  - Loop Volume: 0.250 mL

POST RUN
- Post Time: 0.00 min

method: C:\GC\2014\BETTY\METHODS\GC142P133_CAL.M
Modified on: 9/5/2014 at 7:29:19 AM
Load Time: 0.10 min
Inject Time: 0.50 min
Inlet: Front Inlet
Valve 2 Gas Sampling
Loop Volume: 0.250 mL
Load Time: 0.10 min
Inject Time: 0.50 min
Inlet: Front Inlet

TIME TABLE

Time(min)	Parameter & Setpoint	
3.00	Front Detector Polarity:	Off

CUSTOMGAS
SOLUTIONS

1750 East Club Boulevard
Durham, NC 27704
Phone: (919) 220-2570
Fax: (919) 220-4540

Certificate of Analysis

Customer:

Enthalpy Analytical, Inc.
800-1 Capitola Drive
Durham, NC 27713

Tel: (919) 595-1377

Cylinder Number: XC010510B
Cylinder Size/CGA: 150/590
Fill Pressure: 2015 PSIA
Gas Volume:3700 liters
Date of Mfg: 02/04/14
Expiration Date: 02/04/16

Customer Number	Ship VIA	Job No.	Customer PO	Mixture Type
00127703NC	Pick up	011614-004	01151401	Gravimetric

Component	Nominal Concentration	Actual Concentration*	Mixture Type
Oxygen	10 %	10.01 % +/- 0.2 %	Gravimetric Master Gas
Carbon Dioxide	10 %	10.01 % +/- 0.2 %	
Helium	balance	balance	

NOTES:

Blend Tolerance: +/- 2 %

Analytical Tolerance: +/- 2 %

Traceability: NIST by weight set. NIST Traceability No MT5061.
Internal Standards by analysis

Reactive Mixtures: Analyzed twice with required agreement between analyses of 2%.
Required wait time between analyses of >7 days.

Caution: Do not use below 150 PSIG.

Authorized Signature:

Joseph A. Ernst

*Every effort has been made to establish the actual concentration of the components using master gas blending technology however, Custom Gas Solutions shall have no liability in excess of the established charge for this material.

AIR LIQUIDE Air Liquide America Specialty Gases LLC

6141 EASTON ROAD, BLDG 1, PLUMSTEADVILLE, PA 18949-0310 Phone: 800-331-4953 Fax: 215-766-7226

CERTIFIED MASTER CLASS

Single-Certified Calibration Standard

CERTIFICATE OF ACCURACY: Certified Master Class Calibration Standard

Product Information
Document # : 55008824-001
Item No.: MC500418-P-44
P.O. No.: 04171401

Cylinder Number: 603003Y
Cylinder Size: 44
Certification Date: 01May2014
Expiration Date: 02May2017
Lot Number: PLU0276477

Customer

ENTHALPY ANALYTICAL, INC.
GREG TATE
800-1 CAPITOLA DRIVE
DURHAM, NC 27703
US

CERTIFIED CONCENTRATION

Component Name	Concentration (Moles)		Accuracy (+/-%)
CARBON MONOXIDE	9.95	%	2
HYDROGEN	8.00	%	2
METHANE	8.00	%	2
NITROGEN	10.00	%	2
HELIUM		BALANCE	

TRACEABILITY

Traceable To

Scott Reference Standard

APPROVED BY: WILLIAM MORGAN

DATE: 5-1-14

SPECIFICATIONS

Component Name	Requested Concentration (Moles)	Certified Concentration (Moles)	Blend Tolerance Result (+/- %)	Certified Accuracy Result (+/- %)
CARBON MONOXIDE	10. %	9.95 %	.5	2.00
HYDROGEN	8. %	8.00 %	.0	2.00
METHANE	8. %	8.00 %	.0	2.00
NITROGEN	10. %	10.00 %	.0	2.00
HELIUM	BAL	BAL		

TRACEABILITY

Traceable To
Scott Reference Standard

PHYSICAL PROPERTIES

Cylinder Size: 44

Pressure: 1885 PSIG
Expiration Date: 02May2017

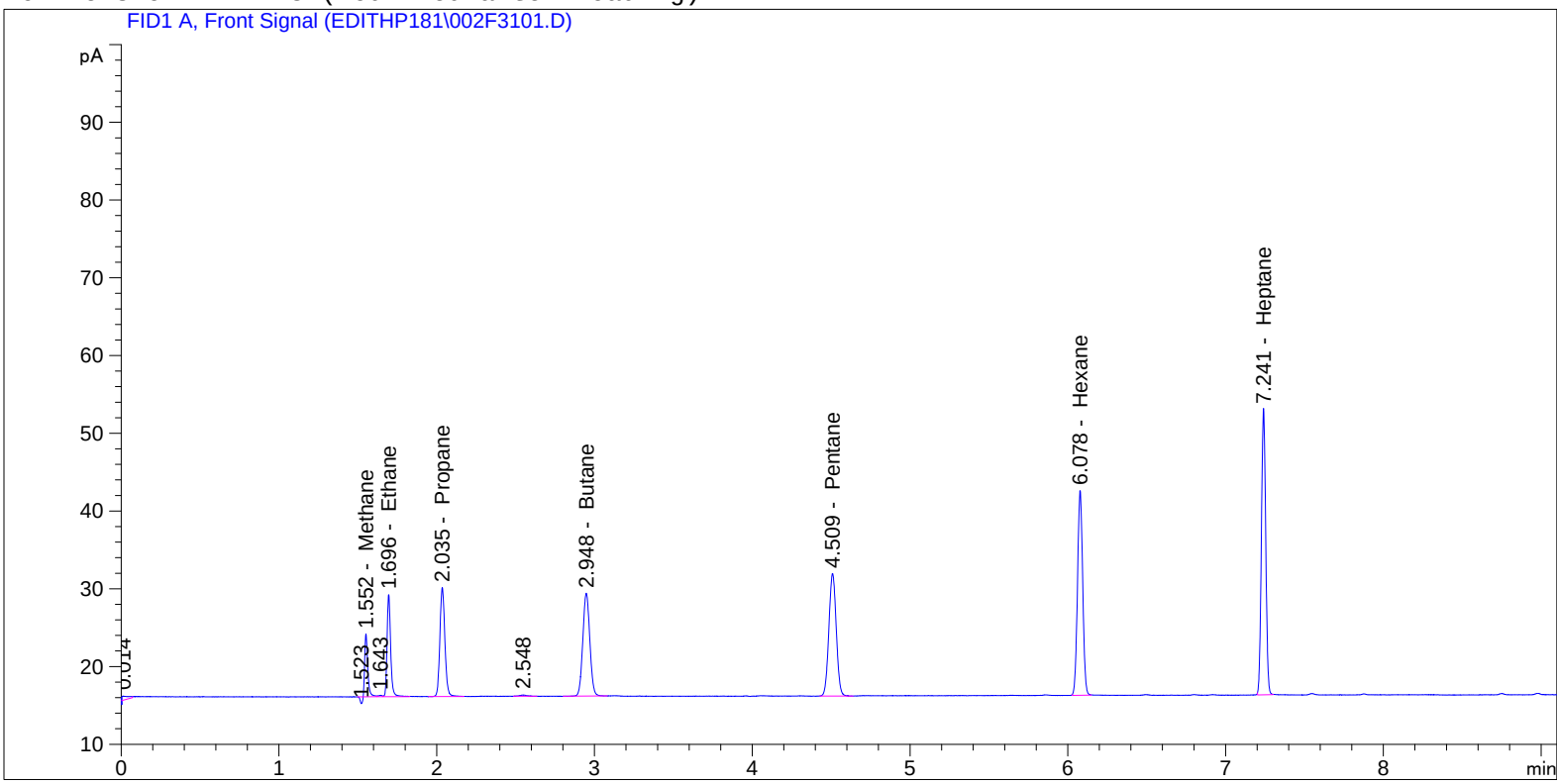
SPECIAL HANDLING INSTRUCTIONS

Do not use or store cylinder at or below the stated dew point temperature. Possible condensation of heavier components could result. In the event the cylinder has been exposed to temperatures at or below the dew point, place cylinder in heated area for 24 hours and then roll cylinder for 15 minutes to re-mix.

Use of calibration standards at or below dew point temperature may result in calibration error.

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP181\002F3101.D
Sample Name: EdithP108 #C3 ENV(1=600,2=400)

```
==================================================================
Acq. Operator   : Turner Oppy                    Seq. Line :  31
Acq. Instrument : Edith                           Location : Vial 2
Injection Date  : 1/7/2015 7:59:43 PM                 Inj :   1
                                                Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP181\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP181.SC.SSIzip
ECM Version     : 3 (modified after loading)
```




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.552	PV	10.97053	3.69451	40.53072		Methane
1.696	VB	20.84645	1.89020	39.40406		Ethane
2.035	PB	30.91908	1.27350	39.37533		Propane
2.948	BB	40.74157	9.60556e-1	39.13454		Butane
4.509	BV	51.13910	7.77229e-1	39.74681		Pentane
6.078	BB	60.59055	6.64074e-1	40.23662		Hexane
6.795		-	-	-		Benzene
7.241	BB	70.62368	5.46145e-1	38.57077		Heptane

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP181\002F3101.D
Sample Name: EdithP108 #C3 ENV(1=600,2=400)

Totals : 276.99885

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
0.014	BB	1.25025	1.26492	1.58147		?
1.523	BP N	8.83141e-1	1.26492	1.11710		?
1.643	VV	3.09838e-1	1.26492	3.91920e-1		?
2.548	BB	5.06683e-1	1.26492	6.40913e-1		?

Uncalib. totals : 3.73140

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Ethane	1.550	1.855	3.09838e-1	0.5851
as Butane	2.479	3.714	5.06683e-1	0.4860

Totals : 1.0711

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

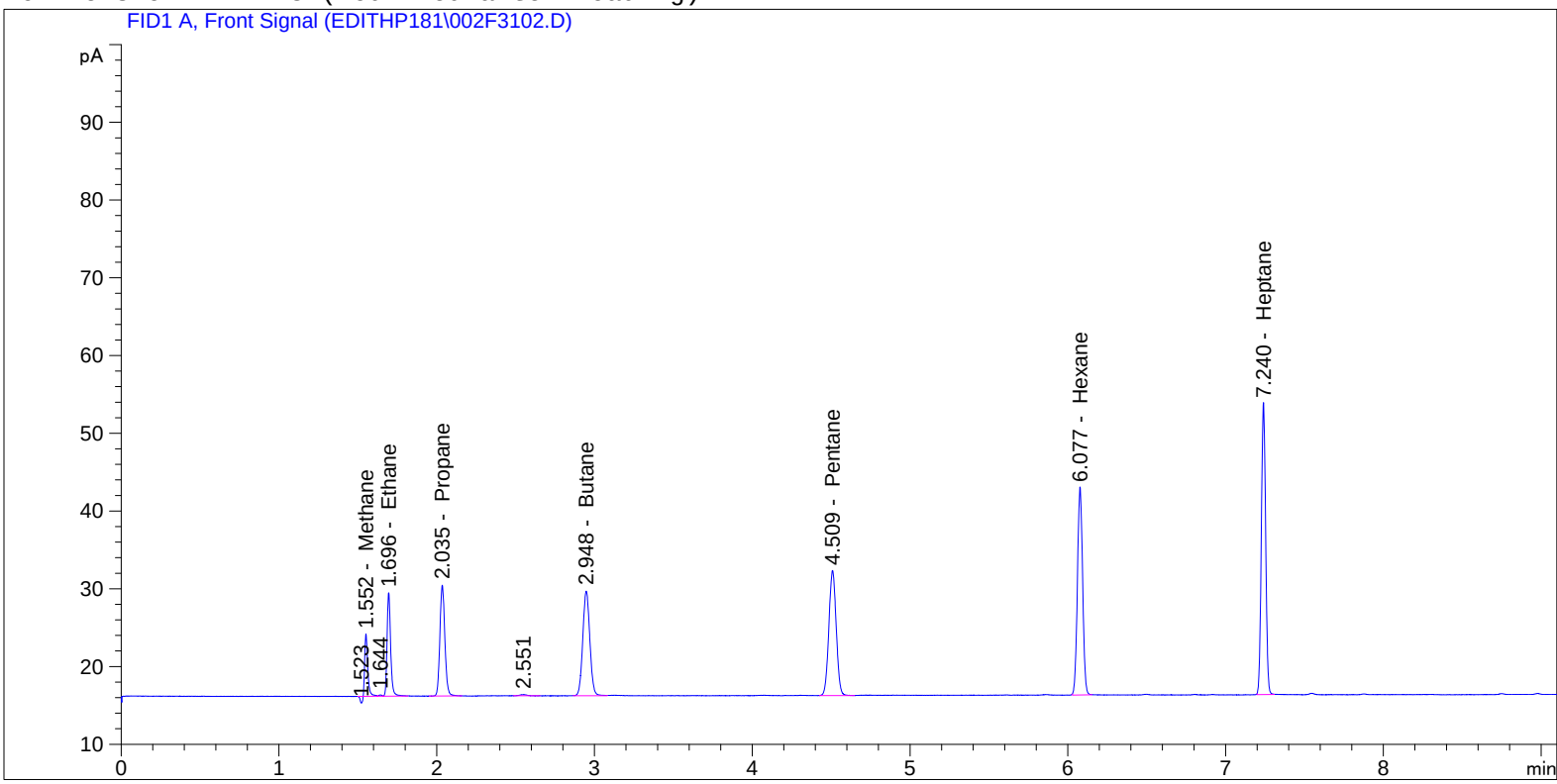
Name	Total Area [pA*s]	Amount [ppm]
as Ethane	3.09838e-1	0.5851
as Butane	5.06683e-1	0.4860
Methane	10.97053	40.5307
Ethane	20.84645	39.4041
Propane	30.91908	39.3753
Butane	40.74157	39.1345
Pentane	51.13910	39.7468
Hexane	60.59055	40.2366
Benzene	0.00000	0.0000
Heptane	70.62368	38.5708

Totals : 278.0699

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP181\002F3102.D
Sample Name: EdithP108 #C3 ENV(1=600,2=400)

```
==================================================================
Acq. Operator   : Turner Oppy                    Seq. Line :  31
Acq. Instrument : Edith                           Location : Vial 2
Injection Date  : 1/7/2015 8:16:39 PM                 Inj :   2
                                                Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP181\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP181.SC.SSIzip
ECM Version     : 3 (modified after loading)
```




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==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.552	PV	10.85313	3.69485	40.10069		Methane
1.696	VB	20.97721	1.89023	39.65166		Ethane
2.035	BB	31.29544	1.27351	39.85509		Propane
2.948	BB	41.77348	9.60605e-1	40.12782		Butane
4.509	BB	52.01278	7.77355e-1	40.43241		Pentane
6.077	BB	61.68084	6.64156e-1	40.96572		Hexane
6.795		-	-	-		Benzene
7.240	BB	71.88531	5.46135e-1	39.25906		Heptane

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP181\002F3102.D
Sample Name: EdithP108 #C3 ENV(1=600,2=400)

Totals : 280.39245

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.523	BP N	8.93538e-1	1.26492	1.13025		?
1.644	VV	2.44355e-1	1.26492	3.09089e-1		?
2.551	BB	4.76265e-1	1.26492	6.02437e-1		?

Uncalib. totals : 2.04178

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Ethane	1.550	1.855	2.44355e-1	0.4614
as Butane	2.479	3.714	4.76265e-1	0.4568

Totals : 9.1824e-1

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

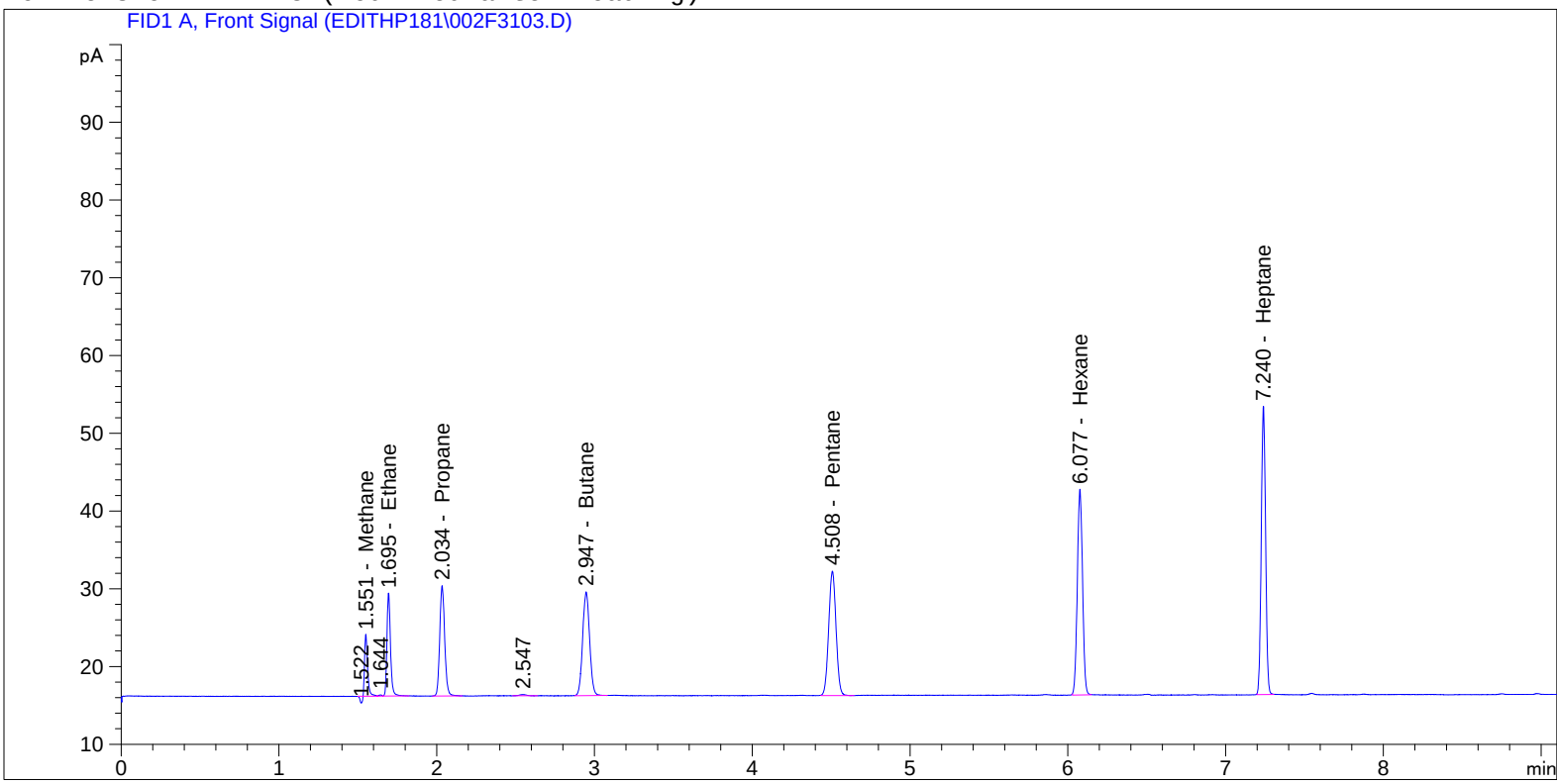
Name	Total Area [pA*s]	Amount [ppm]
as Ethane	2.44355e-1	0.4614
as Butane	4.76265e-1	0.4568
Methane	10.85313	40.1007
Ethane	20.97721	39.6517
Propane	31.29544	39.8551
Butane	41.77348	40.1278
Pentane	52.01278	40.4324
Hexane	61.68084	40.9657
Benzene	0.00000	0.0000
Heptane	71.88531	39.2591

Totals : 281.3107

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP181\002F3103.D
Sample Name: EdithP108 #C3 ENV(1=600,2=400)

```
==================================================================
Acq. Operator   : Turner Oppy                    Seq. Line :  31
Acq. Instrument : Edith                           Location : Vial 2
Injection Date  : 1/7/2015 8:34:26 PM                  Inj :   3
                                                Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP181\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP181.SC.SSIzip
ECM Version     : 3 (modified after loading)
```




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.551	PV	10.72892	3.69522	39.64569		Methane
1.695	VB	20.83546	1.89020	39.38326		Ethane
2.034	BB	31.12652	1.27350	39.63977		Propane
2.947	BB	41.07618	9.60572e-1	39.45662		Butane
4.508	BB	51.64096	7.77302e-1	40.14063		Pentane
6.077	BB	61.21599	6.64122e-1	40.65487		Hexane
6.795		-	-	-		Benzene
7.240	BB	71.34554	5.46139e-1	38.96458		Heptane

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP181\002F3103.D
Sample Name: EdithP108 #C3 ENV(1=600,2=400)

Totals : 277.88541

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.522	BP N	9.06606e-1	1.26492	1.14678		?
1.644	VV	2.37356e-1	1.26492	3.00236e-1		?
2.547	BB	4.55416e-1	1.26492	5.76064e-1		?

Uncalib. totals : 2.02308

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Ethane	1.550	1.855	2.37356e-1	0.4482
as Butane	2.479	3.714	4.55416e-1	0.4368

Totals : 8.8503e-1

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

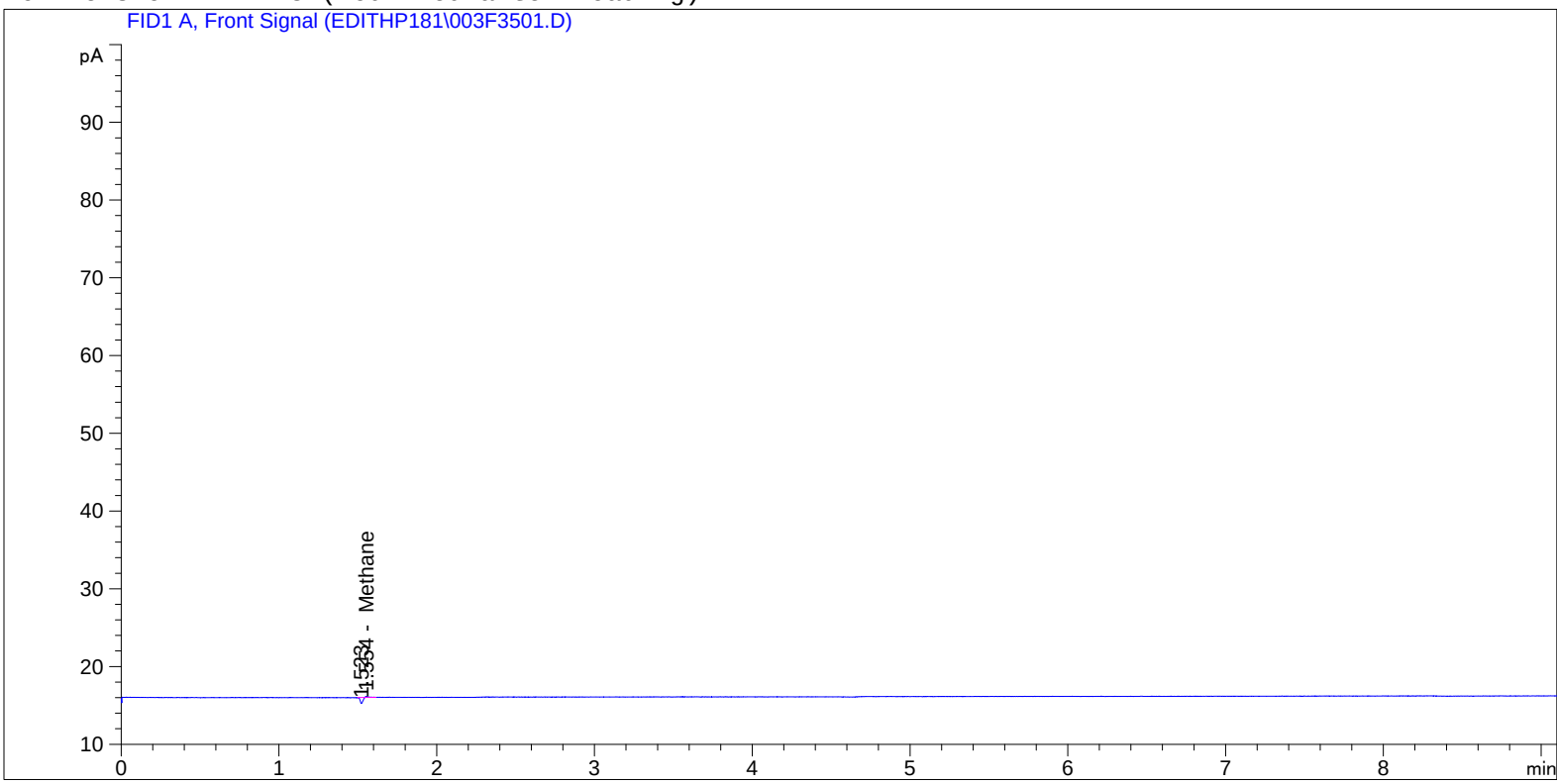
Name	Total Area [pA*s]	Amount [ppm]
as Ethane	2.37356e-1	0.4482
as Butane	4.55416e-1	0.4368
Methane	10.72892	39.6457
Ethane	20.83546	39.3833
Propane	31.12652	39.6398
Butane	41.07618	39.4566
Pentane	51.64096	40.1406
Hexane	61.21599	40.6549
Benzene	0.00000	0.0000
Heptane	71.34554	38.9646

Totals : 278.7704

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP181\003F3501.D
Sample Name: zero air blank

```
==========================================================================
Acq. Operator   : Turner Oppy                    Seq. Line :  35
Acq. Instrument : Edith                           Location : Vial 3
Injection Date  : 1/8/2015 12:28:29 AM                 Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP181\GC139P039_HRVOC_LONG.M
Last changed    : 1/15/2014 1:35:32 PM by Justin Guenzler
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP181.SC.SSIzip
ECM Version     : 3 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.554 PB     1.78322e-1    3.93469 7.01642e-1    Methane
  1.688            -           -          -         Ethane
  2.031            -           -          -         Propane
  2.943            -           -          -         Butane
  4.495            -           -          -         Pentane
  6.067            -           -          -         Hexane
  6.795            -           -          -         Benzene
  7.232            -           -          -         Heptane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP181\003F3501.D
Sample Name: zero air blank

Totals : 7.01642e-1

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.523	BP N	9.17478e-1	1.26492	1.16054		?

Uncalib. totals : 1.16054

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

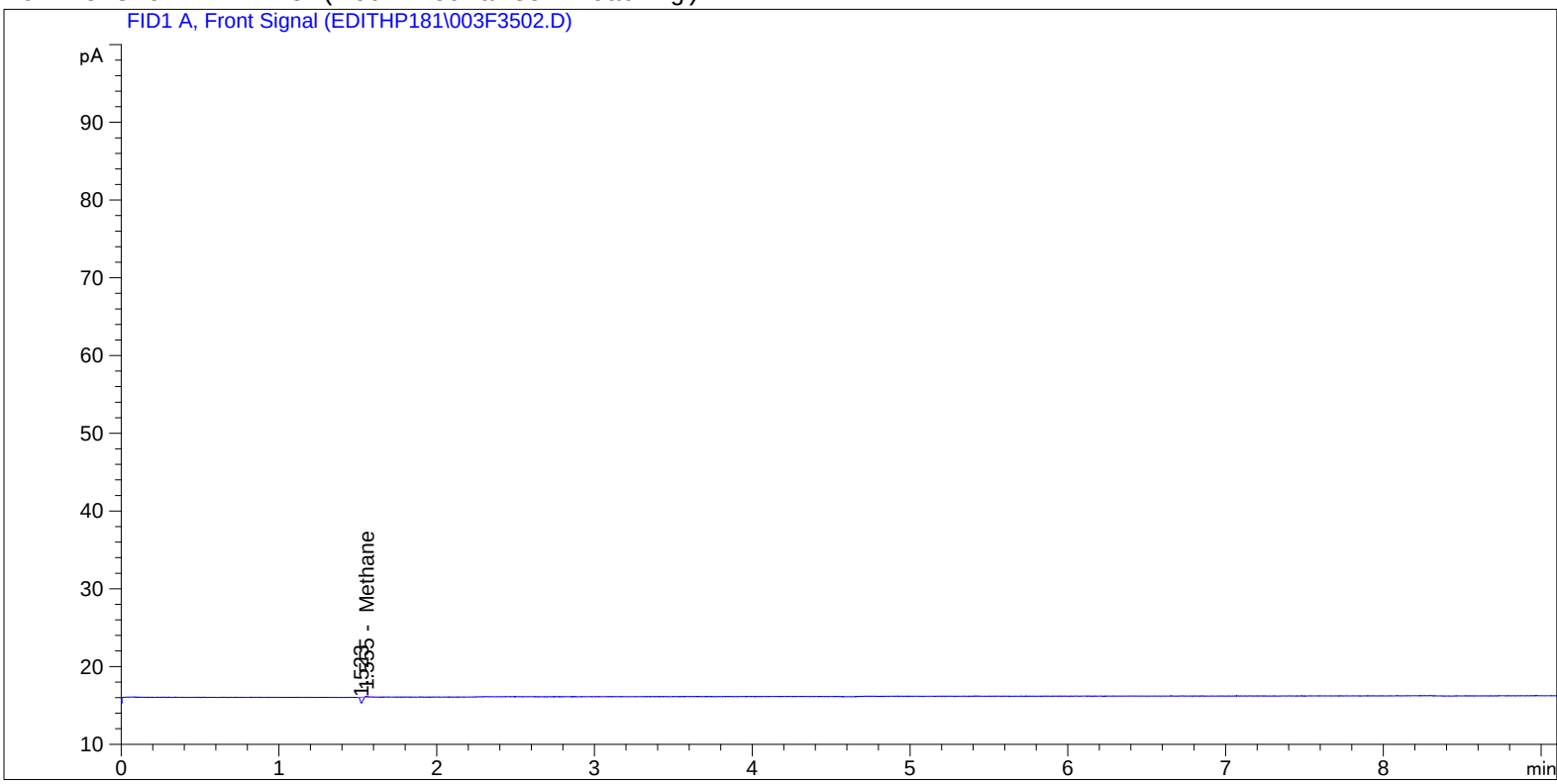
Name	Total Area [pA*s]	Amount [ppm]
Methane	1.78322e-1	0.7016
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000

Totals : 7.0164e-1

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP181\003F3502.D
Sample Name: zero air blank

```
==========================================================================
Acq. Operator   : Turner Oppy                    Seq. Line :  35
Acq. Instrument : Edith                           Location : Vial 3
Injection Date  : 1/8/2015 12:46:43 AM                 Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP181\GC139P039_HRVOC_LONG.M
Last changed    : 1/15/2014 1:35:32 PM by Justin Guenzler
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP181.SC.SSIzip
ECM Version     : 3 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.555 PB     1.57631e-1    3.93469 6.20229e-1    Methane
  1.688           -             -          -        Ethane
  2.031           -             -          -        Propane
  2.943           -             -          -        Butane
  4.495           -             -          -        Pentane
  6.067           -             -          -        Hexane
  6.795           -             -          -        Benzene
  7.232           -             -          -        Heptane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP181\003F3502.D
Sample Name: zero air blank

Totals : 6.20229e-1

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.523	BP N	9.01312e-1	1.26492	1.14009	?	

Uncalib. totals : 1.14009

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

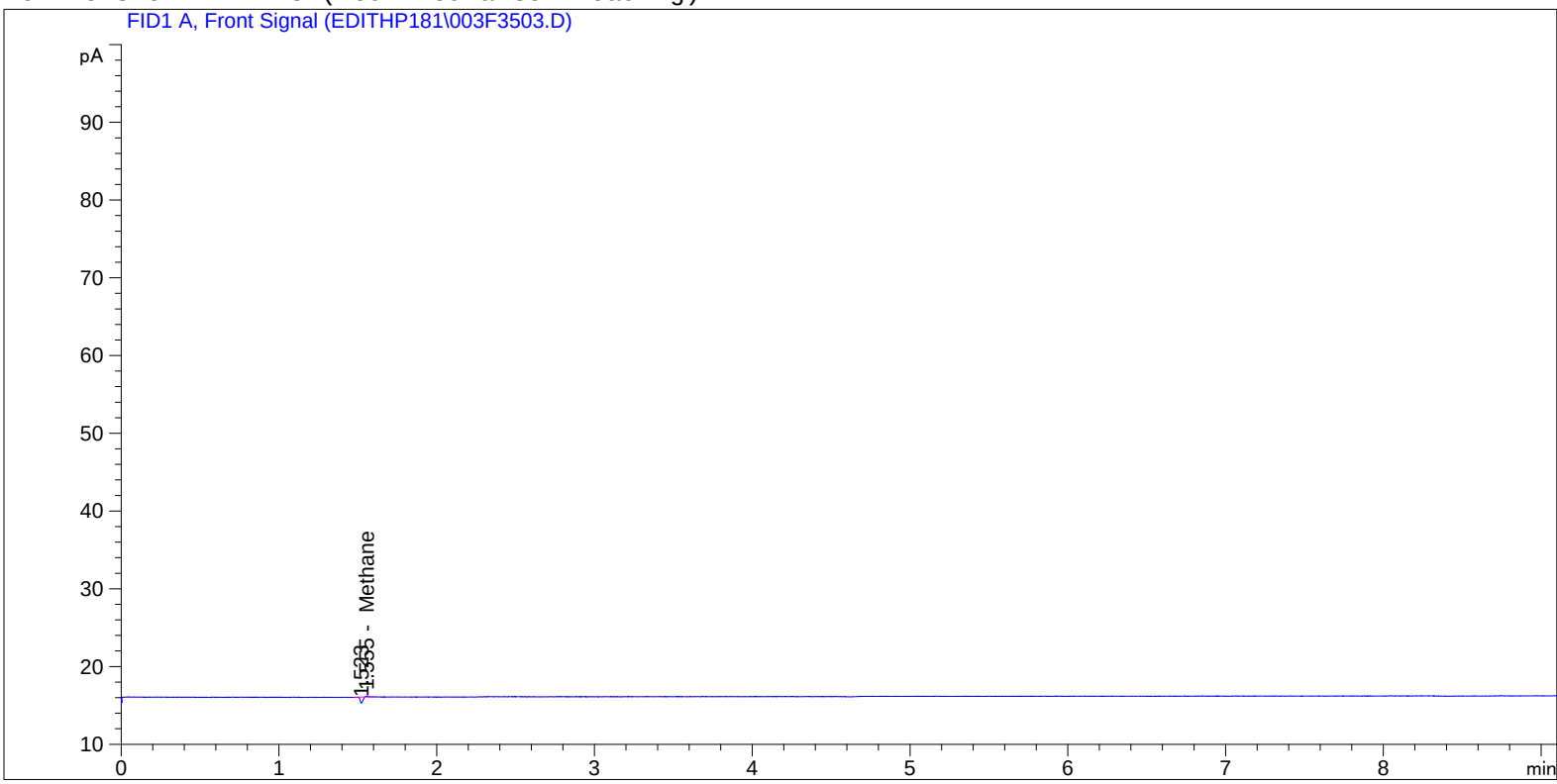
Name	Total Area [pA*s]	Amount [ppm]
Methane	1.57631e-1	0.6202
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000

Totals : 6.2023e-1

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP181\003F3503.D
Sample Name: zero air blank

```
==========================================================================
Acq. Operator   : Turner Oppy                    Seq. Line :  35
Acq. Instrument : Edith                           Location : Vial 3
Injection Date  : 1/8/2015 1:04:50 AM                  Inj :   3
                                                Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP181\GC139P039_HRVOC_LONG.M
Last changed    : 1/15/2014 1:35:32 PM by Justin Guenzler
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP181.SC.SSIzip
ECM Version     : 3 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.555 PB     1.35194e-1    3.93469 5.31945e-1    Methane
  1.688            -           -          -         Ethane
  2.031            -           -          -         Propane
  2.943            -           -          -         Butane
  4.495            -           -          -         Pentane
  6.067            -           -          -         Hexane
  6.795            -           -          -         Benzene
  7.232            -           -          -         Heptane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP181\003F3503.D
Sample Name: zero air blank

Totals : 5.31945e-1

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.523	PP N	9.88867e-1	1.26492	1.25084		?

Uncalib. totals : 1.25084

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

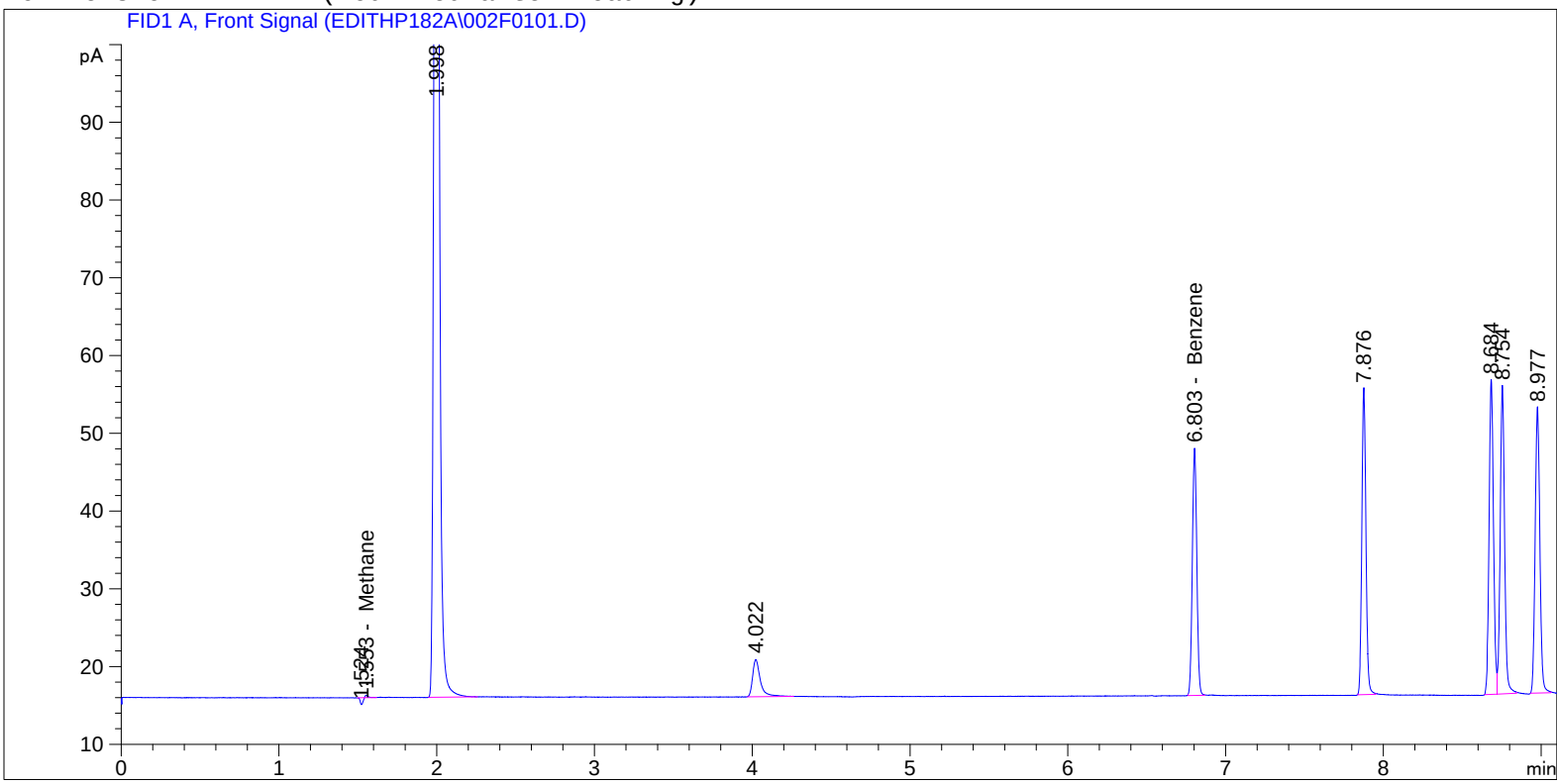
Name	Total Area [pA*s]	Amount [ppm]
Methane	1.35194e-1	0.5319
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000

Totals : 5.3195e-1

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182A\002F0101.D
Sample Name: EdithP155 #B3 ENV(1=600,6=400)

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :   1
Acq. Instrument : Edith                          Location : Vial 2
Injection Date  : 1/8/2015 10:13:56 AM                Inj :   1
                                                Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182A\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182A.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.553 PB     4.48122e-1    3.93469    1.76322    Methane
  1.688           -             -          -       Ethane
  2.031           -             -          -       Propane
  2.943           -             -          -       Butane
  4.495           -             -          -       Pentane
  6.067           -             -          -       Hexane
  6.803 BB       62.81884 6.31498e-1   39.67000    Benzene
  7.232           -             -          -       Heptane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182A\002F0101.D
Sample Name: EdithP155 #B3 ENV(1=600,6=400)

Totals : 41.43322

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.524	BP N	1.05319	1.26492	1.33219		?
1.998	BB	425.20813	1.27467	541.99887		?
4.022	BB	16.40152	1.27238	20.86893		?
7.876	BB	71.27798	1.27421	90.82320		?
8.684	BV	78.30487	1.27426	99.78079		?
8.754	VB	77.17188	1.27425	98.33651		?
8.977	BB	76.45885	1.27425	97.42757		?

Uncalib. totals : 950.56807

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	425.20813	541.2938
as Pentane	3.714	5.209	16.40152	12.6500
as Hexane	5.209	13.000	303.21358	200.0473

Totals : 753.9911

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

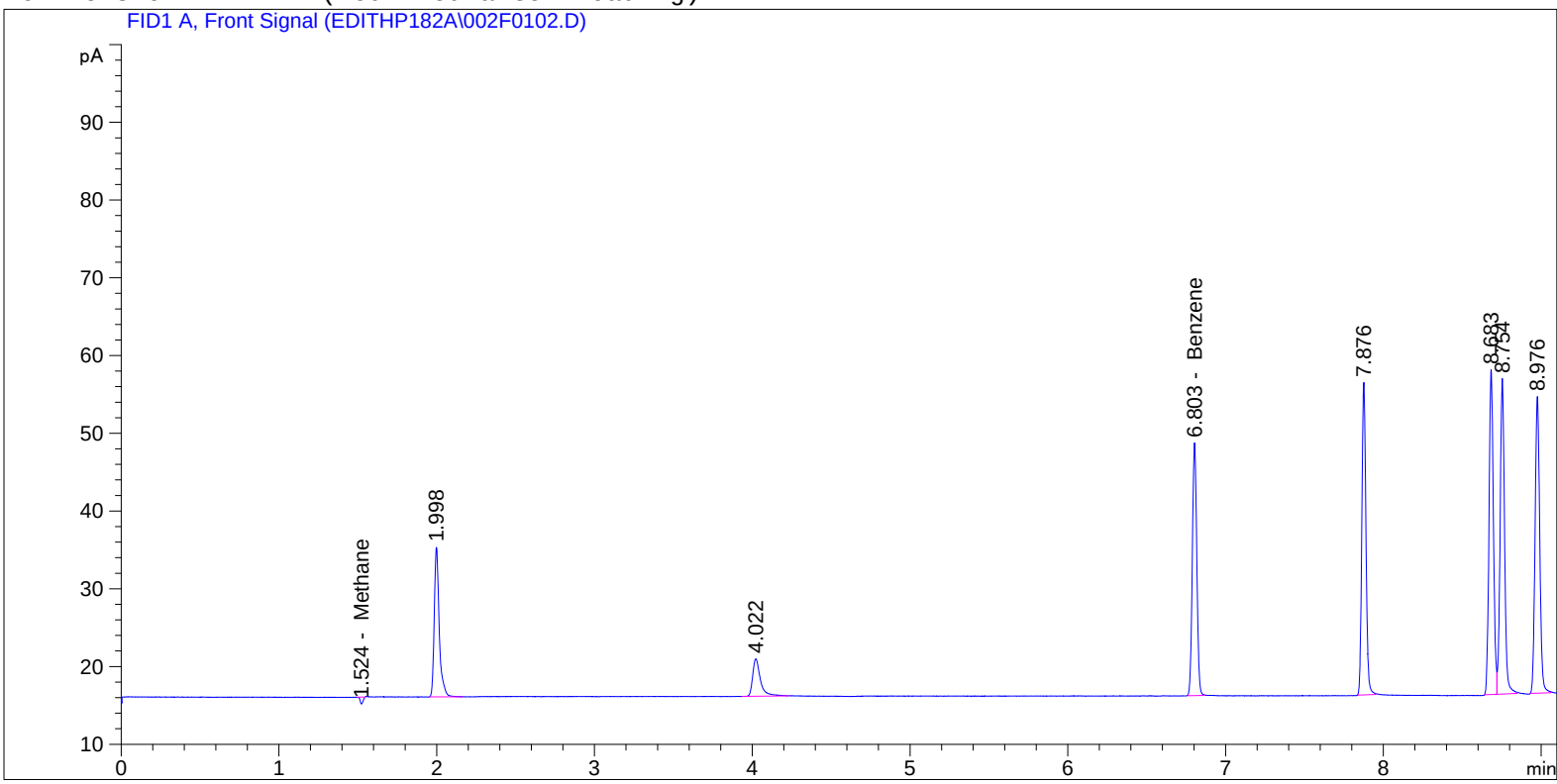
Name	Total Area [pA*s]	Amount [ppm]
as Propane	425.20813	541.2938
as Pentane	16.40152	12.6500
as Hexane	303.21358	200.0473
Methane	4.48122e-1	1.7632
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	62.81884	39.6700
Heptane	0.00000	0.0000

Totals : 795.4243

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182A\002F0102.D
Sample Name: EdithP155 #B3 ENV(1=600,6=400)

```
==================================================================
Acq. Operator   : disconnected                  Seq. Line :   1
Acq. Instrument : Edith                         Location : Vial 2
Injection Date  : 1/8/2015 10:30:48 AM               Inj :   2
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182A\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182A.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.524	PP N	1.13916	3.93469	4.48224		Methane
1.688		-	-	-		Ethane
2.031		-	-	-		Propane
2.943		-	-	-		Butane
4.495		-	-	-		Pentane
6.067		-	-	-		Hexane
6.803	BB	64.00365	6.31515e-1	40.41928		Benzene
7.232		-	-	-		Heptane

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182A\002F0102.D
Sample Name: EdithP155 #B3 ENV(1=600,6=400)

Totals : 44.90152

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.998	BB	42.00206	1.27383	53.50346		?
4.022	BB	16.37509	1.27237	20.83524		?
7.876	BB	72.74232	1.27422	92.68988		?
8.683	BV	80.70777	1.27428	102.84391		?
8.754	VB	79.35832	1.27427	101.12369		?
8.976	BB	78.52911	1.27426	100.06665		?

Uncalib. totals : 471.06283

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	42.00206	53.4690
as Pentane	3.714	5.209	16.37509	12.6296
as Hexane	5.209	13.000	311.33752	205.4071

Totals : 271.5057

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

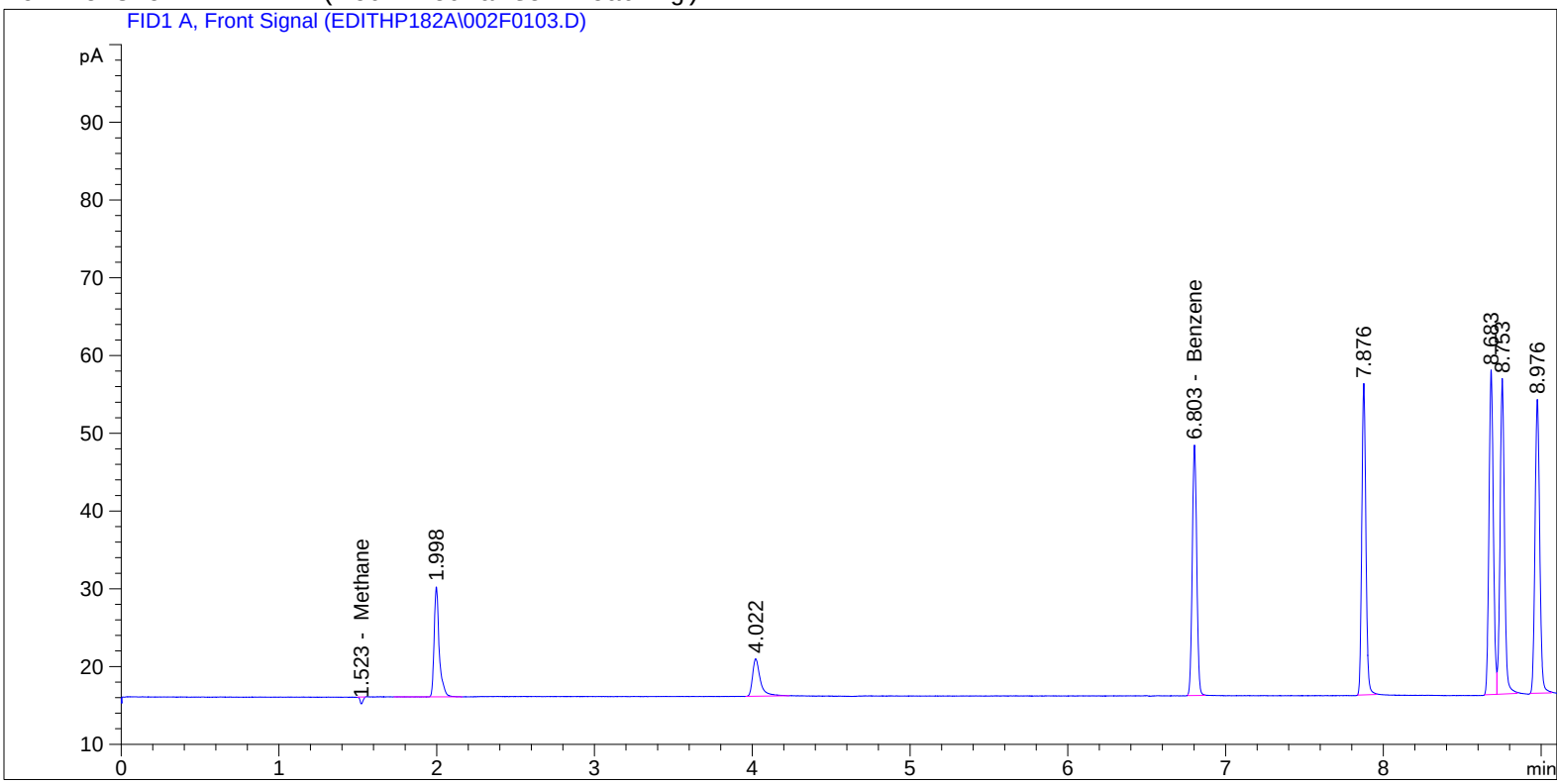
Name	Total Area [pA*s]	Amount [ppm]
as Propane	42.00206	53.4690
as Pentane	16.37509	12.6296
as Hexane	311.33752	205.4071
Methane	1.13916	4.4822
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	64.00365	40.4193
Heptane	0.00000	0.0000

Totals : 316.4072

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182A\002F0103.D
Sample Name: EdithP155 #B3 ENV(1=600,6=400)

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :   1
Acq. Instrument : Edith                          Location : Vial 2
Injection Date  : 1/8/2015 10:47:37 AM                Inj :   3
                                                Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182A\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182A.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.523	BP N	1.12392	3.93469	4.42227		Methane
1.688		-	-	-		Ethane
2.031		-	-	-		Propane
2.943		-	-	-		Butane
4.495		-	-	-		Pentane
6.067		-	-	-		Hexane
6.803	BB	63.87514	6.31513e-1	40.33801		Benzene
7.232		-	-	-		Heptane

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182A\002F0103.D
Sample Name: EdithP155 #B3 ENV(1=600,6=400)

Totals : 44.76028

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.998	BB	31.51140	1.27352	40.13040		?
4.022	BB	16.44115	1.27238	20.91946		?
7.876	BB	72.64736	1.27422	92.56883		?
8.683	BV	80.66606	1.27427	102.79074		?
8.753	VB	79.26756	1.27427	101.00799		?
8.976	BB	78.55742	1.27426	100.10273		?

Uncalib. totals : 457.52016

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========

Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	31.51140	40.1143
as Pentane	3.714	5.209	16.44115	12.6806
as Hexane	5.209	13.000	311.13840	205.2757

Totals : 258.0706

1 Warnings or Errors :

Warning : Reference compound(s) not found

==========

Final Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

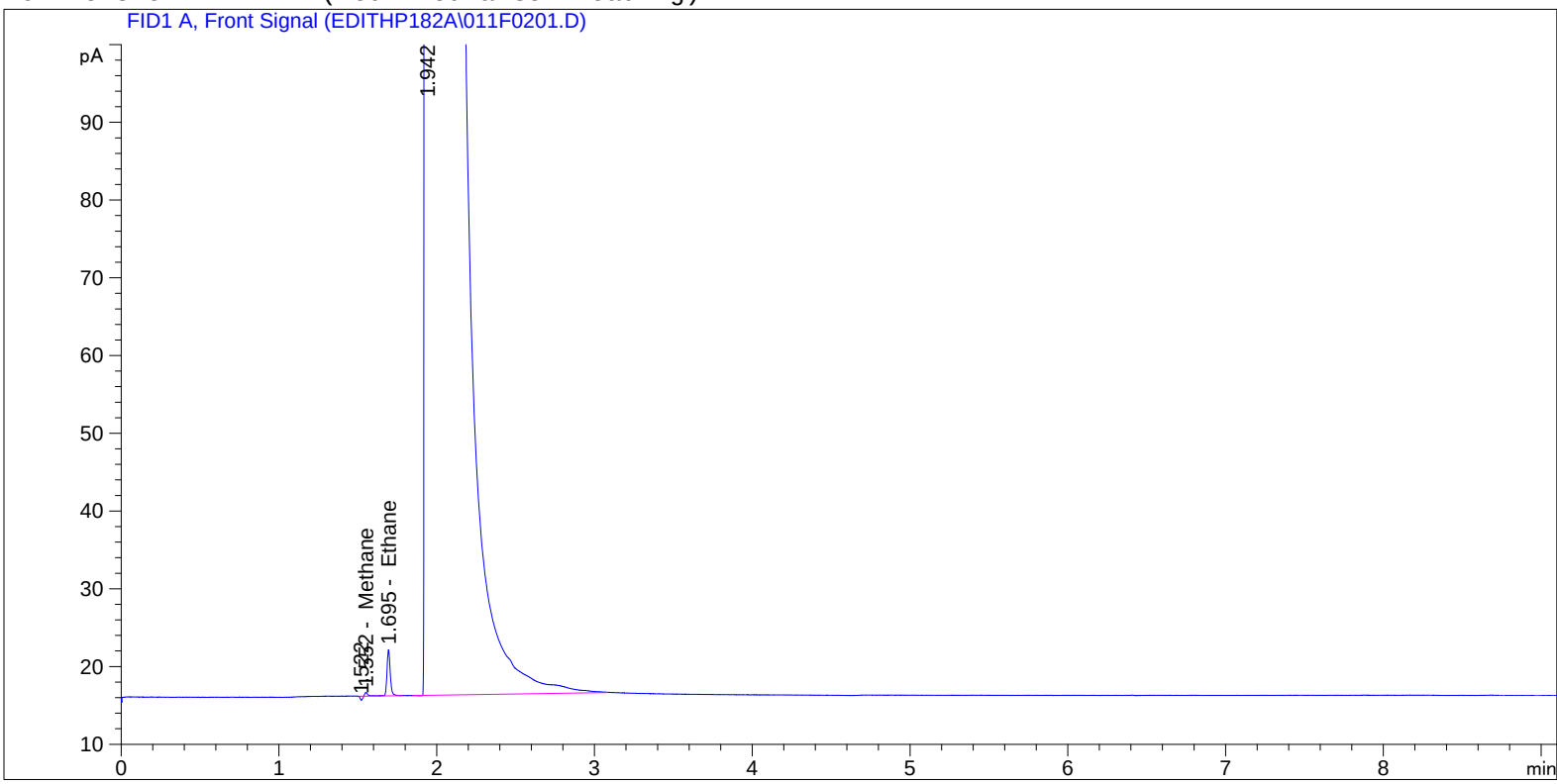
Name	Total Area [pA*s]	Amount [ppm]
as Propane	31.51140	40.1143
as Pentane	16.44115	12.6806
as Hexane	311.13840	205.2757
Methane	1.12392	4.4223
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	63.87514	40.3380
Heptane	0.00000	0.0000

Totals : 302.8309

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182A\011F0201.D
Sample Name: 1214-29.1186.Can

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :   2
Acq. Instrument : Edith                           Location : Vial 11
Injection Date  : 1/8/2015 11:01:31 AM                 Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182A\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182A.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.552 PB     7.51727e-1    3.93469    2.95781    Methane
  1.695 BB        8.45330    1.88532   15.93720    Ethane
  2.031              -          -          -        Propane
  2.943              -          -          -        Butane
  4.495              -          -          -        Pentane
  6.067              -          -          -        Hexane
  6.795              -          -          -        Benzene
  7.232              -          -          -        Heptane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182A\011F0201.D
Sample Name: 1214-29.1186.Can

Totals : 18.89502

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.522	PP N	4.98803e-1	1.26492	6.30945e-1		?
1.942	BB	2.90261e5	1.27476	3.70013e5		?

Uncalib. totals : 3.70014e5

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========

Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	2.90261e5	3.695e5

Report From Diluted Analysis (TBO)

Totals : 3.6951e5

1 Warnings or Errors :

Warning : Reference compound(s) not found

==========

Final Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

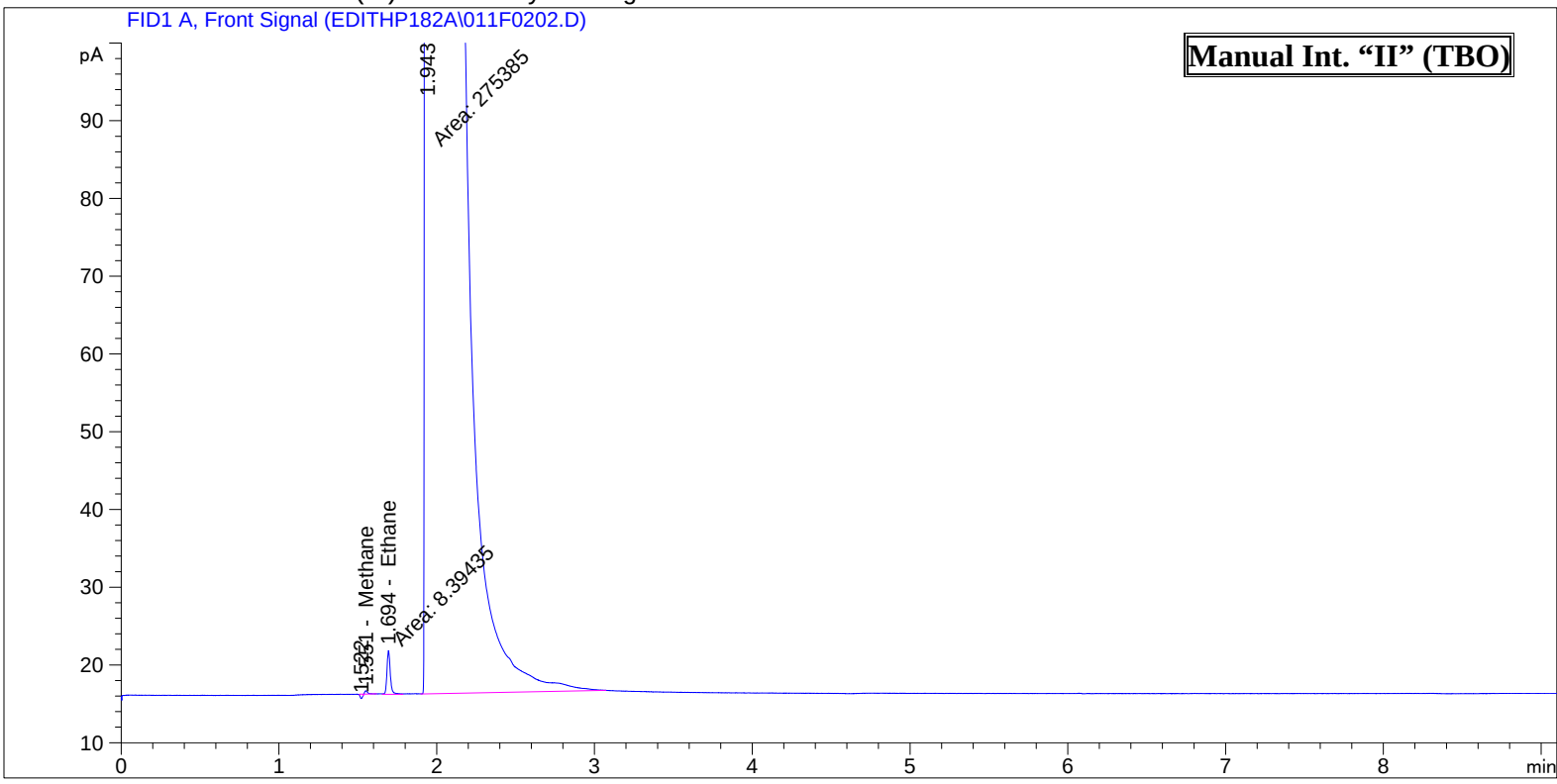
Name	Total Area [pA*s]	Amount [ppm]
as Propane	2.90261e5	3.695e5
Methane	7.51727e-1	2.9578
Ethane	8.45330	15.9372
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000

Totals : 3.6952e5

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182A\011F0202.D
Sample Name: 1214-29.1186.Can

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :   2
Acq. Instrument : Edith                           Location : Vial 11
Injection Date  : 1/8/2015 11:15:41 AM                 Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182A\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182A.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                  [ppm]
-------|------|----------|----------|----------|--|------------------
  1.551 PB     5.29836e-1    3.93469    2.08474    Methane
  1.694 MM        8.39435    1.88527   15.82560    Ethane
  2.031              -          -          -       Propane
  2.943              -          -          -       Butane
  4.495              -          -          -       Pentane
  6.067              -          -          -       Hexane
  6.795              -          -          -       Benzene
  7.232              -          -          -       Heptane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182A\011F0202.D
Sample Name: 1214-29.1186.Can

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				17.91034		

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.522	PP N	5.52035e-1	1.26492	6.98279e-1		?
1.943	MM	2.75385e5	1.27476	3.51050e5		?

Uncalib. totals : 3.51051e5

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========

Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
~~as Propane~~	~~1.855~~	~~2.479~~	~~2.75385e5~~	~~3.506e5~~

Report From Diluted Analysis (TBO)

Totals : 3.5057e5

1 Warnings or Errors :

Warning : Reference compound(s) not found

==========

Final Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

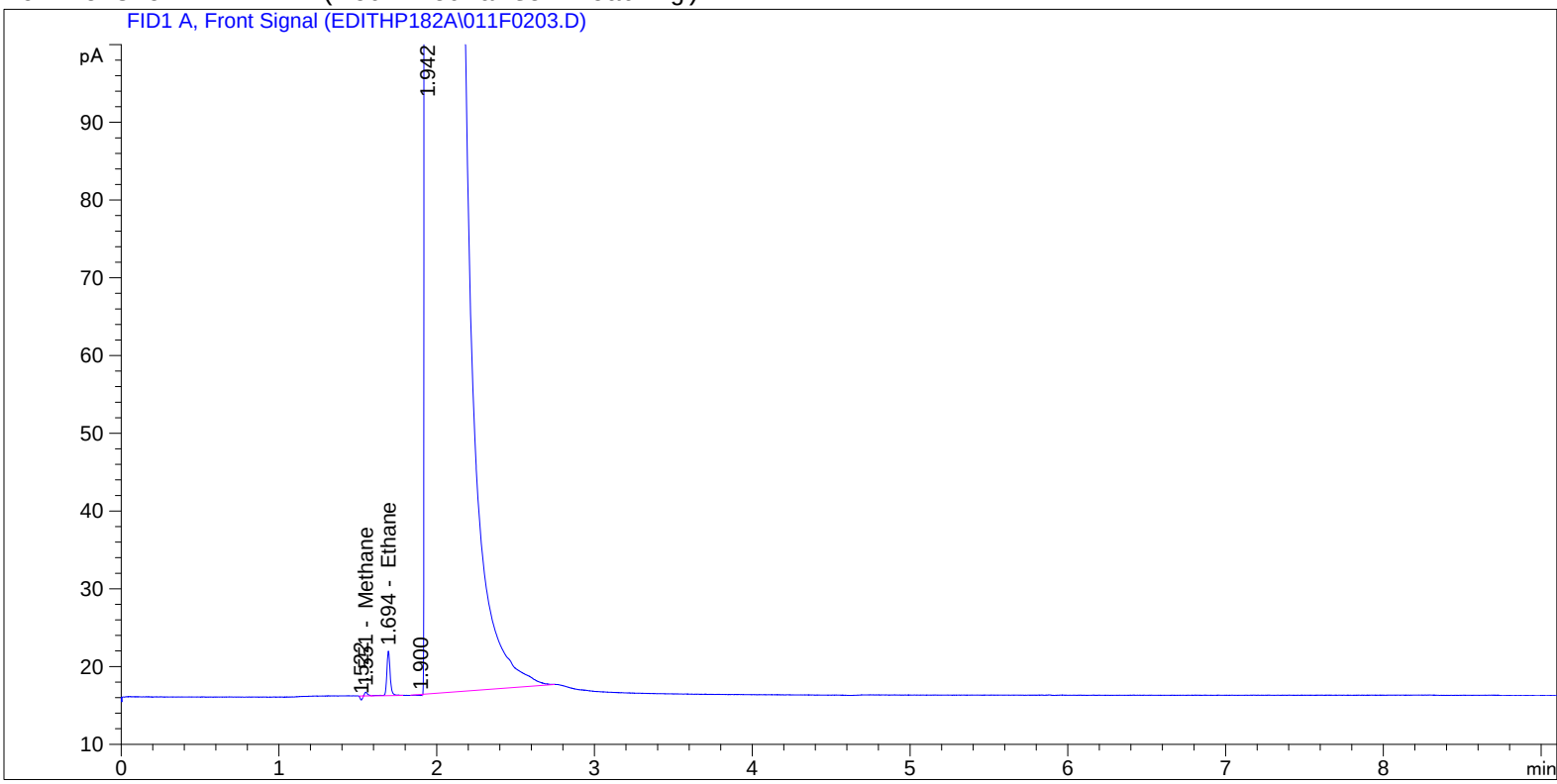
Name	Total Area [pA*s]	Amount [ppm]
as Propane	2.75385e5	3.506e5
Methane	5.29836e-1	2.0847
Ethane	8.39435	15.8256
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000

Totals : 3.5059e5

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182A\011F0203.D
Sample Name: 1214-29.1186.Can

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :   2
Acq. Instrument : Edith                           Location : Vial 11
Injection Date  : 1/8/2015 11:29:40 AM                 Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182A\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182A.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.551 PV     6.26337e-1    3.93469    2.46444    Methane
  1.694 VB        8.42633    1.88530   15.88615    Ethane
  2.031              -          -          -       Propane
  2.943              -          -          -       Butane
  4.495              -          -          -       Pentane
  6.067              -          -          -       Hexane
  6.795              -          -          -       Benzene
  7.232              -          -          -       Heptane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182A\011F0203.D
Sample Name: 1214-29.1186.Can

Totals : 18.35059

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.522	PP N	4.82185e-1	1.26492	6.09925e-1		?
1.900	BP N	3.72591e-1	1.26492	4.71297e-1		?
1.942	PB	2.81554e5	1.27476	3.58913e5		?

Uncalib. totals : 3.58914e5

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========

Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
~~as Propane~~	~~1.855~~	~~2.479~~	~~2.81554e5~~	~~3.584e5~~

Report From Diluted Analysis (TBO)

Totals : 3.5842e5

1 Warnings or Errors :

Warning : Reference compound(s) not found

==========

Final Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

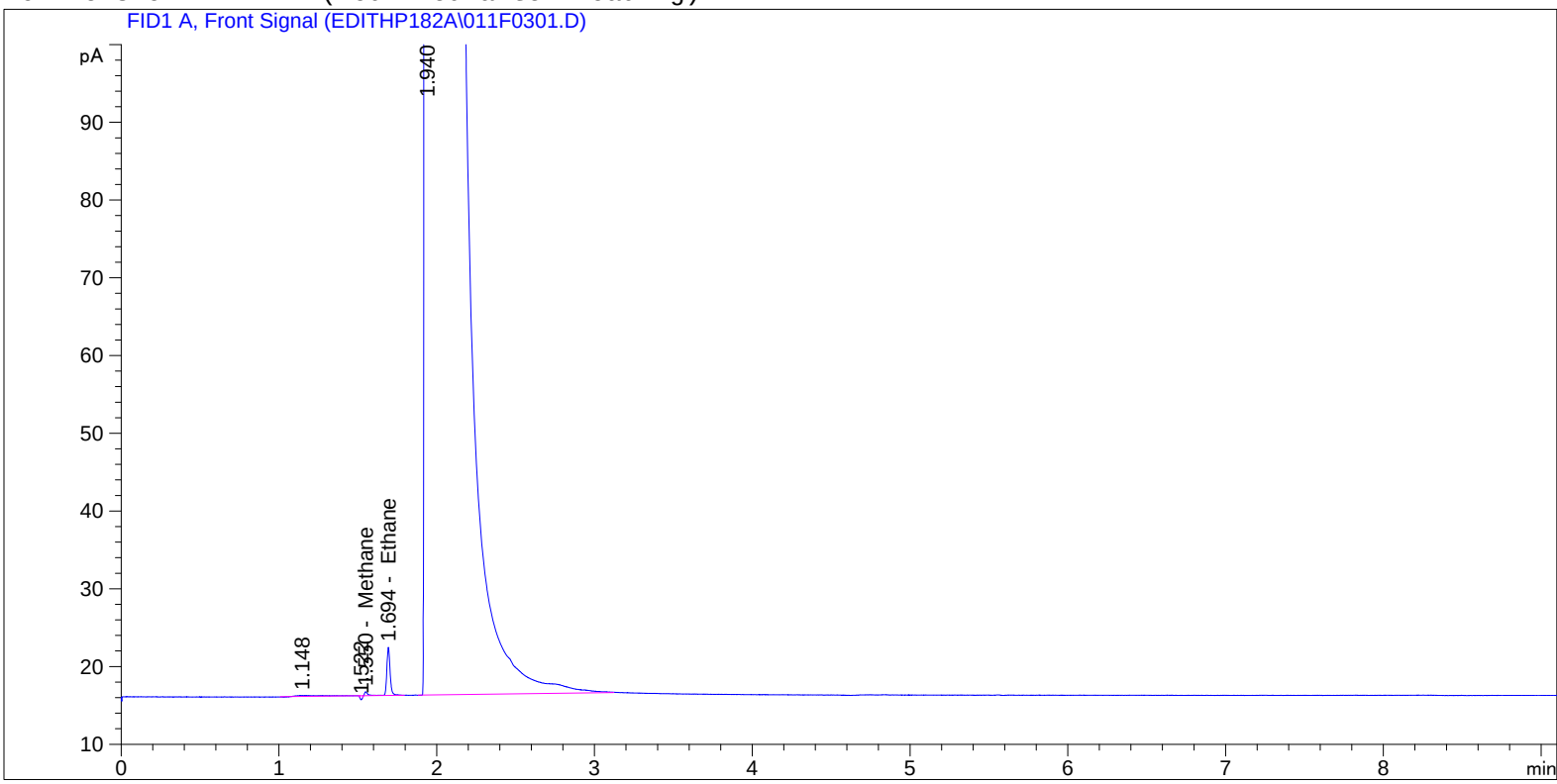
Name	Total Area [pA*s]	Amount [ppm]
as Propane	2.81554e5	3.584e5
Methane	6.26337e-1	2.4644
Ethane	8.42633	15.8861
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000

Totals : 3.5844e5

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182A\011F0301.D
Sample Name: 1214-29.1310.Can

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :   3
Acq. Instrument : Edith                           Location : Vial 11
Injection Date  : 1/8/2015 11:43:48 AM                 Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182A\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182A.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.550 PB     6.93068e-1    3.93469    2.72701    Methane
  1.694 PB        9.02090    1.88584   17.01198    Ethane
  2.031              -          -          -       Propane
  2.943              -          -          -       Butane
  4.495              -          -          -       Pentane
  6.067              -          -          -       Hexane
  6.795              -          -          -       Benzene
  7.232              -          -          -       Heptane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182A\011F0301.D
Sample Name: 1214-29.1310.Can

Totals : 19.73899

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.148	BP	1.25824	1.26492	1.59158		?
1.522	PP N	4.84767e-1	1.26492	6.13191e-1		?
1.940	VB	2.93879e5	1.27476	3.74625e5		?

Uncalib. totals : 3.74627e5

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	2.93879e5	3.741e5

Report From Diluted Analysis (TBO)

Totals : 3.7411e5

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

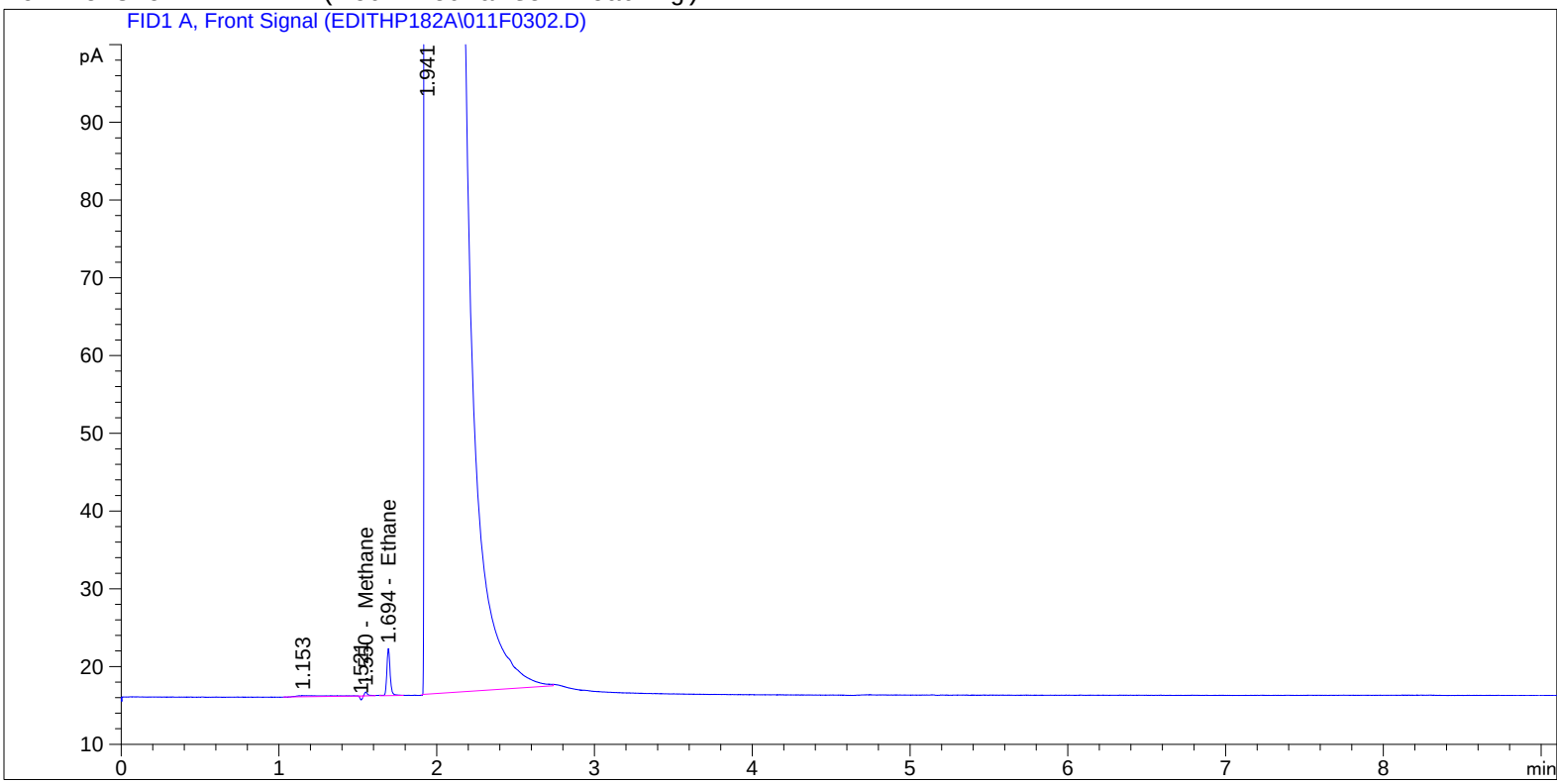
Name	Total Area [pA*s]	Amount [ppm]
as Propane	2.93879e5	3.741e5
Methane	6.93068e-1	2.7270
Ethane	9.02090	17.0120
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000

Totals : 3.7413e5

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182A\011F0302.D
Sample Name: 1214-29.1310.Can

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :   3
Acq. Instrument : Edith                           Location : Vial 11
Injection Date  : 1/8/2015 11:58:00 AM                 Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182A\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182A.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.550 PB     7.04564e-1    3.93469    2.77224    Methane
  1.694 BB        8.74182    1.88560   16.48353    Ethane
  2.031              -           -          -      Propane
  2.943              -           -          -      Butane
  4.495              -           -          -      Pentane
  6.067              -           -          -      Hexane
  6.795              -           -          -      Benzene
  7.232              -           -          -      Heptane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182A\011F0302.D
Sample Name: 1214-29.1310.Can

Totals : 19.25577

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.153	BP	1.69708	1.26492	2.14667		?
1.521	PP N	4.68943e-1	1.26492	5.93175e-1		?
1.941	PB	2.87583e5	1.27476	3.66600e5		?

Uncalib. totals : 3.66602e5

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========

Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	2.87583e5	3.661e5

Report From Diluted Analysis (TBO)

Totals : 3.6610e5

1 Warnings or Errors :

Warning : Reference compound(s) not found

==========

Final Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

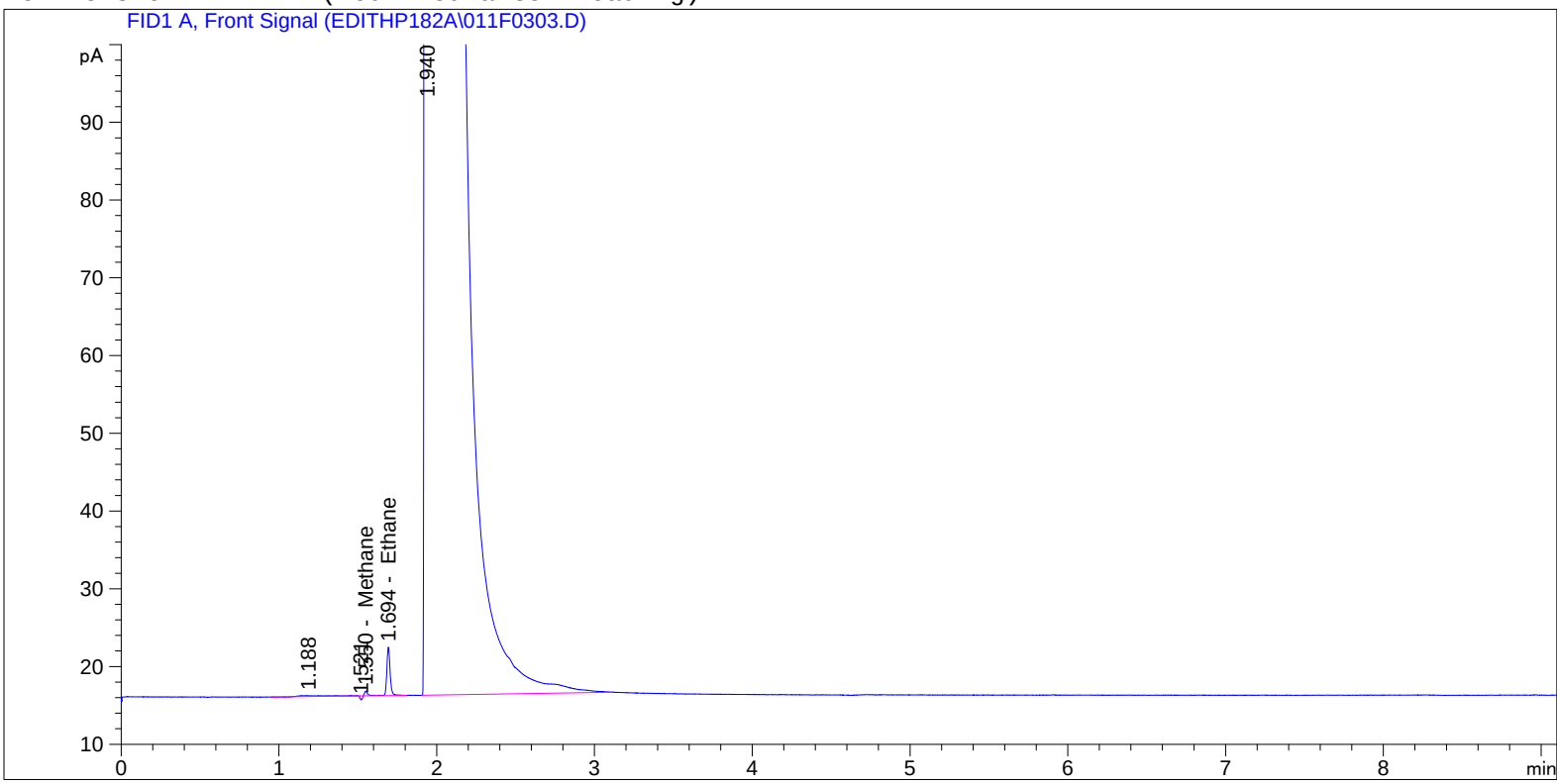
Name	Total Area [pA*s]	Amount [ppm]
as Propane	2.87583e5	3.661e5
Methane	7.04564e-1	2.7722
Ethane	8.74182	16.4835
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000

Totals : 3.6612e5

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182A\011F0303.D
Sample Name: 1214-29.1310.Can

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :   3
Acq. Instrument : Edith                           Location : Vial 11
Injection Date  : 1/8/2015 12:11:59 PM                 Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182A\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182A.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.550 PV     8.71972e-1    3.93469    3.43094    Methane
  1.694 VB        9.04209    1.88586   17.05211    Ethane
  2.031              -          -          -       Propane
  2.943              -          -          -       Butane
  4.495              -          -          -       Pentane
  6.067              -          -          -       Hexane
  6.795              -          -          -       Benzene
  7.232              -          -          -       Heptane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182A\011F0303.D
Sample Name: 1214-29.1310.Can

Totals : 20.48304

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.188	BP	1.29044	1.26492	1.63231		?
1.521	PP N	4.67455e-1	1.26492	5.91293e-1		?
1.940	BB	2.94936e5	1.27476	3.75972e5		?

Uncalib. totals : 3.75975e5

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========

Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	2.94936e5	3.755e5

Report From Diluted Analysis (TBO)

Totals : 3.7546e5

1 Warnings or Errors :

Warning : Reference compound(s) not found

==========

Final Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

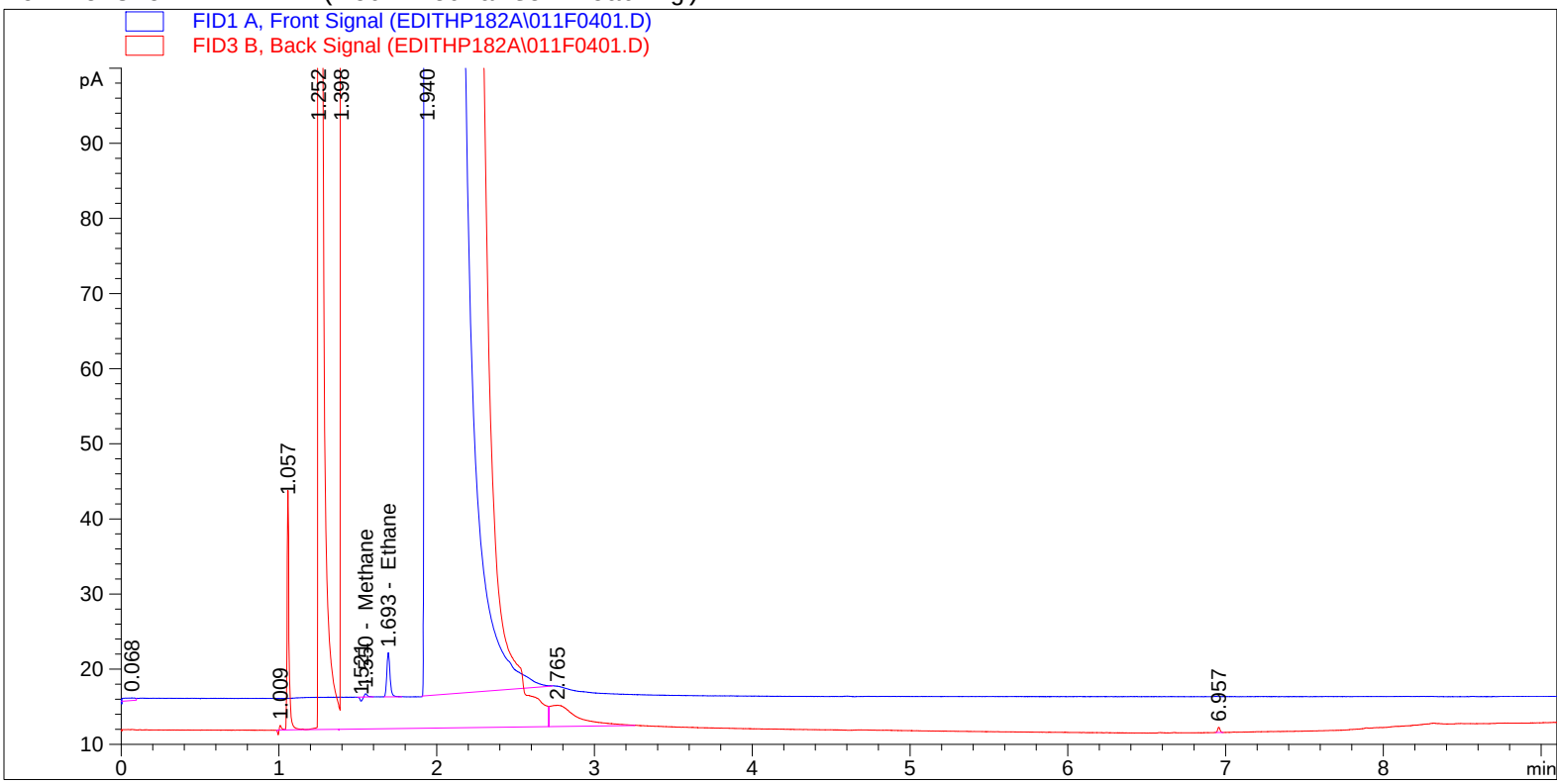
Name	Total Area [pA*s]	Amount [ppm]
as Propane	2.94936e5	3.755e5
Methane	8.71972e-1	3.4309
Ethane	9.04209	17.0521
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000

Totals : 3.7548e5

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182A\011F0401.D
Sample Name: 1214-29.1044.Can

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :   4
Acq. Instrument : Edith                           Location : Vial 11
Injection Date  : 1/8/2015 12:29:40 PM                 Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182A\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182A.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.550 PB     5.20133e-1    3.93469    2.04656    Methane
  1.693 BB        8.29156    1.88516   15.63096    Ethane
  2.031              -          -          -       Propane
  2.943              -          -          -       Butane
  4.495              -          -          -       Pentane
  6.067              -          -          -       Hexane
  6.795              -          -          -       Benzene
  7.232              -          -          -       Heptane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182A\011F0401.D
Sample Name: 1214-29.1044.Can

Totals : 17.67752

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
0.068	BV	1.83640	1.26492	2.32290		?
1.521	BP N	5.94728e-1	1.26492	7.52283e-1		?
1.940	BB	2.89099e5	1.27476	3.68531e5		?

Uncalib. totals : 3.68534e5

Signal 2: FID3 B, Back Signal

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	2.89099e5	3.680e5

Report From Diluted Analysis (TBO)

Totals : 3.6803e5

Signal 2: FID3 B, Back Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Butane	2.479	3.714	34.46872	33.0606
as Hexane	5.209	13.000	7.16034e-1	0.4724

Totals : 33.5330

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Propane	2.89099e5	3.680e5
Methane	5.20133e-1	2.0466
Ethane	8.29156	15.6310
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182A\011F0401.D
Sample Name: 1214-29.1044.Can

Name	Total Area [pA*s]	Amount [ppm]
Totals :	3.6804e5	

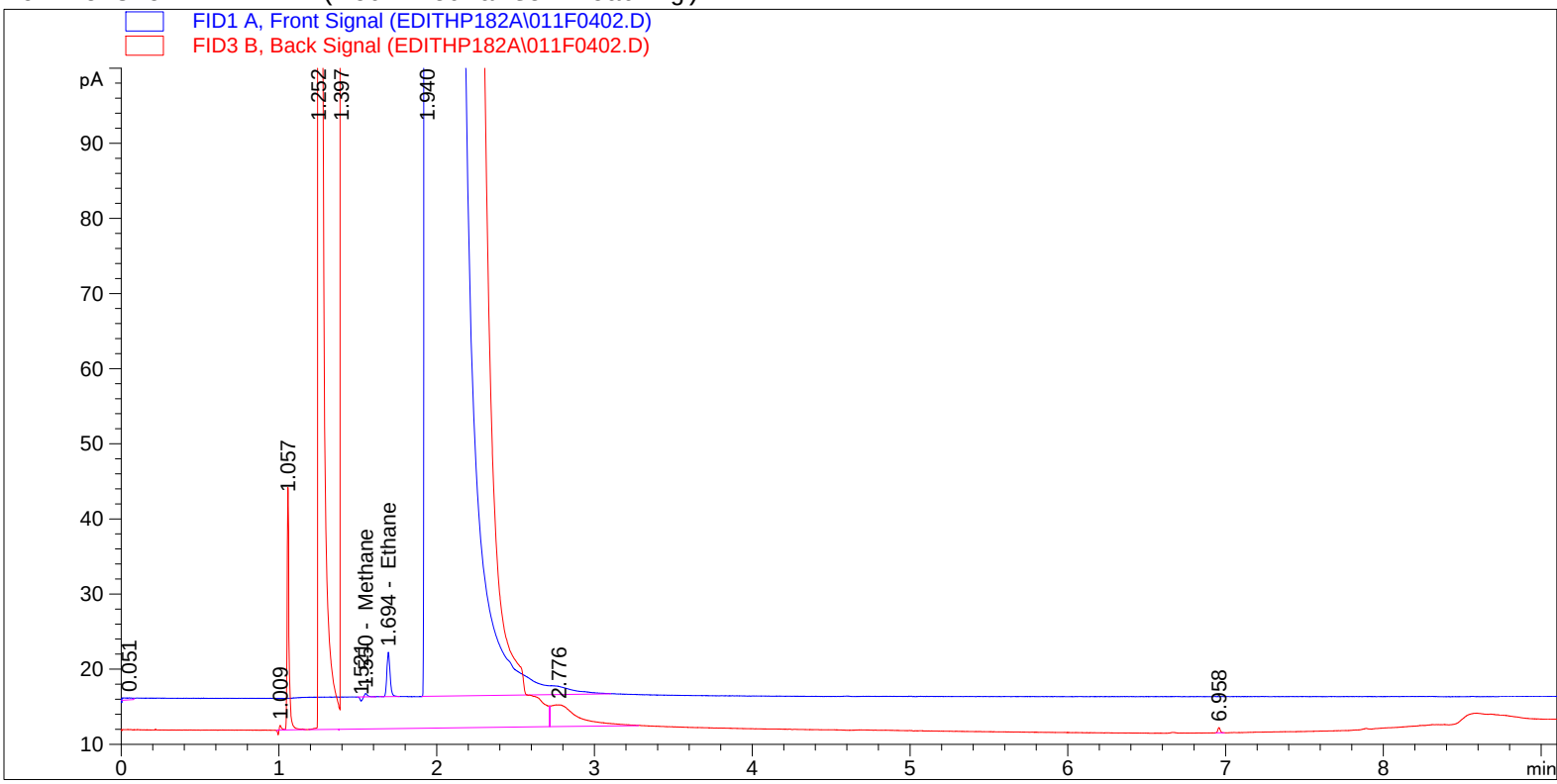
Signal 2: FID3 B, Back Signal

Name	Total Area [pA*s]	Amount [ppm]
as Butane	34.46872	33.0606
as Hexane	7.16034e-1	0.4724
Totals :		33.5330

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182A\011F0402.D
Sample Name: 1214-29.1044.Can

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :   4
Acq. Instrument : Edith                           Location : Vial 11
Injection Date  : 1/8/2015 12:43:53 PM                 Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182A\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182A.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.550 PB     5.84263e-1    3.93469    2.29890    Methane
  1.694 BB        8.36669    1.88524   15.77321    Ethane
  2.031              -          -          -       Propane
  2.943              -          -          -       Butane
  4.495              -          -          -       Pentane
  6.067              -          -          -       Hexane
  6.795              -          -          -       Benzene
  7.232              -          -          -       Heptane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182A\011F0402.D
Sample Name: 1214-29.1044.Can

Totals : 18.07210

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
0.051	BV	1.12450	1.26492	1.42240		?
1.521	BP N	5.81582e-1	1.26492	7.35654e-1		?
1.940	BB	2.91568e5	1.27476	3.71678e5		?

Uncalib. totals : 3.71681e5

Signal 2: FID3 B, Back Signal

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========

Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	2.91568e5	3.712e5

Report From Diluted Analysis (TBO)

Totals : 3.7117e5

Signal 2: FID3 B, Back Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Butane	2.479	3.714	35.45897	34.0104
as Hexane	5.209	13.000	7.44374e-1	0.4911

Totals : 34.5015

1 Warnings or Errors :

Warning : Reference compound(s) not found

==========

Final Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Propane	2.91568e5	3.712e5
Methane	5.84263e-1	2.2989
Ethane	8.36669	15.7732
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182A\011F0402.D
Sample Name: 1214-29.1044.Can

Name	Total Area [pA*s]	Amount [ppm]
Totals :	3.7119e5	

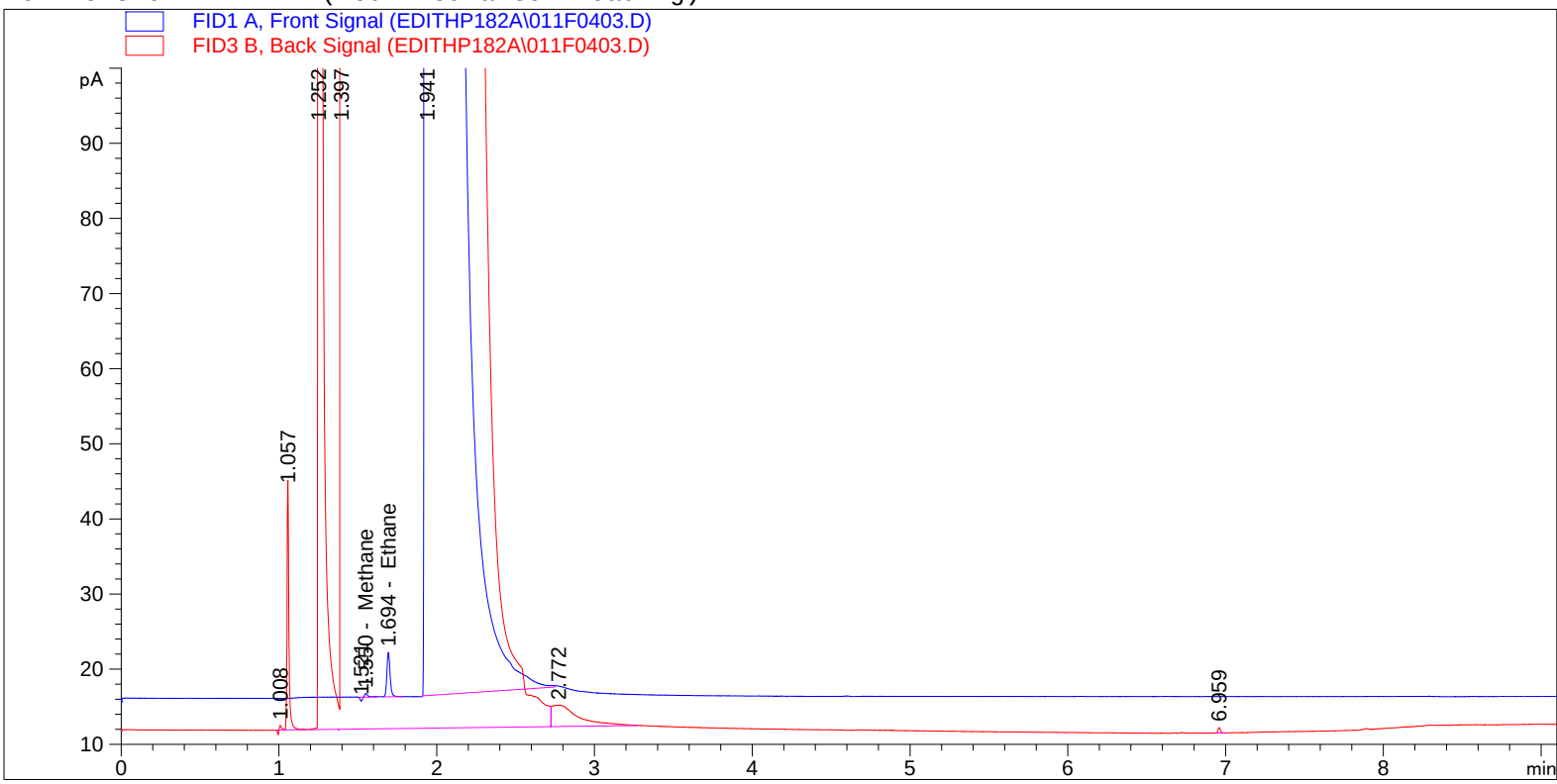
Signal 2: FID3 B, Back Signal

Name	Total Area [pA*s]	Amount [ppm]
as Butane	35.45897	34.0104
as Hexane	7.44374e-1	0.4911
Totals :		34.5015

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182A\011F0403.D
Sample Name: 1214-29.1044.Can

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :   4
Acq. Instrument : Edith                           Location : Vial 11
Injection Date  : 1/8/2015 12:57:53 PM                 Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182A\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182A.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.550 PB     7.23330e-1    3.93469    2.84608    Methane
  1.694 BB        8.43034    1.88530   15.89374    Ethane
  2.031              -          -          -       Propane
  2.943              -          -          -       Butane
  4.495              -          -          -       Pentane
  6.067              -          -          -       Hexane
  6.795              -          -          -       Benzene
  7.232              -          -          -       Heptane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182A\011F0403.D
Sample Name: 1214-29.1044.Can

Totals : 18.73981

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.521	PP N	4.71139e-1	1.26492	5.95953e-1		?
1.941	BB	2.89806e5	1.27476	3.69433e5		?

Uncalib. totals : 3.69434e5

Signal 2: FID3 B, Back Signal

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	2.89806e5	3.689e5

Report From Diluted Analysis (TBO)

Totals : 3.6893e5

Signal 2: FID3 B, Back Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Butane	2.479	3.714	33.81635	32.4348
as Hexane	5.209	13.000	7.48259e-1	0.4937

Totals : 32.9285

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Propane	2.89806e5	3.689e5
Methane	7.23330e-1	2.8461
Ethane	8.43034	15.8937
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182A\011F0403.D
Sample Name: 1214-29.1044.Can

Totals : 3.6894e5

Signal 2: FID3 B, Back Signal

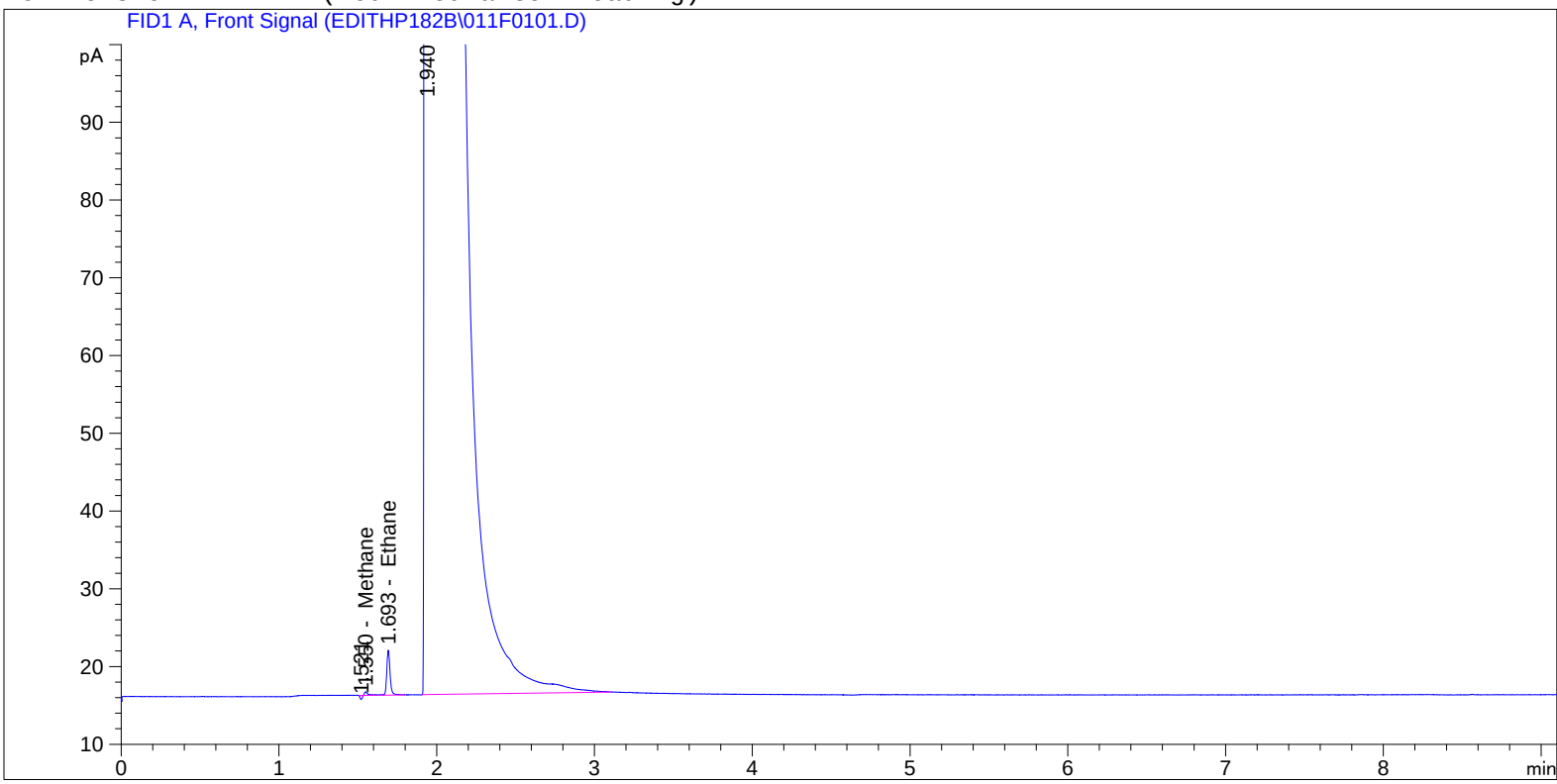
Name	Total Area [pA*s]	Amount [ppm]
as Butane	33.81635	32.4348
as Hexane	7.48259e-1	0.4937

Totals : 32.9285

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\011F0101.D
Sample Name: 1214-29.1340.Can

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :   1
Acq. Instrument : Edith                           Location : Vial 11
Injection Date  : 1/8/2015 1:16:33 PM                  Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.550 PB     7.36125e-1    3.93469    2.89643    Methane
  1.693 BB        8.46133    1.88533   15.95241    Ethane
  2.031              -          -          -       Propane
  2.943              -          -          -       Butane
  4.495              -          -          -       Pentane
  6.067              -          -          -       Hexane
  6.795              -          -          -       Benzene
  7.232              -          -          -       Heptane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\011F0101.D
Sample Name: 1214-29.1340.Can

Totals : 18.84883

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.521	PP N	4.48762e-1	1.26492	5.67648e-1		?
1.940	BB	2.90181e5	1.27476	3.69910e5		?

Uncalib. totals : 3.69911e5

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========

Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	2.90181e5	3.694e5

Report From Diluted Analysis (TBO)

Totals : 3.6940e5

1 Warnings or Errors :

Warning : Reference compound(s) not found

==========

Final Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

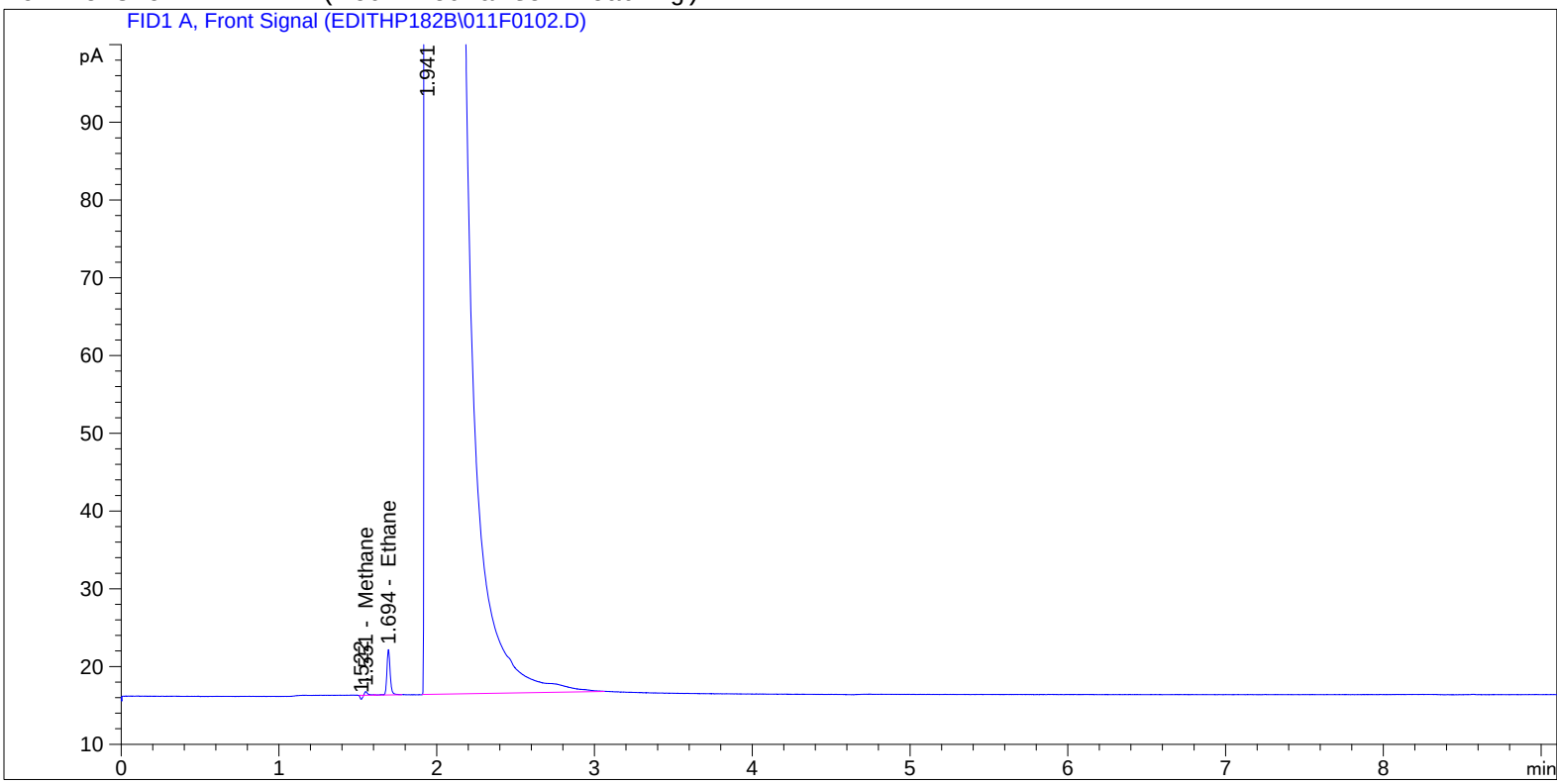
Name	Total Area [pA*s]	Amount [ppm]
as Propane	2.90181e5	3.694e5
Methane	7.36125e-1	2.8964
Ethane	8.46133	15.9524
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000

Totals : 3.6942e5

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\011F0102.D
Sample Name: 1214-29.1340.Can

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :   1
Acq. Instrument : Edith                           Location : Vial 11
Injection Date  : 1/8/2015 1:30:44 PM                  Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.551 PB     6.43722e-1    3.93469    2.53285    Methane
  1.694 PB        8.41652    1.88529   15.86756    Ethane
  2.031              -          -          -       Propane
  2.943              -          -          -       Butane
  4.495              -          -          -       Pentane
  6.067              -          -          -       Hexane
  6.795              -          -          -       Benzene
  7.232              -          -          -       Heptane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\011F0102.D
Sample Name: 1214-29.1340.Can

Totals : 18.40041

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.522	PP N	4.88414e-1	1.26492	6.17805e-1		?
1.941	BB	2.92965e5	1.27476	3.73459e5		?

Uncalib. totals : 3.73460e5

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
~~as Propane~~	~~1.855~~	~~2.479~~	~~2.92965e5~~	~~3.729e5~~

Report From Diluted Analysis (TBO)

Totals : 3.7295e5

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

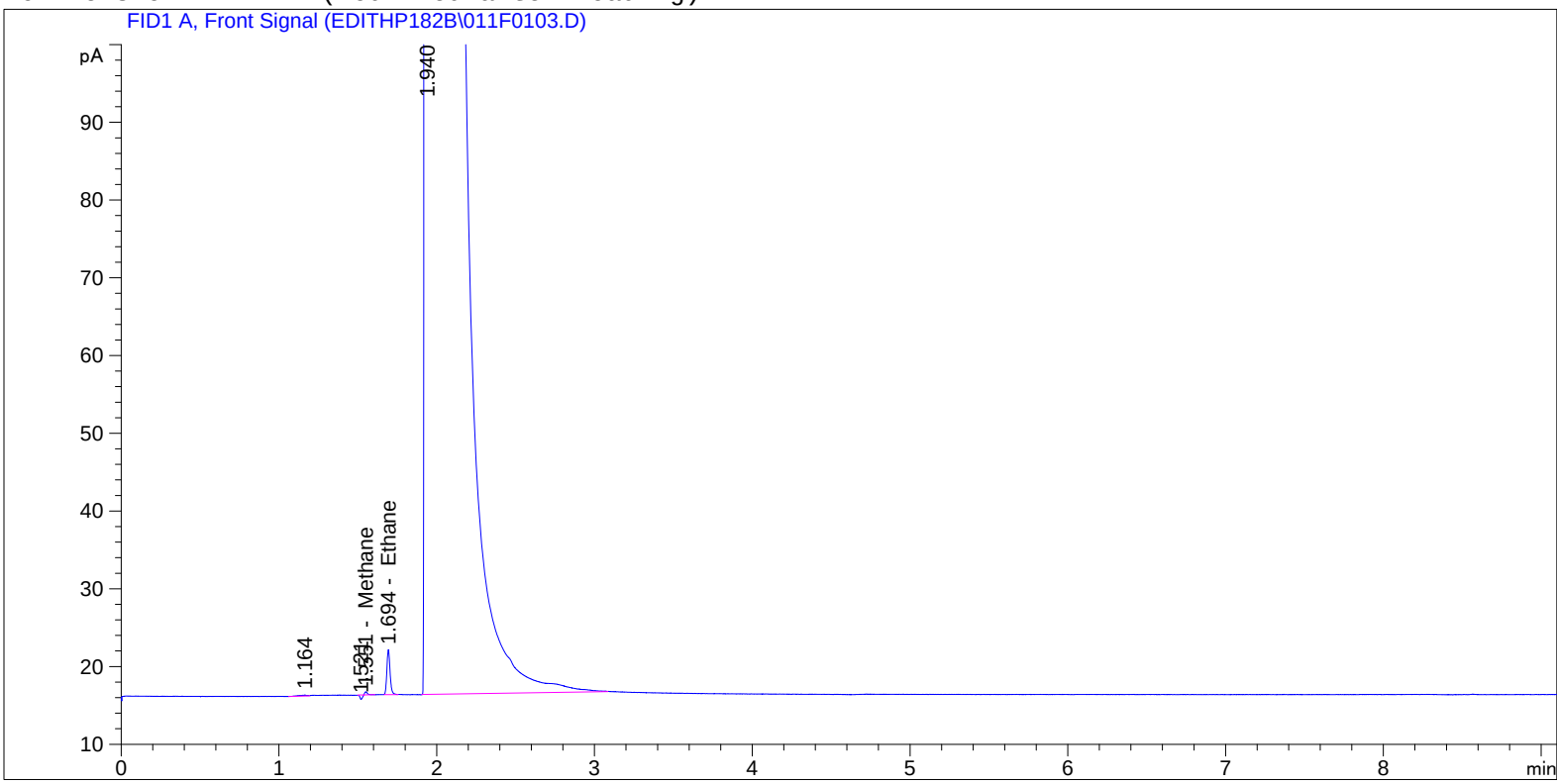
Name	Total Area [pA*s]	Amount [ppm]
as Propane	2.92965e5	3.729e5
Methane	6.43722e-1	2.5328
Ethane	8.41652	15.8676
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000

Totals : 3.7297e5

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\011F0103.D
Sample Name: 1214-29.1340.Can

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :   1
Acq. Instrument : Edith                           Location : Vial 11
Injection Date  : 1/8/2015 1:44:51 PM                  Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.551 PB     4.61495e-1    3.93469    1.81584    Methane
  1.694 BB        8.11348    1.88498   15.29374    Ethane
  2.031              -          -          -       Propane
  2.943              -          -          -       Butane
  4.495              -          -          -       Pentane
  6.067              -          -          -       Hexane
  6.795              -          -          -       Benzene
  7.232              -          -          -       Heptane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\011F0103.D
Sample Name: 1214-29.1340.Can

Totals : 17.10958

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.164	BV	4.00442e-1	1.26492	5.06527e-1		?
1.521	BP N	6.25091e-1	1.26492	7.90690e-1		?
1.940	BB	2.92668e5	1.27476	3.73081e5		?

Uncalib. totals : 3.73082e5

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========

Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
~~as Propane~~	~~1.855~~	~~2.479~~	~~2.92668e5~~	~~3.726e5~~

Report From Diluted Analysis (TBO)

Totals : 3.7257e5

1 Warnings or Errors :

Warning : Reference compound(s) not found

==========

Final Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

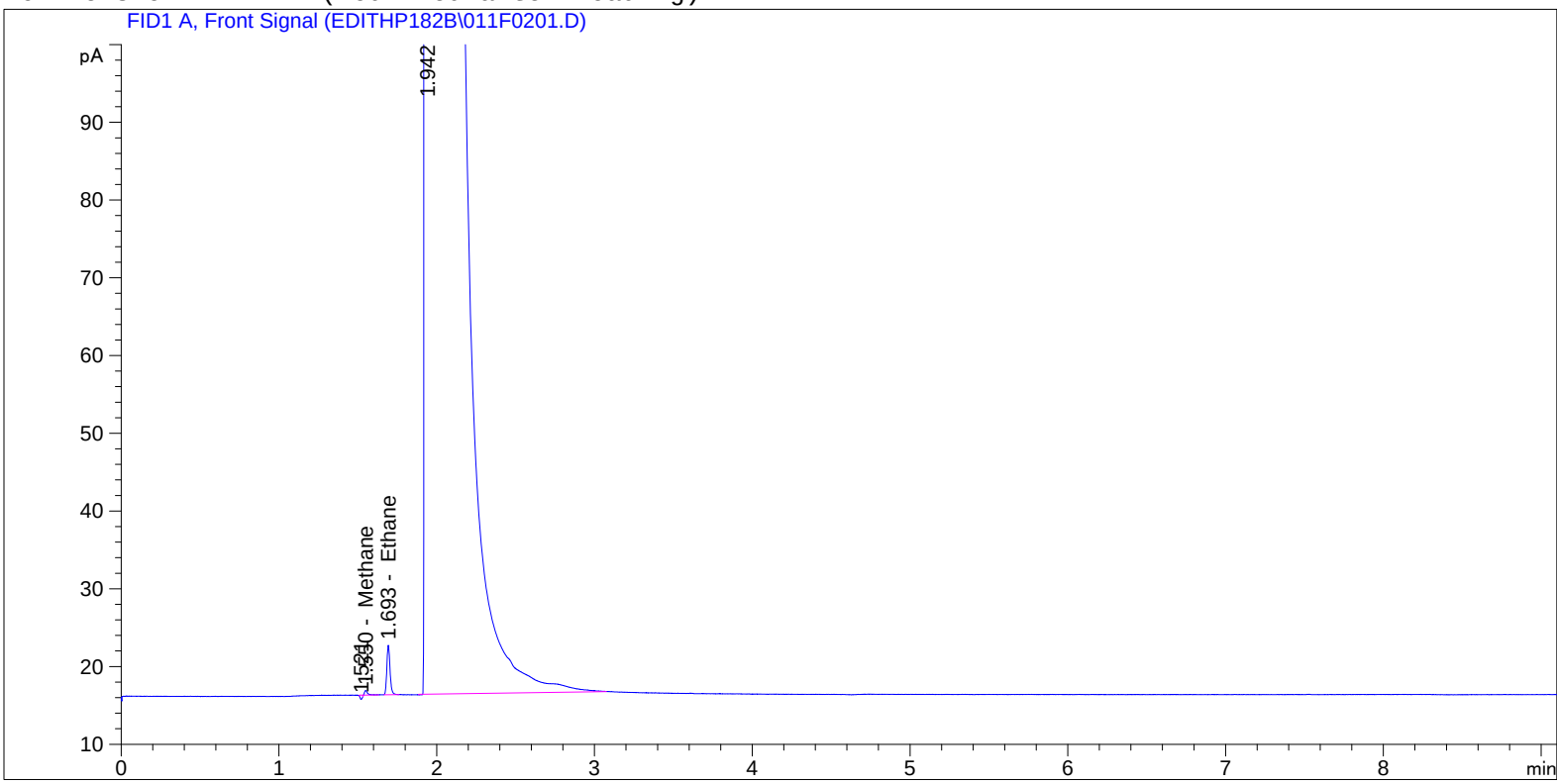
Name	Total Area [pA*s]	Amount [ppm]
as Propane	2.92668e5	3.726e5
Methane	4.61495e-1	1.8158
Ethane	8.11348	15.2937
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000

Totals : 3.7259e5

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\011F0201.D
Sample Name: 1214-29.1049.Can

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :   2
Acq. Instrument : Edith                           Location : Vial 11
Injection Date  : 1/8/2015 1:59:02 PM                  Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.550	PB	7.73670e-1	3.93469	3.04415		Methane
1.693	BB	8.95975	1.88579	16.89618		Ethane
2.031		-	-	-		Propane
2.943		-	-	-		Butane
4.495		-	-	-		Pentane
6.067		-	-	-		Hexane
6.795		-	-	-		Benzene
7.232		-	-	-		Heptane

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\011F0201.D
Sample Name: 1214-29.1049.Can

Totals : 19.94034

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.521	PP N	5.10705e-1	1.26492	6.46001e-1		?
1.942	PB	2.81699e5	1.27476	3.59098e5		?

Uncalib. totals : 3.59098e5

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========

Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
~~as Propane~~	~~1.855~~	~~2.479~~	~~2.81699e5~~	~~3.586e5~~

Report From Diluted Analysis (TBO)

Totals : 3.5860e5

1 Warnings or Errors :

Warning : Reference compound(s) not found

==========

Final Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

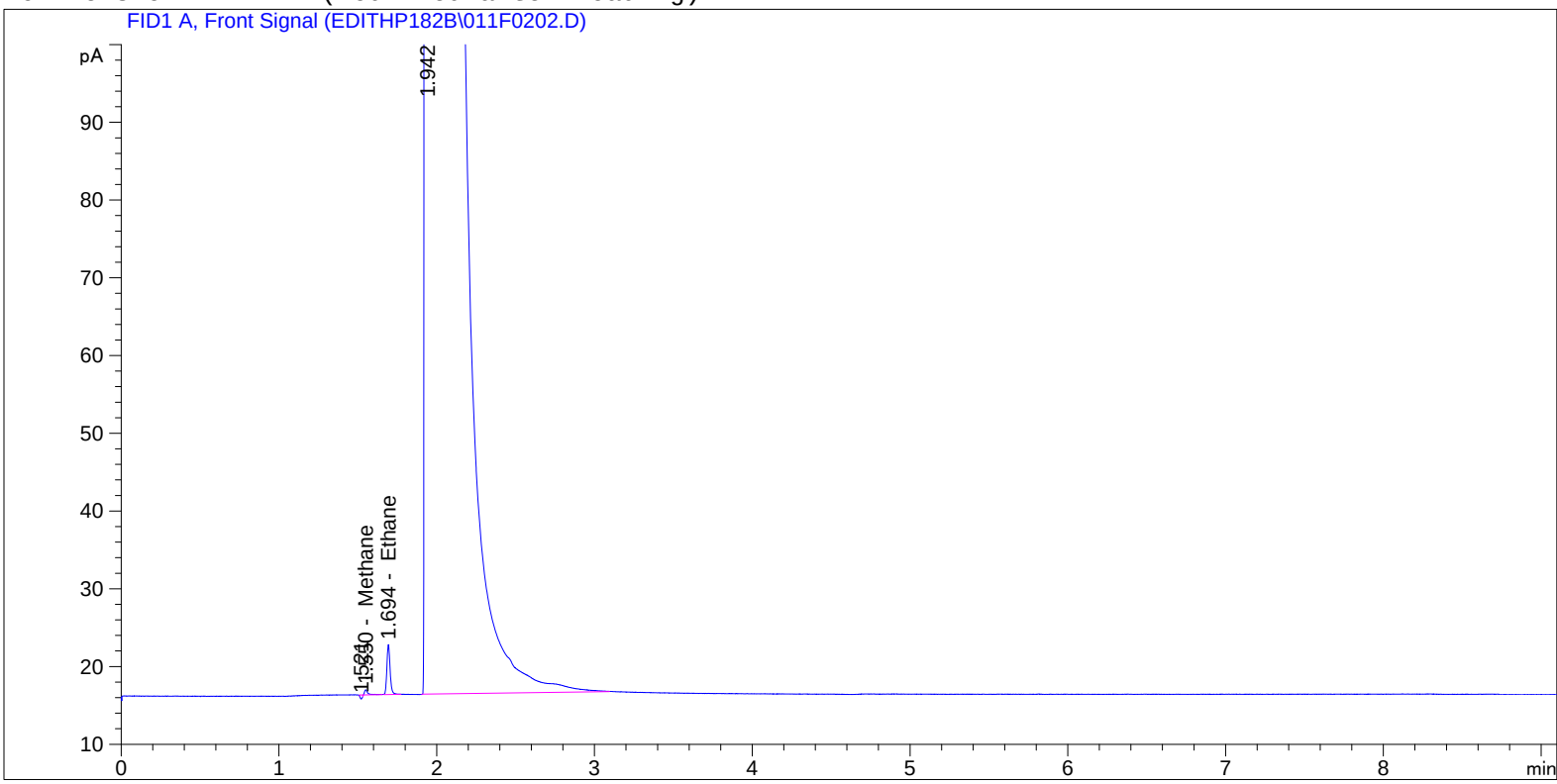
Name	Total Area [pA*s]	Amount [ppm]
as Propane	2.81699e5	3.586e5
Methane	7.73670e-1	3.0442
Ethane	8.95975	16.8962
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000

Totals : 3.5862e5

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\011F0202.D
Sample Name: 1214-29.1049.Can

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :   2
Acq. Instrument : Edith                           Location : Vial 11
Injection Date  : 1/8/2015 2:13:16 PM                  Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.550 PB     9.71587e-1    3.93469    3.82289    Methane
  1.694 BB        9.13474    1.88594   17.22755    Ethane
  2.031              -          -          -       Propane
  2.943              -          -          -       Butane
  4.495              -          -          -       Pentane
  6.067              -          -          -       Hexane
  6.795              -          -          -       Benzene
  7.232              -          -          -       Heptane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\011F0202.D
Sample Name: 1214-29.1049.Can

Totals : 21.05044

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.521	PP N	4.82075e-1	1.26492	6.09786e-1		?
1.942	BB	2.82734e5	1.27476	3.60418e5		?

Uncalib. totals : 3.60419e5

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========

Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
~~as Propane~~	~~1.855~~	~~2.479~~	~~2.82734e5~~	~~3.599e5~~

Report From Diluted Analysis (TBO)

Totals : 3.5992e5

1 Warnings or Errors :

Warning : Reference compound(s) not found

==========

Final Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

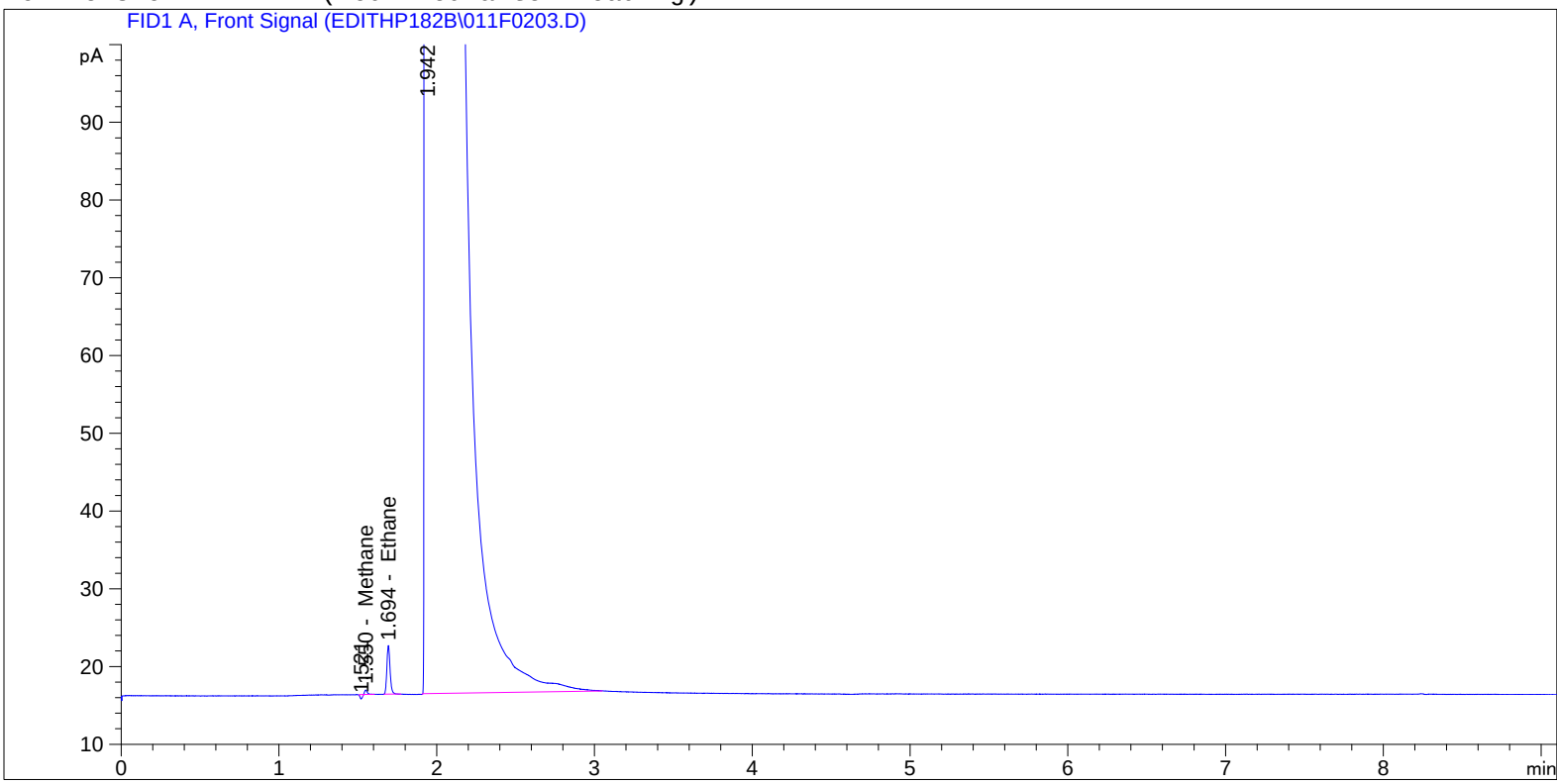
Name	Total Area [pA*s]	Amount [ppm]
as Propane	2.82734e5	3.599e5
Methane	9.71587e-1	3.8229
Ethane	9.13474	17.2275
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000

Totals : 3.5994e5

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\011F0203.D
Sample Name: 1214-29.1049.Can

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :   2
Acq. Instrument : Edith                           Location : Vial 11
Injection Date  : 1/8/2015 2:27:43 PM                  Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.550 PB     6.61087e-1    3.93469    2.60117    Methane
  1.694 BB        8.73478    1.88559   16.47020    Ethane
  2.031              -          -          -       Propane
  2.943              -          -          -       Butane
  4.495              -          -          -       Pentane
  6.067              -          -          -       Hexane
  6.795              -          -          -       Benzene
  7.232              -          -          -       Heptane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\011F0203.D
Sample Name: 1214-29.1049.Can

Totals : 19.07137

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.521	PP N	5.39449e-1	1.26492	6.82360e-1		?
1.942	PB	2.78356e5	1.27476	3.54837e5		?

Uncalib. totals : 3.54837e5

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========

Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
~~as Propane~~	~~1.855~~	~~2.479~~	~~2.78356e5~~	~~3.543e5~~

Report From Diluted Analysis (TBO)

Totals : 3.5435e5

1 Warnings or Errors :

Warning : Reference compound(s) not found

==========

Final Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

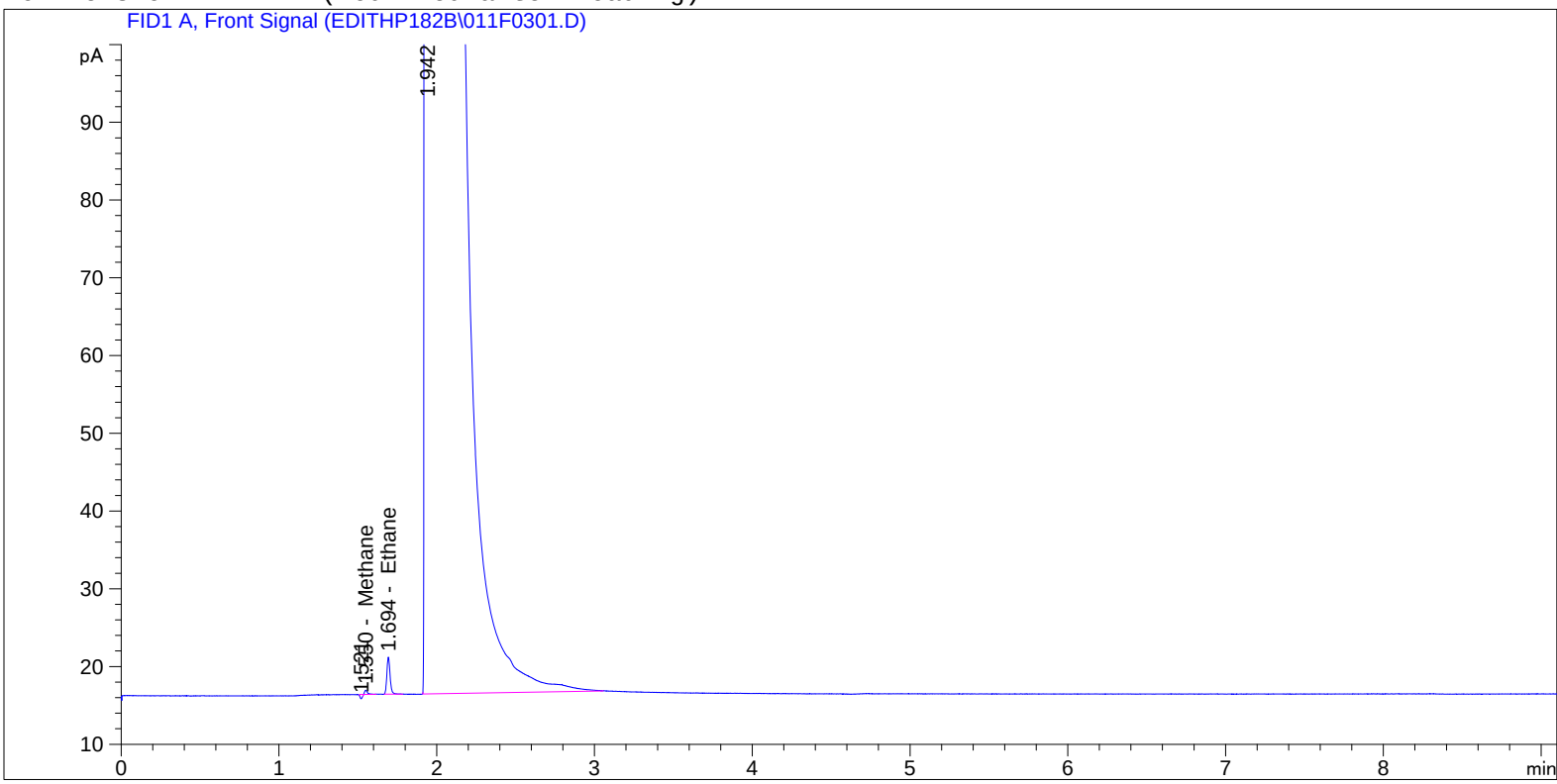
Name	Total Area [pA*s]	Amount [ppm]
as Propane	2.78356e5	3.543e5
Methane	6.61087e-1	2.6012
Ethane	8.73478	16.4702
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000

Totals : 3.5437e5

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\011F0301.D
Sample Name: 1214-29.1334.Can

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :   3
Acq. Instrument : Edith                           Location : Vial 11
Injection Date  : 1/8/2015 2:42:08 PM                  Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.550 PB     6.51046e-1    3.93469    2.56166    Methane
  1.694 BB        6.75589    1.88326   12.72310    Ethane
  2.031              -          -          -       Propane
  2.943              -          -          -       Butane
  4.495              -          -          -       Pentane
  6.067              -          -          -       Hexane
  6.795              -          -          -       Benzene
  7.232              -          -          -       Heptane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\011F0301.D
Sample Name: 1214-29.1334.Can

Totals : 15.28477

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.521	PP N	5.21553e-1	1.26492	6.59722e-1		?
1.942	BB	2.82846e5	1.27476	3.60561e5		?

Uncalib. totals : 3.60562e5

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========

Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
~~as Propane~~	~~1.855~~	~~2.479~~	~~2.82846e5~~	~~3.601e5~~

Report From Diluted Analysis (TBO)

Totals : 3.6007e5

1 Warnings or Errors :

Warning : Reference compound(s) not found

==========

Final Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

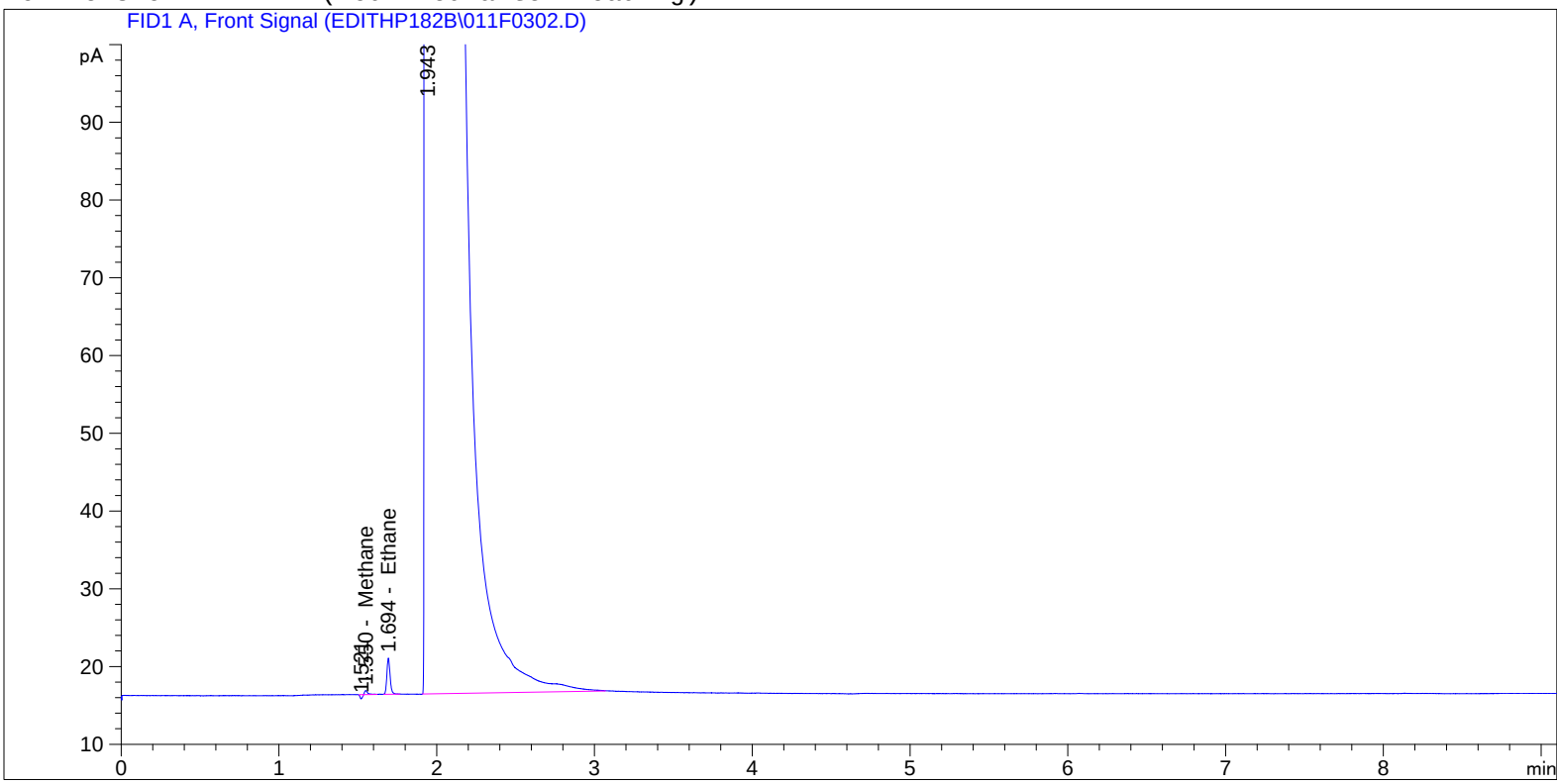
Name	Total Area [pA*s]	Amount [ppm]
as Propane	2.82846e5	3.601e5
Methane	6.51046e-1	2.5617
Ethane	6.75589	12.7231
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000

Totals : 3.6008e5

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\011F0302.D
Sample Name: 1214-29.1334.Can

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :   3
Acq. Instrument : Edith                           Location : Vial 11
Injection Date  : 1/8/2015 2:56:51 PM                  Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.550 PB     7.44982e-1    3.93469    2.93127    Methane
  1.694 BB        6.64018    1.88308   12.50401    Ethane
  2.031              -          -          -       Propane
  2.943              -          -          -       Butane
  4.495              -          -          -       Pentane
  6.067              -          -          -       Hexane
  6.795              -          -          -       Benzene
  7.232              -          -          -       Heptane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\011F0302.D
Sample Name: 1214-29.1334.Can

Totals : 15.43528

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.521	PP N	5.18780e-1	1.26492	6.56215e-1		?
1.943	BB	2.78140e5	1.27476	3.54561e5		?

Uncalib. totals : 3.54562e5

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========

Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	2.78140e5	3.541e5

Report From Diluted Analysis (TBO)

Totals : 3.5407e5

1 Warnings or Errors :

Warning : Reference compound(s) not found

==========

Final Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

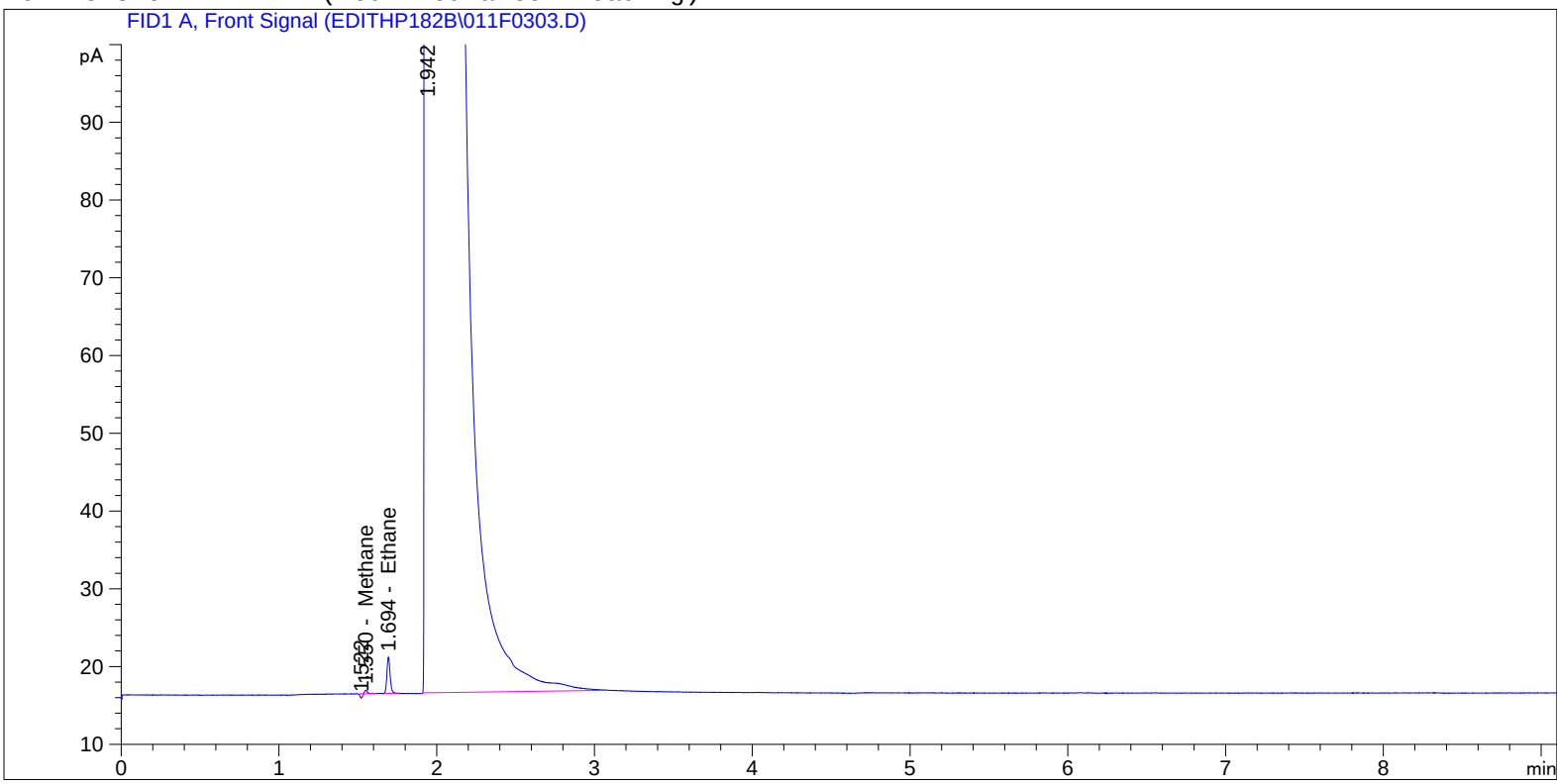
Name	Total Area [pA*s]	Amount [ppm]
as Propane	2.78140e5	3.541e5
Methane	7.44982e-1	2.9313
Ethane	6.64018	12.5040
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000

Totals : 3.5409e5

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\011F0303.D
Sample Name: 1214-29.1334.Can

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :   3
Acq. Instrument : Edith                           Location : Vial 11
Injection Date  : 1/8/2015 3:11:44 PM                  Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.550 PB     5.46644e-1    3.93469    2.15088    Methane
  1.694 BB        6.53590    1.88292   12.30654    Ethane
  2.031              -          -          -       Propane
  2.943              -          -          -       Butane
  4.495              -          -          -       Pentane
  6.067              -          -          -       Hexane
  6.795              -          -          -       Benzene
  7.232              -          -          -       Heptane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\011F0303.D
Sample Name: 1214-29.1334.Can

Totals : 14.45742

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.522	PP N	5.35087e-1	1.26492	6.76842e-1		?
1.942	PB	2.80810e5	1.27476	3.57965e5		?

Uncalib. totals : 3.57966e5

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========

Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	2.80810e5	3.575e5

Report From Diluted Analysis (TBO)

Totals : 3.5747e5

1 Warnings or Errors :

Warning : Reference compound(s) not found

==========

Final Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

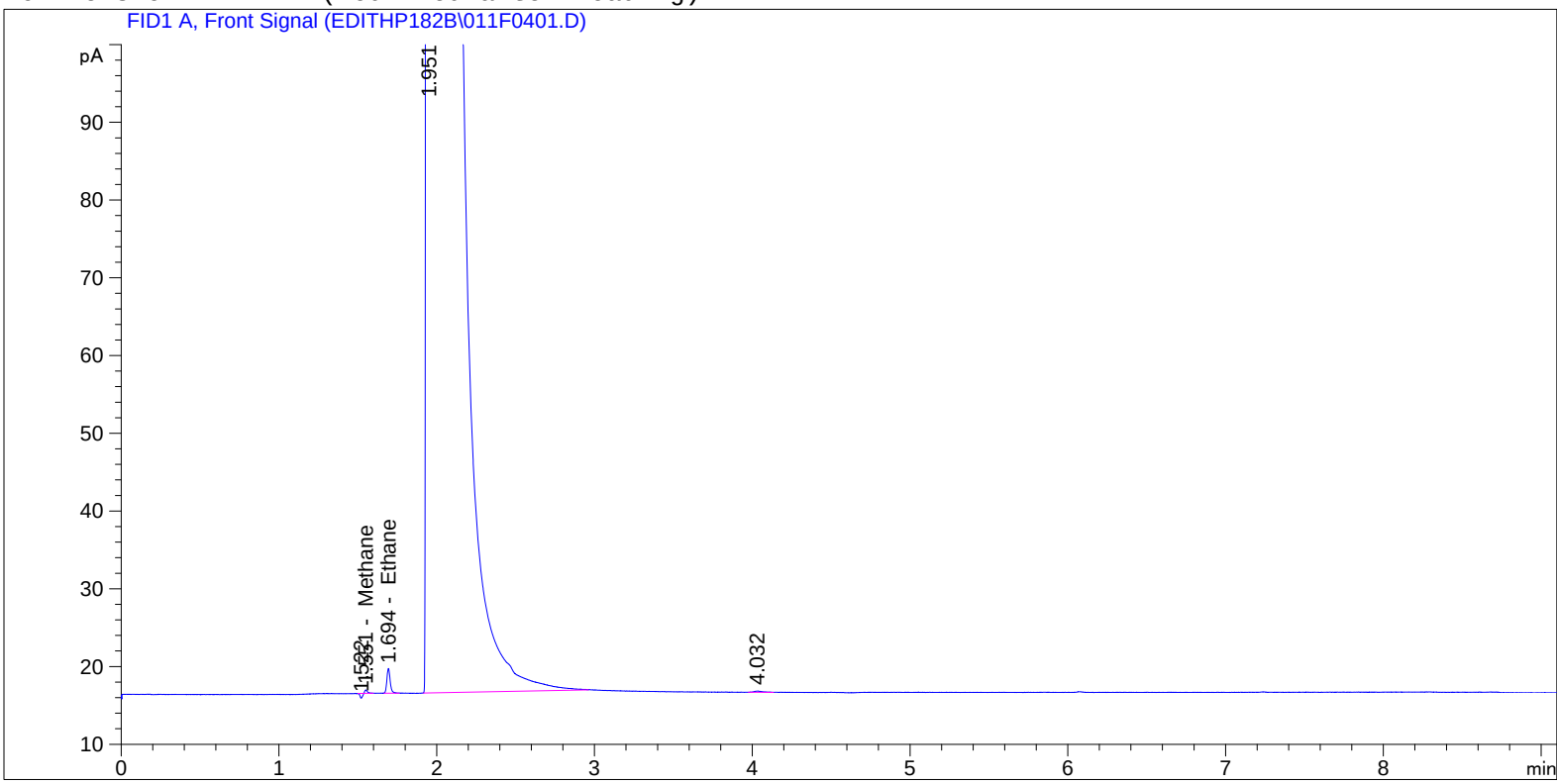
Name	Total Area [pA*s]	Amount [ppm]
as Propane	2.80810e5	3.575e5
Methane	5.46644e-1	2.1509
Ethane	6.53590	12.3065
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000

Totals : 3.5749e5

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\011F0401.D
Sample Name: 1214-29.1324.Can

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :   4
Acq. Instrument : Edith                           Location : Vial 11
Injection Date  : 1/8/2015 3:25:47 PM                  Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.551 PB     5.30067e-1    3.93469    2.08565    Methane
  1.694 BB        4.58548    1.87840    8.61336    Ethane
  2.031              -           -          -      Propane
  2.943              -           -          -      Butane
  4.495              -           -          -      Pentane
  6.067              -           -          -      Hexane
  6.795              -           -          -      Benzene
  7.232              -           -          -      Heptane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\011F0401.D
Sample Name: 1214-29.1324.Can

Totals : 10.69901

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.522	BP N	6.54141e-1	1.26492	8.27436e-1		?
1.951	BB	2.14524e5	1.27476	2.73467e5		?
4.032	BB	5.93798e-1	1.26492	7.51107e-1		?

Uncalib. totals : 2.73469e5

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========

Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	2.14524e5	2.731e5
as Pentane	3.714	5.209	5.93798e-1	0.4580

Report From Diluted Analysis (TBO)

Totals : 2.7309e5

1 Warnings or Errors :

Warning : Reference compound(s) not found

==========

Final Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

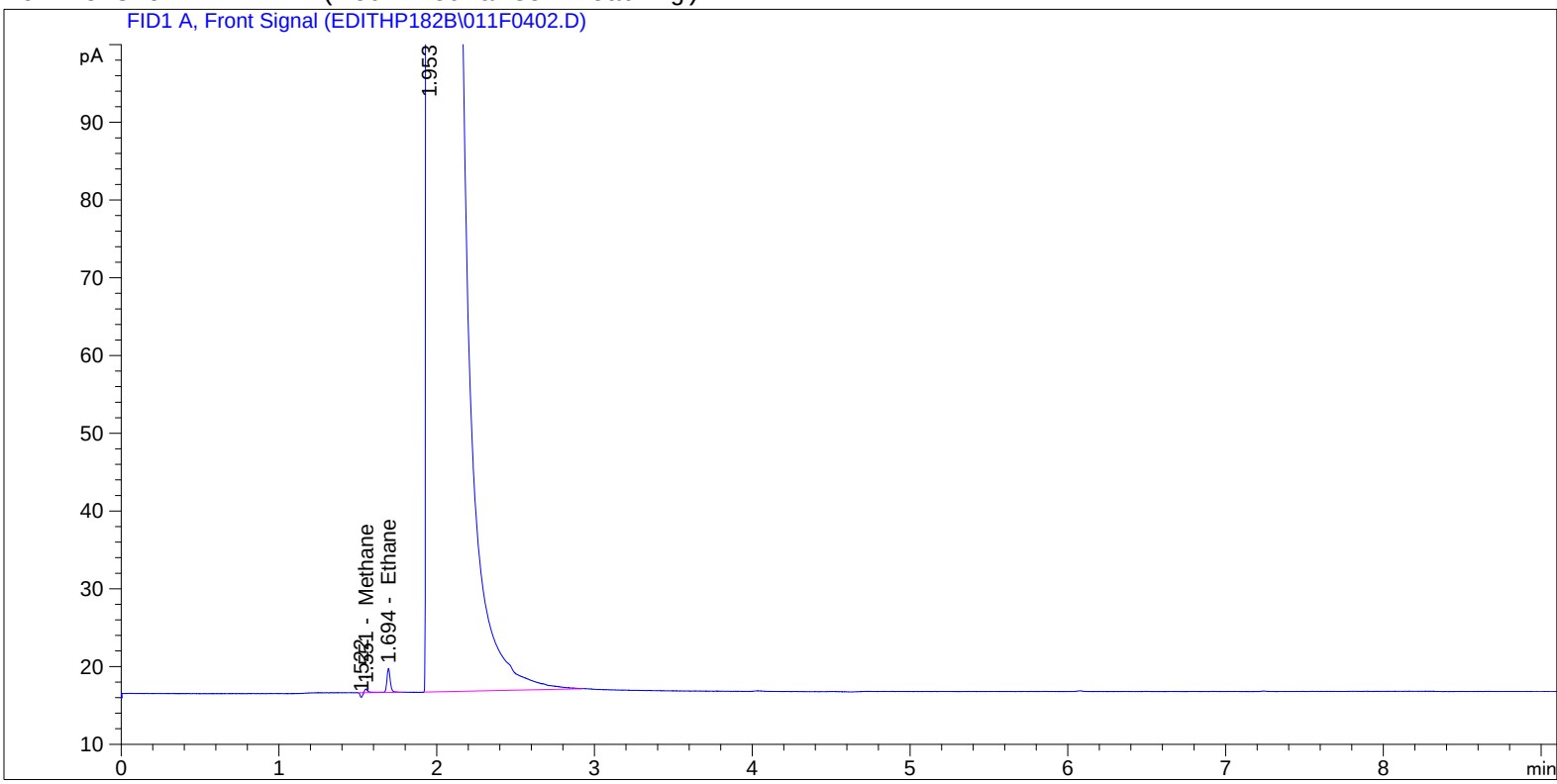
Name	Total Area [pA*s]	Amount [ppm]
as Propane	2.14524e5	2.731e5
as Pentane	5.93798e-1	0.4580
Methane	5.30067e-1	2.0856
Ethane	4.58548	8.6134
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000

Totals : 2.7310e5

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\011F0402.D
Sample Name: 1214-29.1324.Can

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :   4
Acq. Instrument : Edith                           Location : Vial 11
Injection Date  : 1/8/2015 3:40:00 PM                  Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.551 PB     7.46150e-1    3.93469    2.93587    Methane
  1.694 BB        4.54293    1.87826    8.53279    Ethane
  2.031              -          -          -       Propane
  2.943              -          -          -       Butane
  4.495              -          -          -       Pentane
  6.067              -          -          -       Hexane
  6.795              -          -          -       Benzene
  7.232              -          -          -       Heptane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\011F0402.D
Sample Name: 1214-29.1324.Can

Totals : 11.46866

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.522	PP N	5.98293e-1	1.26492	7.56793e-1		?
1.953	BB	2.07362e5	1.27476	2.64336e5		?

Uncalib. totals : 2.64337e5

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========

Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	2.07362e5	2.640e5

Report From Diluted Analysis (TBO)

Totals : 2.6397e5

1 Warnings or Errors :

Warning : Reference compound(s) not found

==========

Final Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

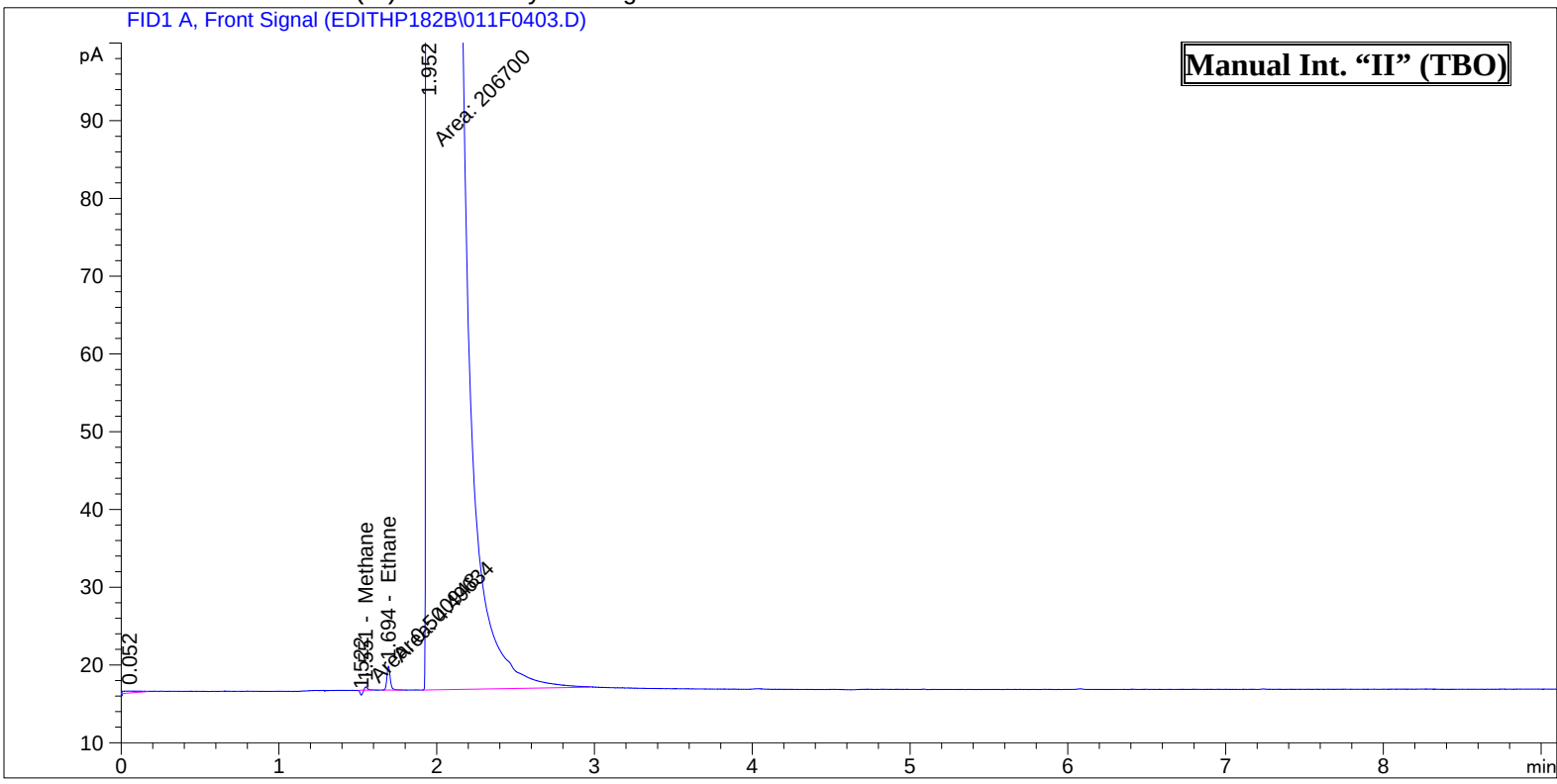
Name	Total Area [pA*s]	Amount [ppm]
as Propane	2.07362e5	2.640e5
Methane	7.46150e-1	2.9359
Ethane	4.54293	8.5328
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000

Totals : 2.6398e5

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\011F0403.D
Sample Name: 1214-29.1324.Can

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :   4
Acq. Instrument : Edith                           Location : Vial 11
Injection Date  : 1/8/2015 3:54:15 PM                  Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                  [ppm]
-------|------|----------|----------|----------|--|------------------
  1.551 MM     5.00948e-1    3.93469    1.97107    Methane
  1.694 MM        4.49634    1.87810    8.44458    Ethane
  2.031              -          -          -       Propane
  2.943              -          -          -       Butane
  4.495              -          -          -       Pentane
  6.067              -          -          -       Hexane
  6.795              -          -          -       Benzene
  7.232              -          -          -       Heptane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\011F0403.D
Sample Name: 1214-29.1324.Can

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				10.41565		

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
0.052	BB	1.61316	1.26492	2.04051	?	
1.522	PP N	6.57545e-1	1.26492	8.31742e-1	?	
1.952	MM	2.06700e5	1.27476	2.63493e5	?	
Uncalib. totals :				2.63496e5		

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
~~as Propane~~	~~1.855~~	~~2.479~~	~~2.06700e5~~	~~2.631e5~~
Totals :				2.6313e5

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

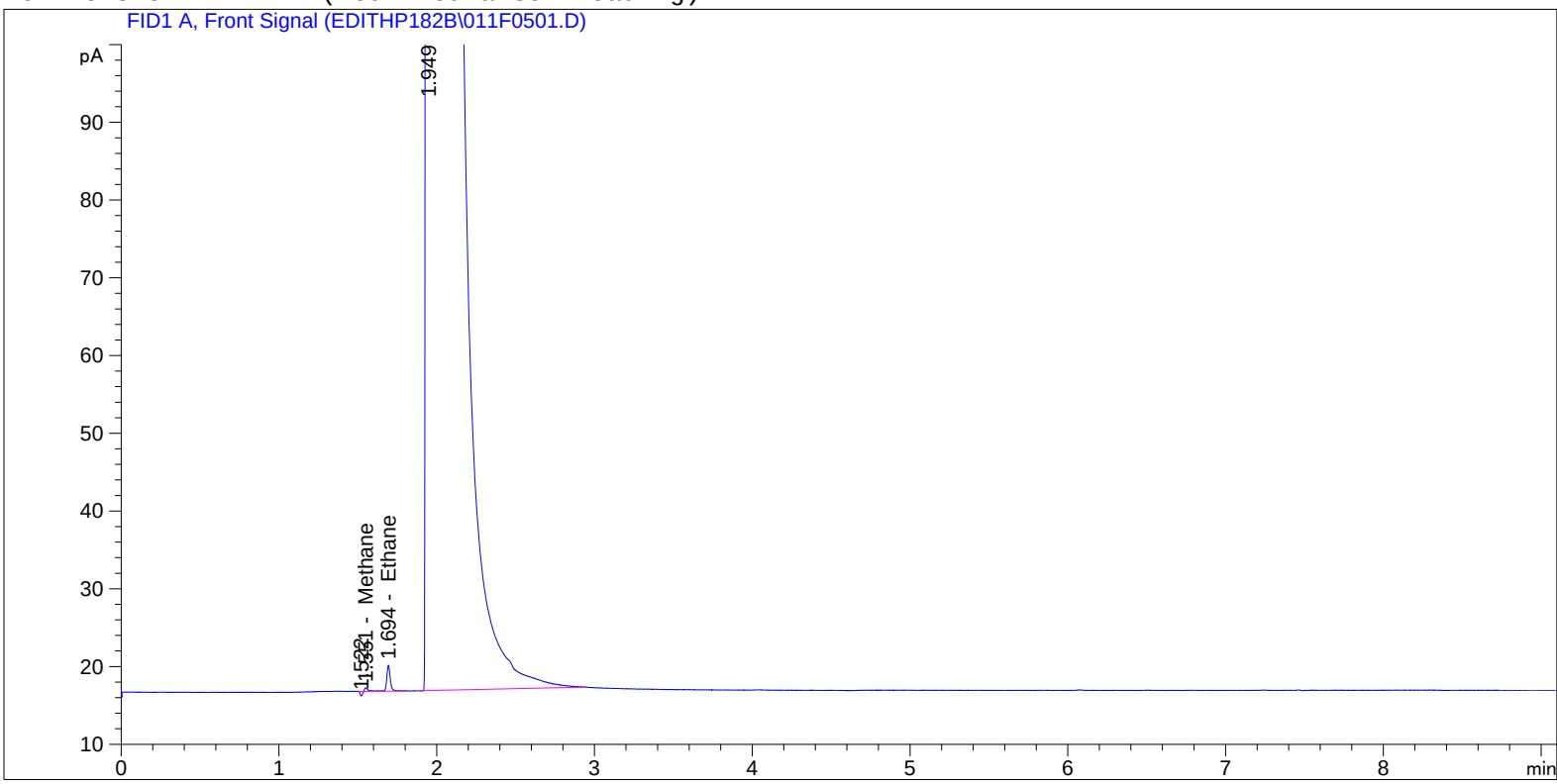
Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Propane	2.06700e5	2.631e5
Methane	5.00948e-1	1.9711
Ethane	4.49634	8.4446
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :		2.6314e5

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\011F0501.D
Sample Name: 1214-29.1453.Can

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :   5
Acq. Instrument : Edith                           Location : Vial 11
Injection Date  : 1/8/2015 4:08:21 PM                  Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.551 PB     6.83559e-1    3.93469    2.68959    Methane
  1.694 BB        5.09044    1.87990    9.56951    Ethane
  2.031              -          -          -       Propane
  2.943              -          -          -       Butane
  4.495              -          -          -       Pentane
  6.067              -          -          -       Hexane
  6.795              -          -          -       Benzene
  7.232              -          -          -       Heptane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\011F0501.D
Sample Name: 1214-29.1453.Can

Totals : 12.25911

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.522	PP N	5.55966e-1	1.26492	7.03253e-1		?
1.949	BB	2.30160e5	1.27476	2.93398e5		?

Uncalib. totals : 2.93399e5

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
~~as Propane~~	~~1.855~~	~~2.479~~	~~2.30160e5~~	~~2.930e5~~

Report From Diluted Analysis (TBO)

Totals : 2.9300e5

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

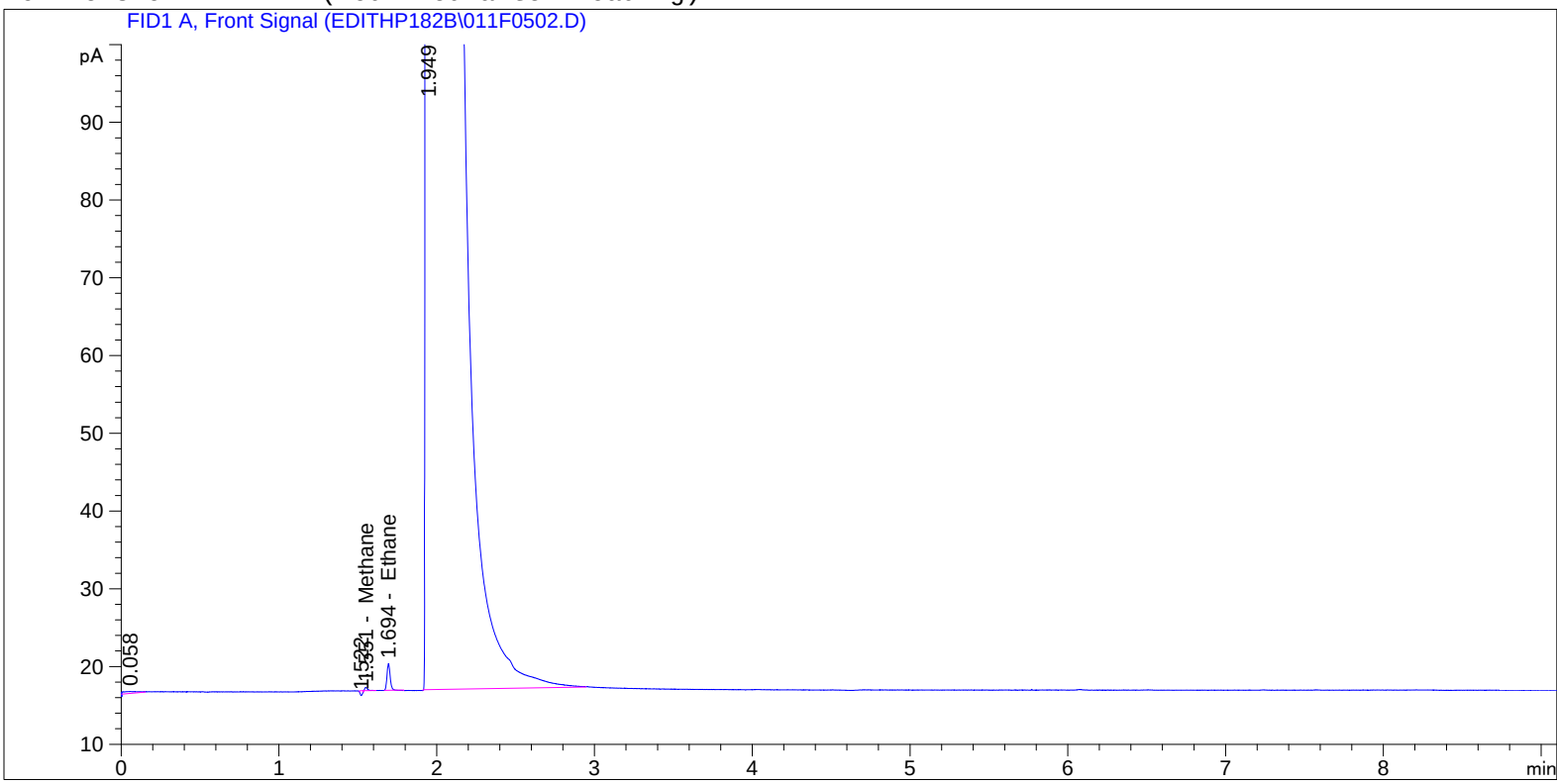
Name	Total Area [pA*s]	Amount [ppm]
as Propane	2.30160e5	2.930e5
Methane	6.83559e-1	2.6896
Ethane	5.09044	9.5695
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000

Totals : 2.9301e5

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\011F0502.D
Sample Name: 1214-29.1453.Can

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :   5
Acq. Instrument : Edith                           Location : Vial 11
Injection Date  : 1/8/2015 4:22:52 PM                  Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.551	PB	5.29429e-1	3.93469	2.08314		Methane
1.694	BP	4.69236	1.87874	8.81573		Ethane
2.031		-	-	-		Propane
2.943		-	-	-		Butane
4.495		-	-	-		Pentane
6.067		-	-	-		Hexane
6.795		-	-	-		Benzene
7.232		-	-	-		Heptane

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\011F0502.D
Sample Name: 1214-29.1453.Can

Totals : 10.89887

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
0.058	BB	1.48649	1.26492	1.88029		?
1.522	PP N	6.19493e-1	1.26492	7.83609e-1		?
1.949	PB	2.36196e5	1.27476	3.01092e5		?

Uncalib. totals : 3.01095e5

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========

Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
~~as Propane~~	~~1.855~~	~~2.479~~	~~2.36196e5~~	~~3.007e5~~

Report From Diluted Analysis (TBO)

Totals : 3.0068e5

1 Warnings or Errors :

Warning : Reference compound(s) not found

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Final Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

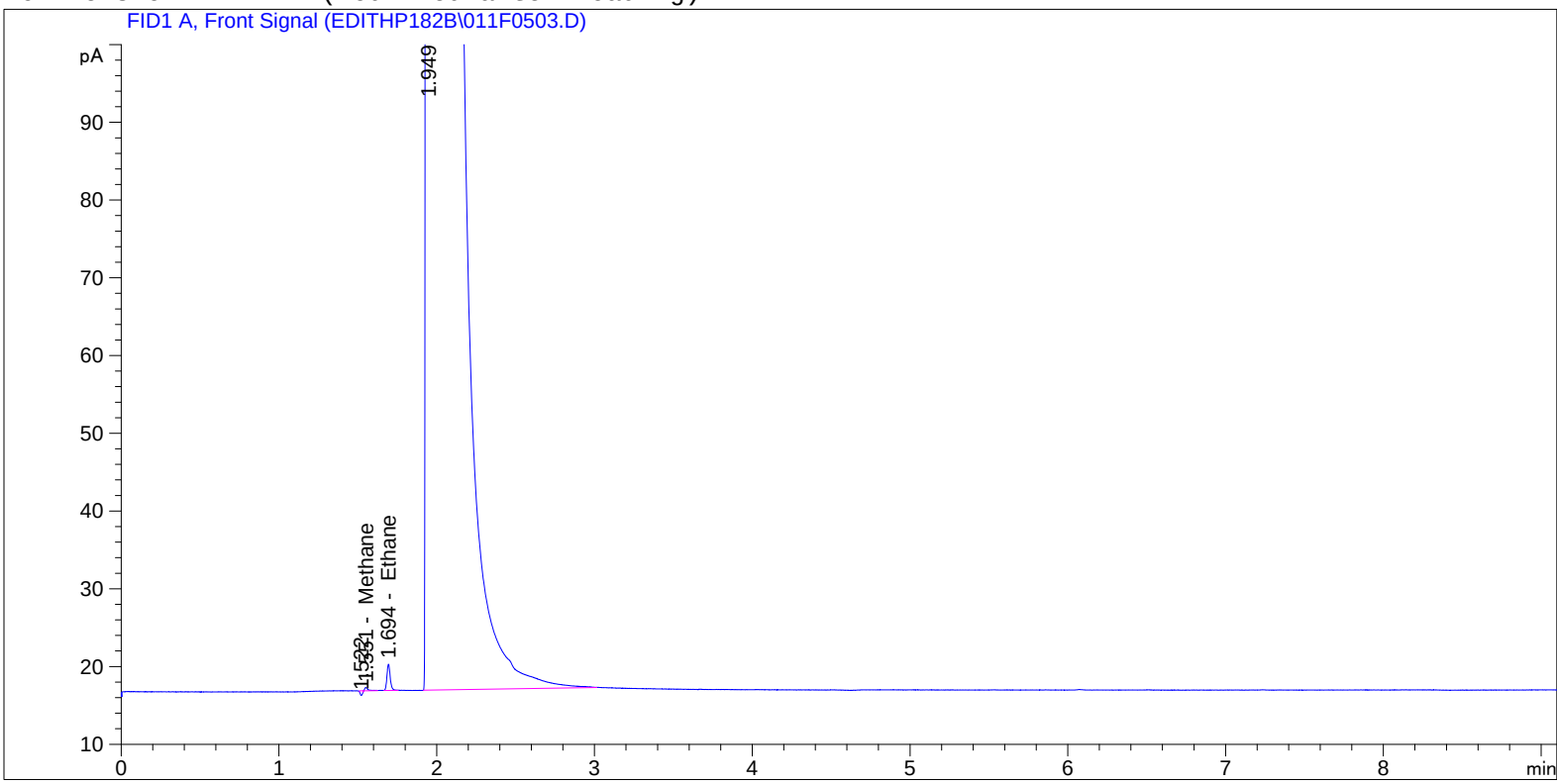
Name	Total Area [pA*s]	Amount [ppm]
as Propane	2.36196e5	3.007e5
Methane	5.29429e-1	2.0831
Ethane	4.69236	8.8157
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000

Totals : 3.0069e5

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\011F0503.D
Sample Name: 1214-29.1453.Can

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :   5
Acq. Instrument : Edith                           Location : Vial 11
Injection Date  : 1/8/2015 4:37:17 PM                  Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.551 PB     6.31595e-1    3.93469    2.48513    Methane
  1.694 BB        4.86209    1.87926    9.13714    Ethane
  2.031              -          -          -       Propane
  2.943              -          -          -       Butane
  4.495              -          -          -       Pentane
  6.067              -          -          -       Hexane
  6.795              -          -          -       Benzene
  7.232              -          -          -       Heptane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\011F0503.D
Sample Name: 1214-29.1453.Can

Totals : 11.62227

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.522	PP N	5.83371e-1	1.26492	7.37917e-1		?
1.949	BB	2.32818e5	1.27476	2.96786e5		?

Uncalib. totals : 2.96787e5

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========

Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
~~as Propane~~	~~1.855~~	~~2.479~~	~~2.32818e5~~	~~2.964e5~~

Report From Diluted Analysis (TBO)

Totals : 2.9638e5

1 Warnings or Errors :

Warning : Reference compound(s) not found

==========

Final Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

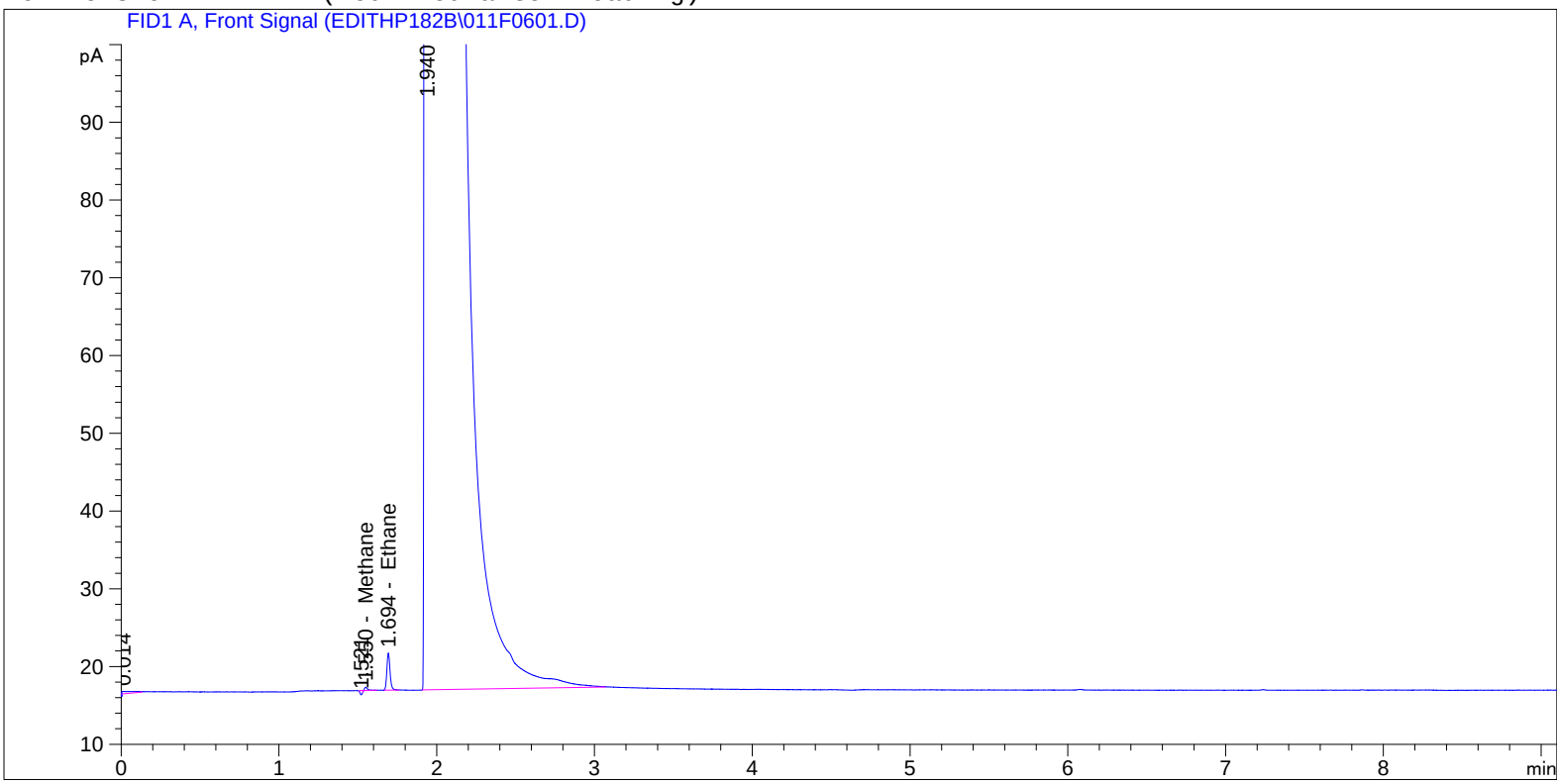
Name	Total Area [pA*s]	Amount [ppm]
as Propane	2.32818e5	2.964e5
Methane	6.31595e-1	2.4851
Ethane	4.86209	9.1371
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000

Totals : 2.9639e5

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\011F0601.D
Sample Name: 1214-29.1308.Can

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :   6
Acq. Instrument : Edith                           Location : Vial 11
Injection Date  : 1/8/2015 4:51:51 PM                  Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.550 PB     5.19078e-1    3.93469    2.04241    Methane
  1.694 BB        6.68108    1.88315   12.58144    Ethane
  2.031              -          -          -       Propane
  2.943              -          -          -       Butane
  4.495              -          -          -       Pentane
  6.067              -          -          -       Hexane
  6.795              -          -          -       Benzene
  7.232              -          -          -       Heptane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\011F0601.D
Sample Name: 1214-29.1308.Can

Totals : 14.62385

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
0.014	BB	1.33728	1.26492	1.69155		?
1.521	PP N	5.21759e-1	1.26492	6.59984e-1		?
1.940	BB	3.00635e5	1.27476	3.83238e5		?

Uncalib. totals : 3.83240e5

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========

Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	3.00635e5	3.827e5

Report From Diluted Analysis (TBO)

Totals : 3.8271e5

1 Warnings or Errors :

Warning : Reference compound(s) not found

==========

Final Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

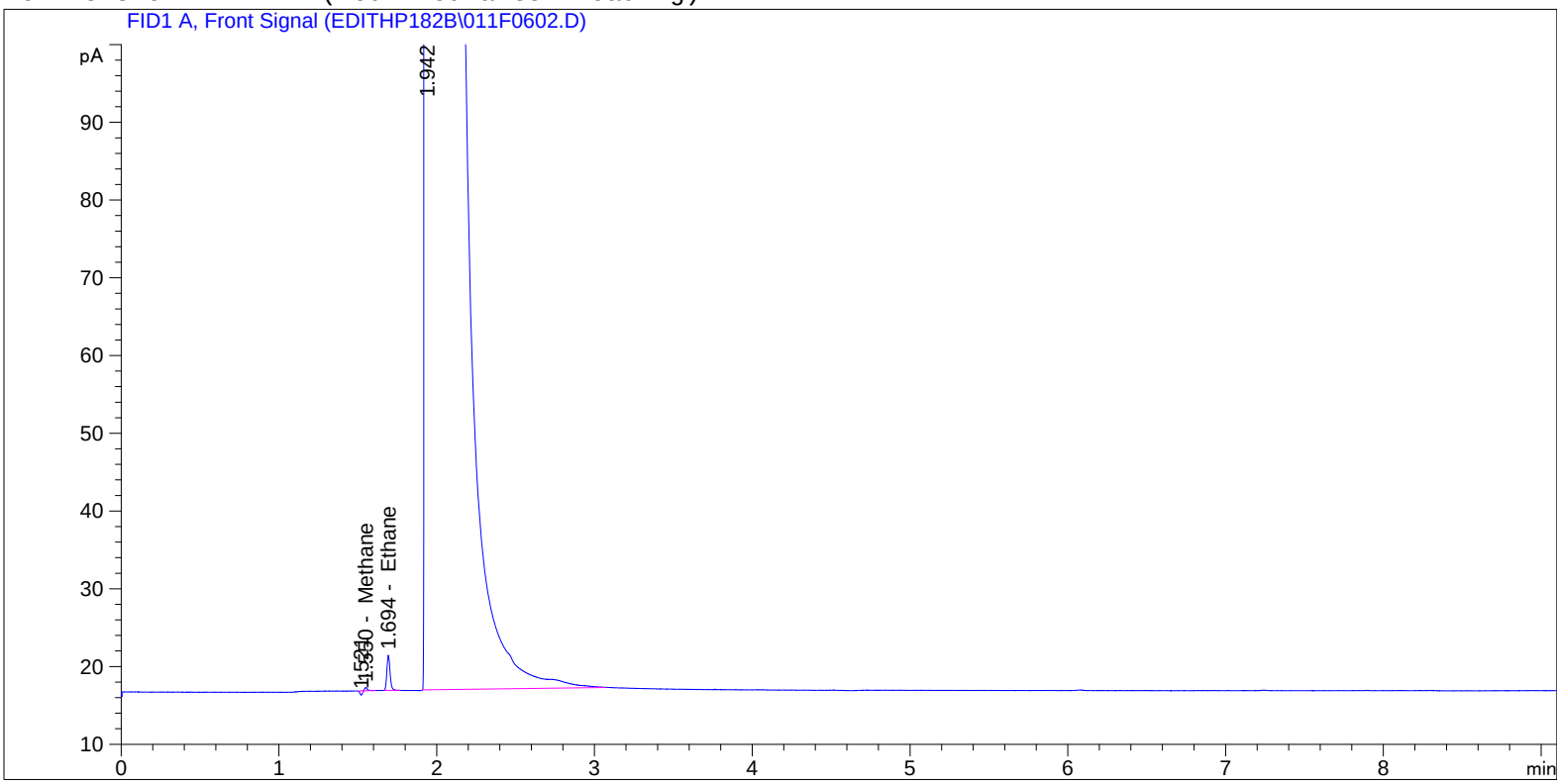
Name	Total Area [pA*s]	Amount [ppm]
as Propane	3.00635e5	3.827e5
Methane	5.19078e-1	2.0424
Ethane	6.68108	12.5814
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000

Totals : 3.8273e5

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\011F0602.D
Sample Name: 1214-29.1308.Can

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :   6
Acq. Instrument : Edith                           Location : Vial 11
Injection Date  : 1/8/2015 5:06:07 PM                  Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.550 PB     4.71509e-1    3.93469    1.85524    Methane
  1.694 BP        6.25106    1.88243   11.76720    Ethane
  2.031              -          -          -       Propane
  2.943              -          -          -       Butane
  4.495              -          -          -       Pentane
  6.067              -          -          -       Hexane
  6.795              -          -          -       Benzene
  7.232              -          -          -       Heptane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\011F0602.D
Sample Name: 1214-29.1308.Can

Totals : 13.62244

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.521	PP N	5.48024e-1	1.26492	6.93207e-1		?
1.942	PB	2.87346e5	1.27476	3.66297e5		?

Uncalib. totals : 3.66298e5

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========

Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
~~as Propane~~	~~1.855~~	~~2.479~~	~~2.87346e5~~	~~3.658e5~~

Report From Diluted Analysis (TBO)

Totals : 3.6579e5

1 Warnings or Errors :

Warning : Reference compound(s) not found

==========

Final Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

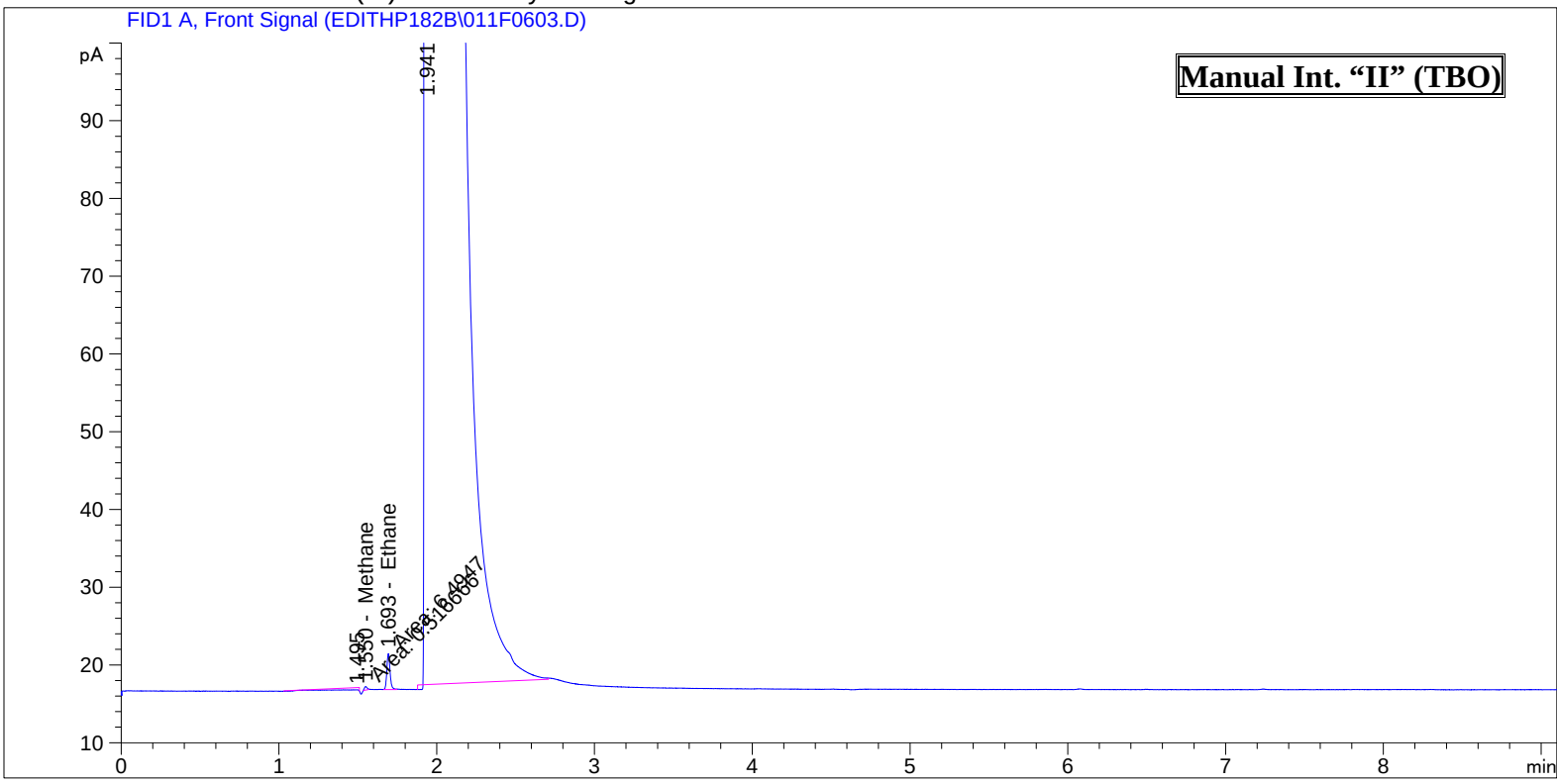
Name	Total Area [pA*s]	Amount [ppm]
as Propane	2.87346e5	3.658e5
Methane	4.71509e-1	1.8552
Ethane	6.25106	11.7672
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000

Totals : 3.6581e5

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\011F0603.D
Sample Name: 1214-29.1308.Can

```
==================================================================
Acq. Operator   : disconnected                  Seq. Line :   6
Acq. Instrument : Edith                          Location : Vial 11
Injection Date  : 1/8/2015 5:20:16 PM                 Inj :   3
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.550	MM	5.16666e-1	3.93469	2.03292		Methane
1.693	MM	6.49470	1.88285	12.22853		Ethane
2.031		-	-	-		Propane
2.943		-	-	-		Butane
4.495		-	-	-		Pentane
6.067		-	-	-		Hexane
6.795		-	-	-		Benzene
7.232		-	-	-		Heptane

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\011F0603.D
Sample Name: 1214-29.1308.Can

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				14.26145		

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.495	BP N	4.06031	1.26514	5.13687	?	
1.941	PB	2.90819e5	1.27476	3.70725e5	?	

Uncalib. totals : 3.70730e5

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========
Summed Peaks Report
==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
~~as Propane~~	~~1.855~~	~~2.479~~	~~2.90819e5~~	~~3.702e5~~
Totals :				3.7022e5

Report From Diluted Analysis (TBO)

1 Warnings or Errors :

Warning : Reference compound(s) not found

==========
Final Summed Peaks Report
==========

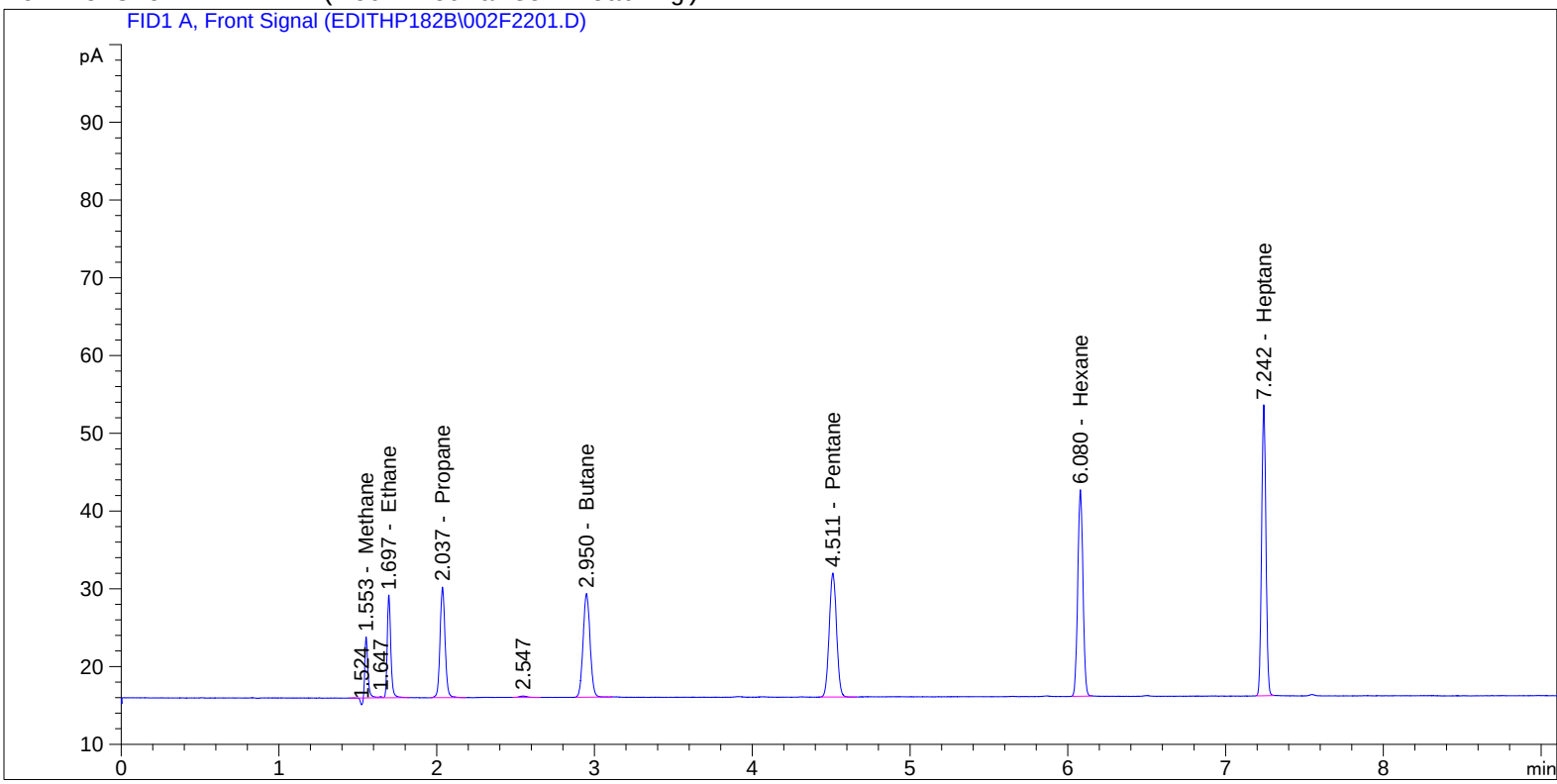
Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Propane	2.90819e5	3.702e5
Methane	5.16666e-1	2.0329
Ethane	6.49470	12.2285
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :		3.7023e5

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\002F2201.D
Sample Name: EdithP108 #C3 ENV(1=600,2=400)

```
==================================================================
Acq. Operator   : disconnected                  Seq. Line :  22
Acq. Instrument : Edith                         Location : Vial 2
Injection Date  : 1/9/2015 9:22:08 AM                Inj :   1
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.553	PB	10.61516	3.69556	39.22900		Methane
1.697	VB	20.83371	1.89020	39.37994		Ethane
2.037	BB	31.66681	1.27353	40.32850		Propane
2.950	BB	41.01762	9.60569e-1	39.40026		Butane
4.511	BB	51.56181	7.77291e-1	40.07852		Pentane
6.080	BB	61.36567	6.64133e-1	40.75496		Hexane
6.795		-	-	-		Benzene
7.242	BB	71.61462	5.46137e-1	39.11138		Heptane

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\002F2201.D
Sample Name: EdithP108 #C3 ENV(1=600,2=400)

Totals : 278.28256

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.524	BP N	9.54854e-1	1.26492	1.20781		?
1.647	BV	2.01969e-1	1.26492	2.55475e-1		?
2.547	BB	5.79769e-1	1.26492	7.33361e-1		?

Uncalib. totals : 2.19665

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========

Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Ethane	1.550	1.855	2.01969e-1	0.3814
as Butane	2.479	3.714	5.79769e-1	0.5561

Totals : 9.3748e-1

1 Warnings or Errors :

Warning : Reference compound(s) not found

==========

Final Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

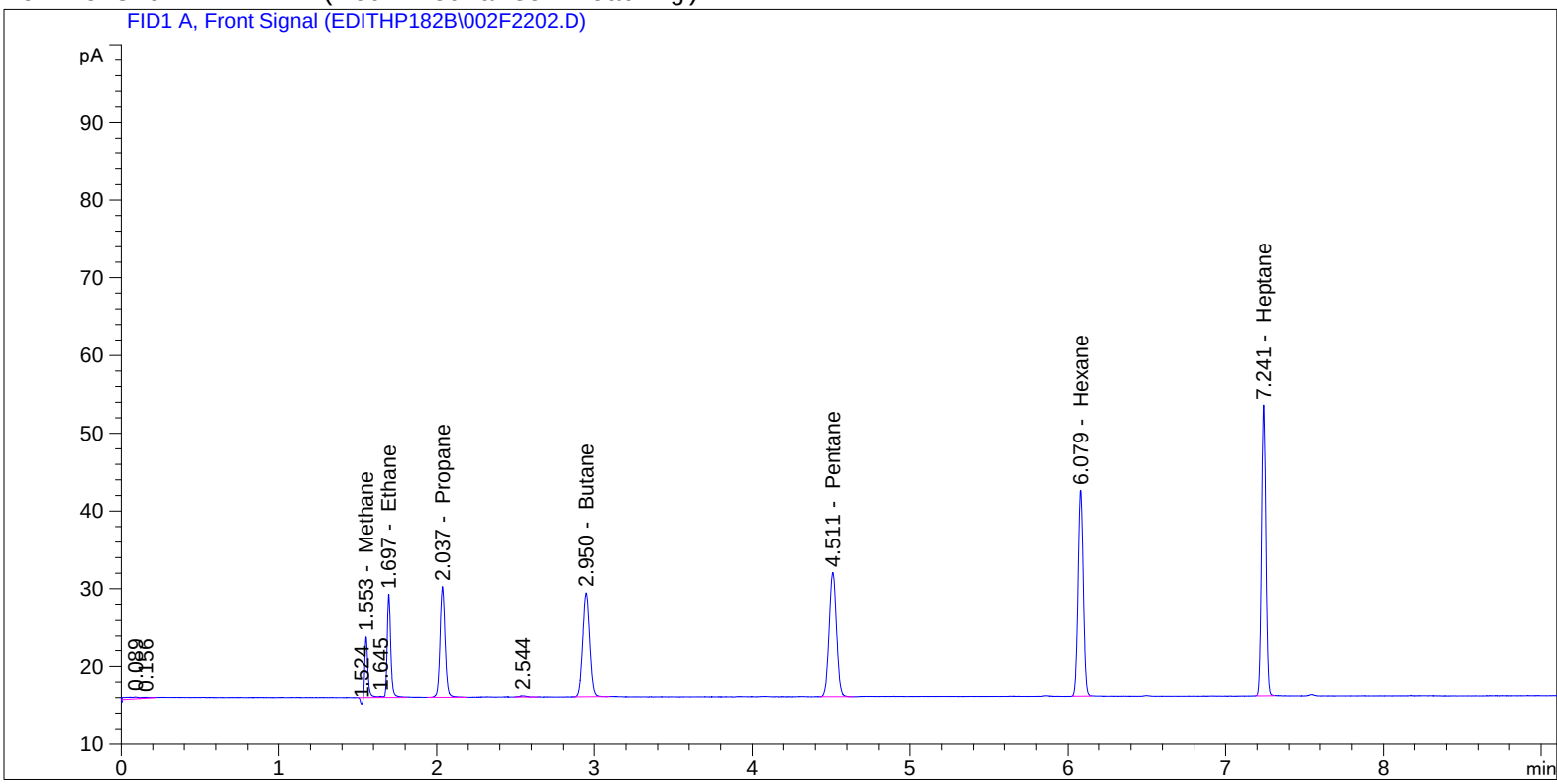
Name	Total Area [pA*s]	Amount [ppm]
as Ethane	2.01969e-1	0.3814
as Butane	5.79769e-1	0.5561
Methane	10.61516	39.2290
Ethane	20.83371	39.3799
Propane	31.66681	40.3285
Butane	41.01762	39.4003
Pentane	51.56181	40.0785
Hexane	61.36567	40.7550
Benzene	0.00000	0.0000
Heptane	71.61462	39.1114

Totals : 279.2200

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\002F2202.D
Sample Name: EdithP108 #C3 ENV(1=600,2=400)

```
==================================================================
Acq. Operator   : disconnected                  Seq. Line :  22
Acq. Instrument : Edith                         Location : Vial 2
Injection Date  : 1/9/2015 9:39:11 AM                Inj :   2
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




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==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.553	PV	10.74346	3.69518	39.69896		Methane
1.697	VB	21.00629	1.89023	39.70673		Ethane
2.037	PB	31.78850	1.27353	40.48363		Propane
2.950	BB	41.08152	9.60572e-1	39.46176		Butane
4.511	BB	51.63745	7.77302e-1	40.13787		Pentane
6.079	BB	61.30168	6.64128e-1	40.71217		Hexane
6.795		-	-	-		Benzene
7.241	BB	71.55357	5.46137e-1	39.07808		Heptane

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\002F2202.D
Sample Name: EdithP108 #C3 ENV(1=600,2=400)

Totals : 279.27920

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
0.089	BV	1.50715	1.26492	1.90642		?
0.156	VB	5.41970e-1	1.26492	6.85548e-1		?
1.524	BP N	8.60350e-1	1.26492	1.08827		?
1.645	VV	2.61823e-1	1.26492	3.31185e-1		?
2.544	BB	4.50374e-1	1.26492	5.69687e-1		?

Uncalib. totals : 4.58111

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Ethane	1.550	1.855	2.61823e-1	0.4944
as Butane	2.479	3.714	4.50374e-1	0.4320

Totals : 9.2640e-1

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

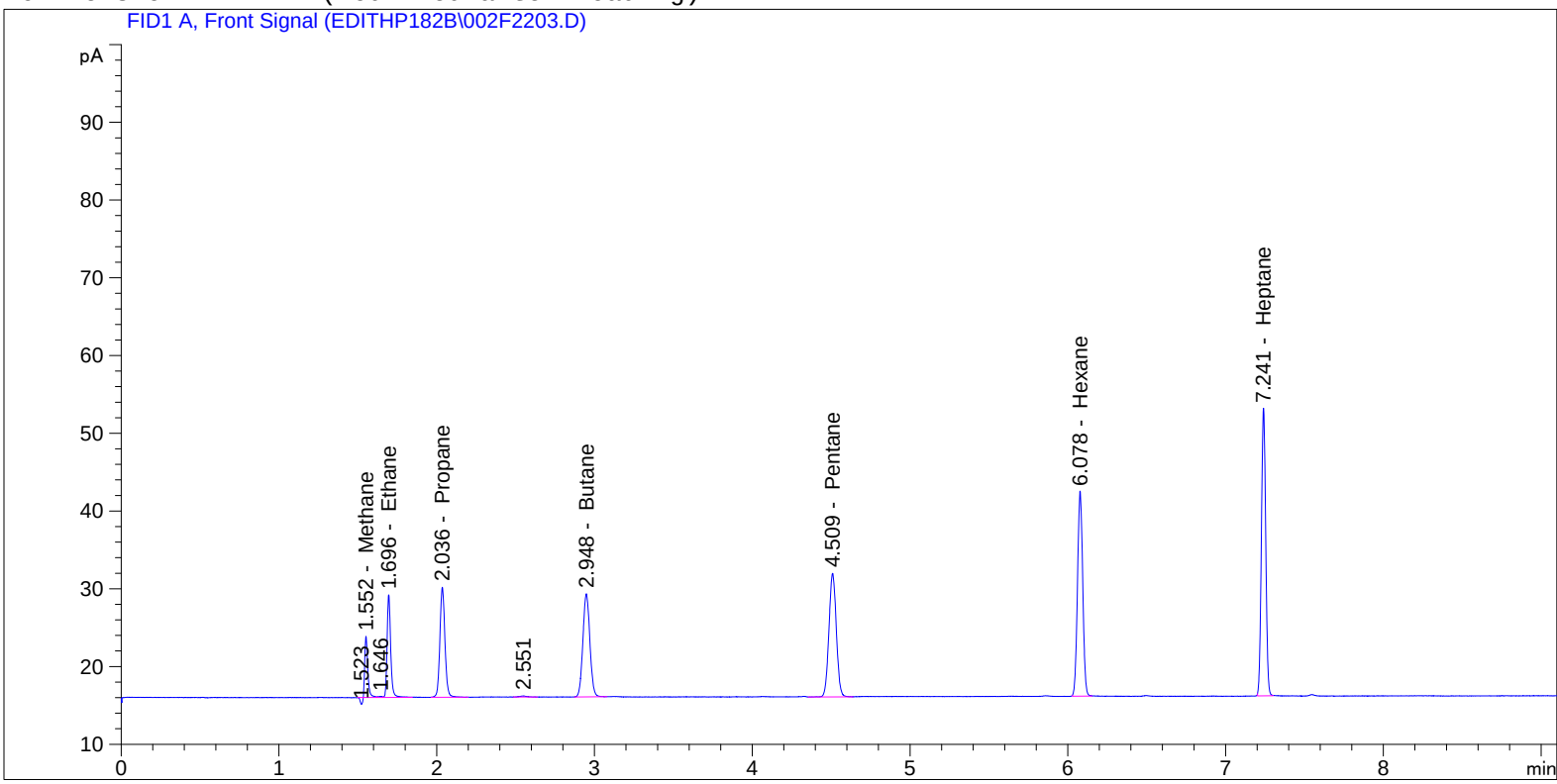
Name	Total Area [pA*s]	Amount [ppm]
as Ethane	2.61823e-1	0.4944
as Butane	4.50374e-1	0.4320
Methane	10.74346	39.6990
Ethane	21.00629	39.7067
Propane	31.78850	40.4836
Butane	41.08152	39.4618
Pentane	51.63745	40.1379
Hexane	61.30168	40.7122
Benzene	0.00000	0.0000
Heptane	71.55357	39.0781

Totals : 280.2056

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\002F2203.D
Sample Name: EdithP108 #C3 ENV(1=600,2=400)

```
==================================================================
Acq. Operator   : disconnected                  Seq. Line :  22
Acq. Instrument : Edith                         Location : Vial 2
Injection Date  : 1/9/2015 9:56:15 AM                Inj :   3
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




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==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.552	PV	10.57544	3.69569	39.08352		Methane
1.696	VB	20.77140	1.89019	39.26195		Ethane
2.036	BB	31.35673	1.27351	39.93322		Propane
2.948	BB	40.86020	9.60561e-1	39.24873		Butane
4.509	VB	51.53592	7.77287e-1	40.05820		Pentane
6.078	BB	60.95045	6.64102e-1	40.47730		Hexane
6.795		-	-	-		Benzene
7.241	BB	70.98714	5.46142e-1	38.76905		Heptane

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\002F2203.D
Sample Name: EdithP108 #C3 ENV(1=600,2=400)

Totals : 276.83197

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.523	BP N	8.88513e-1	1.26492	1.12390		?
1.646	VV	2.38261e-1	1.26492	3.01381e-1		?
2.551	BB	4.22729e-1	1.26492	5.34718e-1		?

Uncalib. totals : 1.96000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Ethane	1.550	1.855	2.38261e-1	0.4499
as Butane	2.479	3.714	4.22729e-1	0.4055

Totals : 8.5539e-1

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

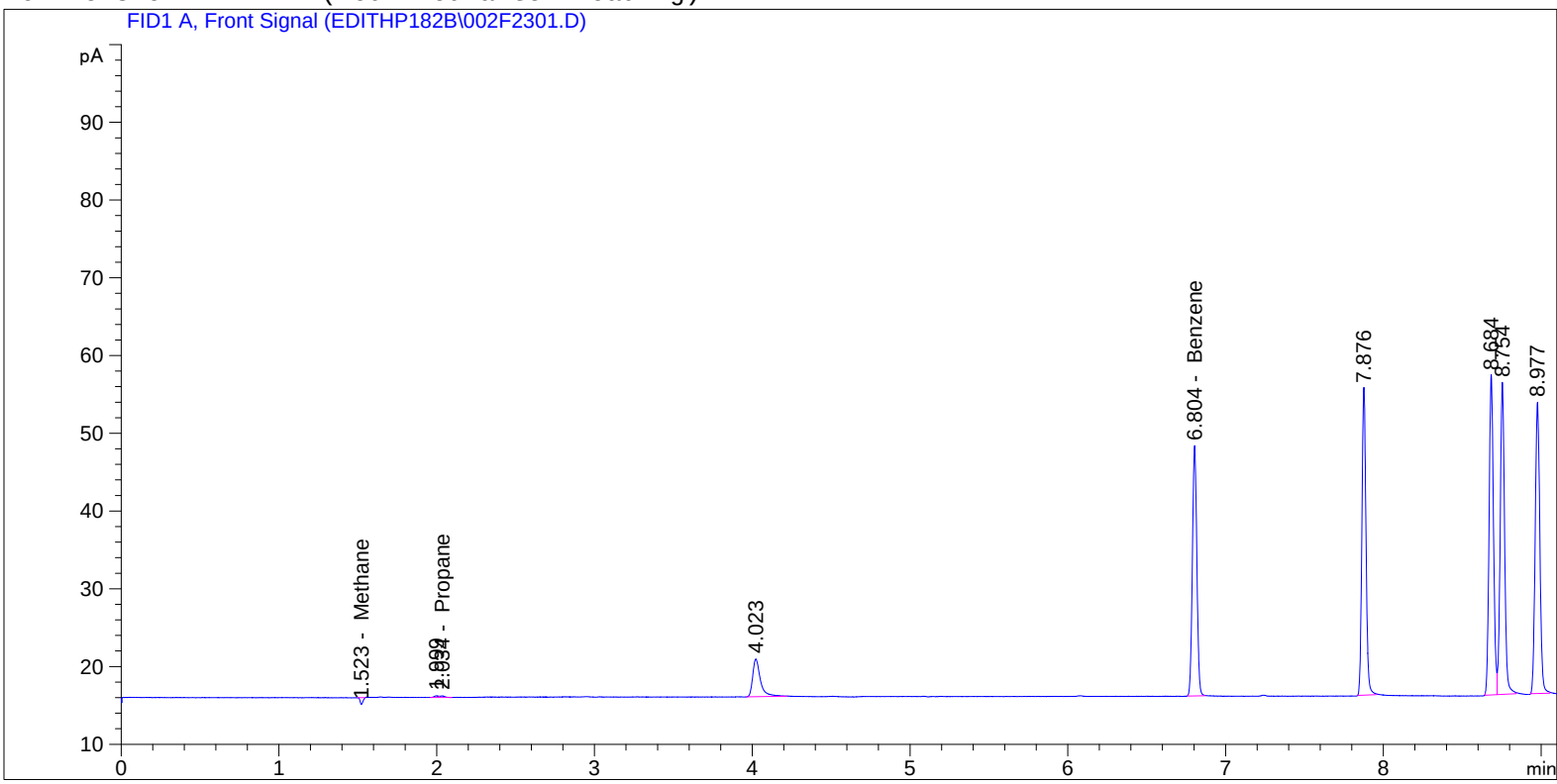
Name	Total Area [pA*s]	Amount [ppm]
as Ethane	2.38261e-1	0.4499
as Butane	4.22729e-1	0.4055
Methane	10.57544	39.0835
Ethane	20.77140	39.2619
Propane	31.35673	39.9332
Butane	40.86020	39.2487
Pentane	51.53592	40.0582
Hexane	60.95045	40.4773
Benzene	0.00000	0.0000
Heptane	70.98714	38.7691

Totals : 277.6874

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\002F2301.D
Sample Name: EdithP155 #B3 ENV(1=600,6=400)

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  23
Acq. Instrument : Edith                          Location : Vial 2
Injection Date  : 1/9/2015 10:30:30 AM                Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.523	BP N	1.07763	3.93469	4.24012		Methane
1.688		-	-	-		Ethane
2.034	VB	4.08465e-1	1.26492	5.16676e-1		Propane
2.943		-	-	-		Butane
4.495		-	-	-		Pentane
6.067		-	-	-		Hexane
6.804	BB	63.46330	6.31508e-1	40.07756		Benzene
7.232		-	-	-		Heptane

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\002F2301.D
Sample Name: EdithP155 #B3 ENV(1=600,6=400)

Totals : 44.83436

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.999	BV	3.75313e-1	1.26492	4.74740e-1		?
4.023	BB	16.49149	1.27239	20.98363		?
7.876	BB	71.60783	1.27421	91.24369		?
8.684	BV	79.21690	1.27427	100.94341		?
8.754	VB	77.84616	1.27426	99.19605		?
8.977	BB	77.18598	1.27425	98.35448		?

Uncalib. totals : 411.19599

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========

Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	3.75313e-1	0.4778
as Pentane	3.714	5.209	16.49149	12.7194
as Hexane	5.209	13.000	305.85687	201.7912

Totals : 214.9884

1 Warnings or Errors :

Warning : Reference compound(s) not found

==========

Final Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

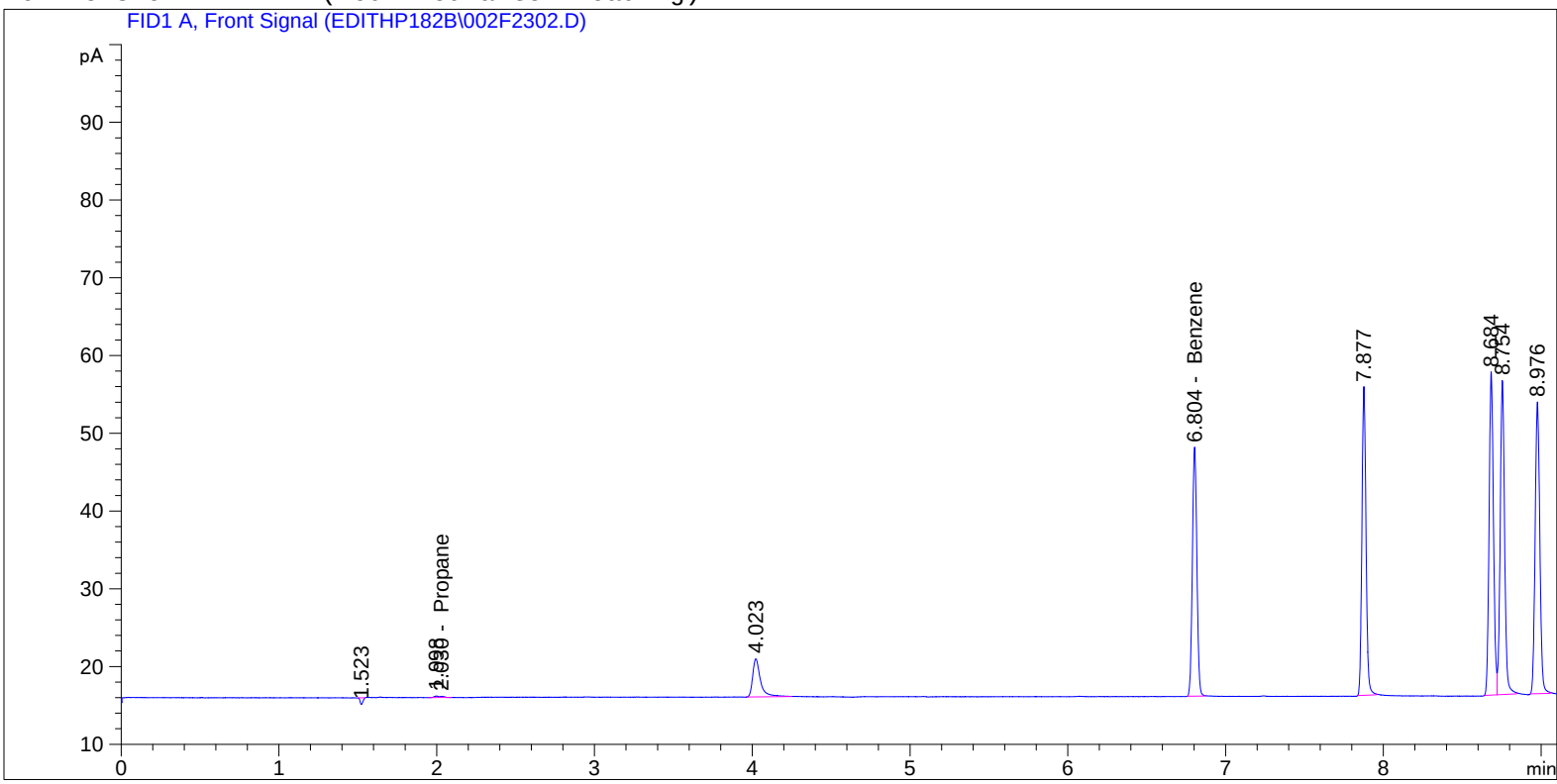
Name	Total Area [pA*s]	Amount [ppm]
as Propane	3.75313e-1	0.4778
as Pentane	16.49149	12.7194
as Hexane	305.85687	201.7912
Methane	1.07763	4.2401
Ethane	0.00000	0.0000
Propane	4.08465e-1	0.5167
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	63.46330	40.0776
Heptane	0.00000	0.0000

Totals : 259.8227

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\002F2302.D
Sample Name: EdithP155 #B3 ENV(1=600,6=400)

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  23
Acq. Instrument : Edith                          Location : Vial 2
Injection Date  : 1/9/2015 10:47:43 AM                Inj :   2
                                                Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.548		-	-	-		Methane
1.688		-	-	-		Ethane
2.030	VB	3.00119e-1	1.26492	3.79627e-1		Propane
2.943		-	-	-		Butane
4.495		-	-	-		Pentane
6.067		-	-	-		Hexane
6.804	BB	63.55719	6.31509e-1	40.13694		Benzene
7.232		-	-	-		Heptane

Totals : 40.51656

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.523	BP N	1.07563	1.26492	1.36058		?
1.998	BV	3.74848e-1	1.26492	4.74152e-1		?
4.023	BB	16.74433	1.27243	21.30594		?
7.877	BB	71.89853	1.27422	91.61425		?
8.684	BV	80.04467	1.27427	101.99862		?
8.754	VB	78.60849	1.27426	100.16784		?
8.976	BB	77.89122	1.27426	99.25349		?

Uncalib. totals : 416.17487

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	3.74848e-1	0.4772
as Pentane	3.714	5.209	16.74433	12.9144
as Hexane	5.209	13.000	308.44291	203.4974

Totals : 216.8890

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

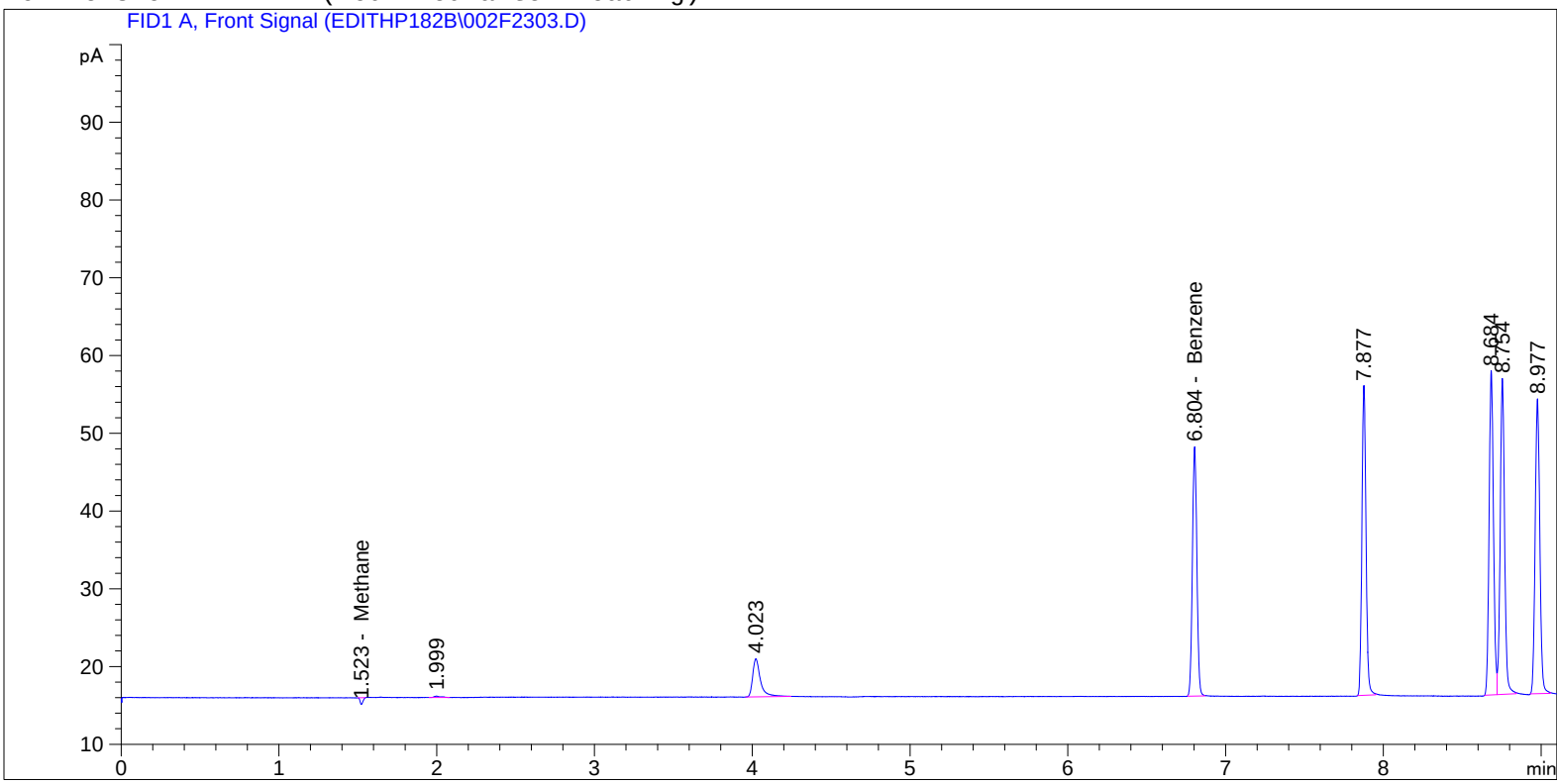
Name	Total Area [pA*s]	Amount [ppm]
as Propane	3.74848e-1	0.4772
as Pentane	16.74433	12.9144
as Hexane	308.44291	203.4974
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	3.00119e-1	0.3796
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	63.55719	40.1369
Heptane	0.00000	0.0000

Totals : 257.4055

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\002F2303.D
Sample Name: EdithP155 #B3 ENV(1=600,6=400)

```
==================================================================
Acq. Operator   : disconnected                  Seq. Line :  23
Acq. Instrument : Edith                         Location : Vial 2
Injection Date  : 1/9/2015 11:04:47 AM               Inj :   3
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.523	BP N	1.07015	3.93469	4.21072		Methane
1.688		-	-	-		Ethane
2.031		-	-	-		Propane
2.943		-	-	-		Butane
4.495		-	-	-		Pentane
6.067		-	-	-		Hexane
6.804	BB	63.62953	6.31510e-1	40.18268		Benzene
7.232		-	-	-		Heptane

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\002F2303.D
Sample Name: EdithP155 #B3 ENV(1=600,6=400)

Totals : 44.39341

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.999	BB	5.35602e-1	1.26492	6.77494e-1		?
4.023	BB	16.89176	1.27245	21.49387		?
7.877	BB	71.99878	1.27422	91.74205		?
8.684	BV	80.28491	1.27427	102.30487		?
8.754	VB	78.76385	1.27426	100.36588		?
8.977	BB	78.07478	1.27426	99.48748		?

Uncalib. totals : 416.07164

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========

Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	5.35602e-1	0.6818
as Pentane	3.714	5.209	16.89176	13.0281
as Hexane	5.209	13.000	309.12231	203.9456

Totals : 217.6555

1 Warnings or Errors :

Warning : Reference compound(s) not found

==========

Final Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

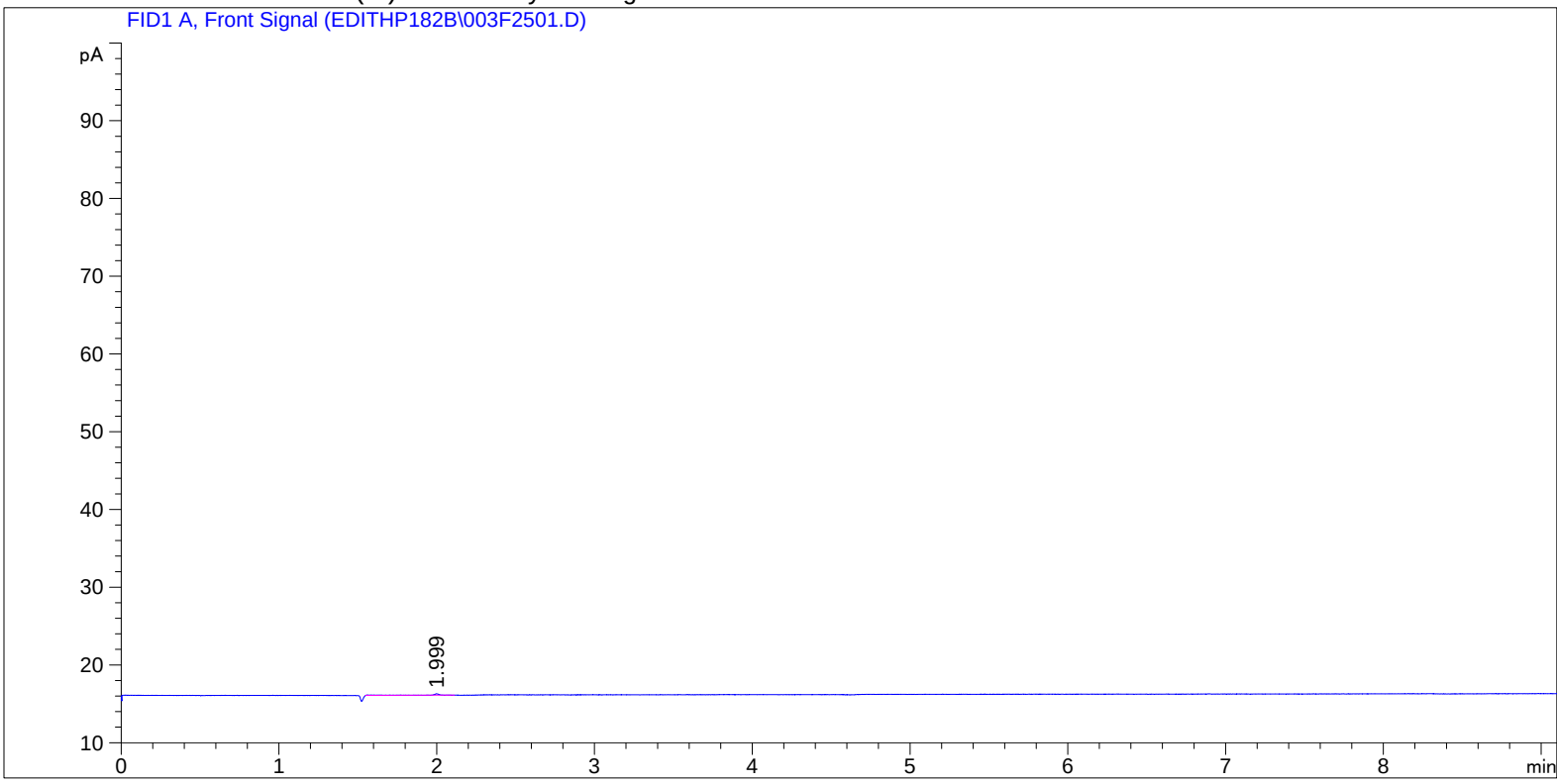
Name	Total Area [pA*s]	Amount [ppm]
as Propane	5.35602e-1	0.6818
as Pentane	16.89176	13.0281
as Hexane	309.12231	203.9456
Methane	1.07015	4.2107
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	63.62953	40.1827
Heptane	0.00000	0.0000

Totals : 262.0489

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\003F2501.D
Sample Name: zero air blank

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  25
Acq. Instrument : Edith                           Location : Vial 3
Injection Date  : 1/9/2015 12:28:30 PM                 Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC_LONG.M
Last changed    : 1/15/2014 1:35:32 PM by Justin Guenzler
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.548            -          -          -         Methane
  1.688            -          -          -         Ethane
  2.031            -          -          -         Propane
  2.943            -          -          -         Butane
  4.495            -          -          -         Pentane
  6.067            -          -          -         Hexane
  6.795            -          -          -         Benzene
  7.232            -          -          -         Heptane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\003F2501.D
Sample Name: zero air blank

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				0.00000		

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.999	PV	5.01799e-1	1.26492	6.34735e-1		?

Uncalib. totals : 6.34735e-1

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	5.01799e-1	0.6388
Totals :				6.3879e-1

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Propane	5.01799e-1	0.6388
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :	6.3879e-1	

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\003F2501.D
Sample Name: zero air blank

Area Percent Report

Sorted By : Signal
Calib. Data Modified : 1/12/2015 2:59:28 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.548		0.0000	0.00000	0.00000	Methane
2	1.688		0.0000	0.00000	0.00000	Ethane
3	2.031		0.0000	0.00000	0.00000	Propane
4	2.943		0.0000	0.00000	0.00000	Butane
5	4.495		0.0000	0.00000	0.00000	Pentane
6	6.067		0.0000	0.00000	0.00000	Hexane
7	6.795		0.0000	0.00000	0.00000	Benzene
8	7.232		0.0000	0.00000	0.00000	Heptane

Totals : 0.00000 0.0000

Uncalibrated Peaks:

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.999	PV	0.0426	5.01799e-1	1.000e2	?

Uncalib. totals : 5.01799e-1 100.0000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Area %
as Propane	1.855	2.479	5.01799e-1	100.0000

Totals : 100.0000

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

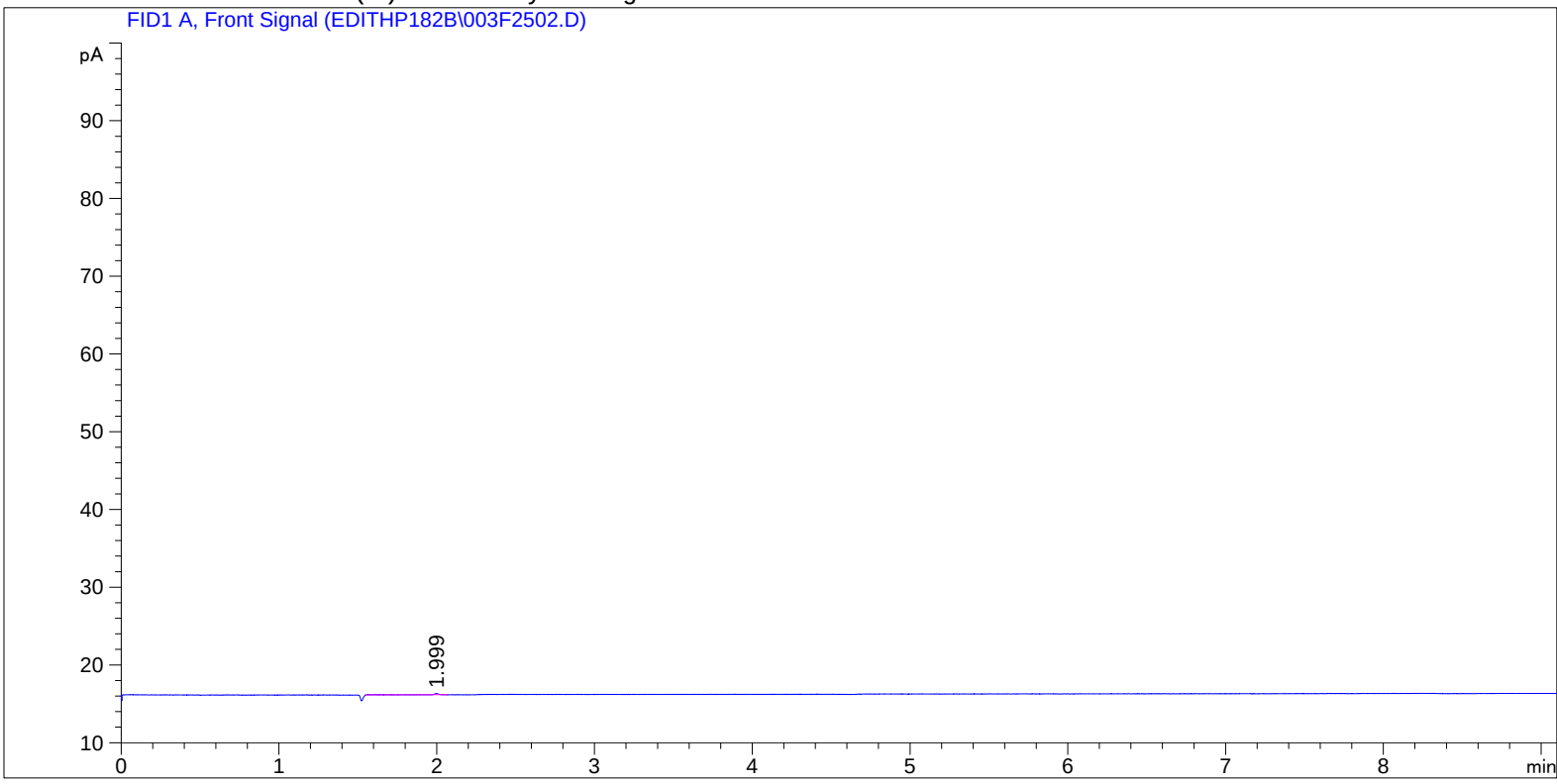
Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\003F2501.D
Sample Name: zero air blank

Name	Total Area [pA*s]	Area %
as Propane	5.01799e-1	100.0000
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :		100.0000

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\003F2502.D
Sample Name: zero air blank

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  25
Acq. Instrument : Edith                           Location : Vial 3
Injection Date  : 1/9/2015 12:46:49 PM                 Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC_LONG.M
Last changed    : 1/15/2014 1:35:32 PM by Justin Guenzler
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.548            -          -          -         Methane
  1.688            -          -          -         Ethane
  2.031            -          -          -         Propane
  2.943            -          -          -         Butane
  4.495            -          -          -         Pentane
  6.067            -          -          -         Hexane
  6.795            -          -          -         Benzene
  7.232            -          -          -         Heptane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\003F2502.D
Sample Name: zero air blank

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				0.00000		

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.999	PV	5.22519e-1	1.26492	6.60944e-1		?

Uncalib. totals : 6.60944e-1

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	5.22519e-1	0.6652
Totals :				6.6517e-1

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Propane	5.22519e-1	0.6652
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :	6.6517e-1	

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\003F2502.D
Sample Name: zero air blank

==========
Area Percent Report
==========

Sorted By : Signal
Calib. Data Modified : 1/12/2015 2:59:28 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.548		0.0000	0.00000	0.00000	Methane
2	1.688		0.0000	0.00000	0.00000	Ethane
3	2.031		0.0000	0.00000	0.00000	Propane
4	2.943		0.0000	0.00000	0.00000	Butane
5	4.495		0.0000	0.00000	0.00000	Pentane
6	6.067		0.0000	0.00000	0.00000	Hexane
7	6.795		0.0000	0.00000	0.00000	Benzene
8	7.232		0.0000	0.00000	0.00000	Heptane

Totals : 0.00000 0.0000

Uncalibrated Peaks:

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.999	PV	0.0472	5.22519e-1	1.000e2	?

Uncalib. totals : 5.22519e-1 100.0000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========
Summed Peaks Report
==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Area %
as Propane	1.855	2.479	5.22519e-1	100.0000

Totals : 100.0000

1 Warnings or Errors :

Warning : Reference compound(s) not found

==========
Final Summed Peaks Report
==========

Signal 1: FID1 A, Front Signal

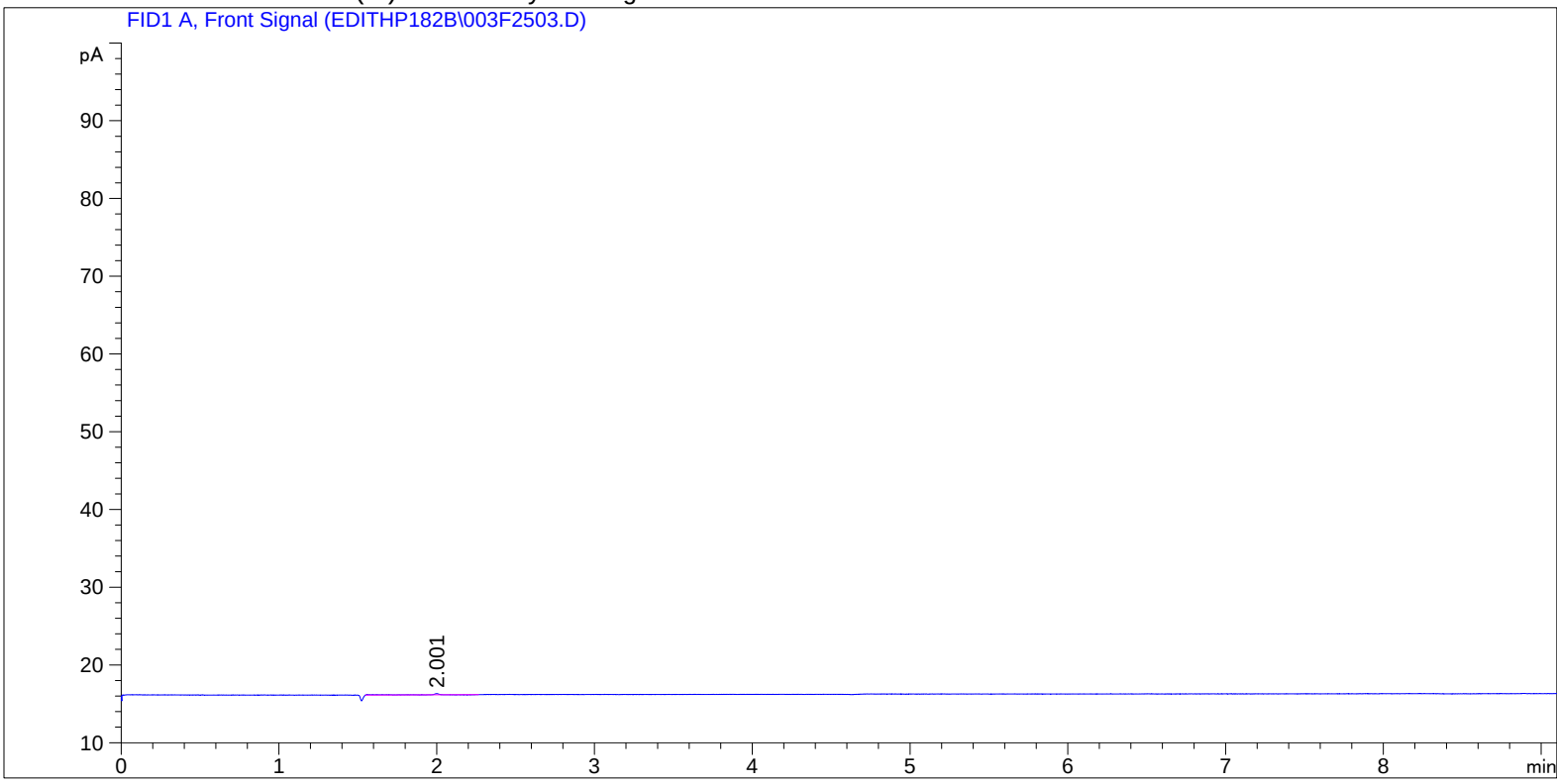
Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\003F2502.D
Sample Name: zero air blank

Name	Total Area [pA*s]	Area %
as Propane	5.22519e-1	100.0000
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :		100.0000

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\003F2503.D
Sample Name: zero air blank

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  25
Acq. Instrument : Edith                           Location : Vial 3
Injection Date  : 1/9/2015 1:05:08 PM                  Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC_LONG.M
Last changed    : 1/15/2014 1:35:32 PM by Justin Guenzler
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.548            -          -          -         Methane
  1.688            -          -          -         Ethane
  2.031            -          -          -         Propane
  2.943            -          -          -         Butane
  4.495            -          -          -         Pentane
  6.067            -          -          -         Hexane
  6.795            -          -          -         Benzene
  7.232            -          -          -         Heptane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\003F2503.D
Sample Name: zero air blank

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				0.00000		

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.001	PB	4.62420e-1	1.26492	5.84924e-1		?
Uncalib. totals :				5.84924e-1		

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	4.62420e-1	0.5887
Totals :			5.8866e-1	

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Propane	4.62420e-1	0.5887
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :	5.8866e-1	

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\003F2503.D
Sample Name: zero air blank

==========
Area Percent Report
==========

Sorted By : Signal
Calib. Data Modified : 1/12/2015 2:59:28 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.548		0.0000	0.00000	0.00000	Methane
2	1.688		0.0000	0.00000	0.00000	Ethane
3	2.031		0.0000	0.00000	0.00000	Propane
4	2.943		0.0000	0.00000	0.00000	Butane
5	4.495		0.0000	0.00000	0.00000	Pentane
6	6.067		0.0000	0.00000	0.00000	Hexane
7	6.795		0.0000	0.00000	0.00000	Benzene
8	7.232		0.0000	0.00000	0.00000	Heptane

Totals : 0.00000 0.0000

Uncalibrated Peaks:

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	2.001	PB	0.0434	4.62420e-1	1.000e2	?

Uncalib. totals : 4.62420e-1 100.0000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========
Summed Peaks Report
==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Area %
as Propane	1.855	2.479	4.62420e-1	100.0000

Totals : 100.0000

1 Warnings or Errors :

Warning : Reference compound(s) not found

==========
Final Summed Peaks Report
==========

Signal 1: FID1 A, Front Signal

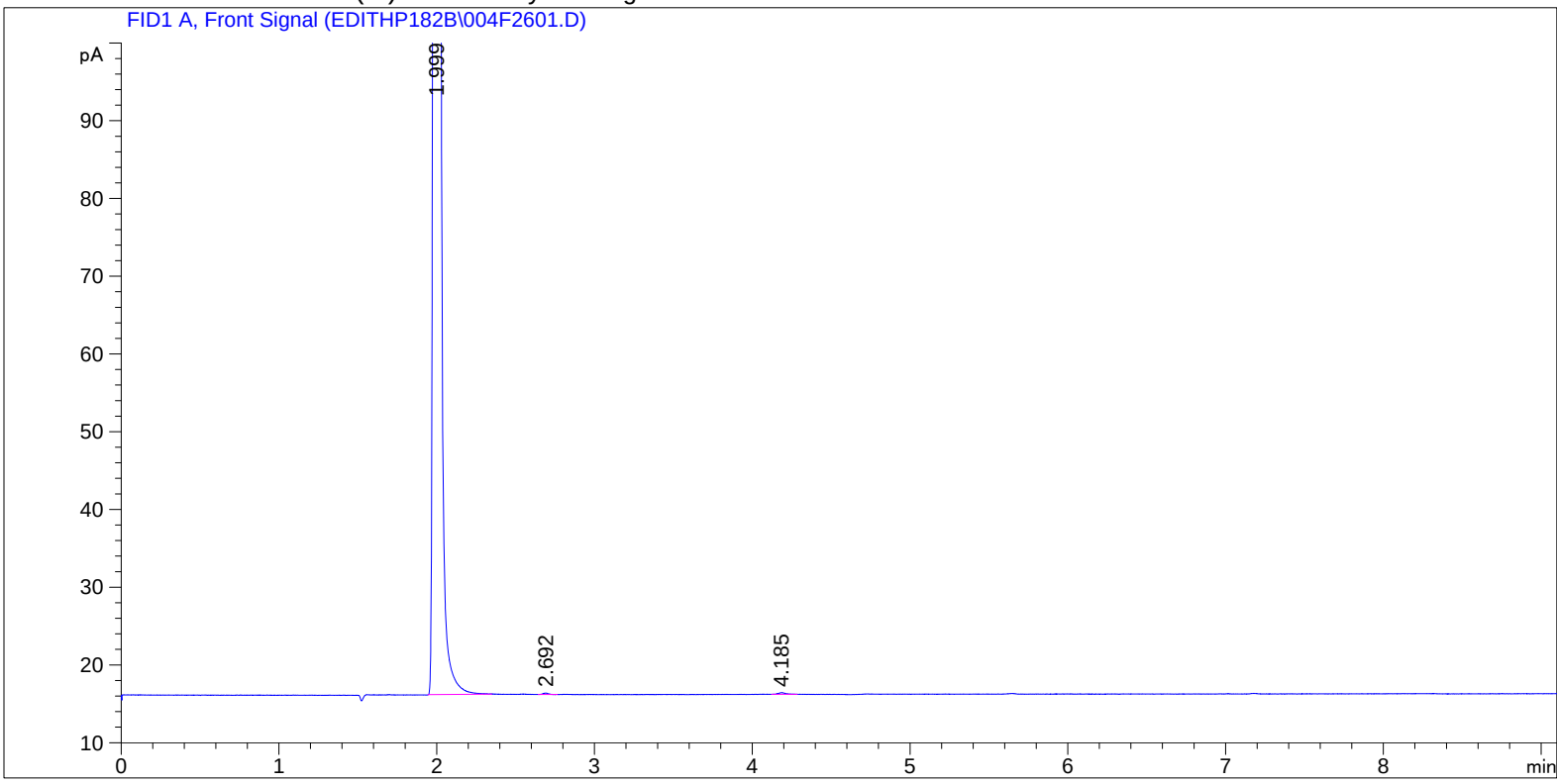
Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\003F2503.D
Sample Name: zero air blank

Name	Total Area [pA*s]	Area %
as Propane	4.62420e-1	100.0000
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :		100.0000

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\004F2601.D
Sample Name: 1214-29.1186.Can *501

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  26
Acq. Instrument : Edith                           Location : Vial 4
Injection Date  : 1/9/2015 1:23:38 PM                  Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.548            -          -          -         Methane
  1.688            -          -          -         Ethane
  2.031            -          -          -         Propane
  2.943            -          -          -         Butane
  4.495            -          -          -         Pentane
  6.067            -          -          -         Hexane
  6.795            -          -          -         Benzene
  7.232            -          -          -         Heptane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\004F2601.D
Sample Name: 1214-29.1186.Can *501

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				0.00000		

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.999	BB	1493.36401	1.27473	1903.64027	?	
2.692	BB	4.19894e-1	1.26492	5.31132e-1	?	
4.185	BB	6.84666e-1	1.26492	8.66047e-1	?	
Uncalib. totals :				1905.03745		

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========

Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	1493.36401	1.901e3
as Butane	2.479	3.714	4.19894e-1	0.4027
as Pentane	3.714	5.209	6.84666e-1	0.5281
Totals :				1901.9966

1 Warnings or Errors :

Warning : Reference compound(s) not found

==========

Final Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Propane	1493.36401	1.901e3
as Butane	4.19894e-1	0.4027
as Pentane	6.84666e-1	0.5281
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :	1901.9966	

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\004F2601.D
Sample Name: 1214-29.1186.Can *501

Area Percent Report

Sorted By : Signal
Calib. Data Modified : 1/12/2015 2:59:28 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.548		0.0000	0.00000	0.00000	Methane
2	1.688		0.0000	0.00000	0.00000	Ethane
3	2.031		0.0000	0.00000	0.00000	Propane
4	2.943		0.0000	0.00000	0.00000	Butane
5	4.495		0.0000	0.00000	0.00000	Pentane
6	6.067		0.0000	0.00000	0.00000	Hexane
7	6.795		0.0000	0.00000	0.00000	Benzene
8	7.232		0.0000	0.00000	0.00000	Heptane

Totals : 0.00000 0.0000

Uncalibrated Peaks:

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.999	BB	0.0305	1493.36401	99.92609	?
2	2.692	BB	0.0350	4.19894e-1	0.02810	?
3	4.185	BB	0.0479	6.84666e-1	0.04581	?

Uncalib. totals : 1494.46857 100.0000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Area %
as Propane	1.855	2.479	1493.36401	99.9261
as Butane	2.479	3.714	4.19894e-1	0.0281
as Pentane	3.714	5.209	6.84666e-1	0.0458

Totals : 100.0000

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\004F2601.D
Sample Name: 1214-29.1186.Can *501

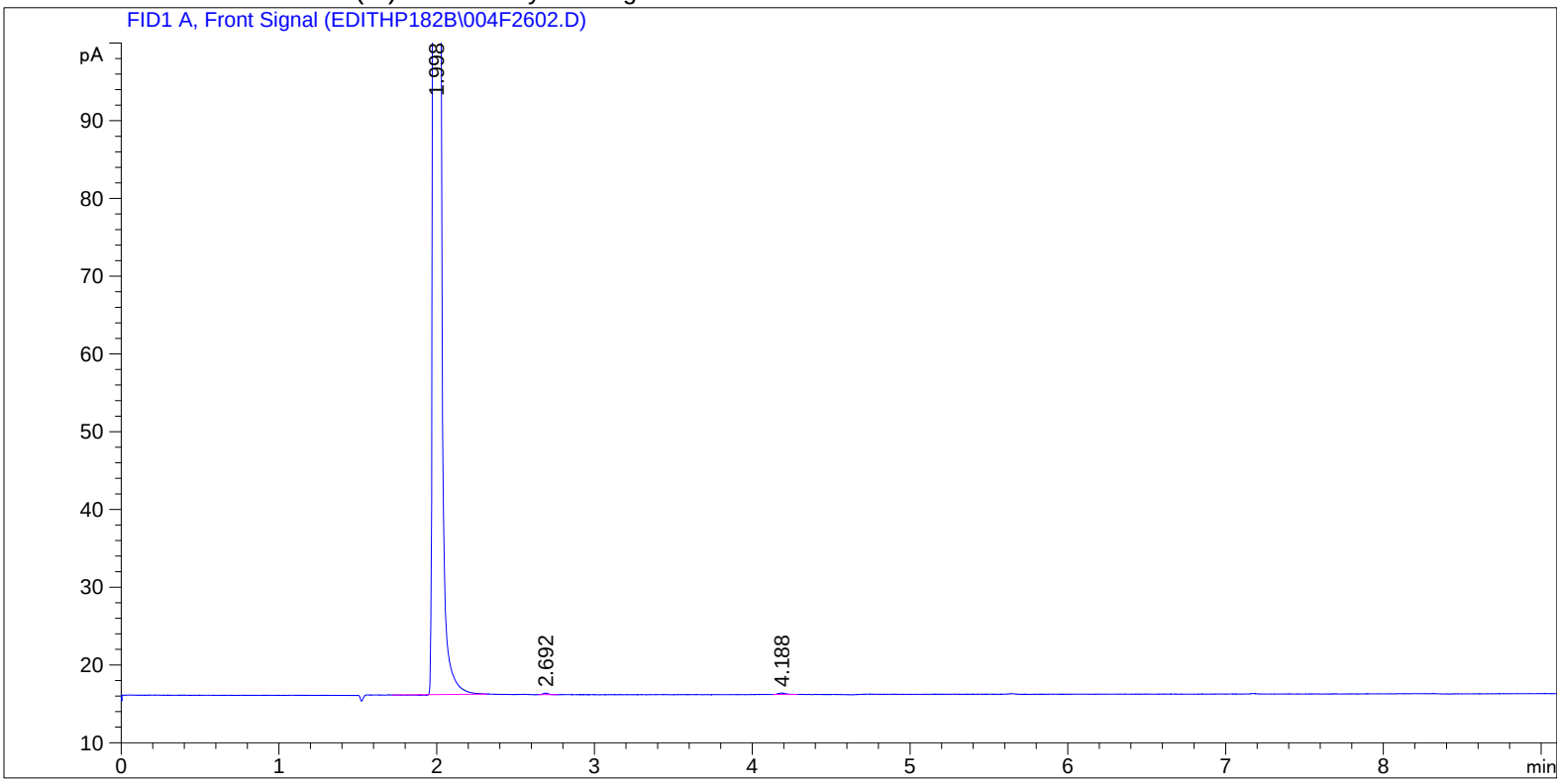
Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Area %
as Propane	1493.36401	99.9261
as Butane	4.19894e-1	0.0281
as Pentane	6.84666e-1	0.0458
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :		100.0000

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\004F2602.D
Sample Name: 1214-29.1186.Can *501

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  26
Acq. Instrument : Edith                           Location : Vial 4
Injection Date  : 1/9/2015 1:37:55 PM                  Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.548            -          -          -         Methane
  1.688            -          -          -         Ethane
  2.031            -          -          -         Propane
  2.943            -          -          -         Butane
  4.495            -          -          -         Pentane
  6.067            -          -          -         Hexane
  6.795            -          -          -         Benzene
  7.232            -          -          -         Heptane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\004F2602.D
Sample Name: 1214-29.1186.Can *501

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				0.00000		

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.998	VB	1495.32593	1.27473	1906.14124	?	
2.692	BB	4.62973e-1	1.26492	5.85624e-1	?	
4.188	BB	5.85505e-1	1.26492	7.40617e-1	?	
Uncalib. totals :				1907.46748		

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	1495.32593	1.904e3
as Butane	2.479	3.714	4.62973e-1	0.4441
as Pentane	3.714	5.209	5.85505e-1	0.4516
Totals :				1904.4590

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Propane	1495.32593	1.904e3
as Butane	4.62973e-1	0.4441
as Pentane	5.85505e-1	0.4516
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :	1904.4590	

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\004F2602.D
Sample Name: 1214-29.1186.Can *501

Area Percent Report

Sorted By : Signal
Calib. Data Modified : 1/12/2015 2:59:28 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.548		0.0000	0.00000	0.00000	Methane
2	1.688		0.0000	0.00000	0.00000	Ethane
3	2.031		0.0000	0.00000	0.00000	Propane
4	2.943		0.0000	0.00000	0.00000	Butane
5	4.495		0.0000	0.00000	0.00000	Pentane
6	6.067		0.0000	0.00000	0.00000	Hexane
7	6.795		0.0000	0.00000	0.00000	Benzene
8	7.232		0.0000	0.00000	0.00000	Heptane

Totals : 0.00000 0.0000

Uncalibrated Peaks:

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.998	VB	0.0335	1495.32593	99.92993	?
2	2.692	BB	0.0333	4.62973e-1	0.03094	?
3	4.188	BB	0.0417	5.85505e-1	0.03913	?

Uncalib. totals : 1496.37441 100.0000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Area %
as Propane	1.855	2.479	1495.32593	99.9299
as Butane	2.479	3.714	4.62973e-1	0.0309
as Pentane	3.714	5.209	5.85505e-1	0.0391

Totals : 100.0000

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\004F2602.D
Sample Name: 1214-29.1186.Can *501

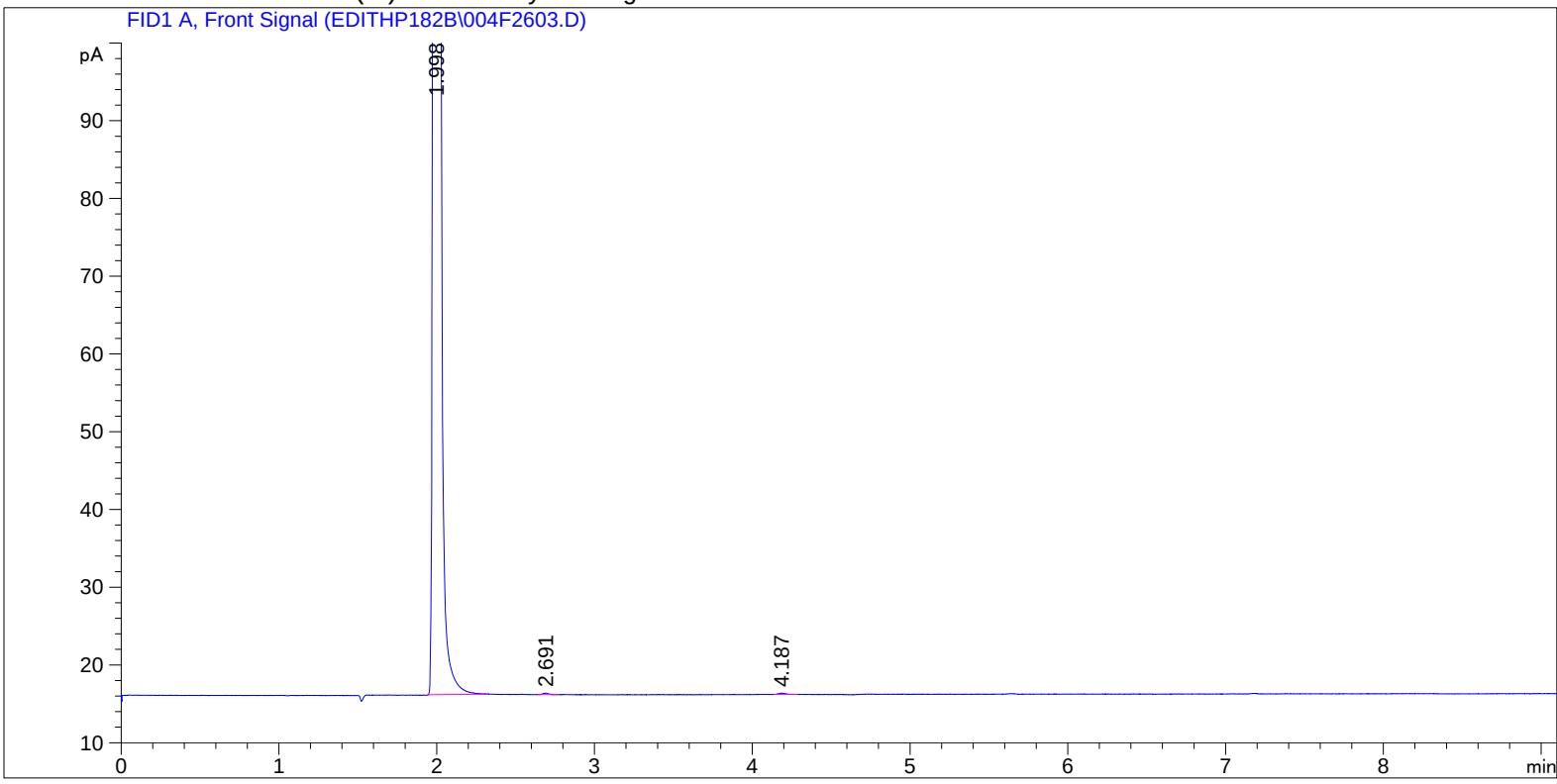
Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Area %
as Propane	1495.32593	99.9299
as Butane	4.62973e-1	0.0309
as Pentane	5.85505e-1	0.0391
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :		100.0000

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\004F2603.D
Sample Name: 1214-29.1186.Can *501

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  26
Acq. Instrument : Edith                           Location : Vial 4
Injection Date  : 1/9/2015 1:52:12 PM                  Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.548            -          -          -         Methane
  1.688            -          -          -         Ethane
  2.031            -          -          -         Propane
  2.943            -          -          -         Butane
  4.495            -          -          -         Pentane
  6.067            -          -          -         Hexane
  6.795            -          -          -         Benzene
  7.232            -          -          -         Heptane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\004F2603.D
Sample Name: 1214-29.1186.Can *501

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				0.00000		

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.998	PB	1502.12109	1.27473	1914.80344	?	
2.691	BB	4.52142e-1	1.26492	5.71923e-1	?	
4.187	BB	5.88611e-1	1.26492	7.44546e-1	?	
Uncalib. totals :				1916.11991		

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========

Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	1502.12109	1.912e3
as Butane	2.479	3.714	4.52142e-1	0.4337
as Pentane	3.714	5.209	5.88611e-1	0.4540
Totals :				1913.1013

1 Warnings or Errors :

Warning : Reference compound(s) not found

==========

Final Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Propane	1502.12109	1.912e3
as Butane	4.52142e-1	0.4337
as Pentane	5.88611e-1	0.4540
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :	1913.1013	

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\004F2603.D
Sample Name: 1214-29.1186.Can *501

Area Percent Report

Sorted By : Signal
Calib. Data Modified : 1/12/2015 2:59:28 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.548		0.0000	0.00000	0.00000	Methane
2	1.688		0.0000	0.00000	0.00000	Ethane
3	2.031		0.0000	0.00000	0.00000	Propane
4	2.943		0.0000	0.00000	0.00000	Butane
5	4.495		0.0000	0.00000	0.00000	Pentane
6	6.067		0.0000	0.00000	0.00000	Hexane
7	6.795		0.0000	0.00000	0.00000	Benzene
8	7.232		0.0000	0.00000	0.00000	Heptane

Totals : 0.00000 0.0000

Uncalibrated Peaks:

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.998	PB	0.0315	1502.12109	99.93076	?
2	2.691	BB	0.0361	4.52142e-1	0.03008	?
3	4.187	BB	0.0507	5.88611e-1	0.03916	?

Uncalib. totals : 1503.16185 100.0000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Area %
as Propane	1.855	2.479	1502.12109	99.9308
as Butane	2.479	3.714	4.52142e-1	0.0301
as Pentane	3.714	5.209	5.88611e-1	0.0392

Totals : 100.0000

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\004F2603.D
Sample Name: 1214-29.1186.Can *501

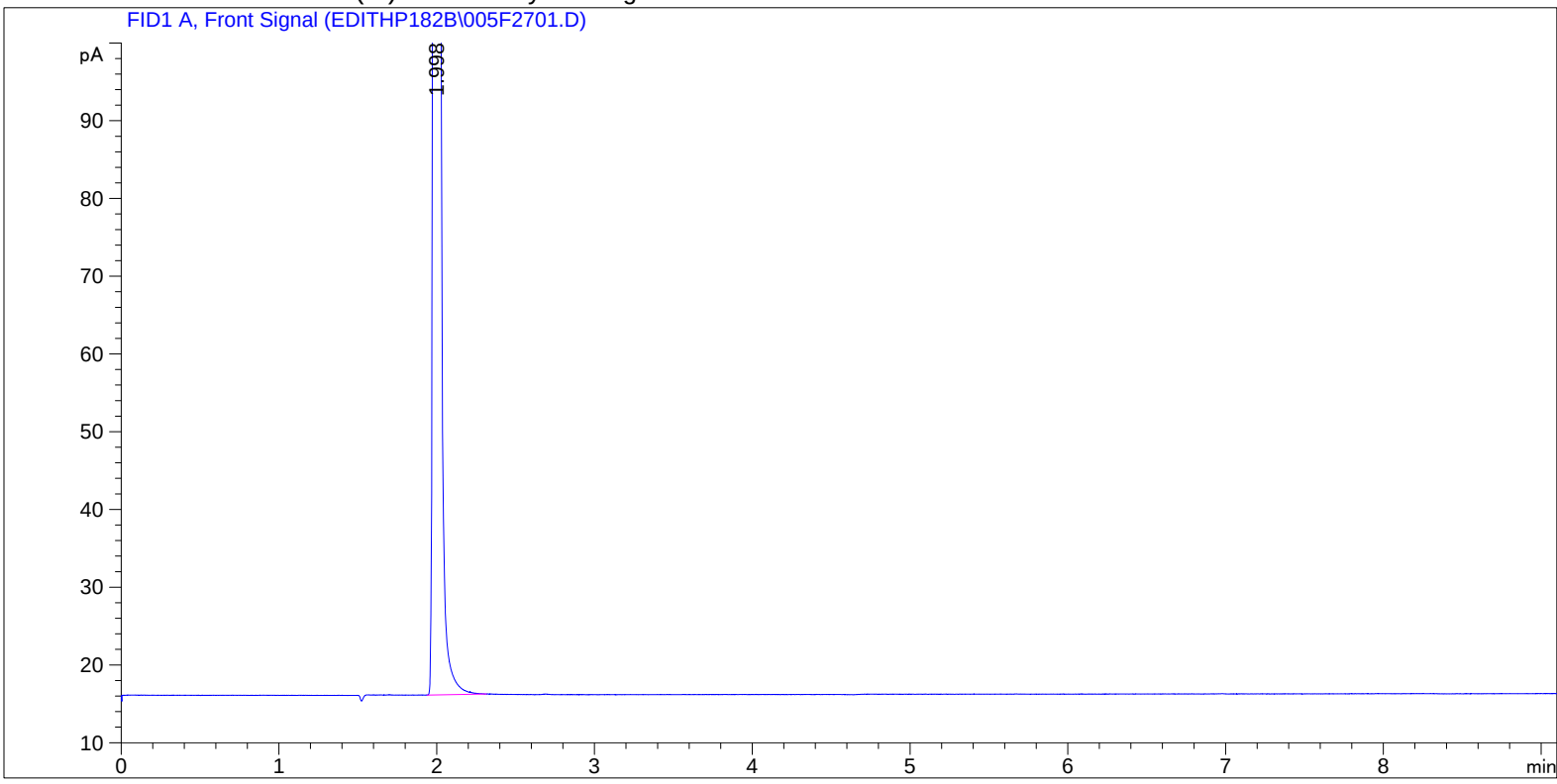
Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Area %
as Propane	1502.12109	99.9308
as Butane	4.52142e-1	0.0301
as Pentane	5.88611e-1	0.0392
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :		100.0000

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\005F2701.D
Sample Name: 1214-29.1310.Can *501

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  27
Acq. Instrument : Edith                           Location : Vial 5
Injection Date  : 1/9/2015 2:06:29 PM                  Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.548            -          -          -         Methane
  1.688            -          -          -         Ethane
  2.031            -          -          -         Propane
  2.943            -          -          -         Butane
  4.495            -          -          -         Pentane
  6.067            -          -          -         Hexane
  6.795            -          -          -         Benzene
  7.232            -          -          -         Heptane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\005F2701.D
Sample Name: 1214-29.1310.Can *501

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				0.00000		

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.998	BB	1461.87830	1.27473	1863.50357	?	

Uncalib. totals : 1863.50357

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	1461.87830	1.861e3
Totals :				1860.9842

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Propane	1461.87830	1.861e3
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :	1860.9842	

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\005F2701.D
Sample Name: 1214-29.1310.Can *501

Area Percent Report

Sorted By : Signal
Calib. Data Modified : 1/12/2015 2:59:28 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.548		0.0000	0.00000	0.00000	Methane
2	1.688		0.0000	0.00000	0.00000	Ethane
3	2.031		0.0000	0.00000	0.00000	Propane
4	2.943		0.0000	0.00000	0.00000	Butane
5	4.495		0.0000	0.00000	0.00000	Pentane
6	6.067		0.0000	0.00000	0.00000	Hexane
7	6.795		0.0000	0.00000	0.00000	Benzene
8	7.232		0.0000	0.00000	0.00000	Heptane

Totals : 0.00000 0.0000

Uncalibrated Peaks:

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.998	BB	0.0315	1461.87830	1.000e2	?

Uncalib. totals : 1461.87830 100.0000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Area %
as Propane	1.855	2.479	1461.87830	100.0000

Totals : 100.0000

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

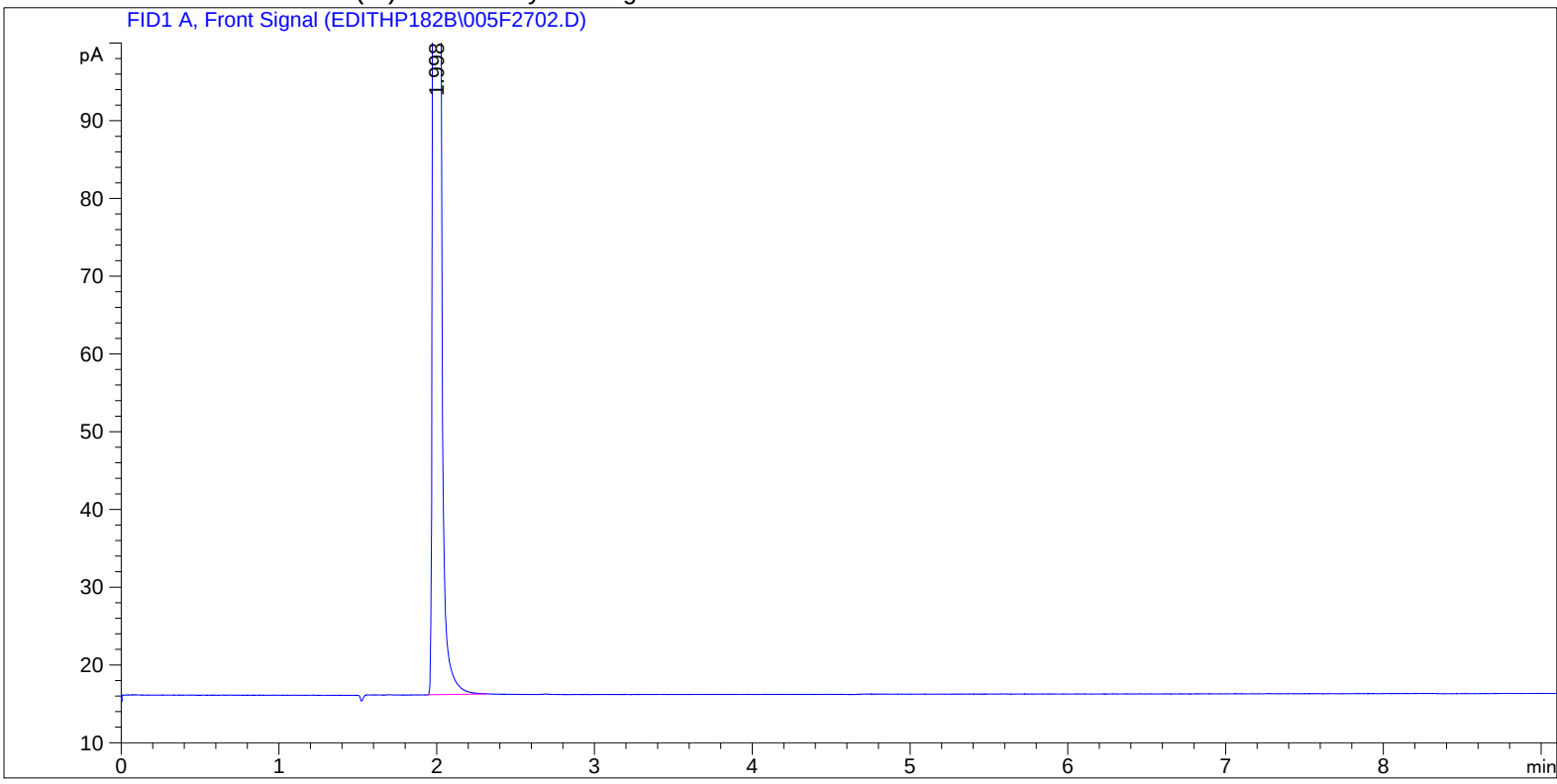
Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\005F2701.D
Sample Name: 1214-29.1310.Can *501

Name	Total Area [pA*s]	Area %
as Propane	1461.87830	100.0000
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :		100.0000

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\005F2702.D
Sample Name: 1214-29.1310.Can *501

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  27
Acq. Instrument : Edith                           Location : Vial 5
Injection Date  : 1/9/2015 2:21:39 PM                  Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.548            -          -          -         Methane
  1.688            -          -          -         Ethane
  2.031            -          -          -         Propane
  2.943            -          -          -         Butane
  4.495            -          -          -         Pentane
  6.067            -          -          -         Hexane
  6.795            -          -          -         Benzene
  7.232            -          -          -         Heptane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\005F2702.D
Sample Name: 1214-29.1310.Can *501

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				0.00000		

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.998	BB	1461.31714	1.27473	1862.78823		?

Uncalib. totals : 1862.78823

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	1461.31714	1.860e3
Totals :				1860.2699

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Propane	1461.31714	1.860e3
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :	1860.2699	

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\005F2702.D
Sample Name: 1214-29.1310.Can *501

==========
Area Percent Report
==========

Sorted By : Signal
Calib. Data Modified : 1/12/2015 2:59:28 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.548		0.0000	0.00000	0.00000	Methane
2	1.688		0.0000	0.00000	0.00000	Ethane
3	2.031		0.0000	0.00000	0.00000	Propane
4	2.943		0.0000	0.00000	0.00000	Butane
5	4.495		0.0000	0.00000	0.00000	Pentane
6	6.067		0.0000	0.00000	0.00000	Hexane
7	6.795		0.0000	0.00000	0.00000	Benzene
8	7.232		0.0000	0.00000	0.00000	Heptane

Totals : 0.00000 0.0000

Uncalibrated Peaks:

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.998	BB	0.0306	1461.31714	1.000e2	?

Uncalib. totals : 1461.31714 100.0000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========
Summed Peaks Report
==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Area %
as Propane	1.855	2.479	1461.31714	100.0000

Totals : 100.0000

1 Warnings or Errors :

Warning : Reference compound(s) not found

==========
Final Summed Peaks Report
==========

Signal 1: FID1 A, Front Signal

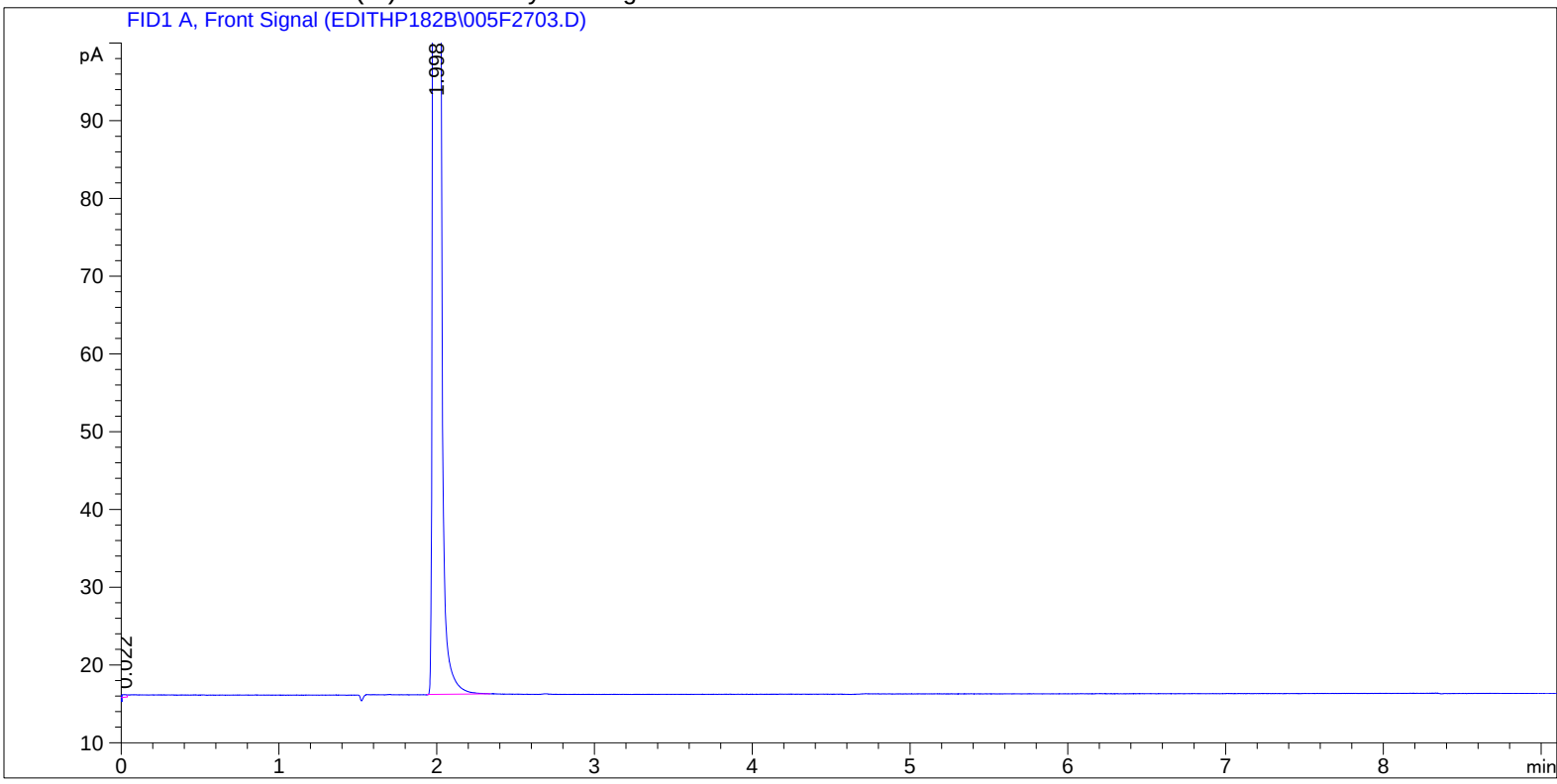
Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\005F2702.D
Sample Name: 1214-29.1310.Can *501

Name	Total Area [pA*s]	Area %
as Propane	1461.31714	100.0000
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :		100.0000

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\005F2703.D
Sample Name: 1214-29.1310.Can *501

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  27
Acq. Instrument : Edith                           Location : Vial 5
Injection Date  : 1/9/2015 2:35:55 PM                  Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.548            -          -          -         Methane
  1.688            -          -          -         Ethane
  2.031            -          -          -         Propane
  2.943            -          -          -         Butane
  4.495            -          -          -         Pentane
  6.067            -          -          -         Hexane
  6.795            -          -          -         Benzene
  7.232            -          -          -         Heptane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\005F2703.D
Sample Name: 1214-29.1310.Can *501

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				0.00000		

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
0.022	BV	5.95844e-1	1.26492	7.53695e-1	?	
1.998	BB	1461.65686	1.27473	1863.22129	?	
Uncalib. totals :				1863.97499		

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	1461.65686	1.861e3
Totals :				1860.7023

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Propane	1461.65686	1.861e3
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :	1860.7023	

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\005F2703.D
Sample Name: 1214-29.1310.Can *501

Area Percent Report

Sorted By : Signal
Calib. Data Modified : 1/12/2015 2:59:28 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.548		0.0000	0.00000	0.00000	Methane
2	1.688		0.0000	0.00000	0.00000	Ethane
3	2.031		0.0000	0.00000	0.00000	Propane
4	2.943		0.0000	0.00000	0.00000	Butane
5	4.495		0.0000	0.00000	0.00000	Pentane
6	6.067		0.0000	0.00000	0.00000	Hexane
7	6.795		0.0000	0.00000	0.00000	Benzene
8	7.232		0.0000	0.00000	0.00000	Heptane

Totals : 0.00000 0.0000

Uncalibrated Peaks:

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	0.022	BV	0.0262	5.95844e-1	0.04075	?
2	1.998	BB	0.0315	1461.65686	99.95925	?

Uncalib. totals : 1462.25270 100.0000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Area %
as Propane	1.855	2.479	1461.65686	99.9593

Totals : 99.9593

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

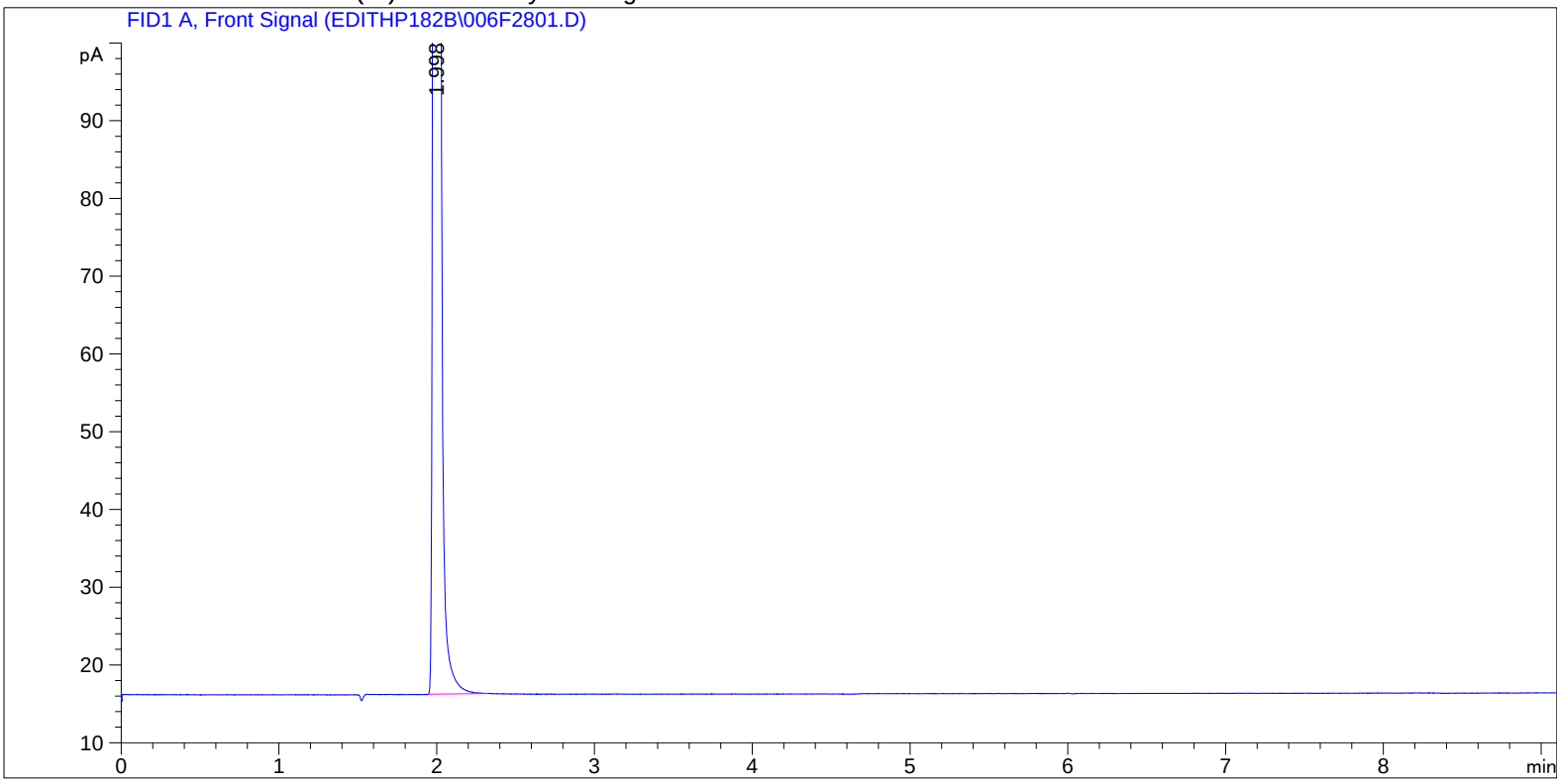
Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\005F2703.D
Sample Name: 1214-29.1310.Can *501

Name	Total Area [pA*s]	Area %
as Propane	1461.65686	99.9593
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :		99.9593

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\006F2801.D
Sample Name: 1214-29.1044.Can *501

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  28
Acq. Instrument : Edith                           Location : Vial 6
Injection Date  : 1/9/2015 2:50:31 PM                  Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.548            -          -          -         Methane
  1.688            -          -          -         Ethane
  2.031            -          -          -         Propane
  2.943            -          -          -         Butane
  4.495            -          -          -         Pentane
  6.067            -          -          -         Hexane
  6.795            -          -          -         Benzene
  7.232            -          -          -         Heptane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\006F2801.D
Sample Name: 1214-29.1044.Can *501

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				0.00000		

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.998	BB	1521.33777	1.27473	1939.30007	?	

Uncalib. totals : 1939.30007

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	1521.33777	1.937e3
Totals :				1936.6767

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Propane	1521.33777	1.937e3
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :	1936.6767	

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\006F2801.D
Sample Name: 1214-29.1044.Can *501

Area Percent Report

Sorted By : Signal
Calib. Data Modified : 1/12/2015 2:59:28 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.548		0.0000	0.00000	0.00000	Methane
2	1.688		0.0000	0.00000	0.00000	Ethane
3	2.031		0.0000	0.00000	0.00000	Propane
4	2.943		0.0000	0.00000	0.00000	Butane
5	4.495		0.0000	0.00000	0.00000	Pentane
6	6.067		0.0000	0.00000	0.00000	Hexane
7	6.795		0.0000	0.00000	0.00000	Benzene
8	7.232		0.0000	0.00000	0.00000	Heptane

Totals : 0.00000 0.0000

Uncalibrated Peaks:

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.998	BB	0.0305	1521.33777	1.000e2	?

Uncalib. totals : 1521.33777 100.0000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Area %
as Propane	1.855	2.479	1521.33777	100.0000

Totals : 100.0000

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

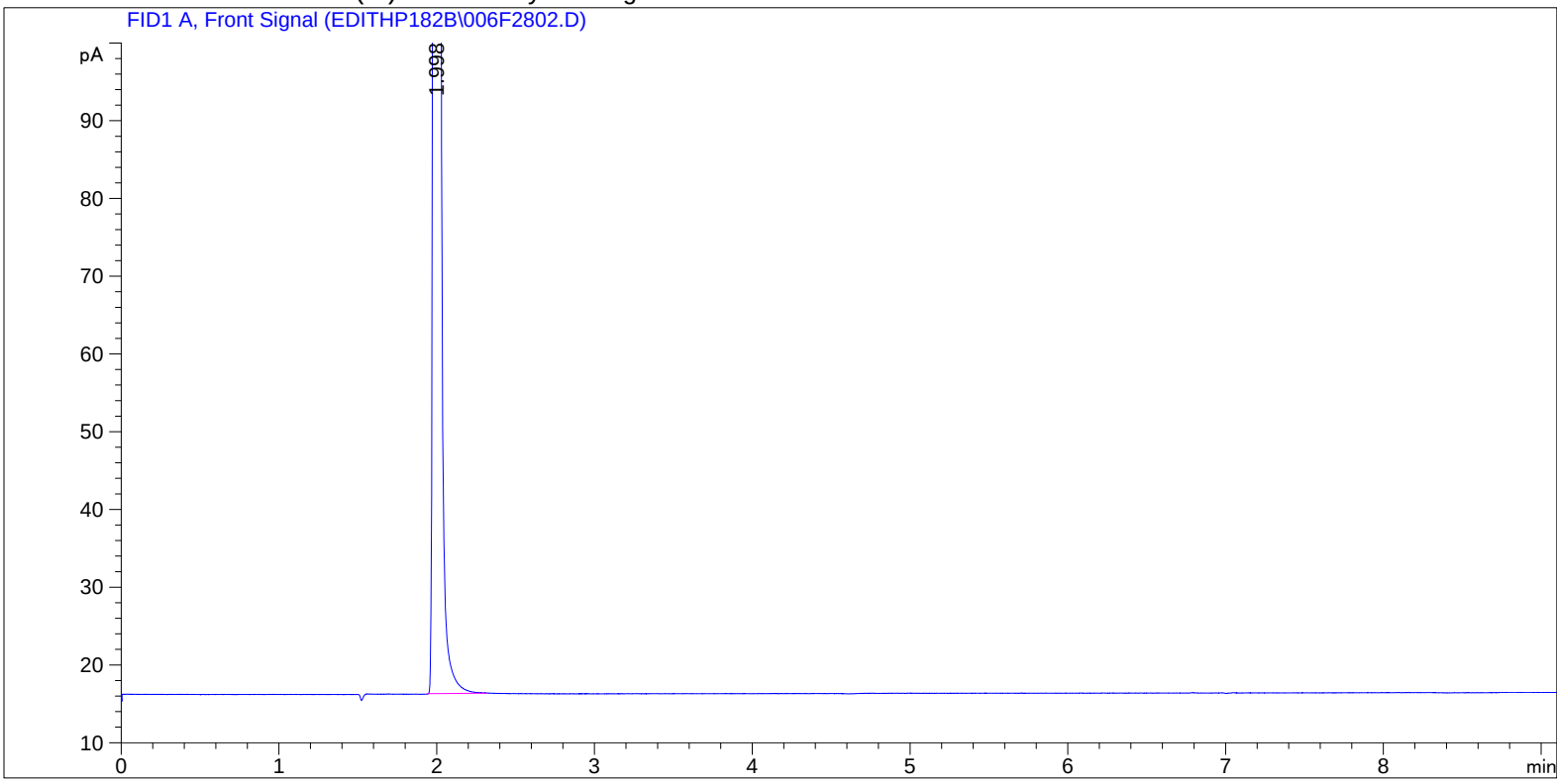
Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\006F2801.D
Sample Name: 1214-29.1044.Can *501

Name	Total Area [pA*s]	Area %
as Propane	1521.33777	100.0000
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :		100.0000

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\006F2802.D
Sample Name: 1214-29.1044.Can *501

```
==================================================================
Acq. Operator   : disconnected                  Seq. Line :  28
Acq. Instrument : Edith                          Location : Vial 6
Injection Date  : 1/9/2015 3:04:48 PM                 Inj :   2
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.548		-	-	-		Methane
1.688		-	-	-		Ethane
2.031		-	-	-		Propane
2.943		-	-	-		Butane
4.495		-	-	-		Pentane
6.067		-	-	-		Hexane
6.795		-	-	-		Benzene
7.232		-	-	-		Heptane

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\006F2802.D
Sample Name: 1214-29.1044.Can *501

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				0.00000		

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.998	PB	1526.65576	1.27473	1946.07923	?	

Uncalib. totals : 1946.07923

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	1526.65576	1.943e3
Totals :				1943.4465

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Propane	1526.65576	1.943e3
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :	1943.4465	

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\006F2802.D
Sample Name: 1214-29.1044.Can *501

Area Percent Report

Sorted By : Signal
Calib. Data Modified : 1/12/2015 2:59:28 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.548		0.0000	0.00000	0.00000	Methane
2	1.688		0.0000	0.00000	0.00000	Ethane
3	2.031		0.0000	0.00000	0.00000	Propane
4	2.943		0.0000	0.00000	0.00000	Butane
5	4.495		0.0000	0.00000	0.00000	Pentane
6	6.067		0.0000	0.00000	0.00000	Hexane
7	6.795		0.0000	0.00000	0.00000	Benzene
8	7.232		0.0000	0.00000	0.00000	Heptane

Totals : 0.00000 0.0000

Uncalibrated Peaks:

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.998	PB	0.0305	1526.65576	1.000e2	?

Uncalib. totals : 1526.65576 100.0000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Area %
as Propane	1.855	2.479	1526.65576	100.0000

Totals : 100.0000

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

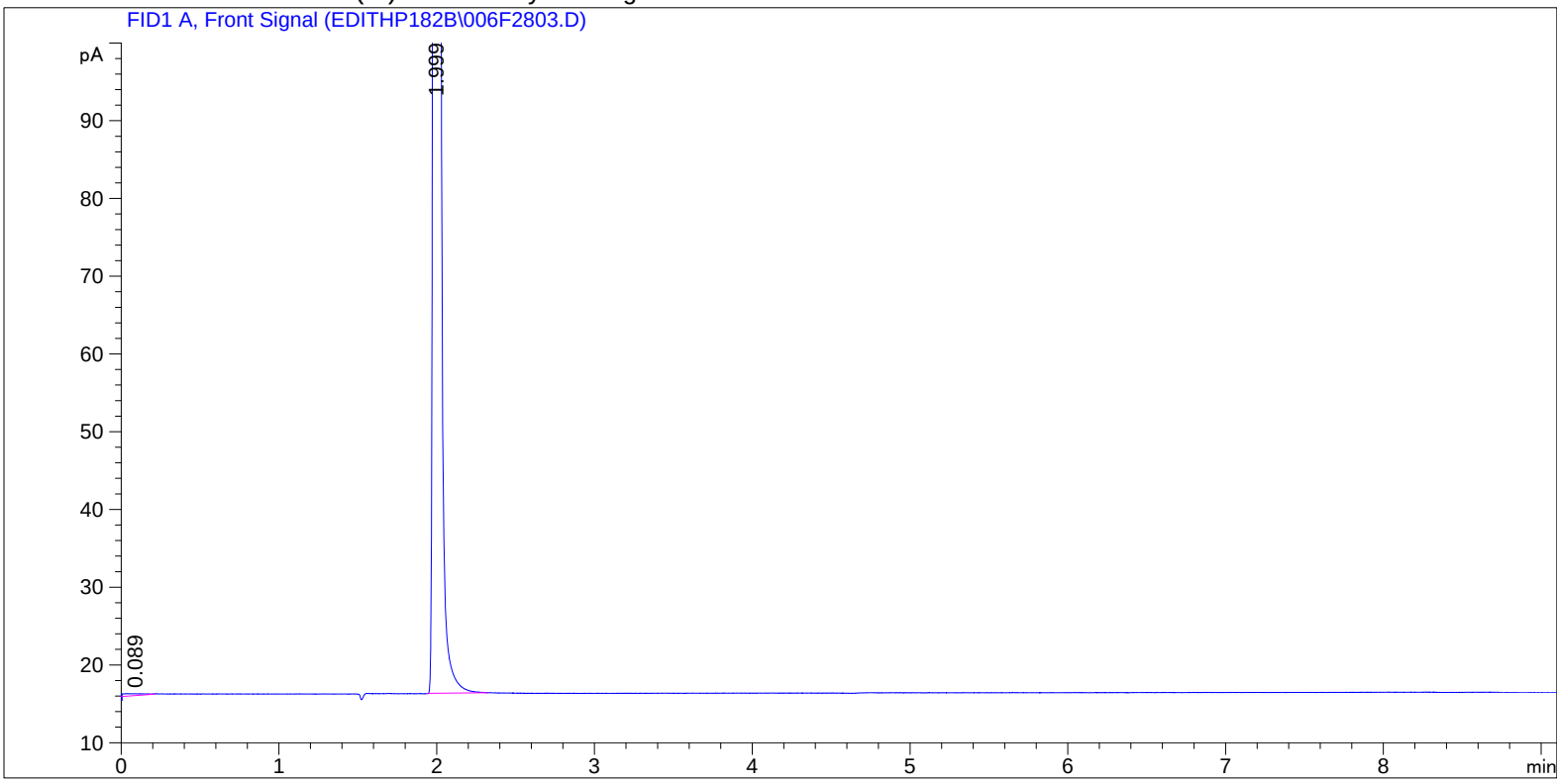
Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\006F2802.D
Sample Name: 1214-29.1044.Can *501

Name	Total Area [pA*s]	Area %
as Propane	1526.65576	100.0000
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :		100.0000

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\006F2803.D
Sample Name: 1214-29.1044.Can *501

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  28
Acq. Instrument : Edith                           Location : Vial 6
Injection Date  : 1/9/2015 3:19:13 PM                  Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.548            -          -          -         Methane
  1.688            -          -          -         Ethane
  2.031            -          -          -         Propane
  2.943            -          -          -         Butane
  4.495            -          -          -         Pentane
  6.067            -          -          -         Hexane
  6.795            -          -          -         Benzene
  7.232            -          -          -         Heptane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\006F2803.D
Sample Name: 1214-29.1044.Can *501

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				0.00000		

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
0.089	BB	2.33636	1.26492	2.95531	?	
1.999	PB	1524.29663	1.27473	1943.07191	?	

Uncalib. totals : 1946.02721

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	1524.29663	1.940e3
Totals :				1940.4433

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Propane	1524.29663	1.940e3
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :	1940.4433	

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\006F2803.D
Sample Name: 1214-29.1044.Can *501

==========
Area Percent Report
==========

Sorted By : Signal
Calib. Data Modified : 1/12/2015 2:59:28 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.548		0.0000	0.00000	0.00000	Methane
2	1.688		0.0000	0.00000	0.00000	Ethane
3	2.031		0.0000	0.00000	0.00000	Propane
4	2.943		0.0000	0.00000	0.00000	Butane
5	4.495		0.0000	0.00000	0.00000	Pentane
6	6.067		0.0000	0.00000	0.00000	Hexane
7	6.795		0.0000	0.00000	0.00000	Benzene
8	7.232		0.0000	0.00000	0.00000	Heptane

Totals : 0.00000 0.0000

Uncalibrated Peaks:

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	0.089	BB	0.1154	2.33636	0.15304	?
2	1.999	PB	0.0305	1524.29663	99.84696	?

Uncalib. totals : 1526.63299 100.0000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========
Summed Peaks Report
==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Area %
as Propane	1.855	2.479	1524.29663	99.8470

Totals : 99.8470

1 Warnings or Errors :

Warning : Reference compound(s) not found

==========
Final Summed Peaks Report
==========

Signal 1: FID1 A, Front Signal

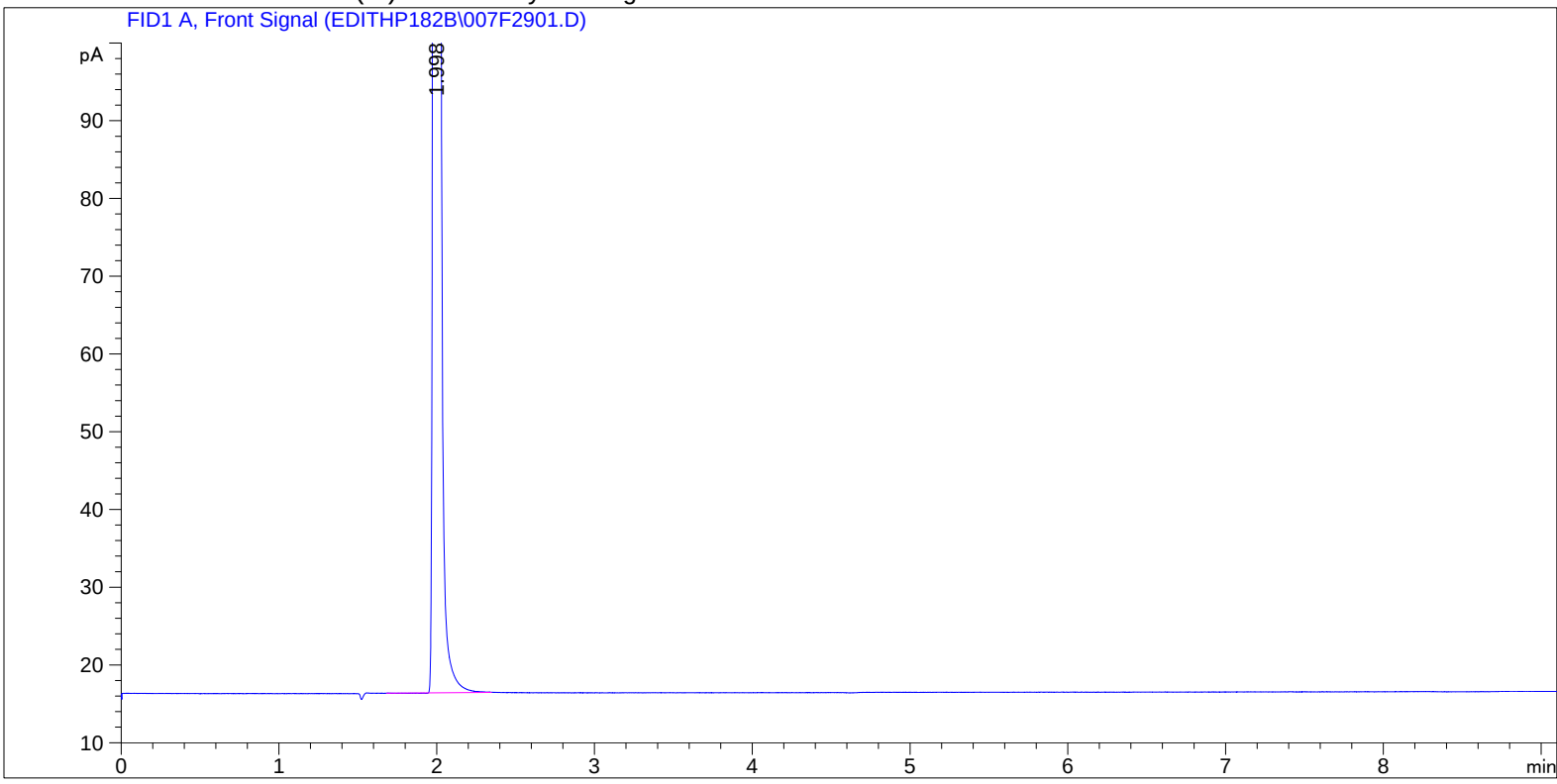
Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\006F2803.D
Sample Name: 1214-29.1044.Can *501

Name	Total Area [pA*s]	Area %
as Propane	1524.29663	99.8470
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :		99.8470

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\007F2901.D
Sample Name: 1214-29.1340.Can *501

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  29
Acq. Instrument : Edith                           Location : Vial 7
Injection Date  : 1/9/2015 3:34:12 PM                  Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.548            -          -          -         Methane
  1.688            -          -          -         Ethane
  2.031            -          -          -         Propane
  2.943            -          -          -         Butane
  4.495            -          -          -         Pentane
  6.067            -          -          -         Hexane
  6.795            -          -          -         Benzene
  7.232            -          -          -         Heptane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\007F2901.D
Sample Name: 1214-29.1340.Can *501

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				0.00000		

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.998	BB	1545.32947	1.27473	1969.88371	?	

Uncalib. totals : 1969.88371

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	1545.32947	1.967e3
Totals :				1967.2183

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Propane	1545.32947	1.967e3
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :	1967.2183	

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\007F2901.D
Sample Name: 1214-29.1340.Can *501

Area Percent Report

Sorted By : Signal
Calib. Data Modified : 1/12/2015 2:59:28 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.548		0.0000	0.00000	0.00000	Methane
2	1.688		0.0000	0.00000	0.00000	Ethane
3	2.031		0.0000	0.00000	0.00000	Propane
4	2.943		0.0000	0.00000	0.00000	Butane
5	4.495		0.0000	0.00000	0.00000	Pentane
6	6.067		0.0000	0.00000	0.00000	Hexane
7	6.795		0.0000	0.00000	0.00000	Benzene
8	7.232		0.0000	0.00000	0.00000	Heptane

Totals : 0.00000 0.0000

Uncalibrated Peaks:

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.998	BB	0.0305	1545.32947	1.000e2	?

Uncalib. totals : 1545.32947 100.0000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Area %
as Propane	1.855	2.479	1545.32947	100.0000

Totals : 100.0000

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

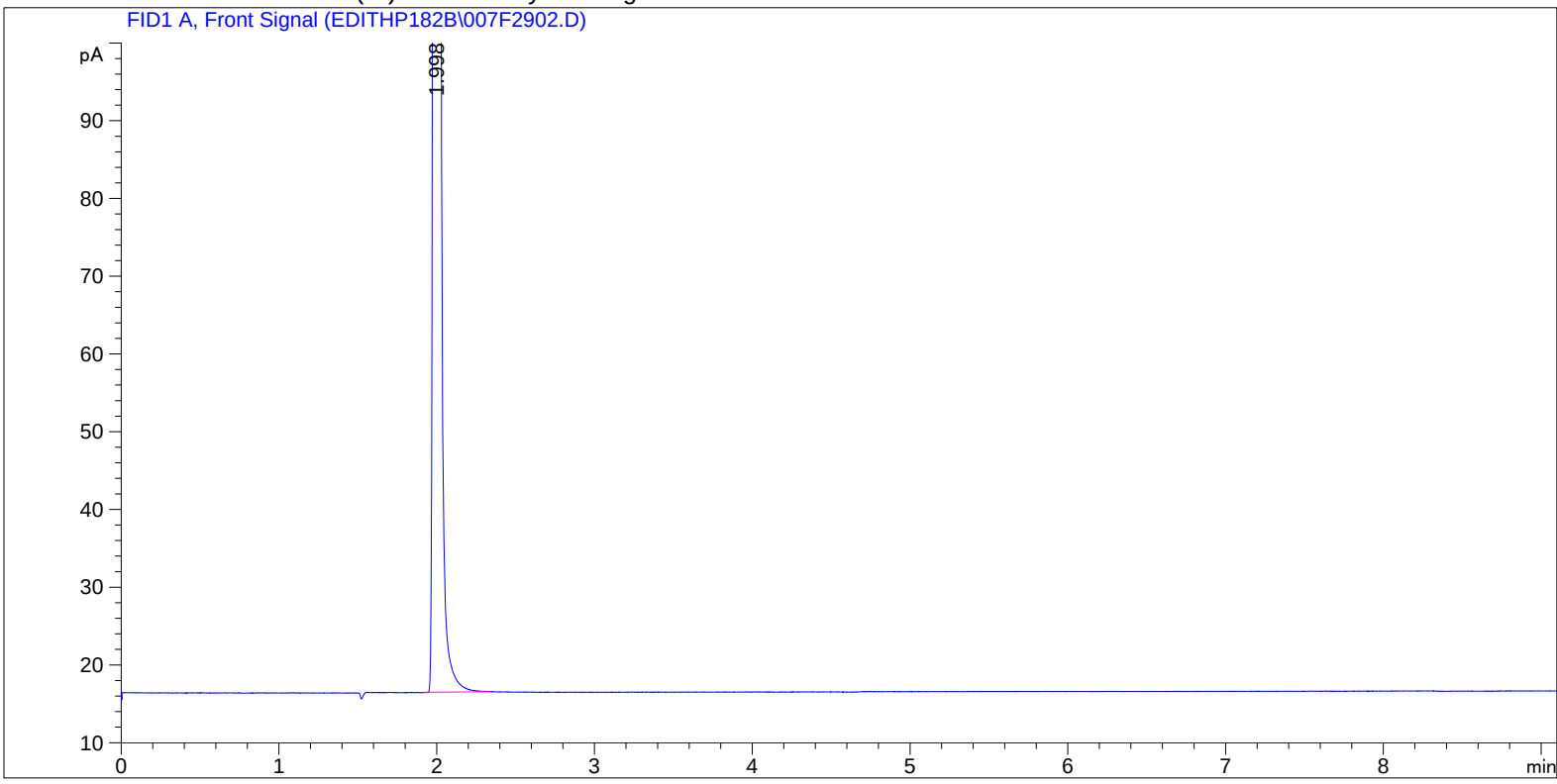
Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\007F2901.D
Sample Name: 1214-29.1340.Can *501

Name	Total Area [pA*s]	Area %
as Propane	1545.32947	100.0000
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :		100.0000

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\007F2902.D
Sample Name: 1214-29.1340.Can *501

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  29
Acq. Instrument : Edith                           Location : Vial 7
Injection Date  : 1/9/2015 3:48:29 PM                  Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.548            -          -          -         Methane
  1.688            -          -          -         Ethane
  2.031            -          -          -         Propane
  2.943            -          -          -         Butane
  4.495            -          -          -         Pentane
  6.067            -          -          -         Hexane
  6.795            -          -          -         Benzene
  7.232            -          -          -         Heptane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\007F2902.D
Sample Name: 1214-29.1340.Can *501

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				0.00000		

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.998	PB	1542.40100	1.27473	1966.15062	?	

Uncalib. totals : 1966.15062

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	1542.40100	1.963e3
Totals :				1963.4904

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Propane	1542.40100	1.963e3
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :	1963.4904	

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\007F2902.D
Sample Name: 1214-29.1340.Can *501

==========
Area Percent Report
==========

Sorted By : Signal
Calib. Data Modified : 1/12/2015 2:59:28 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.548		0.0000	0.00000	0.00000	Methane
2	1.688		0.0000	0.00000	0.00000	Ethane
3	2.031		0.0000	0.00000	0.00000	Propane
4	2.943		0.0000	0.00000	0.00000	Butane
5	4.495		0.0000	0.00000	0.00000	Pentane
6	6.067		0.0000	0.00000	0.00000	Hexane
7	6.795		0.0000	0.00000	0.00000	Benzene
8	7.232		0.0000	0.00000	0.00000	Heptane

Totals : 0.00000 0.0000

Uncalibrated Peaks:

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.998	PB	0.0315	1542.40100	1.000e2	?

Uncalib. totals : 1542.40100 100.0000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========
Summed Peaks Report
==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Area %
as Propane	1.855	2.479	1542.40100	100.0000

Totals : 100.0000

1 Warnings or Errors :

Warning : Reference compound(s) not found

==========
Final Summed Peaks Report
==========

Signal 1: FID1 A, Front Signal

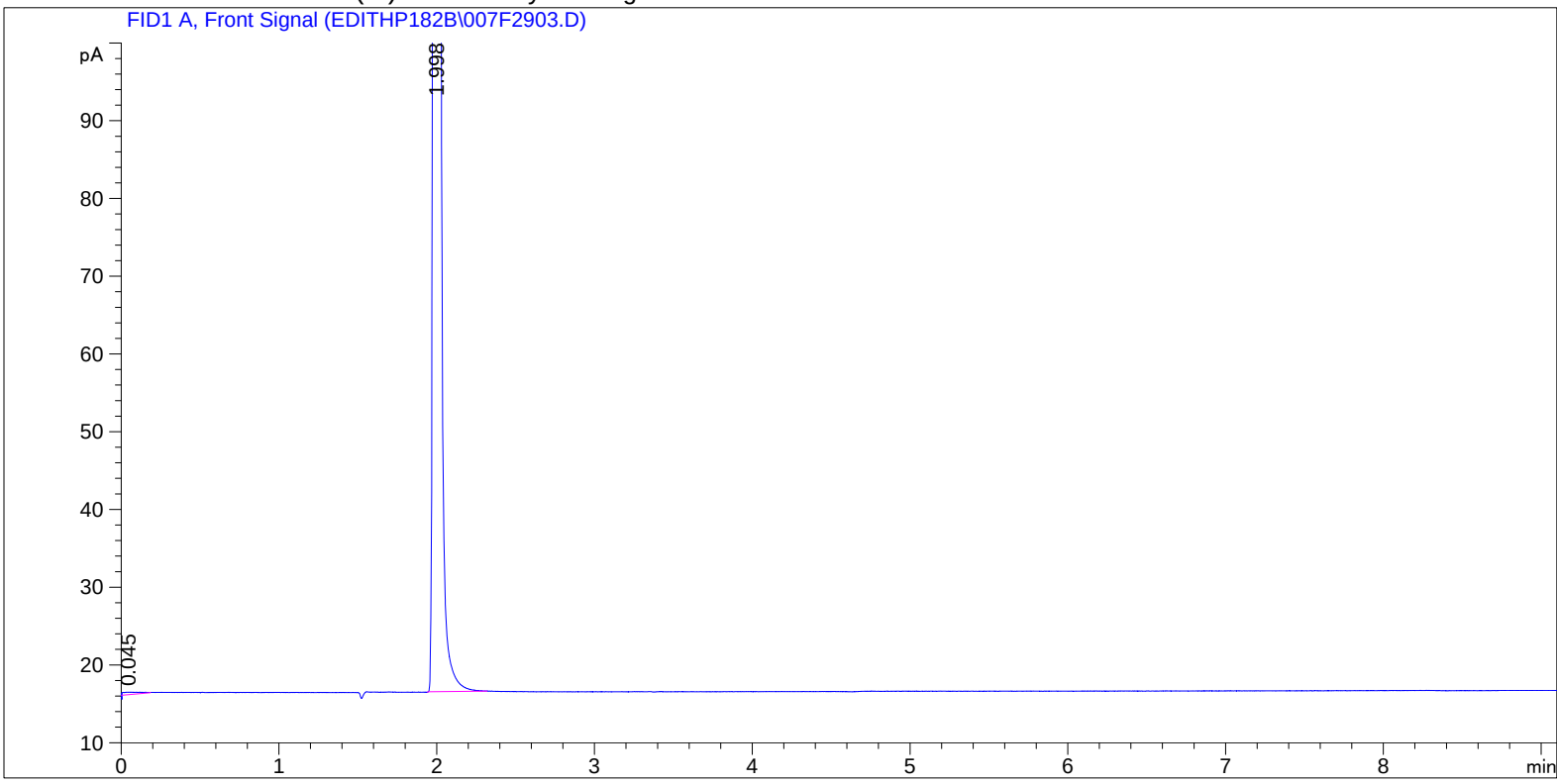
Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\007F2902.D
Sample Name: 1214-29.1340.Can *501

Name	Total Area [pA*s]	Area %
as Propane	1542.40100	100.0000
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :		100.0000

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\007F2903.D
Sample Name: 1214-29.1340.Can *501

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  29
Acq. Instrument : Edith                           Location : Vial 7
Injection Date  : 1/9/2015 4:02:48 PM                  Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.548            -          -          -         Methane
  1.688            -          -          -         Ethane
  2.031            -          -          -         Propane
  2.943            -          -          -         Butane
  4.495            -          -          -         Pentane
  6.067            -          -          -         Hexane
  6.795            -          -          -         Benzene
  7.232            -          -          -         Heptane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\007F2903.D
Sample Name: 1214-29.1340.Can *501

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				0.00000		

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
0.045	BB	2.21007	1.26492	2.79555	?	
1.998	PB	1546.54858	1.27473	1971.43779	?	

Uncalib. totals : 1974.23334

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	1546.54858	1.969e3
Totals :				1968.7703

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Propane	1546.54858	1.969e3
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :	1968.7703	

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\007F2903.D
Sample Name: 1214-29.1340.Can *501

Area Percent Report

Sorted By : Signal
Calib. Data Modified : 1/12/2015 2:59:28 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.548		0.0000	0.00000	0.00000	Methane
2	1.688		0.0000	0.00000	0.00000	Ethane
3	2.031		0.0000	0.00000	0.00000	Propane
4	2.943		0.0000	0.00000	0.00000	Butane
5	4.495		0.0000	0.00000	0.00000	Pentane
6	6.067		0.0000	0.00000	0.00000	Hexane
7	6.795		0.0000	0.00000	0.00000	Benzene
8	7.232		0.0000	0.00000	0.00000	Heptane
Totals :				0.00000	0.0000	

Uncalibrated Peaks:

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	0.045	BB	0.0841	2.21007	0.14270	?
2	1.998	PB	0.0315	1546.54858	99.85730	?
Uncalib. totals :				1548.75865	100.0000	

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Area %
as Propane	1.855	2.479	1546.54858	99.8573
Totals :				99.8573

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

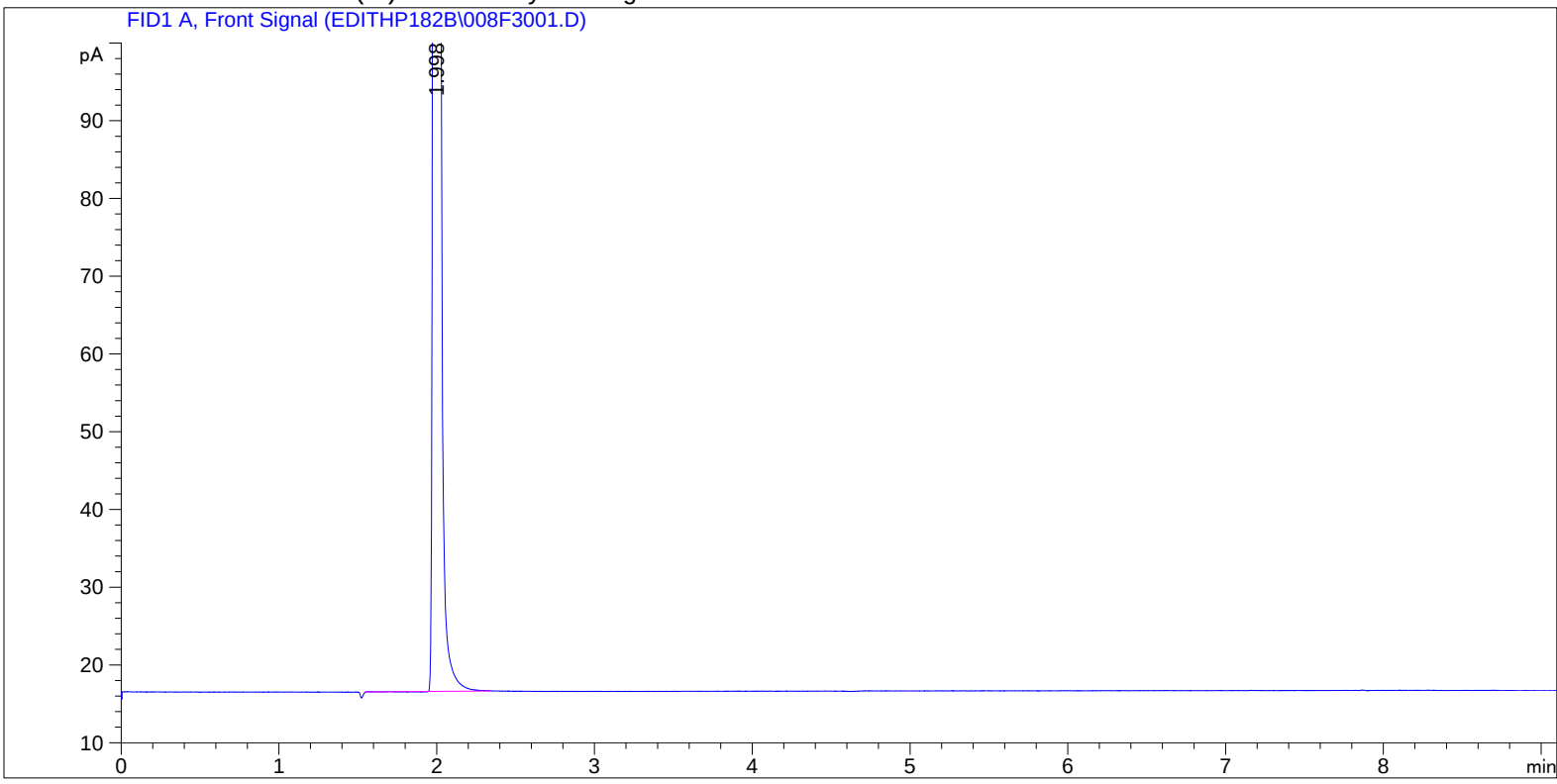
Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\007F2903.D
Sample Name: 1214-29.1340.Can *501

Name	Total Area [pA*s]	Area %
as Propane	1546.54858	99.8573
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :		99.8573

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\008F3001.D
Sample Name: 1214-29.1049.Can *501

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  30
Acq. Instrument : Edith                           Location : Vial 8
Injection Date  : 1/9/2015 4:17:05 PM                  Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.548            -          -          -         Methane
  1.688            -          -          -         Ethane
  2.031            -          -          -         Propane
  2.943            -          -          -         Butane
  4.495            -          -          -         Pentane
  6.067            -          -          -         Hexane
  6.795            -          -          -         Benzene
  7.232            -          -          -         Heptane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\008F3001.D
Sample Name: 1214-29.1049.Can *501

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				0.00000		

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.998	PB	1513.90649	1.27473	1929.82699	?	

Uncalib. totals : 1929.82699

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	1513.90649	1.927e3
Totals :				1927.2166

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Propane	1513.90649	1.927e3
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :	1927.2166	

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\008F3001.D
Sample Name: 1214-29.1049.Can *501

==========
Area Percent Report
==========

Sorted By : Signal
Calib. Data Modified : 1/12/2015 2:59:28 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.548		0.0000	0.00000	0.00000	Methane
2	1.688		0.0000	0.00000	0.00000	Ethane
3	2.031		0.0000	0.00000	0.00000	Propane
4	2.943		0.0000	0.00000	0.00000	Butane
5	4.495		0.0000	0.00000	0.00000	Pentane
6	6.067		0.0000	0.00000	0.00000	Hexane
7	6.795		0.0000	0.00000	0.00000	Benzene
8	7.232		0.0000	0.00000	0.00000	Heptane

Totals : 0.00000 0.0000

Uncalibrated Peaks:

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.998	PB	0.0315	1513.90649	1.000e2	?

Uncalib. totals : 1513.90649 100.0000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========
Summed Peaks Report
==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Area %
as Propane	1.855	2.479	1513.90649	100.0000

Totals : 100.0000

1 Warnings or Errors :

Warning : Reference compound(s) not found

==========
Final Summed Peaks Report
==========

Signal 1: FID1 A, Front Signal

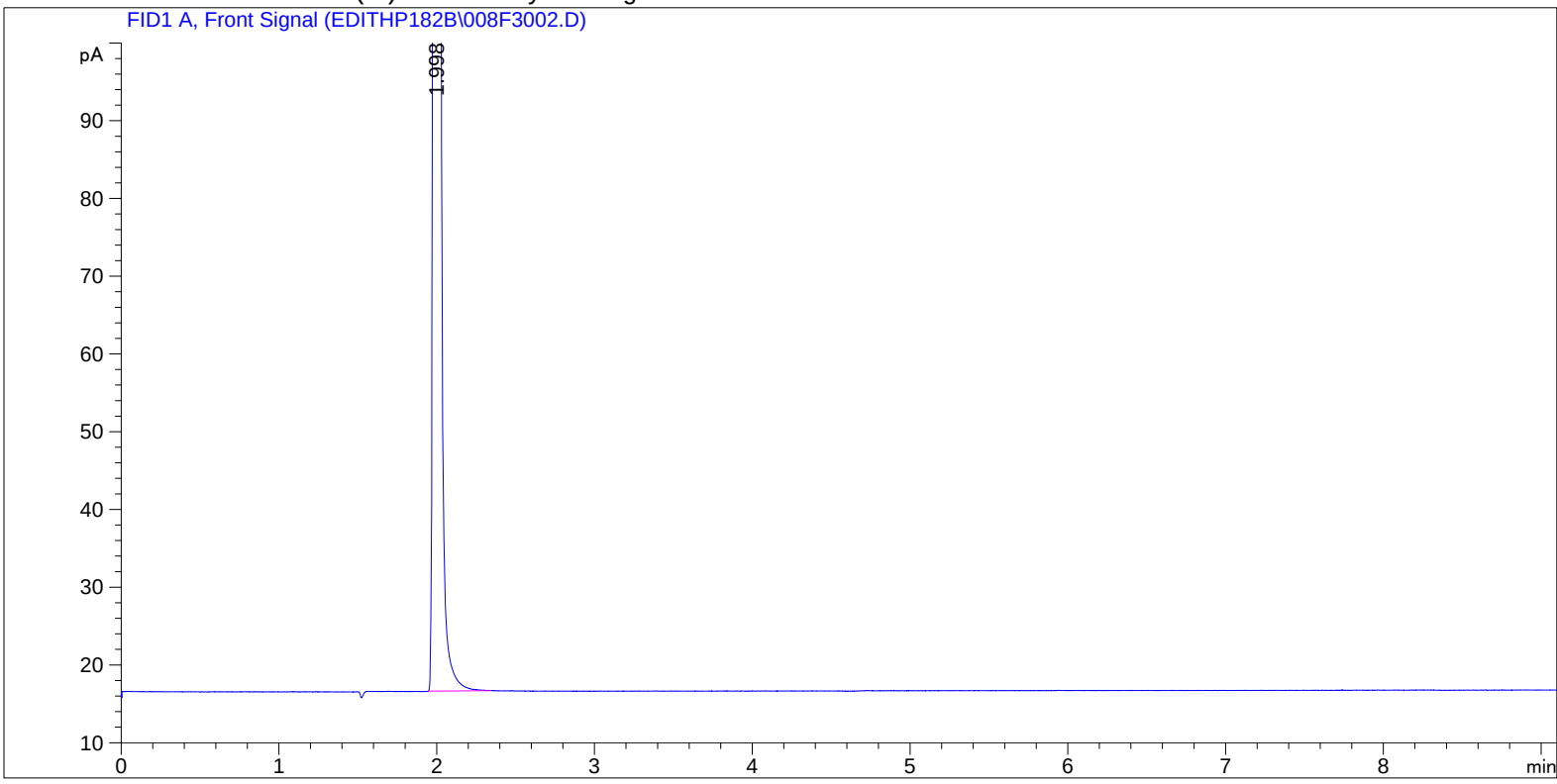
Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\008F3001.D
Sample Name: 1214-29.1049.Can *501

Name	Total Area [pA*s]	Area %
as Propane	1513.90649	100.0000
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :		100.0000

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\008F3002.D
Sample Name: 1214-29.1049.Can *501

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  30
Acq. Instrument : Edith                           Location : Vial 8
Injection Date  : 1/9/2015 4:31:39 PM                  Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.548            -          -          -         Methane
  1.688            -          -          -         Ethane
  2.031            -          -          -         Propane
  2.943            -          -          -         Butane
  4.495            -          -          -         Pentane
  6.067            -          -          -         Hexane
  6.795            -          -          -         Benzene
  7.232            -          -          -         Heptane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\008F3002.D
Sample Name: 1214-29.1049.Can *501

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				0.00000		

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.998	BB	1518.59912	1.27473	1935.80896		?

Uncalib. totals : 1935.80896

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	1518.59912	1.933e3
Totals :				1933.1903

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Propane	1518.59912	1.933e3
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :	1933.1903	

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\008F3002.D
Sample Name: 1214-29.1049.Can *501

==========
Area Percent Report
==========

Sorted By : Signal
Calib. Data Modified : 1/12/2015 2:59:28 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.548		0.0000	0.00000	0.00000	Methane
2	1.688		0.0000	0.00000	0.00000	Ethane
3	2.031		0.0000	0.00000	0.00000	Propane
4	2.943		0.0000	0.00000	0.00000	Butane
5	4.495		0.0000	0.00000	0.00000	Pentane
6	6.067		0.0000	0.00000	0.00000	Hexane
7	6.795		0.0000	0.00000	0.00000	Benzene
8	7.232		0.0000	0.00000	0.00000	Heptane

Totals : 0.00000 0.0000

Uncalibrated Peaks:

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.998	BB	0.0305	1518.59912	1.000e2	?

Uncalib. totals : 1518.59912 100.0000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========
Summed Peaks Report
==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Area %
as Propane	1.855	2.479	1518.59912	100.0000

Totals : 100.0000

1 Warnings or Errors :

Warning : Reference compound(s) not found

==========
Final Summed Peaks Report
==========

Signal 1: FID1 A, Front Signal

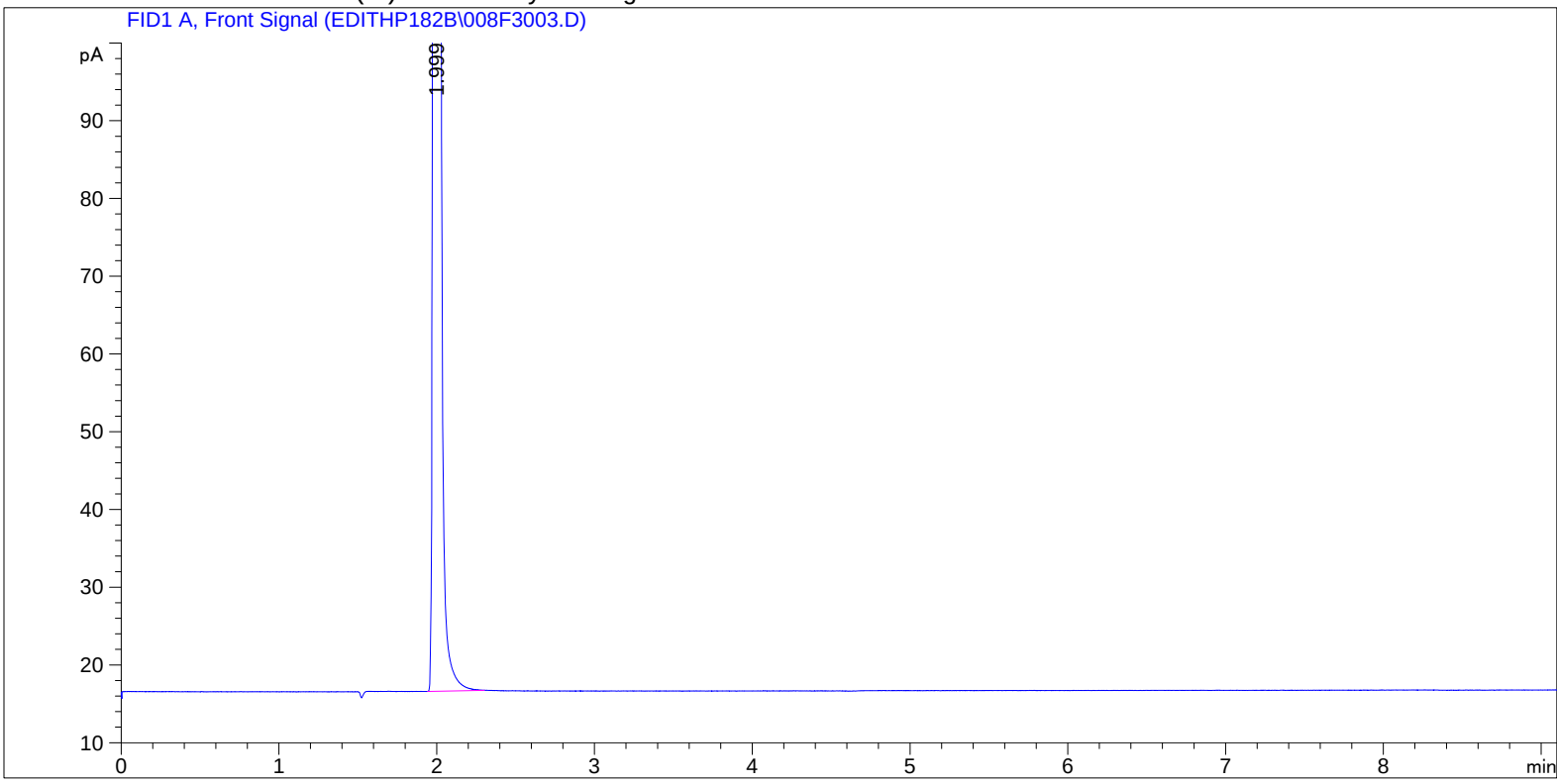
Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\008F3002.D
Sample Name: 1214-29.1049.Can *501

Name	Total Area [pA*s]	Area %
as Propane	1518.59912	100.0000
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :		100.0000

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\008F3003.D
Sample Name: 1214-29.1049.Can *501

```
Acq. Operator   : disconnected                    Seq. Line :  30
Acq. Instrument : Edith                          Location : Vial 8
Injection Date  : 1/9/2015 4:46:31 PM                 Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.548            -          -          -         Methane
  1.688            -          -          -         Ethane
  2.031            -          -          -         Propane
  2.943            -          -          -         Butane
  4.495            -          -          -         Pentane
  6.067            -          -          -         Hexane
  6.795            -          -          -         Benzene
  7.232            -          -          -         Heptane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\008F3003.D
Sample Name: 1214-29.1049.Can *501

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				0.00000		

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.999	BB	1521.26465	1.27473	1939.20686	?	

Uncalib. totals : 1939.20686

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========

Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	1521.26465	1.937e3
Totals :				1936.5836

1 Warnings or Errors :

Warning : Reference compound(s) not found

==========

Final Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Propane	1521.26465	1.937e3
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :	1936.5836	

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\008F3003.D
Sample Name: 1214-29.1049.Can *501

==========
Area Percent Report
==========

Sorted By : Signal
Calib. Data Modified : 1/12/2015 2:59:28 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.548		0.0000	0.00000	0.00000	Methane
2	1.688		0.0000	0.00000	0.00000	Ethane
3	2.031		0.0000	0.00000	0.00000	Propane
4	2.943		0.0000	0.00000	0.00000	Butane
5	4.495		0.0000	0.00000	0.00000	Pentane
6	6.067		0.0000	0.00000	0.00000	Hexane
7	6.795		0.0000	0.00000	0.00000	Benzene
8	7.232		0.0000	0.00000	0.00000	Heptane

Totals : 0.00000 0.0000

Uncalibrated Peaks:

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.999	BB	0.0305	1521.26465	1.000e2	?

Uncalib. totals : 1521.26465 100.0000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========
Summed Peaks Report
==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Area %
as Propane	1.855	2.479	1521.26465	100.0000

Totals : 100.0000

1 Warnings or Errors :

Warning : Reference compound(s) not found

==========
Final Summed Peaks Report
==========

Signal 1: FID1 A, Front Signal

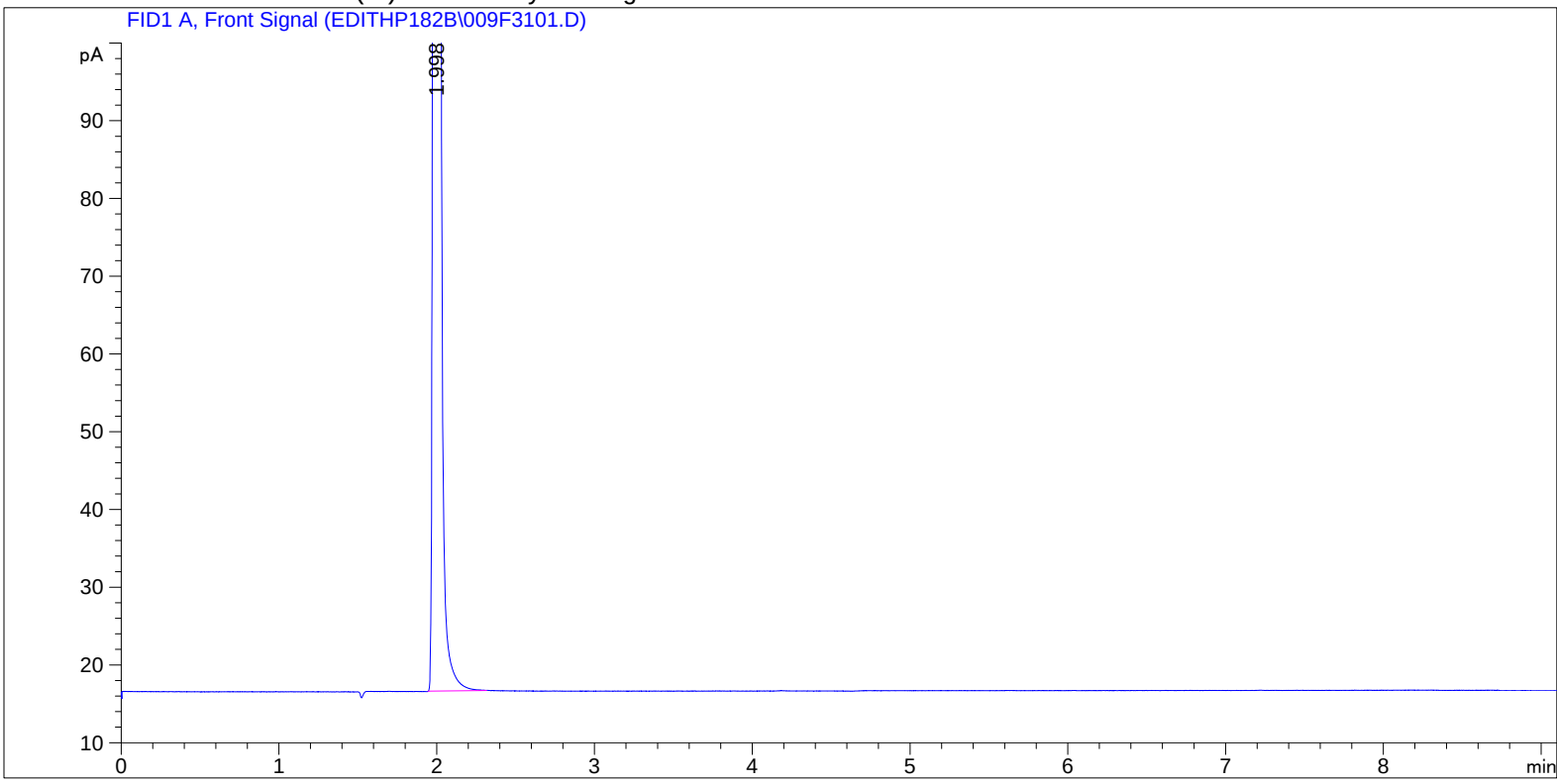
Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\008F3003.D
Sample Name: 1214-29.1049.Can *501

Name	Total Area [pA*s]	Area %
as Propane	1521.26465	100.0000
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :		100.0000

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\009F3101.D
Sample Name: 1214-29.1334.Can *501

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  31
Acq. Instrument : Edith                           Location : Vial 9
Injection Date  : 1/9/2015 5:00:49 PM                  Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.548            -          -          -         Methane
  1.688            -          -          -         Ethane
  2.031            -          -          -         Propane
  2.943            -          -          -         Butane
  4.495            -          -          -         Pentane
  6.067            -          -          -         Hexane
  6.795            -          -          -         Benzene
  7.232            -          -          -         Heptane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\009F3101.D
Sample Name: 1214-29.1334.Can *501

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				0.00000		

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.998	BB	1560.65271	1.27473	1989.41715	?	

Uncalib. totals : 1989.41715

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	1560.65271	1.987e3
Totals :				1986.7249

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Propane	1560.65271	1.987e3
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :	1986.7249	

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\009F3101.D
Sample Name: 1214-29.1334.Can *501

==========
Area Percent Report
==========

Sorted By : Signal
Calib. Data Modified : 1/12/2015 2:59:28 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.548		0.0000	0.00000	0.00000	Methane
2	1.688		0.0000	0.00000	0.00000	Ethane
3	2.031		0.0000	0.00000	0.00000	Propane
4	2.943		0.0000	0.00000	0.00000	Butane
5	4.495		0.0000	0.00000	0.00000	Pentane
6	6.067		0.0000	0.00000	0.00000	Hexane
7	6.795		0.0000	0.00000	0.00000	Benzene
8	7.232		0.0000	0.00000	0.00000	Heptane

Totals : 0.00000 0.0000

Uncalibrated Peaks:

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.998	BB	0.0315	1560.65271	1.000e2	?

Uncalib. totals : 1560.65271 100.0000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========
Summed Peaks Report
==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Area %
as Propane	1.855	2.479	1560.65271	100.0000

Totals : 100.0000

1 Warnings or Errors :

Warning : Reference compound(s) not found

==========
Final Summed Peaks Report
==========

Signal 1: FID1 A, Front Signal

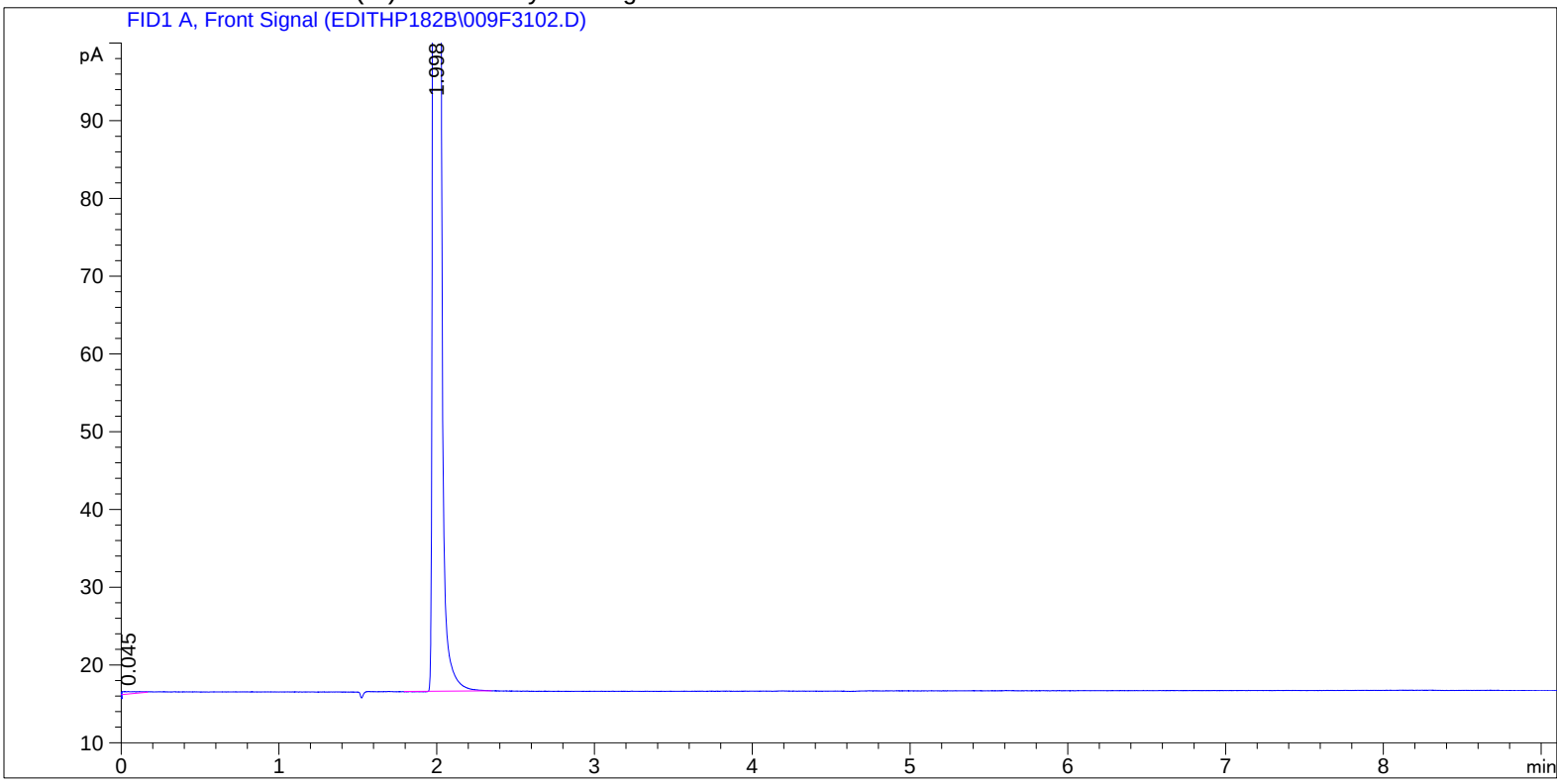
Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\009F3101.D
Sample Name: 1214-29.1334.Can *501

Name	Total Area [pA*s]	Area %
as Propane	1560.65271	100.0000
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :		100.0000

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\009F3102.D
Sample Name: 1214-29.1334.Can *501

```
==================================================================
Acq. Operator   : disconnected                  Seq. Line :  31
Acq. Instrument : Edith                          Location : Vial 9
Injection Date  : 1/9/2015 5:15:02 PM                 Inj :   2
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.548            -          -          -         Methane
  1.688            -          -          -         Ethane
  2.031            -          -          -         Propane
  2.943            -          -          -         Butane
  4.495            -          -          -         Pentane
  6.067            -          -          -         Hexane
  6.795            -          -          -         Benzene
  7.232            -          -          -         Heptane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\009F3102.D
Sample Name: 1214-29.1334.Can *501

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				0.00000		

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
0.045	BB	1.98019	1.26492	2.50478	?	
1.998	VB	1558.24976	1.27473	1986.35396	?	

Uncalib. totals : 1988.85874

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========

Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	1558.24976	1.984e3
Totals :				1983.6660

1 Warnings or Errors :

Warning : Reference compound(s) not found

==========

Final Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Propane	1558.24976	1.984e3
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :	1983.6660	

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\009F3102.D
Sample Name: 1214-29.1334.Can *501

==========
Area Percent Report
==========

Sorted By : Signal
Calib. Data Modified : 1/12/2015 2:59:28 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.548		0.0000	0.00000	0.00000	Methane
2	1.688		0.0000	0.00000	0.00000	Ethane
3	2.031		0.0000	0.00000	0.00000	Propane
4	2.943		0.0000	0.00000	0.00000	Butane
5	4.495		0.0000	0.00000	0.00000	Pentane
6	6.067		0.0000	0.00000	0.00000	Hexane
7	6.795		0.0000	0.00000	0.00000	Benzene
8	7.232		0.0000	0.00000	0.00000	Heptane

Totals : 0.00000 0.0000

Uncalibrated Peaks:

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	0.045	BB	0.0761	1.98019	0.12692	?
2	1.998	VB	0.0336	1558.24976	99.87308	?

Uncalib. totals : 1560.22994 100.0000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========
Summed Peaks Report
==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Area %
as Propane	1.855	2.479	1558.24976	99.8731

Totals : 99.8731

1 Warnings or Errors :

Warning : Reference compound(s) not found

==========
Final Summed Peaks Report
==========

Signal 1: FID1 A, Front Signal

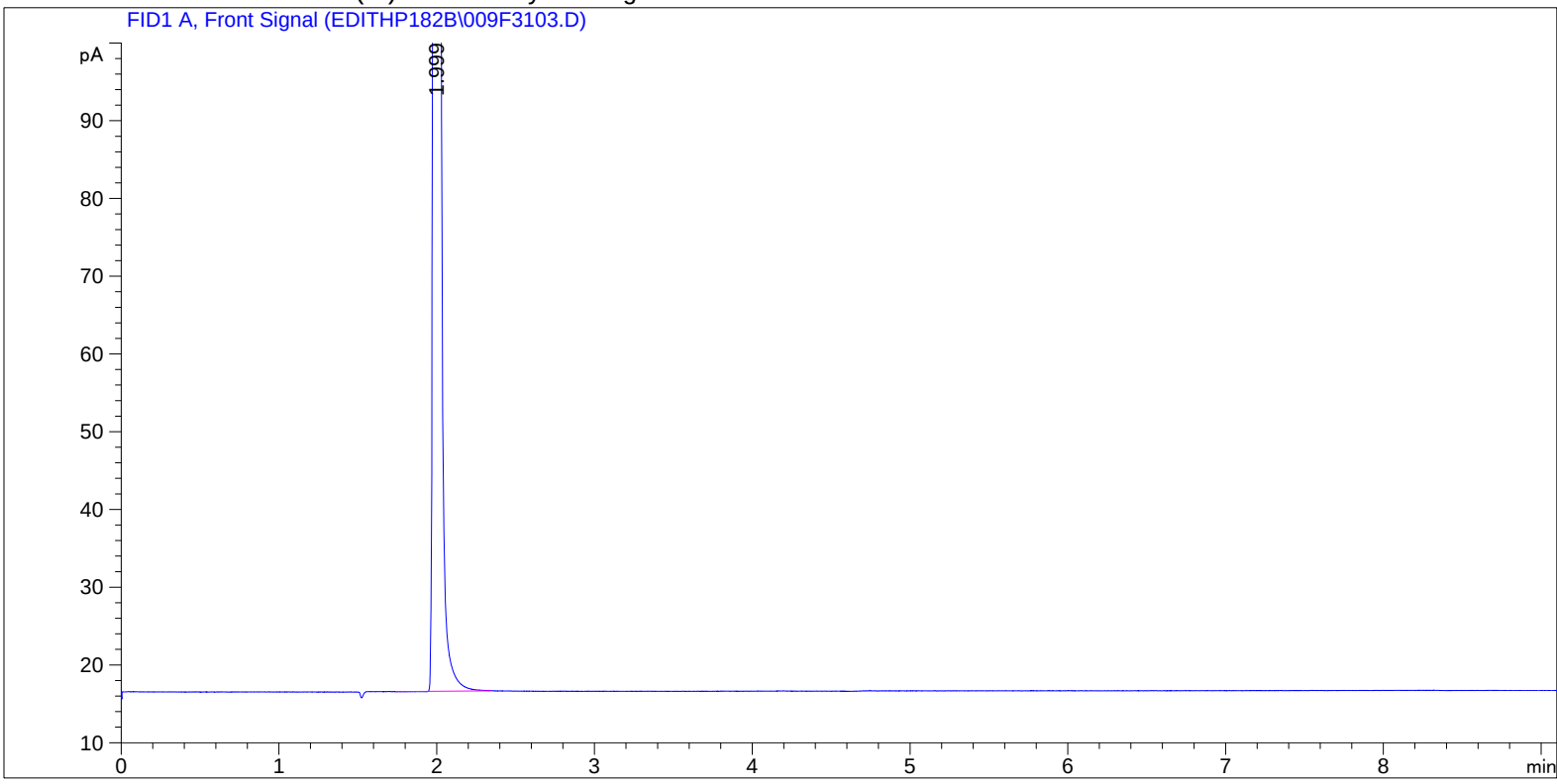
Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\009F3102.D
Sample Name: 1214-29.1334.Can *501

Name	Total Area [pA*s]	Area %
as Propane	1558.24976	99.8731
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :		99.8731

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\009F3103.D
Sample Name: 1214-29.1334.Can *501

```
==================================================================
Acq. Operator   : disconnected                  Seq. Line :  31
Acq. Instrument : Edith                          Location : Vial 9
Injection Date  : 1/9/2015 5:29:30 PM                 Inj :   3
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.548            -          -          -         Methane
  1.688            -          -          -         Ethane
  2.031            -          -          -         Propane
  2.943            -          -          -         Butane
  4.495            -          -          -         Pentane
  6.067            -          -          -         Hexane
  6.795            -          -          -         Benzene
  7.232            -          -          -         Heptane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\009F3103.D
Sample Name: 1214-29.1334.Can *501

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				0.00000		

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.999	VB	1554.77698	1.27473	1981.92701		?

Uncalib. totals : 1981.92701

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	1554.77698	1.979e3
Totals :				1979.2451

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Propane	1554.77698	1.979e3
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :	1979.2451	

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\009F3103.D
Sample Name: 1214-29.1334.Can *501

==========
Area Percent Report
==========

Sorted By : Signal
Calib. Data Modified : 1/12/2015 2:59:28 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.548		0.0000	0.00000	0.00000	Methane
2	1.688		0.0000	0.00000	0.00000	Ethane
3	2.031		0.0000	0.00000	0.00000	Propane
4	2.943		0.0000	0.00000	0.00000	Butane
5	4.495		0.0000	0.00000	0.00000	Pentane
6	6.067		0.0000	0.00000	0.00000	Hexane
7	6.795		0.0000	0.00000	0.00000	Benzene
8	7.232		0.0000	0.00000	0.00000	Heptane

Totals : 0.00000 0.0000

Uncalibrated Peaks:

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.999	VB	0.0336	1554.77698	1.000e2	?

Uncalib. totals : 1554.77698 100.0000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========
Summed Peaks Report
==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Area %
as Propane	1.855	2.479	1554.77698	100.0000

Totals : 100.0000

1 Warnings or Errors :

Warning : Reference compound(s) not found

==========
Final Summed Peaks Report
==========

Signal 1: FID1 A, Front Signal

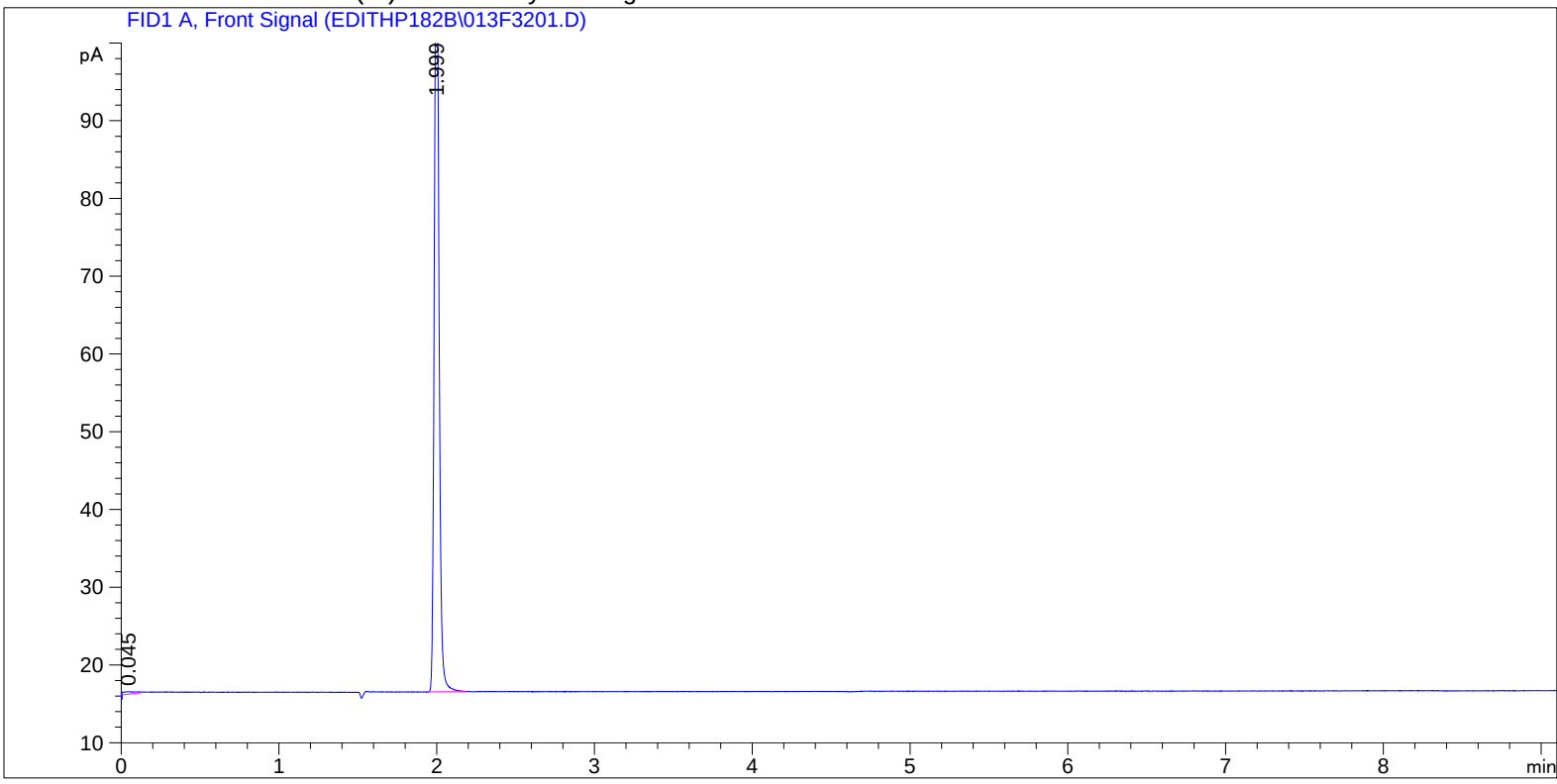
Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\009F3103.D
Sample Name: 1214-29.1334.Can *501

Name	Total Area [pA*s]	Area %
as Propane	1554.77698	100.0000
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :		100.0000

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\013F3201.D
Sample Name: 1214-29.1324.Can *501

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  32
Acq. Instrument : Edith                           Location : Vial 13
Injection Date  : 1/9/2015 5:43:44 PM                  Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.548            -          -          -         Methane
  1.688            -          -          -         Ethane
  2.031            -          -          -         Propane
  2.943            -          -          -         Butane
  4.495            -          -          -         Pentane
  6.067            -          -          -         Hexane
  6.795            -          -          -         Benzene
  7.232            -          -          -         Heptane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\013F3201.D
Sample Name: 1214-29.1324.Can *501

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				0.00000		

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
0.045	BB	1.67210	1.26492	2.11507	?	
1.999	BB	209.26855	1.27457	266.72794	?	
Uncalib. totals :				268.84300		

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========

Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	209.26855	266.4008
Totals :				266.4008

1 Warnings or Errors :

Warning : Reference compound(s) not found

==========

Final Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Propane	209.26855	266.4008
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :		266.4008

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\013F3201.D
Sample Name: 1214-29.1324.Can *501

Area Percent Report

Sorted By : Signal
Calib. Data Modified : 1/12/2015 2:59:28 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.548		0.0000	0.00000	0.00000	Methane
2	1.688		0.0000	0.00000	0.00000	Ethane
3	2.031		0.0000	0.00000	0.00000	Propane
4	2.943		0.0000	0.00000	0.00000	Butane
5	4.495		0.0000	0.00000	0.00000	Pentane
6	6.067		0.0000	0.00000	0.00000	Hexane
7	6.795		0.0000	0.00000	0.00000	Benzene
8	7.232		0.0000	0.00000	0.00000	Heptane

Totals : 0.00000 0.0000

Uncalibrated Peaks:

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	0.045	BB	0.0672	1.67210	0.79269	?
2	1.999	BB	0.0304	209.26855	99.20731	?

Uncalib. totals : 210.94065 100.0000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Area %
as Propane	1.855	2.479	209.26855	99.2073

Totals : 99.2073

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

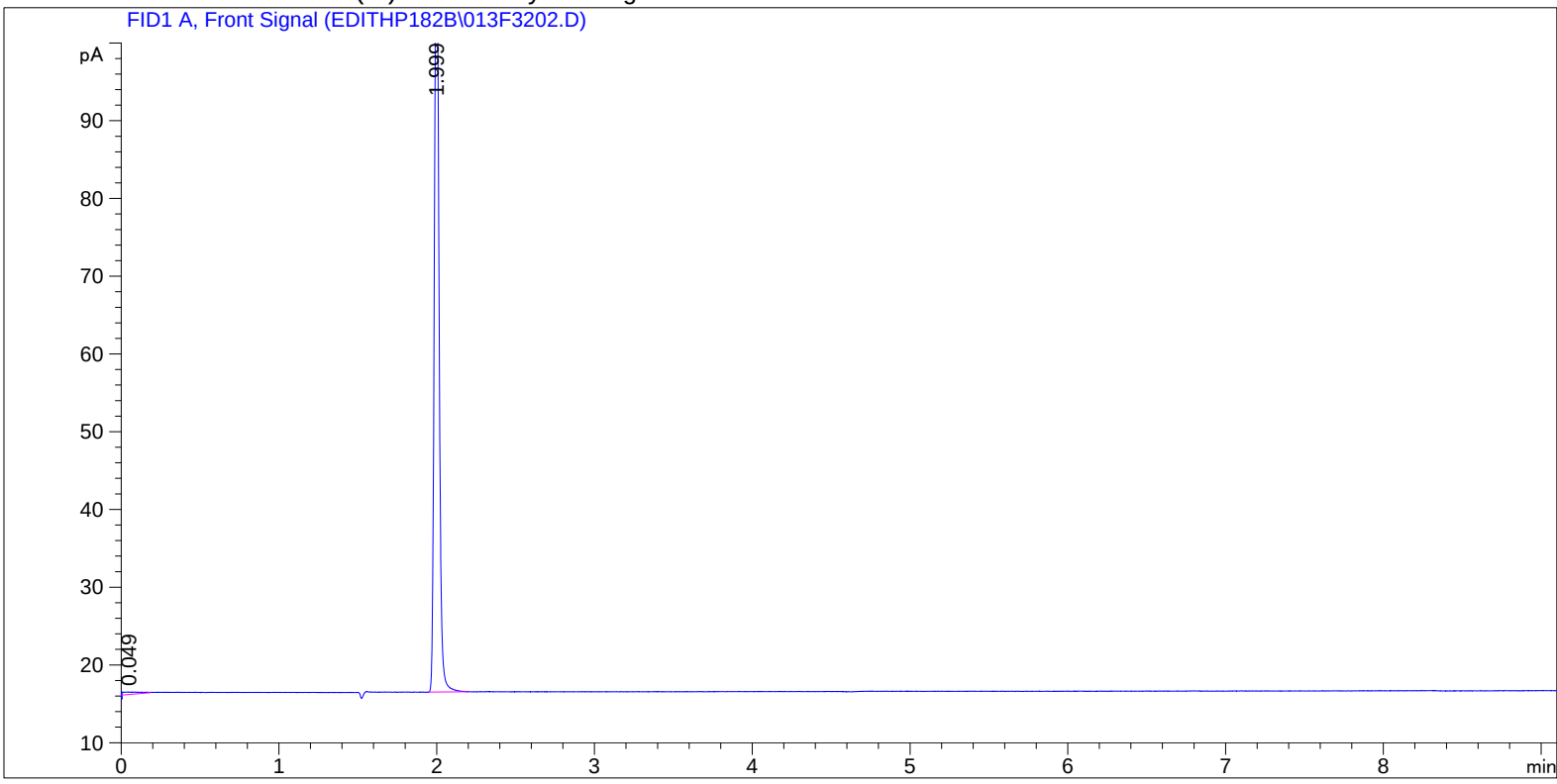
Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\013F3201.D
Sample Name: 1214-29.1324.Can *501

Name	Total Area [pA*s]	Area %
as Propane	209.26855	99.2073
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :		99.2073

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\013F3202.D
Sample Name: 1214-29.1324.Can *501

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  32
Acq. Instrument : Edith                           Location : Vial 13
Injection Date  : 1/9/2015 5:57:55 PM                  Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.548            -          -          -         Methane
  1.688            -          -          -         Ethane
  2.031            -          -          -         Propane
  2.943            -          -          -         Butane
  4.495            -          -          -         Pentane
  6.067            -          -          -         Hexane
  6.795            -          -          -         Benzene
  7.232            -          -          -         Heptane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\013F3202.D
Sample Name: 1214-29.1324.Can *501

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				0.00000		

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
0.049	BB	2.17113	1.26492	2.74631	?	
1.999	BB	209.70660	1.27457	267.28635	?	
Uncalib. totals :				270.03265		

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	209.70660	266.9584
Totals :				266.9584

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Propane	209.70660	266.9584
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :		266.9584

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\013F3202.D
Sample Name: 1214-29.1324.Can *501

Area Percent Report

Sorted By : Signal
Calib. Data Modified : 1/12/2015 2:59:28 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.548		0.0000	0.00000	0.00000	Methane
2	1.688		0.0000	0.00000	0.00000	Ethane
3	2.031		0.0000	0.00000	0.00000	Propane
4	2.943		0.0000	0.00000	0.00000	Butane
5	4.495		0.0000	0.00000	0.00000	Pentane
6	6.067		0.0000	0.00000	0.00000	Hexane
7	6.795		0.0000	0.00000	0.00000	Benzene
8	7.232		0.0000	0.00000	0.00000	Heptane

Totals : 0.00000 0.0000

Uncalibrated Peaks:

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	0.049	BB	0.0929	2.17113	1.02471	?
2	1.999	BB	0.0304	209.70660	98.97529	?

Uncalib. totals : 211.87774 100.0000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Area %
as Propane	1.855	2.479	209.70660	98.9753

Totals : 98.9753

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

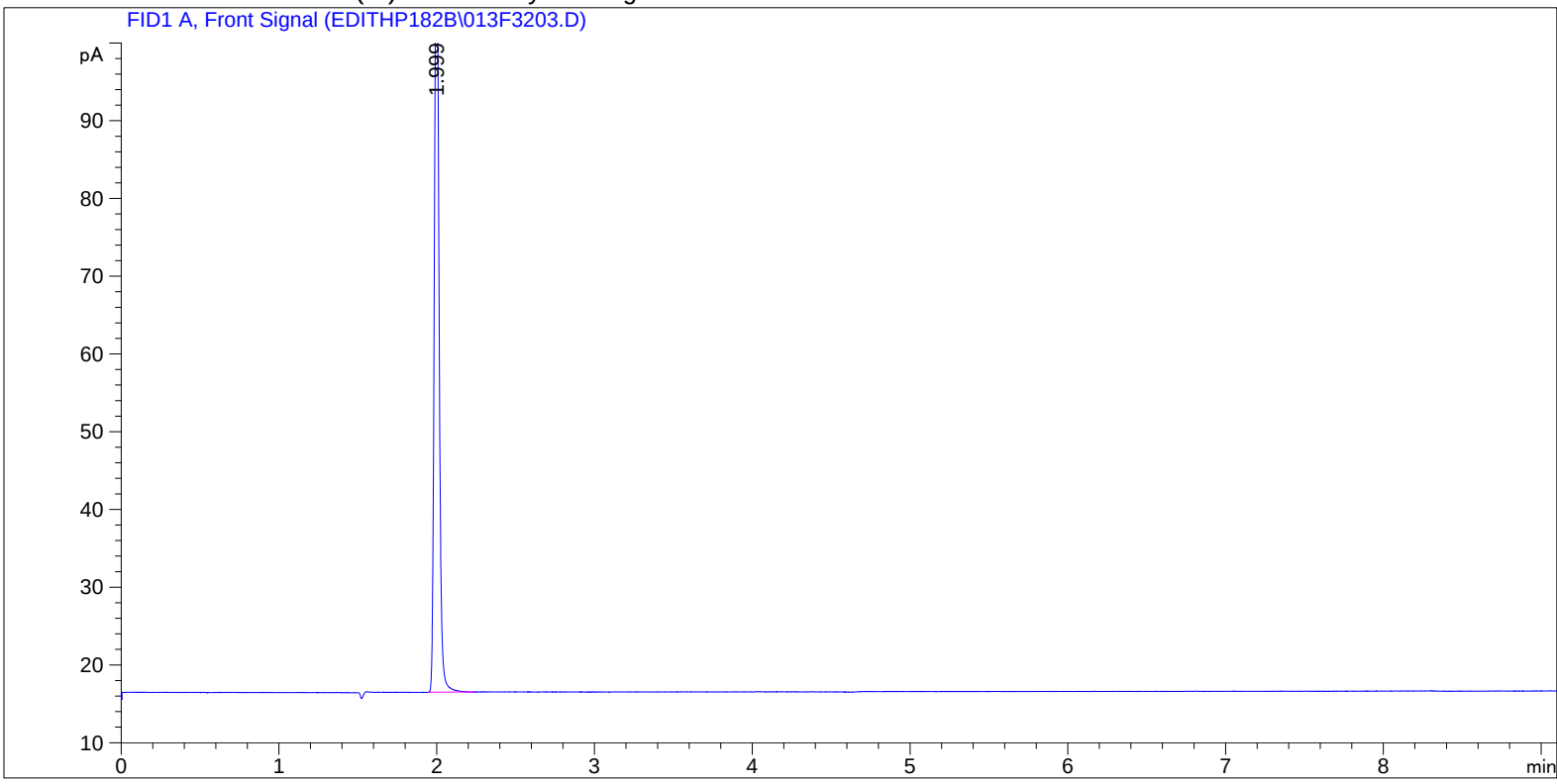
Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\013F3202.D
Sample Name: 1214-29.1324.Can *501

Name	Total Area [pA*s]	Area %
as Propane	209.70660	98.9753
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :		98.9753

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\013F3203.D
Sample Name: 1214-29.1324.Can *501

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  32
Acq. Instrument : Edith                           Location : Vial 13
Injection Date  : 1/9/2015 6:12:06 PM                  Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.548            -          -          -         Methane
  1.688            -          -          -         Ethane
  2.031            -          -          -         Propane
  2.943            -          -          -         Butane
  4.495            -          -          -         Pentane
  6.067            -          -          -         Hexane
  6.795            -          -          -         Benzene
  7.232            -          -          -         Heptane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\013F3203.D
Sample Name: 1214-29.1324.Can *501

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				0.00000		

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.999	BB	209.26433	1.27457	266.72255	?	

Uncalib. totals : 266.72255

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	209.26433	266.3954
Totals :				266.3954

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Propane	209.26433	266.3954
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :		266.3954

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\013F3203.D
Sample Name: 1214-29.1324.Can *501

==========
Area Percent Report
==========

Sorted By : Signal
Calib. Data Modified : 1/12/2015 2:59:28 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.548		0.0000	0.00000	0.00000	Methane
2	1.688		0.0000	0.00000	0.00000	Ethane
3	2.031		0.0000	0.00000	0.00000	Propane
4	2.943		0.0000	0.00000	0.00000	Butane
5	4.495		0.0000	0.00000	0.00000	Pentane
6	6.067		0.0000	0.00000	0.00000	Hexane
7	6.795		0.0000	0.00000	0.00000	Benzene
8	7.232		0.0000	0.00000	0.00000	Heptane

Totals : 0.00000 0.0000

Uncalibrated Peaks:

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.999	BB	0.0304	209.26433	1.000e2	?

Uncalib. totals : 209.26433 100.0000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========
Summed Peaks Report
==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Area %
as Propane	1.855	2.479	209.26433	100.0000

Totals : 100.0000

1 Warnings or Errors :

Warning : Reference compound(s) not found

==========
Final Summed Peaks Report
==========

Signal 1: FID1 A, Front Signal

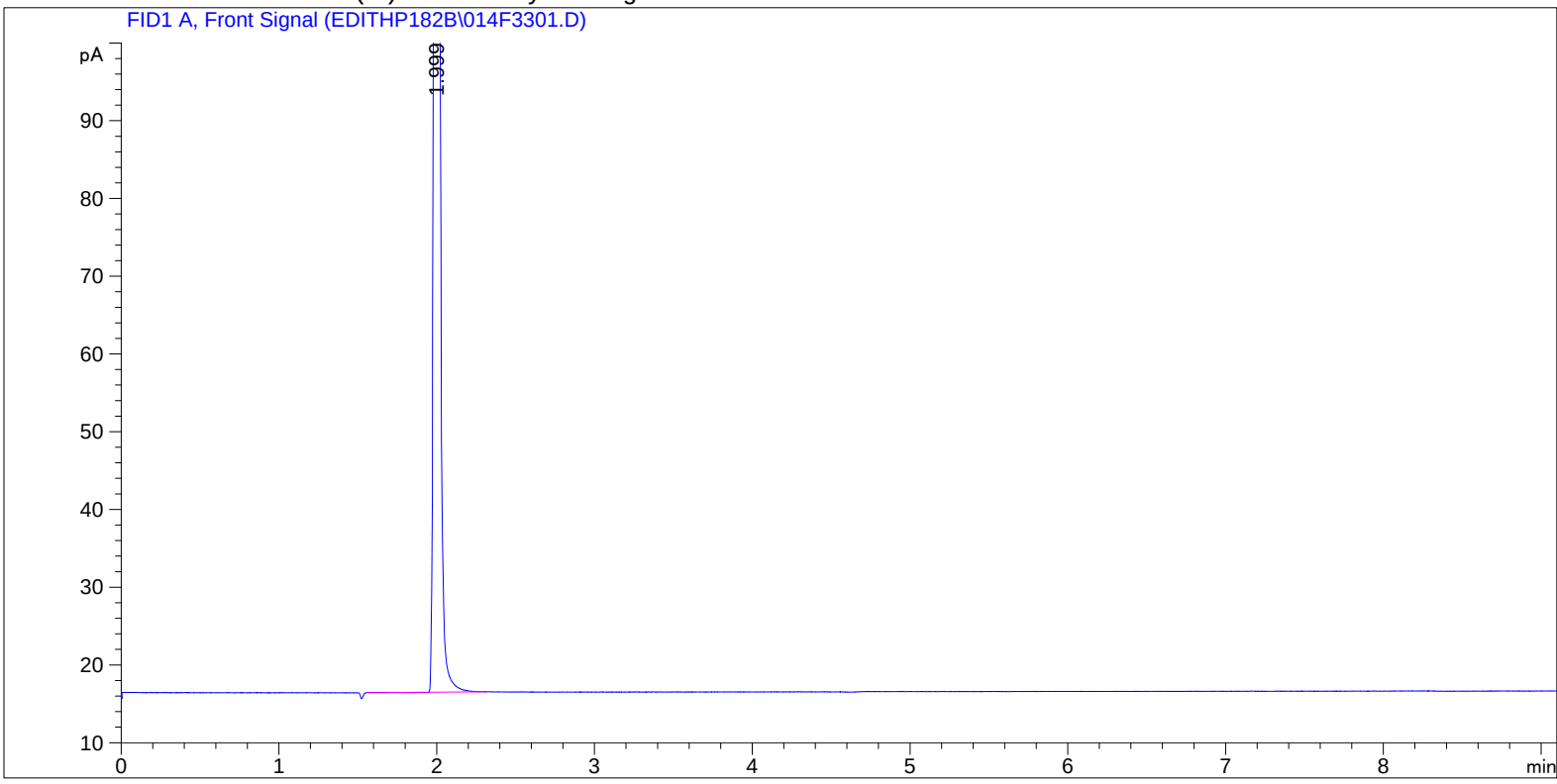
Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\013F3203.D
Sample Name: 1214-29.1324.Can *501

Name	Total Area [pA*s]	Area %
as Propane	209.26433	100.0000
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :		100.0000

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\014F3301.D
Sample Name: 1214-29.1453.Can *501

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  33
Acq. Instrument : Edith                           Location : Vial 14
Injection Date  : 1/9/2015 6:26:14 PM                  Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.548            -          -          -         Methane
  1.688            -          -          -         Ethane
  2.031            -          -          -         Propane
  2.943            -          -          -         Butane
  4.495            -          -          -         Pentane
  6.067            -          -          -         Hexane
  6.795            -          -          -         Benzene
  7.232            -          -          -         Heptane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\014F3301.D
Sample Name: 1214-29.1453.Can *501

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				0.00000		

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.999	PB	702.88727	1.27470	895.97287	?	

Uncalib. totals : 895.97287

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	702.88727	894.7818
Totals :				894.7818

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Propane	702.88727	894.7818
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :		894.7818

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\014F3301.D
Sample Name: 1214-29.1453.Can *501

==========
Area Percent Report
==========

Sorted By : Signal
Calib. Data Modified : 1/12/2015 2:59:28 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.548		0.0000	0.00000	0.00000	Methane
2	1.688		0.0000	0.00000	0.00000	Ethane
3	2.031		0.0000	0.00000	0.00000	Propane
4	2.943		0.0000	0.00000	0.00000	Butane
5	4.495		0.0000	0.00000	0.00000	Pentane
6	6.067		0.0000	0.00000	0.00000	Hexane
7	6.795		0.0000	0.00000	0.00000	Benzene
8	7.232		0.0000	0.00000	0.00000	Heptane

Totals : 0.00000 0.0000

Uncalibrated Peaks:

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.999	PB	0.0305	702.88727	1.000e2	?

Uncalib. totals : 702.88727 100.0000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========
Summed Peaks Report
==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Area %
as Propane	1.855	2.479	702.88727	100.0000

Totals : 100.0000

1 Warnings or Errors :

Warning : Reference compound(s) not found

==========
Final Summed Peaks Report
==========

Signal 1: FID1 A, Front Signal

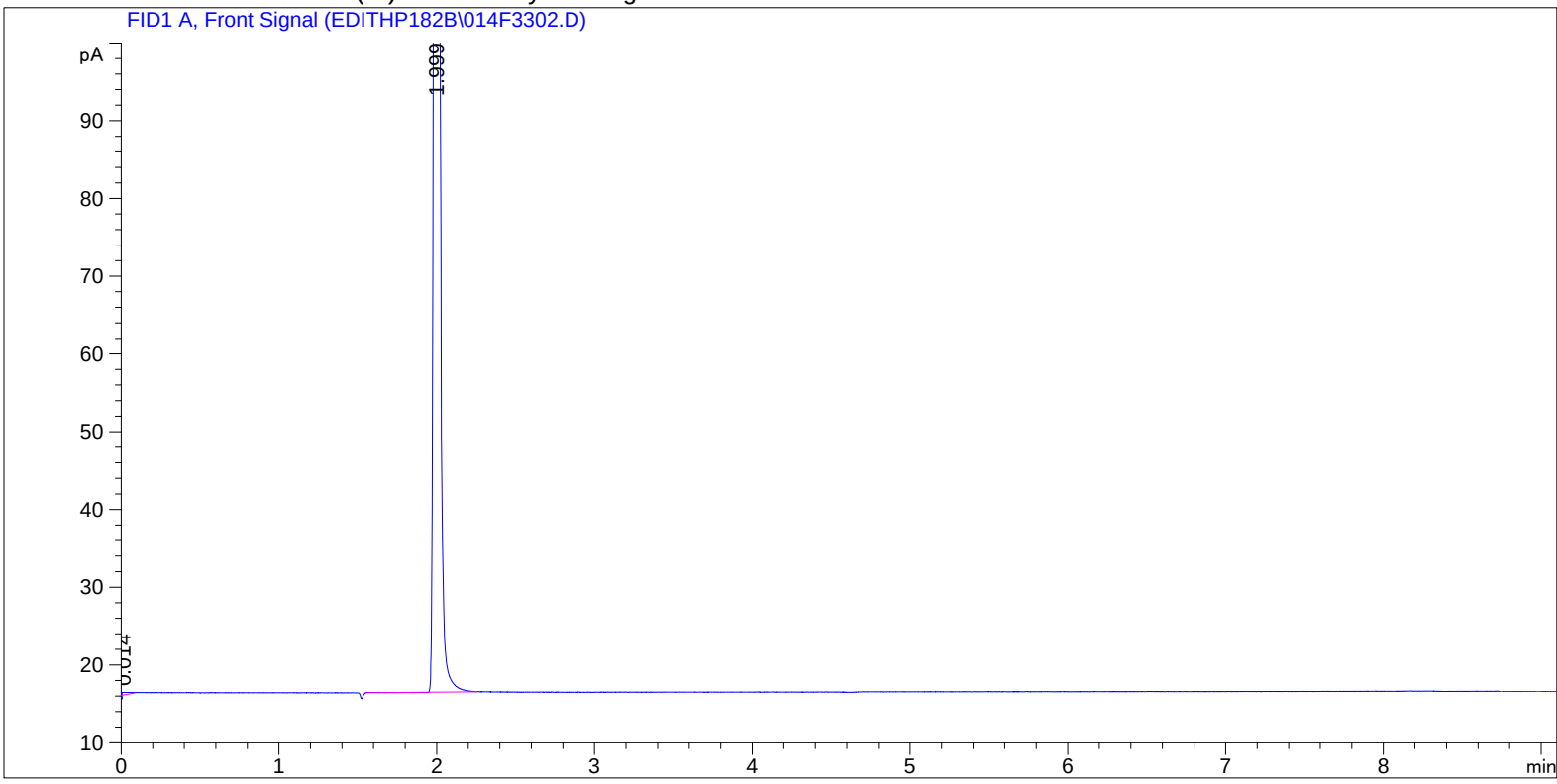
Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\014F3301.D
Sample Name: 1214-29.1453.Can *501

Name	Total Area [pA*s]	Area %
as Propane	702.88727	100.0000
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :		100.0000

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\014F3302.D
Sample Name: 1214-29.1453.Can *501

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  33
Acq. Instrument : Edith                           Location : Vial 14
Injection Date  : 1/9/2015 6:40:25 PM                  Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.548            -          -          -         Methane
  1.688            -          -          -         Ethane
  2.031            -          -          -         Propane
  2.943            -          -          -         Butane
  4.495            -          -          -         Pentane
  6.067            -          -          -         Hexane
  6.795            -          -          -         Benzene
  7.232            -          -          -         Heptane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\014F3302.D
Sample Name: 1214-29.1453.Can *501

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				0.00000		

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
0.014	BB	9.69932e-1	1.26492	1.22689	?	
1.999	PB	700.17889	1.27470	892.52035	?	

Uncalib. totals : 893.74723

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	700.17889	891.3340
Totals :				891.3340

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Propane	700.17889	891.3340
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :		891.3340

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\014F3302.D
Sample Name: 1214-29.1453.Can *501

==========
Area Percent Report
==========

Sorted By : Signal
Calib. Data Modified : 1/12/2015 2:59:28 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.548		0.0000	0.00000	0.00000	Methane
2	1.688		0.0000	0.00000	0.00000	Ethane
3	2.031		0.0000	0.00000	0.00000	Propane
4	2.943		0.0000	0.00000	0.00000	Butane
5	4.495		0.0000	0.00000	0.00000	Pentane
6	6.067		0.0000	0.00000	0.00000	Hexane
7	6.795		0.0000	0.00000	0.00000	Benzene
8	7.232		0.0000	0.00000	0.00000	Heptane

Totals : 0.00000 0.0000

Uncalibrated Peaks:

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	0.014	BB	0.0362	9.69932e-1	0.13833	?
2	1.999	PB	0.0304	700.17889	99.86167	?

Uncalib. totals : 701.14883 100.0000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========
Summed Peaks Report
==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Area %
as Propane	1.855	2.479	700.17889	99.8617

Totals : 99.8617

1 Warnings or Errors :

Warning : Reference compound(s) not found

==========
Final Summed Peaks Report
==========

Signal 1: FID1 A, Front Signal

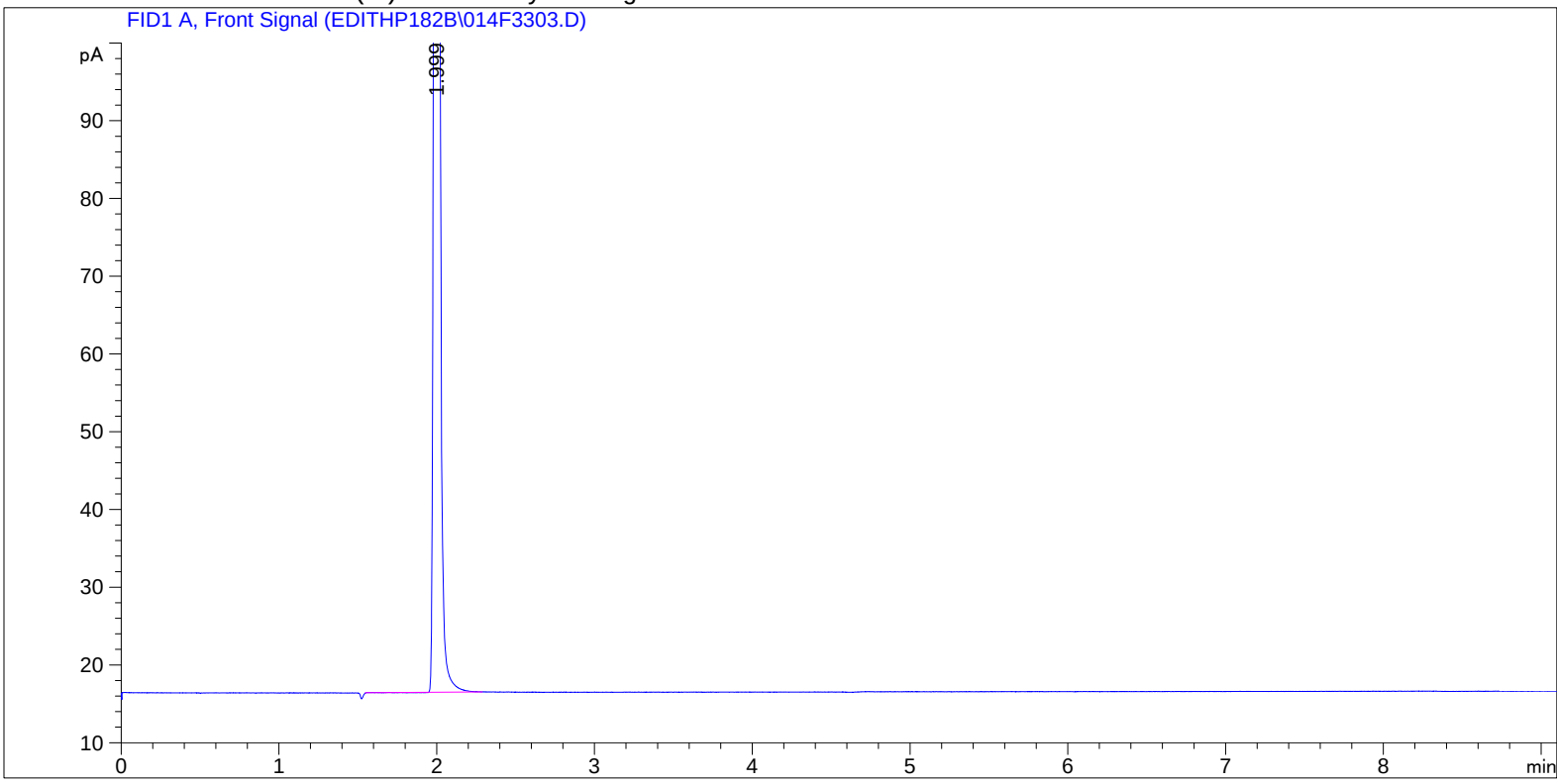
Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\014F3302.D
Sample Name: 1214-29.1453.Can *501

Name	Total Area [pA*s]	Area %
as Propane	700.17889	99.8617
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :		99.8617

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\014F3303.D
Sample Name: 1214-29.1453.Can *501

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  33
Acq. Instrument : Edith                           Location : Vial 14
Injection Date  : 1/9/2015 6:54:32 PM                  Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.548            -          -          -         Methane
  1.688            -          -          -         Ethane
  2.031            -          -          -         Propane
  2.943            -          -          -         Butane
  4.495            -          -          -         Pentane
  6.067            -          -          -         Hexane
  6.795            -          -          -         Benzene
  7.232            -          -          -         Heptane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\014F3303.D
Sample Name: 1214-29.1453.Can *501

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				0.00000		

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.999	PB	699.31482	1.27470	891.41886	?	

Uncalib. totals : 891.41886

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	699.31482	890.2341
Totals :				890.2341

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Propane	699.31482	890.2341
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :		890.2341

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\014F3303.D
Sample Name: 1214-29.1453.Can *501

==========
Area Percent Report
==========

Sorted By : Signal
Calib. Data Modified : 1/12/2015 2:59:28 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.548		0.0000	0.00000	0.00000	Methane
2	1.688		0.0000	0.00000	0.00000	Ethane
3	2.031		0.0000	0.00000	0.00000	Propane
4	2.943		0.0000	0.00000	0.00000	Butane
5	4.495		0.0000	0.00000	0.00000	Pentane
6	6.067		0.0000	0.00000	0.00000	Hexane
7	6.795		0.0000	0.00000	0.00000	Benzene
8	7.232		0.0000	0.00000	0.00000	Heptane

Totals : 0.00000 0.0000

Uncalibrated Peaks:

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.999	PB	0.0304	699.31482	1.000e2	?

Uncalib. totals : 699.31482 100.0000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========
Summed Peaks Report
==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Area %
as Propane	1.855	2.479	699.31482	100.0000

Totals : 100.0000

1 Warnings or Errors :

Warning : Reference compound(s) not found

==========
Final Summed Peaks Report
==========

Signal 1: FID1 A, Front Signal

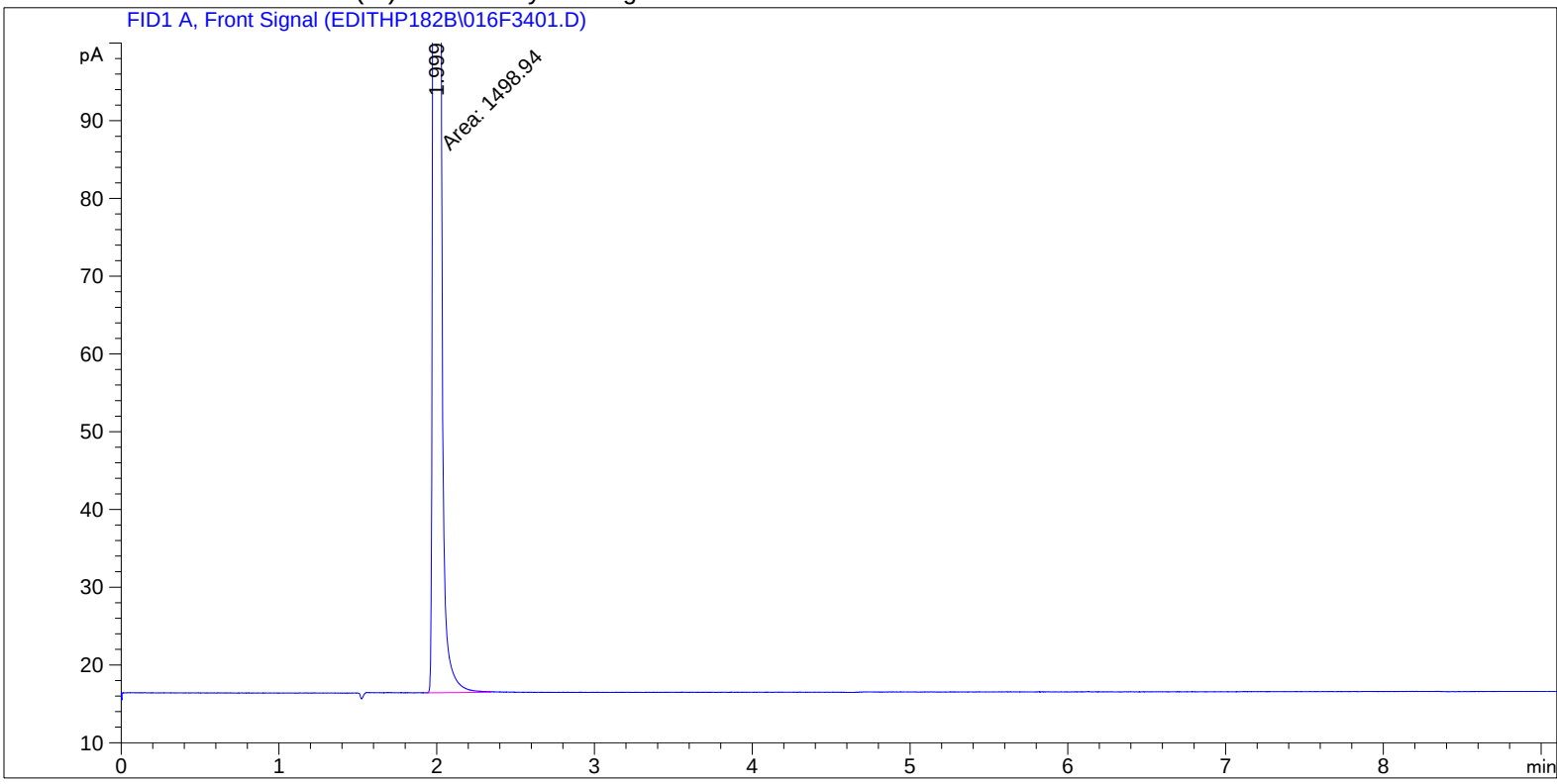
Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\014F3303.D
Sample Name: 1214-29.1453.Can *501

Name	Total Area [pA*s]	Area %
as Propane	699.31482	100.0000
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :		100.0000

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\016F3401.D
Sample Name: 1214-29.1308.Can *501

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  34
Acq. Instrument : Edith                           Location : Vial 16
Injection Date  : 1/9/2015 7:08:38 PM                  Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.548            -          -          -         Methane
  1.688            -          -          -         Ethane
  2.031            -          -          -         Propane
  2.943            -          -          -         Butane
  4.495            -          -          -         Pentane
  6.067            -          -          -         Hexane
  6.795            -          -          -         Benzene
  7.232            -          -          -         Heptane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\016F3401.D
Sample Name: 1214-29.1308.Can *501

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				0.00000		

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.999	MM	1498.94446	1.27473	1910.75400		?

Uncalib. totals : 1910.75400

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	1498.94446	1.908e3
Totals :				1908.1698

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Propane	1498.94446	1.908e3
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :	1908.1698	

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\016F3401.D
Sample Name: 1214-29.1308.Can *501

==========
Area Percent Report
==========

Sorted By : Signal
Calib. Data Modified : 1/12/2015 2:59:28 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.548		0.0000	0.00000	0.00000	Methane
2	1.688		0.0000	0.00000	0.00000	Ethane
3	2.031		0.0000	0.00000	0.00000	Propane
4	2.943		0.0000	0.00000	0.00000	Butane
5	4.495		0.0000	0.00000	0.00000	Pentane
6	6.067		0.0000	0.00000	0.00000	Hexane
7	6.795		0.0000	0.00000	0.00000	Benzene
8	7.232		0.0000	0.00000	0.00000	Heptane

Totals : 0.00000 0.0000

Uncalibrated Peaks:

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.999	MM	0.0334	1498.94446	1.000e2	?

Uncalib. totals : 1498.94446 100.0000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========
Summed Peaks Report
==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Area %
as Propane	1.855	2.479	1498.94446	100.0000

Totals : 100.0000

1 Warnings or Errors :

Warning : Reference compound(s) not found

==========
Final Summed Peaks Report
==========

Signal 1: FID1 A, Front Signal

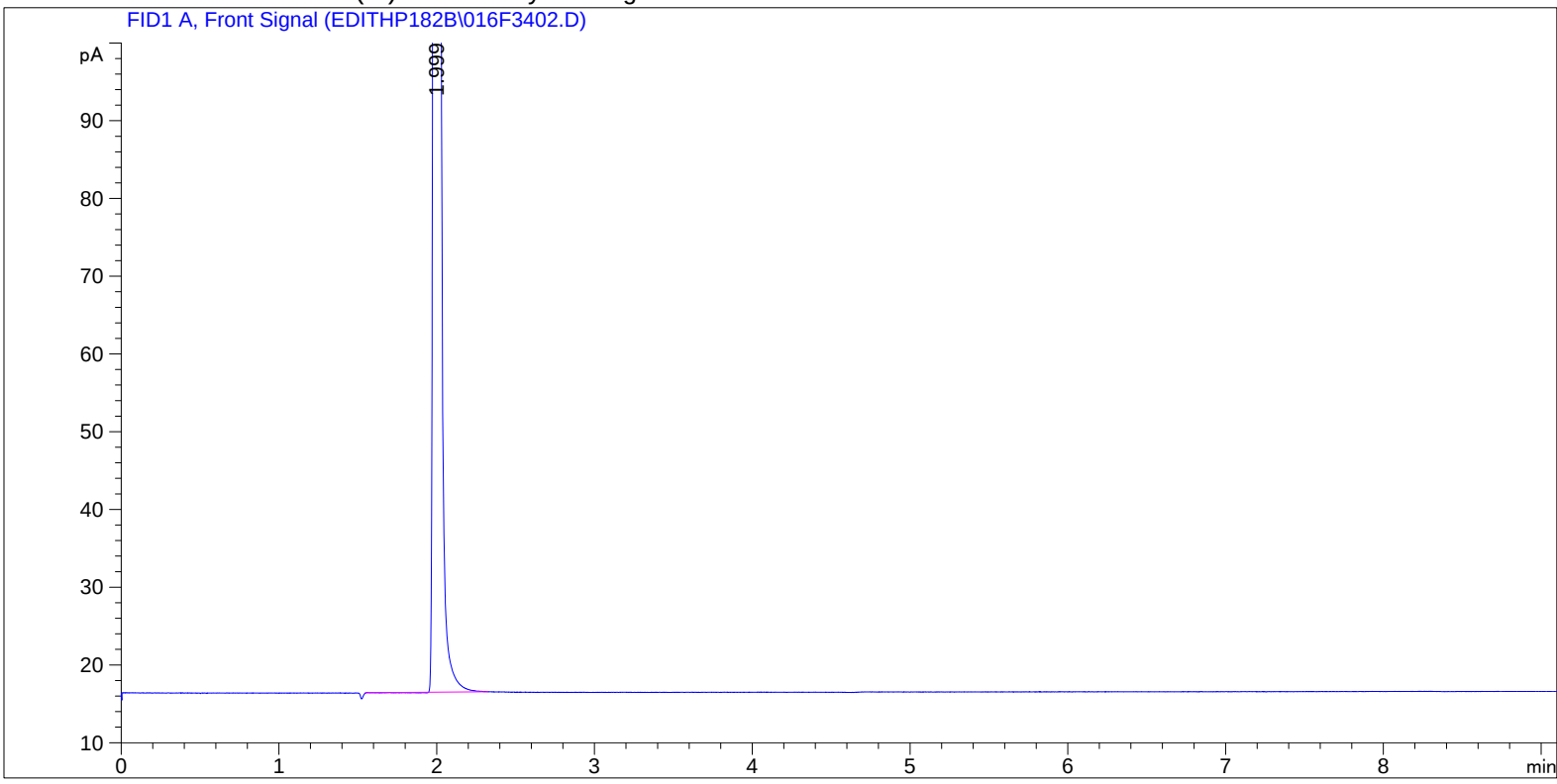
Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\016F3401.D
Sample Name: 1214-29.1308.Can *501

Name	Total Area [pA*s]	Area %
as Propane	1498.94446	100.0000
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :		100.0000

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\016F3402.D
Sample Name: 1214-29.1308.Can *501

```
==================================================================
Acq. Operator   : disconnected                  Seq. Line :  34
Acq. Instrument : Edith                          Location : Vial 16
Injection Date  : 1/9/2015 7:22:58 PM                 Inj :   2
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.548            -          -          -         Methane
  1.688            -          -          -         Ethane
  2.031            -          -          -         Propane
  2.943            -          -          -         Butane
  4.495            -          -          -         Pentane
  6.067            -          -          -         Hexane
  6.795            -          -          -         Benzene
  7.232            -          -          -         Heptane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\016F3402.D
Sample Name: 1214-29.1308.Can *501

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				0.00000		

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.999	PB	1496.52490	1.27473	1907.66964	?	

Uncalib. totals : 1907.66964

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	1496.52490	1.905e3
Totals :				1905.0897

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Propane	1496.52490	1.905e3
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :	1905.0897	

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\016F3402.D
Sample Name: 1214-29.1308.Can *501

==========
Area Percent Report
==========

Sorted By : Signal
Calib. Data Modified : 1/12/2015 2:59:28 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.548		0.0000	0.00000	0.00000	Methane
2	1.688		0.0000	0.00000	0.00000	Ethane
3	2.031		0.0000	0.00000	0.00000	Propane
4	2.943		0.0000	0.00000	0.00000	Butane
5	4.495		0.0000	0.00000	0.00000	Pentane
6	6.067		0.0000	0.00000	0.00000	Hexane
7	6.795		0.0000	0.00000	0.00000	Benzene
8	7.232		0.0000	0.00000	0.00000	Heptane

Totals : 0.00000 0.0000

Uncalibrated Peaks:

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.999	PB	0.0305	1496.52490	1.000e2	?

Uncalib. totals : 1496.52490 100.0000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========
Summed Peaks Report
==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Area %
as Propane	1.855	2.479	1496.52490	100.0000

Totals : 100.0000

1 Warnings or Errors :

Warning : Reference compound(s) not found

==========
Final Summed Peaks Report
==========

Signal 1: FID1 A, Front Signal

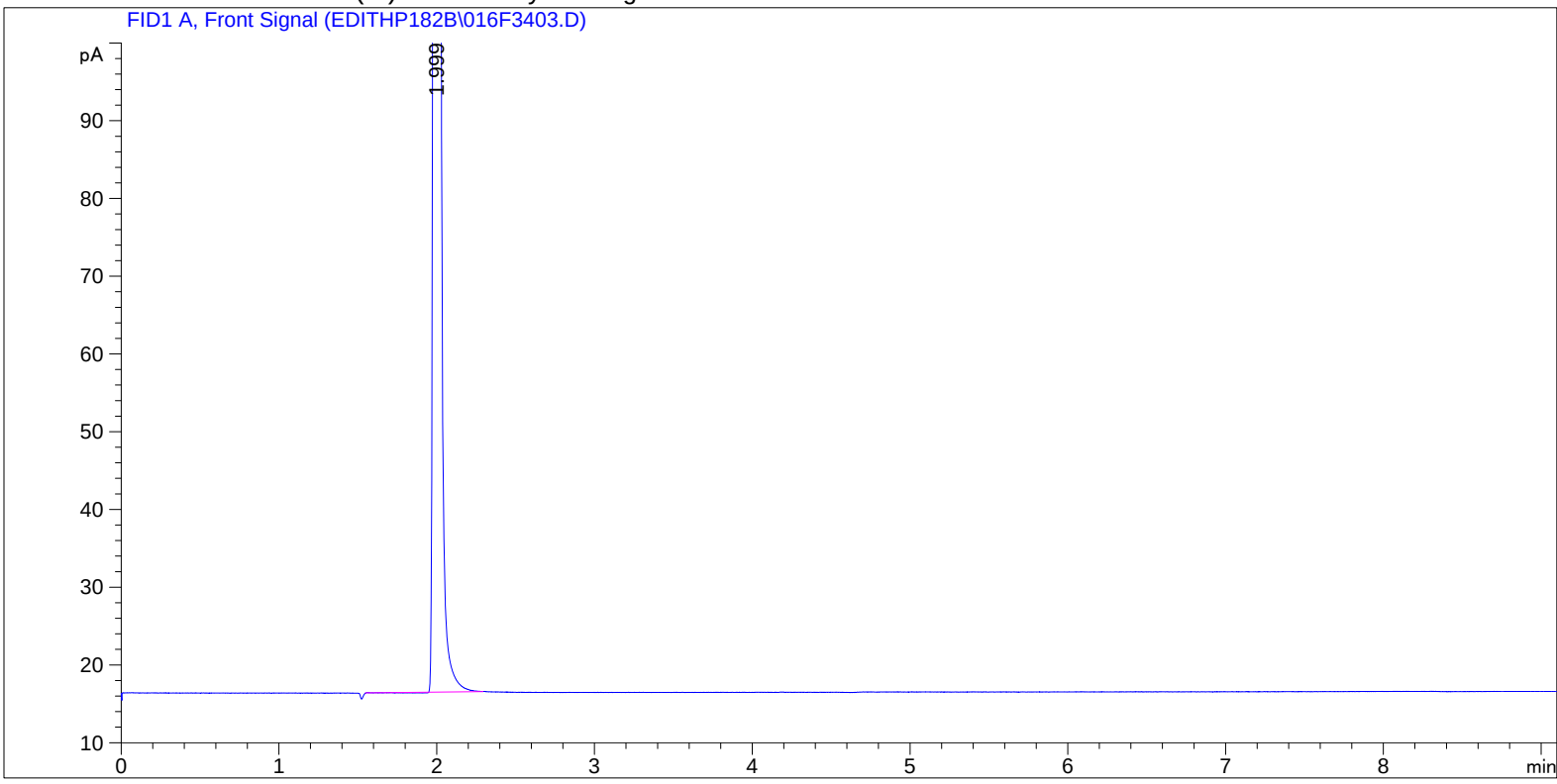
Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\016F3402.D
Sample Name: 1214-29.1308.Can *501

Name	Total Area [pA*s]	Area %
as Propane	1496.52490	100.0000
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :		100.0000

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\016F3403.D
Sample Name: 1214-29.1308.Can *501

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  34
Acq. Instrument : Edith                           Location : Vial 16
Injection Date  : 1/9/2015 7:36:59 PM                  Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.548            -          -          -         Methane
  1.688            -          -          -         Ethane
  2.031            -          -          -         Propane
  2.943            -          -          -         Butane
  4.495            -          -          -         Pentane
  6.067            -          -          -         Hexane
  6.795            -          -          -         Benzene
  7.232            -          -          -         Heptane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\016F3403.D
Sample Name: 1214-29.1308.Can *501

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				0.00000		

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.999	PB	1488.99902	1.27473	1898.07596	?	

Uncalib. totals : 1898.07596

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========

Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	1488.99902	1.896e3
Totals :				1895.5092

1 Warnings or Errors :

Warning : Reference compound(s) not found

==========

Final Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Propane	1488.99902	1.896e3
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :	1895.5092	

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\016F3403.D
Sample Name: 1214-29.1308.Can *501

==========
Area Percent Report
==========

Sorted By : Signal
Calib. Data Modified : 1/12/2015 2:59:28 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.548		0.0000	0.00000	0.00000	Methane
2	1.688		0.0000	0.00000	0.00000	Ethane
3	2.031		0.0000	0.00000	0.00000	Propane
4	2.943		0.0000	0.00000	0.00000	Butane
5	4.495		0.0000	0.00000	0.00000	Pentane
6	6.067		0.0000	0.00000	0.00000	Hexane
7	6.795		0.0000	0.00000	0.00000	Benzene
8	7.232		0.0000	0.00000	0.00000	Heptane

Totals : 0.00000 0.0000

Uncalibrated Peaks:

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.999	PB	0.0304	1488.99902	1.000e2	?

Uncalib. totals : 1488.99902 100.0000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========
Summed Peaks Report
==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Area %
as Propane	1.855	2.479	1488.99902	100.0000

Totals : 100.0000

1 Warnings or Errors :

Warning : Reference compound(s) not found

==========
Final Summed Peaks Report
==========

Signal 1: FID1 A, Front Signal

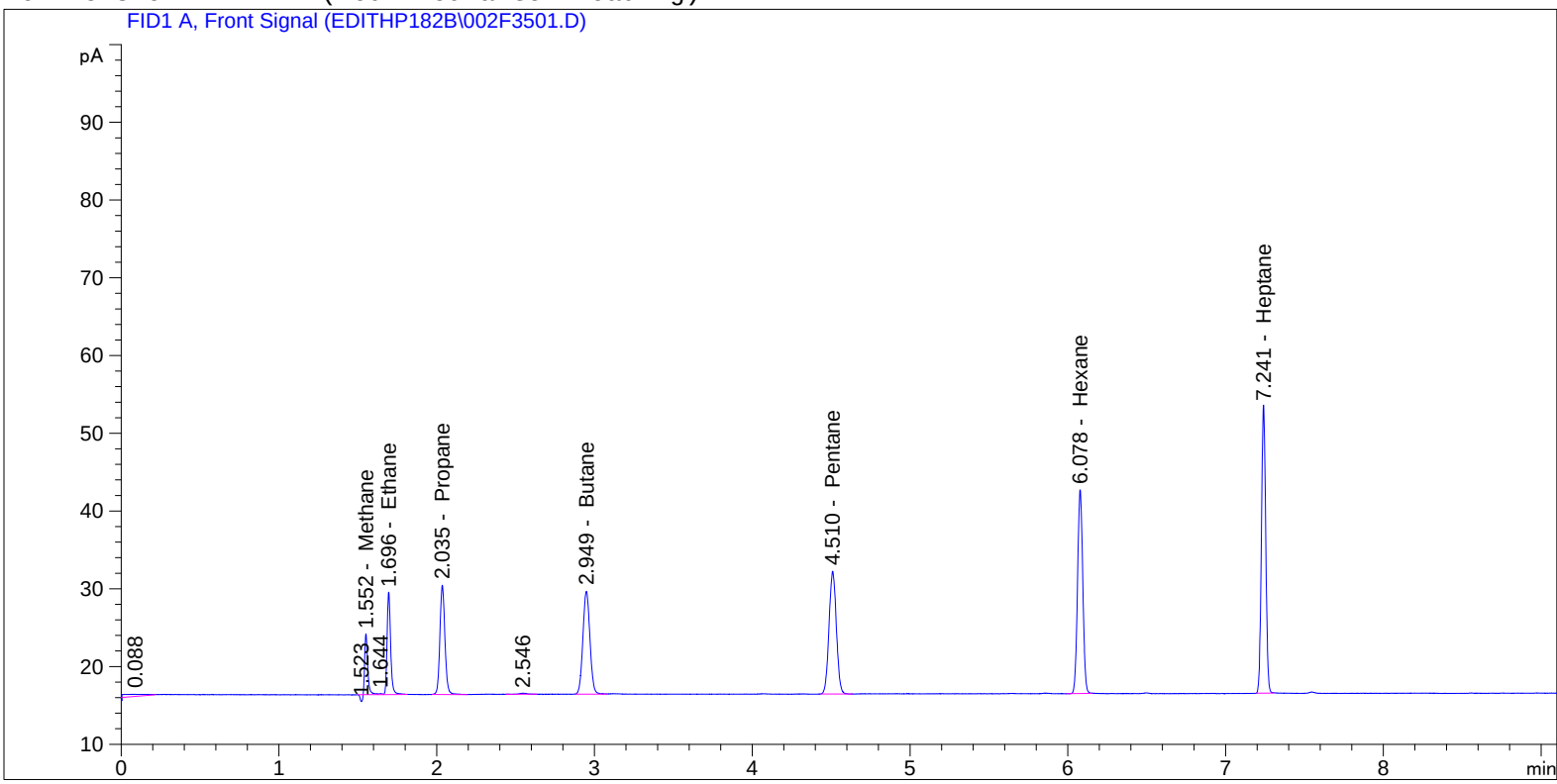
Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\016F3403.D
Sample Name: 1214-29.1308.Can *501

Name	Total Area [pA*s]	Area %
as Propane	1488.99902	100.0000
Methane	0.00000	0.0000
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	0.00000	0.0000
Heptane	0.00000	0.0000
Totals :		100.0000

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\002F3501.D
Sample Name: EdithP108 #C3 ENV(1=600,2=400)

```
==================================================================
Acq. Operator   : disconnected                  Seq. Line :  35
Acq. Instrument : Edith                         Location : Vial 2
Injection Date  : 1/9/2015 7:54:19 PM                Inj :   1
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.552	PV	10.55801	3.69574	39.01966		Methane
1.696	VB	20.62445	1.89017	38.98370		Ethane
2.035	BB	31.15898	1.27351	39.68114		Propane
2.949	BV	40.90118	9.60563e-1	39.28818		Butane
4.510	BB	51.05698	7.77217e-1	39.68237		Pentane
6.078	BB	60.69108	6.64082e-1	40.30385		Hexane
6.795		-	-	-		Benzene
7.241	BB	70.75284	5.46144e-1	38.64123		Heptane

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\002F3501.D
Sample Name: EdithP108 #C3 ENV(1=600,2=400)

Totals : 275.60014

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
0.088	BB	2.72513	1.26492	3.44707		?
1.523	BP N	9.06755e-1	1.26492	1.14697		?
1.644	VV	1.94161e-1	1.26492	2.45598e-1		?
2.546	BB	4.25625e-1	1.26492	5.38381e-1		?

Uncalib. totals : 5.37802

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========

Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Ethane	1.550	1.855	1.94161e-1	0.3667
as Butane	2.479	3.714	4.25625e-1	0.4082

Totals : 7.7489e-1

1 Warnings or Errors :

Warning : Reference compound(s) not found

==========

Final Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

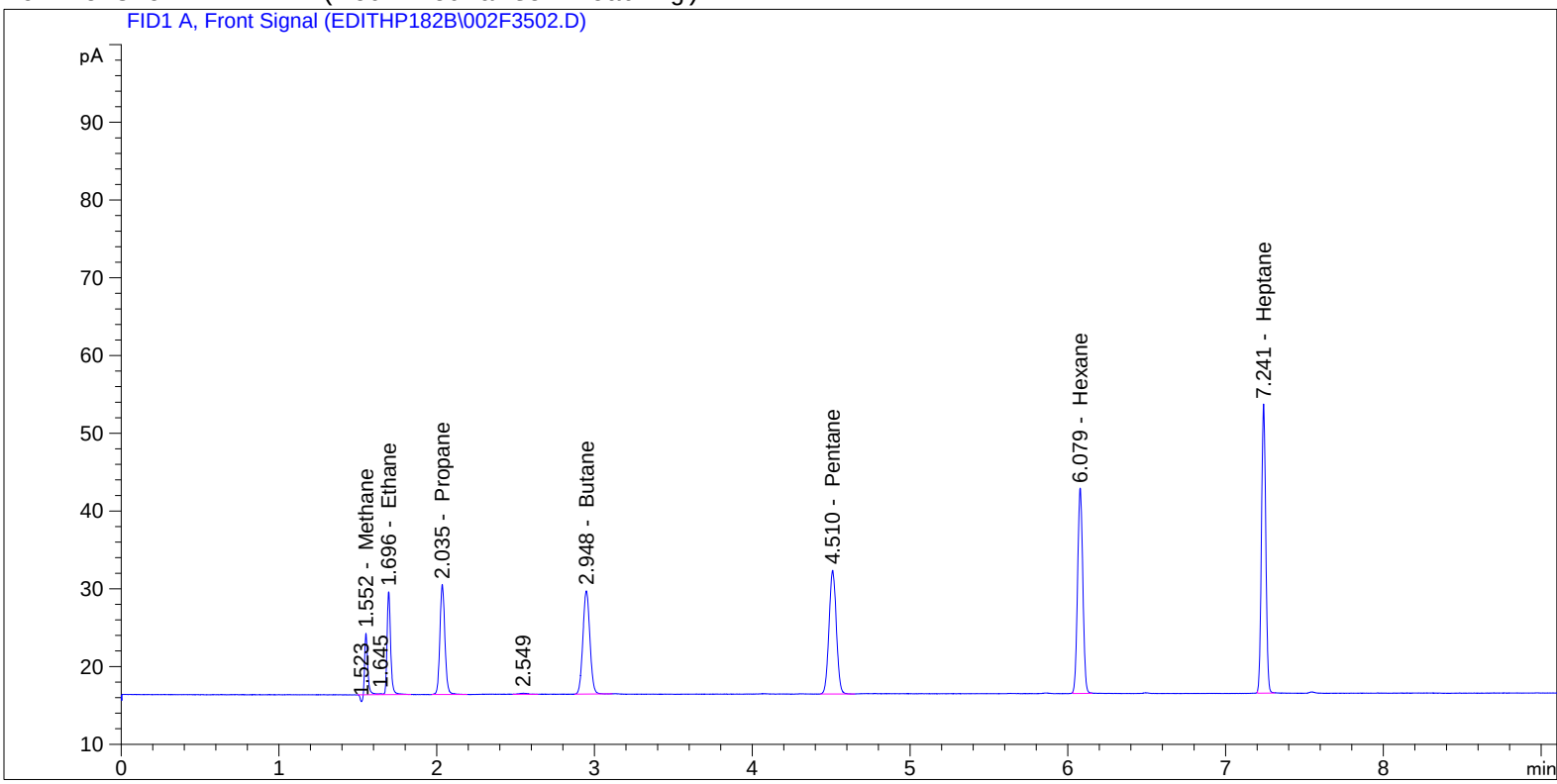
Name	Total Area [pA*s]	Amount [ppm]
as Ethane	1.94161e-1	0.3667
as Butane	4.25625e-1	0.4082
Methane	10.55801	39.0197
Ethane	20.62445	38.9837
Propane	31.15898	39.6811
Butane	40.90118	39.2882
Pentane	51.05698	39.6824
Hexane	60.69108	40.3039
Benzene	0.00000	0.0000
Heptane	70.75284	38.6412

Totals : 276.3750

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\002F3502.D
Sample Name: EdithP108 #C3 ENV(1=600,2=400)

```
==================================================================
Acq. Operator   : disconnected                  Seq. Line :  35
Acq. Instrument : Edith                         Location : Vial 2
Injection Date  : 1/9/2015 8:11:19 PM                Inj :   2
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.552	PV	10.65684	3.69544	39.38168		Methane
1.696	VB	20.82562	1.89020	39.36462		Ethane
2.035	BB	31.26901	1.27351	39.82141		Propane
2.948	BB	40.84511	9.60561e-1	39.23421		Butane
4.510	BB	51.40525	7.77268e-1	39.95566		Pentane
6.079	BB	61.04936	6.64109e-1	40.54344		Hexane
6.795		-	-	-		Benzene
7.241	BB	71.21766	5.46140e-1	38.89482		Heptane

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\002F3502.D
Sample Name: EdithP108 #C3 ENV(1=600,2=400)

Totals : 277.19584

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.523	BP N	8.98161e-1	1.26492	1.13610		?
1.645	VV	2.06324e-1	1.26492	2.60984e-1		?
2.549	BB	4.77995e-1	1.26492	6.04625e-1		?

Uncalib. totals : 2.00171

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Ethane	1.550	1.855	2.06324e-1	0.3896
as Butane	2.479	3.714	4.77995e-1	0.4585

Totals : 8.4809e-1

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

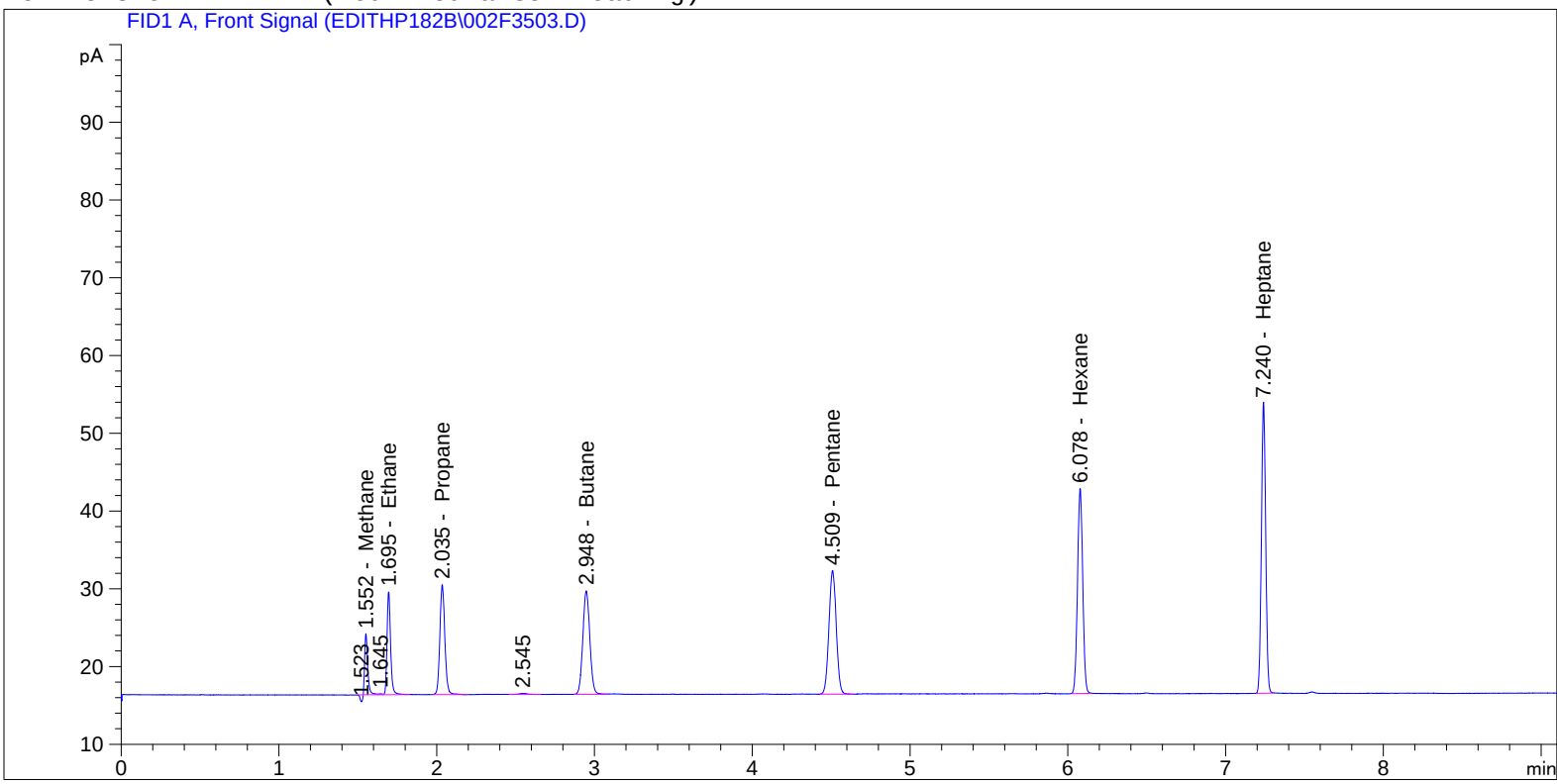
Name	Total Area [pA*s]	Amount [ppm]
as Ethane	2.06324e-1	0.3896
as Butane	4.77995e-1	0.4585
Methane	10.65684	39.3817
Ethane	20.82562	39.3646
Propane	31.26901	39.8214
Butane	40.84511	39.2342
Pentane	51.40525	39.9557
Hexane	61.04936	40.5434
Benzene	0.00000	0.0000
Heptane	71.21766	38.8948

Totals : 278.0439

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\002F3503.D
Sample Name: EdithP108 #C3 ENV(1=600,2=400)

```
==================================================================
Acq. Operator   : disconnected                  Seq. Line :  35
Acq. Instrument : Edith                         Location : Vial 2
Injection Date  : 1/9/2015 8:28:21 PM                Inj :   3
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.552	PV	10.61538	3.69556	39.22980		Methane
1.695	VB	20.75494	1.89019	39.23079		Ethane
2.035	BB	31.24520	1.27351	39.79106		Propane
2.948	BV	41.20476	9.60578e-1	39.58039		Butane
4.509	BB	51.35748	7.77261e-1	39.91817		Pentane
6.078	BB	61.00325	6.64106e-1	40.51260		Hexane
6.795		-	-	-		Benzene
7.240	BB	71.12826	5.46141e-1	38.84604		Heptane

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\002F3503.D
Sample Name: EdithP108 #C3 ENV(1=600,2=400)

Totals : 277.10885

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.523	BP N	9.12286e-1	1.26492	1.15397		?
1.645	VV	2.05743e-1	1.26492	2.60248e-1		?
2.545	BB	4.78365e-1	1.26492	6.05093e-1		?

Uncalib. totals : 2.01931

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Ethane	1.550	1.855	2.05743e-1	0.3885
as Butane	2.479	3.714	4.78365e-1	0.4588

Totals : 8.4734e-1

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

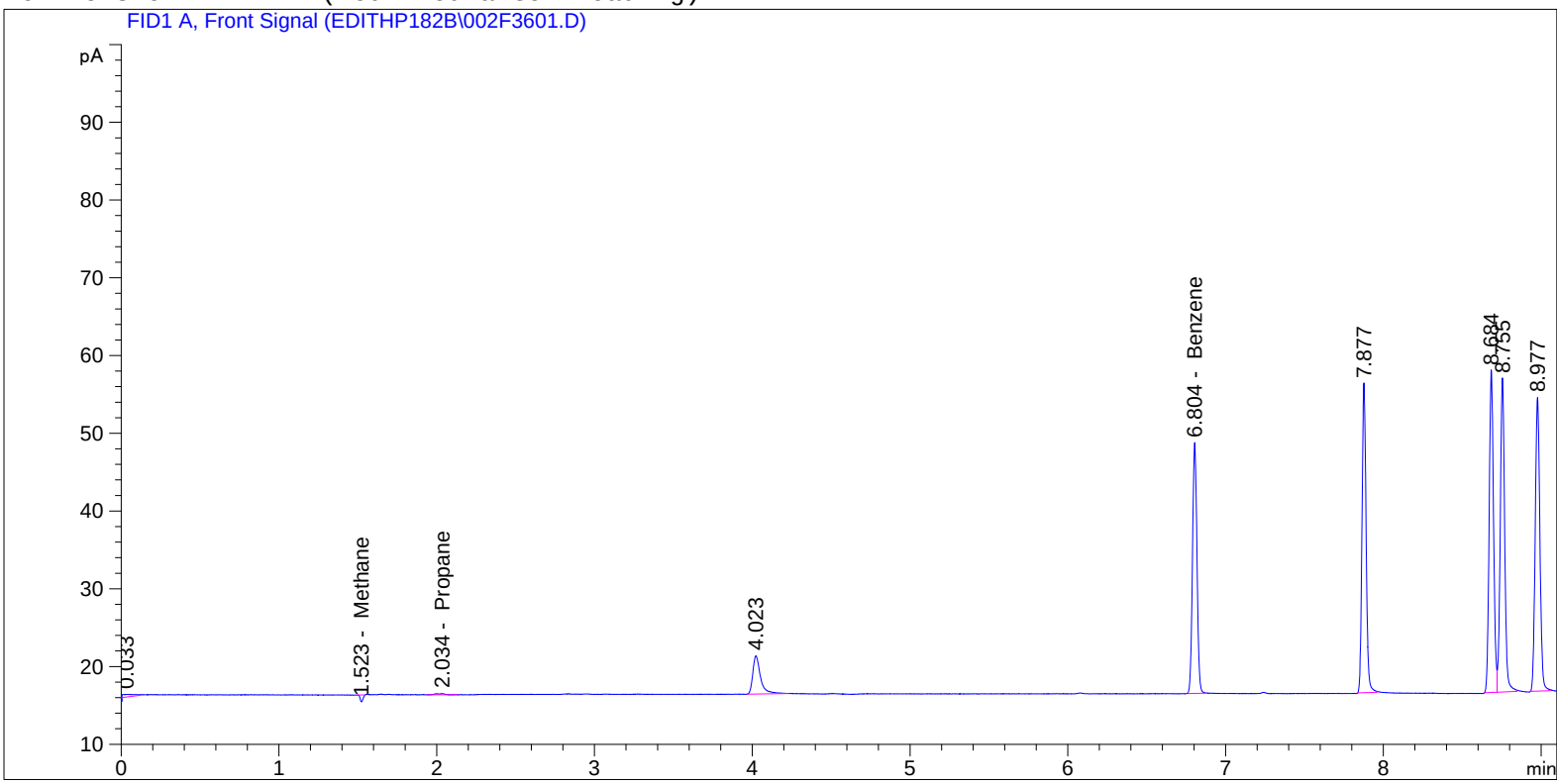
Name	Total Area [pA*s]	Amount [ppm]
as Ethane	2.05743e-1	0.3885
as Butane	4.78365e-1	0.4588
Methane	10.61538	39.2298
Ethane	20.75494	39.2308
Propane	31.24520	39.7911
Butane	41.20476	39.5804
Pentane	51.35748	39.9182
Hexane	61.00325	40.5126
Benzene	0.00000	0.0000
Heptane	71.12826	38.8460

Totals : 277.9562

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\002F3601.D
Sample Name: EdithP155 #B3 ENV(1=600,6=400)

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  36
Acq. Instrument : Edith                          Location : Vial 2
Injection Date  : 1/9/2015 9:02:49 PM                 Inj :   1
                                                Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.523 BP N      1.10926    3.93469    4.36458    Methane
  1.688            -          -          -         Ethane
  2.034 BB     5.72904e-1    1.26492 7.24678e-1    Propane
  2.943            -          -          -         Butane
  4.495            -          -          -         Pentane
  6.067            -          -          -         Hexane
  6.804 BB       63.80238 6.31512e-1   40.29200    Benzene
  7.232            -          -          -         Heptane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\002F3601.D
Sample Name: EdithP155 #B3 ENV(1=600,6=400)

Totals : 45.38125

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
0.033	BB	1.54571	1.26492	1.95520		?
4.023	BB	16.66455	1.27242	21.20424		?
7.877	BB	72.11085	1.27422	91.88491		?
8.684	BV	79.79662	1.27427	101.68241		?
8.755	VB	78.53425	1.27426	100.07320		?
8.977	BB	77.70708	1.27426	99.01875		?

Uncalib. totals : 415.81870

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Pentane	3.714	5.209	16.66455	12.8529
as Hexane	5.209	13.000	308.14879	203.3033

Totals : 216.1562

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

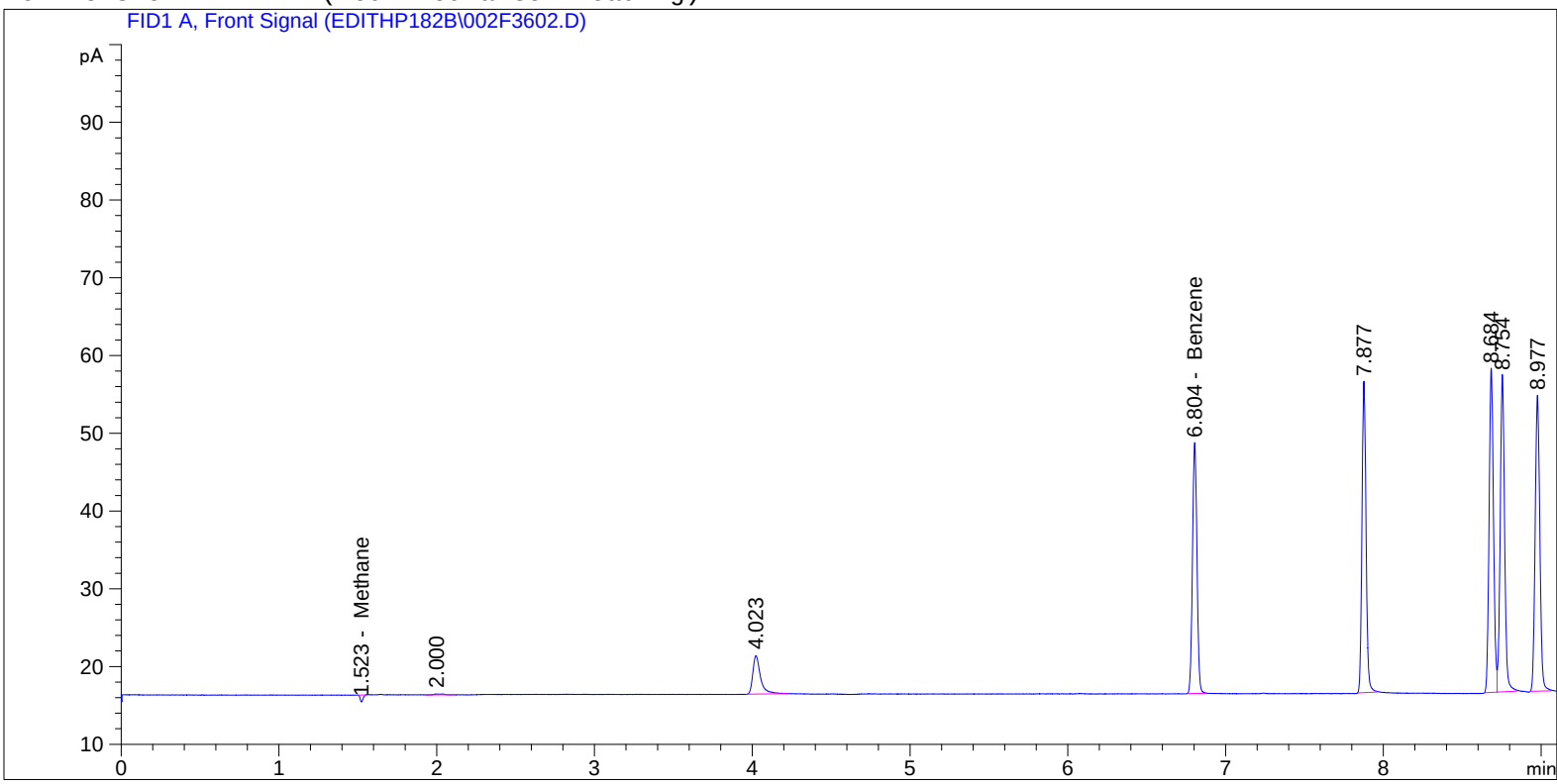
Name	Total Area [pA*s]	Amount [ppm]
as Pentane	16.66455	12.8529
as Hexane	308.14879	203.3033
Methane	1.10926	4.3646
Ethane	0.00000	0.0000
Propane	5.72904e-1	0.7247
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	63.80238	40.2920
Heptane	0.00000	0.0000

Totals : 261.5374

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\002F3602.D
Sample Name: EdithP155 #B3 ENV(1=600,6=400)

```
==================================================================
Acq. Operator   : disconnected                  Seq. Line :  36
Acq. Instrument : Edith                         Location : Vial 2
Injection Date  : 1/9/2015 9:19:47 PM                Inj :   2
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.523	BP N	1.09992	3.93469	4.32784		Methane
1.688		-	-	-		Ethane
2.031		-	-	-		Propane
2.943		-	-	-		Butane
4.495		-	-	-		Pentane
6.067		-	-	-		Hexane
6.804	BB	64.03886	6.31516e-1	40.44155		Benzene
7.232		-	-	-		Heptane

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\002F3602.D
Sample Name: EdithP155 #B3 ENV(1=600,6=400)

Totals : 44.76939

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.000	BB	4.73891e-1	1.26492	5.99434e-1		?
4.023	BB	16.76409	1.27243	21.33112		?
7.877	BB	72.38763	1.27422	92.23774		?
8.684	BV	80.61334	1.27427	102.72354		?
8.754	VB	79.15943	1.27427	100.87015		?
8.977	BB	78.53558	1.27426	100.07490		?

Uncalib. totals : 417.83689

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========

Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	4.73891e-1	0.6033
as Pentane	3.714	5.209	16.76409	12.9296
as Hexane	5.209	13.000	310.69599	204.9839

Totals : 218.5168

1 Warnings or Errors :

Warning : Reference compound(s) not found

==========

Final Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

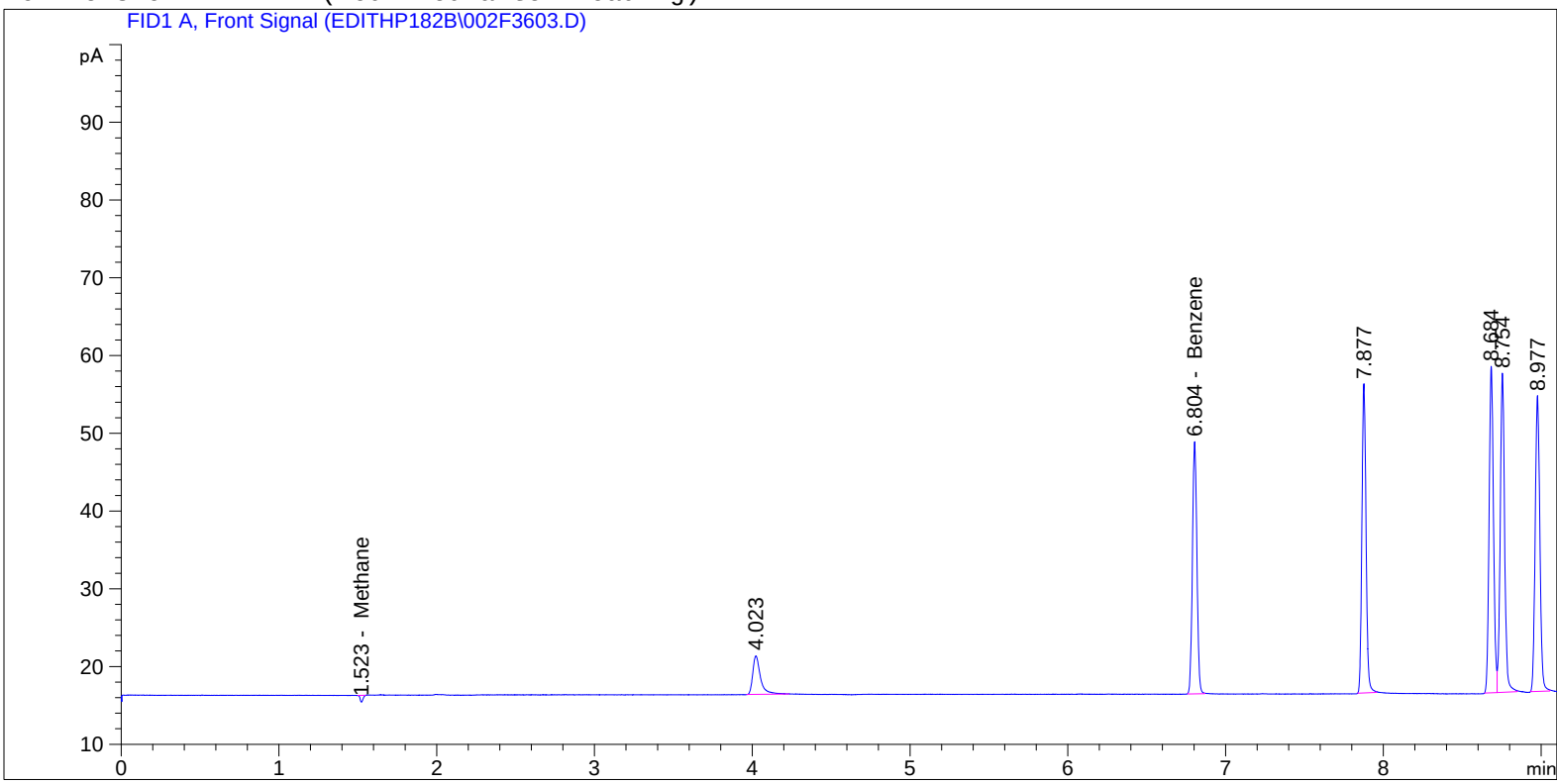
Name	Total Area [pA*s]	Amount [ppm]
as Propane	4.73891e-1	0.6033
as Pentane	16.76409	12.9296
as Hexane	310.69599	204.9839
Methane	1.09992	4.3278
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	64.03886	40.4415
Heptane	0.00000	0.0000

Totals : 263.2861

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\002F3603.D
Sample Name: EdithP155 #B3 ENV(1=600,6=400)

```
==================================================================
Acq. Operator   : disconnected                  Seq. Line :  36
Acq. Instrument : Edith                         Location : Vial 2
Injection Date  : 1/9/2015 9:36:53 PM                Inj :   3
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M
Last changed    : 1/12/2015 2:59:38 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:59:28 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.523 BP N      1.09636    3.93469    4.31383    Methane
  1.688            -          -          -         Ethane
  2.031            -          -          -         Propane
  2.943            -          -          -         Butane
  4.495            -          -          -         Pentane
  6.067            -          -          -         Hexane
  6.804 BB       64.13401 6.31517e-1   40.50172    Benzene
  7.232            -          -          -         Heptane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\002F3603.D
Sample Name: EdithP155 #B3 ENV(1=600,6=400)

Totals : 44.81555

Uncalibrated Peaks : using compound Propane

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
4.023	BB	16.90185	1.27245	21.50673		?
7.877	BB	72.60169	1.27422	92.51062		?
8.684	BV	80.94056	1.27428	103.14066		?
8.754	VB	79.53703	1.27427	101.35150		?
8.977	BB	78.51664	1.27426	100.05075		?

Uncalib. totals : 418.56026

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Pentane	3.714	5.209	16.90185	13.0359
as Hexane	5.209	13.000	311.59592	205.5776

Totals : 218.6135

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Pentane	16.90185	13.0359
as Hexane	311.59592	205.5776
Methane	1.09636	4.3138
Ethane	0.00000	0.0000
Propane	0.00000	0.0000
Butane	0.00000	0.0000
Pentane	0.00000	0.0000
Hexane	0.00000	0.0000
Benzene	64.13401	40.5017
Heptane	0.00000	0.0000

Totals : 263.4290

*** End of Report ***

Calibration Table

Calib. Data Modified : 1/12/2015 2:59:28 PM

Rel. Reference Window : 0.000 %
Abs. Reference Window : 0.100 min
Rel. Non-ref. Window : 0.000 %
Abs. Non-ref. Window : 0.050 min
Uncalibrated Peaks : Separately calculated (see below)
Partial Calibration : Yes, identified peaks are recalibrated
Correct All Ret. Times: No, only for identified peaks

Curve Type : Linear
Origin : Connected
Weight : Quadratic (Amnt)

Recalibration Settings:
Average Response : Average all calibrations
Average Retention Time: Floating Average New 75%

Calibration Report Options :
Printout of recalibrations within a sequence:
Calibration Table after Recalibration
Normal Report after Recalibration
If the sequence is done with bracketing:
Results of first cycle (ending previous bracket)

Signal 1: FID1 A, Front Signal
Uncalibrated Peaks : using compound Propane
Signal 2: FID3 B, Back Signal
Uncalibrated Peaks : not reported

RetTime [min]	Sig	Lvl	Amount [ppm]	Area	Amt/Area	Ref	Grp	Name
1.548	1	1	5.01000	1.24640	4.01958			Methane
		2	10.02000	2.73780	3.65988			
		3	40.08000	11.00137	3.64318			
		4	100.20000	27.38345	3.65914			
		5	1026.00000	279.47185	3.67121			
		7	1.02600e4	2831.91227	3.62299			
		9	5.13000e4	1.33966e4	3.82933			
1.688	1	1	5.00500	2.64095	1.89515			Ethane
		2	10.01000	5.43771	1.84085			
		3	40.04000	21.75508	1.84049			
		4	100.10000	53.44088	1.87310			
		5	1026.00000	539.84916	1.90053			
		7	1.02600e4	5461.77913	1.87851			
		9	5.13000e4	2.57779e4	1.99008			
2.031	1	1	5.02000	3.93552	1.27556			Propane
		2	10.04000	7.98325	1.25763			
		3	40.16000	32.24148	1.24560			
		4	100.40000	79.98379	1.25525			
		5	1026.00000	801.90285	1.27946			
		7	1.02600e4	8146.17285	1.25949			
		9	5.13000e4	3.83387e4	1.33807			
2.943	1	1	5.01000	5.26892	9.50859e-1			Butane
		2	10.02000	10.51788	9.52664e-1			
		3	40.08000	42.46952	9.43736e-1			
		4	100.20000	105.51465	9.49631e-1			

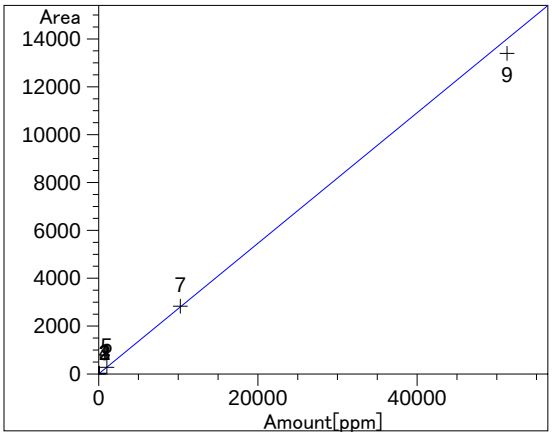
Method C:\GC\2014\EDITH\METHODS\EDITHP121F_C1-C6_BENZENE.M

RetTime [min]	Sig	Lvl	Amount [ppm]	Area	Amt/Area	Ref Grp	Name
		5	206.00000	213.97933	9.62710e-1		
		7	2060.00000	2170.61491	9.49040e-1		
		9	1.03000e4	1.02448e4	1.00539		
4.495	1	1	5.00000	6.79984	7.35311e-1		Pentane
		2	10.00000	13.34243	7.49489e-1		
		3	40.00000	53.24072	7.51305e-1		
		4	100.00000	131.72862	7.59136e-1		
		5	104.00000	131.05394	7.93566e-1		
		7	1040.00000	1331.66182	7.80979e-1		
		9	5200.00000	6271.82715	8.29104e-1		
6.067	1	1	5.00500	7.78685	6.42751e-1		Hexane
		2	10.01000	15.63340	6.40296e-1		
		3	40.04000	63.01467	6.35408e-1		
		4	100.10000	156.35443	6.40212e-1		
		7	820.00000	1210.28654	6.77526e-1		
		9	4100.00000	5675.94564	7.22347e-1		
6.795	1	21	5.15000	8.18262	6.29383e-1		Benzene
		22	20.60000	33.20670	6.20357e-1		
		23	41.20000	66.32658	6.21169e-1		
		24	103.00000	163.96829	6.28170e-1		
		25	530.96000	811.71106	6.54124e-1		
7.232	1	1	4.99100	9.07234	5.50134e-1		Heptane
		2	9.98200	18.20331	5.48362e-1		
		3	39.92800	73.48394	5.43357e-1		
		4	99.82000	182.12613	5.48082e-1		

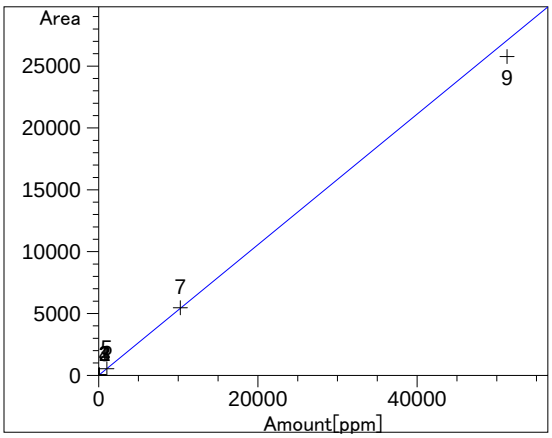
Peak Sum Table

Name	StartTime [min]	EndTime [min]	Use Reference	Response factor	Multiplier	ISTD Peak
as Ethane	1.550	1.855	None	1.8884	1.8884	None
as Propane	1.855	2.479	None	1.2730	1.2730	None
as Butane	2.479	3.714	None	9.5915e-1	0.9591	None
as Pentane	3.714	5.209	None	7.7127e-1	0.7713	None
as Hexane	5.209	13.000	None	6.5976e-1	0.6598	None

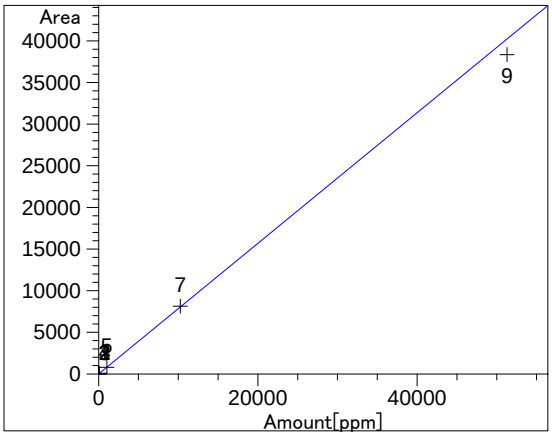
Calibration Curves



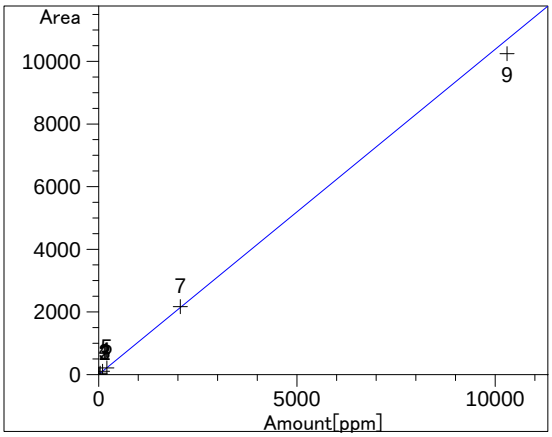
Methane at exp. RT: 1.548
FID1 A, Front Signal
Correlation: 0.99959
Residual Std. Dev.: 272.40560
Formula: y = mx + b
m: 2.73002e-1
b: -9.44523e-2
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.25
Level 3 : 0.015625
Level 4 : 0.0025
Level 5 : 0.000024
Level 7 : 2.38441e-007
Level 9 : 9.53764e-009



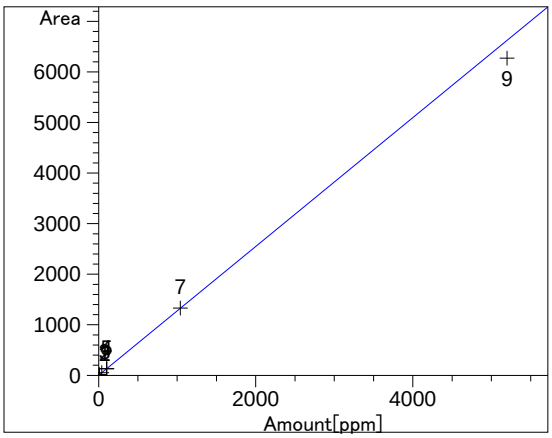
Ethane at exp. RT: 1.688
FID1 A, Front Signal
Correlation: 0.99959
Residual Std. Dev.: 588.10314
Formula: y = mx + b
m: 5.28113e-1
b: 3.66515e-2
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.25
Level 3 : 0.015625
Level 4 : 0.0025
Level 5 : 0.000024
Level 7 : 2.37965e-007
Level 9 : 9.51861e-009



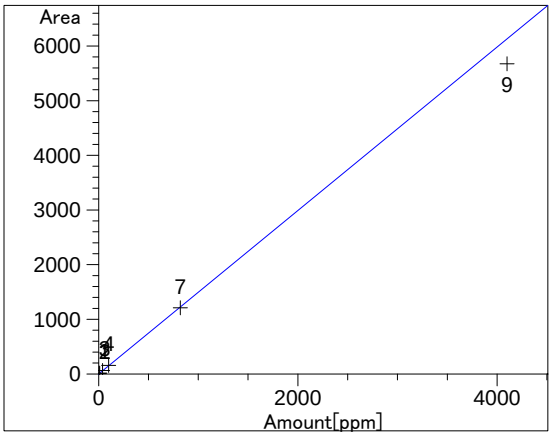
Propane at exp. RT: 2.031
FID1 A, Front Signal
Correlation: 0.99965
Residual Std. Dev.: 852.69660
Formula: y = mx + b
m: 7.84462e-1
b: 3.06331e-2
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.25
Level 3 : 0.015625
Level 4 : 0.0025
Level 5 : 0.000024
Level 7 : 2.39394e-007
Level 9 : 9.57575e-009



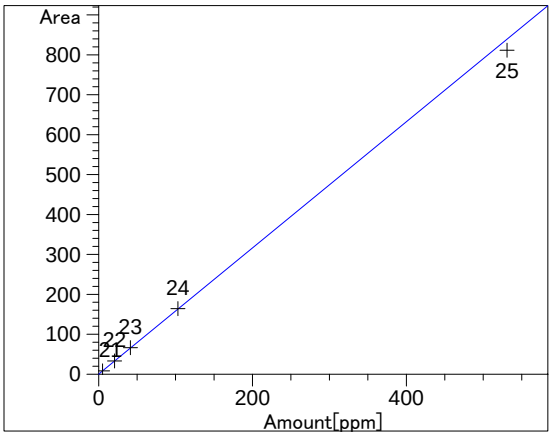
Butane at exp. RT: 2.943
FID1 A, Front Signal
Correlation: 0.99973
Residual Std. Dev.: 204.33121
Formula: y = mx + b
m: 1.03890
b: 8.48570e-2
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.25
Level 3 : 0.015625
Level 4 : 0.0025
Level 5 : 0.000591
Level 7 : 5.91481e-006
Level 9 : 2.36593e-007



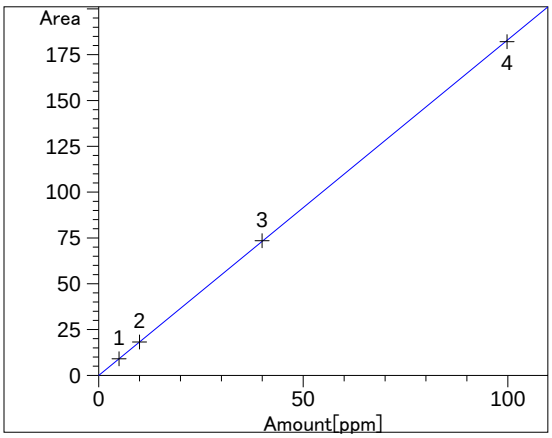
Pentane at exp. RT: 4.495
FID1 A, Front Signal
Correlation: 0.99942
Residual Std. Dev.: 158.88295
Formula: y = mx + b
m: 1.27433
b: 4.88422e-1
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.25
Level 3 : 0.015625
Level 4 : 0.0025
Level 5 : 0.002311
Level 7 : 0.000023
Level 9 : 9.24556e-007



Hexane at exp. RT: 6.067
FID1 A, Front Signal
Correlation: 0.99867
Residual Std. Dev.: 228.00851
Formula: y = mx + b
m: 1.49541
b: 4.20132e-1
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.25
Level 3 : 0.015625
Level 4 : 0.0025
Level 7 : 0.000037
Level 9 : 1.49019e-006



Benzene at exp. RT: 6.795
FID1 A, Front Signal
Correlation: 0.99972
Residual Std. Dev.: 16.17396
Formula: y = mx + b
m: 1.58127
b: 8.98928e-2
x: Amount
y: Area
Calibration Level Weights:
Level 21 : 1
Level 22 : 0.0625
Level 23 : 0.015625
Level 24 : 0.0025
Level 25 : 0.000094



Heptane at exp. RT: 7.232
FID1 A, Front Signal
Correlation: 0.99999
Residual Std. Dev.: 0.60330
Formula: y = mx + b
m: 1.83300
b: -7.65536e-2
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.25
Level 3 : 0.015625
Level 4 : 0.0025

==========

Calibration Table

Calib. Data Modified : 9/23/2014 7:13:51 AM

Rel. Reference Window : 0.000 %
Abs. Reference Window : 0.100 min
Rel. Non-ref. Window : 0.000 %
Abs. Non-ref. Window : 0.050 min
Uncalibrated Peaks : Separately calculated (see below)
Partial Calibration : Yes, identified peaks are recalibrated
Correct All Ret. Times: No, only for identified peaks

Curve Type : Linear
Origin : Connected
Weight : Quadratic (Amnt)

Recalibration Settings:
Average Response : Average all calibrations
Average Retention Time: Floating Average New 75%

Calibration Report Options :
Printout of recalibrations within a sequence:
Calibration Table after Recalibration
Normal Report after Recalibration
If the sequence is done with bracketing:
Results of first cycle (ending previous bracket)

Signal 1: FID1 A, Front Signal
Uncalibrated Peaks : using compound Propane
Signal 2: FID3 B, Back Signal
Uncalibrated Peaks : not reported

RetTime [min]	Sig	Lvl	Amount [ppm]	Area	Amt/Area	Ref	Grp	Name
1.543	1	1	5.01000	1.24640	4.01958			Methane
		2	10.02000	2.73780	3.65988			
		3	40.08000	11.00137	3.64318			
		4	100.20000	27.38345	3.65914			
		5	1026.00000	279.47185	3.67121			
		7	1.02600e4	2831.91227	3.62299			
		9	5.13000e4	1.33966e4	3.82933			
1.685	1	1	5.00500	2.64095	1.89515			Ethane
		2	10.01000	5.43771	1.84085			
		3	40.04000	21.75508	1.84049			
		4	100.10000	53.44088	1.87310			
		5	1026.00000	539.84916	1.90053			
		7	1.02600e4	5461.77913	1.87851			
		9	5.13000e4	2.57779e4	1.99008			
2.023	1	1	5.02000	3.93552	1.27556			Propane
		2	10.04000	7.98325	1.25763			
		3	40.16000	32.24148	1.24560			
		4	100.40000	79.98379	1.25525			
		5	1026.00000	801.90285	1.27946			
		7	1.02600e4	8146.17285	1.25949			
		9	5.13000e4	3.83387e4	1.33807			
2.932	1	1	5.01000	5.26892	9.50859e-1			Butane
		2	10.02000	10.51788	9.52664e-1			
		3	40.08000	42.46952	9.43736e-1			
		4	100.20000	105.51465	9.49631e-1			

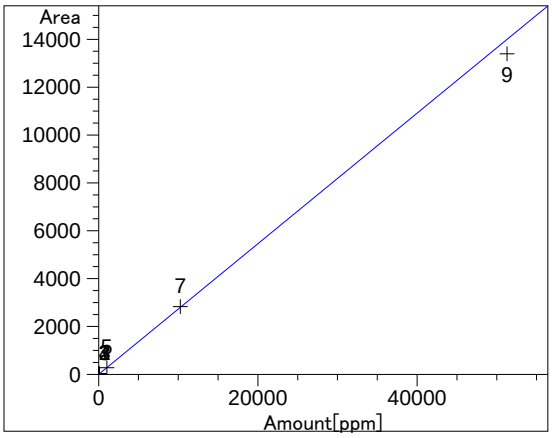
Method C:\GC\2014\EDITH\METHODS\EDITHP108F_C1-C7.M

RetTime [min]	Sig	Lvl	Amount [ppm]	Area	Amt/Area	Ref Grp	Name
		5	206.00000	213.97933	9.62710e-1		
		7	2060.00000	2170.61491	9.49040e-1		
		9	1.03000e4	1.02448e4	1.00539		
4.493	1	1	5.00000	6.79984	7.35311e-1		Pentane
		2	10.00000	13.34243	7.49489e-1		
		3	40.00000	53.24072	7.51305e-1		
		4	100.00000	131.72862	7.59136e-1		
		5	104.00000	131.05394	7.93566e-1		
		7	1040.00000	1331.66182	7.80979e-1		
		9	5200.00000	6271.82715	8.29104e-1		
6.067	1	1	5.00500	7.78685	6.42751e-1		Hexane
		2	10.01000	15.63340	6.40296e-1		
		3	40.04000	63.01467	6.35408e-1		
		4	100.10000	156.35443	6.40212e-1		
		7	820.00000	1210.28654	6.77526e-1		
		9	4100.00000	5675.94564	7.22347e-1		
7.232	1	1	4.99100	9.07234	5.50134e-1		Heptane
		2	9.98200	18.20331	5.48362e-1		
		3	39.92800	73.48394	5.43357e-1		
		4	99.82000	182.12613	5.48082e-1		

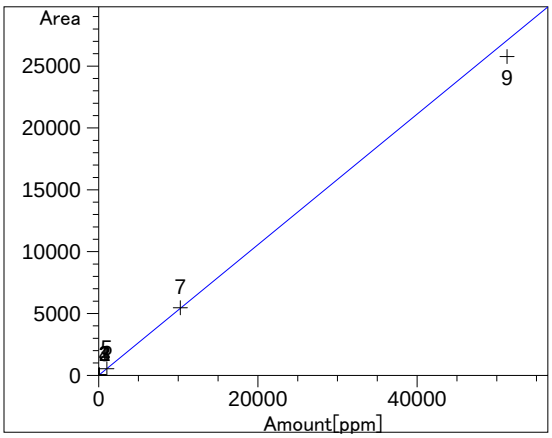
Peak Sum Table

Name	StartTime [min]	EndTime [min]	Use Reference	Response factor	Multiplier	ISTD Peak
as Ethane	1.550	1.855	None	1.8884	1.8884	None
as Propane	1.855	2.479	None	1.2730	1.2730	None
as Butane	2.479	3.714	None	9.5915e-1	0.9591	None
as Pentane	3.714	5.209	None	7.7127e-1	0.7713	None
as Hexane	5.209	6.650	None	6.5976e-1	0.6598	None
as Heptane	6.650	13.000	None	5.4785e-1	0.5475	None

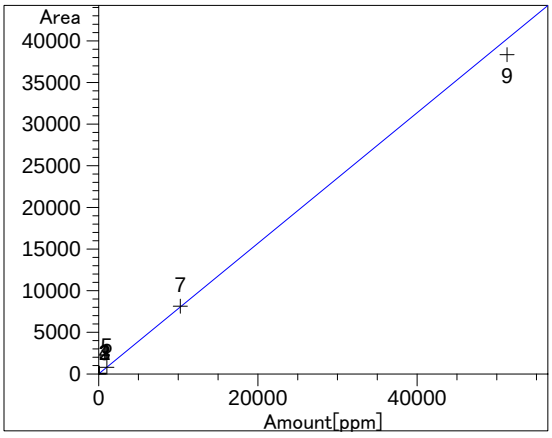
Calibration Curves



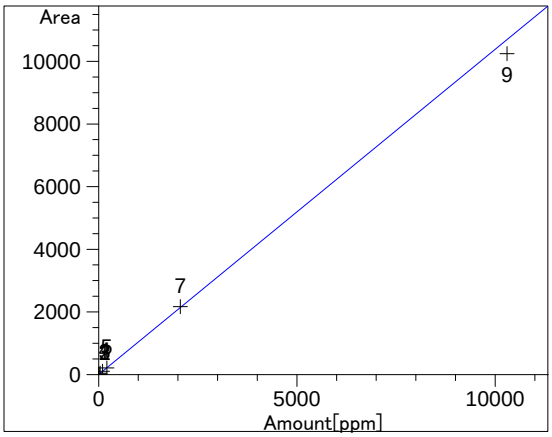
Methane at exp. RT: 1.543
FID1 A, Front Signal
Correlation: 0.99959
Residual Std. Dev.: 272.40560
Formula: y = mx + b
m: 2.73002e-1
b: -9.44523e-2
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.25
Level 3 : 0.015625
Level 4 : 0.0025
Level 5 : 0.000024
Level 7 : 2.38441e-007
Level 9 : 9.53764e-009



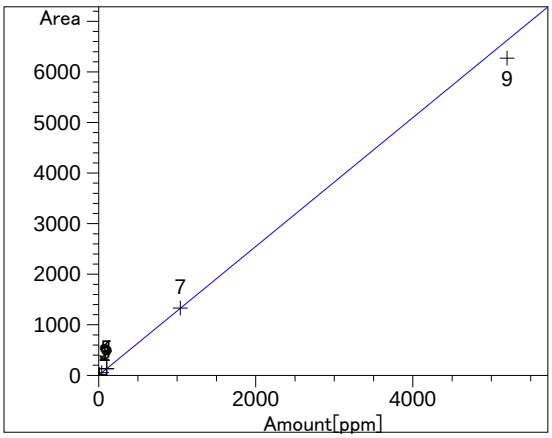
Ethane at exp. RT: 1.685
FID1 A, Front Signal
Correlation: 0.99959
Residual Std. Dev.: 588.10314
Formula: y = mx + b
m: 5.28113e-1
b: 3.66515e-2
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.25
Level 3 : 0.015625
Level 4 : 0.0025
Level 5 : 0.000024
Level 7 : 2.37965e-007
Level 9 : 9.51861e-009



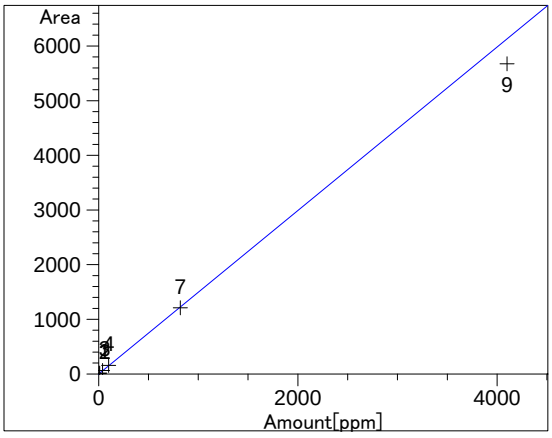
Propane at exp. RT: 2.023
FID1 A, Front Signal
Correlation: 0.99965
Residual Std. Dev.: 852.69660
Formula: y = mx + b
m: 7.84462e-1
b: 3.06331e-2
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.25
Level 3 : 0.015625
Level 4 : 0.0025
Level 5 : 0.000024
Level 7 : 2.39394e-007
Level 9 : 9.57575e-009



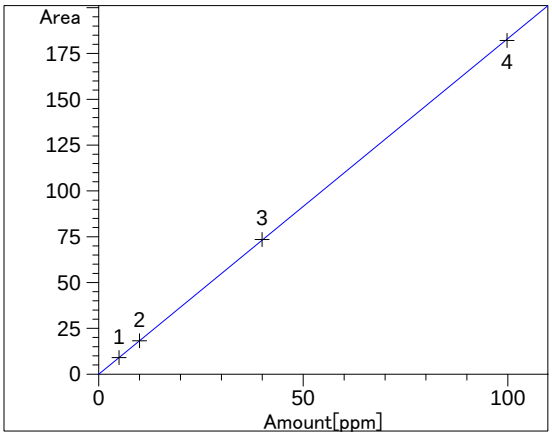
Butane at exp. RT: 2.932
FID1 A, Front Signal
Correlation: 0.99973
Residual Std. Dev.: 204.33121
Formula: y = mx + b
m: 1.03890
b: 8.48570e-2
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.25
Level 3 : 0.015625
Level 4 : 0.0025
Level 5 : 0.000591
Level 7 : 5.91481e-006
Level 9 : 2.36593e-007



Pentane at exp. RT: 4.493
FID1 A, Front Signal
Correlation: 0.99942
Residual Std. Dev.: 158.88295
Formula: y = mx + b
m: 1.27433
b: 4.88422e-1
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.25
Level 3 : 0.015625
Level 4 : 0.0025
Level 5 : 0.002311
Level 7 : 0.000023
Level 9 : 9.24556e-007



Hexane at exp. RT: 6.067
FID1 A, Front Signal
Correlation: 0.99867
Residual Std. Dev.: 228.00851
Formula: y = mx + b
m: 1.49541
b: 4.20132e-1
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.25
Level 3 : 0.015625
Level 4 : 0.0025
Level 7 : 0.000037
Level 9 : 1.49019e-006

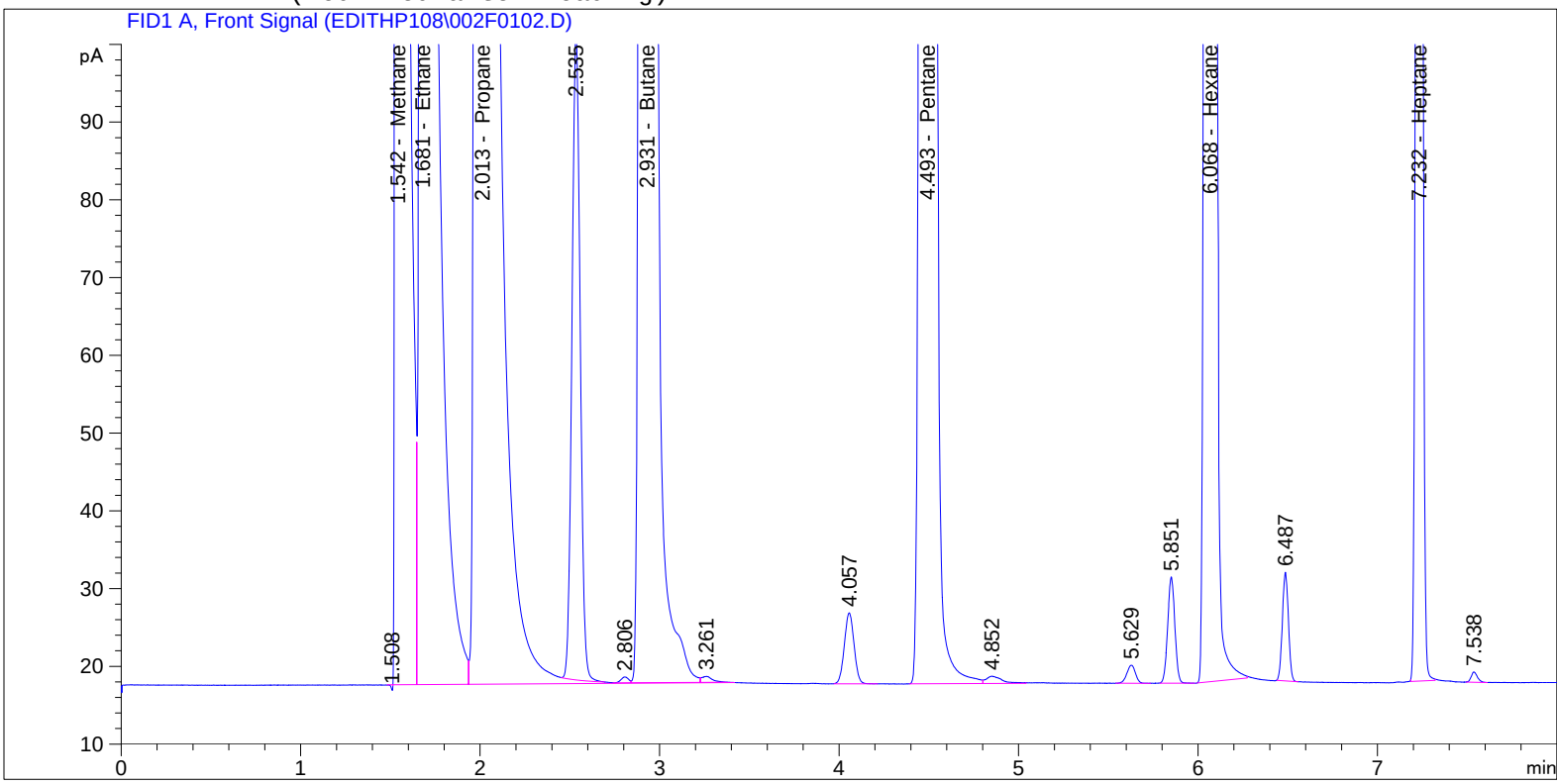


Heptane at exp. RT: 7.232
FID1 A, Front Signal
Correlation: 0.99999
Residual Std. Dev.: 0.60330
Formula: y = mx + b
m: 1.83300
b: -7.65536e-2
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.25
Level 3 : 0.015625
Level 4 : 0.0025

==========

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F0102.D
Sample Name: EdithP108 #C9 ENV(1=0,6=400)

```
==================================================================
Acq. Operator   : disconnected                  Seq. Line :   1
Acq. Instrument : Edith                          Location : Vial 2
Injection Date  : 9/19/2014 10:11:23 AM               Inj :   2
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 3\EDITHP108\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_C1-C7.M
Last changed    : 9/22/2014 10:21:52 AM by Justin Guenzler
                  (modified after loading)
```




```
==================================================================
                      External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/22/2014 10:21:52 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.542 PV     1.35438e4     3.66300 4.96110e4     Methane
  1.681 VV     2.60609e4     1.89353 4.93471e4     Ethane
  2.013 VB S   3.87471e4     1.27476 4.93932e4     Propane
  2.931 VV T   1.03501e4  9.62552e-1 9962.51135    Butane
  4.493 BV     6329.58447 7.84664e-1 4966.59403    Pentane
  6.068 BB     5713.65137 6.68662e-1 3820.50129    Hexane
  7.232 BB      769.60168 5.45608e-1  419.90076    Heptane

Totals :                             1.67521e5

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F0102.D
Sample Name: EdithP108 #C9 ENV(1=0,6=400)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.508	PP N	4.18803e-1	1.26492	5.29752e-1		?
2.535	BB X	265.56903	1.27461	338.49748		?
2.806	BV T	2.11725	1.26492	2.67815		?
3.261	VB T	3.10334	1.26492	3.92547		?
4.057	BB	34.32124	1.27362	43.71227		?
4.852	VB	5.78772	1.26801	7.33890		?
5.629	BB	7.69984	1.26969	9.77639		?
5.851	BB	37.88299	1.27373	48.25263		?
6.487	BB	32.84457	1.27357	41.82986		?
7.538	BB	3.14729	1.26492	3.98107		?

Uncalib. totals : 500.52198

==========

Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Butane	2.400	3.700	270.78962	276.3657
as Pentane	3.700	5.300	40.10896	32.3588
as Hexane	5.300	6.600	78.42740	54.1561
as Heptane	6.600	13.000	3.14729	1.8504

Totals : 364.7311

1 Warnings or Errors :

Warning : Reference compound(s) not found

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Final Summed Peaks Report

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Signal 1: FID1 A, Front Signal

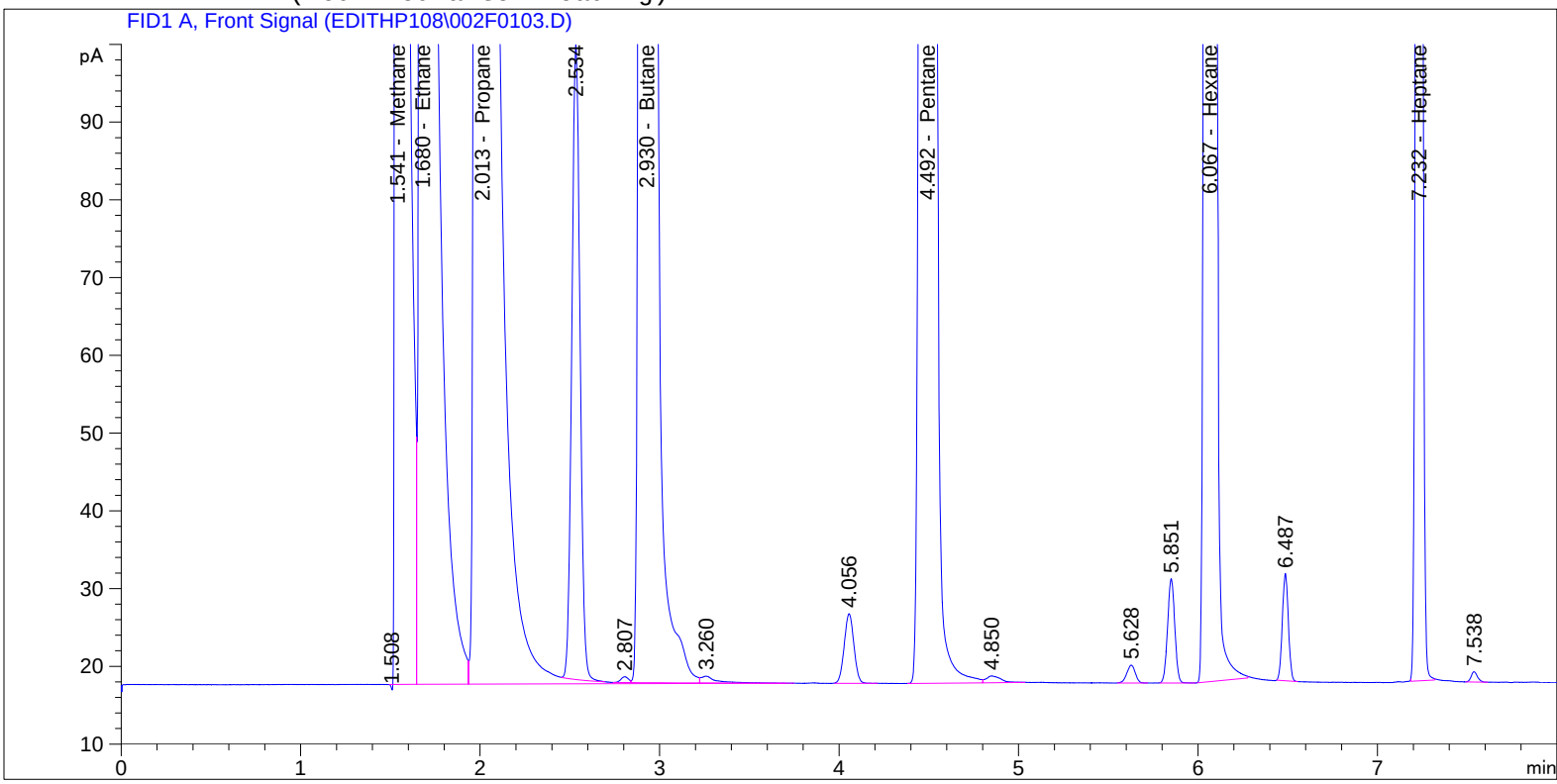
Name	Total Area [pA*s]	Amount [ppm]
as Butane	270.78962	276.3657
as Pentane	40.10896	32.3588
as Hexane	78.42740	54.1561
as Heptane	3.14729	1.8504
Methane	1.35438e4	4.961e4
Ethane	2.60609e4	4.935e4
Propane	3.87471e4	4.939e4
Butane	1.03501e4	9.963e3
Pentane	6329.58447	4.967e3
Hexane	5713.65137	3.821e3
Heptane	769.60168	419.9008

Totals : 1.6789e5

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F0103.D
Sample Name: EdithP108 #C9 ENV(1=0,6=400)

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :   1
Acq. Instrument : Edith                          Location : Vial 2
Injection Date  : 9/19/2014 10:27:35 AM               Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 3\EDITHP108\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_C1-C7.M
Last changed    : 9/22/2014 10:21:52 AM by Justin Guenzler
                  (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/22/2014 10:21:52 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.541 PV     1.32962e4     3.66300 4.87040e4     Methane
  1.680 VV     2.55747e4     1.89353 4.84265e4     Ethane
  2.013 VB S   3.80294e4     1.27476 4.84783e4     Propane
  2.930 VV X   1.01608e4  9.62552e-1 9780.26314    Butane
  4.492 BV     6221.71289 7.84662e-1 4881.94461    Pentane
  6.067 BB     5630.36670 6.68661e-1 3764.80790    Hexane
  7.232 BB      764.27332 5.45608e-1  416.99385    Heptane

Totals :                              1.64453e5

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F0103.D
Sample Name: EdithP108 #C9 ENV(1=0,6=400)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.508	BP N	3.70898e-1	1.26492	4.69157e-1		?
2.534	BB X	260.52020	1.27461	332.06144		?
2.807	BV X	2.15459	1.26492	2.72539		?
3.260	VB T	5.46515	1.26761	6.92770		?
4.056	BB	33.59258	1.27360	42.78340		?
4.850	VB	4.94411	1.26686	6.26350		?
5.628	BB	7.50741	1.26956	9.53109		?
5.851	BB	37.18023	1.27371	47.35678		?
6.487	BB	32.33476	1.27355	41.17998		?
7.538	BB	3.21634	1.26492	4.06841		?

Uncalib. totals : 493.36685

==========

Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Butane	2.400	3.700	268.13994	273.6615
as Pentane	3.700	5.300	38.53670	31.0904
as Hexane	5.300	6.600	77.02240	53.1859
as Heptane	6.600	13.000	3.21634	1.8910

Totals : 359.8288

1 Warnings or Errors :

Warning : Reference compound(s) not found

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Final Summed Peaks Report

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Signal 1: FID1 A, Front Signal

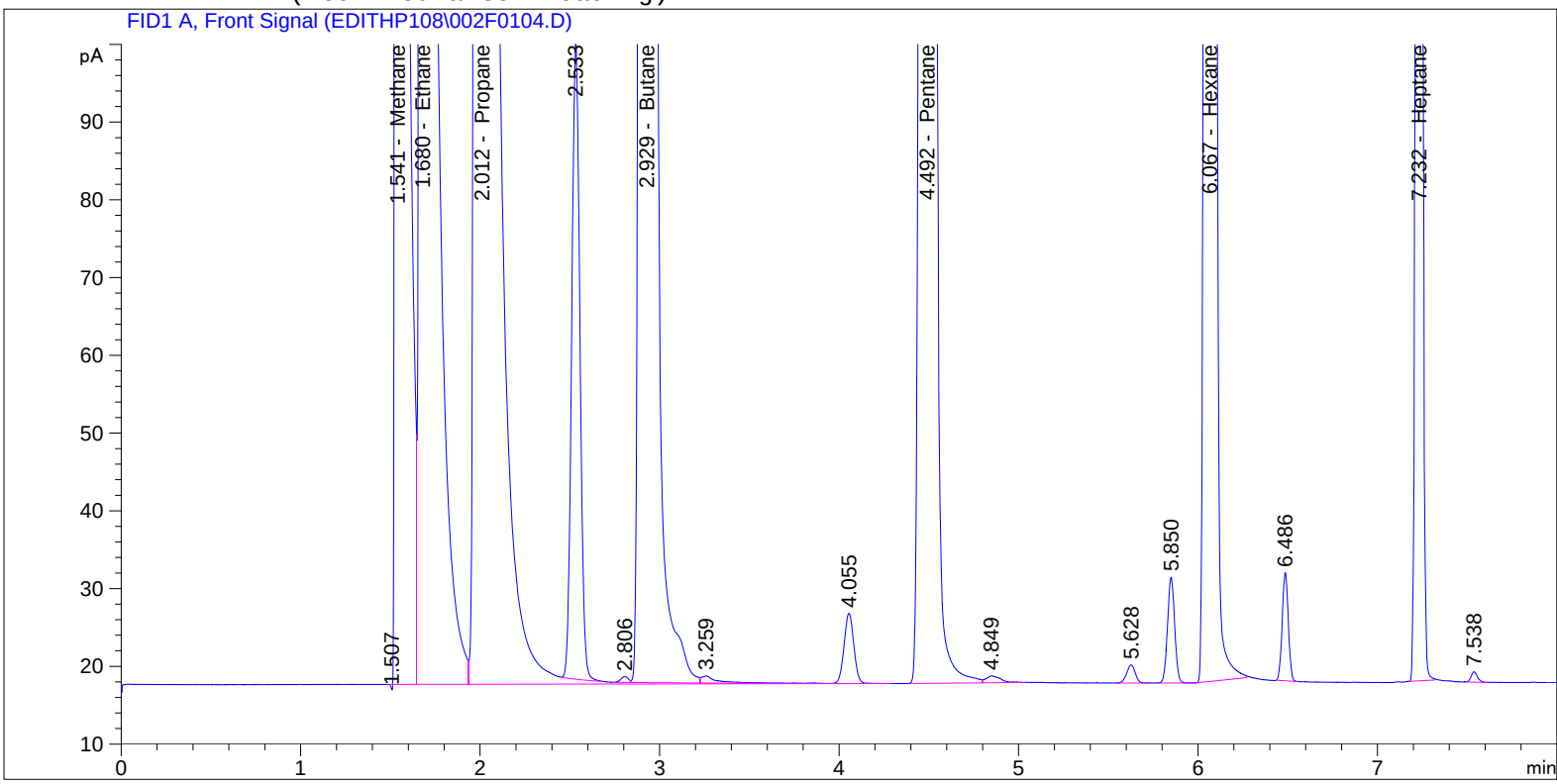
Name	Total Area [pA*s]	Amount [ppm]
as Butane	268.13994	273.6615
as Pentane	38.53670	31.0904
as Hexane	77.02240	53.1859
as Heptane	3.21634	1.8910
Methane	1.32962e4	4.870e4
Ethane	2.55747e4	4.843e4
Propane	3.80294e4	4.848e4
Butane	1.01608e4	9.780e3
Pentane	6221.71289	4.882e3
Hexane	5630.36670	3.765e3
Heptane	764.27332	416.9938

Totals : 1.6481e5

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F0104.D
Sample Name: EdithP108 #C9 ENV(1=0,6=400)

```
==================================================================
Acq. Operator   : disconnected                  Seq. Line :   1
Acq. Instrument : Edith                          Location : Vial 2
Injection Date  : 9/19/2014 10:43:55 AM               Inj :   4
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 3\EDITHP108\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_C1-C7.M
Last changed    : 9/22/2014 10:21:52 AM by Justin Guenzler
                  (modified after loading)
```




```
==================================================================
                      External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/22/2014 10:21:52 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.541 PV     1.33497e4     3.66300 4.89001e4     Methane
  1.680 VV     2.56982e4     1.89353 4.86603e4     Ethane
  2.012 VB S   3.82397e4     1.27476 4.87463e4     Propane
  2.929 VV X   1.02236e4  9.62552e-1 9840.78036    Butane
  4.492 BV     6264.18408 7.84663e-1 4915.27277    Pentane
  6.067 VB     5683.81885 6.68662e-1 3800.55195    Hexane
  7.232 BB      774.91528 5.45608e-1  422.79961    Heptane

Totals :                             1.65286e5

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F0104.D
Sample Name: EdithP108 #C9 ENV(1=0,6=400)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.507	BP N	3.68159e-1	1.26492	4.65692e-1		?
2.533	BB X	261.63516	1.27461	333.48275		?
2.806	BV X	2.16156	1.26492	2.73420		?
3.259	VV X	6.30059	1.26856	7.99269		?
4.055	VB T	34.12494	1.27361	43.46203		?
4.849	VB	4.99038	1.26693	6.32248		?
5.628	BB	7.64277	1.26965	9.70365		?
5.850	BV	37.59710	1.27372	47.88820		?
6.486	BB	32.65027	1.27356	41.58218		?
7.538	BB	3.15404	1.26492	3.98961		?

Uncalib. totals : 497.62347

==========

Summed Peaks Report

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Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Butane	2.400	3.700	270.09732	275.6592
as Pentane	3.700	5.300	39.11532	31.5572
as Hexane	5.300	6.600	77.89015	53.7851
as Heptane	6.600	13.000	3.15404	1.8544

Totals : 362.8559

1 Warnings or Errors :

Warning : Reference compound(s) not found

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Final Summed Peaks Report

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Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Butane	270.09732	275.6592
as Pentane	39.11532	31.5572
as Hexane	77.89015	53.7851
as Heptane	3.15404	1.8544
Methane	1.33497e4	4.890e4
Ethane	2.56982e4	4.866e4
Propane	3.82397e4	4.875e4
Butane	1.02236e4	9.841e3
Pentane	6264.18408	4.915e3
Hexane	5683.81885	3.801e3
Heptane	774.91528	422.7996

Totals : 1.6565e5

*** End of Report ***

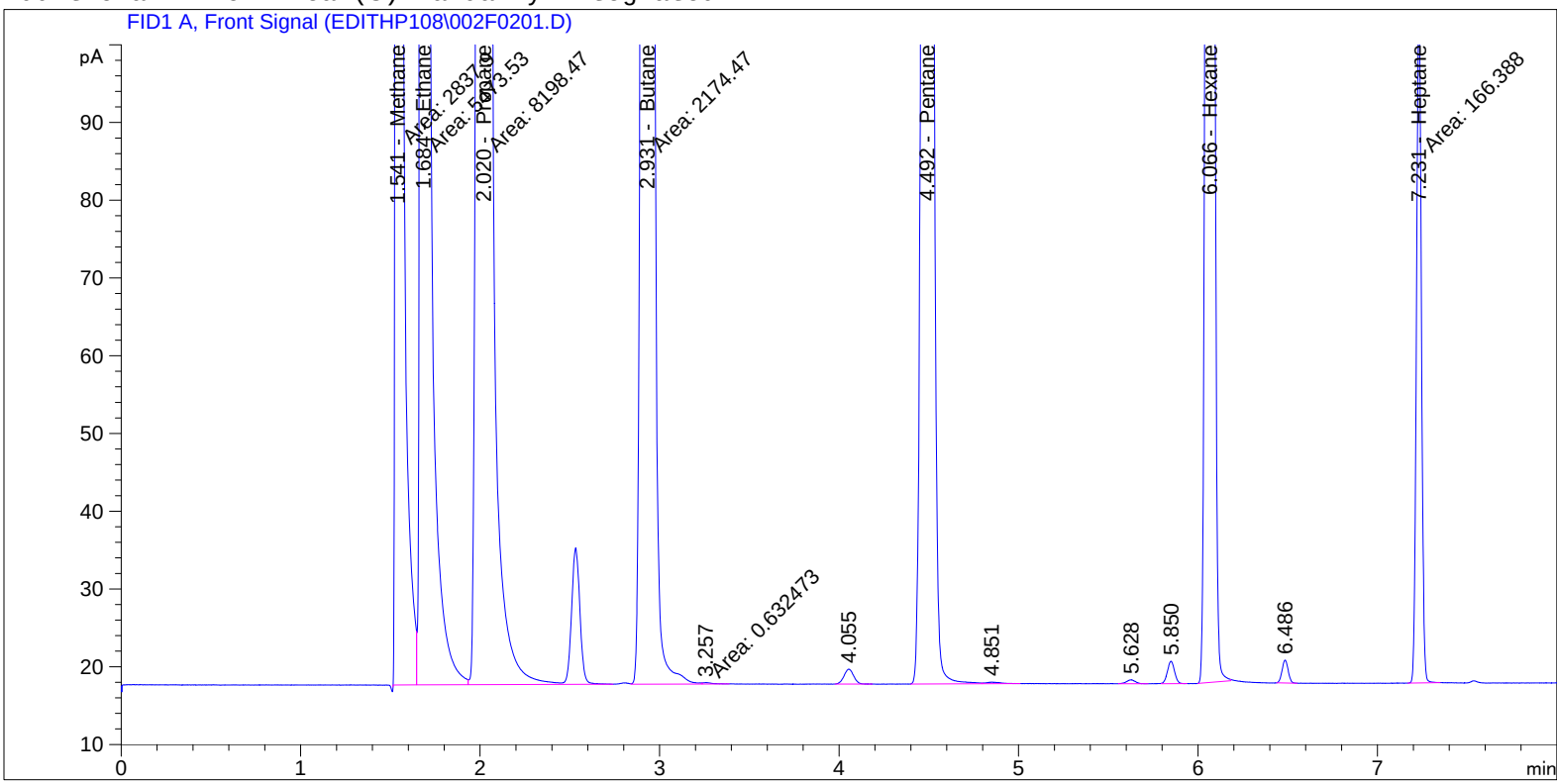
Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F0201.D
Sample Name: EdithP108 #C7 ENV(1=800,6=243.33)

==========

Acq. Operator : disconnected Seq. Line : 2
Acq. Instrument : Edith Location : Vial 2
Injection Date : 9/19/2014 11:00:20 AM Inj : 1
Inj Volume : 250 µl
Acq. Method : C:\GC\2014\EDITH\QUARTER 3\EDITHP108\GC139P039_HRVOC.M
Last changed : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_C1-C7.M
Last changed : 9/22/2014 10:21:52 AM by Justin Guenzler
(modified after loading)

Manual Int. "II" (JKG)

Additional Info : Peak(s) manually integrated



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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 9/22/2014 10:21:52 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.541	MF	2837.89941	3.66309	1.03955e4		Methane
1.684	FM	5473.52734	1.89352	1.03642e4		Ethane
2.020	FM	8198.47168	1.27475	1.04510e4		Propane
2.931	MF	2174.47192	9.62523e-1	2092.97885		Butane
4.492	BB	1333.55444	7.84437e-1	1046.08900		Pentane
6.066	BB	1210.79712	6.68479e-1	809.39256		Hexane
7.231	MM	166.38818	5.45805e-1	90.81544		Heptane

Totals : 3.52500e4

Uncalibrated Peaks : using compound Propane

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F0201.D
Sample Name: EdithP108 #C7 ENV(1=800,6=243.33)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
3.257	FM	6.32473e-1	1.26492	8.00028e-1		?
4.055	BB	7.19889	1.26933	9.13780		?
4.851	BB	1.12338	1.26492	1.42098		?
5.628	BB	1.65493	1.26492	2.09335		?
5.850	BB	7.91996	1.26983	10.05700		?
6.486	BB	6.91590	1.26911	8.77706		?

Uncalib. totals : 32.28620

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Butane	2.400	3.700	6.32473e-1	0.6455
as Pentane	3.700	5.300	8.32226	6.7142
as Hexane	5.300	6.600	16.49079	11.3873

Totals : 18.7470

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Butane	6.32473e-1	0.6455
as Pentane	8.32226	6.7142
as Hexane	16.49079	11.3873
Methane	2837.89941	1.040e4
Ethane	5473.52734	1.036e4
Propane	8198.47168	1.045e4
Butane	2174.47192	2.093e3
Pentane	1333.55444	1.046e3
Hexane	1210.79712	809.3926
Heptane	166.38818	90.8154

Totals : 3.5269e4

*** End of Report ***

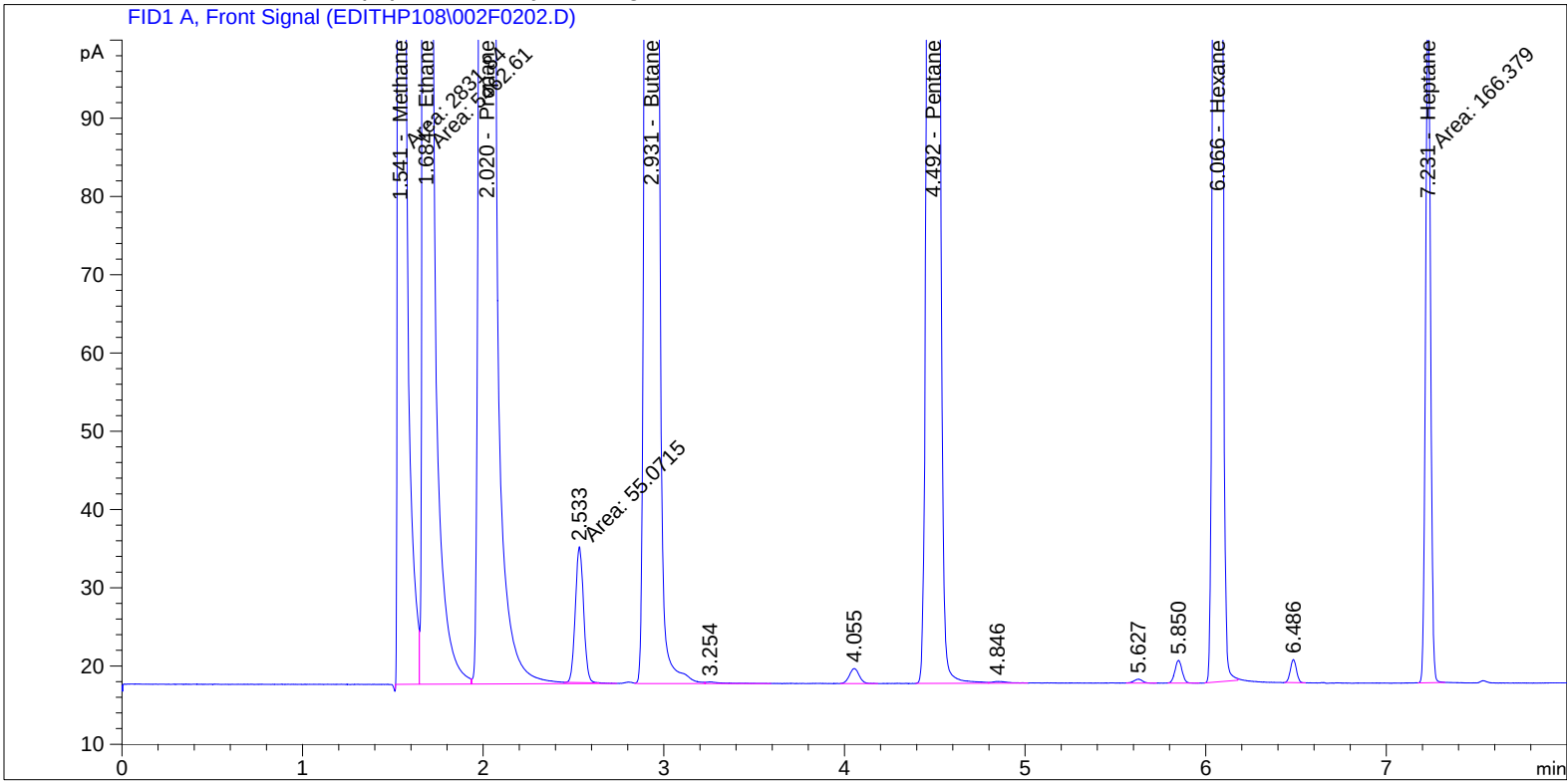
Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F0202.D
Sample Name: EdithP108 #C7 ENV(1=800,6=243.33)

==========

Acq. Operator : disconnected Seq. Line : 2
Acq. Instrument : Edith Location : Vial 2
Injection Date : 9/19/2014 11:16:47 AM Inj : 2
Inj Volume : 250 µl
Acq. Method : C:\GC\2014\EDITH\QUARTER 3\EDITHP108\GC139P039_HRVOC.M
Last changed : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_C1-C7.M
Last changed : 9/22/2014 10:21:52 AM by Justin Guenzler
(modified after loading)

Manual Int. "II" (JKG)

Additional Info : Peak(s) manually integrated



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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 9/22/2014 10:21:52 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.541	MF	2831.83716	3.66309	1.03733e4		Methane
1.684	MF	5462.61475	1.89352	1.03436e4		Ethane
2.020	FM R	8128.95898	1.27475	1.03624e4		Propane
2.931	VV X	2171.11353	9.62523e-1	2089.74619		Butane
4.492	BB	1331.40698	7.84436e-1	1044.40383		Pentane
6.066	BB	1209.52686	6.68479e-1	808.54312		Hexane
7.231	MM	166.37857	5.45805e-1	90.81020		Heptane

Totals : 3.51128e4

Uncalibrated Peaks : using compound Propane

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F0202.D
Sample Name: EdithP108 #C7 ENV(1=800,6=243.33)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.533	MM T	55.07153	1.27405	70.16388		?
3.254	VB T	1.46397	1.26492	1.85180		?
4.055	BB	7.19456	1.26933	9.13228		?
4.846	BB	1.24461	1.26492	1.57433		?
5.627	BB	1.63600	1.26492	2.06940		?
5.850	BB	7.97587	1.26986	10.12826		?
6.486	BB	6.90483	1.26910	8.76294		?

Uncalib. totals : 103.68290

==========

Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Butane	2.400	3.700	56.53550	57.6997
as Pentane	3.700	5.300	8.43917	6.8085
as Hexane	5.300	6.600	16.51669	11.4052

Totals : 75.9134

1 Warnings or Errors :

Warning : Reference compound(s) not found

==========

Final Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Butane	56.53550	57.6997
as Pentane	8.43917	6.8085
as Hexane	16.51669	11.4052
Methane	2831.83716	1.037e4
Ethane	5462.61475	1.034e4
Propane	8128.95898	1.036e4
Butane	2171.11353	2.090e3
Pentane	1331.40698	1.044e3
Hexane	1209.52686	808.5431
Heptane	166.37857	90.8102

Totals : 3.5189e4

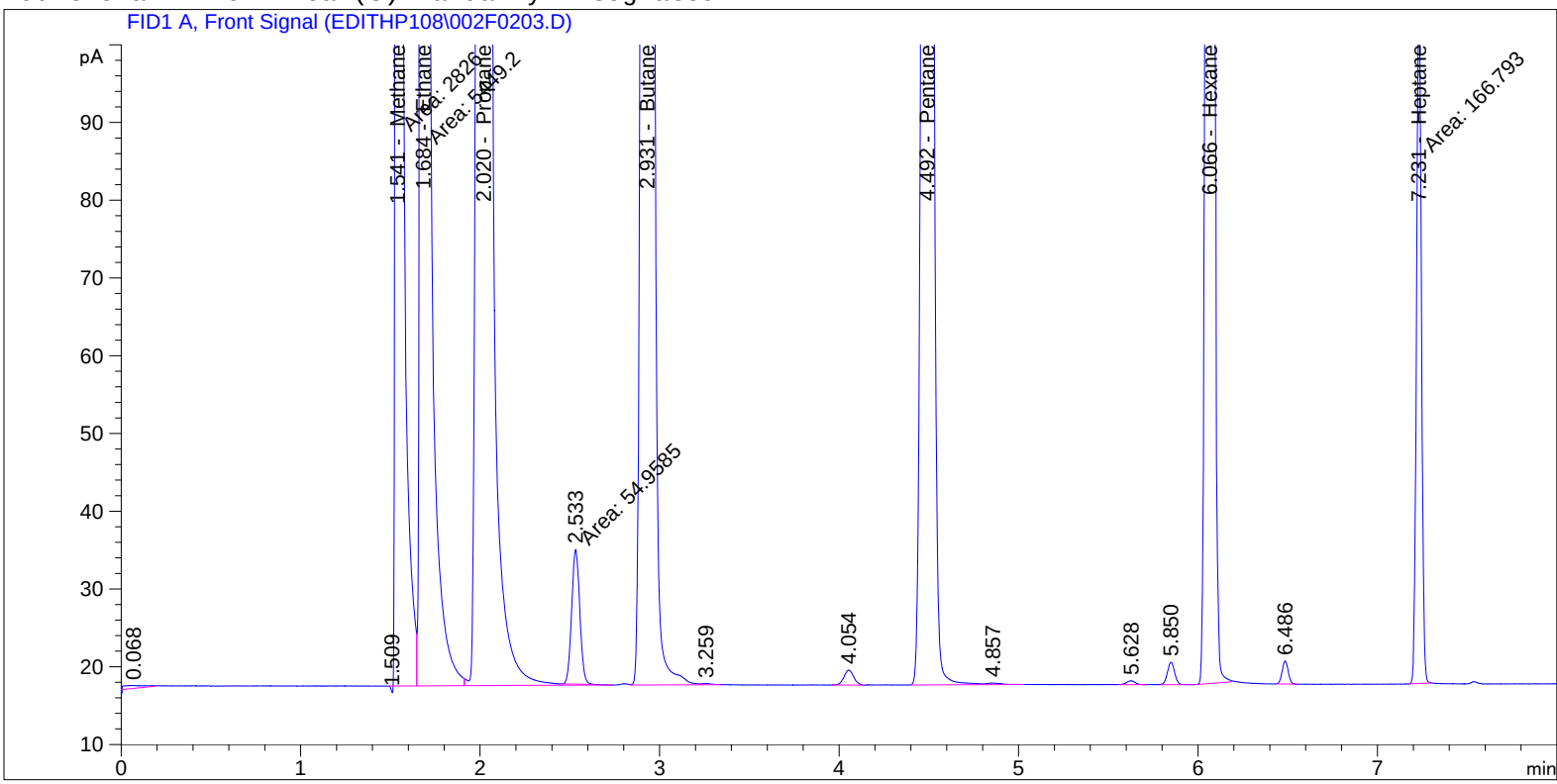
*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F0203.D
Sample Name: EdithP108 #C7 ENV(1=800,6=243.33)

==========

Acq. Operator : disconnected Seq. Line : 2
Acq. Instrument : Edith Location : Vial 2
Injection Date : 9/19/2014 11:33:11 AM Inj : 3
Inj Volume : 250 µl
Acq. Method : C:\GC\2014\EDITH\QUARTER 3\EDITHP108\GC139P039_HRVOC.M
Last changed : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_C1-C7.M
Last changed : 9/22/2014 10:21:52 AM by Justin Guenzler
(modified after loading)
Additional Info : Peak(s) manually integrated

Manual Int. "II" (JKG)



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External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 9/22/2014 10:21:52 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.541	MF	2826.00024	3.66309	1.03519e4		Methane
1.684	MF	5449.19531	1.89352	1.03182e4		Ethane
2.020	FM R	8111.08789	1.27475	1.03396e4		Propane
2.931	VV T	2166.25928	9.62523e-1	2085.07368		Butane
4.492	BV	1330.02405	7.84436e-1	1043.31861		Pentane
6.066	BB	1210.53564	6.68479e-1	809.21771		Hexane
7.231	MM	166.79295	5.45804e-1	91.03627		Heptane

Totals : 3.50384e4

Uncalibrated Peaks : using compound Propane

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F0203.D
Sample Name: EdithP108 #C7 ENV(1=800,6=243.33)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
0.068	BB	2.98571	1.26492	3.77668		?
1.509	BP N	5.60743e-1	1.26492	7.09295e-1		?
2.533	MM T	54.95855	1.27405	70.01985		?
3.259	VB T	6.22596e-1	1.26492	7.87533e-1		?
4.054	BV	7.35849	1.26945	9.34125		?
4.857	VB	1.16596	1.26492	1.47484		?
5.628	BB	1.61657	1.26492	2.04483		?
5.850	BB	8.00895	1.26988	10.17043		?
6.486	BB	6.94798	1.26914	8.81795		?

Uncalib. totals : 107.14267

==========

Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Butane	2.400	3.700	55.58114	56.7257
as Pentane	3.700	5.300	8.52444	6.8773
as Hexane	5.300	6.600	16.57350	11.4444

Totals : 75.0474

1 Warnings or Errors :

Warning : Reference compound(s) not found

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Final Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

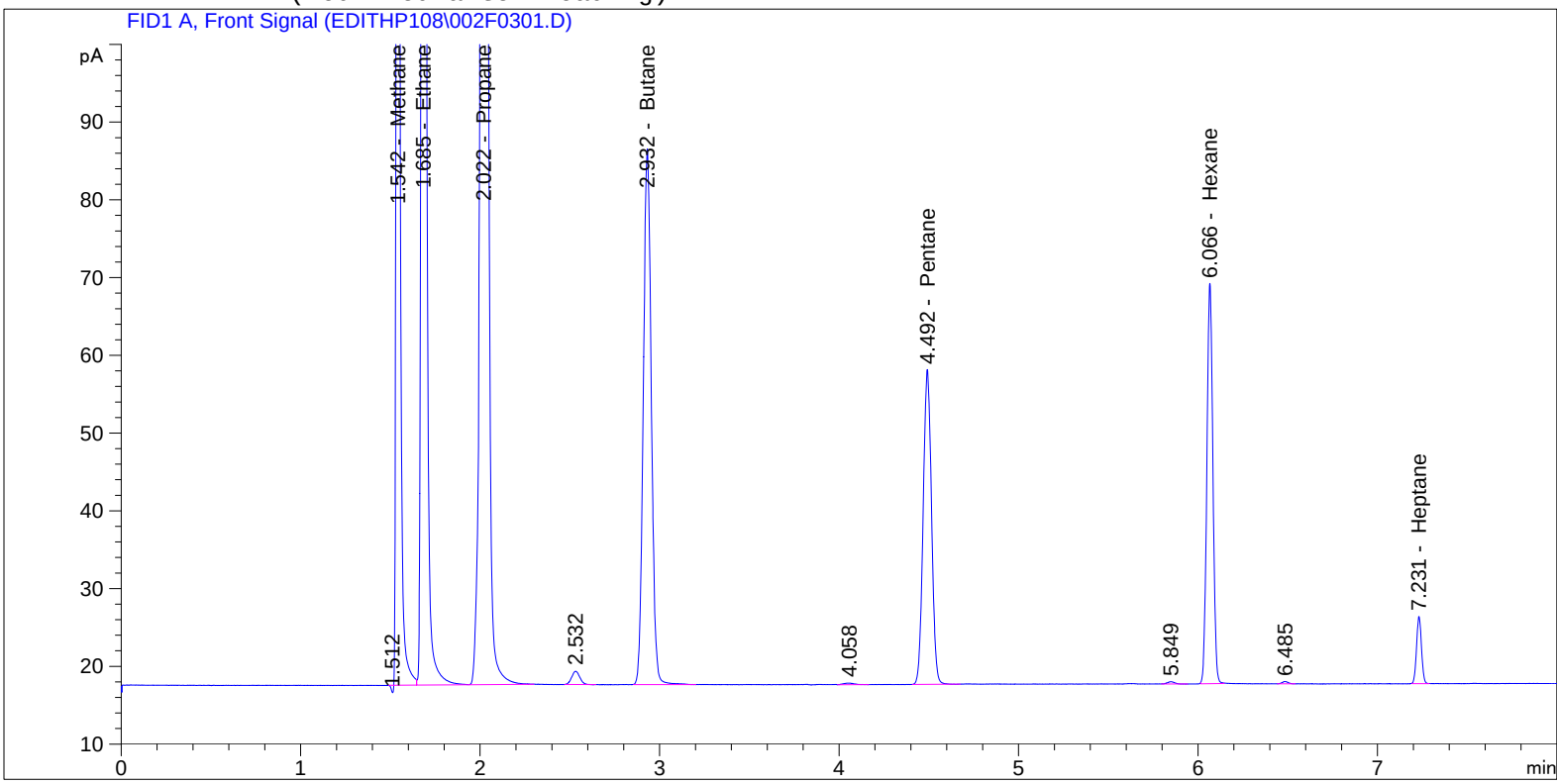
Name	Total Area [pA*s]	Amount [ppm]
as Butane	55.58114	56.7257
as Pentane	8.52444	6.8773
as Hexane	16.57350	11.4444
Methane	2826.00024	1.035e4
Ethane	5449.19531	1.032e4
Propane	8111.08789	1.034e4
Butane	2166.25928	2.085e3
Pentane	1330.02405	1.043e3
Hexane	1210.53564	809.2177
Heptane	166.79295	91.0363

Totals : 3.5113e4

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F0301.D
Sample Name: EdithP108 #C5 ENV(1=4900,6=121.67)

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :   3
Acq. Instrument : Edith                          Location : Vial 2
Injection Date  : 9/19/2014 11:49:30 AM               Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 3\EDITHP108\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_C1-C7.M
Last changed    : 9/22/2014 10:21:52 AM by Justin Guenzler
                  (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/22/2014 10:21:52 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.542 PV      279.65533    3.66421 1024.71563    Methane
  1.685 VV      540.20013    1.89341 1022.81792    Ethane
  2.022 VB      802.41431    1.27471 1022.84587    Propane
  2.932 BB      214.20848 9.62179e-1  206.10692    Butane
  4.492 BB      130.77841 7.81793e-1  102.24169    Pentane
  6.066 BB      119.46789 6.66359e-1   79.60856    Hexane
  7.231 BB       16.45404 5.48092e-1    9.01832    Heptane

Totals :                             3467.35491

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F0301.D
Sample Name: EdithP108 #C5 ENV(1=4900,6=121.67)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.512	BP N	7.72924e-1	1.26492	9.77687e-1		?
2.532	BB	5.37431	1.26749	6.81190		?
4.058	VB	9.06267e-1	1.26492	1.14635		?
5.849	BB	7.83291e-1	1.26492	9.90800e-1		?
6.485	BB	6.78864e-1	1.26492	8.58709e-1		?

Uncalib. totals : 10.78545

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Butane	2.400	3.700	5.37431	5.4850
as Pentane	3.700	5.300	9.06267e-1	0.7312
as Hexane	5.300	6.600	1.46216	1.0097

Totals : 7.2258

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

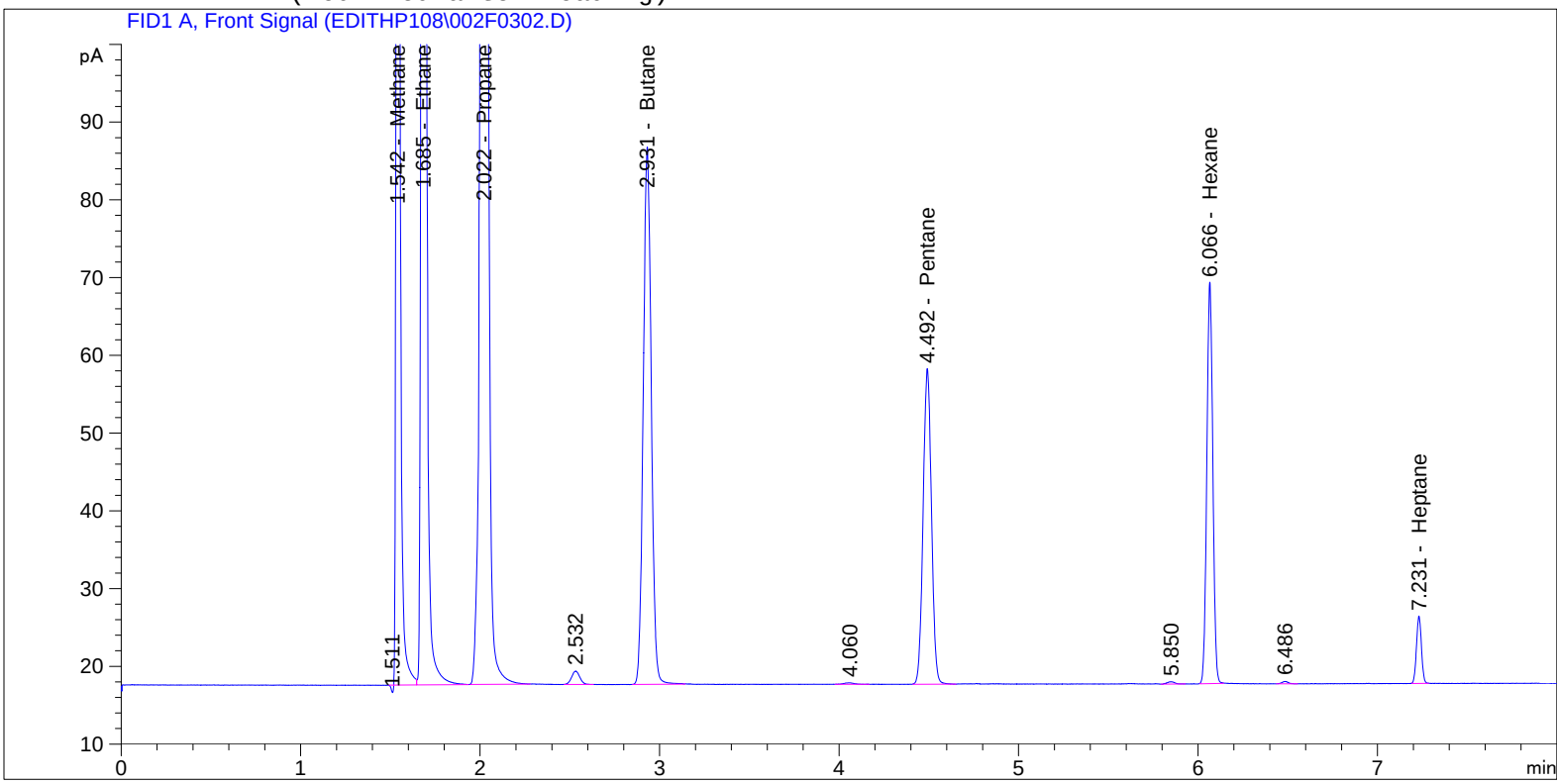
Name	Total Area [pA*s]	Amount [ppm]
as Butane	5.37431	5.4850
as Pentane	9.06267e-1	0.7312
as Hexane	1.46216	1.0097
Methane	279.65533	1.025e3
Ethane	540.20013	1.023e3
Propane	802.41431	1.023e3
Butane	214.20848	206.1069
Pentane	130.77841	102.2417
Hexane	119.46789	79.6086
Heptane	16.45404	9.0183

Totals : 3474.5807

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F0302.D
Sample Name: EdithP108 #C5 ENV(1=4900,6=121.67)

```
==================================================================
Acq. Operator   : disconnected                  Seq. Line :   3
Acq. Instrument : Edith                         Location : Vial 2
Injection Date  : 9/19/2014 12:05:46 PM              Inj :   2
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 3\EDITHP108\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_C1-C7.M
Last changed    : 9/22/2014 10:21:52 AM by Justin Guenzler
                  (modified after loading)
```




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/22/2014 10:21:52 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.542	PV	279.70560	3.66421	1024.89974		Methane
1.685	VB	540.25098	1.89341	1022.91419		Ethane
2.022	BB	802.57178	1.27471	1023.04660		Propane
2.931	BB	213.83063	9.62178e-1	205.74321		Butane
4.492	BB	131.31786	7.81805e-1	102.66501		Pentane
6.066	BB	119.85897	6.66367e-1	79.87008		Hexane
7.231	BB	16.56271	5.48075e-1	9.07761		Heptane

```
Totals :                          3468.21645

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F0302.D
Sample Name: EdithP108 #C5 ENV(1=4900,6=121.67)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.511	BP N	7.70508e-1	1.26492	9.74630e-1		?
2.532	BB	5.38442	1.26751	6.82479		?
4.060	BB	8.02487e-1	1.26492	1.01508		?
5.850	BB	8.78099e-1	1.26492	1.11072		?
6.486	BB	6.96806e-1	1.26492	8.81403e-1		?

Uncalib. totals : 10.80663

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Butane	2.400	3.700	5.38442	5.4953
as Pentane	3.700	5.300	8.02487e-1	0.6474
as Hexane	5.300	6.600	1.57491	1.0875

Totals : 7.2302

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

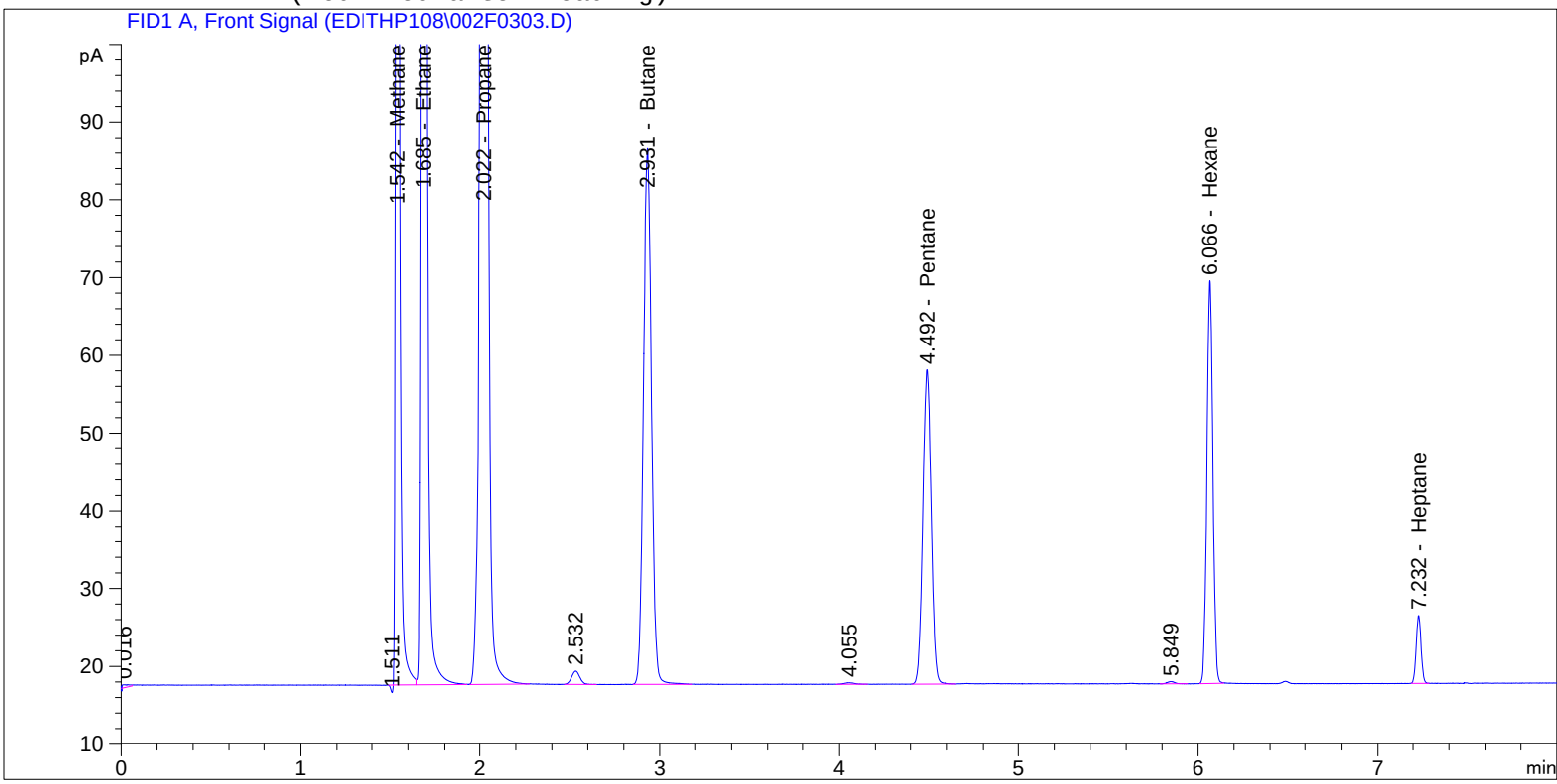
Name	Total Area [pA*s]	Amount [ppm]
as Butane	5.38442	5.4953
as Pentane	8.02487e-1	0.6474
as Hexane	1.57491	1.0875
Methane	279.70560	1.025e3
Ethane	540.25098	1.023e3
Propane	802.57178	1.023e3
Butane	213.83063	205.7432
Pentane	131.31786	102.6650
Hexane	119.85897	79.8701
Heptane	16.56271	9.0776

Totals : 3475.4467

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F0303.D
Sample Name: EdithP108 #C5 ENV(1=4900,6=121.67)

```
==================================================================
Acq. Operator   : disconnected                  Seq. Line :   3
Acq. Instrument : Edith                         Location : Vial 2
Injection Date  : 9/19/2014 12:22:56 PM              Inj :   3
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 3\EDITHP108\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_C1-C7.M
Last changed    : 9/22/2014 10:21:52 AM by Justin Guenzler
                  (modified after loading)
```




```
==================================================================
                      External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/22/2014 10:21:52 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.542 PV      279.05463    3.66421 1022.51526    Methane
  1.685 VB      539.09637    1.89341 1020.72791    Ethane
  2.022 BB      800.72247    1.27471 1020.68919    Propane
  2.931 BB      213.89888 9.62179e-1  205.80891    Butane
  4.492 BV      131.06555 7.81800e-1  102.46702    Pentane
  6.066 BB      119.81548 6.66366e-1   79.84099    Hexane
  7.232 BB       16.59894 5.48070e-1    9.09738    Heptane

Totals :                              3461.14665

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F0303.D
Sample Name: EdithP108 #C5 ENV(1=4900,6=121.67)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
0.016	BB	8.67494e-1	1.26492	1.09731		?
1.511	BP N	7.72846e-1	1.26492	9.77588e-1		?
2.532	BB	5.35825	1.26747	6.79143		?
4.055	BB	7.85258e-1	1.26492	9.93288e-1		?
5.849	BB	7.89094e-1	1.26492	9.98140e-1		?

Uncalib. totals : 10.85776

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Butane	2.400	3.700	5.35825	5.4686
as Pentane	3.700	5.300	7.85258e-1	0.6335
as Hexane	5.300	6.600	7.89094e-1	0.5449

Totals : 6.6470

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

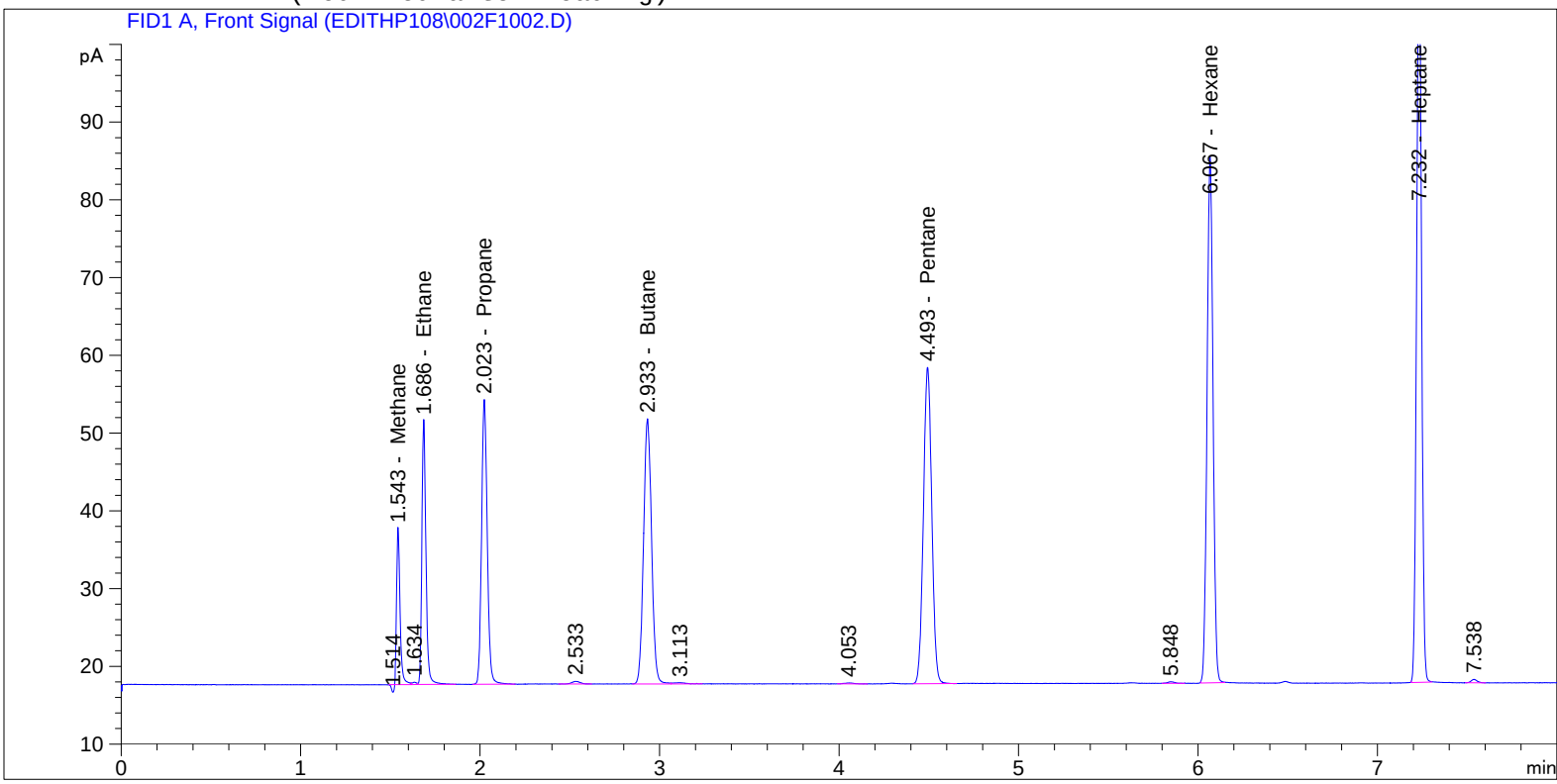
Name	Total Area [pA*s]	Amount [ppm]
as Butane	5.35825	5.4686
as Pentane	7.85258e-1	0.6335
as Hexane	7.89094e-1	0.5449
Methane	279.05463	1.023e3
Ethane	539.09637	1.021e3
Propane	800.72247	1.021e3
Butane	213.89888	205.8089
Pentane	131.06555	102.4670
Hexane	119.81548	79.8410
Heptane	16.59894	9.0974

Totals : 3467.7937

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F1002.D
Sample Name: EdithP108 #C4 ENV(1=0,2=450)

```
==================================================================
Acq. Operator   : disconnected                  Seq. Line :  10
Acq. Instrument : Edith                         Location : Vial 2
Injection Date  : 9/19/2014 2:34:27 PM               Inj :   2
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 3\EDITHP108\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_C1-C7.M
Last changed    : 9/22/2014 10:21:52 AM by Justin Guenzler
                  (modified after loading)
```




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==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/22/2014 10:21:52 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.543 PV       27.44783    3.67558  100.88661    Methane
  1.686 VB       53.68153    1.89224  101.57839    Ethane
  2.023 BB       80.46478    1.27427  102.53415    Propane
  2.933 BV      105.75439 9.61788e-1  101.71331    Butane
  4.493 BB      131.92094 7.81819e-1  103.13826    Pentane
  6.067 BB      156.57463 6.66917e-1  104.42225    Hexane
  7.232 BB      182.24956 5.45783e-1   99.46867    Heptane

Totals :                             713.74165

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F1002.D
Sample Name: EdithP108 #C4 ENV(1=0,2=450)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.514	BP N	9.40663e-1	1.26492	1.18986		?
1.634	VV	4.80986e-1	1.26492	6.08408e-1		?
2.533	BB	1.08576	1.26492	1.37339		?
3.113	VB	7.46504e-1	1.26492	9.44267e-1		?
4.053	BB	4.56221e-1	1.26492	5.77082e-1		?
5.848	BB	5.27333e-1	1.26492	6.67033e-1		?
7.538	BB	9.92297e-1	1.26492	1.25518		?

Uncalib. totals : 6.61522

==========

Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Ethane	1.550	1.850	4.80986e-1	0.9835
as Butane	2.400	3.700	1.83226	1.8700
as Pentane	3.700	5.300	4.56221e-1	0.3681
as Hexane	5.300	6.600	5.27333e-1	0.3641
as Heptane	6.600	13.000	9.92297e-1	0.5834

Totals : 4.1691

1 Warnings or Errors :

Warning : Reference compound(s) not found

==========

Final Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

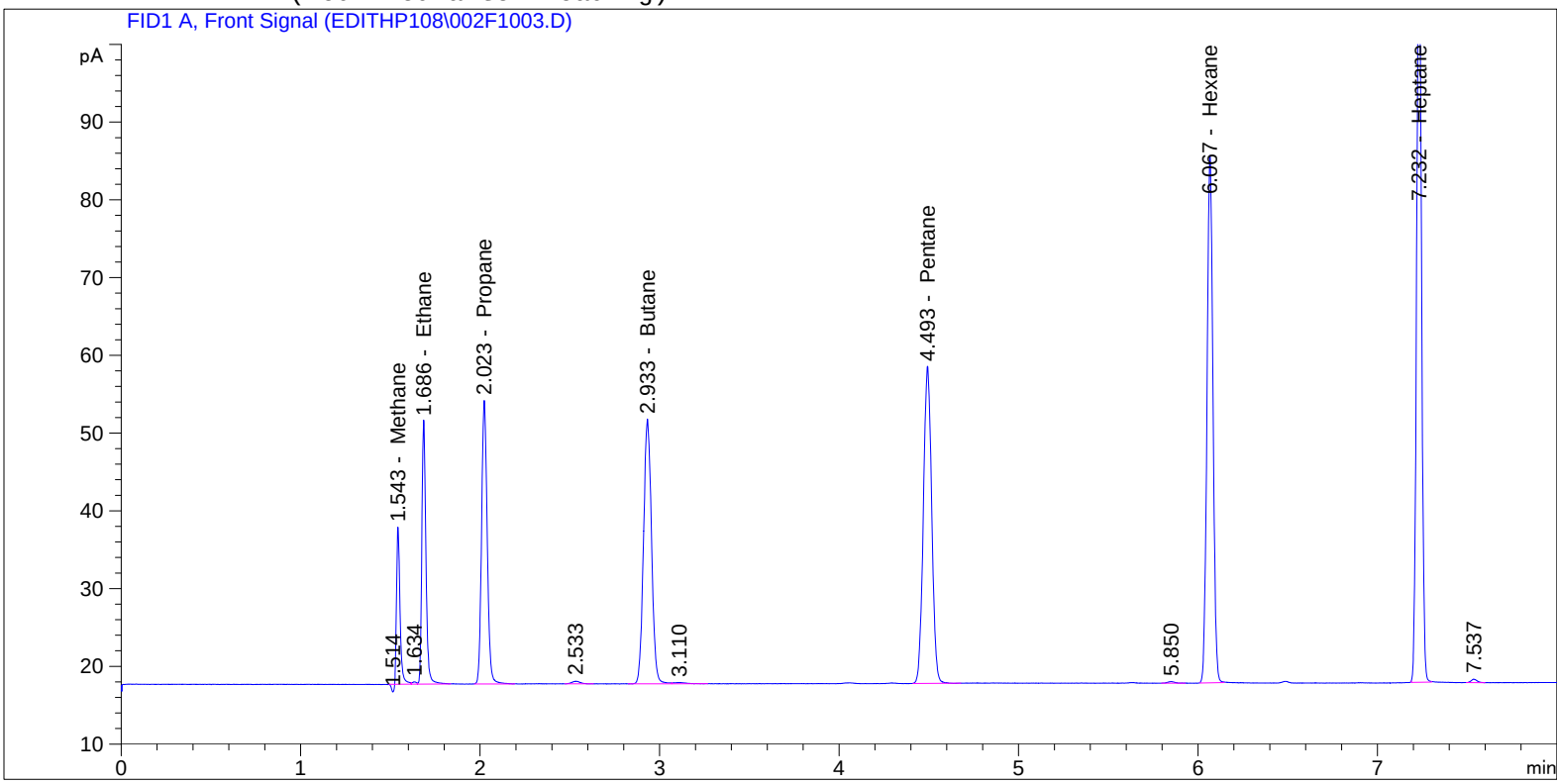
Name	Total Area [pA*s]	Amount [ppm]
as Ethane	4.80986e-1	0.9835
as Butane	1.83226	1.8700
as Pentane	4.56221e-1	0.3681
as Hexane	5.27333e-1	0.3641
as Heptane	9.92297e-1	0.5834
Methane	27.44783	100.8866
Ethane	53.68153	101.5784
Propane	80.46478	102.5342
Butane	105.75439	101.7133
Pentane	131.92094	103.1383
Hexane	156.57463	104.4223
Heptane	182.24956	99.4687

Totals : 717.9108

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F1003.D
Sample Name: EdithP108 #C4 ENV(1=0,2=450)

```
==================================================================
Acq. Operator   : disconnected                  Seq. Line :  10
Acq. Instrument : Edith                         Location : Vial 2
Injection Date  : 9/19/2014 2:50:31 PM               Inj :   3
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 3\EDITHP108\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_C1-C7.M
Last changed    : 9/22/2014 10:21:52 AM by Justin Guenzler
                  (modified after loading)
```




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==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/22/2014 10:21:52 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.543	PV	27.37074	3.67561	100.60423		Methane
1.686	VB	53.33620	1.89223	100.92452		Ethane
2.023	BB	79.96803	1.27427	101.90093		Propane
2.933	VV	105.60441	9.61787e-1	101.56894		Butane
4.493	BB	131.71680	7.81814e-1	102.97807		Pentane
6.067	BB	156.46011	6.66915e-1	104.34567		Hexane
7.232	BB	182.34998	5.45783e-1	99.52346		Heptane

```
Totals :                                711.84581

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F1003.D
Sample Name: EdithP108 #C4 ENV(1=0,2=450)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.514	BP N	9.42002e-1	1.26492	1.19156		?
1.634	VV	4.76327e-1	1.26492	6.02516e-1		?
2.533	BB	1.05936	1.26492	1.34000		?
3.110	VB	7.18170e-1	1.26492	9.08427e-1		?
5.850	BB	5.55074e-1	1.26492	7.02123e-1		?
7.537	BB	9.72606e-1	1.26492	1.23027		?

Uncalib. totals : 5.97489

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Ethane	1.550	1.850	4.76327e-1	0.9740
as Butane	2.400	3.700	1.77753	1.8141
as Hexane	5.300	6.600	5.55074e-1	0.3833
as Heptane	6.600	13.000	9.72606e-1	0.5718

Totals : 3.7433

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

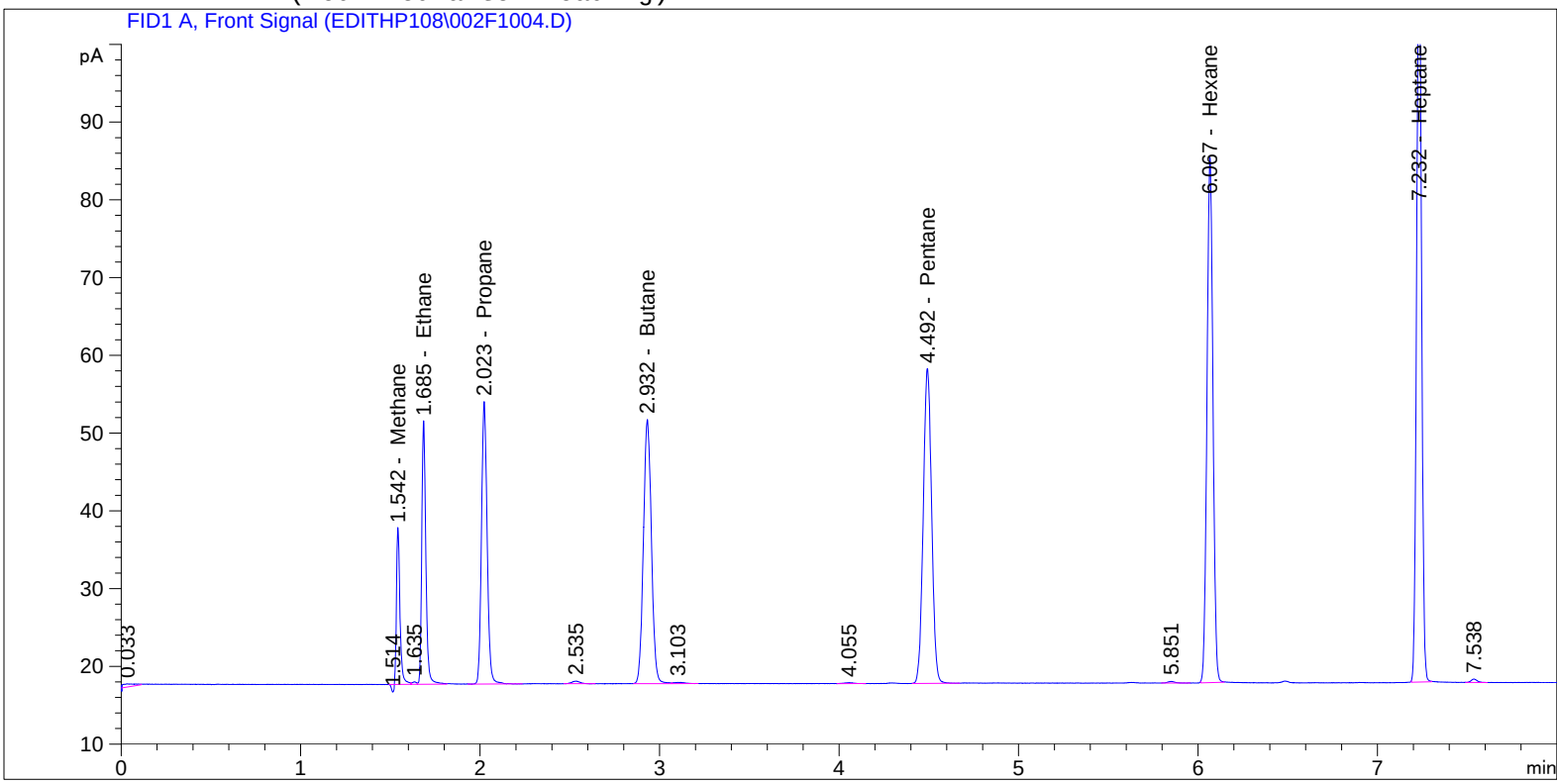
Name	Total Area [pA*s]	Amount [ppm]
as Ethane	4.76327e-1	0.9740
as Butane	1.77753	1.8141
as Hexane	5.55074e-1	0.3833
as Heptane	9.72606e-1	0.5718
Methane	27.37074	100.6042
Ethane	53.33620	100.9245
Propane	79.96803	101.9009
Butane	105.60441	101.5689
Pentane	131.71680	102.9781
Hexane	156.46011	104.3457
Heptane	182.34998	99.5235

Totals : 715.5891

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F1004.D
Sample Name: EdithP108 #C4 ENV(1=0,2=450)

```
==================================================================
Acq. Operator   : disconnected                  Seq. Line :  10
Acq. Instrument : Edith                         Location : Vial 2
Injection Date  : 9/19/2014 3:06:36 PM               Inj :   4
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 3\EDITHP108\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_C1-C7.M
Last changed    : 9/22/2014 10:21:52 AM by Justin Guenzler
                  (modified after loading)
```




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==================================================================
                      External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/22/2014 10:21:52 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.542 PV       27.33177    3.67563  100.46148    Methane
  1.685 VB       53.30490    1.89223  100.86524    Ethane
  2.023 PB       79.51855    1.27427  101.32795    Propane
  2.932 BV      105.18516 9.61784e-1  101.16539    Butane
  4.492 BB      131.54813 7.81810e-1  102.84571    Pentane
  6.067 BB      156.02853 6.66911e-1  104.05707    Hexane
  7.232 BB      181.77887 5.45783e-1   99.21189    Heptane

Totals :                              709.93472

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F1004.D
Sample Name: EdithP108 #C4 ENV(1=0,2=450)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
0.033	BB	1.72203	1.26492	2.17823		?
1.514	BP N	9.34361e-1	1.26492	1.18189		?
1.635	VV	5.10190e-1	1.26492	6.45349e-1		?
2.535	BB	1.03156	1.26492	1.30484		?
3.103	VB	6.35190e-1	1.26492	8.03464e-1		?
4.055	BB	3.93774e-1	1.26492	4.98092e-1		?
5.851	BB	5.56474e-1	1.26492	7.03894e-1		?
7.538	BB	9.77187e-1	1.26492	1.23606		?

Uncalib. totals : 8.55182

==========
Summed Peaks Report
==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Ethane	1.550	1.850	5.10190e-1	1.0432
as Butane	2.400	3.700	1.66675	1.7011
as Pentane	3.700	5.300	3.93774e-1	0.3177
as Hexane	5.300	6.600	5.56474e-1	0.3843
as Heptane	6.600	13.000	9.77187e-1	0.5745

Totals : 4.0208

1 Warnings or Errors :

Warning : Reference compound(s) not found

==========
Final Summed Peaks Report
==========

Signal 1: FID1 A, Front Signal

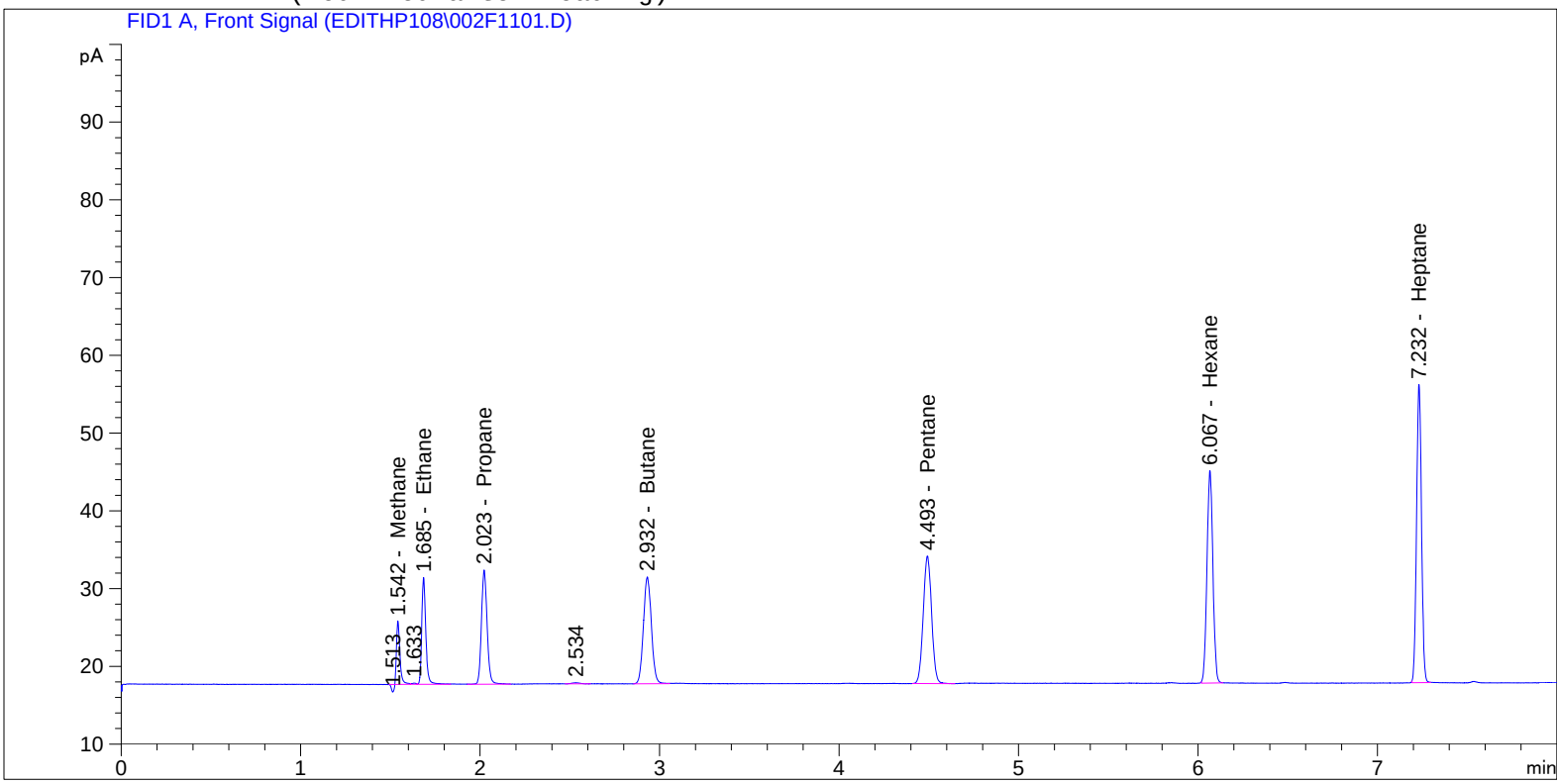
Name	Total Area [pA*s]	Amount [ppm]
as Ethane	5.10190e-1	1.0432
as Butane	1.66675	1.7011
as Pentane	3.93774e-1	0.3177
as Hexane	5.56474e-1	0.3843
as Heptane	9.77187e-1	0.5745
Methane	27.33177	100.4615
Ethane	53.30490	100.8652
Propane	79.51855	101.3279
Butane	105.18516	101.1654
Pentane	131.54813	102.8457
Hexane	156.02853	104.0571
Heptane	181.77887	99.2119

Totals : 713.9555

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F1101.D
Sample Name: EdithP108 #C3 ENV(1=600,2=400)

```
==================================================================
Acq. Operator   : disconnected                  Seq. Line :  11
Acq. Instrument : Edith                         Location : Vial 2
Injection Date  : 9/19/2014 3:22:56 PM               Inj :   1
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 3\EDITHP108\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_C1-C7.M
Last changed    : 9/22/2014 10:21:52 AM by Justin Guenzler
                  (modified after loading)
```




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==================================================================
                      External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/22/2014 10:21:52 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.542 PV       11.00137    3.69442   40.64369    Methane
  1.685 VB       21.75508    1.89034   41.12459    Ethane
  2.023 PB       32.24148    1.27355   41.06107    Propane
  2.932 BB       42.46952 9.60637e-1   40.79780    Butane
  4.493 BB       53.24072 7.77525e-1   41.39600    Pentane
  6.067 BB       63.01467 6.64253e-1   41.85766    Hexane
  7.232 BB       73.48394 5.46122e-1   40.13119    Heptane

Totals :                              287.01200

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F1101.D
Sample Name: EdithP108 #C3 ENV(1=600,2=400)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.513	BP N	9.78457e-1	1.26492	1.23767		?
1.633	VV	2.68972e-1	1.26492	3.40228e-1		?
2.534	BB	4.14086e-1	1.26492	5.23786e-1		?

Uncalib. totals : 2.10168

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Ethane	1.550	1.850	2.68972e-1	0.5500
as Butane	2.400	3.700	4.14086e-1	0.4226

Totals : 9.7261e-1

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

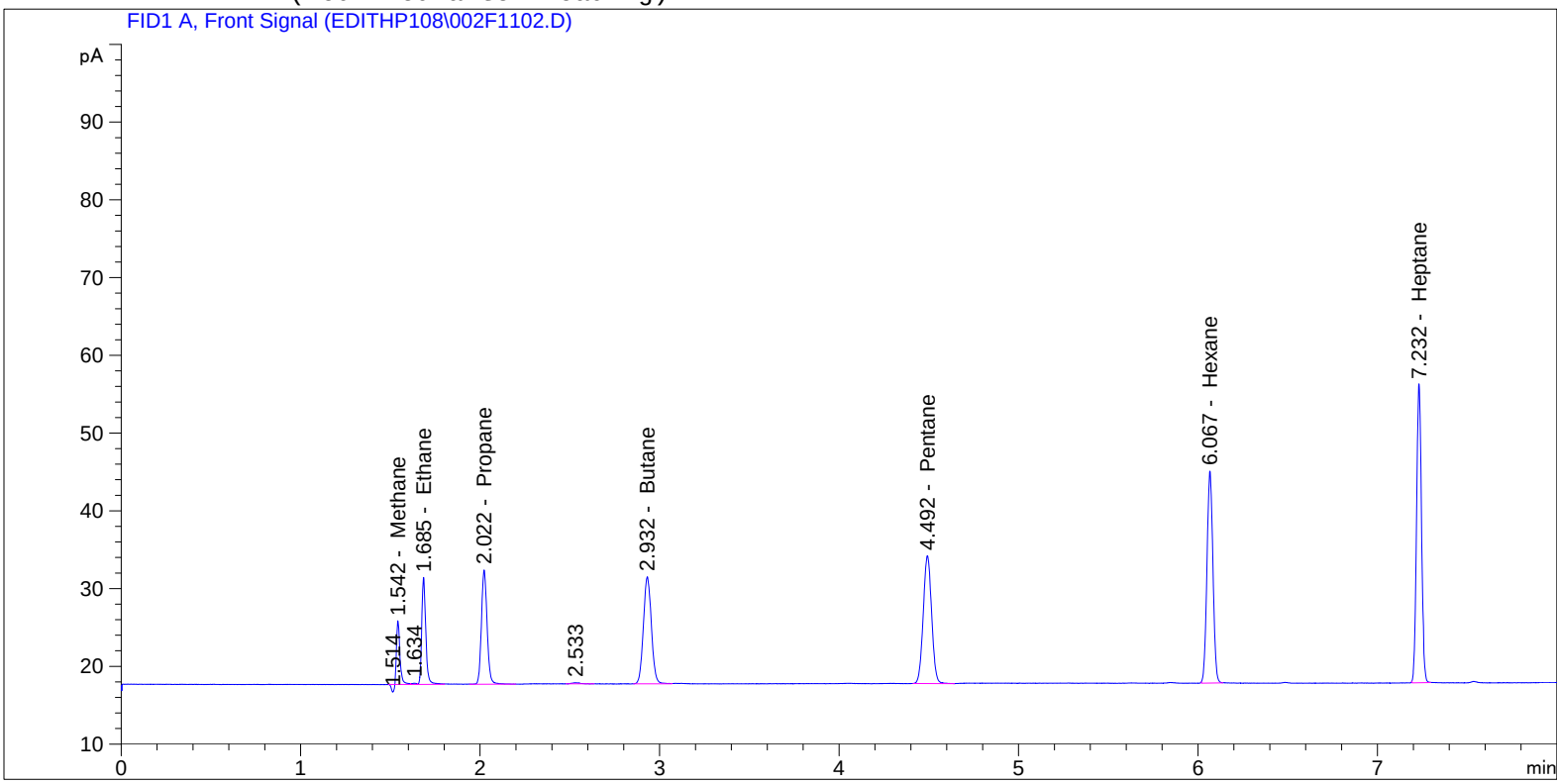
Name	Total Area [pA*s]	Amount [ppm]
as Ethane	2.68972e-1	0.5500
as Butane	4.14086e-1	0.4226
Methane	11.00137	40.6437
Ethane	21.75508	41.1246
Propane	32.24148	41.0611
Butane	42.46952	40.7978
Pentane	53.24072	41.3960
Hexane	63.01467	41.8577
Heptane	73.48394	40.1312

Totals : 287.9846

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F1102.D
Sample Name: EdithP108 #C3 ENV(1=600,2=400)

```
==================================================================
Acq. Operator   : disconnected                  Seq. Line :  11
Acq. Instrument : Edith                         Location : Vial 2
Injection Date  : 9/19/2014 3:39:01 PM               Inj :   2
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 3\EDITHP108\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_C1-C7.M
Last changed    : 9/22/2014 10:21:52 AM by Justin Guenzler
                  (modified after loading)
```




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==================================================================
                      External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/22/2014 10:21:52 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.542 PV       11.02327    3.69436   40.72390    Methane
  1.685 VB       21.73584    1.89034   41.08815    Ethane
  2.022 PB       32.31124    1.27355   41.14999    Propane
  2.932 BV       42.66705 9.60646e-1   40.98794    Butane
  4.492 BV       53.34929 7.77540e-1   41.48120    Pentane
  6.067 BB       63.19386 6.64265e-1   41.97749    Hexane
  7.232 BB       73.63406 5.46121e-1   40.21309    Heptane

Totals :                              287.62175

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F1102.D
Sample Name: EdithP108 #C3 ENV(1=600,2=400)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.514	BP N	9.94072e-1	1.26492	1.25742	?	
1.634	VV	2.72370e-1	1.26492	3.44526e-1	?	
2.533	BB	4.36528e-1	1.26492	5.52172e-1	?	

Uncalib. totals : 2.15412

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Ethane	1.550	1.850	2.72370e-1	0.5569
as Butane	2.400	3.700	4.36528e-1	0.4455

Totals : 1.0025

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

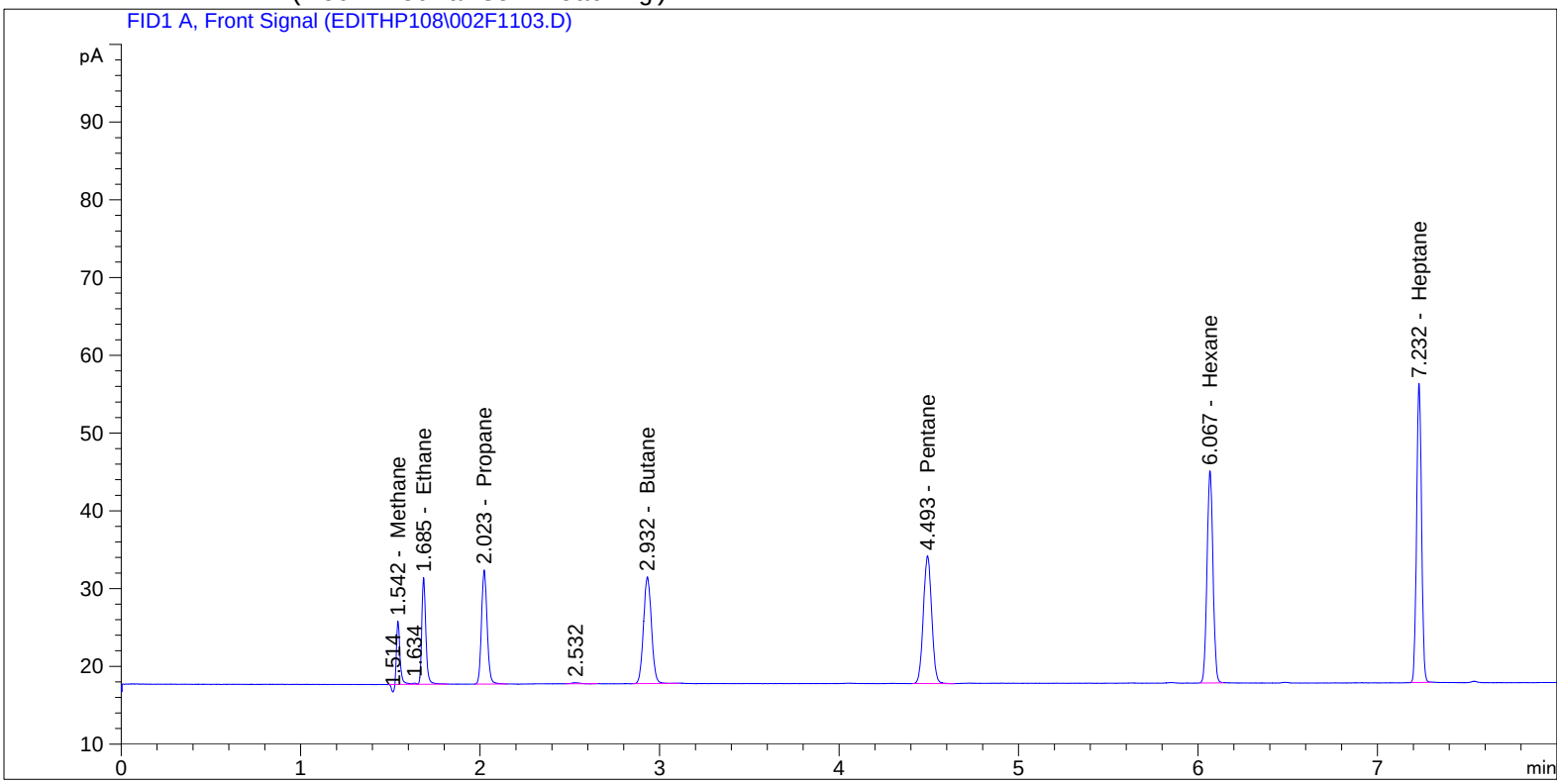
Name	Total Area [pA*s]	Amount [ppm]
as Ethane	2.72370e-1	0.5569
as Butane	4.36528e-1	0.4455
Methane	11.02327	40.7239
Ethane	21.73584	41.0881
Propane	32.31124	41.1500
Butane	42.66705	40.9879
Pentane	53.34929	41.4812
Hexane	63.19386	41.9775
Heptane	73.63406	40.2131

Totals : 288.6242

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F1103.D
Sample Name: EdithP108 #C3 ENV(1=600,2=400)

```
==================================================================
Acq. Operator   : disconnected                  Seq. Line :  11
Acq. Instrument : Edith                         Location : Vial 2
Injection Date  : 9/19/2014 3:55:26 PM               Inj :   3
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 3\EDITHP108\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_C1-C7.M
Last changed    : 9/22/2014 10:21:52 AM by Justin Guenzler
                  (modified after loading)
```




```
==================================================================
                      External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/22/2014 10:21:52 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.542 PV       11.00070    3.69442   40.64121    Methane
  1.685 VB       21.52324    1.89031   40.68559    Ethane
  2.023 BB       32.06316    1.27354   40.83375    Propane
  2.932 BB       42.35880 9.60632e-1   40.69123    Butane
  4.493 BV       53.31446 7.77535e-1   41.45386    Pentane
  6.067 BB       63.17406 6.64264e-1   41.96425    Hexane
  7.232 BB       73.57939 5.46121e-1   40.18327    Heptane

Totals :                              286.45316

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F1103.D
Sample Name: EdithP108 #C3 ENV(1=600,2=400)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.514	BP N	1.00316	1.26492	1.26892		?
1.634	VV	2.18718e-1	1.26492	2.76660e-1		?
2.532	BB	4.07677e-1	1.26492	5.15678e-1		?

Uncalib. totals : 2.06126

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Ethane	1.550	1.850	2.18718e-1	0.4472
as Butane	2.400	3.700	4.07677e-1	0.4161

Totals : 8.6331e-1

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

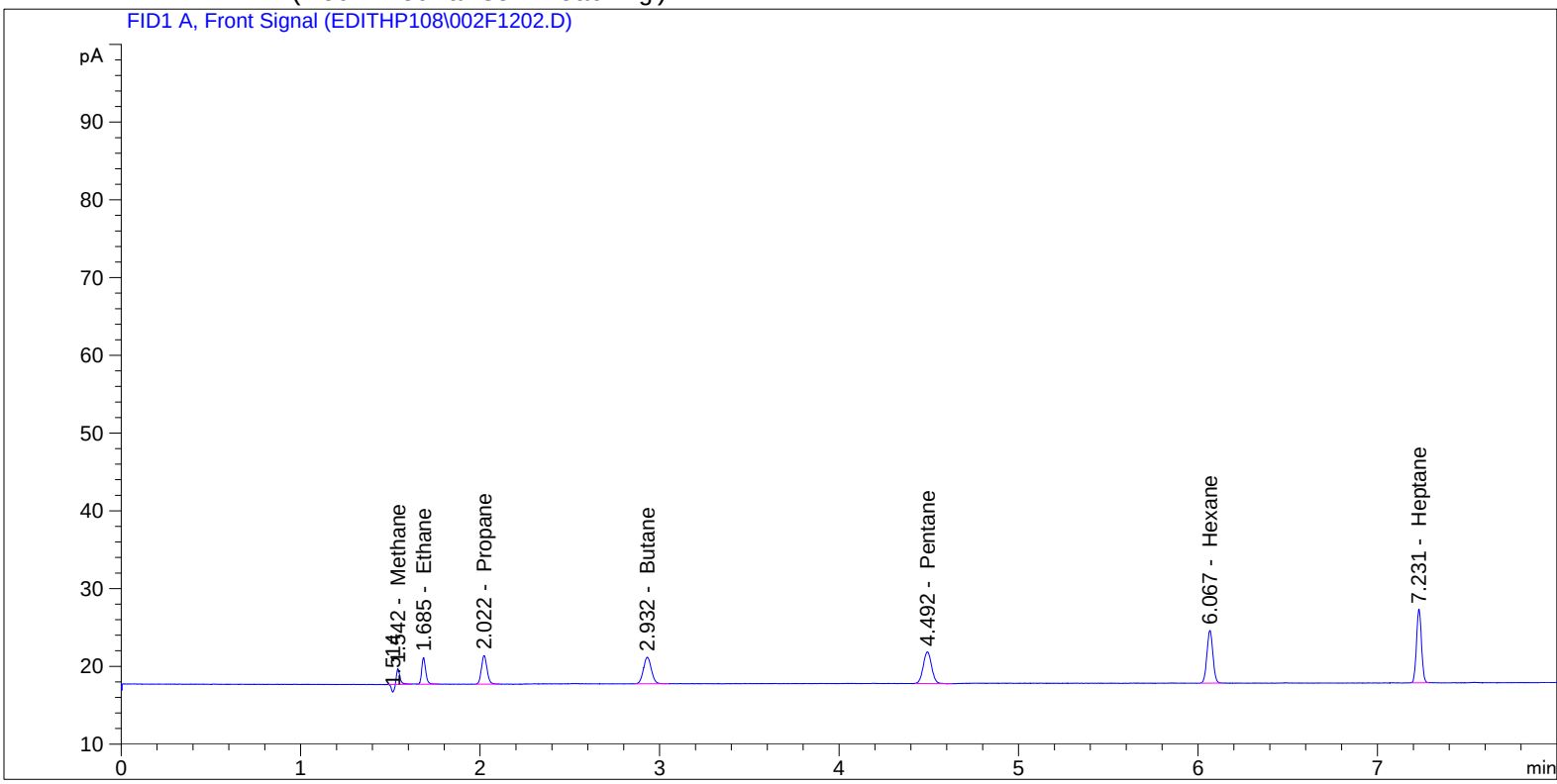
Name	Total Area [pA*s]	Amount [ppm]
as Ethane	2.18718e-1	0.4472
as Butane	4.07677e-1	0.4161
Methane	11.00070	40.6412
Ethane	21.52324	40.6856
Propane	32.06316	40.8337
Butane	42.35880	40.6912
Pentane	53.31446	41.4539
Hexane	63.17406	41.9643
Heptane	73.57939	40.1833

Totals : 287.3165

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F1202.D
Sample Name: EdithP108 #C2 ENV(1=900,2=100)

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  12
Acq. Instrument : Edith                          Location : Vial 2
Injection Date  : 9/19/2014 4:27:54 PM                Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 3\EDITHP108\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_C1-C7.M
Last changed    : 9/22/2014 10:21:52 AM by Justin Guenzler
                  (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/22/2014 10:21:52 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.542	PB	2.72163	3.79009	10.31524		Methane
1.685	BB	5.34763	1.88056	10.05652		Ethane
2.022	BB	7.96017	1.26985	10.10825		Propane
2.932	BB	10.48665	9.54771e-1	10.01235		Butane
4.492	BB	13.31481	7.55938e-1	10.06518		Pentane
6.067	BB	15.69162	6.50807e-1	10.21221		Hexane
7.231	BB	18.25233	5.47842e-1	9.99939		Heptane

```
Totals :                                  70.76913

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F1202.D
Sample Name: EdithP108 #C2 ENV(1=900,2=100)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.514	BP N	1.10081	1.26492	1.39244	?	

Uncalib. totals : 1.39244

Summed Peaks Report

Signal 1: FID1 A, Front Signal

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

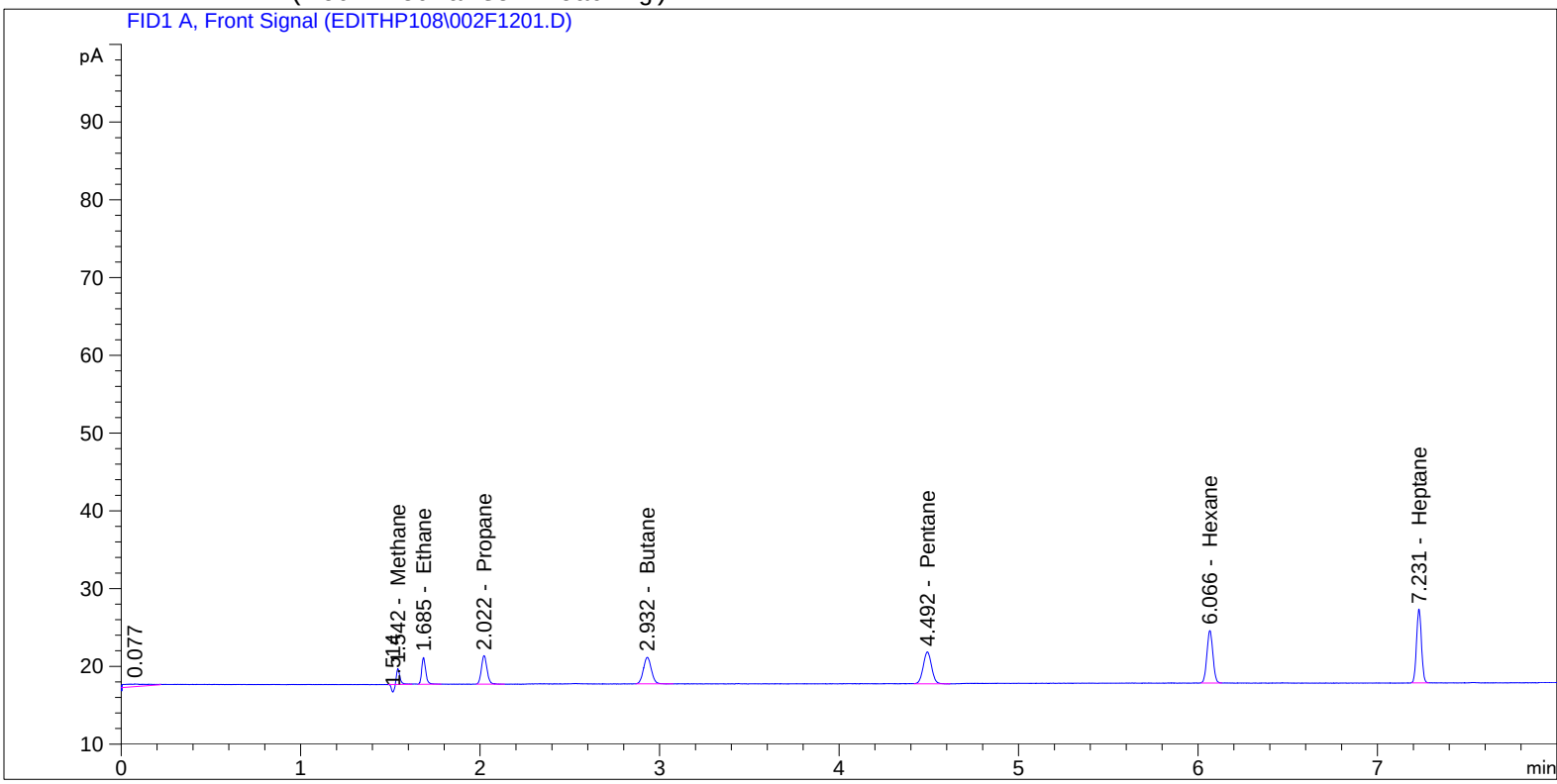
Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
Methane	2.72163	10.3152
Ethane	5.34763	10.0565
Propane	7.96017	10.1083
Butane	10.48665	10.0124
Pentane	13.31481	10.0652
Hexane	15.69162	10.2122
Heptane	18.25233	9.9994
Totals :		70.7691

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F1201.D
Sample Name: EdithP108 #C2 ENV(1=900,2=100)

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  12
Acq. Instrument : Edith                          Location : Vial 2
Injection Date  : 9/19/2014 4:11:37 PM                Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 3\EDITHP108\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_C1-C7.M
Last changed    : 9/22/2014 10:21:52 AM by Justin Guenzler
                  (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/22/2014 10:21:52 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.542 PB        2.73122    3.78965   10.35035    Methane
  1.685 BB        5.38953    1.88066   10.13586    Ethane
  2.022 BB        7.97306    1.26986   10.12468    Propane
  2.932 BB       10.55341 9.54821e-1   10.07662    Butane
  4.492 BB       13.33021 7.55972e-1   10.07726    Pentane
  6.066 BB       15.62524 6.50731e-1   10.16783    Hexane
  7.231 BB       18.17946 5.47851e-1    9.95964    Heptane

Totals :                               70.89222

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F1201.D
Sample Name: EdithP108 #C2 ENV(1=900,2=100)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
0.077	BB	2.96837	1.26492	3.75475	?	
1.514	BP N	1.06279	1.26492	1.34435	?	

Uncalib. totals : 5.09910

Summed Peaks Report

Signal 1: FID1 A, Front Signal

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

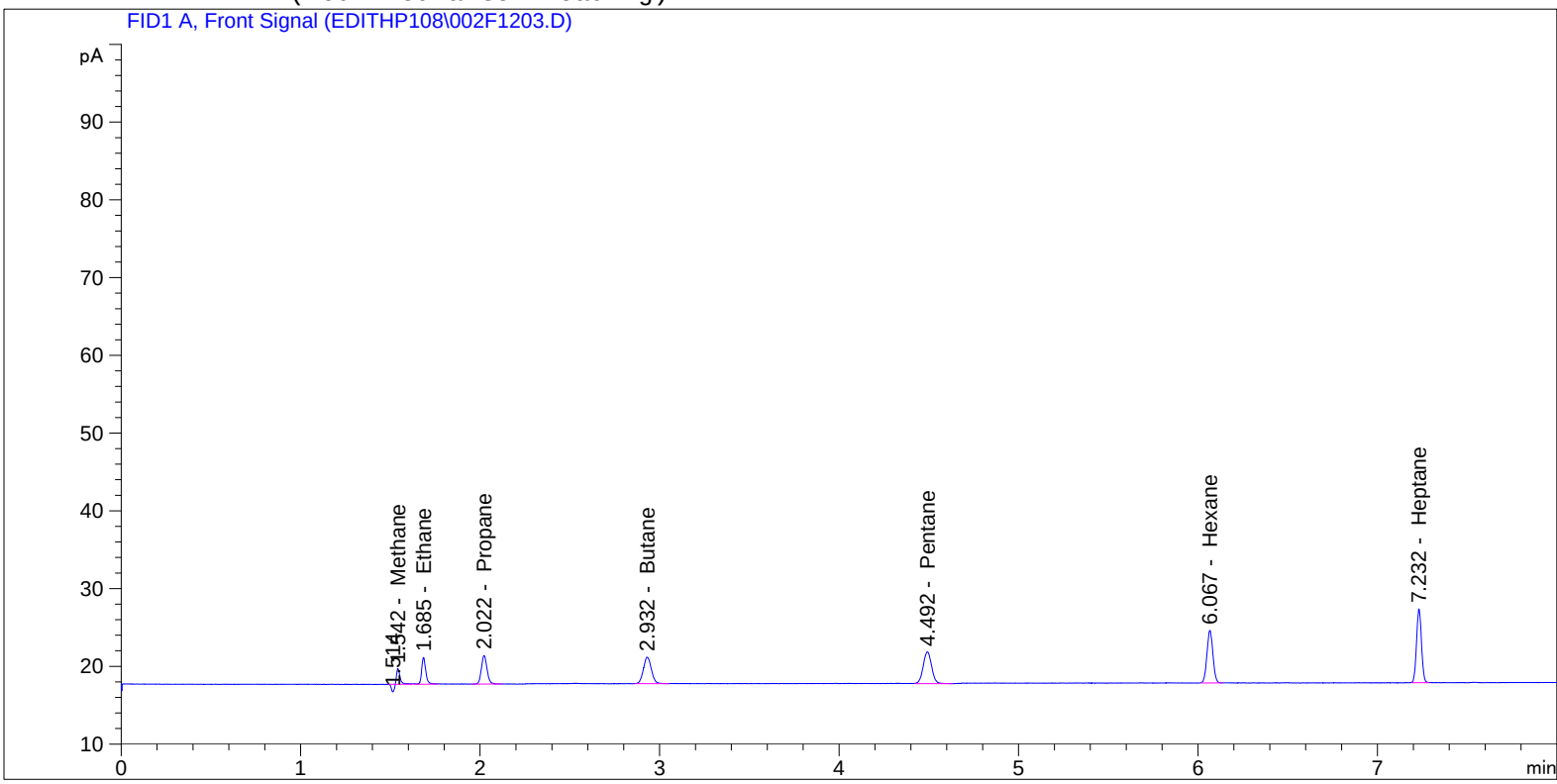
Name	Total Area [pA*s]	Amount [ppm]
Methane	2.73122	10.3503
Ethane	5.38953	10.1359
Propane	7.97306	10.1247
Butane	10.55341	10.0766
Pentane	13.33021	10.0773
Hexane	15.62524	10.1678
Heptane	18.17946	9.9596

Totals : 70.8922

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F1203.D
Sample Name: EdithP108 #C2 ENV(1=900,2=100)

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  12
Acq. Instrument : Edith                          Location : Vial 2
Injection Date  : 9/19/2014 4:44:08 PM                Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 3\EDITHP108\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_C1-C7.M
Last changed    : 9/22/2014 10:21:52 AM by Justin Guenzler
                  (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/22/2014 10:21:52 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.542	PB	2.76054	3.78830	10.45775		Methane
1.685	PB	5.57597	1.88109	10.48888		Ethane
2.022	PB	8.01652	1.26989	10.18009		Propane
2.932	BB	10.51357	9.54791e-1	10.03826		Butane
4.492	BB	13.38227	7.56083e-1	10.11811		Pentane
6.067	BB	15.58333	6.50682e-1	10.13980		Hexane
7.232	BB	18.17815	5.47851e-1	9.95892		Heptane

```
Totals :                                  71.38182

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F1203.D
Sample Name: EdithP108 #C2 ENV(1=900,2=100)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.514	BP N	1.06684	1.26492	1.34946	?	

Uncalib. totals : 1.34946

Summed Peaks Report

Signal 1: FID1 A, Front Signal

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

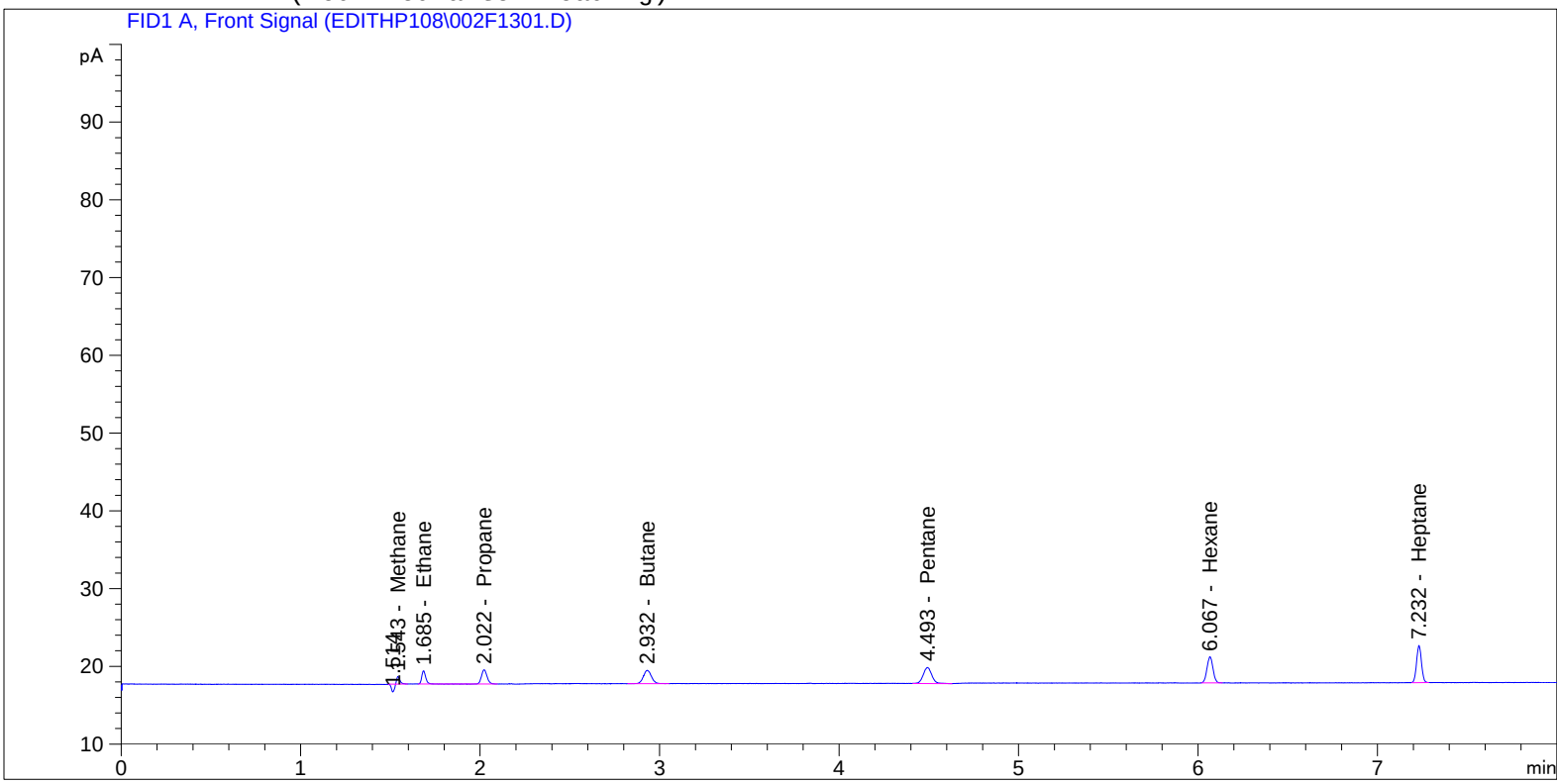
Name	Total Area [pA*s]	Amount [ppm]
Methane	2.76054	10.4577
Ethane	5.57597	10.4889
Propane	8.01652	10.1801
Butane	10.51357	10.0383
Pentane	13.38227	10.1181
Hexane	15.58333	10.1398
Heptane	18.17815	9.9589

Totals : 71.3818

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F1301.D
Sample Name: EdithP108 #C1 ENV(1=1900,2=100)

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  13
Acq. Instrument : Edith                          Location : Vial 2
Injection Date  : 9/19/2014 5:00:11 PM                Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 3\EDITHP108\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_C1-C7.M
Last changed    : 9/22/2014 10:21:52 AM by Justin Guenzler
                  (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/22/2014 10:21:52 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.543	PB	1.21230	3.93469	4.77003		Methane
1.685	BP	2.56303	1.86764	4.78680		Ethane
2.022	VB	3.83415	1.26492	4.84989		Propane
2.932	BB	5.30351	9.47159e-1	5.02327		Butane
4.493	BB	6.80569	7.28854e-1	4.96035		Pentane
6.067	BB	7.81790	6.33169e-1	4.95005		Hexane
7.232	BB	9.08140	5.50152e-1	4.99616		Heptane

```
Totals :                                 34.33655

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F1301.D
Sample Name: EdithP108 #C1 ENV(1=1900,2=100)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.514	PP N	1.17246	1.26492	1.48307	?	

Uncalib. totals : 1.48307

Summed Peaks Report

Signal 1: FID1 A, Front Signal

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
Methane	1.21230	4.7700
Ethane	2.56303	4.7868
Propane	3.83415	4.8499
Butane	5.30351	5.0233
Pentane	6.80569	4.9604
Hexane	7.81790	4.9501
Heptane	9.08140	4.9962

Totals : 34.3366

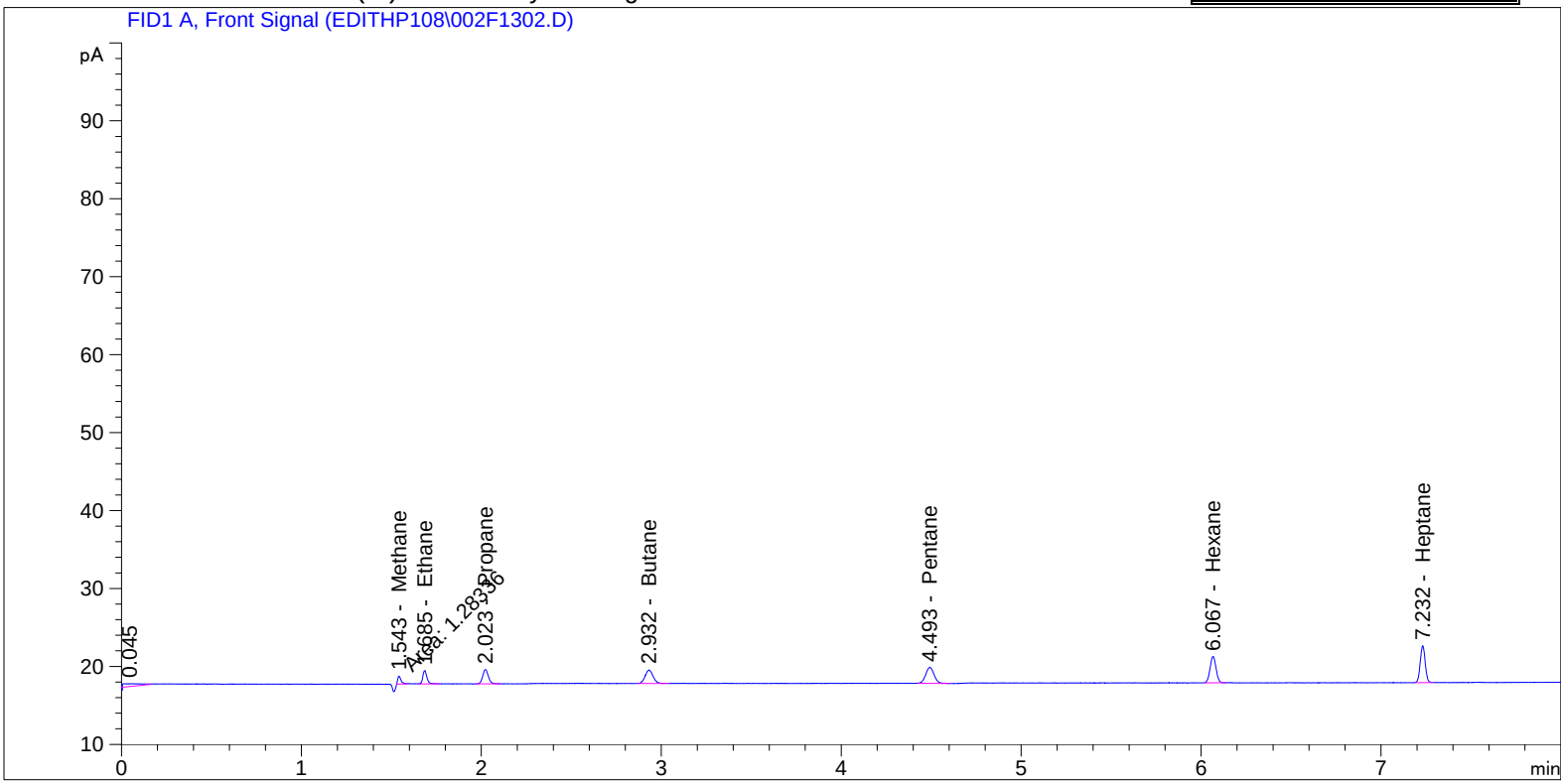
*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F1302.D
Sample Name: EdithP108 #C1 ENV(1=1900,2=100)

==========

Acq. Operator : disconnected Seq. Line : 13
Acq. Instrument : Edith Location : Vial 2
Injection Date : 9/19/2014 5:16:17 PM Inj : 2
Inj Volume : 250 µl
Acq. Method : C:\GC\2014\EDITH\QUARTER 3\EDITHP108\GC139P039_HRVOC.M
Last changed : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_C1-C7.M
Last changed : 9/22/2014 10:21:52 AM by Justin Guenzler
(modified after loading)
Additional Info : Peak(s) manually integrated

Manual Int. "II" (JKG)



==========

External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 9/22/2014 10:21:52 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.543	MM	1.28336	3.93256	5.04688		Methane
1.685	BB	2.69641	1.86780	5.03635		Ethane
2.023	BB	3.98421	1.26496	5.03986		Propane
2.932	BB	5.27217	9.47119e-1	4.99337		Butane
4.493	BB	6.72683	7.28854e-1	4.90288		Pentane
6.067	BB	7.75067	6.33169e-1	4.90749		Hexane
7.232	BB	9.07698	5.50155e-1	4.99375		Heptane

Totals : 34.92058

Uncalibrated Peaks : using compound Propane

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F1302.D
Sample Name: EdithP108 #C1 ENV(1=1900,2=100)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
0.045	BB	2.29596	1.26492	2.90421		?

Uncalib. totals : 2.90421

Summed Peaks Report

Signal 1: FID1 A, Front Signal

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
Methane	1.28336	5.0469
Ethane	2.69641	5.0363
Propane	3.98421	5.0399
Butane	5.27217	4.9934
Pentane	6.72683	4.9029
Hexane	7.75067	4.9075
Heptane	9.07698	4.9937

Totals : 34.9206

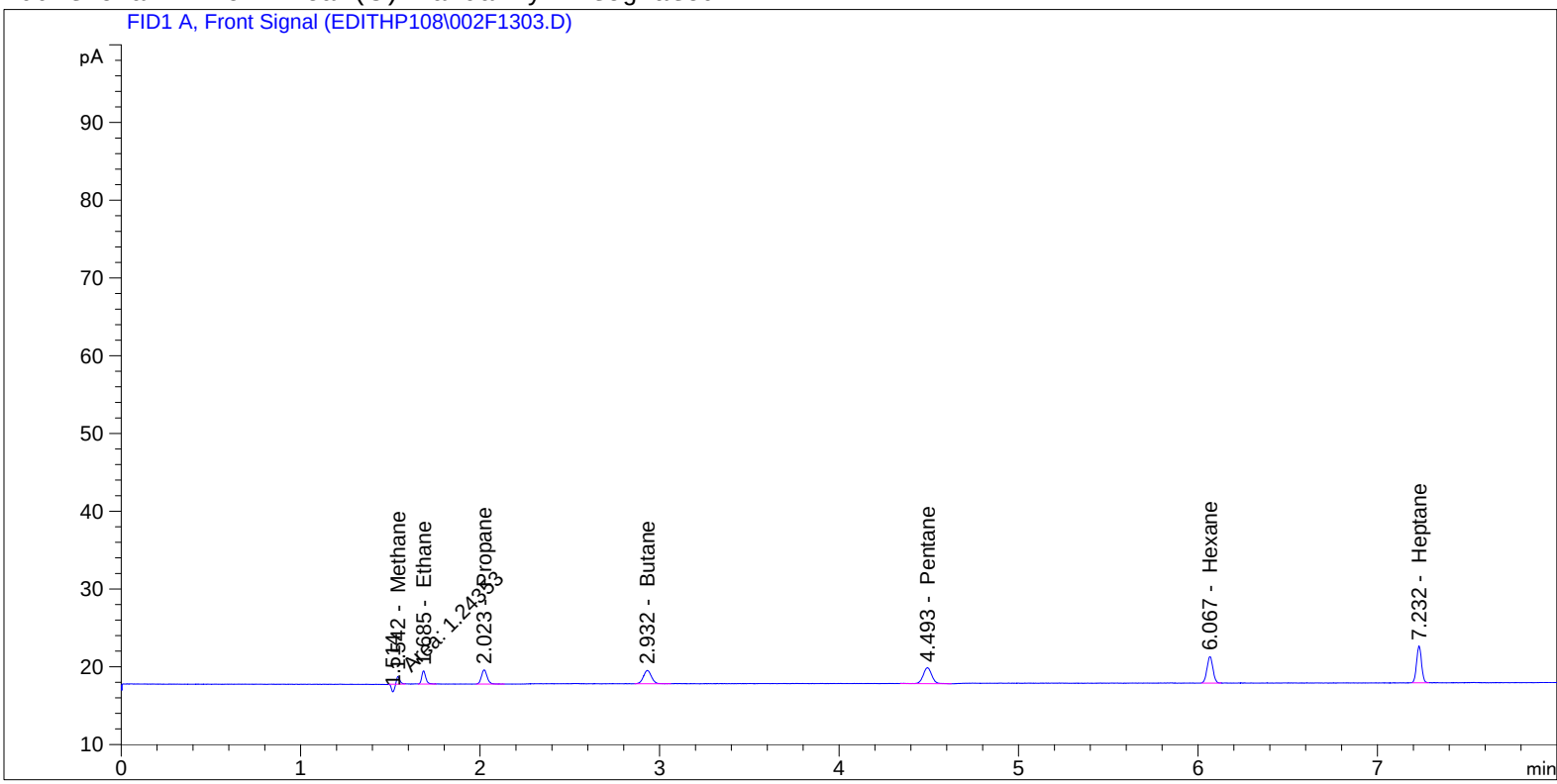
*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F1303.D
Sample Name: EdithP108 #C1 ENV(1=1900,2=100)

==========

Acq. Operator : disconnected Seq. Line : 13
Acq. Instrument : Edith Location : Vial 2
Injection Date : 9/19/2014 5:32:35 PM Inj : 3
Inj Volume : 250 µl
Acq. Method : C:\GC\2014\EDITH\QUARTER 3\EDITHP108\GC139P039_HRVOC.M
Last changed : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_C1-C7.M
Last changed : 9/22/2014 10:21:52 AM by Justin Guenzler
(modified after loading)
Additional Info : Peak(s) manually integrated

Manual Int. "II" (JKG)



==========

External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 9/22/2014 10:21:52 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.542	MM	1.24353	3.93469	4.89291		Methane
1.685	BB	2.66340	1.86764	4.97426		Ethane
2.023	BB	3.98818	1.26497	5.04492		Propane
2.932	BB	5.23108	9.47119e-1	4.95446		Butane
4.493	BB	6.86699	7.28910e-1	5.00542		Pentane
6.067	BB	7.79197	6.33169e-1	4.93364		Hexane
7.232	BB	9.05862	5.50157e-1	4.98366		Heptane

Totals : 34.78928

Uncalibrated Peaks : using compound Propane

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F1303.D
Sample Name: EdithP108 #C1 ENV(1=1900,2=100)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.514	BP N	1.11667	1.26492	1.41250	?	

Uncalib. totals : 1.41250

Summed Peaks Report

Signal 1: FID1 A, Front Signal

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
Methane	1.24353	4.8929
Ethane	2.66340	4.9743
Propane	3.98818	5.0449
Butane	5.23108	4.9545
Pentane	6.86699	5.0054
Hexane	7.79197	4.9336
Heptane	9.05862	4.9837

Totals : 34.7893

*** End of Report ***

THE LINDE GROUP

Linde

SHIPPED TO: Enthalpy Analytical Inc.
800 Capitola Dr. Ste 1
Durham, NC 27713-4385

PAGE: 1 of 1

CERTIFICATE OF ANALYSIS

Sales#:	111957073	**Cylinder Size:**	2 (9" X 51")
Production#:	1308627	**Cylinder # :**	9819192
Certification Date:	Aug-28-2014	**Cylinder Pressure:**	525 psig
P.O.# :	08111418	**Cylinder Valve:**	CGA 350 / Brass
Blend Type:	CERTIFIED	**Cylinder Volume:**	44 Liter
Material#:	24094007	**Cylinder Material:**	Steel
Traceability:	NIST by weight	**Gas Volume:**	1572 Liters
Expiration Date:	Aug-28-2015	**Blend Tolerance:**	5% Relative
Do NOT use under:	150 psig	**Analytical Accuracy:**	2% Relative

COMPONENT	CAS NUMBER	REQUESTED CONC	CERTIFIED CONC
Methane	74-82-8	5.00 %	5.13 %
Ethane	74-84-0	5.00 %	5.13 %
Propane	74-98-6	5.00 %	5.13 %
Butane	106-97-8	1.00 %	1.03 %
Pentane	109-66-0	0.50 %	0.52 %
Hexane	110-54-3	0.40 %	0.41 %
Heptane	142-82-5	500 ppm	519 ppm
Nitrogen	7727-37-9	Balance	Balance

ANALYST: _____
Lou Lorenzetti

DATE: Aug-28-2014

Linde Gas North America LLC

(908) 329-9700 Main (908) 329-9740 Fax
www.Lindeus.com

CUSTOMGAS
SOLUTIONS

1750 East Club Boulevard
Durham, NC 27704
Phone: (919) 220-2570
Fax: (919) 220-4540

Certificate of Analysis

Customer:

Enthalpy Analytical, Inc.
800-1 Capitola Drive
Durham, NC 27713

Tel: (919) 595-1377

Cylinder Number: SX25635
Cylinder Size/CGA: 150/350
Fill Pressure: 2015 PSIA
Gas Volume: 3700 liters
Date of Mfg: 02/04/14
Expiration Date: 02/04/16

Customer Number	Ship VIA	Job No.	Customer PO	Mixture Type
00127703NC	Pick up	011714-003	01171401	Gravimetric

Component	Nominal Concentration	Actual Concentration*	Mixture Type
Heptane	100 ppm	99.82 ppm +/- 2 ppm	Gravimetric Master Gas
Hexane	100 ppm	100.1 ppm +/- 2 ppm	
Pentane	100 ppm	100.0 ppm +/- 2 ppm	
Methane	100 ppm	100.2 ppm +/- 2 ppm	
Ethane	100 ppm	100.1 ppm +/- 2 ppm	
Propane	100 ppm	100.4 ppm +/- 2 ppm	
Butane	100 ppm	100.2 ppm +/- 2 ppm	
Nitrogen	balance		

NOTES:

Blend Tolerance: +/- 2 %

Analytical Tolerance: +/- 2 %

Traceability: NIST by weight set. NIST Traceability No MT5061.
Internal Standards by analysis

Reactive Mixtures: Analyzed twice with required agreement between analyses of 2%.
Required wait time between analyses of >7 days.

Caution: Do not use below 150 PSIG.

Authorized Signature:

Joseph A. Ernst

*Every effort has been made to establish the actual concentration of the components using master gas blending technology however, Custom Gas Solutions shall have no liability in excess of the established charge for this material.

Agilent 7890A

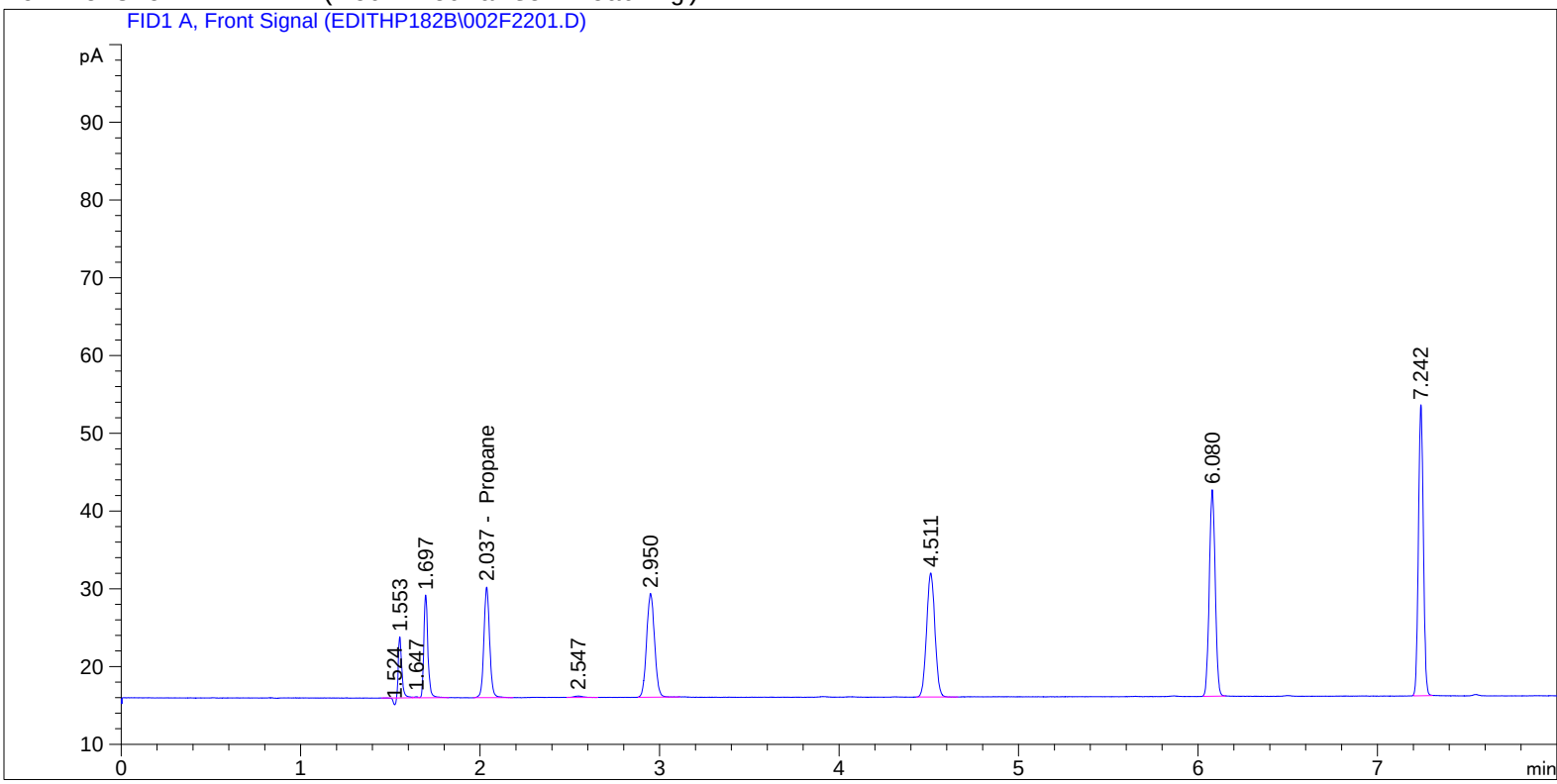
Oven	
Equilibration Time	0.3 min
Max Temperature	200 degrees C
Slow Fan	Disabled
Oven Program	On
35 °C for 2.2 min	
#1 then 15 °C/min to 70 °C for 0.07 min	
#2 then 30 °C/min to 180 °C for 1 min	
Run Time	9.27 min
Sample Overlap	
Sample overlap is not enabled	
Front SS Inlet H2	
Mode	Split
Heater	On 200 °C
Pressure	On 5.1931 psi
Total Flow	On 15.6 mL/min
Septum Purge Flow	On 3 mL/min
Gas Saver	Off
Split Ratio	5 :1
Split Flow	10.5 mL/min
Back SS Inlet H2	
Mode	Split
Heater	On 200 °C
Pressure	On 4.9511 psi
Total Flow	On 9.6 mL/min
Septum Purge Flow	On 3 mL/min
Gas Saver	Off
Split Ratio	2 :1
Split Flow	0 mL/min
Column #1	
Restek 10198Rtx-1 S/N 806941	
280 °C: 30 m x 320 µm x 4 µm	
In: Front SS Inlet H2	
Out: Front Detector FID	
(Initial)	35 °C
Pressure	5.1931 psi
Flow	2.1 mL/min
Average Velocity	39.91 cm/sec
Holdup Time	1.2528 min
Flow Program	On
2.1 mL/min for 0 min	
Run Time	9.27 min
Column #2	
Restek 19701Alumina S/N 156109	
280 °C: 30 m x 320 µm x 10 µm	
In: Front SS Inlet H2	
Out: Back Detector FID	
(Initial)	35 °C
Pressure	6.1868 psi
Flow	2.2 mL/min
Average Velocity	43.848 cm/sec
Holdup Time	1.1403 min
Flow Program	On

method: C:\GC\2013\EDITH\METHODS\GC139P039_HRVOC.M
Modified on: 1/14/2014 at 3:15:15 PM
2.2 mL/min for 0 min

Run Time	9.27 min	
Front Detector FID		
Heater	On	300 °C
H2 Flow	On	50 mL/min
Air Flow	On	450 mL/min
Makeup Flow	On	35 mL/min
Const Col + Makeup	Off	
Flame	On	
Electrometer	On	
Back Detector FID		
Heater	On	200 °C
H2 Flow	On	50 mL/min
Air Flow	On	450 mL/min
Makeup Flow	On	35 mL/min
Const Col + Makeup	Off	
Flame	On	
Electrometer	On	
Valve 1		
Gas Sampling Valve	Off	
GSV Loop Volume	0.25 mL	
Load Time	1.5 min	
Inject Time	0.5 min	
Valve 2		
Gas Sampling Valve	Off	
GSV Loop Volume	0.25 mL	
Load Time	1.5 min	
Inject Time	0.5 min	
Valve Box		
Heater	On	150 °C
Signals		
Signal #1: Front Signal	Save On	
	20 Hz	
Signal #2: Test Plot	Save Off	
	50 Hz	
Signal #3: Back Signal	Save On	
	20 Hz	
Signal #4: Test Plot	Save Off	
	50 Hz	

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\002F2201.D
Sample Name: EdithP108 #C3 ENV(1=600,2=400)

```
==================================================================
Acq. Operator   : disconnected                  Seq. Line :  22
Acq. Instrument : Edith                         Location : Vial 2
Injection Date  : 1/9/2015 9:22:08 AM                Inj :   1
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_TVOC_AS_C3.M
Last changed    : 1/12/2015 2:35:21 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:35:14 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  2.037 BB       31.66681    1.27353   40.32850    Propane

Totals :                                40.32850

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\002F2201.D
Sample Name: EdithP108 #C3 ENV(1=600,2=400)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.524	BP N	9.54854e-1	1.26492	1.20781		?
1.553	PB	10.61516	1.27108	13.49272		?
1.647	BV	2.01969e-1	1.26492	2.55475e-1		?
1.697	VB	20.83371	1.27288	26.51891		?
2.547	BB	5.79769e-1	1.26492	7.33361e-1		?
2.950	BB	41.01762	1.27381	52.24853		?
4.511	BB	51.56181	1.27400	65.68984		?
6.080	BB	61.36567	1.27412	78.18740		?
7.242	BB	71.61462	1.27421	91.25234		?

Uncalib. totals : 329.58639

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Ethane	1.550	1.855	31.65084	59.7690
as Butane	2.479	3.714	41.59739	39.8980
as Pentane	3.714	5.209	51.56181	39.7681
as Hexane	5.209	6.650	61.36567	40.4864
as Heptane	6.650	13.000	71.61462	39.2079

Totals : 219.1294

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

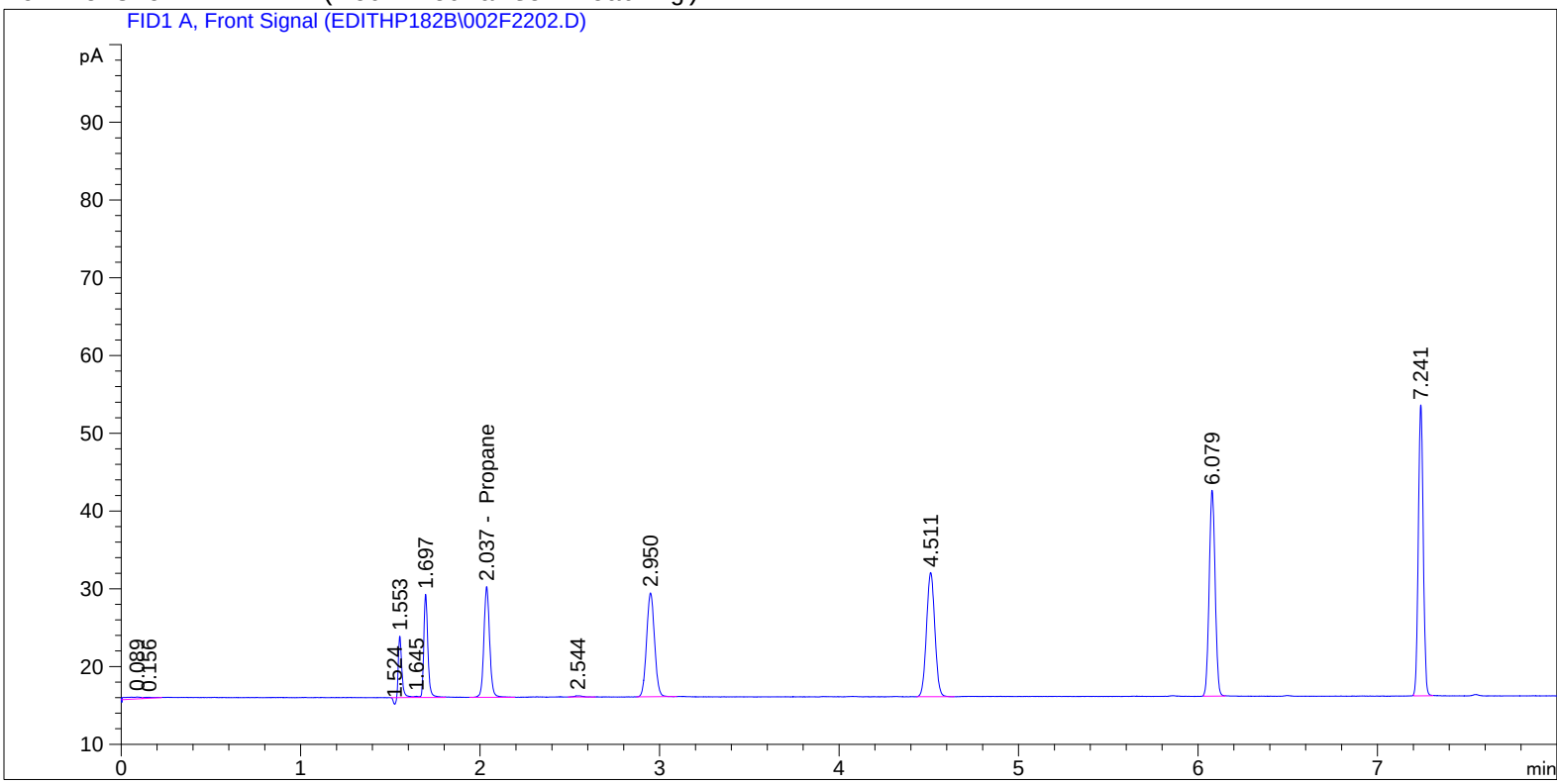
Name	Total Area [pA*s]	Amount [ppm]
as Ethane	31.65084	59.7690
as Butane	41.59739	39.8980
as Pentane	51.56181	39.7681
as Hexane	61.36567	40.4864
as Heptane	71.61462	39.2079
Propane	31.66681	40.3285

Totals : 259.4579

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\002F2202.D
Sample Name: EdithP108 #C3 ENV(1=600,2=400)

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  22
Acq. Instrument : Edith                          Location : Vial 2
Injection Date  : 1/9/2015 9:39:11 AM                 Inj :   2
                                                Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_TVOC_AS_C3.M
Last changed    : 1/12/2015 2:35:21 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:35:14 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  2.037 PB       31.78850    1.27353   40.48363    Propane

Totals :                                 40.48363

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\002F2202.D
Sample Name: EdithP108 #C3 ENV(1=600,2=400)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
0.089	BV	1.50715	1.26492	1.90642		?
0.156	VB	5.41970e-1	1.26492	6.85548e-1		?
1.524	BP N	8.60350e-1	1.26492	1.08827		?
1.553	PV	10.74346	1.27112	13.65627		?
1.645	VV	2.61823e-1	1.26492	3.31185e-1		?
1.697	VB	21.00629	1.27290	26.73891		?
2.544	BB	4.50374e-1	1.26492	5.69687e-1		?
2.950	BB	41.08152	1.27381	52.32999		?
4.511	BB	51.63745	1.27400	65.78625		?
6.079	BB	61.30168	1.27412	78.10582		?
7.241	BB	71.55357	1.27421	91.17452		?

Uncalib. totals : 332.37288

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Ethane	1.550	1.855	32.01157	60.4502
as Butane	2.479	3.714	41.53189	39.8352
as Pentane	3.714	5.209	51.63745	39.8264
as Hexane	5.209	6.650	61.30168	40.4442
as Heptane	6.650	13.000	71.55357	39.1744

Totals : 219.7305

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

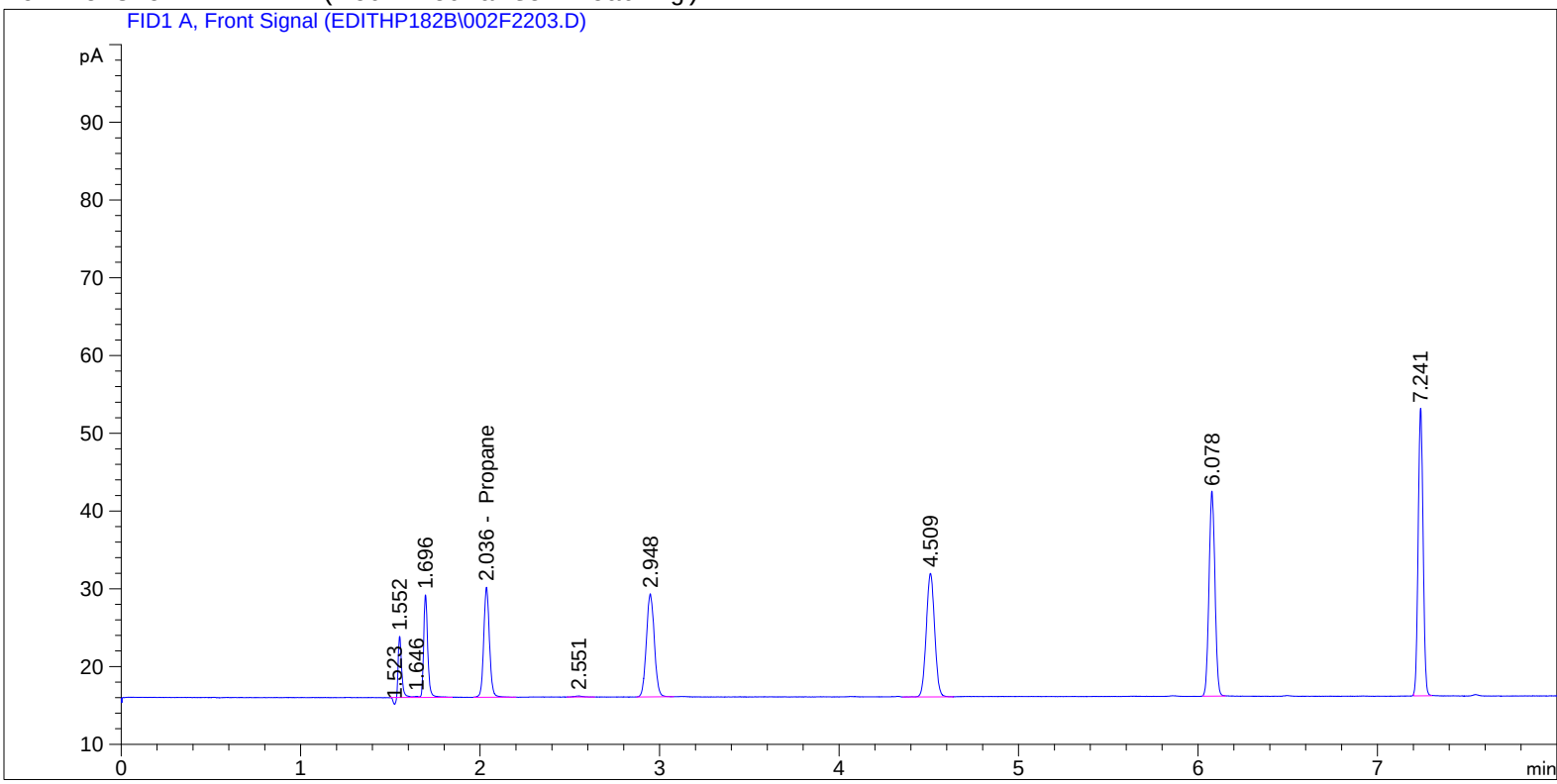
Name	Total Area [pA*s]	Amount [ppm]
as Ethane	32.01157	60.4502
as Butane	41.53189	39.8352
as Pentane	51.63745	39.8264
as Hexane	61.30168	40.4442
as Heptane	71.55357	39.1744
Propane	31.78850	40.4836

Totals : 260.2141

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\002F2203.D
Sample Name: EdithP108 #C3 ENV(1=600,2=400)

```
==================================================================
Acq. Operator   : disconnected                  Seq. Line :  22
Acq. Instrument : Edith                         Location : Vial 2
Injection Date  : 1/9/2015 9:56:15 AM                Inj :   3
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_TVOC_AS_C3.M
Last changed    : 1/12/2015 2:35:21 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:35:14 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  2.036 BB       31.35673    1.27351   39.93322    Propane

Totals :                                 39.93322

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\002F2203.D
Sample Name: EdithP108 #C3 ENV(1=600,2=400)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.523	BP N	8.88513e-1	1.26492	1.12390		?
1.552	PV	10.57544	1.27107	13.44209		?
1.646	VV	2.38261e-1	1.26492	3.01381e-1		?
1.696	VB	20.77140	1.27288	26.43948		?
2.551	BB	4.22729e-1	1.26492	5.34718e-1		?
2.948	BB	40.86020	1.27380	52.04786		?
4.509	VB	51.53592	1.27400	65.65683		?
6.078	BB	60.95045	1.27412	77.65809		?
7.241	BB	70.98714	1.27421	90.45245		?

Uncalib. totals : 327.65679

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Ethane	1.550	1.855	31.58510	59.6449
as Butane	2.479	3.714	41.28293	39.5964
as Pentane	3.714	5.209	51.53592	39.7481
as Hexane	5.209	6.650	60.95045	40.2125
as Heptane	6.650	13.000	70.98714	38.8643

Totals : 218.0662

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

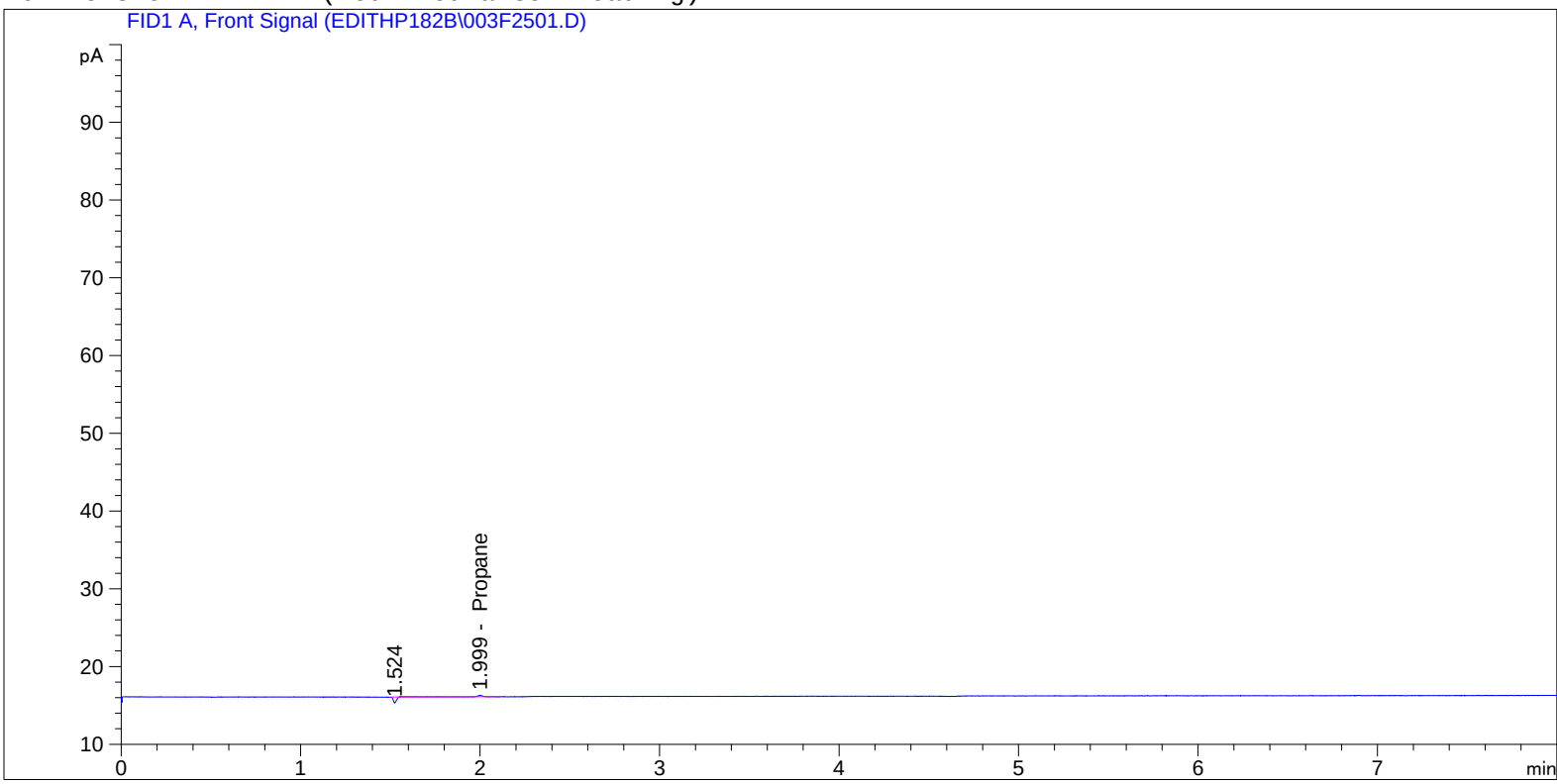
Name	Total Area [pA*s]	Amount [ppm]
as Ethane	31.58510	59.6449
as Butane	41.28293	39.5964
as Pentane	51.53592	39.7481
as Hexane	60.95045	40.2125
as Heptane	70.98714	38.8643
Propane	31.35673	39.9332

Totals : 257.9994

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\003F2501.D
Sample Name: zero air blank

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  25
Acq. Instrument : Edith                           Location : Vial 3
Injection Date  : 1/9/2015 12:28:30 PM                 Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC_LONG.M
Last changed    : 1/15/2014 1:35:32 PM by Justin Guenzler
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_TVOC_AS_C3.M
Last changed    : 1/12/2015 2:35:21 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:35:14 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.999 PV     5.01799e-1    1.26492 6.34735e-1    Propane

Totals :                              6.34735e-1

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\003F2501.D
Sample Name: zero air blank

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.524	BP N	9.21802e-1	1.26492	1.16601		?

Uncalib. totals : 1.16601

Summed Peaks Report

Signal 1: FID1 A, Front Signal

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

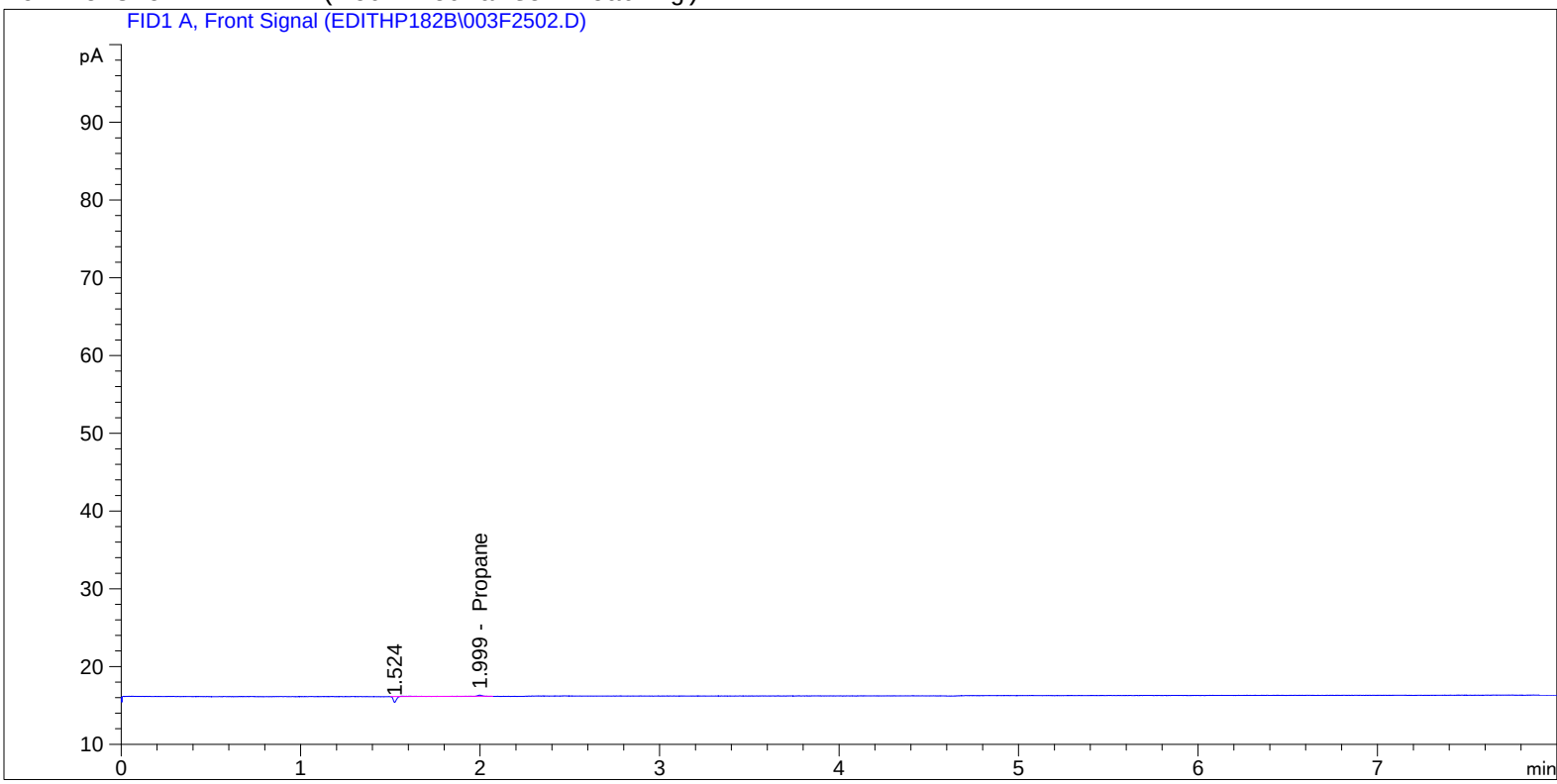
Name	Total Area [pA*s]	Amount [ppm]
Propane	5.01799e-1	0.6347

Totals : 6.3474e-1

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\003F2502.D
Sample Name: zero air blank

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  25
Acq. Instrument : Edith                           Location : Vial 3
Injection Date  : 1/9/2015 12:46:49 PM                 Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC_LONG.M
Last changed    : 1/15/2014 1:35:32 PM by Justin Guenzler
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_TVOC_AS_C3.M
Last changed    : 1/12/2015 2:35:21 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:35:14 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.999 PV     5.22519e-1    1.26492 6.60944e-1    Propane

Totals :                              6.60944e-1

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\003F2502.D
Sample Name: zero air blank

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.524	BP N	9.02304e-1	1.26492	1.14134		?

Uncalib. totals : 1.14134

Summed Peaks Report

Signal 1: FID1 A, Front Signal

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

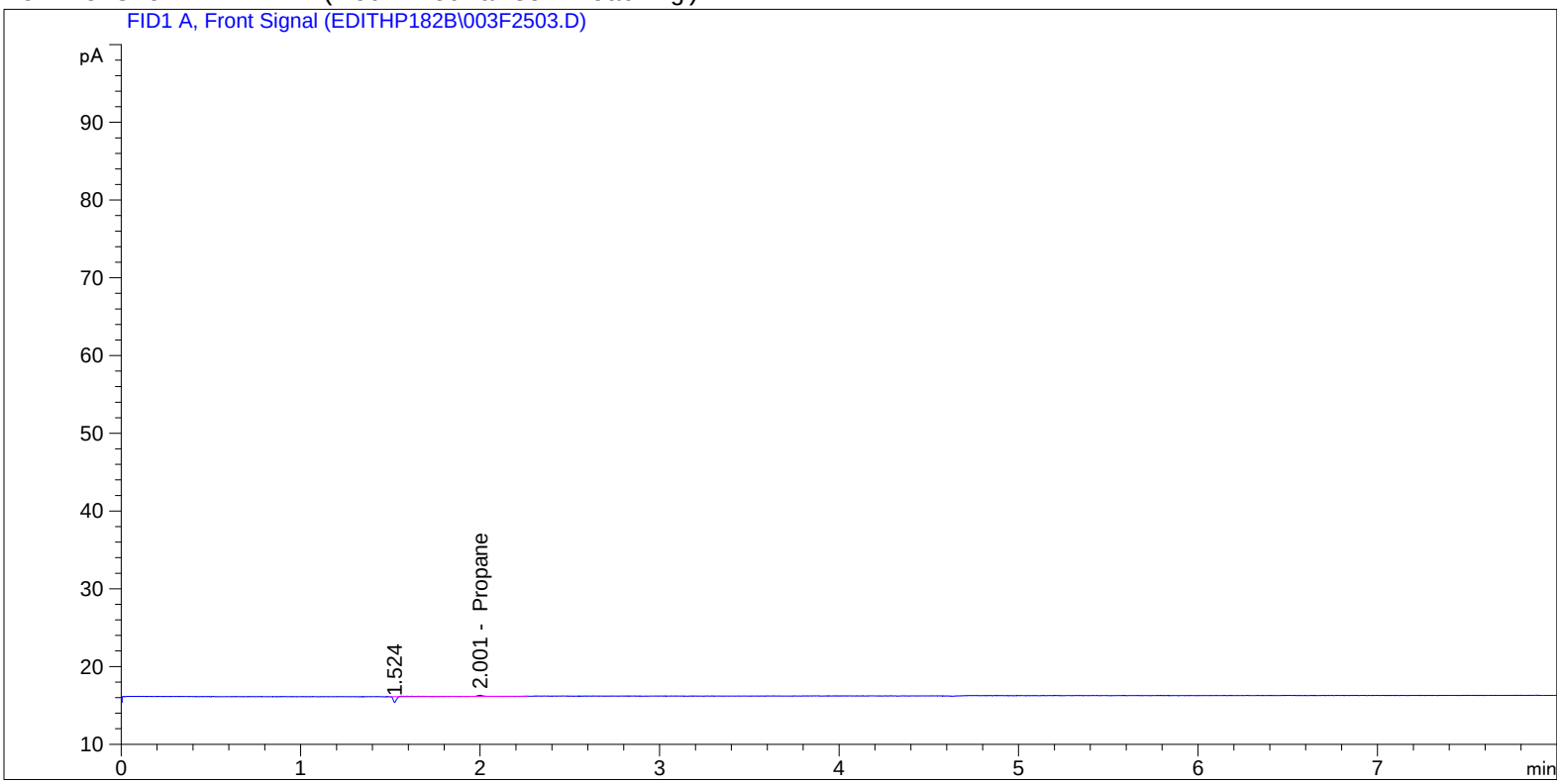
Name	Total Area [pA*s]	Amount [ppm]
Propane	5.22519e-1	0.6609

Totals : 6.6094e-1

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\003F2503.D
Sample Name: zero air blank

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  25
Acq. Instrument : Edith                           Location : Vial 3
Injection Date  : 1/9/2015 1:05:08 PM                  Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC_LONG.M
Last changed    : 1/15/2014 1:35:32 PM by Justin Guenzler
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_TVOC_AS_C3.M
Last changed    : 1/12/2015 2:35:21 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:35:14 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  2.001 PB     4.62420e-1    1.26492 5.84924e-1    Propane

Totals :                              5.84924e-1

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\003F2503.D
Sample Name: zero air blank

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.524	BP N	8.97248e-1	1.26492	1.13495	?	

Uncalib. totals : 1.13495

Summed Peaks Report

Signal 1: FID1 A, Front Signal

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

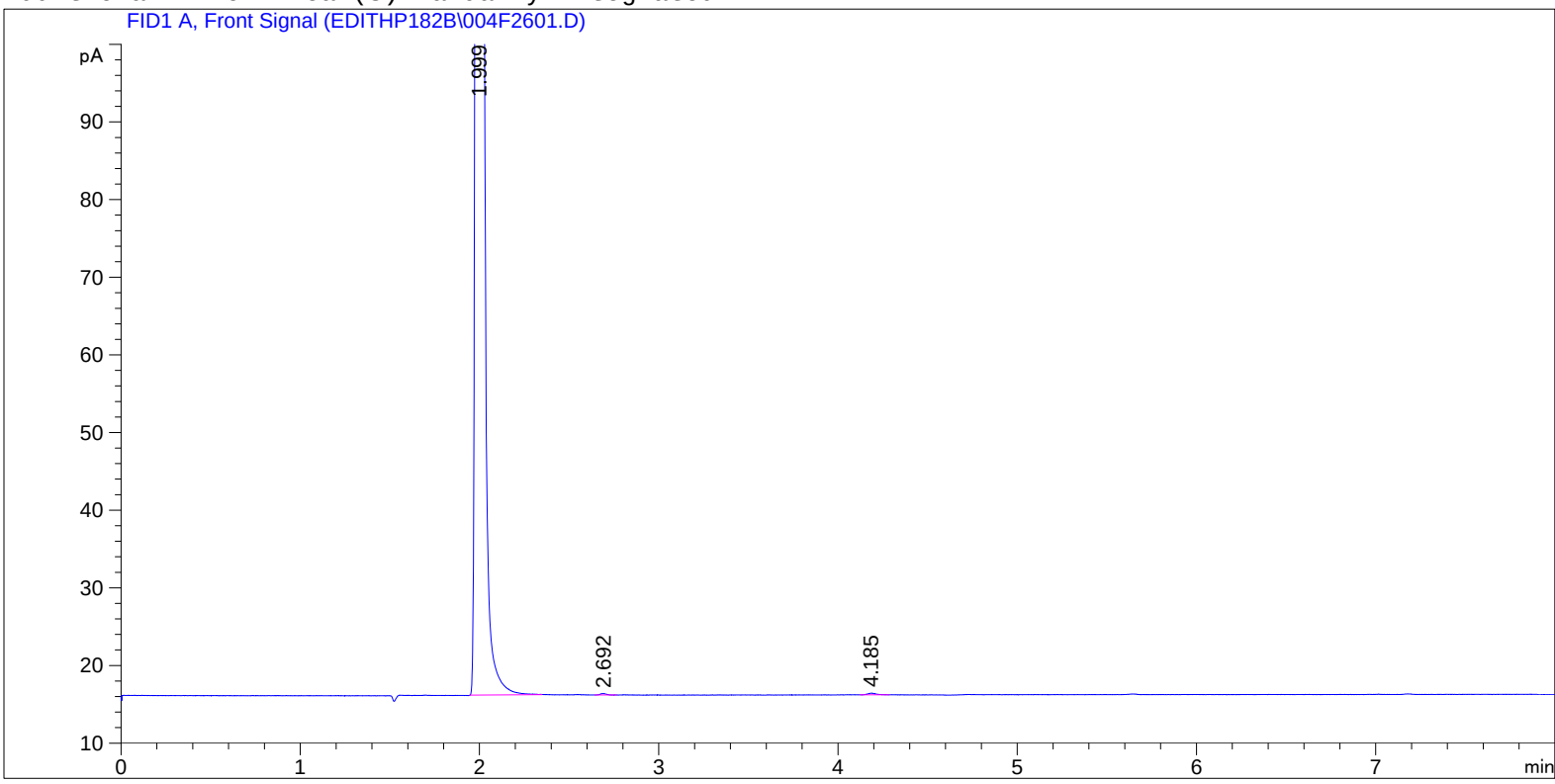
Name	Total Area [pA*s]	Amount [ppm]
Propane	4.62420e-1	0.5849

Totals : 5.8492e-1

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\004F2601.D
Sample Name: 1214-29.1186.Can *501

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  26
Acq. Instrument : Edith                           Location : Vial 4
Injection Date  : 1/9/2015 1:23:38 PM                  Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_TVOC_AS_C3.M
Last changed    : 1/12/2015 2:42:06 PM by Turner Oppy
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:42:06 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|-----------------
  2.030            -          -          -         Propane

Totals :                                0.00000

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\004F2601.D
Sample Name: 1214-29.1186.Can *501

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.999	BB	1493.36401	1.27473	1903.64027		?
2.692	BB	4.19894e-1	1.26492	5.31132e-1		?
4.185	BB	6.84666e-1	1.26492	8.66047e-1		?

Uncalib. totals : 1905.03745

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	1493.36401	1.901e3
as Butane	2.479	3.714	4.19894e-1	0.4027
as Pentane	3.714	5.209	6.84666e-1	0.5281

Totals : 1901.9966

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Propane	1493.36401	1.901e3
as Butane	4.19894e-1	0.4027
as Pentane	6.84666e-1	0.5281
Propane	0.00000	0.0000

Totals : 1901.9966

Area Percent Report

Sorted By : Signal
Calib. Data Modified : 1/12/2015 2:42:06 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\004F2601.D
Sample Name: 1214-29.1186.Can *501

Signal 1: FID1 A, Front Signal

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	2.030		0.0000	0.00000	0.00000	Propane
Totals :				0.00000	0.0000	

Uncalibrated Peaks:

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.999	BB	0.0305	1493.36401	99.92609	?
2	2.692	BB	0.0350	4.19894e-1	0.02810	?
3	4.185	BB	0.0479	6.84666e-1	0.04581	?
Uncalib. totals :				1494.46857	100.0000	

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========

Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Area %
as Propane	1.855	2.479	1493.36401	99.9261
as Butane	2.479	3.714	4.19894e-1	0.0281
as Pentane	3.714	5.209	6.84666e-1	0.0458
Totals :				100.0000

1 Warnings or Errors :

Warning : Reference compound(s) not found

==========

Final Summed Peaks Report

==========

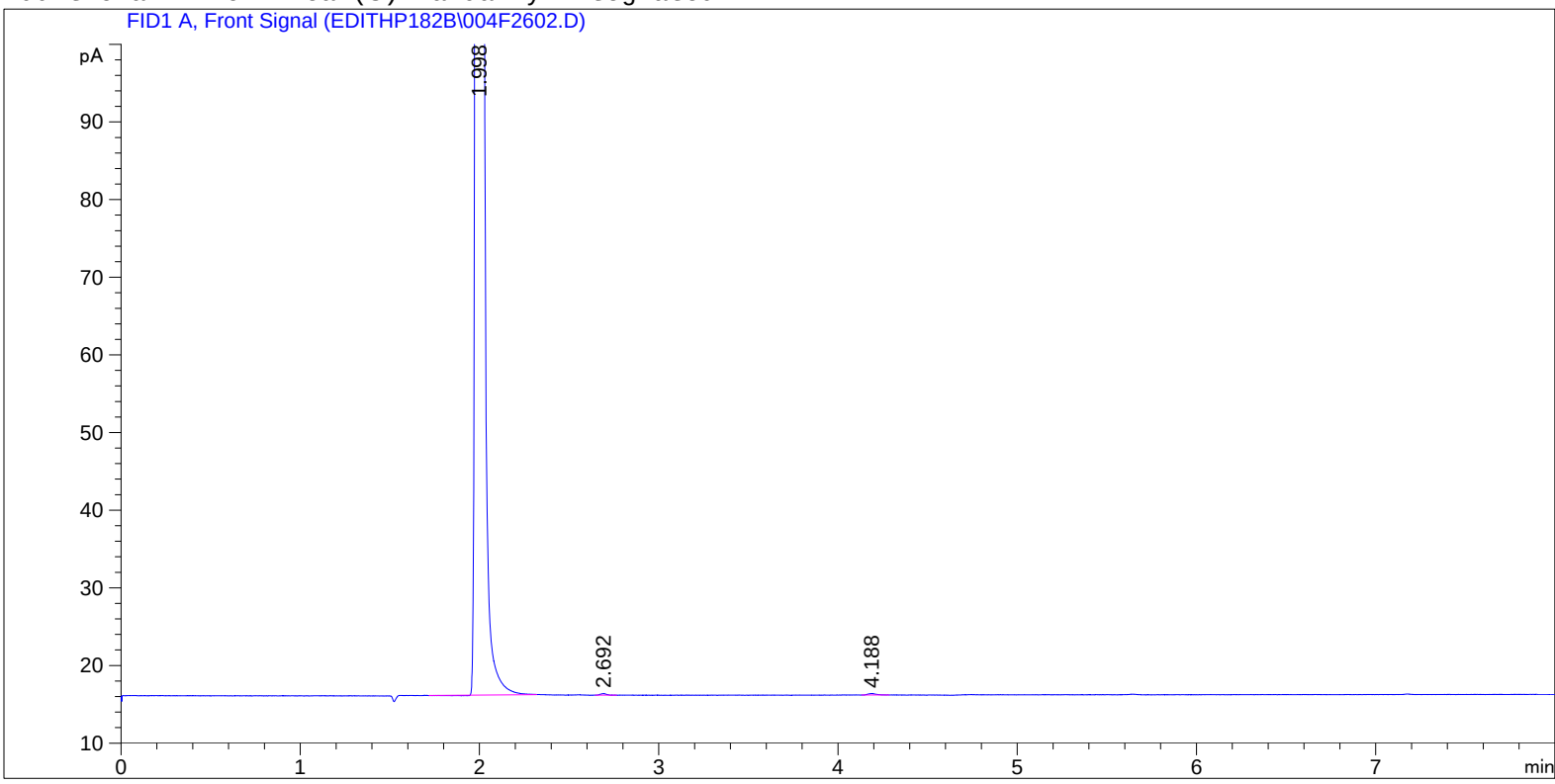
Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Area %
as Propane	1493.36401	99.9261
as Butane	4.19894e-1	0.0281
as Pentane	6.84666e-1	0.0458
Propane	0.00000	0.0000
Totals :	100.0000	

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\004F2602.D
Sample Name: 1214-29.1186.Can *501

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  26
Acq. Instrument : Edith                           Location : Vial 4
Injection Date  : 1/9/2015 1:37:55 PM                  Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_TVOC_AS_C3.M
Last changed    : 1/12/2015 2:42:06 PM by Turner Oppy
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:42:18 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|-----------------
  2.030            -          -          -         Propane

Totals :                                0.00000

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\004F2602.D
Sample Name: 1214-29.1186.Can *501

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.998	VB	1495.32593	1.27473	1906.14124		?
2.692	BB	4.62973e-1	1.26492	5.85624e-1		?
4.188	BB	5.85505e-1	1.26492	7.40617e-1		?

Uncalib. totals : 1907.46748

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	1495.32593	1.904e3
as Butane	2.479	3.714	4.62973e-1	0.4441
as Pentane	3.714	5.209	5.85505e-1	0.4516

Totals : 1904.4590

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Propane	1495.32593	1.904e3
as Butane	4.62973e-1	0.4441
as Pentane	5.85505e-1	0.4516
Propane	0.00000	0.0000

Totals : 1904.4590

Area Percent Report

Sorted By : Signal
Calib. Data Modified : 1/12/2015 2:42:18 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\004F2602.D
Sample Name: 1214-29.1186.Can *501

Signal 1: FID1 A, Front Signal

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	2.030		0.0000	0.00000	0.00000	Propane
Totals :				0.00000	0.0000	

Uncalibrated Peaks:

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.998	VB	0.0335	1495.32593	99.92993	?
2	2.692	BB	0.0333	4.62973e-1	0.03094	?
3	4.188	BB	0.0417	5.85505e-1	0.03913	?
Uncalib. totals :				1496.37441	100.0000	

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========

Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Area %
as Propane	1.855	2.479	1495.32593	99.9299
as Butane	2.479	3.714	4.62973e-1	0.0309
as Pentane	3.714	5.209	5.85505e-1	0.0391
Totals :				100.0000

1 Warnings or Errors :

Warning : Reference compound(s) not found

==========

Final Summed Peaks Report

==========

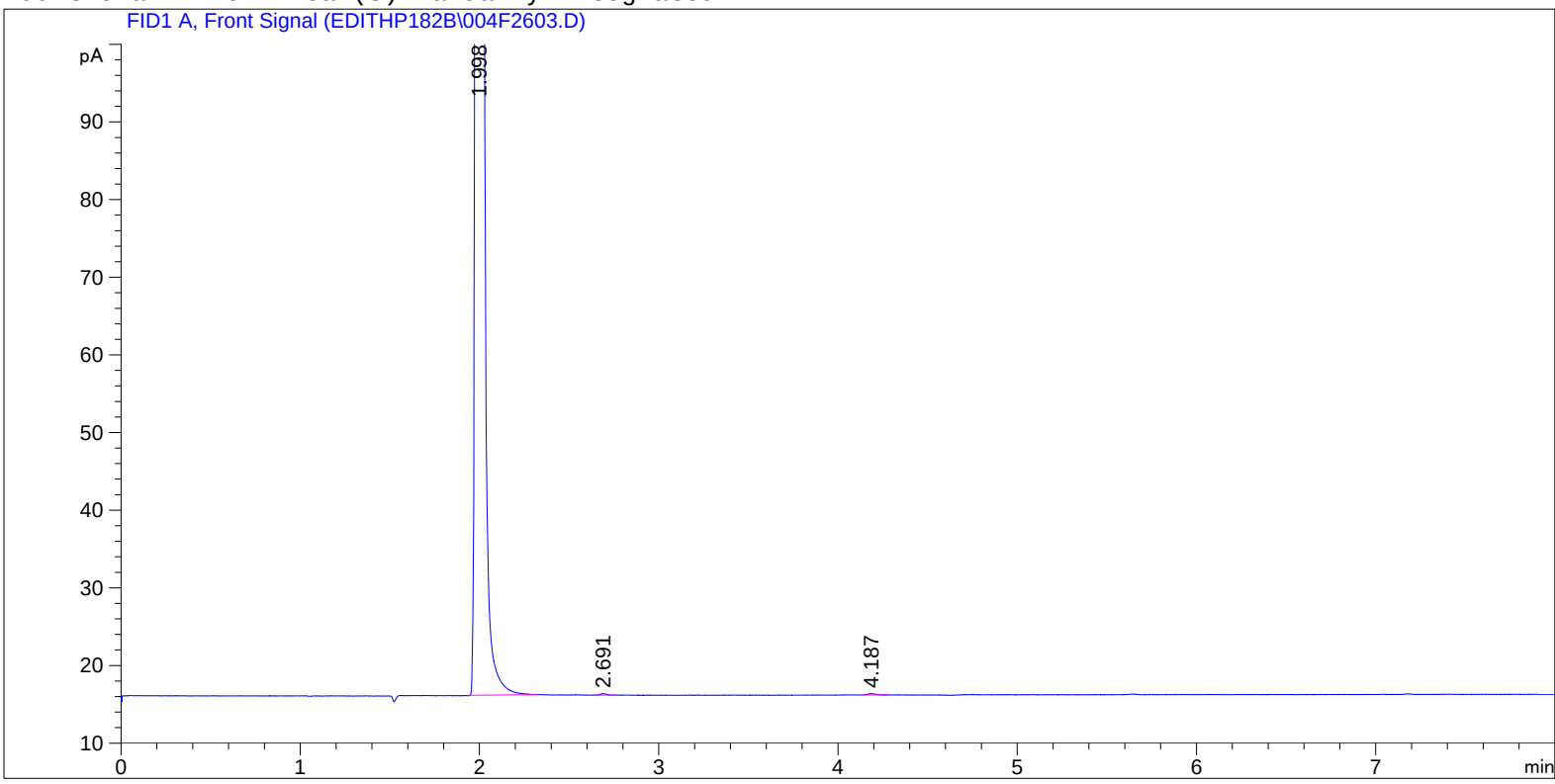
Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Area %
as Propane	1495.32593	99.9299
as Butane	4.62973e-1	0.0309
as Pentane	5.85505e-1	0.0391
Propane	0.00000	0.0000
Totals :	100.0000	

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\004F2603.D
Sample Name: 1214-29.1186.Can *501

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  26
Acq. Instrument : Edith                           Location : Vial 4
Injection Date  : 1/9/2015 1:52:12 PM                  Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_TVOC_AS_C3.M
Last changed    : 1/12/2015 2:42:06 PM by Turner Oppy
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:42:18 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|-----------------
  2.030            -          -          -         Propane

Totals :                                0.00000

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\004F2603.D
Sample Name: 1214-29.1186.Can *501

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.998	PB	1502.12109	1.27473	1914.80344		?
2.691	BB	4.52142e-1	1.26492	5.71923e-1		?
4.187	BB	5.88611e-1	1.26492	7.44546e-1		?

Uncalib. totals : 1916.11991

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	1502.12109	1.912e3
as Butane	2.479	3.714	4.52142e-1	0.4337
as Pentane	3.714	5.209	5.88611e-1	0.4540

Totals : 1913.1013

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Propane	1502.12109	1.912e3
as Butane	4.52142e-1	0.4337
as Pentane	5.88611e-1	0.4540
Propane	0.00000	0.0000

Totals : 1913.1013

Area Percent Report

Sorted By : Signal
Calib. Data Modified : 1/12/2015 2:42:18 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\004F2603.D
Sample Name: 1214-29.1186.Can *501

Signal 1: FID1 A, Front Signal

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	2.030		0.0000	0.00000	0.00000	Propane
Totals :				0.00000	0.0000	

Uncalibrated Peaks:

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.998	PB	0.0315	1502.12109	99.93076	?
2	2.691	BB	0.0361	4.52142e-1	0.03008	?
3	4.187	BB	0.0507	5.88611e-1	0.03916	?
Uncalib. totals :				1503.16185	100.0000	

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

==========

Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Area %
as Propane	1.855	2.479	1502.12109	99.9308
as Butane	2.479	3.714	4.52142e-1	0.0301
as Pentane	3.714	5.209	5.88611e-1	0.0392
Totals :				100.0000

1 Warnings or Errors :

Warning : Reference compound(s) not found

==========

Final Summed Peaks Report

==========

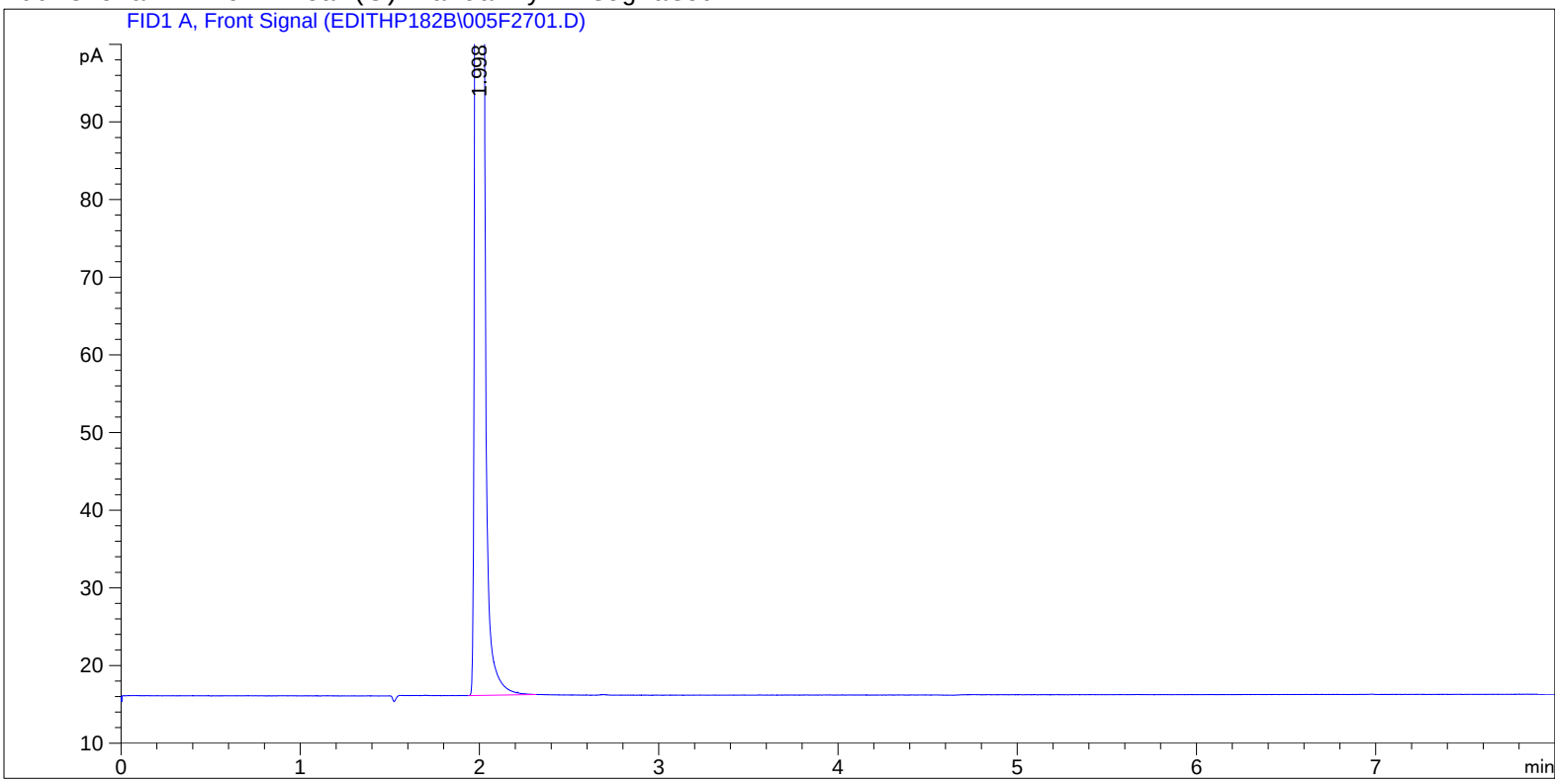
Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Area %
as Propane	1502.12109	99.9308
as Butane	4.52142e-1	0.0301
as Pentane	5.88611e-1	0.0392
Propane	0.00000	0.0000
Totals :	100.0000	

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\005F2701.D
Sample Name: 1214-29.1310.Can *501

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  27
Acq. Instrument : Edith                           Location : Vial 5
Injection Date  : 1/9/2015 2:06:29 PM                  Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_TVOC_AS_C3.M
Last changed    : 1/12/2015 2:42:06 PM by Turner Oppy
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:42:18 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|-----------------
  2.030            -          -          -         Propane

Totals :                                0.00000

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\005F2701.D
Sample Name: 1214-29.1310.Can *501

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.998	BB	1461.87830	1.27473	1863.50357		?

Uncalib. totals : 1863.50357

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	1461.87830	1.861e3

Totals : 1860.9842

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Propane	1461.87830	1.861e3
Propane	0.00000	0.0000

Totals : 1860.9842

Area Percent Report

Sorted By : Signal
Calib. Data Modified : 1/12/2015 2:42:18 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	2.030		0.0000	0.00000	0.00000	Propane

Totals : 0.00000 0.0000

Uncalibrated Peaks:

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\005F2701.D
Sample Name: 1214-29.1310.Can *501

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.998	BB	0.0315	1461.87830	1.000e2	?

Uncalib. totals : 1461.87830 100.0000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Area %
as Propane	1.855	2.479	1461.87830	100.0000

Totals : 100.0000

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

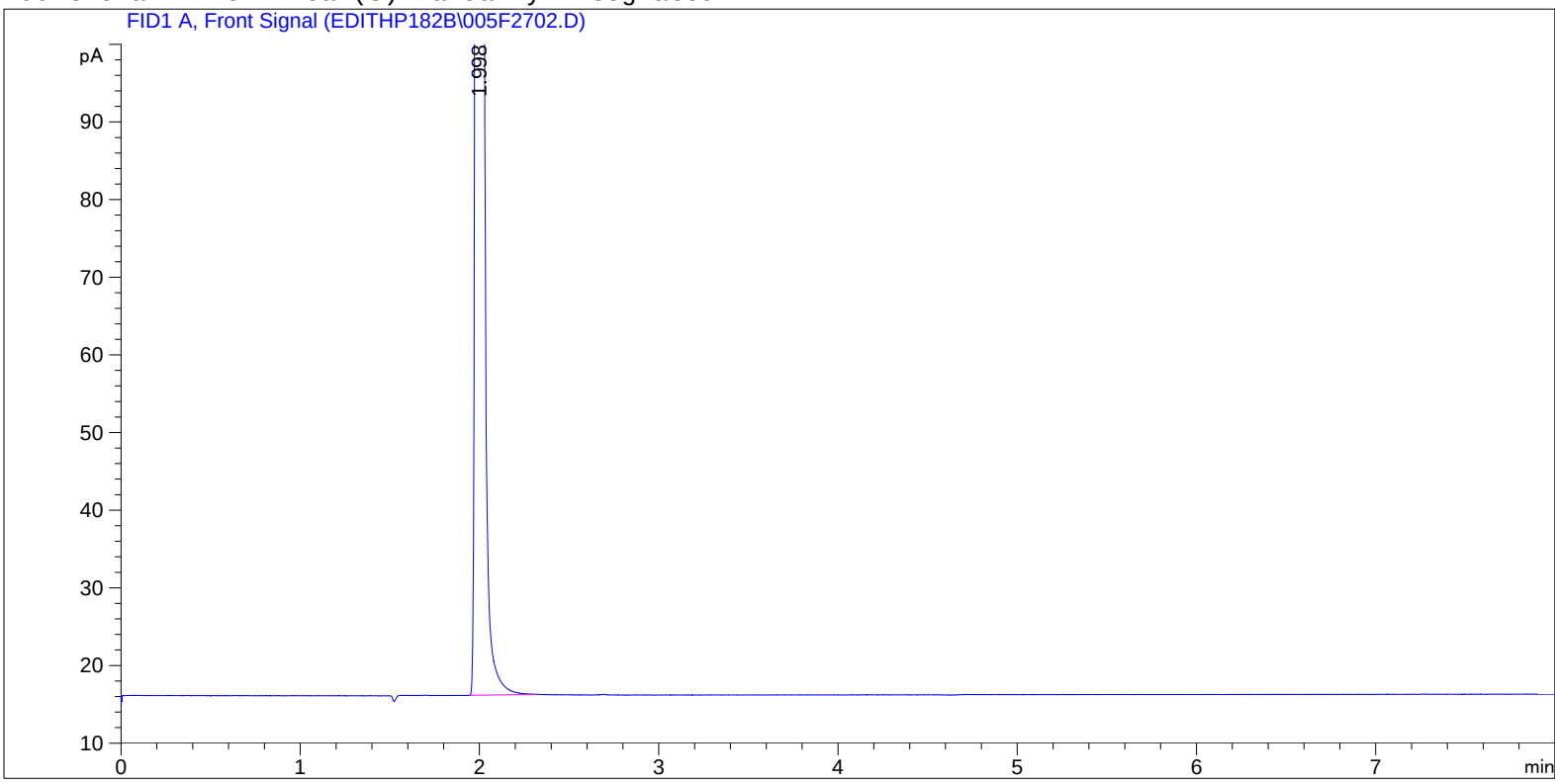
Name	Total Area [pA*s]	Area %
as Propane	1461.87830	100.0000
Propane	0.00000	0.0000

Totals : 100.0000

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\005F2702.D
Sample Name: 1214-29.1310.Can *501

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  27
Acq. Instrument : Edith                           Location : Vial 5
Injection Date  : 1/9/2015 2:21:39 PM                  Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_TVOC_AS_C3.M
Last changed    : 1/12/2015 2:42:06 PM by Turner Oppy
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:42:18 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|-----------------
  2.030            -          -          -         Propane

Totals :                                0.00000

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\005F2702.D
Sample Name: 1214-29.1310.Can *501

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.998	BB	1461.31714	1.27473	1862.78823		?

Uncalib. totals : 1862.78823

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	1461.31714	1.860e3

Totals : 1860.2699

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Propane	1461.31714	1.860e3
Propane	0.00000	0.0000

Totals : 1860.2699

Area Percent Report

Sorted By : Signal
Calib. Data Modified : 1/12/2015 2:42:18 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	2.030		0.0000	0.00000	0.00000	Propane

Totals : 0.00000 0.0000

Uncalibrated Peaks:

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\005F2702.D
Sample Name: 1214-29.1310.Can *501

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.998	BB	0.0306	1461.31714	1.000e2	?

Uncalib. totals : 1461.31714 100.0000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Area %
as Propane	1.855	2.479	1461.31714	100.0000

Totals : 100.0000

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

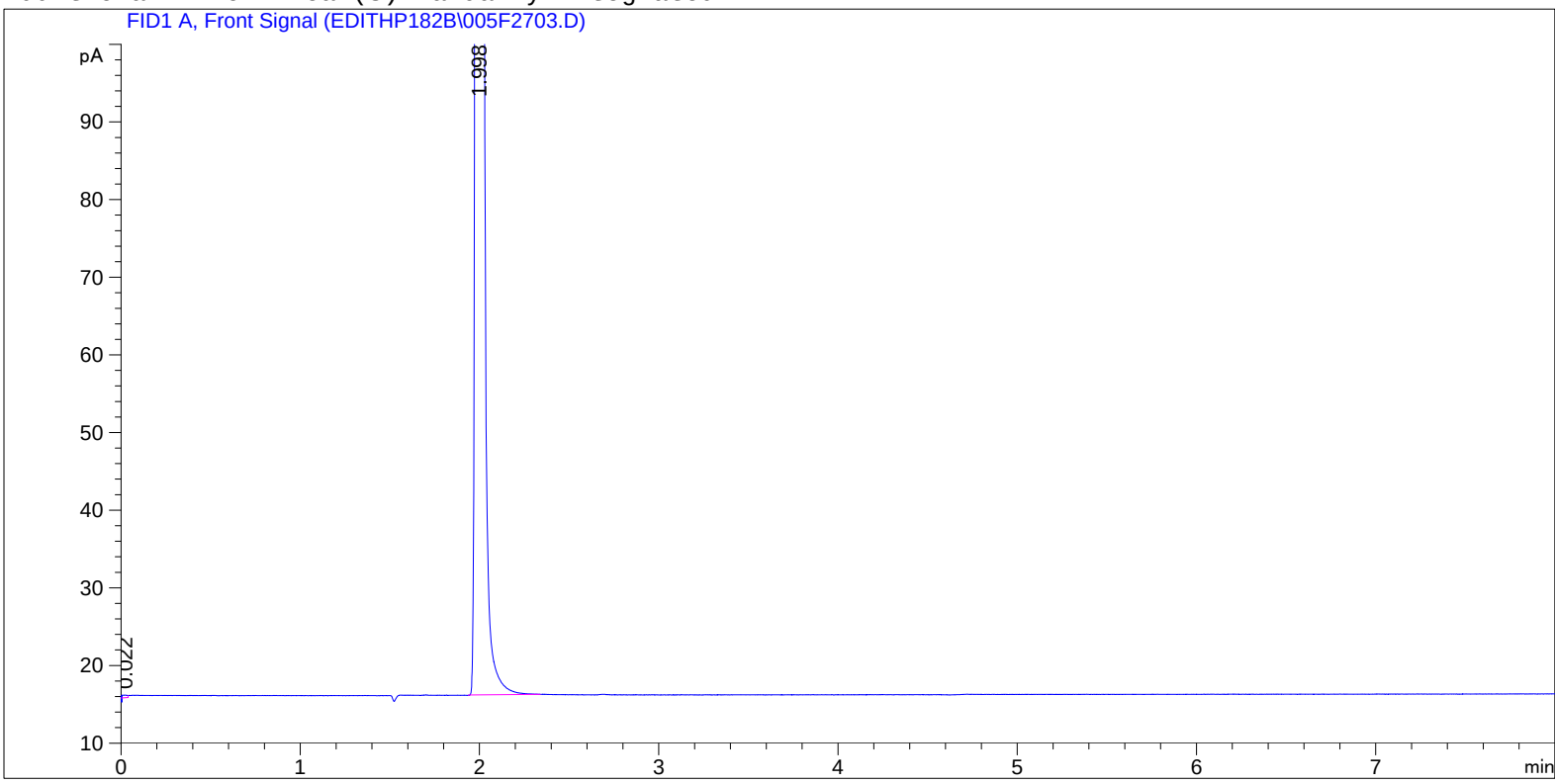
Name	Total Area [pA*s]	Area %
as Propane	1461.31714	100.0000
Propane	0.00000	0.0000

Totals : 100.0000

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\005F2703.D
Sample Name: 1214-29.1310.Can *501

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  27
Acq. Instrument : Edith                           Location : Vial 5
Injection Date  : 1/9/2015 2:35:55 PM                  Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_TVOC_AS_C3.M
Last changed    : 1/12/2015 2:42:06 PM by Turner Oppy
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:42:18 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|-----------------
  2.030            -          -          -         Propane

Totals :                                0.00000

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\005F2703.D
Sample Name: 1214-29.1310.Can *501

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
0.022	BV	5.95844e-1	1.26492	7.53695e-1		?
1.998	BB	1461.65686	1.27473	1863.22129		?

Uncalib. totals : 1863.97499

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	1461.65686	1.861e3

Totals : 1860.7023

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Propane	1461.65686	1.861e3
Propane	0.00000	0.0000

Totals : 1860.7023

Area Percent Report

Sorted By : Signal
Calib. Data Modified : 1/12/2015 2:42:18 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	2.030		0.0000	0.00000	0.00000	Propane

Totals : 0.00000 0.0000

Uncalibrated Peaks:

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\005F2703.D
Sample Name: 1214-29.1310.Can *501

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	0.022	BV	0.0262	5.95844e-1	0.04075	?
2	1.998	BB	0.0315	1461.65686	99.95925	?

Uncalib. totals : 1462.25270 100.0000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Area %
as Propane	1.855	2.479	1461.65686	99.9593

Totals : 99.9593

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

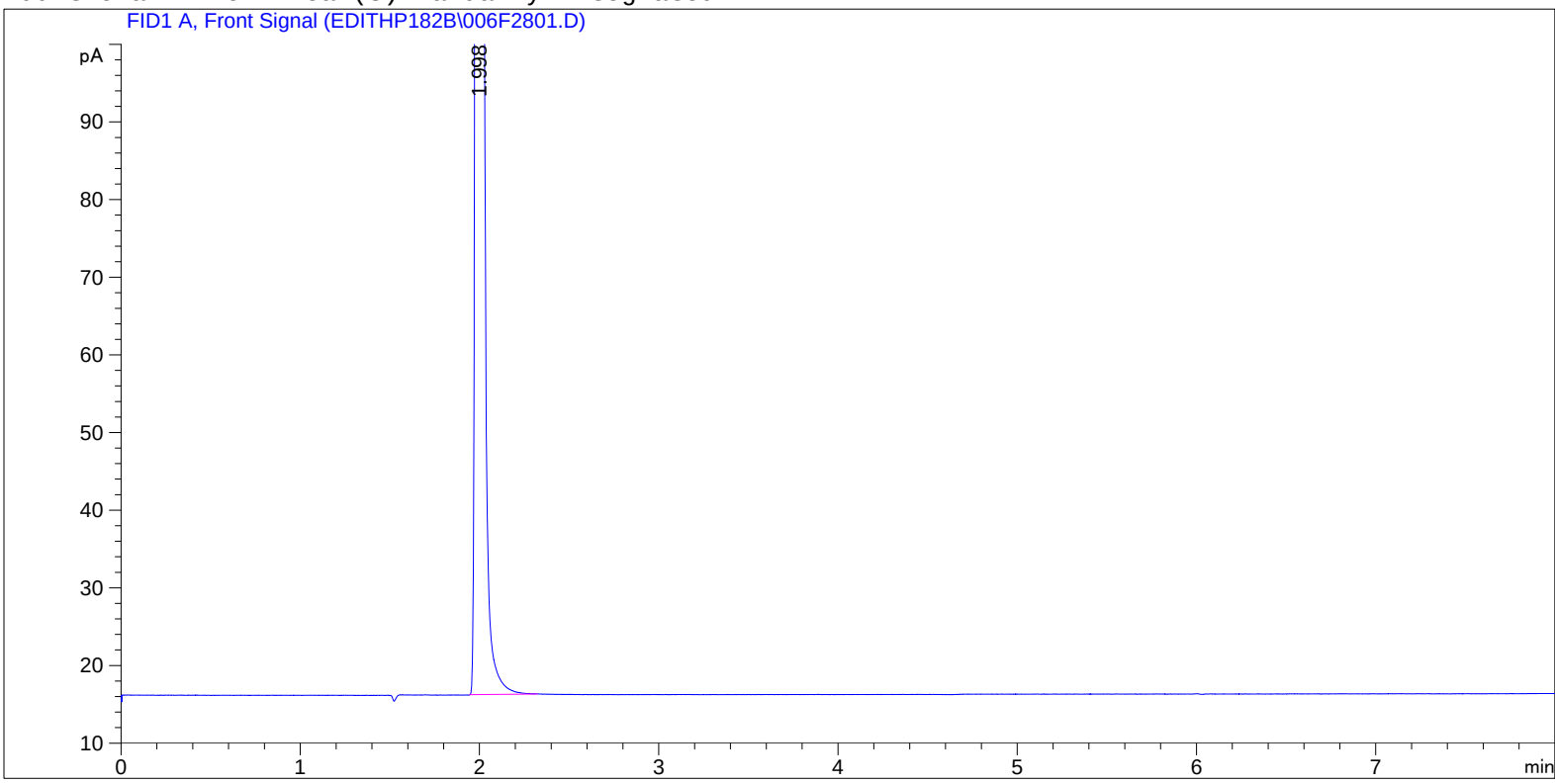
Name	Total Area [pA*s]	Area %
as Propane	1461.65686	99.9593
Propane	0.00000	0.0000

Totals : 99.9593

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\006F2801.D
Sample Name: 1214-29.1044.Can *501

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  28
Acq. Instrument : Edith                           Location : Vial 6
Injection Date  : 1/9/2015 2:50:31 PM                  Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_TVOC_AS_C3.M
Last changed    : 1/12/2015 2:42:06 PM by Turner Oppy
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:42:18 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|-----------------
  2.030            -          -          -         Propane

Totals :                                0.00000

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\006F2801.D
Sample Name: 1214-29.1044.Can *501

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.998	BB	1521.33777	1.27473	1939.30007		?

Uncalib. totals : 1939.30007

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	1521.33777	1.937e3

Totals : 1936.6767

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Propane	1521.33777	1.937e3
Propane	0.00000	0.0000

Totals : 1936.6767

Area Percent Report

Sorted By : Signal
Calib. Data Modified : 1/12/2015 2:42:18 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	2.030		0.0000	0.00000	0.00000	Propane

Totals : 0.00000 0.0000

Uncalibrated Peaks:

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\006F2801.D
Sample Name: 1214-29.1044.Can *501

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.998	BB	0.0305	1521.33777	1.000e2	?

Uncalib. totals : 1521.33777 100.0000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Area %
as Propane	1.855	2.479	1521.33777	100.0000

Totals : 100.0000

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

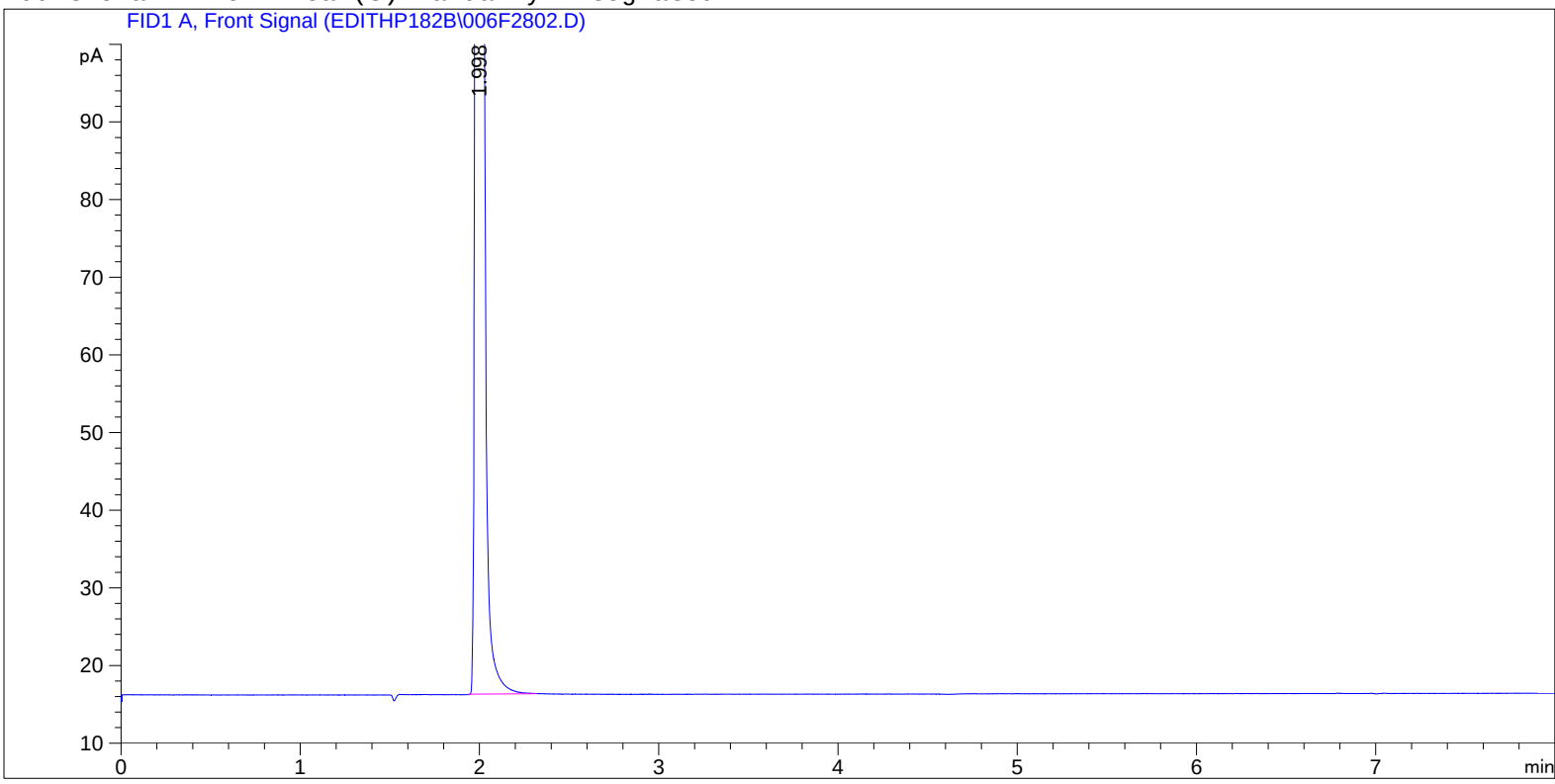
Name	Total Area [pA*s]	Area %
as Propane	1521.33777	100.0000
Propane	0.00000	0.0000

Totals : 100.0000

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\006F2802.D
Sample Name: 1214-29.1044.Can *501

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  28
Acq. Instrument : Edith                           Location : Vial 6
Injection Date  : 1/9/2015 3:04:48 PM                  Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_TVOC_AS_C3.M
Last changed    : 1/12/2015 2:42:06 PM by Turner Oppy
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:42:18 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|-----------------
  2.030            -          -          -         Propane

Totals :                                0.00000

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\006F2802.D
Sample Name: 1214-29.1044.Can *501

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.998	PB	1526.65576	1.27473	1946.07923		?

Uncalib. totals : 1946.07923

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	1526.65576	1.943e3

Totals : 1943.4465

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Propane	1526.65576	1.943e3
Propane	0.00000	0.0000

Totals : 1943.4465

Area Percent Report

Sorted By : Signal
Calib. Data Modified : 1/12/2015 2:42:18 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	2.030		0.0000	0.00000	0.00000	Propane

Totals : 0.00000 0.0000

Uncalibrated Peaks:

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\006F2802.D
Sample Name: 1214-29.1044.Can *501

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.998	PB	0.0305	1526.65576	1.000e2	?

Uncalib. totals : 1526.65576 100.0000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Area %
as Propane	1.855	2.479	1526.65576	100.0000

Totals : 100.0000

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

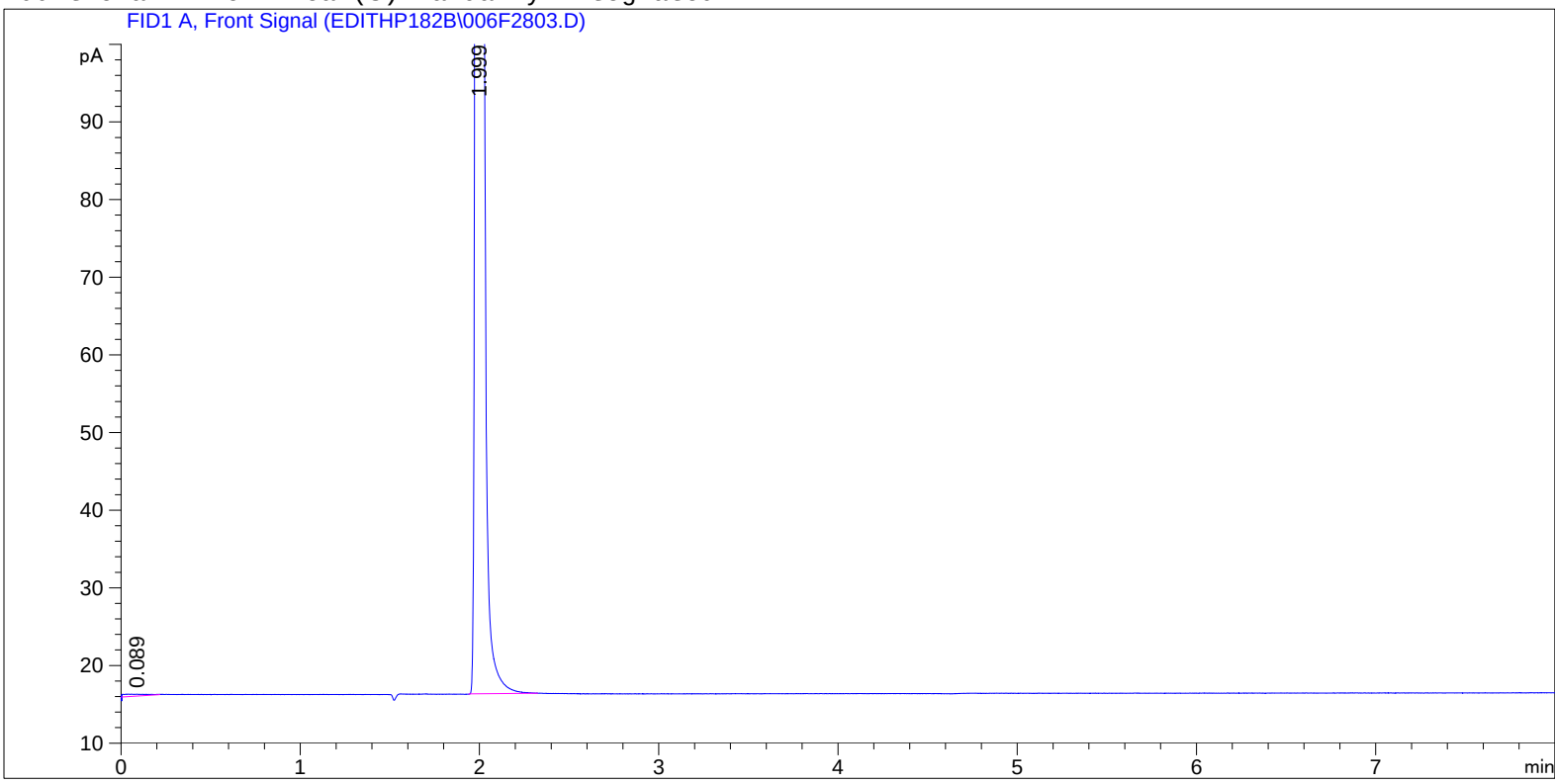
Name	Total Area [pA*s]	Area %
as Propane	1526.65576	100.0000
Propane	0.00000	0.0000

Totals : 100.0000

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\006F2803.D
Sample Name: 1214-29.1044.Can *501

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  28
Acq. Instrument : Edith                           Location : Vial 6
Injection Date  : 1/9/2015 3:19:13 PM                  Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_TVOC_AS_C3.M
Last changed    : 1/12/2015 2:42:06 PM by Turner Oppy
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:42:18 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|-----------------
  2.030            -          -          -         Propane

Totals :                                0.00000

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\006F2803.D
Sample Name: 1214-29.1044.Can *501

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
0.089	BB	2.33636	1.26492	2.95531	?	
1.999	PB	1524.29663	1.27473	1943.07191	?	

Uncalib. totals : 1946.02721

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	1524.29663	1.940e3

Totals : 1940.4433

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Propane	1524.29663	1.940e3
Propane	0.00000	0.0000

Totals : 1940.4433

Area Percent Report

Sorted By : Signal
Calib. Data Modified : 1/12/2015 2:42:18 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	2.030		0.0000	0.00000	0.00000	Propane

Totals : 0.00000 0.0000

Uncalibrated Peaks:

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\006F2803.D
Sample Name: 1214-29.1044.Can *501

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	0.089	BB	0.1154	2.33636	0.15304	?
2	1.999	PB	0.0305	1524.29663	99.84696	?

Uncalib. totals : 1526.63299 100.0000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Area %
as Propane	1.855	2.479	1524.29663	99.8470

Totals : 99.8470

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

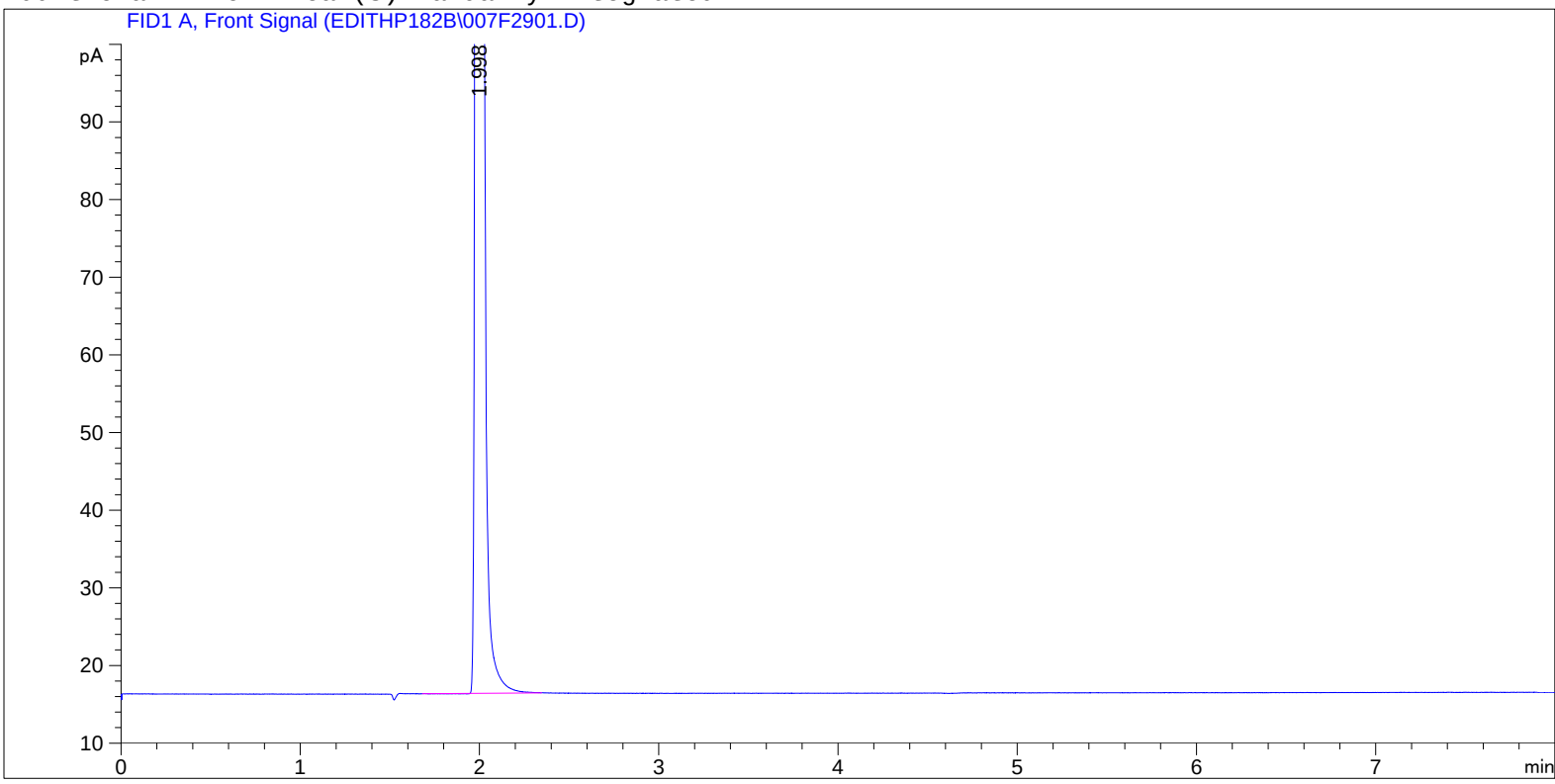
Name	Total Area [pA*s]	Area %
as Propane	1524.29663	99.8470
Propane	0.00000	0.0000

Totals : 99.8470

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\007F2901.D
Sample Name: 1214-29.1340.Can *501

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  29
Acq. Instrument : Edith                           Location : Vial 7
Injection Date  : 1/9/2015 3:34:12 PM                  Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_TVOC_AS_C3.M
Last changed    : 1/12/2015 2:42:06 PM by Turner Oppy
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:42:18 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|-----------------
  2.030            -          -          -         Propane

Totals :                                0.00000

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\007F2901.D
Sample Name: 1214-29.1340.Can *501

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.998	BB	1545.32947	1.27473	1969.88371		?

Uncalib. totals : 1969.88371

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	1545.32947	1.967e3

Totals : 1967.2183

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Propane	1545.32947	1.967e3
Propane	0.00000	0.0000

Totals : 1967.2183

Area Percent Report

Sorted By : Signal
Calib. Data Modified : 1/12/2015 2:42:18 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	2.030		0.0000	0.00000	0.00000	Propane

Totals : 0.00000 0.0000

Uncalibrated Peaks:

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\007F2901.D
Sample Name: 1214-29.1340.Can *501

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.998	BB	0.0305	1545.32947	1.000e2	?

Uncalib. totals : 1545.32947 100.0000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Area %
as Propane	1.855	2.479	1545.32947	100.0000

Totals : 100.0000

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

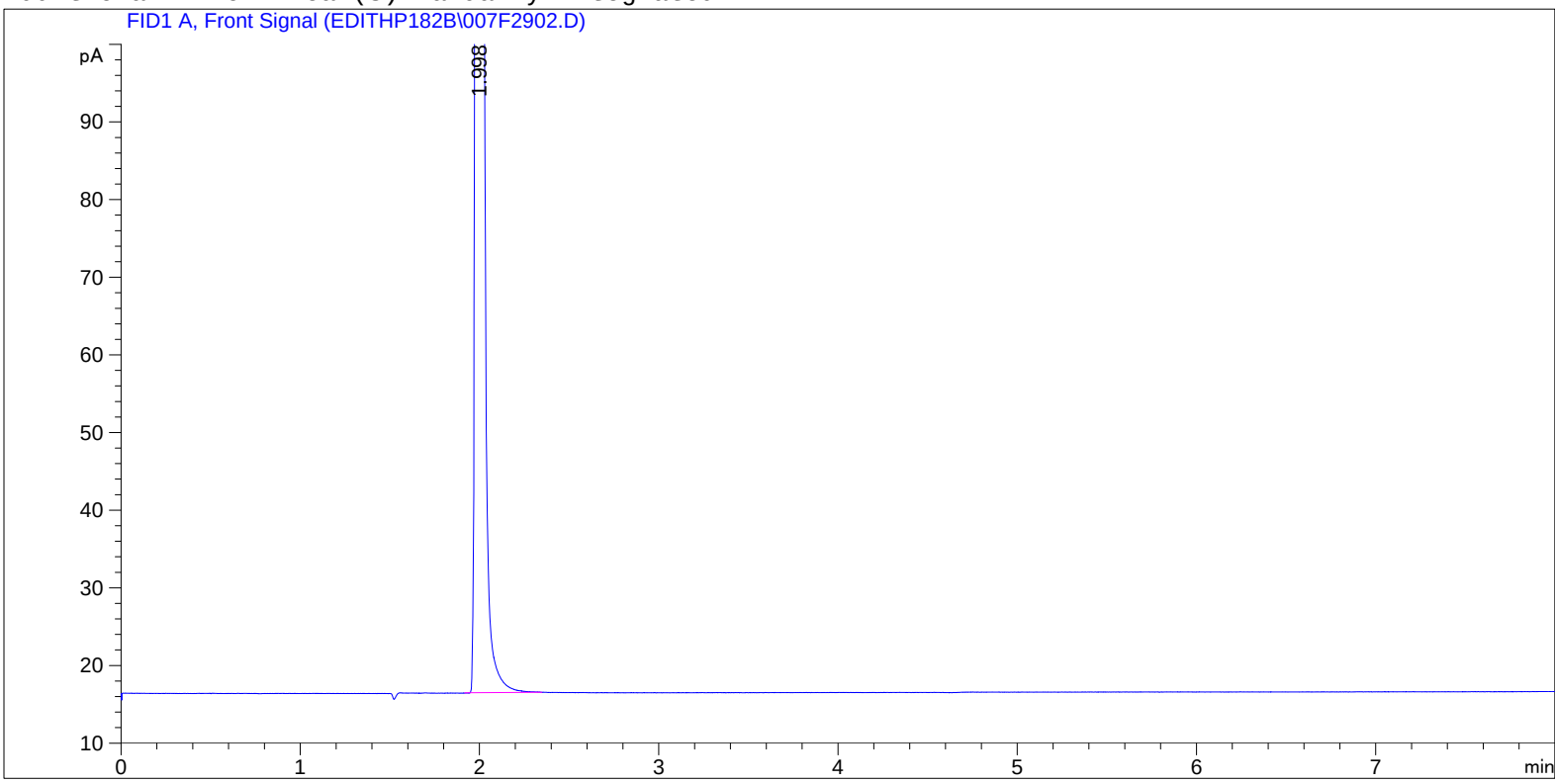
Name	Total Area [pA*s]	Area %
as Propane	1545.32947	100.0000
Propane	0.00000	0.0000

Totals : 100.0000

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\007F2902.D
Sample Name: 1214-29.1340.Can *501

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  29
Acq. Instrument : Edith                           Location : Vial 7
Injection Date  : 1/9/2015 3:48:29 PM                  Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_TVOC_AS_C3.M
Last changed    : 1/12/2015 2:42:06 PM by Turner Oppy
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:42:18 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|-----------------
  2.030            -          -          -         Propane

Totals :                                0.00000

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\007F2902.D
Sample Name: 1214-29.1340.Can *501

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.998	PB	1542.40100	1.27473	1966.15062		?

Uncalib. totals : 1966.15062

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	1542.40100	1.963e3

Totals : 1963.4904

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Propane	1542.40100	1.963e3
Propane	0.00000	0.0000

Totals : 1963.4904

Area Percent Report

Sorted By : Signal
Calib. Data Modified : 1/12/2015 2:42:18 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	2.030		0.0000	0.00000	0.00000	Propane

Totals : 0.00000 0.0000

Uncalibrated Peaks:

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\007F2902.D
Sample Name: 1214-29.1340.Can *501

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.998	PB	0.0315	1542.40100	1.000e2	?

Uncalib. totals : 1542.40100 100.0000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Area %
as Propane	1.855	2.479	1542.40100	100.0000

Totals : 100.0000

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

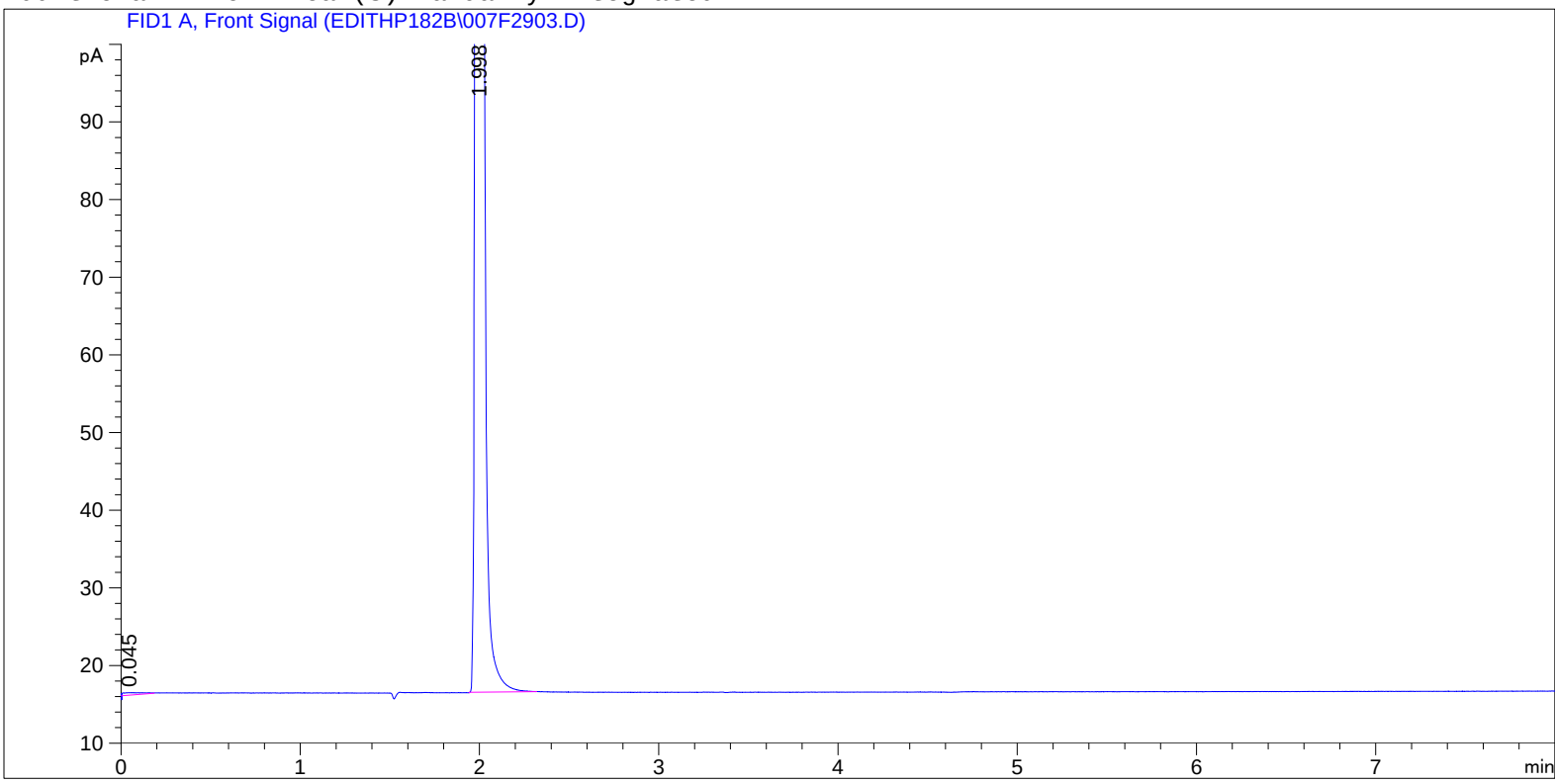
Name	Total Area [pA*s]	Area %
as Propane	1542.40100	100.0000
Propane	0.00000	0.0000

Totals : 100.0000

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\007F2903.D
Sample Name: 1214-29.1340.Can *501

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  29
Acq. Instrument : Edith                           Location : Vial 7
Injection Date  : 1/9/2015 4:02:48 PM                  Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_TVOC_AS_C3.M
Last changed    : 1/12/2015 2:42:06 PM by Turner Oppy
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:42:18 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|-----------------
  2.030            -          -          -         Propane

Totals :                                0.00000

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\007F2903.D
Sample Name: 1214-29.1340.Can *501

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
0.045	BB	2.21007	1.26492	2.79555	?	
1.998	PB	1546.54858	1.27473	1971.43779	?	

Uncalib. totals : 1974.23334

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	1546.54858	1.969e3

Totals : 1968.7703

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Propane	1546.54858	1.969e3
Propane	0.00000	0.0000

Totals : 1968.7703

Area Percent Report

Sorted By : Signal
Calib. Data Modified : 1/12/2015 2:42:18 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	2.030		0.0000	0.00000	0.00000	Propane

Totals : 0.00000 0.0000

Uncalibrated Peaks:

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\007F2903.D
Sample Name: 1214-29.1340.Can *501

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	0.045	BB	0.0841	2.21007	0.14270	?
2	1.998	PB	0.0315	1546.54858	99.85730	?

Uncalib. totals : 1548.75865 100.0000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Area %
as Propane	1.855	2.479	1546.54858	99.8573

Totals : 99.8573

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

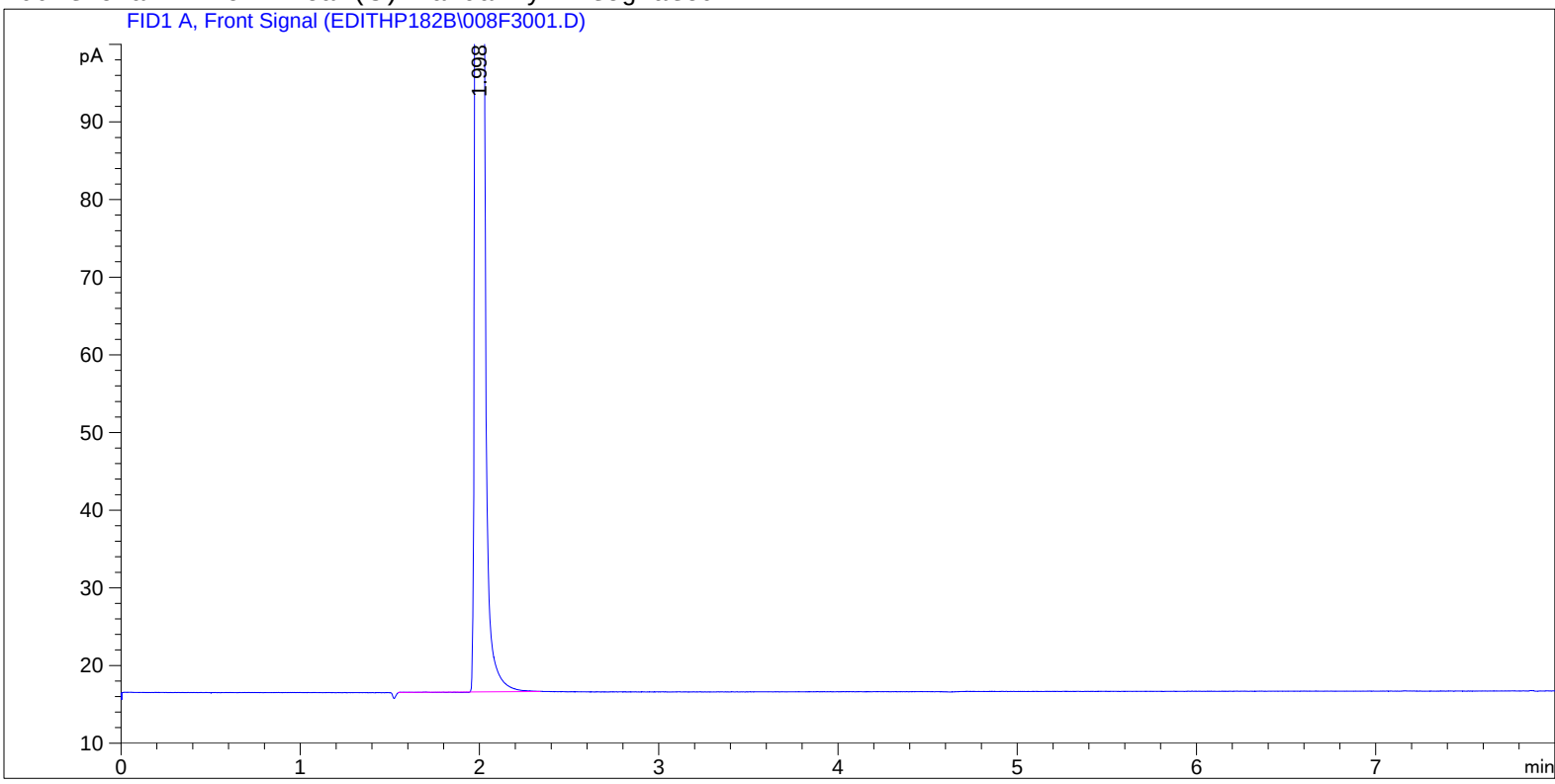
Name	Total Area [pA*s]	Area %
as Propane	1546.54858	99.8573
Propane	0.00000	0.0000

Totals : 99.8573

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\008F3001.D
Sample Name: 1214-29.1049.Can *501

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  30
Acq. Instrument : Edith                           Location : Vial 8
Injection Date  : 1/9/2015 4:17:05 PM                  Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_TVOC_AS_C3.M
Last changed    : 1/12/2015 2:42:06 PM by Turner Oppy
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:42:18 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|-----------------
  2.030            -          -          -         Propane

Totals :                                0.00000

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\008F3001.D
Sample Name: 1214-29.1049.Can *501

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.998	PB	1513.90649	1.27473	1929.82699		?

Uncalib. totals : 1929.82699

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	1513.90649	1.927e3

Totals : 1927.2166

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Propane	1513.90649	1.927e3
Propane	0.00000	0.0000

Totals : 1927.2166

Area Percent Report

Sorted By : Signal
Calib. Data Modified : 1/12/2015 2:42:18 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	2.030		0.0000	0.00000	0.00000	Propane

Totals : 0.00000 0.0000

Uncalibrated Peaks:

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\008F3001.D
Sample Name: 1214-29.1049.Can *501

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.998	PB	0.0315	1513.90649	1.000e2	?

Uncalib. totals : 1513.90649 100.0000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Area %
as Propane	1.855	2.479	1513.90649	100.0000

Totals : 100.0000

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

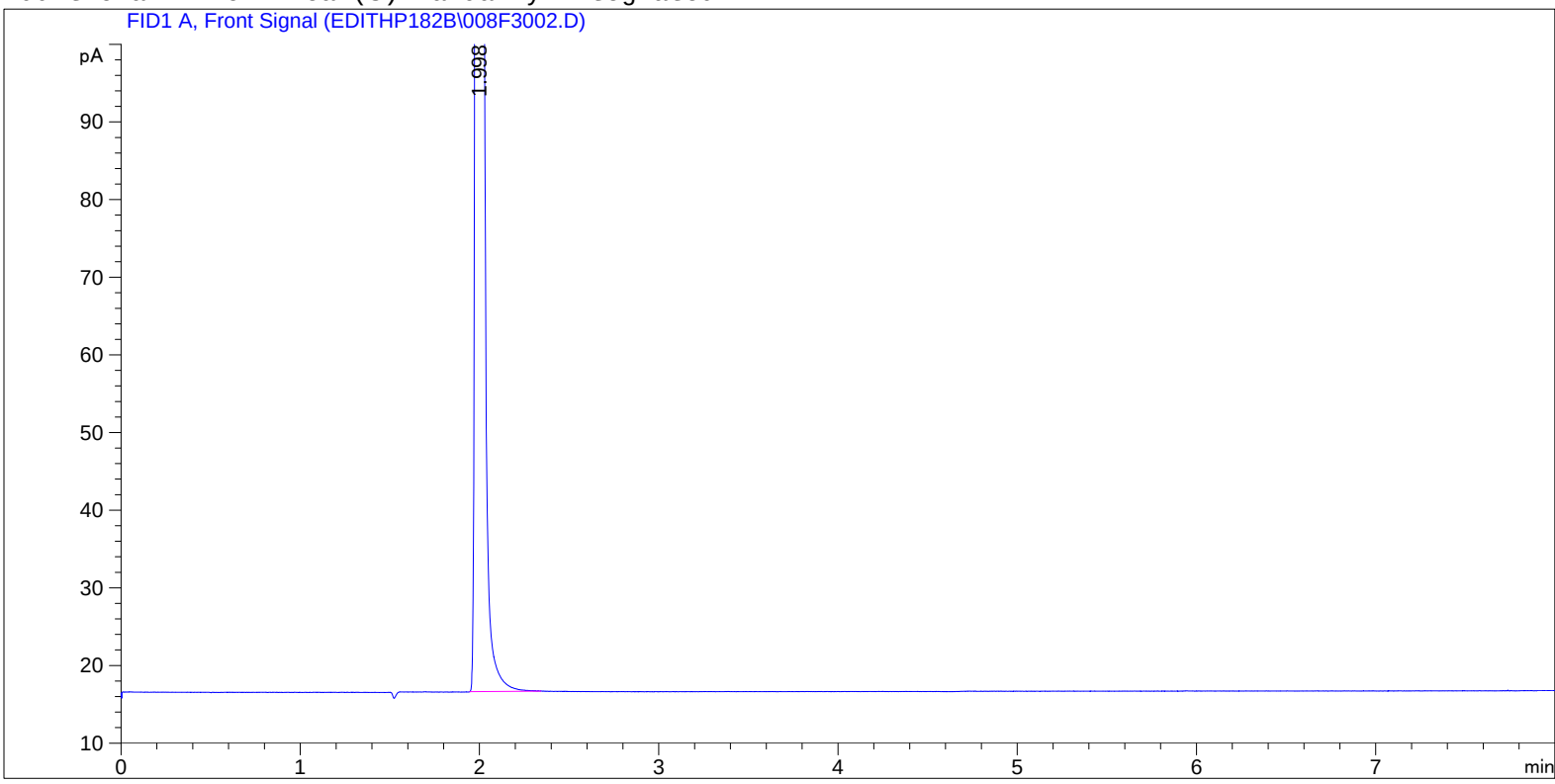
Name	Total Area [pA*s]	Area %
as Propane	1513.90649	100.0000
Propane	0.00000	0.0000

Totals : 100.0000

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\008F3002.D
Sample Name: 1214-29.1049.Can *501

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  30
Acq. Instrument : Edith                           Location : Vial 8
Injection Date  : 1/9/2015 4:31:39 PM                  Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_TVOC_AS_C3.M
Last changed    : 1/12/2015 2:42:06 PM by Turner Oppy
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:42:18 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|-----------------
  2.030            -          -          -         Propane

Totals :                                0.00000

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\008F3002.D
Sample Name: 1214-29.1049.Can *501

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.998	BB	1518.59912	1.27473	1935.80896		?

Uncalib. totals : 1935.80896

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	1518.59912	1.933e3

Totals : 1933.1903

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Propane	1518.59912	1.933e3
Propane	0.00000	0.0000

Totals : 1933.1903

Area Percent Report

Sorted By : Signal
Calib. Data Modified : 1/12/2015 2:42:18 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	2.030		0.0000	0.00000	0.00000	Propane

Totals : 0.00000 0.0000

Uncalibrated Peaks:

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\008F3002.D
Sample Name: 1214-29.1049.Can *501

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.998	BB	0.0305	1518.59912	1.000e2	?

Uncalib. totals : 1518.59912 100.0000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Area %
as Propane	1.855	2.479	1518.59912	100.0000

Totals : 100.0000

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

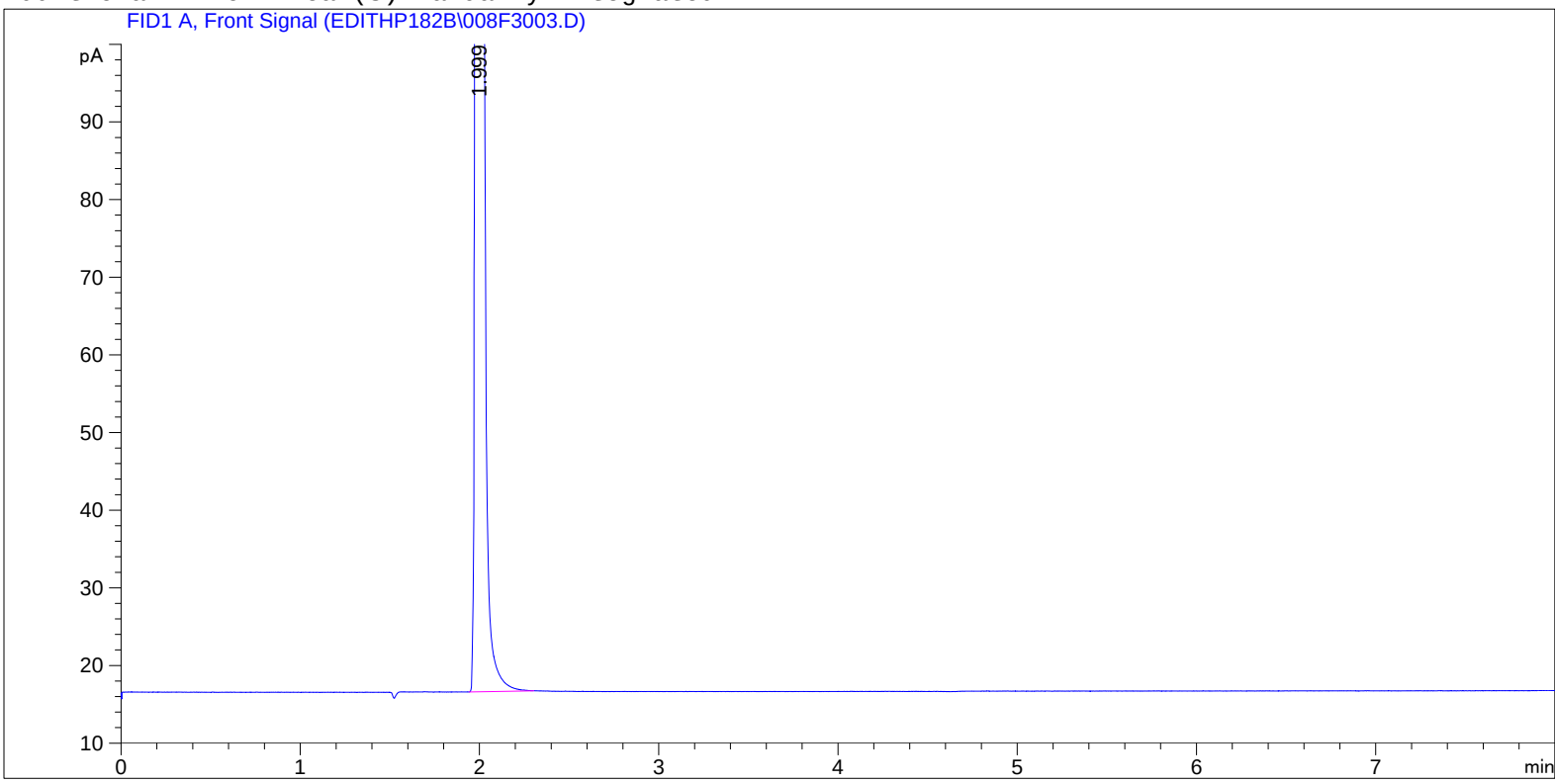
Name	Total Area [pA*s]	Area %
as Propane	1518.59912	100.0000
Propane	0.00000	0.0000

Totals : 100.0000

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\008F3003.D
Sample Name: 1214-29.1049.Can *501

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  30
Acq. Instrument : Edith                           Location : Vial 8
Injection Date  : 1/9/2015 4:46:31 PM                  Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_TVOC_AS_C3.M
Last changed    : 1/12/2015 2:42:06 PM by Turner Oppy
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:42:18 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|-----------------
  2.030            -          -          -         Propane

Totals :                                0.00000

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\008F3003.D
Sample Name: 1214-29.1049.Can *501

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.999	BB	1521.26465	1.27473	1939.20686		?

Uncalib. totals : 1939.20686

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	1521.26465	1.937e3

Totals : 1936.5836

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Propane	1521.26465	1.937e3
Propane	0.00000	0.0000

Totals : 1936.5836

Area Percent Report

Sorted By : Signal
Calib. Data Modified : 1/12/2015 2:42:18 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	2.030		0.0000	0.00000	0.00000	Propane

Totals : 0.00000 0.0000

Uncalibrated Peaks:

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\008F3003.D
Sample Name: 1214-29.1049.Can *501

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.999	BB	0.0305	1521.26465	1.000e2	?

Uncalib. totals : 1521.26465 100.0000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Area %
as Propane	1.855	2.479	1521.26465	100.0000

Totals : 100.0000

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

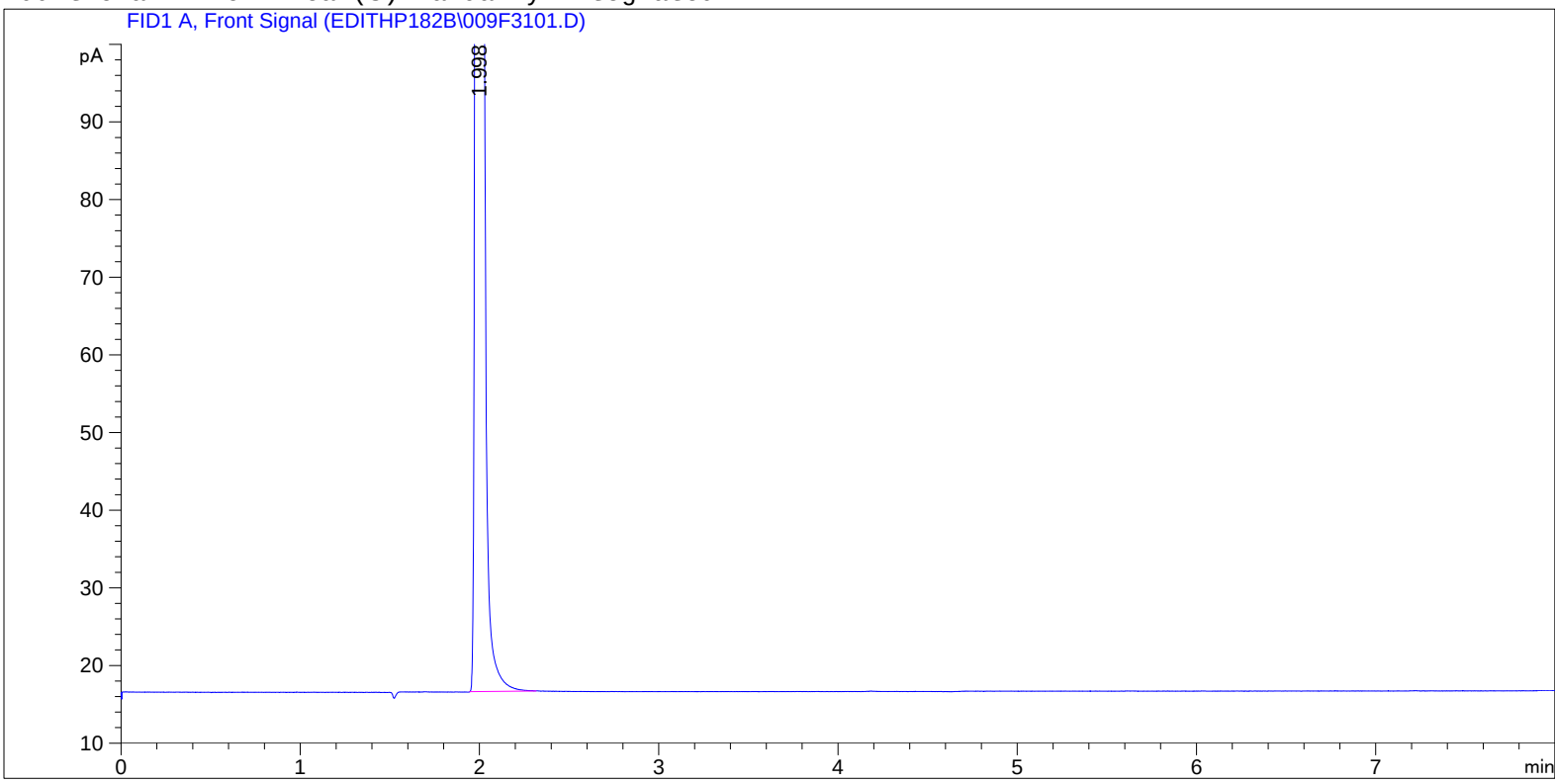
Name	Total Area [pA*s]	Area %
as Propane	1521.26465	100.0000
Propane	0.00000	0.0000

Totals : 100.0000

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\009F3101.D
Sample Name: 1214-29.1334.Can *501

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  31
Acq. Instrument : Edith                           Location : Vial 9
Injection Date  : 1/9/2015 5:00:49 PM                  Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_TVOC_AS_C3.M
Last changed    : 1/12/2015 2:42:06 PM by Turner Oppy
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:42:18 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|-----------------
  2.030            -          -          -         Propane

Totals :                                0.00000

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\009F3101.D
Sample Name: 1214-29.1334.Can *501

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.998	BB	1560.65271	1.27473	1989.41715		?

Uncalib. totals : 1989.41715

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	1560.65271	1.987e3

Totals : 1986.7249

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Propane	1560.65271	1.987e3
Propane	0.00000	0.0000

Totals : 1986.7249

Area Percent Report

Sorted By : Signal
Calib. Data Modified : 1/12/2015 2:42:18 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	2.030		0.0000	0.00000	0.00000	Propane

Totals : 0.00000 0.0000

Uncalibrated Peaks:

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\009F3101.D
Sample Name: 1214-29.1334.Can *501

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.998	BB	0.0315	1560.65271	1.000e2	?

Uncalib. totals : 1560.65271 100.0000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Area %
as Propane	1.855	2.479	1560.65271	100.0000

Totals : 100.0000

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

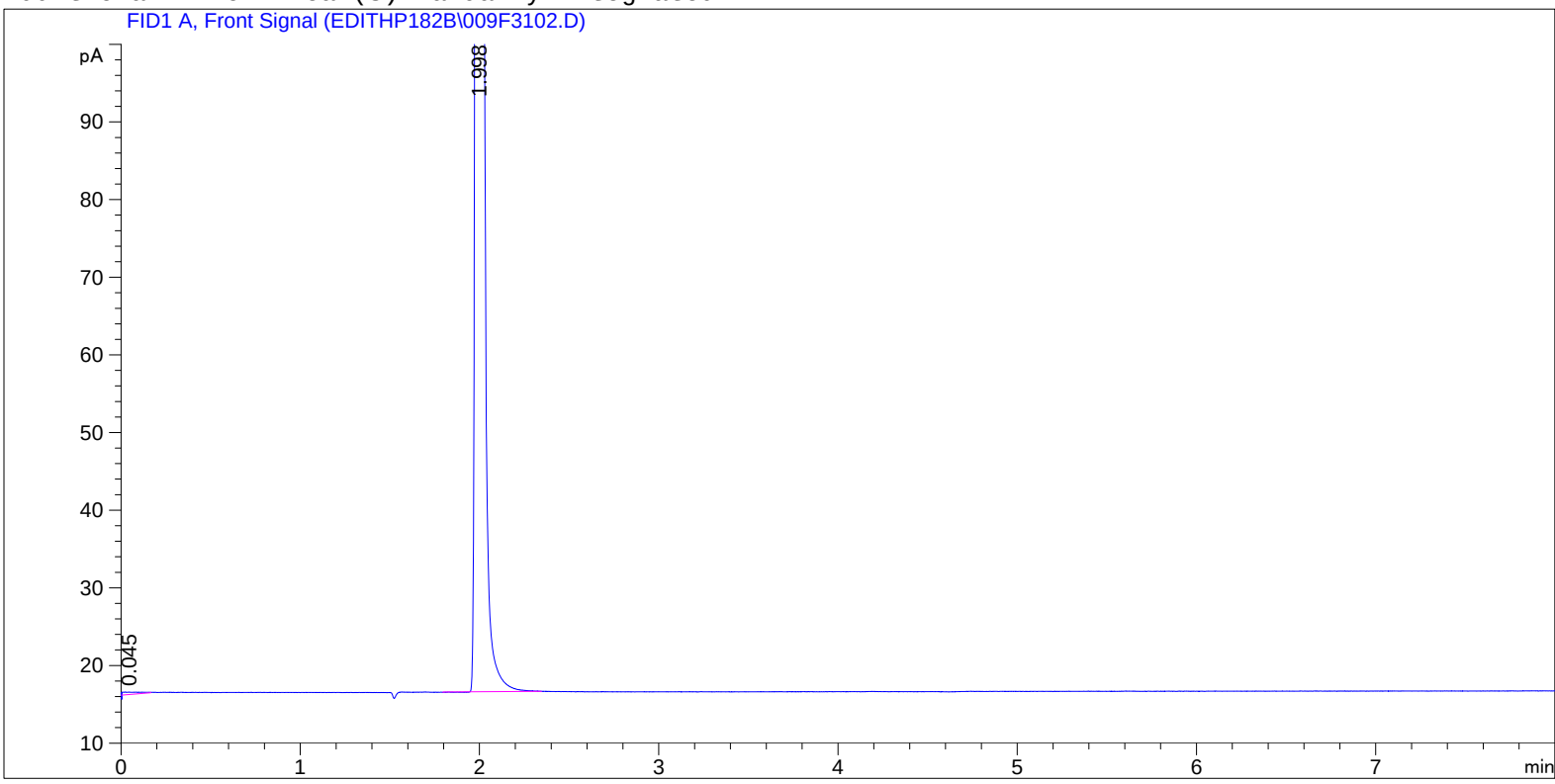
Name	Total Area [pA*s]	Area %
as Propane	1560.65271	100.0000
Propane	0.00000	0.0000

Totals : 100.0000

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\009F3102.D
Sample Name: 1214-29.1334.Can *501

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  31
Acq. Instrument : Edith                           Location : Vial 9
Injection Date  : 1/9/2015 5:15:02 PM                  Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_TVOC_AS_C3.M
Last changed    : 1/12/2015 2:42:06 PM by Turner Oppy
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:42:18 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|-----------------
  2.030            -          -          -         Propane

Totals :                                0.00000

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\009F3102.D
Sample Name: 1214-29.1334.Can *501

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
0.045	BB	1.98019	1.26492	2.50478	?	
1.998	VB	1558.24976	1.27473	1986.35396	?	

Uncalib. totals : 1988.85874

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	1558.24976	1.984e3

Totals : 1983.6660

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Propane	1558.24976	1.984e3
Propane	0.00000	0.0000

Totals : 1983.6660

Area Percent Report

Sorted By : Signal
Calib. Data Modified : 1/12/2015 2:42:18 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	2.030		0.0000	0.00000	0.00000	Propane

Totals : 0.00000 0.0000

Uncalibrated Peaks:

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\009F3102.D
Sample Name: 1214-29.1334.Can *501

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	0.045	BB	0.0761	1.98019	0.12692	?
2	1.998	VB	0.0336	1558.24976	99.87308	?

Uncalib. totals : 1560.22994 100.0000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Area %
as Propane	1.855	2.479	1558.24976	99.8731

Totals : 99.8731

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

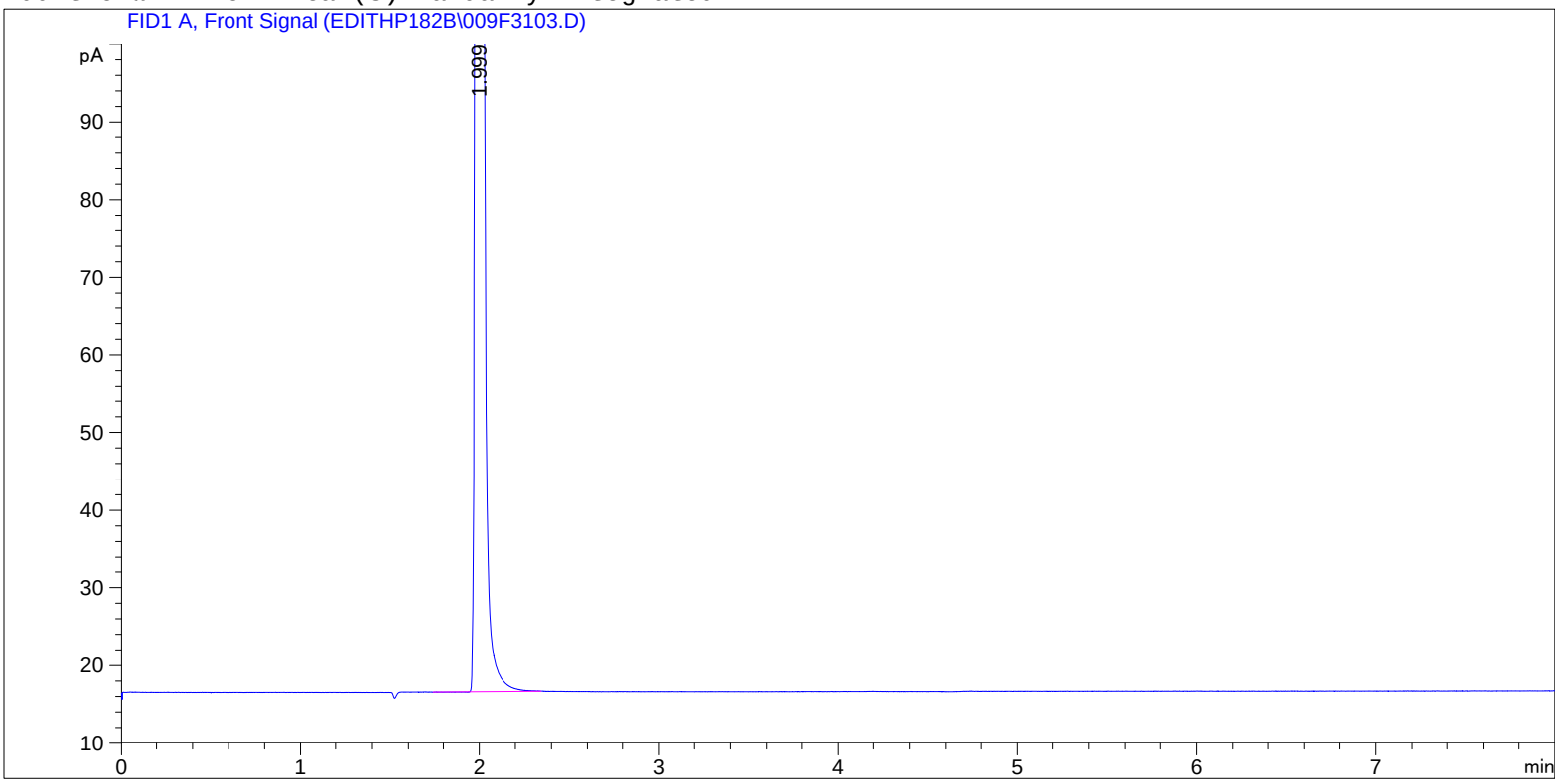
Name	Total Area [pA*s]	Area %
as Propane	1558.24976	99.8731
Propane	0.00000	0.0000

Totals : 99.8731

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\009F3103.D
Sample Name: 1214-29.1334.Can *501

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  31
Acq. Instrument : Edith                           Location : Vial 9
Injection Date  : 1/9/2015 5:29:30 PM                  Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_TVOC_AS_C3.M
Last changed    : 1/12/2015 2:42:06 PM by Turner Oppy
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:42:18 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|-----------------
  2.030            -          -          -         Propane

Totals :                                0.00000

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\009F3103.D
Sample Name: 1214-29.1334.Can *501

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.999	VB	1554.77698	1.27473	1981.92701		?

Uncalib. totals : 1981.92701

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	1554.77698	1.979e3

Totals : 1979.2451

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Propane	1554.77698	1.979e3
Propane	0.00000	0.0000

Totals : 1979.2451

Area Percent Report

Sorted By : Signal
Calib. Data Modified : 1/12/2015 2:42:18 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	2.030		0.0000	0.00000	0.00000	Propane

Totals : 0.00000 0.0000

Uncalibrated Peaks:

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\009F3103.D
Sample Name: 1214-29.1334.Can *501

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.999	VB	0.0336	1554.77698	1.000e2	?

Uncalib. totals : 1554.77698 100.0000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Area %
as Propane	1.855	2.479	1554.77698	100.0000

Totals : 100.0000

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

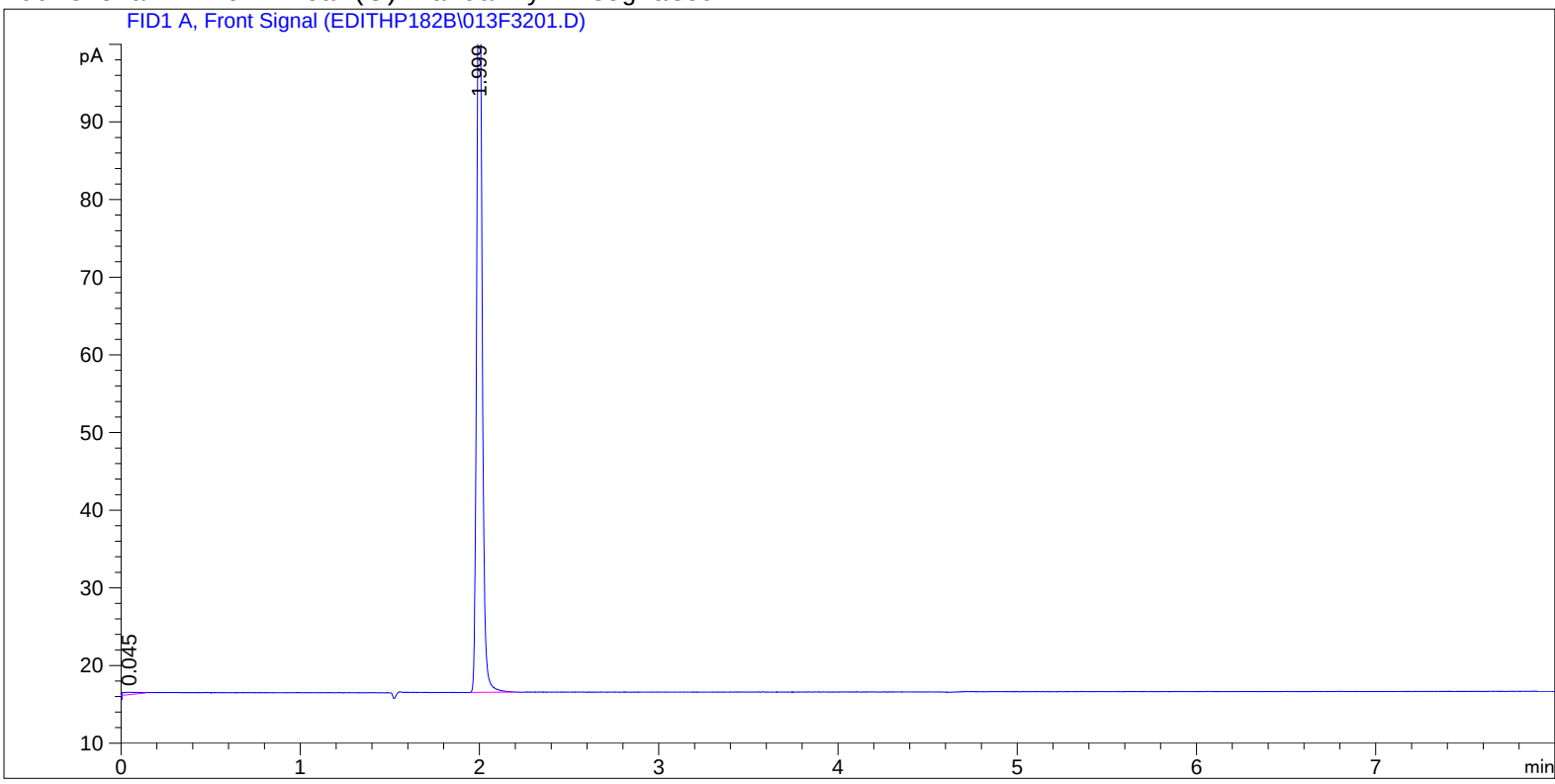
Name	Total Area [pA*s]	Area %
as Propane	1554.77698	100.0000
Propane	0.00000	0.0000

Totals : 100.0000

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\013F3201.D
Sample Name: 1214-29.1324.Can *501

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  32
Acq. Instrument : Edith                           Location : Vial 13
Injection Date  : 1/9/2015 5:43:44 PM                  Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_TVOC_AS_C3.M
Last changed    : 1/12/2015 2:42:06 PM by Turner Oppy
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:42:18 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|-----------------
  2.030            -          -          -         Propane

Totals :                                0.00000

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\013F3201.D
Sample Name: 1214-29.1324.Can *501

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
0.045	BB	1.67210	1.26492	2.11507	?	
1.999	BB	209.26855	1.27457	266.72794	?	

Uncalib. totals : 268.84300

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	209.26855	266.4008

Totals : 266.4008

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Propane	209.26855	266.4008
Propane	0.00000	0.0000

Totals : 266.4008

Area Percent Report

Sorted By : Signal
Calib. Data Modified : 1/12/2015 2:42:18 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	2.030		0.0000	0.00000	0.00000	Propane

Totals : 0.00000 0.0000

Uncalibrated Peaks:

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\013F3201.D
Sample Name: 1214-29.1324.Can *501

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	0.045	BB	0.0672	1.67210	0.79269	?
2	1.999	BB	0.0304	209.26855	99.20731	?

Uncalib. totals : 210.94065 100.0000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Area %
as Propane	1.855	2.479	209.26855	99.2073

Totals : 99.2073

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

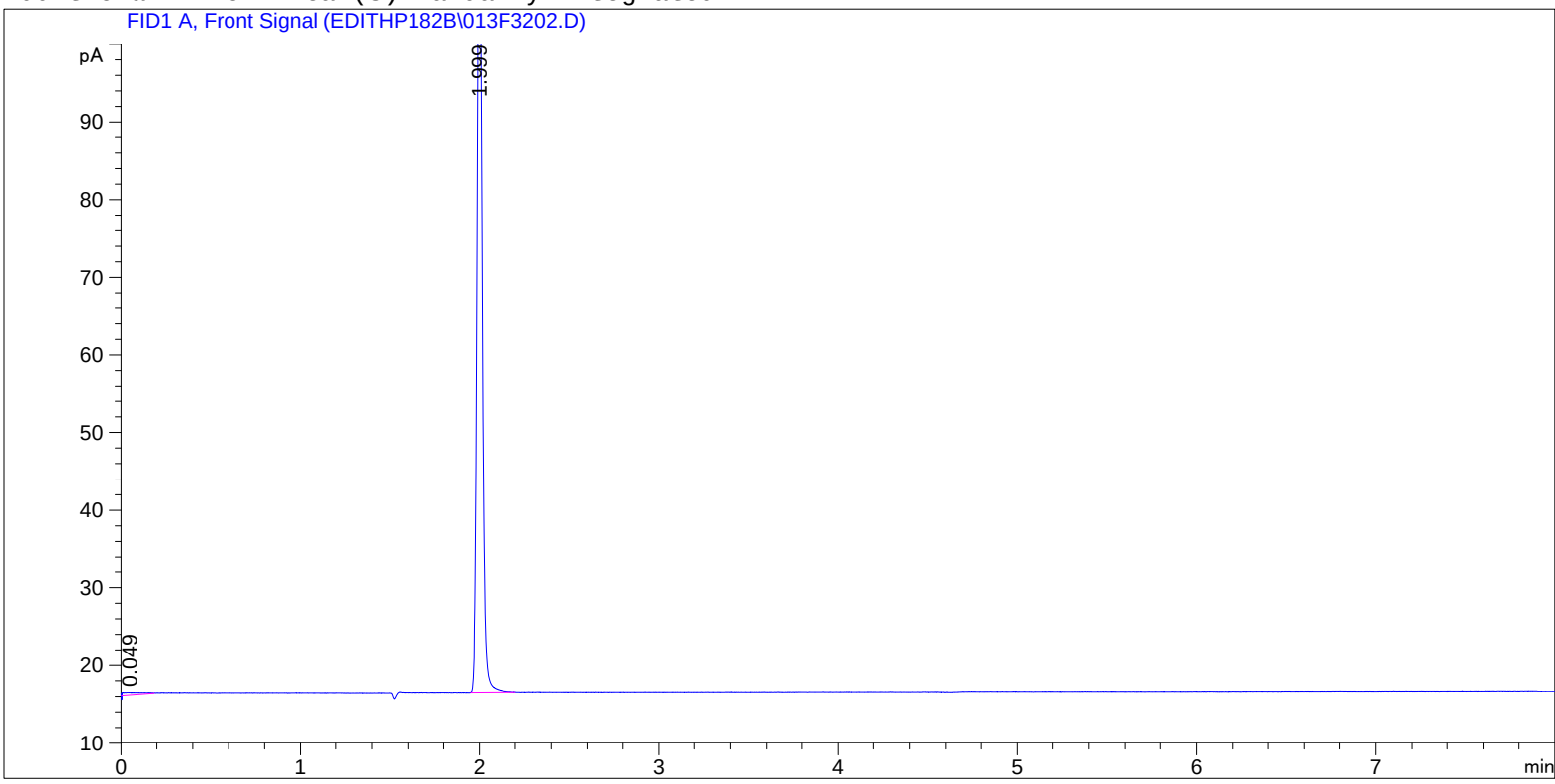
Name	Total Area [pA*s]	Area %
as Propane	209.26855	99.2073
Propane	0.00000	0.0000

Totals : 99.2073

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\013F3202.D
Sample Name: 1214-29.1324.Can *501

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  32
Acq. Instrument : Edith                           Location : Vial 13
Injection Date  : 1/9/2015 5:57:55 PM                  Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_TVOC_AS_C3.M
Last changed    : 1/12/2015 2:42:06 PM by Turner Oppy
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:42:18 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|-----------------
  2.030            -          -          -         Propane

Totals :                                0.00000

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\013F3202.D
Sample Name: 1214-29.1324.Can *501

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
0.049	BB	2.17113	1.26492	2.74631	?	
1.999	BB	209.70660	1.27457	267.28635	?	

Uncalib. totals : 270.03265

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	209.70660	266.9584

Totals : 266.9584

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Propane	209.70660	266.9584
Propane	0.00000	0.0000

Totals : 266.9584

Area Percent Report

Sorted By : Signal
Calib. Data Modified : 1/12/2015 2:42:18 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	2.030		0.0000	0.00000	0.00000	Propane

Totals : 0.00000 0.0000

Uncalibrated Peaks:

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\013F3202.D
Sample Name: 1214-29.1324.Can *501

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	0.049	BB	0.0929	2.17113	1.02471	?
2	1.999	BB	0.0304	209.70660	98.97529	?

Uncalib. totals : 211.87774 100.0000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Area %
as Propane	1.855	2.479	209.70660	98.9753

Totals : 98.9753

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

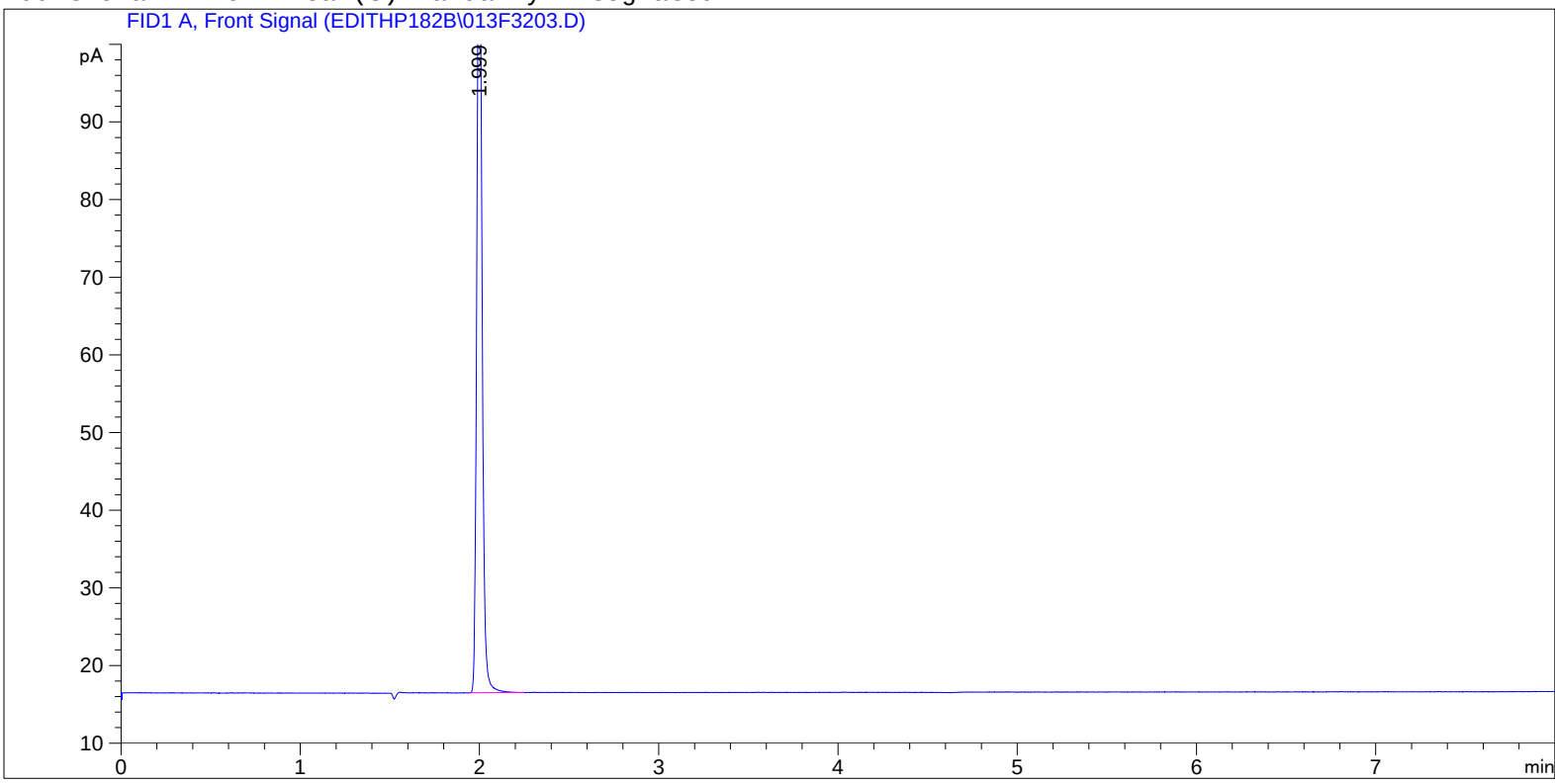
Name	Total Area [pA*s]	Area %
as Propane	209.70660	98.9753
Propane	0.00000	0.0000

Totals : 98.9753

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\013F3203.D
Sample Name: 1214-29.1324.Can *501

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  32
Acq. Instrument : Edith                           Location : Vial 13
Injection Date  : 1/9/2015 6:12:06 PM                  Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_TVOC_AS_C3.M
Last changed    : 1/12/2015 2:42:06 PM by Turner Oppy
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:42:18 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|-----------------
  2.030            -          -          -         Propane

Totals :                                0.00000

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\013F3203.D
Sample Name: 1214-29.1324.Can *501

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.999	BB	209.26433	1.27457	266.72255		?

Uncalib. totals : 266.72255

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	209.26433	266.3954

Totals : 266.3954

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Propane	209.26433	266.3954
Propane	0.00000	0.0000

Totals : 266.3954

Area Percent Report

Sorted By : Signal
Calib. Data Modified : 1/12/2015 2:42:18 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	2.030		0.0000	0.00000	0.00000	Propane

Totals : 0.00000 0.0000

Uncalibrated Peaks:

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\013F3203.D
Sample Name: 1214-29.1324.Can *501

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.999	BB	0.0304	209.26433	1.000e2	?

Uncalib. totals : 209.26433 100.0000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Area %
as Propane	1.855	2.479	209.26433	100.0000

Totals : 100.0000

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

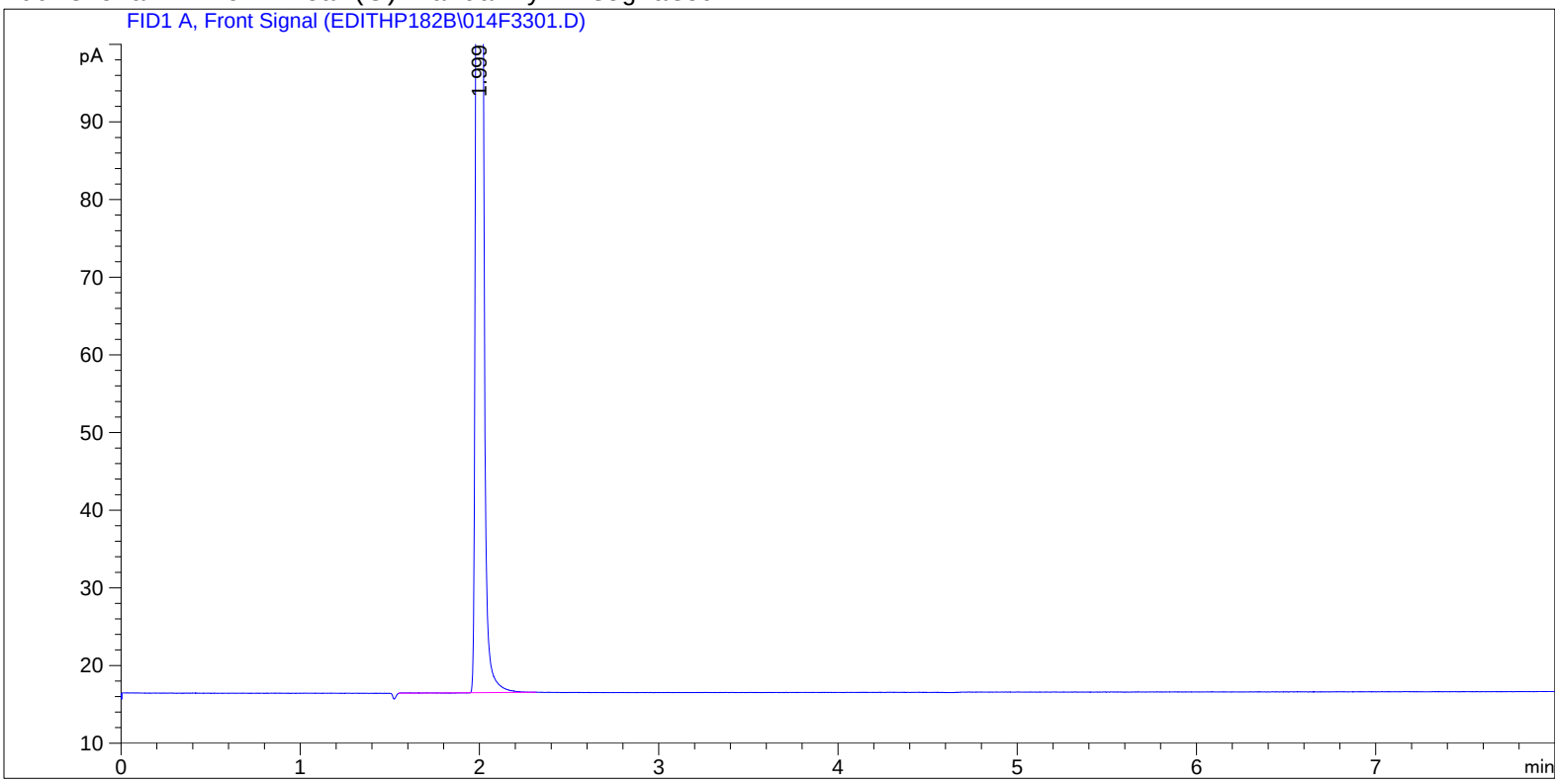
Name	Total Area [pA*s]	Area %
as Propane	209.26433	100.0000
Propane	0.00000	0.0000

Totals : 100.0000

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\014F3301.D
Sample Name: 1214-29.1453.Can *501

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  33
Acq. Instrument : Edith                           Location : Vial 14
Injection Date  : 1/9/2015 6:26:14 PM                  Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_TVOC_AS_C3.M
Last changed    : 1/12/2015 2:42:06 PM by Turner Oppy
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:42:18 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|-----------------
  2.030            -          -          -         Propane

Totals :                                0.00000

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\014F3301.D
Sample Name: 1214-29.1453.Can *501

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.999	PB	702.88727	1.27470	895.97287		?

Uncalib. totals : 895.97287

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	702.88727	894.7818

Totals : 894.7818

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Propane	702.88727	894.7818
Propane	0.00000	0.0000

Totals : 894.7818

Area Percent Report

Sorted By : Signal
Calib. Data Modified : 1/12/2015 2:42:18 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	2.030		0.0000	0.00000	0.00000	Propane

Totals : 0.00000 0.0000

Uncalibrated Peaks:

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\014F3301.D
Sample Name: 1214-29.1453.Can *501

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.999	PB	0.0305	702.88727	1.000e2	?

Uncalib. totals : 702.88727 100.0000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Area %
as Propane	1.855	2.479	702.88727	100.0000

Totals : 100.0000

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

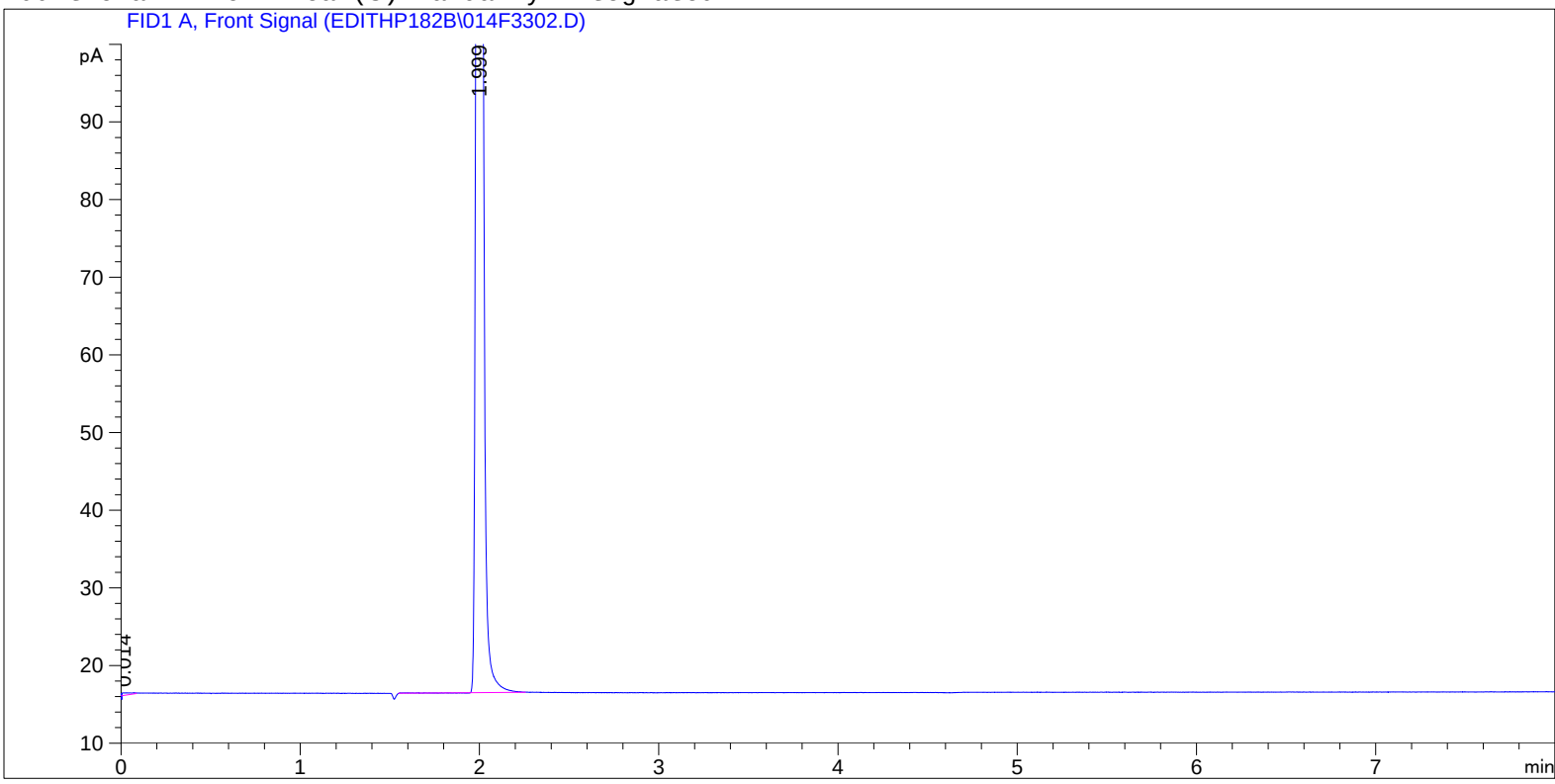
Name	Total Area [pA*s]	Area %
as Propane	702.88727	100.0000
Propane	0.00000	0.0000

Totals : 100.0000

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\014F3302.D
Sample Name: 1214-29.1453.Can *501

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  33
Acq. Instrument : Edith                           Location : Vial 14
Injection Date  : 1/9/2015 6:40:25 PM                  Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_TVOC_AS_C3.M
Last changed    : 1/12/2015 2:42:06 PM by Turner Oppy
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:42:18 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|-----------------
  2.030            -          -          -         Propane

Totals :                                0.00000

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\014F3302.D
Sample Name: 1214-29.1453.Can *501

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
0.014	BB	9.69932e-1	1.26492	1.22689	?	
1.999	PB	700.17889	1.27470	892.52035	?	

Uncalib. totals : 893.74723

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	700.17889	891.3340

Totals : 891.3340

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Propane	700.17889	891.3340
Propane	0.00000	0.0000

Totals : 891.3340

Area Percent Report

Sorted By : Signal
Calib. Data Modified : 1/12/2015 2:42:18 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	2.030		0.0000	0.00000	0.00000	Propane

Totals : 0.00000 0.0000

Uncalibrated Peaks:

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\014F3302.D
Sample Name: 1214-29.1453.Can *501

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	0.014	BB	0.0362	9.69932e-1	0.13833	?
2	1.999	PB	0.0304	700.17889	99.86167	?

Uncalib. totals : 701.14883 100.0000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Area %
as Propane	1.855	2.479	700.17889	99.8617

Totals : 99.8617

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

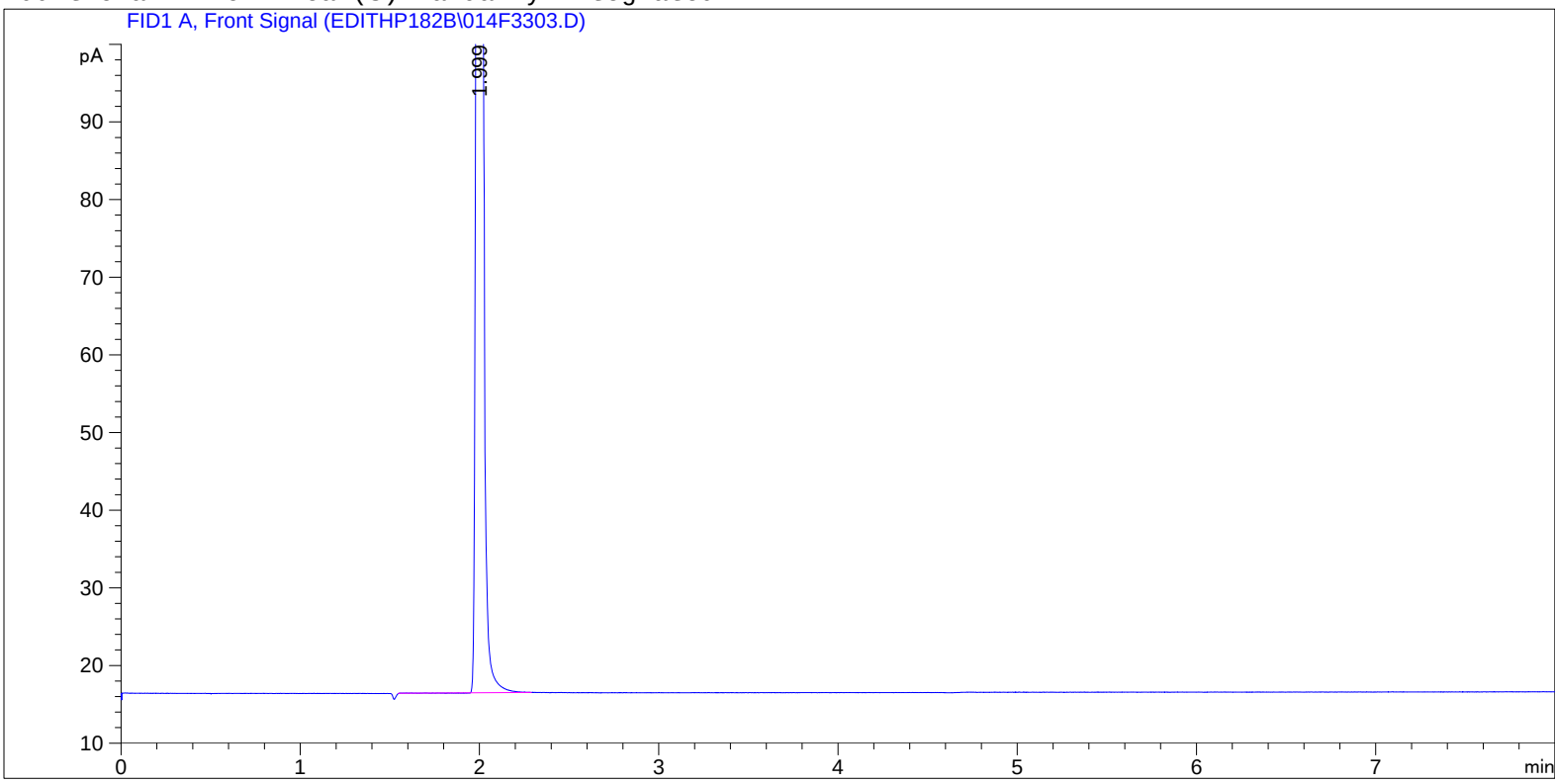
Name	Total Area [pA*s]	Area %
as Propane	700.17889	99.8617
Propane	0.00000	0.0000

Totals : 99.8617

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\014F3303.D
Sample Name: 1214-29.1453.Can *501

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  33
Acq. Instrument : Edith                           Location : Vial 14
Injection Date  : 1/9/2015 6:54:32 PM                  Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_TVOC_AS_C3.M
Last changed    : 1/12/2015 2:42:06 PM by Turner Oppy
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:42:18 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|-----------------
  2.030            -          -          -         Propane

Totals :                                0.00000

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\014F3303.D
Sample Name: 1214-29.1453.Can *501

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.999	PB	699.31482	1.27470	891.41886		?

Uncalib. totals : 891.41886

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	699.31482	890.2341

Totals : 890.2341

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Propane	699.31482	890.2341
Propane	0.00000	0.0000

Totals : 890.2341

Area Percent Report

Sorted By : Signal
Calib. Data Modified : 1/12/2015 2:42:18 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	2.030		0.0000	0.00000	0.00000	Propane

Totals : 0.00000 0.0000

Uncalibrated Peaks:

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\014F3303.D
Sample Name: 1214-29.1453.Can *501

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.999	PB	0.0304	699.31482	1.000e2	?

Uncalib. totals : 699.31482 100.0000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Area %
as Propane	1.855	2.479	699.31482	100.0000

Totals : 100.0000

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

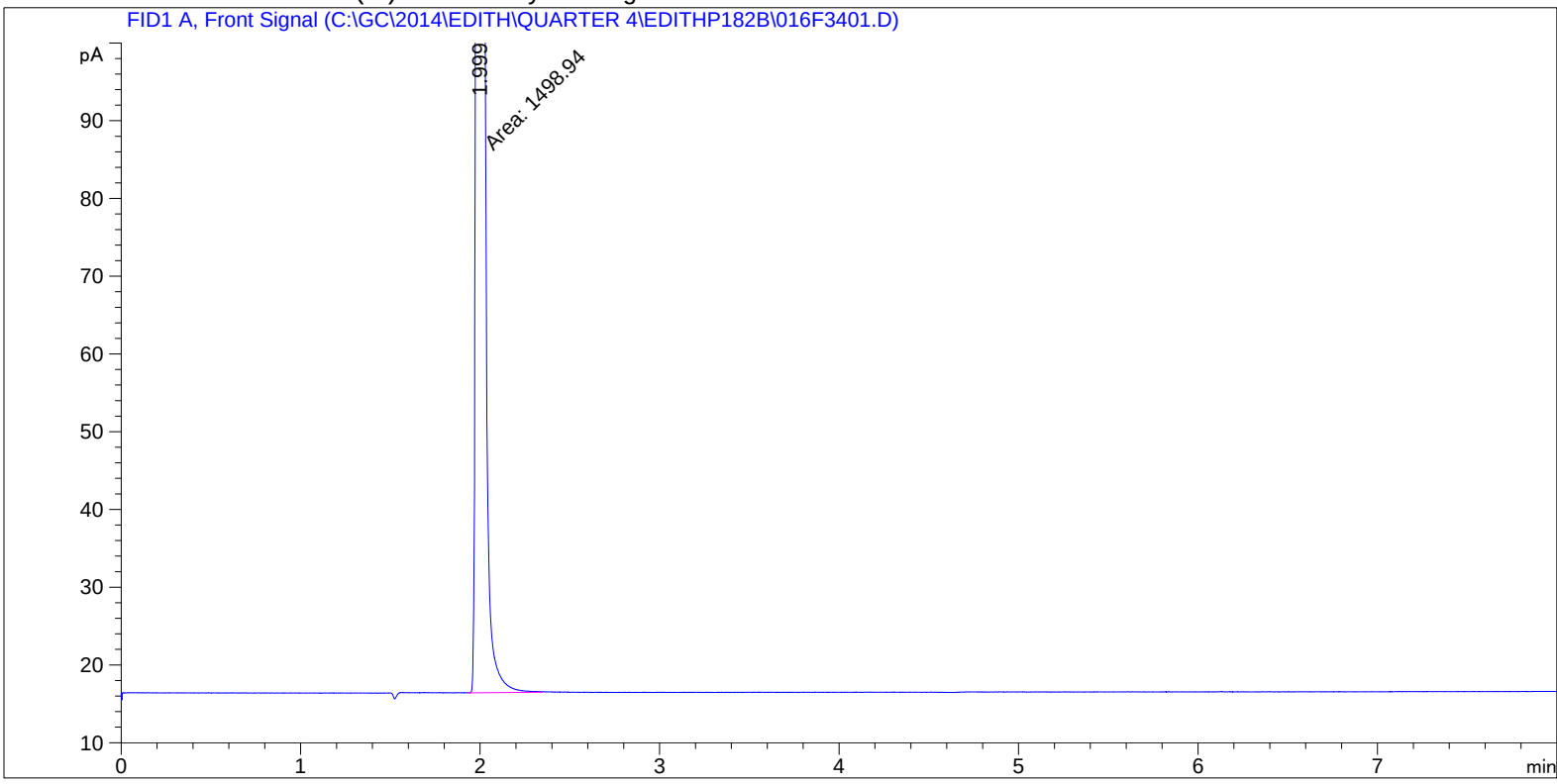
Name	Total Area [pA*s]	Area %
as Propane	699.31482	100.0000
Propane	0.00000	0.0000

Totals : 100.0000

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\016F3401.D
Sample Name: 1214-29.1308.Can *501

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  34
Acq. Instrument : Edith                           Location : Vial 16
Injection Date  : 1/9/2015 7:08:38 PM                  Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_TVOC_AS_C3.M
Last changed    : 1/12/2015 2:58:04 PM by Turner Oppy
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : disconnected
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:42:18 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  2.030            -          -          -         Propane

Totals :                                0.00000

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\016F3401.D
Sample Name: 1214-29.1308.Can *501

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.999	MM	1498.94446	1.27473	1910.75400		?

Uncalib. totals : 1910.75400

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	1498.94446	1.908e3

Totals : 1908.1698

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Propane	1498.94446	1.908e3
Propane	0.00000	0.0000

Totals : 1908.1698

Area Percent Report

Sorted By : Signal
Calib. Data Modified : 1/12/2015 2:42:18 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	2.030		0.0000	0.00000	0.00000	Propane

Totals : 0.00000 0.0000

Uncalibrated Peaks:

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\016F3401.D
Sample Name: 1214-29.1308.Can *501

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.999	MM	0.0334	1498.94446	1.000e2	?

Uncalib. totals : 1498.94446 100.0000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Area %
as Propane	1.855	2.479	1498.94446	100.0000

Totals : 100.0000

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

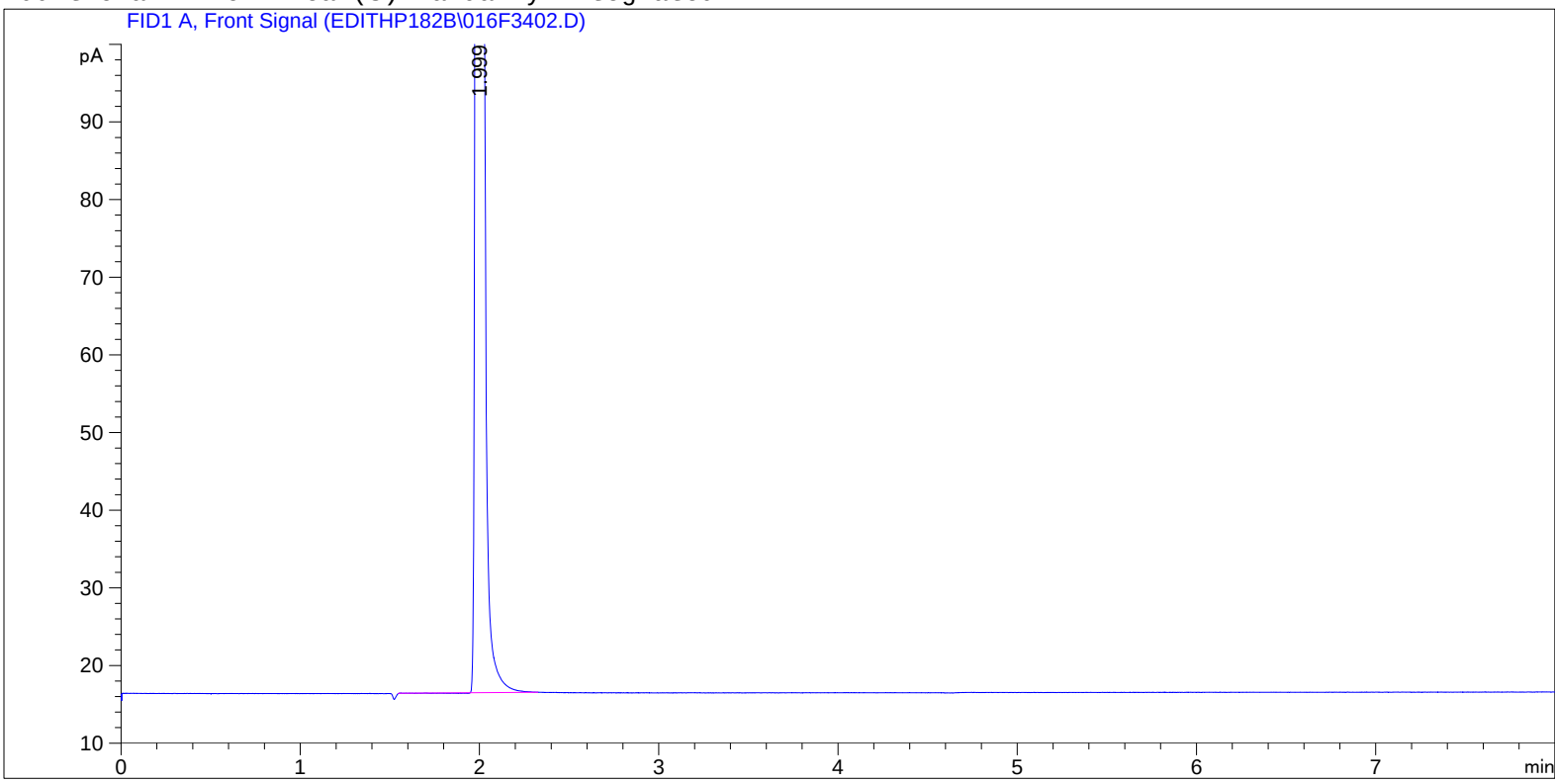
Name	Total Area [pA*s]	Area %
as Propane	1498.94446	100.0000
Propane	0.00000	0.0000

Totals : 100.0000

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\016F3402.D
Sample Name: 1214-29.1308.Can *501

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  34
Acq. Instrument : Edith                           Location : Vial 16
Injection Date  : 1/9/2015 7:22:58 PM                  Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_TVOC_AS_C3.M
Last changed    : 1/12/2015 2:42:06 PM by Turner Oppy
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:42:18 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|-----------------
  2.030            -          -          -         Propane

Totals :                                0.00000

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\016F3402.D
Sample Name: 1214-29.1308.Can *501

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.999	PB	1496.52490	1.27473	1907.66964		?

Uncalib. totals : 1907.66964

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	1496.52490	1.905e3

Totals : 1905.0897

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Propane	1496.52490	1.905e3
Propane	0.00000	0.0000

Totals : 1905.0897

Area Percent Report

Sorted By : Signal
Calib. Data Modified : 1/12/2015 2:42:18 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	2.030		0.0000	0.00000	0.00000	Propane

Totals : 0.00000 0.0000

Uncalibrated Peaks:

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\016F3402.D
Sample Name: 1214-29.1308.Can *501

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.999	PB	0.0305	1496.52490	1.000e2	?

Uncalib. totals : 1496.52490 100.0000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Area %
as Propane	1.855	2.479	1496.52490	100.0000

Totals : 100.0000

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

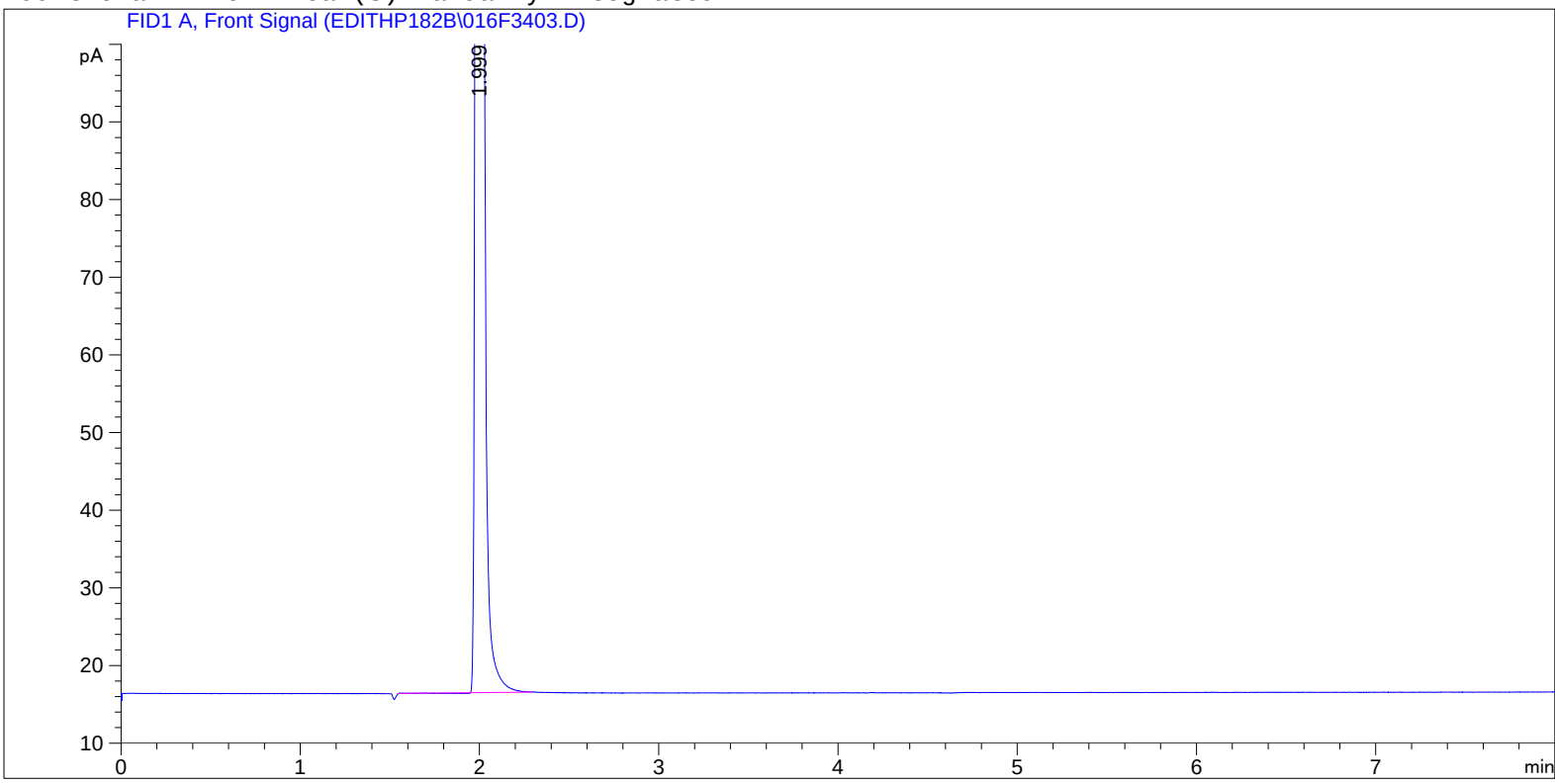
Name	Total Area [pA*s]	Area %
as Propane	1496.52490	100.0000
Propane	0.00000	0.0000

Totals : 100.0000

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\016F3403.D
Sample Name: 1214-29.1308.Can *501

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  34
Acq. Instrument : Edith                           Location : Vial 16
Injection Date  : 1/9/2015 7:36:59 PM                  Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_TVOC_AS_C3.M
Last changed    : 1/12/2015 2:42:06 PM by Turner Oppy
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:42:18 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|-----------------
  2.030            -          -          -         Propane

Totals :                                0.00000

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\016F3403.D
Sample Name: 1214-29.1308.Can *501

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.999	PB	1488.99902	1.27473	1898.07596		?

Uncalib. totals : 1898.07596

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Propane	1.855	2.479	1488.99902	1.896e3

Totals : 1895.5092

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Propane	1488.99902	1.896e3
Propane	0.00000	0.0000

Totals : 1895.5092

Area Percent Report

Sorted By : Signal
Calib. Data Modified : 1/12/2015 2:42:18 PM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	2.030		0.0000	0.00000	0.00000	Propane

Totals : 0.00000 0.0000

Uncalibrated Peaks:

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\016F3403.D
Sample Name: 1214-29.1308.Can *501

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Area %	Name
1	1.999	PB	0.0304	1488.99902	1.000e2	?

Uncalib. totals : 1488.99902 100.0000

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Area %
as Propane	1.855	2.479	1488.99902	100.0000

Totals : 100.0000

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

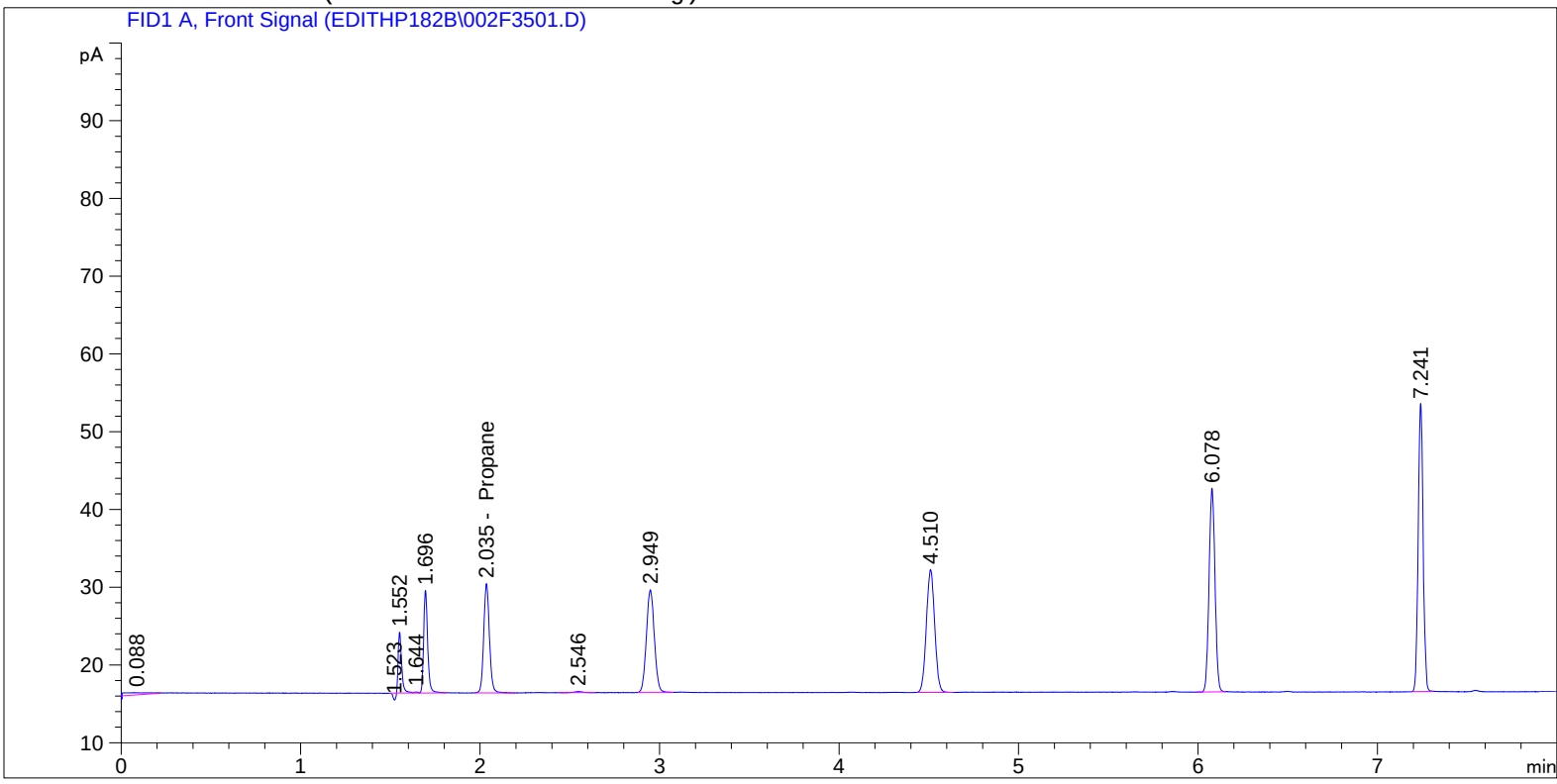
Name	Total Area [pA*s]	Area %
as Propane	1488.99902	100.0000
Propane	0.00000	0.0000

Totals : 100.0000

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\002F3501.D
Sample Name: EdithP108 #C3 ENV(1=600,2=400)

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  35
Acq. Instrument : Edith                          Location : Vial 2
Injection Date  : 1/9/2015 7:54:19 PM                 Inj :   1
                                                Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_TVOC_AS_C3.M
Last changed    : 1/12/2015 2:42:06 PM by Turner Oppy
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:42:18 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  2.035 BB       31.15898    1.27351   39.68114    Propane

Totals :                                 39.68114

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\002F3501.D
Sample Name: EdithP108 #C3 ENV(1=600,2=400)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
0.088	BB	2.72513	1.26492	3.44707		?
1.523	BP N	9.06755e-1	1.26492	1.14697		?
1.552	PV	10.55801	1.27106	13.41987		?
1.644	VV	1.94161e-1	1.26492	2.45598e-1		?
1.696	VB	20.62445	1.27287	26.25216		?
2.546	BB	4.25625e-1	1.26492	5.38381e-1		?
2.949	BV	40.90118	1.27380	52.10011		?
4.510	BB	51.05698	1.27399	65.04630		?
6.078	BB	60.69108	1.27412	77.32745		?
7.241	BB	70.75284	1.27421	90.15377		?

Uncalib. totals : 329.67768

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Ethane	1.550	1.855	31.37662	59.2512
as Butane	2.479	3.714	41.32681	39.6385
as Pentane	3.714	5.209	51.05698	39.3787
as Hexane	5.209	6.650	60.69108	40.0414
as Heptane	6.650	13.000	70.75284	38.7360

Totals : 217.0458

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

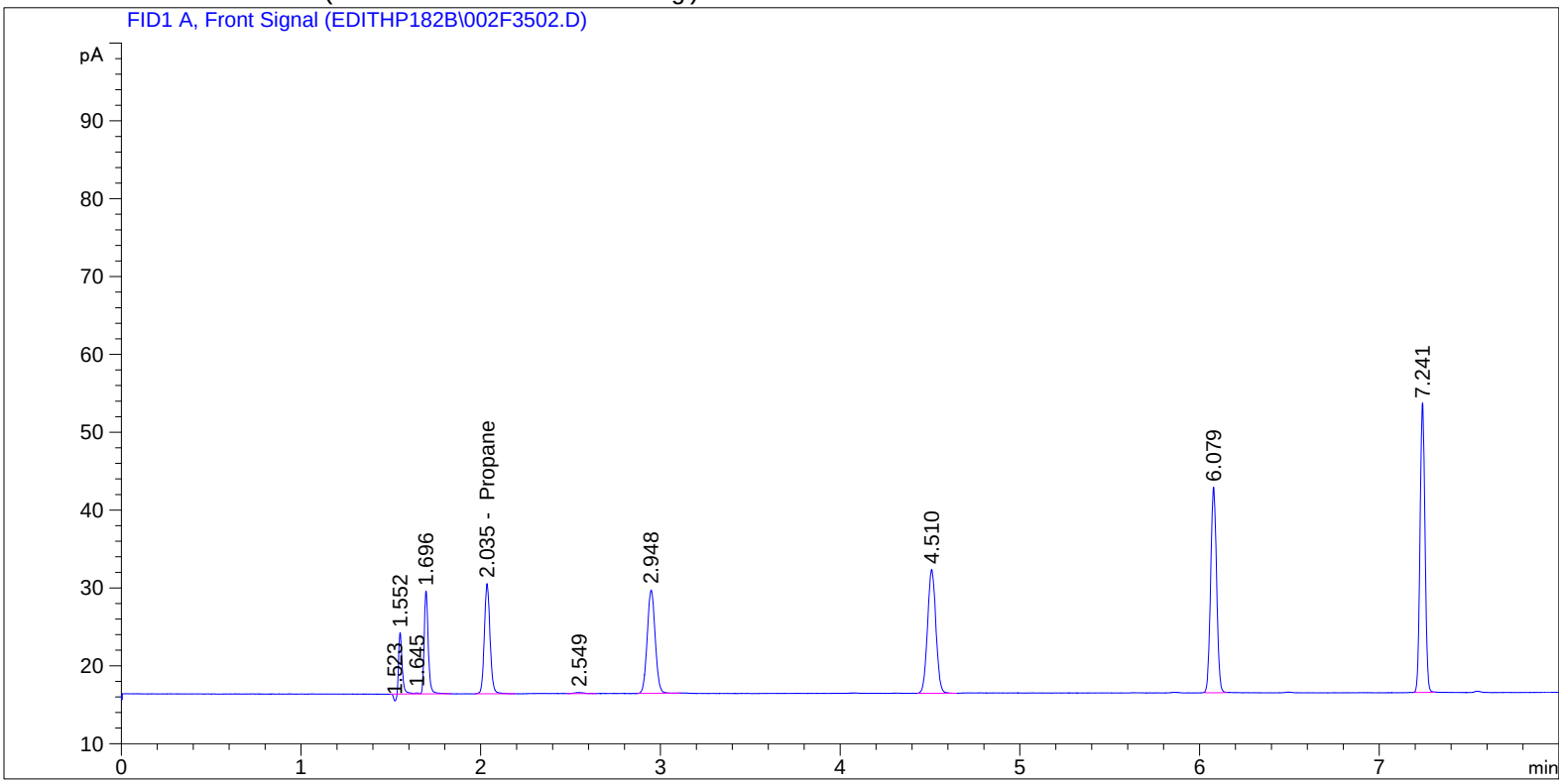
Name	Total Area [pA*s]	Amount [ppm]
as Ethane	31.37662	59.2512
as Butane	41.32681	39.6385
as Pentane	51.05698	39.3787
as Hexane	60.69108	40.0414
as Heptane	70.75284	38.7360
Propane	31.15898	39.6811

Totals : 256.7270

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\002F3502.D
Sample Name: EdithP108 #C3 ENV(1=600,2=400)

```
==================================================================
Acq. Operator   : disconnected                  Seq. Line :  35
Acq. Instrument : Edith                         Location : Vial 2
Injection Date  : 1/9/2015 8:11:19 PM                Inj :   2
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_TVOC_AS_C3.M
Last changed    : 1/12/2015 2:42:06 PM by Turner Oppy
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:42:18 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  2.035 BB       31.26901    1.27351   39.82141    Propane

Totals :                                 39.82141

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\002F3502.D
Sample Name: EdithP108 #C3 ENV(1=600,2=400)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.523	BP N	8.98161e-1	1.26492	1.13610		?
1.552	PV	10.65684	1.27109	13.54585		?
1.645	VV	2.06324e-1	1.26492	2.60984e-1		?
1.696	VB	20.82562	1.27288	26.50860		?
2.549	BB	4.77995e-1	1.26492	6.04625e-1		?
2.948	BB	40.84511	1.27380	52.02863		?
4.510	BB	51.40525	1.27400	65.49026		?
6.079	BB	61.04936	1.27412	77.78418		?
7.241	BB	71.21766	1.27421	90.74631		?

Uncalib. totals : 328.10554

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Ethane	1.550	1.855	31.68878	59.8407
as Butane	2.479	3.714	41.32311	39.6349
as Pentane	3.714	5.209	51.40525	39.6473
as Hexane	5.209	6.650	61.04936	40.2777
as Heptane	6.650	13.000	71.21766	38.9905

Totals : 218.3912

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

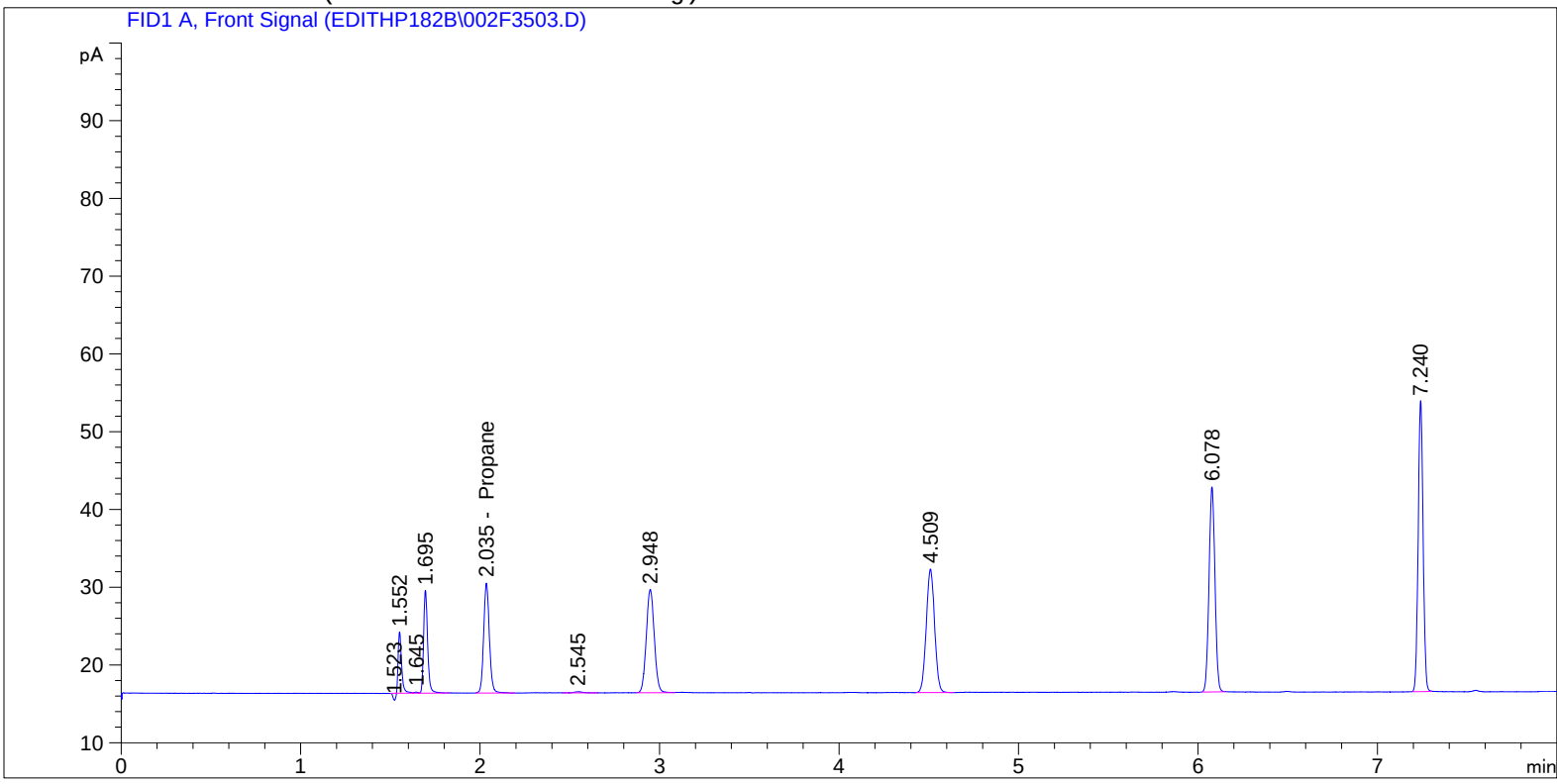
Name	Total Area [pA*s]	Amount [ppm]
as Ethane	31.68878	59.8407
as Butane	41.32311	39.6349
as Pentane	51.40525	39.6473
as Hexane	61.04936	40.2777
as Heptane	71.21766	38.9905
Propane	31.26901	39.8214

Totals : 258.2126

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\002F3503.D
Sample Name: EdithP108 #C3 ENV(1=600,2=400)

```
==================================================================
Acq. Operator   : disconnected                  Seq. Line :  35
Acq. Instrument : Edith                         Location : Vial 2
Injection Date  : 1/9/2015 8:28:21 PM                Inj :   3
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_TVOC_AS_C3.M
Last changed    : 1/12/2015 2:42:06 PM by Turner Oppy
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 2:42:18 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  2.035 BB       31.24520    1.27351   39.79106    Propane

Totals :                                 39.79106

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\002F3503.D
Sample Name: EdithP108 #C3 ENV(1=600,2=400)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.523	BP N	9.12286e-1	1.26492	1.15397		?
1.552	PV	10.61538	1.27108	13.49300		?
1.645	VV	2.05743e-1	1.26492	2.60248e-1		?
1.695	VB	20.75494	1.27288	26.41850		?
2.545	BB	4.78365e-1	1.26492	6.05093e-1		?
2.948	BV	41.20476	1.27381	52.48709		?
4.509	BB	51.35748	1.27400	65.42936		?
6.078	BB	61.00325	1.27412	77.72540		?
7.240	BB	71.12826	1.27421	90.63234		?

Uncalib. totals : 328.20499

==========

Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Ethane	1.550	1.855	31.57606	59.6278
as Butane	2.479	3.714	41.68312	39.9802
as Pentane	3.714	5.209	51.35748	39.6105
as Hexane	5.209	6.650	61.00325	40.2473
as Heptane	6.650	13.000	71.12826	38.9416

Totals : 218.4074

1 Warnings or Errors :

Warning : Reference compound(s) not found

==========

Final Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Ethane	31.57606	59.6278
as Butane	41.68312	39.9802
as Pentane	51.35748	39.6105
as Hexane	61.00325	40.2473
as Heptane	71.12826	38.9416
Propane	31.24520	39.7911

Totals : 258.1985

*** End of Report ***

Calibration Table

Calib. Data Modified : 1/12/2015 2:42:18 PM

Rel. Reference Window : 0.000 %
Abs. Reference Window : 0.100 min
Rel. Non-ref. Window : 0.000 %
Abs. Non-ref. Window : 0.050 min
Uncalibrated Peaks : Separately calculated (see below)
Partial Calibration : Yes, identified peaks are recalibrated
Correct All Ret. Times: No, only for identified peaks

Curve Type : Linear
Origin : Connected
Weight : Quadratic (Amnt)

Recalibration Settings:
Average Response : Average all calibrations
Average Retention Time: Floating Average New 75%

Calibration Report Options :
Printout of recalibrations within a sequence:
Calibration Table after Recalibration
Normal Report after Recalibration
If the sequence is done with bracketing:
Results of first cycle (ending previous bracket)

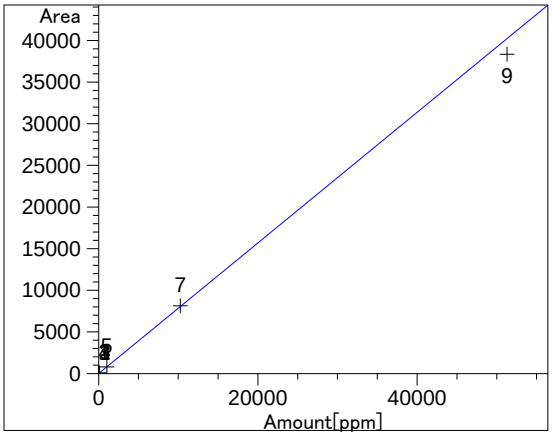
Signal 1: FID1 A, Front Signal
Uncalibrated Peaks : using compound Propane
Signal 2: FID3 B, Back Signal
Uncalibrated Peaks : not reported

RetTime [min]	Sig	Lvl	Amount [ppm]	Area	Amt/Area	Ref	Grp	Name
2.030	1	1	5.02000	3.93552	1.27556			Propane
		2	10.04000	7.98325	1.25763			
		3	40.16000	32.24148	1.24560			
		4	100.40000	79.98379	1.25525			
		5	1026.00000	801.90285	1.27946			
		7	1.02600e4	8146.17285	1.25949			
		9	5.13000e4	3.83387e4	1.33807			

Peak Sum Table

Name	StartTime [min]	EndTime [min]	Use Reference	Response factor	Multiplier	ISTD Peak
as Ethane	1.550	1.855	None	1.8884	1.8884	None
as Propane	1.855	2.479	None	1.2730	1.2730	None
as Butane	2.479	3.714	None	9.5915e-1	0.9591	None
as Pentane	3.714	5.209	None	7.7127e-1	0.7713	None
as Hexane	5.209	6.650	None	6.5976e-1	0.6598	None
as Heptane	6.650	13.000	None	5.4785e-1	0.5475	None

Calibration Curves



Propane at exp. RT: 2.030
FID1 A, Front Signal
Correlation: 0.99965
Residual Std. Dev.: 852.69660
Formula: y = mx + b
m: 7.84462e-1
b: 3.06331e-2
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.25
Level 3 : 0.015625
Level 4 : 0.0025
Level 5 : 0.000024
Level 7 : 2.39394e-007
Level 9 : 9.57575e-009

Calibration Table

Calib. Data Modified : 9/23/2014 7:13:51 AM

Rel. Reference Window : 0.000 %
Abs. Reference Window : 0.100 min
Rel. Non-ref. Window : 0.000 %
Abs. Non-ref. Window : 0.050 min
Uncalibrated Peaks : Separately calculated (see below)
Partial Calibration : Yes, identified peaks are recalibrated
Correct All Ret. Times: No, only for identified peaks

Curve Type : Linear
Origin : Connected
Weight : Quadratic (Amnt)

Recalibration Settings:
Average Response : Average all calibrations
Average Retention Time: Floating Average New 75%

Calibration Report Options :
Printout of recalibrations within a sequence:
Calibration Table after Recalibration
Normal Report after Recalibration
If the sequence is done with bracketing:
Results of first cycle (ending previous bracket)

Signal 1: FID1 A, Front Signal
Uncalibrated Peaks : using compound Propane
Signal 2: FID3 B, Back Signal
Uncalibrated Peaks : not reported

RetTime [min]	Sig	Lvl	Amount [ppm]	Area	Amt/Area	Ref	Grp	Name
1.543	1	1	5.01000	1.24640	4.01958			Methane
		2	10.02000	2.73780	3.65988			
		3	40.08000	11.00137	3.64318			
		4	100.20000	27.38345	3.65914			
		5	1026.00000	279.47185	3.67121			
		7	1.02600e4	2831.91227	3.62299			
		9	5.13000e4	1.33966e4	3.82933			
1.685	1	1	5.00500	2.64095	1.89515			Ethane
		2	10.01000	5.43771	1.84085			
		3	40.04000	21.75508	1.84049			
		4	100.10000	53.44088	1.87310			
		5	1026.00000	539.84916	1.90053			
		7	1.02600e4	5461.77913	1.87851			
		9	5.13000e4	2.57779e4	1.99008			
2.023	1	1	5.02000	3.93552	1.27556			Propane
		2	10.04000	7.98325	1.25763			
		3	40.16000	32.24148	1.24560			
		4	100.40000	79.98379	1.25525			
		5	1026.00000	801.90285	1.27946			
		7	1.02600e4	8146.17285	1.25949			
		9	5.13000e4	3.83387e4	1.33807			
2.932	1	1	5.01000	5.26892	9.50859e-1			Butane
		2	10.02000	10.51788	9.52664e-1			
		3	40.08000	42.46952	9.43736e-1			
		4	100.20000	105.51465	9.49631e-1			

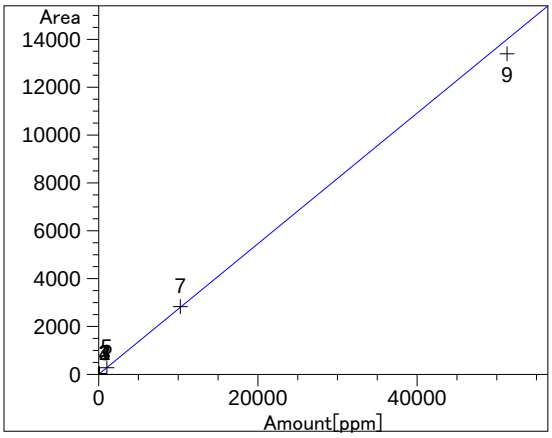
Method C:\GC\2014\EDITH\METHODS\EDITHP108F_C1-C7.M

RetTime [min]	Sig	Lvl	Amount [ppm]	Area	Amt/Area	Ref	Grp	Name
		5	206.00000	213.97933	9.62710e-1			
		7	2060.00000	2170.61491	9.49040e-1			
		9	1.03000e4	1.02448e4	1.00539			
4.493	1	1	5.00000	6.79984	7.35311e-1			Pentane
		2	10.00000	13.34243	7.49489e-1			
		3	40.00000	53.24072	7.51305e-1			
		4	100.00000	131.72862	7.59136e-1			
		5	104.00000	131.05394	7.93566e-1			
		7	1040.00000	1331.66182	7.80979e-1			
		9	5200.00000	6271.82715	8.29104e-1			
6.067	1	1	5.00500	7.78685	6.42751e-1			Hexane
		2	10.01000	15.63340	6.40296e-1			
		3	40.04000	63.01467	6.35408e-1			
		4	100.10000	156.35443	6.40212e-1			
		7	820.00000	1210.28654	6.77526e-1			
		9	4100.00000	5675.94564	7.22347e-1			
7.232	1	1	4.99100	9.07234	5.50134e-1			Heptane
		2	9.98200	18.20331	5.48362e-1			
		3	39.92800	73.48394	5.43357e-1			
		4	99.82000	182.12613	5.48082e-1			

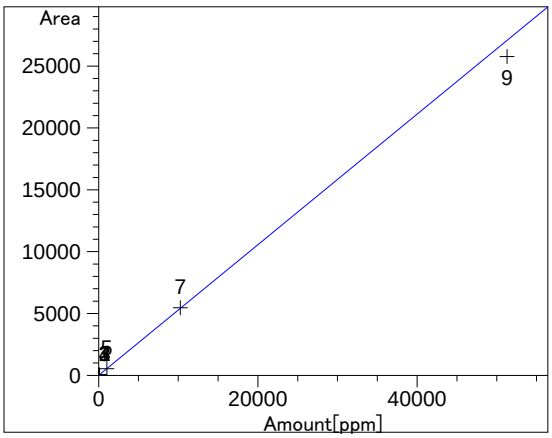
Peak Sum Table

Name	StartTime [min]	EndTime [min]	Use Reference	Response factor	Multiplier	ISTD Peak
as Ethane	1.550	1.855	None	1.8884	1.8884	None
as Propane	1.855	2.479	None	1.2730	1.2730	None
as Butane	2.479	3.714	None	9.5915e-1	0.9591	None
as Pentane	3.714	5.209	None	7.7127e-1	0.7713	None
as Hexane	5.209	6.650	None	6.5976e-1	0.6598	None
as Heptane	6.650	13.000	None	5.4785e-1	0.5475	None

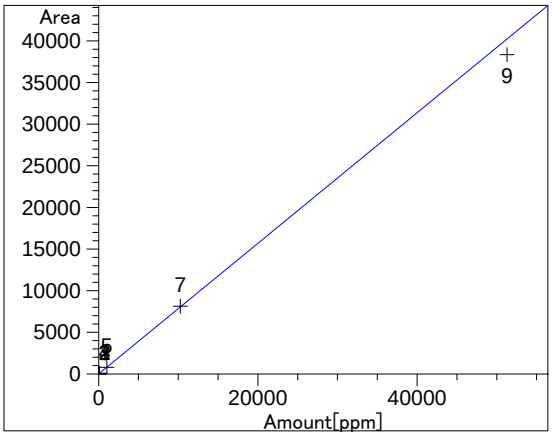
Calibration Curves



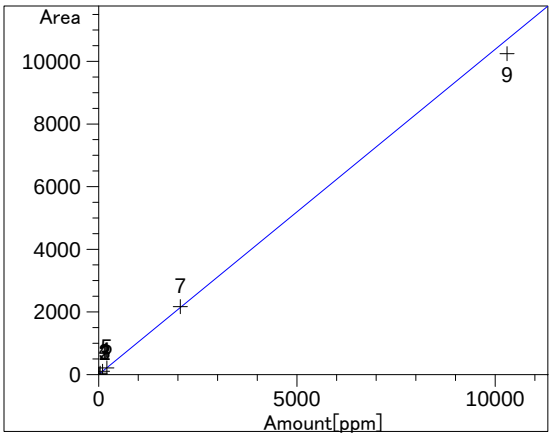
Methane at exp. RT: 1.543
FID1 A, Front Signal
Correlation: 0.99959
Residual Std. Dev.: 272.40560
Formula: y = mx + b
m: 2.73002e-1
b: -9.44523e-2
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.25
Level 3 : 0.015625
Level 4 : 0.0025
Level 5 : 0.000024
Level 7 : 2.38441e-007
Level 9 : 9.53764e-009



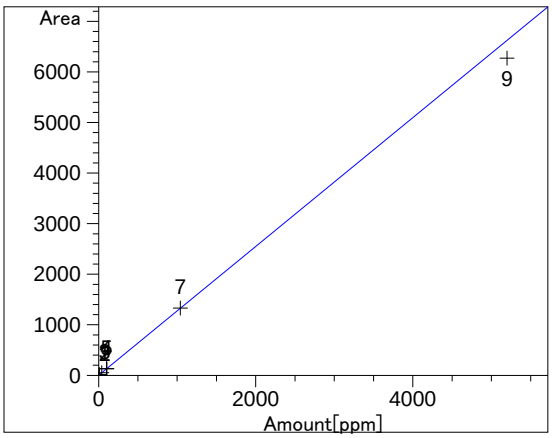
Ethane at exp. RT: 1.685
FID1 A, Front Signal
Correlation: 0.99959
Residual Std. Dev.: 588.10314
Formula: y = mx + b
m: 5.28113e-1
b: 3.66515e-2
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.25
Level 3 : 0.015625
Level 4 : 0.0025
Level 5 : 0.000024
Level 7 : 2.37965e-007
Level 9 : 9.51861e-009



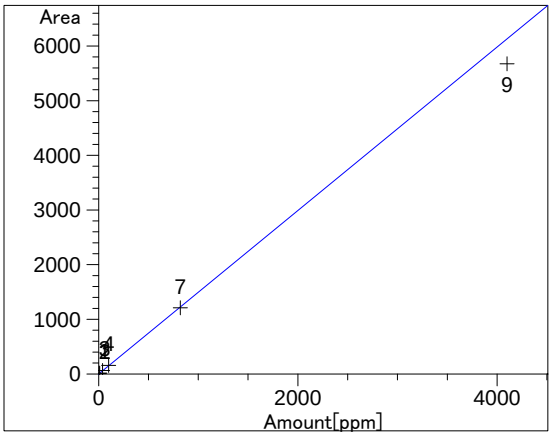
Propane at exp. RT: 2.023
FID1 A, Front Signal
Correlation: 0.99965
Residual Std. Dev.: 852.69660
Formula: y = mx + b
m: 7.84462e-1
b: 3.06331e-2
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.25
Level 3 : 0.015625
Level 4 : 0.0025
Level 5 : 0.000024
Level 7 : 2.39394e-007
Level 9 : 9.57575e-009



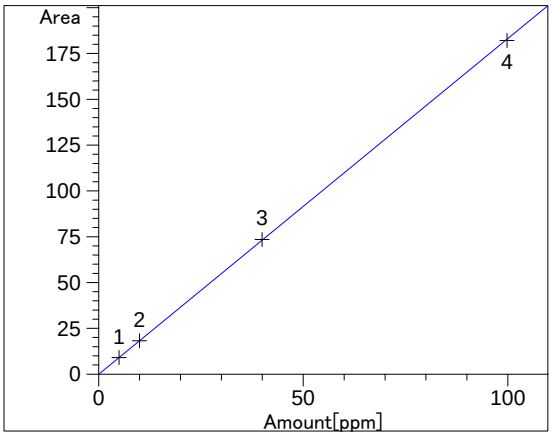
Butane at exp. RT: 2.932
FID1 A, Front Signal
Correlation: 0.99973
Residual Std. Dev.: 204.33121
Formula: y = mx + b
m: 1.03890
b: 8.48570e-2
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.25
Level 3 : 0.015625
Level 4 : 0.0025
Level 5 : 0.000591
Level 7 : 5.91481e-006
Level 9 : 2.36593e-007



Pentane at exp. RT: 4.493
FID1 A, Front Signal
Correlation: 0.99942
Residual Std. Dev.: 158.88295
Formula: y = mx + b
m: 1.27433
b: 4.88422e-1
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.25
Level 3 : 0.015625
Level 4 : 0.0025
Level 5 : 0.002311
Level 7 : 0.000023
Level 9 : 9.24556e-007



Hexane at exp. RT: 6.067
FID1 A, Front Signal
Correlation: 0.99867
Residual Std. Dev.: 228.00851
Formula: y = mx + b
m: 1.49541
b: 4.20132e-1
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.25
Level 3 : 0.015625
Level 4 : 0.0025
Level 7 : 0.000037
Level 9 : 1.49019e-006

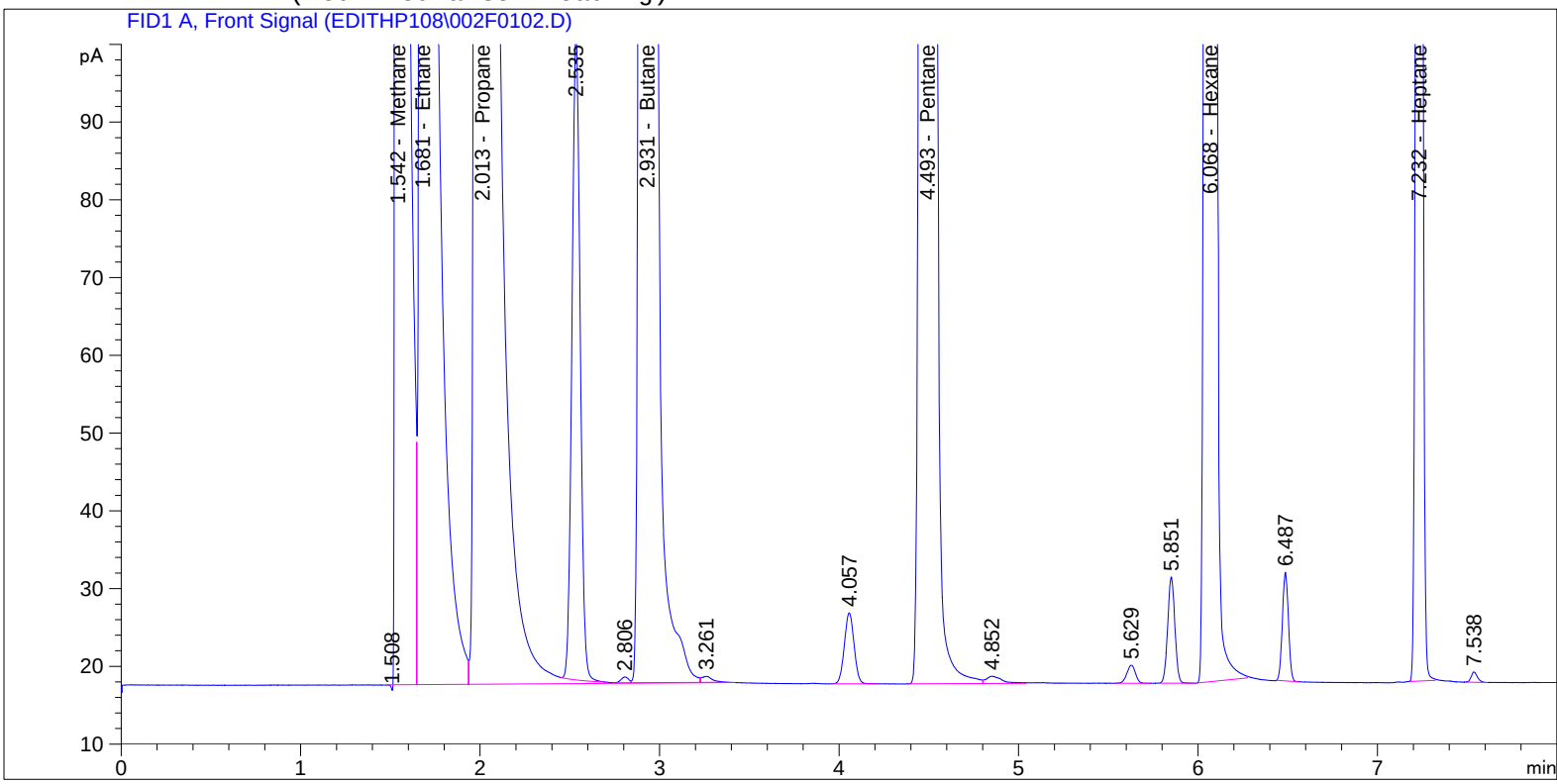


Heptane at exp. RT: 7.232
FID1 A, Front Signal
Correlation: 0.99999
Residual Std. Dev.: 0.60330
Formula: y = mx + b
m: 1.83300
b: -7.65536e-2
x: Amount
y: Area
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.25
Level 3 : 0.015625
Level 4 : 0.0025

==========

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F0102.D
Sample Name: EdithP108 #C9 ENV(1=0,6=400)

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :   1
Acq. Instrument : Edith                          Location : Vial 2
Injection Date  : 9/19/2014 10:11:23 AM               Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 3\EDITHP108\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_C1-C7.M
Last changed    : 9/22/2014 10:21:52 AM by Justin Guenzler
                  (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/22/2014 10:21:52 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.542 PV     1.35438e4     3.66300 4.96110e4     Methane
  1.681 VV     2.60609e4     1.89353 4.93471e4     Ethane
  2.013 VB S   3.87471e4     1.27476 4.93932e4     Propane
  2.931 VV T   1.03501e4  9.62552e-1 9962.51135    Butane
  4.493 BV     6329.58447 7.84664e-1 4966.59403    Pentane
  6.068 BB     5713.65137 6.68662e-1 3820.50129    Hexane
  7.232 BB      769.60168 5.45608e-1  419.90076    Heptane

Totals :                              1.67521e5

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F0102.D
Sample Name: EdithP108 #C9 ENV(1=0,6=400)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.508	PP N	4.18803e-1	1.26492	5.29752e-1		?
2.535	BB X	265.56903	1.27461	338.49748		?
2.806	BV T	2.11725	1.26492	2.67815		?
3.261	VB T	3.10334	1.26492	3.92547		?
4.057	BB	34.32124	1.27362	43.71227		?
4.852	VB	5.78772	1.26801	7.33890		?
5.629	BB	7.69984	1.26969	9.77639		?
5.851	BB	37.88299	1.27373	48.25263		?
6.487	BB	32.84457	1.27357	41.82986		?
7.538	BB	3.14729	1.26492	3.98107		?

Uncalib. totals : 500.52198

==========

Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Butane	2.400	3.700	270.78962	276.3657
as Pentane	3.700	5.300	40.10896	32.3588
as Hexane	5.300	6.600	78.42740	54.1561
as Heptane	6.600	13.000	3.14729	1.8504

Totals : 364.7311

1 Warnings or Errors :

Warning : Reference compound(s) not found

==========

Final Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

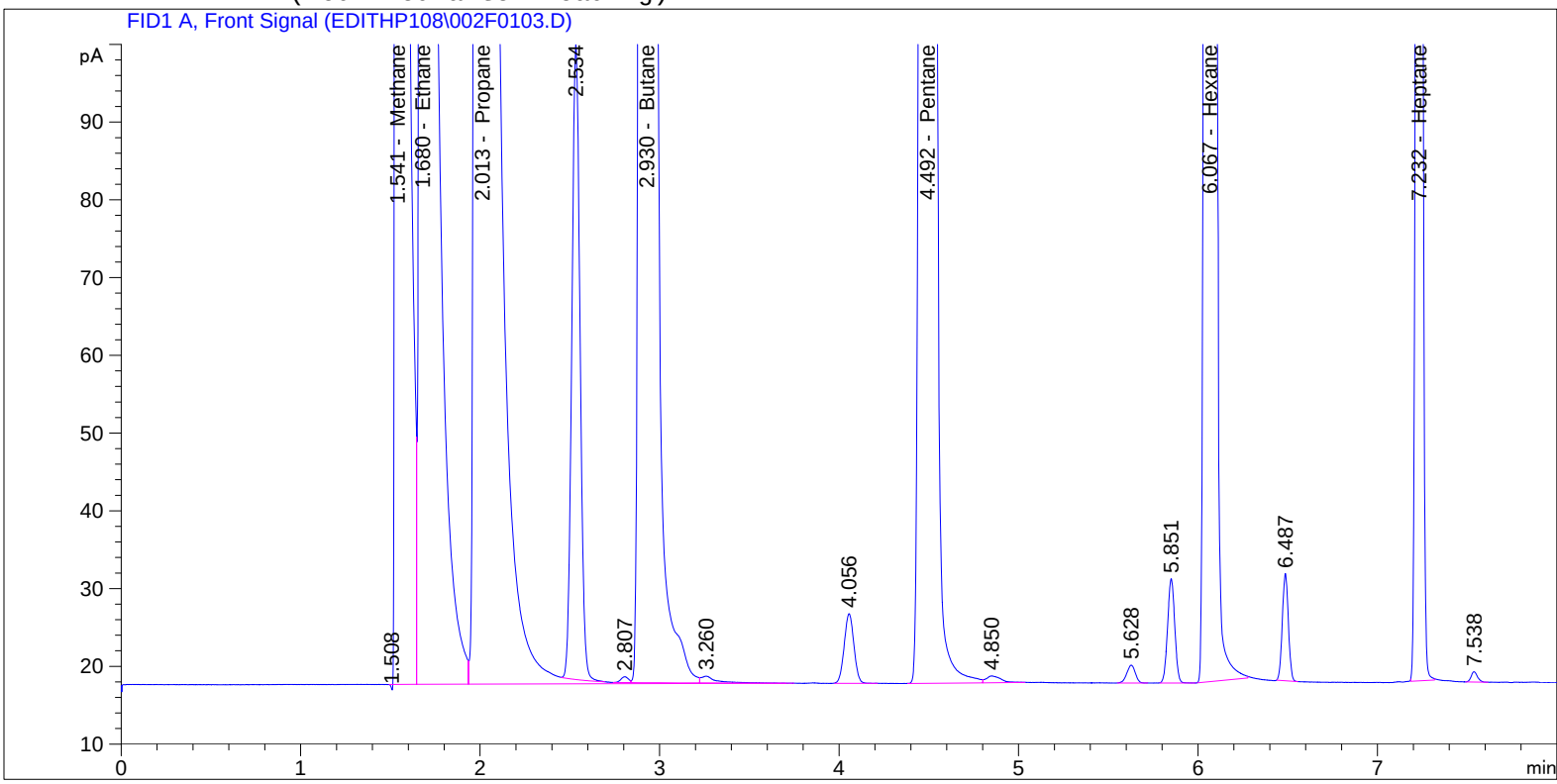
Name	Total Area [pA*s]	Amount [ppm]
as Butane	270.78962	276.3657
as Pentane	40.10896	32.3588
as Hexane	78.42740	54.1561
as Heptane	3.14729	1.8504
Methane	1.35438e4	4.961e4
Ethane	2.60609e4	4.935e4
Propane	3.87471e4	4.939e4
Butane	1.03501e4	9.963e3
Pentane	6329.58447	4.967e3
Hexane	5713.65137	3.821e3
Heptane	769.60168	419.9008

Totals : 1.6789e5

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F0103.D
Sample Name: EdithP108 #C9 ENV(1=0,6=400)

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :   1
Acq. Instrument : Edith                          Location : Vial 2
Injection Date  : 9/19/2014 10:27:35 AM               Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 3\EDITHP108\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_C1-C7.M
Last changed    : 9/22/2014 10:21:52 AM by Justin Guenzler
                  (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/22/2014 10:21:52 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.541 PV     1.32962e4     3.66300 4.87040e4     Methane
  1.680 VV     2.55747e4     1.89353 4.84265e4     Ethane
  2.013 VB S   3.80294e4     1.27476 4.84783e4     Propane
  2.930 VV X   1.01608e4  9.62552e-1 9780.26314    Butane
  4.492 BV     6221.71289 7.84662e-1 4881.94461    Pentane
  6.067 BB     5630.36670 6.68661e-1 3764.80790    Hexane
  7.232 BB      764.27332 5.45608e-1  416.99385    Heptane

Totals :                              1.64453e5

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F0103.D
Sample Name: EdithP108 #C9 ENV(1=0,6=400)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.508	BP N	3.70898e-1	1.26492	4.69157e-1		?
2.534	BB X	260.52020	1.27461	332.06144		?
2.807	BV X	2.15459	1.26492	2.72539		?
3.260	VB T	5.46515	1.26761	6.92770		?
4.056	BB	33.59258	1.27360	42.78340		?
4.850	VB	4.94411	1.26686	6.26350		?
5.628	BB	7.50741	1.26956	9.53109		?
5.851	BB	37.18023	1.27371	47.35678		?
6.487	BB	32.33476	1.27355	41.17998		?
7.538	BB	3.21634	1.26492	4.06841		?

Uncalib. totals : 493.36685

==========

Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Butane	2.400	3.700	268.13994	273.6615
as Pentane	3.700	5.300	38.53670	31.0904
as Hexane	5.300	6.600	77.02240	53.1859
as Heptane	6.600	13.000	3.21634	1.8910

Totals : 359.8288

1 Warnings or Errors :

Warning : Reference compound(s) not found

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Final Summed Peaks Report

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Signal 1: FID1 A, Front Signal

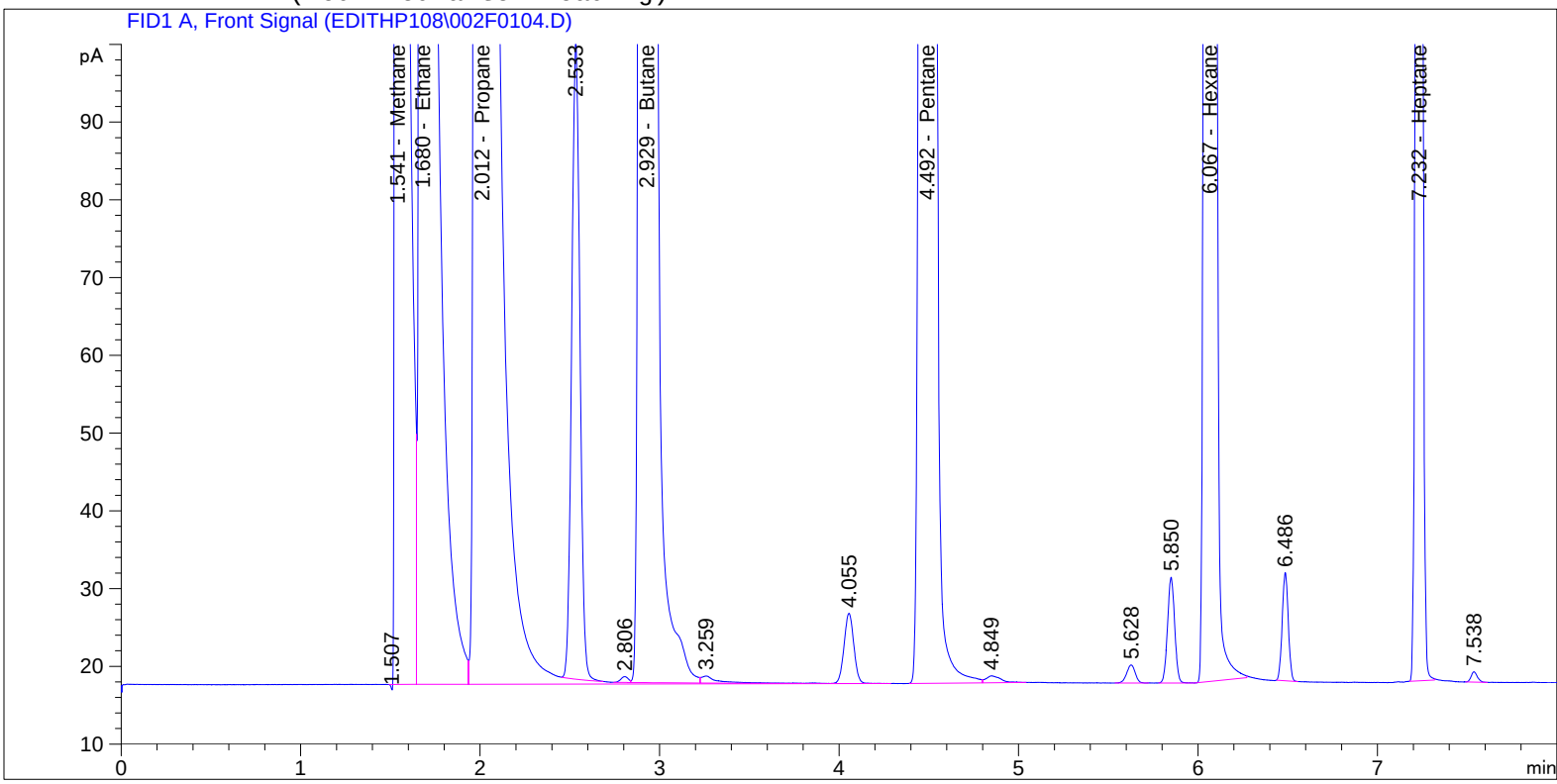
Name	Total Area [pA*s]	Amount [ppm]
as Butane	268.13994	273.6615
as Pentane	38.53670	31.0904
as Hexane	77.02240	53.1859
as Heptane	3.21634	1.8910
Methane	1.32962e4	4.870e4
Ethane	2.55747e4	4.843e4
Propane	3.80294e4	4.848e4
Butane	1.01608e4	9.780e3
Pentane	6221.71289	4.882e3
Hexane	5630.36670	3.765e3
Heptane	764.27332	416.9938

Totals : 1.6481e5

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F0104.D
Sample Name: EdithP108 #C9 ENV(1=0,6=400)

```
==================================================================
Acq. Operator   : disconnected                  Seq. Line :   1
Acq. Instrument : Edith                          Location : Vial 2
Injection Date  : 9/19/2014 10:43:55 AM               Inj :   4
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 3\EDITHP108\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_C1-C7.M
Last changed    : 9/22/2014 10:21:52 AM by Justin Guenzler
                  (modified after loading)
```




```
==================================================================
                      External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/22/2014 10:21:52 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.541	PV	1.33497e4	3.66300	4.89001e4		Methane
1.680	VV	2.56982e4	1.89353	4.86603e4		Ethane
2.012	VB S	3.82397e4	1.27476	4.87463e4		Propane
2.929	VV X	1.02236e4	9.62552e-1	9840.78036		Butane
4.492	BV	6264.18408	7.84663e-1	4915.27277		Pentane
6.067	VB	5683.81885	6.68662e-1	3800.55195		Hexane
7.232	BB	774.91528	5.45608e-1	422.79961		Heptane

```
Totals :                          1.65286e5

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F0104.D
Sample Name: EdithP108 #C9 ENV(1=0,6=400)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.507	BP N	3.68159e-1	1.26492	4.65692e-1		?
2.533	BB X	261.63516	1.27461	333.48275		?
2.806	BV X	2.16156	1.26492	2.73420		?
3.259	VV X	6.30059	1.26856	7.99269		?
4.055	VB T	34.12494	1.27361	43.46203		?
4.849	VB	4.99038	1.26693	6.32248		?
5.628	BB	7.64277	1.26965	9.70365		?
5.850	BV	37.59710	1.27372	47.88820		?
6.486	BB	32.65027	1.27356	41.58218		?
7.538	BB	3.15404	1.26492	3.98961		?

Uncalib. totals : 497.62347

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Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Butane	2.400	3.700	270.09732	275.6592
as Pentane	3.700	5.300	39.11532	31.5572
as Hexane	5.300	6.600	77.89015	53.7851
as Heptane	6.600	13.000	3.15404	1.8544

Totals : 362.8559

1 Warnings or Errors :

Warning : Reference compound(s) not found

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Final Summed Peaks Report

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Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Butane	270.09732	275.6592
as Pentane	39.11532	31.5572
as Hexane	77.89015	53.7851
as Heptane	3.15404	1.8544
Methane	1.33497e4	4.890e4
Ethane	2.56982e4	4.866e4
Propane	3.82397e4	4.875e4
Butane	1.02236e4	9.841e3
Pentane	6264.18408	4.915e3
Hexane	5683.81885	3.801e3
Heptane	774.91528	422.7996

Totals : 1.6565e5

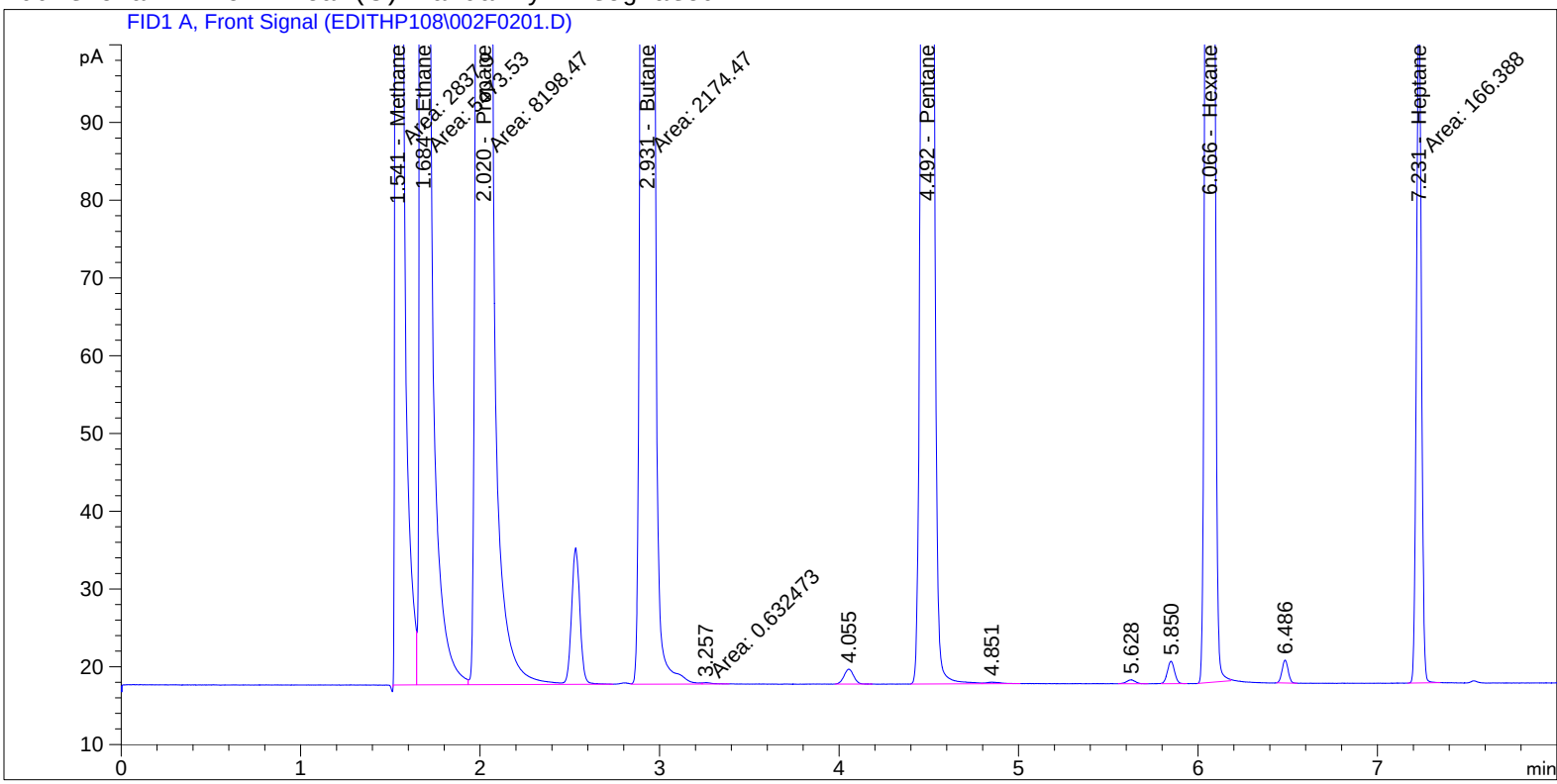
*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F0201.D
Sample Name: EdithP108 #C7 ENV(1=800,6=243.33)

==========

Acq. Operator : disconnected Seq. Line : 2
Acq. Instrument : Edith Location : Vial 2
Injection Date : 9/19/2014 11:00:20 AM Inj : 1
Inj Volume : 250 µl
Acq. Method : C:\GC\2014\EDITH\QUARTER 3\EDITHP108\GC139P039_HRVOC.M
Last changed : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_C1-C7.M
Last changed : 9/22/2014 10:21:52 AM by Justin Guenzler
(modified after loading)
Additional Info : Peak(s) manually integrated

Manual Int. "II" (JKG)



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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 9/22/2014 10:21:52 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.541	MF	2837.89941	3.66309	1.03955e4		Methane
1.684	FM	5473.52734	1.89352	1.03642e4		Ethane
2.020	FM	8198.47168	1.27475	1.04510e4		Propane
2.931	MF	2174.47192	9.62523e-1	2092.97885		Butane
4.492	BB	1333.55444	7.84437e-1	1046.08900		Pentane
6.066	BB	1210.79712	6.68479e-1	809.39256		Hexane
7.231	MM	166.38818	5.45805e-1	90.81544		Heptane

Totals : 3.52500e4

Uncalibrated Peaks : using compound Propane

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F0201.D
Sample Name: EdithP108 #C7 ENV(1=800,6=243.33)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
3.257	FM	6.32473e-1	1.26492	8.00028e-1		?
4.055	BB	7.19889	1.26933	9.13780		?
4.851	BB	1.12338	1.26492	1.42098		?
5.628	BB	1.65493	1.26492	2.09335		?
5.850	BB	7.91996	1.26983	10.05700		?
6.486	BB	6.91590	1.26911	8.77706		?

Uncalib. totals : 32.28620

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Butane	2.400	3.700	6.32473e-1	0.6455
as Pentane	3.700	5.300	8.32226	6.7142
as Hexane	5.300	6.600	16.49079	11.3873

Totals : 18.7470

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Butane	6.32473e-1	0.6455
as Pentane	8.32226	6.7142
as Hexane	16.49079	11.3873
Methane	2837.89941	1.040e4
Ethane	5473.52734	1.036e4
Propane	8198.47168	1.045e4
Butane	2174.47192	2.093e3
Pentane	1333.55444	1.046e3
Hexane	1210.79712	809.3926
Heptane	166.38818	90.8154

Totals : 3.5269e4

*** End of Report ***

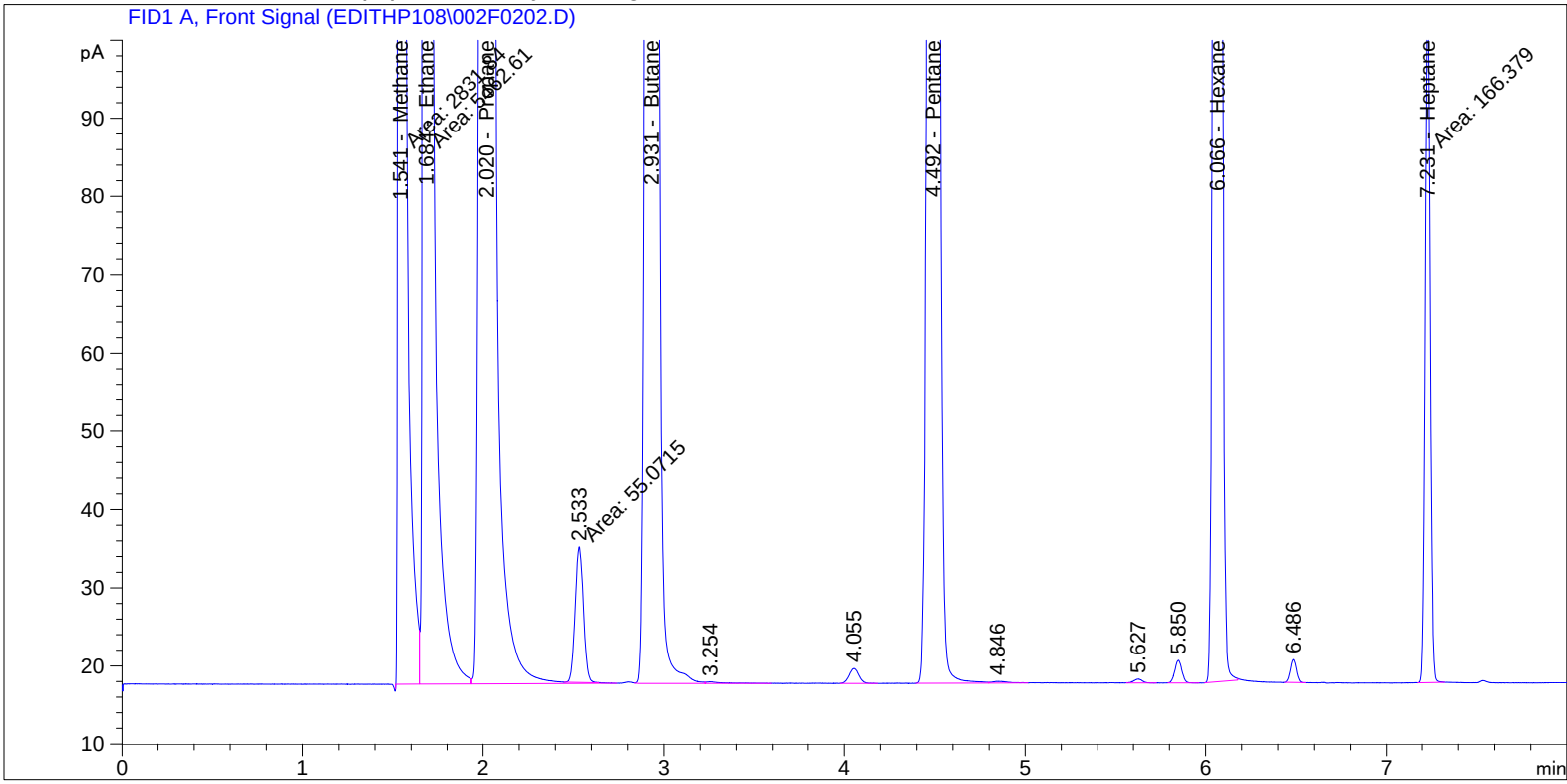
Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F0202.D
Sample Name: EdithP108 #C7 ENV(1=800,6=243.33)

==========

Acq. Operator : disconnected Seq. Line : 2
Acq. Instrument : Edith Location : Vial 2
Injection Date : 9/19/2014 11:16:47 AM Inj : 2
Inj Volume : 250 µl
Acq. Method : C:\GC\2014\EDITH\QUARTER 3\EDITHP108\GC139P039_HRVOC.M
Last changed : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_C1-C7.M
Last changed : 9/22/2014 10:21:52 AM by Justin Guenzler
(modified after loading)

Manual Int. "II" (JKG)

Additional Info : Peak(s) manually integrated



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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 9/22/2014 10:21:52 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.541	MF	2831.83716	3.66309	1.03733e4		Methane
1.684	MF	5462.61475	1.89352	1.03436e4		Ethane
2.020	FM R	8128.95898	1.27475	1.03624e4		Propane
2.931	VV X	2171.11353	9.62523e-1	2089.74619		Butane
4.492	BB	1331.40698	7.84436e-1	1044.40383		Pentane
6.066	BB	1209.52686	6.68479e-1	808.54312		Hexane
7.231	MM	166.37857	5.45805e-1	90.81020		Heptane

Totals : 3.51128e4

Uncalibrated Peaks : using compound Propane

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F0202.D
Sample Name: EdithP108 #C7 ENV(1=800,6=243.33)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
2.533	MM T	55.07153	1.27405	70.16388		?
3.254	VB T	1.46397	1.26492	1.85180		?
4.055	BB	7.19456	1.26933	9.13228		?
4.846	BB	1.24461	1.26492	1.57433		?
5.627	BB	1.63600	1.26492	2.06940		?
5.850	BB	7.97587	1.26986	10.12826		?
6.486	BB	6.90483	1.26910	8.76294		?

Uncalib. totals : 103.68290

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Butane	2.400	3.700	56.53550	57.6997
as Pentane	3.700	5.300	8.43917	6.8085
as Hexane	5.300	6.600	16.51669	11.4052

Totals : 75.9134

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
as Butane	56.53550	57.6997
as Pentane	8.43917	6.8085
as Hexane	16.51669	11.4052
Methane	2831.83716	1.037e4
Ethane	5462.61475	1.034e4
Propane	8128.95898	1.036e4
Butane	2171.11353	2.090e3
Pentane	1331.40698	1.044e3
Hexane	1209.52686	808.5431
Heptane	166.37857	90.8102

Totals : 3.5189e4

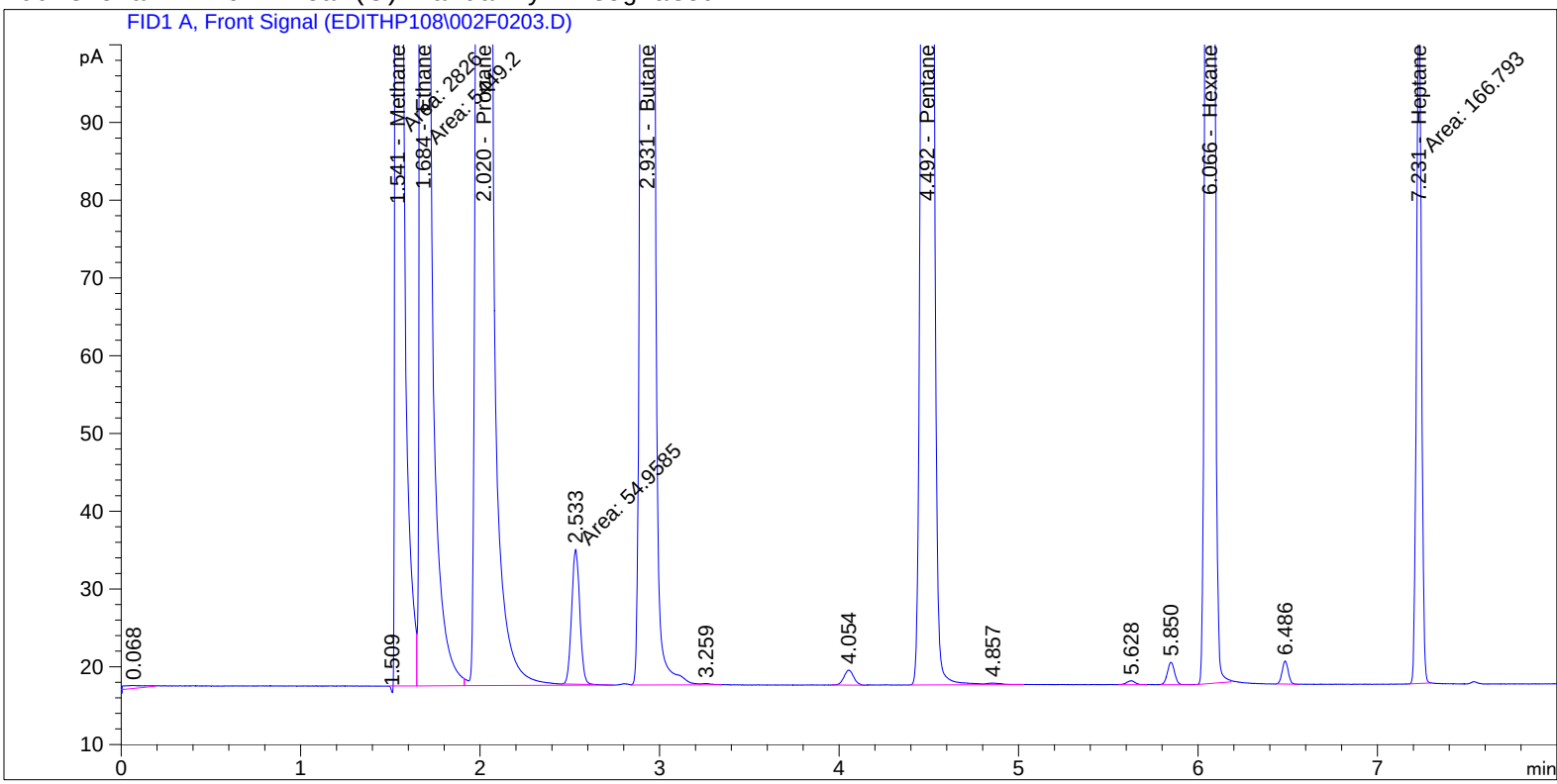
*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F0203.D
Sample Name: EdithP108 #C7 ENV(1=800,6=243.33)

==========

Acq. Operator : disconnected Seq. Line : 2
Acq. Instrument : Edith Location : Vial 2
Injection Date : 9/19/2014 11:33:11 AM Inj : 3
Inj Volume : 250 µl
Acq. Method : C:\GC\2014\EDITH\QUARTER 3\EDITHP108\GC139P039_HRVOC.M
Last changed : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_C1-C7.M
Last changed : 9/22/2014 10:21:52 AM by Justin Guenzler
(modified after loading)
Additional Info : Peak(s) manually integrated

Manual Int. "II" (JKG)



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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 9/22/2014 10:21:52 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.541	MF	2826.00024	3.66309	1.03519e4		Methane
1.684	MF	5449.19531	1.89352	1.03182e4		Ethane
2.020	FM R	8111.08789	1.27475	1.03396e4		Propane
2.931	VV T	2166.25928	9.62523e-1	2085.07368		Butane
4.492	BV	1330.02405	7.84436e-1	1043.31861		Pentane
6.066	BB	1210.53564	6.68479e-1	809.21771		Hexane
7.231	MM	166.79295	5.45804e-1	91.03627		Heptane

Totals : 3.50384e4

Uncalibrated Peaks : using compound Propane

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F0203.D
Sample Name: EdithP108 #C7 ENV(1=800,6=243.33)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
0.068	BB	2.98571	1.26492	3.77668		?
1.509	BP N	5.60743e-1	1.26492	7.09295e-1		?
2.533	MM T	54.95855	1.27405	70.01985		?
3.259	VB T	6.22596e-1	1.26492	7.87533e-1		?
4.054	BV	7.35849	1.26945	9.34125		?
4.857	VB	1.16596	1.26492	1.47484		?
5.628	BB	1.61657	1.26492	2.04483		?
5.850	BB	8.00895	1.26988	10.17043		?
6.486	BB	6.94798	1.26914	8.81795		?

Uncalib. totals : 107.14267

==========

Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Butane	2.400	3.700	55.58114	56.7257
as Pentane	3.700	5.300	8.52444	6.8773
as Hexane	5.300	6.600	16.57350	11.4444

Totals : 75.0474

1 Warnings or Errors :

Warning : Reference compound(s) not found

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Final Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

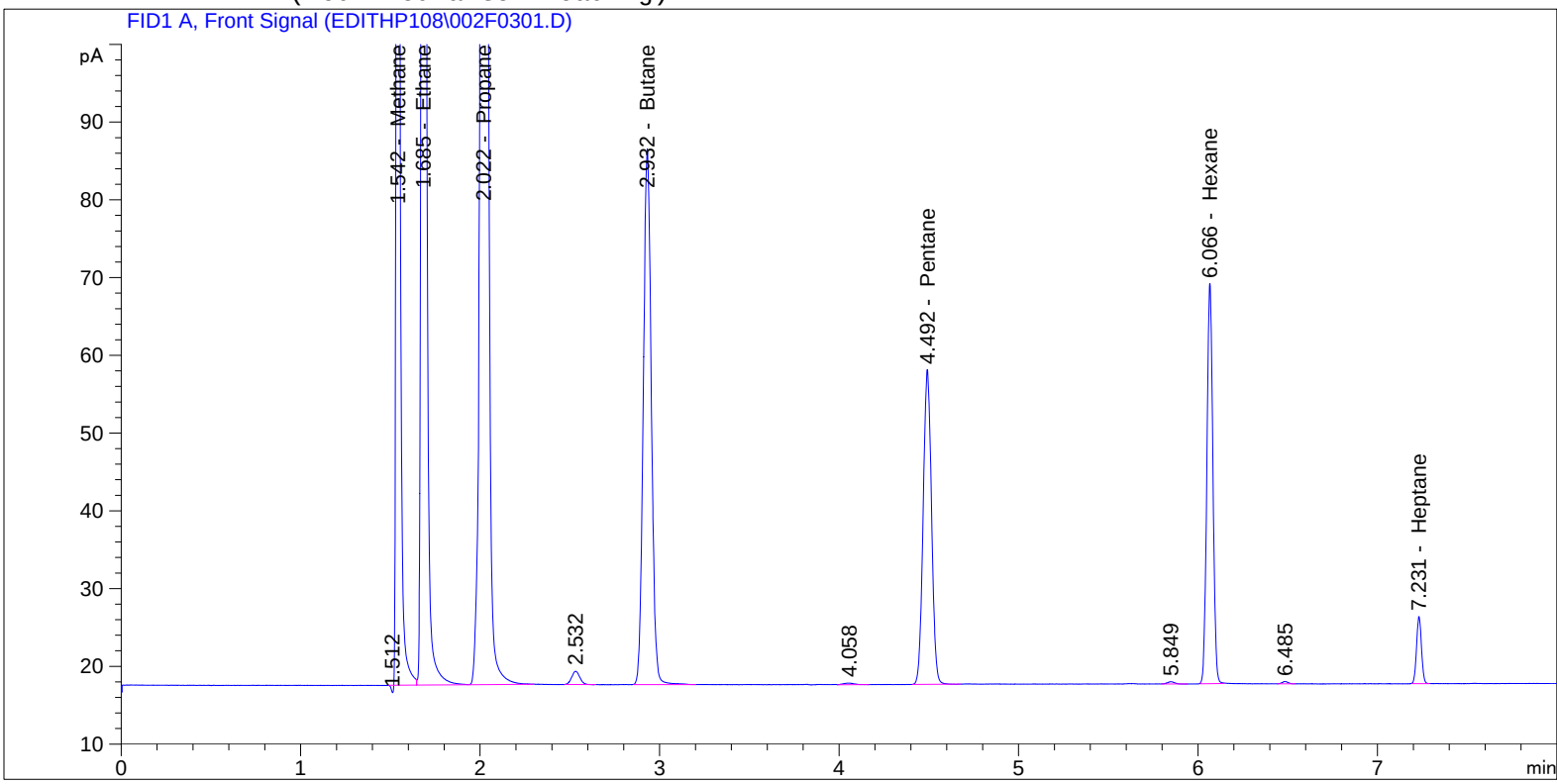
Name	Total Area [pA*s]	Amount [ppm]
as Butane	55.58114	56.7257
as Pentane	8.52444	6.8773
as Hexane	16.57350	11.4444
Methane	2826.00024	1.035e4
Ethane	5449.19531	1.032e4
Propane	8111.08789	1.034e4
Butane	2166.25928	2.085e3
Pentane	1330.02405	1.043e3
Hexane	1210.53564	809.2177
Heptane	166.79295	91.0363

Totals : 3.5113e4

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F0301.D
Sample Name: EdithP108 #C5 ENV(1=4900,6=121.67)

```
==================================================================
Acq. Operator   : disconnected                  Seq. Line :   3
Acq. Instrument : Edith                         Location : Vial 2
Injection Date  : 9/19/2014 11:49:30 AM              Inj :   1
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 3\EDITHP108\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_C1-C7.M
Last changed    : 9/22/2014 10:21:52 AM by Justin Guenzler
                  (modified after loading)
```




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/22/2014 10:21:52 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.542	PV	279.65533	3.66421	1024.71563		Methane
1.685	VV	540.20013	1.89341	1022.81792		Ethane
2.022	VB	802.41431	1.27471	1022.84587		Propane
2.932	BB	214.20848	9.62179e-1	206.10692		Butane
4.492	BB	130.77841	7.81793e-1	102.24169		Pentane
6.066	BB	119.46789	6.66359e-1	79.60856		Hexane
7.231	BB	16.45404	5.48092e-1	9.01832		Heptane

```
Totals :                          3467.35491

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F0301.D
Sample Name: EdithP108 #C5 ENV(1=4900,6=121.67)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.512	BP N	7.72924e-1	1.26492	9.77687e-1		?
2.532	BB	5.37431	1.26749	6.81190		?
4.058	VB	9.06267e-1	1.26492	1.14635		?
5.849	BB	7.83291e-1	1.26492	9.90800e-1		?
6.485	BB	6.78864e-1	1.26492	8.58709e-1		?

Uncalib. totals : 10.78545

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Butane	2.400	3.700	5.37431	5.4850
as Pentane	3.700	5.300	9.06267e-1	0.7312
as Hexane	5.300	6.600	1.46216	1.0097

Totals : 7.2258

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

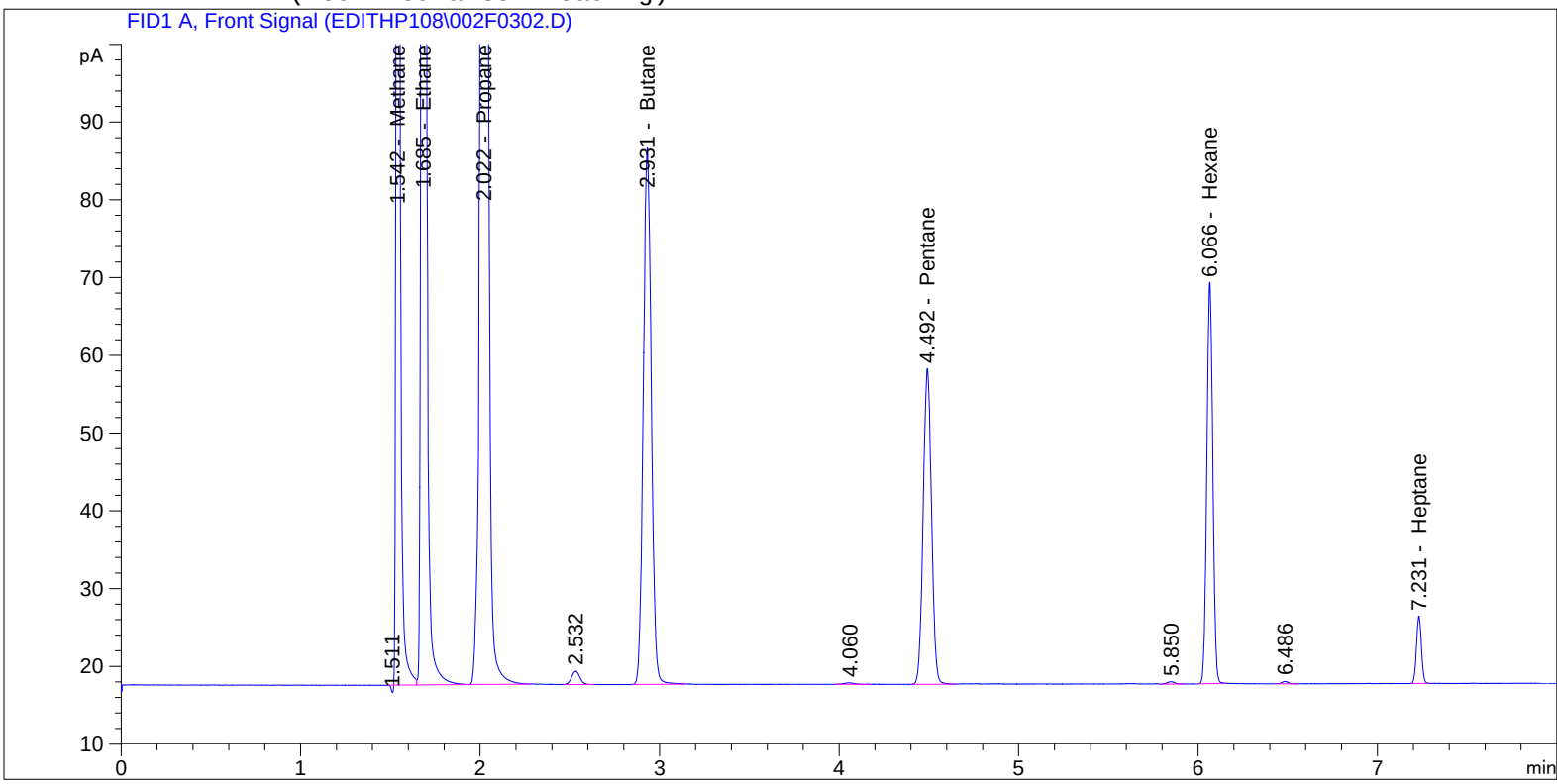
Name	Total Area [pA*s]	Amount [ppm]
as Butane	5.37431	5.4850
as Pentane	9.06267e-1	0.7312
as Hexane	1.46216	1.0097
Methane	279.65533	1.025e3
Ethane	540.20013	1.023e3
Propane	802.41431	1.023e3
Butane	214.20848	206.1069
Pentane	130.77841	102.2417
Hexane	119.46789	79.6086
Heptane	16.45404	9.0183

Totals : 3474.5807

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F0302.D
Sample Name: EdithP108 #C5 ENV(1=4900,6=121.67)

```
==================================================================
Acq. Operator   : disconnected                  Seq. Line :   3
Acq. Instrument : Edith                         Location : Vial 2
Injection Date  : 9/19/2014 12:05:46 PM              Inj :   2
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 3\EDITHP108\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_C1-C7.M
Last changed    : 9/22/2014 10:21:52 AM by Justin Guenzler
                  (modified after loading)
```




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/22/2014 10:21:52 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.542	PV	279.70560	3.66421	1024.89974		Methane
1.685	VB	540.25098	1.89341	1022.91419		Ethane
2.022	BB	802.57178	1.27471	1023.04660		Propane
2.931	BB	213.83063	9.62178e-1	205.74321		Butane
4.492	BB	131.31786	7.81805e-1	102.66501		Pentane
6.066	BB	119.85897	6.66367e-1	79.87008		Hexane
7.231	BB	16.56271	5.48075e-1	9.07761		Heptane

```
Totals :                          3468.21645

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F0302.D
Sample Name: EdithP108 #C5 ENV(1=4900,6=121.67)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.511	BP N	7.70508e-1	1.26492	9.74630e-1		?
2.532	BB	5.38442	1.26751	6.82479		?
4.060	BB	8.02487e-1	1.26492	1.01508		?
5.850	BB	8.78099e-1	1.26492	1.11072		?
6.486	BB	6.96806e-1	1.26492	8.81403e-1		?

Uncalib. totals : 10.80663

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Butane	2.400	3.700	5.38442	5.4953
as Pentane	3.700	5.300	8.02487e-1	0.6474
as Hexane	5.300	6.600	1.57491	1.0875

Totals : 7.2302

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

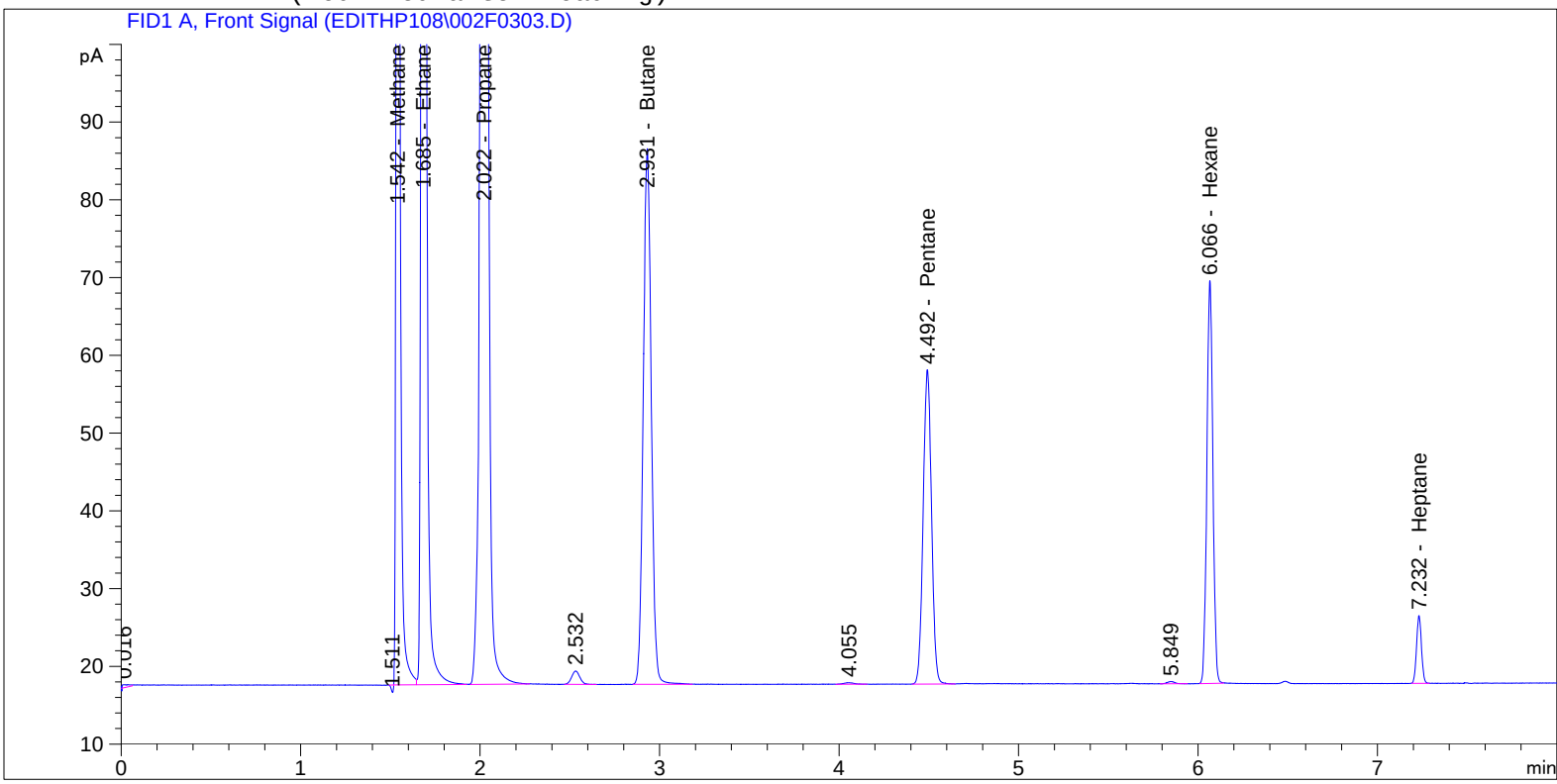
Name	Total Area [pA*s]	Amount [ppm]
as Butane	5.38442	5.4953
as Pentane	8.02487e-1	0.6474
as Hexane	1.57491	1.0875
Methane	279.70560	1.025e3
Ethane	540.25098	1.023e3
Propane	802.57178	1.023e3
Butane	213.83063	205.7432
Pentane	131.31786	102.6650
Hexane	119.85897	79.8701
Heptane	16.56271	9.0776

Totals : 3475.4467

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F0303.D
Sample Name: EdithP108 #C5 ENV(1=4900,6=121.67)

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :   3
Acq. Instrument : Edith                          Location : Vial 2
Injection Date  : 9/19/2014 12:22:56 PM               Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 3\EDITHP108\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_C1-C7.M
Last changed    : 9/22/2014 10:21:52 AM by Justin Guenzler
                  (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/22/2014 10:21:52 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.542 PV      279.05463    3.66421 1022.51526    Methane
  1.685 VB      539.09637    1.89341 1020.72791    Ethane
  2.022 BB      800.72247    1.27471 1020.68919    Propane
  2.931 BB      213.89888 9.62179e-1  205.80891    Butane
  4.492 BV      131.06555 7.81800e-1  102.46702    Pentane
  6.066 BB      119.81548 6.66366e-1   79.84099    Hexane
  7.232 BB       16.59894 5.48070e-1    9.09738    Heptane

Totals :                              3461.14665

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F0303.D
Sample Name: EdithP108 #C5 ENV(1=4900,6=121.67)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
0.016	BB	8.67494e-1	1.26492	1.09731		?
1.511	BP N	7.72846e-1	1.26492	9.77588e-1		?
2.532	BB	5.35825	1.26747	6.79143		?
4.055	BB	7.85258e-1	1.26492	9.93288e-1		?
5.849	BB	7.89094e-1	1.26492	9.98140e-1		?

Uncalib. totals : 10.85776

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Butane	2.400	3.700	5.35825	5.4686
as Pentane	3.700	5.300	7.85258e-1	0.6335
as Hexane	5.300	6.600	7.89094e-1	0.5449

Totals : 6.6470

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

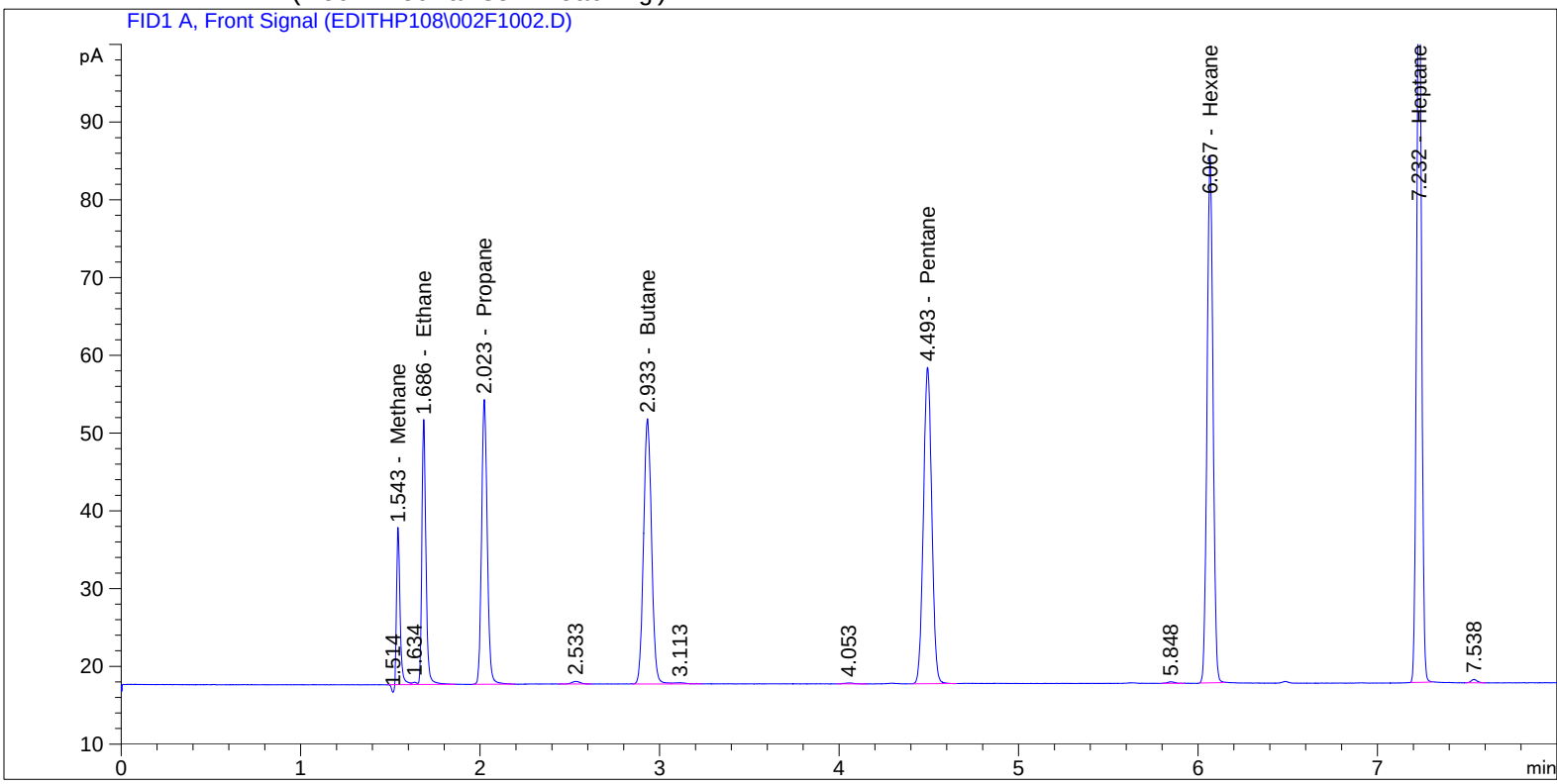
Name	Total Area [pA*s]	Amount [ppm]
as Butane	5.35825	5.4686
as Pentane	7.85258e-1	0.6335
as Hexane	7.89094e-1	0.5449
Methane	279.05463	1.023e3
Ethane	539.09637	1.021e3
Propane	800.72247	1.021e3
Butane	213.89888	205.8089
Pentane	131.06555	102.4670
Hexane	119.81548	79.8410
Heptane	16.59894	9.0974

Totals : 3467.7937

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F1002.D
Sample Name: EdithP108 #C4 ENV(1=0,2=450)

```
==================================================================
Acq. Operator   : disconnected                  Seq. Line :  10
Acq. Instrument : Edith                         Location : Vial 2
Injection Date  : 9/19/2014 2:34:27 PM               Inj :   2
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 3\EDITHP108\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_C1-C7.M
Last changed    : 9/22/2014 10:21:52 AM by Justin Guenzler
                  (modified after loading)
```




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==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/22/2014 10:21:52 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.543 PV       27.44783    3.67558  100.88661    Methane
  1.686 VB       53.68153    1.89224  101.57839    Ethane
  2.023 BB       80.46478    1.27427  102.53415    Propane
  2.933 BV      105.75439 9.61788e-1  101.71331    Butane
  4.493 BB      131.92094 7.81819e-1  103.13826    Pentane
  6.067 BB      156.57463 6.66917e-1  104.42225    Hexane
  7.232 BB      182.24956 5.45783e-1   99.46867    Heptane

Totals :                             713.74165

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F1002.D
Sample Name: EdithP108 #C4 ENV(1=0,2=450)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.514	BP N	9.40663e-1	1.26492	1.18986		?
1.634	VV	4.80986e-1	1.26492	6.08408e-1		?
2.533	BB	1.08576	1.26492	1.37339		?
3.113	VB	7.46504e-1	1.26492	9.44267e-1		?
4.053	BB	4.56221e-1	1.26492	5.77082e-1		?
5.848	BB	5.27333e-1	1.26492	6.67033e-1		?
7.538	BB	9.92297e-1	1.26492	1.25518		?

Uncalib. totals : 6.61522

==========

Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Ethane	1.550	1.850	4.80986e-1	0.9835
as Butane	2.400	3.700	1.83226	1.8700
as Pentane	3.700	5.300	4.56221e-1	0.3681
as Hexane	5.300	6.600	5.27333e-1	0.3641
as Heptane	6.600	13.000	9.92297e-1	0.5834

Totals : 4.1691

1 Warnings or Errors :

Warning : Reference compound(s) not found

==========

Final Summed Peaks Report

==========

Signal 1: FID1 A, Front Signal

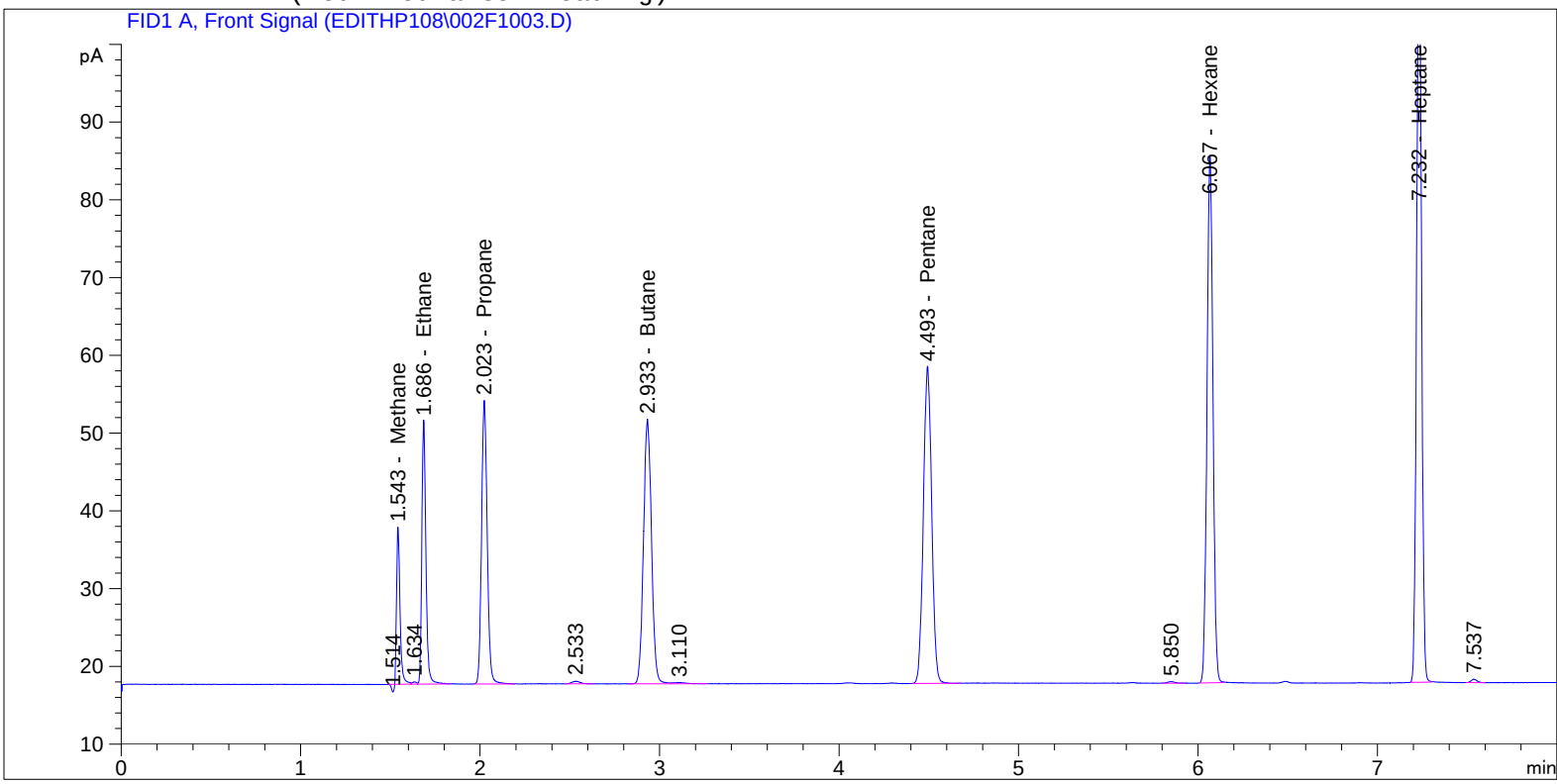
Name	Total Area [pA*s]	Amount [ppm]
as Ethane	4.80986e-1	0.9835
as Butane	1.83226	1.8700
as Pentane	4.56221e-1	0.3681
as Hexane	5.27333e-1	0.3641
as Heptane	9.92297e-1	0.5834
Methane	27.44783	100.8866
Ethane	53.68153	101.5784
Propane	80.46478	102.5342
Butane	105.75439	101.7133
Pentane	131.92094	103.1383
Hexane	156.57463	104.4223
Heptane	182.24956	99.4687

Totals : 717.9108

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F1003.D
Sample Name: EdithP108 #C4 ENV(1=0,2=450)

```
==================================================================
Acq. Operator   : disconnected                  Seq. Line :  10
Acq. Instrument : Edith                         Location : Vial 2
Injection Date  : 9/19/2014 2:50:31 PM               Inj :   3
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 3\EDITHP108\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_C1-C7.M
Last changed    : 9/22/2014 10:21:52 AM by Justin Guenzler
                  (modified after loading)
```




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/22/2014 10:21:52 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.543	PV	27.37074	3.67561	100.60423		Methane
1.686	VB	53.33620	1.89223	100.92452		Ethane
2.023	BB	79.96803	1.27427	101.90093		Propane
2.933	VV	105.60441	9.61787e-1	101.56894		Butane
4.493	BB	131.71680	7.81814e-1	102.97807		Pentane
6.067	BB	156.46011	6.66915e-1	104.34567		Hexane
7.232	BB	182.34998	5.45783e-1	99.52346		Heptane

```
Totals :                                711.84581

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F1003.D
Sample Name: EdithP108 #C4 ENV(1=0,2=450)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.514	BP N	9.42002e-1	1.26492	1.19156		?
1.634	VV	4.76327e-1	1.26492	6.02516e-1		?
2.533	BB	1.05936	1.26492	1.34000		?
3.110	VB	7.18170e-1	1.26492	9.08427e-1		?
5.850	BB	5.55074e-1	1.26492	7.02123e-1		?
7.537	BB	9.72606e-1	1.26492	1.23027		?

Uncalib. totals : 5.97489

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Ethane	1.550	1.850	4.76327e-1	0.9740
as Butane	2.400	3.700	1.77753	1.8141
as Hexane	5.300	6.600	5.55074e-1	0.3833
as Heptane	6.600	13.000	9.72606e-1	0.5718

Totals : 3.7433

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

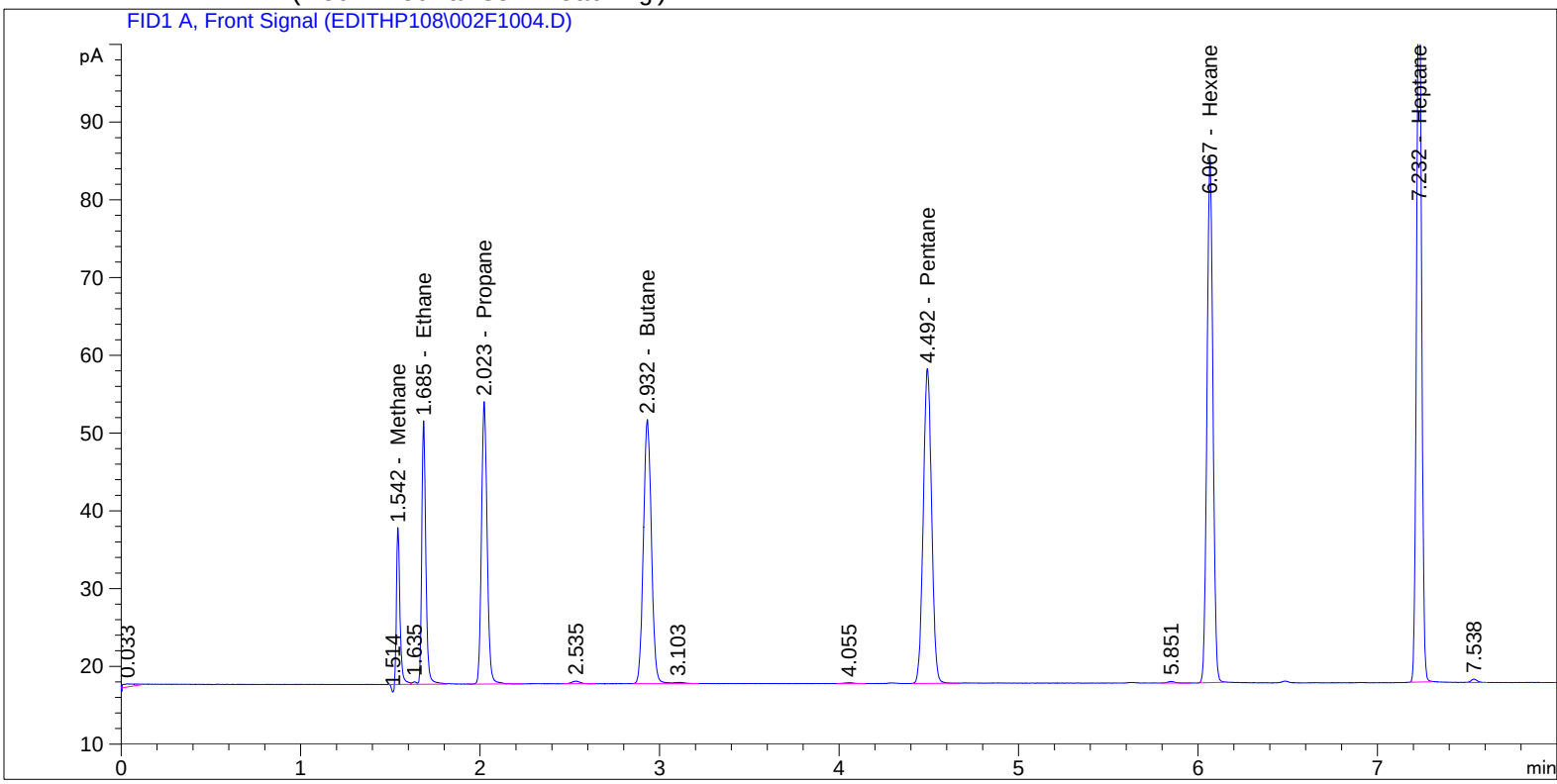
Name	Total Area [pA*s]	Amount [ppm]
as Ethane	4.76327e-1	0.9740
as Butane	1.77753	1.8141
as Hexane	5.55074e-1	0.3833
as Heptane	9.72606e-1	0.5718
Methane	27.37074	100.6042
Ethane	53.33620	100.9245
Propane	79.96803	101.9009
Butane	105.60441	101.5689
Pentane	131.71680	102.9781
Hexane	156.46011	104.3457
Heptane	182.34998	99.5235

Totals : 715.5891

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F1004.D
Sample Name: EdithP108 #C4 ENV(1=0,2=450)

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  10
Acq. Instrument : Edith                          Location : Vial 2
Injection Date  : 9/19/2014 3:06:36 PM                Inj :   4
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 3\EDITHP108\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_C1-C7.M
Last changed    : 9/22/2014 10:21:52 AM by Justin Guenzler
                  (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/22/2014 10:21:52 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.542 PV       27.33177    3.67563  100.46148    Methane
  1.685 VB       53.30490    1.89223  100.86524    Ethane
  2.023 PB       79.51855    1.27427  101.32795    Propane
  2.932 BV      105.18516 9.61784e-1  101.16539    Butane
  4.492 BB      131.54813 7.81810e-1  102.84571    Pentane
  6.067 BB      156.02853 6.66911e-1  104.05707    Hexane
  7.232 BB      181.77887 5.45783e-1   99.21189    Heptane

Totals :                              709.93472

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F1004.D
Sample Name: EdithP108 #C4 ENV(1=0,2=450)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
0.033	BB	1.72203	1.26492	2.17823		?
1.514	BP N	9.34361e-1	1.26492	1.18189		?
1.635	VV	5.10190e-1	1.26492	6.45349e-1		?
2.535	BB	1.03156	1.26492	1.30484		?
3.103	VB	6.35190e-1	1.26492	8.03464e-1		?
4.055	BB	3.93774e-1	1.26492	4.98092e-1		?
5.851	BB	5.56474e-1	1.26492	7.03894e-1		?
7.538	BB	9.77187e-1	1.26492	1.23606		?

Uncalib. totals : 8.55182

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Ethane	1.550	1.850	5.10190e-1	1.0432
as Butane	2.400	3.700	1.66675	1.7011
as Pentane	3.700	5.300	3.93774e-1	0.3177
as Hexane	5.300	6.600	5.56474e-1	0.3843
as Heptane	6.600	13.000	9.77187e-1	0.5745

Totals : 4.0208

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

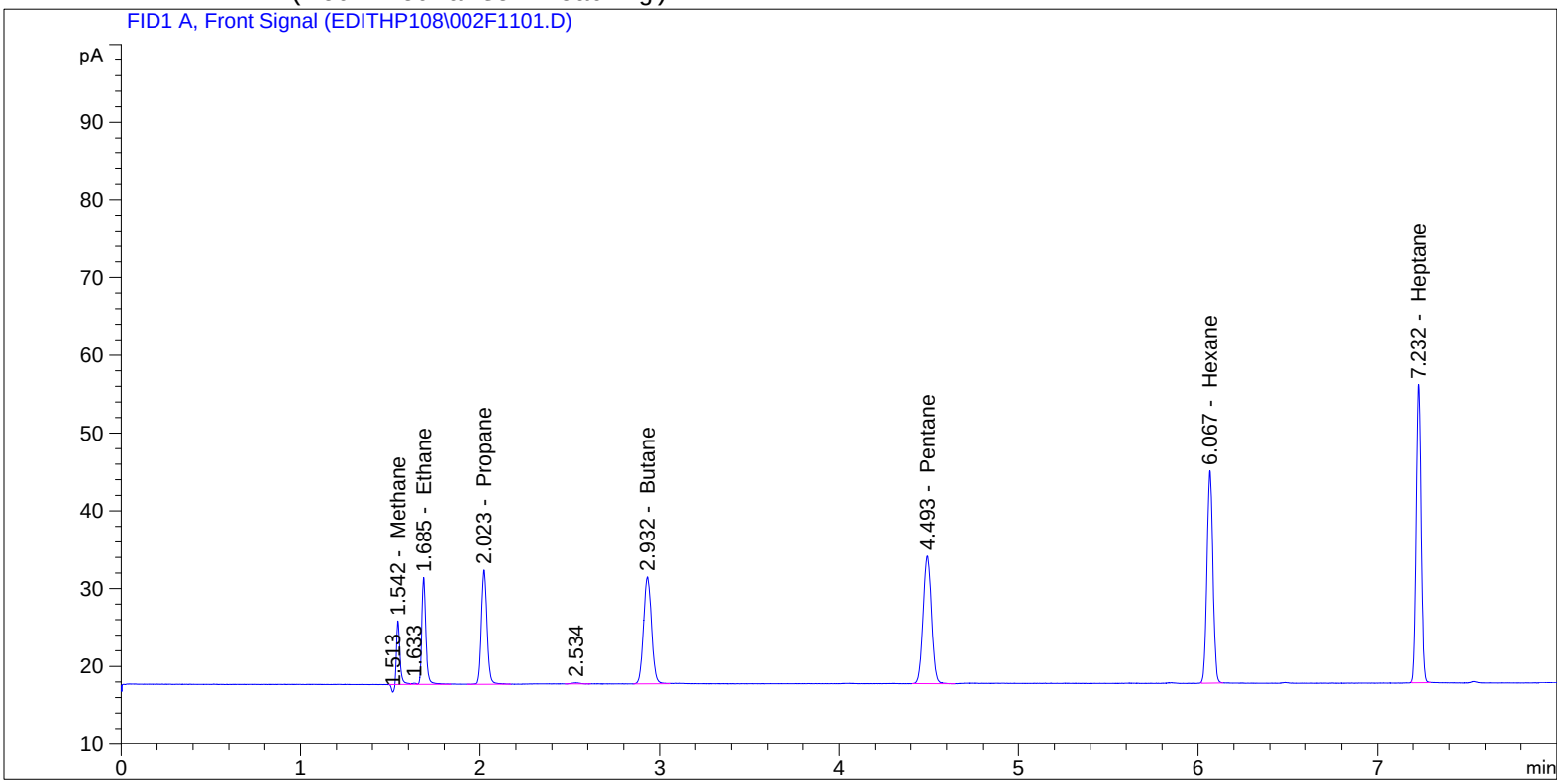
Name	Total Area [pA*s]	Amount [ppm]
as Ethane	5.10190e-1	1.0432
as Butane	1.66675	1.7011
as Pentane	3.93774e-1	0.3177
as Hexane	5.56474e-1	0.3843
as Heptane	9.77187e-1	0.5745
Methane	27.33177	100.4615
Ethane	53.30490	100.8652
Propane	79.51855	101.3279
Butane	105.18516	101.1654
Pentane	131.54813	102.8457
Hexane	156.02853	104.0571
Heptane	181.77887	99.2119

Totals : 713.9555

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F1101.D
Sample Name: EdithP108 #C3 ENV(1=600,2=400)

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  11
Acq. Instrument : Edith                          Location : Vial 2
Injection Date  : 9/19/2014 3:22:56 PM                Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 3\EDITHP108\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_C1-C7.M
Last changed    : 9/22/2014 10:21:52 AM by Justin Guenzler
                  (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/22/2014 10:21:52 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.542 PV       11.00137    3.69442   40.64369    Methane
  1.685 VB       21.75508    1.89034   41.12459    Ethane
  2.023 PB       32.24148    1.27355   41.06107    Propane
  2.932 BB       42.46952 9.60637e-1   40.79780    Butane
  4.493 BB       53.24072 7.77525e-1   41.39600    Pentane
  6.067 BB       63.01467 6.64253e-1   41.85766    Hexane
  7.232 BB       73.48394 5.46122e-1   40.13119    Heptane

Totals :                              287.01200

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F1101.D
Sample Name: EdithP108 #C3 ENV(1=600,2=400)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.513	BP N	9.78457e-1	1.26492	1.23767		?
1.633	VV	2.68972e-1	1.26492	3.40228e-1		?
2.534	BB	4.14086e-1	1.26492	5.23786e-1		?

Uncalib. totals : 2.10168

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Ethane	1.550	1.850	2.68972e-1	0.5500
as Butane	2.400	3.700	4.14086e-1	0.4226

Totals : 9.7261e-1

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

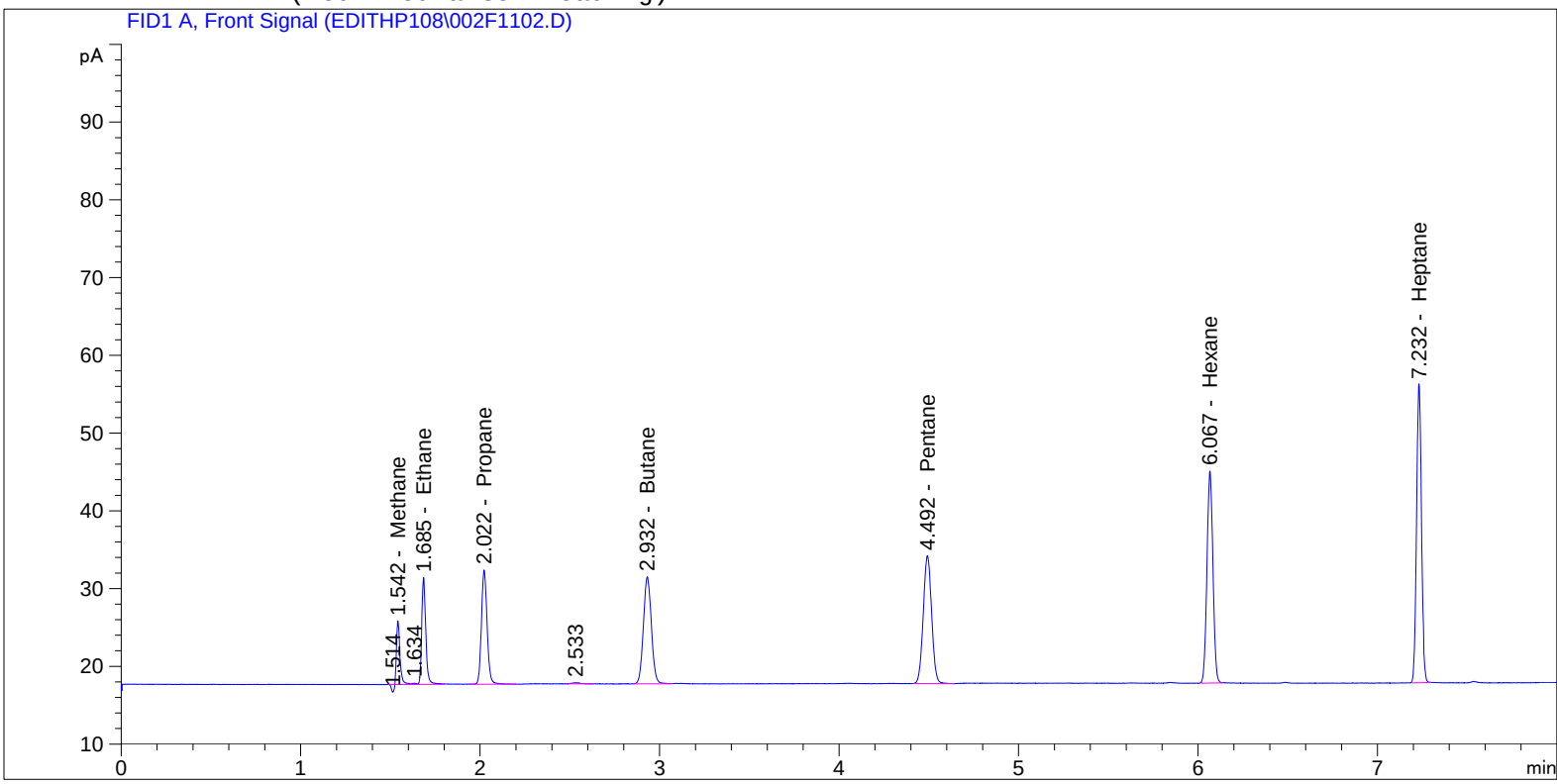
Name	Total Area [pA*s]	Amount [ppm]
as Ethane	2.68972e-1	0.5500
as Butane	4.14086e-1	0.4226
Methane	11.00137	40.6437
Ethane	21.75508	41.1246
Propane	32.24148	41.0611
Butane	42.46952	40.7978
Pentane	53.24072	41.3960
Hexane	63.01467	41.8577
Heptane	73.48394	40.1312

Totals : 287.9846

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F1102.D
Sample Name: EdithP108 #C3 ENV(1=600,2=400)

```
==================================================================
Acq. Operator   : disconnected                  Seq. Line :  11
Acq. Instrument : Edith                         Location : Vial 2
Injection Date  : 9/19/2014 3:39:01 PM               Inj :   2
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 3\EDITHP108\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_C1-C7.M
Last changed    : 9/22/2014 10:21:52 AM by Justin Guenzler
                  (modified after loading)
```




```
==================================================================
                      External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/22/2014 10:21:52 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.542 PV       11.02327    3.69436   40.72390    Methane
  1.685 VB       21.73584    1.89034   41.08815    Ethane
  2.022 PB       32.31124    1.27355   41.14999    Propane
  2.932 BV       42.66705 9.60646e-1   40.98794    Butane
  4.492 BV       53.34929 7.77540e-1   41.48120    Pentane
  6.067 BB       63.19386 6.64265e-1   41.97749    Hexane
  7.232 BB       73.63406 5.46121e-1   40.21309    Heptane

Totals :                              287.62175

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F1102.D
Sample Name: EdithP108 #C3 ENV(1=600,2=400)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.514	BP N	9.94072e-1	1.26492	1.25742		?
1.634	VV	2.72370e-1	1.26492	3.44526e-1		?
2.533	BB	4.36528e-1	1.26492	5.52172e-1		?

Uncalib. totals : 2.15412

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Ethane	1.550	1.850	2.72370e-1	0.5569
as Butane	2.400	3.700	4.36528e-1	0.4455

Totals : 1.0025

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

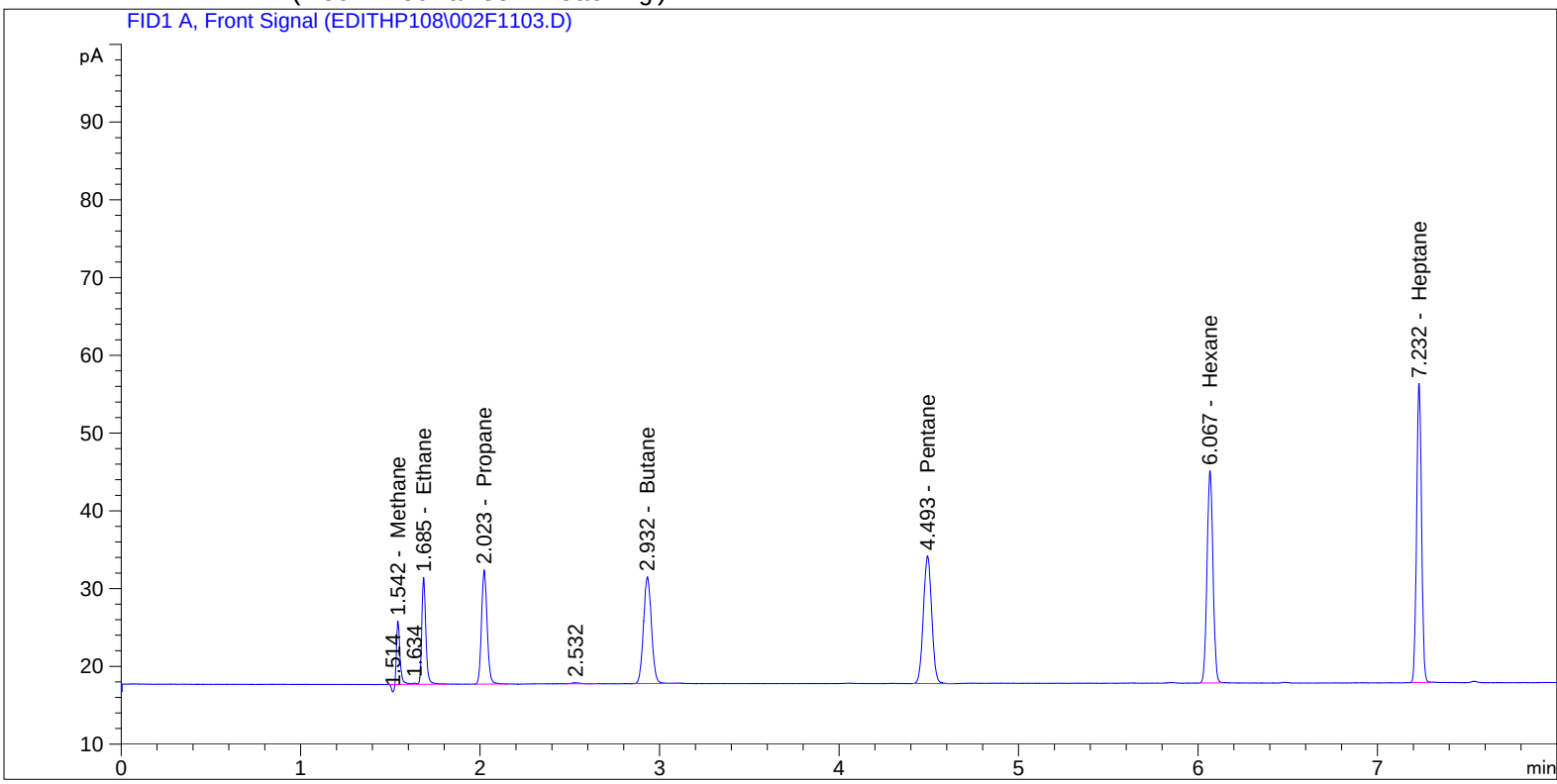
Name	Total Area [pA*s]	Amount [ppm]
as Ethane	2.72370e-1	0.5569
as Butane	4.36528e-1	0.4455
Methane	11.02327	40.7239
Ethane	21.73584	41.0881
Propane	32.31124	41.1500
Butane	42.66705	40.9879
Pentane	53.34929	41.4812
Hexane	63.19386	41.9775
Heptane	73.63406	40.2131

Totals : 288.6242

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F1103.D
Sample Name: EdithP108 #C3 ENV(1=600,2=400)

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  11
Acq. Instrument : Edith                          Location : Vial 2
Injection Date  : 9/19/2014 3:55:26 PM                Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 3\EDITHP108\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_C1-C7.M
Last changed    : 9/22/2014 10:21:52 AM by Justin Guenzler
                  (modified after loading)
```




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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/22/2014 10:21:52 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.542	PV	11.00070	3.69442	40.64121		Methane
1.685	VB	21.52324	1.89031	40.68559		Ethane
2.023	BB	32.06316	1.27354	40.83375		Propane
2.932	BB	42.35880	9.60632e-1	40.69123		Butane
4.493	BV	53.31446	7.77535e-1	41.45386		Pentane
6.067	BB	63.17406	6.64264e-1	41.96425		Hexane
7.232	BB	73.57939	5.46121e-1	40.18327		Heptane

```
Totals :                              286.45316

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F1103.D
Sample Name: EdithP108 #C3 ENV(1=600,2=400)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.514	BP N	1.00316	1.26492	1.26892		?
1.634	VV	2.18718e-1	1.26492	2.76660e-1		?
2.532	BB	4.07677e-1	1.26492	5.15678e-1		?

Uncalib. totals : 2.06126

Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Start Time [min]	End Time [min]	Total Area [pA*s]	Amount [ppm]
as Ethane	1.550	1.850	2.18718e-1	0.4472
as Butane	2.400	3.700	4.07677e-1	0.4161

Totals : 8.6331e-1

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

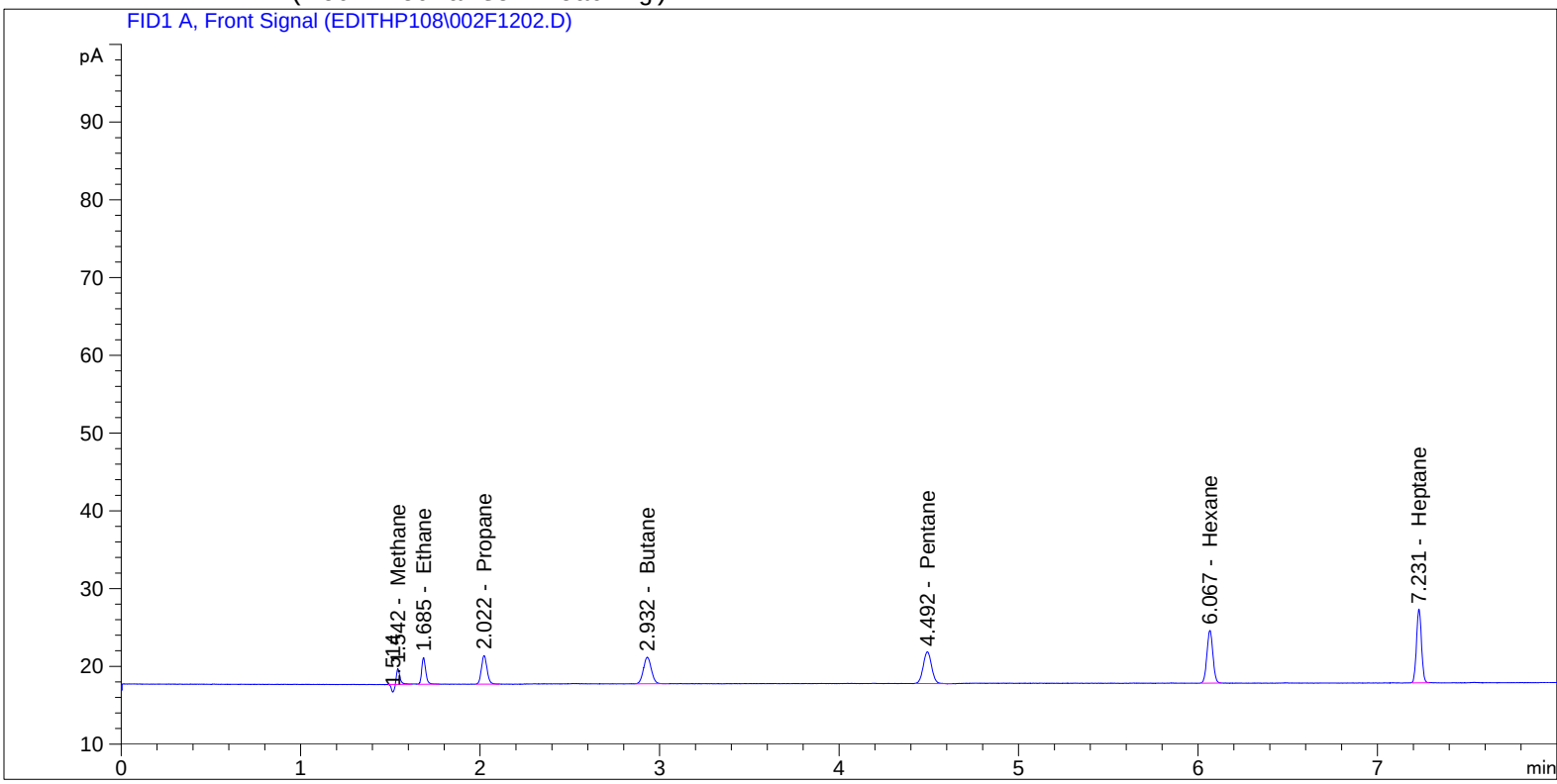
Name	Total Area [pA*s]	Amount [ppm]
as Ethane	2.18718e-1	0.4472
as Butane	4.07677e-1	0.4161
Methane	11.00070	40.6412
Ethane	21.52324	40.6856
Propane	32.06316	40.8337
Butane	42.35880	40.6912
Pentane	53.31446	41.4539
Hexane	63.17406	41.9643
Heptane	73.57939	40.1833

Totals : 287.3165

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F1202.D
Sample Name: EdithP108 #C2 ENV(1=900,2=100)

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  12
Acq. Instrument : Edith                          Location : Vial 2
Injection Date  : 9/19/2014 4:27:54 PM                Inj :   2
                                                Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 3\EDITHP108\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_C1-C7.M
Last changed    : 9/22/2014 10:21:52 AM by Justin Guenzler
                  (modified after loading)
```




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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/22/2014 10:21:52 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.542	PB	2.72163	3.79009	10.31524		Methane
1.685	BB	5.34763	1.88056	10.05652		Ethane
2.022	BB	7.96017	1.26985	10.10825		Propane
2.932	BB	10.48665	9.54771e-1	10.01235		Butane
4.492	BB	13.31481	7.55938e-1	10.06518		Pentane
6.067	BB	15.69162	6.50807e-1	10.21221		Hexane
7.231	BB	18.25233	5.47842e-1	9.99939		Heptane

```
Totals :                                  70.76913

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F1202.D
Sample Name: EdithP108 #C2 ENV(1=900,2=100)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.514	BP N	1.10081	1.26492	1.39244	?	

Uncalib. totals : 1.39244

Summed Peaks Report

Signal 1: FID1 A, Front Signal

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

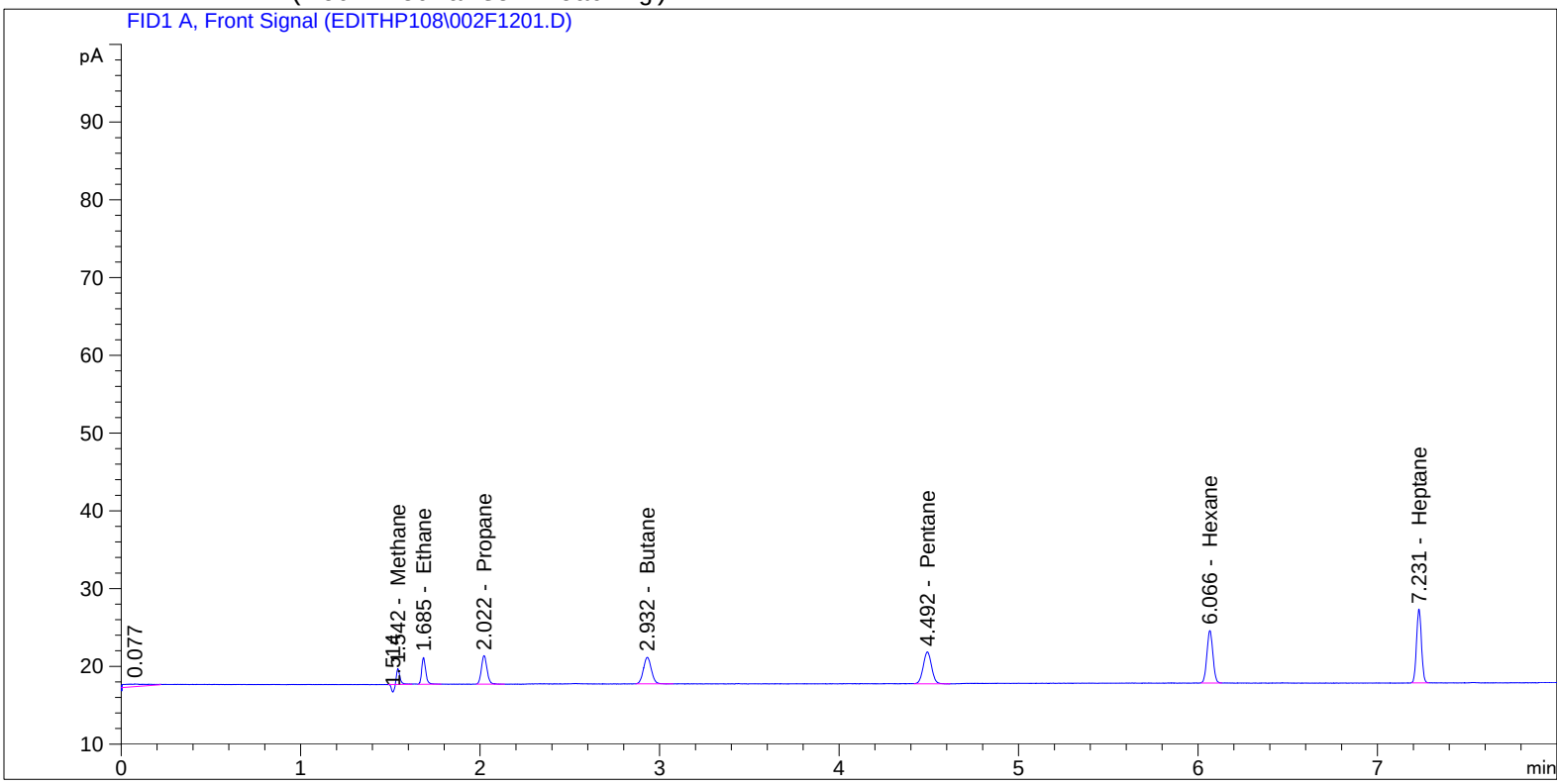
Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
Methane	2.72163	10.3152
Ethane	5.34763	10.0565
Propane	7.96017	10.1083
Butane	10.48665	10.0124
Pentane	13.31481	10.0652
Hexane	15.69162	10.2122
Heptane	18.25233	9.9994
Totals :		70.7691

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F1201.D
Sample Name: EdithP108 #C2 ENV(1=900,2=100)

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  12
Acq. Instrument : Edith                          Location : Vial 2
Injection Date  : 9/19/2014 4:11:37 PM                Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 3\EDITHP108\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_C1-C7.M
Last changed    : 9/22/2014 10:21:52 AM by Justin Guenzler
                  (modified after loading)
```




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==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/22/2014 10:21:52 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.542 PB        2.73122    3.78965   10.35035    Methane
  1.685 BB        5.38953    1.88066   10.13586    Ethane
  2.022 BB        7.97306    1.26986   10.12468    Propane
  2.932 BB       10.55341 9.54821e-1   10.07662    Butane
  4.492 BB       13.33021 7.55972e-1   10.07726    Pentane
  6.066 BB       15.62524 6.50731e-1   10.16783    Hexane
  7.231 BB       18.17946 5.47851e-1    9.95964    Heptane

Totals :                               70.89222

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F1201.D
Sample Name: EdithP108 #C2 ENV(1=900,2=100)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
0.077	BB	2.96837	1.26492	3.75475	?	
1.514	BP N	1.06279	1.26492	1.34435	?	

Uncalib. totals : 5.09910

Summed Peaks Report

Signal 1: FID1 A, Front Signal

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

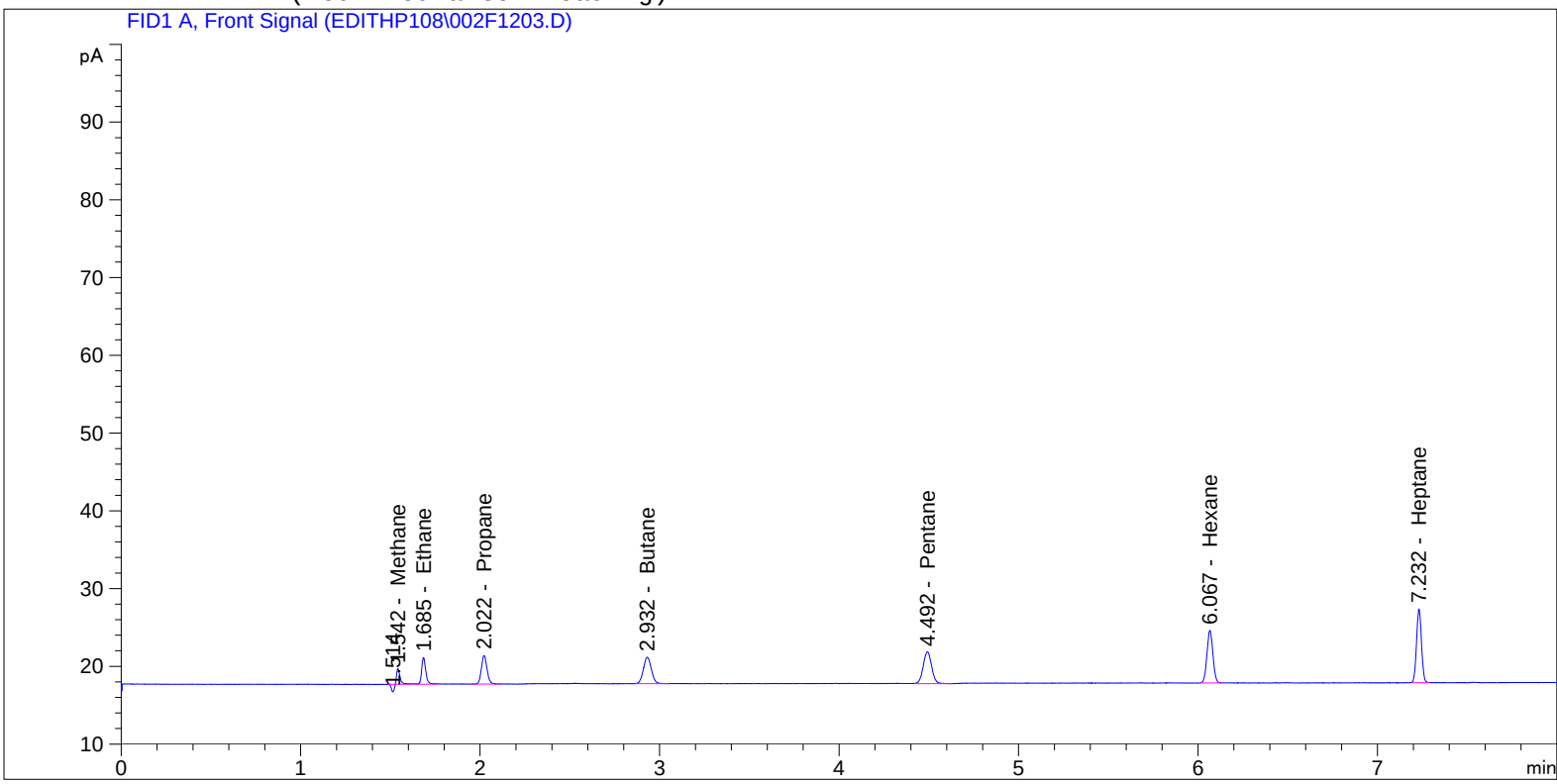
Name	Total Area [pA*s]	Amount [ppm]
Methane	2.73122	10.3503
Ethane	5.38953	10.1359
Propane	7.97306	10.1247
Butane	10.55341	10.0766
Pentane	13.33021	10.0773
Hexane	15.62524	10.1678
Heptane	18.17946	9.9596

Totals : 70.8922

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F1203.D
Sample Name: EdithP108 #C2 ENV(1=900,2=100)

```
==================================================================
Acq. Operator   : disconnected                  Seq. Line :  12
Acq. Instrument : Edith                         Location : Vial 2
Injection Date  : 9/19/2014 4:44:08 PM               Inj :   3
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 3\EDITHP108\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_C1-C7.M
Last changed    : 9/22/2014 10:21:52 AM by Justin Guenzler
                  (modified after loading)
```




```
==================================================================
                      External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/22/2014 10:21:52 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.542	PB	2.76054	3.78830	10.45775		Methane
1.685	PB	5.57597	1.88109	10.48888		Ethane
2.022	PB	8.01652	1.26989	10.18009		Propane
2.932	BB	10.51357	9.54791e-1	10.03826		Butane
4.492	BB	13.38227	7.56083e-1	10.11811		Pentane
6.067	BB	15.58333	6.50682e-1	10.13980		Hexane
7.232	BB	18.17815	5.47851e-1	9.95892		Heptane

```
Totals :                                  71.38182

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F1203.D
Sample Name: EdithP108 #C2 ENV(1=900,2=100)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.514	BP N	1.06684	1.26492	1.34946	?	

Uncalib. totals : 1.34946

Summed Peaks Report

Signal 1: FID1 A, Front Signal

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

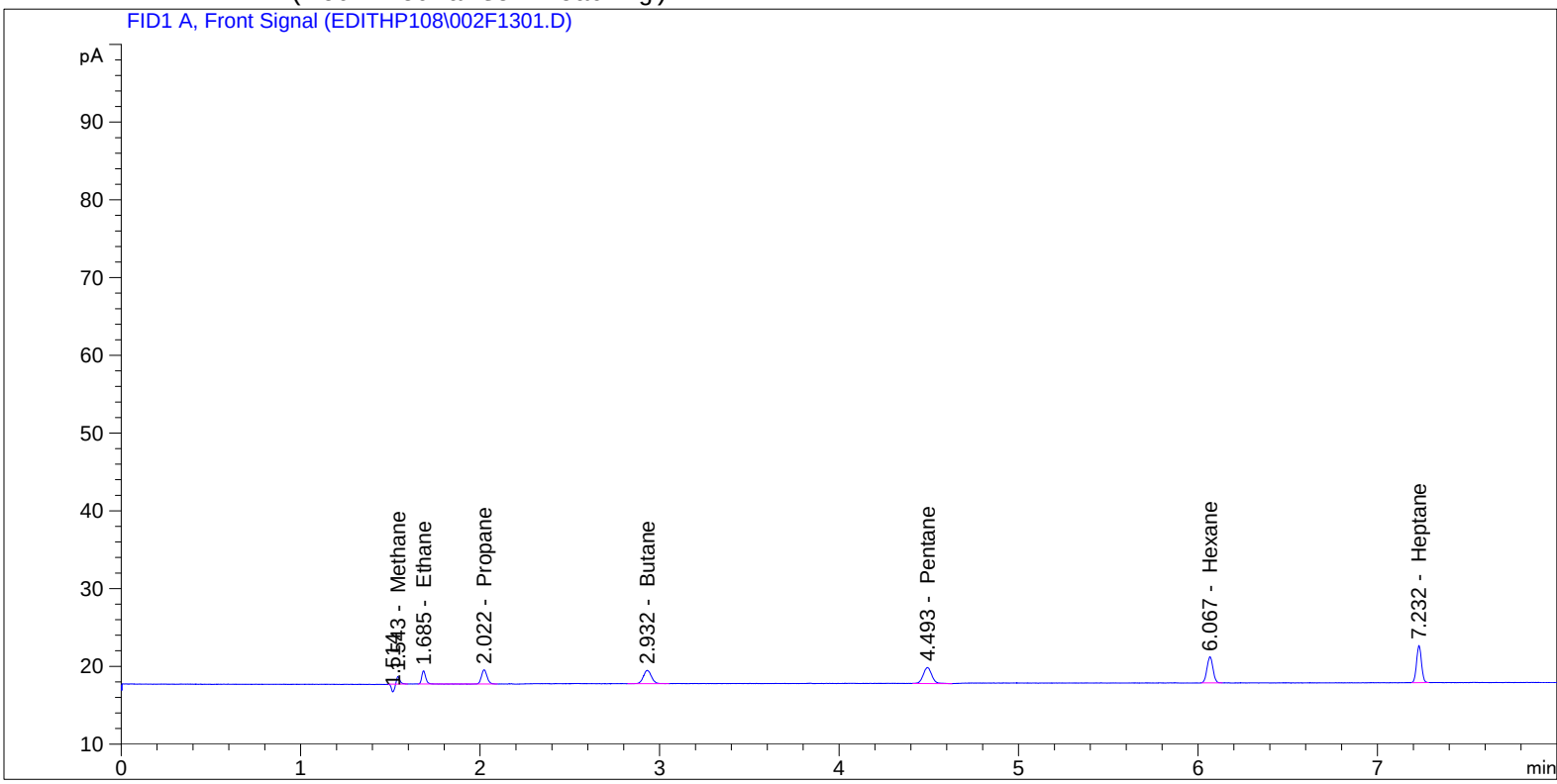
Name	Total Area [pA*s]	Amount [ppm]
Methane	2.76054	10.4577
Ethane	5.57597	10.4889
Propane	8.01652	10.1801
Butane	10.51357	10.0383
Pentane	13.38227	10.1181
Hexane	15.58333	10.1398
Heptane	18.17815	9.9589

Totals : 71.3818

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F1301.D
Sample Name: EdithP108 #C1 ENV(1=1900,2=100)

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  13
Acq. Instrument : Edith                          Location : Vial 2
Injection Date  : 9/19/2014 5:00:11 PM                Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 3\EDITHP108\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_C1-C7.M
Last changed    : 9/22/2014 10:21:52 AM by Justin Guenzler
                  (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      9/22/2014 10:21:52 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.543	PB	1.21230	3.93469	4.77003		Methane
1.685	BP	2.56303	1.86764	4.78680		Ethane
2.022	VB	3.83415	1.26492	4.84989		Propane
2.932	BB	5.30351	9.47159e-1	5.02327		Butane
4.493	BB	6.80569	7.28854e-1	4.96035		Pentane
6.067	BB	7.81790	6.33169e-1	4.95005		Hexane
7.232	BB	9.08140	5.50152e-1	4.99616		Heptane

```
Totals :                                  34.33655

Uncalibrated Peaks    :      using compound Propane
```

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F1301.D
Sample Name: EdithP108 #C1 ENV(1=1900,2=100)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.514	PP N	1.17246	1.26492	1.48307	?	

Uncalib. totals : 1.48307

Summed Peaks Report

Signal 1: FID1 A, Front Signal

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
Methane	1.21230	4.7700
Ethane	2.56303	4.7868
Propane	3.83415	4.8499
Butane	5.30351	5.0233
Pentane	6.80569	4.9604
Hexane	7.81790	4.9501
Heptane	9.08140	4.9962

Totals : 34.3366

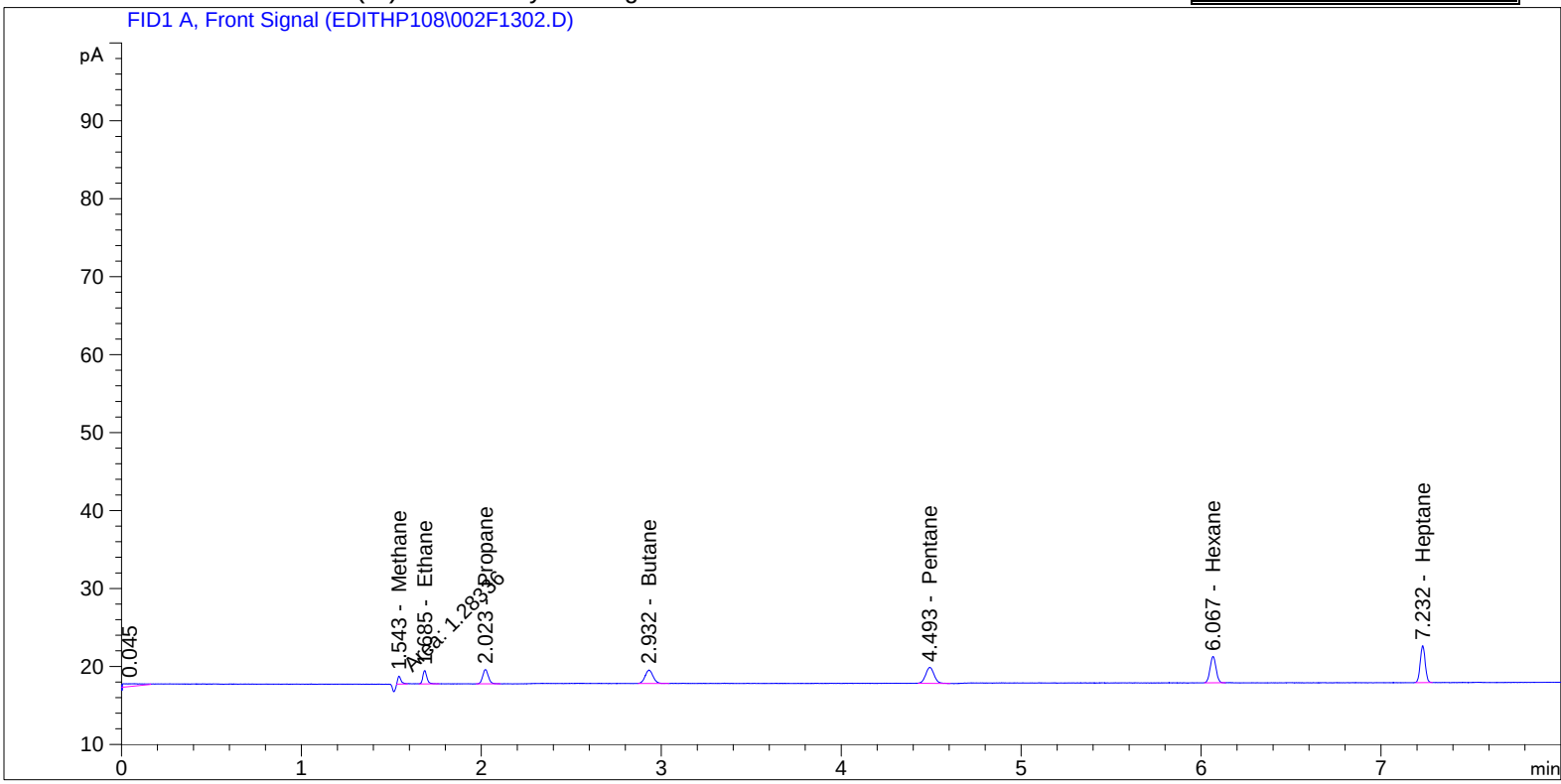
*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F1302.D
Sample Name: EdithP108 #C1 ENV(1=1900,2=100)

==========

Acq. Operator : disconnected Seq. Line : 13
Acq. Instrument : Edith Location : Vial 2
Injection Date : 9/19/2014 5:16:17 PM Inj : 2
Inj Volume : 250 µl
Acq. Method : C:\GC\2014\EDITH\QUARTER 3\EDITHP108\GC139P039_HRVOC.M
Last changed : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_C1-C7.M
Last changed : 9/22/2014 10:21:52 AM by Justin Guenzler
(modified after loading)
Additional Info : Peak(s) manually integrated

Manual Int. "II" (JKG)



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External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 9/22/2014 10:21:52 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.543	MM	1.28336	3.93256	5.04688		Methane
1.685	BB	2.69641	1.86780	5.03635		Ethane
2.023	BB	3.98421	1.26496	5.03986		Propane
2.932	BB	5.27217	9.47119e-1	4.99337		Butane
4.493	BB	6.72683	7.28854e-1	4.90288		Pentane
6.067	BB	7.75067	6.33169e-1	4.90749		Hexane
7.232	BB	9.07698	5.50155e-1	4.99375		Heptane

Totals : 34.92058

Uncalibrated Peaks : using compound Propane

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F1302.D
Sample Name: EdithP108 #C1 ENV(1=1900,2=100)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
0.045	BB	2.29596	1.26492	2.90421		?

Uncalib. totals : 2.90421

Summed Peaks Report

Signal 1: FID1 A, Front Signal

1 Warnings or Errors :

Warning : Reference compound(s) not found

Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
Methane	1.28336	5.0469
Ethane	2.69641	5.0363
Propane	3.98421	5.0399
Butane	5.27217	4.9934
Pentane	6.72683	4.9029
Hexane	7.75067	4.9075
Heptane	9.07698	4.9937

Totals : 34.9206

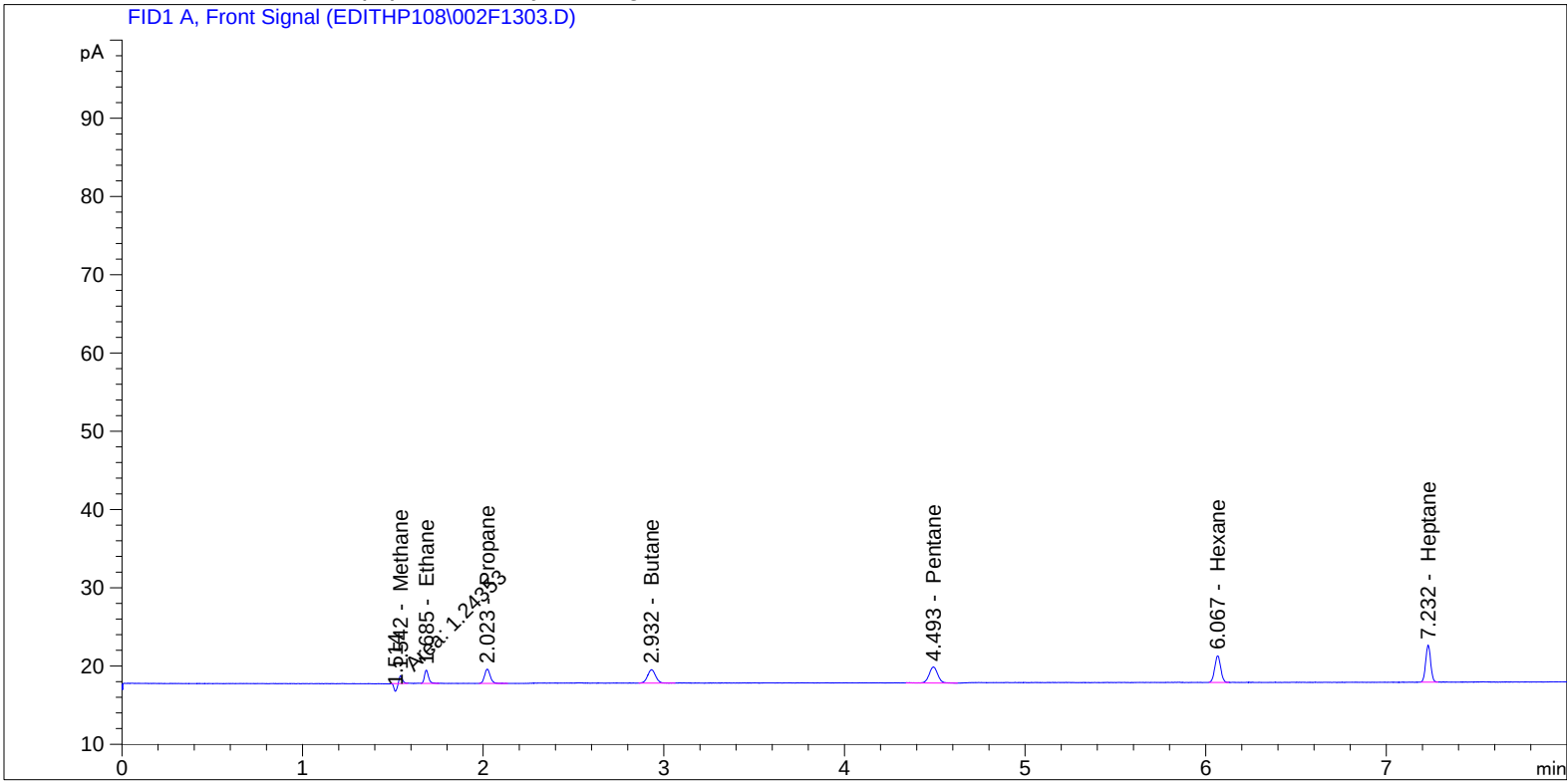
*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F1303.D
Sample Name: EdithP108 #C1 ENV(1=1900,2=100)

==========

Acq. Operator : disconnected Seq. Line : 13
Acq. Instrument : Edith Location : Vial 2
Injection Date : 9/19/2014 5:32:35 PM Inj : 3
Inj Volume : 250 µl
Acq. Method : C:\GC\2014\EDITH\QUARTER 3\EDITHP108\GC139P039_HRVOC.M
Last changed : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP108F_C1-C7.M
Last changed : 9/22/2014 10:21:52 AM by Justin Guenzler
(modified after loading)
Additional Info : Peak(s) manually integrated

Manual Int. "II" (JKG)



==========

External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 9/22/2014 10:21:52 AM
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID1 A, Front Signal

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.542	MM	1.24353	3.93469	4.89291		Methane
1.685	BB	2.66340	1.86764	4.97426		Ethane
2.023	BB	3.98818	1.26497	5.04492		Propane
2.932	BB	5.23108	9.47119e-1	4.95446		Butane
4.493	BB	6.86699	7.28910e-1	5.00542		Pentane
6.067	BB	7.79197	6.33169e-1	4.93364		Hexane
7.232	BB	9.05862	5.50157e-1	4.98366		Heptane

Totals : 34.78928

Uncalibrated Peaks : using compound Propane

Data File C:\GC\2014\EDITH\QUARTER 3\EDITHP108\002F1303.D
Sample Name: EdithP108 #C1 ENV(1=1900,2=100)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.514	BP N	1.11667	1.26492	1.41250	?	

Uncalib. totals : 1.41250

Summed Peaks Report

Signal 1: FID1 A, Front Signal

1 Warnings or Errors :

Warning : Reference compound(s) not found

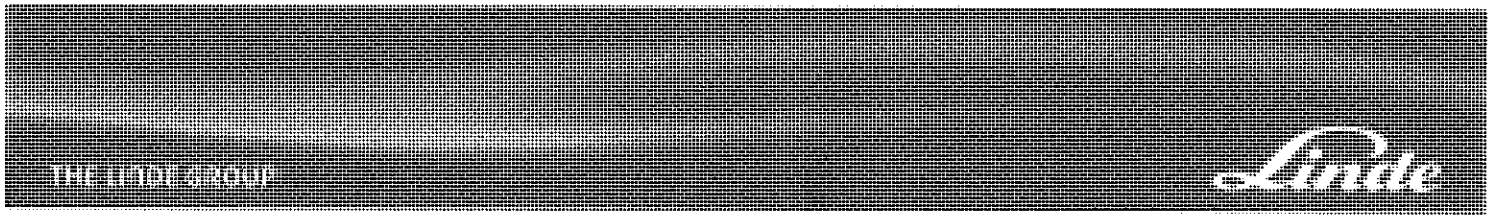
Final Summed Peaks Report

Signal 1: FID1 A, Front Signal

Name	Total Area [pA*s]	Amount [ppm]
Methane	1.24353	4.8929
Ethane	2.66340	4.9743
Propane	3.98818	5.0449
Butane	5.23108	4.9545
Pentane	6.86699	5.0054
Hexane	7.79197	4.9336
Heptane	9.05862	4.9837

Totals : 34.7893

*** End of Report ***



SHIPPED TO: Enthalpy Analytical Inc.
800 Capitola Dr. Ste 1
Durham, NC 27713-4385

PAGE: 1 of 1

CERTIFICATE OF ANALYSIS

Sales#:	111957073	**Cylinder Size:**	2 (9" X 51")
Production#:	1308627	**Cylinder # :**	9819192
Certification Date:	Aug-28-2014	**Cylinder Pressure:**	525 psig
P.O.# :	08111418	**Cylinder Valve:**	CGA 350 / Brass
Blend Type:	CERTIFIED	**Cylinder Volume:**	44 Liter
Material#:	24094007	**Cylinder Material:**	Steel
Traceability:	NIST by weight	**Gas Volume:**	1572 Liters
Expiration Date:	Aug-28-2015	**Blend Tolerance:**	5% Relative
Do NOT use under:	150 psig	**Analytical Accuracy:**	2% Relative

COMPONENT	CAS NUMBER	REQUESTED CONC	CERTIFIED CONC
Methane	74-82-8	5.00 %	5.13 %
Ethane	74-84-0	5.00 %	5.13 %
Propane	74-98-6	5.00 %	5.13 %
Butane	106-97-8	1.00 %	1.03 %
Pentane	109-66-0	0.50 %	0.52 %
Hexane	110-54-3	0.40 %	0.41 %
Heptane	142-82-5	500 ppm	519 ppm
Nitrogen	7727-37-9	Balance	Balance

ANALYST: _____
Lou Lorenzetti

DATE: Aug-28-2014

Linde Gas North America LLC

(908) 329-9700 Main (908) 329-9740 Fax
www.Lindeus.com

CUSTOMGAS
SOLUTIONS

1750 East Club Boulevard
Durham, NC 27704
Phone: (919) 220-2570
Fax: (919) 220-4540

Certificate of Analysis

Customer:

Enthalpy Analytical, Inc.
800-1 Capitola Drive
Durham, NC 27713

Tel: (919) 595-1377

Cylinder Number: SX25635
Cylinder Size/CGA: 150/350
Fill Pressure: 2015 PSIA
Gas Volume: 3700 liters
Date of Mfg: 02/04/14
Expiration Date: 02/04/16

Customer Number	Ship VIA	Job No.	Customer PO	Mixture Type
00127703NC	Pick up	011714-003	01171401	Gravimetric

Component	Nominal Concentration	Actual Concentration*	Mixture Type
Heptane	100 ppm	99.82 ppm +/- 2 ppm	Gravimetric Master Gas
Hexane	100 ppm	100.1 ppm +/- 2 ppm	
Pentane	100 ppm	100.0 ppm +/- 2 ppm	
Methane	100 ppm	100.2 ppm +/- 2 ppm	
Ethane	100 ppm	100.1 ppm +/- 2 ppm	
Propane	100 ppm	100.4 ppm +/- 2 ppm	
Butane	100 ppm	100.2 ppm +/- 2 ppm	
Nitrogen	balance		

NOTES:

Blend Tolerance: +/- 2 %

Analytical Tolerance: +/- 2 %

Traceability: NIST by weight set. NIST Traceability No MT5061.
Internal Standards by analysis

Reactive Mixtures: Analyzed twice with required agreement between analyses of 2%.
Required wait time between analyses of >7 days.

Caution: Do not use below 150 PSIG.

Authorized Signature:

Joseph A. Ernst

*Every effort has been made to establish the actual concentration of the components using master gas blending technology however, Custom Gas Solutions shall have no liability in excess of the established charge for this material.

Agilent 7890A

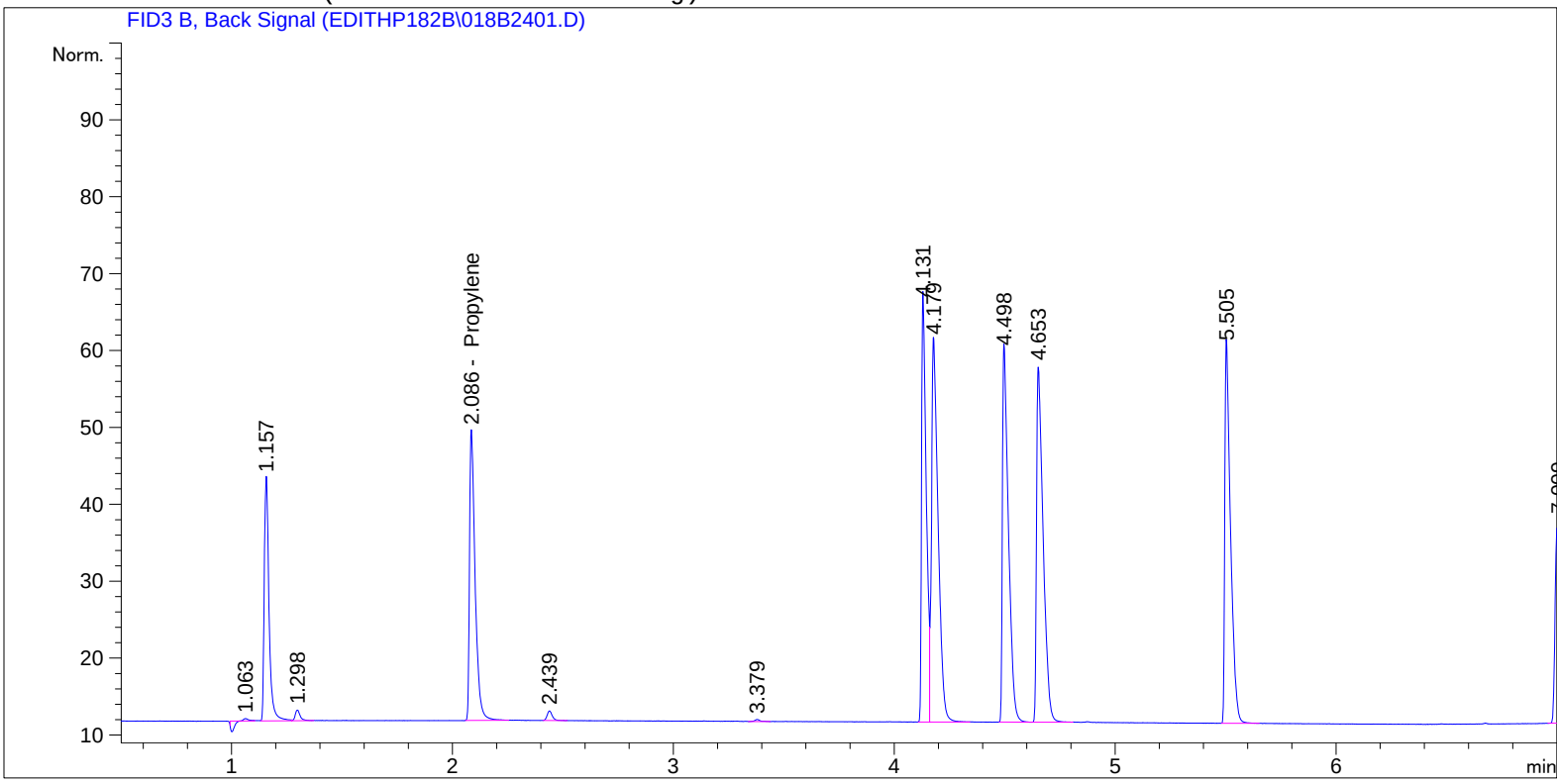
Oven	
Equilibration Time	0.3 min
Max Temperature	200 degrees C
Slow Fan	Disabled
Oven Program	On
35 °C for 2.2 min	
#1 then 15 °C/min to 70 °C for 0.07 min	
#2 then 30 °C/min to 180 °C for 1 min	
Run Time	9.27 min
Sample Overlap	
Sample overlap is not enabled	
Front SS Inlet H2	
Mode	Split
Heater	On 200 °C
Pressure	On 5.1931 psi
Total Flow	On 15.6 mL/min
Septum Purge Flow	On 3 mL/min
Gas Saver	Off
Split Ratio	5 :1
Split Flow	10.5 mL/min
Back SS Inlet H2	
Mode	Split
Heater	On 200 °C
Pressure	On 4.9511 psi
Total Flow	On 9.6 mL/min
Septum Purge Flow	On 3 mL/min
Gas Saver	Off
Split Ratio	2 :1
Split Flow	0 mL/min
Column #1	
Restek 10198Rtx-1 S/N 806941	
280 °C: 30 m x 320 µm x 4 µm	
In: Front SS Inlet H2	
Out: Front Detector FID	
(Initial)	35 °C
Pressure	5.1931 psi
Flow	2.1 mL/min
Average Velocity	39.91 cm/sec
Holdup Time	1.2528 min
Flow Program	On
2.1 mL/min for 0 min	
Run Time	9.27 min
Column #2	
Restek 19701Alumina S/N 156109	
280 °C: 30 m x 320 µm x 10 µm	
In: Front SS Inlet H2	
Out: Back Detector FID	
(Initial)	35 °C
Pressure	6.1868 psi
Flow	2.2 mL/min
Average Velocity	43.848 cm/sec
Holdup Time	1.1403 min
Flow Program	On

method: C:\GC\2013\EDITH\METHODS\GC139P039_HRVOC.M
Modified on: 1/14/2014 at 3:15:15 PM
2.2 mL/min for 0 min

Run Time	9.27 min	
Front Detector FID		
Heater	On	300 °C
H2 Flow	On	50 mL/min
Air Flow	On	450 mL/min
Makeup Flow	On	35 mL/min
Const Col + Makeup	Off	
Flame	On	
Electrometer	On	
Back Detector FID		
Heater	On	200 °C
H2 Flow	On	50 mL/min
Air Flow	On	450 mL/min
Makeup Flow	On	35 mL/min
Const Col + Makeup	Off	
Flame	On	
Electrometer	On	
Valve 1		
Gas Sampling Valve	Off	
GSV Loop Volume	0.25 mL	
Load Time	1.5 min	
Inject Time	0.5 min	
Valve 2		
Gas Sampling Valve	Off	
GSV Loop Volume	0.25 mL	
Load Time	1.5 min	
Inject Time	0.5 min	
Valve Box		
Heater	On	150 °C
Signals		
Signal #1: Front Signal	Save On	
	20 Hz	
Signal #2: Test Plot	Save Off	
	50 Hz	
Signal #3: Back Signal	Save On	
	20 Hz	
Signal #4: Test Plot	Save Off	
	50 Hz	

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\018B2401.D
Sample Name: EdithP155 #HR4 ENV(1=600,4=400)

```
==================================================================
Acq. Operator   : disconnected                  Seq. Line :  24
Acq. Instrument : Edith                        Location : Vial 18
Injection Date  : 1/9/2015 11:21:58 AM              Inj :   1
                                              Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP052R_HRVOC_PROPYLENE.M
Last changed    : 1/12/2015 11:01:24 AM by Turner Oppy
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 11:01:24 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal

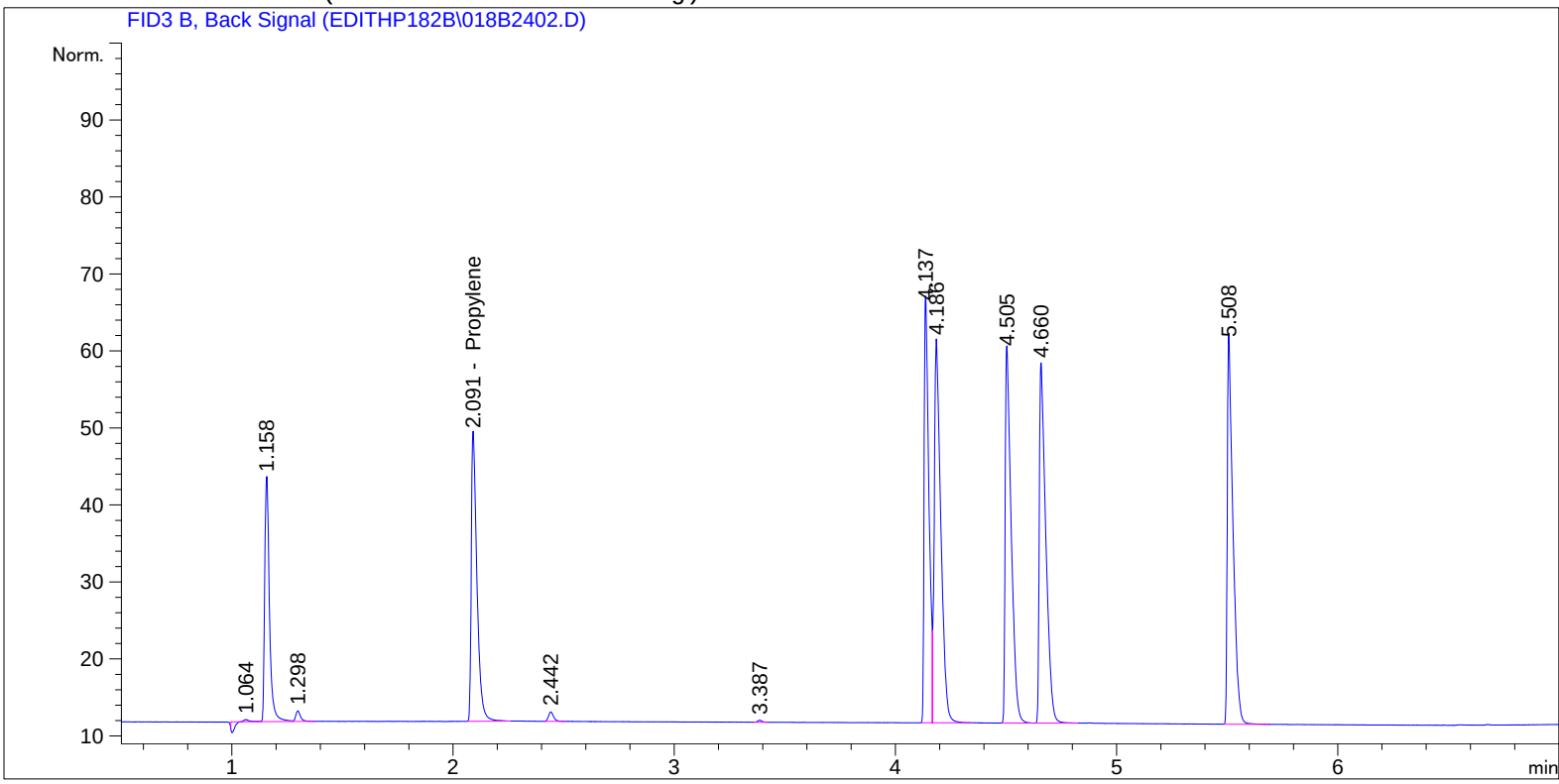
RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  2.086 BB       66.57938 6.16577e-1   41.05132    Propylene

Totals :                               41.05132

Uncalibrated Peaks    :      using compound Propylene
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\018B2402.D
Sample Name: EdithP155 #HR4 ENV(1=600,4=400)

```
==================================================================
Acq. Operator   : disconnected                  Seq. Line :  24
Acq. Instrument : Edith                        Location : Vial 18
Injection Date  : 1/9/2015 11:39:16 AM              Inj :   2
                                              Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP052R_HRVOC_PROPYLENE.M
Last changed    : 1/12/2015 11:01:24 AM by Turner Oppy
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 11:01:24 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal

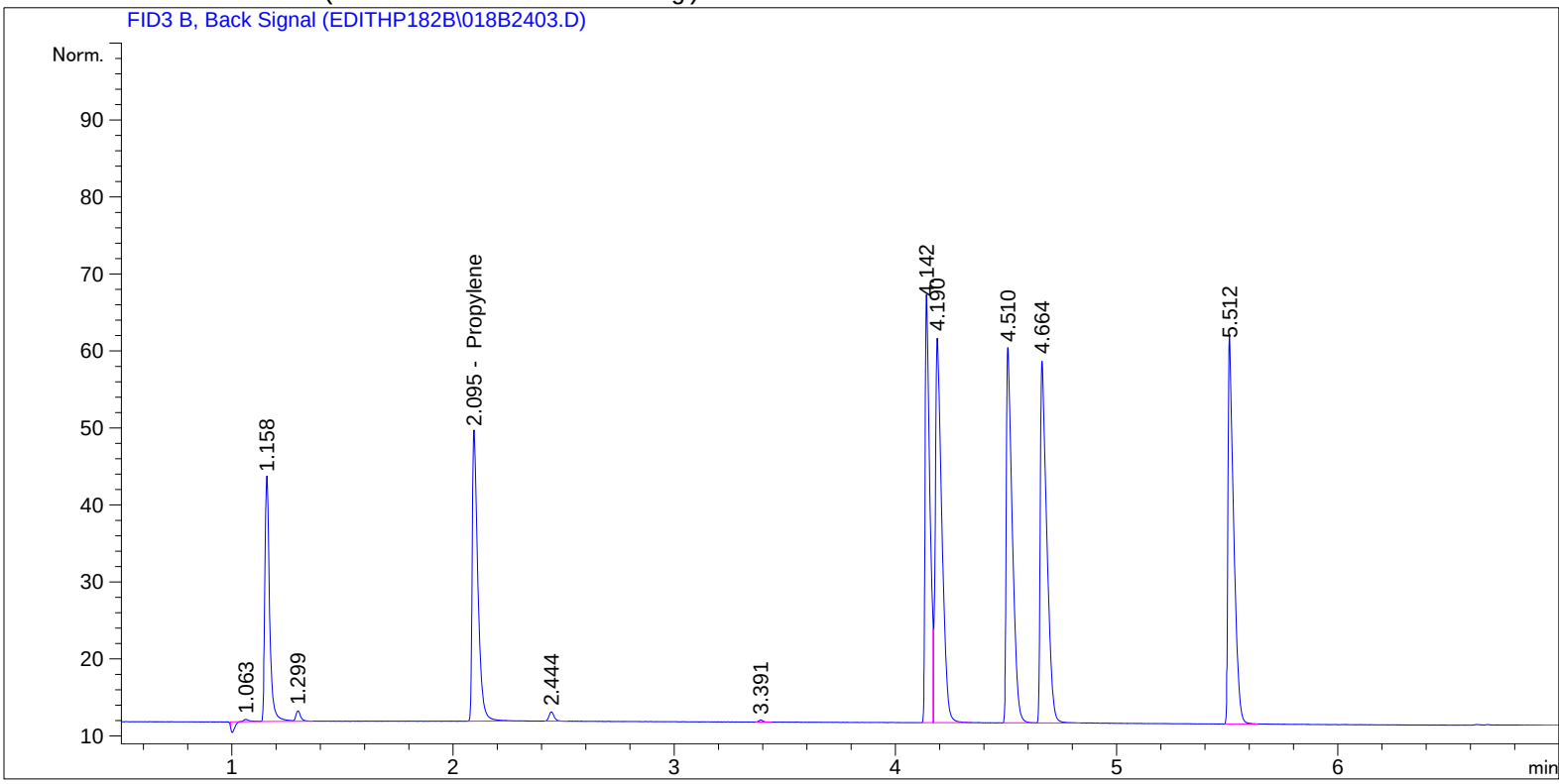
RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                  [ppm]
-------|------|----------|----------|----------|--|------------------
  2.091 BB       66.45738 6.16575e-1   40.97597    Propylene

Totals :                                40.97597

Uncalibrated Peaks    :      using compound Propylene
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\018B2403.D
Sample Name: EdithP155 #HR4 ENV(1=600,4=400)

```
==================================================================
Acq. Operator   : disconnected                  Seq. Line :  24
Acq. Instrument : Edith                        Location : Vial 18
Injection Date  : 1/9/2015 11:57:05 AM              Inj :   3
                                              Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP052R_HRVOC_PROPYLENE.M
Last changed    : 1/12/2015 11:01:24 AM by Turner Oppy
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 11:01:24 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal

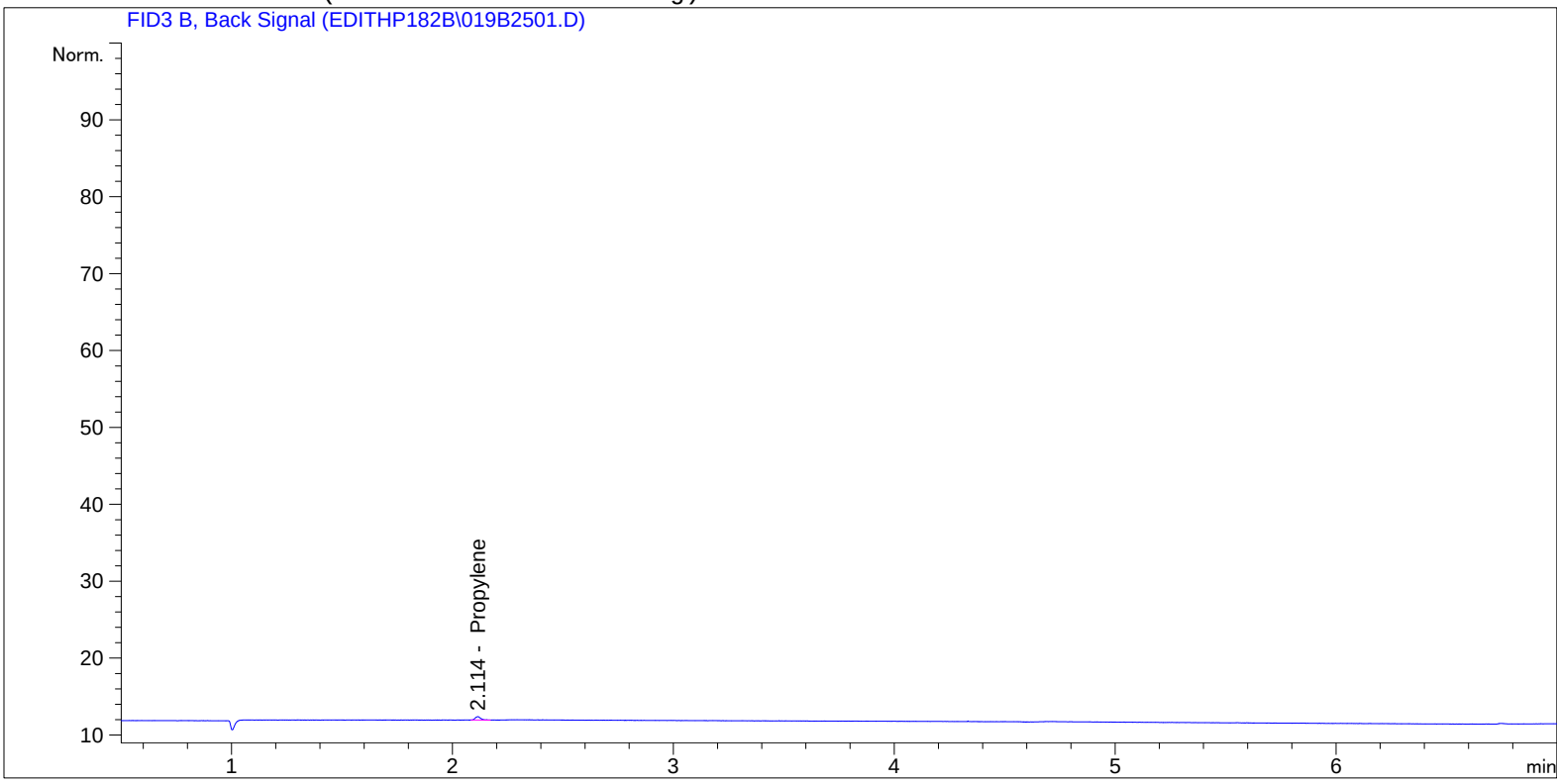
RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  2.095 BB       66.78806 6.16580e-1   41.18020    Propylene

Totals :                               41.18020

Uncalibrated Peaks    :      using compound Propylene
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\019B2501.D
Sample Name: zero air blank

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  25
Acq. Instrument : Edith                           Location : Vial 19
Injection Date  : 1/9/2015 12:28:30 PM                 Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC_LONG.M
Last changed    : 1/15/2014 1:35:32 PM by Justin Guenzler
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP052R_HRVOC_PROPYLENE.M
Last changed    : 1/12/2015 11:01:24 AM by Turner Oppy
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 11:01:24 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal

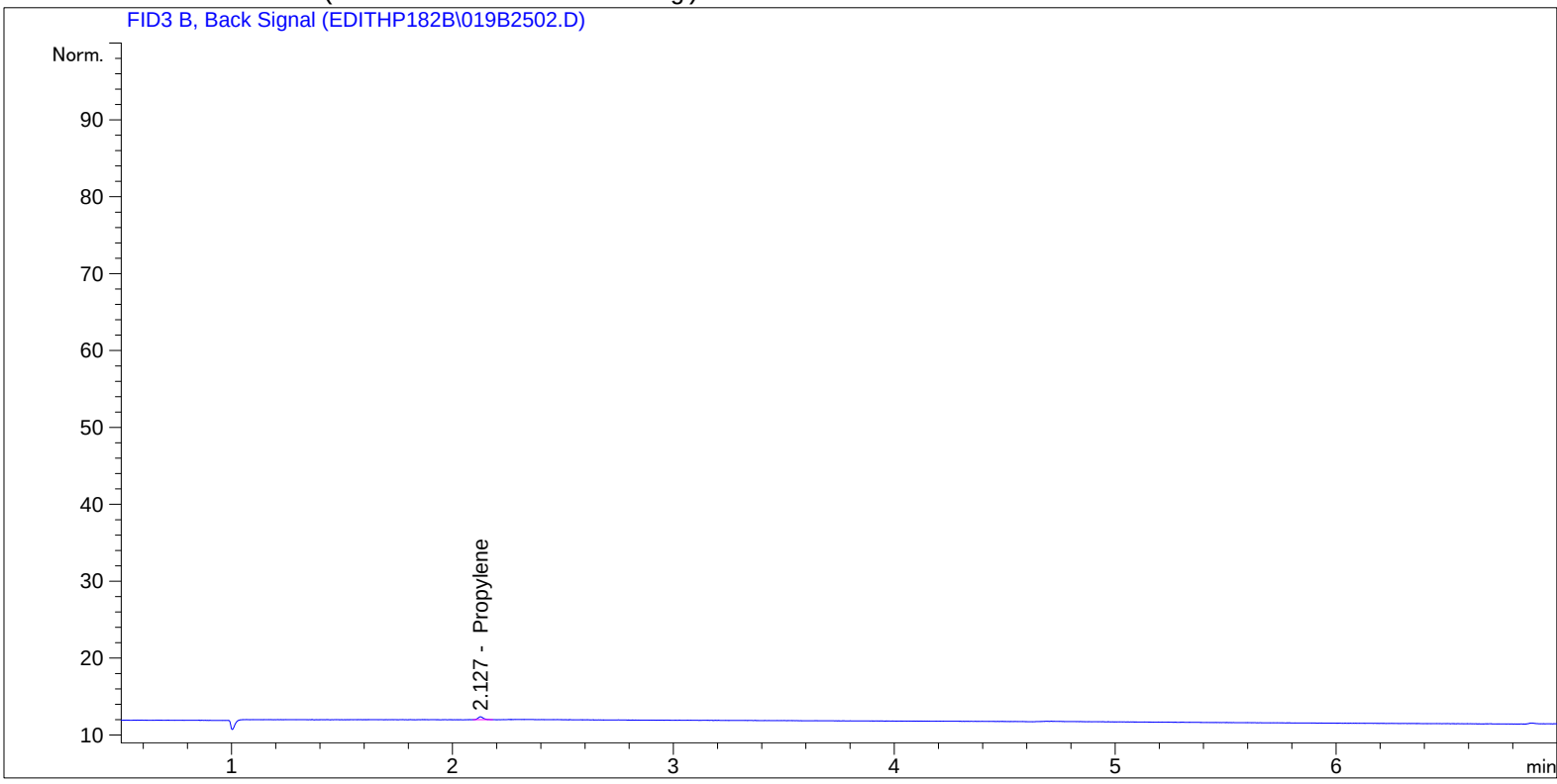
RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  2.114 BB     7.59772e-1 5.85121e-1 4.44559e-1    Propylene

Totals :                              4.44559e-1

Uncalibrated Peaks    :      using compound Propylene
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\019B2502.D
Sample Name: zero air blank

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  25
Acq. Instrument : Edith                           Location : Vial 19
Injection Date  : 1/9/2015 12:46:49 PM                 Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC_LONG.M
Last changed    : 1/15/2014 1:35:32 PM by Justin Guenzler
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP052R_HRVOC_PROPYLENE.M
Last changed    : 1/12/2015 11:01:53 AM by Turner Oppy
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 11:01:24 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal

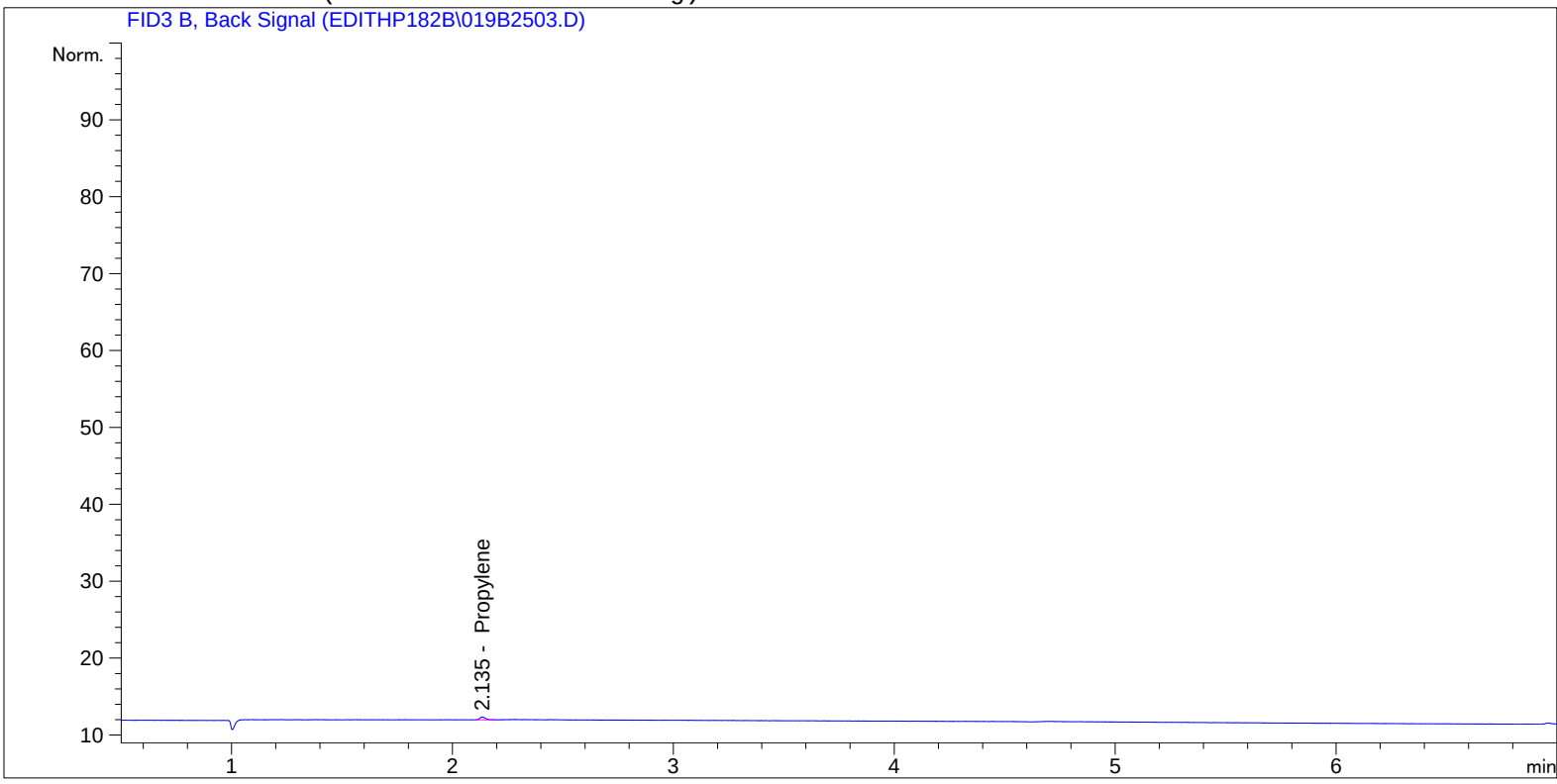
RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  2.127 BB     6.54137e-1 5.85121e-1 3.82749e-1    Propylene

Totals :                              3.82749e-1

Uncalibrated Peaks    :      using compound Propylene
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\019B2503.D
Sample Name: zero air blank

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  25
Acq. Instrument : Edith                           Location : Vial 19
Injection Date  : 1/9/2015 1:05:08 PM                  Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC_LONG.M
Last changed    : 1/15/2014 1:35:32 PM by Justin Guenzler
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP052R_HRVOC_PROPYLENE.M
Last changed    : 1/12/2015 11:01:53 AM by Turner Oppy
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 11:01:24 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal

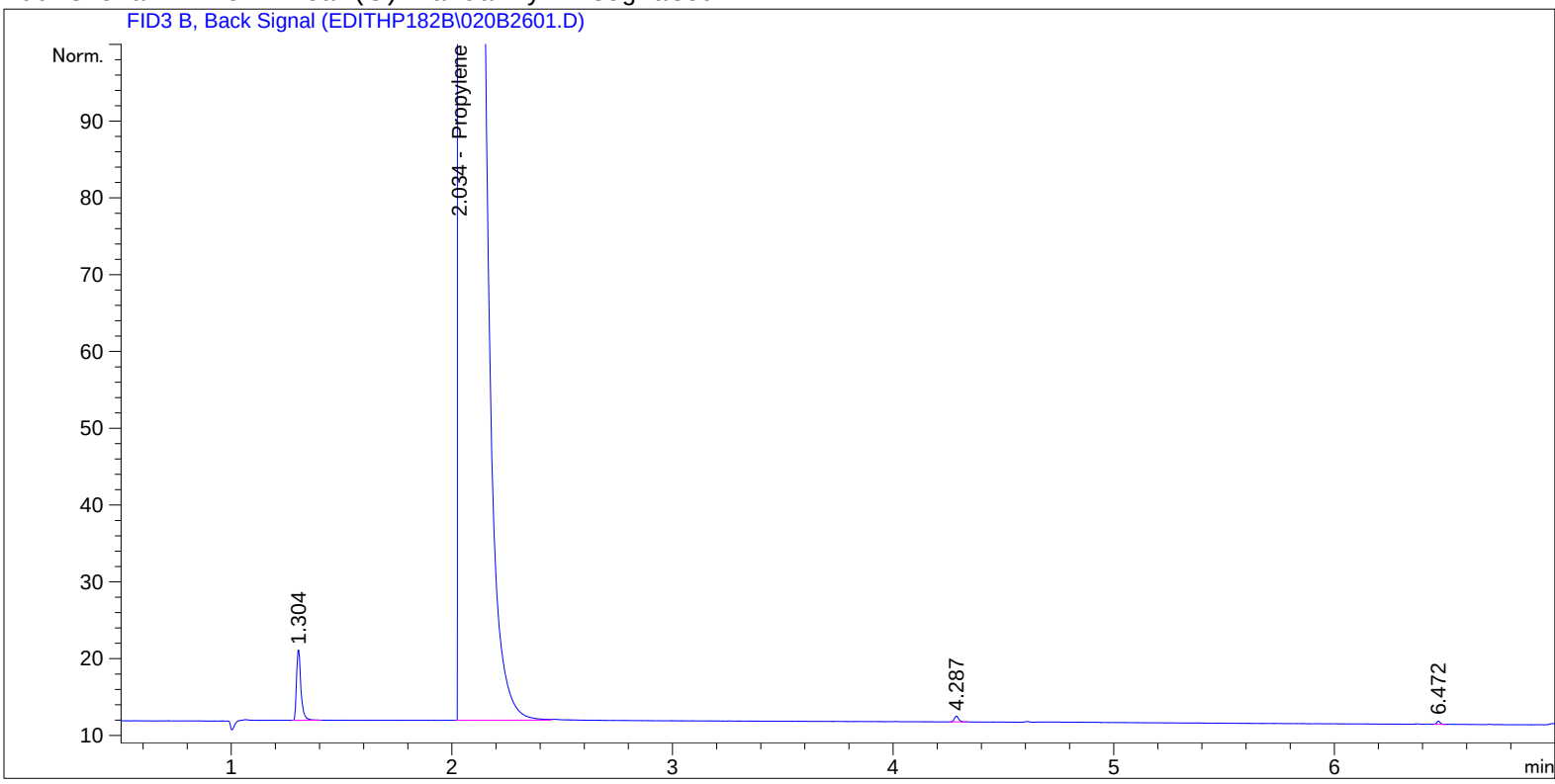
RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  2.135 BB     6.08924e-1 5.85121e-1 3.56294e-1    Propylene

Totals :                              3.56294e-1

Uncalibrated Peaks    :      using compound Propylene
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\020B2601.D
Sample Name: 1214-29.1186.Can *501

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  26
Acq. Instrument : Edith                           Location : Vial 20
Injection Date  : 1/9/2015 1:23:38 PM                  Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP052R_HRVOC_PROPYLENE.M
Last changed    : 1/12/2015 11:16:35 AM by Turner Oppy
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 11:16:35 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|-----------------
  2.034 BV     3252.08081 6.17598e-1 2008.48014    Propylene

Totals :                              2008.48014

Uncalibrated Peaks    :      using compound Propylene
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\020B2601.D
Sample Name: 1214-29.1186.Can *501

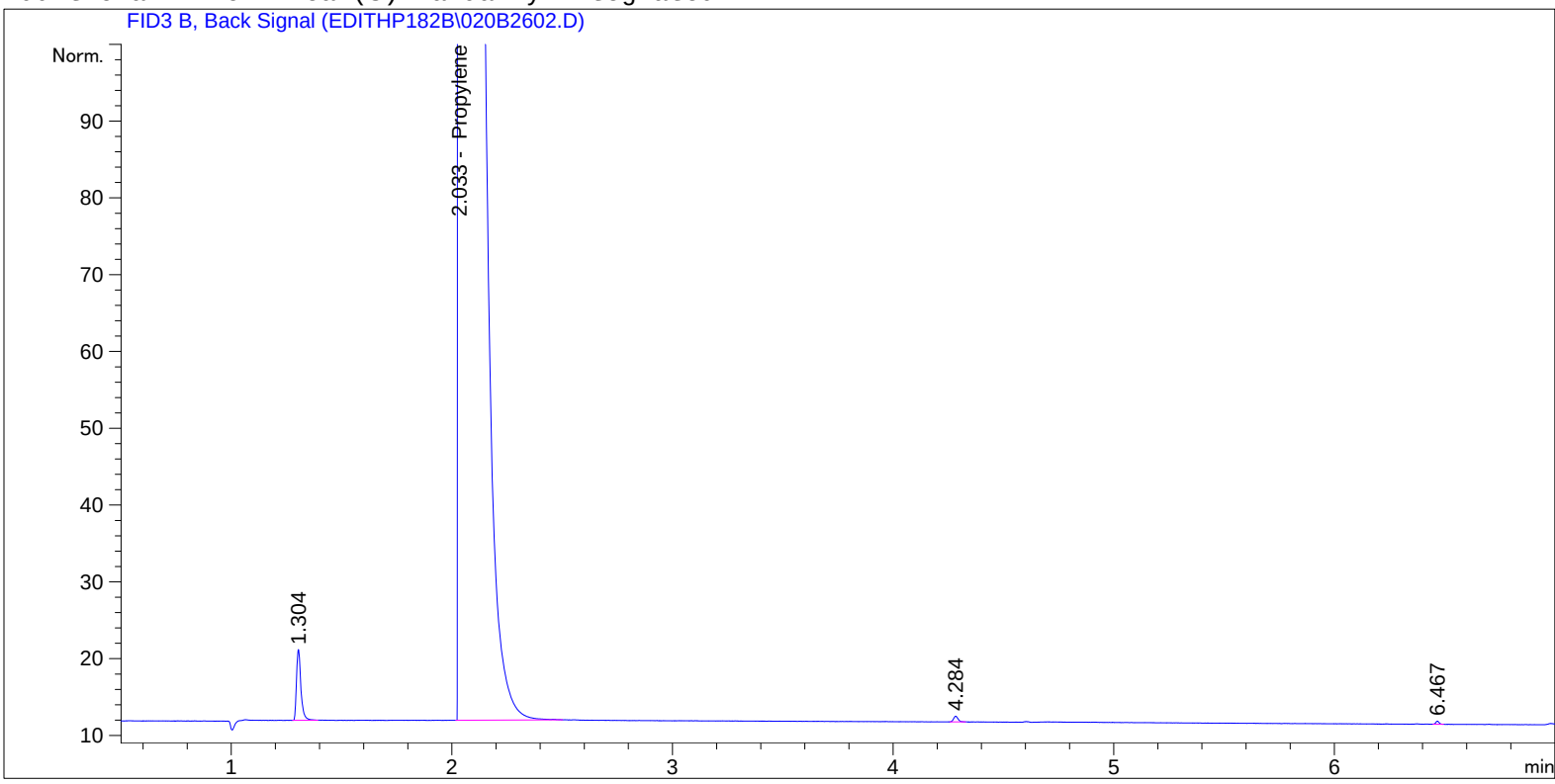
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.304	BB	12.76102	6.12179e-1	7.81203		?
4.287	BB	1.03065	5.85121e-1	6.03055e-1		?
6.472	BB	4.26815e-1	5.85121e-1	2.49738e-1		?
8.361	BB	4.03640e-1	5.85121e-1	2.36178e-1		?

Uncalib. totals : 8.90100

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\020B2602.D
Sample Name: 1214-29.1186.Can *501

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  26
Acq. Instrument : Edith                           Location : Vial 20
Injection Date  : 1/9/2015 1:37:55 PM                  Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP052R_HRVOC_PROPYLENE.M
Last changed    : 1/12/2015 11:02:09 AM by Turner Oppy
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 11:02:20 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|-----------------
  2.033 BB     3268.37769 6.17599e-1 2018.54542    Propylene

Totals :                              2018.54542

Uncalibrated Peaks    :      using compound Propylene
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\020B2602.D
Sample Name: 1214-29.1186.Can *501

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.304	BB	12.77940	6.12187e-1	7.82338		?
4.284	BB	1.04334	5.85121e-1	6.10482e-1		?
6.467	BB	4.11709e-1	5.85121e-1	2.40900e-1		?
8.358	BB	4.16258e-1	5.85121e-1	2.43561e-1		?

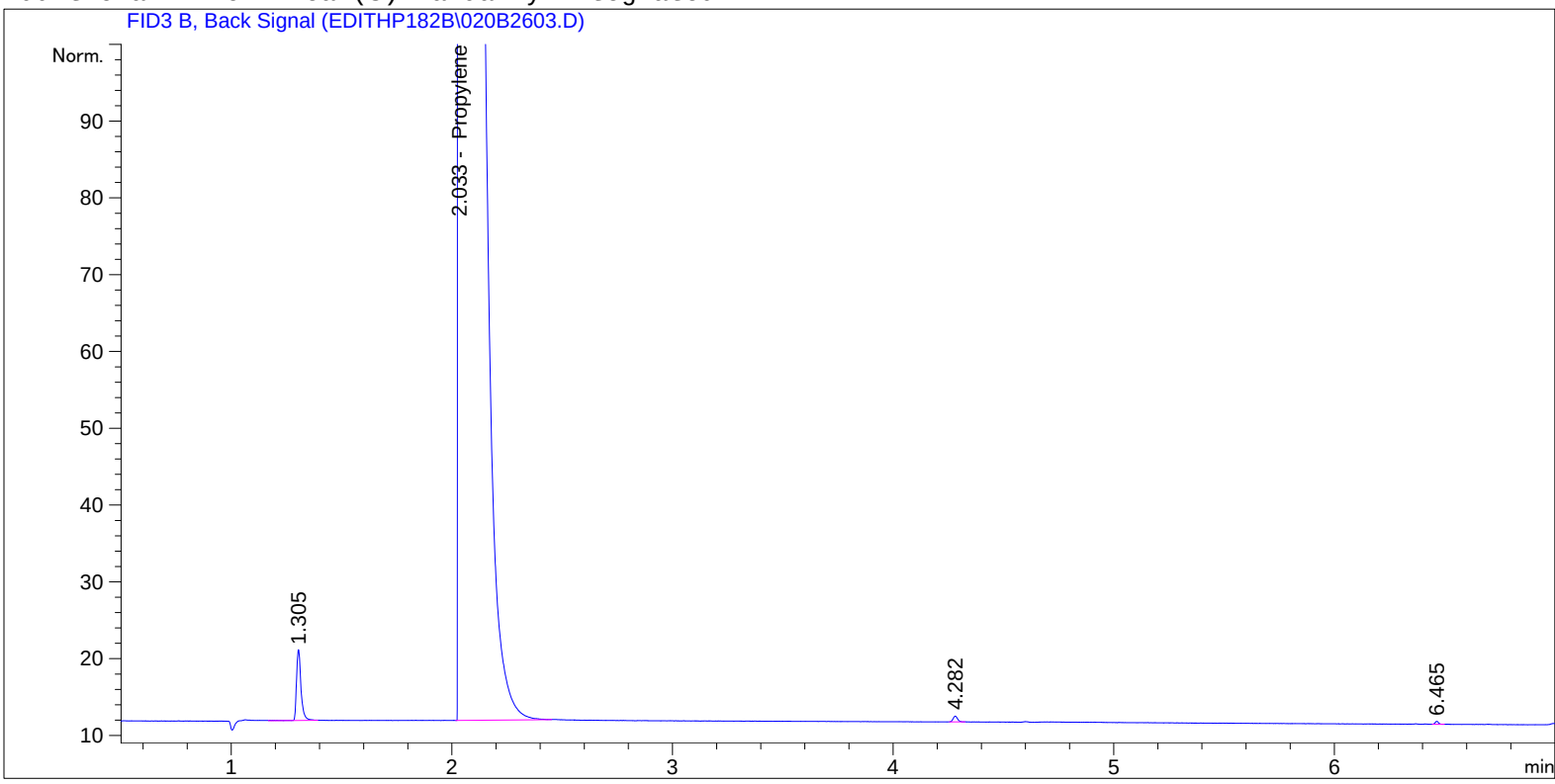
Uncalib. totals : 8.91833

==========

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\020B2603.D
Sample Name: 1214-29.1186.Can *501

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  26
Acq. Instrument : Edith                           Location : Vial 20
Injection Date  : 1/9/2015 1:52:12 PM                  Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP052R_HRVOC_PROPYLENE.M
Last changed    : 1/12/2015 11:02:09 AM by Turner Oppy
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 11:02:20 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|-----------------
  2.033 BB     3288.87061 6.17599e-1 2031.20225    Propylene

Totals :                              2031.20225

Uncalibrated Peaks    :      using compound Propylene
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\020B2603.D
Sample Name: 1214-29.1186.Can *501

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.305	BB	13.06048	6.12304e-1	7.99698		?
4.282	BB	1.04903	5.85121e-1	6.13808e-1		?
6.465	BB	4.00344e-1	5.85121e-1	2.34250e-1		?
8.356	BB	4.33772e-1	5.85121e-1	2.53809e-1		?

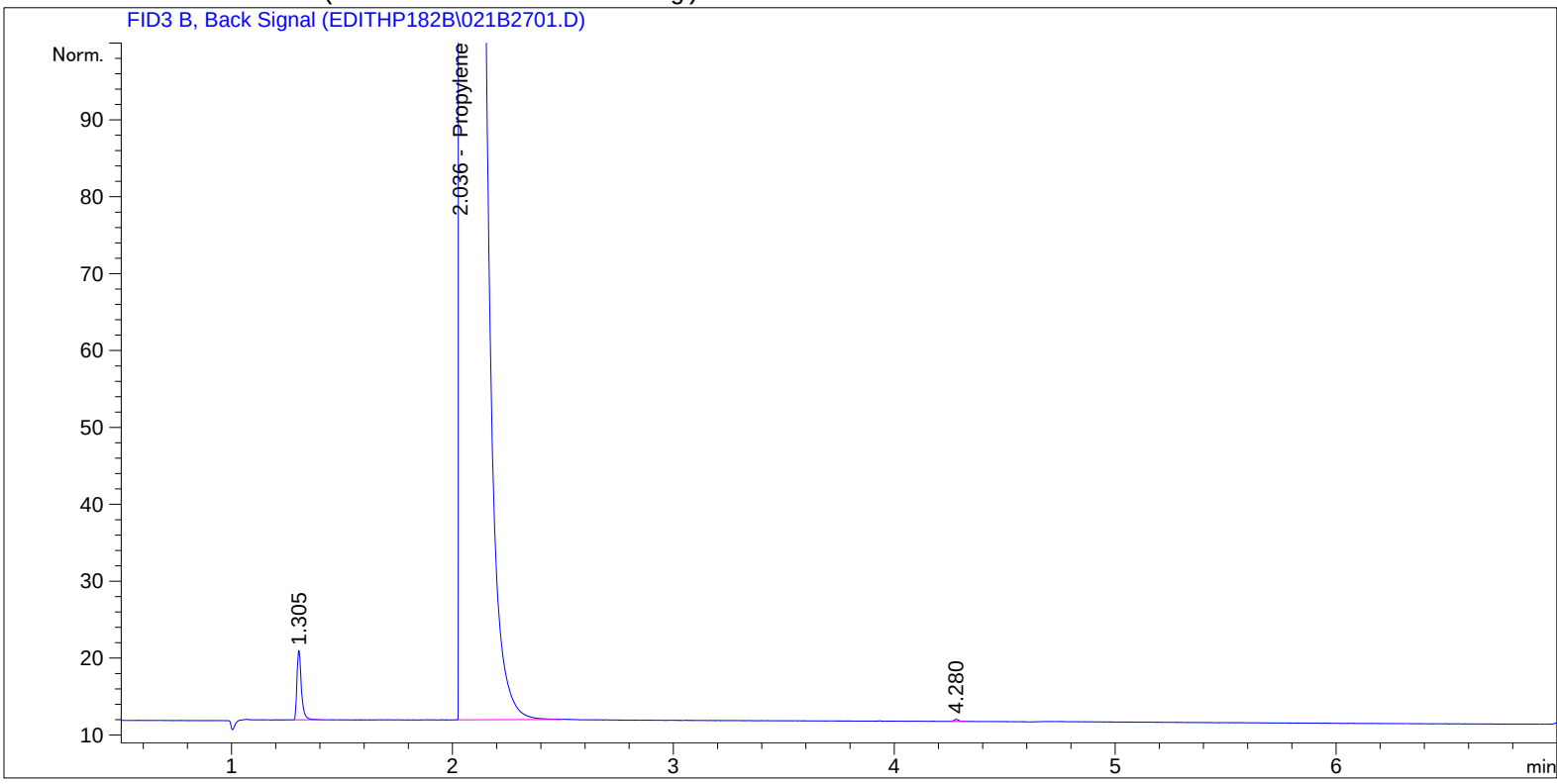
Uncalib. totals : 9.09885

==========

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\021B2701.D
Sample Name: 1214-29.1310.Can *501

```
==================================================================
Acq. Operator   : disconnected                  Seq. Line :  27
Acq. Instrument : Edith                          Location : Vial 21
Injection Date  : 1/9/2015 2:06:29 PM                 Inj :   1
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP052R_HRVOC_PROPYLENE.M
Last changed    : 1/12/2015 11:02:09 AM by Turner Oppy
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 11:02:20 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  2.036 BB     3203.92334 6.17598e-1 1978.73713    Propylene

Totals :                              1978.73713

Uncalibrated Peaks    :      using compound Propylene
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\021B2701.D
Sample Name: 1214-29.1310.Can *501

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.305	BB	12.60528	6.12112e-1	7.71584		?
4.280	BB	3.83478e-1	5.85121e-1	2.24381e-1		?

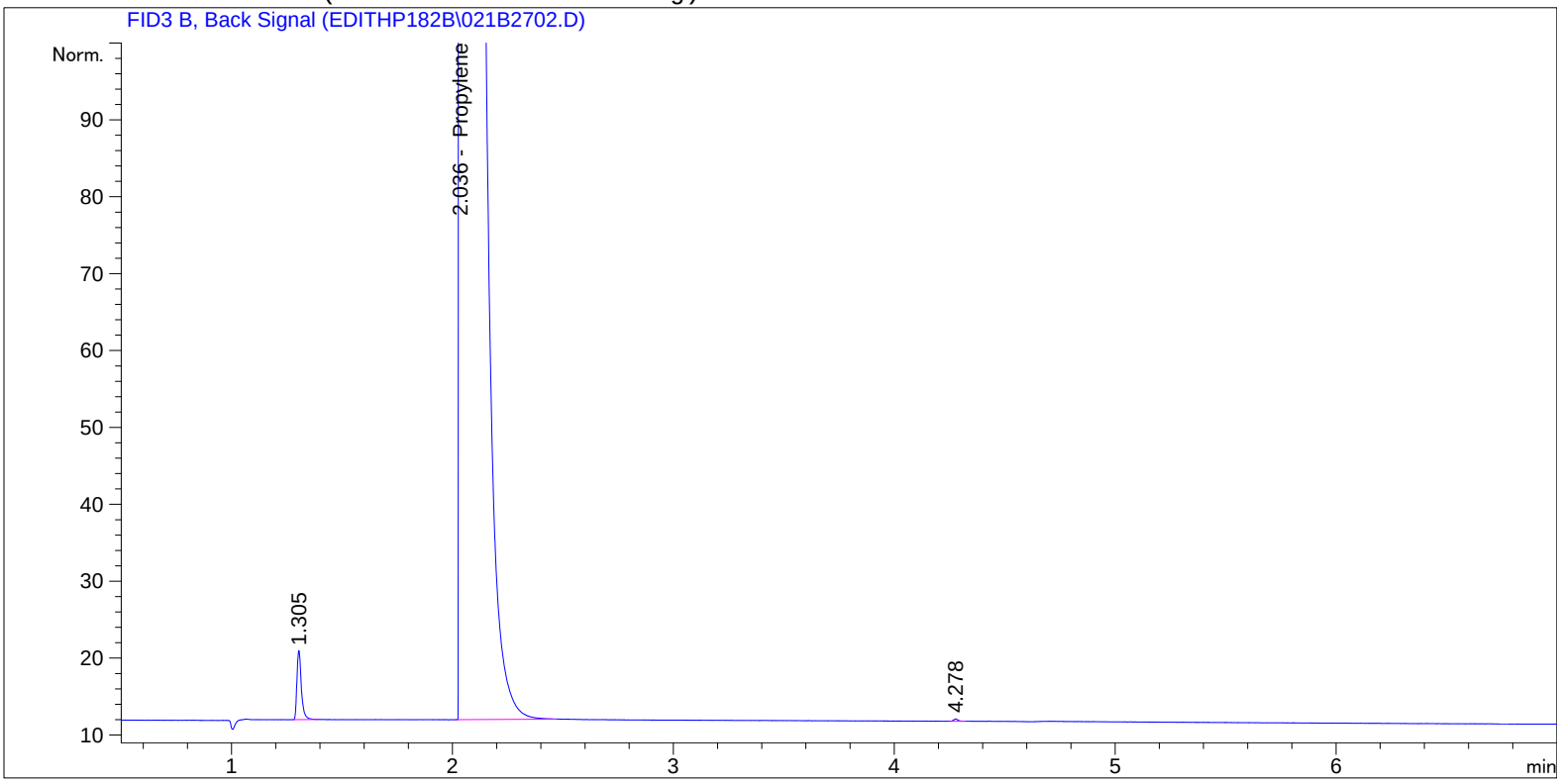
Uncalib. totals : 7.94022

==========

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\021B2702.D
Sample Name: 1214-29.1310.Can *501

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  27
Acq. Instrument : Edith                           Location : Vial 21
Injection Date  : 1/9/2015 2:21:39 PM                  Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP052R_HRVOC_PROPYLENE.M
Last changed    : 1/12/2015 11:02:09 AM by Turner Oppy
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 11:02:20 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                  [ppm]
-------|------|----------|----------|----------|--|------------------
  2.036 BB     3195.94995 6.17598e-1 1973.81261    Propylene

Totals :                               1973.81261

Uncalibrated Peaks    :      using compound Propylene
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\021B2702.D
Sample Name: 1214-29.1310.Can *501

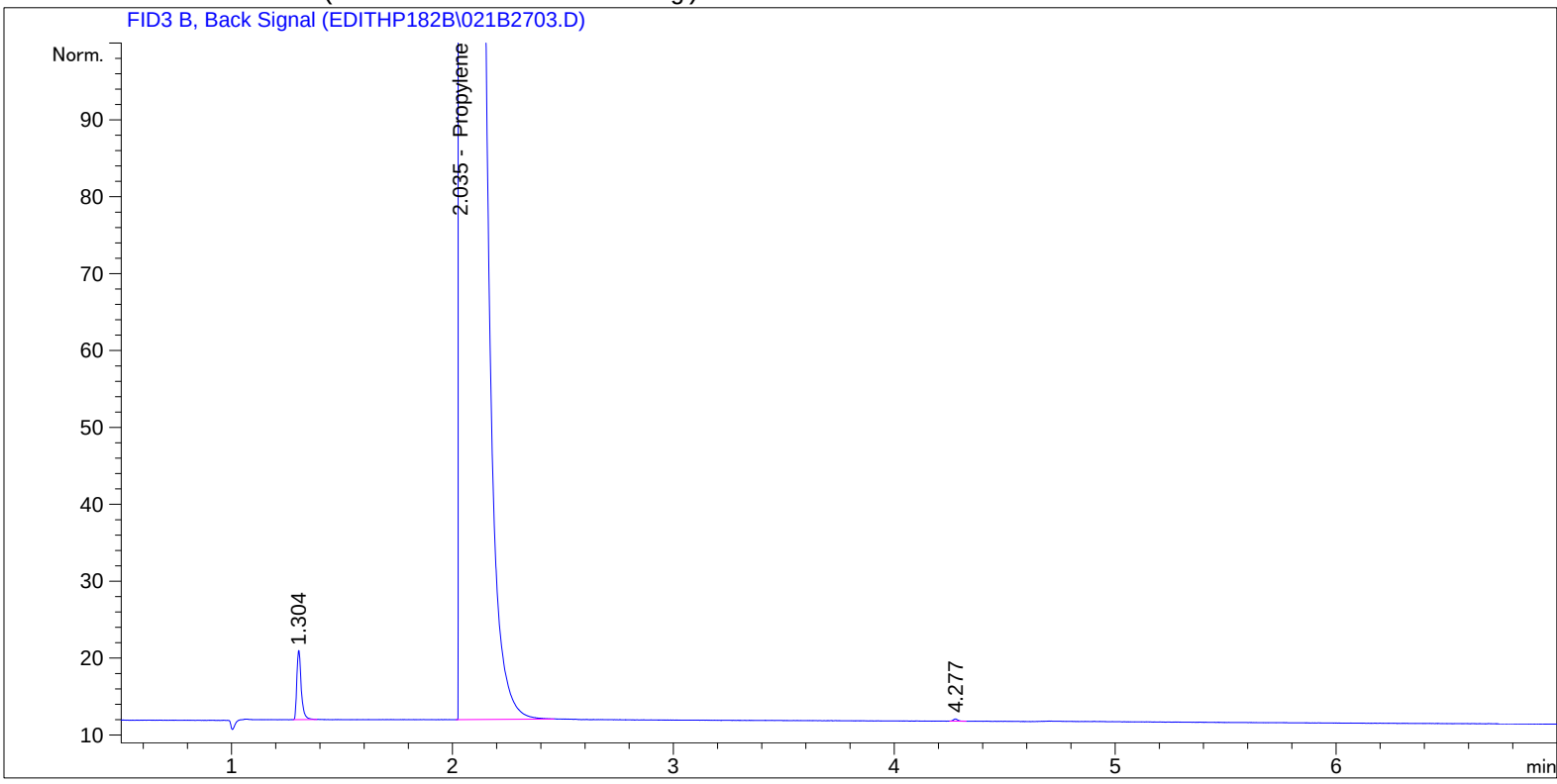
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.305	BB	12.51946	6.12074e-1	7.66284		?
4.278	BB	3.87165e-1	5.85121e-1	2.26538e-1		?

Uncalib. totals : 7.88938

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\021B2703.D
Sample Name: 1214-29.1310.Can *501

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  27
Acq. Instrument : Edith                           Location : Vial 21
Injection Date  : 1/9/2015 2:35:55 PM                  Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP052R_HRVOC_PROPYLENE.M
Last changed    : 1/12/2015 11:02:09 AM by Turner Oppy
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 11:02:20 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                  [ppm]
-------|------|----------|----------|----------|--|------------------
  2.035 BB     3190.26660 6.17598e-1 1970.30246    Propylene

Totals :                              1970.30246

Uncalibrated Peaks    :      using compound Propylene
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\021B2703.D
Sample Name: 1214-29.1310.Can *501

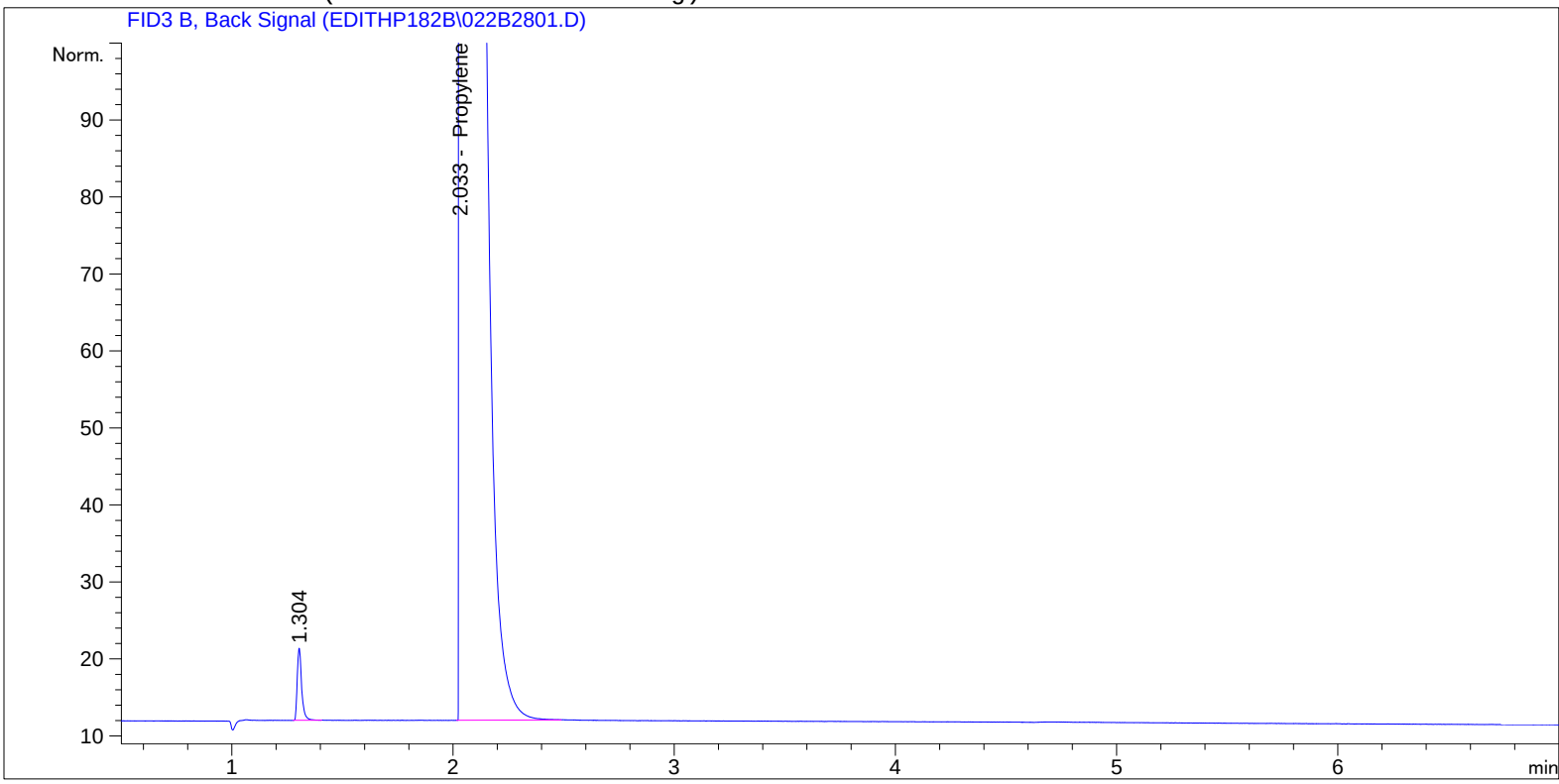
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.304	BB	12.49716	6.12064e-1	7.64907		?
4.277	BB	3.98854e-1	5.85121e-1	2.33378e-1		?

Uncalib. totals : 7.88244

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\022B2801.D
Sample Name: 1214-29.1044.Can *501

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  28
Acq. Instrument : Edith                           Location : Vial 22
Injection Date  : 1/9/2015 2:50:31 PM                  Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP052R_HRVOC_PROPYLENE.M
Last changed    : 1/12/2015 11:02:09 AM by Turner Oppy
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 11:02:20 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  2.033 BB     3322.39307 6.17599e-1 2051.90639    Propylene

Totals :                              2051.90639

Uncalibrated Peaks    :      using compound Propylene
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\022B2801.D
Sample Name: 1214-29.1044.Can *501

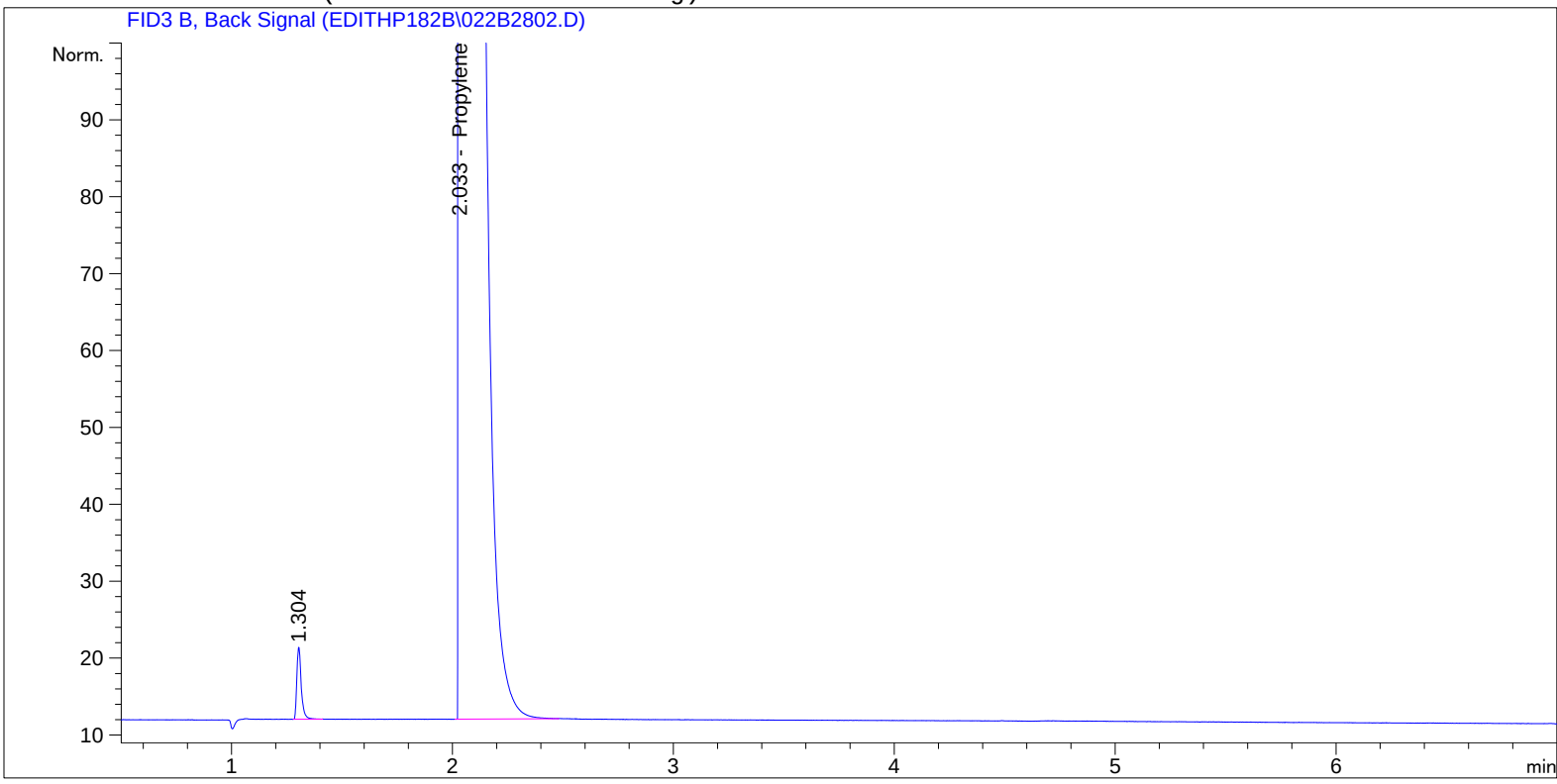
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.304	BB	13.00676	6.12282e-1	7.96381		?

Uncalib. totals : 7.96381

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\022B2802.D
Sample Name: 1214-29.1044.Can *501

```
==================================================================
Acq. Operator   : disconnected                  Seq. Line :  28
Acq. Instrument : Edith                          Location : Vial 22
Injection Date  : 1/9/2015 3:04:48 PM                 Inj :   2
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP052R_HRVOC_PROPYLENE.M
Last changed    : 1/12/2015 11:02:09 AM by Turner Oppy
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 11:02:20 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  2.033 BB     3333.45508 6.17599e-1 2058.73850    Propylene

Totals :                              2058.73850

Uncalibrated Peaks    :      using compound Propylene
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\022B2802.D
Sample Name: 1214-29.1044.Can *501

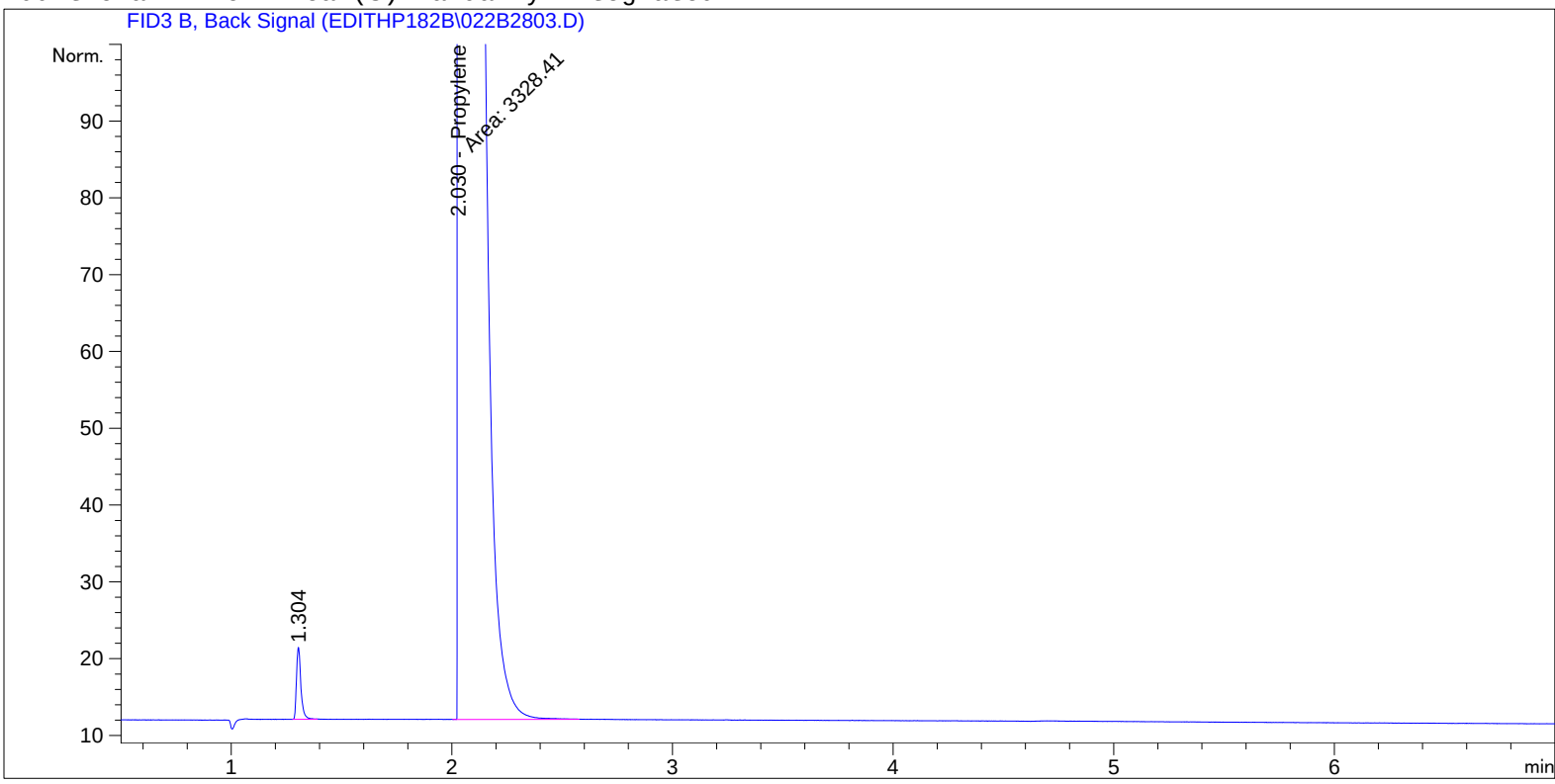
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.304	BB	13.09381	6.12318e-1	8.01757		?

Uncalib. totals : 8.01757

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\022B2803.D
Sample Name: 1214-29.1044.Can *501

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  28
Acq. Instrument : Edith                          Location : Vial 22
Injection Date  : 1/9/2015 3:19:13 PM                 Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP052R_HRVOC_PROPYLENE.M
Last changed    : 1/12/2015 11:02:09 AM by Turner Oppy
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 11:02:20 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|-----------------
  2.030 MM     3328.40625 6.17599e-1 2055.62025    Propylene

Totals :                              2055.62025

Uncalibrated Peaks    :      using compound Propylene
```

Manual Int. "NI" (TBO)

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\022B2803.D
Sample Name: 1214-29.1044.Can *501

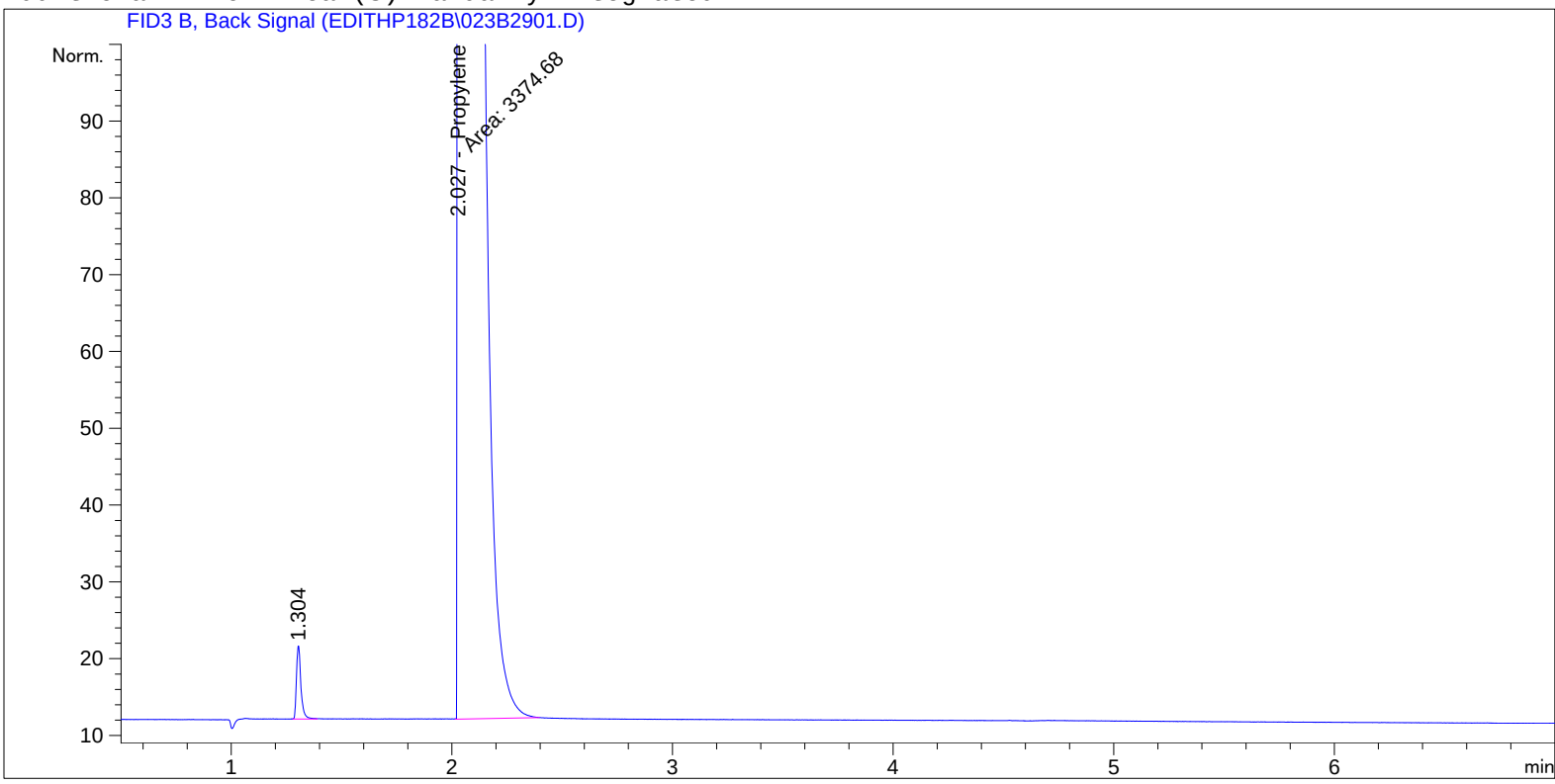
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.304	BB	13.00753	6.12282e-1	7.96428		?

Uncalib. totals : 7.96428

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\023B2901.D
Sample Name: 1214-29.1340.Can *501

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  29
Acq. Instrument : Edith                           Location : Vial 23
Injection Date  : 1/9/2015 3:34:12 PM                  Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP052R_HRVOC_PROPYLENE.M
Last changed    : 1/12/2015 11:02:09 AM by Turner Oppy
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 11:02:20 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|-----------------
  2.027 MM     3374.68018 6.17599e-1 2084.19994    Propylene

Totals :                              2084.19994

Uncalibrated Peaks    :      using compound Propylene
```

Manual Int. "NI" (TBO)

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\023B2901.D
Sample Name: 1214-29.1340.Can *501

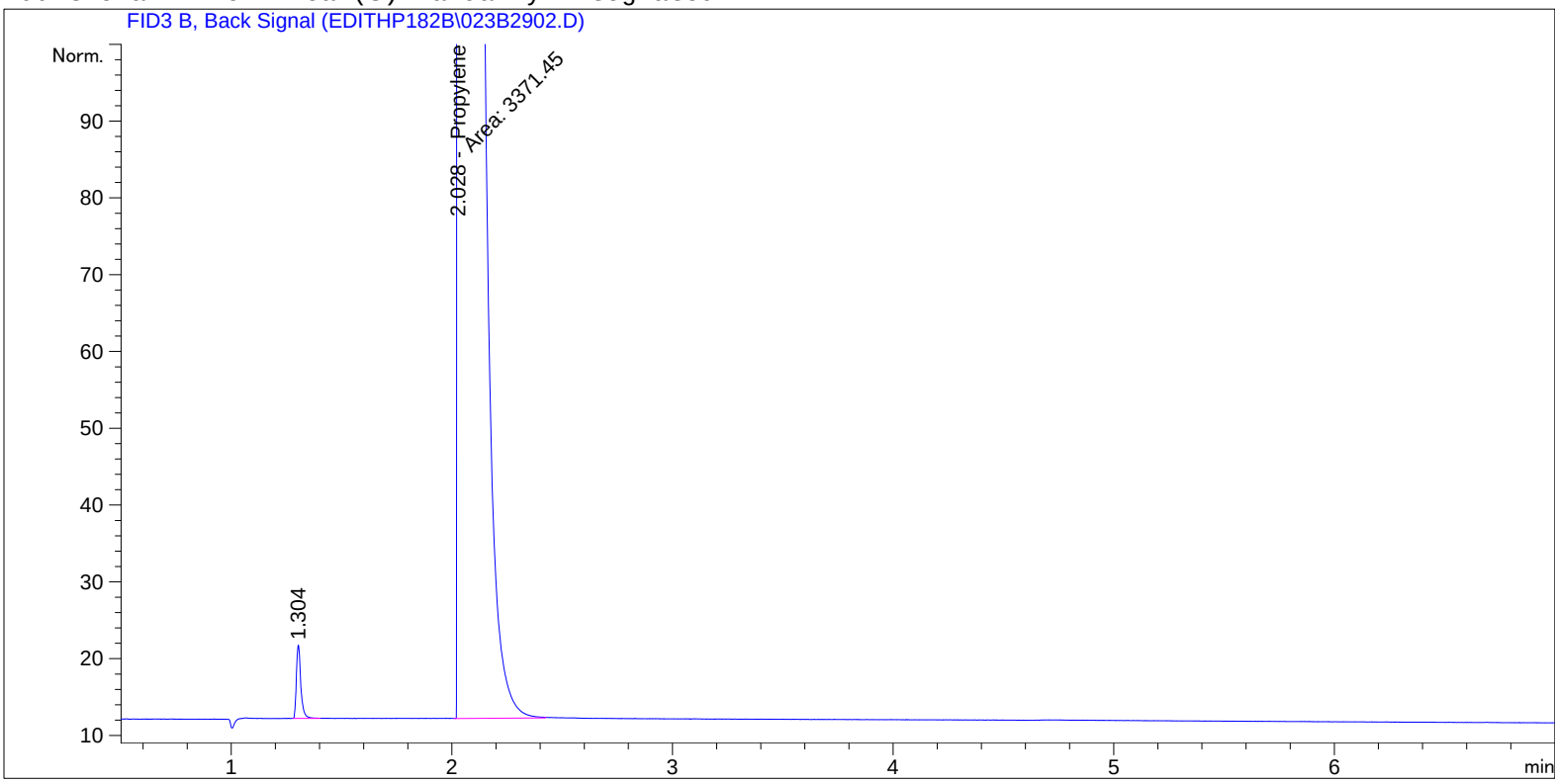
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.304	BB	13.36701	6.12426e-1	8.18631		?

Uncalib. totals : 8.18631

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\023B2902.D
Sample Name: 1214-29.1340.Can *501

```
==================================================================
Acq. Operator   : disconnected                  Seq. Line :  29
Acq. Instrument : Edith                          Location : Vial 23
Injection Date  : 1/9/2015 3:48:29 PM                 Inj :   2
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP052R_HRVOC_PROPYLENE.M
Last changed    : 1/12/2015 11:02:09 AM by Turner Oppy
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==================================================================
                     External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 11:02:20 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|-----------------
  2.028 MM     3371.45264 6.17599e-1 2082.20655    Propylene
Totals :                              2082.20655

Uncalibrated Peaks    :      using compound Propylene
```

Manual Int. “NI” (TBO)

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\023B2902.D
Sample Name: 1214-29.1340.Can *501

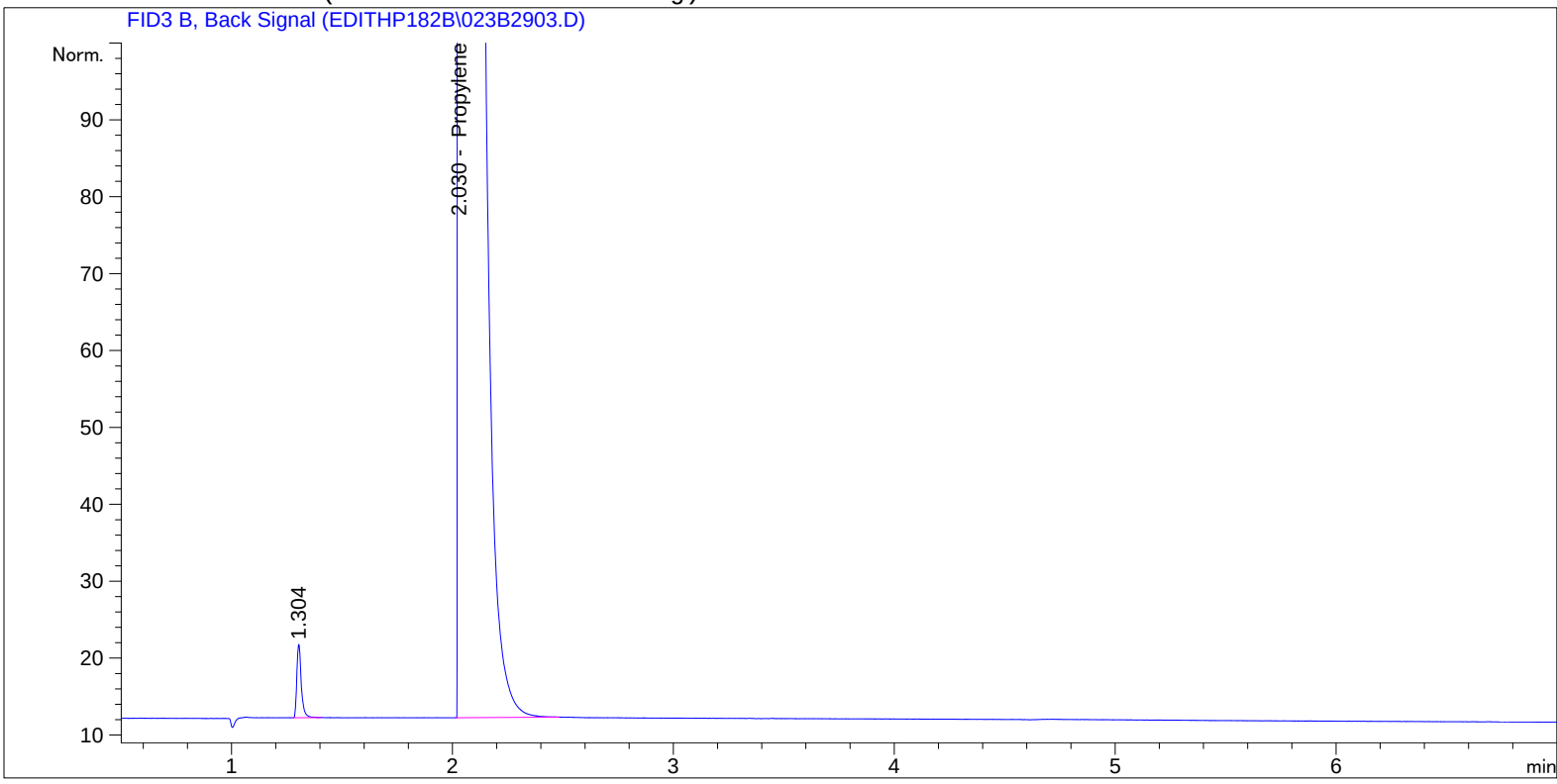
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.304	BB	13.26905	6.12388e-1	8.12580		?

Uncalib. totals : 8.12580

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\023B2903.D
Sample Name: 1214-29.1340.Can *501

```
==================================================================
Acq. Operator   : disconnected                  Seq. Line :  29
Acq. Instrument : Edith                          Location : Vial 23
Injection Date  : 1/9/2015 4:02:48 PM                 Inj :   3
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP052R_HRVOC_PROPYLENE.M
Last changed    : 1/12/2015 11:02:09 AM by Turner Oppy
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 11:02:20 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  2.030 BB     3385.76611 6.17599e-1 2091.04684    Propylene

Totals :                              2091.04684

Uncalibrated Peaks    :      using compound Propylene
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\023B2903.D
Sample Name: 1214-29.1340.Can *501

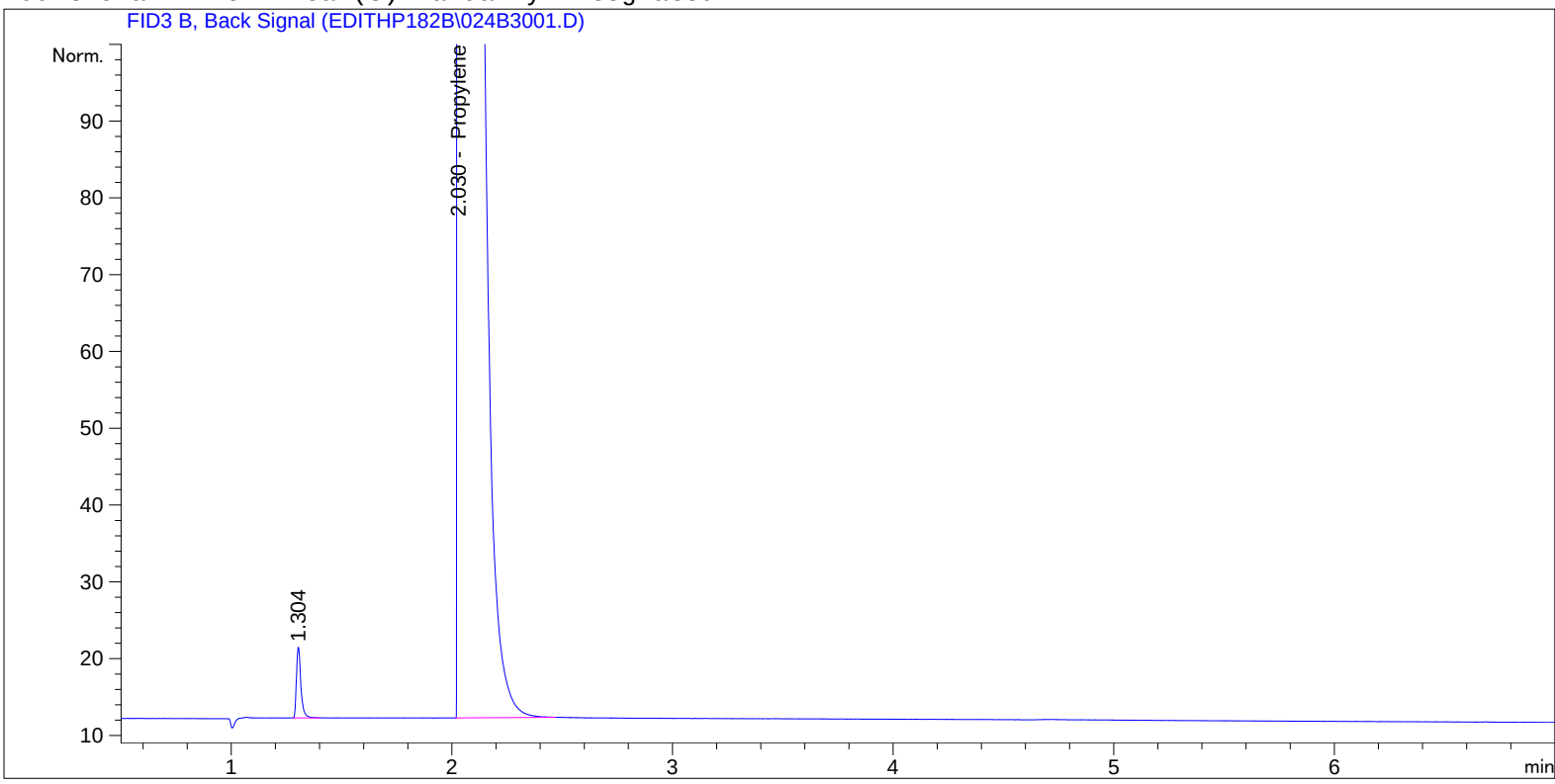
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.304	BB	13.34027	6.12415e-1	8.16979		?

Uncalib. totals : 8.16979

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\024B3001.D
Sample Name: 1214-29.1049.Can *501

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  30
Acq. Instrument : Edith                           Location : Vial 24
Injection Date  : 1/9/2015 4:17:05 PM                  Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP052R_HRVOC_PROPYLENE.M
Last changed    : 1/12/2015 11:02:09 AM by Turner Oppy
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 11:02:20 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|-----------------
  2.030 BB     3325.68384 6.17599e-1 2053.93883    Propylene

Totals :                              2053.93883

Uncalibrated Peaks    :      using compound Propylene
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\024B3001.D
Sample Name: 1214-29.1049.Can *501

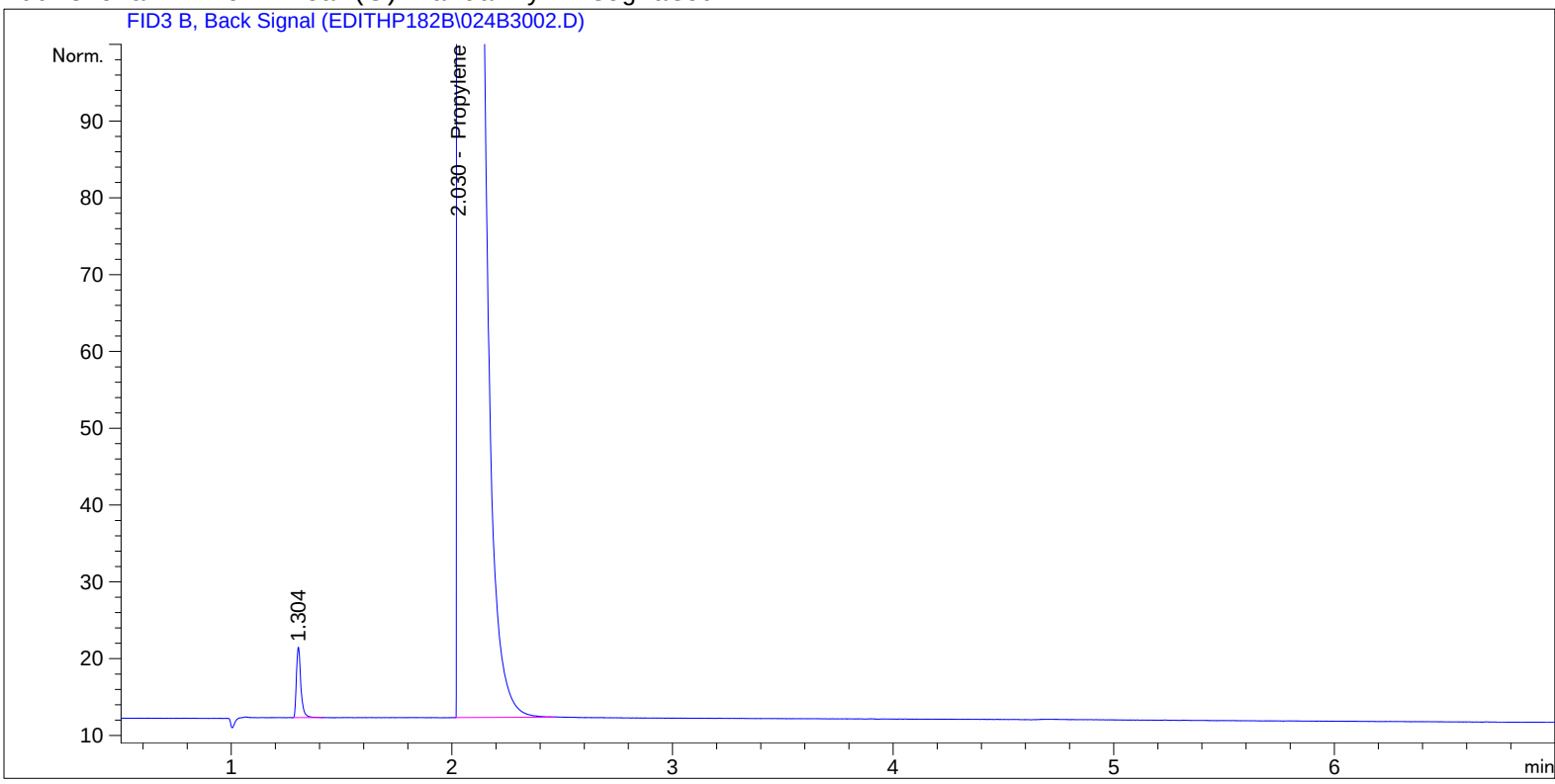
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.304	BB	12.89909	6.12237e-1	7.89731		?

Uncalib. totals : 7.89731

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\024B3002.D
Sample Name: 1214-29.1049.Can *501

```
==================================================================
Acq. Operator   : disconnected                  Seq. Line :  30
Acq. Instrument : Edith                          Location : Vial 24
Injection Date  : 1/9/2015 4:31:39 PM                 Inj :   2
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP052R_HRVOC_PROPYLENE.M
Last changed    : 1/12/2015 11:02:09 AM by Turner Oppy
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 11:02:20 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|-----------------
  2.030 BB     3323.19287 6.17599e-1 2052.40036    Propylene

Totals :                              2052.40036

Uncalibrated Peaks    :      using compound Propylene
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\024B3002.D
Sample Name: 1214-29.1049.Can *501

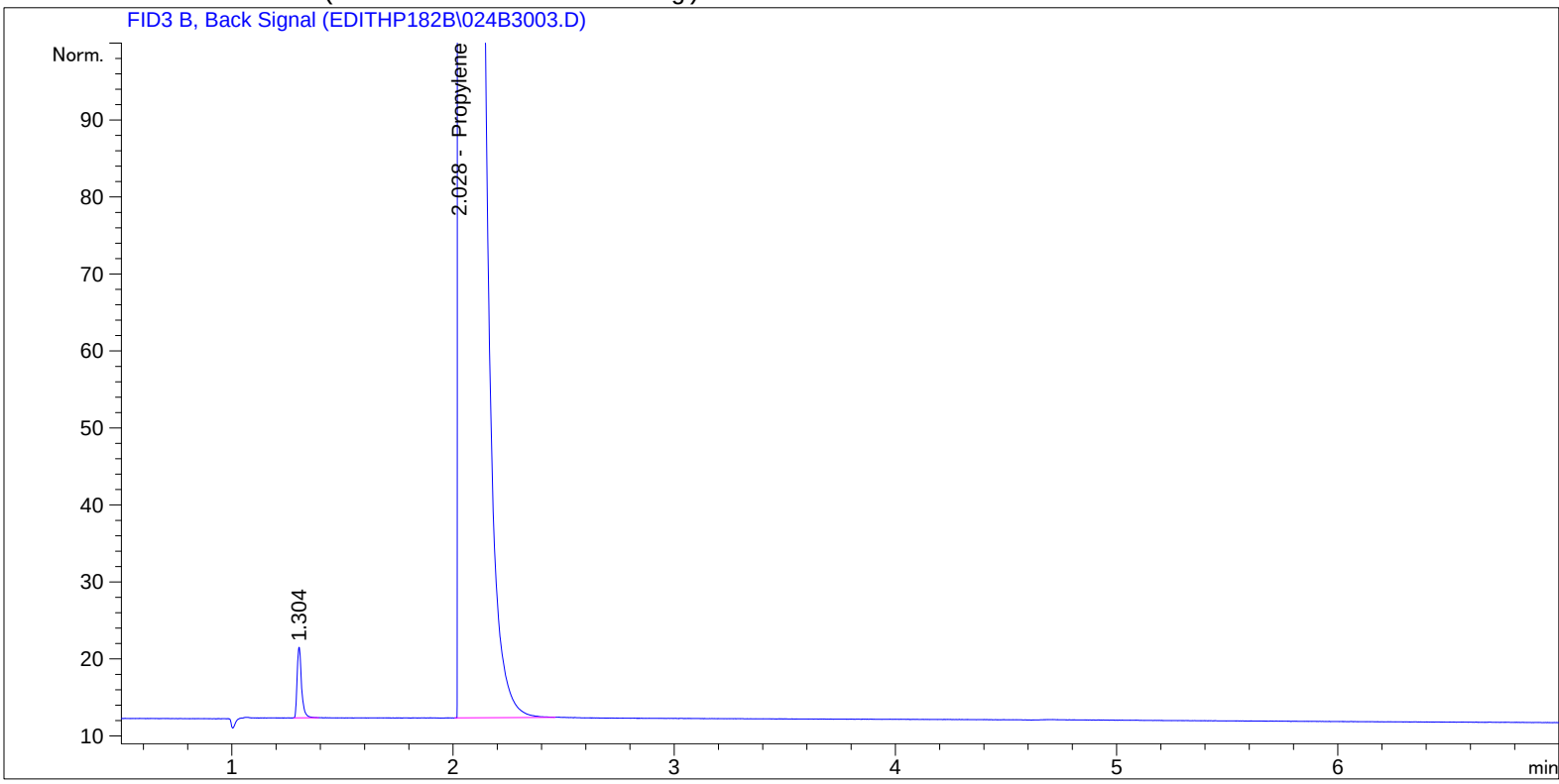
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.304	BB	12.91580	6.12244e-1	7.90763		?

Uncalib. totals : 7.90763

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\024B3003.D
Sample Name: 1214-29.1049.Can *501

```
==================================================================
Acq. Operator   : disconnected                  Seq. Line :  30
Acq. Instrument : Edith                          Location : Vial 24
Injection Date  : 1/9/2015 4:46:31 PM                 Inj :   3
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP052R_HRVOC_PROPYLENE.M
Last changed    : 1/12/2015 11:02:09 AM by Turner Oppy
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 11:02:20 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  2.028 BB     3311.44189 6.17599e-1 2045.14273    Propylene

Totals :                              2045.14273

Uncalibrated Peaks    :      using compound Propylene
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\024B3003.D
Sample Name: 1214-29.1049.Can *501

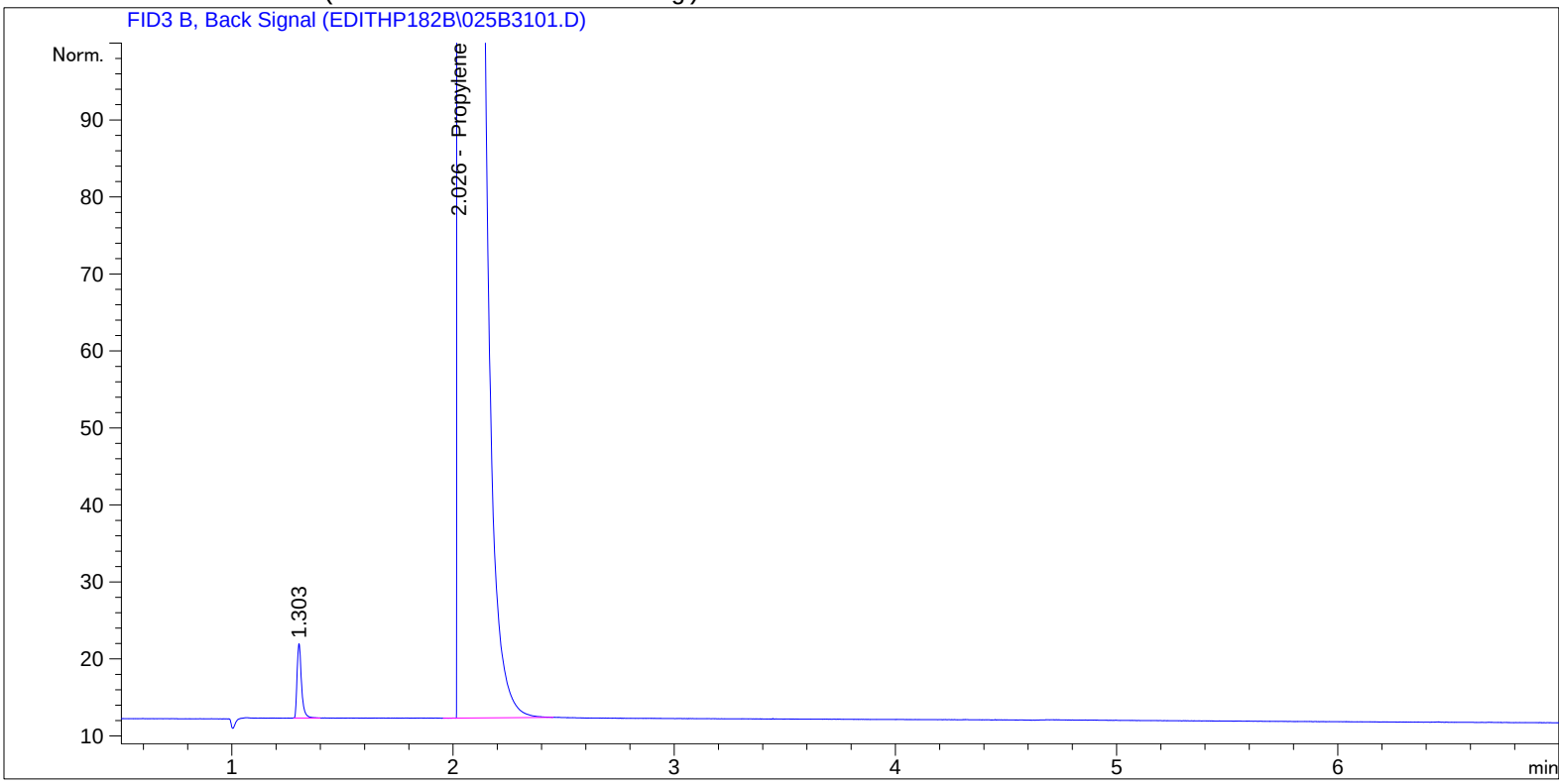
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.304	BB	12.79964	6.12196e-1	7.83588		?

Uncalib. totals : 7.83588

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\025B3101.D
Sample Name: 1214-29.1334.Can *501

```
==================================================================
Acq. Operator   : disconnected                  Seq. Line :  31
Acq. Instrument : Edith                          Location : Vial 25
Injection Date  : 1/9/2015 5:00:49 PM                 Inj :   1
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP052R_HRVOC_PROPYLENE.M
Last changed    : 1/12/2015 11:02:09 AM by Turner Oppy
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 11:02:20 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  2.026 BB     3410.11572 6.17599e-1 2106.08564    Propylene

Totals :                              2106.08564

Uncalibrated Peaks    :      using compound Propylene
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\025B3101.D
Sample Name: 1214-29.1334.Can *501

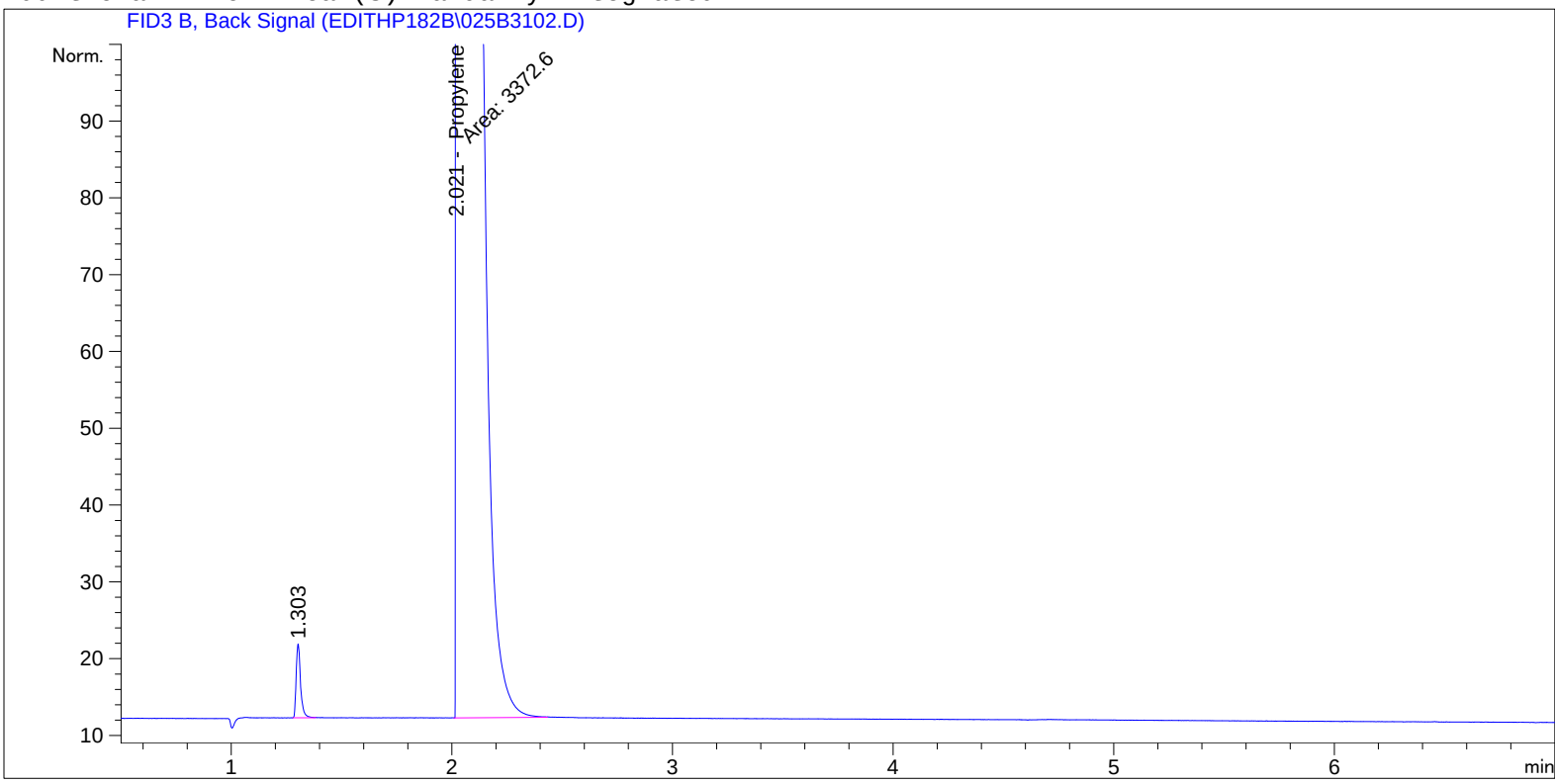
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.303	BB	13.44296	6.12455e-1	8.23321		?

Uncalib. totals : 8.23321

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\025B3102.D
Sample Name: 1214-29.1334.Can *501

```
==================================================================
Acq. Operator   : disconnected                  Seq. Line :  31
Acq. Instrument : Edith                          Location : Vial 25
Injection Date  : 1/9/2015 5:15:02 PM                 Inj :   2
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP052R_HRVOC_PROPYLENE.M
Last changed    : 1/12/2015 11:02:09 AM by Turner Oppy
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 11:02:20 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|-----------------
  2.021 MM     3372.60132 6.17599e-1 2082.91600    Propylene

Totals :                              2082.91600

Uncalibrated Peaks    :      using compound Propylene
```

Manual Int. "NI" (TBO)

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\025B3102.D
Sample Name: 1214-29.1334.Can *501

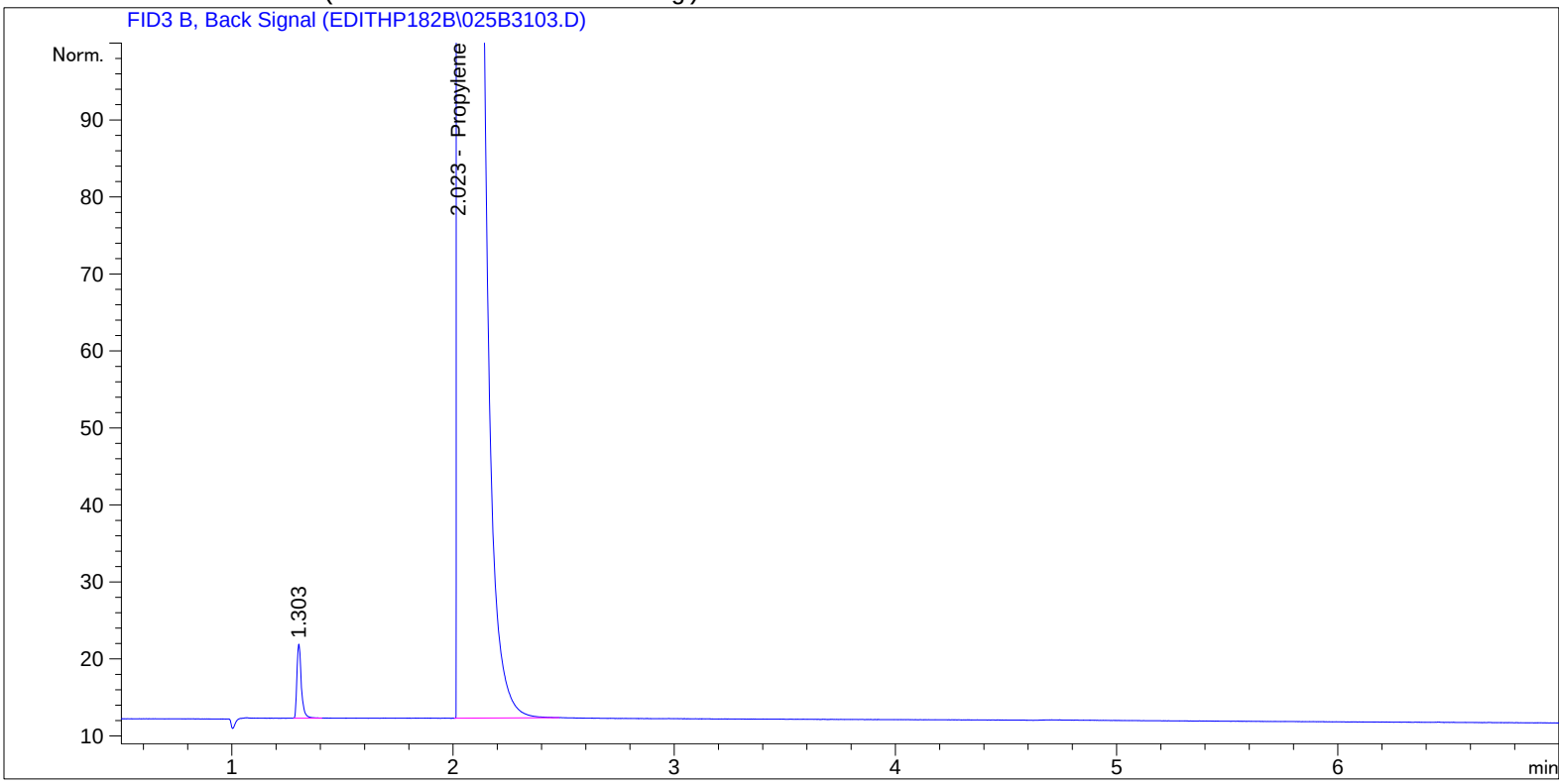
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.303	BB	13.34620	6.12418e-1	8.17345	?	

Uncalib. totals : 8.17345

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\025B3103.D
Sample Name: 1214-29.1334.Can *501

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  31
Acq. Instrument : Edith                           Location : Vial 25
Injection Date  : 1/9/2015 5:29:30 PM                  Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP052R_HRVOC_PROPYLENE.M
Last changed    : 1/12/2015 11:02:09 AM by Turner Oppy
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 11:02:20 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  2.023 BB     3373.56519 6.17599e-1 2083.51130    Propylene

Totals :                              2083.51130

Uncalibrated Peaks    :      using compound Propylene
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\025B3103.D
Sample Name: 1214-29.1334.Can *501

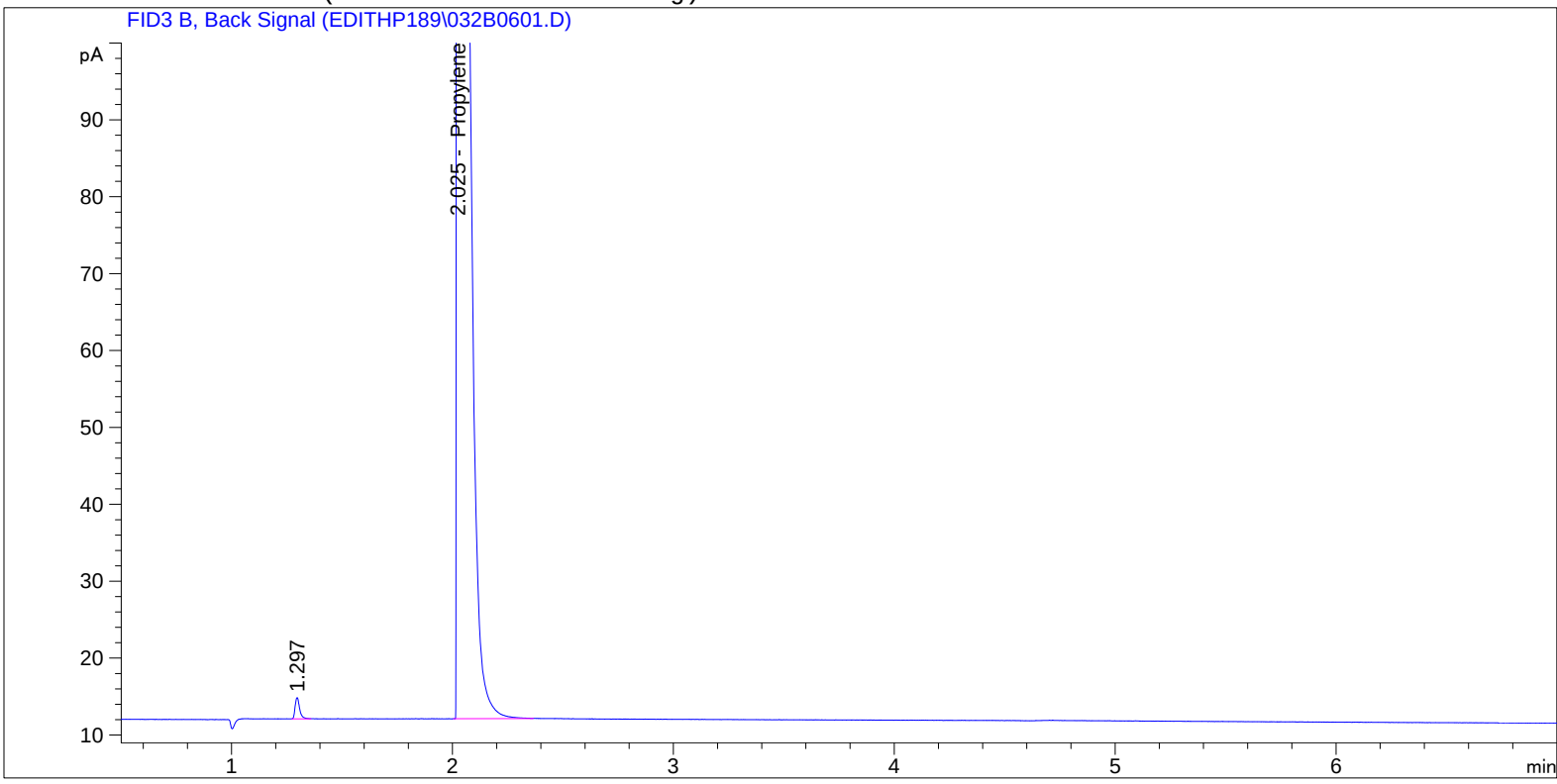
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.303	BB	13.29809	6.12399e-1	8.14374		?

Uncalib. totals : 8.14374

*** End of Report ***

Data File C:\GC\2015\EDITH\QUARTER 1\EDITHP189\032B0601.D
Sample Name: 1214-29.1324.Can P2 *501

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :   6
Acq. Instrument : Edith                           Location : Vial 32
Injection Date  : 1/19/2015 2:34:42 PM                 Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2015\EDITH\QUARTER 1\EDITHP189\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2015\EDITH\METHODS\EDITHP052R_HRVOC_ACETYLENE.M
Last changed    : 1/20/2015 3:18:38 PM by Justin Guenzler
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Justin Guenzler
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP189.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/20/2015 3:18:38 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                  [ppm]
-------|------|----------|----------|----------|--|------------------
  1.165                -          -          -       Ethylene
  2.025 BB      997.23181 6.17550e-1  615.84071       Propylene
  2.950                -          -          -       Acetylene
  4.130                -          -          -       trans-2-Butene
  4.176                -          -          -       1-Butene
  4.500                -          -          -       Isobutylene
  4.650                -          -          -       cis-2-Butene
  5.500                -          -          -       1,3-Butadiene
```

Report From Undiluted Analysis (JKG)

Data File C:\GC\2015\EDITH\QUARTER 1\EDITHP189\032B0601.D
Sample Name: 1214-29.1324.Can P2 *501

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				615.84071		

2 Warnings or Errors :

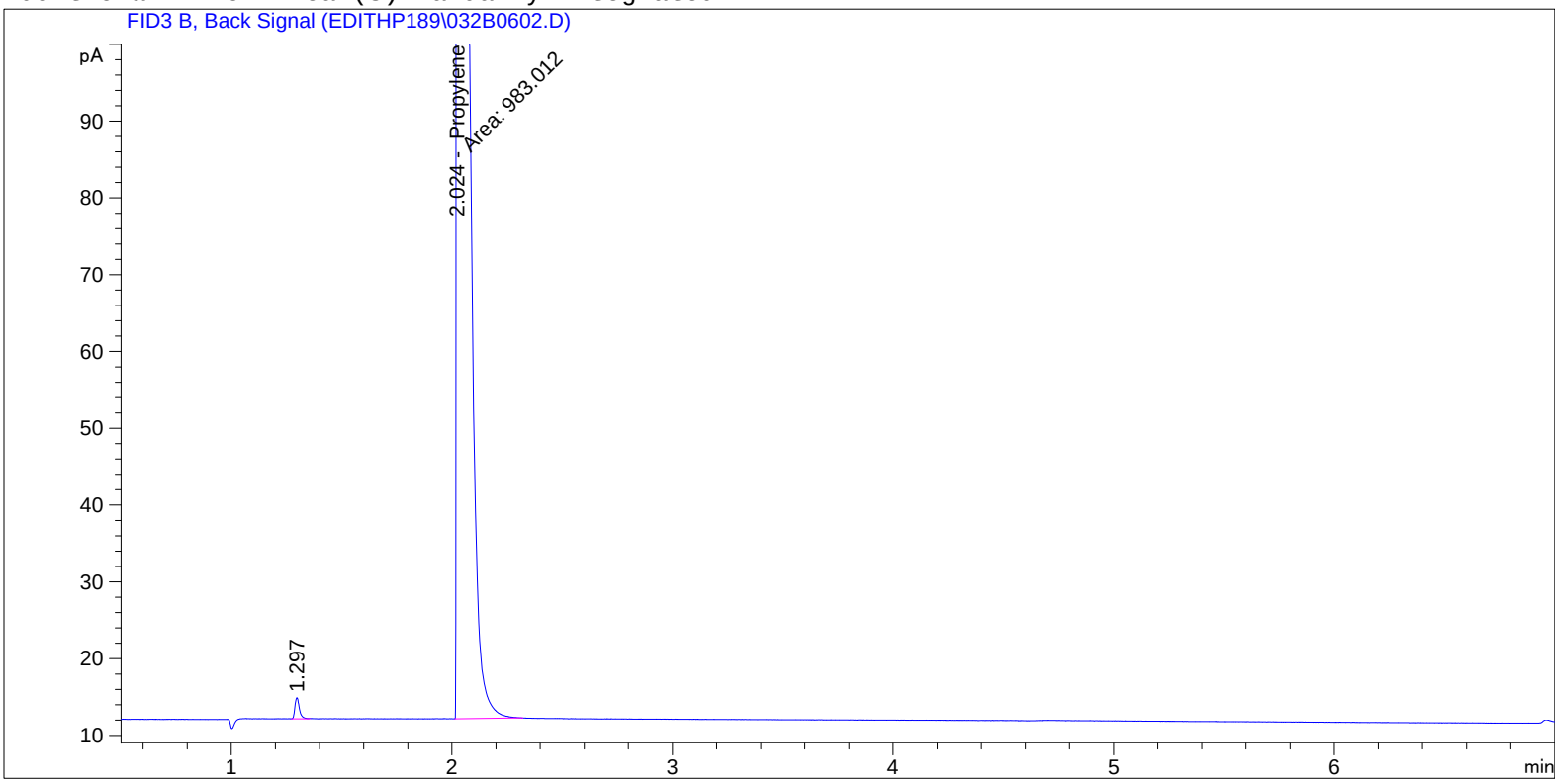
Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File C:\GC\2015\EDITH\QUARTER 1\EDITHP189\032B0602.D
Sample Name: 1214-29.1324.Can P2 *501

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :   6
Acq. Instrument : Edith                           Location : Vial 32
Injection Date  : 1/19/2015 2:49:07 PM                 Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2015\EDITH\QUARTER 1\EDITHP189\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2015\EDITH\METHODS\EDITHP052R_HRVOC_ACETYLENE.M
Last changed    : 1/20/2015 3:18:38 PM by Justin Guenzler
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Justin Guenzler
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP189.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/20/2015 3:18:38 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]          [pA*s]                  [ppm]
-------|------|----------|----------|----------|--|-----------------
  1.165            -           -          -          Ethylene
  2.024 MM    983.01215 6.17549e-1  607.05836    Propylene
  2.950            -           -          -          Acetylene
  4.130            -           -          -          trans-2-Butene
  4.176            -           -          -          1-Butene
  4.500            -           -          -          Isobutylene
  4.650            -           -          -          cis-2-Butene
```

Manual Int. "II" (JKG)

Report From Undiluted Analysis (JKG)

Data File C:\GC\2015\EDITH\QUARTER 1\EDITHP189\032B0602.D
Sample Name: 1214-29.1324.Can P2 *501

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
5.500	-	-	-			1,3-Butadiene

Report From Undiluted Analysis (JKG)

Totals : 607.05836

2 Warnings or Errors :

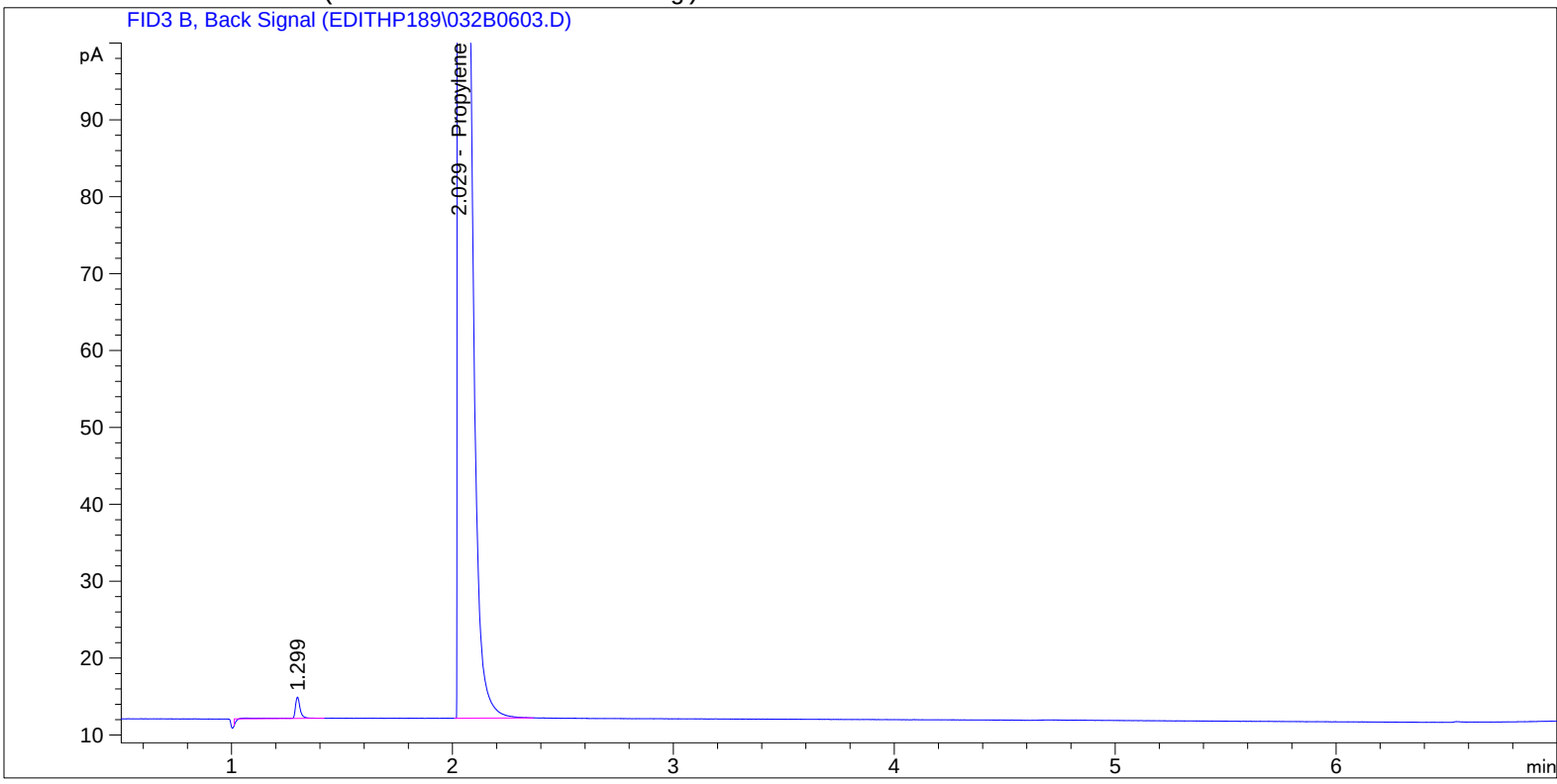
Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File C:\GC\2015\EDITH\QUARTER 1\EDITHP189\032B0603.D
Sample Name: 1214-29.1324.Can P2 *501

```
==================================================================
Acq. Operator   : disconnected                  Seq. Line :   6
Acq. Instrument : Edith                          Location : Vial 32
Injection Date  : 1/19/2015 3:03:32 PM                Inj :   3
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2015\EDITH\QUARTER 1\EDITHP189\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2015\EDITH\METHODS\EDITHP052R_HRVOC_ACETYLENE.M
Last changed    : 1/20/2015 3:18:38 PM by Justin Guenzler
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Justin Guenzler
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP189.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/20/2015 3:18:38 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]          [pA*s]                  [ppm]
-------|------|----------|----------|----------|--|------------------
  1.165            -           -          -          Ethylene
  2.029 BB      991.56335 6.17550e-1  612.33976       Propylene
  2.950            -           -          -          Acetylene
  4.130            -           -          -          trans-2-Butene
  4.176            -           -          -          1-Butene
  4.500            -           -          -          Isobutylene
  4.650            -           -          -          cis-2-Butene
  5.500            -           -          -          1,3-Butadiene
```

Report From Undiluted Analysis (JKG)

Data File C:\GC\2015\EDITH\QUARTER 1\EDITHP189\032B0603.D
Sample Name: 1214-29.1324.Can P2 *501

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				612.33976		

2 Warnings or Errors :

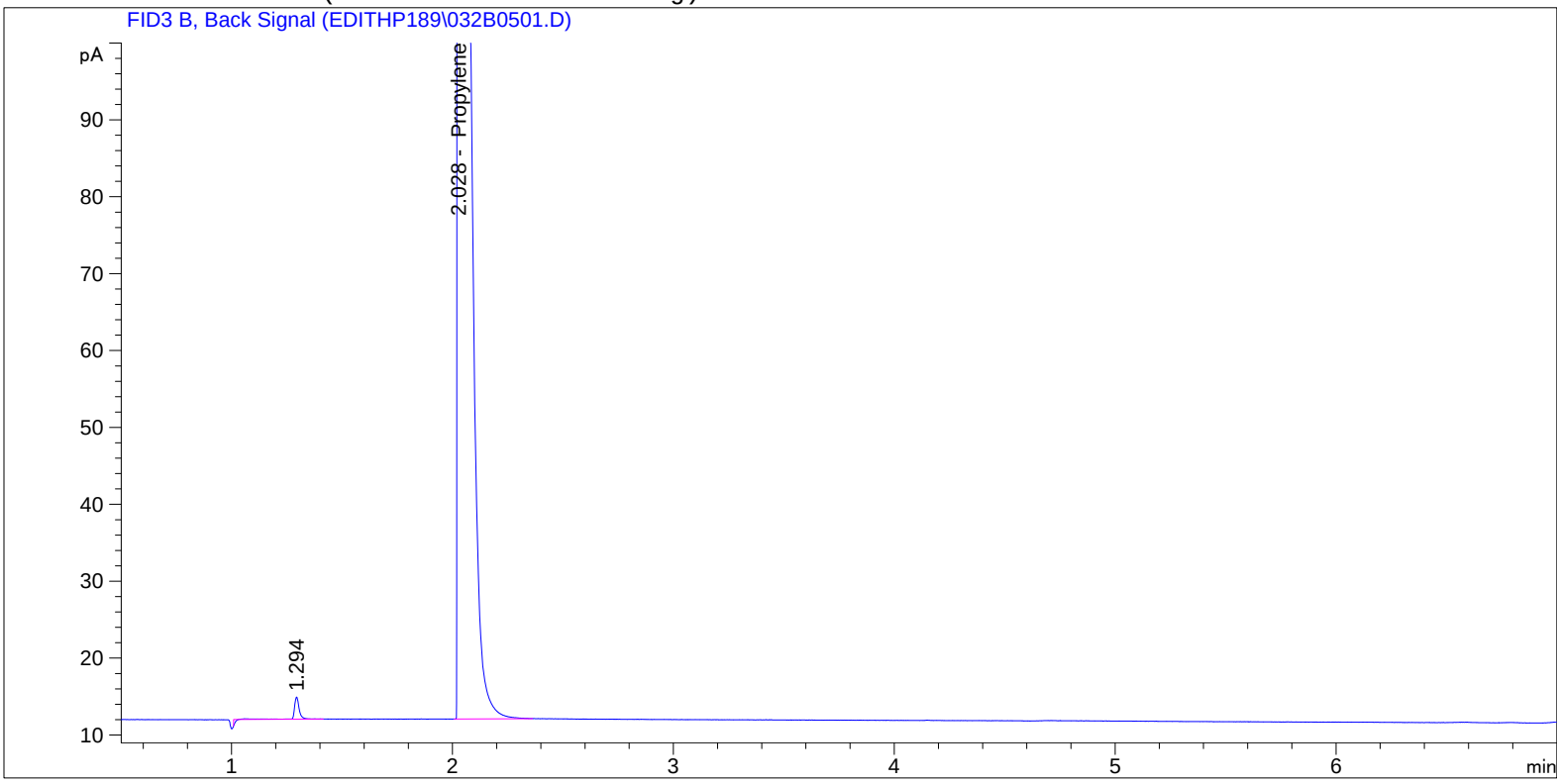
Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File C:\GC\2015\EDITH\QUARTER 1\EDITHP189\032B0501.D
Sample Name: 1214-29.1453.Can P2 *501

```
==================================================================
Acq. Operator   : disconnected                  Seq. Line :   5
Acq. Instrument : Edith                          Location : Vial 32
Injection Date  : 1/19/2015 1:33:56 PM                Inj :   1
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2015\EDITH\QUARTER 1\EDITHP189\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2015\EDITH\METHODS\EDITHP052R_HRVOC_ACETYLENE.M
Last changed    : 1/20/2015 3:18:38 PM by Justin Guenzler
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Justin Guenzler
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP189.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/20/2015 3:18:38 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
~~1.165~~		-		-		~~Ethylene~~
2.028	BB	1006.18024	6.17551e-1	621.36743		Propylene
~~2.950~~		-		-		~~Acetylene~~
4.130		-		-		trans-2-Butene
4.176		-		-		1-Butene
4.500		-		-		Isobutylene
4.650		-		-		cis-2-Butene
~~5.500~~		-		-		~~1,3-Butadiene~~

Report From Undiluted Analysis (JKG)

Data File C:\GC\2015\EDITH\QUARTER 1\EDITHP189\032B0501.D
Sample Name: 1214-29.1453.Can P2 *501

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				621.36743		

2 Warnings or Errors :

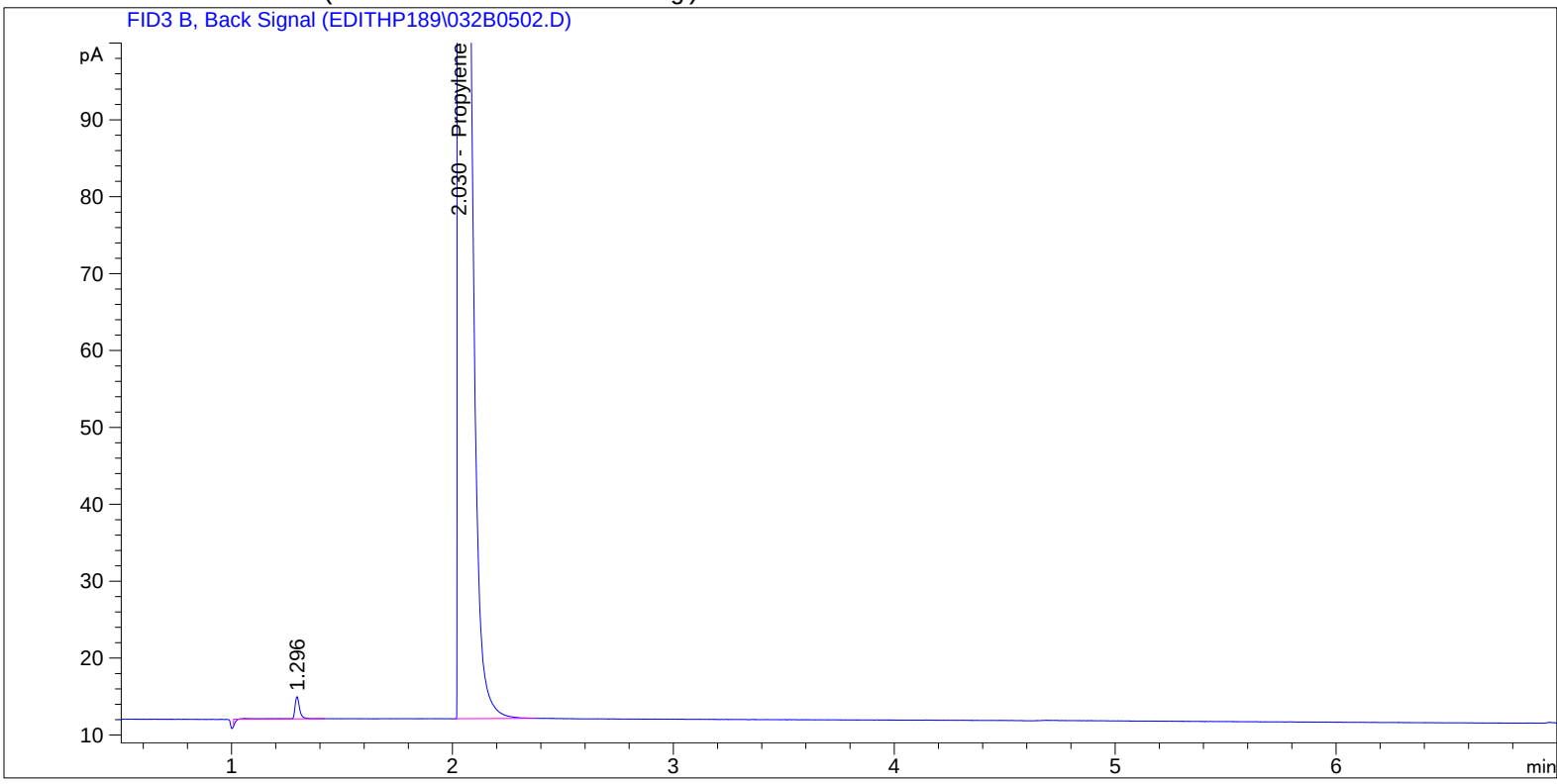
Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File C:\GC\2015\EDITH\QUARTER 1\EDITHP189\032B0502.D
Sample Name: 1214-29.1453.Can P2 *501

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :   5
Acq. Instrument : Edith                           Location : Vial 32
Injection Date  : 1/19/2015 1:48:12 PM                 Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2015\EDITH\QUARTER 1\EDITHP189\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2015\EDITH\METHODS\EDITHP052R_HRVOC_ACETYLENE.M
Last changed    : 1/20/2015 3:18:38 PM by Justin Guenzler
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Justin Guenzler
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP189.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/20/2015 3:18:38 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]          [pA*s]                  [ppm]
-------|------|----------|----------|----------|--|------------------
  1.165             -           -          -          Ethylene
  2.030 BB     1009.16626 6.17551e-1  623.21166       Propylene
  2.950             -           -          -          Acetylene
  4.130             -           -          -          trans-2-Butene
  4.176             -           -          -          1-Butene
  4.500             -           -          -          Isobutylene
  4.650             -           -          -          cis-2-Butene
  5.500             -           -          -          1,3-Butadiene
```

Report From Undiluted Analysis (JKG)

Data File C:\GC\2015\EDITH\QUARTER 1\EDITHP189\032B0502.D
Sample Name: 1214-29.1453.Can P2 *501

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				623.21166		

2 Warnings or Errors :

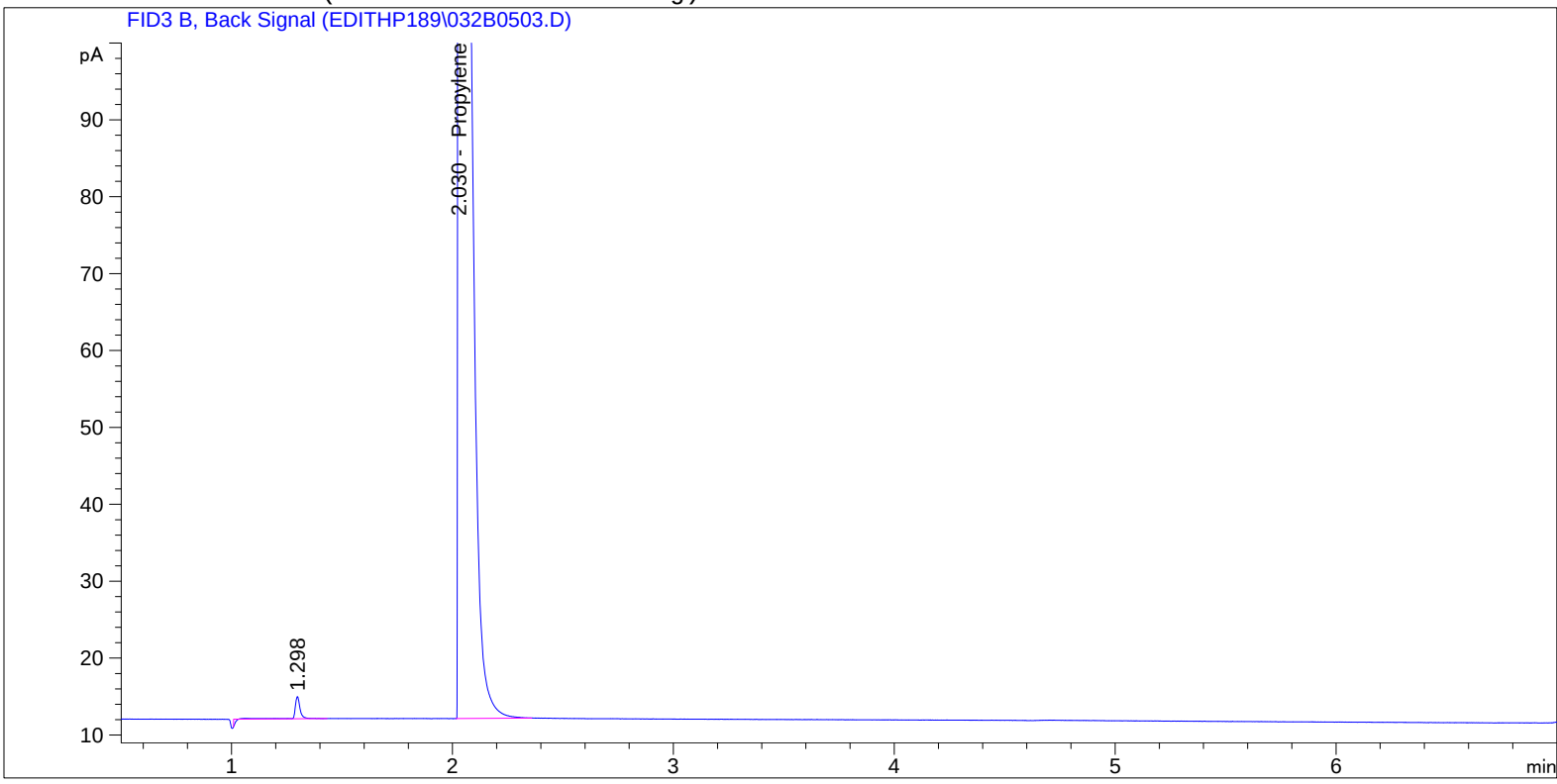
Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File C:\GC\2015\EDITH\QUARTER 1\EDITHP189\032B0503.D
Sample Name: 1214-29.1453.Can P2 *501

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :   5
Acq. Instrument : Edith                           Location : Vial 32
Injection Date  : 1/19/2015 2:02:34 PM                 Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2015\EDITH\QUARTER 1\EDITHP189\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2015\EDITH\METHODS\EDITHP052R_HRVOC_ACETYLENE.M
Last changed    : 1/20/2015 3:18:38 PM by Justin Guenzler
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Justin Guenzler
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP189.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/20/2015 3:18:38 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]          [pA*s]                  [ppm]
-------|------|----------|----------|----------|--|------------------
  1.165            -           -          -          Ethylene
  2.030 BB     1018.22156 6.17552e-1  628.80439      Propylene
  2.950            -           -          -          Acetylene
  4.130            -           -          -          trans-2-Butene
  4.176            -           -          -          1-Butene
  4.500            -           -          -          Isobutylene
  4.650            -           -          -          cis-2-Butene
  5.500            -           -          -          1,3-Butadiene
```

Report From Undiluted Analysis (JKG)

Data File C:\GC\2015\EDITH\QUARTER 1\EDITHP189\032B0503.D
Sample Name: 1214-29.1453.Can P2 *501

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				628.80439		

2 Warnings or Errors :

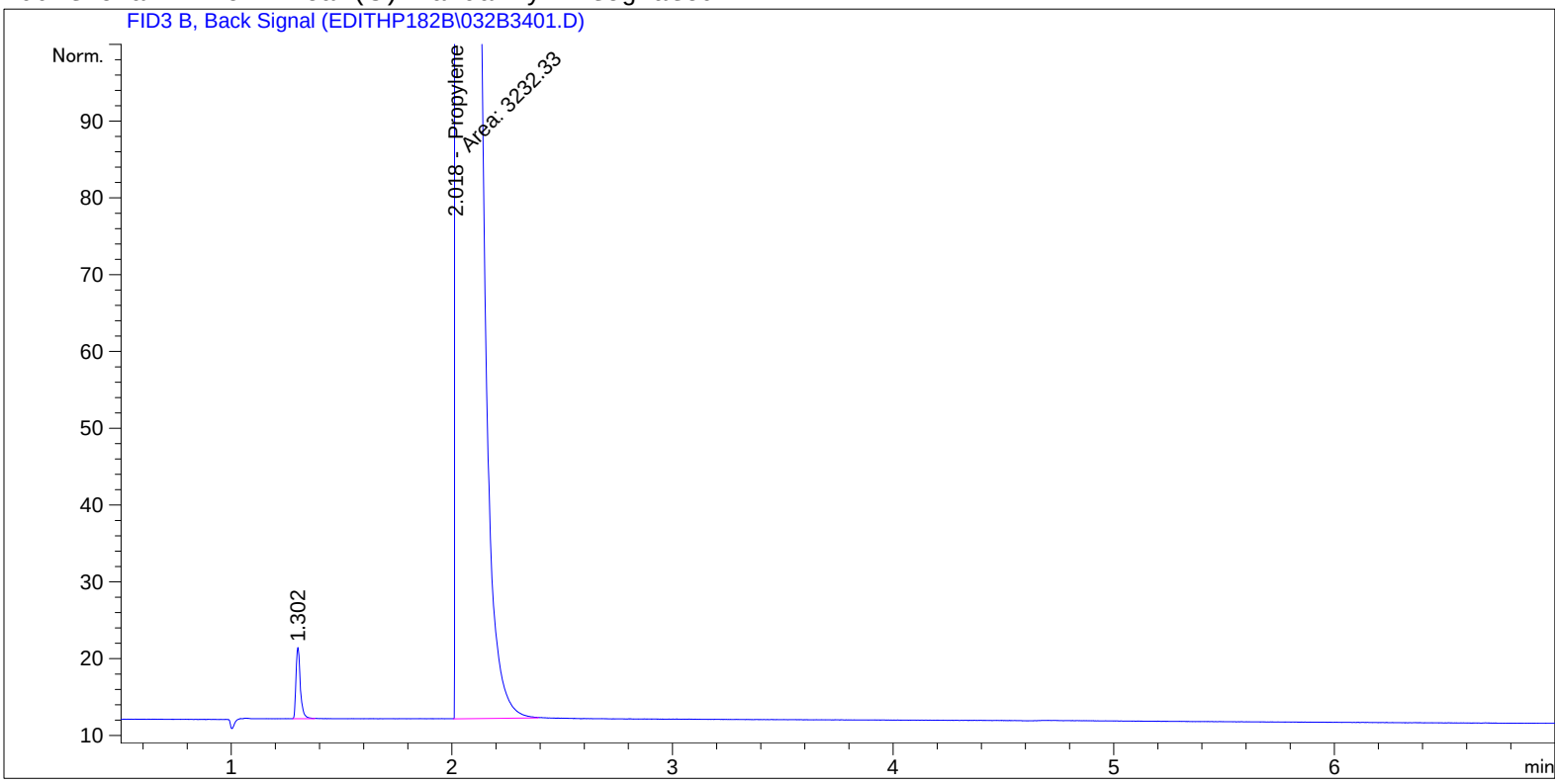
Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\032B3401.D
Sample Name: 1214-29.1308.Can *501

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  34
Acq. Instrument : Edith                           Location : Vial 32
Injection Date  : 1/9/2015 7:08:38 PM                  Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP052R_HRVOC_PROPYLENE.M
Last changed    : 1/12/2015 11:08:52 AM by Turner Oppy
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 11:08:49 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|-----------------
  2.018 MM     3232.33301 6.17598e-1 1996.28351    Propylene

Totals :                               1996.28351

Uncalibrated Peaks    :      using compound Propylene
```

Manual Int. "NI" (TBO)

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\032B3401.D
Sample Name: 1214-29.1308.Can *501

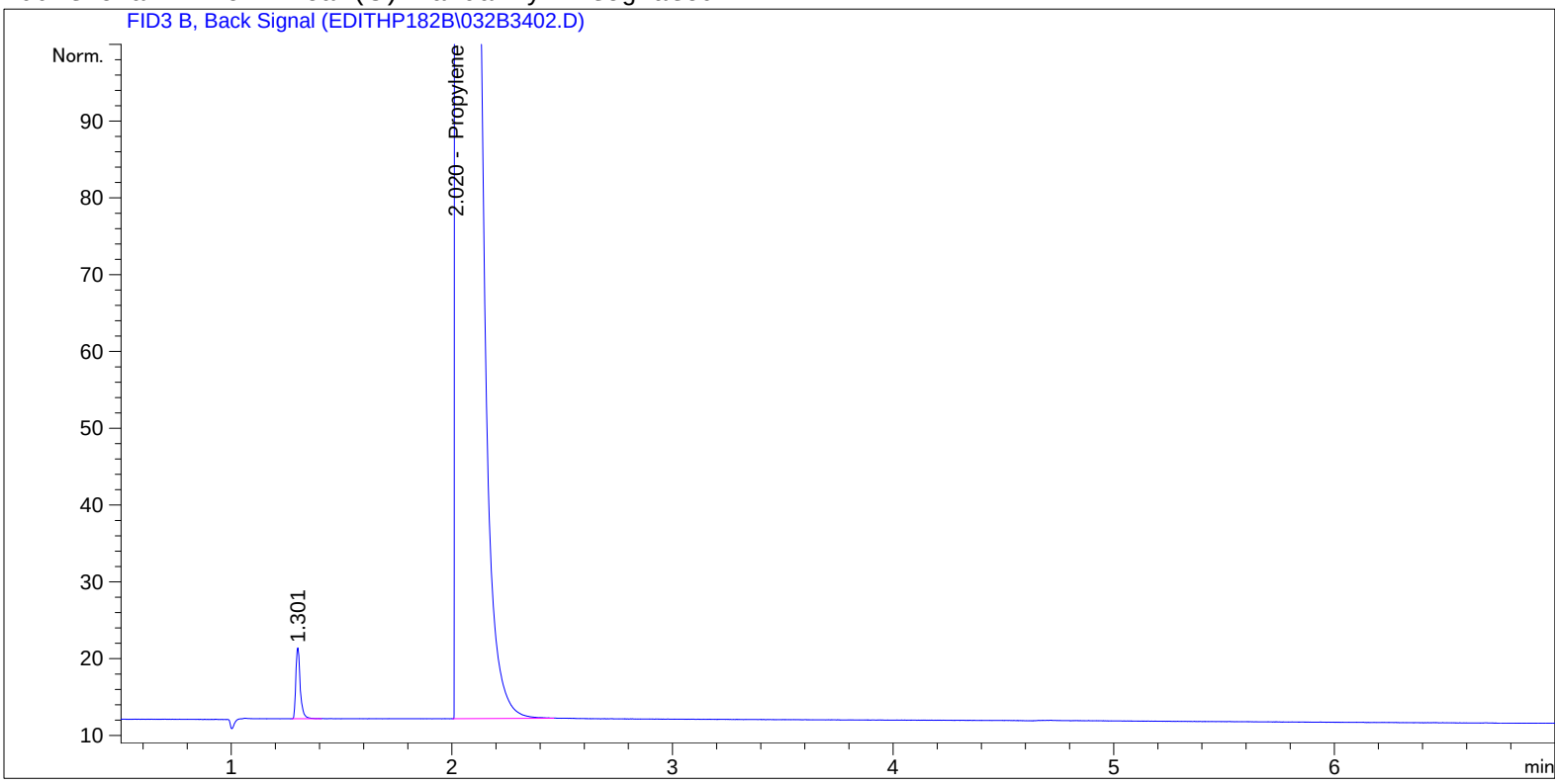
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.302	BB	12.81526	6.12202e-1	7.84553		?

Uncalib. totals : 7.84553

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\032B3402.D
Sample Name: 1214-29.1308.Can *501

```
==================================================================
Acq. Operator   : disconnected                  Seq. Line :  34
Acq. Instrument : Edith                          Location : Vial 32
Injection Date  : 1/9/2015 7:22:58 PM                 Inj :   2
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP052R_HRVOC_PROPYLENE.M
Last changed    : 1/12/2015 11:08:52 AM by Turner Oppy
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 11:09:11 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|-----------------
  2.020 BB     3216.04468 6.17598e-1 1986.22351    Propylene

Totals :                              1986.22351

Uncalibrated Peaks    :      using compound Propylene
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\032B3402.D
Sample Name: 1214-29.1308.Can *501

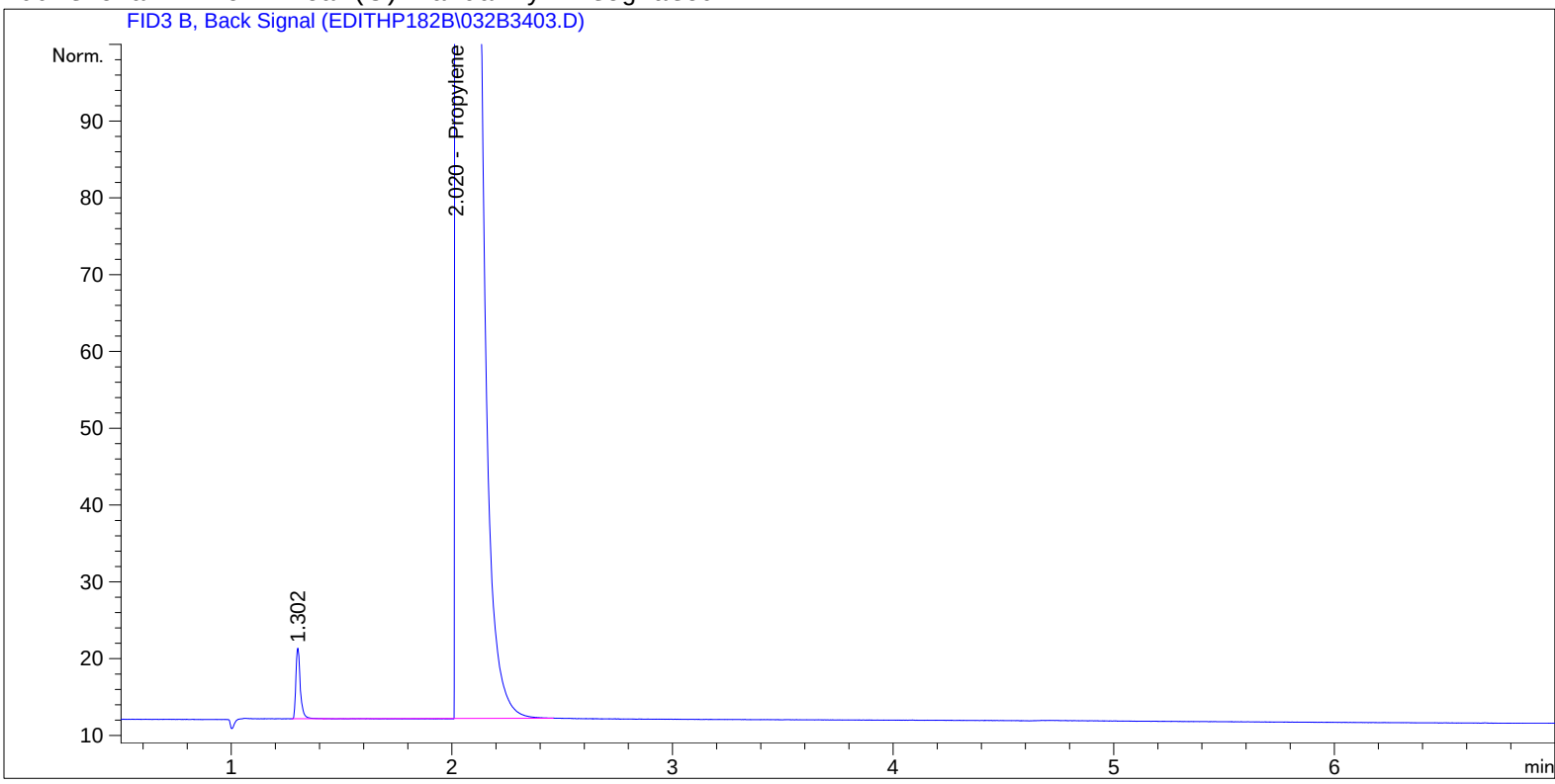
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.301	BB	12.72481	6.12164e-1	7.78967		?

Uncalib. totals : 7.78967

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\032B3403.D
Sample Name: 1214-29.1308.Can *501

```
==================================================================
Acq. Operator   : disconnected                  Seq. Line :  34
Acq. Instrument : Edith                          Location : Vial 32
Injection Date  : 1/9/2015 7:36:59 PM                 Inj :   3
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP052R_HRVOC_PROPYLENE.M
Last changed    : 1/12/2015 11:08:52 AM by Turner Oppy
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
Additional Info : Peak(s) manually integrated
```




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 11:09:11 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|-----------------
  2.020 VB     3215.54077 6.17598e-1 1985.91229    Propylene

Totals :                              1985.91229

Uncalibrated Peaks    :      using compound Propylene
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\032B3403.D
Sample Name: 1214-29.1308.Can *501

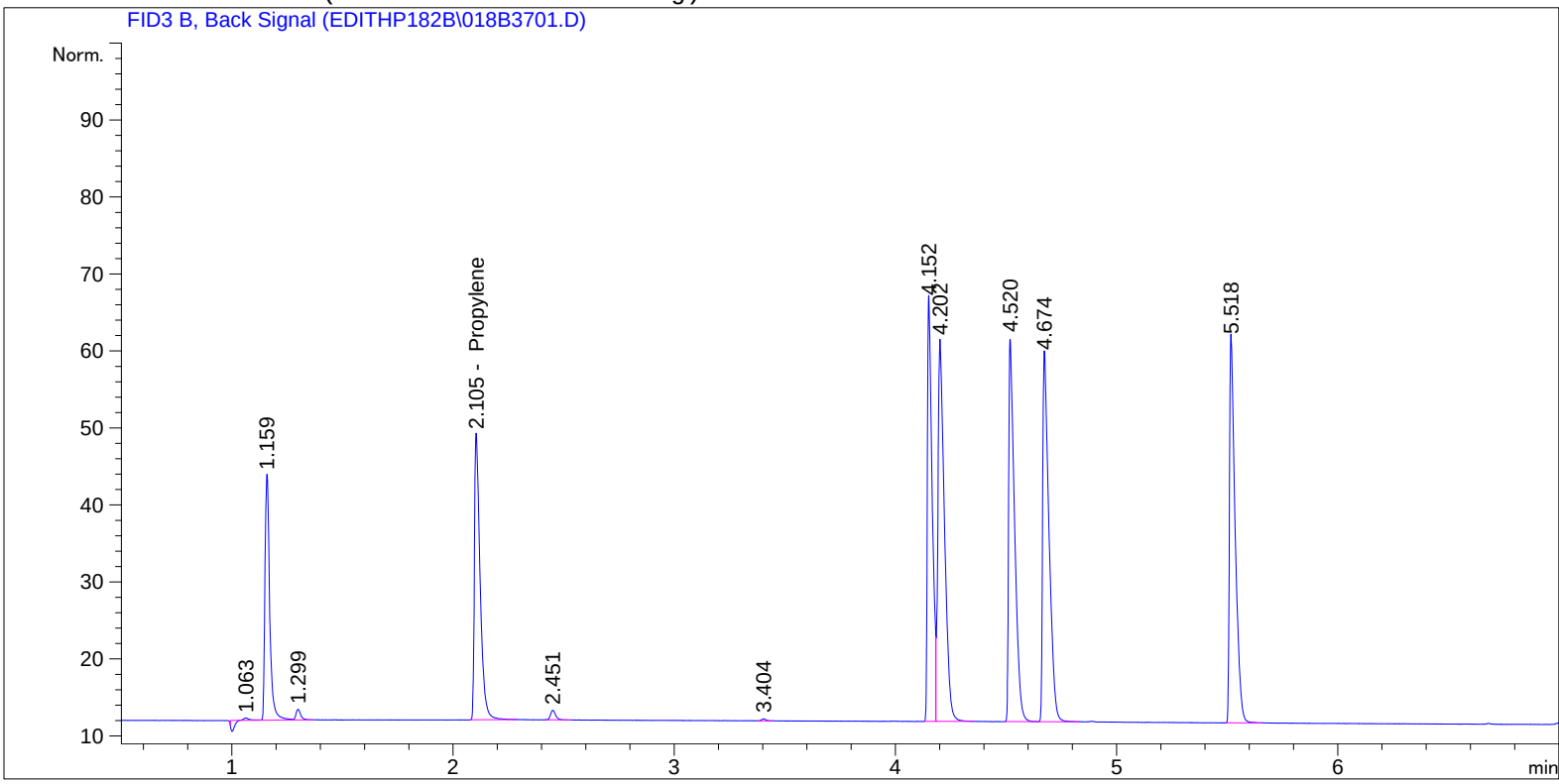
RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.302	BP	12.74923	6.12174e-1	7.80475		?

Uncalib. totals : 7.80475

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\018B3701.D
Sample Name: EdithP155 #HR4 ENV(1=600,4=400)

```
==================================================================
Acq. Operator   : disconnected                  Seq. Line :  37
Acq. Instrument : Edith                        Location : Vial 18
Injection Date  : 1/9/2015 9:54:05 PM               Inj :   1
                                              Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP052R_HRVOC_PROPYLENE.M
Last changed    : 1/12/2015 11:09:39 AM by Turner Oppy
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 11:09:39 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal

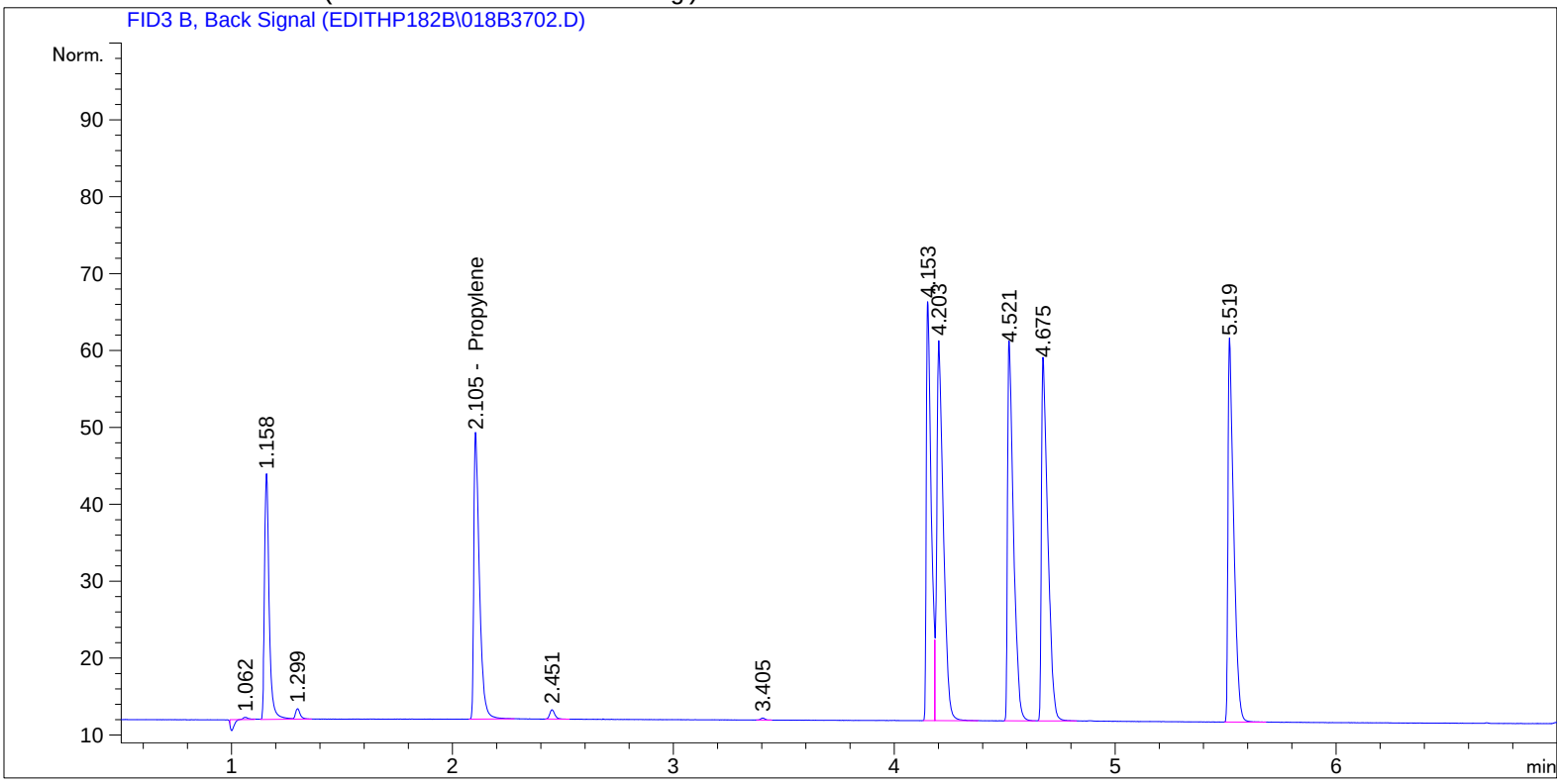
RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  2.105 BB       66.19543 6.16571e-1   40.81419    Propylene

Totals :                               40.81419

Uncalibrated Peaks    :      using compound Propylene
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\018B3702.D
Sample Name: EdithP155 #HR4 ENV(1=600,4=400)

```
==================================================================
Acq. Operator   : disconnected                  Seq. Line :  37
Acq. Instrument : Edith                        Location : Vial 18
Injection Date  : 1/9/2015 10:11:08 PM              Inj :   2
                                              Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP052R_HRVOC_PROPYLENE.M
Last changed    : 1/12/2015 11:09:39 AM by Turner Oppy
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 11:09:39 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal

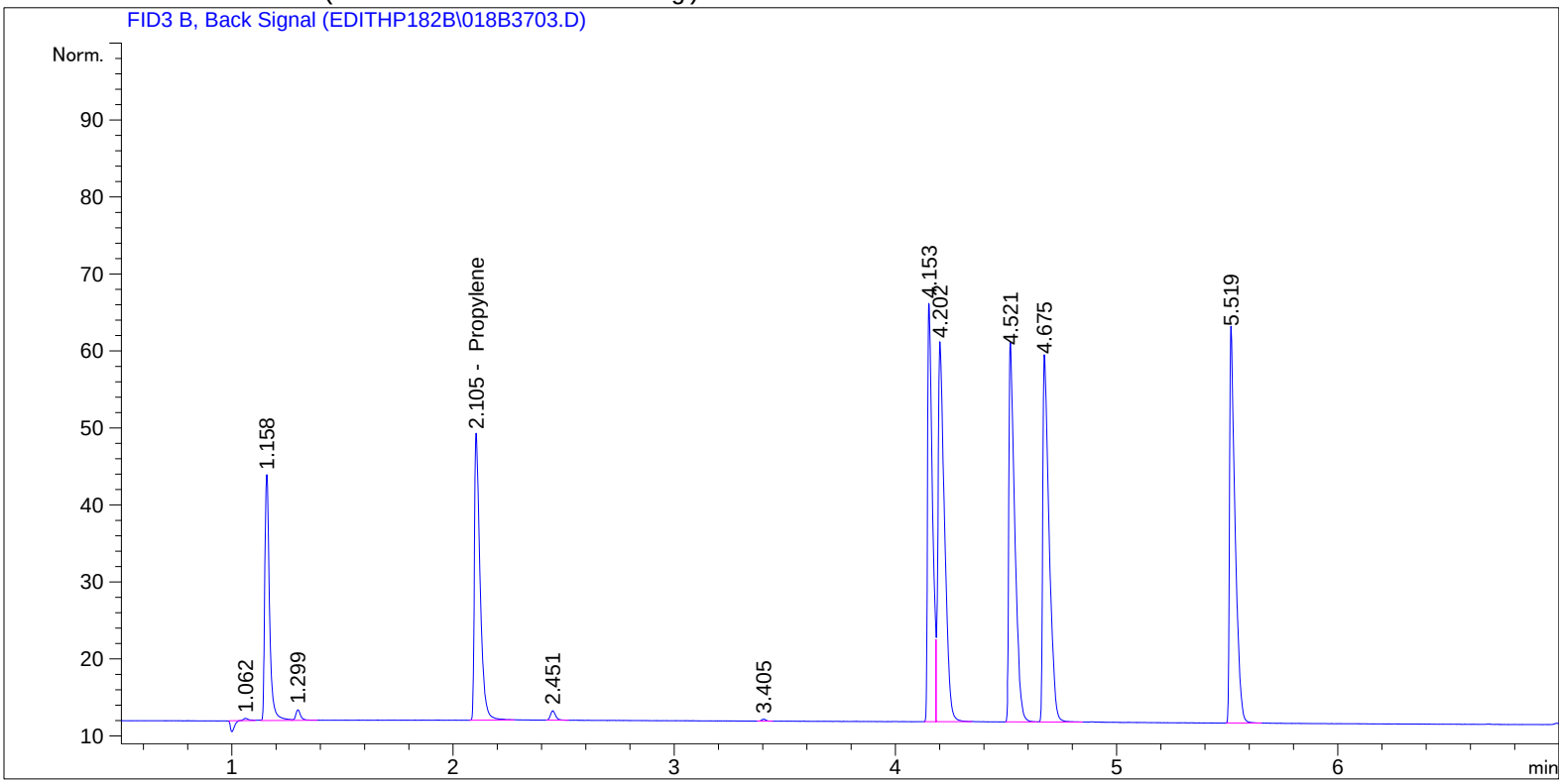
RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  2.105 BB       65.69013 6.16563e-1   40.50210    Propylene

Totals :                               40.50210

Uncalibrated Peaks    :      using compound Propylene
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\018B3703.D
Sample Name: EdithP155 #HR4 ENV(1=600,4=400)

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  37
Acq. Instrument : Edith                          Location : Vial 18
Injection Date  : 1/9/2015 10:28:05 PM                Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP052R_HRVOC_PROPYLENE.M
Last changed    : 1/12/2015 11:09:39 AM by Turner Oppy
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 11:09:39 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal

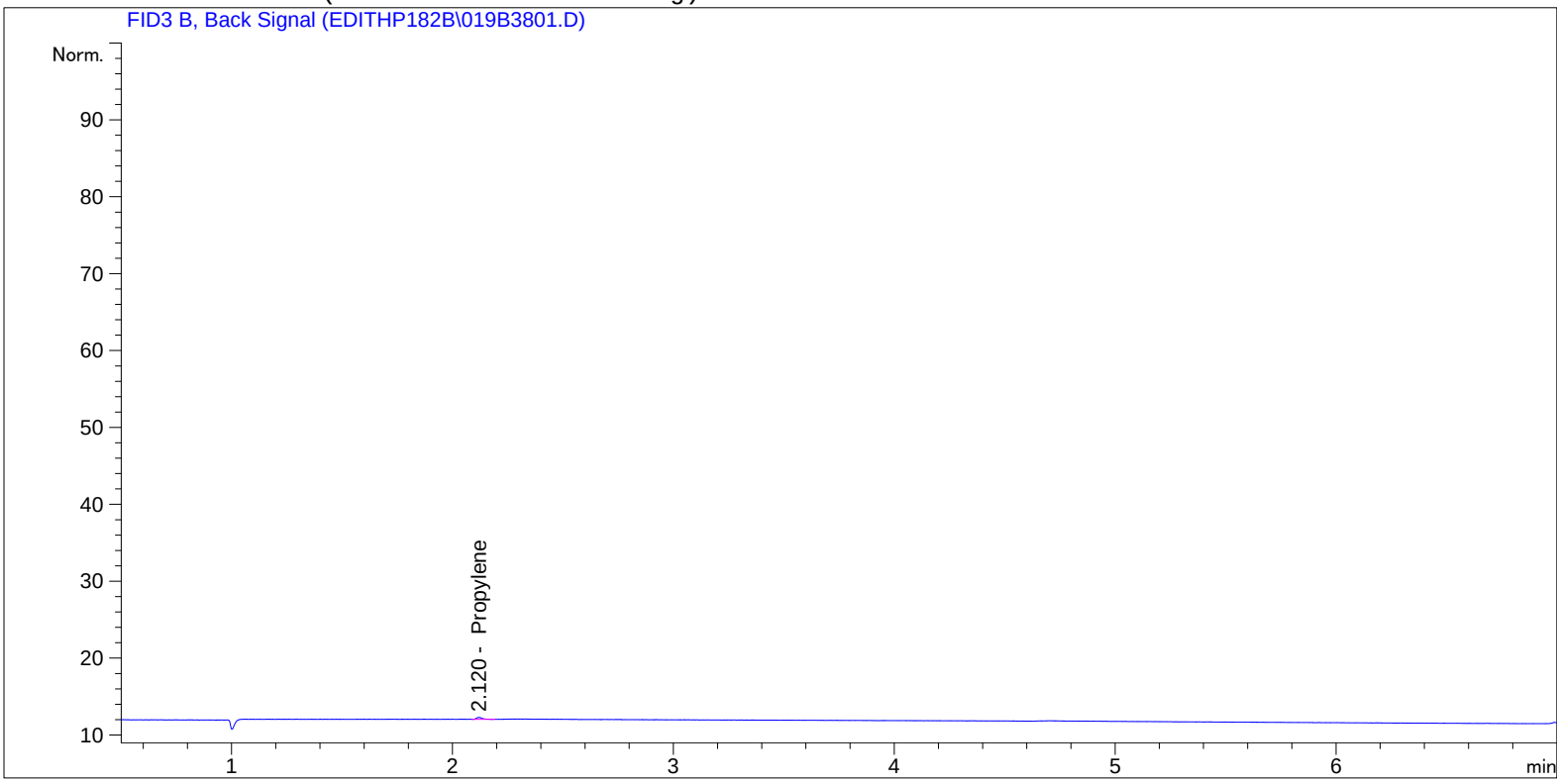
RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  2.105 BB       65.85711 6.16566e-1   40.60523    Propylene

Totals :                               40.60523

Uncalibrated Peaks    :      using compound Propylene
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\019B3801.D
Sample Name: zero air blank

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  38
Acq. Instrument : Edith                           Location : Vial 19
Injection Date  : 1/9/2015 10:59:32 PM                 Inj :   1
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC_LONG.M
Last changed    : 1/15/2014 1:35:32 PM by Justin Guenzler
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP052R_HRVOC_PROPYLENE.M
Last changed    : 1/12/2015 11:09:39 AM by Turner Oppy
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 11:09:39 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal

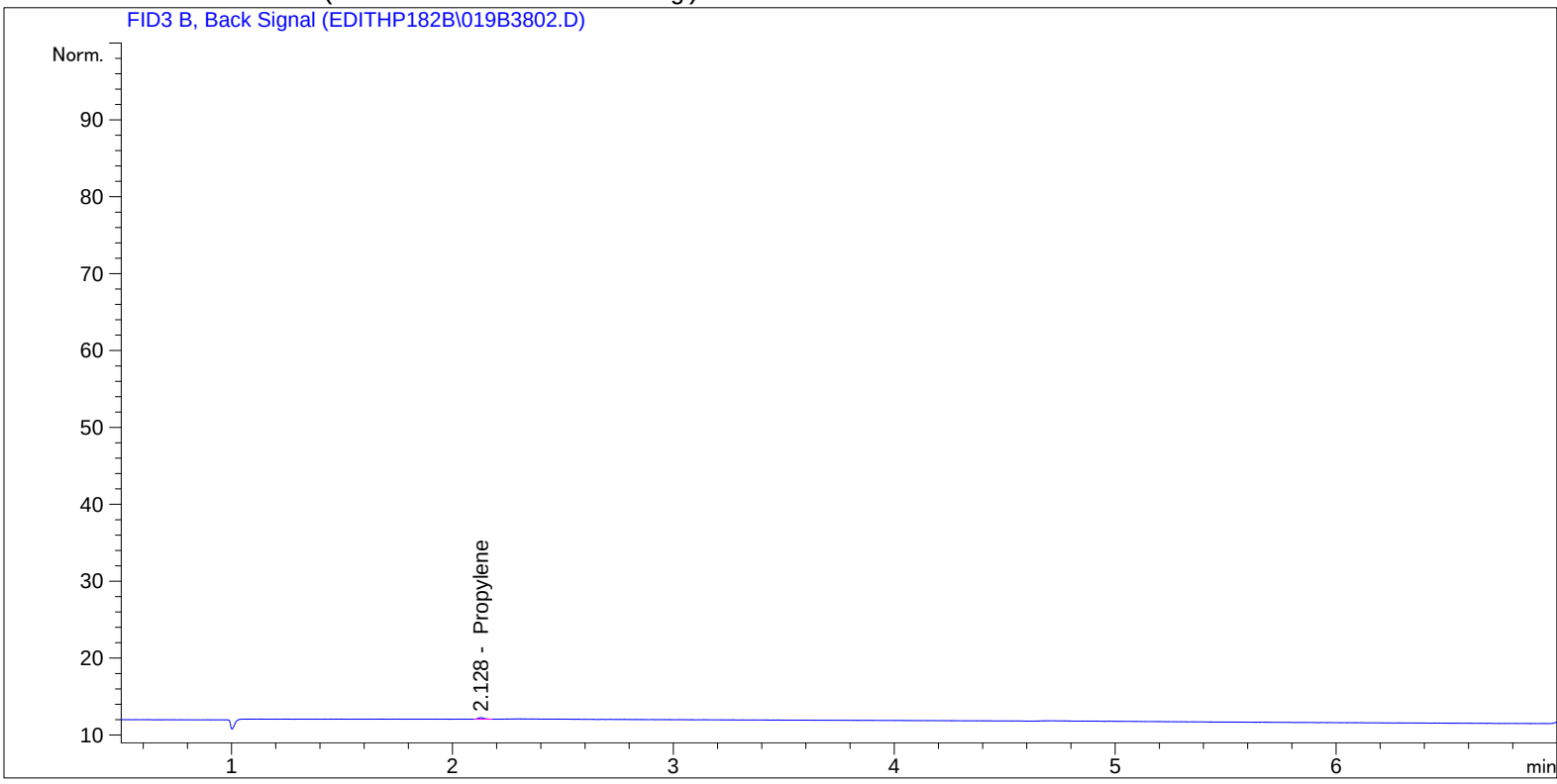
RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                  [ppm]
-------|------|----------|----------|----------|--|------------------
  2.120 BB     4.22968e-1 5.85121e-1 2.47488e-1    Propylene

Totals :                              2.47488e-1

Uncalibrated Peaks    :      using compound Propylene
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\019B3802.D
Sample Name: zero air blank

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  38
Acq. Instrument : Edith                           Location : Vial 19
Injection Date  : 1/9/2015 11:17:36 PM                 Inj :   2
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC_LONG.M
Last changed    : 1/15/2014 1:35:32 PM by Justin Guenzler
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP052R_HRVOC_PROPYLENE.M
Last changed    : 1/12/2015 11:10:01 AM by Turner Oppy
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 11:09:39 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal

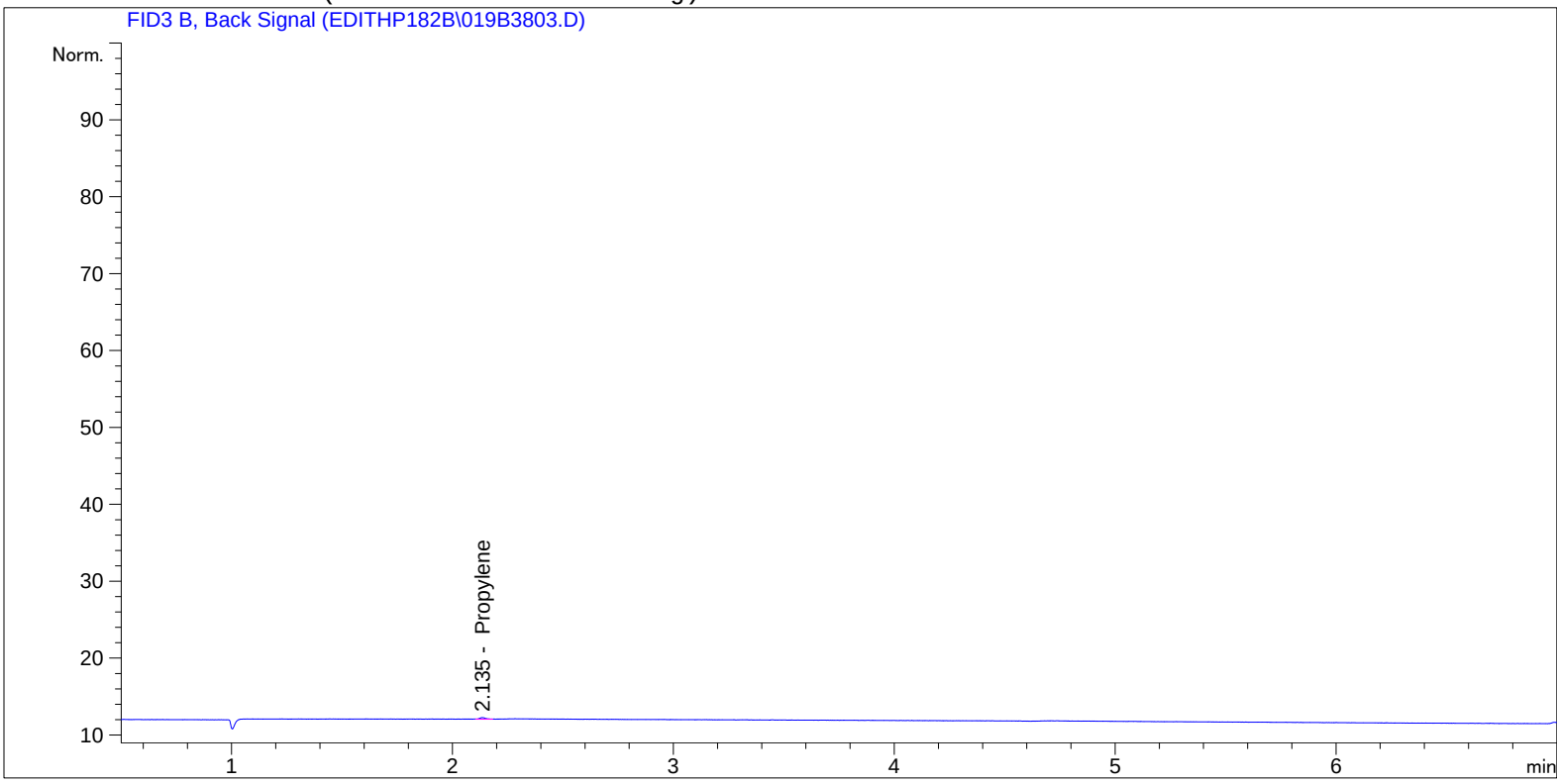
RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  2.128 BB     3.54406e-1 5.85121e-1 2.07371e-1    Propylene

Totals :                              2.07371e-1

Uncalibrated Peaks    :      using compound Propylene
```

Data File C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\019B3803.D
Sample Name: zero air blank

```
==========================================================================
Acq. Operator   : disconnected                    Seq. Line :  38
Acq. Instrument : Edith                           Location : Vial 19
Injection Date  : 1/9/2015 11:35:53 PM                 Inj :   3
                                                 Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 4\EDITHP182B\GC139P039_HRVOC_LONG.M
Last changed    : 1/15/2014 1:35:32 PM by Justin Guenzler
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP052R_HRVOC_PROPYLENE.M
Last changed    : 1/12/2015 11:10:01 AM by Turner Oppy
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Turner Oppy
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP182B.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/12/2015 11:09:39 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  2.135 BB     3.42823e-1 5.85121e-1 2.00593e-1    Propylene

Totals :                              2.00593e-1

Uncalibrated Peaks    :      using compound Propylene
```

Calibration Table

Calib. Data Modified : 1/12/2015 11:09:39 AM

Rel. Reference Window : 0.000 %
Abs. Reference Window : 0.100 min
Rel. Non-ref. Window : 0.000 %
Abs. Non-ref. Window : 0.050 min
Uncalibrated Peaks : Separately calculated (see below)
Partial Calibration : Yes, identified peaks are recalibrated
Correct All Ret. Times: No, only for identified peaks

Curve Type : Linear
Origin : Connected
Weight : Quadratic (Amnt)

Recalibration Settings:
Average Response : Average all calibrations
Average Retention Time: Floating Average New 75%

Calibration Report Options :
Printout of recalibrations within a sequence:
Calibration Table after Recalibration
Normal Report after Recalibration
If the sequence is done with bracketing:
Results of first cycle (ending previous bracket)

Signal 1: FID1 A, Front Signal
Uncalibrated Peaks : not reported
Signal 2: FID3 B, Back Signal
Uncalibrated Peaks : using compound Propylene

RetTime [min]	Sig	Lvl	Amount [ppm]	Area	Amt/Area	Ref	Grp	Name
2.130	2	61	1.25000	2.12937	5.87029e-1			Propylene
		62	4.99000	8.29263	6.01739e-1			
		63	19.94000	32.40038	6.15425e-1			
		64	39.90000	65.54734	6.08720e-1			
		65	99.70000	161.53156	6.17217e-1			
		66	210.00000	335.68747	6.25582e-1			
		67	308.82000	497.00771	6.21359e-1			
		69	4200.00000	6782.26042	6.19263e-1			

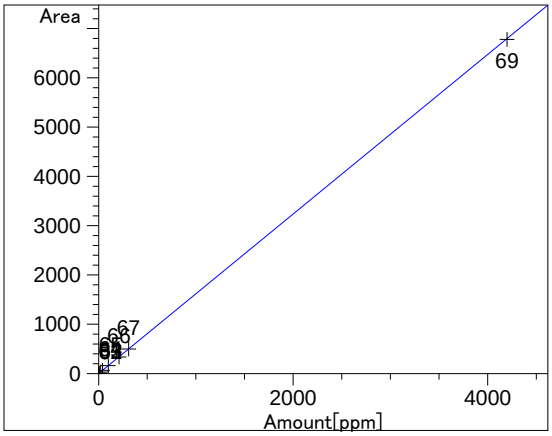
Peak Sum Table

No Entries in table

==========

Calibration Curves

==========



Propylene at exp. RT: 2.130
FID3 B, Back Signal
Correlation: 0.99996
Residual Std. Dev.: 7.74217
Formula: y = mx + b
m: 1.61912
b: 1.12411e-1
x: Amount
y: Area
Calibration Level Weights:
Level 61 : 1
Level 62 : 0.062751
Level 63 : 0.00393
Level 64 : 0.000981
Level 65 : 0.000157
Level 66 : 0.000035
Level 67 : 0.000016
Level 69 : 8.85771e-008

==========

Calibration Table

Calib. Data Modified : 6/23/2014 10:57:28 AM

Rel. Reference Window : 0.000 %
Abs. Reference Window : 0.100 min
Rel. Non-ref. Window : 0.000 %
Abs. Non-ref. Window : 0.050 min
Uncalibrated Peaks : not reported
Partial Calibration : Yes, identified peaks are recalibrated
Correct All Ret. Times: No, only for identified peaks

Curve Type : Linear
Origin : Connected
Weight : Quadratic (Amnt)

Recalibration Settings:
Average Response : Average all calibrations
Average Retention Time: Floating Average New 75%

Calibration Report Options :
Printout of recalibrations within a sequence:
Calibration Table after Recalibration
Normal Report after Recalibration
If the sequence is done with bracketing:
Results of first cycle (ending previous bracket)

Signal 1: FID1 A, Front Signal
Signal 2: FID3 B, Back Signal

RetTime [min]	Sig	Lvl	Amount [ppm]	Area	Amt/Area	Ref	Grp	Name
1.165	2	61	1.29000	1.57551	8.18782e-1			Ethylene
		62	5.15000	6.30810	8.16411e-1			
		63	20.60000	23.51073	8.76196e-1			
		64	41.20000	46.91324	8.78217e-1			
		65	103.00000	115.04617	8.95293e-1			
		66	196.00000	223.88818	8.75437e-1			
		67	288.24000	331.26403	8.70122e-1			
		69	3920.00000	4517.32292	8.67771e-1			
2.016	2	61	1.25000	2.12937	5.87029e-1			Propylene
		62	4.99000	8.29263	6.01739e-1			
		63	19.94000	32.40038	6.15425e-1			
		64	39.90000	65.54734	6.08720e-1			
		65	99.70000	161.53156	6.17217e-1			
		66	210.00000	335.68747	6.25582e-1			
		67	308.82000	497.00771	6.21359e-1			
		69	4200.00000	6782.26042	6.19263e-1			
3.149	2	51	2.50000	3.50740	7.12779e-1			Acetylene
		52	14.70600	20.37861	7.21639e-1			
		53	125.00000	178.72140	6.99413e-1			
		54	250.00000	343.08602	7.28680e-1			
4.179	2	61	1.28750	3.14187	4.09788e-1			trans-2-Butene
		62	5.15000	11.65753	4.41775e-1			
		63	20.60000	44.93304	4.58460e-1			
		64	41.20000	88.76618	4.64141e-1			
		65	103.00000	212.59893	4.84480e-1			
		66	206.00000	410.72234	5.01555e-1			
		67	302.94000	580.44826	5.21907e-1			

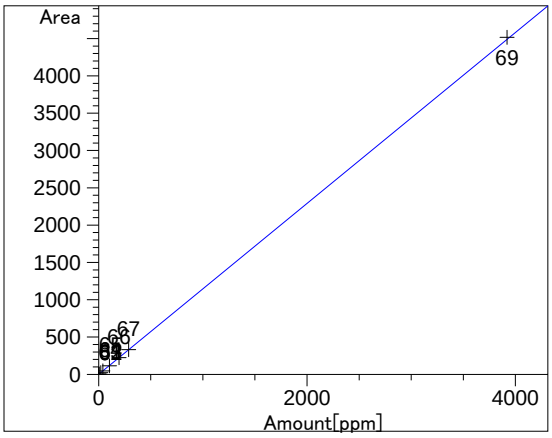
Method C:\GC\2014\EDITH\METHODS\EDITHP052R_HRVOC_ACETYLENE.M

RetTime [min]	Sig	Lvl	Amount [ppm]	Area	Amt/Area	Ref Grp	Name
4.239	2	61	1.30000	3.20633	4.05449e-1		1-Butene
		62	5.20000	12.28898	4.23143e-1		
		63	20.80000	47.68281	4.36216e-1		
		64	41.60000	96.62514	4.30530e-1		
		65	104.00000	244.27413	4.25751e-1		
		66	206.00000	493.08966	4.17774e-1		
		67	302.94000	759.13763	3.99058e-1		
4.562	2	61	1.30000	3.17807	4.09053e-1		Isobutylene
		62	5.20000	11.82203	4.39857e-1		
		63	20.80000	46.01850	4.51992e-1		
		64	41.60000	92.09678	4.51699e-1		
		65	104.00000	226.60143	4.58956e-1		
		66	206.00000	448.19190	4.59625e-1		
		67	302.94000	663.45522	4.56610e-1		
4.717	2	61	1.31250	3.23696	4.05473e-1		cis-2-Butene
		62	5.25000	12.27261	4.27782e-1		
		63	21.00000	47.68250	4.40413e-1		
		64	42.00000	95.27670	4.40821e-1		
		65	105.00000	234.84230	4.47109e-1		
		66	208.00000	456.13542	4.56005e-1		
		67	305.88000	676.50861	4.52145e-1		
5.550	2	61	1.26250	3.08077	4.09801e-1		1,3-Butadiene
		62	5.05000	11.59423	4.35561e-1		
		63	20.20000	45.01618	4.48728e-1		
		64	40.40000	90.13220	4.48230e-1		
		65	101.00000	222.42559	4.54084e-1		
		66	204.00000	447.61721	4.55747e-1		
		67	300.00000	663.92749	4.51857e-1		

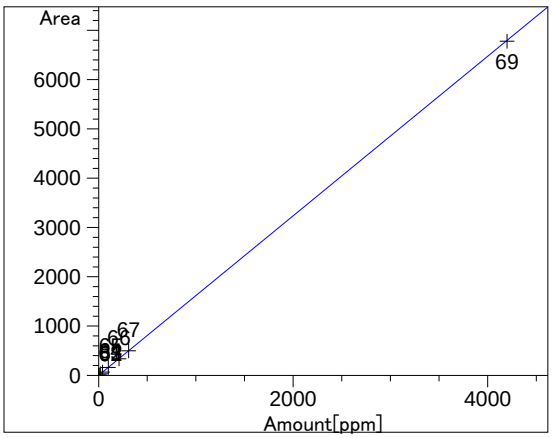
Peak Sum Table

No Entries in table

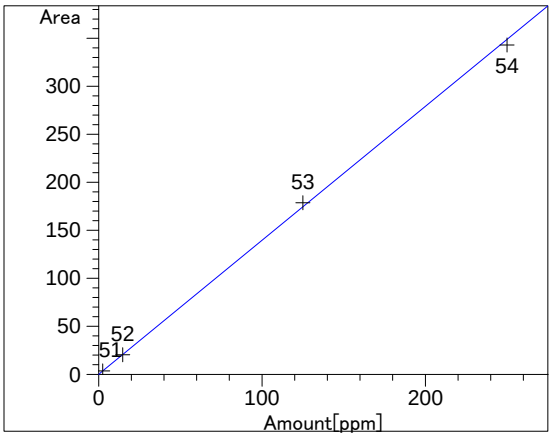
Calibration Curves



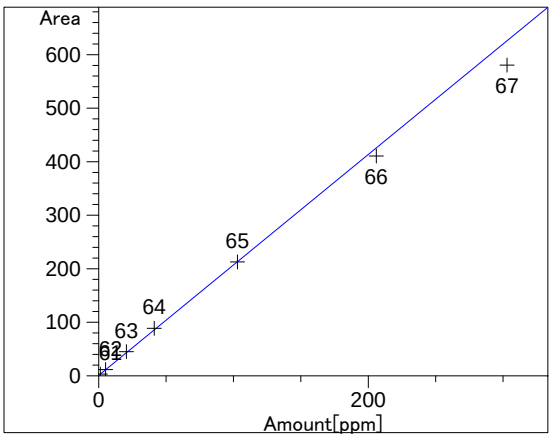
Ethylene at exp. RT: 1.165
FID3 B, Back Signal
Correlation: 0.99972
Residual Std. Dev.: 10.66832
Formula: y = mx + b
m: 1.14574
b: 1.14214e-1
x: Amount
y: Area
Calibration Level Weights:
Level 61 : 1
Level 62 : 0.062743
Level 63 : 0.003921
Level 64 : 0.00098
Level 65 : 0.000157
Level 66 : 0.000043
Level 67 : 0.00002
Level 69 : 1.08295e-007



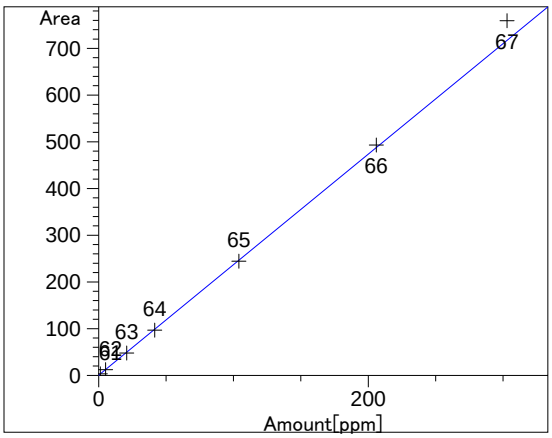
Propylene at exp. RT: 2.016
FID3 B, Back Signal
Correlation: 0.99996
Residual Std. Dev.: 7.74217
Formula: y = mx + b
m: 1.61912
b: 1.12411e-1
x: Amount
y: Area
Calibration Level Weights:
Level 61 : 1
Level 62 : 0.062751
Level 63 : 0.00393
Level 64 : 0.000981
Level 65 : 0.000157
Level 66 : 0.000035
Level 67 : 0.000016
Level 69 : 8.85771e-008



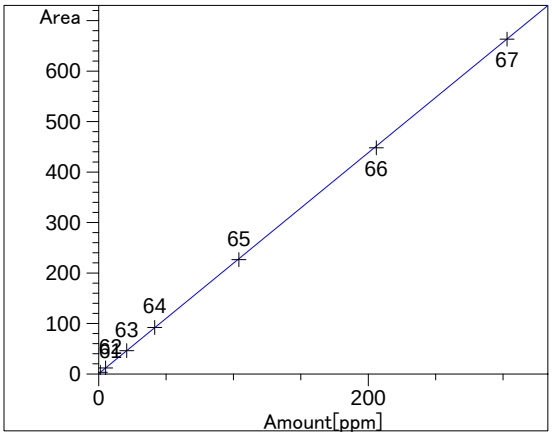
Acetylene at exp. RT: 3.149
FID3 B, Back Signal
Correlation: 0.99982
Residual Std. Dev.: 5.14929
Formula: y = mx + b
m: 1.39608
b: 1.34847e-2
x: Amount
y: Area
Calibration Level Weights:
Level 51 : 1
Level 52 : 0.0289
Level 53 : 0.0004
Level 54 : 0.0001



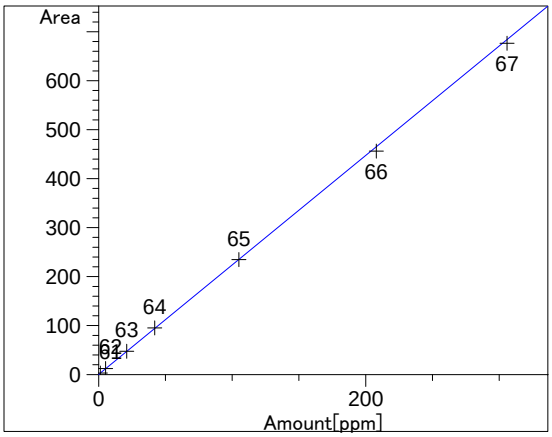
trans-2-Butene at exp. RT: 4.179
FID3 B, Back Signal
Correlation: 0.99883
Residual Std. Dev.: 21.66997
Formula: y = mx + b
m: 2.06558
b: 5.22331e-1
x: Amount
y: Area
Calibration Level Weights:
Level 61 : 1
Level 62 : 0.0625
Level 63 : 0.003906
Level 64 : 0.000977
Level 65 : 0.000156
Level 66 : 0.000039
Level 67 : 0.000018



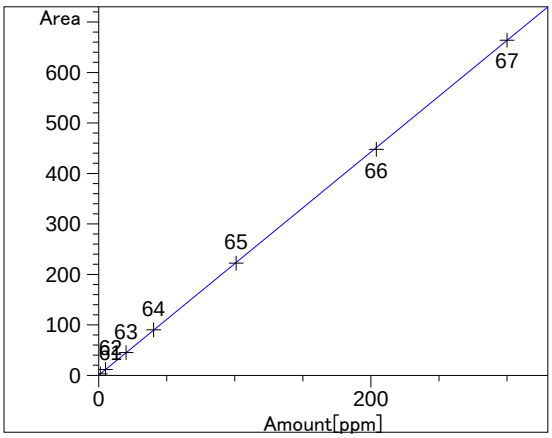
1-Butene at exp. RT: 4.239
FID3 B, Back Signal
Correlation: 0.99950
Residual Std. Dev.: 18.83864
Formula: y = mx + b
m: 2.36798
b: 1.11571e-1
x: Amount
y: Area
Calibration Level Weights:
Level 61 : 1
Level 62 : 0.0625
Level 63 : 0.003906
Level 64 : 0.000977
Level 65 : 0.000156
Level 66 : 0.00004
Level 67 : 0.000018



Isobutylene at exp. RT: 4.562
FID3 B, Back Signal
Correlation: 0.99998
Residual Std. Dev.: 1.73000
Formula: y = mx + b
m: 2.19072
b: 3.36650e-1
x: Amount
y: Area
Calibration Level Weights:
Level 61 : 1
Level 62 : 0.0625
Level 63 : 0.003906
Level 64 : 0.000977
Level 65 : 0.000156
Level 66 : 0.00004
Level 67 : 0.000018



cis-2-Butene at exp. RT: 4.717
FID3 B, Back Signal
Correlation: 0.99990
Residual Std. Dev.: 5.46950
Formula: y = mx + b
m: 2.23625
b: 3.17356e-1
x: Amount
y: Area
Calibration Level Weights:
Level 61 : 1
Level 62 : 0.0625
Level 63 : 0.003906
Level 64 : 0.000977
Level 65 : 0.000156
Level 66 : 0.00004
Level 67 : 0.000018

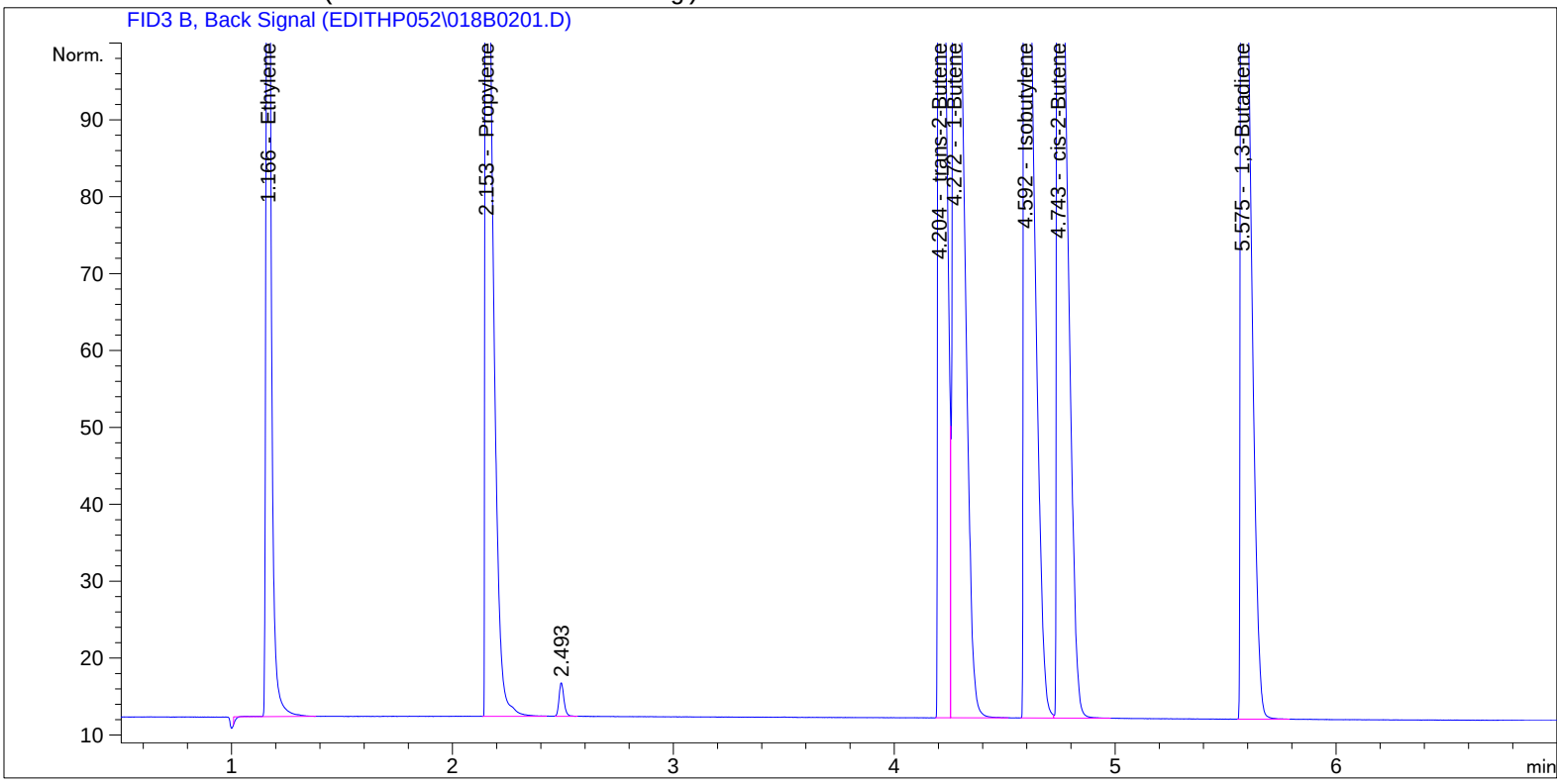


1,3-Butadiene at exp. RT: 5.550
FID3 B, Back Signal
Correlation: 0.99997
Residual Std. Dev.: 1.86737
Formula: y = mx + b
m: 2.21207
b: 2.96214e-1
x: Amount
y: Area
Calibration Level Weights:
Level 61 : 1
Level 62 : 0.0625
Level 63 : 0.003906
Level 64 : 0.000977
Level 65 : 0.000156
Level 66 : 0.000038
Level 67 : 0.000018

==========

Data File C:\GC\2014\EDITH\QUARTER 2\EDITHP052\018B0201.D
Sample Name: EdithP010 #HR6 ENV(1=4900,6=113.17)

```
==================================================================
Acq. Operator   : Justin Guenzler               Seq. Line :   2
Acq. Instrument : Edith                         Location : Vial 18
Injection Date  : 6/19/2014 11:49:27 AM              Inj :   1
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 2\EDITHP052\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP052R_HRVOC_ACETYLENE.M
Last changed    : 6/23/2014 10:57:50 AM by Justin Guenzler
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Justin Guenzler
ECM Path        : GC\2014\Edith\Quarter 2\EDITHP052.SC.SSIzip
ECM Version     : 2 (modified after loading)
```




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==================================================================
                    External Standard Report
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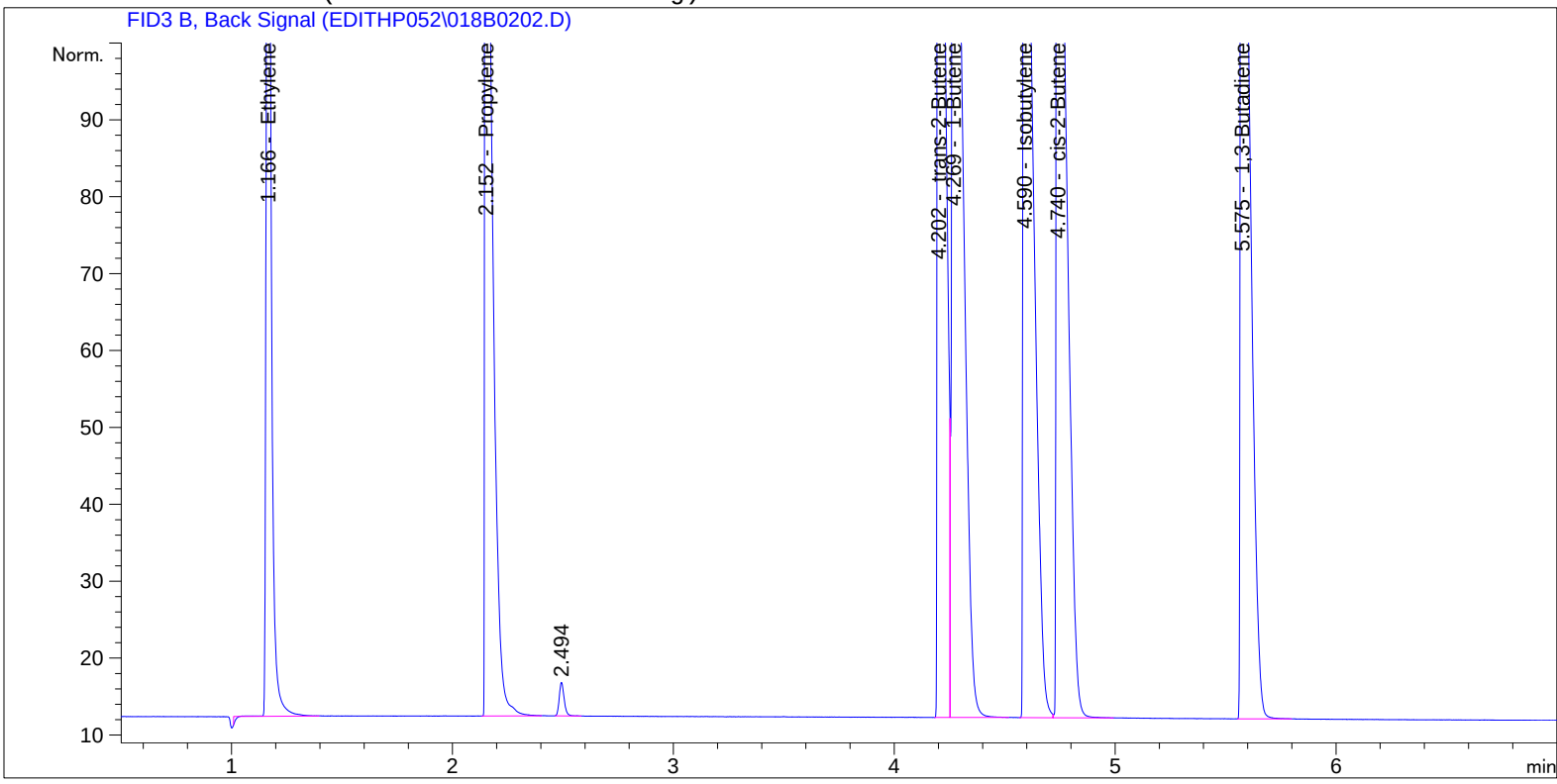
Sorted By             :      Signal
Calib. Data Modified  :      6/23/2014 10:57:28 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.166	BB	224.35971	8.72356e-1	195.72148		Ethylene
2.153	BB	336.73541	6.17414e-1	207.90504		Propylene
3.149		-	-	-		Acetylene
4.204	BV	411.76700	4.83512e-1	199.09414		trans-2-Butene
4.272	VB	494.32281	4.22206e-1	208.70591		1-Butene
4.592	BV	449.45367	4.56128e-1	205.00842		Isobutylene
4.743	VB	457.34195	4.46868e-1	204.37139		cis-2-Butene
5.575	BB	448.67252	4.51767e-1	202.69529		1,3-Butadiene

Data File C:\GC\2014\EDITH\QUARTER 2\EDITHP052\018B0202.D
Sample Name: EdithP010 #HR6 ENV(1=4900,6=113.17)

```
==================================================================
Acq. Operator   : Justin Guenzler               Seq. Line :   2
Acq. Instrument : Edith                         Location : Vial 18
Injection Date  : 6/19/2014 12:05:42 PM              Inj :   2
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 2\EDITHP052\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP052R_HRVOC_ACETYLENE.M
Last changed    : 6/23/2014 10:57:50 AM by Justin Guenzler
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Justin Guenzler
ECM Path        : GC\2014\Edith\Quarter 2\EDITHP052.SC.SSIzip
ECM Version     : 2 (modified after loading)
```




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==================================================================
                    External Standard Report
==================================================================

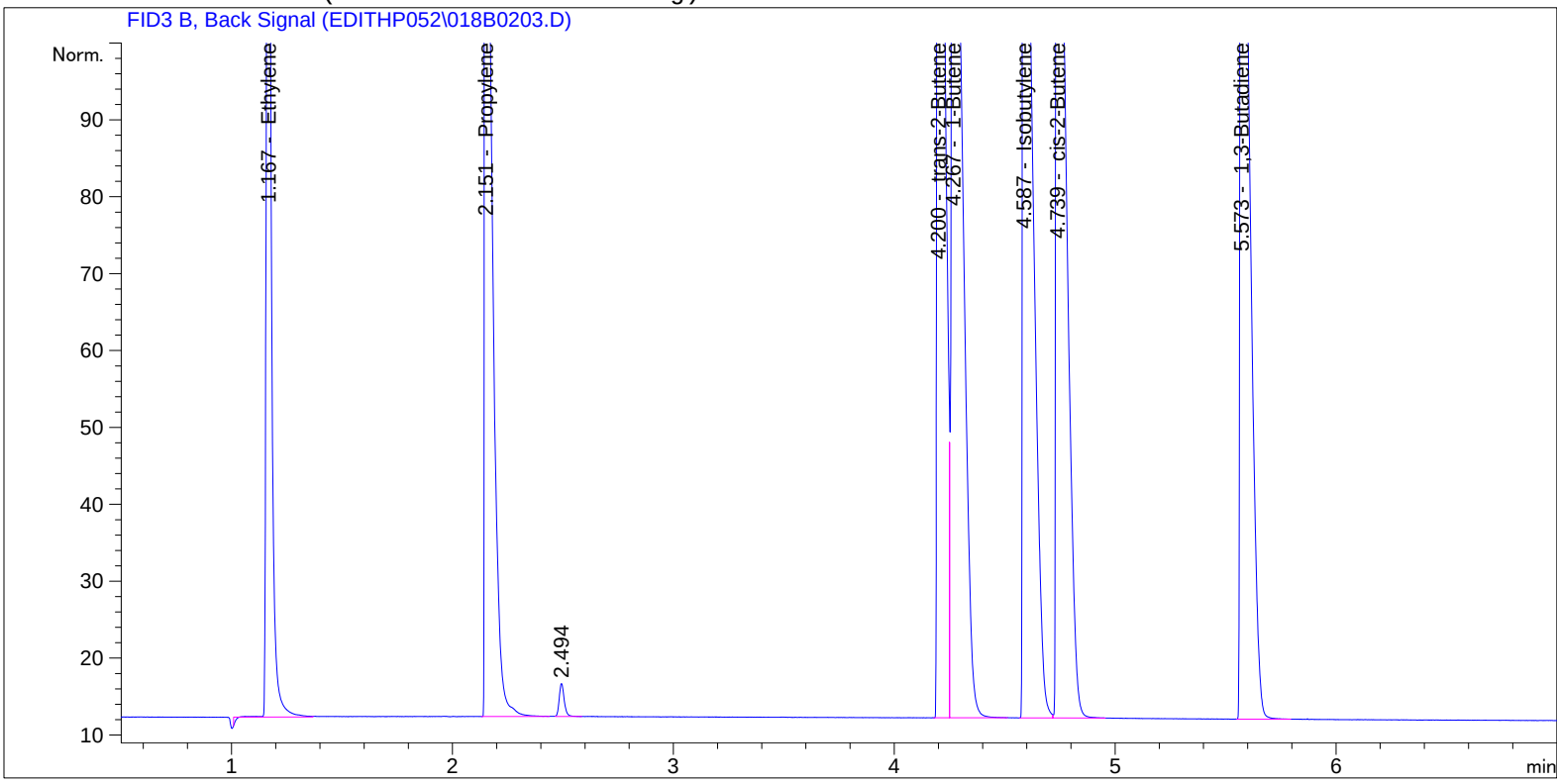
Sorted By             :      Signal
Calib. Data Modified  :      6/23/2014 10:57:28 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.166	BB	224.04964	8.72355e-1	195.45085		Ethylene
2.152	BB	336.09671	6.17413e-1	207.51056		Propylene
3.149		-	-	-		Acetylene
4.202	BV	411.38599	4.83511e-1	198.90968		trans-2-Butene
4.269	VB	494.06265	4.22206e-1	208.59605		1-Butene
4.590	BV	448.94696	4.56128e-1	204.77712		Isobutylene
4.740	VB	456.93979	4.46868e-1	204.19156		cis-2-Butene
5.575	BB	448.39188	4.51766e-1	202.56842		1,3-Butadiene

Data File C:\GC\2014\EDITH\QUARTER 2\EDITHP052\018B0203.D
Sample Name: EdithP010 #HR6 ENV(1=4900,6=113.17)

```
==================================================================
Acq. Operator   : Justin Guenzler               Seq. Line :   2
Acq. Instrument : Edith                         Location : Vial 18
Injection Date  : 6/19/2014 12:22:01 PM              Inj :   3
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 2\EDITHP052\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP052R_HRVOC_ACETYLENE.M
Last changed    : 6/23/2014 10:57:50 AM by Justin Guenzler
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Justin Guenzler
ECM Path        : GC\2014\Edith\Quarter 2\EDITHP052.SC.SSIzip
ECM Version     : 2 (modified after loading)
```




```
==================================================================
                    External Standard Report
==================================================================

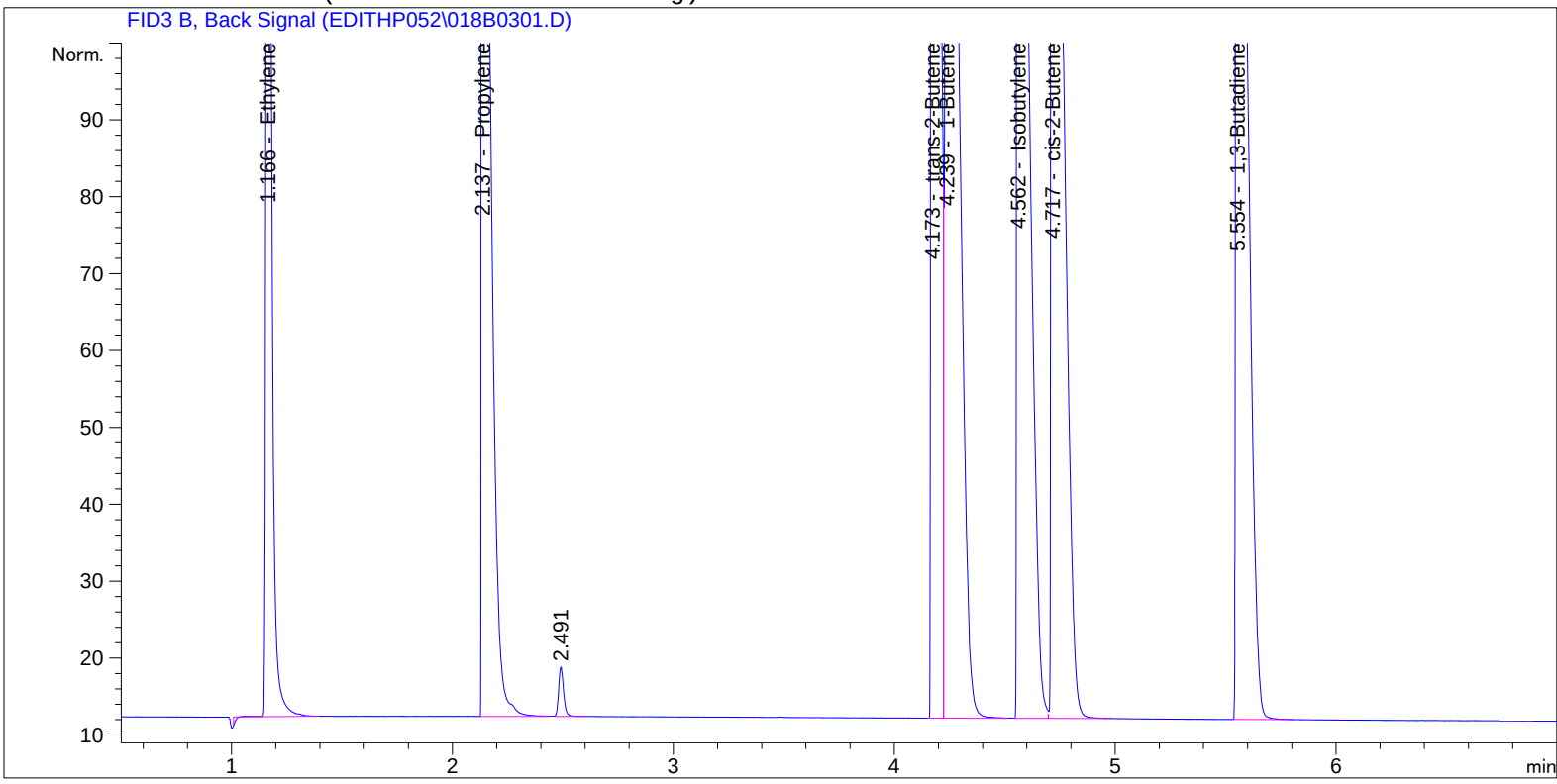
Sorted By             :      Signal
Calib. Data Modified  :      6/23/2014 10:57:28 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.167	BB	223.25520	8.72354e-1	194.75746		Ethylene
2.151	BB	334.23029	6.17412e-1	206.35782		Propylene
3.149		-	-	-		Acetylene
4.200	BV	409.01404	4.83508e-1	197.76136		trans-2-Butene
4.267	VB	490.88351	4.22205e-1	207.25349		1-Butene
4.587	BV	446.17508	4.56126e-1	203.51184		Isobutylene
4.739	VB	454.12451	4.46866e-1	202.93263		cis-2-Butene
5.573	BB	445.78723	4.51765e-1	201.39095		1,3-Butadiene

Data File C:\GC\2014\EDITH\QUARTER 2\EDITHP052\018B0301.D
Sample Name: EdithP010 #HR7 ENV(1=3300,6=113.17)

```
==================================================================
Acq. Operator   : Justin Guenzler               Seq. Line :   3
Acq. Instrument : Edith                         Location : Vial 18
Injection Date  : 6/19/2014 12:54:43 PM              Inj :   1
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 2\EDITHP052\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP052R_HRVOC_ACETYLENE.M
Last changed    : 6/23/2014 10:58:25 AM by Justin Guenzler
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Justin Guenzler
ECM Path        : GC\2014\Edith\Quarter 2\EDITHP052.SC.SSIzip
ECM Version     : 2 (modified after loading)
```




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==================================================================
                    External Standard Report
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Sorted By             :      Signal
Calib. Data Modified  :      6/23/2014 10:57:28 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.166	BB	330.64908	8.72499e-1	288.49084		Ethylene
2.137	BB	496.58426	6.17480e-1	306.63085		Propylene
3.149		-	-	-		Acetylene
4.173	BV	580.13824	4.83690e-1	280.60699		trans-2-Butene
4.239	VB	756.92371	4.22239e-1	319.60254		1-Butene
4.562	BV	662.26318	4.56238e-1	302.14956		Isobutylene
4.717	VB	675.10657	4.46968e-1	301.75096		cis-2-Butene
5.554	BB	662.34406	4.51863e-1	299.28874		1,3-Butadiene

Data File C:\GC\2014\EDITH\QUARTER 2\EDITHP052\018B0301.D
Sample Name: EdithP010 #HR7 ENV(1=3300,6=113.17)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				2098.52049		

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

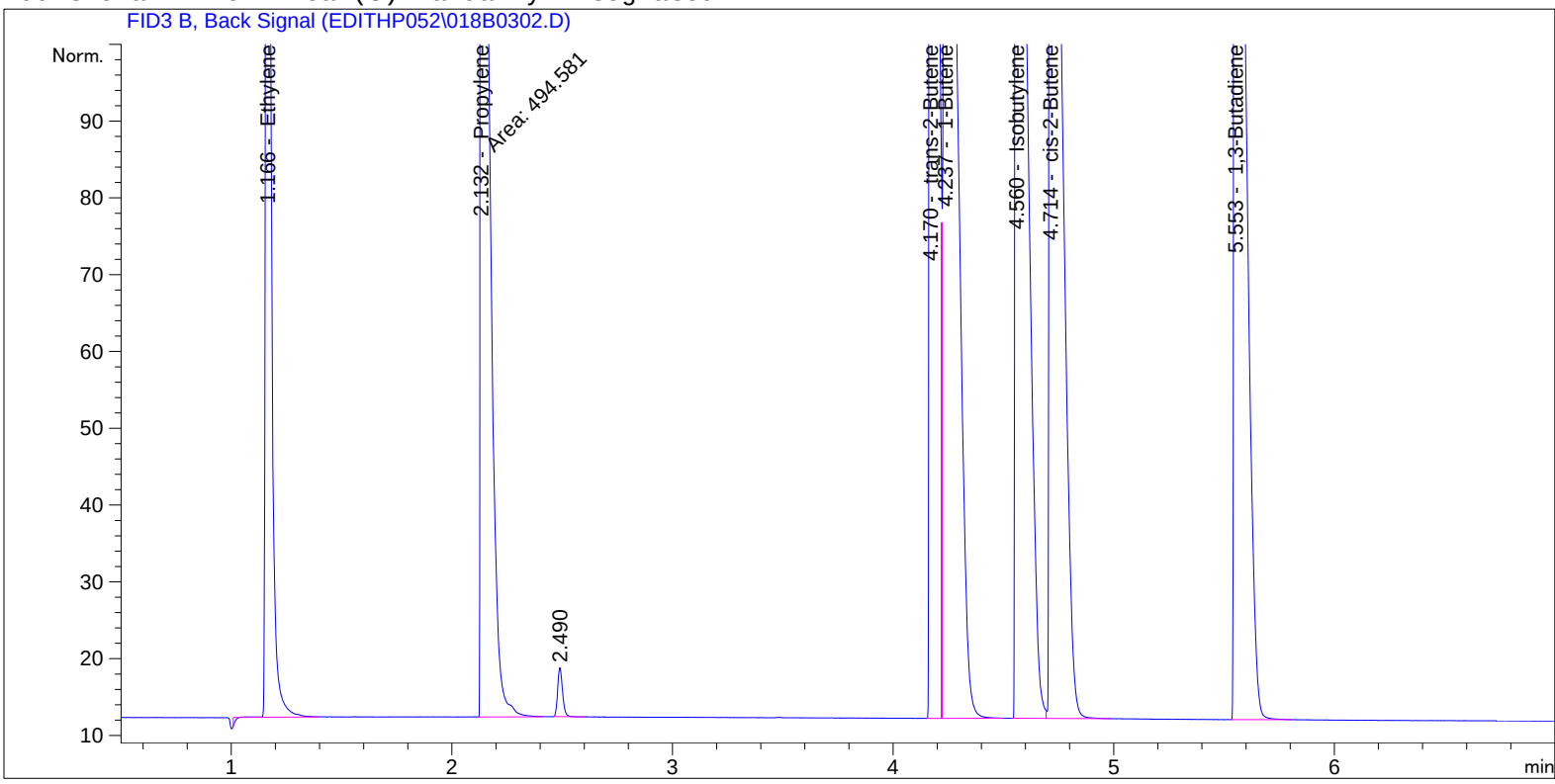
==========

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 2\EDITHP052\018B0302.D
Sample Name: EdithP010 #HR7 ENV(1=3300,6=113.17)

```
==================================================================
Acq. Operator   : Justin Guenzler              Seq. Line :   3
Acq. Instrument : Edith                        Location : Vial 18
Injection Date  : 6/19/2014 1:11:12 PM              Inj :   2
                                             Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 2\EDITHP052\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP052R_HRVOC_ACETYLENE.M
Last changed    : 6/23/2014 10:58:25 AM by Justin Guenzler
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Justin Guenzler
ECM Path        : GC\2014\Edith\Quarter 2\EDITHP052.SC.SSIzip
ECM Version     : 2 (modified after loading)
Additional Info : Peak(s) manually integrated
```

Manual Int. "II" (JKG)




```
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                    External Standard Report
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Sorted By             :      Signal
Calib. Data Modified  :      6/23/2014 10:57:28 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.166	BB	329.60867	8.72498e-1	287.58278		Ethylene
2.132	MM	494.58072	6.17479e-1	305.39343		Propylene
3.149		-	-	-		Acetylene
4.170	BV	578.32477	4.83689e-1	279.72904		trans-2-Butene
4.237	VB	754.19916	4.22239e-1	318.45196		1-Butene
4.560	BV	660.02405	4.56237e-1	301.12746		Isobutylene
4.714	VB	673.18085	4.46967e-1	300.88982		cis-2-Butene

Data File C:\GC\2014\EDITH\QUARTER 2\EDITHP052\018B0302.D
Sample Name: EdithP010 #HR7 ENV(1=3300,6=113.17)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
5.553	BB	660.76300	4.51862e-1	298.57400		1,3-Butadiene

Totals : 2091.74849

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

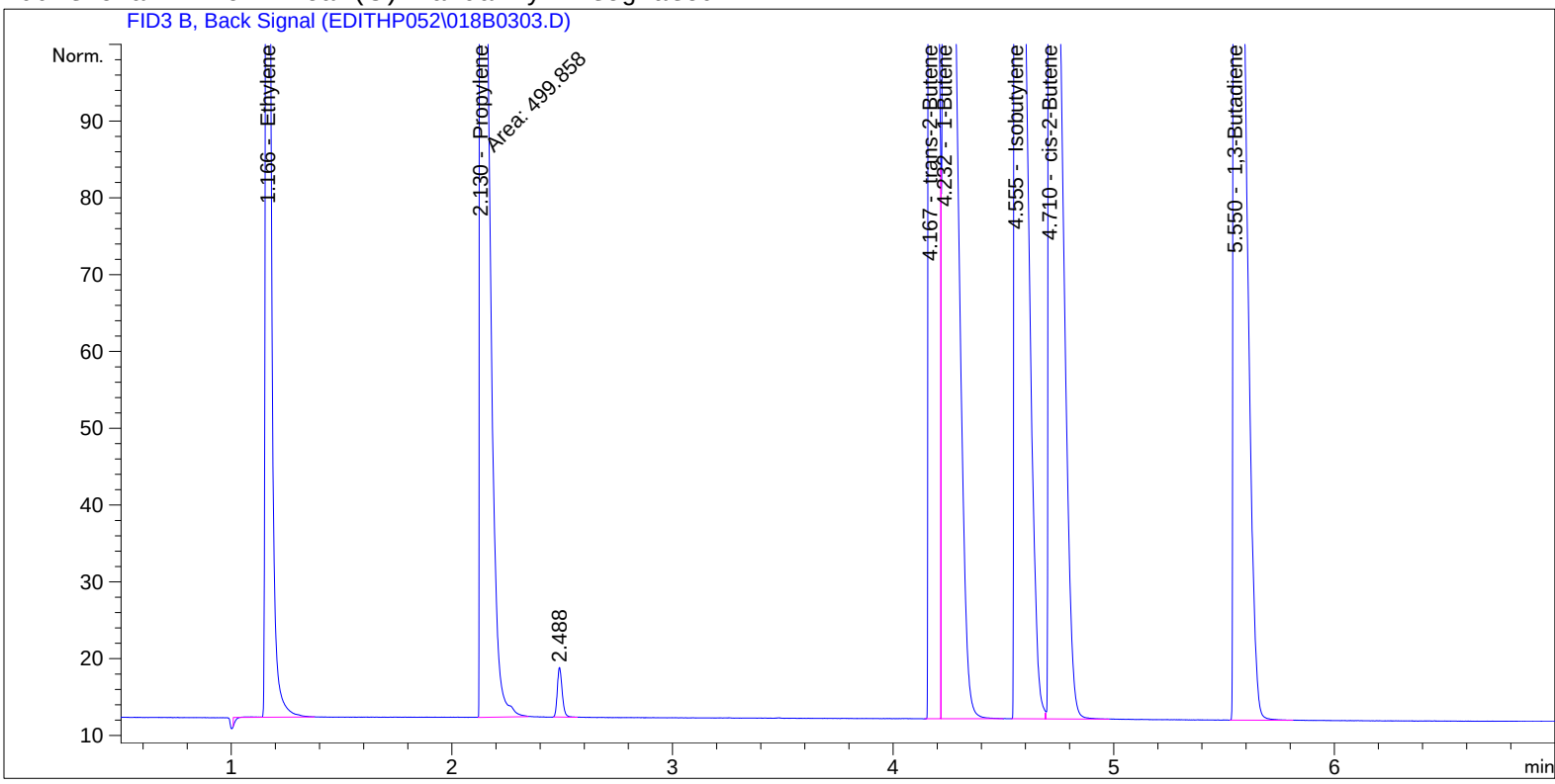
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*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 2\EDITHP052\018B0303.D
Sample Name: EdithP010 #HR7 ENV(1=3300,6=113.17)

```
==================================================================
Acq. Operator   : Justin Guenzler              Seq. Line :   3
Acq. Instrument : Edith                        Location : Vial 18
Injection Date  : 6/19/2014 1:27:30 PM              Inj :   3
                                             Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 2\EDITHP052\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP052R_HRVOC_ACETYLENE.M
Last changed    : 6/23/2014 10:58:42 AM by Justin Guenzler
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Justin Guenzler
ECM Path        : GC\2014\Edith\Quarter 2\EDITHP052.SC.SSIzip
ECM Version     : 2 (modified after loading)
Additional Info : Peak(s) manually integrated
```

Manual Int. "II" (JKG)




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                    External Standard Report
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Sorted By             :      Signal
Calib. Data Modified  :      6/23/2014 10:57:28 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.166	BB	333.53433	8.72501e-1	291.00909		Ethylene
2.130	MM	499.85815	6.17481e-1	308.65288		Propylene
3.149		-	-	-		Acetylene
4.167	BV	582.88177	4.83692e-1	281.93521		trans-2-Butene
4.232	VB	766.29004	4.22240e-1	323.55795		1-Butene
4.555	BV	668.07843	4.56240e-1	304.80404		Isobutylene
4.710	VB	681.23840	4.46970e-1	304.49299		cis-2-Butene

Data File C:\GC\2014\EDITH\QUARTER 2\EDITHP052\018B0303.D
Sample Name: EdithP010 #HR7 ENV(1=3300,6=113.17)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
5.550	BB	668.67542	4.51865e-1	302.15092		1,3-Butadiene

Totals : 2116.60308

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

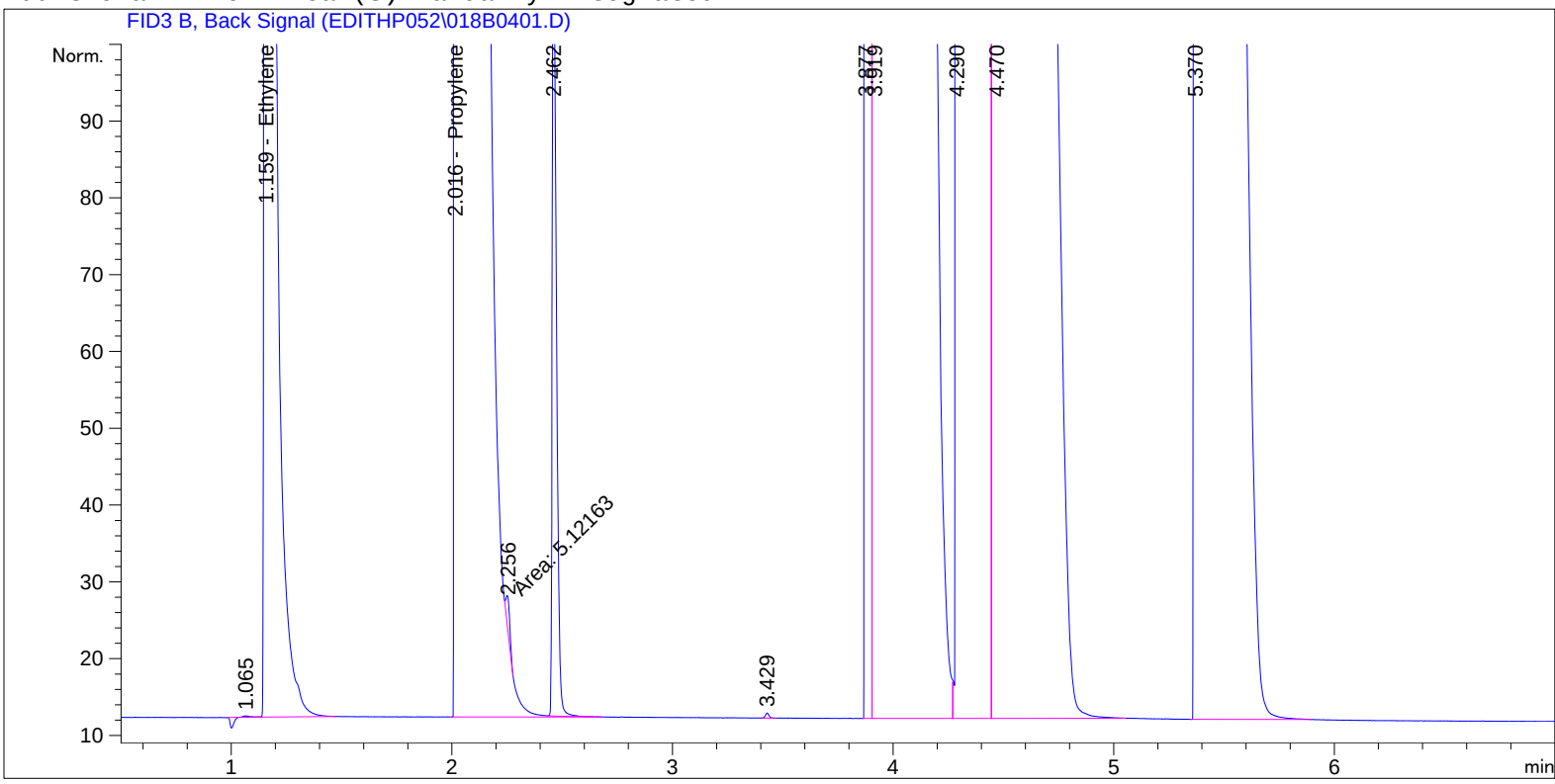
==========

*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 2\EDITHP052\018B0401.D
Sample Name: EdithP010 #HR9 ENV(1=600,6=452.68)

```
==================================================================
Acq. Operator   : Justin Guenzler              Seq. Line :   4
Acq. Instrument : Edith                        Location : Vial 18
Injection Date  : 6/19/2014 1:43:52 PM              Inj :   1
                                             Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 2\EDITHP052\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP052R_HRVOC_ACETYLENE.M
Last changed    : 6/23/2014 10:58:58 AM by Justin Guenzler
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Justin Guenzler
ECM Path        : GC\2014\Edith\Quarter 2\EDITHP052.SC.SSIzip
ECM Version     : 2 (modified after loading)
Additional Info : Peak(s) manually integrated
```

Manual Int. "II" (JKG)




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                    External Standard Report
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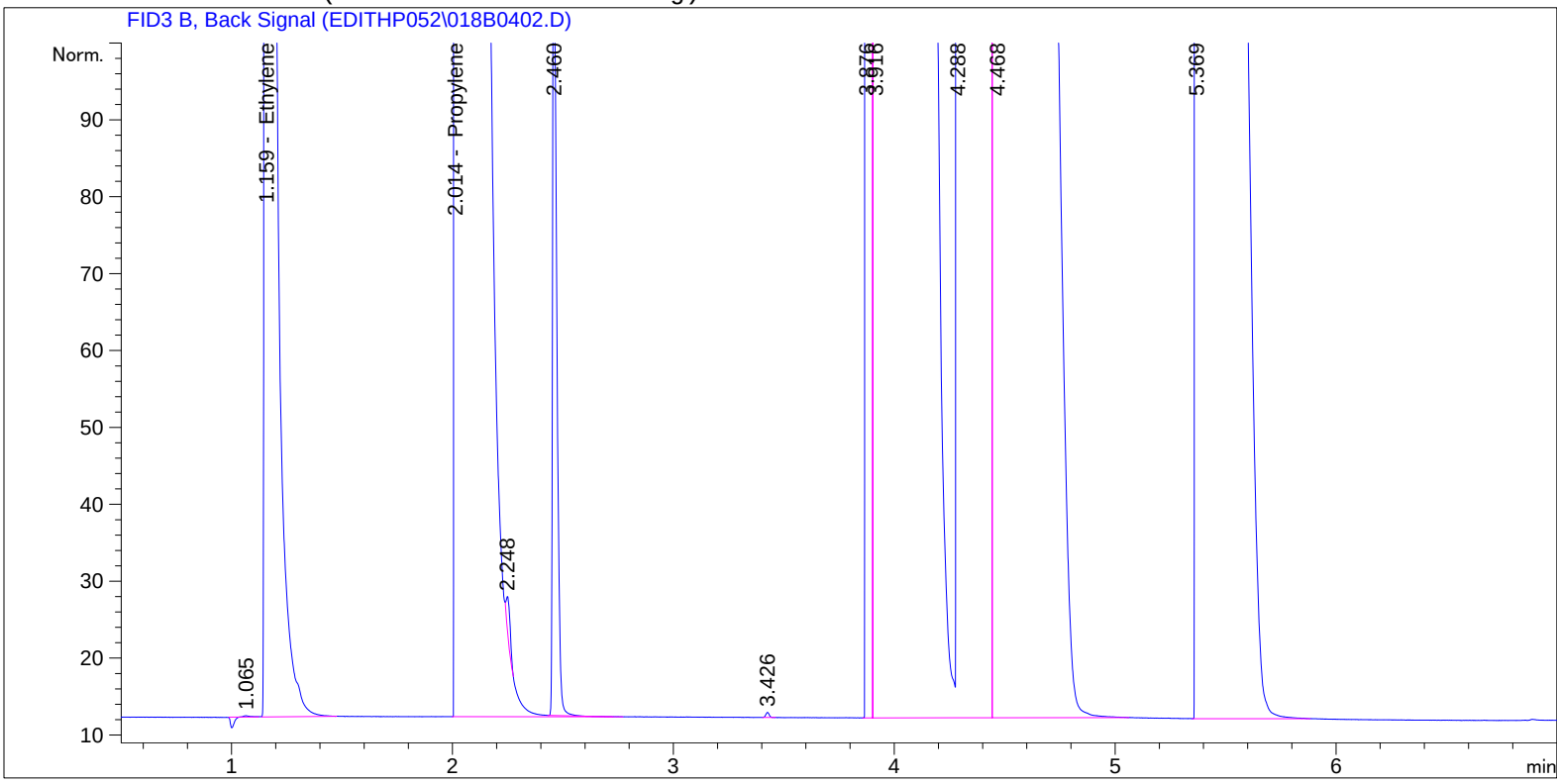
Sorted By             :      Signal
Calib. Data Modified  :      6/23/2014 10:57:28 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal

RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|-----------------
  1.159 VB     4526.81592 8.72778e-1 3950.90543    Ethylene
  2.016 BB S   6794.74902 6.17610e-1 4196.50225    Propylene
  3.149            -          -          -         Acetylene
  4.179            -          -          -         trans-2-Butene
  4.239            -          -          -         1-Butene
  4.562            -          -          -         Isobutylene
  4.717            -          -          -         cis-2-Butene
```

Data File C:\GC\2014\EDITH\QUARTER 2\EDITHP052\018B0402.D
Sample Name: EdithP010 #HR9 ENV(1=600,6=452.68)

```
==================================================================
Acq. Operator   : Justin Guenzler              Seq. Line :   4
Acq. Instrument : Edith                        Location : Vial 18
Injection Date  : 6/19/2014 2:00:16 PM              Inj :   2
                                             Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 2\EDITHP052\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP052R_HRVOC_ACETYLENE.M
Last changed    : 6/23/2014 10:58:58 AM by Justin Guenzler
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Justin Guenzler
ECM Path        : GC\2014\Edith\Quarter 2\EDITHP052.SC.SSIzip
ECM Version     : 2 (modified after loading)
```




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                    External Standard Report
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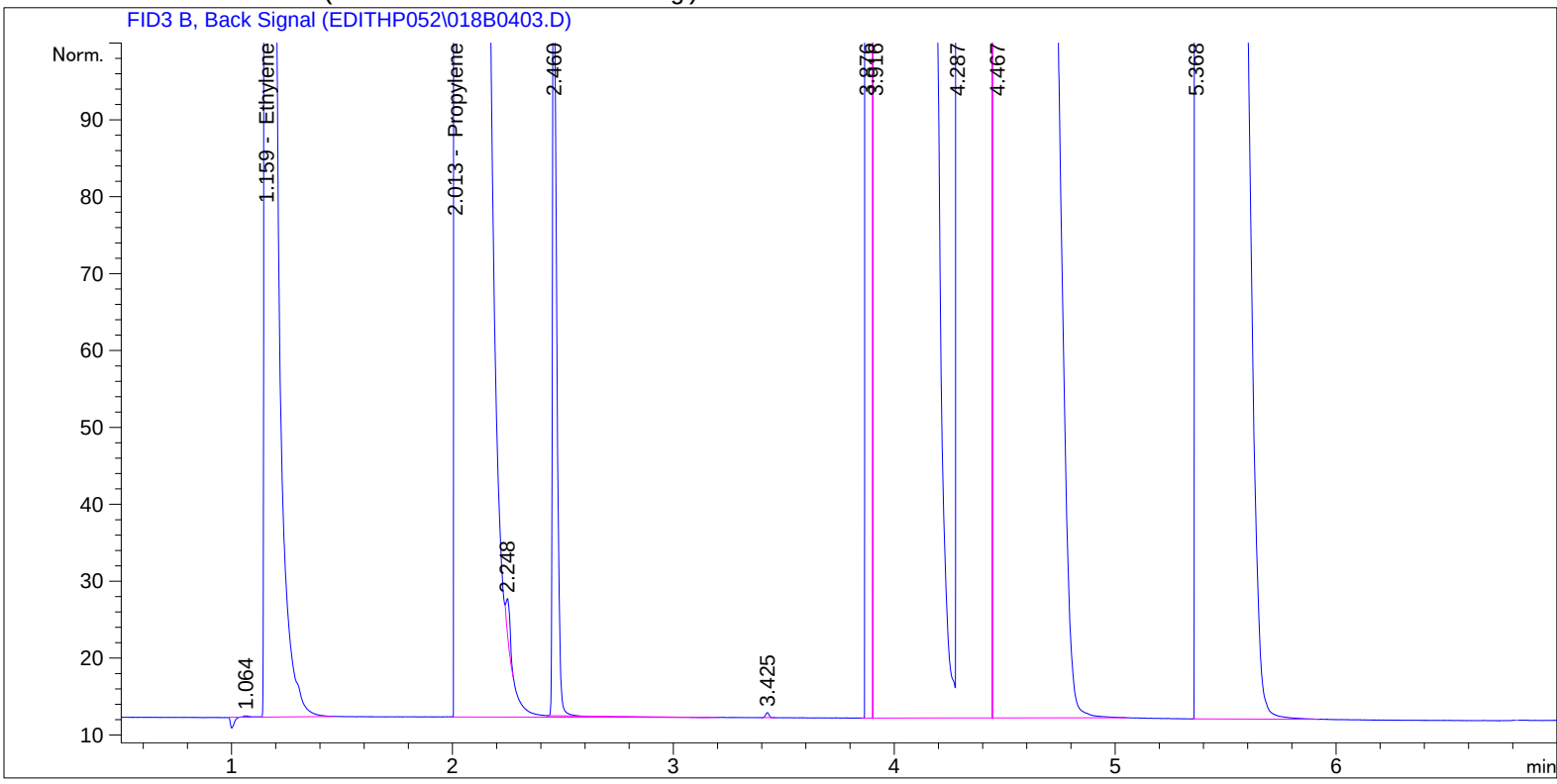
Sorted By             :      Signal
Calib. Data Modified  :      6/23/2014 10:57:28 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal

RetTime  Type     Area      Amt/Area    Amount    Grp   Name
 [min]          [pA*s]                  [ppm]
-------|------|----------|----------|----------|--|------------------
  1.159 BB     4522.75146 8.72778e-1 3947.35797    Ethylene
  2.014 BB S   6790.62695 6.17610e-1 4193.95638    Propylene
  3.149            -          -          -         Acetylene
  4.179            -          -          -         trans-2-Butene
  4.239            -          -          -         1-Butene
  4.562            -          -          -         Isobutylene
  4.717            -          -          -         cis-2-Butene
  5.550            -          -          -         1,3-Butadiene
```

Data File C:\GC\2014\EDITH\QUARTER 2\EDITHP052\018B0403.D
Sample Name: EdithP010 #HR9 ENV(1=600,6=452.68)

```
==================================================================
Acq. Operator   : Justin Guenzler              Seq. Line :   4
Acq. Instrument : Edith                        Location : Vial 18
Injection Date  : 6/19/2014 2:16:31 PM              Inj :   3
                                             Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 2\EDITHP052\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP052R_HRVOC_ACETYLENE.M
Last changed    : 6/23/2014 10:58:58 AM by Justin Guenzler
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Justin Guenzler
ECM Path        : GC\2014\Edith\Quarter 2\EDITHP052.SC.SSIzip
ECM Version     : 2 (modified after loading)
```




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                    External Standard Report
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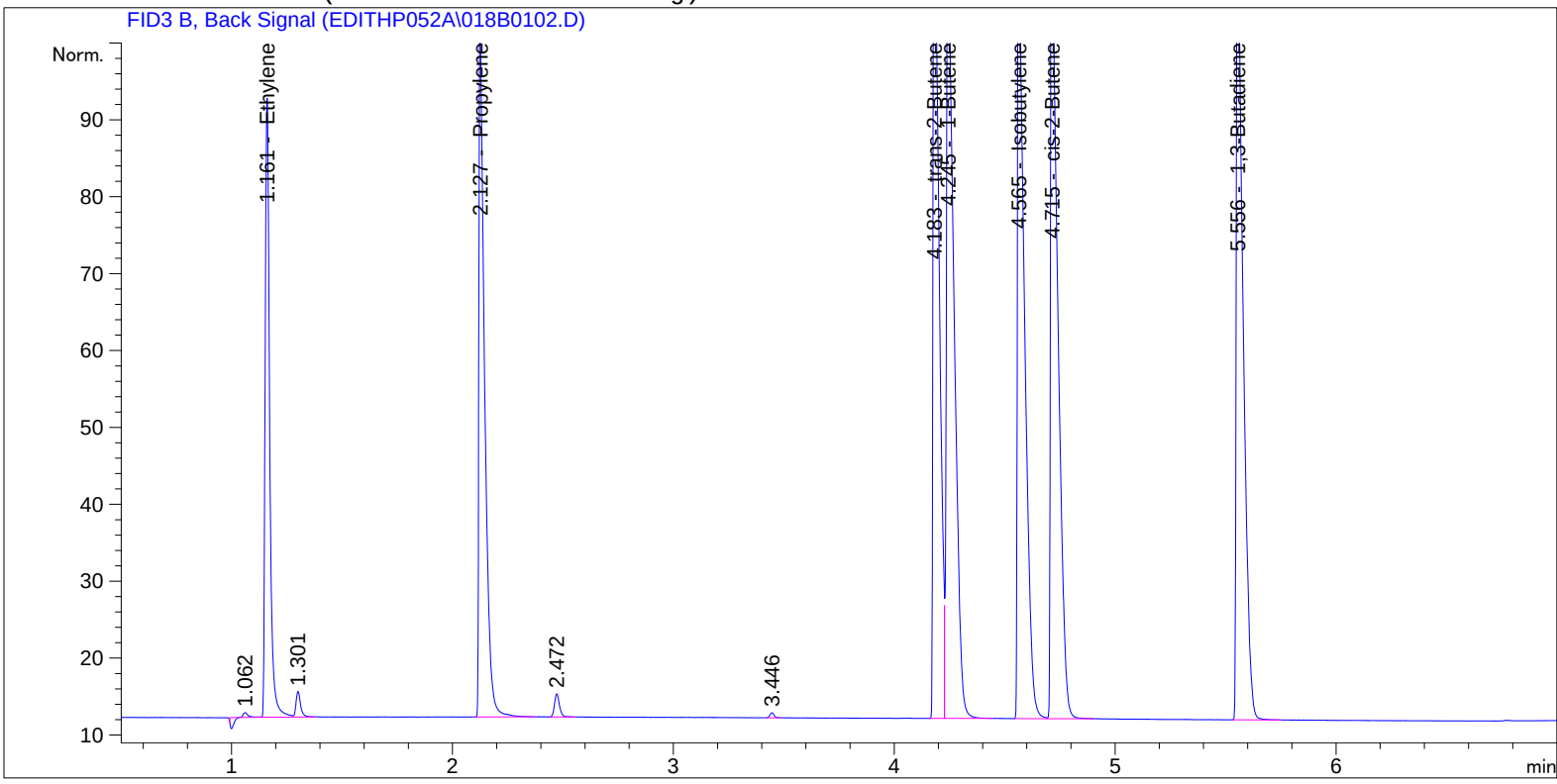
Sorted By             :      Signal
Calib. Data Modified  :      6/23/2014 10:57:28 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                  [ppm]
-------|------|----------|----------|----------|--|------------------
  1.159 BB     4502.40137 8.72778e-1 3929.59641    Ethylene
  2.013 BB S   6761.40527 6.17610e-1 4175.90849    Propylene
  3.149            -          -          -         Acetylene
  4.179            -          -          -         trans-2-Butene
  4.239            -          -          -         1-Butene
  4.562            -          -          -         Isobutylene
  4.717            -          -          -         cis-2-Butene
  5.550            -          -          -         1,3-Butadiene
```

Data File C:\GC\2014\EDITH\QUARTER 2\EDITHP052A\018B0102.D
Sample Name: EdithP024 #HR5 ENV(1=0,6=450)

```
==================================================================
Acq. Operator   : Justin Guenzler              Seq. Line :   1
Acq. Instrument : Edith                        Location : Vial 18
Injection Date  : 6/19/2014 3:45:07 PM              Inj :   2
                                             Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 2\EDITHP052A\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP052R_HRVOC_ACETYLENE.M
Last changed    : 6/23/2014 11:02:23 AM by Justin Guenzler
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Justin Guenzler
ECM Path        : GC\2014\Edith\Quarter 2\EDITHP052A.SC.SSIzip
ECM Version     : 2 (modified after loading)
```




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                    External Standard Report
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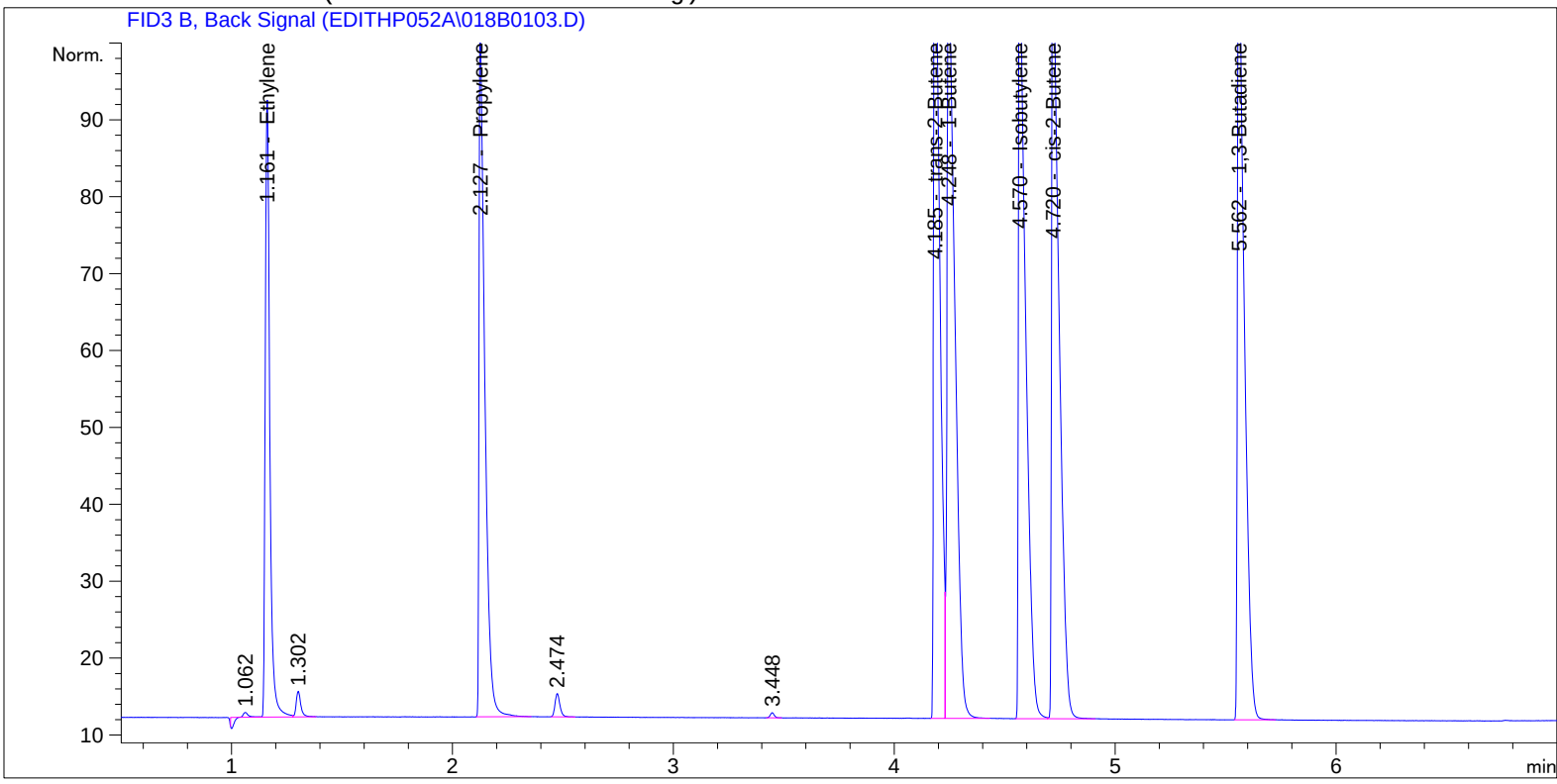
Sorted By             :      Signal
Calib. Data Modified  :      6/23/2014 11:02:23 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.161	VV	114.85823	8.71932e-1	100.14858		Ethylene
2.127	BB	161.49525	6.17190e-1	99.67324		Propylene
3.149		-	-	-		Acetylene
4.183	BV	213.33179	4.82940e-1	103.02654		trans-2-Butene
4.245	VB	244.04803	4.22108e-1	103.01462		1-Butene
4.565	BV	226.53098	4.55792e-1	103.25091		Isobutylene
4.715	VB	235.02690	4.46574e-1	104.95697		cis-2-Butene
5.556	BB	222.87820	4.51464e-1	100.62155		1,3-Butadiene

Data File C:\GC\2014\EDITH\QUARTER 2\EDITHP052A\018B0103.D
Sample Name: EdithP024 #HR5 ENV(1=0,6=450)

```
==================================================================
Acq. Operator   : Justin Guenzler              Seq. Line :   1
Acq. Instrument : Edith                        Location : Vial 18
Injection Date  : 6/19/2014 4:01:23 PM              Inj :   3
                                             Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 2\EDITHP052A\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP052R_HRVOC_ACETYLENE.M
Last changed    : 6/23/2014 11:02:23 AM by Justin Guenzler
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Justin Guenzler
ECM Path        : GC\2014\Edith\Quarter 2\EDITHP052A.SC.SSIzip
ECM Version     : 2 (modified after loading)
```




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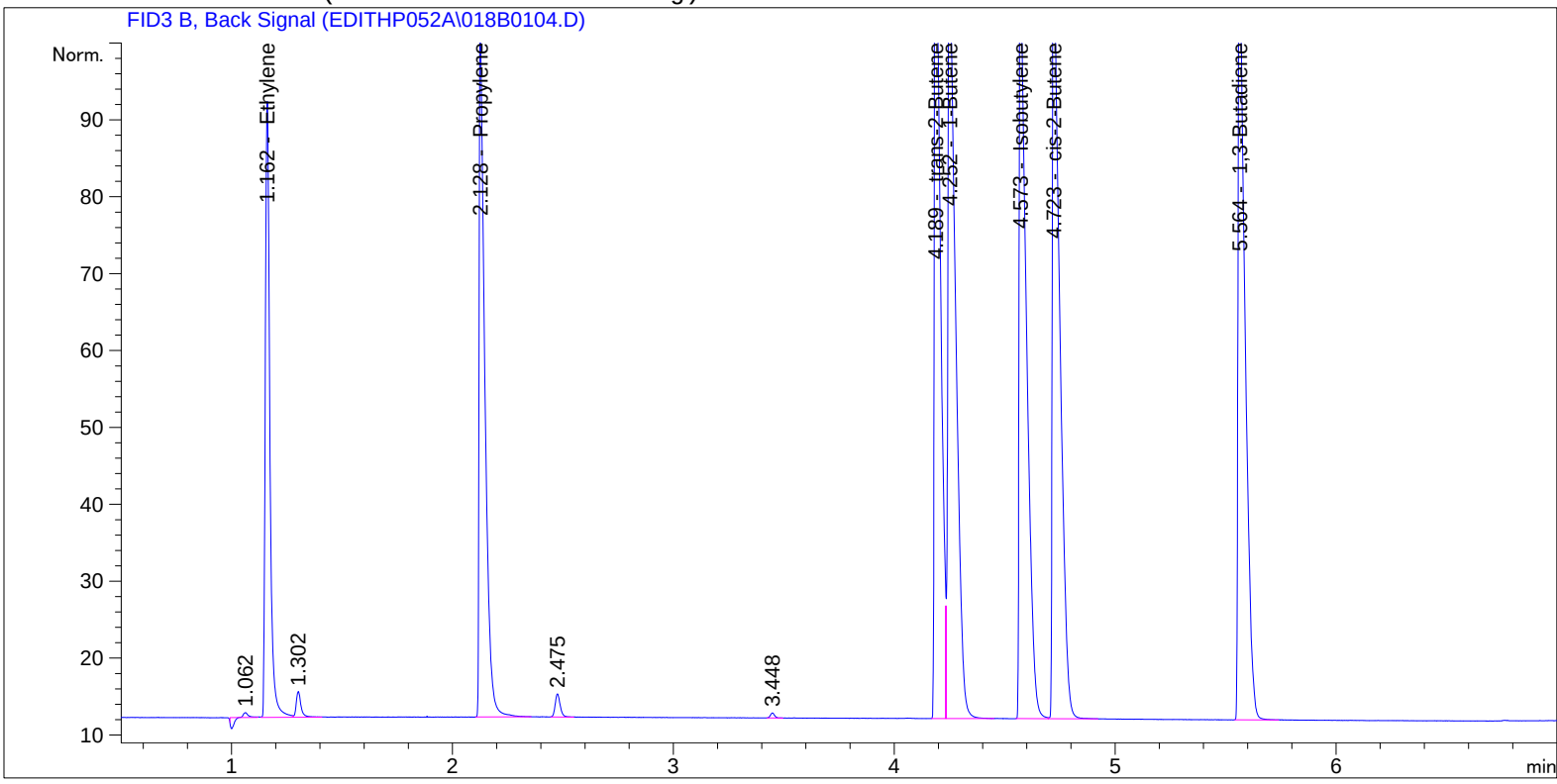
Sorted By             :      Signal
Calib. Data Modified  :      6/23/2014 11:02:23 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.161	VV	115.22174	8.71935e-1	100.46585		Ethylene
2.127	BB	161.65340	6.17190e-1	99.77091		Propylene
3.149		-	-	-		Acetylene
4.185	BV	212.33777	4.82935e-1	102.54531		trans-2-Butene
4.248	VB	244.60750	4.22108e-1	103.25088		1-Butene
4.570	BV	226.80664	4.55792e-1	103.37674		Isobutylene
4.720	VB	234.89131	4.46574e-1	104.89634		cis-2-Butene
5.562	BB	222.35475	4.51463e-1	100.38492		1,3-Butadiene

Data File C:\GC\2014\EDITH\QUARTER 2\EDITHP052A\018B0104.D
Sample Name: EdithP024 #HR5 ENV(1=0,6=450)

```
==================================================================
Acq. Operator   : Justin Guenzler              Seq. Line :   1
Acq. Instrument : Edith                        Location : Vial 18
Injection Date  : 6/19/2014 4:17:41 PM              Inj :   4
                                             Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 2\EDITHP052A\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP052R_HRVOC_ACETYLENE.M
Last changed    : 6/23/2014 11:02:23 AM by Justin Guenzler
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Justin Guenzler
ECM Path        : GC\2014\Edith\Quarter 2\EDITHP052A.SC.SSIzip
ECM Version     : 2 (modified after loading)
```




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==================================================================
                    External Standard Report
==================================================================

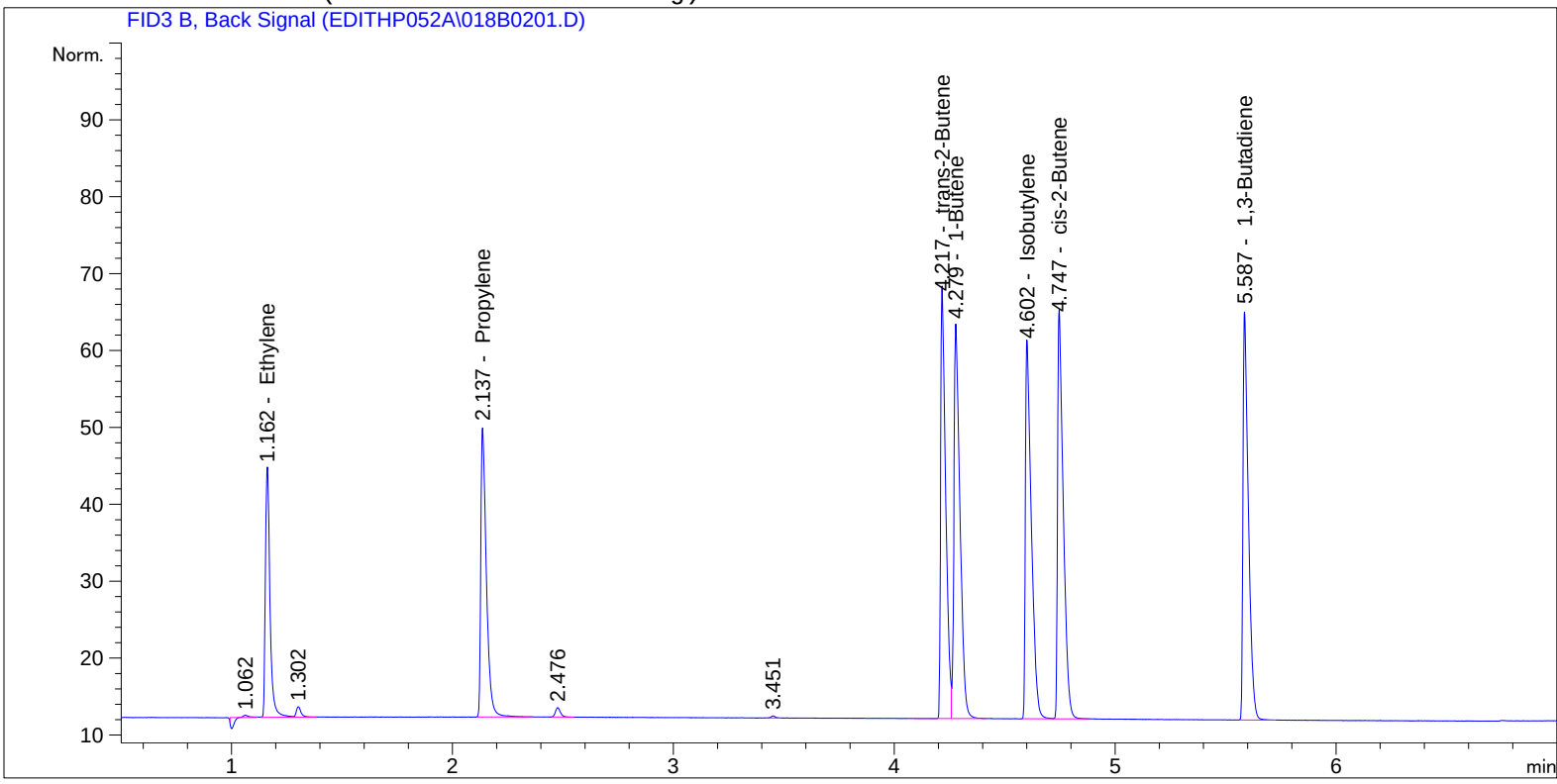
Sorted By             :      Signal
Calib. Data Modified  :      6/23/2014 11:02:23 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.162	BV	115.05853	8.71934e-1	100.32340		Ethylene
2.128	BB	161.44603	6.17190e-1	99.64284		Propylene
3.149		-	-	-		Acetylene
4.189	BV	212.12723	4.82934e-1	102.44338		trans-2-Butene
4.252	VB	244.16687	4.22108e-1	103.06480		1-Butene
4.573	BV	226.46667	4.55791e-1	103.22156		Isobutylene
4.723	VB	234.60867	4.46573e-1	104.76995		cis-2-Butene
5.564	BB	222.04381	4.51462e-1	100.24435		1,3-Butadiene

Data File C:\GC\2014\EDITH\QUARTER 2\EDITHP052A\018B0201.D
Sample Name: EdithP024 #HR4 ENV(1=600,6=400)

```
==================================================================
Acq. Operator   : Justin Guenzler               Seq. Line :   2
Acq. Instrument : Edith                         Location : Vial 18
Injection Date  : 6/19/2014 4:34:04 PM               Inj :   1
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 2\EDITHP052A\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP052R_HRVOC_ACETYLENE.M
Last changed    : 6/23/2014 11:03:07 AM by Justin Guenzler
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Justin Guenzler
ECM Path        : GC\2014\Edith\Quarter 2\EDITHP052A.SC.SSIzip
ECM Version     : 2 (modified after loading)
```




```
==================================================================
                    External Standard Report
==================================================================

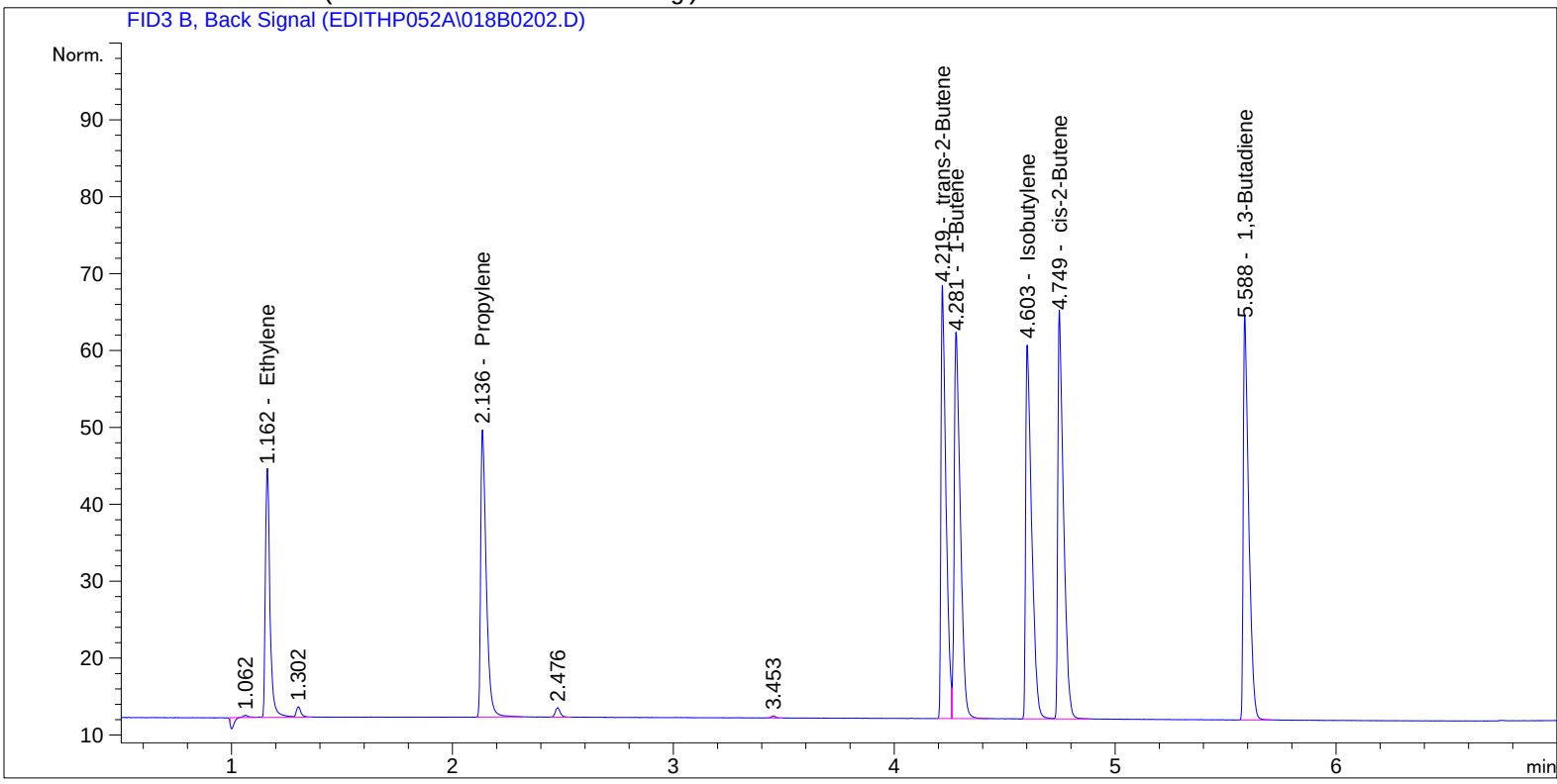
Sorted By             :      Signal
Calib. Data Modified  :      6/23/2014 11:02:23 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.162	BV	47.06726	8.70682e-1	40.98062		Ethylene
2.137	BB	65.92663	6.16567e-1	40.64817		Propylene
3.149		-	-	-		Acetylene
4.217	BV	89.06522	4.81287e-1	42.86589		trans-2-Butene
4.279	VB	96.95395	4.21815e-1	40.89664		1-Butene
4.602	BV	92.39603	4.54807e-1	42.02234		Isobutylene
4.747	VB	95.64816	4.45694e-1	42.62985		cis-2-Butene
5.587	BB	90.47153	4.50585e-1	40.76511		1,3-Butadiene

Data File C:\GC\2014\EDITH\QUARTER 2\EDITHP052A\018B0202.D
Sample Name: EdithP024 #HR4 ENV(1=600,6=400)

```
==================================================================
Acq. Operator   : Justin Guenzler              Seq. Line :   2
Acq. Instrument : Edith                        Location : Vial 18
Injection Date  : 6/19/2014 4:50:26 PM              Inj :   2
                                              Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 2\EDITHP052A\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP052R_HRVOC_ACETYLENE.M
Last changed    : 6/23/2014 11:03:07 AM by Justin Guenzler
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Justin Guenzler
ECM Path        : GC\2014\Edith\Quarter 2\EDITHP052A.SC.SSIzip
ECM Version     : 2 (modified after loading)
```




```
==================================================================
                    External Standard Report
==================================================================

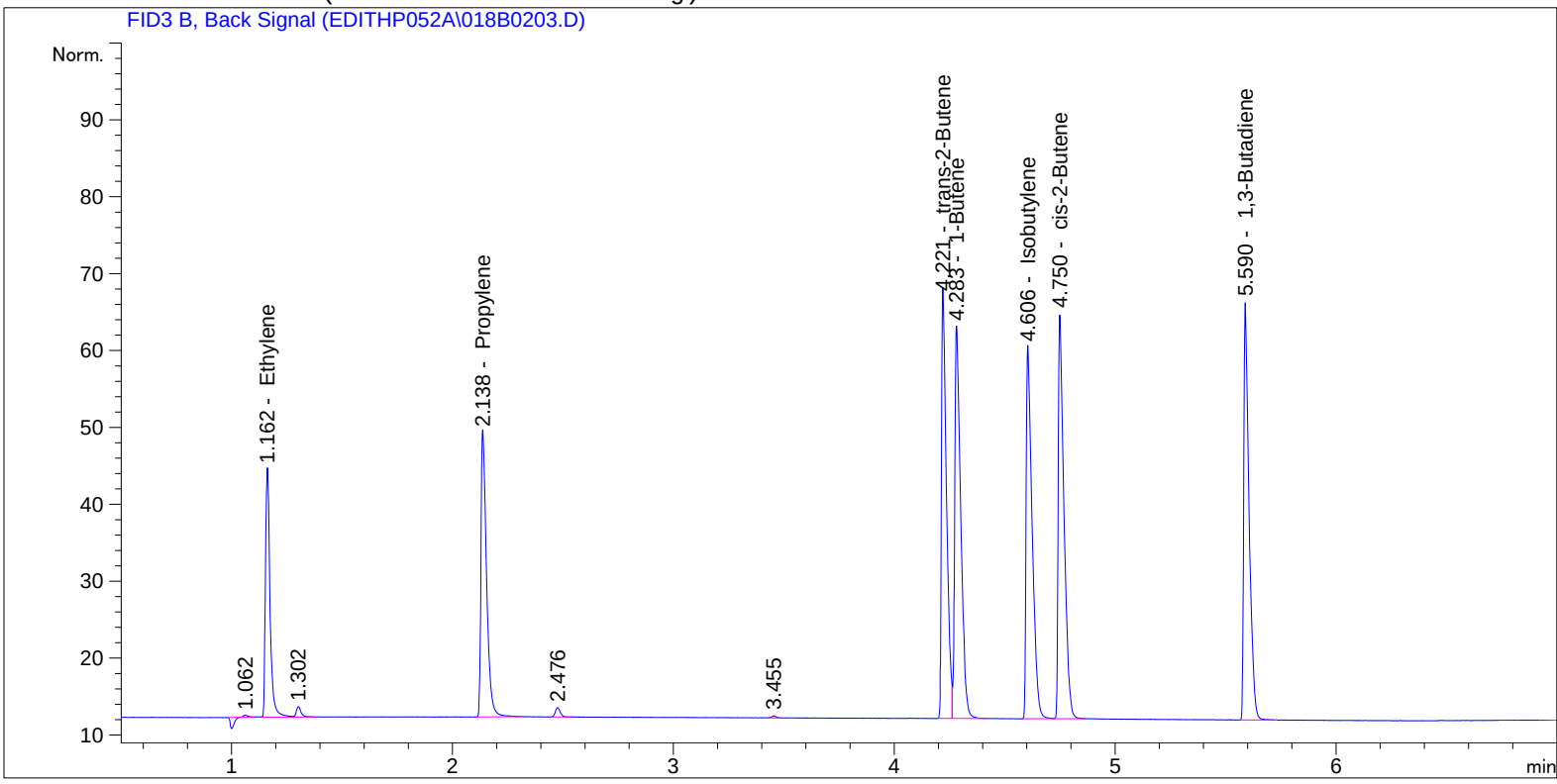
Sorted By             :      Signal
Calib. Data Modified  :      6/23/2014 11:02:23 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.162	BV	46.85580	8.70673e-1	40.79605		Ethylene
2.136	BB	65.43562	6.16559e-1	40.34491		Propylene
3.149		-	-	-		Acetylene
4.219	BV	88.69268	4.81275e-1	42.68554		trans-2-Butene
4.281	VB	96.51315	4.21813e-1	40.71049		1-Butene
4.603	BV	92.01144	4.54800e-1	41.84678		Isobutylene
4.749	VB	95.20778	4.45688e-1	42.43292		cis-2-Butene
5.588	BB	90.00748	4.50577e-1	40.55534		1,3-Butadiene

Data File C:\GC\2014\EDITH\QUARTER 2\EDITHP052A\018B0203.D
Sample Name: EdithP024 #HR4 ENV(1=600,6=400)

```
==================================================================
Acq. Operator   : Justin Guenzler              Seq. Line :   2
Acq. Instrument : Edith                        Location : Vial 18
Injection Date  : 6/19/2014 5:06:49 PM              Inj :   3
                                             Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 2\EDITHP052A\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP052R_HRVOC_ACETYLENE.M
Last changed    : 6/23/2014 11:03:07 AM by Justin Guenzler
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Justin Guenzler
ECM Path        : GC\2014\Edith\Quarter 2\EDITHP052A.SC.SSIzip
ECM Version     : 2 (modified after loading)
```




```
==================================================================
                    External Standard Report
==================================================================

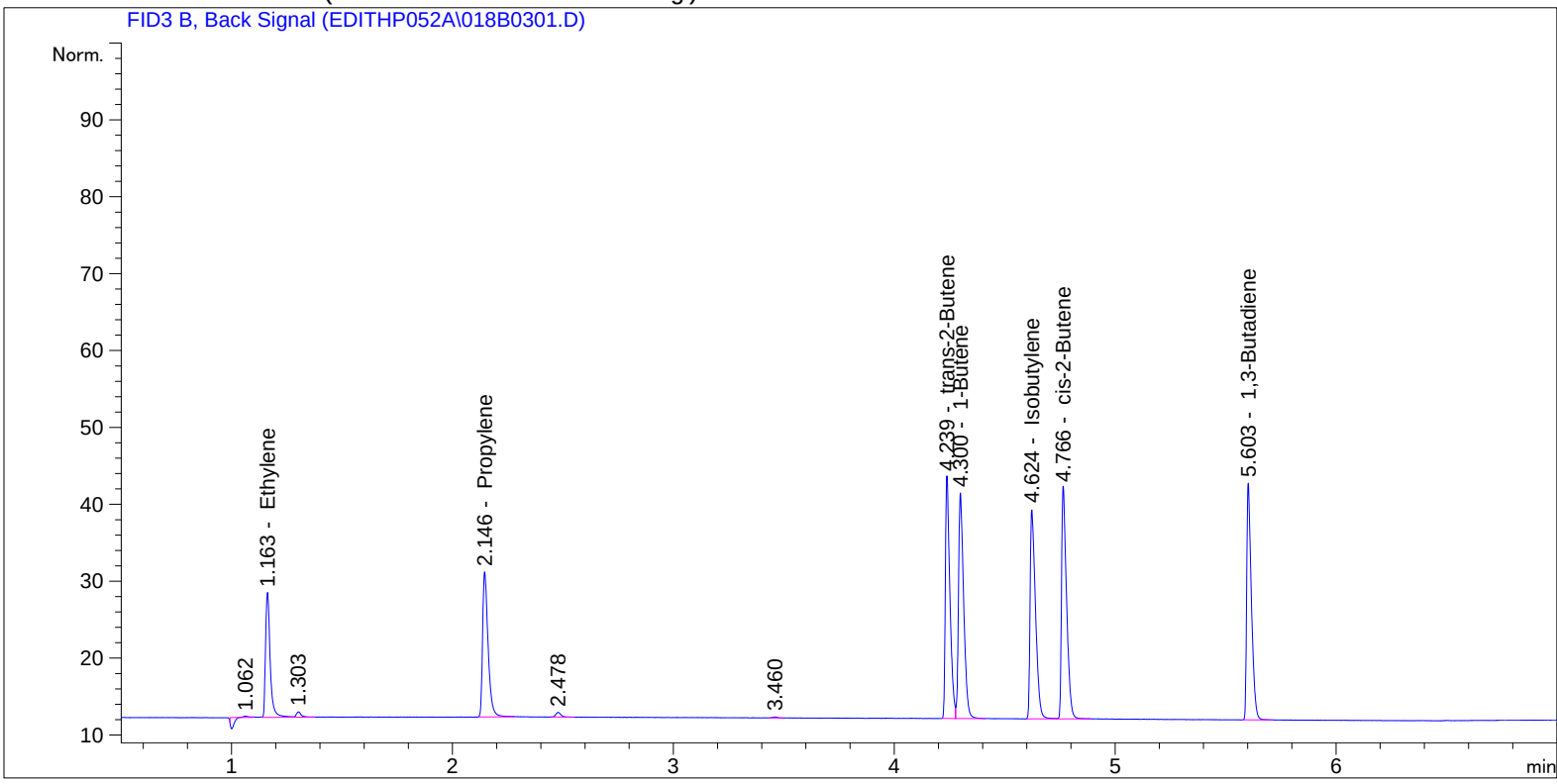
Sorted By             :      Signal
Calib. Data Modified  :      6/23/2014 11:02:23 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.162	BV	46.81665	8.70671e-1	40.76189		Ethylene
2.138	BB	65.27979	6.16556e-1	40.24866		Propylene
3.149		-	-	-		Acetylene
4.221	BV	88.54065	4.81270e-1	42.61193		trans-2-Butene
4.283	VB	96.40832	4.21812e-1	40.66621		1-Butene
4.606	BV	91.88289	4.54797e-1	41.78811		Isobutylene
4.750	VB	94.97415	4.45684e-1	42.32845		cis-2-Butene
5.590	BB	89.91760	4.50576e-1	40.51470		1,3-Butadiene

Data File C:\GC\2014\EDITH\QUARTER 2\EDITHP052A\018B0301.D
Sample Name: EdithP024 #HR3 ENV(1=800,6=200)

```
==================================================================
Acq. Operator   : Justin Guenzler               Seq. Line :   3
Acq. Instrument : Edith                         Location : Vial 18
Injection Date  : 6/19/2014 5:23:09 PM               Inj :   1
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 2\EDITHP052A\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP052R_HRVOC_ACETYLENE.M
Last changed    : 6/23/2014 11:03:07 AM by Justin Guenzler
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Justin Guenzler
ECM Path        : GC\2014\Edith\Quarter 2\EDITHP052A.SC.SSIzip
ECM Version     : 2 (modified after loading)
```




```
==================================================================
                    External Standard Report
==================================================================

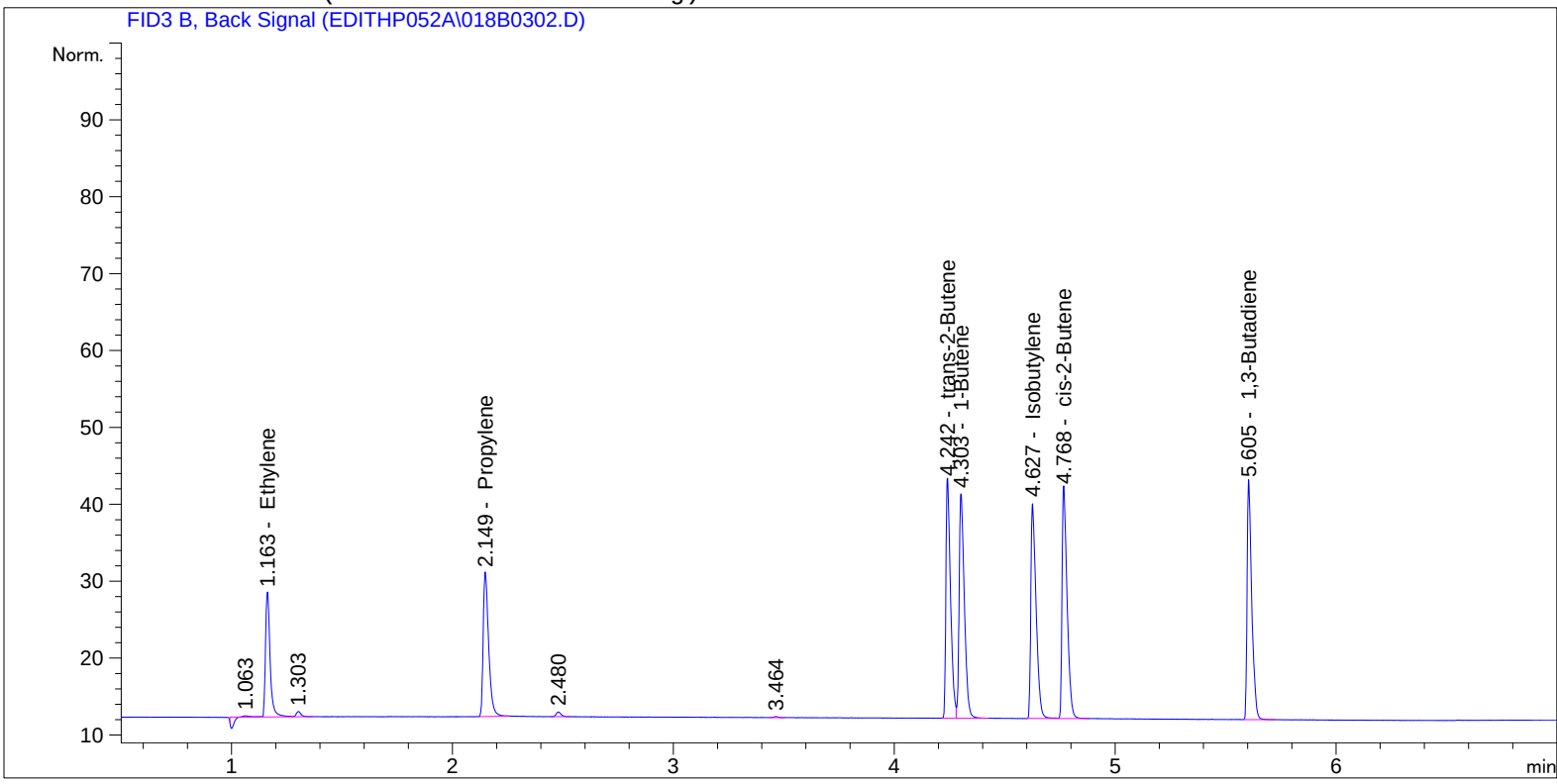
Sorted By             :      Signal
Calib. Data Modified  :      6/23/2014 11:02:23 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.163	BV	23.56117	8.68569e-1	20.46450		Ethylene
2.146	BB	32.52989	6.15486e-1	20.02168		Propylene
3.149		-	-	-		Acetylene
4.239	BV	45.10286	4.78519e-1	21.58258		trans-2-Butene
4.300	VB	47.87969	4.21317e-1	20.17253		1-Butene
4.624	BV	46.20186	4.53144e-1	20.93609		Isobutylene
4.766	VB	47.88242	4.44214e-1	21.27005		cis-2-Butene
5.603	BB	45.22040	4.49104e-1	20.30866		1,3-Butadiene

Data File C:\GC\2014\EDITH\QUARTER 2\EDITHP052A\018B0302.D
Sample Name: EdithP024 #HR3 ENV(1=800,6=200)

```
==================================================================
Acq. Operator   : Justin Guenzler               Seq. Line :   3
Acq. Instrument : Edith                         Location : Vial 18
Injection Date  : 6/19/2014 5:39:25 PM               Inj :   2
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 2\EDITHP052A\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP052R_HRVOC_ACETYLENE.M
Last changed    : 6/23/2014 11:03:07 AM by Justin Guenzler
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Justin Guenzler
ECM Path        : GC\2014\Edith\Quarter 2\EDITHP052A.SC.SSIzip
ECM Version     : 2 (modified after loading)
```




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==================================================================
                    External Standard Report
==================================================================

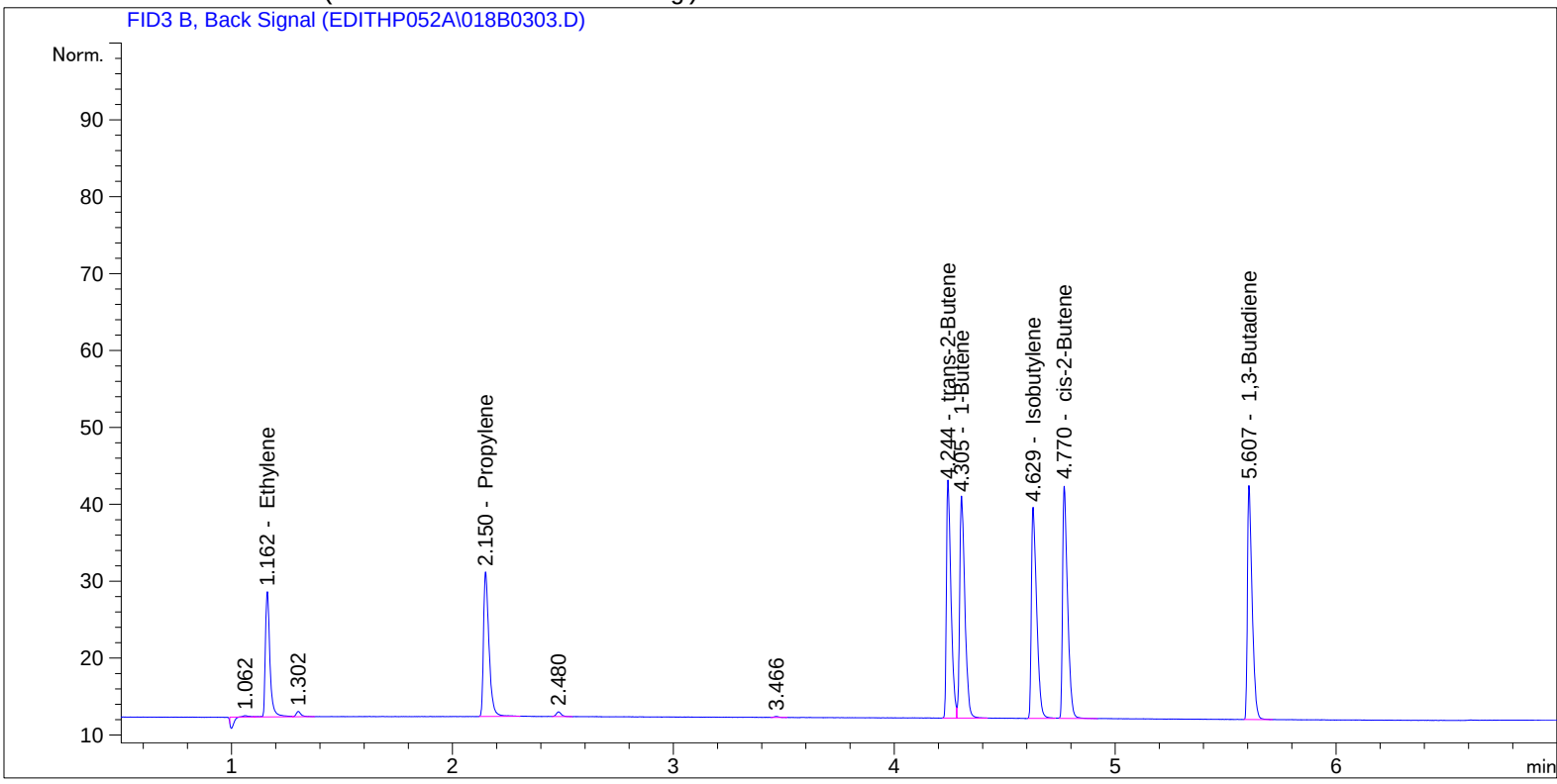
Sorted By             :      Signal
Calib. Data Modified  :      6/23/2014 11:02:23 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.163	BB	23.53396	8.68564e-1	20.44075		Ethylene
2.149	BB	32.36102	6.15474e-1	19.91738		Propylene
3.149		-	-	-		Acetylene
4.242	BV	45.09496	4.78518e-1	21.57876		trans-2-Butene
4.303	VB	47.84719	4.21316e-1	20.15880		1-Butene
4.627	BV	46.15243	4.53140e-1	20.91353		Isobutylene
4.768	VB	47.76640	4.44207e-1	21.21817		cis-2-Butene
5.605	BB	45.15238	4.49099e-1	20.27791		1,3-Butadiene

Data File C:\GC\2014\EDITH\QUARTER 2\EDITHP052A\018B0303.D
Sample Name: EdithP024 #HR3 ENV(1=800,6=200)

```
==================================================================
Acq. Operator   : Justin Guenzler               Seq. Line :   3
Acq. Instrument : Edith                         Location : Vial 18
Injection Date  : 6/19/2014 5:55:40 PM               Inj :   3
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 2\EDITHP052A\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP052R_HRVOC_ACETYLENE.M
Last changed    : 6/23/2014 11:03:48 AM by Justin Guenzler
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Justin Guenzler
ECM Path        : GC\2014\Edith\Quarter 2\EDITHP052A.SC.SSIzip
ECM Version     : 2 (modified after loading)
```




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/23/2014 11:02:23 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

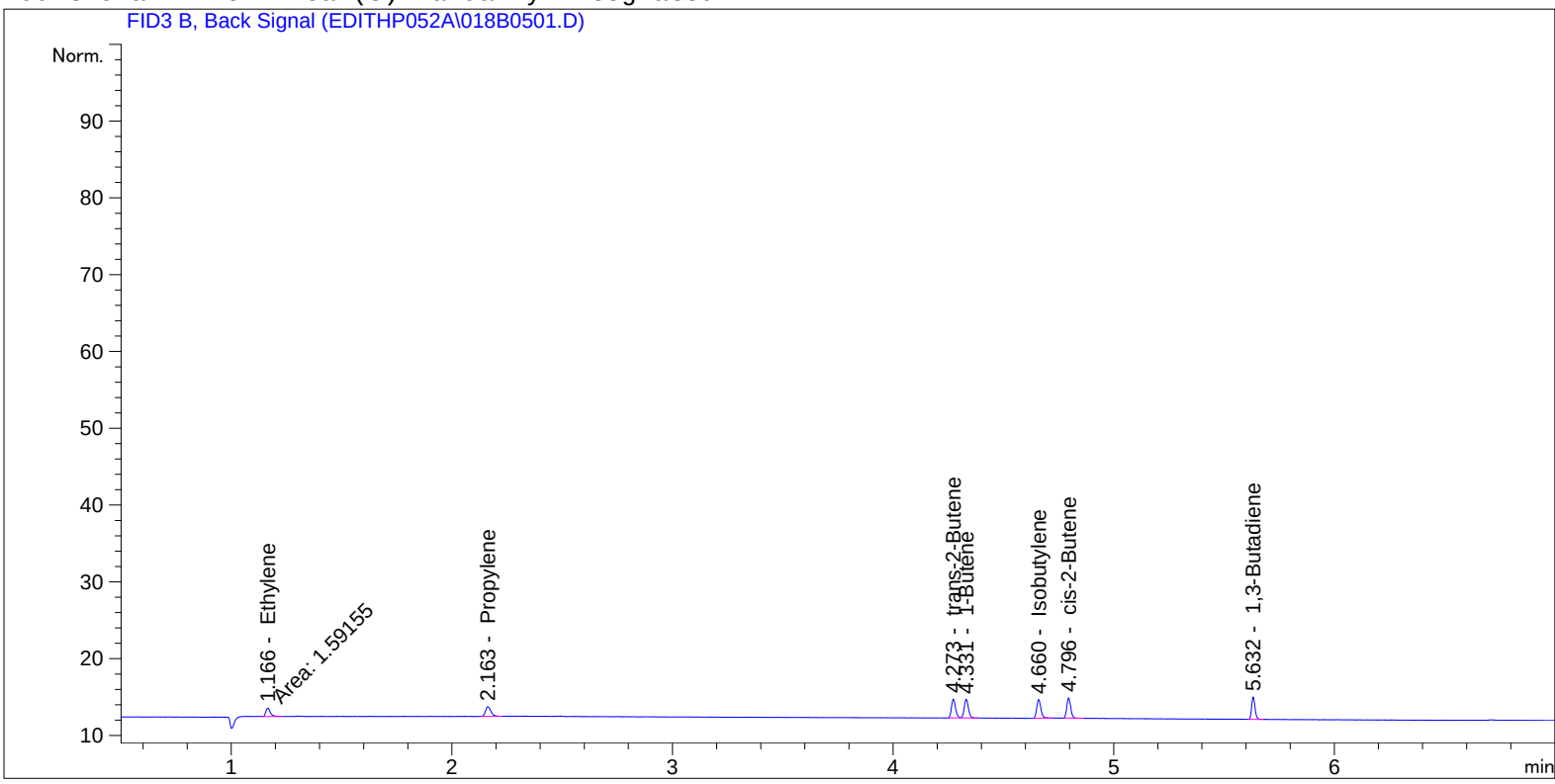
Signal 1: FID3 B, Back Signal
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.162	VV	23.43707	8.68547e-1	20.35619		Ethylene
2.150	BB	32.31024	6.15471e-1	19.88602		Propylene
3.149		-	-	-		Acetylene
4.244	BV	44.60128	4.78456e-1	21.33976		trans-2-Butene
4.305	VB	47.32155	4.21305e-1	19.93682		1-Butene
4.629	BB	45.70122	4.53107e-1	20.70756		Isobutylene
4.770	BB	47.39867	4.44184e-1	21.05373		cis-2-Butene
5.607	BB	44.67575	4.49068e-1	20.06244		1,3-Butadiene

Data File C:\GC\2014\EDITH\QUARTER 2\EDITHP052A\018B0501.D
Sample Name: EdithP024 #HR1 ENV(1=3950,6=50)

```
==================================================================
Acq. Operator   : Justin Guenzler              Seq. Line :   5
Acq. Instrument : Edith                        Location : Vial 18
Injection Date  : 6/19/2014 7:00:45 PM              Inj :   1
                                              Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 2\EDITHP052A\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP052R_HRVOC_ACETYLENE.M
Last changed    : 6/23/2014 11:04:42 AM by Justin Guenzler
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Justin Guenzler
ECM Path        : GC\2014\Edith\Quarter 2\EDITHP052A.SC.SSIzip
ECM Version     : 2 (modified after loading)
Additional Info : Peak(s) manually integrated
```

Manual Int. "II" (JKG)




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/23/2014 11:02:23 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.166	MM	1.59155	8.10191e-1	1.28946		Ethylene
2.163	BB	2.14093	5.85191e-1	1.25285		Propylene
3.149		-	-	-		Acetylene
4.273	BV	3.16383	4.04650e-1	1.28024		trans-2-Butene
4.331	VB	3.24038	4.07761e-1	1.32130		1-Butene
4.660	BB	3.19604	4.08388e-1	1.30523		Isobutylene
4.796	BB	3.25797	4.03619e-1	1.31498		cis-2-Butene

Data File C:\GC\2014\EDITH\QUARTER 2\EDITHP052A\018B0501.D
Sample Name: EdithP024 #HR1 ENV(1=3950,6=50)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
5.632	BB	3.10528	4.08942e-1	1.26988		1,3-Butadiene
Totals :				9.03394		

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

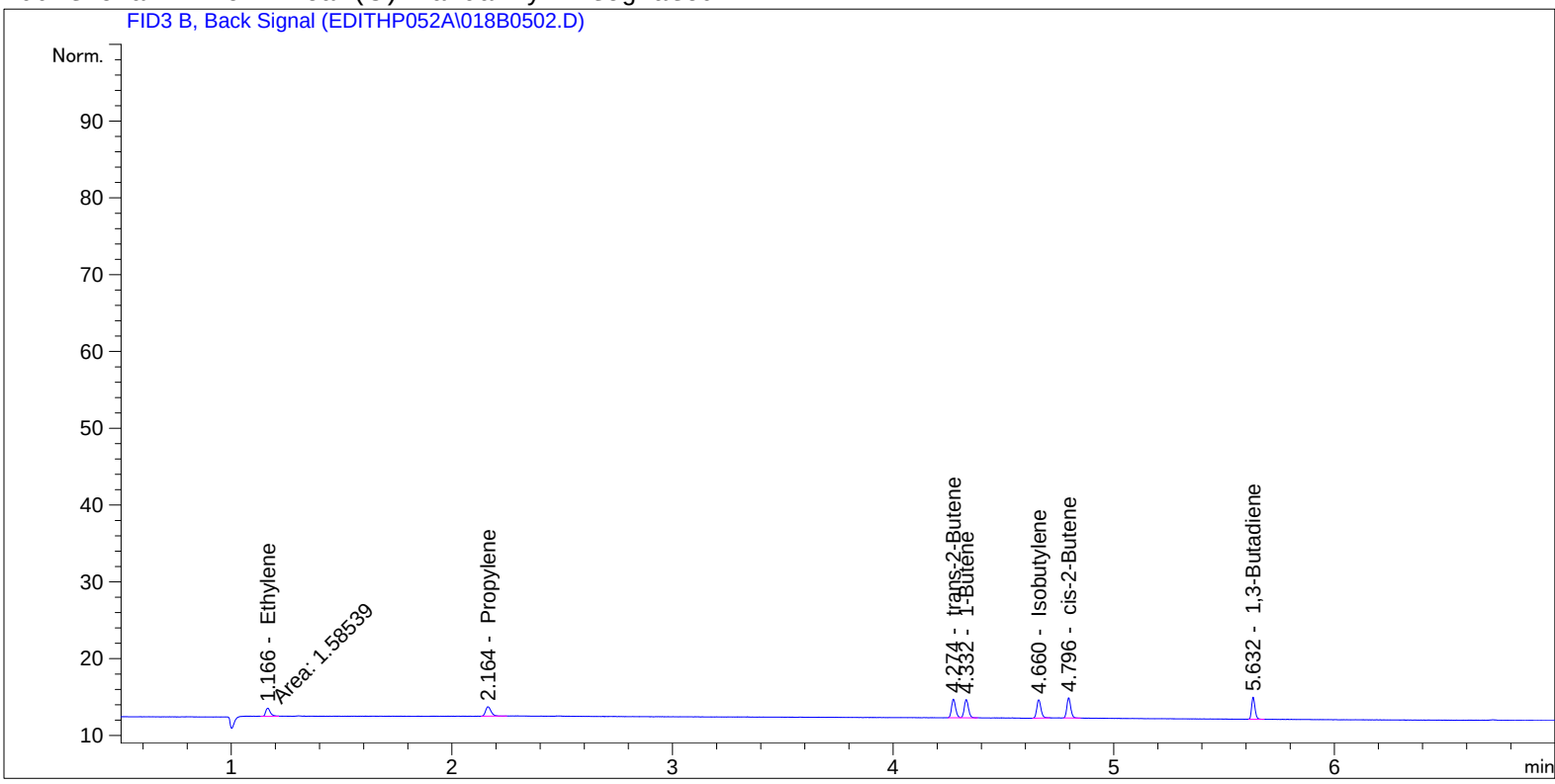
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*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 2\EDITHP052A\018B0502.D
Sample Name: EdithP024 #HR1 ENV(1=3950,6=50)

```
==================================================================
Acq. Operator   : Justin Guenzler              Seq. Line :   5
Acq. Instrument : Edith                        Location : Vial 18
Injection Date  : 6/19/2014 7:17:00 PM              Inj :   2
                                              Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 2\EDITHP052A\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP052R_HRVOC_ACETYLENE.M
Last changed    : 6/23/2014 11:04:42 AM by Justin Guenzler
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Justin Guenzler
ECM Path        : GC\2014\Edith\Quarter 2\EDITHP052A.SC.SSIzip
ECM Version     : 2 (modified after loading)
Additional Info : Peak(s) manually integrated
```

Manual Int. "II" (JKG)




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/23/2014 11:02:23 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.166	MM	1.58539	8.10191e-1	1.28447		Ethylene
2.164	BB	2.06728	5.85121e-1	1.20961		Propylene
3.149		-	-	-		Acetylene
4.274	BV	3.11602	4.04650e-1	1.26090		trans-2-Butene
4.332	VB	3.16677	4.07531e-1	1.29056		1-Butene
4.660	BB	3.14433	4.08216e-1	1.28356		Isobutylene
4.796	BB	3.21600	4.03545e-1	1.29780		cis-2-Butene

Data File C:\GC\2014\EDITH\QUARTER 2\EDITHP052A\018B0502.D
Sample Name: EdithP024 #HR1 ENV(1=3950,6=50)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
5.632	BB	3.05760	4.08714e-1	1.24969		1,3-Butadiene
Totals :				8.87659		

1 Warnings or Errors :

Warning : Calibrated compound(s) not found

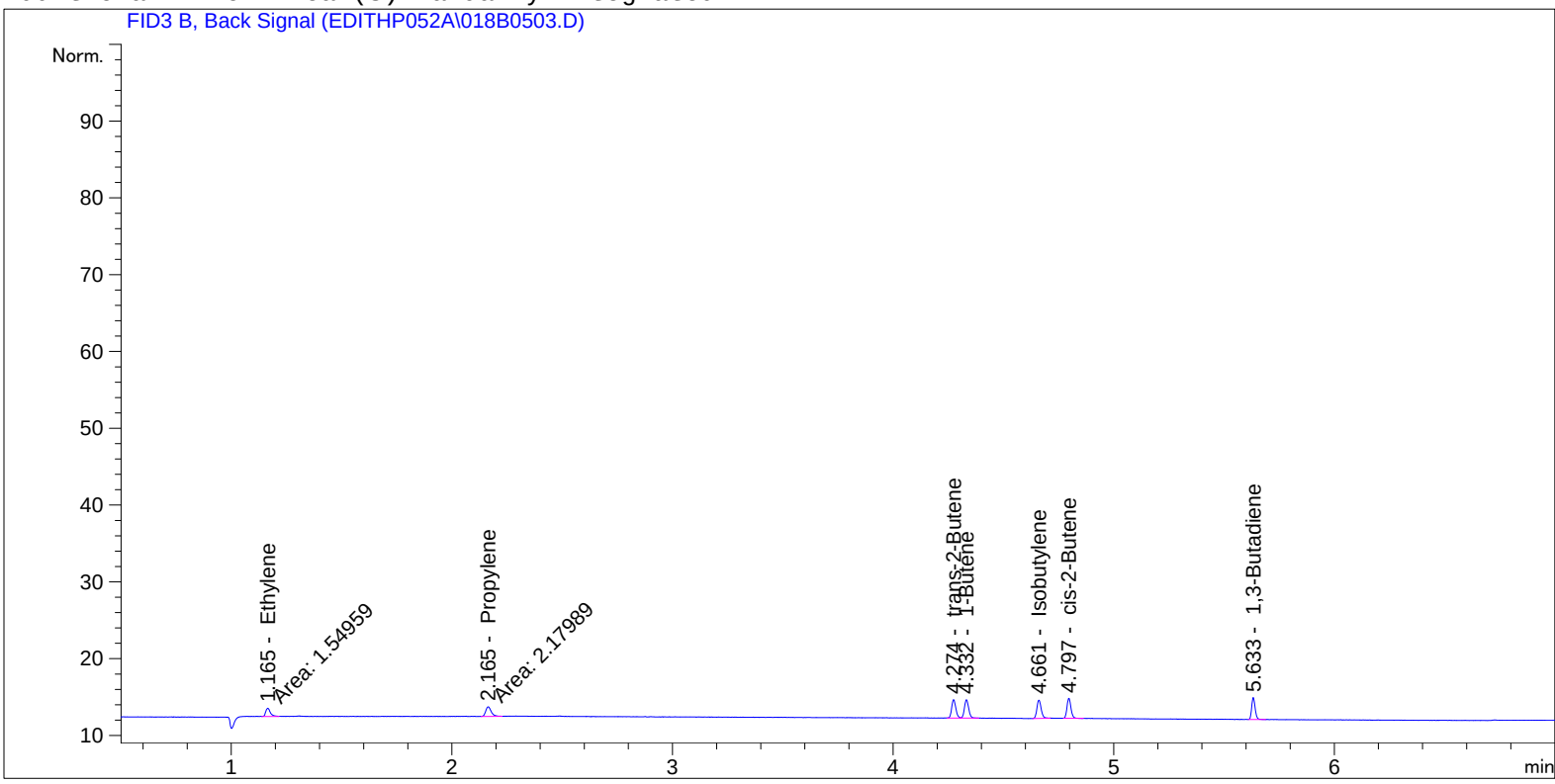
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*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 2\EDITHP052A\018B0503.D
Sample Name: EdithP024 #HR1 ENV(1=3950,6=50)

```
==================================================================
Acq. Operator   : Justin Guenzler              Seq. Line :   5
Acq. Instrument : Edith                        Location : Vial 18
Injection Date  : 6/19/2014 7:33:10 PM              Inj :   3
                                              Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 2\EDITHP052A\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP052R_HRVOC_ACETYLENE.M
Last changed    : 6/23/2014 11:04:42 AM by Justin Guenzler
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Justin Guenzler
ECM Path        : GC\2014\Edith\Quarter 2\EDITHP052A.SC.SSIzip
ECM Version     : 2 (modified after loading)
Additional Info : Peak(s) manually integrated
```

Manual Int. "II" (JKG)




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==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/23/2014 11:02:23 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.165	MM	1.54959	8.10191e-1	1.25547		Ethylene
2.165	MM	2.17989	5.85771e-1	1.27692		Propylene
3.149		-	-	-		Acetylene
4.274	BV	3.14576	4.04650e-1	1.27293		trans-2-Butene
4.332	VB	3.21183	4.07631e-1	1.30924		1-Butene
4.661	BB	3.19385	4.08355e-1	1.30423		Isobutylene
4.797	BB	3.23691	4.03545e-1	1.30624		cis-2-Butene

Data File C:\GC\2014\EDITH\QUARTER 2\EDITHP052A\018B0503.D
Sample Name: EdithP024 #HR1 ENV(1=3950,6=50)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
5.633	BB	3.07942	4.08714e-1	1.25860		1,3-Butadiene

Totals : 8.98362

1 Warnings or Errors :

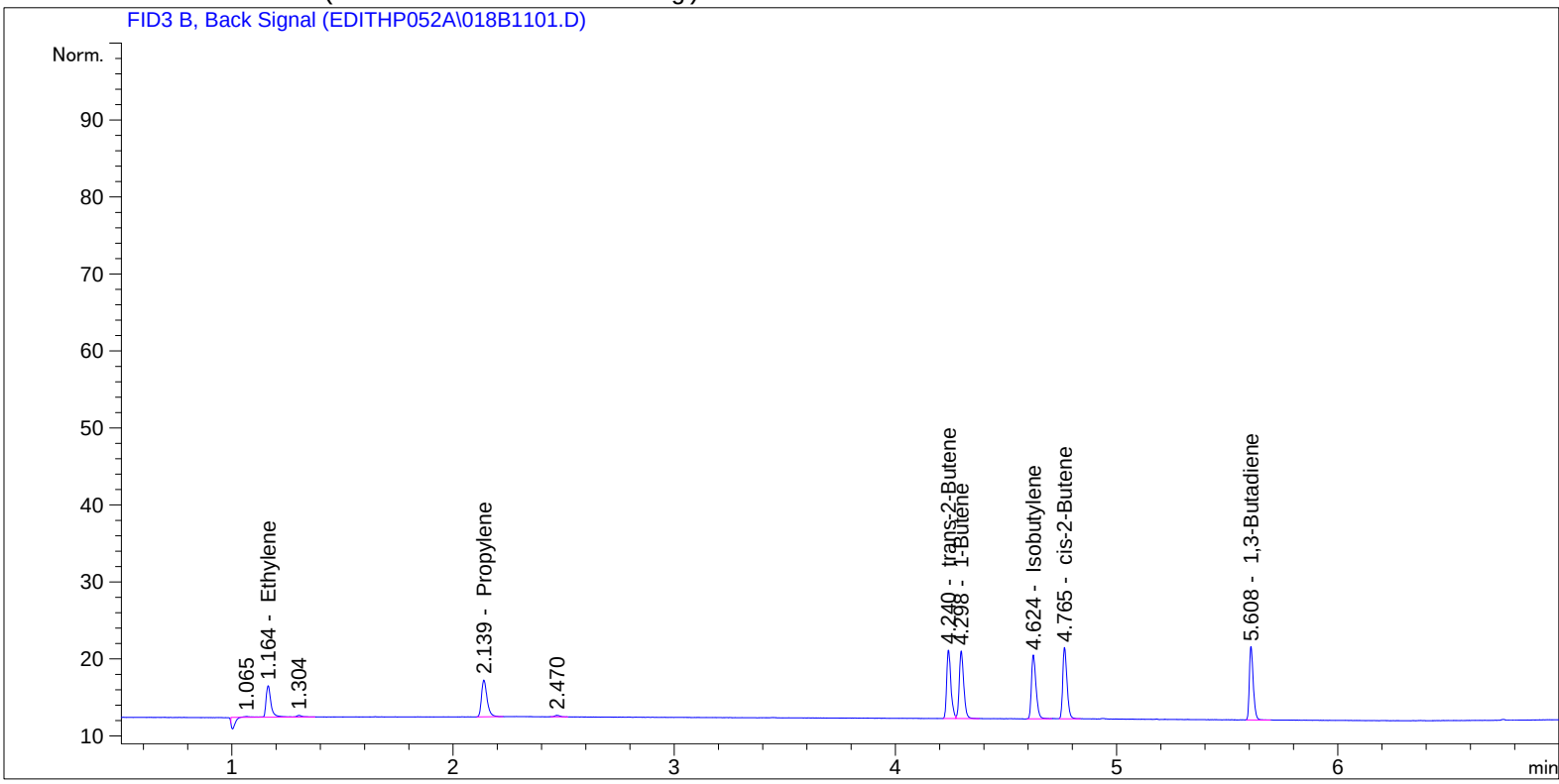
Warning : Calibrated compound(s) not found

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*** End of Report ***

Data File C:\GC\2014\EDITH\QUARTER 2\EDITHP052A\018B1101.D
Sample Name: EdithP024 #HR2 ENV(1=1900,6=100)

```
==================================================================
Acq. Operator   : Justin Guenzler               Seq. Line :  11
Acq. Instrument : Edith                         Location : Vial 18
Injection Date  : 6/20/2014 9:17:03 AM               Inj :   1
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 2\EDITHP052A\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP052R_HRVOC_ACETYLENE.M
Last changed    : 6/23/2014 11:05:18 AM by Justin Guenzler
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Justin Guenzler
ECM Path        : GC\2014\Edith\Quarter 2\EDITHP052A.SC.SSIzip
ECM Version     : 2 (modified after loading)
```




```
==================================================================
                    External Standard Report
==================================================================

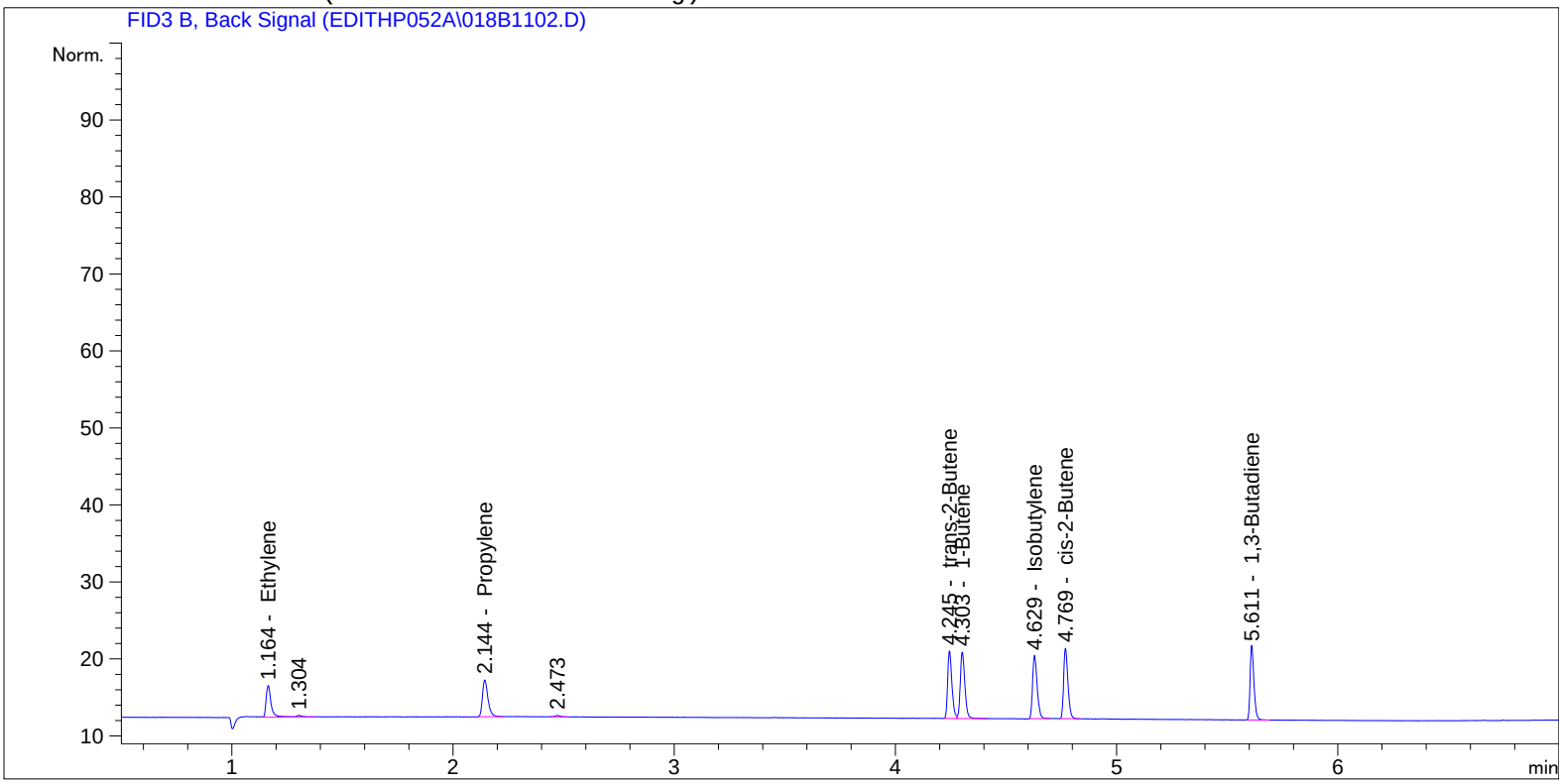
Sorted By             :      Signal
Calib. Data Modified  :      6/23/2014 11:02:23 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.164	BB	6.33746	8.57070e-1	5.43165		Ethylene
2.139	BB	8.34535	6.09301e-1	5.08483		Propylene
3.149		-	-	-		Acetylene
4.240	BV	11.72681	4.62562e-1	5.42438		trans-2-Butene
4.298	VB	12.34598	4.18485e-1	5.16660		1-Butene
4.624	BB	11.98577	4.43649e-1	5.31747		Isobutylene
4.765	BB	12.41254	4.35745e-1	5.40870		cis-2-Butene
5.608	BB	11.65107	4.40572e-1	5.13314		1,3-Butadiene

Data File C:\GC\2014\EDITH\QUARTER 2\EDITHP052A\018B1102.D
Sample Name: EdithP024 #HR2 ENV(1=1900,6=100)

```
==================================================================
Acq. Operator   : Justin Guenzler              Seq. Line :  11
Acq. Instrument : Edith                        Location : Vial 18
Injection Date  : 6/20/2014 9:33:48 AM              Inj :   2
                                              Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 2\EDITHP052A\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP052R_HRVOC_ACETYLENE.M
Last changed    : 6/23/2014 11:05:18 AM by Justin Guenzler
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Justin Guenzler
ECM Path        : GC\2014\Edith\Quarter 2\EDITHP052A.SC.SSIzip
ECM Version     : 2 (modified after loading)
```




```
==================================================================
                    External Standard Report
==================================================================

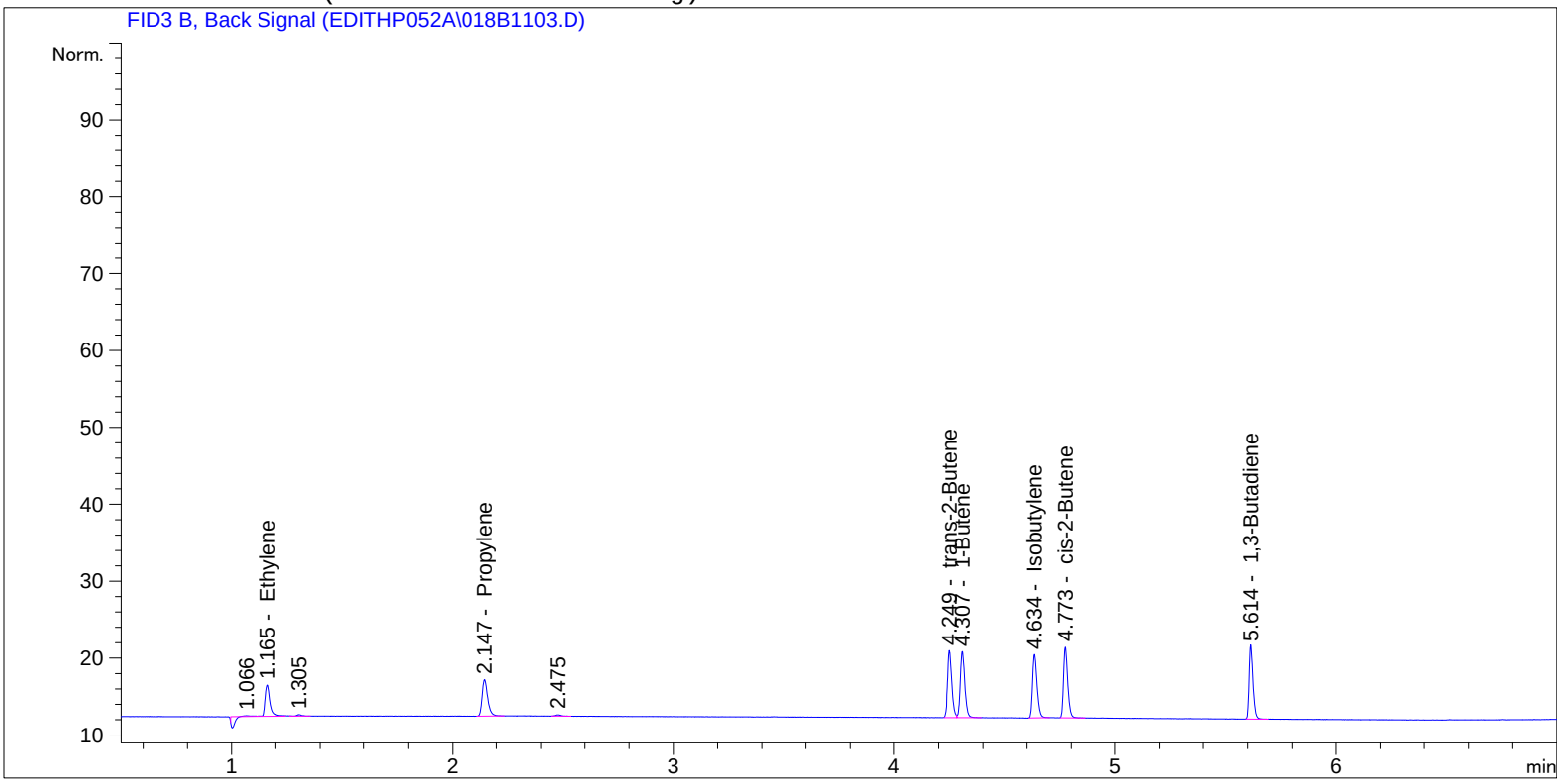
Sorted By             :      Signal
Calib. Data Modified  :      6/23/2014 11:02:23 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.164	VB	6.34184	8.57081e-1	5.43548		Ethylene
2.144	BB	8.27519	6.09230e-1	5.04150		Propylene
3.149		-	-	-		Acetylene
4.245	BV	11.67297	4.62463e-1	5.39831		trans-2-Butene
4.303	VB	12.32316	4.18478e-1	5.15697		1-Butene
4.629	BB	11.73445	4.43374e-1	5.20275		Isobutylene
4.769	BB	12.22547	4.35570e-1	5.32505		cis-2-Butene
5.611	BB	11.61056	4.40532e-1	5.11482		1,3-Butadiene

Data File C:\GC\2014\EDITH\QUARTER 2\EDITHP052A\018B1103.D
Sample Name: EdithP024 #HR2 ENV(1=1900,6=100)

```
==================================================================
Acq. Operator   : Justin Guenzler              Seq. Line :  11
Acq. Instrument : Edith                        Location : Vial 18
Injection Date  : 6/20/2014 9:50:50 AM              Inj :   3
                                              Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 2\EDITHP052A\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2014\EDITH\METHODS\EDITHP052R_HRVOC_ACETYLENE.M
Last changed    : 6/23/2014 11:05:18 AM by Justin Guenzler
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Justin Guenzler
ECM Path        : GC\2014\Edith\Quarter 2\EDITHP052A.SC.SSIzip
ECM Version     : 2 (modified after loading)
```




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      6/23/2014 11:02:23 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.165	VB	6.24500	8.56837e-1	5.35095		Ethylene
2.147	BB	8.25735	6.09212e-1	5.03047		Propylene
3.149		-	-	-		Acetylene
4.249	BV	11.57281	4.62275e-1	5.34982		trans-2-Butene
4.307	VB	12.19779	4.18438e-1	5.10402		1-Butene
4.634	BB	11.74586	4.43387e-1	5.20796		Isobutylene
4.773	BB	12.17982	4.35526e-1	5.30463		cis-2-Butene
5.614	BB	11.52107	4.40442e-1	5.07436		1,3-Butadiene

THE LINDE GROUP

Linde

SHIPPED TO: Enthalpy Analytical Inc.
800 Capitola Dr. Ste 1
Durham, NC 27713-4385

PAGE: 1 of 1

CERTIFICATE OF ANALYSIS

Sales#:	111524232	**Cylinder Size:**	2A (8" X 47.5")
Production#:	1293571	**Cylinder # :**	CC-344433
Certification Date:	Apr-14-2014	**Cylinder Pressure:**	2000 psig
P.O.# :	04031401	**Cylinder Valve:**	CGA 350 / Steel
Blend Type:	CERTIFIED	**Cylinder Volume:**	29.5 Liter
Material#:	24086389	**Cylinder Material:**	Aluminum
Traceability:	NIST by weight	**Gas Volume:**	4000 Liters
Expiration Date:	Apr-14-2015	**Blend Tolerance:**	5% Relative
Do NOT use under:	150 psig	**Analytical Accuracy:**	2% Relative

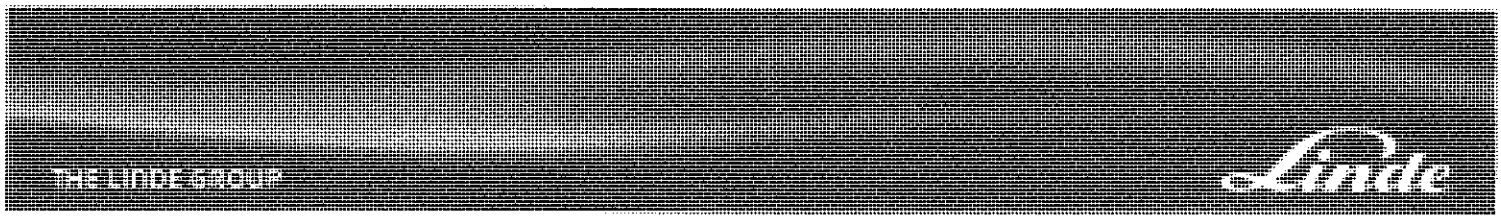
COMPONENT	CAS NUMBER	REQUESTED CONC	CERTIFIED CONC
Ethylene	74-85-1	100 ppm	103 ppm
Propylene	115-07-1	100 ppm	99.7 ppm
Isobutylene	115-11-7	100 ppm	104 ppm
1-Butene	106-98-9	100 ppm	104 ppm
1,3-Butadiene	106-99-0	100 ppm	101 ppm
Trans-2-butene	624-64-6	100 ppm	103 ppm
Cis-2-Butene	590-18-1	100 ppm	105 ppm
Nitrogen	7727-37-9	Balance	Balance

ANALYST: Lou Lorenzetti

DATE: Apr-14-2014

Linde Gas North America LLC

(908) 329-9700 Main (908) 329-9740 Fax
www.Lindeus.com



SHIPPED TO: Enthalpy Analytical Inc
800 Capitola Dr. Ste. 1
Durham, NC 27713

PAGE: 1 of 1

CERTIFICATE OF ANALYSIS

Sales#:	109110410	**Cylinder Size:**	2 (9" X 51")
Production#:	1220766	**Cylinder # :**	2008615Y
Certification Date:	Jun-19-2012	**Cylinder Pressure:**	900 psig
P.O.# :	06011204	**Cylinder Valve:**	CGA 350 / Brass
Blend Type:	CERTIFIED	**Cylinder Volume:**	44 Liter
Material#:	24087889	**Cylinder Material:**	Steel
Traceability:	NIST by weight	**Gas Volume:**	2694 Liter
Expiration Date:	Jun-19-2014	**Blend Tolerance:**	5% Relative
Do NOT use under:	150 psig	**Analytical Accuracy:**	2% Relative

COMPONENT	CAS NUMBER	REQUESTED CONC	CERTIFIED CONC
Ethylene	74-85-1	1.00 %	0.98 %
Propylene	115-07-1	1.00 %	1.05 %
Isobutene	115-11-7	1.00 %	1.03 %
1-Butene	106-98-9	1.00 %	1.03 %
1,3-Butadiene	106-99-0	1.00 %	1.02 %
Trans-2-Butene	624-64-6	1.00 %	1.03 %
Cis-2-Butene	590-18-1	1.00 %	1.04 %
Nitrogen	7727-37-9	Balance	Balance

ANALYST: Matthew Booth

DATE: Jun-19-2012

Agilent 7890A

Oven	
Equilibration Time	0.3 min
Max Temperature	200 degrees C
Slow Fan	Disabled
Oven Program	On
35 °C for 2.2 min	
#1 then 15 °C/min to 70 °C for 0.07 min	
#2 then 30 °C/min to 180 °C for 1 min	
Run Time	9.27 min
Sample Overlap	
Sample overlap is not enabled	
Front SS Inlet H2	
Mode	Split
Heater	On 200 °C
Pressure	On 5.1931 psi
Total Flow	On 15.6 mL/min
Septum Purge Flow	On 3 mL/min
Gas Saver	Off
Split Ratio	5 :1
Split Flow	10.5 mL/min
Back SS Inlet H2	
Mode	Split
Heater	On 200 °C
Pressure	On 4.9511 psi
Total Flow	On 9.6 mL/min
Septum Purge Flow	On 3 mL/min
Gas Saver	Off
Split Ratio	2 :1
Split Flow	0 mL/min
Column #1	
Restek 10198Rtx-1 S/N 806941	
280 °C: 30 m x 320 µm x 4 µm	
In: Front SS Inlet H2	
Out: Front Detector FID	
(Initial)	35 °C
Pressure	5.1931 psi
Flow	2.1 mL/min
Average Velocity	39.91 cm/sec
Holdup Time	1.2528 min
Flow Program	On
2.1 mL/min for 0 min	
Run Time	9.27 min
Column #2	
Restek 19701Alumina S/N 156109	
280 °C: 30 m x 320 µm x 10 µm	
In: Front SS Inlet H2	
Out: Back Detector FID	
(Initial)	35 °C
Pressure	6.1868 psi
Flow	2.2 mL/min
Average Velocity	43.848 cm/sec
Holdup Time	1.1403 min
Flow Program	On

method: C:\GC\2013\EDITH\METHODS\GC139P039_HRVOC.M
Modified on: 1/14/2014 at 3:15:15 PM
2.2 mL/min for 0 min

Run Time	9.27 min	
Front Detector FID		
Heater	On	300 °C
H2 Flow	On	50 mL/min
Air Flow	On	450 mL/min
Makeup Flow	On	35 mL/min
Const Col + Makeup	Off	
Flame	On	
Electrometer	On	
Back Detector FID		
Heater	On	200 °C
H2 Flow	On	50 mL/min
Air Flow	On	450 mL/min
Makeup Flow	On	35 mL/min
Const Col + Makeup	Off	
Flame	On	
Electrometer	On	
Valve 1		
Gas Sampling Valve	Off	
GSV Loop Volume	0.25 mL	
Load Time	1.5 min	
Inject Time	0.5 min	
Valve 2		
Gas Sampling Valve	Off	
GSV Loop Volume	0.25 mL	
Load Time	1.5 min	
Inject Time	0.5 min	
Valve Box		
Heater	On	150 °C
Signals		
Signal #1: Front Signal	Save On	
	20 Hz	
Signal #2: Test Plot	Save Off	
	50 Hz	
Signal #3: Back Signal	Save On	
	20 Hz	
Signal #4: Test Plot	Save Off	
	50 Hz	

Calibration Table

Calib. Data Modified : 4/1/2014 1:50:03 PM

Rel. Reference Window : 0.000 %
Abs. Reference Window : 0.100 min
Rel. Non-ref. Window : 0.000 %
Abs. Non-ref. Window : 0.050 min
Uncalibrated Peaks : not reported
Partial Calibration : Yes, identified peaks are recalibrated
Correct All Ret. Times: No, only for identified peaks

Curve Type : Linear
Origin : Connected
Weight : Quadratic (Amnt)

Recalibration Settings:
Average Response : Average all calibrations
Average Retention Time: Floating Average New 75%

Calibration Report Options :
Printout of recalibrations within a sequence:
Calibration Table after Recalibration
Normal Report after Recalibration
If the sequence is done with bracketing:
Results of first cycle (ending previous bracket)

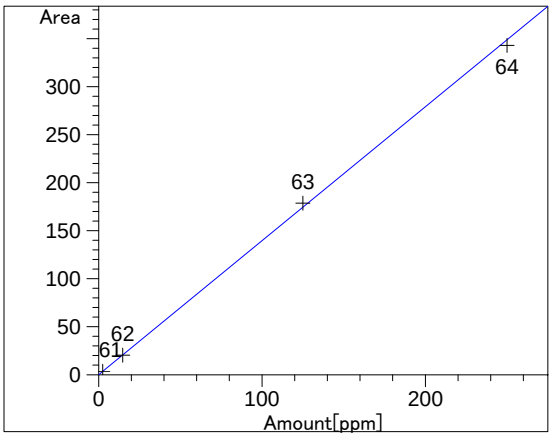
Signal 1: FID1 A, Front Signal
Signal 2: FID3 B, Back Signal

RetTime [min]	Sig	Lvl	Amount [ppm]	Area	Amt/Area	Ref	Grp	Name
3.217	2	61	2.50000	3.50740	7.12779e-1			Acetylene
		62	14.70600	20.37861	7.21639e-1			
		63	125.00000	178.72140	6.99413e-1			
		64	250.00000	343.08602	7.28680e-1			

Peak Sum Table

No Entries in table

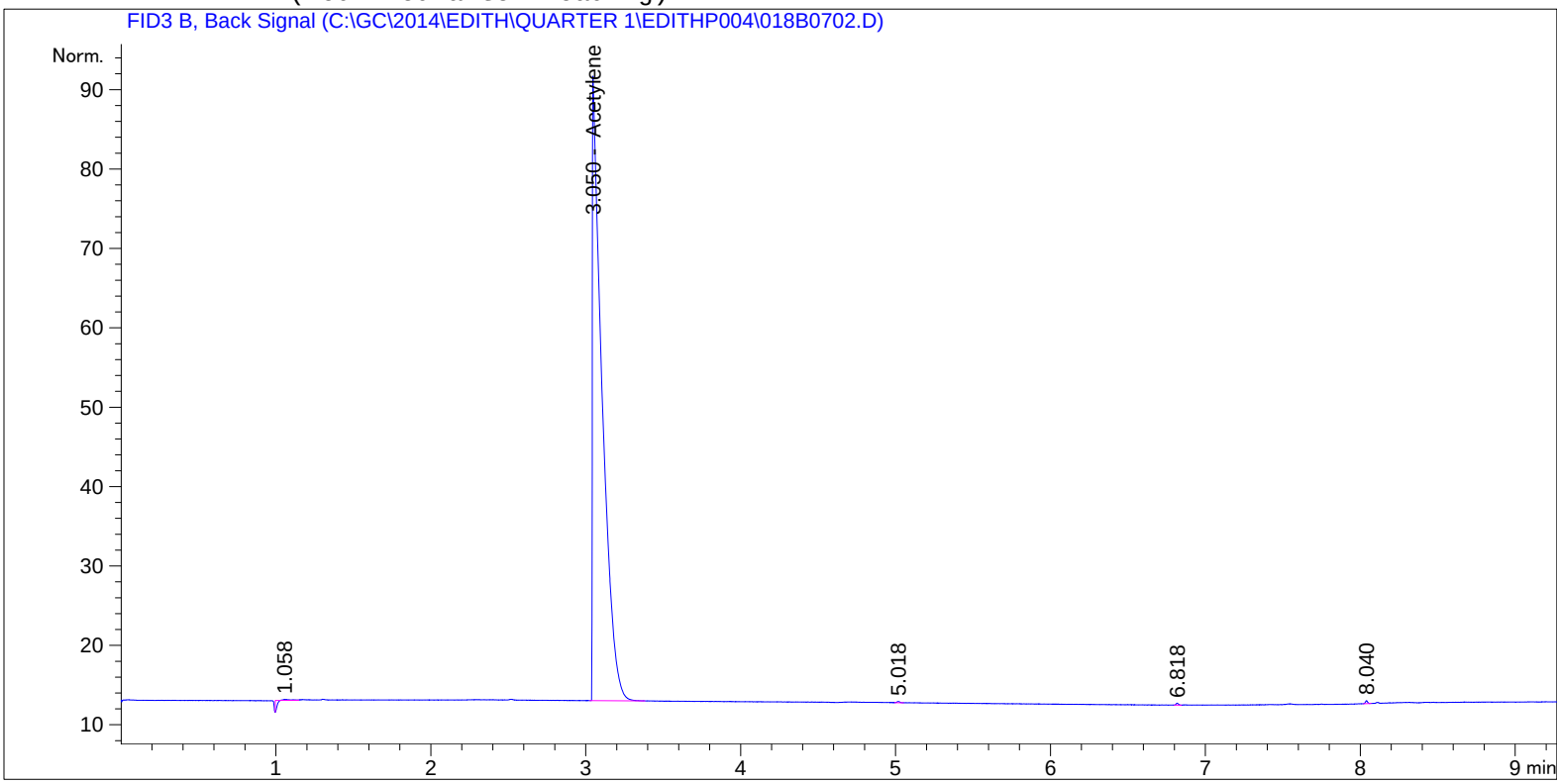
Calibration Curves



Acetylene at exp. RT: 3.217
FID3 B, Back Signal
Correlation: 0.99982
Residual Std. Dev.: 5.14929
Formula: y = mx + b
m: 1.39608
b: 1.34847e-2
x: Amount
y: Area
Calibration Level Weights:
Level 61 : 1
Level 62 : 0.0289
Level 63 : 0.0004
Level 64 : 0.0001

Data File C:\GC\2014\EDITH\QUARTER 1\EDITHP004\018B0702.D
Sample Name: gc147p111 #A4 ENV(1=0,6=400)

```
==========================================================================
Acq. Operator   : Justin Guenzler               Seq. Line :   7
Acq. Instrument : Edith                        Location : Vial 18
Injection Date  : 4/1/2014 9:23:48 AM               Inj :   2
                                              Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 1\EDITHP004\GC139P039_HRVOC.M
Last changed    : 1/14/2014 3:17:10 PM by Justin Guenzler
Analysis Method : V:\GC2014\GC\2014\EDITH\QUARTER 1\METHODS\EDITHP004R_ACETYLENE.M
Last changed    : 4/1/2014 1:50:03 PM by Justin Guenzler
                  (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      4/1/2014 1:50:03 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal

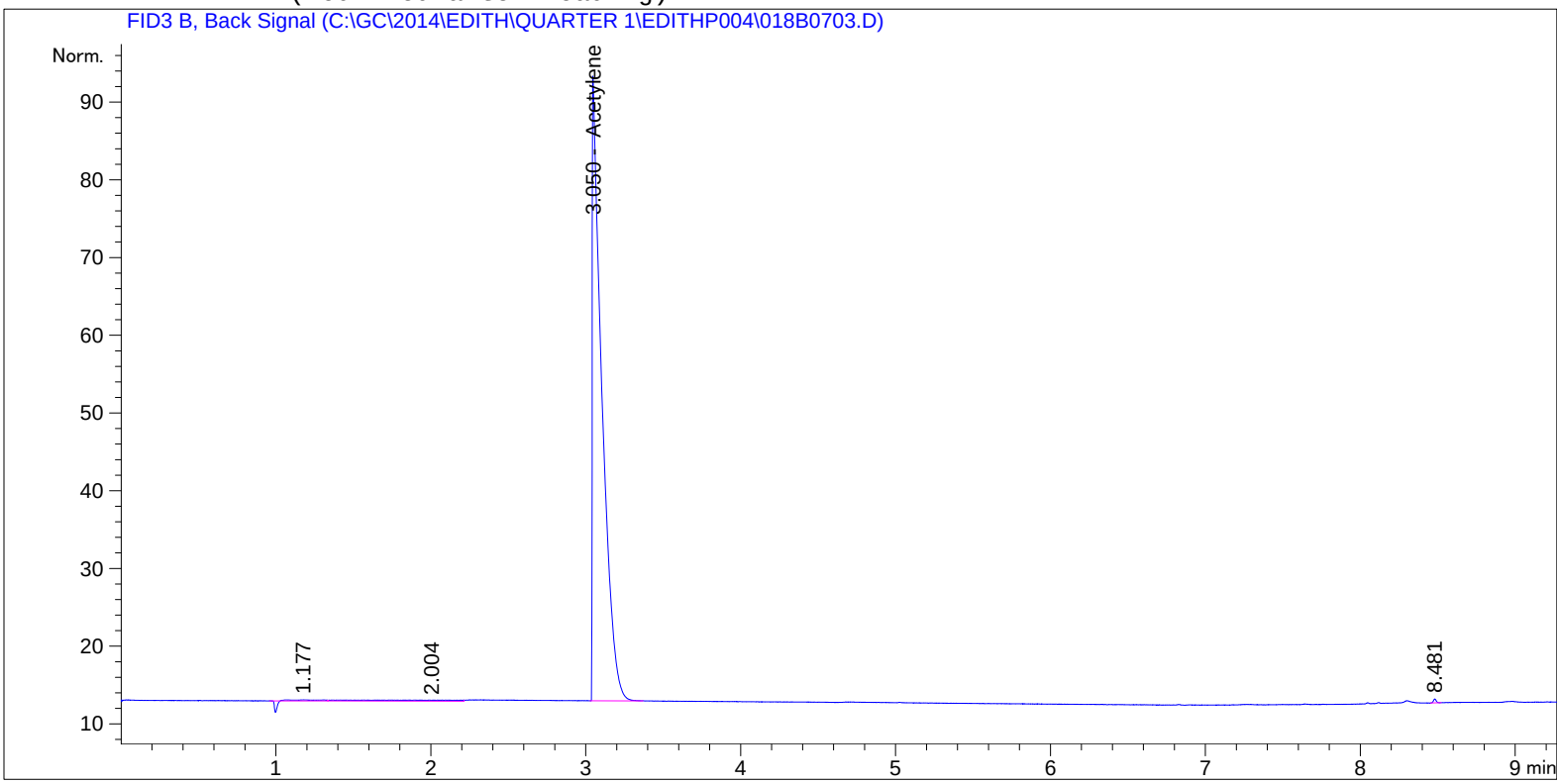
RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  3.050 BB      338.61578 7.16261e-1  242.53716    Acetylene

Totals :                              242.53716


==========================================================================
                         *** End of Report ***
```

Data File C:\GC\2014\EDITH\QUARTER 1\EDITHP004\018B0703.D
Sample Name: gc147p111 #A4 ENV(1=0,6=400)

```
==========================================================================
Acq. Operator   : Justin Guenzler               Seq. Line :   7
Acq. Instrument : Edith                        Location : Vial 18
Injection Date  : 4/1/2014 9:40:00 AM               Inj :   3
                                              Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 1\EDITHP004\GC139P039_HRVOC.M
Last changed    : 1/14/2014 3:17:10 PM by Justin Guenzler
Analysis Method : V:\GC2014\GC\2014\EDITH\QUARTER 1\METHODS\EDITHP004R_ACETYLENE.M
Last changed    : 4/1/2014 1:50:03 PM by Justin Guenzler
                  (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      4/1/2014 1:50:03 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal

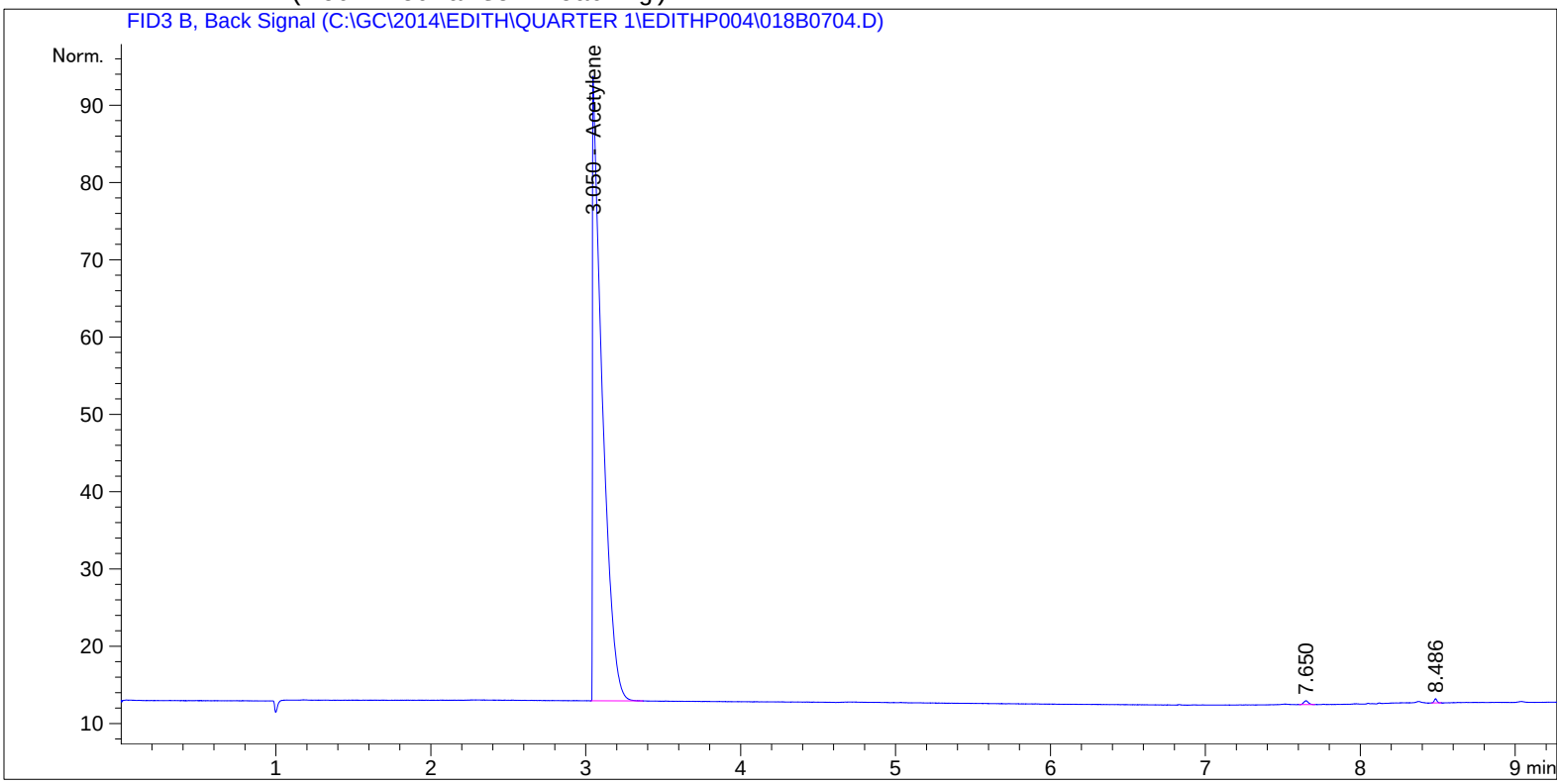
RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  3.050 BB      343.15430 7.16261e-1  245.78805    Acetylene

Totals :                              245.78805


==========================================================================
                         *** End of Report ***
```

Data File C:\GC\2014\EDITH\QUARTER 1\EDITHP004\018B0704.D
Sample Name: gc147p111 #A4 ENV(1=0,6=400)

```
==========================================================================
Acq. Operator   : Justin Guenzler               Seq. Line :   7
Acq. Instrument : Edith                        Location : Vial 18
Injection Date  : 4/1/2014 9:56:28 AM               Inj :   4
                                              Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 1\EDITHP004\GC139P039_HRVOC.M
Last changed    : 1/14/2014 3:17:10 PM by Justin Guenzler
Analysis Method : V:\GC2014\GC\2014\EDITH\QUARTER 1\METHODS\EDITHP004R_ACETYLENE.M
Last changed    : 4/1/2014 1:50:03 PM by Justin Guenzler
                  (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      4/1/2014 1:50:03 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal

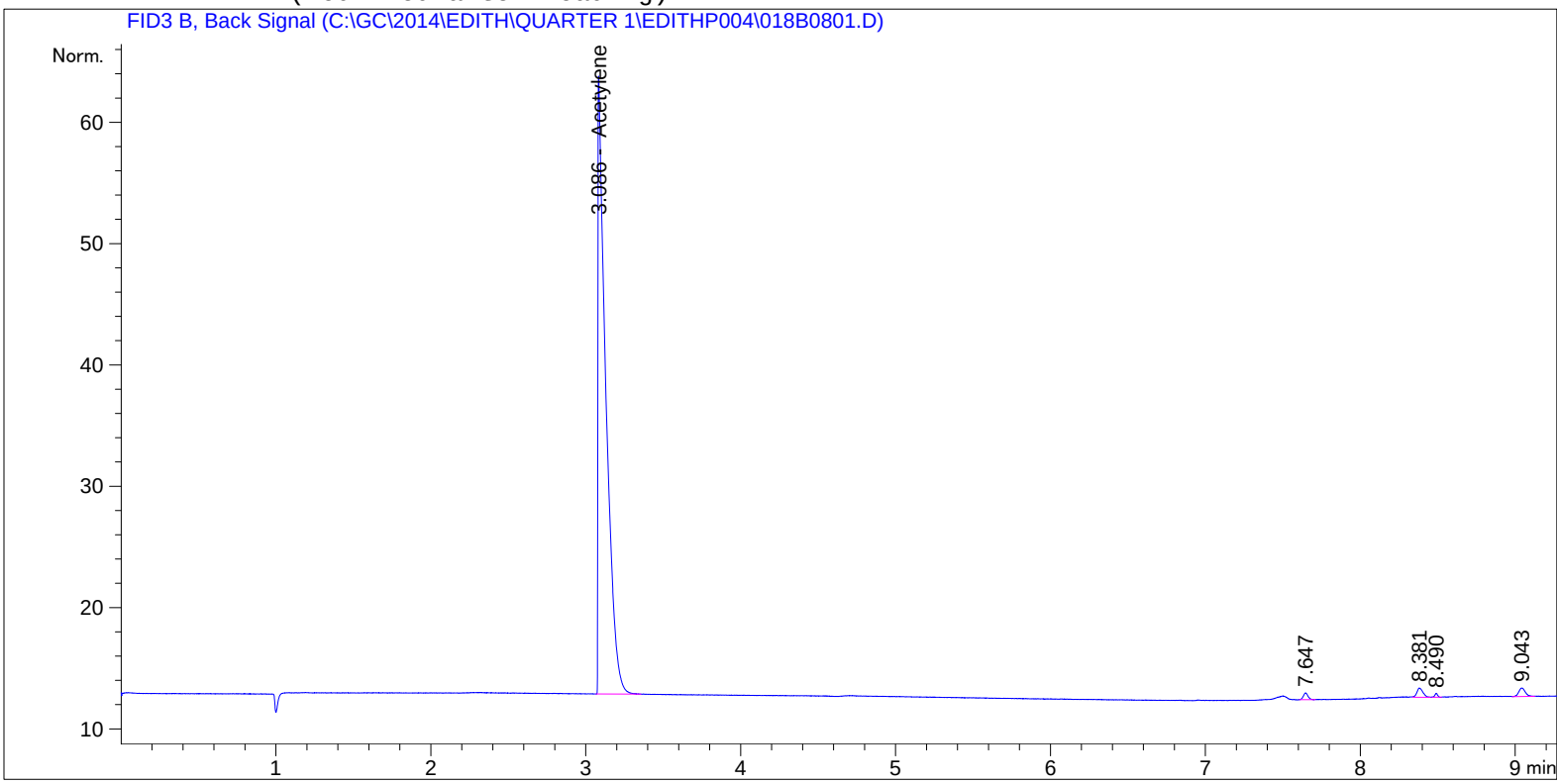
RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  3.050 BB      347.48798 7.16261e-1  248.89222    Acetylene

Totals :                              248.89222


==========================================================================
                         *** End of Report ***
```

Data File C:\GC\2014\EDITH\QUARTER 1\EDITHP004\018B0801.D
Sample Name: gc147p111 #A3 ENV(1=400,6=400)

```
==========================================================================
Acq. Operator   : Justin Guenzler               Seq. Line :   8
Acq. Instrument : Edith                        Location : Vial 18
Injection Date  : 4/1/2014 10:14:39 AM              Inj :   1
                                              Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 1\EDITHP004\GC139P039_HRVOC.M
Last changed    : 1/14/2014 3:17:10 PM by Justin Guenzler
Analysis Method : V:\GC2014\GC\2014\EDITH\QUARTER 1\METHODS\EDITHP004R_ACETYLENE.M
Last changed    : 4/1/2014 1:50:25 PM by Justin Guenzler
                  (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      4/1/2014 1:50:03 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal

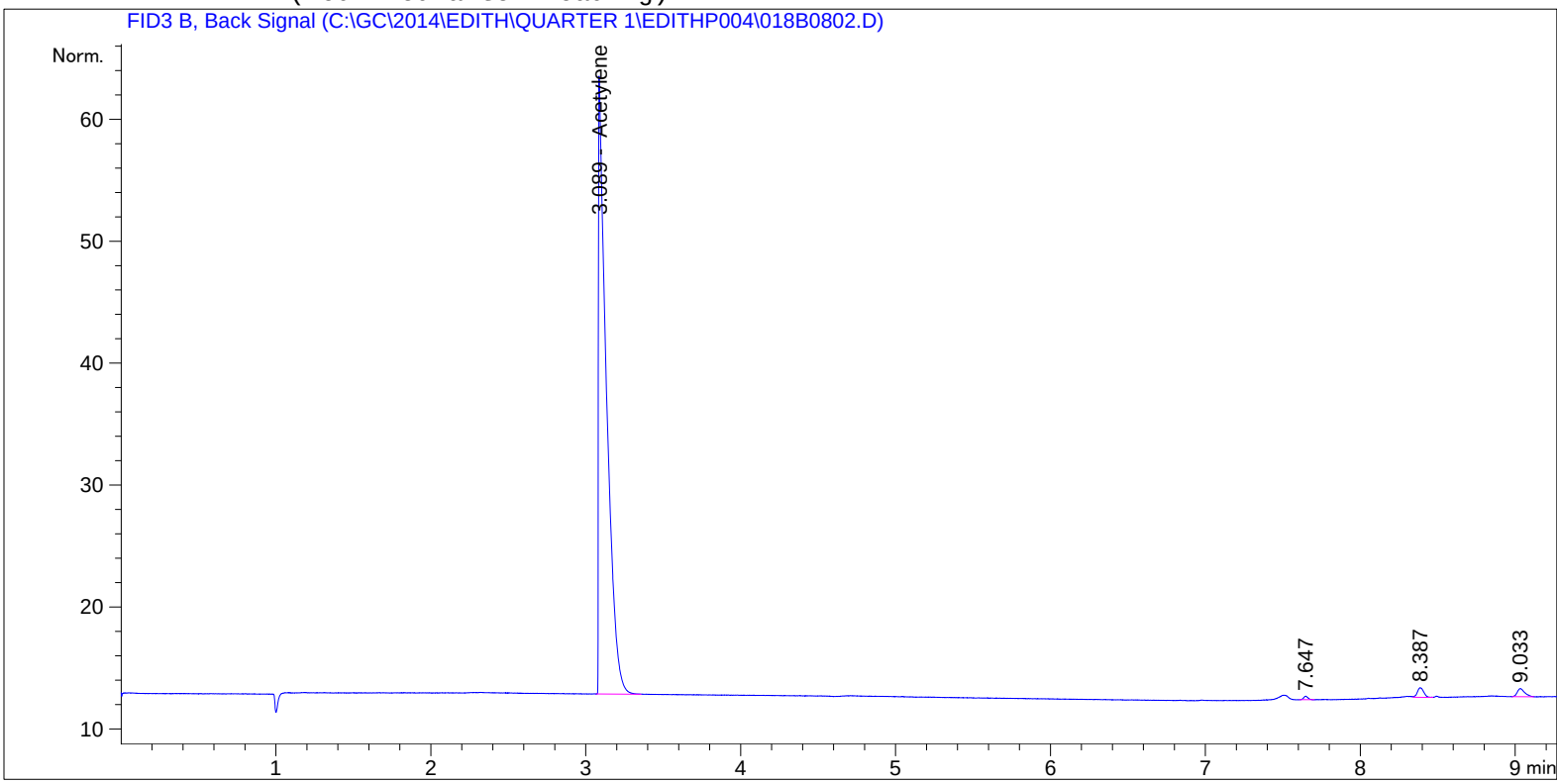
RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  3.086 BB      178.59305 7.16235e-1  127.91461    Acetylene

Totals :                              127.91461


==========================================================================
                         *** End of Report ***
```

Data File C:\GC\2014\EDITH\QUARTER 1\EDITHP004\018B0802.D
Sample Name: gc147p111 #A3 ENV(1=400,6=400)

```
==========================================================================
Acq. Operator   : Justin Guenzler               Seq. Line :   8
Acq. Instrument : Edith                        Location : Vial 18
Injection Date  : 4/1/2014 10:31:53 AM              Inj :   2
                                              Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 1\EDITHP004\GC139P039_HRVOC.M
Last changed    : 1/14/2014 3:17:10 PM by Justin Guenzler
Analysis Method : V:\GC2014\GC\2014\EDITH\QUARTER 1\METHODS\EDITHP004R_ACETYLENE.M
Last changed    : 4/1/2014 1:50:25 PM by Justin Guenzler
                  (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      4/1/2014 1:50:03 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal

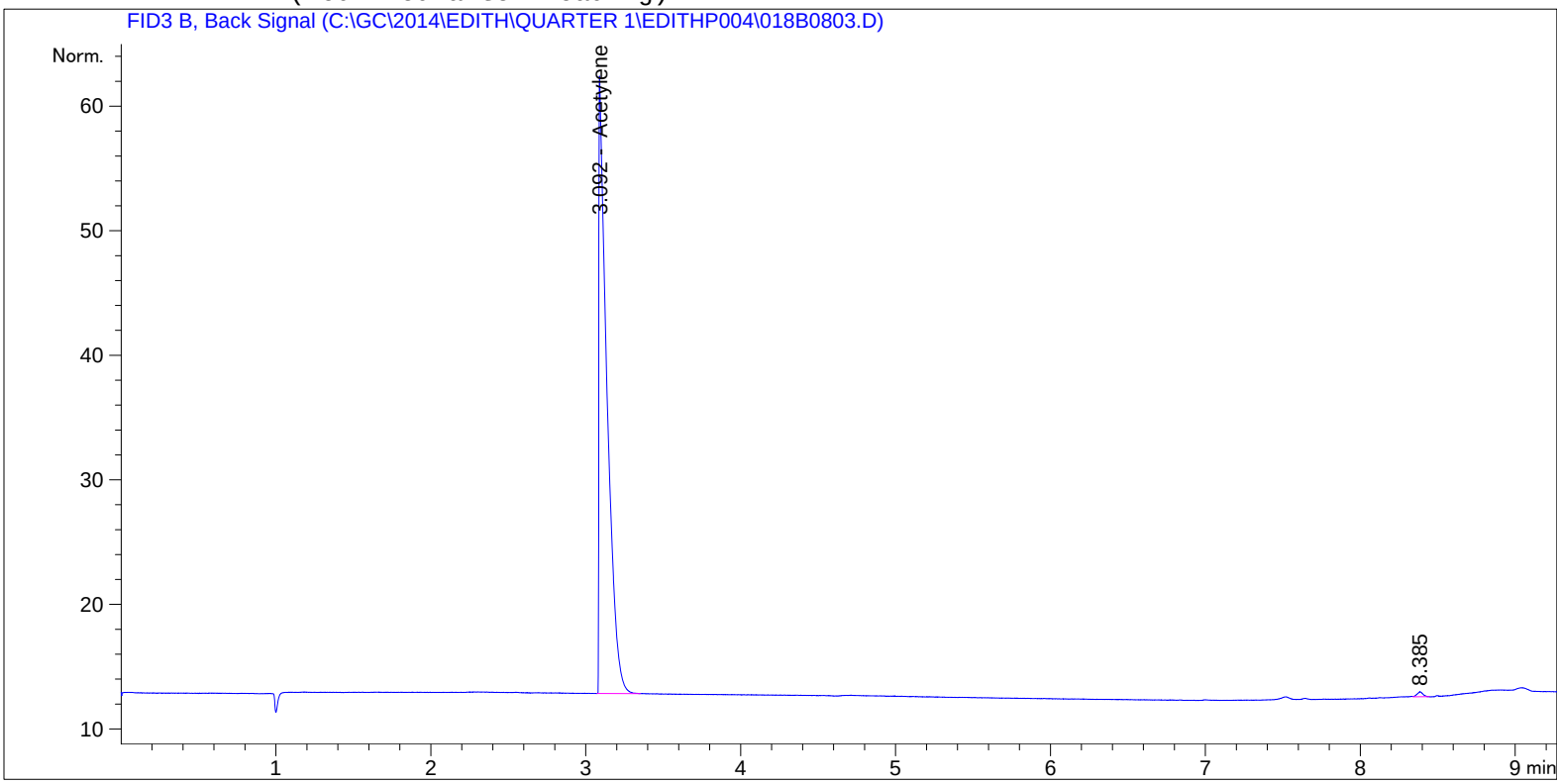
RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  3.089 BB      179.64188 7.16235e-1  128.66587    Acetylene

Totals :                              128.66587


==========================================================================
                         *** End of Report ***
```

Data File C:\GC\2014\EDITH\QUARTER 1\EDITHP004\018B0803.D
Sample Name: gc147p111 #A3 ENV(1=400,6=400)

```
==========================================================================
Acq. Operator   : Justin Guenzler               Seq. Line :   8
Acq. Instrument : Edith                        Location : Vial 18
Injection Date  : 4/1/2014 10:48:45 AM              Inj :   3
                                              Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 1\EDITHP004\GC139P039_HRVOC.M
Last changed    : 1/14/2014 3:17:10 PM by Justin Guenzler
Analysis Method : V:\GC2014\GC\2014\EDITH\QUARTER 1\METHODS\EDITHP004R_ACETYLENE.M
Last changed    : 4/1/2014 1:50:25 PM by Justin Guenzler
                  (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      4/1/2014 1:50:03 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal

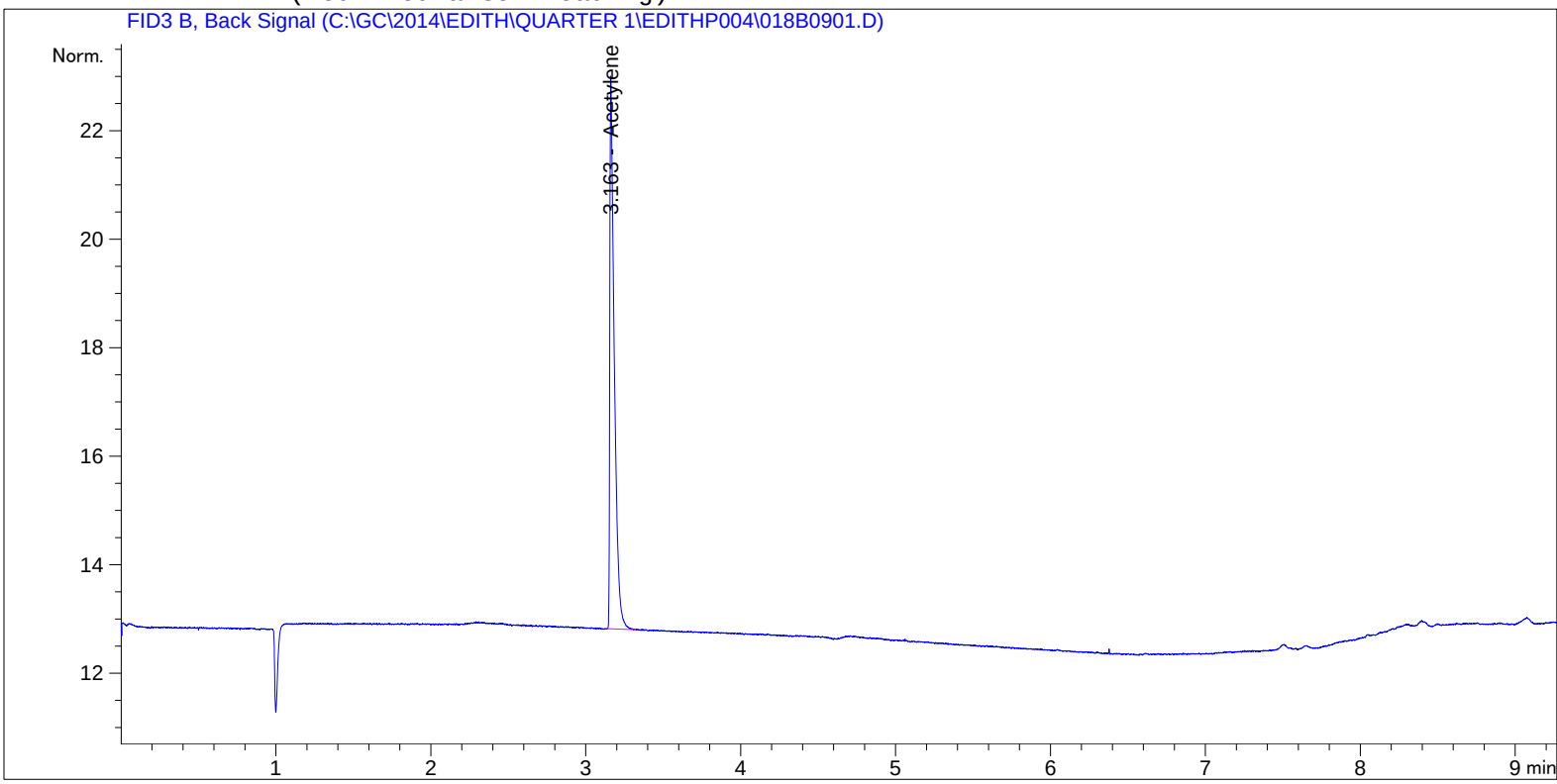
RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  3.092 BB      177.92928 7.16235e-1  127.43915    Acetylene

Totals :                              127.43915


==========================================================================
                         *** End of Report ***
```

Data File C:\GC\2014\EDITH\QUARTER 1\EDITHP004\018B0901.D
Sample Name: gc147p111 #A2 ENV(1=1600,6=100)

```
==========================================================================
Acq. Operator   : Justin Guenzler               Seq. Line :   9
Acq. Instrument : Edith                        Location : Vial 18
Injection Date  : 4/1/2014 11:05:05 AM              Inj :   1
                                              Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 1\EDITHP004\GC139P039_HRVOC.M
Last changed    : 1/14/2014 3:17:10 PM by Justin Guenzler
Analysis Method : V:\GC2014\GC\2014\EDITH\QUARTER 1\METHODS\EDITHP004R_ACETYLENE.M
Last changed    : 4/1/2014 1:50:42 PM by Justin Guenzler
                  (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      4/1/2014 1:50:03 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal

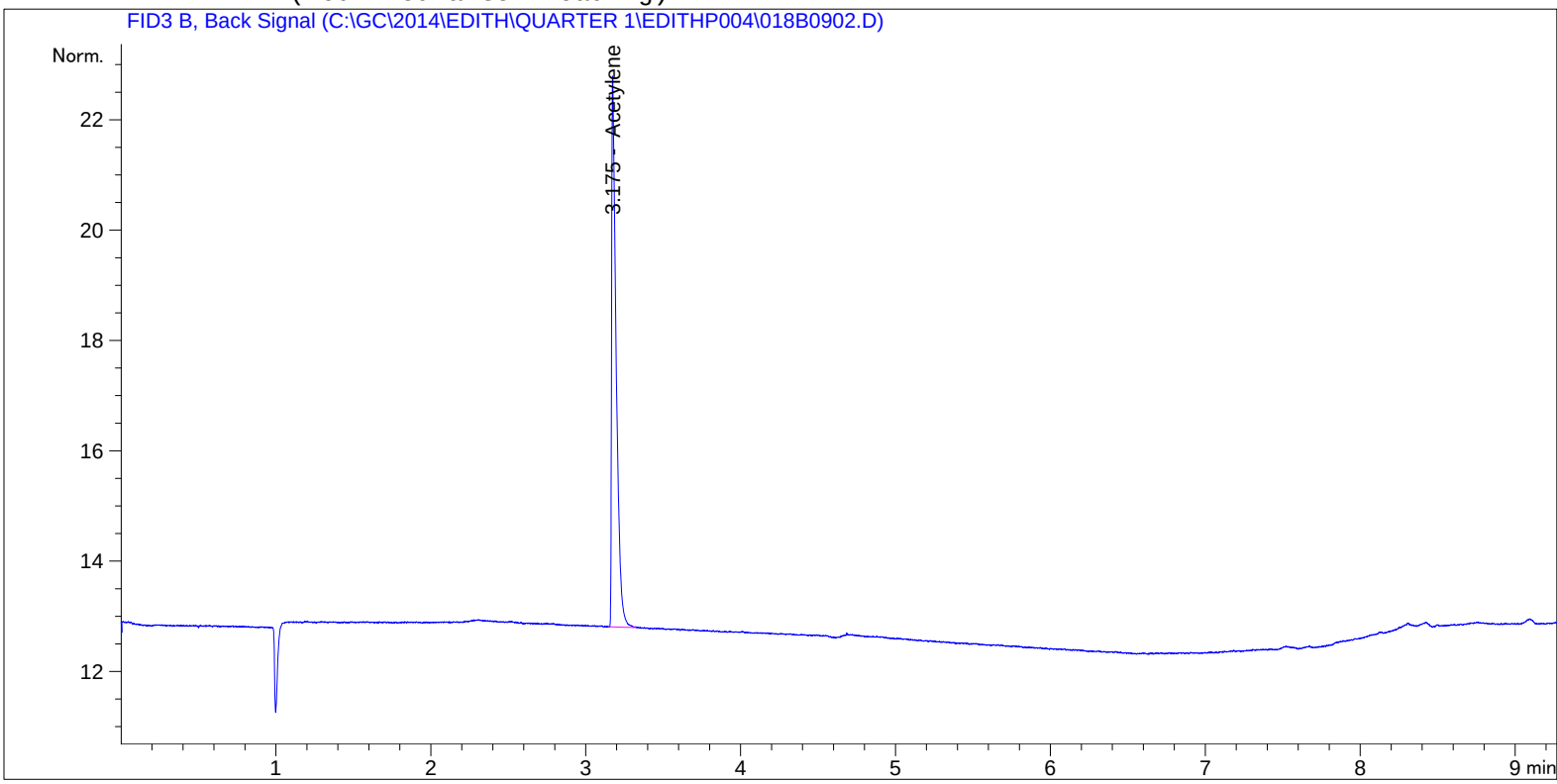
RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  3.163 BB       20.49495 7.15818e-1   14.67065    Acetylene

Totals :                               14.67065


==========================================================================
                         *** End of Report ***
```

Data File C:\GC\2014\EDITH\QUARTER 1\EDITHP004\018B0902.D
Sample Name: gc147p111 #A2 ENV(1=1600,6=100)

```
==================================================================
Acq. Operator   : Justin Guenzler               Seq. Line :   9
Acq. Instrument : Edith                         Location : Vial 18
Injection Date  : 4/1/2014 11:21:25 AM               Inj :   2
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 1\EDITHP004\GC139P039_HRVOC.M
Last changed    : 1/14/2014 3:17:10 PM by Justin Guenzler
Analysis Method : V:\GC2014\GC\2014\EDITH\QUARTER 1\METHODS\EDITHP004R_ACETYLENE.M
Last changed    : 4/1/2014 1:50:42 PM by Justin Guenzler
                  (modified after loading)
```




```
==================================================================
                      External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      4/1/2014 1:50:03 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal

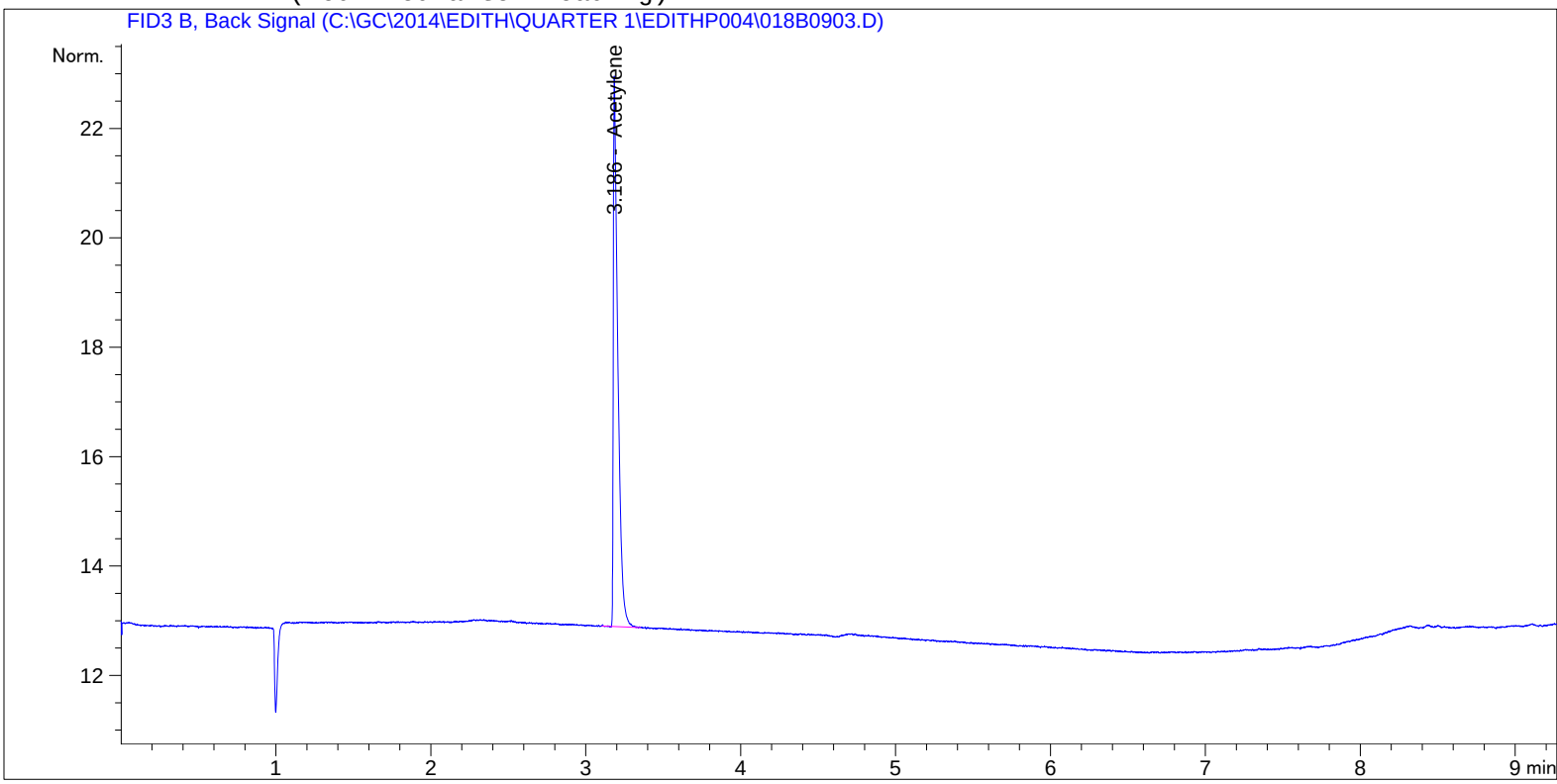
RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|-----------------
  3.175 BB       20.29594 7.15813e-1   14.52810    Acetylene

Totals :                               14.52810


==================================================================
                         *** End of Report ***
```

Data File C:\GC\2014\EDITH\QUARTER 1\EDITHP004\018B0903.D
Sample Name: gc147p111 #A2 ENV(1=1600,6=100)

```
==========================================================================
Acq. Operator   : Justin Guenzler               Seq. Line :   9
Acq. Instrument : Edith                        Location : Vial 18
Injection Date  : 4/1/2014 11:37:55 AM              Inj :   3
                                              Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 1\EDITHP004\GC139P039_HRVOC.M
Last changed    : 1/14/2014 3:17:10 PM by Justin Guenzler
Analysis Method : V:\GC2014\GC\2014\EDITH\QUARTER 1\METHODS\EDITHP004R_ACETYLENE.M
Last changed    : 4/1/2014 1:50:42 PM by Justin Guenzler
                  (modified after loading)
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      4/1/2014 1:50:03 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal

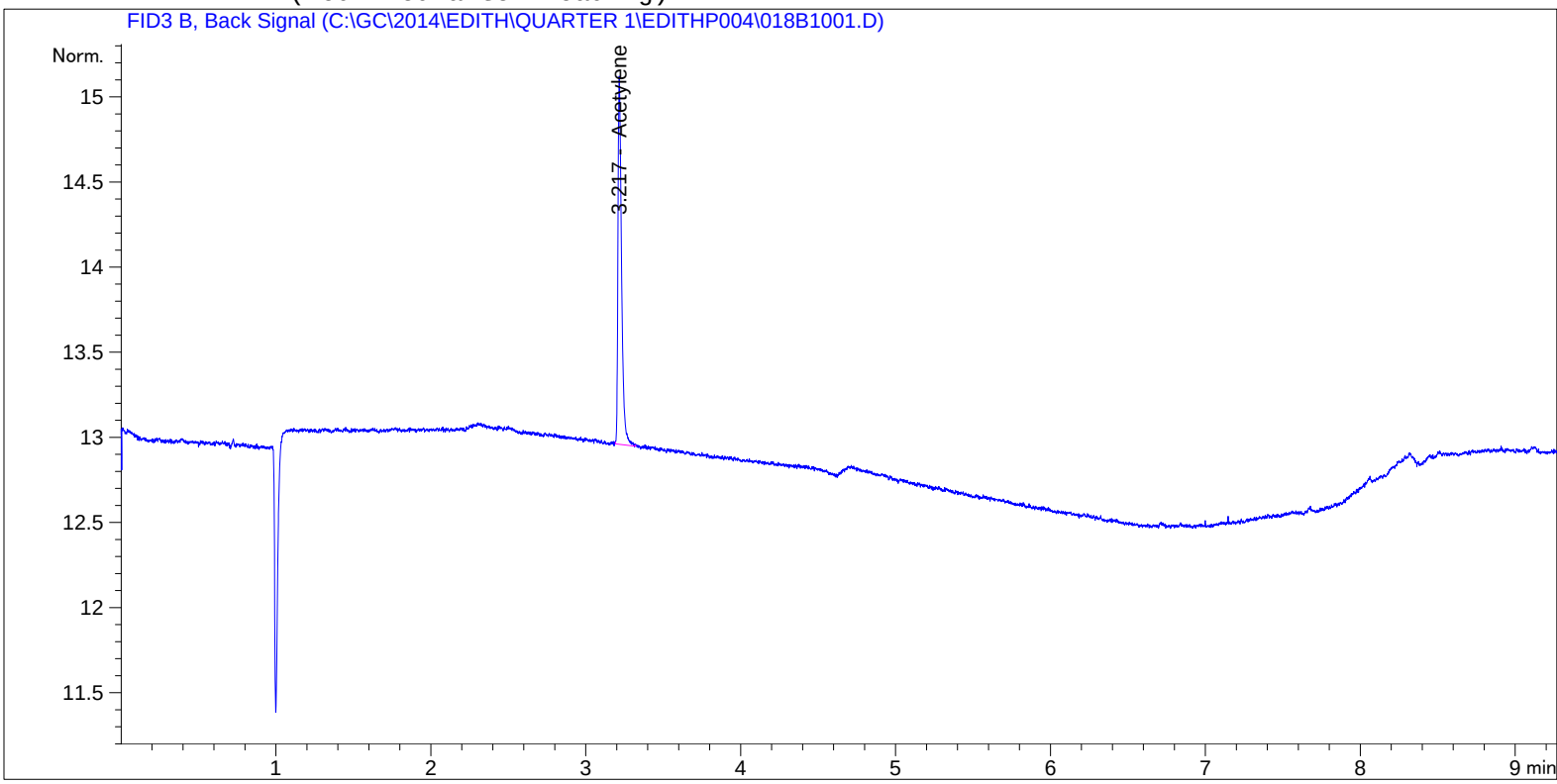
RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  3.186 BB       20.34494 7.15814e-1   14.56320    Acetylene

Totals :                               14.56320


==========================================================================
                         *** End of Report ***
```

Data File C:\GC\2014\EDITH\QUARTER 1\EDITHP004\018B1001.D
Sample Name: gc147p111 #A1 ENV(1=4950,6=50)

```
==================================================================
Acq. Operator   : Justin Guenzler               Seq. Line :  10
Acq. Instrument : Edith                          Location : Vial 18
Injection Date  : 4/1/2014 11:54:23 AM                Inj :   1
                                                Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 1\EDITHP004\GC139P039_HRVOC.M
Last changed    : 1/14/2014 3:17:10 PM by Justin Guenzler
Analysis Method : V:\GC2014\GC\2014\EDITH\QUARTER 1\METHODS\EDITHP004R_ACETYLENE.M
Last changed    : 4/1/2014 1:51:07 PM by Justin Guenzler
                  (modified after loading)
```




```
==================================================================
                      External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      4/1/2014 1:50:03 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal

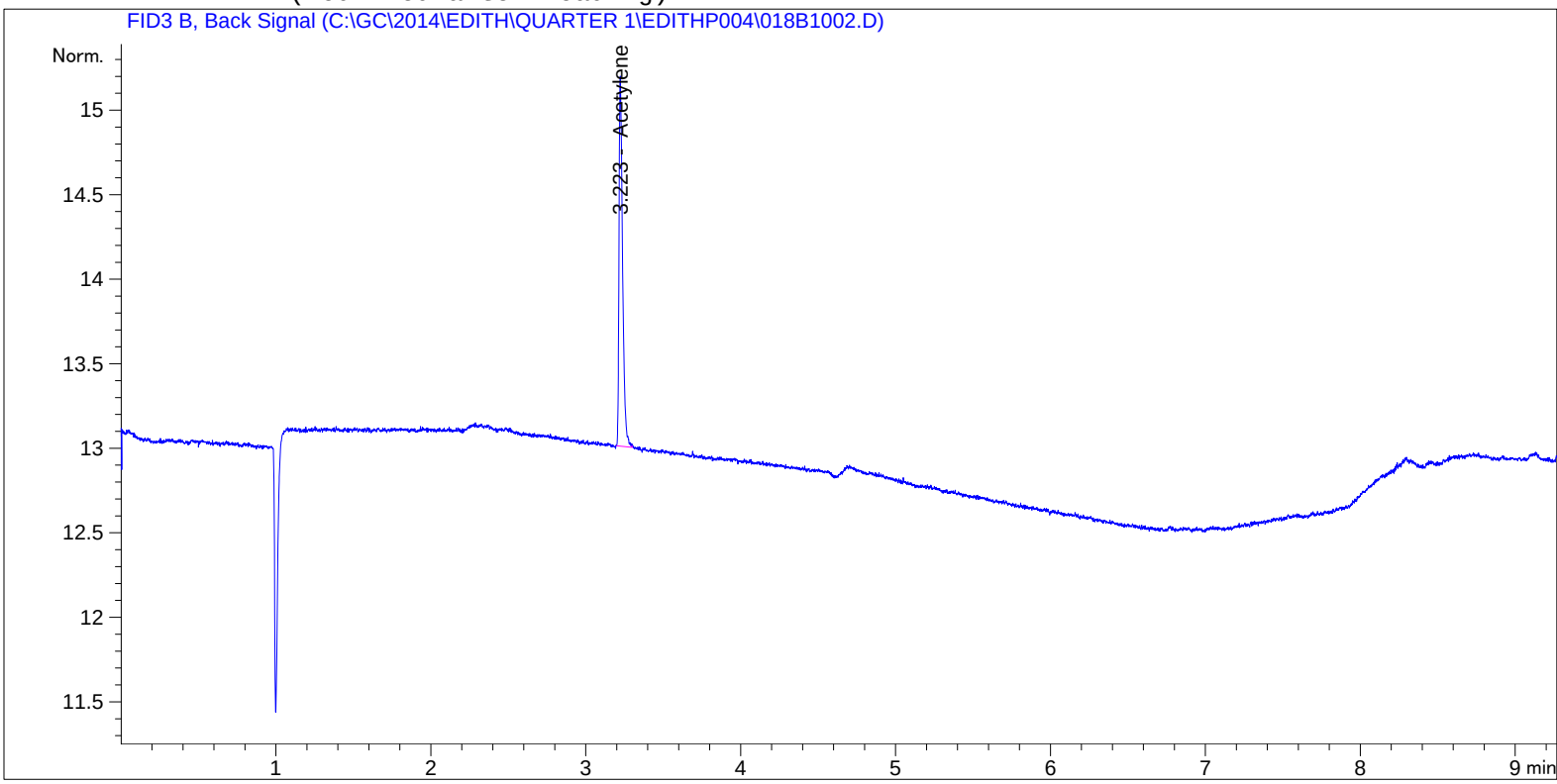
RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  3.217 BB        3.50118 7.13532e-1    2.49820    Acetylene

Totals :                                2.49820


==================================================================
                         *** End of Report ***
```

Data File C:\GC\2014\EDITH\QUARTER 1\EDITHP004\018B1002.D
Sample Name: gc147p111 #A1 ENV(1=4950,6=50)

```
==================================================================
Acq. Operator   : Justin Guenzler               Seq. Line :  10
Acq. Instrument : Edith                          Location : Vial 18
Injection Date  : 4/1/2014 12:10:47 PM                Inj :   2
                                                Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 1\EDITHP004\GC139P039_HRVOC.M
Last changed    : 1/14/2014 3:17:10 PM by Justin Guenzler
Analysis Method : V:\GC2014\GC\2014\EDITH\QUARTER 1\METHODS\EDITHP004R_ACETYLENE.M
Last changed    : 4/1/2014 1:51:07 PM by Justin Guenzler
                  (modified after loading)
```




```
==================================================================
                      External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      4/1/2014 1:50:03 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal

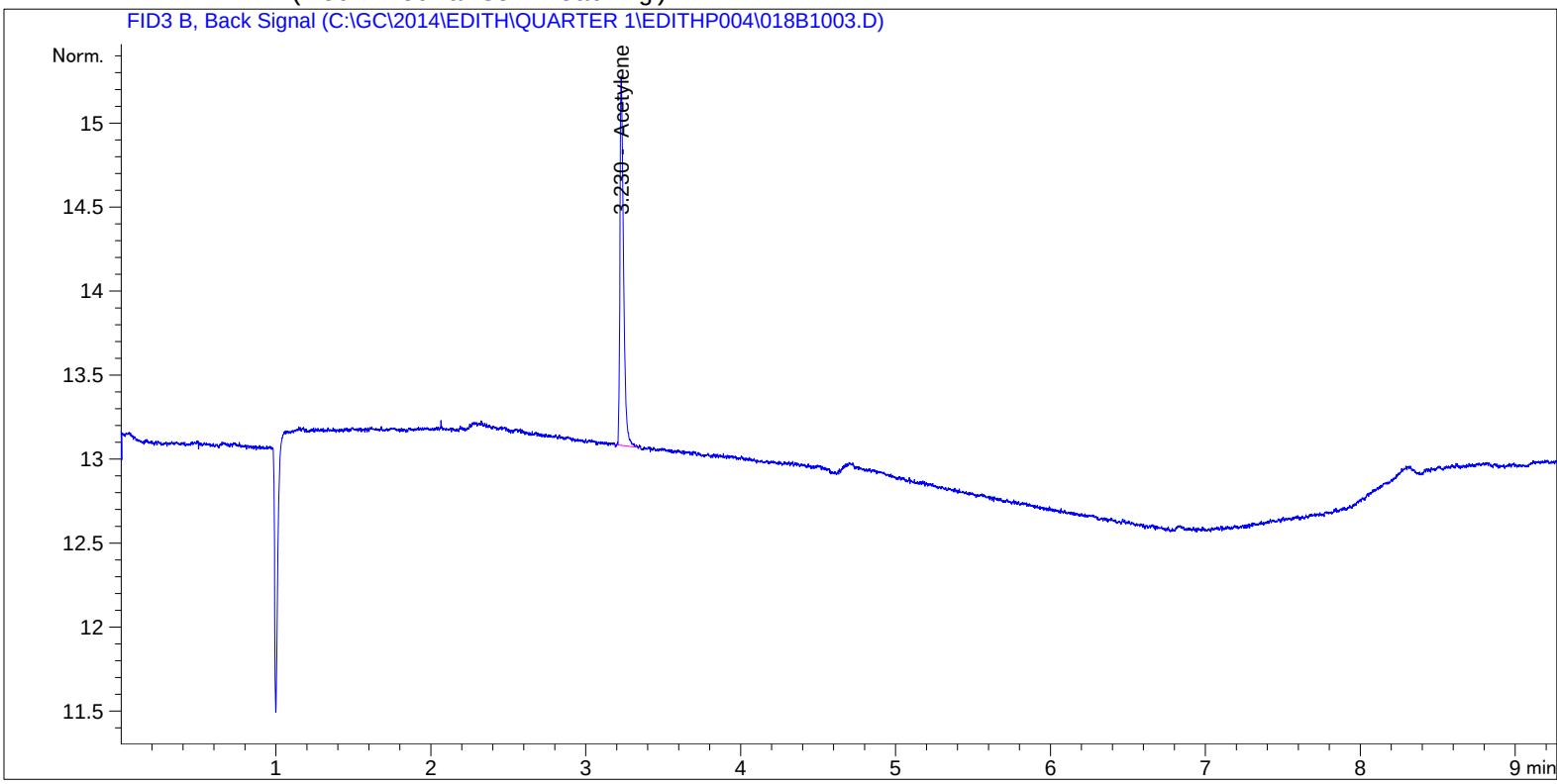
RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  3.223 BB        3.49530 7.13532e-1    2.49401    Acetylene

Totals :                                2.49401


==================================================================
                         *** End of Report ***
```

Data File C:\GC\2014\EDITH\QUARTER 1\EDITHP004\018B1003.D
Sample Name: gc147p111 #A1 ENV(1=4950,6=50)

```
==================================================================
Acq. Operator   : Justin Guenzler               Seq. Line :  10
Acq. Instrument : Edith                          Location : Vial 18
Injection Date  : 4/1/2014 12:27:17 PM                Inj :   3
                                                Inj Volume : 250 µl
Acq. Method     : C:\GC\2014\EDITH\QUARTER 1\EDITHP004\GC139P039_HRVOC.M
Last changed    : 1/14/2014 3:17:10 PM by Justin Guenzler
Analysis Method : V:\GC2014\GC\2014\EDITH\QUARTER 1\METHODS\EDITHP004R_ACETYLENE.M
Last changed    : 4/1/2014 1:51:07 PM by Justin Guenzler
                  (modified after loading)
```




```
==================================================================
                      External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      4/1/2014 1:50:03 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal

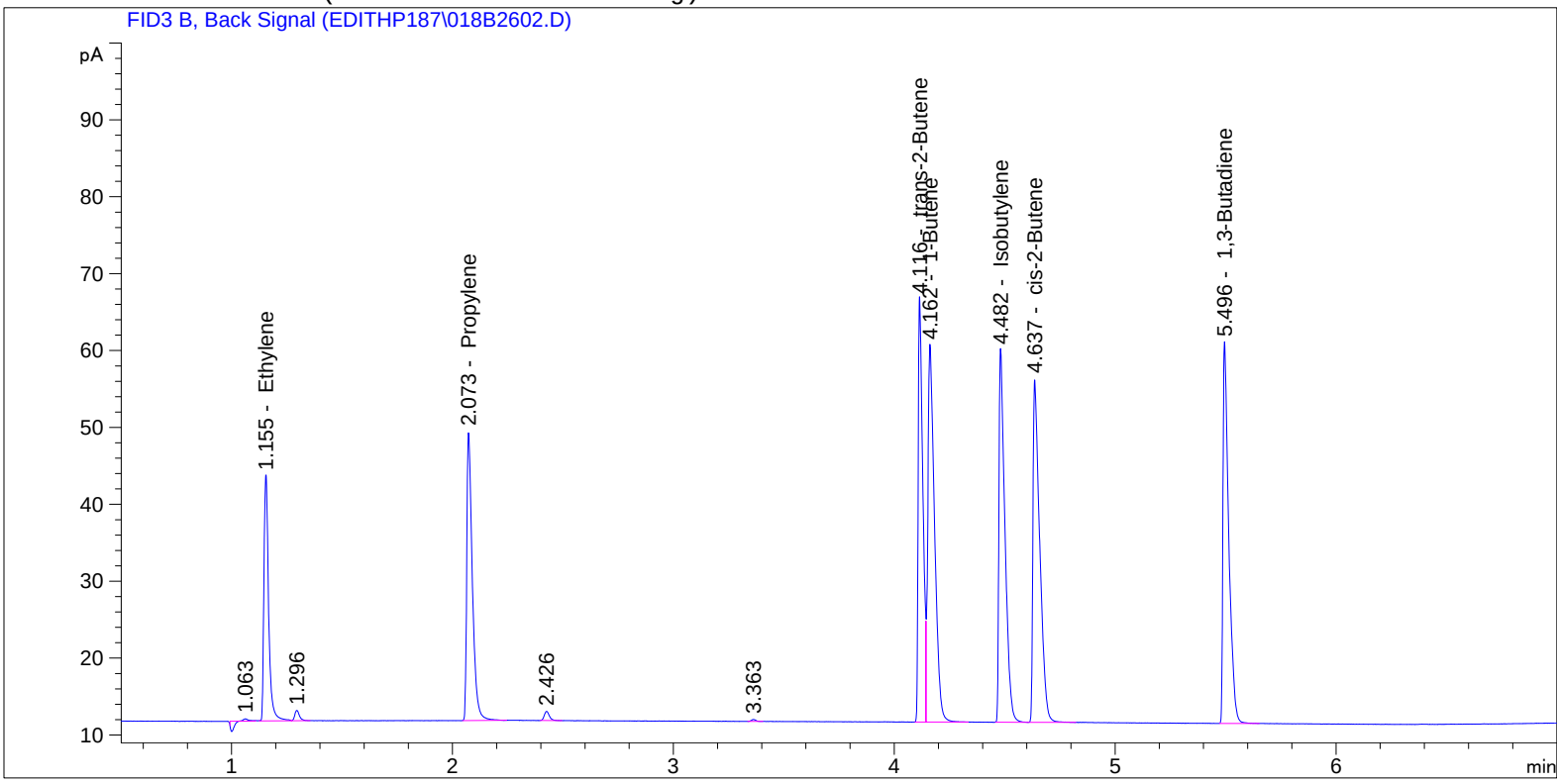
RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  3.230 BB        3.52572 7.13550e-1    2.51578    Acetylene

Totals :                                2.51578


==================================================================
                         *** End of Report ***
```

Data File C:\GC\2015\EDITH\QUARTER 1\EDITHP187\018B2602.D
Sample Name: EdithP155 #HR4 ENV(1=600,4=400)

```
==================================================================
Acq. Operator   : disconnected                  Seq. Line :  26
Acq. Instrument : Edith                        Location : Vial 18
Injection Date  : 1/19/2015 3:51:22 AM              Inj :   2
                                              Inj Volume : 250 µl
Acq. Method     : C:\GC\2015\EDITH\QUARTER 1\EDITHP187\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2015\EDITH\METHODS\EDITHP052R_HRVOC_ACETYLENE.M
Last changed    : 1/20/2015 3:18:04 PM by Justin Guenzler
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Justin Guenzler
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP187.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/20/2015 3:18:04 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.155	BV	47.21556	8.70689e-1	41.11006		Ethylene
2.073	BB	65.53703	6.16560e-1	40.40754		Propylene
2.950		-	-	-		Acetylene
4.116	BV	80.84309	4.80998e-1	38.88535		trans-2-Butene
4.162	VB	104.19141	4.21849e-1	43.95302		1-Butene
4.482	BV	92.14159	4.54802e-1	41.90620		Isobutylene
4.637	VB	95.12225	4.45686e-1	42.39467		cis-2-Butene
5.496	BB	89.71643	4.50573e-1	40.42376		1,3-Butadiene

Data File C:\GC\2015\EDITH\QUARTER 1\EDITHP187\018B2602.D
Sample Name: EdithP155 #HR4 ENV(1=600,4=400)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				289.08060		

2 Warnings or Errors :

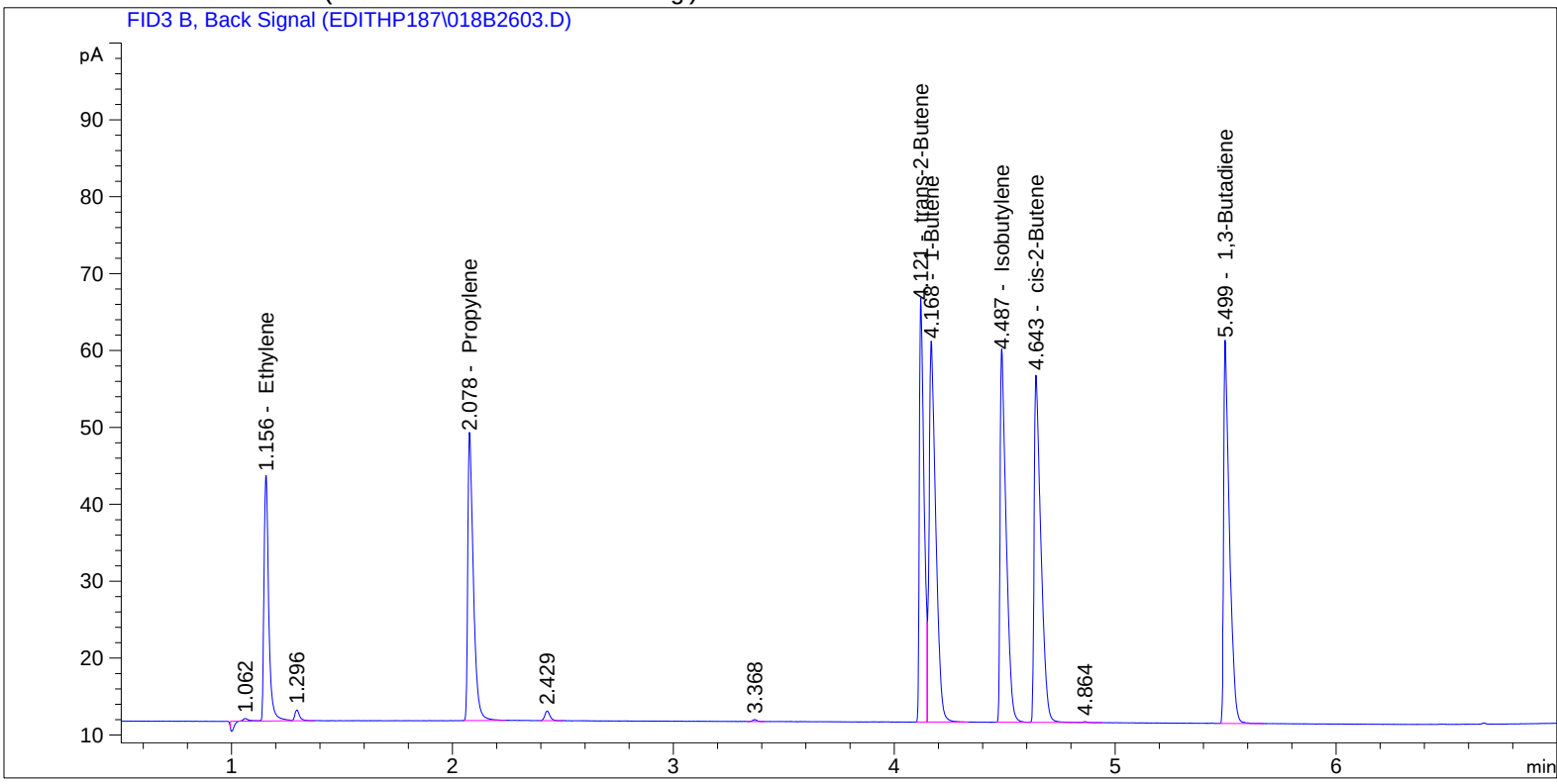
Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File C:\GC\2015\EDITH\QUARTER 1\EDITHP187\018B2603.D
Sample Name: EdithP155 #HR4 ENV(1=600,4=400)

```
==================================================================
Acq. Operator   : disconnected                  Seq. Line :  26
Acq. Instrument : Edith                        Location : Vial 18
Injection Date  : 1/19/2015 4:09:13 AM              Inj :   3
                                              Inj Volume : 250 µl
Acq. Method     : C:\GC\2015\EDITH\QUARTER 1\EDITHP187\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2015\EDITH\METHODS\EDITHP052R_HRVOC_ACETYLENE.M
Last changed    : 1/20/2015 3:18:04 PM by Justin Guenzler
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Justin Guenzler
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP187.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/20/2015 3:18:04 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.156	VV	47.41525	8.70698e-1	41.28434		Ethylene
2.078	BB	65.73080	6.16564e-1	40.52722		Propylene
2.950		-	-	-		Acetylene
4.121	BV	81.24397	4.81013e-1	39.07943		trans-2-Butene
4.168	VB	104.34932	4.21849e-1	44.01971		1-Butene
4.487	BV	92.44849	4.54808e-1	42.04628		Isobutylene
4.643	VB	95.61023	4.45694e-1	42.61289		cis-2-Butene
5.499	BB	90.12108	4.50579e-1	40.60669		1,3-Butadiene

Data File C:\GC\2015\EDITH\QUARTER 1\EDITHP187\018B2603.D
Sample Name: EdithP155 #HR4 ENV(1=600,4=400)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				290.17655		

2 Warnings or Errors :

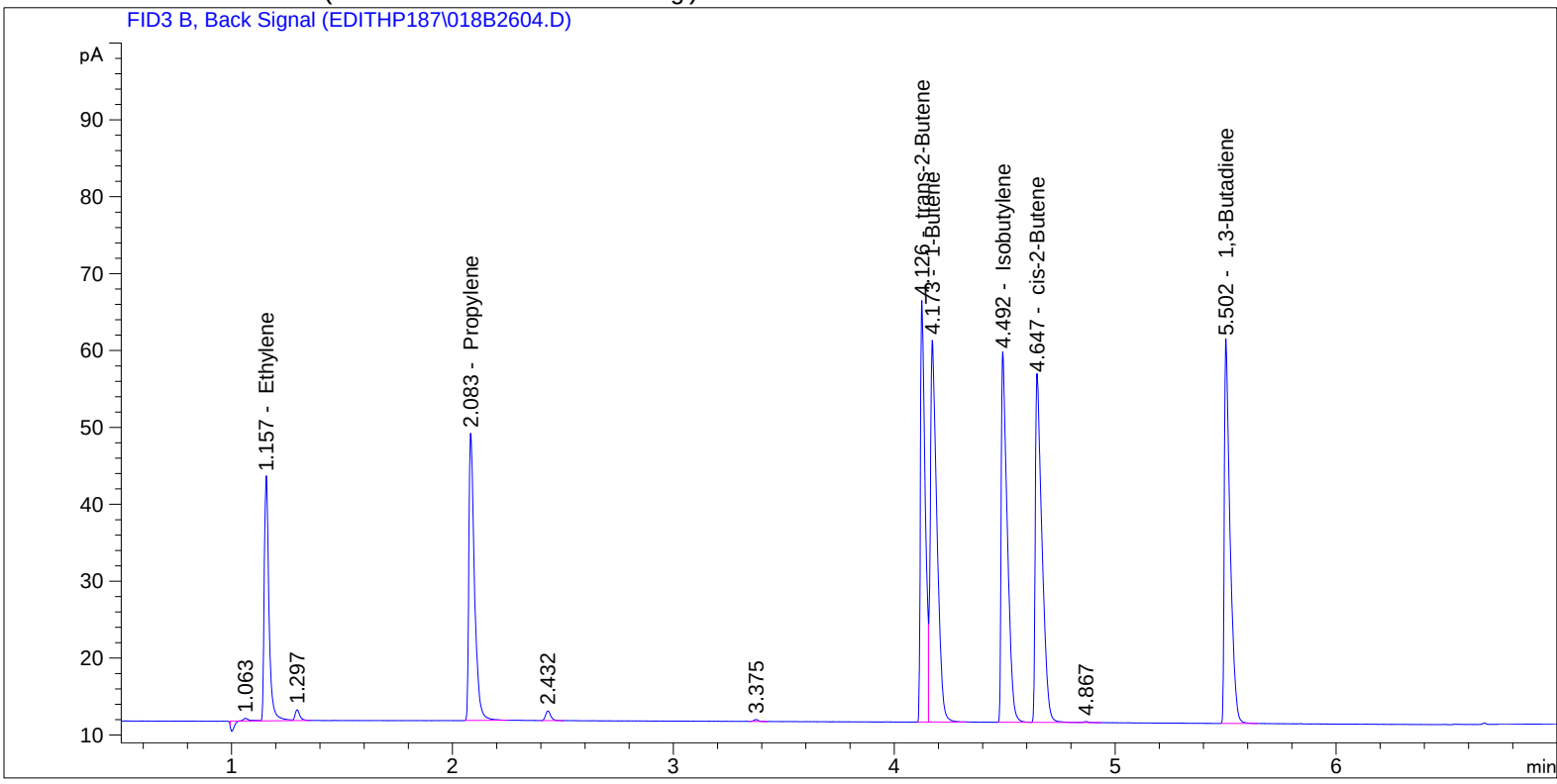
Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File C:\GC\2015\EDITH\QUARTER 1\EDITHP187\018B2604.D
Sample Name: EdithP155 #HR4 ENV(1=600,4=400)

```
==================================================================
Acq. Operator   : disconnected                  Seq. Line :  26
Acq. Instrument : Edith                        Location : Vial 18
Injection Date  : 1/19/2015 4:27:07 AM              Inj :   4
                                              Inj Volume : 250 µl
Acq. Method     : C:\GC\2015\EDITH\QUARTER 1\EDITHP187\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2015\EDITH\METHODS\EDITHP052R_HRVOC_ACETYLENE.M
Last changed    : 1/20/2015 3:18:04 PM by Justin Guenzler
                  (modified after loading)
ECM Server      : http://ecm-server/enthalpy
ECM Operator    : Justin Guenzler
ECM Path        : GC\2014\Edith\Quarter 4\EDITHP187.SC.SSIzip
ECM Version     : 1 (modified after loading)
```




```
==================================================================
                    External Standard Report
==================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/20/2015 3:18:04 PM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.157	VV	47.39913	8.70697e-1	41.27027		Ethylene
2.083	BB	65.77876	6.16564e-1	40.55684		Propylene
2.950		-	-	-		Acetylene
4.126	BV	81.54221	4.81025e-1	39.22381		trans-2-Butene
4.173	VB	104.04162	4.21848e-1	43.88977		1-Butene
4.492	BV	92.49812	4.54809e-1	42.06894		Isobutylene
4.647	VB	95.68459	4.45695e-1	42.64614		cis-2-Butene
5.502	BB	89.99557	4.50577e-1	40.54995		1,3-Butadiene

Data File C:\GC\2015\EDITH\QUARTER 1\EDITHP187\018B2604.D
Sample Name: EdithP155 #HR4 ENV(1=600,4=400)

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
Totals :				290.20572		

2 Warnings or Errors :

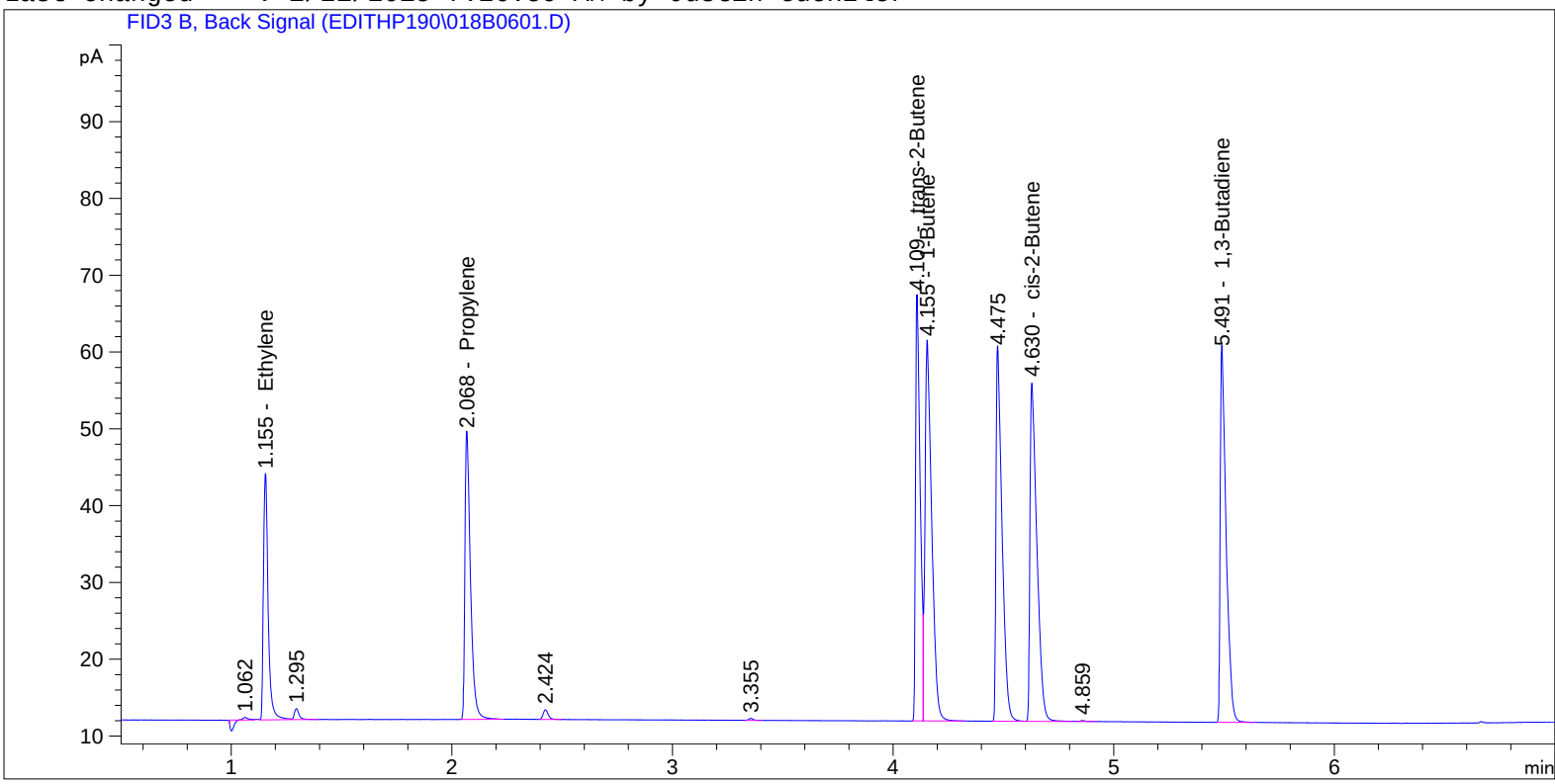
Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found

==========

*** End of Report ***

Data File C:\GC\2015\EDITH\QUARTER 1\EDITHP190\018B0601.D
Sample Name: EdithP155 #HR4 ENV(1=600,4=400)

```
==========================================================================
Acq. Operator   : Justin Guenzler                Seq. Line :   6
Acq. Instrument : Edith                          Location : Vial 18
Injection Date  : 1/21/2015 4:09:18 AM                Inj :   1
                                                Inj Volume : 250 µl
Acq. Method     : C:\GC\2015\EDITH\QUARTER 1\EDITHP190\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2015\EDITH\METHODS\EDITHP052R_HRVOC_ACETYLENE.M
Last changed    : 1/21/2015 7:26:59 AM by Justin Guenzler
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/21/2015 7:26:52 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal

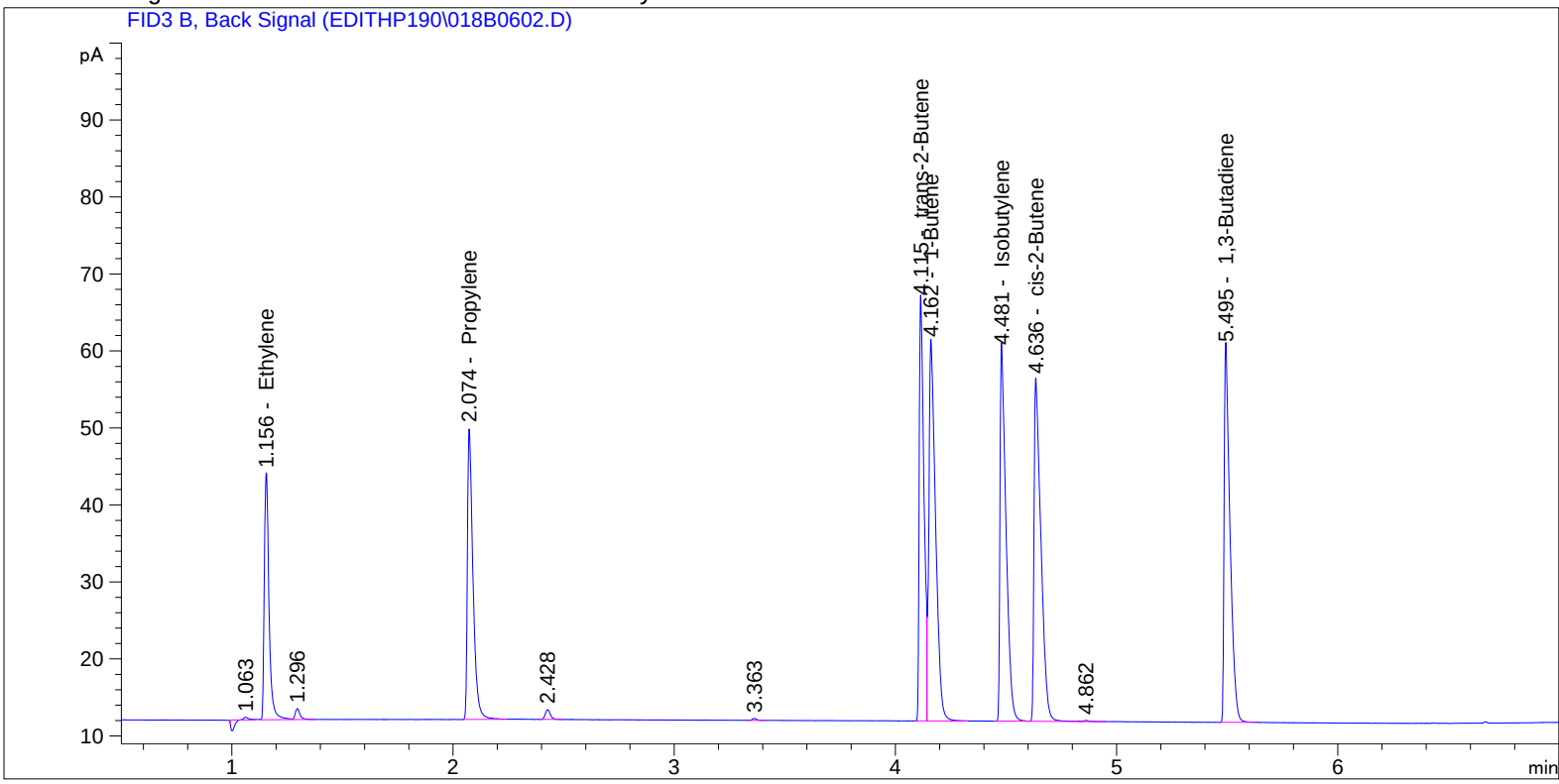
RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.155 BV       47.44105 8.70699e-1   41.30686    Ethylene
  2.068 BB       65.79148 6.16565e-1   40.56470    Propylene
  2.950            -          -          -         Acetylene
  4.109 BV       80.65016 4.80990e-1   38.79195    trans-2-Butene
  4.155 VB      104.90646 4.21852e-1   44.25499    1-Butene
  4.500            -          -          -         Isobutylene
  4.630 VB       95.58594 4.45693e-1   42.60202    cis-2-Butene
  5.491 BB       89.95201 4.50576e-1   40.53026    1,3-Butadiene

Totals :                              248.05077


2 Warnings or Errors :
```

Data File C:\GC\2015\EDITH\QUARTER 1\EDITHP190\018B0602.D
Sample Name: EdithP155 #HR4 ENV(1=600,4=400)

```
==========================================================================
Acq. Operator   : Justin Guenzler                Seq. Line :   6
Acq. Instrument : Edith                          Location : Vial 18
Injection Date  : 1/21/2015 4:27:51 AM                Inj :   2
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2015\EDITH\QUARTER 1\EDITHP190\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2015\EDITH\METHODS\EDITHP052R_HRVOC_ACETYLENE.M
Last changed    : 1/21/2015 7:26:59 AM by Justin Guenzler
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/21/2015 7:26:52 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal

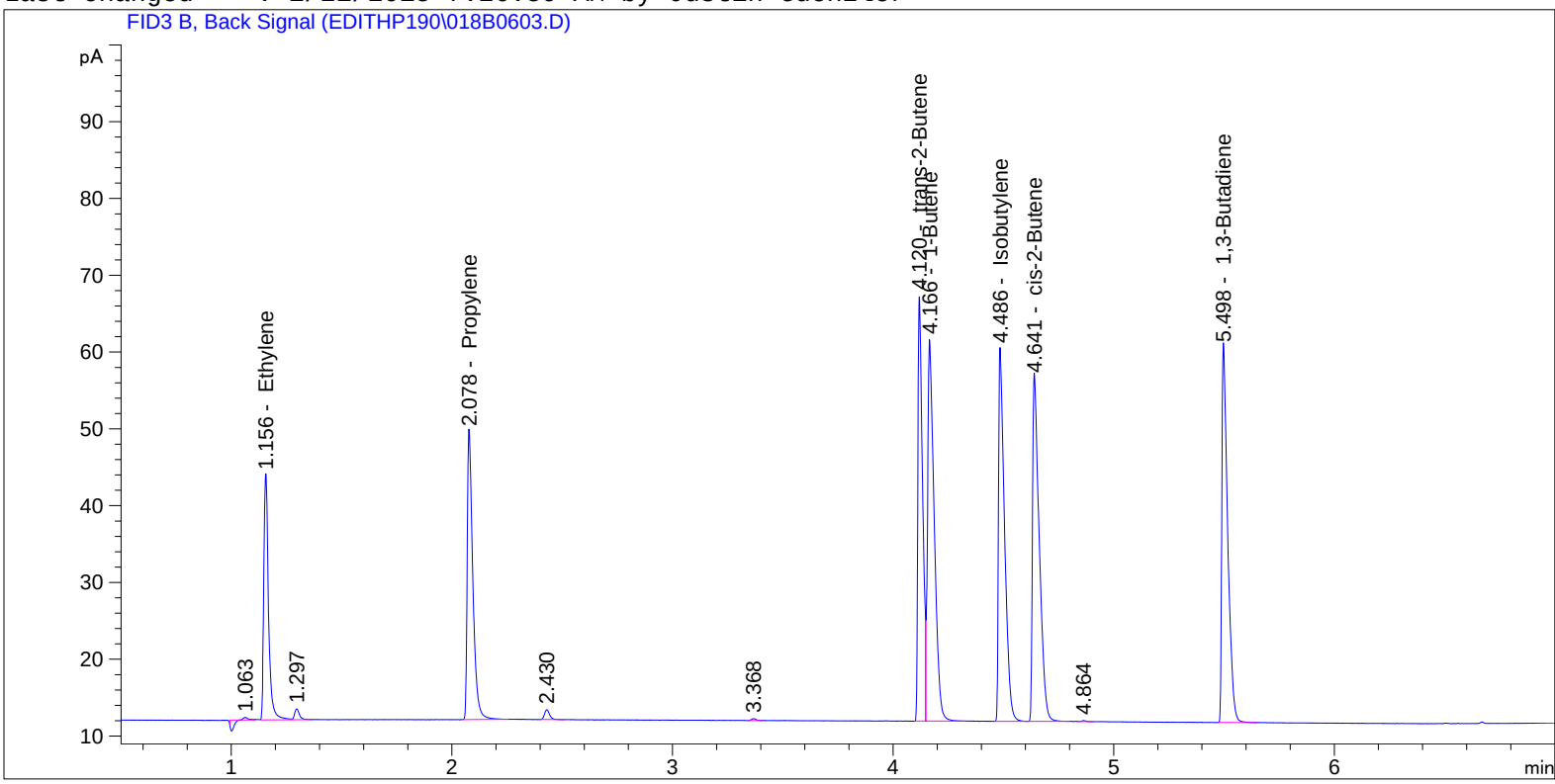
RetTime  Type     Area     Amt/Area    Amount   Grp   Name
 [min]          [pA*s]                 [ppm]
-------|------|----------|----------|----------|--|------------------
  1.156 BV       47.55812 8.70704e-1   41.40904    Ethylene
  2.074 BB       65.94994 6.16567e-1   40.66256    Propylene
  2.950            -          -          -         Acetylene
  4.115 BV       81.30235 4.81015e-1   39.10769    trans-2-Butene
  4.162 VB      104.75677 4.21851e-1   44.19177    1-Butene
  4.481 BV       92.73458 4.54813e-1   42.17688    Isobutylene
  4.636 VB       95.90185 4.45698e-1   42.74329    cis-2-Butene
  5.495 BB       90.11369 4.50579e-1   40.60335    1,3-Butadiene

Totals :                               290.89459


2 Warnings or Errors :
```

Data File C:\GC\2015\EDITH\QUARTER 1\EDITHP190\018B0603.D
Sample Name: EdithP155 #HR4 ENV(1=600,4=400)

```
==========================================================================
Acq. Operator   : Justin Guenzler                Seq. Line :   6
Acq. Instrument : Edith                          Location : Vial 18
Injection Date  : 1/21/2015 4:46:50 AM                Inj :   3
                                               Inj Volume : 250 µl
Acq. Method     : C:\GC\2015\EDITH\QUARTER 1\EDITHP190\GC139P039_HRVOC.M
Last changed    : 5/5/2014 7:30:03 AM by Todd Huml
Analysis Method : C:\GC\2015\EDITH\METHODS\EDITHP052R_HRVOC_ACETYLENE.M
Last changed    : 1/21/2015 7:26:59 AM by Justin Guenzler
```




```
==========================================================================
                      External Standard Report
==========================================================================

Sorted By             :      Signal
Calib. Data Modified  :      1/21/2015 7:26:52 AM
Multiplier            :      1.0000
Dilution              :      1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID3 B, Back Signal
```

RetTime [min]	Type	Area [pA*s]	Amt/Area	Amount [ppm]	Grp	Name
1.156	BV	47.60923	8.70706e-1	41.45365		Ethylene
2.078	BB	66.06036	6.16569e-1	40.73076		Propylene
2.950		-	-	-		Acetylene
4.120	BV	81.52348	4.81024e-1	39.21474		trans-2-Butene
4.166	VB	104.72529	4.21851e-1	44.17848		1-Butene
4.486	BV	92.84812	4.54815e-1	42.22871		Isobutylene
4.641	VB	95.80754	4.45697e-1	42.70112		cis-2-Butene
5.498	BB	90.32353	4.50583e-1	40.69821		1,3-Butadiene

Totals : 291.20567

2 Warnings or Errors :

CUSTOMGAS
SOLUTIONS

1750 East Club Boulevard
Durham, NC 27704
Phone: (919) 220-2570
Fax: (919) 220-4540

Certificate of Analysis

Customer:

Enthalpy Analytical, Inc.
800-1 Capitola Drive
Durham, NC 27713

Tel: (919) 595-1377

Cylinder Number: CAL-013629
Cylinder Size/CGA: AL33/350
Fill Pressure: 2015 PSIA
Gas Volume: 750 liters
Date of Mfg: 05/16/14
Expiration Date: 05/16/16

Customer Number	Ship VIA	Job No.	Customer PO	Mixture Type
00127703NC	Pick up	050914-003	05081403	Gravimetric

Component	Nominal Concentration	Actual Concentration*	Mixture Type
Acetylene	250 ppm	250 ppm +/- 5 ppm	Gravimetric Master Gas
Nitrogen	balance	balance	

NOTES:

Blend Tolerance: +/- 2 %

Analytical Tolerance: +/- 2 %

Traceability: NIST by weight set. NIST Traceability No MT5061.
Internal Standards by analysis

Reactive Mixtures: Analyzed twice with required agreement between analyses of 2%.
Required wait time between analyses of >7 days.

Caution: Do not use below 150 PSIG.

Authorized Signature:



Joseph A. Ernst

*Every effort has been made to establish the actual concentration of the components using master gas blending technology however, Custom Gas Solutions shall have no liability in excess of the established charge for this material.

Agilent 7890A

Oven	
Equilibration Time	0.3 min
Max Temperature	200 degrees C
Slow Fan	Disabled
Oven Program	On
35 °C for 2.2 min	
#1 then 15 °C/min to 70 °C for 0.07 min	
#2 then 30 °C/min to 180 °C for 1 min	
Run Time	9.27 min
Sample Overlap	
Sample overlap is not enabled	
Front SS Inlet H2	
Mode	Split
Heater	On 200 °C
Pressure	On 5.1931 psi
Total Flow	On 15.6 mL/min
Septum Purge Flow	On 3 mL/min
Gas Saver	Off
Split Ratio	5 :1
Split Flow	10.5 mL/min
Back SS Inlet H2	
Mode	Split
Heater	On 200 °C
Pressure	On 4.9511 psi
Total Flow	On 9.6 mL/min
Septum Purge Flow	On 3 mL/min
Gas Saver	Off
Split Ratio	2 :1
Split Flow	0 mL/min
Column #1	
Restek 10198Rtx-1 S/N 806941	
280 °C: 30 m x 320 µm x 4 µm	
In: Front SS Inlet H2	
Out: Front Detector FID	
(Initial)	35 °C
Pressure	5.1931 psi
Flow	2.1 mL/min
Average Velocity	39.91 cm/sec
Holdup Time	1.2528 min
Flow Program	On
2.1 mL/min for 0 min	
Run Time	9.27 min
Column #2	
Restek 19701Alumina S/N 156109	
280 °C: 30 m x 320 µm x 10 µm	
In: Front SS Inlet H2	
Out: Back Detector FID	
(Initial)	35 °C
Pressure	6.1868 psi
Flow	2.2 mL/min
Average Velocity	43.848 cm/sec
Holdup Time	1.1403 min
Flow Program	On

method: C:\GC\2013\EDITH\METHODS\GC139P039_HRVOC.M
Modified on: 1/14/2014 at 3:15:15 PM
2.2 mL/min for 0 min

Run Time	9.27 min
Front Detector FID	
Heater	On 300 °C
H2 Flow	On 50 mL/min
Air Flow	On 450 mL/min
Makeup Flow	On 35 mL/min
Const Col + Makeup	Off
Flame	On
Electrometer	On
Back Detector FID	
Heater	On 200 °C
H2 Flow	On 50 mL/min
Air Flow	On 450 mL/min
Makeup Flow	On 35 mL/min
Const Col + Makeup	Off
Flame	On
Electrometer	On
Valve 1	
Gas Sampling Valve	Off
GSV Loop Volume	0.25 mL
Load Time	1.5 min
Inject Time	0.5 min
Valve 2	
Gas Sampling Valve	Off
GSV Loop Volume	0.25 mL
Load Time	1.5 min
Inject Time	0.5 min
Valve Box	
Heater	On 150 °C
Signals	
Signal #1: Front Signal	Save On 20 Hz
Signal #2: Test Plot	Save Off 50 Hz
Signal #3: Back Signal	Save On 20 Hz
Signal #4: Test Plot	Save Off 50 Hz

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APPENDIX F

Reference Method Monitors Data

18" Combustor Stack
Carbon Monoxide
Concentration

Run - Condition Number	Measured (ppm)	Adjusted (ppm*)
1-1	6.92	6.96
2-1	6.94	6.98
3-1	6.80	6.79
1-2	3.32	3.33
2-2	3.08	3.10
3-2	3.39	3.40
1-3	4.47	4.45
2-3	5.05	5.13
3-3	4.08	4.18
1-4	3.07	3.14
2-4	3.09	3.15
3-4	3.04	3.13

*Calculated according to equation 7E-5.

18" Combustor Stack
Total Hydrocarbon
Concentration

Run Number	Measured (ppm)
1-1	0.20
2-1	0.76
3-1	0.67
1-2	0.19
2-2	0.10
3-2	0.21
1-3	0.56
2-3	0.82
3-3	0.18
1-4	0.01
2-4	0.03
3-4	0.80

18" Combustor Stack
Calibration Summary
Carbon Monoxide

Run Number	CO Calibration Initial Drift Check (ppm)	CO Calibration Final Drift Check (ppm)	CO Calibration Average (ppm)	CO Zero Initial Drift Check (ppm)	CO Zero Final Drift Check (ppm)	CO Zero Average (ppm)	Actual CO Calibration Value (ppm)	Actual CO Zero Value (ppm)
1-1	5.12	5.07	5.10	0.00	0.00	0.00	5.13	0.00
2-1	5.07	5.13	5.10	0.00	0.00	0.00	5.13	0.00
3-1	5.13	5.14	5.14	0.00	0.00	0.00	5.13	0.00
1-2	5.14	5.09	5.12	0.00	0.00	0.00	5.13	0.00
2-2	5.09	5.08	5.09	0.00	0.00	0.00	5.13	0.00
3-2	5.08	5.13	5.11	0.00	0.00	0.00	5.13	0.00
1-3	5.22	5.07	5.15	0.00	0.00	0.00	5.13	0.00
2-3	5.07	5.03	5.05	0.00	0.00	0.00	5.13	0.00
3-3	5.03	4.99	5.01	0.00	0.00	0.00	5.13	0.00
1-4	4.99	5.03	5.01	0.00	0.00	0.00	5.13	0.00
2-4	5.03	5.03	5.03	0.00	0.00	0.00	5.13	0.00
3-4	5.00	4.95	4.98	0.00	0.00	0.00	5.13	0.00

18" Combustor Stack
System Calibration Bias and Drift Data
Carbon Monoxide
Calibration Span = 9.17 ppm

Run Number	CO Calibration Initial Response (ppm)	CO Calibration Initial Bias (%*)	CO Calibration Final Response (ppm)	CO Calibration Final Bias (%*)	CO Calibration Drift (%*)	CO Zero Initial Response (ppm)	CO Zero Initial Bias (%*)	CO Zero Final Response (ppm)	CO Zero Final Bias (%*)	CO Zero Drift (%*)	Actual CO Calibration Value (ppm)	Actual CO Zero Value (ppm)
1-1	5.12	0.44	5.07	0.11	0.55	0.00	0.00	0.00	0.00	0.00	5.08	0.00
2-1	5.07	0.11	5.13	0.55	0.65	0.00	0.00	0.00	0.00	0.00	5.08	0.00
3-1	5.13	0.55	5.14	0.65	0.11	0.00	0.00	0.00	0.00	0.00	5.08	0.00
1-2	5.14	0.65	5.09	0.11	0.55	0.00	0.00	0.00	0.00	0.00	5.08	0.00
2-2	5.09	0.11	5.08	0.00	0.11	0.00	0.00	0.00	0.00	0.00	5.08	0.00
4-2	5.08	0.00	5.13	0.55	0.55	0.00	0.00	0.00	0.00	0.00	5.08	0.00
1-3	5.22	1.20	5.07	0.44	1.64	0.00	0.00	0.00	0.00	0.00	5.11	0.00
2-3	5.07	0.44	5.03	0.87	0.44	0.00	0.00	0.00	0.00	0.00	5.11	0.00
3-3	5.03	0.87	4.99	1.31	0.44	0.00	0.00	0.00	0.00	0.00	5.11	0.00
1-4	4.99	1.31	5.03	0.87	0.44	0.00	0.00	0.00	0.00	0.00	5.11	0.00
2-4	5.03	0.87	5.03	0.87	0.00	0.00	0.00	0.00	0.00	0.00	5.11	0.00
3-4	5.00	1.31	4.95	1.85	0.55	0.00	0.11	0.00	0.11	0.00	5.12	0.01

* Percent of Calibration Span

18" Combustor Stack
Analyzer Calibration Data
Carbon Monoxide

Date 12/19/14
Condition 1 and 2 - Runs 1 - 3
Calibration Span = 9.17 ppm

Gas Range	Actual Calibration Value (ppm)	Analyzer Calibration Response (ppm)	Absolute Difference (ppm)	Difference (%*)
Low	0.00	0.00	0.00	0.00
Mid	5.13	5.08	0.05	0.55
High	9.17	9.10	0.07	0.76

* Percent of Calibration Span

18" Combustor Stack
Analyzer Calibration Data
Carbon Monoxide

Date 12/20/14
Condition 3 Runs 1 - 3 and Condition 4 Runs 1 - 2
Calibration Span = 9.17 ppm

Gas Range	Actual Calibration Value (ppm)	Analyzer Calibration Response (ppm)	Absolute Difference (ppm)	Difference (%*)
Low	0.00	0.00	0.00	0.00
Mid	5.13	5.11	0.02	0.22
High	9.17	9.16	0.01	0.11

* Percent of Calibration Span

18" Combustor Stack
Analyzer Calibration Data
Carbon Monoxide

Date 12/21/14
Condition 4 Run 3
Calibration Span = 9.17 ppm

Gas Range	Actual Calibration Value (ppm)	Analyzer Calibration Response (ppm)	Absolute Difference (ppm)	Difference (%*)
Low	0.00	0.01	0.01	0.11
Mid	5.13	5.12	0.01	0.11
High	9.17	9.15	0.02	0.22

* Percent of Calibration Span

18" Combustor Stack
Analyzer Calibration Data
Total Hydrocarbons

Date:12/19/14 and 12
Condition 1 Runs 1 - 3
Calibration Span = 10 ppm

Gas Range	Actual Calibration Value (ppm)	Analyzer Calibration Response (ppm)	Absolute Difference (ppm)	Difference (%*)
Zero	0.00	0.00	0.00	----
Low	3.01	3.02	0.01	0.33
Mid	5.06	5.02	0.04	0.79
High	8.72	8.94	0.22	----

* Percent of calibration gas

18" Combustor Stack
Analyzer Calibration Data
Total Hydrocarbons

Date: 12/20/14
Condition 3 Runs 1 - 3 and Condition 4 Runs 1 - 2
Calibration Span = 10 ppm

Gas Range	Actual Calibration Value (ppm)	Analyzer Calibration Response (ppm)	Absolute Difference (ppm)	Difference (%*)
Zero	0.00	0.00	0.00	----
Low	3.01	3.07	0.06	1.99
Mid	5.06	5.00	0.06	1.19
High	8.72	8.79	0.07	----

* Percent of calibration gas

18" Combustor Stack
Analyzer Calibration Data
Total Hydrocarbons

Date: 12/21/14
Condition 4 Run 3

Calibration Span = 10 ppm

Gas Range	Actual Calibration Value (ppm)	Analyzer Calibration Response (ppm)	Absolute Difference (ppm)	Difference (%*)
Zero	0.00	0.00	0.00	----
Low	3.01	2.99	0.02	0.66
Mid	5.06	4.98	0.08	1.58
High	8.72	8.68	0.04	----

* Percent of calibration gas

filename	12/19/2014	6:45:39							
testby1	Metco								
testby2	Dallas Operations								
testby3	M-7								
testby4	Shane Lee								
testfor1	Black Gold Rush								
testfor2	24" Thermal Combuster Outlet Stack								
testfor3	Midland Site								
testfor4	Midland, TX								
name			4)CO	6)THC					
sn			1125049419.00	1033744940.00					
offset			0.00	0.00					
fullscale			10.00	10.00					
train			1.00	1.00					
gastype			co 10	thc 25a					
dcg1	12/19/2014	6:46:15	0.56	0.24	ALM008053/cg1	N2	0	N2	0
dcg1	12/19/2014	6:46:30	0.38	0.24	ALM008053/cg1	N2	0	N2	0
dcg1	12/19/2014	6:46:45	0.34	0.24	ALM008053/cg1	N2	0	N2	0
dcg1	12/19/2014	6:47:00	0.31	0.24	ALM008053/cg1	N2	0	N2	0
dcg1	12/19/2014	6:47:15	0.32	0.24	ALM008053/cg1	N2	0	N2	0
dcg1	12/19/2014	6:47:30	0.11	0.24	ALM008053/cg1	N2	0	N2	0
dcg1	12/19/2014	6:47:45	0.00	0.24	ALM008053/cg1	N2	0	N2	0
dcg1	12/19/2014	6:48:00	0.00	0.24	ALM008053/cg1	N2	0	N2	0
dcg1	12/19/2014	6:48:15	0.00	0.24	ALM008053/cg1	N2	0	N2	0
o2ezero1	12/19/2014	6:48:00	0.00	0.24	ALM008053/cg1	N2	0	N2	0
co2ezero1	12/19/2014	6:47:45	0.00	0.24	ALM008053/cg1	N2	0	N2	0
coezero1	12/19/2014	6:48:00	0.00	0.24	ALM008053/cg1	N2	0	N2	0
dcg5	12/19/2014	6:48:45	0.34	0.24	ALM005790/cg5	CO	9.17		0
dcg5	12/19/2014	6:49:00	6.88	0.24	ALM005790/cg5	CO	9.17		0
dcg5	12/19/2014	6:49:15	8.98	0.24	ALM005790/cg5	CO	9.17		0
dcg5	12/19/2014	6:49:30	9.09	0.24	ALM005790/cg5	CO	9.17		0
dcg5	12/19/2014	6:49:45	9.09	0.24	ALM005790/cg5	CO	9.17		0
dcg5	12/19/2014	6:50:00	9.10	0.24	ALM005790/cg5	CO	9.17		0
cohigh1	12/19/2014	6:50:00	9.10	0.24	ALM005790/cg5	CO	9.17		0
dcg4	12/19/2014	6:51:15	0.96	1.47	CC66094/cg4	CO	5.13		0
dcg4	12/19/2014	6:51:30	4.25	1.47	CC66094/cg4	CO	5.13		0
dcg4	12/19/2014	6:51:45	4.97	1.63	CC66094/cg4	CO	5.13		0
dcg4	12/19/2014	6:52:00	5.01	1.25	CC66094/cg4	CO	5.13		0
dcg4	12/19/2014	6:52:15	5.00	1.21	CC66094/cg4	CO	5.13		0
dcg4	12/19/2014	6:52:30	5.02	1.22	CC66094/cg4	CO	5.13		0
dcg4	12/19/2014	6:52:45	4.98	1.02	CC66094/cg4	CO	5.13		0
dcg4	12/19/2014	6:53:00	5.00	0.77	CC66094/cg4	CO	5.13		0
dcg4	12/19/2014	6:53:15	5.08	0.80	CC66094/cg4	CO	5.13		0
comid1	12/19/2014	6:53:15	5.08	0.80	CC66094/cg4	CO	5.13		0
dcg9	12/19/2014	6:54:00	4.75	0.84	ALM010233/cg9	O2	20	CO2	20.5
dcg9	12/19/2014	6:54:15	1.13	0.79	ALM010233/cg9	O2	20	CO2	20.5
dcg9	12/19/2014	6:54:30	0.00	0.71	ALM010233/cg9	O2	20	CO2	20.5
dcg9	12/19/2014	6:54:45	0.00	0.62	ALM010233/cg9	O2	20	CO2	20.5
dcg9	12/19/2014	6:55:00	0.00	0.67	ALM010233/cg9	O2	20	CO2	20.5
dcg9	12/19/2014	6:55:15	0.00	0.71	ALM010233/cg9	O2	20	CO2	20.5
dcg9	12/19/2014	6:55:30	0.00	0.71	ALM010233/cg9	O2	20	CO2	20.5
o2high1	12/19/2014	6:55:15	0.00	0.71	ALM010233/cg9	O2	20	CO2	20.5
co2high1	12/19/2014	6:55:30	0.00	0.71	ALM010233/cg9	O2	20	CO2	20.5
dcg8	12/19/2014	6:55:45	0.00	1.06	CC1076/cg8	O2	11.1	CO2	11.1
dcg8	12/19/2014	6:56:00	0.00	0.70	CC1076/cg8	O2	11.1	CO2	11.1
dcg8	12/19/2014	6:56:15	0.00	0.69	CC1076/cg8	O2	11.1	CO2	11.1
dcg8	12/19/2014	6:56:30	0.00	0.66	CC1076/cg8	O2	11.1	CO2	11.1
dcg8	12/19/2014	6:56:45	0.00	0.67	CC1076/cg8	O2	11.1	CO2	11.1
dcg8	12/19/2014	6:57:00	0.00	0.65	CC1076/cg8	O2	11.1	CO2	11.1

dcg8	12/19/2014	6:57:15	0.00	0.70	CC1076/cg8	O2	11.1	CO2	11.1
dcg8	12/19/2014	6:57:30	0.00	0.72	CC1076/cg8	O2	11.1	CO2	11.1
dcg8	12/19/2014	6:57:45	0.00	0.75	CC1076/cg8	O2	11.1	CO2	11.1
dcg8	12/19/2014	6:58:00	0.00	0.84	CC1076/cg8	O2	11.1	CO2	11.1
o2mid1	12/19/2014	6:58:00	0.00	0.84	CC1076/cg8	O2	11.1	CO2	11.1
co2mid1	12/19/2014	6:58:00	0.00	0.84	CC1076/cg8	O2	11.1	CO2	11.1
dcg1	12/19/2014	7:00:00	0.31	0.83	ALM008053/cg1	N2	0	N2	0
dcg1	12/19/2014	7:00:15	0.29	0.75	ALM008053/cg1	N2	0	N2	0
dcg1	12/19/2014	7:00:30	0.27	0.40	ALM008053/cg1	N2	0	N2	0
dcg1	12/19/2014	7:00:45	0.25	0.28	ALM008053/cg1	N2	0	N2	0
dcg1	12/19/2014	7:01:00	0.26	0.28	ALM008053/cg1	N2	0	N2	0
dcg1	12/19/2014	7:01:15	0.25	0.31	ALM008053/cg1	N2	0	N2	0
dcg1	12/19/2014	7:01:30	0.27	0.33	ALM008053/cg1	N2	0	N2	0
dcg1	12/19/2014	7:01:45	0.27	0.40	ALM008053/cg1	N2	0	N2	0
dcg1	12/19/2014	7:02:00	0.26	0.13	ALM008053/cg1	N2	0	N2	0
dcg1	12/19/2014	7:02:15	0.27	0.00	ALM008053/cg1	N2	0	N2	0
dcg1	12/19/2014	7:02:30	0.26	0.01	ALM008053/cg1	N2	0	N2	0
dcg1	12/19/2014	7:02:45	0.26	0.03	ALM008053/cg1	N2	0	N2	0
thcezero1	12/19/2014	7:02:15	0.27	0.00	ALM008053/cg1	N2	0	N2	0
dcg12	12/19/2014	7:03:15	0.26	0.01	LL67700/cg12	THC	8.72		0
dcg12	12/19/2014	7:03:30	0.26	0.00	LL67700/cg12	THC	8.72		0
dcg12	12/19/2014	7:03:45	0.25	0.00	LL67700/cg12	THC	8.72		0
dcg12	12/19/2014	7:04:00	0.24	0.02	LL67700/cg12	THC	8.72		0
dcg12	12/19/2014	7:04:15	0.25	0.04	LL67700/cg12	THC	8.72		0
dcg12	12/19/2014	7:04:30	0.24	0.00	LL67700/cg12	THC	8.72		0
dcg12	12/19/2014	7:04:45	0.22	0.00	LL67700/cg12	THC	8.72		0
dcg12	12/19/2014	7:05:00	0.23	0.00	LL67700/cg12	THC	8.72		0
dcg12	12/19/2014	7:05:15	0.24	0.00	LL67700/cg12	THC	8.72		0
dcg12	12/19/2014	7:05:30	0.26	0.00	LL67700/cg12	THC	8.72		0
dcg12	12/19/2014	7:05:45	0.27	0.42	LL67700/cg12	THC	8.72		0
dcg12	12/19/2014	7:06:00	0.21	1.94	LL67700/cg12	THC	8.72		0
dcg12	12/19/2014	7:06:15	0.23	2.74	LL67700/cg12	THC	8.72		0
dcg12	12/19/2014	7:06:30	0.26	3.01	LL67700/cg12	THC	8.72		0
dcg12	12/19/2014	7:06:45	0.26	3.21	LL67700/cg12	THC	8.72		0
dcg12	12/19/2014	7:07:00	0.22	3.24	LL67700/cg12	THC	8.72		0
dcg12	12/19/2014	7:07:15	0.24	3.28	LL67700/cg12	THC	8.72		0
dcg12	12/19/2014	7:07:30	0.26	3.24	LL67700/cg12	THC	8.72		0
dcg12	12/19/2014	7:07:45	0.25	3.27	LL67700/cg12	THC	8.72		0
dcg12	12/19/2014	7:08:00	0.24	3.09	LL67700/cg12	THC	8.72		0
dcg12	12/19/2014	7:08:15	0.24	2.32	LL67700/cg12	THC	8.72		0
dcg12	12/19/2014	7:08:30	0.24	2.04	LL67700/cg12	THC	8.72		0
dcg12	12/19/2014	7:08:45	0.24	1.94	LL67700/cg12	THC	8.72		0
dcg12	12/19/2014	7:09:00	0.23	1.85	LL67700/cg12	THC	8.72		0
dcg12	12/19/2014	7:09:15	0.22	2.03	LL67700/cg12	THC	8.72		0
dcg12	12/19/2014	7:09:30	0.25	2.06	LL67700/cg12	THC	8.72		0
dcg12	12/19/2014	7:09:45	0.24	2.06	LL67700/cg12	THC	8.72		0
dcg12	12/19/2014	7:10:00	0.21	2.52	LL67700/cg12	THC	8.72		0
dcg12	12/19/2014	7:10:15	0.23	2.35	LL67700/cg12	THC	8.72		0
dcg12	12/19/2014	7:10:30	0.23	2.33	LL67700/cg12	THC	8.72		0
dcg12	12/19/2014	7:10:45	0.23	2.36	LL67700/cg12	THC	8.72		0
dcg12	12/19/2014	7:11:00	0.23	2.47	LL67700/cg12	THC	8.72		0
dcg12	12/19/2014	7:11:15	0.21	8.00	LL67700/cg12	THC	8.72		0
dcg12	12/19/2014	7:11:30	0.21	8.97	LL67700/cg12	THC	8.72		0
dcg12	12/19/2014	7:11:45	0.24	8.94	LL67700/cg12	THC	8.72		0
dcg12	12/19/2014	7:12:00	0.22	9.02	LL67700/cg12	THC	8.72		0
dcg12	12/19/2014	7:12:15	0.25	8.88	LL67700/cg12	THC	8.72		0
thchigh1	12/19/2014	7:11:45	0.24	8.94	LL67700/cg12	THC	8.72		0
dcg11	12/19/2014	7:12:45	0.27	8.83	LL107680/cg11	THC	5.06		0
dcg11	12/19/2014	7:13:00	0.28	8.80	LL107680/cg11	THC	5.06		0

dcg11	12/19/2014	7:13:15	0.24	8.71	LL107680/cg11	THC	5.06		0
dcg11	12/19/2014	7:13:30	0.26	8.99	LL107680/cg11	THC	5.06		0
dcg11	12/19/2014	7:13:45	0.27	8.92	LL107680/cg11	THC	5.06		0
dcg11	12/19/2014	7:14:00	0.28	8.70	LL107680/cg11	THC	5.06		0
dcg11	12/19/2014	7:14:15	0.30	8.73	LL107680/cg11	THC	5.06		0
dcg11	12/19/2014	7:14:30	0.28	8.59	LL107680/cg11	THC	5.06		0
dcg11	12/19/2014	7:14:45	0.28	8.42	LL107680/cg11	THC	5.06		0
dcg11	12/19/2014	7:15:00	0.30	8.51	LL107680/cg11	THC	5.06		0
dcg11	12/19/2014	7:15:15	0.28	8.67	LL107680/cg11	THC	5.06		0
dcg11	12/19/2014	7:15:30	0.26	7.65	LL107680/cg11	THC	5.06		0
dcg11	12/19/2014	7:15:45	0.28	5.96	LL107680/cg11	THC	5.06		0
dcg11	12/19/2014	7:16:00	0.30	5.35	LL107680/cg11	THC	5.06		0
dcg11	12/19/2014	7:16:15	0.29	5.03	LL107680/cg11	THC	5.06		0
dcg11	12/19/2014	7:16:30	0.26	5.02	LL107680/cg11	THC	5.06		0
dcg11	12/19/2014	7:16:45	0.24	5.00	LL107680/cg11	THC	5.06		0
thcmid1	12/19/2014	7:16:30	0.26	5.02	LL107680/cg11	THC	5.06		0
dcg10	12/19/2014	7:17:15	0.32	4.69	BLM002982/cg10	THC	3.01		0
dcg10	12/19/2014	7:17:30	0.32	4.44	BLM002982/cg10	THC	3.01		0
dcg10	12/19/2014	7:17:45	0.34	4.65	BLM002982/cg10	THC	3.01		0
dcg10	12/19/2014	7:18:00	0.34	4.61	BLM002982/cg10	THC	3.01		0
dcg10	12/19/2014	7:18:15	0.36	4.65	BLM002982/cg10	THC	3.01		0
dcg10	12/19/2014	7:18:30	0.33	4.28	BLM002982/cg10	THC	3.01		0
dcg10	12/19/2014	7:18:45	0.28	4.26	BLM002982/cg10	THC	3.01		0
dcg10	12/19/2014	7:19:00	0.31	4.22	BLM002982/cg10	THC	3.01		0
dcg10	12/19/2014	7:19:15	0.32	4.27	BLM002982/cg10	THC	3.01		0
dcg10	12/19/2014	7:19:30	0.31	4.27	BLM002982/cg10	THC	3.01		0
dcg10	12/19/2014	7:19:45	0.32	5.29	BLM002982/cg10	THC	3.01		0
dcg10	12/19/2014	7:20:00	0.33	4.18	BLM002982/cg10	THC	3.01		0
dcg10	12/19/2014	7:20:15	0.32	3.62	BLM002982/cg10	THC	3.01		0
dcg10	12/19/2014	7:20:30	0.29	3.37	BLM002982/cg10	THC	3.01		0
dcg10	12/19/2014	7:20:45	0.31	3.32	BLM002982/cg10	THC	3.01		0
dcg10	12/19/2014	7:21:00	0.31	3.02	BLM002982/cg10	THC	3.01		0
dcg10	12/19/2014	7:21:15	0.32	2.87	BLM002982/cg10	THC	3.01		0
dcg10	12/19/2014	7:21:30	0.32	3.06	BLM002982/cg10	THC	3.01		0
dcg10	12/19/2014	7:21:45	0.29	3.10	BLM002982/cg10	THC	3.01		0
thclow1	12/19/2014	7:21:00	0.31	3.02	BLM002982/cg10	THC	3.01		0
scg4	12/19/2014	7:23:15	0.27	0.41	CC66094/cg4	CO	5.13		0
scg4	12/19/2014	7:23:30	0.28	0.19	CC66094/cg4	CO	5.13		0
scg4	12/19/2014	7:23:45	1.40	0.00	CC66094/cg4	CO	5.13		0
scg4	12/19/2014	7:24:00	4.04	0.00	CC66094/cg4	CO	5.13		0
scg4	12/19/2014	7:24:15	5.04	0.00	CC66094/cg4	CO	5.13		0
scg4	12/19/2014	7:24:30	5.15	0.00	CC66094/cg4	CO	5.13		0
scg4	12/19/2014	7:24:45	5.12	0.00	CC66094/cg4	CO	5.13		0
scg4	12/19/2014	7:25:00	5.11	0.00	CC66094/cg4	CO	5.13		0
o2zero1	12/19/2014	7:24:45	5.12	0.00	CC66094/cg4	CO	5.13		0
co2zero1	12/19/2014	7:24:30	5.15	0.00	CC66094/cg4	CO	5.13		0
cospan1	12/19/2014	7:24:45	5.12	0.00	CC66094/cg4	CO	5.13		0
scg8	12/19/2014	7:25:30	5.12	0.00	CC1076/cg8	O2	11.1	CO2	11.1
scg8	12/19/2014	7:25:45	5.05	0.02	CC1076/cg8	O2	11.1	CO2	11.1
scg8	12/19/2014	7:26:00	3.12	0.01	CC1076/cg8	O2	11.1	CO2	11.1
scg8	12/19/2014	7:26:15	0.67	0.01	CC1076/cg8	O2	11.1	CO2	11.1
scg8	12/19/2014	7:26:30	0.00	0.00	CC1076/cg8	O2	11.1	CO2	11.1
scg8	12/19/2014	7:26:45	0.00	0.00	CC1076/cg8	O2	11.1	CO2	11.1
scg8	12/19/2014	7:27:00	0.00	0.00	CC1076/cg8	O2	11.1	CO2	11.1
o2span1	12/19/2014	7:27:00	0.00	0.00	CC1076/cg8	O2	11.1	CO2	11.1
co2span1	12/19/2014	7:27:00	0.00	0.00	CC1076/cg8	O2	11.1	CO2	11.1
cozero1	12/19/2014	7:27:00	0.00	0.00	CC1076/cg8	O2	11.1	CO2	11.1
scg8	12/19/2014	7:27:30	0.00	0.09	CC1076/cg8	O2	11.1	CO2	11.1
scg8	12/19/2014	7:27:45	0.00	0.26	CC1076/cg8	O2	11.1	CO2	11.1

scg8	12/19/2014	7:28:00	0.00	0.08	CC1076/cg8	O2	11.1	CO2	11.1
scg8	12/19/2014	7:28:15	0.00	0.00	CC1076/cg8	O2	11.1	CO2	11.1
scg8	12/19/2014	7:28:30	0.00	0.00	CC1076/cg8	O2	11.1	CO2	11.1
thczero1	12/19/2014	7:28:15	0.00	0.00	CC1076/cg8	O2	11.1	CO2	11.1
scg11	12/19/2014	7:29:00	0.00	0.00	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	7:29:15	0.00	0.00	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	7:29:30	0.00	0.36	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	7:29:45	0.06	0.99	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	7:30:00	0.18	0.97	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	7:30:15	0.17	1.04	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	7:30:30	0.15	1.12	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	7:30:45	0.17	1.10	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	7:31:00	0.15	1.04	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	7:31:15	0.18	0.92	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	7:31:30	0.17	0.35	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	7:31:45	0.19	1.03	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	7:32:00	0.18	1.19	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	7:32:15	0.19	1.26	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	7:32:30	0.20	1.29	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	7:32:45	0.19	1.32	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	7:33:00	0.19	1.28	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	7:33:15	0.18	1.23	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	7:33:30	0.18	1.23	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	7:33:45	0.15	1.24	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	7:34:00	0.16	1.23	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	7:34:15	0.18	1.23	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	7:34:30	0.17	1.24	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	7:34:45	0.16	1.24	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	7:35:00	0.17	1.25	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	7:35:15	0.21	5.05	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	7:35:30	1.22	9.09	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	7:35:45	6.68	5.16	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	7:36:00	9.45	1.99	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	7:36:15	10.00	1.11	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	7:36:30	9.73	1.20	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	7:36:45	3.77	1.20	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	7:37:00	0.63	1.21	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	7:37:15	0.25	1.17	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	7:37:30	0.24	4.75	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	7:37:45	0.18	5.12	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	7:38:00	0.19	4.98	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	7:38:15	0.18	4.82	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	7:38:30	0.22	4.85	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	7:38:45	0.18	4.91	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	7:39:00	0.16	4.91	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	7:39:15	0.15	6.15	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	7:39:30	0.18	4.54	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	7:39:45	0.15	4.67	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	7:40:00	0.17	5.09	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	7:40:15	0.16	4.93	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	7:40:30	0.18	4.96	LL107680/cg11	THC	5.06		0
thcspan1	12/19/2014	7:40:00	0.17	5.09	LL107680/cg11	THC	5.06		0
run1	12/19/2014	9:35:00	6.21	0.00					
run1	12/19/2014	9:35:15	6.34	0.00					
run1	12/19/2014	9:35:30	6.46	0.04					
run1	12/19/2014	9:35:45	6.54	0.00					
run1	12/19/2014	9:36:00	6.52	0.03					
run1	12/19/2014	9:36:15	6.82	0.07					
run1	12/19/2014	9:36:30	6.86	0.13					

run1	12/19/2014	9:36:45	6.60	0.13
run1	12/19/2014	9:37:00	6.01	0.34
run1	12/19/2014	9:37:15	6.22	1.30
run1	12/19/2014	9:37:30	6.63	0.02
run1	12/19/2014	9:37:45	6.21	0.05
run1	12/19/2014	9:38:00	6.18	0.12
run1	12/19/2014	9:38:15	6.29	0.30
run1	12/19/2014	9:38:30	6.15	0.28
run1	12/19/2014	9:38:45	6.08	0.15
run1	12/19/2014	9:39:00	5.93	0.12
run1	12/19/2014	9:39:15	6.20	0.01
run1	12/19/2014	9:39:30	6.04	0.01
run1	12/19/2014	9:39:45	5.81	0.03
run1	12/19/2014	9:40:00	6.17	0.03
run1	12/19/2014	9:40:15	5.95	1.26
run1	12/19/2014	9:40:30	5.18	0.25
run1	12/19/2014	9:40:45	5.11	0.19
run1	12/19/2014	9:41:00	5.44	0.17
run1	12/19/2014	9:41:15	5.29	0.24
run1	12/19/2014	9:41:30	5.56	0.27
run1	12/19/2014	9:41:45	6.42	0.29
run1	12/19/2014	9:42:00	6.51	0.02
run1	12/19/2014	9:42:15	6.21	0.12
run1	12/19/2014	9:42:30	5.88	0.16
run1	12/19/2014	9:42:45	6.29	0.17
run1	12/19/2014	9:43:00	5.90	0.17
run1	12/19/2014	9:43:15	5.24	1.53
run1	12/19/2014	9:43:30	5.22	0.09
run1	12/19/2014	9:43:45	5.63	0.10
run1	12/19/2014	9:44:00	5.29	0.05
run1	12/19/2014	9:44:15	5.16	0.04
run1	12/19/2014	9:44:30	5.09	0.08
run1	12/19/2014	9:44:45	4.94	0.27
run1	12/19/2014	9:45:00	4.87	0.35
run1	12/19/2014	9:45:15	5.59	0.17
run1	12/19/2014	9:45:30	6.37	0.20
run1	12/19/2014	9:45:45	6.38	0.15
run1	12/19/2014	9:46:00	7.22	0.15
run1	12/19/2014	9:46:15	8.85	0.15
run1	12/19/2014	9:46:30	9.62	1.00
run1	12/19/2014	9:46:45	9.48	0.55
run1	12/19/2014	9:47:00	9.16	0.00
run1	12/19/2014	9:47:15	8.44	0.01
run1	12/19/2014	9:47:30	7.35	0.01
run1	12/19/2014	9:47:45	7.08	0.11
run1	12/19/2014	9:48:00	5.89	0.01
run1	12/19/2014	9:48:15	5.00	0.10
run1	12/19/2014	9:48:45	4.50	0.20
run1	12/19/2014	9:49:00	5.54	0.14
run1	12/19/2014	9:49:15	6.44	0.28
run1	12/19/2014	9:49:30	6.82	0.35
run1	12/19/2014	9:49:45	6.76	0.35
run1	12/19/2014	9:50:00	6.65	1.19
run1	12/19/2014	9:50:15	6.93	0.73
run1	12/19/2014	9:50:30	7.30	0.10
run1	12/19/2014	9:50:45	6.97	0.15
run1	12/19/2014	9:51:00	6.93	0.10
run1	12/19/2014	9:51:15	7.41	0.18
run1	12/19/2014	9:51:30	7.19	0.06

run1	12/19/2014	9:51:45	6.31	0.05
run1	12/19/2014	9:52:00	6.23	0.00
run1	12/19/2014	9:52:15	6.83	0.00
run1	12/19/2014	9:52:30	7.08	0.00
run1	12/19/2014	9:52:45	6.74	0.00
run1	12/19/2014	9:53:00	6.94	0.00
run1	12/19/2014	9:53:15	7.10	1.19
run1	12/19/2014	9:53:30	6.74	0.20
run1	12/19/2014	9:53:45	6.14	0.07
run1	12/19/2014	9:54:00	6.26	0.24
run1	12/19/2014	9:54:15	6.99	0.07
run1	12/19/2014	9:54:30	6.88	0.10
run1	12/19/2014	9:54:45	6.97	0.02
run1	12/19/2014	9:55:00	6.77	0.06
run1	12/19/2014	9:55:15	6.60	0.04
run1	12/19/2014	9:55:30	6.83	0.04
run1	12/19/2014	9:55:45	7.11	0.00
run1	12/19/2014	9:56:00	7.33	0.00
run1	12/19/2014	9:56:15	7.18	0.00
run1	12/19/2014	9:56:30	7.08	1.30
run1	12/19/2014	9:56:45	6.96	0.04
run1	12/19/2014	9:57:00	6.97	0.00
run1	12/19/2014	9:57:15	7.28	0.02
run1	12/19/2014	9:57:30	7.27	0.24
run1	12/19/2014	9:57:45	7.16	0.38
run1	12/19/2014	9:58:00	7.03	0.36
run1	12/19/2014	9:58:15	7.13	0.23
run1	12/19/2014	9:58:30	7.37	0.16
run1	12/19/2014	9:58:45	7.12	0.33
run1	12/19/2014	9:59:00	7.22	0.40
run1	12/19/2014	9:59:15	7.49	0.24
run1	12/19/2014	9:59:30	7.32	0.05
run1	12/19/2014	9:59:45	7.25	0.07
run1	12/19/2014	10:00:00	7.30	0.08
run1	12/19/2014	10:00:15	7.44	0.16
run1	12/19/2014	10:00:30	7.51	1.37
run1	12/19/2014	10:00:45	7.10	0.01
run1	12/19/2014	10:01:00	6.34	0.00
run1	12/19/2014	10:01:15	4.72	0.00
run1	12/19/2014	10:01:30	3.62	0.00
run1	12/19/2014	10:01:45	3.73	0.01
run1	12/19/2014	10:02:00	5.81	0.10
run1	12/19/2014	10:02:15	7.24	0.11
run1	12/19/2014	10:02:30	7.39	0.00
run1	12/19/2014	10:02:45	7.34	0.01
run1	12/19/2014	10:03:00	7.27	0.02
run1	12/19/2014	10:03:15	7.53	0.00
run1	12/19/2014	10:03:30	7.74	0.00
run1	12/19/2014	10:03:45	7.82	0.00
run1	12/19/2014	10:04:00	7.56	0.00
run1	12/19/2014	10:04:15	7.61	1.34
run1	12/19/2014	10:04:30	7.63	0.32
run1	12/19/2014	10:04:45	7.70	0.00
run1	12/19/2014	10:05:00	7.49	0.16
run1	12/19/2014	10:05:15	7.68	0.17
run1	12/19/2014	10:05:30	8.16	0.12
run1	12/19/2014	10:05:45	8.16	0.10
run1	12/19/2014	10:06:00	7.54	0.18
run1	12/19/2014	10:06:15	7.40	0.16

run1	12/19/2014	10:06:30	7.76	0.20
run1	12/19/2014	10:07:00	7.73	0.17
run1	12/19/2014	10:07:15	7.82	0.09
run1	12/19/2014	10:07:30	8.14	0.05
run1	12/19/2014	10:07:45	7.96	0.11
run1	12/19/2014	10:08:00	7.96	0.19
run1	12/19/2014	10:08:15	8.07	0.23
run1	12/19/2014	10:08:30	8.34	0.29
run1	12/19/2014	10:08:45	8.76	0.44
run1	12/19/2014	10:09:00	9.01	0.11
run1	12/19/2014	10:09:15	8.53	0.00
run1	12/19/2014	10:09:30	8.46	0.00
run1	12/19/2014	10:09:45	8.55	0.45
run1	12/19/2014	10:10:00	9.09	1.19
run1	12/19/2014	10:10:15	9.00	0.41
run1	12/19/2014	10:10:30	8.74	0.46
run1	12/19/2014	10:10:45	8.33	0.23
run1	12/19/2014	10:11:00	7.99	0.08
run1	12/19/2014	10:11:15	7.93	0.01
run1	12/19/2014	10:11:30	7.58	0.00
run1	12/19/2014	10:11:45	7.24	0.10
run1	12/19/2014	10:12:00	8.07	0.21
run1	12/19/2014	10:12:15	8.51	0.17
run1	12/19/2014	10:12:30	8.83	0.07
run1	12/19/2014	10:12:45	9.12	0.05
run1	12/19/2014	10:13:00	8.67	0.14
run1	12/19/2014	10:13:15	8.23	0.20
run1	12/19/2014	10:13:30	7.91	0.08
run1	12/19/2014	10:13:45	7.12	0.10
run1	12/19/2014	10:14:00	7.04	0.10
run1	12/19/2014	10:14:15	7.78	1.32
run1	12/19/2014	10:14:30	9.68	0.26
run1	12/19/2014	10:14:45	9.28	0.10
run1	12/19/2014	10:15:00	9.07	0.14
run1	12/19/2014	10:15:15	9.13	0.40
run1	12/19/2014	10:15:30	9.03	0.30
run1	12/19/2014	10:15:45	9.11	0.24
run1	12/19/2014	10:16:00	9.00	0.47
run1	12/19/2014	10:16:15	9.40	0.21
run1	12/19/2014	10:16:30	7.74	0.07
run1	12/19/2014	10:16:45	6.14	0.08
run1	12/19/2014	10:17:00	5.50	0.24
run1	12/19/2014	10:17:15	5.12	0.21
run1	12/19/2014	10:17:30	4.28	0.17
run1	12/19/2014	10:17:45	3.85	0.11
run1	12/19/2014	10:18:00	3.76	0.13
run1	12/19/2014	10:18:15	3.79	0.13
run1	12/19/2014	10:18:30	4.06	0.00
run1	12/19/2014	10:18:45	4.64	0.00
run1	12/19/2014	10:19:00	5.30	0.00
run1	12/19/2014	10:19:15	5.64	0.00
run1	12/19/2014	10:19:30	5.61	1.44
run1	12/19/2014	10:19:45	5.61	0.27
run1	12/19/2014	10:20:00	5.21	0.13
run1	12/19/2014	10:20:15	4.84	0.23
run1	12/19/2014	10:20:30	5.09	0.18
run1	12/19/2014	10:20:45	4.92	0.01
run1	12/19/2014	10:21:00	5.04	0.00
run1	12/19/2014	10:21:15	5.34	0.02

run1	12/19/2014	10:21:30	5.44	0.00
run1	12/19/2014	10:21:45	5.70	0.01
run1	12/19/2014	10:22:00	5.92	0.10
run1	12/19/2014	10:22:15	6.13	0.18
run1	12/19/2014	10:22:30	6.60	0.22
run1	12/19/2014	10:22:45	6.61	0.15
run1	12/19/2014	10:23:00	6.41	0.15
run1	12/19/2014	10:23:15	6.35	0.26
run1	12/19/2014	10:23:30	6.23	0.23
run1	12/19/2014	10:23:45	6.29	0.01
run1	12/19/2014	10:24:00	7.42	0.07
run1	12/19/2014	10:24:15	7.89	0.18
run1	12/19/2014	10:24:30	7.26	0.17
run1	12/19/2014	10:25:00	6.83	0.17
run1	12/19/2014	10:25:15	6.43	1.39
run1	12/19/2014	10:25:30	6.13	0.03
run1	12/19/2014	10:25:45	7.11	0.03
run1	12/19/2014	10:26:00	7.26	0.02
run1	12/19/2014	10:26:15	6.64	0.22
run1	12/19/2014	10:26:30	6.89	0.25
run1	12/19/2014	10:26:45	6.98	0.30
run1	12/19/2014	10:27:00	6.63	0.14
run1	12/19/2014	10:27:15	6.44	0.19
run1	12/19/2014	10:27:30	6.41	0.20
run1	12/19/2014	10:27:45	6.67	0.09
run1	12/19/2014	10:28:00	6.10	0.00
run1	12/19/2014	10:28:15	5.87	0.04
run1	12/19/2014	10:28:30	6.37	0.10
run1	12/19/2014	10:28:45	6.44	0.02
run1	12/19/2014	10:29:00	6.68	0.09
run1	12/19/2014	10:29:15	6.98	0.14
run1	12/19/2014	10:29:30	7.28	0.14
run1	12/19/2014	10:29:45	7.21	0.19
run1	12/19/2014	10:30:00	6.99	0.07
run1	12/19/2014	10:30:15	7.57	0.00
run1	12/19/2014	10:30:30	8.33	0.00
run1	12/19/2014	10:30:45	8.93	1.09
run1	12/19/2014	10:31:00	8.92	0.49
run1	12/19/2014	10:31:15	9.06	0.03
run1	12/19/2014	10:31:30	8.71	0.10
run1	12/19/2014	10:31:45	8.34	0.39
run1	12/19/2014	10:32:00	7.98	0.22
run1	12/19/2014	10:32:15	7.49	0.26
run1	12/19/2014	10:32:30	7.38	0.02
run1	12/19/2014	10:32:45	7.55	0.21
run1	12/19/2014	10:33:00	7.37	0.32
run1	12/19/2014	10:33:15	6.94	0.28
run1	12/19/2014	10:33:30	6.71	0.16
run1	12/19/2014	10:33:45	6.73	0.26
run1	12/19/2014	10:34:00	7.08	0.22
run1	12/19/2014	10:34:15	7.46	0.29
run1	12/19/2014	10:34:30	7.14	0.08
run1	12/19/2014	10:34:45	6.94	0.09
run1	12/19/2014	10:35:00	7.19	0.04
run1	12/19/2014	10:35:15	7.17	0.22
run1	12/19/2014	10:35:30	7.01	0.08
run1	12/19/2014	10:35:45	7.30	0.05
run1	12/19/2014	10:36:00	7.09	0.03
run1	12/19/2014	10:36:15	6.42	0.01

run1	12/19/2014	10:36:30	6.74	0.00					
run1	12/19/2014	10:36:45	6.56	0.02					
run1	12/19/2014	10:37:00	6.25	0.08					
run1	12/19/2014	10:37:15	6.72	0.24					
run1	12/19/2014	10:37:30	7.29	0.11					
run1	12/19/2014	10:37:45	7.42	0.08					
run1	12/19/2014	10:38:00	7.11	0.08					
run1	12/19/2014	10:38:15	6.49	1.27					
run1	12/19/2014	10:38:30	6.61	0.26					
run1	12/19/2014	10:38:45	6.60	0.37					
run1	12/19/2014	10:39:00	6.87	0.30					
run1	12/19/2014	10:39:15	6.48	0.06					
run1	12/19/2014	10:39:30	6.17	0.11					
run1	12/19/2014	10:39:45	6.40	0.22					
run1	12/19/2014	10:40:00	6.57	0.14					
run1	12/19/2014	10:40:15	6.89	0.12					
run1	12/19/2014	10:40:30	7.06	0.02					
run1	12/19/2014	10:40:45	7.08	0.19					
run1	12/19/2014	10:41:00	6.39	0.21					
averun1	12/19/2014	9:37:30	6.92	0.20	63				
scg4	12/19/2014	10:41:45	7.81	0.23	CC66094/cg4	CO	5.13		0
scg4	12/19/2014	10:42:00	7.83	0.23	CC66094/cg4	CO	5.13		0
scg4	12/19/2014	10:42:15	6.89	0.14	CC66094/cg4	CO	5.13		0
scg4	12/19/2014	10:42:30	5.41	0.27	CC66094/cg4	CO	5.13		0
scg4	12/19/2014	10:42:45	5.08	0.08	CC66094/cg4	CO	5.13		0
scg4	12/19/2014	10:43:00	5.04	0.09	CC66094/cg4	CO	5.13		0
scg4	12/19/2014	10:43:15	5.07	0.11	CC66094/cg4	CO	5.13		0
scg4	12/19/2014	10:43:30	5.07	0.09	CC66094/cg4	CO	5.13		0
scg4	12/19/2014	10:43:45	5.03	0.00	CC66094/cg4	CO	5.13		0
scg4	12/19/2014	10:44:00	5.02	0.02	CC66094/cg4	CO	5.13		0
scg4	12/19/2014	10:44:15	5.07	0.03	CC66094/cg4	CO	5.13		0
scg4	12/19/2014	10:44:30	5.07	0.02	CC66094/cg4	CO	5.13		0
o2zero1	12/19/2014	10:44:30	5.07	0.02	CC66094/cg4	CO	5.13		0
co2zero1	12/19/2014	10:44:30	5.07	0.02	CC66094/cg4	CO	5.13		0
cospan1	12/19/2014	10:43:30	5.07	0.09	CC66094/cg4	CO	5.13		0
scg8	12/19/2014	10:45:00	5.10	0.01	CC1076/cg8	O2	11.1	CO2	11.1
scg8	12/19/2014	10:45:15	5.09	0.00	CC1076/cg8	O2	11.1	CO2	11.1
scg8	12/19/2014	10:45:30	3.83	0.04	CC1076/cg8	O2	11.1	CO2	11.1
scg8	12/19/2014	10:45:45	1.09	0.29	CC1076/cg8	O2	11.1	CO2	11.1
scg8	12/19/2014	10:46:00	0.00	0.19	CC1076/cg8	O2	11.1	CO2	11.1
scg8	12/19/2014	10:46:15	0.00	0.01	CC1076/cg8	O2	11.1	CO2	11.1
scg8	12/19/2014	10:46:30	0.00	0.00	CC1076/cg8	O2	11.1	CO2	11.1
scg8	12/19/2014	10:46:45	0.00	0.00	CC1076/cg8	O2	11.1	CO2	11.1
scg8	12/19/2014	10:47:00	0.00	0.00	CC1076/cg8	O2	11.1	CO2	11.1
scg8	12/19/2014	10:47:15	0.00	1.33	CC1076/cg8	O2	11.1	CO2	11.1
o2span1	12/19/2014	10:46:45	0.00	0.00	CC1076/cg8	O2	11.1	CO2	11.1
co2span1	12/19/2014	10:47:00	0.00	0.00	CC1076/cg8	O2	11.1	CO2	11.1
cozero1	12/19/2014	10:47:15	0.00	1.33	CC1076/cg8	O2	11.1	CO2	11.1
thczero1	12/19/2014	10:46:45	0.00	0.00	CC1076/cg8	O2	11.1	CO2	11.1
scg11	12/19/2014	10:47:45	0.00	0.11	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	10:48:00	0.00	0.67	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	10:48:15	0.08	2.40	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	10:48:30	0.18	2.84	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	10:48:45	0.11	3.13	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	10:49:00	0.11	3.35	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	10:49:15	0.17	3.46	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	10:49:30	0.15	3.91	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	10:49:45	0.13	5.31	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	10:50:00	0.14	4.95	LL107680/cg11	THC	5.06		0

scg11	12/19/2014	10:50:15	0.17	4.94	LL107680/cg11	THC	5.06	0
scg11	12/19/2014	10:50:30	0.15	4.84	LL107680/cg11	THC	5.06	0
scg11	12/19/2014	10:50:45	0.14	5.07	LL107680/cg11	THC	5.06	0
scg11	12/19/2014	10:51:00	0.15	5.13	LL107680/cg11	THC	5.06	0
scg11	12/19/2014	10:51:15	0.15	5.09	LL107680/cg11	THC	5.06	0
scg11	12/19/2014	10:51:30	0.13	5.10	LL107680/cg11	THC	5.06	0
scg11	12/19/2014	10:51:45	0.14	4.95	LL107680/cg11	THC	5.06	0
scg11	12/19/2014	10:52:00	0.14	4.88	LL107680/cg11	THC	5.06	0
thcspan1	12/19/2014	10:51:15	0.15	5.09	LL107680/cg11	THC	5.06	0
run2	12/19/2014	11:05:00	9.19	0.23				
run2	12/19/2014	11:05:15	9.21	0.30				
run2	12/19/2014	11:05:30	9.23	0.30				
run2	12/19/2014	11:05:45	9.76	0.45				
run2	12/19/2014	11:06:00	9.14	2.42				
run2	12/19/2014	11:06:15	9.41	0.59				
run2	12/19/2014	11:06:30	9.29	0.49				
run2	12/19/2014	11:06:45	9.06	0.36				
run2	12/19/2014	11:07:00	8.71	0.43				
run2	12/19/2014	11:07:15	8.72	0.52				
run2	12/19/2014	11:07:30	9.00	0.55				
run2	12/19/2014	11:07:45	8.68	0.44				
run2	12/19/2014	11:08:00	7.85	0.36				
run2	12/19/2014	11:08:15	7.45	0.80				
run2	12/19/2014	11:08:30	7.55	0.45				
run2	12/19/2014	11:08:45	7.89	0.32				
run2	12/19/2014	11:09:00	7.76	0.08				
run2	12/19/2014	11:09:15	7.49	0.20				
run2	12/19/2014	11:09:30	7.37	0.20				
run2	12/19/2014	11:09:45	7.47	0.37				
run2	12/19/2014	11:10:00	7.55	0.29				
run2	12/19/2014	11:10:15	7.43	0.41				
run2	12/19/2014	11:10:30	7.47	0.58				
run2	12/19/2014	11:10:45	7.41	0.58				
run2	12/19/2014	11:11:00	7.64	0.84				
run2	12/19/2014	11:11:15	8.01	2.05				
run2	12/19/2014	11:11:30	8.22	0.35				
run2	12/19/2014	11:11:45	8.19	0.10				
run2	12/19/2014	11:12:00	8.11	0.10				
run2	12/19/2014	11:12:15	7.82	0.19				
run2	12/19/2014	11:12:30	7.42	0.56				
run2	12/19/2014	11:12:45	7.53	0.40				
run2	12/19/2014	11:13:00	7.77	0.19				
run2	12/19/2014	11:13:15	7.60	0.25				
run2	12/19/2014	11:13:30	7.30	0.17				
run2	12/19/2014	11:13:45	7.28	0.58				
run2	12/19/2014	11:14:00	7.33	0.58				
run2	12/19/2014	11:14:15	7.39	0.34				
run2	12/19/2014	11:14:30	7.36	0.08				
run2	12/19/2014	11:14:45	7.39	0.06				
run2	12/19/2014	11:15:00	7.41	0.17				
run2	12/19/2014	11:15:15	7.43	0.23				
run2	12/19/2014	11:15:30	7.63	0.35				
run2	12/19/2014	11:15:45	7.49	0.35				
run2	12/19/2014	11:16:00	7.34	2.15				
run2	12/19/2014	11:16:15	7.56	0.08				
run2	12/19/2014	11:16:30	7.65	0.21				
run2	12/19/2014	11:16:45	7.35	0.40				
run2	12/19/2014	11:17:00	7.23	0.39				
run2	12/19/2014	11:17:15	7.06	0.32				

run2	12/19/2014	11:17:30	6.76	0.41
run2	12/19/2014	11:18:00	6.74	0.42
run2	12/19/2014	11:18:15	6.83	0.76
run2	12/19/2014	11:18:30	7.14	0.51
run2	12/19/2014	11:18:45	7.22	0.12
run2	12/19/2014	11:19:00	6.91	0.03
run2	12/19/2014	11:19:15	6.05	0.16
run2	12/19/2014	11:19:30	5.76	0.27
run2	12/19/2014	11:19:45	5.64	0.08
run2	12/19/2014	11:20:00	5.68	0.20
run2	12/19/2014	11:20:15	5.74	0.24
run2	12/19/2014	11:20:30	5.85	0.02
run2	12/19/2014	11:20:45	6.18	0.20
run2	12/19/2014	11:21:00	6.05	0.33
run2	12/19/2014	11:21:15	5.85	0.61
run2	12/19/2014	11:21:30	5.79	0.65
run2	12/19/2014	11:21:45	5.61	0.65
run2	12/19/2014	11:22:00	5.71	1.78
run2	12/19/2014	11:22:15	5.82	2.82
run2	12/19/2014	11:22:30	5.98	1.82
run2	12/19/2014	11:22:45	5.99	1.76
run2	12/19/2014	11:23:00	6.06	1.47
run2	12/19/2014	11:23:15	6.11	1.22
run2	12/19/2014	11:23:30	6.08	0.99
run2	12/19/2014	11:23:45	6.25	0.78
run2	12/19/2014	11:24:00	6.56	0.79
run2	12/19/2014	11:24:15	6.18	1.00
run2	12/19/2014	11:24:30	5.85	1.00
run2	12/19/2014	11:24:45	5.81	0.81
run2	12/19/2014	11:25:00	5.89	0.67
run2	12/19/2014	11:25:15	5.79	0.66
run2	12/19/2014	11:25:30	5.73	0.53
run2	12/19/2014	11:25:45	5.83	0.64
run2	12/19/2014	11:26:00	5.88	0.55
run2	12/19/2014	11:26:15	5.97	0.42
run2	12/19/2014	11:26:30	5.97	0.52
run2	12/19/2014	11:26:45	6.02	0.81
run2	12/19/2014	11:27:00	5.91	0.64
run2	12/19/2014	11:27:15	5.67	0.71
run2	12/19/2014	11:27:30	5.95	0.67
run2	12/19/2014	11:27:45	6.12	0.67
run2	12/19/2014	11:28:00	6.15	1.33
run2	12/19/2014	11:28:15	6.62	2.43
run2	12/19/2014	11:28:30	6.78	1.49
run2	12/19/2014	11:28:45	6.30	1.28
run2	12/19/2014	11:29:00	6.49	1.43
run2	12/19/2014	11:29:15	6.74	1.48
run2	12/19/2014	11:29:30	6.57	1.56
run2	12/19/2014	11:29:45	6.80	1.68
run2	12/19/2014	11:30:00	6.66	1.75
run2	12/19/2014	11:30:15	6.75	1.97
run2	12/19/2014	11:30:30	6.45	1.73
run2	12/19/2014	11:30:45	6.13	1.44
run2	12/19/2014	11:31:00	6.27	1.59
run2	12/19/2014	11:31:15	6.30	1.44
run2	12/19/2014	11:31:30	6.49	1.52
run2	12/19/2014	11:31:45	6.76	1.29
run2	12/19/2014	11:32:00	6.72	1.00
run2	12/19/2014	11:32:15	6.63	0.96

run2	12/19/2014	11:32:30	6.70	0.75
run2	12/19/2014	11:32:45	6.89	0.78
run2	12/19/2014	11:33:00	6.98	0.98
run2	12/19/2014	11:33:15	6.65	0.84
run2	12/19/2014	11:33:30	6.46	0.62
run2	12/19/2014	11:33:45	6.67	0.56
run2	12/19/2014	11:34:00	6.76	0.36
run2	12/19/2014	11:34:15	6.54	0.65
run2	12/19/2014	11:34:30	6.20	1.17
run2	12/19/2014	11:34:45	6.18	1.04
run2	12/19/2014	11:35:00	6.37	0.74
run2	12/19/2014	11:35:15	6.65	0.95
run2	12/19/2014	11:35:30	6.73	0.95
run2	12/19/2014	11:35:45	6.60	1.69
run2	12/19/2014	11:36:15	6.87	1.91
run2	12/19/2014	11:36:30	6.61	0.77
run2	12/19/2014	11:36:45	6.13	0.77
run2	12/19/2014	11:37:00	6.14	0.65
run2	12/19/2014	11:37:15	6.51	0.91
run2	12/19/2014	11:37:30	6.84	0.69
run2	12/19/2014	11:37:45	6.76	0.71
run2	12/19/2014	11:38:00	6.41	0.99
run2	12/19/2014	11:38:15	6.75	0.73
run2	12/19/2014	11:38:30	7.18	0.25
run2	12/19/2014	11:38:45	6.48	0.34
run2	12/19/2014	11:39:00	6.06	0.37
run2	12/19/2014	11:39:15	6.10	0.60
run2	12/19/2014	11:39:30	5.91	0.78
run2	12/19/2014	11:39:45	5.74	0.65
run2	12/19/2014	11:40:00	5.80	0.72
run2	12/19/2014	11:40:15	6.14	0.73
run2	12/19/2014	11:40:30	6.60	0.47
run2	12/19/2014	11:40:45	6.58	0.51
run2	12/19/2014	11:41:00	6.39	0.76
run2	12/19/2014	11:41:15	6.70	0.87
run2	12/19/2014	11:41:30	7.03	0.69
run2	12/19/2014	11:41:45	6.83	0.63
run2	12/19/2014	11:42:00	6.78	0.38
run2	12/19/2014	11:42:15	6.72	0.40
run2	12/19/2014	11:42:30	6.67	0.73
run2	12/19/2014	11:42:45	6.76	0.73
run2	12/19/2014	11:43:00	6.42	0.45
run2	12/19/2014	11:43:15	6.34	0.49
run2	12/19/2014	11:43:30	6.44	0.62
run2	12/19/2014	11:43:45	6.48	0.50
run2	12/19/2014	11:44:00	6.51	0.50
run2	12/19/2014	11:44:15	6.69	2.13
run2	12/19/2014	11:44:30	6.78	1.44
run2	12/19/2014	11:44:45	7.02	0.73
run2	12/19/2014	11:45:00	6.91	0.54
run2	12/19/2014	11:45:15	7.15	0.39
run2	12/19/2014	11:45:30	7.50	0.60
run2	12/19/2014	11:45:45	7.88	0.34
run2	12/19/2014	11:46:00	8.13	0.67
run2	12/19/2014	11:46:15	8.17	0.65
run2	12/19/2014	11:46:30	8.18	0.69
run2	12/19/2014	11:46:45	7.76	0.39
run2	12/19/2014	11:47:00	7.46	0.57
run2	12/19/2014	11:47:15	7.17	0.56

run2	12/19/2014	11:47:30	7.10	0.72
run2	12/19/2014	11:47:45	7.21	0.65
run2	12/19/2014	11:48:00	7.26	0.32
run2	12/19/2014	11:48:15	7.12	0.23
run2	12/19/2014	11:48:30	6.88	0.30
run2	12/19/2014	11:48:45	7.43	0.53
run2	12/19/2014	11:49:00	8.27	0.69
run2	12/19/2014	11:49:15	8.39	0.70
run2	12/19/2014	11:49:30	8.28	0.68
run2	12/19/2014	11:49:45	8.03	0.55
run2	12/19/2014	11:50:00	7.74	0.87
run2	12/19/2014	11:50:15	7.68	0.79
run2	12/19/2014	11:50:30	7.45	0.73
run2	12/19/2014	11:50:45	7.21	1.06
run2	12/19/2014	11:51:00	6.41	0.82
run2	12/19/2014	11:51:15	6.13	0.75
run2	12/19/2014	11:51:30	6.39	0.83
run2	12/19/2014	11:51:45	6.75	1.11
run2	12/19/2014	11:52:00	7.08	0.97
run2	12/19/2014	11:52:15	7.51	0.69
run2	12/19/2014	11:52:30	7.77	0.35
run2	12/19/2014	11:52:45	7.89	0.60
run2	12/19/2014	11:53:00	7.68	0.52
run2	12/19/2014	11:53:15	7.54	0.53
run2	12/19/2014	11:53:30	7.93	0.59
run2	12/19/2014	11:53:45	8.23	0.55
run2	12/19/2014	11:54:15	8.04	0.55
run2	12/19/2014	11:54:30	7.79	3.04
run2	12/19/2014	11:54:45	7.43	0.75
run2	12/19/2014	11:55:00	7.61	0.71
run2	12/19/2014	11:55:15	8.12	0.72
run2	12/19/2014	11:55:30	8.56	0.56
run2	12/19/2014	11:55:45	8.80	0.55
run2	12/19/2014	11:56:00	8.49	0.89
run2	12/19/2014	11:56:15	8.30	0.64
run2	12/19/2014	11:56:30	8.42	0.51
run2	12/19/2014	11:56:45	8.19	0.67
run2	12/19/2014	11:57:00	7.97	0.53
run2	12/19/2014	11:57:15	7.97	0.69
run2	12/19/2014	11:57:30	8.00	0.73
run2	12/19/2014	11:57:45	8.20	0.63
run2	12/19/2014	11:58:00	7.99	0.60
run2	12/19/2014	11:58:15	7.78	0.58
run2	12/19/2014	11:58:30	7.42	0.43
run2	12/19/2014	11:58:45	7.18	0.39
run2	12/19/2014	11:59:00	7.46	0.55
run2	12/19/2014	11:59:15	7.67	0.38
run2	12/19/2014	11:59:30	7.57	0.37
run2	12/19/2014	11:59:45	7.85	0.39
run2	12/19/2014	12:00:00	7.93	0.35
run2	12/19/2014	12:00:15	7.97	0.55
run2	12/19/2014	12:00:30	8.09	1.02
run2	12/19/2014	12:00:45	8.02	0.72
run2	12/19/2014	12:01:00	7.58	0.68
run2	12/19/2014	12:01:15	7.35	0.75
run2	12/19/2014	12:01:30	7.07	0.70
run2	12/19/2014	12:01:45	6.94	0.69
run2	12/19/2014	12:02:00	6.80	0.65
run2	12/19/2014	12:02:15	6.99	0.28

run2	12/19/2014	12:02:30	7.36	0.81
run2	12/19/2014	12:02:45	7.30	1.12
run2	12/19/2014	12:03:00	7.37	0.88
run2	12/19/2014	12:03:15	7.52	0.60
run2	12/19/2014	12:03:30	7.55	0.57
run2	12/19/2014	12:03:45	7.31	0.52
run2	12/19/2014	12:04:00	7.32	0.34
run2	12/19/2014	12:04:15	7.22	0.48
run2	12/19/2014	12:04:30	6.66	0.43
run2	12/19/2014	12:04:45	5.96	0.48
run2	12/19/2014	12:05:00	6.00	0.48
run2	12/19/2014	12:05:15	6.10	2.60
run2	12/19/2014	12:05:30	5.67	0.71
run2	12/19/2014	12:05:45	5.49	0.40
run2	12/19/2014	12:06:00	6.09	0.76
run2	12/19/2014	12:06:15	6.57	0.72
run2	12/19/2014	12:06:30	6.60	0.88
run2	12/19/2014	12:06:45	7.12	0.77
run2	12/19/2014	12:07:00	6.81	0.65
run2	12/19/2014	12:07:15	6.72	0.55
run2	12/19/2014	12:07:30	7.27	0.64
run2	12/19/2014	12:07:45	7.63	0.81
run2	12/19/2014	12:08:00	7.19	1.04
run2	12/19/2014	12:08:15	7.27	0.85
run2	12/19/2014	12:08:30	7.85	0.68
run2	12/19/2014	12:08:45	7.89	0.57
run2	12/19/2014	12:09:00	7.74	0.44
run2	12/19/2014	12:09:15	7.97	0.65
run2	12/19/2014	12:09:30	7.90	0.67
run2	12/19/2014	12:09:45	7.64	0.58
run2	12/19/2014	12:10:00	7.30	0.88
run2	12/19/2014	12:10:15	7.40	1.00
run2	12/19/2014	12:10:30	7.92	0.69
run2	12/19/2014	12:10:45	8.14	0.55
run2	12/19/2014	12:11:00	7.92	0.84
run2	12/19/2014	12:11:15	7.83	1.30
run2	12/19/2014	12:11:30	7.50	1.19
run2	12/19/2014	12:11:45	7.39	1.05
run2	12/19/2014	12:12:00	7.71	1.03
run2	12/19/2014	12:12:30	8.01	0.64
run2	12/19/2014	12:12:45	7.65	0.89
run2	12/19/2014	12:13:00	7.78	1.08
run2	12/19/2014	12:13:15	7.75	1.26
run2	12/19/2014	12:13:30	7.66	1.16
run2	12/19/2014	12:13:45	7.74	0.90
run2	12/19/2014	12:14:00	8.03	0.89
run2	12/19/2014	12:14:15	7.61	0.70
run2	12/19/2014	12:14:30	7.33	0.96
run2	12/19/2014	12:14:45	7.73	0.96
run2	12/19/2014	12:15:00	7.66	0.83
run2	12/19/2014	12:15:15	6.98	0.56
run2	12/19/2014	12:15:30	6.21	0.58
run2	12/19/2014	12:15:45	5.70	0.55
run2	12/19/2014	12:16:00	5.79	0.82
run2	12/19/2014	12:16:15	5.90	0.66
run2	12/19/2014	12:16:30	6.05	0.48
run2	12/19/2014	12:16:45	6.33	0.49
run2	12/19/2014	12:17:00	6.86	0.57
run2	12/19/2014	12:17:15	6.55	0.61

	run2	12/19/2014	12:17:30	6.11	0.58					
	run2	12/19/2014	12:17:45	5.67	0.53					
	run2	12/19/2014	12:18:00	5.61	0.74					
	run2	12/19/2014	12:18:15	6.06	0.66					
	run2	12/19/2014	12:18:30	6.08	1.10					
cl	averun2	12/19/2014	11:14:30	6.94	0.76	63				
Y	scg4	12/19/2014	12:19:00	7.07	0.79	CC66094/cg4	CO	5.13		0
	scg4	12/19/2014	12:19:15	7.19	1.13	CC66094/cg4	CO	5.13		0
	scg4	12/19/2014	12:19:30	6.04	0.64	CC66094/cg4	CO	5.13		0
	scg4	12/19/2014	12:19:45	5.10	0.65	CC66094/cg4	CO	5.13		0
	scg4	12/19/2014	12:20:00	4.94	0.48	CC66094/cg4	CO	5.13		0
	scg4	12/19/2014	12:20:15	4.93	0.27	CC66094/cg4	CO	5.13		0
	scg4	12/19/2014	12:20:30	5.08	0.31	CC66094/cg4	CO	5.13		0
	scg4	12/19/2014	12:20:45	5.13	0.32	CC66094/cg4	CO	5.13		0
	o2zero1	12/19/2014	12:20:30	5.08	0.31	CC66094/cg4	CO	5.13		0
	co2zero1	12/19/2014	12:20:30	5.08	0.31	CC66094/cg4	CO	5.13		0
	cospan1	12/19/2014	12:20:45	5.13	0.32	CC66094/cg4	CO	5.13		0
	scg8	12/19/2014	12:21:15	5.13	0.39	CC1076/cg8	O2	11.1	CO2	11.1
	scg8	12/19/2014	12:21:30	5.11	0.43	CC1076/cg8	O2	11.1	CO2	11.1
	scg8	12/19/2014	12:21:45	3.52	0.52	CC1076/cg8	O2	11.1	CO2	11.1
	scg8	12/19/2014	12:22:00	0.77	0.40	CC1076/cg8	O2	11.1	CO2	11.1
	scg8	12/19/2014	12:22:15	0.01	0.34	CC1076/cg8	O2	11.1	CO2	11.1
	scg8	12/19/2014	12:22:30	0.00	0.51	CC1076/cg8	O2	11.1	CO2	11.1
	scg8	12/19/2014	12:22:45	0.00	0.17	CC1076/cg8	O2	11.1	CO2	11.1
	scg8	12/19/2014	12:23:00	0.00	0.23	CC1076/cg8	O2	11.1	CO2	11.1
	scg8	12/19/2014	12:23:15	0.00	0.54	CC1076/cg8	O2	11.1	CO2	11.1
	scg8	12/19/2014	12:23:30	0.00	0.40	CC1076/cg8	O2	11.1	CO2	11.1
	scg8	12/19/2014	12:23:45	0.00	0.08	CC1076/cg8	O2	11.1	CO2	11.1
	scg8	12/19/2014	12:24:00	0.00	0.17	CC1076/cg8	O2	11.1	CO2	11.1
	scg8	12/19/2014	12:24:15	0.00	0.05	CC1076/cg8	O2	11.1	CO2	11.1
	scg8	12/19/2014	12:24:30	0.00	0.06	CC1076/cg8	O2	11.1	CO2	11.1
	o2span1	12/19/2014	12:23:15	0.00	0.54	CC1076/cg8	O2	11.1	CO2	11.1
	co2span1	12/19/2014	12:23:15	0.00	0.54	CC1076/cg8	O2	11.1	CO2	11.1
	cozero1	12/19/2014	12:23:15	0.00	0.54	CC1076/cg8	O2	11.1	CO2	11.1
	thczero1	12/19/2014	12:24:15	0.00	0.05	CC1076/cg8	O2	11.1	CO2	11.1
	scg11	12/19/2014	12:25:00	0.00	0.30	LL107680/cg11	THC	5.06		0
	scg11	12/19/2014	12:25:15	0.00	1.31	LL107680/cg11	THC	5.06		0
	scg11	12/19/2014	12:25:30	0.03	2.98	LL107680/cg11	THC	5.06		0
	scg11	12/19/2014	12:25:45	0.08	3.84	LL107680/cg11	THC	5.06		0
	scg11	12/19/2014	12:26:00	0.05	4.53	LL107680/cg11	THC	5.06		0
	scg11	12/19/2014	12:26:15	0.04	4.18	LL107680/cg11	THC	5.06		0
	scg11	12/19/2014	12:26:45	0.09	4.45	LL107680/cg11	THC	5.06		0
	scg11	12/19/2014	12:27:00	0.06	5.02	LL107680/cg11	THC	5.06		0
	scg11	12/19/2014	12:27:15	0.04	5.20	LL107680/cg11	THC	5.06		0
	scg11	12/19/2014	12:27:30	0.03	5.51	LL107680/cg11	THC	5.06		0
	scg11	12/19/2014	12:27:45	0.03	5.22	LL107680/cg11	THC	5.06		0
	scg11	12/19/2014	12:28:00	0.08	5.47	LL107680/cg11	THC	5.06		0
	scg11	12/19/2014	12:28:15	0.06	5.39	LL107680/cg11	THC	5.06		0
	scg11	12/19/2014	12:28:30	0.05	5.28	LL107680/cg11	THC	5.06		0
	scg11	12/19/2014	12:28:45	0.06	5.02	LL107680/cg11	THC	5.06		0
	scg11	12/19/2014	12:29:00	0.07	4.93	LL107680/cg11	THC	5.06		0
	thcspan1	12/19/2014	12:28:45	0.06	5.02	LL107680/cg11	THC	5.06		0
	run3	12/19/2014	12:35:00	7.39	0.65					
	run3	12/19/2014	12:35:15	7.49	0.27					
	run3	12/19/2014	12:35:30	7.61	0.43					
	run3	12/19/2014	12:35:45	7.37	0.08					
	run3	12/19/2014	12:36:00	6.82	0.50					
	run3	12/19/2014	12:36:15	6.52	0.41					
	run3	12/19/2014	12:36:30	6.92	0.41					

run3	12/19/2014	12:36:45	6.79	0.49
run3	12/19/2014	12:37:00	6.68	0.51
run3	12/19/2014	12:37:15	6.93	0.47
run3	12/19/2014	12:37:30	7.61	0.65
run3	12/19/2014	12:37:45	8.05	0.93
run3	12/19/2014	12:38:00	7.68	0.61
run3	12/19/2014	12:38:15	7.86	0.57
run3	12/19/2014	12:38:30	8.38	0.51
run3	12/19/2014	12:38:45	8.76	0.96
run3	12/19/2014	12:39:00	8.55	0.38
run3	12/19/2014	12:39:15	7.95	0.10
run3	12/19/2014	12:39:30	7.71	0.45
run3	12/19/2014	12:39:45	7.54	0.61
run3	12/19/2014	12:40:00	7.34	0.63
run3	12/19/2014	12:40:15	6.98	0.56
run3	12/19/2014	12:40:30	7.11	0.24
run3	12/19/2014	12:40:45	7.33	0.19
run3	12/19/2014	12:41:00	7.33	0.18
run3	12/19/2014	12:41:15	7.37	0.17
run3	12/19/2014	12:41:30	7.65	0.42
run3	12/19/2014	12:41:45	7.72	0.56
run3	12/19/2014	12:42:00	7.27	0.69
run3	12/19/2014	12:42:30	6.46	0.74
run3	12/19/2014	12:42:45	6.31	0.88
run3	12/19/2014	12:43:00	6.33	0.76
run3	12/19/2014	12:43:15	6.24	0.71
run3	12/19/2014	12:43:30	6.96	0.79
run3	12/19/2014	12:43:45	7.77	0.45
run3	12/19/2014	12:44:00	7.70	0.20
run3	12/19/2014	12:44:15	7.27	0.11
run3	12/19/2014	12:44:30	7.49	0.43
run3	12/19/2014	12:44:45	7.68	0.68
run3	12/19/2014	12:45:00	8.00	0.50
run3	12/19/2014	12:45:15	8.08	0.32
run3	12/19/2014	12:45:30	6.91	0.48
run3	12/19/2014	12:45:45	6.55	0.41
run3	12/19/2014	12:46:00	6.04	0.57
run3	12/19/2014	12:46:15	6.19	0.17
run3	12/19/2014	12:46:30	6.62	0.25
run3	12/19/2014	12:46:45	6.47	0.79
run3	12/19/2014	12:47:00	6.83	0.57
run3	12/19/2014	12:47:15	6.26	0.64
run3	12/19/2014	12:47:30	5.66	0.70
run3	12/19/2014	12:47:45	6.32	0.92
run3	12/19/2014	12:48:00	7.11	0.44
run3	12/19/2014	12:48:15	7.15	0.71
run3	12/19/2014	12:48:30	7.66	1.16
run3	12/19/2014	12:48:45	7.87	0.91
run3	12/19/2014	12:49:00	7.59	0.96
run3	12/19/2014	12:49:15	6.97	0.82
run3	12/19/2014	12:49:30	7.04	0.98
run3	12/19/2014	12:49:45	7.22	0.54
run3	12/19/2014	12:50:00	6.71	0.48
run3	12/19/2014	12:50:15	5.82	0.48
run3	12/19/2014	12:50:30	5.19	0.72
run3	12/19/2014	12:50:45	4.73	0.70
run3	12/19/2014	12:51:00	4.83	0.50
run3	12/19/2014	12:51:15	5.09	0.41
run3	12/19/2014	12:51:30	5.59	0.36

run3	12/19/2014	12:51:45	5.91	0.26
run3	12/19/2014	12:52:00	6.49	0.36
run3	12/19/2014	12:52:15	6.77	0.33
run3	12/19/2014	12:52:30	6.68	0.39
run3	12/19/2014	12:52:45	6.59	0.54
run3	12/19/2014	12:53:00	6.33	0.45
run3	12/19/2014	12:53:15	6.67	0.61
run3	12/19/2014	12:53:30	7.00	0.26
run3	12/19/2014	12:53:45	7.48	0.39
run3	12/19/2014	12:54:00	7.67	0.30
run3	12/19/2014	12:54:15	7.45	0.90
run3	12/19/2014	12:54:30	7.07	0.70
run3	12/19/2014	12:54:45	6.88	0.75
run3	12/19/2014	12:55:00	6.72	0.84
run3	12/19/2014	12:55:15	6.32	0.48
run3	12/19/2014	12:55:30	5.62	0.54
run3	12/19/2014	12:55:45	5.63	0.74
run3	12/19/2014	12:56:00	6.45	0.85
run3	12/19/2014	12:56:15	7.06	0.83
run3	12/19/2014	12:56:30	6.78	1.10
run3	12/19/2014	12:56:45	6.62	0.77
run3	12/19/2014	12:57:00	6.10	0.83
run3	12/19/2014	12:57:15	5.85	0.70
run3	12/19/2014	12:57:30	5.97	0.60
run3	12/19/2014	12:57:45	6.31	0.91
run3	12/19/2014	12:58:00	6.75	1.03
run3	12/19/2014	12:58:15	6.78	0.80
run3	12/19/2014	12:58:30	6.78	0.58
run3	12/19/2014	12:58:45	6.82	0.36
run3	12/19/2014	12:59:00	6.83	0.55
run3	12/19/2014	12:59:15	7.39	0.87
run3	12/19/2014	12:59:30	7.64	1.05
run3	12/19/2014	12:59:45	7.42	1.07
run3	12/19/2014	13:00:00	7.14	1.01
run3	12/19/2014	13:00:30	7.30	0.62
run3	12/19/2014	13:00:45	7.31	0.97
run3	12/19/2014	13:01:00	7.12	0.92
run3	12/19/2014	13:01:15	7.05	1.05
run3	12/19/2014	13:01:30	7.67	1.26
run3	12/19/2014	13:01:45	8.33	0.91
run3	12/19/2014	13:02:00	8.08	0.79
run3	12/19/2014	13:02:15	8.02	0.91
run3	12/19/2014	13:02:30	8.00	0.76
run3	12/19/2014	13:02:45	8.18	1.01
run3	12/19/2014	13:03:00	8.93	0.83
run3	12/19/2014	13:03:15	8.91	0.47
run3	12/19/2014	13:03:30	8.25	0.95
run3	12/19/2014	13:03:45	7.23	0.87
run3	12/19/2014	13:04:00	6.25	0.84
run3	12/19/2014	13:04:15	6.21	0.90
run3	12/19/2014	13:04:30	7.08	1.17
run3	12/19/2014	13:04:45	7.29	1.17
run3	12/19/2014	13:05:00	7.53	1.00
run3	12/19/2014	13:05:15	7.74	0.98
run3	12/19/2014	13:05:30	7.39	1.27
run3	12/19/2014	13:05:45	7.13	1.07
run3	12/19/2014	13:06:00	7.21	1.05
run3	12/19/2014	13:06:15	7.59	0.93
run3	12/19/2014	13:06:30	7.89	0.66

run3	12/19/2014	13:06:45	7.64	0.52
run3	12/19/2014	13:07:00	7.97	0.74
run3	12/19/2014	13:07:15	8.52	0.80
run3	12/19/2014	13:07:30	8.73	0.80
run3	12/19/2014	13:07:45	8.49	0.74
run3	12/19/2014	13:08:00	8.21	0.13
run3	12/19/2014	13:08:15	7.89	0.38
run3	12/19/2014	13:08:30	7.63	0.46
run3	12/19/2014	13:08:45	7.42	0.48
run3	12/19/2014	13:09:00	6.55	0.34
run3	12/19/2014	13:09:15	5.13	0.36
run3	12/19/2014	13:09:30	4.41	0.42
run3	12/19/2014	13:09:45	4.42	0.16
run3	12/19/2014	13:10:00	5.37	0.72
run3	12/19/2014	13:10:15	5.61	0.69
run3	12/19/2014	13:10:30	4.54	0.32
run3	12/19/2014	13:10:45	3.94	0.29
run3	12/19/2014	13:11:00	3.88	0.09
run3	12/19/2014	13:11:15	4.67	0.41
run3	12/19/2014	13:11:30	5.88	0.39
run3	12/19/2014	13:11:45	6.82	0.80
run3	12/19/2014	13:12:00	7.11	0.96
run3	12/19/2014	13:12:15	7.24	0.51
run3	12/19/2014	13:12:30	7.48	0.28
run3	12/19/2014	13:12:45	7.52	0.34
run3	12/19/2014	13:13:00	7.43	0.94
run3	12/19/2014	13:13:15	6.68	0.83
run3	12/19/2014	13:13:30	6.35	0.89
run3	12/19/2014	13:13:45	5.72	0.51
run3	12/19/2014	13:14:00	4.67	0.56
run3	12/19/2014	13:14:15	4.62	0.78
run3	12/19/2014	13:14:30	4.67	0.48
run3	12/19/2014	13:14:45	4.88	0.26
run3	12/19/2014	13:15:00	5.55	0.34
run3	12/19/2014	13:15:15	5.73	0.51
run3	12/19/2014	13:15:30	5.53	0.29
run3	12/19/2014	13:15:45	5.66	0.35
run3	12/19/2014	13:16:00	6.11	0.36
run3	12/19/2014	13:16:15	6.67	0.80
run3	12/19/2014	13:16:30	7.11	0.83
run3	12/19/2014	13:16:45	7.04	0.80
run3	12/19/2014	13:17:00	6.84	1.01
run3	12/19/2014	13:17:15	6.85	0.59
run3	12/19/2014	13:17:30	6.76	0.57
run3	12/19/2014	13:17:45	6.52	0.27
run3	12/19/2014	13:18:00	7.09	0.38
run3	12/19/2014	13:18:15	7.24	0.44
run3	12/19/2014	13:18:45	7.32	0.60
run3	12/19/2014	13:19:00	7.65	0.88
run3	12/19/2014	13:19:15	8.11	0.93
run3	12/19/2014	13:19:30	8.19	0.53
run3	12/19/2014	13:19:45	7.81	0.64
run3	12/19/2014	13:20:00	7.25	0.49
run3	12/19/2014	13:20:15	6.83	0.90
run3	12/19/2014	13:20:30	6.43	0.70
run3	12/19/2014	13:20:45	6.20	0.76
run3	12/19/2014	13:21:00	6.12	0.57
run3	12/19/2014	13:21:15	5.88	0.51
run3	12/19/2014	13:21:30	6.23	0.88

run3	12/19/2014	13:21:45	6.56	0.85
run3	12/19/2014	13:22:00	6.15	0.87
run3	12/19/2014	13:22:15	6.08	0.79
run3	12/19/2014	13:22:30	6.50	1.06
run3	12/19/2014	13:22:45	6.73	1.17
run3	12/19/2014	13:23:00	7.01	1.01
run3	12/19/2014	13:23:15	7.30	0.61
run3	12/19/2014	13:23:30	7.47	0.80
run3	12/19/2014	13:23:45	7.55	0.76
run3	12/19/2014	13:24:00	7.85	0.67
run3	12/19/2014	13:24:15	8.10	0.56
run3	12/19/2014	13:24:30	8.05	1.06
run3	12/19/2014	13:24:45	8.04	0.92
run3	12/19/2014	13:25:00	8.19	0.78
run3	12/19/2014	13:25:15	7.68	0.67
run3	12/19/2014	13:25:30	7.07	0.58
run3	12/19/2014	13:25:45	6.60	0.72
run3	12/19/2014	13:26:00	6.57	1.00
run3	12/19/2014	13:26:15	7.04	0.93
run3	12/19/2014	13:26:30	7.08	0.77
run3	12/19/2014	13:26:45	6.75	0.87
run3	12/19/2014	13:27:00	6.61	0.67
run3	12/19/2014	13:27:15	7.21	1.02
run3	12/19/2014	13:27:30	7.45	0.84
run3	12/19/2014	13:27:45	6.89	0.33
run3	12/19/2014	13:28:00	6.10	0.84
run3	12/19/2014	13:28:15	5.75	0.73
run3	12/19/2014	13:28:30	5.81	0.73
run3	12/19/2014	13:28:45	5.66	0.88
run3	12/19/2014	13:29:00	5.50	0.55
run3	12/19/2014	13:29:15	5.68	0.39
run3	12/19/2014	13:29:30	5.93	0.67
run3	12/19/2014	13:29:45	6.01	1.13
run3	12/19/2014	13:30:00	5.60	1.15
run3	12/19/2014	13:30:15	5.89	0.97
run3	12/19/2014	13:30:30	6.19	0.82
run3	12/19/2014	13:30:45	5.99	1.23
run3	12/19/2014	13:31:00	6.02	1.19
run3	12/19/2014	13:31:15	5.91	0.90
run3	12/19/2014	13:31:30	5.63	1.01
run3	12/19/2014	13:31:45	5.83	0.93
run3	12/19/2014	13:32:00	6.06	0.76
run3	12/19/2014	13:32:15	5.68	0.91
run3	12/19/2014	13:32:30	5.41	0.73
run3	12/19/2014	13:32:45	4.85	0.76
run3	12/19/2014	13:33:00	4.72	1.15
run3	12/19/2014	13:33:15	5.29	0.87
run3	12/19/2014	13:33:30	5.78	0.65
run3	12/19/2014	13:33:45	5.90	0.75
run3	12/19/2014	13:34:00	5.98	0.66
run3	12/19/2014	13:34:15	6.20	0.76
run3	12/19/2014	13:34:30	6.27	0.94
run3	12/19/2014	13:34:45	6.20	1.30
run3	12/19/2014	13:35:00	6.25	1.27
run3	12/19/2014	13:35:15	6.84	1.20
run3	12/19/2014	13:35:30	7.44	0.60
run3	12/19/2014	13:35:45	7.71	0.17
run3	12/19/2014	13:36:00	7.88	0.52
run3	12/19/2014	13:36:15	7.78	0.55

run3	12/19/2014	13:36:45	7.66	0.56					
run3	12/19/2014	13:37:00	7.58	0.62					
run3	12/19/2014	13:37:15	7.39	0.32					
run3	12/19/2014	13:37:30	6.96	0.44					
run3	12/19/2014	13:37:45	7.07	0.64					
run3	12/19/2014	13:38:00	6.98	0.53					
run3	12/19/2014	13:38:15	6.97	0.77					
run3	12/19/2014	13:38:30	7.25	0.94					
run3	12/19/2014	13:38:45	7.41	0.86					
averun3	12/19/2014	12:35:00	6.80	0.67	63				
scg4	12/19/2014	13:39:15	7.90	0.76	CC66094/cg4	CO	5.13		0
scg4	12/19/2014	13:39:30	7.93	1.41	CC66094/cg4	CO	5.13		0
scg4	12/19/2014	13:39:45	6.79	1.36	CC66094/cg4	CO	5.13		0
scg4	12/19/2014	13:40:00	5.41	0.25	CC66094/cg4	CO	5.13		0
scg4	12/19/2014	13:40:15	5.12	0.10	CC66094/cg4	CO	5.13		0
scg4	12/19/2014	13:40:30	5.08	0.09	CC66094/cg4	CO	5.13		0
scg4	12/19/2014	13:40:45	5.08	0.60	CC66094/cg4	CO	5.13		0
scg4	12/19/2014	13:41:00	5.14	0.59	CC66094/cg4	CO	5.13		0
scg4	12/19/2014	13:41:15	5.10	0.33	CC66094/cg4	CO	5.13		0
o2zero1	12/19/2014	13:41:00	5.14	0.59	CC66094/cg4	CO	5.13		0
co2zero1	12/19/2014	13:41:00	5.14	0.59	CC66094/cg4	CO	5.13		0
cospan1	12/19/2014	13:41:00	5.14	0.59	CC66094/cg4	CO	5.13		0
scg8	12/19/2014	13:41:30	5.12	0.28	CC1076/cg8	O2	11.1	CO2	11.1
scg8	12/19/2014	13:41:45	5.08	0.58	CC1076/cg8	O2	11.1	CO2	11.1
scg8	12/19/2014	13:42:00	3.47	0.09	CC1076/cg8	O2	11.1	CO2	11.1
scg8	12/19/2014	13:42:15	0.79	0.08	CC1076/cg8	O2	11.1	CO2	11.1
scg8	12/19/2014	13:42:45	0.00	0.35	CC1076/cg8	O2	11.1	CO2	11.1
scg8	12/19/2014	13:43:00	0.00	0.42	CC1076/cg8	O2	11.1	CO2	11.1
scg8	12/19/2014	13:43:15	0.00	0.08	CC1076/cg8	O2	11.1	CO2	11.1
scg8	12/19/2014	13:43:30	0.00	0.03	CC1076/cg8	O2	11.1	CO2	11.1
scg8	12/19/2014	13:43:45	0.00	0.21	CC1076/cg8	O2	11.1	CO2	11.1
o2span1	12/19/2014	13:43:15	0.00	0.08	CC1076/cg8	O2	11.1	CO2	11.1
co2span1	12/19/2014	13:43:15	0.00	0.08	CC1076/cg8	O2	11.1	CO2	11.1
cozero1	12/19/2014	13:43:45	0.00	0.21	CC1076/cg8	O2	11.1	CO2	11.1
thczero1	12/19/2014	13:43:30	0.00	0.03	CC1076/cg8	O2	11.1	CO2	11.1
scg11	12/19/2014	13:44:00	0.00	0.10	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	13:44:15	0.00	1.33	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	13:44:30	0.00	3.29	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	13:44:45	0.00	4.20	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	13:45:00	0.01	4.92	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	13:45:15	0.04	5.74	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	13:45:30	0.02	4.97	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	13:45:45	0.05	4.89	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	13:46:00	0.01	5.09	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	13:46:30	0.02	5.04	LL107680/cg11	THC	5.06		0
thcspan1	12/19/2014	13:46:00	0.01	5.09	LL107680/cg11	THC	5.06		0
run4	12/19/2014	14:20:00	3.35	0.44					
run4	12/19/2014	14:20:15	3.36	0.70					
run4	12/19/2014	14:20:30	3.36	0.45					
run4	12/19/2014	14:20:45	3.48	0.12					
run4	12/19/2014	14:21:00	3.39	0.41					
run4	12/19/2014	14:21:15	3.45	0.05					
run4	12/19/2014	14:21:30	3.58	0.11					
run4	12/19/2014	14:21:45	3.41	0.17					
run4	12/19/2014	14:22:00	3.64	0.20					
run4	12/19/2014	14:22:15	3.93	0.04					
run4	12/19/2014	14:22:30	4.14	0.00					
run4	12/19/2014	14:22:45	4.39	0.00					
run4	12/19/2014	14:23:00	4.41	0.01					

run4	12/19/2014	14:23:15	3.87	0.14
run4	12/19/2014	14:23:30	4.09	0.07
run4	12/19/2014	14:23:45	3.63	0.07
run4	12/19/2014	14:24:00	2.61	0.18
run4	12/19/2014	14:24:15	2.74	0.15
run4	12/19/2014	14:24:30	2.93	0.04
run4	12/19/2014	14:24:45	2.79	0.13
run4	12/19/2014	14:25:00	3.08	0.00
run4	12/19/2014	14:25:15	2.78	0.07
run4	12/19/2014	14:25:30	2.46	0.07
run4	12/19/2014	14:25:45	2.53	0.12
run4	12/19/2014	14:26:00	2.62	0.01
run4	12/19/2014	14:26:15	2.45	0.00
run4	12/19/2014	14:26:30	2.22	0.00
run4	12/19/2014	14:26:45	2.04	0.00
run4	12/19/2014	14:27:00	1.82	0.00
run4	12/19/2014	14:27:15	1.84	0.04
run4	12/19/2014	14:27:30	1.84	0.10
run4	12/19/2014	14:27:45	2.07	0.01
run4	12/19/2014	14:28:00	2.25	0.01
run4	12/19/2014	14:28:15	2.73	0.22
run4	12/19/2014	14:28:30	3.72	0.14
run4	12/19/2014	14:28:45	4.07	0.03
run4	12/19/2014	14:29:00	3.93	0.00
run4	12/19/2014	14:29:15	4.04	0.09
run4	12/19/2014	14:29:30	4.07	0.18
run4	12/19/2014	14:29:45	3.96	0.26
run4	12/19/2014	14:30:00	3.75	0.36
run4	12/19/2014	14:30:15	3.80	0.00
run4	12/19/2014	14:30:30	3.67	0.15
run4	12/19/2014	14:30:45	3.36	0.32
run4	12/19/2014	14:31:00	3.14	0.43
run4	12/19/2014	14:31:15	3.15	0.36
run4	12/19/2014	14:31:30	3.32	0.33
run4	12/19/2014	14:31:45	3.41	0.45
run4	12/19/2014	14:32:15	2.71	0.25
run4	12/19/2014	14:32:30	1.92	0.38
run4	12/19/2014	14:32:45	1.79	0.31
run4	12/19/2014	14:33:00	1.73	0.32
run4	12/19/2014	14:33:15	1.83	0.20
run4	12/19/2014	14:33:30	2.15	0.17
run4	12/19/2014	14:33:45	3.11	0.05
run4	12/19/2014	14:34:00	3.59	0.20
run4	12/19/2014	14:34:15	3.67	0.58
run4	12/19/2014	14:34:30	3.83	0.42
run4	12/19/2014	14:34:45	3.82	0.12
run4	12/19/2014	14:35:00	3.72	0.20
run4	12/19/2014	14:35:15	3.72	0.28
run4	12/19/2014	14:35:30	3.66	0.34
run4	12/19/2014	14:35:45	3.60	0.75
run4	12/19/2014	14:36:00	3.62	0.68
run4	12/19/2014	14:36:15	3.66	0.34
run4	12/19/2014	14:36:30	3.71	0.25
run4	12/19/2014	14:36:45	3.87	0.46
run4	12/19/2014	14:37:00	3.83	0.83
run4	12/19/2014	14:37:15	3.96	0.96
run4	12/19/2014	14:37:30	3.89	0.73
run4	12/19/2014	14:37:45	3.80	0.49
run4	12/19/2014	14:38:00	3.70	0.15

run4	12/19/2014	14:38:15	3.63	0.10
run4	12/19/2014	14:38:30	3.33	0.22
run4	12/19/2014	14:38:45	3.72	0.21
run4	12/19/2014	14:39:00	3.81	0.37
run4	12/19/2014	14:39:15	3.67	0.21
run4	12/19/2014	14:39:30	3.72	0.60
run4	12/19/2014	14:39:45	3.51	0.15
run4	12/19/2014	14:40:00	3.08	0.41
run4	12/19/2014	14:40:15	2.59	0.44
run4	12/19/2014	14:40:30	2.43	0.03
run4	12/19/2014	14:40:45	2.52	0.08
run4	12/19/2014	14:41:00	2.54	0.12
run4	12/19/2014	14:41:15	2.09	0.11
run4	12/19/2014	14:41:30	1.64	0.55
run4	12/19/2014	14:41:45	1.51	0.40
run4	12/19/2014	14:42:00	1.25	0.72
run4	12/19/2014	14:42:15	1.48	0.47
run4	12/19/2014	14:42:30	2.41	0.57
run4	12/19/2014	14:42:45	3.92	0.23
run4	12/19/2014	14:43:00	4.43	0.07
run4	12/19/2014	14:43:15	4.37	0.04
run4	12/19/2014	14:43:30	3.76	0.29
run4	12/19/2014	14:43:45	3.36	0.11
run4	12/19/2014	14:44:00	3.06	0.12
run4	12/19/2014	14:44:15	2.51	0.57
run4	12/19/2014	14:44:30	2.58	0.49
run4	12/19/2014	14:44:45	2.61	0.47
run4	12/19/2014	14:45:00	2.57	0.38
run4	12/19/2014	14:45:15	2.56	0.42
run4	12/19/2014	14:45:30	3.28	0.22
run4	12/19/2014	14:45:45	3.61	0.33
run4	12/19/2014	14:46:00	3.13	0.02
run4	12/19/2014	14:46:15	2.41	0.00
run4	12/19/2014	14:46:30	2.01	0.30
run4	12/19/2014	14:46:45	2.11	0.41
run4	12/19/2014	14:47:00	2.32	0.46
run4	12/19/2014	14:47:15	2.49	0.31
run4	12/19/2014	14:47:30	2.67	0.11
run4	12/19/2014	14:47:45	2.63	0.02
run4	12/19/2014	14:48:00	2.38	0.23
run4	12/19/2014	14:48:15	3.06	0.01
run4	12/19/2014	14:48:30	4.34	0.36
run4	12/19/2014	14:48:45	4.49	0.52
run4	12/19/2014	14:49:00	4.40	0.44
run4	12/19/2014	14:49:15	4.54	0.76
run4	12/19/2014	14:49:30	4.70	0.98
run4	12/19/2014	14:49:45	4.56	0.85
run4	12/19/2014	14:50:15	4.51	0.60
run4	12/19/2014	14:50:30	4.55	0.64
run4	12/19/2014	14:50:45	4.59	0.51
run4	12/19/2014	14:51:00	4.55	0.25
run4	12/19/2014	14:51:15	4.43	0.00
run4	12/19/2014	14:51:30	4.48	0.00
run4	12/19/2014	14:51:45	4.59	0.00
run4	12/19/2014	14:52:00	4.52	0.00
run4	12/19/2014	14:52:15	4.14	0.02
run4	12/19/2014	14:52:30	3.78	0.00
run4	12/19/2014	14:52:45	3.75	0.01
run4	12/19/2014	14:53:00	4.04	0.11

run4	12/19/2014	14:53:15	3.88	0.19
run4	12/19/2014	14:53:30	3.37	0.15
run4	12/19/2014	14:53:45	3.09	0.46
run4	12/19/2014	14:54:00	3.11	0.41
run4	12/19/2014	14:54:15	2.83	0.41
run4	12/19/2014	14:54:30	2.80	0.00
run4	12/19/2014	14:54:45	2.87	0.02
run4	12/19/2014	14:55:00	2.98	0.22
run4	12/19/2014	14:55:15	3.06	0.76
run4	12/19/2014	14:55:30	3.07	0.28
run4	12/19/2014	14:55:45	3.12	0.10
run4	12/19/2014	14:56:00	3.30	0.13
run4	12/19/2014	14:56:15	3.40	0.09
run4	12/19/2014	14:56:30	3.55	0.16
run4	12/19/2014	14:56:45	3.55	0.24
run4	12/19/2014	14:57:00	3.67	0.02
run4	12/19/2014	14:57:15	3.59	0.03
run4	12/19/2014	14:57:30	3.66	0.03
run4	12/19/2014	14:57:45	3.77	0.01
run4	12/19/2014	14:58:00	3.79	0.11
run4	12/19/2014	14:58:15	3.82	0.49
run4	12/19/2014	14:58:30	4.07	0.50
run4	12/19/2014	14:58:45	3.50	0.20
run4	12/19/2014	14:59:00	2.66	0.27
run4	12/19/2014	14:59:15	2.20	0.06
run4	12/19/2014	14:59:30	2.14	0.00
run4	12/19/2014	14:59:45	2.15	0.00
run4	12/19/2014	15:00:00	1.89	0.02
run4	12/19/2014	15:00:15	2.15	0.01
run4	12/19/2014	15:00:30	2.68	0.00
run4	12/19/2014	15:00:45	2.76	0.03
run4	12/19/2014	15:01:00	3.08	0.26
run4	12/19/2014	15:01:15	3.41	0.07
run4	12/19/2014	15:01:30	2.99	0.18
run4	12/19/2014	15:01:45	2.78	0.08
run4	12/19/2014	15:02:00	2.72	0.01
run4	12/19/2014	15:02:15	2.75	0.00
run4	12/19/2014	15:02:30	2.80	0.00
run4	12/19/2014	15:02:45	2.89	0.00
run4	12/19/2014	15:03:00	2.67	0.11
run4	12/19/2014	15:03:15	2.29	0.14
run4	12/19/2014	15:03:30	2.43	0.06
run4	12/19/2014	15:03:45	2.73	0.05
run4	12/19/2014	15:04:00	2.54	0.03
run4	12/19/2014	15:04:15	2.29	0.05
run4	12/19/2014	15:04:30	2.28	0.00
run4	12/19/2014	15:04:45	2.06	0.00
run4	12/19/2014	15:05:00	1.87	0.00
run4	12/19/2014	15:05:15	1.89	0.00
run4	12/19/2014	15:05:30	2.25	0.00
run4	12/19/2014	15:05:45	2.49	0.00
run4	12/19/2014	15:06:00	2.25	0.00
run4	12/19/2014	15:06:15	2.17	0.02
run4	12/19/2014	15:06:30	2.23	0.01
run4	12/19/2014	15:06:45	2.33	0.00
run4	12/19/2014	15:07:00	2.34	0.00
run4	12/19/2014	15:07:15	2.08	2.52
run4	12/19/2014	15:07:30	2.23	0.29
run4	12/19/2014	15:07:45	2.60	0.04

run4	12/19/2014	15:08:15	2.66	0.02
run4	12/19/2014	15:08:30	2.65	0.02
run4	12/19/2014	15:08:45	3.41	0.00
run4	12/19/2014	15:09:00	4.02	0.00
run4	12/19/2014	15:09:15	4.00	0.15
run4	12/19/2014	15:09:30	4.22	0.17
run4	12/19/2014	15:09:45	4.15	0.07
run4	12/19/2014	15:10:00	4.07	0.04
run4	12/19/2014	15:10:15	4.15	0.00
run4	12/19/2014	15:10:30	4.17	0.00
run4	12/19/2014	15:10:45	4.08	0.00
run4	12/19/2014	15:11:00	4.02	0.00
run4	12/19/2014	15:11:15	3.89	0.00
run4	12/19/2014	15:11:30	3.85	0.00
run4	12/19/2014	15:11:45	3.72	0.00
run4	12/19/2014	15:12:00	3.81	0.01
run4	12/19/2014	15:12:15	3.93	0.34
run4	12/19/2014	15:12:30	4.02	0.39
run4	12/19/2014	15:12:45	4.16	0.06
run4	12/19/2014	15:13:00	4.14	0.00
run4	12/19/2014	15:13:15	3.82	0.00
run4	12/19/2014	15:13:30	3.48	0.00
run4	12/19/2014	15:13:45	3.50	0.00
run4	12/19/2014	15:14:00	3.45	0.10
run4	12/19/2014	15:14:15	3.42	0.00
run4	12/19/2014	15:14:30	3.44	0.08
run4	12/19/2014	15:14:45	3.41	0.03
run4	12/19/2014	15:15:00	3.52	0.00
run4	12/19/2014	15:15:15	3.55	0.00
run4	12/19/2014	15:15:30	3.61	0.00
run4	12/19/2014	15:15:45	3.49	0.00
run4	12/19/2014	15:16:00	3.37	0.00
run4	12/19/2014	15:16:15	3.53	0.00
run4	12/19/2014	15:16:30	3.41	2.51
run4	12/19/2014	15:16:45	3.45	0.07
run4	12/19/2014	15:17:00	3.59	0.00
run4	12/19/2014	15:17:15	3.68	0.04
run4	12/19/2014	15:17:30	3.65	0.00
run4	12/19/2014	15:17:45	3.66	0.00
run4	12/19/2014	15:18:00	3.66	0.03
run4	12/19/2014	15:18:15	3.83	0.05
run4	12/19/2014	15:18:30	3.80	0.01
run4	12/19/2014	15:18:45	3.75	0.01
run4	12/19/2014	15:19:00	4.11	0.03
run4	12/19/2014	15:19:15	4.28	0.15
run4	12/19/2014	15:19:30	4.44	0.00
run4	12/19/2014	15:19:45	4.49	0.05
run4	12/19/2014	15:20:00	4.24	0.00
run4	12/19/2014	15:20:15	3.68	0.00
run4	12/19/2014	15:20:30	4.12	0.00
run4	12/19/2014	15:20:45	4.76	0.00
run4	12/19/2014	15:21:00	4.78	0.00
run4	12/19/2014	15:21:15	4.32	0.02
run4	12/19/2014	15:21:30	4.36	0.00
run4	12/19/2014	15:21:45	4.50	0.00
run4	12/19/2014	15:22:00	4.56	0.00
run4	12/19/2014	15:22:15	4.17	0.00
run4	12/19/2014	15:22:30	4.31	0.00
run4	12/19/2014	15:22:45	4.42	0.10

run4	12/19/2014	15:23:00	4.20	0.04						
run4	12/19/2014	15:23:15	4.04	0.22						
run4	12/19/2014	15:23:30	4.26	0.22						
run4	12/19/2014	15:23:45	4.04	0.08						
run4	12/19/2014	15:24:00	3.01	0.00						
run4	12/19/2014	15:24:15	2.23	0.00						
run4	12/19/2014	15:24:30	2.23	0.00						
run4	12/19/2014	15:24:45	2.43	0.00						
run4	12/19/2014	15:25:00	2.57	0.00						
run4	12/19/2014	15:25:15	2.36	0.02						
run4	12/19/2014	15:25:30	2.42	0.00						
run4	12/19/2014	15:25:45	2.96	0.00						
run4	12/19/2014	15:26:00	3.96	0.94						
run4	12/19/2014	15:26:30	3.58	1.40						
run4	12/19/2014	15:26:45	3.86	0.00						
run4	12/19/2014	15:27:00	4.23	0.00						
run4	12/19/2014	15:27:15	4.33	0.00						
run4	12/19/2014	15:27:30	4.10	0.00						
run4	12/19/2014	15:27:45	3.26	0.00						
averun4	12/19/2014	14:20:30	3.32	0.19	63					
scg4	12/19/2014	15:28:15	3.80	0.00	CC66094/cg4	CO	5.13		0	
scg4	12/19/2014	15:28:30	4.40	0.00	CC66094/cg4	CO	5.13		0	
scg4	12/19/2014	15:28:45	4.37	0.07	CC66094/cg4	CO	5.13		0	
scg4	12/19/2014	15:29:00	4.75	0.05	CC66094/cg4	CO	5.13		0	
scg4	12/19/2014	15:29:15	5.05	0.00	CC66094/cg4	CO	5.13		0	
scg4	12/19/2014	15:29:30	5.08	0.00	CC66094/cg4	CO	5.13		0	
scg4	12/19/2014	15:29:45	5.09	0.00	CC66094/cg4	CO	5.13		0	
scg4	12/19/2014	15:30:00	5.06	0.00	CC66094/cg4	CO	5.13		0	
o2zero1	12/19/2014	15:29:30	5.08	0.00	CC66094/cg4	CO	5.13		0	
co2zero1	12/19/2014	15:30:00	5.06	0.00	CC66094/cg4	CO	5.13		0	
cospan1	12/19/2014	15:29:45	5.09	0.00	CC66094/cg4	CO	5.13		0	
scg8	12/19/2014	15:30:15	5.11	0.00	CC1076/cg8	O2	11.1	CO2	11.1	
scg8	12/19/2014	15:30:30	5.00	0.10	CC1076/cg8	O2	11.1	CO2	11.1	
scg8	12/19/2014	15:30:45	3.49	0.00	CC1076/cg8	O2	11.1	CO2	11.1	
scg8	12/19/2014	15:31:00	0.74	0.00	CC1076/cg8	O2	11.1	CO2	11.1	
scg8	12/19/2014	15:31:15	0.00	0.00	CC1076/cg8	O2	11.1	CO2	11.1	
scg8	12/19/2014	15:31:30	0.00	0.00	CC1076/cg8	O2	11.1	CO2	11.1	
scg8	12/19/2014	15:31:45	0.00	0.00	CC1076/cg8	O2	11.1	CO2	11.1	
scg8	12/19/2014	15:32:00	0.00	0.00	CC1076/cg8	O2	11.1	CO2	11.1	
o2span1	12/19/2014	15:31:45	0.00	0.00	CC1076/cg8	O2	11.1	CO2	11.1	
co2span1	12/19/2014	15:31:45	0.00	0.00	CC1076/cg8	O2	11.1	CO2	11.1	
cozero1	12/19/2014	15:31:45	0.00	0.00	CC1076/cg8	O2	11.1	CO2	11.1	
thczero1	12/19/2014	15:31:30	0.00	0.00	CC1076/cg8	O2	11.1	CO2	11.1	
scg11	12/19/2014	15:32:30	0.00	0.00	LL107680/cg11	THC	5.06		0	
scg11	12/19/2014	15:32:45	0.00	0.88	LL107680/cg11	THC	5.06		0	
scg11	12/19/2014	15:33:00	0.00	3.49	LL107680/cg11	THC	5.06		0	
scg11	12/19/2014	15:33:15	0.00	3.82	LL107680/cg11	THC	5.06		0	
scg11	12/19/2014	15:33:30	0.01	4.19	LL107680/cg11	THC	5.06		0	
scg11	12/19/2014	15:33:45	0.01	5.47	LL107680/cg11	THC	5.06		0	
scg11	12/19/2014	15:34:00	0.02	5.50	LL107680/cg11	THC	5.06		0	
scg11	12/19/2014	15:34:15	0.04	5.42	LL107680/cg11	THC	5.06		0	
scg11	12/19/2014	15:34:30	0.03	4.99	LL107680/cg11	THC	5.06		0	
scg11	12/19/2014	15:34:45	0.05	5.17	LL107680/cg11	THC	5.06		0	
scg11	12/19/2014	15:35:00	0.03	5.09	LL107680/cg11	THC	5.06		0	
thcspan1	12/19/2014	15:35:00	0.03	5.09	LL107680/cg11	THC	5.06		0	
run5	12/19/2014	15:40:15	2.00	0.00						
run5	12/19/2014	15:40:30	2.32	0.00						
run5	12/19/2014	15:40:45	2.51	0.00						
run5	12/19/2014	15:41:00	2.56	0.00						

run5	12/19/2014	15:41:15	2.43	0.00
run5	12/19/2014	15:41:30	2.49	0.05
run5	12/19/2014	15:41:45	2.54	0.04
run5	12/19/2014	15:42:00	2.48	0.00
run5	12/19/2014	15:42:15	2.60	0.00
run5	12/19/2014	15:42:30	2.39	0.00
run5	12/19/2014	15:42:45	2.18	0.00
run5	12/19/2014	15:43:00	2.08	0.00
run5	12/19/2014	15:43:15	2.35	0.00
run5	12/19/2014	15:43:30	2.74	0.00
run5	12/19/2014	15:43:45	3.30	0.00
run5	12/19/2014	15:44:00	3.15	0.00
run5	12/19/2014	15:44:15	2.57	0.00
run5	12/19/2014	15:44:30	2.56	0.05
run5	12/19/2014	15:44:45	2.73	0.02
run5	12/19/2014	15:45:00	3.24	0.00
run5	12/19/2014	15:45:15	4.12	0.00
run5	12/19/2014	15:45:30	4.21	0.00
run5	12/19/2014	15:45:45	4.41	0.00
run5	12/19/2014	15:46:00	4.90	0.00
run5	12/19/2014	15:46:15	5.03	0.00
run5	12/19/2014	15:46:30	5.09	0.00
run5	12/19/2014	15:46:45	5.39	0.00
run5	12/19/2014	15:47:00	5.40	0.00
run5	12/19/2014	15:47:15	4.75	0.00
run5	12/19/2014	15:47:30	3.64	0.00
run5	12/19/2014	15:47:45	2.68	2.47
run5	12/19/2014	15:48:00	2.32	0.00
run5	12/19/2014	15:48:15	3.36	0.01
run5	12/19/2014	15:48:30	4.32	0.04
run5	12/19/2014	15:48:45	4.12	0.00
run5	12/19/2014	15:49:00	4.02	0.19
run5	12/19/2014	15:49:15	4.23	0.17
run5	12/19/2014	15:49:30	4.33	0.02
run5	12/19/2014	15:49:45	4.45	0.03
run5	12/19/2014	15:50:00	4.21	0.01
run5	12/19/2014	15:50:15	3.98	0.10
run5	12/19/2014	15:50:30	4.27	0.00
run5	12/19/2014	15:50:45	4.28	0.00
run5	12/19/2014	15:51:00	3.92	0.07
run5	12/19/2014	15:51:15	3.63	0.00
run5	12/19/2014	15:51:30	3.56	0.00
run5	12/19/2014	15:51:45	3.92	0.01
run5	12/19/2014	15:52:00	3.90	0.04
run5	12/19/2014	15:52:15	3.59	0.08
run5	12/19/2014	15:52:30	3.63	0.00
run5	12/19/2014	15:52:45	4.09	0.00
run5	12/19/2014	15:53:00	4.22	0.00
run5	12/19/2014	15:53:15	4.12	0.05
run5	12/19/2014	15:53:30	4.01	0.00
run5	12/19/2014	15:53:45	3.79	0.00
run5	12/19/2014	15:54:00	3.48	0.00
run5	12/19/2014	15:54:15	3.65	0.00
run5	12/19/2014	15:54:30	4.01	0.01
run5	12/19/2014	15:54:45	4.11	0.00
run5	12/19/2014	15:55:00	4.27	0.00
run5	12/19/2014	15:55:30	4.31	0.03
run5	12/19/2014	15:55:45	4.13	0.12
run5	12/19/2014	15:56:00	3.86	0.08

run5	12/19/2014	15:56:15	4.01	0.08
run5	12/19/2014	15:56:30	3.83	0.00
run5	12/19/2014	15:56:45	3.76	0.00
run5	12/19/2014	15:57:00	3.67	1.19
run5	12/19/2014	15:57:15	3.83	1.21
run5	12/19/2014	15:57:30	3.83	0.07
run5	12/19/2014	15:57:45	3.61	0.11
run5	12/19/2014	15:58:00	3.77	0.58
run5	12/19/2014	15:58:15	4.07	0.31
run5	12/19/2014	15:58:30	3.48	0.12
run5	12/19/2014	15:58:45	3.23	0.09
run5	12/19/2014	15:59:00	2.34	0.11
run5	12/19/2014	15:59:15	1.86	0.07
run5	12/19/2014	15:59:30	1.89	0.02
run5	12/19/2014	15:59:45	2.08	0.02
run5	12/19/2014	16:00:00	1.93	0.01
run5	12/19/2014	16:00:15	1.97	0.00
run5	12/19/2014	16:00:30	1.94	0.00
run5	12/19/2014	16:00:45	1.78	0.00
run5	12/19/2014	16:01:00	1.98	0.00
run5	12/19/2014	16:01:15	2.04	0.00
run5	12/19/2014	16:01:30	2.27	0.00
run5	12/19/2014	16:01:45	2.08	0.00
run5	12/19/2014	16:02:00	2.18	0.00
run5	12/19/2014	16:02:15	2.30	0.00
run5	12/19/2014	16:02:30	2.26	0.00
run5	12/19/2014	16:02:45	1.94	0.00
run5	12/19/2014	16:03:00	1.67	0.11
run5	12/19/2014	16:03:15	1.63	0.04
run5	12/19/2014	16:03:30	1.69	0.00
run5	12/19/2014	16:03:45	1.77	0.00
run5	12/19/2014	16:04:00	1.90	0.00
run5	12/19/2014	16:04:15	1.89	2.39
run5	12/19/2014	16:04:30	1.76	0.00
run5	12/19/2014	16:04:45	1.90	0.00
run5	12/19/2014	16:05:00	1.86	0.00
run5	12/19/2014	16:05:15	1.74	0.00
run5	12/19/2014	16:05:30	1.80	0.07
run5	12/19/2014	16:05:45	1.88	0.03
run5	12/19/2014	16:06:00	1.76	0.04
run5	12/19/2014	16:06:15	1.97	0.07
run5	12/19/2014	16:06:30	2.33	0.02
run5	12/19/2014	16:06:45	2.21	0.00
run5	12/19/2014	16:07:00	2.28	0.00
run5	12/19/2014	16:07:15	2.44	0.06
run5	12/19/2014	16:07:30	2.64	0.00
run5	12/19/2014	16:07:45	2.58	0.00
run5	12/19/2014	16:08:00	2.58	0.00
run5	12/19/2014	16:08:15	2.47	0.00
run5	12/19/2014	16:08:30	2.24	0.00
run5	12/19/2014	16:08:45	2.11	0.01
run5	12/19/2014	16:09:00	2.03	0.10
run5	12/19/2014	16:09:15	2.58	0.02
run5	12/19/2014	16:09:30	3.52	0.07
run5	12/19/2014	16:09:45	3.96	0.00
run5	12/19/2014	16:10:00	4.05	0.00
run5	12/19/2014	16:10:15	3.97	0.01
run5	12/19/2014	16:10:30	3.85	0.04
run5	12/19/2014	16:10:45	3.85	0.04

run5	12/19/2014	16:11:00	3.94	0.01
run5	12/19/2014	16:11:15	4.04	0.00
run5	12/19/2014	16:11:30	3.78	0.00
run5	12/19/2014	16:11:45	3.58	0.00
run5	12/19/2014	16:12:00	3.57	0.15
run5	12/19/2014	16:12:15	3.64	2.09
run5	12/19/2014	16:12:30	3.72	0.01
run5	12/19/2014	16:12:45	3.58	0.00
run5	12/19/2014	16:13:00	3.56	0.01
run5	12/19/2014	16:13:30	3.57	0.01
run5	12/19/2014	16:13:45	3.44	0.00
run5	12/19/2014	16:14:00	3.62	0.00
run5	12/19/2014	16:14:15	3.55	0.00
run5	12/19/2014	16:14:30	3.50	0.02
run5	12/19/2014	16:14:45	3.54	0.00
run5	12/19/2014	16:15:00	3.39	0.06
run5	12/19/2014	16:15:15	3.43	0.42
run5	12/19/2014	16:15:30	3.75	0.00
run5	12/19/2014	16:15:45	3.92	0.00
run5	12/19/2014	16:16:00	4.05	0.00
run5	12/19/2014	16:16:15	4.20	0.00
run5	12/19/2014	16:16:30	3.98	0.00
run5	12/19/2014	16:16:45	3.83	0.00
run5	12/19/2014	16:17:00	3.94	0.00
run5	12/19/2014	16:17:15	4.01	0.00
run5	12/19/2014	16:17:30	3.93	0.00
run5	12/19/2014	16:17:45	3.86	0.00
run5	12/19/2014	16:18:00	3.85	0.00
run5	12/19/2014	16:18:15	3.83	0.00
run5	12/19/2014	16:18:30	2.65	0.00
run5	12/19/2014	16:18:45	1.94	0.00
run5	12/19/2014	16:19:00	1.89	0.22
run5	12/19/2014	16:19:15	2.00	0.02
run5	12/19/2014	16:19:30	1.91	0.00
run5	12/19/2014	16:19:45	1.86	0.00
run5	12/19/2014	16:20:00	1.95	0.00
run5	12/19/2014	16:20:15	1.98	0.00
run5	12/19/2014	16:20:30	2.09	0.00
run5	12/19/2014	16:20:45	2.07	0.00
run5	12/19/2014	16:21:00	2.12	2.12
run5	12/19/2014	16:21:15	2.35	0.00
run5	12/19/2014	16:21:30	2.36	0.00
run5	12/19/2014	16:21:45	2.28	0.00
run5	12/19/2014	16:22:00	2.32	0.00
run5	12/19/2014	16:22:15	2.23	0.00
run5	12/19/2014	16:22:30	2.12	0.00
run5	12/19/2014	16:22:45	2.10	0.00
run5	12/19/2014	16:23:00	2.02	0.00
run5	12/19/2014	16:23:15	2.07	0.00
run5	12/19/2014	16:23:30	2.21	0.00
run5	12/19/2014	16:23:45	2.37	0.00
run5	12/19/2014	16:24:00	2.39	0.10
run5	12/19/2014	16:24:15	2.35	0.00
run5	12/19/2014	16:24:30	2.17	0.00
run5	12/19/2014	16:24:45	2.17	0.00
run5	12/19/2014	16:25:00	2.19	0.00
run5	12/19/2014	16:25:15	2.28	0.00
run5	12/19/2014	16:25:30	2.20	0.00
run5	12/19/2014	16:25:45	2.29	0.00

run5	12/19/2014	16:26:00	2.34	0.09
run5	12/19/2014	16:26:15	2.59	0.04
run5	12/19/2014	16:26:30	2.97	0.01
run5	12/19/2014	16:26:45	2.78	0.00
run5	12/19/2014	16:27:00	2.42	0.00
run5	12/19/2014	16:27:15	2.26	0.00
run5	12/19/2014	16:27:30	2.25	0.00
run5	12/19/2014	16:27:45	2.25	0.00
run5	12/19/2014	16:28:00	2.35	2.28
run5	12/19/2014	16:28:15	2.29	0.00
run5	12/19/2014	16:28:30	2.27	0.00
run5	12/19/2014	16:28:45	2.21	0.00
run5	12/19/2014	16:29:00	2.22	0.00
run5	12/19/2014	16:29:15	2.36	0.00
run5	12/19/2014	16:29:30	2.82	0.06
run5	12/19/2014	16:29:45	3.72	0.00
run5	12/19/2014	16:30:00	4.47	0.00
run5	12/19/2014	16:30:15	4.35	0.00
run5	12/19/2014	16:30:30	4.16	0.00
run5	12/19/2014	16:30:45	4.31	0.00
run5	12/19/2014	16:31:00	4.27	0.00
run5	12/19/2014	16:31:15	4.09	0.00
run5	12/19/2014	16:31:45	3.93	0.01
run5	12/19/2014	16:32:00	3.97	0.00
run5	12/19/2014	16:32:15	4.06	0.00
run5	12/19/2014	16:32:30	4.09	0.00
run5	12/19/2014	16:32:45	3.97	0.00
run5	12/19/2014	16:33:00	3.52	0.00
run5	12/19/2014	16:33:15	3.52	0.00
run5	12/19/2014	16:33:30	3.41	0.00
run5	12/19/2014	16:33:45	3.35	0.00
run5	12/19/2014	16:34:00	3.29	0.00
run5	12/19/2014	16:34:15	3.53	2.00
run5	12/19/2014	16:34:30	3.82	0.43
run5	12/19/2014	16:34:45	3.96	0.00
run5	12/19/2014	16:35:00	4.00	0.00
run5	12/19/2014	16:35:15	3.87	0.11
run5	12/19/2014	16:35:30	3.65	0.01
run5	12/19/2014	16:35:45	3.70	0.00
run5	12/19/2014	16:36:00	3.64	0.00
run5	12/19/2014	16:36:15	3.57	0.00
run5	12/19/2014	16:36:30	3.71	0.00
run5	12/19/2014	16:36:45	3.96	0.00
run5	12/19/2014	16:37:00	4.04	0.00
run5	12/19/2014	16:37:15	3.85	0.00
run5	12/19/2014	16:37:30	3.53	0.00
run5	12/19/2014	16:37:45	3.40	0.00
run5	12/19/2014	16:38:00	3.54	0.00
run5	12/19/2014	16:38:15	3.63	0.00
run5	12/19/2014	16:38:30	3.62	0.00
run5	12/19/2014	16:38:45	3.32	0.00
run5	12/19/2014	16:39:00	2.87	0.00
run5	12/19/2014	16:39:15	2.84	0.00
run5	12/19/2014	16:39:30	2.98	0.00
run5	12/19/2014	16:39:45	3.05	0.00
run5	12/19/2014	16:40:00	2.96	0.00
run5	12/19/2014	16:40:15	2.75	0.00
run5	12/19/2014	16:40:30	2.65	0.00
run5	12/19/2014	16:40:45	2.49	0.00

run5	12/19/2014	16:41:00	1.99	0.00						
run5	12/19/2014	16:41:15	2.01	0.63						
run5	12/19/2014	16:41:30	2.29	1.73						
run5	12/19/2014	16:41:45	2.53	0.04						
run5	12/19/2014	16:42:00	2.33	0.06						
run5	12/19/2014	16:42:15	2.05	0.05						
run5	12/19/2014	16:42:30	2.13	0.02						
run5	12/19/2014	16:42:45	2.12	0.00						
run5	12/19/2014	16:43:00	1.94	0.00						
run5	12/19/2014	16:43:15	1.98	0.00						
averun5	12/19/2014	15:40:45	3.08	0.10	62					
scg4	12/19/2014	16:43:45	2.41	0.00	CC66094/cg4	CO	5.13		0	
scg4	12/19/2014	16:44:00	2.13	0.03	CC66094/cg4	CO	5.13		0	
scg4	12/19/2014	16:44:15	2.79	0.03	CC66094/cg4	CO	5.13		0	
scg4	12/19/2014	16:44:30	4.35	0.00	CC66094/cg4	CO	5.13		0	
scg4	12/19/2014	16:44:45	4.98	0.10	CC66094/cg4	CO	5.13		0	
scg4	12/19/2014	16:45:00	5.08	0.20	CC66094/cg4	CO	5.13		0	
scg4	12/19/2014	16:45:15	5.15	0.01	CC66094/cg4	CO	5.13		0	
o2zero1	12/19/2014	16:45:00	5.08	0.20	CC66094/cg4	CO	5.13		0	
co2zero1	12/19/2014	16:45:15	5.15	0.01	CC66094/cg4	CO	5.13		0	
cospan1	12/19/2014	16:45:00	5.08	0.20	CC66094/cg4	CO	5.13		0	
scg8	12/19/2014	16:45:45	5.13	0.00	CC1076/cg8	O2	11.1	CO2	11.1	
scg8	12/19/2014	16:46:00	5.02	0.00	CC1076/cg8	O2	11.1	CO2	11.1	
scg8	12/19/2014	16:46:15	3.27	0.00	CC1076/cg8	O2	11.1	CO2	11.1	
scg8	12/19/2014	16:46:30	0.53	0.00	CC1076/cg8	O2	11.1	CO2	11.1	
scg8	12/19/2014	16:46:45	0.00	0.00	CC1076/cg8	O2	11.1	CO2	11.1	
scg8	12/19/2014	16:47:00	0.00	0.04	CC1076/cg8	O2	11.1	CO2	11.1	
scg8	12/19/2014	16:47:15	0.00	0.06	CC1076/cg8	O2	11.1	CO2	11.1	
o2span1	12/19/2014	16:47:00	0.00	0.04	CC1076/cg8	O2	11.1	CO2	11.1	
co2span1	12/19/2014	16:47:00	0.00	0.04	CC1076/cg8	O2	11.1	CO2	11.1	
cozero1	12/19/2014	16:47:00	0.00	0.04	CC1076/cg8	O2	11.1	CO2	11.1	
thczero1	12/19/2014	16:46:45	0.00	0.00	CC1076/cg8	O2	11.1	CO2	11.1	
scg11	12/19/2014	16:47:45	0.00	0.00	LL107680/cg11	THC	5.06		0	
scg11	12/19/2014	16:48:00	0.00	1.07	LL107680/cg11	THC	5.06		0	
scg11	12/19/2014	16:48:15	0.00	2.84	LL107680/cg11	THC	5.06		0	
scg11	12/19/2014	16:48:30	0.02	4.00	LL107680/cg11	THC	5.06		0	
scg11	12/19/2014	16:48:45	0.01	4.29	LL107680/cg11	THC	5.06		0	
scg11	12/19/2014	16:49:00	0.03	4.79	LL107680/cg11	THC	5.06		0	
scg11	12/19/2014	16:49:15	0.06	4.98	LL107680/cg11	THC	5.06		0	
scg11	12/19/2014	16:49:30	0.06	5.04	LL107680/cg11	THC	5.06		0	
scg11	12/19/2014	16:49:45	0.03	5.03	LL107680/cg11	THC	5.06		0	
thcspan1	12/19/2014	16:49:45	0.03	5.03	LL107680/cg11	THC	5.06		0	
run6	12/19/2014	17:00:00	3.29	0.00						
run6	12/19/2014	17:00:15	3.24	0.03						
run6	12/19/2014	17:00:30	3.17	0.00						
run6	12/19/2014	17:00:45	3.20	0.00						
run6	12/19/2014	17:01:00	3.25	0.05						
run6	12/19/2014	17:01:15	3.45	0.14						
run6	12/19/2014	17:01:30	3.44	0.08						
run6	12/19/2014	17:01:45	3.14	0.01						
run6	12/19/2014	17:02:00	3.06	0.01						
run6	12/19/2014	17:02:15	2.96	0.19						
run6	12/19/2014	17:02:30	2.91	0.16						
run6	12/19/2014	17:02:45	2.96	0.18						
run6	12/19/2014	17:03:00	3.01	0.00						
run6	12/19/2014	17:03:15	2.92	0.00						
run6	12/19/2014	17:03:30	3.05	0.06						
run6	12/19/2014	17:03:45	3.24	0.00						
run6	12/19/2014	17:04:00	3.41	0.00						

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run6	12/19/2014	17:04:15	3.35	0.00
run6	12/19/2014	17:04:30	3.15	2.33
run6	12/19/2014	17:04:45	3.05	0.20
run6	12/19/2014	17:05:00	3.19	0.19
run6	12/19/2014	17:05:15	3.31	0.24
run6	12/19/2014	17:05:30	3.38	0.15
run6	12/19/2014	17:05:45	3.30	0.21
run6	12/19/2014	17:06:00	3.13	0.09
run6	12/19/2014	17:06:15	2.85	0.45
run6	12/19/2014	17:06:30	2.97	0.47
run6	12/19/2014	17:06:45	3.03	0.12
run6	12/19/2014	17:07:00	2.90	0.30
run6	12/19/2014	17:07:15	2.98	0.17
run6	12/19/2014	17:07:30	3.06	0.10
run6	12/19/2014	17:07:45	2.92	0.00
run6	12/19/2014	17:08:00	2.91	0.00
run6	12/19/2014	17:08:15	3.34	0.08
run6	12/19/2014	17:08:30	3.67	0.30
run6	12/19/2014	17:08:45	3.53	0.30
run6	12/19/2014	17:09:00	3.14	0.07
run6	12/19/2014	17:09:15	2.98	0.07
run6	12/19/2014	17:09:30	2.90	0.30
run6	12/19/2014	17:09:45	3.14	0.33
run6	12/19/2014	17:10:00	3.38	0.33
run6	12/19/2014	17:10:15	3.33	2.15
run6	12/19/2014	17:10:30	3.27	0.13
run6	12/19/2014	17:10:45	3.27	0.42
run6	12/19/2014	17:11:00	3.26	0.06
run6	12/19/2014	17:11:15	3.31	0.24
run6	12/19/2014	17:11:30	3.29	0.15
run6	12/19/2014	17:11:45	3.29	0.19
run6	12/19/2014	17:12:00	3.27	0.03
run6	12/19/2014	17:12:15	3.29	0.01
run6	12/19/2014	17:12:45	3.16	0.01
run6	12/19/2014	17:13:00	3.21	0.05
run6	12/19/2014	17:13:15	3.12	0.03
run6	12/19/2014	17:13:30	3.06	0.41
run6	12/19/2014	17:13:45	3.15	0.35
run6	12/19/2014	17:14:00	3.14	0.17
run6	12/19/2014	17:14:15	2.96	0.01
run6	12/19/2014	17:14:30	2.77	0.00
run6	12/19/2014	17:14:45	2.85	0.00
run6	12/19/2014	17:15:00	3.00	0.01
run6	12/19/2014	17:15:15	2.84	0.11
run6	12/19/2014	17:15:30	2.71	0.18
run6	12/19/2014	17:15:45	2.75	0.07
run6	12/19/2014	17:16:00	2.80	0.00
run6	12/19/2014	17:16:15	2.66	0.00
run6	12/19/2014	17:16:30	2.74	0.07
run6	12/19/2014	17:16:45	2.79	0.08
run6	12/19/2014	17:17:00	2.61	0.08
run6	12/19/2014	17:17:15	2.51	2.17
run6	12/19/2014	17:17:30	2.55	0.03
run6	12/19/2014	17:17:45	2.51	0.08
run6	12/19/2014	17:18:00	2.53	0.00
run6	12/19/2014	17:18:15	2.51	0.00
run6	12/19/2014	17:18:30	2.59	0.10
run6	12/19/2014	17:18:45	3.34	0.01
run6	12/19/2014	17:19:00	3.98	0.00

run6	12/19/2014	17:19:15	4.13	0.02
run6	12/19/2014	17:19:30	4.25	0.06
run6	12/19/2014	17:19:45	3.77	0.12
run6	12/19/2014	17:20:00	3.12	0.08
run6	12/19/2014	17:20:15	2.84	0.09
run6	12/19/2014	17:20:30	2.56	0.15
run6	12/19/2014	17:20:45	2.82	0.21
run6	12/19/2014	17:21:00	2.97	0.19
run6	12/19/2014	17:21:15	2.95	0.19
run6	12/19/2014	17:21:30	3.08	2.01
run6	12/19/2014	17:21:45	3.02	0.28
run6	12/19/2014	17:22:00	3.03	0.09
run6	12/19/2014	17:22:15	2.86	0.31
run6	12/19/2014	17:22:30	2.69	0.13
run6	12/19/2014	17:22:45	2.97	0.02
run6	12/19/2014	17:23:00	2.87	0.01
run6	12/19/2014	17:23:15	2.66	0.07
run6	12/19/2014	17:23:30	2.74	0.09
run6	12/19/2014	17:23:45	2.69	0.03
run6	12/19/2014	17:24:00	2.94	0.04
run6	12/19/2014	17:24:15	3.22	0.02
run6	12/19/2014	17:24:30	3.14	0.01
run6	12/19/2014	17:24:45	2.99	0.09
run6	12/19/2014	17:25:00	3.09	0.01
run6	12/19/2014	17:25:15	3.16	0.09
run6	12/19/2014	17:25:30	3.32	0.12
run6	12/19/2014	17:25:45	3.45	0.25
run6	12/19/2014	17:26:00	3.36	0.25
run6	12/19/2014	17:26:15	3.60	2.30
run6	12/19/2014	17:26:30	3.70	0.15
run6	12/19/2014	17:26:45	3.68	0.04
run6	12/19/2014	17:27:00	3.75	0.23
run6	12/19/2014	17:27:15	3.74	0.14
run6	12/19/2014	17:27:30	3.75	0.40
run6	12/19/2014	17:27:45	3.69	0.21
run6	12/19/2014	17:28:00	3.87	0.26
run6	12/19/2014	17:28:15	3.86	0.01
run6	12/19/2014	17:28:30	3.81	0.65
run6	12/19/2014	17:28:45	3.67	0.37
run6	12/19/2014	17:29:00	3.58	0.03
run6	12/19/2014	17:29:15	3.60	0.03
run6	12/19/2014	17:29:30	3.74	0.16
run6	12/19/2014	17:29:45	3.70	0.12
run6	12/19/2014	17:30:00	3.52	0.08
run6	12/19/2014	17:30:15	3.39	0.08
run6	12/19/2014	17:30:45	3.51	2.06
run6	12/19/2014	17:31:00	3.62	0.00
run6	12/19/2014	17:31:15	3.51	0.00
run6	12/19/2014	17:31:30	3.22	0.00
run6	12/19/2014	17:31:45	3.18	0.00
run6	12/19/2014	17:32:00	3.38	0.02
run6	12/19/2014	17:32:15	3.35	0.00
run6	12/19/2014	17:32:30	3.25	0.00
run6	12/19/2014	17:32:45	3.12	0.04
run6	12/19/2014	17:33:00	3.03	0.18
run6	12/19/2014	17:33:15	3.04	0.20
run6	12/19/2014	17:33:30	3.11	0.20
run6	12/19/2014	17:33:45	3.28	0.18
run6	12/19/2014	17:34:00	3.20	0.14

run6	12/19/2014	17:34:15	3.08	0.36
run6	12/19/2014	17:34:30	3.10	0.57
run6	12/19/2014	17:34:45	3.06	0.44
run6	12/19/2014	17:35:00	2.97	0.08
run6	12/19/2014	17:35:15	2.91	0.01
run6	12/19/2014	17:35:30	2.76	0.13
run6	12/19/2014	17:35:45	3.00	0.05
run6	12/19/2014	17:36:00	2.90	0.05
run6	12/19/2014	17:36:15	2.66	2.29
run6	12/19/2014	17:36:30	2.94	0.23
run6	12/19/2014	17:36:45	3.39	0.15
run6	12/19/2014	17:37:00	3.26	0.00
run6	12/19/2014	17:37:15	3.17	0.01
run6	12/19/2014	17:37:30	3.46	0.00
run6	12/19/2014	17:37:45	3.37	0.01
run6	12/19/2014	17:38:00	3.28	0.00
run6	12/19/2014	17:38:15	3.34	0.05
run6	12/19/2014	17:38:30	3.45	0.06
run6	12/19/2014	17:38:45	3.74	0.05
run6	12/19/2014	17:39:00	3.33	0.07
run6	12/19/2014	17:39:15	2.87	0.00
run6	12/19/2014	17:39:30	3.01	0.00
run6	12/19/2014	17:39:45	3.21	0.00
run6	12/19/2014	17:40:00	3.30	0.00
run6	12/19/2014	17:40:15	3.33	0.00
run6	12/19/2014	17:40:30	3.34	0.00
run6	12/19/2014	17:40:45	3.52	0.04
run6	12/19/2014	17:41:00	3.66	0.08
run6	12/19/2014	17:41:15	3.77	0.08
run6	12/19/2014	17:41:30	3.61	2.03
run6	12/19/2014	17:41:45	3.53	0.27
run6	12/19/2014	17:42:00	3.64	0.00
run6	12/19/2014	17:42:15	3.67	0.27
run6	12/19/2014	17:42:30	3.73	0.35
run6	12/19/2014	17:42:45	3.78	0.34
run6	12/19/2014	17:43:00	3.87	0.12
run6	12/19/2014	17:43:15	3.70	0.17
run6	12/19/2014	17:43:30	3.51	0.19
run6	12/19/2014	17:43:45	3.53	0.10
run6	12/19/2014	17:44:00	3.80	0.00
run6	12/19/2014	17:44:15	3.85	0.00
run6	12/19/2014	17:44:30	3.73	0.00
run6	12/19/2014	17:44:45	3.53	0.00
run6	12/19/2014	17:45:00	3.52	0.00
run6	12/19/2014	17:45:15	3.52	0.00
run6	12/19/2014	17:45:30	3.44	0.00
run6	12/19/2014	17:45:45	3.32	2.45
run6	12/19/2014	17:46:00	3.35	0.42
run6	12/19/2014	17:46:15	3.47	0.20
run6	12/19/2014	17:46:30	3.66	0.18
run6	12/19/2014	17:46:45	3.86	0.05
run6	12/19/2014	17:47:00	3.86	0.05
run6	12/19/2014	17:47:15	3.58	0.06
run6	12/19/2014	17:47:30	3.65	0.18
run6	12/19/2014	17:47:45	3.77	0.54
run6	12/19/2014	17:48:00	3.75	0.01
run6	12/19/2014	17:48:15	3.65	0.00
run6	12/19/2014	17:48:30	3.94	0.00
run6	12/19/2014	17:49:00	3.94	0.00

run6	12/19/2014	17:49:15	4.02	0.08
run6	12/19/2014	17:49:30	3.89	0.17
run6	12/19/2014	17:49:45	3.63	0.21
run6	12/19/2014	17:50:00	3.69	0.03
run6	12/19/2014	17:50:15	3.69	0.00
run6	12/19/2014	17:50:30	3.82	0.06
run6	12/19/2014	17:50:45	3.96	0.13
run6	12/19/2014	17:51:00	3.90	0.08
run6	12/19/2014	17:51:15	3.72	0.09
run6	12/19/2014	17:51:30	3.66	0.00
run6	12/19/2014	17:51:45	3.70	0.00
run6	12/19/2014	17:52:00	3.80	0.00
run6	12/19/2014	17:52:15	3.81	2.41
run6	12/19/2014	17:52:30	3.60	0.54
run6	12/19/2014	17:52:45	3.54	0.46
run6	12/19/2014	17:53:00	3.69	0.17
run6	12/19/2014	17:53:15	3.73	0.00
run6	12/19/2014	17:53:30	3.69	0.00
run6	12/19/2014	17:53:45	3.66	0.19
run6	12/19/2014	17:54:00	3.49	0.12
run6	12/19/2014	17:54:15	3.46	0.08
run6	12/19/2014	17:54:30	3.58	0.20
run6	12/19/2014	17:54:45	3.54	0.49
run6	12/19/2014	17:55:00	3.54	0.14
run6	12/19/2014	17:55:15	3.66	0.28
run6	12/19/2014	17:55:30	3.59	0.33
run6	12/19/2014	17:55:45	3.49	0.00
run6	12/19/2014	17:56:00	3.64	0.04
run6	12/19/2014	17:56:15	3.72	0.16
run6	12/19/2014	17:56:30	3.68	0.19
run6	12/19/2014	17:56:45	3.66	0.15
run6	12/19/2014	17:57:00	3.67	0.24
run6	12/19/2014	17:57:15	3.65	0.20
run6	12/19/2014	17:57:30	3.57	0.12
run6	12/19/2014	17:57:45	3.68	0.00
run6	12/19/2014	17:58:00	3.69	0.00
run6	12/19/2014	17:58:15	3.46	0.18
run6	12/19/2014	17:58:30	3.54	0.22
run6	12/19/2014	17:58:45	4.22	0.43
run6	12/19/2014	17:59:00	4.67	0.25
run6	12/19/2014	17:59:15	4.81	0.25
run6	12/19/2014	17:59:30	4.84	2.39
run6	12/19/2014	17:59:45	5.04	0.39
run6	12/19/2014	18:00:00	5.15	0.05
run6	12/19/2014	18:00:15	5.01	0.00
run6	12/19/2014	18:00:30	4.77	0.02
run6	12/19/2014	18:00:45	4.15	0.00
run6	12/19/2014	18:01:00	3.76	0.01
run6	12/19/2014	18:01:15	3.60	0.00
run6	12/19/2014	18:01:30	3.60	0.02
run6	12/19/2014	18:01:45	3.61	0.01
run6	12/19/2014	18:02:00	3.76	0.00
run6	12/19/2014	18:02:15	3.66	0.00
run6	12/19/2014	18:02:30	3.57	0.14
run6	12/19/2014	18:02:45	3.81	0.31
run6	12/19/2014	18:03:00	3.82	0.20
run6	12/19/2014	18:03:15	3.64	0.06
run6	12/19/2014	18:03:30	3.53	0.10
averun6	12/19/2014	17:00:00	3.39	0.21

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scg4	12/19/2014	18:04:00	3.65	0.07	CC66094/cg4	CO	5.13		0
scg4	12/19/2014	18:04:15	3.66	0.51	CC66094/cg4	CO	5.13		0
scg4	12/19/2014	18:04:30	3.81	0.21	CC66094/cg4	CO	5.13		0
scg4	12/19/2014	18:04:45	4.66	0.15	CC66094/cg4	CO	5.13		0
scg4	12/19/2014	18:05:00	5.02	0.03	CC66094/cg4	CO	5.13		0
scg4	12/19/2014	18:05:15	5.07	0.00	CC66094/cg4	CO	5.13		0
scg4	12/19/2014	18:05:30	5.13	0.09	CC66094/cg4	CO	5.13		0
scg4	12/19/2014	18:05:45	5.07	0.10	CC66094/cg4	CO	5.13		0
o2zero1	12/19/2014	18:05:45	5.07	0.10	CC66094/cg4	CO	5.13		0
co2zero1	12/19/2014	18:05:45	5.07	0.10	CC66094/cg4	CO	5.13		0
cospan1	12/19/2014	18:05:30	5.13	0.09	CC66094/cg4	CO	5.13		0
scg8	12/19/2014	18:06:15	5.05	0.01	CC1076/cg8	O2	11.1	CO2	11.1
scg8	12/19/2014	18:06:30	5.05	0.00	CC1076/cg8	O2	11.1	CO2	11.1
scg8	12/19/2014	18:06:45	3.57	0.00	CC1076/cg8	O2	11.1	CO2	11.1
scg8	12/19/2014	18:07:00	0.64	0.00	CC1076/cg8	O2	11.1	CO2	11.1
scg8	12/19/2014	18:07:15	0.00	0.05	CC1076/cg8	O2	11.1	CO2	11.1
scg8	12/19/2014	18:07:30	0.00	2.02	CC1076/cg8	O2	11.1	CO2	11.1
scg8	12/19/2014	18:07:45	0.00	0.24	CC1076/cg8	O2	11.1	CO2	11.1
o2span1	12/19/2014	18:07:30	0.00	2.02	CC1076/cg8	O2	11.1	CO2	11.1
co2span1	12/19/2014	18:07:45	0.00	0.24	CC1076/cg8	O2	11.1	CO2	11.1
cozero1	12/19/2014	18:07:30	0.00	2.02	CC1076/cg8	O2	11.1	CO2	11.1
thczero1	12/19/2014	18:07:00	0.64	0.00	CC1076/cg8	O2	11.1	CO2	11.1
scg11	12/19/2014	18:08:15	0.00	0.00	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	18:08:30	0.00	1.02	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	18:08:45	0.00	3.16	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	18:09:00	0.00	4.17	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	18:09:15	0.05	4.55	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	18:09:30	0.02	4.91	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	18:09:45	0.04	4.67	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	18:10:00	0.01	4.51	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	18:10:15	0.01	5.24	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	18:10:30	0.03	5.38	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	18:10:45	0.03	5.13	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	18:11:00	0.03	5.05	LL107680/cg11	THC	5.06		0
scg11	12/19/2014	18:11:15	0.03	4.91	LL107680/cg11	THC	5.06		0
thcspan1	12/19/2014	18:10:45	0.03	5.13	LL107680/cg11	THC	5.06		0
dcg1	12/20/2014	6:39:15	0.13	0.00	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	6:39:30	0.00	0.00	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	6:39:45	0.00	0.00	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	6:40:00	0.00	0.00	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	6:40:15	0.00	0.00	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	6:40:30	0.00	0.00	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	6:40:45	0.00	0.00	ALM008053/cg1	N2	0	N2	0
o2ezero1	12/20/2014	6:40:45	0.00	0.00	ALM008053/cg1	N2	0	N2	0
co2ezero1	12/20/2014	6:40:45	0.00	0.00	ALM008053/cg1	N2	0	N2	0
coezero1	12/20/2014	6:40:30	0.00	0.00	ALM008053/cg1	N2	0	N2	0
dcg5	12/20/2014	6:41:15	0.62	0.00	ALM005790/cg5	CO	9.17		0
dcg5	12/20/2014	6:41:30	6.70	0.00	ALM005790/cg5	CO	9.17		0
dcg5	12/20/2014	6:41:45	9.50	0.00	ALM005790/cg5	CO	9.17		0
dcg5	12/20/2014	6:42:00	9.55	0.00	ALM005790/cg5	CO	9.17		0
dcg5	12/20/2014	6:42:15	9.53	0.00	ALM005790/cg5	CO	9.17		0
dcg5	12/20/2014	6:42:30	9.56	0.00	ALM005790/cg5	CO	9.17		0
dcg5	12/20/2014	6:42:45	9.49	0.00	ALM005790/cg5	CO	9.17		0
dcg5	12/20/2014	6:43:00	9.18	4.32	ALM005790/cg5	CO	9.17		0
dcg5	12/20/2014	6:43:15	9.16	10.00	ALM005790/cg5	CO	9.17		0
dcg5	12/20/2014	6:43:30	9.16	10.00	ALM005790/cg5	CO	9.17		0
dcg5	12/20/2014	6:43:45	9.17	9.70	ALM005790/cg5	CO	9.17		0
cohigh1	12/20/2014	6:43:30	9.16	10.00	ALM005790/cg5	CO	9.17		0
dcg4	12/20/2014	6:45:45	0.97	5.63	CC66094/cg4	CO	5.13		0

dcg4	12/20/2014	6:46:00	4.27	5.66	CC66094/cg4	CO	5.13		0
dcg4	12/20/2014	6:46:15	5.00	6.20	CC66094/cg4	CO	5.13		0
dcg4	12/20/2014	6:46:30	5.01	6.31	CC66094/cg4	CO	5.13		0
dcg4	12/20/2014	6:46:45	5.02	6.31	CC66094/cg4	CO	5.13		0
dcg4	12/20/2014	6:47:00	5.11	7.68	CC66094/cg4	CO	5.13		0
dcg4	12/20/2014	6:47:15	5.11	6.20	CC66094/cg4	CO	5.13		0
dcg4	12/20/2014	6:47:30	5.11	6.03	CC66094/cg4	CO	5.13		0
dcg4	12/20/2014	6:47:45	5.09	6.14	CC66094/cg4	CO	5.13		0
comid1	12/20/2014	6:47:30	5.11	6.03	CC66094/cg4	CO	5.13		0
dcg9	12/20/2014	6:48:00	4.76	6.98	ALM010233/cg9	O2	20	CO2	20.5
dcg9	12/20/2014	6:48:15	0.85	6.99	ALM010233/cg9	O2	20	CO2	20.5
dcg9	12/20/2014	6:48:30	0.00	6.62	ALM010233/cg9	O2	20	CO2	20.5
dcg9	12/20/2014	6:48:45	0.00	6.13	ALM010233/cg9	O2	20	CO2	20.5
dcg9	12/20/2014	6:49:00	0.00	5.76	ALM010233/cg9	O2	20	CO2	20.5
dcg9	12/20/2014	6:49:15	0.00	5.78	ALM010233/cg9	O2	20	CO2	20.5
dcg9	12/20/2014	6:49:30	0.00	5.82	ALM010233/cg9	O2	20	CO2	20.5
dcg9	12/20/2014	6:49:45	0.00	5.84	ALM010233/cg9	O2	20	CO2	20.5
dcg9	12/20/2014	6:50:00	0.00	6.15	ALM010233/cg9	O2	20	CO2	20.5
dcg9	12/20/2014	6:50:15	0.00	7.50	ALM010233/cg9	O2	20	CO2	20.5
dcg9	12/20/2014	6:50:30	0.00	5.81	ALM010233/cg9	O2	20	CO2	20.5
o2high1	12/20/2014	6:50:15	0.00	7.50	ALM010233/cg9	O2	20	CO2	20.5
co2high1	12/20/2014	6:50:15	0.00	7.50	ALM010233/cg9	O2	20	CO2	20.5
dcg8	12/20/2014	6:51:00	0.00	6.09	CC1076/cg8	O2	11.1	CO2	11.1
dcg8	12/20/2014	6:51:15	0.00	6.28	CC1076/cg8	O2	11.1	CO2	11.1
dcg8	12/20/2014	6:51:30	0.00	6.28	CC1076/cg8	O2	11.1	CO2	11.1
dcg8	12/20/2014	6:51:45	0.00	5.84	CC1076/cg8	O2	11.1	CO2	11.1
dcg8	12/20/2014	6:52:00	0.00	5.47	CC1076/cg8	O2	11.1	CO2	11.1
dcg8	12/20/2014	6:52:15	0.00	5.60	CC1076/cg8	O2	11.1	CO2	11.1
dcg8	12/20/2014	6:52:30	0.00	6.21	CC1076/cg8	O2	11.1	CO2	11.1
dcg8	12/20/2014	6:52:45	0.00	6.44	CC1076/cg8	O2	11.1	CO2	11.1
dcg8	12/20/2014	6:53:00	0.00	6.45	CC1076/cg8	O2	11.1	CO2	11.1
dcg8	12/20/2014	6:53:15	0.00	5.93	CC1076/cg8	O2	11.1	CO2	11.1
o2mid1	12/20/2014	6:53:00	0.00	6.45	CC1076/cg8	O2	11.1	CO2	11.1
co2mid1	12/20/2014	6:53:00	0.00	6.45	CC1076/cg8	O2	11.1	CO2	11.1
dcg1	12/20/2014	6:54:45	0.19	9.36	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	6:55:00	0.16	10.00	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	6:55:15	0.14	10.00	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	6:55:30	0.17	9.47	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	6:55:45	0.16	7.40	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	6:56:00	0.16	6.03	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	6:56:15	0.11	5.52	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	6:56:30	0.14	5.24	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	6:56:45	0.11	4.95	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	6:57:00	0.13	5.52	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	6:57:15	0.18	5.72	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	6:57:30	0.16	5.75	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	6:57:45	0.14	5.55	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	6:58:00	0.15	5.51	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	6:58:15	0.16	5.97	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	6:58:30	0.16	6.41	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	6:58:45	0.14	6.50	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	6:59:00	0.13	6.19	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	6:59:15	0.13	6.52	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	6:59:30	0.14	6.40	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	6:59:45	0.12	6.91	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	7:00:00	0.16	8.83	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	7:00:15	0.17	8.99	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	7:00:30	0.15	10.00	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	7:00:45	0.15	10.00	ALM008053/cg1	N2	0	N2	0

dcg1	12/20/2014	7:01:00	0.15	10.00	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	7:01:15	0.16	10.00	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	7:01:30	0.13	10.00	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	7:01:45	0.15	10.00	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	7:02:00	0.16	10.00	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	7:02:15	0.16	10.00	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	7:02:30	0.15	10.00	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	7:02:45	0.14	10.00	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	7:03:15	0.13	10.00	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	7:03:30	0.14	10.00	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	7:03:45	0.13	10.00	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	7:04:00	0.15	10.00	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	7:04:15	0.12	10.00	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	7:04:30	0.16	9.38	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	7:04:45	0.19	8.82	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	7:05:00	0.17	8.12	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	7:05:15	0.15	6.54	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	7:05:30	0.12	0.18	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	7:05:45	0.15	0.04	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	7:06:00	0.16	0.17	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	7:06:15	0.17	1.97	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	7:06:30	0.15	1.54	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	7:06:45	0.15	0.53	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	7:07:00	0.14	0.35	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	7:07:15	0.14	0.00	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	7:07:30	0.15	0.00	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	7:07:45	0.13	0.59	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	7:08:00	0.14	3.89	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	7:08:15	0.17	0.00	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	7:08:30	0.14	0.01	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	7:08:45	0.14	1.97	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	7:09:00	0.15	1.96	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	7:09:15	0.14	1.70	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	7:09:30	0.13	1.71	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	7:09:45	0.12	2.81	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	7:10:00	0.15	1.66	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	7:10:15	0.15	0.00	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	7:10:30	0.16	0.00	ALM008053/cg1	N2	0	N2	0
dcg1	12/20/2014	7:10:45	0.14	0.00	ALM008053/cg1	N2	0	N2	0
thcezero1	12/20/2014	7:10:45	0.14	0.00	ALM008053/cg1	N2	0	N2	0
dcg12	12/20/2014	7:11:15	0.21	0.00	LL67700/cg12	THC	8.72		0
dcg12	12/20/2014	7:11:30	0.27	0.00	LL67700/cg12	THC	8.72		0
dcg12	12/20/2014	7:11:45	0.29	0.00	LL67700/cg12	THC	8.72		0
dcg12	12/20/2014	7:12:00	0.30	0.00	LL67700/cg12	THC	8.72		0
dcg12	12/20/2014	7:12:15	0.27	0.00	LL67700/cg12	THC	8.72		0
dcg12	12/20/2014	7:12:30	0.26	0.00	LL67700/cg12	THC	8.72		0
dcg12	12/20/2014	7:12:45	0.30	0.00	LL67700/cg12	THC	8.72		0
dcg12	12/20/2014	7:13:00	0.28	0.00	LL67700/cg12	THC	8.72		0
dcg12	12/20/2014	7:13:15	0.30	0.00	LL67700/cg12	THC	8.72		0
dcg12	12/20/2014	7:13:30	0.25	3.80	LL67700/cg12	THC	8.72		0
dcg12	12/20/2014	7:13:45	0.25	0.10	LL67700/cg12	THC	8.72		0
dcg12	12/20/2014	7:14:00	0.25	0.00	LL67700/cg12	THC	8.72		0
dcg12	12/20/2014	7:14:15	0.24	0.00	LL67700/cg12	THC	8.72		0
dcg12	12/20/2014	7:14:30	0.27	2.85	LL67700/cg12	THC	8.72		0
dcg12	12/20/2014	7:14:45	0.25	10.00	LL67700/cg12	THC	8.72		0
dcg12	12/20/2014	7:15:00	0.26	10.00	LL67700/cg12	THC	8.72		0
dcg12	12/20/2014	7:15:15	0.26	10.00	LL67700/cg12	THC	8.72		0
dcg12	12/20/2014	7:15:30	0.25	10.00	LL67700/cg12	THC	8.72		0
dcg12	12/20/2014	7:15:45	0.23	10.00	LL67700/cg12	THC	8.72		0

dcg12	12/20/2014	7:16:00	0.25	8.83	LL67700/cg12	THC	8.72	0
dcg12	12/20/2014	7:16:15	0.28	8.62	LL67700/cg12	THC	8.72	0
dcg12	12/20/2014	7:16:30	0.27	9.07	LL67700/cg12	THC	8.72	0
dcg12	12/20/2014	7:16:45	0.24	8.92	LL67700/cg12	THC	8.72	0
dcg12	12/20/2014	7:17:00	0.26	9.05	LL67700/cg12	THC	8.72	0
dcg12	12/20/2014	7:17:15	0.30	8.95	LL67700/cg12	THC	8.72	0
dcg12	12/20/2014	7:17:30	0.28	8.96	LL67700/cg12	THC	8.72	0
dcg12	12/20/2014	7:17:45	0.27	8.99	LL67700/cg12	THC	8.72	0
dcg12	12/20/2014	7:18:00	0.26	8.81	LL67700/cg12	THC	8.72	0
dcg12	12/20/2014	7:18:15	0.29	7.84	LL67700/cg12	THC	8.72	0
dcg12	12/20/2014	7:18:30	0.27	8.30	LL67700/cg12	THC	8.72	0
dcg12	12/20/2014	7:18:45	0.23	8.56	LL67700/cg12	THC	8.72	0
dcg12	12/20/2014	7:19:00	0.23	8.79	LL67700/cg12	THC	8.72	0
dcg12	12/20/2014	7:19:15	0.24	8.63	LL67700/cg12	THC	8.72	0
thchigh1	12/20/2014	7:19:00	0.23	8.79	LL67700/cg12	THC	8.72	0
dcg11	12/20/2014	7:19:45	0.58	8.44	LL107680/cg11	THC	5.06	0
dcg11	12/20/2014	7:20:00	0.88	8.11	LL107680/cg11	THC	5.06	0
dcg11	12/20/2014	7:20:15	0.88	7.67	LL107680/cg11	THC	5.06	0
dcg11	12/20/2014	7:20:30	0.89	7.89	LL107680/cg11	THC	5.06	0
dcg11	12/20/2014	7:20:45	0.88	7.91	LL107680/cg11	THC	5.06	0
dcg11	12/20/2014	7:21:00	0.89	7.85	LL107680/cg11	THC	5.06	0
dcg11	12/20/2014	7:21:15	0.86	7.49	LL107680/cg11	THC	5.06	0
dcg11	12/20/2014	7:21:30	0.90	7.55	LL107680/cg11	THC	5.06	0
dcg11	12/20/2014	7:21:45	0.87	7.03	LL107680/cg11	THC	5.06	0
dcg11	12/20/2014	7:22:00	0.87	6.97	LL107680/cg11	THC	5.06	0
dcg11	12/20/2014	7:22:15	0.86	6.66	LL107680/cg11	THC	5.06	0
dcg11	12/20/2014	7:22:30	0.86	6.69	LL107680/cg11	THC	5.06	0
dcg11	12/20/2014	7:22:45	0.84	7.29	LL107680/cg11	THC	5.06	0
dcg11	12/20/2014	7:23:00	0.83	7.12	LL107680/cg11	THC	5.06	0
dcg11	12/20/2014	7:23:15	0.82	5.39	LL107680/cg11	THC	5.06	0
dcg11	12/20/2014	7:23:30	0.85	4.27	LL107680/cg11	THC	5.06	0
dcg11	12/20/2014	7:23:45	0.84	3.87	LL107680/cg11	THC	5.06	0
dcg11	12/20/2014	7:24:00	0.81	4.12	LL107680/cg11	THC	5.06	0
dcg11	12/20/2014	7:24:15	0.83	4.30	LL107680/cg11	THC	5.06	0
dcg11	12/20/2014	7:24:30	0.82	5.16	LL107680/cg11	THC	5.06	0
dcg11	12/20/2014	7:24:45	0.83	4.89	LL107680/cg11	THC	5.06	0
dcg11	12/20/2014	7:25:00	0.80	4.63	LL107680/cg11	THC	5.06	0
dcg11	12/20/2014	7:25:15	0.77	4.68	LL107680/cg11	THC	5.06	0
dcg11	12/20/2014	7:25:30	0.76	4.67	LL107680/cg11	THC	5.06	0
dcg11	12/20/2014	7:25:45	0.81	4.91	LL107680/cg11	THC	5.06	0
dcg11	12/20/2014	7:26:00	0.80	4.94	LL107680/cg11	THC	5.06	0
dcg11	12/20/2014	7:26:15	0.77	6.84	LL107680/cg11	THC	5.06	0
dcg11	12/20/2014	7:26:30	0.77	5.13	LL107680/cg11	THC	5.06	0
dcg11	12/20/2014	7:26:45	0.80	5.51	LL107680/cg11	THC	5.06	0
dcg11	12/20/2014	7:27:00	0.77	5.37	LL107680/cg11	THC	5.06	0
dcg11	12/20/2014	7:27:15	0.78	5.40	LL107680/cg11	THC	5.06	0
dcg11	12/20/2014	7:27:30	0.80	5.15	LL107680/cg11	THC	5.06	0
dcg11	12/20/2014	7:27:45	0.78	5.00	LL107680/cg11	THC	5.06	0
dcg11	12/20/2014	7:28:00	0.76	4.92	LL107680/cg11	THC	5.06	0
thcmid1	12/20/2014	7:27:45	0.78	5.00	LL107680/cg11	THC	5.06	0
dcg10	12/20/2014	7:28:30	0.95	4.85	BLM002982/cg10	THC	3.01	0
dcg10	12/20/2014	7:28:45	1.20	4.21	BLM002982/cg10	THC	3.01	0
dcg10	12/20/2014	7:29:00	1.20	3.49	BLM002982/cg10	THC	3.01	0
dcg10	12/20/2014	7:29:15	1.16	3.17	BLM002982/cg10	THC	3.01	0
dcg10	12/20/2014	7:29:30	1.19	3.63	BLM002982/cg10	THC	3.01	0
dcg10	12/20/2014	7:29:45	1.18	3.34	BLM002982/cg10	THC	3.01	0
dcg10	12/20/2014	7:30:00	1.16	3.19	BLM002982/cg10	THC	3.01	0
dcg10	12/20/2014	7:30:15	1.16	3.38	BLM002982/cg10	THC	3.01	0
dcg10	12/20/2014	7:30:30	1.15	3.28	BLM002982/cg10	THC	3.01	0

dcg10	12/20/2014	7:30:45	1.16	2.89	BLM002982/cg10	THC	3.01		0
dcg10	12/20/2014	7:31:00	1.16	2.70	BLM002982/cg10	THC	3.01		0
dcg10	12/20/2014	7:31:15	1.13	2.67	BLM002982/cg10	THC	3.01		0
dcg10	12/20/2014	7:31:30	1.11	2.71	BLM002982/cg10	THC	3.01		0
dcg10	12/20/2014	7:31:45	1.14	5.24	BLM002982/cg10	THC	3.01		0
dcg10	12/20/2014	7:32:00	1.12	1.95	BLM002982/cg10	THC	3.01		0
dcg10	12/20/2014	7:32:15	1.14	1.27	BLM002982/cg10	THC	3.01		0
dcg10	12/20/2014	7:32:30	1.07	0.91	BLM002982/cg10	THC	3.01		0
dcg10	12/20/2014	7:32:45	1.13	1.31	BLM002982/cg10	THC	3.01		0
dcg10	12/20/2014	7:33:00	1.10	1.07	BLM002982/cg10	THC	3.01		0
dcg10	12/20/2014	7:33:15	1.10	1.18	BLM002982/cg10	THC	3.01		0
dcg10	12/20/2014	7:33:30	1.08	1.05	BLM002982/cg10	THC	3.01		0
dcg10	12/20/2014	7:33:45	1.05	1.33	BLM002982/cg10	THC	3.01		0
dcg10	12/20/2014	7:34:00	1.08	1.30	BLM002982/cg10	THC	3.01		0
dcg10	12/20/2014	7:34:15	1.11	1.10	BLM002982/cg10	THC	3.01		0
dcg10	12/20/2014	7:34:30	1.09	2.66	BLM002982/cg10	THC	3.01		0
dcg10	12/20/2014	7:34:45	1.07	4.15	BLM002982/cg10	THC	3.01		0
dcg10	12/20/2014	7:35:00	1.07	3.07	BLM002982/cg10	THC	3.01		0
dcg10	12/20/2014	7:35:15	1.06	2.89	BLM002982/cg10	THC	3.01		0
dcg10	12/20/2014	7:35:30	1.06	2.87	BLM002982/cg10	THC	3.01		0
dcg10	12/20/2014	7:35:45	1.06	2.89	BLM002982/cg10	THC	3.01		0
thclow1	12/20/2014	7:35:00	1.07	3.07	BLM002982/cg10	THC	3.01		0
scg4	12/20/2014	7:38:15	0.31	0.00	CC66094/cg4	CO	5.13		0
scg4	12/20/2014	7:38:30	0.33	0.00	CC66094/cg4	CO	5.13		0
scg4	12/20/2014	7:38:45	1.76	0.00	CC66094/cg4	CO	5.13		0
scg4	12/20/2014	7:39:00	4.18	0.00	CC66094/cg4	CO	5.13		0
scg4	12/20/2014	7:39:15	5.13	0.00	CC66094/cg4	CO	5.13		0
scg4	12/20/2014	7:39:30	5.21	0.00	CC66094/cg4	CO	5.13		0
scg4	12/20/2014	7:39:45	5.25	0.00	CC66094/cg4	CO	5.13		0
scg4	12/20/2014	7:40:00	5.24	0.00	CC66094/cg4	CO	5.13		0
scg4	12/20/2014	7:40:15	5.22	0.00	CC66094/cg4	CO	5.13		0
scg4	12/20/2014	7:40:30	5.21	0.00	CC66094/cg4	CO	5.13		0
scg4	12/20/2014	7:40:45	5.21	0.00	CC66094/cg4	CO	5.13		0
scg4	12/20/2014	7:41:00	5.19	0.00	CC66094/cg4	CO	5.13		0
scg4	12/20/2014	7:41:15	5.19	0.00	CC66094/cg4	CO	5.13		0
o2zero1	12/20/2014	7:41:00	5.19	0.00	CC66094/cg4	CO	5.13		0
co2zero1	12/20/2014	7:40:30	5.21	0.00	CC66094/cg4	CO	5.13		0
cospan1	12/20/2014	7:40:15	5.22	0.00	CC66094/cg4	CO	5.13		0
scg8	12/20/2014	7:41:30	5.24	0.01	CC1076/cg8	O2	11.1	CO2	11.1
scg8	12/20/2014	7:41:45	5.12	0.00	CC1076/cg8	O2	11.1	CO2	11.1
scg8	12/20/2014	7:42:00	3.59	0.00	CC1076/cg8	O2	11.1	CO2	11.1
scg8	12/20/2014	7:42:15	0.74	0.00	CC1076/cg8	O2	11.1	CO2	11.1
scg8	12/20/2014	7:42:30	0.03	0.00	CC1076/cg8	O2	11.1	CO2	11.1
scg8	12/20/2014	7:42:45	0.00	0.00	CC1076/cg8	O2	11.1	CO2	11.1
scg8	12/20/2014	7:43:00	0.00	0.00	CC1076/cg8	O2	11.1	CO2	11.1
scg8	12/20/2014	7:43:15	0.00	1.06	CC1076/cg8	O2	11.1	CO2	11.1
o2span1	12/20/2014	7:43:00	0.00	0.00	CC1076/cg8	O2	11.1	CO2	11.1
co2span1	12/20/2014	7:43:15	0.00	1.06	CC1076/cg8	O2	11.1	CO2	11.1
cozero1	12/20/2014	7:43:00	0.00	0.00	CC1076/cg8	O2	11.1	CO2	11.1
thczero1	12/20/2014	7:43:00	0.00	0.00	CC1076/cg8	O2	11.1	CO2	11.1
scg11	12/20/2014	7:43:45	0.00	0.02	LL107680/cg11	THC	5.06		0
scg11	12/20/2014	7:44:00	0.00	0.63	LL107680/cg11	THC	5.06		0
scg11	12/20/2014	7:44:15	0.02	1.57	LL107680/cg11	THC	5.06		0
scg11	12/20/2014	7:44:30	0.14	2.06	LL107680/cg11	THC	5.06		0
scg11	12/20/2014	7:44:45	0.19	2.31	LL107680/cg11	THC	5.06		0
scg11	12/20/2014	7:45:00	0.18	2.50	LL107680/cg11	THC	5.06		0
scg11	12/20/2014	7:45:15	0.22	2.28	LL107680/cg11	THC	5.06		0
scg11	12/20/2014	7:45:30	0.25	2.57	LL107680/cg11	THC	5.06		0
scg11	12/20/2014	7:45:45	0.24	4.91	LL107680/cg11	THC	5.06		0

scg11	12/20/2014	7:46:00	0.23	4.95	LL107680/cg11	THC	5.06	0
scg11	12/20/2014	7:46:15	0.24	5.17	LL107680/cg11	THC	5.06	0
scg11	12/20/2014	7:46:30	0.23	5.33	LL107680/cg11	THC	5.06	0
thcspan1	12/20/2014	7:46:00	0.23	4.95	LL107680/cg11	THC	5.06	0
run7	12/20/2014	11:15:00	6.22	0.71				
run7	12/20/2014	11:15:15	6.46	0.78				
run7	12/20/2014	11:15:30	6.36	3.77				
run7	12/20/2014	11:15:45	6.14	1.09				
run7	12/20/2014	11:16:00	5.94	1.21				
run7	12/20/2014	11:16:15	5.90	0.88				
run7	12/20/2014	11:16:30	5.81	0.86				
run7	12/20/2014	11:16:45	5.94	0.81				
run7	12/20/2014	11:17:00	6.03	0.72				
run7	12/20/2014	11:17:15	6.17	0.49				
run7	12/20/2014	11:17:30	6.29	0.74				
run7	12/20/2014	11:17:45	6.22	1.04				
run7	12/20/2014	11:18:00	6.24	0.64				
run7	12/20/2014	11:18:15	6.21	0.48				
run7	12/20/2014	11:18:30	6.08	0.63				
run7	12/20/2014	11:18:45	6.00	0.52				
run7	12/20/2014	11:19:00	5.93	0.49				
run7	12/20/2014	11:19:15	6.11	0.23				
run7	12/20/2014	11:19:30	6.20	0.30				
run7	12/20/2014	11:19:45	6.35	0.76				
run7	12/20/2014	11:20:00	6.36	0.46				
run7	12/20/2014	11:20:15	6.18	0.42				
run7	12/20/2014	11:20:30	5.93	0.59				
run7	12/20/2014	11:20:45	5.98	0.72				
run7	12/20/2014	11:21:00	6.13	0.77				
run7	12/20/2014	11:21:15	5.92	1.04				
run7	12/20/2014	11:21:30	5.77	1.27				
run7	12/20/2014	11:21:45	6.05	0.80				
run7	12/20/2014	11:22:00	6.20	0.80				
run7	12/20/2014	11:22:15	5.93	0.68				
run7	12/20/2014	11:22:30	5.91	0.65				
run7	12/20/2014	11:22:45	6.06	0.46				
run7	12/20/2014	11:23:00	6.08	0.47				
run7	12/20/2014	11:23:15	6.05	0.55				
run7	12/20/2014	11:23:30	6.23	0.77				
run7	12/20/2014	11:23:45	6.72	0.49				
run7	12/20/2014	11:24:00	5.15	0.50				
run7	12/20/2014	11:24:15	3.51	0.39				
run7	12/20/2014	11:24:30	3.36	0.38				
run7	12/20/2014	11:24:45	3.16	0.37				
run7	12/20/2014	11:25:00	2.98	0.09				
run7	12/20/2014	11:25:15	2.90	0.10				
run7	12/20/2014	11:25:30	2.92	0.25				
run7	12/20/2014	11:25:45	3.18	0.58				
run7	12/20/2014	11:26:00	3.33	0.49				
run7	12/20/2014	11:26:15	3.38	0.26				
run7	12/20/2014	11:26:30	3.27	0.26				
run7	12/20/2014	11:26:45	3.12	0.23				
run7	12/20/2014	11:27:00	2.92	0.51				
run7	12/20/2014	11:27:15	2.82	0.67				
run7	12/20/2014	11:27:30	2.79	0.56				
run7	12/20/2014	11:27:45	2.96	0.42				
run7	12/20/2014	11:28:00	2.93	0.27				
run7	12/20/2014	11:28:15	2.91	0.33				
run7	12/20/2014	11:28:45	2.84	0.35				

run7	12/20/2014	11:29:00	2.84	0.53
run7	12/20/2014	11:29:15	2.72	0.58
run7	12/20/2014	11:29:30	2.83	0.14
run7	12/20/2014	11:29:45	2.89	0.16
run7	12/20/2014	11:30:00	2.91	0.13
run7	12/20/2014	11:30:15	2.76	0.19
run7	12/20/2014	11:30:30	2.71	0.19
run7	12/20/2014	11:30:45	2.70	0.42
run7	12/20/2014	11:31:00	2.64	0.47
run7	12/20/2014	11:31:15	2.48	0.50
run7	12/20/2014	11:31:30	2.61	0.49
run7	12/20/2014	11:31:45	2.70	1.08
run7	12/20/2014	11:32:00	2.66	0.97
run7	12/20/2014	11:32:15	2.65	0.94
run7	12/20/2014	11:32:30	2.71	0.89
run7	12/20/2014	11:32:45	2.87	0.34
run7	12/20/2014	11:33:00	2.92	0.23
run7	12/20/2014	11:33:15	3.27	0.39
run7	12/20/2014	11:33:30	4.72	0.97
run7	12/20/2014	11:33:45	5.50	0.87
run7	12/20/2014	11:34:00	5.74	0.65
run7	12/20/2014	11:34:15	5.81	0.50
run7	12/20/2014	11:34:30	5.89	0.54
run7	12/20/2014	11:34:45	5.90	0.50
run7	12/20/2014	11:35:00	5.90	0.33
run7	12/20/2014	11:35:15	5.90	0.50
run7	12/20/2014	11:35:30	5.96	0.52
run7	12/20/2014	11:35:45	6.01	0.56
run7	12/20/2014	11:36:00	5.92	0.64
run7	12/20/2014	11:36:15	5.84	0.74
run7	12/20/2014	11:36:30	5.75	0.68
run7	12/20/2014	11:36:45	5.73	0.63
run7	12/20/2014	11:37:00	5.74	0.69
run7	12/20/2014	11:37:15	5.68	0.66
run7	12/20/2014	11:37:30	5.67	0.42
run7	12/20/2014	11:37:45	5.75	0.18
run7	12/20/2014	11:38:00	5.80	0.34
run7	12/20/2014	11:38:15	5.87	0.39
run7	12/20/2014	11:38:30	6.04	0.51
run7	12/20/2014	11:38:45	6.04	0.68
run7	12/20/2014	11:39:00	5.98	0.77
run7	12/20/2014	11:39:15	5.86	0.55
run7	12/20/2014	11:39:30	5.95	0.74
run7	12/20/2014	11:39:45	6.04	0.38
run7	12/20/2014	11:40:00	6.00	0.24
run7	12/20/2014	11:40:15	6.11	0.45
run7	12/20/2014	11:40:30	6.19	0.42
run7	12/20/2014	11:40:45	6.13	0.20
run7	12/20/2014	11:41:00	6.08	0.28
run7	12/20/2014	11:41:15	6.06	0.36
run7	12/20/2014	11:41:30	6.03	0.25
run7	12/20/2014	11:41:45	6.01	0.53
run7	12/20/2014	11:42:00	6.05	0.73
run7	12/20/2014	11:42:15	6.06	0.48
run7	12/20/2014	11:42:30	6.11	0.54
run7	12/20/2014	11:42:45	6.19	0.45
run7	12/20/2014	11:43:00	6.18	0.50
run7	12/20/2014	11:43:15	6.49	0.09
run7	12/20/2014	11:43:30	5.70	0.37

run7	12/20/2014	11:43:45	3.92	0.23
run7	12/20/2014	11:44:00	3.49	0.04
run7	12/20/2014	11:44:15	3.32	0.46
run7	12/20/2014	11:44:30	3.21	0.75
run7	12/20/2014	11:44:45	3.21	0.99
run7	12/20/2014	11:45:00	3.14	0.69
run7	12/20/2014	11:45:15	3.10	0.13
run7	12/20/2014	11:45:30	3.24	0.46
run7	12/20/2014	11:45:45	3.22	0.75
run7	12/20/2014	11:46:00	3.31	0.68
run7	12/20/2014	11:46:15	3.21	0.79
run7	12/20/2014	11:46:30	2.75	0.64
run7	12/20/2014	11:47:00	2.64	0.71
run7	12/20/2014	11:47:15	2.85	0.72
run7	12/20/2014	11:47:30	2.84	0.78
run7	12/20/2014	11:47:45	2.99	0.99
run7	12/20/2014	11:48:00	2.98	0.99
run7	12/20/2014	11:48:15	3.08	0.80
run7	12/20/2014	11:48:30	3.17	0.70
run7	12/20/2014	11:48:45	2.94	0.51
run7	12/20/2014	11:49:00	2.94	0.07
run7	12/20/2014	11:49:15	3.01	0.14
run7	12/20/2014	11:49:30	2.92	0.28
run7	12/20/2014	11:49:45	3.03	0.48
run7	12/20/2014	11:50:00	2.95	0.76
run7	12/20/2014	11:50:15	2.70	0.54
run7	12/20/2014	11:50:30	2.61	0.23
run7	12/20/2014	11:50:45	2.87	0.36
run7	12/20/2014	11:51:00	2.98	0.12
run7	12/20/2014	11:51:15	3.02	0.18
run7	12/20/2014	11:51:30	3.14	0.76
run7	12/20/2014	11:51:45	3.21	0.40
run7	12/20/2014	11:52:00	3.21	0.56
run7	12/20/2014	11:52:15	3.23	0.69
run7	12/20/2014	11:52:30	3.10	0.39
run7	12/20/2014	11:52:45	3.09	0.33
run7	12/20/2014	11:53:00	3.04	0.00
run7	12/20/2014	11:53:15	3.17	0.43
run7	12/20/2014	11:53:30	4.31	0.80
run7	12/20/2014	11:53:45	5.34	0.83
run7	12/20/2014	11:54:00	5.65	0.43
run7	12/20/2014	11:54:15	5.59	0.44
run7	12/20/2014	11:54:30	5.69	0.40
run7	12/20/2014	11:54:45	5.83	0.42
run7	12/20/2014	11:55:00	5.82	0.43
run7	12/20/2014	11:55:15	5.80	0.37
run7	12/20/2014	11:55:30	5.76	0.20
run7	12/20/2014	11:55:45	5.73	0.33
run7	12/20/2014	11:56:00	5.83	0.41
run7	12/20/2014	11:56:15	5.79	0.28
run7	12/20/2014	11:56:30	5.83	0.34
run7	12/20/2014	11:56:45	5.98	0.29
run7	12/20/2014	11:57:00	5.83	0.53
run7	12/20/2014	11:57:15	5.92	0.33
run7	12/20/2014	11:57:30	6.10	0.76
run7	12/20/2014	11:57:45	5.98	1.01
run7	12/20/2014	11:58:00	5.93	0.96
run7	12/20/2014	11:58:15	5.80	0.76
run7	12/20/2014	11:58:30	5.83	0.86

run7	12/20/2014	11:58:45	5.89	0.73
run7	12/20/2014	11:59:00	5.88	0.82
run7	12/20/2014	11:59:15	5.99	0.93
run7	12/20/2014	11:59:30	5.88	0.86
run7	12/20/2014	11:59:45	5.85	0.43
run7	12/20/2014	12:00:00	5.95	0.28
run7	12/20/2014	12:00:15	5.87	0.34
run7	12/20/2014	12:00:30	5.95	0.59
run7	12/20/2014	12:00:45	6.08	0.68
run7	12/20/2014	12:01:00	6.08	0.75
run7	12/20/2014	12:01:15	6.10	0.87
run7	12/20/2014	12:01:30	6.10	1.20
run7	12/20/2014	12:01:45	6.03	1.11
run7	12/20/2014	12:02:00	5.98	0.79
run7	12/20/2014	12:02:15	6.02	1.03
run7	12/20/2014	12:02:30	6.08	0.58
run7	12/20/2014	12:02:45	6.11	0.28
run7	12/20/2014	12:03:00	6.02	0.72
run7	12/20/2014	12:03:15	6.07	0.68
run7	12/20/2014	12:03:30	5.86	0.64
run7	12/20/2014	12:03:45	4.39	0.69
run7	12/20/2014	12:04:00	3.54	0.74
run7	12/20/2014	12:04:15	3.16	0.56
run7	12/20/2014	12:04:30	2.72	0.49
run7	12/20/2014	12:05:00	2.66	0.42
run7	12/20/2014	12:05:15	2.80	0.48
run7	12/20/2014	12:05:30	3.02	0.37
run7	12/20/2014	12:05:45	3.06	0.33
run7	12/20/2014	12:06:00	3.03	0.12
run7	12/20/2014	12:06:15	3.02	0.19
run7	12/20/2014	12:06:30	2.98	0.37
run7	12/20/2014	12:06:45	2.66	0.46
run7	12/20/2014	12:07:00	2.61	0.16
run7	12/20/2014	12:07:15	2.71	0.86
run7	12/20/2014	12:07:30	2.54	0.82
run7	12/20/2014	12:07:45	2.38	0.94
run7	12/20/2014	12:08:00	2.28	0.68
run7	12/20/2014	12:08:15	2.27	0.63
run7	12/20/2014	12:08:30	2.40	0.64
run7	12/20/2014	12:08:45	2.38	0.36
run7	12/20/2014	12:09:00	2.26	0.71
run7	12/20/2014	12:09:15	2.27	1.39
run7	12/20/2014	12:09:30	2.21	0.71
run7	12/20/2014	12:09:45	2.12	0.34
run7	12/20/2014	12:10:00	2.19	0.13
run7	12/20/2014	12:10:15	2.17	0.51
run7	12/20/2014	12:10:30	2.12	0.61
run7	12/20/2014	12:10:45	2.17	0.45
run7	12/20/2014	12:11:00	2.37	0.29
run7	12/20/2014	12:11:15	2.37	0.26
run7	12/20/2014	12:11:30	1.97	0.37
run7	12/20/2014	12:11:45	1.96	0.56
run7	12/20/2014	12:12:00	2.09	0.56
run7	12/20/2014	12:12:15	2.05	0.55
run7	12/20/2014	12:12:30	2.09	0.56
run7	12/20/2014	12:12:45	2.24	0.41
run7	12/20/2014	12:13:00	2.16	0.57
run7	12/20/2014	12:13:15	2.17	0.47
run7	12/20/2014	12:13:30	3.09	0.88

run7	12/20/2014	12:13:45	4.64	0.41					
run7	12/20/2014	12:14:00	5.19	0.53					
run7	12/20/2014	12:14:15	4.98	0.58					
run7	12/20/2014	12:14:30	4.86	0.35					
run7	12/20/2014	12:14:45	4.98	0.45					
run7	12/20/2014	12:15:00	5.07	0.38					
run7	12/20/2014	12:15:15	5.36	0.69					
run7	12/20/2014	12:15:30	5.33	0.81					
run7	12/20/2014	12:15:45	5.25	0.84					
run7	12/20/2014	12:16:00	5.29	0.81					
run7	12/20/2014	12:16:15	5.24	0.75					
run7	12/20/2014	12:16:30	5.26	0.87					
run7	12/20/2014	12:16:45	5.15	0.76					
run7	12/20/2014	12:17:00	5.13	0.44					
run7	12/20/2014	12:17:15	5.28	0.49					
run7	12/20/2014	12:17:30	5.25	0.64					
run7	12/20/2014	12:17:45	5.22	0.67					
run7	12/20/2014	12:18:00	5.27	0.82					
averun7	12/20/2014	11:15:30	4.47	0.56	62				
scg4	12/20/2014	12:18:30	5.17	0.52	CC66094/cg4	CO	5.13		0
scg4	12/20/2014	12:18:45	5.25	0.45	CC66094/cg4	CO	5.13		0
scg4	12/20/2014	12:19:00	5.42	0.63	CC66094/cg4	CO	5.13		0
scg4	12/20/2014	12:19:15	5.23	0.47	CC66094/cg4	CO	5.13		0
scg4	12/20/2014	12:19:30	5.07	0.22	CC66094/cg4	CO	5.13		0
scg4	12/20/2014	12:19:45	4.99	0.11	CC66094/cg4	CO	5.13		0
o2zero1	12/20/2014	12:19:45	4.99	0.11	CC66094/cg4	CO	5.13		0
co2zero1	12/20/2014	12:19:45	4.99	0.11	CC66094/cg4	CO	5.13		0
cospan1	12/20/2014	12:19:30	5.07	0.22	CC66094/cg4	CO	5.13		0
scg8	12/20/2014	12:20:30	4.98	0.01	CC1076/cg8	O2	11.1	CO2	11.1
scg8	12/20/2014	12:20:45	4.98	0.06	CC1076/cg8	O2	11.1	CO2	11.1
scg8	12/20/2014	12:21:00	3.48	0.07	CC1076/cg8	O2	11.1	CO2	11.1
scg8	12/20/2014	12:21:15	0.72	0.04	CC1076/cg8	O2	11.1	CO2	11.1
scg8	12/20/2014	12:21:30	0.00	0.16	CC1076/cg8	O2	11.1	CO2	11.1
scg8	12/20/2014	12:21:45	0.00	0.04	CC1076/cg8	O2	11.1	CO2	11.1
scg8	12/20/2014	12:22:00	0.00	0.01	CC1076/cg8	O2	11.1	CO2	11.1
scg8	12/20/2014	12:22:15	0.00	0.00	CC1076/cg8	O2	11.1	CO2	11.1
o2span1	12/20/2014	12:22:00	0.00	0.01	CC1076/cg8	O2	11.1	CO2	11.1
co2span1	12/20/2014	12:22:00	0.00	0.01	CC1076/cg8	O2	11.1	CO2	11.1
cozero1	12/20/2014	12:22:00	0.00	0.01	CC1076/cg8	O2	11.1	CO2	11.1
thczero1	12/20/2014	12:22:15	0.00	0.00	CC1076/cg8	O2	11.1	CO2	11.1
scg11	12/20/2014	12:22:45	0.00	0.01	LL107680/cg11	THC	5.06		0
scg11	12/20/2014	12:23:00	0.00	0.94	LL107680/cg11	THC	5.06		0
scg11	12/20/2014	12:23:15	0.00	2.79	LL107680/cg11	THC	5.06		0
scg11	12/20/2014	12:23:30	0.03	3.95	LL107680/cg11	THC	5.06		0
scg11	12/20/2014	12:23:45	0.04	4.71	LL107680/cg11	THC	5.06		0
scg11	12/20/2014	12:24:00	0.06	4.71	LL107680/cg11	THC	5.06		0
scg11	12/20/2014	12:24:15	0.09	4.99	LL107680/cg11	THC	5.06		0
scg11	12/20/2014	12:24:30	0.09	4.93	LL107680/cg11	THC	5.06		0
scg11	12/20/2014	12:24:45	0.09	5.21	LL107680/cg11	THC	5.06		0
scg11	12/20/2014	12:25:00	0.08	5.55	LL107680/cg11	THC	5.06		0
thcspan1	12/20/2014	12:24:15	0.09	4.99	LL107680/cg11	THC	5.06		0
run8	12/20/2014	12:33:00	8.25	0.83					
run8	12/20/2014	12:33:15	7.80	0.75					
run8	12/20/2014	12:33:30	7.79	0.61					
run8	12/20/2014	12:33:45	7.32	0.83					
run8	12/20/2014	12:34:00	7.12	0.49					
run8	12/20/2014	12:34:15	7.94	0.76					
run8	12/20/2014	12:34:30	8.69	0.59					
run8	12/20/2014	12:34:45	8.24	0.10					

run8	12/20/2014	12:35:00	7.27	0.52
run8	12/20/2014	12:35:15	7.04	0.39
run8	12/20/2014	12:35:30	6.85	0.54
run8	12/20/2014	12:35:45	7.39	0.28
run8	12/20/2014	12:36:00	7.60	0.52
run8	12/20/2014	12:36:15	6.87	0.58
run8	12/20/2014	12:36:30	6.52	0.40
run8	12/20/2014	12:36:45	6.66	0.33
run8	12/20/2014	12:37:00	6.80	0.46
run8	12/20/2014	12:37:15	6.97	0.23
run8	12/20/2014	12:37:30	6.82	0.55
run8	12/20/2014	12:37:45	6.59	0.49
run8	12/20/2014	12:38:00	6.58	0.51
run8	12/20/2014	12:38:15	7.00	0.65
run8	12/20/2014	12:38:30	7.39	0.98
run8	12/20/2014	12:38:45	7.62	0.99
run8	12/20/2014	12:39:00	7.15	0.88
run8	12/20/2014	12:39:15	6.79	1.15
run8	12/20/2014	12:39:30	7.12	0.63
run8	12/20/2014	12:39:45	7.74	0.18
run8	12/20/2014	12:40:00	7.77	0.14
run8	12/20/2014	12:40:15	7.32	0.17
run8	12/20/2014	12:40:30	7.16	0.42
run8	12/20/2014	12:40:45	6.70	0.47
run8	12/20/2014	12:41:00	6.45	0.36
run8	12/20/2014	12:41:15	6.77	0.54
run8	12/20/2014	12:41:30	6.83	0.67
run8	12/20/2014	12:41:45	5.19	0.53
run8	12/20/2014	12:42:00	4.14	0.81
run8	12/20/2014	12:42:15	4.13	0.70
run8	12/20/2014	12:42:30	4.34	0.58
run8	12/20/2014	12:42:45	4.10	0.62
run8	12/20/2014	12:43:00	3.73	1.10
run8	12/20/2014	12:43:15	3.61	0.62
run8	12/20/2014	12:43:30	3.72	0.28
run8	12/20/2014	12:43:45	3.71	0.70
run8	12/20/2014	12:44:00	3.53	0.43
run8	12/20/2014	12:44:15	3.51	0.62
run8	12/20/2014	12:44:45	3.54	0.66
run8	12/20/2014	12:45:00	3.54	0.90
run8	12/20/2014	12:45:15	3.56	1.15
run8	12/20/2014	12:45:30	3.63	1.10
run8	12/20/2014	12:45:45	3.67	1.10
run8	12/20/2014	12:46:00	3.74	1.47
run8	12/20/2014	12:46:15	3.62	1.30
run8	12/20/2014	12:46:30	3.36	1.32
run8	12/20/2014	12:46:45	3.23	0.94
run8	12/20/2014	12:47:00	3.49	0.92
run8	12/20/2014	12:47:15	3.51	0.99
run8	12/20/2014	12:47:30	3.38	0.74
run8	12/20/2014	12:47:45	3.29	0.39
run8	12/20/2014	12:48:00	3.38	0.44
run8	12/20/2014	12:48:15	3.35	0.19
run8	12/20/2014	12:48:30	3.22	0.43
run8	12/20/2014	12:48:45	3.23	0.78
run8	12/20/2014	12:49:00	3.19	0.54
run8	12/20/2014	12:49:15	3.32	0.42
run8	12/20/2014	12:49:30	3.26	0.28
run8	12/20/2014	12:49:45	2.99	0.48

run8	12/20/2014	12:50:00	2.98	1.01
run8	12/20/2014	12:50:15	3.18	1.31
run8	12/20/2014	12:50:30	3.45	0.50
run8	12/20/2014	12:50:45	3.46	0.85
run8	12/20/2014	12:51:00	3.54	0.10
run8	12/20/2014	12:51:15	5.00	0.75
run8	12/20/2014	12:51:30	7.78	0.80
run8	12/20/2014	12:51:45	7.58	0.23
run8	12/20/2014	12:52:00	6.66	0.79
run8	12/20/2014	12:52:15	7.14	0.91
run8	12/20/2014	12:52:30	6.55	0.56
run8	12/20/2014	12:52:45	6.01	0.69
run8	12/20/2014	12:53:00	6.59	0.83
run8	12/20/2014	12:53:15	7.85	0.81
run8	12/20/2014	12:53:30	8.78	0.82
run8	12/20/2014	12:53:45	8.73	1.13
run8	12/20/2014	12:54:00	8.23	1.28
run8	12/20/2014	12:54:15	8.67	1.31
run8	12/20/2014	12:54:30	8.72	1.43
run8	12/20/2014	12:54:45	8.56	1.47
run8	12/20/2014	12:55:00	8.58	1.00
run8	12/20/2014	12:55:15	7.36	0.77
run8	12/20/2014	12:55:30	6.93	0.66
run8	12/20/2014	12:55:45	7.44	0.46
run8	12/20/2014	12:56:00	7.34	0.64
run8	12/20/2014	12:56:15	7.40	0.30
run8	12/20/2014	12:56:30	6.40	0.52
run8	12/20/2014	12:56:45	7.51	0.90
run8	12/20/2014	12:57:00	8.54	1.09
run8	12/20/2014	12:57:15	8.56	0.85
run8	12/20/2014	12:57:30	8.28	0.87
run8	12/20/2014	12:57:45	7.70	1.44
run8	12/20/2014	12:58:00	8.23	1.52
run8	12/20/2014	12:58:15	8.82	1.15
run8	12/20/2014	12:58:30	8.14	0.74
run8	12/20/2014	12:58:45	8.27	0.80
run8	12/20/2014	12:59:00	8.27	0.75
run8	12/20/2014	12:59:15	7.91	0.85
run8	12/20/2014	12:59:30	7.53	0.55
run8	12/20/2014	12:59:45	7.63	0.90
run8	12/20/2014	13:00:00	7.83	0.76
run8	12/20/2014	13:00:15	7.93	0.50
run8	12/20/2014	13:00:30	7.88	0.54
run8	12/20/2014	13:00:45	7.50	0.67
run8	12/20/2014	13:01:00	5.64	0.36
run8	12/20/2014	13:01:15	4.92	0.26
run8	12/20/2014	13:01:30	5.18	0.32
run8	12/20/2014	13:01:45	4.23	0.34
run8	12/20/2014	13:02:00	3.59	0.34
run8	12/20/2014	13:02:15	3.46	1.06
run8	12/20/2014	13:02:30	3.38	0.72
run8	12/20/2014	13:03:00	3.21	0.63
run8	12/20/2014	13:03:15	2.78	0.94
run8	12/20/2014	13:03:30	2.39	0.52
run8	12/20/2014	13:03:45	2.52	0.75
run8	12/20/2014	13:04:00	3.19	0.53
run8	12/20/2014	13:04:15	3.34	0.50
run8	12/20/2014	13:04:30	3.38	0.65
run8	12/20/2014	13:04:45	3.29	0.58

run8	12/20/2014	13:05:00	3.21	1.15
run8	12/20/2014	13:05:15	3.33	1.05
run8	12/20/2014	13:05:30	3.26	0.76
run8	12/20/2014	13:05:45	3.22	0.41
run8	12/20/2014	13:06:00	3.24	0.48
run8	12/20/2014	13:06:15	3.42	0.57
run8	12/20/2014	13:06:30	3.17	0.74
run8	12/20/2014	13:06:45	3.16	0.97
run8	12/20/2014	13:07:00	3.38	1.24
run8	12/20/2014	13:07:15	3.42	1.43
run8	12/20/2014	13:07:30	3.23	1.65
run8	12/20/2014	13:07:45	2.94	1.30
run8	12/20/2014	13:08:00	2.79	1.11
run8	12/20/2014	13:08:15	2.91	1.24
run8	12/20/2014	13:08:30	3.01	1.23
run8	12/20/2014	13:08:45	2.91	0.71
run8	12/20/2014	13:09:00	2.81	1.07
run8	12/20/2014	13:09:15	2.77	1.35
run8	12/20/2014	13:09:30	2.57	1.07
run8	12/20/2014	13:09:45	2.43	0.83
run8	12/20/2014	13:10:00	2.39	0.45
run8	12/20/2014	13:10:15	2.48	0.97
run8	12/20/2014	13:10:30	2.58	0.90
run8	12/20/2014	13:10:45	2.71	0.53
run8	12/20/2014	13:11:00	2.98	0.76
run8	12/20/2014	13:11:15	3.84	0.63
run8	12/20/2014	13:11:30	5.69	0.69
run8	12/20/2014	13:11:45	6.56	0.72
run8	12/20/2014	13:12:00	6.74	0.78
run8	12/20/2014	13:12:15	6.89	1.01
run8	12/20/2014	13:12:30	7.01	0.97
run8	12/20/2014	13:12:45	6.71	0.41
run8	12/20/2014	13:13:00	5.87	0.84
run8	12/20/2014	13:13:15	5.81	0.85
run8	12/20/2014	13:13:30	6.60	1.00
run8	12/20/2014	13:13:45	6.79	0.77
run8	12/20/2014	13:14:00	6.68	0.77
run8	12/20/2014	13:14:15	6.29	1.15
run8	12/20/2014	13:14:30	6.50	1.10
run8	12/20/2014	13:14:45	6.81	0.92
run8	12/20/2014	13:15:00	6.89	0.95
run8	12/20/2014	13:15:15	6.10	0.45
run8	12/20/2014	13:15:30	5.01	0.52
run8	12/20/2014	13:15:45	5.63	0.85
run8	12/20/2014	13:16:00	6.29	1.44
run8	12/20/2014	13:16:15	5.85	1.06
run8	12/20/2014	13:16:30	4.97	0.84
run8	12/20/2014	13:16:45	5.01	0.92
run8	12/20/2014	13:17:00	5.81	0.67
run8	12/20/2014	13:17:15	5.43	0.23
run8	12/20/2014	13:17:30	4.41	0.64
run8	12/20/2014	13:17:45	4.04	0.65
run8	12/20/2014	13:18:00	3.91	0.20
run8	12/20/2014	13:18:15	4.24	0.65
run8	12/20/2014	13:18:30	4.80	0.78
run8	12/20/2014	13:18:45	5.92	0.85
run8	12/20/2014	13:19:00	6.84	0.72
run8	12/20/2014	13:19:15	6.61	0.56
run8	12/20/2014	13:19:30	6.95	1.16

run8	12/20/2014	13:19:45	7.16	1.46
run8	12/20/2014	13:20:00	7.38	1.43
run8	12/20/2014	13:20:15	7.30	1.23
run8	12/20/2014	13:20:30	7.11	1.22
run8	12/20/2014	13:21:00	7.07	0.97
run8	12/20/2014	13:21:15	7.21	1.01
run8	12/20/2014	13:21:30	7.39	0.95
run8	12/20/2014	13:21:45	5.40	0.52
run8	12/20/2014	13:22:00	3.57	0.93
run8	12/20/2014	13:22:15	2.60	1.59
run8	12/20/2014	13:22:30	2.39	0.96
run8	12/20/2014	13:22:45	2.77	1.20
run8	12/20/2014	13:23:00	3.08	0.57
run8	12/20/2014	13:23:15	2.91	0.48
run8	12/20/2014	13:23:30	2.99	0.92
run8	12/20/2014	13:23:45	3.13	1.32
run8	12/20/2014	13:24:00	2.77	0.81
run8	12/20/2014	13:24:15	2.46	0.90
run8	12/20/2014	13:24:30	2.63	1.06
run8	12/20/2014	13:24:45	2.76	1.37
run8	12/20/2014	13:25:00	2.83	1.25
run8	12/20/2014	13:25:15	3.19	1.13
run8	12/20/2014	13:25:30	3.21	1.64
run8	12/20/2014	13:25:45	3.00	1.50
run8	12/20/2014	13:26:00	3.15	0.74
run8	12/20/2014	13:26:15	3.52	1.04
run8	12/20/2014	13:26:30	3.39	0.76
run8	12/20/2014	13:26:45	3.04	0.83
run8	12/20/2014	13:27:00	3.13	1.10
run8	12/20/2014	13:27:15	3.36	0.71
run8	12/20/2014	13:27:30	3.24	0.82
run8	12/20/2014	13:27:45	3.06	0.88
run8	12/20/2014	13:28:00	3.27	0.64
run8	12/20/2014	13:28:15	3.09	0.88
run8	12/20/2014	13:28:30	3.01	0.57
run8	12/20/2014	13:28:45	2.89	0.74
run8	12/20/2014	13:29:00	2.41	1.44
run8	12/20/2014	13:29:15	2.32	1.53
run8	12/20/2014	13:29:30	2.28	1.13
run8	12/20/2014	13:29:45	2.36	1.37
run8	12/20/2014	13:30:00	2.19	1.03
run8	12/20/2014	13:30:15	2.19	0.73
run8	12/20/2014	13:30:30	2.15	0.83
run8	12/20/2014	13:30:45	2.42	0.72
run8	12/20/2014	13:31:00	2.81	0.84
run8	12/20/2014	13:31:15	3.26	0.81
run8	12/20/2014	13:31:30	4.30	0.75
run8	12/20/2014	13:31:45	4.37	1.32
run8	12/20/2014	13:32:00	4.17	1.65
run8	12/20/2014	13:32:15	4.40	1.49
run8	12/20/2014	13:32:30	4.91	1.51
run8	12/20/2014	13:32:45	5.80	0.98
run8	12/20/2014	13:33:00	5.91	0.98
run8	12/20/2014	13:33:15	5.90	1.01
run8	12/20/2014	13:33:30	4.90	0.85
run8	12/20/2014	13:33:45	4.89	1.03
run8	12/20/2014	13:34:00	6.17	1.18
run8	12/20/2014	13:34:15	5.47	1.07
run8	12/20/2014	13:34:30	3.95	0.95

run8	12/20/2014	13:34:45	3.92	0.73					
run8	12/20/2014	13:35:00	4.20	0.87					
run8	12/20/2014	13:35:15	4.24	1.20					
run8	12/20/2014	13:35:30	3.96	1.11					
run8	12/20/2014	13:35:45	3.81	0.92					
run8	12/20/2014	13:36:00	6.03	1.06					
run8	12/20/2014	13:36:15	6.96	0.85					
averun8	12/20/2014	12:33:45	5.05	0.82	62				
scg4	12/20/2014	13:36:45	5.20	1.01	CC66094/cg4	CO	5.13		0
scg4	12/20/2014	13:37:00	4.99	0.95	CC66094/cg4	CO	5.13		0
scg4	12/20/2014	13:37:15	4.49	0.91	CC66094/cg4	CO	5.13		0
scg4	12/20/2014	13:37:30	4.72	0.43	CC66094/cg4	CO	5.13		0
scg4	12/20/2014	13:37:45	4.87	0.95	CC66094/cg4	CO	5.13		0
scg4	12/20/2014	13:38:00	4.89	0.87	CC66094/cg4	CO	5.13		0
scg4	12/20/2014	13:38:15	4.90	0.52	CC66094/cg4	CO	5.13		0
scg4	12/20/2014	13:38:30	4.88	0.42	CC66094/cg4	CO	5.13		0
scg4	12/20/2014	13:38:45	4.88	0.81	CC66094/cg4	CO	5.13		0
scg4	12/20/2014	13:39:15	4.91	1.05	CC66094/cg4	CO	5.13		0
scg4	12/20/2014	13:39:30	4.91	0.62	CC66094/cg4	CO	5.13		0
scg4	12/20/2014	13:39:45	4.92	0.37	CC66094/cg4	CO	5.13		0
scg4	12/20/2014	13:40:00	5.03	0.50	CC66094/cg4	CO	5.13		0
o2zero1	12/20/2014	13:39:45	4.92	0.37	CC66094/cg4	CO	5.13		0
co2zero1	12/20/2014	13:39:30	4.91	0.62	CC66094/cg4	CO	5.13		0
cospan1	12/20/2014	13:40:00	5.03	0.50	CC66094/cg4	CO	5.13		0
scg8	12/20/2014	13:40:15	5.02	0.71	CC1076/cg8	O2	11.1	CO2	11.1
scg8	12/20/2014	13:40:30	5.02	1.18	CC1076/cg8	O2	11.1	CO2	11.1
scg8	12/20/2014	13:40:45	3.37	0.85	CC1076/cg8	O2	11.1	CO2	11.1
scg8	12/20/2014	13:41:00	0.78	1.04	CC1076/cg8	O2	11.1	CO2	11.1
scg8	12/20/2014	13:41:15	0.01	1.06	CC1076/cg8	O2	11.1	CO2	11.1
scg8	12/20/2014	13:41:30	0.00	0.58	CC1076/cg8	O2	11.1	CO2	11.1
scg8	12/20/2014	13:41:45	0.00	0.15	CC1076/cg8	O2	11.1	CO2	11.1
scg8	12/20/2014	13:42:00	0.00	0.00	CC1076/cg8	O2	11.1	CO2	11.1
o2span1	12/20/2014	13:41:45	0.00	0.15	CC1076/cg8	O2	11.1	CO2	11.1
co2span1	12/20/2014	13:41:45	0.00	0.15	CC1076/cg8	O2	11.1	CO2	11.1
cozero1	12/20/2014	13:41:45	0.00	0.15	CC1076/cg8	O2	11.1	CO2	11.1
thczero1	12/20/2014	13:42:00	0.00	0.00	CC1076/cg8	O2	11.1	CO2	11.1
scg11	12/20/2014	13:42:30	0.00	0.00	LL107680/cg11	THC	5.06		0
scg11	12/20/2014	13:42:45	0.00	0.63	LL107680/cg11	THC	5.06		0
scg11	12/20/2014	13:43:00	0.00	3.30	LL107680/cg11	THC	5.06		0
scg11	12/20/2014	13:43:15	0.00	5.28	LL107680/cg11	THC	5.06		0
scg11	12/20/2014	13:43:30	0.00	4.85	LL107680/cg11	THC	5.06		0
scg11	12/20/2014	13:43:45	0.00	5.38	LL107680/cg11	THC	5.06		0
scg11	12/20/2014	13:44:00	0.00	5.18	LL107680/cg11	THC	5.06		0
scg11	12/20/2014	13:44:15	0.00	5.50	LL107680/cg11	THC	5.06		0
scg11	12/20/2014	13:44:30	0.00	5.36	LL107680/cg11	THC	5.06		0
scg11	12/20/2014	13:44:45	0.00	5.16	LL107680/cg11	THC	5.06		0
scg11	12/20/2014	13:45:00	0.00	4.85	LL107680/cg11	THC	5.06		0
scg11	12/20/2014	13:45:15	0.00	5.23	LL107680/cg11	THC	5.06		0
scg11	12/20/2014	13:45:30	0.01	5.44	LL107680/cg11	THC	5.06		0
scg11	12/20/2014	13:45:45	0.00	5.33	LL107680/cg11	THC	5.06		0
thcspan1	12/20/2014	13:45:15	0.00	5.23	LL107680/cg11	THC	5.06		0
run9	12/20/2014	13:55:00	6.84	0.00					
run9	12/20/2014	13:55:15	5.98	0.03					
run9	12/20/2014	13:55:30	5.97	0.38					
run9	12/20/2014	13:55:45	6.68	0.23					
run9	12/20/2014	13:56:00	6.60	0.28					
run9	12/20/2014	13:56:15	6.36	0.10					
run9	12/20/2014	13:56:30	6.71	0.11					
run9	12/20/2014	13:56:45	6.93	0.18					

run9	12/20/2014	13:57:00	7.53	0.24
run9	12/20/2014	13:57:15	7.64	0.11
run9	12/20/2014	13:57:30	7.15	0.10
run9	12/20/2014	13:57:45	6.58	0.16
run9	12/20/2014	13:58:00	6.27	0.02
run9	12/20/2014	13:58:15	6.58	0.01
run9	12/20/2014	13:58:30	6.54	0.34
run9	12/20/2014	13:58:45	6.44	0.27
run9	12/20/2014	13:59:00	6.02	0.22
run9	12/20/2014	13:59:15	4.28	0.00
run9	12/20/2014	13:59:30	3.56	0.00
run9	12/20/2014	13:59:45	4.84	0.21
run9	12/20/2014	14:00:00	5.98	0.32
run9	12/20/2014	14:00:15	6.26	0.44
run9	12/20/2014	14:00:30	6.67	0.48
run9	12/20/2014	14:00:45	6.39	0.77
run9	12/20/2014	14:01:00	6.08	0.25
run9	12/20/2014	14:01:15	6.68	0.56
run9	12/20/2014	14:01:30	6.69	0.25
run9	12/20/2014	14:01:45	6.70	0.18
run9	12/20/2014	14:02:00	7.06	0.40
run9	12/20/2014	14:02:15	7.30	0.07
run9	12/20/2014	14:02:30	6.88	0.61
run9	12/20/2014	14:02:45	5.85	0.32
run9	12/20/2014	14:03:00	6.03	0.27
run9	12/20/2014	14:03:15	6.72	0.02
run9	12/20/2014	14:03:30	6.10	0.21
run9	12/20/2014	14:03:45	4.70	0.02
run9	12/20/2014	14:04:00	4.01	0.45
run9	12/20/2014	14:04:15	3.81	0.01
run9	12/20/2014	14:04:30	3.72	0.02
run9	12/20/2014	14:04:45	3.57	0.01
run9	12/20/2014	14:05:00	3.58	0.13
run9	12/20/2014	14:05:15	3.62	0.19
run9	12/20/2014	14:05:30	3.43	0.18
run9	12/20/2014	14:05:45	2.83	0.12
run9	12/20/2014	14:06:00	2.41	0.08
run9	12/20/2014	14:06:15	2.20	0.33
run9	12/20/2014	14:06:30	2.21	0.24
run9	12/20/2014	14:06:45	2.06	0.30
run9	12/20/2014	14:07:00	1.84	0.17
run9	12/20/2014	14:07:15	1.70	0.00
run9	12/20/2014	14:07:30	1.62	0.00
run9	12/20/2014	14:08:00	1.77	0.00
run9	12/20/2014	14:08:15	1.89	0.00
run9	12/20/2014	14:08:30	2.20	0.00
run9	12/20/2014	14:08:45	2.55	0.06
run9	12/20/2014	14:09:00	2.48	0.28
run9	12/20/2014	14:09:15	2.17	0.07
run9	12/20/2014	14:09:30	2.08	0.00
run9	12/20/2014	14:09:45	2.39	0.00
run9	12/20/2014	14:10:00	2.51	0.00
run9	12/20/2014	14:10:15	2.54	0.01
run9	12/20/2014	14:10:30	2.45	0.03
run9	12/20/2014	14:10:45	2.35	0.40
run9	12/20/2014	14:11:00	2.32	0.65
run9	12/20/2014	14:11:15	2.13	0.38
run9	12/20/2014	14:11:30	2.50	0.43
run9	12/20/2014	14:11:45	2.77	0.33

run9	12/20/2014	14:12:00	2.83	0.25
run9	12/20/2014	14:12:15	2.92	0.57
run9	12/20/2014	14:12:30	3.05	0.18
run9	12/20/2014	14:12:45	2.99	0.14
run9	12/20/2014	14:13:00	3.00	0.35
run9	12/20/2014	14:13:15	3.22	0.38
run9	12/20/2014	14:13:30	3.50	0.16
run9	12/20/2014	14:13:45	4.78	0.23
run9	12/20/2014	14:14:00	6.20	0.30
run9	12/20/2014	14:14:15	5.96	0.50
run9	12/20/2014	14:14:30	5.24	0.20
run9	12/20/2014	14:14:45	4.81	0.00
run9	12/20/2014	14:15:00	4.17	0.00
run9	12/20/2014	14:15:15	3.73	0.02
run9	12/20/2014	14:15:30	3.75	0.51
run9	12/20/2014	14:15:45	4.89	0.14
run9	12/20/2014	14:16:00	5.53	0.00
run9	12/20/2014	14:16:15	4.68	0.00
run9	12/20/2014	14:16:30	3.02	0.10
run9	12/20/2014	14:16:45	2.42	0.12
run9	12/20/2014	14:17:00	2.91	0.00
run9	12/20/2014	14:17:15	4.13	0.09
run9	12/20/2014	14:17:30	4.50	0.29
run9	12/20/2014	14:17:45	3.73	0.04
run9	12/20/2014	14:18:00	2.44	0.00
run9	12/20/2014	14:18:15	1.93	0.00
run9	12/20/2014	14:18:30	2.07	0.08
run9	12/20/2014	14:18:45	3.99	0.15
run9	12/20/2014	14:19:00	5.67	0.09
run9	12/20/2014	14:19:15	6.71	0.17
run9	12/20/2014	14:19:30	6.55	0.40
run9	12/20/2014	14:19:45	6.18	0.21
run9	12/20/2014	14:20:00	6.26	0.52
run9	12/20/2014	14:20:15	5.28	0.31
run9	12/20/2014	14:20:30	4.99	0.06
run9	12/20/2014	14:20:45	4.54	0.05
run9	12/20/2014	14:21:00	4.25	0.00
run9	12/20/2014	14:21:15	4.29	0.00
run9	12/20/2014	14:21:30	4.06	0.00
run9	12/20/2014	14:21:45	5.09	0.13
run9	12/20/2014	14:22:00	5.51	0.01
run9	12/20/2014	14:22:15	5.05	0.00
run9	12/20/2014	14:22:30	5.40	0.00
run9	12/20/2014	14:22:45	5.26	0.00
run9	12/20/2014	14:23:00	5.38	0.00
run9	12/20/2014	14:23:15	5.78	0.00
run9	12/20/2014	14:23:30	4.98	0.00
run9	12/20/2014	14:23:45	5.55	0.00
run9	12/20/2014	14:24:00	6.65	0.08
run9	12/20/2014	14:24:15	6.69	0.04
run9	12/20/2014	14:24:30	7.37	0.39
run9	12/20/2014	14:24:45	6.22	0.29
run9	12/20/2014	14:25:00	4.49	0.04
run9	12/20/2014	14:25:15	4.11	0.22
run9	12/20/2014	14:25:30	3.84	0.05
run9	12/20/2014	14:25:45	3.40	0.00
run9	12/20/2014	14:26:15	3.49	0.00
run9	12/20/2014	14:26:30	3.59	0.01
run9	12/20/2014	14:26:45	2.69	0.14

run9	12/20/2014	14:27:00	3.02	0.06
run9	12/20/2014	14:27:15	3.25	0.02
run9	12/20/2014	14:27:30	2.92	0.06
run9	12/20/2014	14:27:45	2.53	0.11
run9	12/20/2014	14:28:00	2.53	0.32
run9	12/20/2014	14:28:15	2.53	0.09
run9	12/20/2014	14:28:30	2.61	0.01
run9	12/20/2014	14:28:45	2.76	0.00
run9	12/20/2014	14:29:00	2.70	0.00
run9	12/20/2014	14:29:15	2.66	0.00
run9	12/20/2014	14:29:30	2.79	0.16
run9	12/20/2014	14:29:45	3.25	0.00
run9	12/20/2014	14:30:00	3.44	0.00
run9	12/20/2014	14:30:15	3.40	0.00
run9	12/20/2014	14:30:30	3.22	0.10
run9	12/20/2014	14:30:45	2.89	0.00
run9	12/20/2014	14:31:00	2.61	0.00
run9	12/20/2014	14:31:15	2.81	0.00
run9	12/20/2014	14:31:30	3.12	0.10
run9	12/20/2014	14:31:45	2.94	0.21
run9	12/20/2014	14:32:00	2.68	0.42
run9	12/20/2014	14:32:15	2.41	0.00
run9	12/20/2014	14:32:30	2.02	0.13
run9	12/20/2014	14:32:45	1.73	0.38
run9	12/20/2014	14:33:00	1.72	0.23
run9	12/20/2014	14:33:15	1.78	0.02
run9	12/20/2014	14:33:30	2.03	0.44
run9	12/20/2014	14:33:45	3.05	0.15
run9	12/20/2014	14:34:00	4.87	0.30
run9	12/20/2014	14:34:15	5.58	0.03
run9	12/20/2014	14:34:30	5.28	0.46
run9	12/20/2014	14:34:45	5.40	0.48
run9	12/20/2014	14:35:00	4.98	0.19
run9	12/20/2014	14:35:15	4.01	0.00
run9	12/20/2014	14:35:30	4.00	0.00
run9	12/20/2014	14:35:45	5.79	0.00
run9	12/20/2014	14:36:00	6.88	0.05
run9	12/20/2014	14:36:15	6.43	0.24
run9	12/20/2014	14:36:30	5.69	0.03
run9	12/20/2014	14:36:45	5.36	0.24
run9	12/20/2014	14:37:00	4.63	0.13
run9	12/20/2014	14:37:15	3.73	0.67
run9	12/20/2014	14:37:30	2.83	0.30
run9	12/20/2014	14:37:45	2.32	0.01
run9	12/20/2014	14:38:00	2.86	0.00
run9	12/20/2014	14:38:15	3.94	0.03
run9	12/20/2014	14:38:30	4.51	0.00
run9	12/20/2014	14:38:45	6.09	0.01
run9	12/20/2014	14:39:00	6.84	0.12
run9	12/20/2014	14:39:15	6.62	0.04
run9	12/20/2014	14:39:30	5.61	0.05
run9	12/20/2014	14:39:45	3.94	0.04
run9	12/20/2014	14:40:00	3.80	0.12
run9	12/20/2014	14:40:15	4.68	0.22
run9	12/20/2014	14:40:30	4.67	0.25
run9	12/20/2014	14:40:45	3.89	0.37
run9	12/20/2014	14:41:00	4.14	0.14
run9	12/20/2014	14:41:15	4.61	0.00
run9	12/20/2014	14:41:30	4.58	0.00

run9	12/20/2014	14:41:45	5.60	0.37
run9	12/20/2014	14:42:00	6.42	0.07
run9	12/20/2014	14:42:15	5.65	0.48
run9	12/20/2014	14:42:30	5.22	0.33
run9	12/20/2014	14:42:45	5.96	0.33
run9	12/20/2014	14:43:00	6.71	0.40
run9	12/20/2014	14:43:15	6.57	0.46
run9	12/20/2014	14:43:30	4.84	0.38
run9	12/20/2014	14:43:45	4.55	0.61
run9	12/20/2014	14:44:15	3.31	0.52
run9	12/20/2014	14:44:30	2.68	0.24
run9	12/20/2014	14:44:45	3.09	0.32
run9	12/20/2014	14:45:00	3.59	0.22
run9	12/20/2014	14:45:15	3.44	0.09
run9	12/20/2014	14:45:30	3.39	0.27
run9	12/20/2014	14:45:45	3.74	0.26
run9	12/20/2014	14:46:00	3.63	0.04
run9	12/20/2014	14:46:15	3.22	0.10
run9	12/20/2014	14:46:30	3.24	0.05
run9	12/20/2014	14:46:45	3.41	0.58
run9	12/20/2014	14:47:00	3.41	0.23
run9	12/20/2014	14:47:15	3.28	0.00
run9	12/20/2014	14:47:30	3.64	0.00
run9	12/20/2014	14:47:45	3.33	0.19
run9	12/20/2014	14:48:00	2.75	0.24
run9	12/20/2014	14:48:15	2.40	0.40
run9	12/20/2014	14:48:30	2.38	0.03
run9	12/20/2014	14:48:45	2.66	0.04
run9	12/20/2014	14:49:00	2.57	0.57
run9	12/20/2014	14:49:15	2.87	0.22
run9	12/20/2014	14:49:30	3.35	0.80
run9	12/20/2014	14:49:45	3.36	0.31
run9	12/20/2014	14:50:00	3.39	0.38
run9	12/20/2014	14:50:15	3.38	0.22
run9	12/20/2014	14:50:30	3.21	0.33
run9	12/20/2014	14:50:45	3.29	0.46
run9	12/20/2014	14:51:00	2.89	0.41
run9	12/20/2014	14:51:15	2.82	0.30
run9	12/20/2014	14:51:30	3.48	0.10
run9	12/20/2014	14:51:45	3.56	0.20
run9	12/20/2014	14:52:00	2.97	0.37
run9	12/20/2014	14:52:15	2.81	0.77
run9	12/20/2014	14:52:30	2.77	0.16
run9	12/20/2014	14:52:45	2.62	0.11
run9	12/20/2014	14:53:00	2.33	0.06
run9	12/20/2014	14:53:15	2.26	0.08
run9	12/20/2014	14:53:30	3.20	0.19
run9	12/20/2014	14:53:45	3.93	0.01
run9	12/20/2014	14:54:00	3.79	0.12
run9	12/20/2014	14:54:15	3.24	0.48
run9	12/20/2014	14:54:30	2.43	0.30
run9	12/20/2014	14:54:45	2.20	0.50
run9	12/20/2014	14:55:00	2.30	0.17
run9	12/20/2014	14:55:15	2.60	0.00
run9	12/20/2014	14:55:30	3.04	0.13
run9	12/20/2014	14:55:45	2.90	0.10
run9	12/20/2014	14:56:00	3.26	0.16
run9	12/20/2014	14:56:15	4.40	0.00
run9	12/20/2014	14:56:30	4.46	0.03

run9	12/20/2014	14:56:45	4.39	0.17					
run9	12/20/2014	14:57:00	3.80	0.18					
run9	12/20/2014	14:57:15	2.85	0.03					
run9	12/20/2014	14:57:30	2.67	0.10					
run9	12/20/2014	14:57:45	2.35	0.02					
run9	12/20/2014	14:58:00	2.79	0.72					
averun9	12/20/2014	13:55:30	4.08	0.18	62				
scg4	12/20/2014	14:58:30	4.29	0.53	CC66094/cg4	CO	5.13		0
scg4	12/20/2014	14:58:45	5.44	0.16	CC66094/cg4	CO	5.13		0
scg4	12/20/2014	14:59:00	6.00	0.03	CC66094/cg4	CO	5.13		0
scg4	12/20/2014	14:59:15	4.88	0.03	CC66094/cg4	CO	5.13		0
scg4	12/20/2014	14:59:30	4.46	0.00	CC66094/cg4	CO	5.13		0
scg4	12/20/2014	14:59:45	4.37	0.00	CC66094/cg4	CO	5.13		0
scg4	12/20/2014	15:00:00	4.18	0.00	CC66094/cg4	CO	5.13		0
scg4	12/20/2014	15:00:15	3.97	0.00	CC66094/cg4	CO	5.13		0
scg4	12/20/2014	15:00:30	3.72	0.00	CC66094/cg4	CO	5.13		0
scg4	12/20/2014	15:00:45	4.25	0.00	CC66094/cg4	CO	5.13		0
scg4	12/20/2014	15:01:00	4.78	0.00	CC66094/cg4	CO	5.13		0
scg4	12/20/2014	15:01:15	4.95	0.00	CC66094/cg4	CO	5.13		0
scg4	12/20/2014	15:01:30	4.97	0.00	CC66094/cg4	CO	5.13		0
scg4	12/20/2014	15:01:45	4.97	0.00	CC66094/cg4	CO	5.13		0
scg4	12/20/2014	15:02:00	4.99	0.00	CC66094/cg4	CO	5.13		0
scg4	12/20/2014	15:02:15	4.99	0.00	CC66094/cg4	CO	5.13		0
scg4	12/20/2014	15:02:30	4.97	0.00	CC66094/cg4	CO	5.13		0
scg4	12/20/2014	15:02:45	4.97	0.00	CC66094/cg4	CO	5.13		0
o2zero1	12/20/2014	15:02:45	4.97	0.00	CC66094/cg4	CO	5.13		0
co2zero1	12/20/2014	15:02:30	4.97	0.00	CC66094/cg4	CO	5.13		0
cospan1	12/20/2014	15:02:15	4.99	0.00	CC66094/cg4	CO	5.13		0
scg8	12/20/2014	15:03:15	4.99	0.04	CC1076/cg8	O2	11.1	CO2	11.1
scg8	12/20/2014	15:03:30	4.89	0.17	CC1076/cg8	O2	11.1	CO2	11.1
scg8	12/20/2014	15:03:45	3.34	0.00	CC1076/cg8	O2	11.1	CO2	11.1
scg8	12/20/2014	15:04:00	0.51	0.00	CC1076/cg8	O2	11.1	CO2	11.1
scg8	12/20/2014	15:04:15	0.00	0.01	CC1076/cg8	O2	11.1	CO2	11.1
scg8	12/20/2014	15:04:45	0.00	0.03	CC1076/cg8	O2	11.1	CO2	11.1
scg8	12/20/2014	15:05:00	0.00	0.00	CC1076/cg8	O2	11.1	CO2	11.1
o2span1	12/20/2014	15:05:00	0.00	0.00	CC1076/cg8	O2	11.1	CO2	11.1
co2span1	12/20/2014	15:04:45	0.00	0.03	CC1076/cg8	O2	11.1	CO2	11.1
cozero1	12/20/2014	15:04:45	0.00	0.03	CC1076/cg8	O2	11.1	CO2	11.1
thczero1	12/20/2014	15:04:00	0.51	0.00	CC1076/cg8	O2	11.1	CO2	11.1
scg11	12/20/2014	15:05:15	0.00	0.01	LL107680/cg11	THC	5.06		0
scg11	12/20/2014	15:05:30	0.00	0.85	LL107680/cg11	THC	5.06		0
scg11	12/20/2014	15:05:45	0.03	2.58	LL107680/cg11	THC	5.06		0
scg11	12/20/2014	15:06:00	0.01	3.78	LL107680/cg11	THC	5.06		0
scg11	12/20/2014	15:06:15	0.00	4.49	LL107680/cg11	THC	5.06		0
scg11	12/20/2014	15:06:30	0.00	4.78	LL107680/cg11	THC	5.06		0
scg11	12/20/2014	15:06:45	0.00	4.61	LL107680/cg11	THC	5.06		0
scg11	12/20/2014	15:07:15	0.00	4.72	LL107680/cg11	THC	5.06		0
scg11	12/20/2014	15:07:30	0.00	5.00	LL107680/cg11	THC	5.06		0
scg11	12/20/2014	15:07:45	0.00	5.23	LL107680/cg11	THC	5.06		0
scg11	12/20/2014	15:08:00	0.00	4.64	LL107680/cg11	THC	5.06		0
scg11	12/20/2014	15:08:15	0.00	4.94	LL107680/cg11	THC	5.06		0
scg11	12/20/2014	15:08:30	0.00	5.08	LL107680/cg11	THC	5.06		0
scg11	12/20/2014	15:08:45	0.00	5.04	LL107680/cg11	THC	5.06		0
thcspan1	12/20/2014	15:08:30	0.00	5.08	LL107680/cg11	THC	5.06		0
run10	12/20/2014	15:20:00	2.62	0.00					
run10	12/20/2014	15:20:15	2.47	0.00					
run10	12/20/2014	15:20:30	2.33	0.00					
run10	12/20/2014	15:20:45	2.57	0.00					
run10	12/20/2014	15:21:00	2.58	0.00					

run10	12/20/2014	15:21:15	2.56	0.00
run10	12/20/2014	15:21:30	2.42	0.00
run10	12/20/2014	15:21:45	2.56	0.00
run10	12/20/2014	15:22:00	2.85	0.01
run10	12/20/2014	15:22:15	2.69	0.00
run10	12/20/2014	15:22:30	2.62	0.00
run10	12/20/2014	15:22:45	2.73	0.00
run10	12/20/2014	15:23:00	3.14	0.00
run10	12/20/2014	15:23:15	3.11	0.01
run10	12/20/2014	15:23:30	3.08	0.00
run10	12/20/2014	15:23:45	2.87	0.00
run10	12/20/2014	15:24:00	2.76	0.00
run10	12/20/2014	15:24:15	2.51	0.00
run10	12/20/2014	15:24:30	2.33	0.00
run10	12/20/2014	15:24:45	2.53	0.00
run10	12/20/2014	15:25:00	2.57	0.00
run10	12/20/2014	15:25:15	2.45	0.00
run10	12/20/2014	15:25:30	2.37	0.00
run10	12/20/2014	15:25:45	2.09	0.00
run10	12/20/2014	15:26:00	2.00	0.00
run10	12/20/2014	15:26:15	2.36	0.00
run10	12/20/2014	15:26:30	2.81	0.00
run10	12/20/2014	15:26:45	3.12	0.00
run10	12/20/2014	15:27:00	3.06	0.00
run10	12/20/2014	15:27:15	2.84	0.00
run10	12/20/2014	15:27:30	2.83	0.00
run10	12/20/2014	15:27:45	2.95	0.00
run10	12/20/2014	15:28:00	3.07	0.00
run10	12/20/2014	15:28:15	3.62	0.12
run10	12/20/2014	15:28:30	4.79	0.00
run10	12/20/2014	15:28:45	4.35	0.00
run10	12/20/2014	15:29:00	3.95	0.00
run10	12/20/2014	15:29:15	3.77	0.00
run10	12/20/2014	15:29:30	3.66	0.00
run10	12/20/2014	15:29:45	3.63	0.00
run10	12/20/2014	15:30:00	3.68	0.01
run10	12/20/2014	15:30:15	3.73	0.00
run10	12/20/2014	15:30:30	3.62	0.00
run10	12/20/2014	15:30:45	3.67	0.00
run10	12/20/2014	15:31:15	3.33	0.00
run10	12/20/2014	15:31:30	3.03	0.00
run10	12/20/2014	15:31:45	3.43	0.00
run10	12/20/2014	15:32:00	3.57	0.20
run10	12/20/2014	15:32:15	3.63	0.10
run10	12/20/2014	15:32:30	3.46	0.17
run10	12/20/2014	15:32:45	3.35	0.00
run10	12/20/2014	15:33:00	3.49	0.00
run10	12/20/2014	15:33:15	3.60	0.00
run10	12/20/2014	15:33:30	3.63	0.00
run10	12/20/2014	15:33:45	3.59	0.02
run10	12/20/2014	15:34:00	3.46	0.03
run10	12/20/2014	15:34:15	3.42	0.02
run10	12/20/2014	15:34:30	3.42	0.03
run10	12/20/2014	15:34:45	3.05	0.06
run10	12/20/2014	15:35:00	3.17	0.00
run10	12/20/2014	15:35:15	3.17	0.00
run10	12/20/2014	15:35:30	3.14	0.00
run10	12/20/2014	15:35:45	3.08	0.02
run10	12/20/2014	15:36:00	3.08	0.01

run10	12/20/2014	15:36:15	3.04	0.00
run10	12/20/2014	15:36:30	3.02	0.02
run10	12/20/2014	15:36:45	3.16	0.01
run10	12/20/2014	15:37:00	3.05	0.00
run10	12/20/2014	15:37:15	3.15	0.00
run10	12/20/2014	15:37:30	3.34	0.00
run10	12/20/2014	15:37:45	3.36	0.00
run10	12/20/2014	15:38:00	3.44	0.00
run10	12/20/2014	15:38:15	3.37	0.00
run10	12/20/2014	15:38:30	2.64	0.00
run10	12/20/2014	15:38:45	2.29	0.00
run10	12/20/2014	15:39:00	2.34	0.00
run10	12/20/2014	15:39:15	2.17	0.00
run10	12/20/2014	15:39:30	2.20	0.12
run10	12/20/2014	15:39:45	2.31	0.00
run10	12/20/2014	15:40:00	2.13	0.00
run10	12/20/2014	15:40:15	1.85	0.00
run10	12/20/2014	15:40:30	2.19	0.00
run10	12/20/2014	15:40:45	2.26	0.00
run10	12/20/2014	15:41:00	1.98	0.00
run10	12/20/2014	15:41:15	2.26	0.00
run10	12/20/2014	15:41:30	2.29	0.00
run10	12/20/2014	15:41:45	1.86	0.00
run10	12/20/2014	15:42:00	2.55	0.00
run10	12/20/2014	15:42:15	3.20	0.00
run10	12/20/2014	15:42:30	3.30	0.00
run10	12/20/2014	15:42:45	2.75	0.01
run10	12/20/2014	15:43:00	2.56	0.00
run10	12/20/2014	15:43:15	2.78	0.00
run10	12/20/2014	15:43:30	3.22	0.02
run10	12/20/2014	15:43:45	2.83	0.04
run10	12/20/2014	15:44:00	2.79	0.01
run10	12/20/2014	15:44:15	3.30	0.17
run10	12/20/2014	15:44:30	3.31	0.02
run10	12/20/2014	15:44:45	3.06	0.02
run10	12/20/2014	15:45:00	3.31	0.00
run10	12/20/2014	15:45:15	3.15	0.00
run10	12/20/2014	15:45:30	2.99	0.00
run10	12/20/2014	15:45:45	2.84	0.00
run10	12/20/2014	15:46:00	2.70	0.00
run10	12/20/2014	15:46:15	2.90	0.00
run10	12/20/2014	15:46:30	3.32	0.00
run10	12/20/2014	15:46:45	3.25	0.00
run10	12/20/2014	15:47:00	3.00	0.00
run10	12/20/2014	15:47:15	2.82	0.00
run10	12/20/2014	15:47:30	2.99	0.00
run10	12/20/2014	15:47:45	3.30	0.02
run10	12/20/2014	15:48:00	3.37	0.01
run10	12/20/2014	15:48:15	3.62	0.00
run10	12/20/2014	15:48:30	4.11	0.00
run10	12/20/2014	15:48:45	4.20	0.00
run10	12/20/2014	15:49:00	4.19	0.00
run10	12/20/2014	15:49:30	3.56	0.00
run10	12/20/2014	15:49:45	3.36	0.00
run10	12/20/2014	15:50:00	3.43	0.00
run10	12/20/2014	15:50:15	3.48	0.00
run10	12/20/2014	15:50:30	3.59	0.00
run10	12/20/2014	15:50:45	3.49	0.00
run10	12/20/2014	15:51:00	3.45	0.00

run10	12/20/2014	15:51:15	3.50	0.00
run10	12/20/2014	15:51:30	3.51	0.00
run10	12/20/2014	15:51:45	3.50	0.00
run10	12/20/2014	15:52:00	3.54	0.00
run10	12/20/2014	15:52:15	3.41	0.00
run10	12/20/2014	15:52:30	3.44	0.00
run10	12/20/2014	15:52:45	3.40	0.00
run10	12/20/2014	15:53:00	3.37	0.00
run10	12/20/2014	15:53:15	3.28	0.00
run10	12/20/2014	15:53:30	3.33	0.00
run10	12/20/2014	15:53:45	3.26	0.00
run10	12/20/2014	15:54:00	3.20	0.00
run10	12/20/2014	15:54:15	3.24	0.00
run10	12/20/2014	15:54:30	3.26	0.00
run10	12/20/2014	15:54:45	3.19	0.00
run10	12/20/2014	15:55:00	3.07	0.00
run10	12/20/2014	15:55:15	3.06	0.00
run10	12/20/2014	15:55:30	2.79	0.00
run10	12/20/2014	15:55:45	2.79	0.00
run10	12/20/2014	15:56:00	3.06	0.00
run10	12/20/2014	15:56:15	2.99	0.00
run10	12/20/2014	15:56:30	3.28	0.00
run10	12/20/2014	15:56:45	3.27	0.00
run10	12/20/2014	15:57:00	3.25	0.03
run10	12/20/2014	15:57:15	3.22	0.02
run10	12/20/2014	15:57:30	3.34	0.00
run10	12/20/2014	15:57:45	3.34	0.00
run10	12/20/2014	15:58:00	3.34	0.00
run10	12/20/2014	15:58:15	3.32	0.00
run10	12/20/2014	15:58:30	2.84	0.00
run10	12/20/2014	15:58:45	2.51	0.00
run10	12/20/2014	15:59:00	2.37	0.00
run10	12/20/2014	15:59:15	2.14	0.00
run10	12/20/2014	15:59:30	2.32	0.00
run10	12/20/2014	15:59:45	2.56	0.00
run10	12/20/2014	16:00:00	2.55	0.00
run10	12/20/2014	16:00:15	2.40	0.00
run10	12/20/2014	16:00:30	2.44	0.00
run10	12/20/2014	16:00:45	2.60	0.00
run10	12/20/2014	16:01:00	2.85	0.00
run10	12/20/2014	16:01:15	2.61	0.00
run10	12/20/2014	16:01:30	2.40	0.00
run10	12/20/2014	16:01:45	2.86	0.00
run10	12/20/2014	16:02:00	3.04	0.01
run10	12/20/2014	16:02:15	3.36	0.00
run10	12/20/2014	16:02:30	3.69	0.00
run10	12/20/2014	16:02:45	3.59	0.00
run10	12/20/2014	16:03:00	3.39	0.00
run10	12/20/2014	16:03:15	3.05	0.01
run10	12/20/2014	16:03:30	3.29	0.00
run10	12/20/2014	16:03:45	3.44	0.00
run10	12/20/2014	16:04:00	3.03	0.00
run10	12/20/2014	16:04:15	2.56	0.00
run10	12/20/2014	16:04:30	2.51	0.00
run10	12/20/2014	16:04:45	2.53	0.00
run10	12/20/2014	16:05:00	2.53	0.00
run10	12/20/2014	16:05:15	2.58	0.00
run10	12/20/2014	16:05:30	2.55	0.00
run10	12/20/2014	16:05:45	2.55	0.00

run10	12/20/2014	16:06:00	2.74	0.00
run10	12/20/2014	16:06:15	3.03	0.00
run10	12/20/2014	16:06:30	3.15	0.00
run10	12/20/2014	16:06:45	3.16	0.00
run10	12/20/2014	16:07:00	3.16	0.00
run10	12/20/2014	16:07:30	3.07	0.00
run10	12/20/2014	16:07:45	3.37	0.00
run10	12/20/2014	16:08:00	3.18	0.00
run10	12/20/2014	16:08:15	2.79	0.00
run10	12/20/2014	16:08:30	3.45	0.00
run10	12/20/2014	16:08:45	3.96	0.00
run10	12/20/2014	16:09:00	3.83	0.00
run10	12/20/2014	16:09:15	3.71	0.00
run10	12/20/2014	16:09:30	3.60	0.01
run10	12/20/2014	16:09:45	3.51	0.00
run10	12/20/2014	16:10:00	3.28	0.00
run10	12/20/2014	16:10:15	3.15	0.00
run10	12/20/2014	16:10:30	3.11	0.00
run10	12/20/2014	16:10:45	3.10	0.00
run10	12/20/2014	16:11:00	3.04	0.00
run10	12/20/2014	16:11:15	2.94	0.00
run10	12/20/2014	16:11:30	2.89	0.00
run10	12/20/2014	16:11:45	2.93	0.00
run10	12/20/2014	16:12:00	3.06	0.01
run10	12/20/2014	16:12:15	3.25	0.09
run10	12/20/2014	16:12:30	3.29	0.00
run10	12/20/2014	16:12:45	3.30	0.00
run10	12/20/2014	16:13:00	3.28	0.00
run10	12/20/2014	16:13:15	3.52	0.00
run10	12/20/2014	16:13:30	3.21	0.00
run10	12/20/2014	16:13:45	2.92	0.00
run10	12/20/2014	16:14:00	3.10	0.09
run10	12/20/2014	16:14:15	3.11	0.00
run10	12/20/2014	16:14:30	3.10	0.00
run10	12/20/2014	16:14:45	3.18	0.00
run10	12/20/2014	16:15:00	3.24	0.00
run10	12/20/2014	16:15:15	3.29	0.00
run10	12/20/2014	16:15:30	3.33	0.00
run10	12/20/2014	16:15:45	3.36	0.00
run10	12/20/2014	16:16:00	3.46	0.00
run10	12/20/2014	16:16:15	3.46	0.00
run10	12/20/2014	16:16:30	3.24	0.00
run10	12/20/2014	16:16:45	3.38	0.00
run10	12/20/2014	16:17:00	3.46	0.00
run10	12/20/2014	16:17:15	3.56	0.00
run10	12/20/2014	16:17:30	3.59	0.00
run10	12/20/2014	16:17:45	3.58	0.00
run10	12/20/2014	16:18:00	3.52	0.00
run10	12/20/2014	16:18:15	3.28	0.00
run10	12/20/2014	16:18:30	2.79	0.00
run10	12/20/2014	16:18:45	2.45	0.00
run10	12/20/2014	16:19:00	2.51	0.00
run10	12/20/2014	16:19:15	2.57	0.00
run10	12/20/2014	16:19:30	2.86	0.00
run10	12/20/2014	16:19:45	3.09	0.00
run10	12/20/2014	16:20:00	3.06	0.00
run10	12/20/2014	16:20:15	3.11	0.00
run10	12/20/2014	16:20:30	3.12	0.00
run10	12/20/2014	16:20:45	3.10	0.00

	run10	12/20/2014	16:21:00	2.91	0.00					
	run10	12/20/2014	16:21:15	2.85	0.00					
	run10	12/20/2014	16:21:30	3.13	0.00					
	run10	12/20/2014	16:21:45	3.08	0.00					
	run10	12/20/2014	16:22:00	3.24	0.00					
	run10	12/20/2014	16:22:15	2.87	0.00					
	run10	12/20/2014	16:22:30	2.85	0.00					
	run10	12/20/2014	16:22:45	2.57	0.00					
	run10	12/20/2014	16:23:00	2.28	0.00					
C4R1	averun10	12/20/2014	15:20:30	3.07	0.01	62				
	scg4	12/20/2014	16:23:45	2.58	0.00	CC66094/cg4	CO	5.13		0
	scg4	12/20/2014	16:24:00	2.86	0.03	CC66094/cg4	CO	5.13		0
	scg4	12/20/2014	16:24:15	3.53	0.01	CC66094/cg4	CO	5.13		0
	scg4	12/20/2014	16:24:30	4.54	0.00	CC66094/cg4	CO	5.13		0
	scg4	12/20/2014	16:24:45	4.92	0.00	CC66094/cg4	CO	5.13		0
	scg4	12/20/2014	16:25:00	5.03	0.00	CC66094/cg4	CO	5.13		0
	scg4	12/20/2014	16:25:15	5.00	0.00	CC66094/cg4	CO	5.13		0
	scg4	12/20/2014	16:25:30	5.03	0.00	CC66094/cg4	CO	5.13		0
	scg4	12/20/2014	16:25:45	4.98	0.00	CC66094/cg4	CO	5.13		0
	scg4	12/20/2014	16:26:00	5.03	0.00	CC66094/cg4	CO	5.13		0
	scg4	12/20/2014	16:26:15	5.04	0.00	CC66094/cg4	CO	5.13		0
	o2zero1	12/20/2014	16:26:00	5.03	0.00	CC66094/cg4	CO	5.13		0
	co2zero1	12/20/2014	16:26:15	5.04	0.00	CC66094/cg4	CO	5.13		0
	cospan1	12/20/2014	16:26:00	5.03	0.00	CC66094/cg4	CO	5.13		0
	scg8	12/20/2014	16:26:45	5.01	0.00	CC1076/cg8	O2	11.1	CO2	11.1
	scg8	12/20/2014	16:27:00	4.81	0.00	CC1076/cg8	O2	11.1	CO2	11.1
	scg8	12/20/2014	16:27:15	2.69	0.00	CC1076/cg8	O2	11.1	CO2	11.1
	scg8	12/20/2014	16:27:30	0.43	0.00	CC1076/cg8	O2	11.1	CO2	11.1
	scg8	12/20/2014	16:27:45	0.00	0.00	CC1076/cg8	O2	11.1	CO2	11.1
	scg8	12/20/2014	16:28:00	0.00	0.00	CC1076/cg8	O2	11.1	CO2	11.1
	scg8	12/20/2014	16:28:15	0.00	0.00	CC1076/cg8	O2	11.1	CO2	11.1
	scg8	12/20/2014	16:28:30	0.00	0.00	CC1076/cg8	O2	11.1	CO2	11.1
	scg8	12/20/2014	16:28:45	0.00	0.00	CC1076/cg8	O2	11.1	CO2	11.1
	o2span1	12/20/2014	16:28:30	0.00	0.00	CC1076/cg8	O2	11.1	CO2	11.1
	co2span1	12/20/2014	16:28:30	0.00	0.00	CC1076/cg8	O2	11.1	CO2	11.1
	cozero1	12/20/2014	16:28:15	0.00	0.00	CC1076/cg8	O2	11.1	CO2	11.1
	thczero1	12/20/2014	16:28:15	0.00	0.00	CC1076/cg8	O2	11.1	CO2	11.1
	scg11	12/20/2014	16:29:15	0.00	0.00	LL107680/cg11	THC	5.06		0
	scg11	12/20/2014	16:29:30	0.00	0.84	LL107680/cg11	THC	5.06		0
	scg11	12/20/2014	16:29:45	0.00	3.18	LL107680/cg11	THC	5.06		0
	scg11	12/20/2014	16:30:00	0.00	4.06	LL107680/cg11	THC	5.06		0
	scg11	12/20/2014	16:30:15	0.00	5.09	LL107680/cg11	THC	5.06		0
	scg11	12/20/2014	16:30:30	0.00	4.80	LL107680/cg11	THC	5.06		0
	scg11	12/20/2014	16:30:45	0.00	4.87	LL107680/cg11	THC	5.06		0
	scg11	12/20/2014	16:31:00	0.00	4.97	LL107680/cg11	THC	5.06		0
	thcspan1	12/20/2014	16:31:00	0.00	4.97	LL107680/cg11	THC	5.06		0
	run11	12/20/2014	16:40:15	3.05	0.00					
	run11	12/20/2014	16:40:30	2.89	0.00					
	run11	12/20/2014	16:40:45	2.70	0.00					
	run11	12/20/2014	16:41:00	2.45	0.00					
	run11	12/20/2014	16:41:15	2.50	0.00					
	run11	12/20/2014	16:41:30	2.73	0.00					
	run11	12/20/2014	16:41:45	2.99	0.00					
	run11	12/20/2014	16:42:00	2.84	0.00					
	run11	12/20/2014	16:42:15	2.65	0.00					
	run11	12/20/2014	16:42:30	2.58	0.00					
	run11	12/20/2014	16:42:45	2.49	0.00					
	run11	12/20/2014	16:43:00	2.40	0.00					
	run11	12/20/2014	16:43:15	2.39	0.00					

run11	12/20/2014	16:43:30	2.33	0.00
run11	12/20/2014	16:43:45	2.52	0.00
run11	12/20/2014	16:44:00	2.55	0.00
run11	12/20/2014	16:44:15	2.57	0.00
run11	12/20/2014	16:44:30	2.67	0.00
run11	12/20/2014	16:44:45	3.13	0.00
run11	12/20/2014	16:45:00	3.39	0.00
run11	12/20/2014	16:45:15	3.40	0.00
run11	12/20/2014	16:45:30	3.45	0.00
run11	12/20/2014	16:45:45	3.40	0.00
run11	12/20/2014	16:46:00	3.55	0.00
run11	12/20/2014	16:46:15	3.75	0.00
run11	12/20/2014	16:46:30	3.71	0.00
run11	12/20/2014	16:46:45	3.38	0.00
run11	12/20/2014	16:47:00	3.43	0.00
run11	12/20/2014	16:47:15	3.56	0.00
run11	12/20/2014	16:47:30	2.88	0.00
run11	12/20/2014	16:47:45	2.53	0.00
run11	12/20/2014	16:48:00	2.53	0.00
run11	12/20/2014	16:48:15	2.81	0.00
run11	12/20/2014	16:48:30	3.35	0.00
run11	12/20/2014	16:48:45	3.66	0.00
run11	12/20/2014	16:49:00	3.67	0.00
run11	12/20/2014	16:49:15	3.57	0.00
run11	12/20/2014	16:49:30	3.33	0.00
run11	12/20/2014	16:49:45	3.18	0.00
run11	12/20/2014	16:50:00	3.04	0.00
run11	12/20/2014	16:50:15	3.06	0.00
run11	12/20/2014	16:50:30	3.14	0.00
run11	12/20/2014	16:50:45	3.13	0.00
run11	12/20/2014	16:51:00	2.99	0.00
run11	12/20/2014	16:51:15	3.04	0.00
run11	12/20/2014	16:51:30	3.11	0.00
run11	12/20/2014	16:51:45	2.99	0.00
run11	12/20/2014	16:52:00	2.96	0.00
run11	12/20/2014	16:52:15	3.04	0.00
run11	12/20/2014	16:52:30	2.92	0.00
run11	12/20/2014	16:52:45	2.86	0.01
run11	12/20/2014	16:53:00	2.75	0.00
run11	12/20/2014	16:53:15	2.96	0.00
run11	12/20/2014	16:53:30	3.16	0.00
run11	12/20/2014	16:53:45	3.26	0.00
run11	12/20/2014	16:54:00	3.19	0.00
run11	12/20/2014	16:54:15	3.16	0.00
run11	12/20/2014	16:54:30	3.16	0.00
run11	12/20/2014	16:54:45	3.13	0.00
run11	12/20/2014	16:55:00	3.01	0.00
run11	12/20/2014	16:55:15	3.06	0.00
run11	12/20/2014	16:55:30	3.09	0.00
run11	12/20/2014	16:55:45	3.10	0.00
run11	12/20/2014	16:56:00	3.07	0.00
run11	12/20/2014	16:56:15	3.08	0.00
run11	12/20/2014	16:56:30	3.08	0.00
run11	12/20/2014	16:56:45	2.96	0.00
run11	12/20/2014	16:57:00	2.93	0.00
run11	12/20/2014	16:57:15	2.84	0.00
run11	12/20/2014	16:57:30	3.03	0.00
run11	12/20/2014	16:57:45	3.21	0.00
run11	12/20/2014	16:58:00	3.20	0.00

run11	12/20/2014	16:58:30	3.23	0.00
run11	12/20/2014	16:58:45	3.21	0.00
run11	12/20/2014	16:59:00	3.15	0.00
run11	12/20/2014	16:59:15	2.95	0.00
run11	12/20/2014	16:59:30	2.68	0.00
run11	12/20/2014	16:59:45	2.42	0.00
run11	12/20/2014	17:00:00	2.72	0.00
run11	12/20/2014	17:00:15	3.29	0.00
run11	12/20/2014	17:00:30	3.14	0.00
run11	12/20/2014	17:00:45	2.95	0.00
run11	12/20/2014	17:01:00	2.94	0.00
run11	12/20/2014	17:01:15	3.15	0.00
run11	12/20/2014	17:01:30	3.39	0.00
run11	12/20/2014	17:01:45	3.19	0.00
run11	12/20/2014	17:02:00	2.83	2.52
run11	12/20/2014	17:02:15	2.48	0.00
run11	12/20/2014	17:02:30	2.34	0.00
run11	12/20/2014	17:02:45	2.32	0.00
run11	12/20/2014	17:03:00	2.47	0.00
run11	12/20/2014	17:03:15	2.60	0.00
run11	12/20/2014	17:03:30	2.66	0.00
run11	12/20/2014	17:03:45	2.66	0.00
run11	12/20/2014	17:04:00	2.89	0.00
run11	12/20/2014	17:04:15	3.06	0.00
run11	12/20/2014	17:04:30	2.79	0.00
run11	12/20/2014	17:04:45	2.82	0.00
run11	12/20/2014	17:05:00	2.99	0.00
run11	12/20/2014	17:05:15	2.75	0.00
run11	12/20/2014	17:05:30	2.63	0.00
run11	12/20/2014	17:05:45	2.45	0.00
run11	12/20/2014	17:06:00	2.68	0.00
run11	12/20/2014	17:06:15	2.81	0.00
run11	12/20/2014	17:06:30	2.79	0.00
run11	12/20/2014	17:06:45	2.90	0.00
run11	12/20/2014	17:07:00	3.15	0.00
run11	12/20/2014	17:07:15	3.30	0.00
run11	12/20/2014	17:07:30	2.92	0.00
run11	12/20/2014	17:07:45	2.64	0.00
run11	12/20/2014	17:08:00	2.88	0.00
run11	12/20/2014	17:08:15	2.97	0.00
run11	12/20/2014	17:08:30	3.55	0.00
run11	12/20/2014	17:08:45	4.95	0.00
run11	12/20/2014	17:09:00	4.02	0.00
run11	12/20/2014	17:09:15	3.33	0.00
run11	12/20/2014	17:09:30	3.29	0.00
run11	12/20/2014	17:09:45	3.44	0.00
run11	12/20/2014	17:10:00	3.64	0.00
run11	12/20/2014	17:10:15	3.66	0.00
run11	12/20/2014	17:10:30	3.55	0.00
run11	12/20/2014	17:10:45	3.56	0.00
run11	12/20/2014	17:11:00	3.63	0.00
run11	12/20/2014	17:11:15	3.53	0.00
run11	12/20/2014	17:11:30	3.34	0.00
run11	12/20/2014	17:11:45	3.34	0.00
run11	12/20/2014	17:12:00	3.29	1.44
run11	12/20/2014	17:12:15	3.33	1.04
run11	12/20/2014	17:12:30	3.35	0.00
run11	12/20/2014	17:12:45	3.30	0.00
run11	12/20/2014	17:13:00	3.17	0.00

run11	12/20/2014	17:13:15	3.12	0.00
run11	12/20/2014	17:13:30	3.07	0.00
run11	12/20/2014	17:13:45	3.29	0.00
run11	12/20/2014	17:14:00	3.29	0.00
run11	12/20/2014	17:14:15	3.11	0.00
run11	12/20/2014	17:14:30	3.15	0.00
run11	12/20/2014	17:14:45	3.32	0.00
run11	12/20/2014	17:15:00	3.32	0.00
run11	12/20/2014	17:15:15	3.25	0.00
run11	12/20/2014	17:15:30	3.21	0.01
run11	12/20/2014	17:15:45	3.22	0.00
run11	12/20/2014	17:16:00	3.26	0.00
run11	12/20/2014	17:16:30	3.20	0.00
run11	12/20/2014	17:16:45	3.23	0.00
run11	12/20/2014	17:17:00	3.28	0.00
run11	12/20/2014	17:17:15	3.29	0.00
run11	12/20/2014	17:17:30	3.34	0.00
run11	12/20/2014	17:17:45	3.25	0.00
run11	12/20/2014	17:18:00	3.06	0.00
run11	12/20/2014	17:18:15	3.26	0.00
run11	12/20/2014	17:18:30	3.68	0.00
run11	12/20/2014	17:18:45	3.39	0.00
run11	12/20/2014	17:19:00	3.06	0.00
run11	12/20/2014	17:19:15	2.58	0.00
run11	12/20/2014	17:19:30	2.31	0.00
run11	12/20/2014	17:19:45	2.36	0.00
run11	12/20/2014	17:20:00	2.47	0.00
run11	12/20/2014	17:20:15	2.66	0.00
run11	12/20/2014	17:20:30	2.96	0.00
run11	12/20/2014	17:20:45	2.98	0.00
run11	12/20/2014	17:21:00	3.14	0.00
run11	12/20/2014	17:21:15	3.12	0.00
run11	12/20/2014	17:21:30	2.93	0.00
run11	12/20/2014	17:21:45	3.28	0.00
run11	12/20/2014	17:22:00	3.63	0.00
run11	12/20/2014	17:22:15	3.33	0.00
run11	12/20/2014	17:22:30	2.86	0.00
run11	12/20/2014	17:22:45	2.57	0.00
run11	12/20/2014	17:23:00	2.63	0.00
run11	12/20/2014	17:23:15	2.82	0.00
run11	12/20/2014	17:23:30	2.98	0.00
run11	12/20/2014	17:23:45	2.80	0.00
run11	12/20/2014	17:24:00	2.81	0.00
run11	12/20/2014	17:24:15	2.96	0.00
run11	12/20/2014	17:24:30	2.94	0.00
run11	12/20/2014	17:24:45	3.10	0.00
run11	12/20/2014	17:25:00	2.78	0.00
run11	12/20/2014	17:25:15	2.62	0.00
run11	12/20/2014	17:25:30	2.91	0.00
run11	12/20/2014	17:25:45	2.99	0.00
run11	12/20/2014	17:26:00	2.65	0.00
run11	12/20/2014	17:26:15	2.27	0.00
run11	12/20/2014	17:26:30	2.49	0.00
run11	12/20/2014	17:26:45	2.45	0.00
run11	12/20/2014	17:27:00	2.64	0.00
run11	12/20/2014	17:27:15	2.49	0.00
run11	12/20/2014	17:27:30	2.48	2.51
run11	12/20/2014	17:27:45	2.78	0.00
run11	12/20/2014	17:28:00	2.92	0.00

run11	12/20/2014	17:28:15	3.22	0.00
run11	12/20/2014	17:28:30	3.87	0.00
run11	12/20/2014	17:28:45	3.67	0.00
run11	12/20/2014	17:29:00	3.39	0.00
run11	12/20/2014	17:29:15	3.33	0.00
run11	12/20/2014	17:29:30	3.21	0.00
run11	12/20/2014	17:29:45	3.10	0.00
run11	12/20/2014	17:30:00	3.18	0.00
run11	12/20/2014	17:30:15	3.56	0.00
run11	12/20/2014	17:30:30	3.76	0.00
run11	12/20/2014	17:30:45	3.61	0.00
run11	12/20/2014	17:31:00	3.64	0.00
run11	12/20/2014	17:31:15	3.75	0.00
run11	12/20/2014	17:31:30	3.67	0.00
run11	12/20/2014	17:31:45	3.60	0.00
run11	12/20/2014	17:32:00	3.54	0.00
run11	12/20/2014	17:32:15	3.24	0.00
run11	12/20/2014	17:32:30	3.20	0.00
run11	12/20/2014	17:32:45	3.18	0.00
run11	12/20/2014	17:33:00	3.25	0.00
run11	12/20/2014	17:33:15	3.35	0.00
run11	12/20/2014	17:33:30	3.41	0.00
run11	12/20/2014	17:33:45	3.64	0.00
run11	12/20/2014	17:34:00	3.68	0.00
run11	12/20/2014	17:34:30	3.42	0.00
run11	12/20/2014	17:34:45	3.29	0.00
run11	12/20/2014	17:35:00	3.39	0.00
run11	12/20/2014	17:35:15	3.02	0.00
run11	12/20/2014	17:35:30	2.70	0.00
run11	12/20/2014	17:35:45	2.97	0.00
run11	12/20/2014	17:36:00	3.24	0.00
run11	12/20/2014	17:36:15	3.14	0.00
run11	12/20/2014	17:36:30	2.91	0.00
run11	12/20/2014	17:36:45	3.22	0.00
run11	12/20/2014	17:37:00	3.52	0.15
run11	12/20/2014	17:37:15	3.44	0.00
run11	12/20/2014	17:37:30	3.36	0.00
run11	12/20/2014	17:37:45	3.29	0.00
run11	12/20/2014	17:38:00	3.25	0.00
run11	12/20/2014	17:38:15	3.40	0.00
run11	12/20/2014	17:38:30	3.61	0.00
run11	12/20/2014	17:38:45	3.57	0.00
run11	12/20/2014	17:39:00	3.18	0.00
run11	12/20/2014	17:39:15	3.24	0.00
run11	12/20/2014	17:39:30	3.11	0.00
run11	12/20/2014	17:39:45	3.01	0.00
run11	12/20/2014	17:40:00	3.24	0.00
run11	12/20/2014	17:40:15	3.08	0.00
run11	12/20/2014	17:40:30	2.79	0.00
run11	12/20/2014	17:40:45	2.99	0.00
run11	12/20/2014	17:41:00	3.03	0.00
run11	12/20/2014	17:41:15	3.00	0.00
run11	12/20/2014	17:41:30	3.30	0.00
run11	12/20/2014	17:41:45	3.31	0.00
run11	12/20/2014	17:42:00	3.38	0.00
run11	12/20/2014	17:42:15	3.36	0.00
run11	12/20/2014	17:42:30	3.18	0.00
run11	12/20/2014	17:42:45	3.18	0.00
run11	12/20/2014	17:43:00	3.32	0.19

C4R2	averun11	12/20/2014	16:40:30	3.09	0.03		62		
	scg4	12/20/2014	17:43:30	3.40	0.00	CC66094/cg4	CO	5.13	0
	scg4	12/20/2014	17:43:45	3.42	0.01	CC66094/cg4	CO	5.13	0
	scg4	12/20/2014	17:44:00	3.86	0.00	CC66094/cg4	CO	5.13	0
	scg4	12/20/2014	17:44:15	4.62	0.00	CC66094/cg4	CO	5.13	0
	scg4	12/20/2014	17:44:30	4.99	0.00	CC66094/cg4	CO	5.13	0
	scg4	12/20/2014	17:44:45	4.99	0.00	CC66094/cg4	CO	5.13	0
	scg4	12/20/2014	17:45:00	5.00	0.00	CC66094/cg4	CO	5.13	0
	scg4	12/20/2014	17:45:15	5.01	0.00	CC66094/cg4	CO	5.13	0
	scg4	12/20/2014	17:45:30	5.00	0.00	CC66094/cg4	CO	5.13	0
	scg4	12/20/2014	17:45:45	5.03	0.00	CC66094/cg4	CO	5.13	0
	o2zero1	12/20/2014	17:45:45	5.03	0.00	CC66094/cg4	CO	5.13	0
	co2zero1	12/20/2014	17:45:45	5.03	0.00	CC66094/cg4	CO	5.13	0
	cospan1	12/20/2014	17:45:45	5.03	0.00	CC66094/cg4	CO	5.13	0
	scg8	12/20/2014	17:46:15	5.03	0.00	CC1076/cg8	O2	11.1 CO2	11.1
	scg8	12/20/2014	17:46:45	4.87	0.00	CC1076/cg8	O2	11.1 CO2	11.1
	scg8	12/20/2014	17:47:00	3.34	0.00	CC1076/cg8	O2	11.1 CO2	11.1
	scg8	12/20/2014	17:47:15	0.52	0.00	CC1076/cg8	O2	11.1 CO2	11.1
	scg8	12/20/2014	17:47:30	0.00	0.00	CC1076/cg8	O2	11.1 CO2	11.1
	scg8	12/20/2014	17:47:45	0.00	0.00	CC1076/cg8	O2	11.1 CO2	11.1
	scg8	12/20/2014	17:48:00	0.00	0.00	CC1076/cg8	O2	11.1 CO2	11.1
	scg8	12/20/2014	17:48:15	0.00	0.00	CC1076/cg8	O2	11.1 CO2	11.1
	o2span1	12/20/2014	17:48:00	0.00	0.00	CC1076/cg8	O2	11.1 CO2	11.1
	co2span1	12/20/2014	17:48:00	0.00	0.00	CC1076/cg8	O2	11.1 CO2	11.1
	cozero1	12/20/2014	17:48:00	0.00	0.00	CC1076/cg8	O2	11.1 CO2	11.1
	thczero1	12/20/2014	17:48:00	0.00	0.00	CC1076/cg8	O2	11.1 CO2	11.1
	scg11	12/20/2014	17:48:30	0.00	0.00	LL107680/cg11	THC	5.06	0
	scg11	12/20/2014	17:48:45	0.00	0.26	LL107680/cg11	THC	5.06	0
	scg11	12/20/2014	17:49:00	0.12	2.21	LL107680/cg11	THC	5.06	0
	scg11	12/20/2014	17:49:15	0.10	3.85	LL107680/cg11	THC	5.06	0
	scg11	12/20/2014	17:49:30	0.00	4.16	LL107680/cg11	THC	5.06	0
	scg11	12/20/2014	17:49:45	0.00	4.46	LL107680/cg11	THC	5.06	0
	scg11	12/20/2014	17:50:00	0.00	4.69	LL107680/cg11	THC	5.06	0
	scg11	12/20/2014	17:50:15	0.00	4.81	LL107680/cg11	THC	5.06	0
	scg11	12/20/2014	17:50:30	0.00	4.73	LL107680/cg11	THC	5.06	0
	scg11	12/20/2014	17:50:45	0.00	4.60	LL107680/cg11	THC	5.06	0
	scg11	12/20/2014	17:51:00	0.00	4.86	LL107680/cg11	THC	5.06	0
	scg11	12/20/2014	17:51:15	0.00	5.02	LL107680/cg11	THC	5.06	0
	scg11	12/20/2014	17:51:30	0.00	4.75	LL107680/cg11	THC	5.06	0
	scg11	12/20/2014	17:51:45	0.00	4.50	LL107680/cg11	THC	5.06	0
	scg11	12/20/2014	17:52:00	0.00	4.72	LL107680/cg11	THC	5.06	0
	scg11	12/20/2014	17:52:15	0.00	4.90	LL107680/cg11	THC	5.06	0
	scg11	12/20/2014	17:52:30	0.00	5.29	LL107680/cg11	THC	5.06	0
	scg11	12/20/2014	17:52:45	0.00	4.87	LL107680/cg11	THC	5.06	0
	scg11	12/20/2014	17:53:00	0.00	4.77	LL107680/cg11	THC	5.06	0
	scg11	12/20/2014	17:53:15	0.00	4.77	LL107680/cg11	THC	5.06	0
	scg11	12/20/2014	17:53:30	0.00	4.72	LL107680/cg11	THC	5.06	0
	scg11	12/20/2014	17:53:45	0.00	4.55	LL107680/cg11	THC	5.06	0
	scg11	12/20/2014	17:54:00	0.00	4.93	LL107680/cg11	THC	5.06	0
	scg11	12/20/2014	17:54:15	0.00	5.23	LL107680/cg11	THC	5.06	0
	scg11	12/20/2014	17:54:30	0.00	5.14	LL107680/cg11	THC	5.06	0
	scg11	12/20/2014	17:54:45	0.00	4.71	LL107680/cg11	THC	5.06	0
	thcspan1	12/20/2014	17:54:30	0.00	5.14	LL107680/cg11	THC	5.06	0
	scg11	12/20/2014	17:55:45	1.27	2.87	LL107680/cg11	THC	5.06	0
	scg11	12/20/2014	17:56:00	2.98	2.89	LL107680/cg11	THC	5.06	0
	scg11	12/20/2014	17:56:15	2.27	4.22	LL107680/cg11	THC	5.06	0
	scg11	12/20/2014	17:56:30	0.56	4.44	LL107680/cg11	THC	5.06	0
	scg11	12/20/2014	17:56:45	0.00	4.63	LL107680/cg11	THC	5.06	0
	scg11	12/20/2014	17:57:00	0.00	4.74	LL107680/cg11	THC	5.06	0

scg11	12/20/2014	17:57:15	0.00	4.93	LL107680/cg11	THC	5.06		0
scg11	12/20/2014	17:57:30	0.00	4.71	LL107680/cg11	THC	5.06		0
scg11	12/20/2014	17:57:45	0.01	4.88	LL107680/cg11	THC	5.06		0
scg11	12/20/2014	17:58:00	0.00	4.89	LL107680/cg11	THC	5.06		0
scg11	12/20/2014	17:58:15	0.00	5.00	LL107680/cg11	THC	5.06		0
thcspan1	12/20/2014	17:58:15	0.00	5.00	LL107680/cg11	THC	5.06		0
dcg5	12/21/2014	7:49:00	3.70	0.48	ALM005790/cg5	CO	9.17		0
dcg5	12/21/2014	7:49:15	3.74	0.38	ALM005790/cg5	CO	9.17		0
dcg5	12/21/2014	7:49:30	4.49	0.38	ALM005790/cg5	CO	9.17		0
dcg5	12/21/2014	7:49:45	4.60	4.67	ALM005790/cg5	CO	9.17		0
dcg5	12/21/2014	7:50:00	3.55	2.09	ALM005790/cg5	CO	9.17		0
dcg5	12/21/2014	7:50:15	3.31	1.44	ALM005790/cg5	CO	9.17		0
dcg5	12/21/2014	7:50:30	3.54	0.79	ALM005790/cg5	CO	9.17		0
dcg5	12/21/2014	7:50:45	3.81	0.77	ALM005790/cg5	CO	9.17		0
dcg5	12/21/2014	7:51:00	3.88	1.04	ALM005790/cg5	CO	9.17		0
dcg5	12/21/2014	7:51:15	3.96	2.04	ALM005790/cg5	CO	9.17		0
dcg1	12/21/2014	7:52:00	1.92	0.82	ALM008053/cg1	N2	0	N2	0
dcg1	12/21/2014	7:52:15	0.06	0.40	ALM008053/cg1	N2	0	N2	0
dcg1	12/21/2014	7:52:30	0.00	0.26	ALM008053/cg1	N2	0	N2	0
dcg1	12/21/2014	7:52:45	0.00	0.00	ALM008053/cg1	N2	0	N2	0
dcg1	12/21/2014	7:53:00	0.00	0.00	ALM008053/cg1	N2	0	N2	0
dcg1	12/21/2014	7:53:15	0.00	0.00	ALM008053/cg1	N2	0	N2	0
dcg1	12/21/2014	7:53:30	0.00	3.14	ALM008053/cg1	N2	0	N2	0
dcg1	12/21/2014	7:53:45	0.00	0.67	ALM008053/cg1	N2	0	N2	0
dcg1	12/21/2014	7:54:00	0.00	0.81	ALM008053/cg1	N2	0	N2	0
dcg1	12/21/2014	7:54:15	0.03	1.11	ALM008053/cg1	N2	0	N2	0
dcg1	12/21/2014	7:54:30	0.01	1.29	ALM008053/cg1	N2	0	N2	0
dcg1	12/21/2014	7:54:45	0.01	2.06	ALM008053/cg1	N2	0	N2	0
dcg1	12/21/2014	7:55:00	0.02	3.13	ALM008053/cg1	N2	0	N2	0
dcg1	12/21/2014	7:55:15	0.03	4.07	ALM008053/cg1	N2	0	N2	0
o2ezero1	12/21/2014	7:54:45	0.01	2.06	ALM008053/cg1	N2	0	N2	0
co2ezero1	12/21/2014	7:54:45	0.01	2.06	ALM008053/cg1	N2	0	N2	0
coezero1	12/21/2014	7:54:45	0.01	2.06	ALM008053/cg1	N2	0	N2	0
dcg5	12/21/2014	7:55:45	0.24	4.11	ALM005790/cg5	CO	9.17		0
dcg5	12/21/2014	7:56:00	0.45	3.73	ALM005790/cg5	CO	9.17		0
dcg5	12/21/2014	7:56:15	0.22	3.02	ALM005790/cg5	CO	9.17		0
dcg5	12/21/2014	7:56:30	0.20	2.93	ALM005790/cg5	CO	9.17		0
dcg5	12/21/2014	7:56:45	0.20	2.93	ALM005790/cg5	CO	9.17		0
dcg5	12/21/2014	7:57:00	0.48	5.16	ALM005790/cg5	CO	9.17		0
dcg5	12/21/2014	7:57:15	5.53	2.20	ALM005790/cg5	CO	9.17		0
dcg5	12/21/2014	7:57:30	9.44	2.13	ALM005790/cg5	CO	9.17		0
dcg5	12/21/2014	7:57:45	9.53	1.90	ALM005790/cg5	CO	9.17		0
dcg5	12/21/2014	7:58:00	9.27	1.80	ALM005790/cg5	CO	9.17		0
dcg5	12/21/2014	7:58:15	9.19	2.17	ALM005790/cg5	CO	9.17		0
dcg5	12/21/2014	7:58:30	9.18	2.24	ALM005790/cg5	CO	9.17		0
dcg5	12/21/2014	7:58:45	9.15	2.11	ALM005790/cg5	CO	9.17		0
dcg5	12/21/2014	7:59:00	9.08	2.69	ALM005790/cg5	CO	9.17		0
cohigh1	12/21/2014	7:58:45	9.15	2.11	ALM005790/cg5	CO	9.17		0
dcg4	12/21/2014	7:59:15	8.65	3.40	CC66094/cg4	CO	5.13		0
dcg4	12/21/2014	7:59:30	8.25	3.42	CC66094/cg4	CO	5.13		0
dcg4	12/21/2014	7:59:45	8.19	3.23	CC66094/cg4	CO	5.13		0
dcg4	12/21/2014	8:00:00	8.00	2.56	CC66094/cg4	CO	5.13		0
dcg4	12/21/2014	8:00:15	6.31	2.08	CC66094/cg4	CO	5.13		0
dcg4	12/21/2014	8:00:45	5.13	1.69	CC66094/cg4	CO	5.13		0
dcg4	12/21/2014	8:01:00	5.05	1.09	CC66094/cg4	CO	5.13		0
dcg4	12/21/2014	8:01:15	5.05	0.97	CC66094/cg4	CO	5.13		0
dcg4	12/21/2014	8:01:30	5.05	1.35	CC66094/cg4	CO	5.13		0
dcg4	12/21/2014	8:02:00	5.17	4.01	CC66094/cg4	CO	5.13		0
dcg4	12/21/2014	8:02:15	5.08	0.90	CC66094/cg4	CO	5.13		0

dcg4	12/21/2014	8:02:30	5.04	0.04	CC66094/cg4	CO	5.13	0
dcg4	12/21/2014	8:02:45	5.04	0.07	CC66094/cg4	CO	5.13	0
dcg4	12/21/2014	8:03:00	5.07	0.15	CC66094/cg4	CO	5.13	0
dcg4	12/21/2014	8:03:15	5.11	0.11	CC66094/cg4	CO	5.13	0
dcg4	12/21/2014	8:03:30	5.10	0.36	CC66094/cg4	CO	5.13	0
dcg4	12/21/2014	8:03:45	5.12	0.60	CC66094/cg4	CO	5.13	0
dcg4	12/21/2014	8:04:00	5.12	0.26	CC66094/cg4	CO	5.13	0
comid1	12/21/2014	8:04:00	5.12	0.26	CC66094/cg4	CO	5.13	0
dcg9	12/21/2014	8:04:30	4.64	1.14	ALM010233/cg9	O2	20 CO2	20.5
dcg9	12/21/2014	8:04:45	1.09	1.79	ALM010233/cg9	O2	20 CO2	20.5
dcg9	12/21/2014	8:05:00	0.01	1.60	ALM010233/cg9	O2	20 CO2	20.5
dcg9	12/21/2014	8:05:15	0.00	1.40	ALM010233/cg9	O2	20 CO2	20.5
dcg9	12/21/2014	8:05:30	0.00	1.14	ALM010233/cg9	O2	20 CO2	20.5
dcg9	12/21/2014	8:05:45	0.00	0.93	ALM010233/cg9	O2	20 CO2	20.5
dcg9	12/21/2014	8:06:00	0.00	0.88	ALM010233/cg9	O2	20 CO2	20.5
dcg9	12/21/2014	8:06:15	0.00	0.77	ALM010233/cg9	O2	20 CO2	20.5
dcg9	12/21/2014	8:06:30	0.00	0.77	ALM010233/cg9	O2	20 CO2	20.5
dcg9	12/21/2014	8:07:00	0.00	3.95	ALM010233/cg9	O2	20 CO2	20.5
dcg9	12/21/2014	8:07:15	0.00	1.12	ALM010233/cg9	O2	20 CO2	20.5
dcg9	12/21/2014	8:07:30	0.00	1.35	ALM010233/cg9	O2	20 CO2	20.5
dcg9	12/21/2014	8:07:45	0.00	1.41	ALM010233/cg9	O2	20 CO2	20.5
dcg9	12/21/2014	8:08:00	0.00	1.92	ALM010233/cg9	O2	20 CO2	20.5
dcg9	12/21/2014	8:08:15	0.00	2.54	ALM010233/cg9	O2	20 CO2	20.5
dcg9	12/21/2014	8:08:30	0.00	2.82	ALM010233/cg9	O2	20 CO2	20.5
dcg9	12/21/2014	8:08:45	0.00	3.15	ALM010233/cg9	O2	20 CO2	20.5
o2high1	12/21/2014	8:08:45	0.00	3.15	ALM010233/cg9	O2	20 CO2	20.5
co2high1	12/21/2014	8:08:45	0.00	3.15	ALM010233/cg9	O2	20 CO2	20.5
dcg8	12/21/2014	8:09:15	0.08	3.75	CC1076/cg8	O2	11.1 CO2	11.1
dcg8	12/21/2014	8:09:30	0.14	3.58	CC1076/cg8	O2	11.1 CO2	11.1
dcg8	12/21/2014	8:09:45	0.00	3.15	CC1076/cg8	O2	11.1 CO2	11.1
dcg8	12/21/2014	8:10:00	0.00	2.96	CC1076/cg8	O2	11.1 CO2	11.1
dcg8	12/21/2014	8:10:15	0.00	2.89	CC1076/cg8	O2	11.1 CO2	11.1
dcg8	12/21/2014	8:10:30	0.00	2.60	CC1076/cg8	O2	11.1 CO2	11.1
o2mid1	12/21/2014	8:10:15	0.00	2.89	CC1076/cg8	O2	11.1 CO2	11.1
co2mid1	12/21/2014	8:10:30	0.00	2.60	CC1076/cg8	O2	11.1 CO2	11.1
dcg1	12/21/2014	8:10:45	0.34	2.55	ALM008053/cg1	N2	0 N2	0
dcg1	12/21/2014	8:11:00	0.47	2.55	ALM008053/cg1	N2	0 N2	0
dcg1	12/21/2014	8:11:15	0.02	4.58	ALM008053/cg1	N2	0 N2	0
dcg1	12/21/2014	8:11:45	0.00	1.29	ALM008053/cg1	N2	0 N2	0
dcg1	12/21/2014	8:12:00	0.00	0.75	ALM008053/cg1	N2	0 N2	0
dcg1	12/21/2014	8:12:15	0.03	0.39	ALM008053/cg1	N2	0 N2	0
dcg1	12/21/2014	8:12:30	0.03	0.07	ALM008053/cg1	N2	0 N2	0
dcg1	12/21/2014	8:12:45	0.02	0.12	ALM008053/cg1	N2	0 N2	0
dcg1	12/21/2014	8:13:00	0.01	0.13	ALM008053/cg1	N2	0 N2	0
dcg1	12/21/2014	8:13:15	0.05	0.04	ALM008053/cg1	N2	0 N2	0
dcg1	12/21/2014	8:13:30	0.04	0.26	ALM008053/cg1	N2	0 N2	0
dcg1	12/21/2014	8:13:45	0.04	0.68	ALM008053/cg1	N2	0 N2	0
dcg1	12/21/2014	8:14:00	0.01	0.35	ALM008053/cg1	N2	0 N2	0
dcg1	12/21/2014	8:14:15	0.04	0.29	ALM008053/cg1	N2	0 N2	0
dcg1	12/21/2014	8:14:30	0.03	0.66	ALM008053/cg1	N2	0 N2	0
dcg1	12/21/2014	8:14:45	0.03	0.66	ALM008053/cg1	N2	0 N2	0
dcg1	12/21/2014	8:15:00	0.01	1.08	ALM008053/cg1	N2	0 N2	0
dcg1	12/21/2014	8:15:15	0.01	1.12	ALM008053/cg1	N2	0 N2	0
dcg1	12/21/2014	8:15:30	0.03	1.12	ALM008053/cg1	N2	0 N2	0
dcg1	12/21/2014	8:16:30	4.39	0.43	ALM008053/cg1	N2	0 N2	0
dcg1	12/21/2014	8:16:45	1.19	0.02	ALM008053/cg1	N2	0 N2	0
dcg1	12/21/2014	8:17:00	0.08	0.00	ALM008053/cg1	N2	0 N2	0
dcg1	12/21/2014	8:17:15	0.04	0.01	ALM008053/cg1	N2	0 N2	0
dcg1	12/21/2014	8:17:30	0.05	0.02	ALM008053/cg1	N2	0 N2	0

dcg1	12/21/2014	8:17:45	0.05	0.00	ALM008053/cg1	N2	0	N2	0
dcg1	12/21/2014	8:18:00	0.03	0.00	ALM008053/cg1	N2	0	N2	0
dcg1	12/21/2014	8:18:15	0.05	0.01	ALM008053/cg1	N2	0	N2	0
thcezero1	12/21/2014	8:18:00	0.03	0.00	ALM008053/cg1	N2	0	N2	0
dcg12	12/21/2014	8:18:45	0.22	0.00	LL67700/cg12	THC	8.72		0
dcg12	12/21/2014	8:19:00	0.40	0.08	LL67700/cg12	THC	8.72		0
dcg12	12/21/2014	8:19:15	0.41	0.17	LL67700/cg12	THC	8.72		0
dcg12	12/21/2014	8:19:30	0.40	0.13	LL67700/cg12	THC	8.72		0
dcg12	12/21/2014	8:19:45	0.40	0.08	LL67700/cg12	THC	8.72		0
dcg12	12/21/2014	8:20:00	0.38	0.08	LL67700/cg12	THC	8.72		0
dcg12	12/21/2014	8:20:15	0.39	3.25	LL67700/cg12	THC	8.72		0
dcg12	12/21/2014	8:20:30	0.40	0.26	LL67700/cg12	THC	8.72		0
dcg12	12/21/2014	8:20:45	0.42	0.43	LL67700/cg12	THC	8.72		0
dcg12	12/21/2014	8:21:00	0.42	0.53	LL67700/cg12	THC	8.72		0
dcg12	12/21/2014	8:21:15	0.47	1.24	LL67700/cg12	THC	8.72		0
dcg12	12/21/2014	8:21:30	0.58	0.83	LL67700/cg12	THC	8.72		0
dcg12	12/21/2014	8:21:45	0.45	0.70	LL67700/cg12	THC	8.72		0
dcg12	12/21/2014	8:22:00	0.10	0.67	LL67700/cg12	THC	8.72		0
dcg12	12/21/2014	8:22:15	0.07	0.83	LL67700/cg12	THC	8.72		0
dcg12	12/21/2014	8:22:30	0.03	0.84	LL67700/cg12	THC	8.72		0
dcg12	12/21/2014	8:22:45	0.04	0.73	LL67700/cg12	THC	8.72		0
dcg12	12/21/2014	8:23:00	0.09	1.50	LL67700/cg12	THC	8.72		0
dcg12	12/21/2014	8:23:15	0.08	1.55	LL67700/cg12	THC	8.72		0
dcg12	12/21/2014	8:23:30	0.05	1.69	LL67700/cg12	THC	8.72		0
dcg12	12/21/2014	8:23:45	0.07	1.64	LL67700/cg12	THC	8.72		0
dcg12	12/21/2014	8:24:00	0.04	1.89	LL67700/cg12	THC	8.72		0
dcg12	12/21/2014	8:24:15	0.06	1.85	LL67700/cg12	THC	8.72		0
dcg12	12/21/2014	8:24:30	0.09	1.76	LL67700/cg12	THC	8.72		0
dcg12	12/21/2014	8:24:45	0.06	1.79	LL67700/cg12	THC	8.72		0
dcg12	12/21/2014	8:25:00	0.05	1.79	LL67700/cg12	THC	8.72		0
dcg12	12/21/2014	8:25:15	0.07	1.85	LL67700/cg12	THC	8.72		0
dcg12	12/21/2014	8:25:45	0.53	5.06	LL67700/cg12	THC	8.72		0
dcg12	12/21/2014	8:26:00	3.23	6.96	LL67700/cg12	THC	8.72		0
dcg12	12/21/2014	8:26:15	3.20	9.79	LL67700/cg12	THC	8.72		0
dcg12	12/21/2014	8:26:30	1.12	6.40	LL67700/cg12	THC	8.72		0
dcg12	12/21/2014	8:26:45	1.97	2.94	LL67700/cg12	THC	8.72		0
dcg12	12/21/2014	8:27:00	3.42	3.17	LL67700/cg12	THC	8.72		0
dcg12	12/21/2014	8:27:15	3.91	4.70	LL67700/cg12	THC	8.72		0
dcg12	12/21/2014	8:27:30	4.07	4.37	LL67700/cg12	THC	8.72		0
dcg12	12/21/2014	8:27:45	4.31	3.51	LL67700/cg12	THC	8.72		0
dcg12	12/21/2014	8:28:00	4.19	2.27	LL67700/cg12	THC	8.72		0
dcg12	12/21/2014	8:28:15	3.85	2.63	LL67700/cg12	THC	8.72		0
dcg12	12/21/2014	8:28:30	3.69	2.78	LL67700/cg12	THC	8.72		0
dcg12	12/21/2014	8:28:45	3.76	3.17	LL67700/cg12	THC	8.72		0
dcg12	12/21/2014	8:29:00	3.88	3.39	LL67700/cg12	THC	8.72		0
dcg12	12/21/2014	8:29:15	3.51	3.34	LL67700/cg12	THC	8.72		0
dcg12	12/21/2014	8:29:30	3.61	3.34	LL67700/cg12	THC	8.72		0
dcg12	12/21/2014	8:29:45	3.74	6.12	LL67700/cg12	THC	8.72		0
dcg12	12/21/2014	8:30:00	3.53	8.10	LL67700/cg12	THC	8.72		0
dcg12	12/21/2014	8:30:15	1.85	10.00	LL67700/cg12	THC	8.72		0
dcg12	12/21/2014	8:30:30	0.53	9.96	LL67700/cg12	THC	8.72		0
dcg12	12/21/2014	8:30:45	0.30	8.97	LL67700/cg12	THC	8.72		0
dcg12	12/21/2014	8:31:00	0.26	8.24	LL67700/cg12	THC	8.72		0
dcg12	12/21/2014	8:31:15	0.25	8.24	LL67700/cg12	THC	8.72		0
dcg12	12/21/2014	8:31:30	0.26	8.43	LL67700/cg12	THC	8.72		0
dcg12	12/21/2014	8:31:45	0.25	8.64	LL67700/cg12	THC	8.72		0
dcg12	12/21/2014	8:32:15	0.24	8.40	LL67700/cg12	THC	8.72		0
dcg12	12/21/2014	8:32:30	0.25	8.56	LL67700/cg12	THC	8.72		0
dcg12	12/21/2014	8:32:45	0.25	9.03	LL67700/cg12	THC	8.72		0

dcg12	12/21/2014	8:33:00	0.23	9.08	LL67700/cg12	THC	8.72		0
dcg12	12/21/2014	8:33:15	0.25	8.90	LL67700/cg12	THC	8.72		0
dcg12	12/21/2014	8:33:30	0.25	8.71	LL67700/cg12	THC	8.72		0
dcg12	12/21/2014	8:33:45	0.23	8.68	LL67700/cg12	THC	8.72		0
dcg12	12/21/2014	8:34:00	0.23	8.68	LL67700/cg12	THC	8.72		0
thchigh1	12/21/2014	8:34:00	0.23	8.68	LL67700/cg12	THC	8.72		0
dcg10	12/21/2014	8:34:30	0.24	8.91	BLM002982/cg10	THC	3.01		0
dcg10	12/21/2014	8:34:45	0.25	8.63	BLM002982/cg10	THC	3.01		0
dcg10	12/21/2014	8:35:00	0.30	8.61	BLM002982/cg10	THC	3.01		0
dcg10	12/21/2014	8:35:15	1.52	8.61	BLM002982/cg10	THC	3.01		0
dcg10	12/21/2014	8:35:30	3.28	5.26	BLM002982/cg10	THC	3.01		0
dcg10	12/21/2014	8:35:45	3.76	1.53	BLM002982/cg10	THC	3.01		0
dcg10	12/21/2014	8:36:00	2.59	3.59	BLM002982/cg10	THC	3.01		0
dcg10	12/21/2014	8:36:15	0.86	4.17	BLM002982/cg10	THC	3.01		0
dcg10	12/21/2014	8:36:30	0.36	4.34	BLM002982/cg10	THC	3.01		0
dcg10	12/21/2014	8:36:45	0.31	4.12	BLM002982/cg10	THC	3.01		0
dcg10	12/21/2014	8:37:00	0.32	4.18	BLM002982/cg10	THC	3.01		0
dcg10	12/21/2014	8:37:15	0.32	4.08	BLM002982/cg10	THC	3.01		0
dcg1	12/21/2014	8:37:30	0.37	4.27	ALM008053/cg1	N2	0	N2	0
dcg1	12/21/2014	8:37:45	0.29	4.38	ALM008053/cg1	N2	0	N2	0
dcg1	12/21/2014	8:38:00	0.10	4.54	ALM008053/cg1	N2	0	N2	0
dcg1	12/21/2014	8:38:15	0.04	4.74	ALM008053/cg1	N2	0	N2	0
dcg10	12/21/2014	8:38:45	0.07	4.65	BLM002982/cg10	THC	3.01		0
dcg10	12/21/2014	8:39:00	0.39	3.40	BLM002982/cg10	THC	3.01		0
dcg10	12/21/2014	8:39:15	0.53	2.89	BLM002982/cg10	THC	3.01		0
dcg10	12/21/2014	8:39:30	0.39	3.07	BLM002982/cg10	THC	3.01		0
dcg10	12/21/2014	8:39:45	0.28	2.79	BLM002982/cg10	THC	3.01		0
dcg10	12/21/2014	8:40:00	0.30	2.85	BLM002982/cg10	THC	3.01		0
dcg10	12/21/2014	8:40:15	0.32	3.04	BLM002982/cg10	THC	3.01		0
dcg10	12/21/2014	8:40:30	0.35	3.11	BLM002982/cg10	THC	3.01		0
dcg10	12/21/2014	8:40:45	0.30	3.06	BLM002982/cg10	THC	3.01		0
dcg10	12/21/2014	8:41:00	0.31	2.86	BLM002982/cg10	THC	3.01		0
dcg10	12/21/2014	8:41:15	0.31	2.56	BLM002982/cg10	THC	3.01		0
dcg10	12/21/2014	8:41:30	0.34	2.56	BLM002982/cg10	THC	3.01		0
dcg10	12/21/2014	8:41:45	0.35	4.27	BLM002982/cg10	THC	3.01		0
dcg10	12/21/2014	8:42:00	0.30	2.94	BLM002982/cg10	THC	3.01		0
dcg10	12/21/2014	8:42:15	0.38	2.84	BLM002982/cg10	THC	3.01		0
dcg10	12/21/2014	8:42:30	0.31	2.76	BLM002982/cg10	THC	3.01		0
dcg10	12/21/2014	8:42:45	0.32	3.04	BLM002982/cg10	THC	3.01		0
dcg10	12/21/2014	8:43:00	0.35	3.19	BLM002982/cg10	THC	3.01		0
dcg10	12/21/2014	8:43:15	0.32	3.03	BLM002982/cg10	THC	3.01		0
dcg10	12/21/2014	8:43:30	0.31	3.23	BLM002982/cg10	THC	3.01		0
dcg10	12/21/2014	8:43:45	0.31	3.20	BLM002982/cg10	THC	3.01		0
dcg10	12/21/2014	8:44:00	0.33	3.04	BLM002982/cg10	THC	3.01		0
dcg10	12/21/2014	8:44:15	0.34	2.86	BLM002982/cg10	THC	3.01		0
dcg10	12/21/2014	8:44:30	0.29	2.75	BLM002982/cg10	THC	3.01		0
dcg10	12/21/2014	8:44:45	0.31	2.78	BLM002982/cg10	THC	3.01		0
dcg10	12/21/2014	8:45:00	0.33	2.82	BLM002982/cg10	THC	3.01		0
dcg10	12/21/2014	8:45:15	0.35	2.74	BLM002982/cg10	THC	3.01		0
dcg10	12/21/2014	8:45:30	0.29	2.94	BLM002982/cg10	THC	3.01		0
dcg10	12/21/2014	8:45:45	0.31	3.02	BLM002982/cg10	THC	3.01		0
dcg10	12/21/2014	8:46:00	0.29	2.99	BLM002982/cg10	THC	3.01		0
thclow1	12/21/2014	8:46:00	0.29	2.99	BLM002982/cg10	THC	3.01		0
dcg11	12/21/2014	8:46:30	0.30	3.13	LL107680/cg11	THC	5.06		0
dcg11	12/21/2014	8:46:45	0.29	2.92	LL107680/cg11	THC	5.06		0
dcg11	12/21/2014	8:47:00	0.40	1.38	LL107680/cg11	THC	5.06		0
dcg11	12/21/2014	8:47:15	1.34	0.43	LL107680/cg11	THC	5.06		0
dcg11	12/21/2014	8:47:30	3.12	0.43	LL107680/cg11	THC	5.06		0
dcg11	12/21/2014	8:47:45	3.83	1.18	LL107680/cg11	THC	5.06		0

dcg11	12/21/2014	8:48:00	3.41	1.13	LL107680/cg11	THC	5.06	0
dcg11	12/21/2014	8:48:15	3.53	0.00	LL107680/cg11	THC	5.06	0
dcg11	12/21/2014	8:48:30	3.69	0.00	LL107680/cg11	THC	5.06	0
dcg11	12/21/2014	8:48:45	3.68	0.00	LL107680/cg11	THC	5.06	0
dcg11	12/21/2014	8:49:00	3.48	0.26	LL107680/cg11	THC	5.06	0
dcg11	12/21/2014	8:49:15	1.75	0.77	LL107680/cg11	THC	5.06	0
dcg11	12/21/2014	8:49:30	0.44	1.14	LL107680/cg11	THC	5.06	0
dcg11	12/21/2014	8:49:45	0.28	0.90	LL107680/cg11	THC	5.06	0
dcg11	12/21/2014	8:50:15	0.28	1.13	LL107680/cg11	THC	5.06	0
dcg11	12/21/2014	8:50:30	0.25	1.11	LL107680/cg11	THC	5.06	0
dcg11	12/21/2014	8:51:15	0.25	1.26	LL107680/cg11	THC	5.06	0
dcg11	12/21/2014	8:51:30	0.26	1.39	LL107680/cg11	THC	5.06	0
dcg11	12/21/2014	8:51:45	0.25	1.30	LL107680/cg11	THC	5.06	0
dcg11	12/21/2014	8:52:00	0.23	1.28	LL107680/cg11	THC	5.06	0
dcg11	12/21/2014	8:52:15	0.27	0.92	LL107680/cg11	THC	5.06	0
dcg11	12/21/2014	8:52:30	0.29	0.18	LL107680/cg11	THC	5.06	0
dcg11	12/21/2014	8:52:45	1.26	0.05	LL107680/cg11	THC	5.06	0
dcg11	12/21/2014	8:53:00	3.30	0.05	LL107680/cg11	THC	5.06	0
dcg11	12/21/2014	8:53:15	3.96	2.27	LL107680/cg11	THC	5.06	0
dcg11	12/21/2014	8:53:45	1.48	0.73	LL107680/cg11	THC	5.06	0
dcg11	12/21/2014	8:54:00	2.22	0.04	LL107680/cg11	THC	5.06	0
dcg11	12/21/2014	8:54:15	3.43	1.17	LL107680/cg11	THC	5.06	0
dcg11	12/21/2014	8:54:30	2.06	2.39	LL107680/cg11	THC	5.06	0
dcg11	12/21/2014	8:54:45	0.58	2.94	LL107680/cg11	THC	5.06	0
dcg11	12/21/2014	8:55:30	0.29	5.45	LL107680/cg11	THC	5.06	0
dcg11	12/21/2014	8:55:45	0.31	5.13	LL107680/cg11	THC	5.06	0
dcg11	12/21/2014	8:56:00	0.30	5.36	LL107680/cg11	THC	5.06	0
dcg11	12/21/2014	8:56:15	0.30	5.28	LL107680/cg11	THC	5.06	0
dcg11	12/21/2014	8:56:30	0.29	4.69	LL107680/cg11	THC	5.06	0
dcg11	12/21/2014	8:56:45	0.33	4.93	LL107680/cg11	THC	5.06	0
dcg11	12/21/2014	8:57:00	0.31	5.22	LL107680/cg11	THC	5.06	0
dcg11	12/21/2014	8:57:15	0.34	5.38	LL107680/cg11	THC	5.06	0
dcg11	12/21/2014	8:57:30	0.31	5.17	LL107680/cg11	THC	5.06	0
dcg11	12/21/2014	8:57:45	0.31	4.87	LL107680/cg11	THC	5.06	0
dcg11	12/21/2014	8:58:00	0.34	4.87	LL107680/cg11	THC	5.06	0
dcg11	12/21/2014	8:58:15	0.27	4.90	LL107680/cg11	THC	5.06	0
dcg11	12/21/2014	8:58:30	0.29	7.28	LL107680/cg11	THC	5.06	0
dcg11	12/21/2014	8:58:45	0.27	5.06	LL107680/cg11	THC	5.06	0
dcg11	12/21/2014	8:59:00	0.30	5.11	LL107680/cg11	THC	5.06	0
dcg11	12/21/2014	8:59:15	0.29	5.29	LL107680/cg11	THC	5.06	0
dcg11	12/21/2014	8:59:30	0.31	5.30	LL107680/cg11	THC	5.06	0
dcg11	12/21/2014	8:59:45	0.27	5.30	LL107680/cg11	THC	5.06	0
dcg11	12/21/2014	9:00:00	0.28	4.97	LL107680/cg11	THC	5.06	0
dcg11	12/21/2014	9:00:15	0.32	5.11	LL107680/cg11	THC	5.06	0
dcg11	12/21/2014	9:00:30	0.27	5.25	LL107680/cg11	THC	5.06	0
dcg11	12/21/2014	9:00:45	0.27	5.11	LL107680/cg11	THC	5.06	0
dcg11	12/21/2014	9:01:00	0.28	4.66	LL107680/cg11	THC	5.06	0
dcg11	12/21/2014	9:01:15	0.26	4.49	LL107680/cg11	THC	5.06	0
dcg11	12/21/2014	9:01:30	0.30	5.35	LL107680/cg11	THC	5.06	0
dcg11	12/21/2014	9:01:45	0.31	5.25	LL107680/cg11	THC	5.06	0
dcg11	12/21/2014	9:02:00	0.27	4.96	LL107680/cg11	THC	5.06	0
dcg11	12/21/2014	9:02:15	0.25	4.98	LL107680/cg11	THC	5.06	0
dcg11	12/21/2014	9:02:30	0.28	4.85	LL107680/cg11	THC	5.06	0
thcmid1	12/21/2014	9:02:15	0.25	4.98	LL107680/cg11	THC	5.06	0
dcg4	12/21/2014	9:03:00	0.28	5.42	CC66094/cg4	CO	5.13	0
dcg4	12/21/2014	9:03:15	0.28	5.57	CC66094/cg4	CO	5.13	0
dcg4	12/21/2014	9:03:30	0.30	5.57	CC66094/cg4	CO	5.13	0
dcg4	12/21/2014	9:03:45	0.48	5.75	CC66094/cg4	CO	5.13	0
dcg4	12/21/2014	9:04:00	2.06	0.01	CC66094/cg4	CO	5.13	0

dcg4	12/21/2014	9:04:15	3.61	0.00	CC66094/cg4	CO	5.13	0
dcg4	12/21/2014	9:04:30	4.09	0.00	CC66094/cg4	CO	5.13	0
dcg4	12/21/2014	9:04:45	4.07	0.00	CC66094/cg4	CO	5.13	0
dcg4	12/21/2014	9:05:00	4.05	0.00	CC66094/cg4	CO	5.13	0
dcg4	12/21/2014	9:05:15	4.22	0.00	CC66094/cg4	CO	5.13	0
dcg4	12/21/2014	9:05:30	4.34	0.00	CC66094/cg4	CO	5.13	0
dcg4	12/21/2014	9:06:00	4.81	0.00	CC66094/cg4	CO	5.13	0
dcg4	12/21/2014	9:06:15	5.15	0.00	CC66094/cg4	CO	5.13	0
dcg4	12/21/2014	9:06:30	5.19	0.00	CC66094/cg4	CO	5.13	0
dcg4	12/21/2014	9:06:45	5.21	0.00	CC66094/cg4	CO	5.13	0
dcg4	12/21/2014	9:07:00	5.20	0.00	CC66094/cg4	CO	5.13	0
dcg4	12/21/2014	9:07:15	5.15	0.00	CC66094/cg4	CO	5.13	0
dcg4	12/21/2014	9:07:30	5.17	0.00	CC66094/cg4	CO	5.13	0
dcg4	12/21/2014	9:07:45	5.16	0.00	CC66094/cg4	CO	5.13	0
dcg4	12/21/2014	9:08:00	5.18	0.00	CC66094/cg4	CO	5.13	0
dcg4	12/21/2014	9:08:15	5.15	0.00	CC66094/cg4	CO	5.13	0
dcg4	12/21/2014	9:08:30	5.16	0.00	CC66094/cg4	CO	5.13	0
dcg4	12/21/2014	9:08:45	5.06	0.00	CC66094/cg4	CO	5.13	0
dcg4	12/21/2014	9:09:00	5.00	0.00	CC66094/cg4	CO	5.13	0
scg4	12/21/2014	9:10:30	4.13	0.00	CC66094/cg4	CO	5.13	0
scg4	12/21/2014	9:11:00	3.52	0.00	CC66094/cg4	CO	5.13	0
scg4	12/21/2014	9:11:15	2.89	2.72	CC66094/cg4	CO	5.13	0
scg4	12/21/2014	9:11:30	3.72	1.33	CC66094/cg4	CO	5.13	0
scg4	12/21/2014	9:11:45	2.43	0.85	CC66094/cg4	CO	5.13	0
scg4	12/21/2014	9:12:00	2.44	0.00	CC66094/cg4	CO	5.13	0
scg4	12/21/2014	9:12:15	4.41	0.00	CC66094/cg4	CO	5.13	0
scg4	12/21/2014	9:12:30	4.97	0.00	CC66094/cg4	CO	5.13	0
scg4	12/21/2014	9:12:45	5.05	0.00	CC66094/cg4	CO	5.13	0
scg4	12/21/2014	9:13:00	5.00	0.00	CC66094/cg4	CO	5.13	0
o2zero1	12/21/2014	9:13:00	5.00	0.00	CC66094/cg4	CO	5.13	0
co2zero1	12/21/2014	9:13:00	5.00	0.00	CC66094/cg4	CO	5.13	0
cospan1	12/21/2014	9:13:00	5.00	0.00	CC66094/cg4	CO	5.13	0
scg8	12/21/2014	9:13:30	5.04	0.00	CC1076/cg8	O2	11.1 CO2	11.1
scg8	12/21/2014	9:13:45	4.99	0.00	CC1076/cg8	O2	11.1 CO2	11.1
scg8	12/21/2014	9:14:00	3.79	0.00	CC1076/cg8	O2	11.1 CO2	11.1
scg8	12/21/2014	9:14:15	0.96	0.00	CC1076/cg8	O2	11.1 CO2	11.1
scg8	12/21/2014	9:14:30	0.07	0.00	CC1076/cg8	O2	11.1 CO2	11.1
scg8	12/21/2014	9:14:45	0.00	0.00	CC1076/cg8	O2	11.1 CO2	11.1
scg8	12/21/2014	9:15:00	0.00	2.69	CC1076/cg8	O2	11.1 CO2	11.1
scg8	12/21/2014	9:15:15	0.00	0.00	CC1076/cg8	O2	11.1 CO2	11.1
scg8	12/21/2014	9:15:30	0.00	0.00	CC1076/cg8	O2	11.1 CO2	11.1
scg8	12/21/2014	9:15:45	0.00	0.02	CC1076/cg8	O2	11.1 CO2	11.1
scg8	12/21/2014	9:16:00	0.25	0.00	CC1076/cg8	O2	11.1 CO2	11.1
scg8	12/21/2014	9:16:15	1.47	0.04	CC1076/cg8	O2	11.1 CO2	11.1
scg8	12/21/2014	9:16:30	1.46	0.00	CC1076/cg8	O2	11.1 CO2	11.1
scg8	12/21/2014	9:16:45	0.29	0.00	CC1076/cg8	O2	11.1 CO2	11.1
scg8	12/21/2014	9:17:00	0.00	0.00	CC1076/cg8	O2	11.1 CO2	11.1
scg8	12/21/2014	9:17:15	0.00	0.00	CC1076/cg8	O2	11.1 CO2	11.1
scg8	12/21/2014	9:17:30	0.00	0.00	CC1076/cg8	O2	11.1 CO2	11.1
scg8	12/21/2014	9:17:45	0.00	0.00	CC1076/cg8	O2	11.1 CO2	11.1
scg8	12/21/2014	9:18:00	0.00	0.03	CC1076/cg8	O2	11.1 CO2	11.1
scg8	12/21/2014	9:18:15	0.00	0.35	CC1076/cg8	O2	11.1 CO2	11.1
scg8	12/21/2014	9:18:30	0.00	0.09	CC1076/cg8	O2	11.1 CO2	11.1
scg8	12/21/2014	9:18:45	0.00	0.15	CC1076/cg8	O2	11.1 CO2	11.1
scg8	12/21/2014	9:19:00	0.00	0.37	CC1076/cg8	O2	11.1 CO2	11.1
scg8	12/21/2014	9:19:15	0.00	0.13	CC1076/cg8	O2	11.1 CO2	11.1
scg8	12/21/2014	9:19:30	0.00	0.00	CC1076/cg8	O2	11.1 CO2	11.1
scg8	12/21/2014	9:19:45	0.00	0.05	CC1076/cg8	O2	11.1 CO2	11.1
scg8	12/21/2014	9:20:00	0.00	0.00	CC1076/cg8	O2	11.1 CO2	11.1

o2span1	12/21/2014	9:20:00	0.00	0.00	CC1076/cg8	O2	11.1 CO2	11.1
co2span1	12/21/2014	9:20:00	0.00	0.00	CC1076/cg8	O2	11.1 CO2	11.1
cozero1	12/21/2014	9:20:00	0.00	0.00	CC1076/cg8	O2	11.1 CO2	11.1
thczero1	12/21/2014	9:20:00	0.00	0.00	CC1076/cg8	O2	11.1 CO2	11.1
scg11	12/21/2014	9:20:30	0.00	0.07	LL107680/cg11	THC	5.06	0
scg11	12/21/2014	9:20:45	0.00	1.19	LL107680/cg11	THC	5.06	0
scg11	12/21/2014	9:21:00	0.09	3.03	LL107680/cg11	THC	5.06	0
scg11	12/21/2014	9:21:15	0.19	4.18	LL107680/cg11	THC	5.06	0
scg11	12/21/2014	9:21:30	0.24	4.35	LL107680/cg11	THC	5.06	0
scg11	12/21/2014	9:21:45	0.23	5.63	LL107680/cg11	THC	5.06	0
scg11	12/21/2014	9:22:00	0.26	5.79	LL107680/cg11	THC	5.06	0
scg11	12/21/2014	9:22:15	0.22	5.70	LL107680/cg11	THC	5.06	0
scg11	12/21/2014	9:22:30	0.25	5.32	LL107680/cg11	THC	5.06	0
scg11	12/21/2014	9:22:45	0.24	5.30	LL107680/cg11	THC	5.06	0
scg11	12/21/2014	9:23:00	0.27	5.05	LL107680/cg11	THC	5.06	0
scg11	12/21/2014	9:23:15	0.26	4.48	LL107680/cg11	THC	5.06	0
scg11	12/21/2014	9:23:30	0.24	4.53	LL107680/cg11	THC	5.06	0
scg11	12/21/2014	9:23:45	0.25	4.53	LL107680/cg11	THC	5.06	0
scg11	12/21/2014	9:24:00	0.23	6.63	LL107680/cg11	THC	5.06	0
scg11	12/21/2014	9:24:15	0.25	5.27	LL107680/cg11	THC	5.06	0
scg11	12/21/2014	9:24:30	0.26	5.37	LL107680/cg11	THC	5.06	0
scg11	12/21/2014	9:24:45	0.24	4.72	LL107680/cg11	THC	5.06	0
scg11	12/21/2014	9:25:00	0.23	4.38	LL107680/cg11	THC	5.06	0
scg11	12/21/2014	9:25:15	0.24	4.47	LL107680/cg11	THC	5.06	0
scg11	12/21/2014	9:25:30	0.25	4.37	LL107680/cg11	THC	5.06	0
scg11	12/21/2014	9:25:45	0.24	4.64	LL107680/cg11	THC	5.06	0
scg11	12/21/2014	9:26:00	0.24	4.57	LL107680/cg11	THC	5.06	0
scg11	12/21/2014	9:26:15	0.23	4.45	LL107680/cg11	THC	5.06	0
scg11	12/21/2014	9:26:30	0.24	4.81	LL107680/cg11	THC	5.06	0
scg11	12/21/2014	9:26:45	0.23	4.93	LL107680/cg11	THC	5.06	0
scg11	12/21/2014	9:27:00	0.22	4.90	LL107680/cg11	THC	5.06	0
scg11	12/21/2014	9:27:15	0.26	5.01	LL107680/cg11	THC	5.06	0
thcspan1	12/21/2014	9:27:15	0.26	5.01	LL107680/cg11	THC	5.06	0
run12	12/21/2014	9:42:00	2.65	1.19				
run12	12/21/2014	9:42:15	2.31	1.08				
run12	12/21/2014	9:42:30	2.29	1.08				
run12	12/21/2014	9:42:45	2.61	3.26				
run12	12/21/2014	9:43:00	2.78	0.73				
run12	12/21/2014	9:43:15	2.43	0.50				
run12	12/21/2014	9:43:30	2.44	0.56				
run12	12/21/2014	9:43:45	2.45	0.37				
run12	12/21/2014	9:44:00	2.11	0.34				
run12	12/21/2014	9:44:15	2.02	0.89				
run12	12/21/2014	9:44:30	2.33	1.11				
run12	12/21/2014	9:44:45	2.60	1.34				
run12	12/21/2014	9:45:00	2.44	0.85				
run12	12/21/2014	9:45:15	2.31	1.20				
run12	12/21/2014	9:45:30	2.69	1.02				
run12	12/21/2014	9:45:45	3.08	0.95				
run12	12/21/2014	9:46:00	3.15	1.34				
run12	12/21/2014	9:46:15	3.13	1.39				
run12	12/21/2014	9:46:30	2.77	1.24				
run12	12/21/2014	9:46:45	2.34	0.88				
run12	12/21/2014	9:47:00	2.24	0.84				
run12	12/21/2014	9:47:15	2.29	0.72				
run12	12/21/2014	9:47:30	2.19	0.72				
run12	12/21/2014	9:47:45	2.44	2.84				
run12	12/21/2014	9:48:00	2.62	1.32				
run12	12/21/2014	9:48:15	2.65	1.16				

run12	12/21/2014	9:48:30	4.21	1.14
run12	12/21/2014	9:48:45	4.43	0.99
run12	12/21/2014	9:49:00	3.95	0.64
run12	12/21/2014	9:49:15	3.96	0.33
run12	12/21/2014	9:49:30	4.07	0.77
run12	12/21/2014	9:49:45	3.85	0.54
run12	12/21/2014	9:50:00	3.96	0.46
run12	12/21/2014	9:50:15	3.80	0.67
run12	12/21/2014	9:50:30	3.79	0.55
run12	12/21/2014	9:50:45	3.57	0.24
run12	12/21/2014	9:51:00	3.56	0.24
run12	12/21/2014	9:51:15	3.59	0.74
run12	12/21/2014	9:51:30	3.54	0.70
run12	12/21/2014	9:51:45	3.63	0.70
run12	12/21/2014	9:52:00	3.82	0.78
run12	12/21/2014	9:52:15	3.94	1.41
run12	12/21/2014	9:52:30	4.08	1.18
run12	12/21/2014	9:52:45	4.11	1.05
run12	12/21/2014	9:53:00	4.00	0.89
run12	12/21/2014	9:53:15	4.03	1.27
run12	12/21/2014	9:53:30	3.79	1.14
run12	12/21/2014	9:53:45	3.41	0.95
run12	12/21/2014	9:54:00	3.31	0.95
run12	12/21/2014	9:54:15	3.28	1.55
run12	12/21/2014	9:54:30	3.10	2.65
run12	12/21/2014	9:54:45	2.88	1.12
run12	12/21/2014	9:55:00	3.14	0.84
run12	12/21/2014	9:55:30	3.47	1.10
run12	12/21/2014	9:55:45	3.54	1.59
run12	12/21/2014	9:56:00	3.67	1.31
run12	12/21/2014	9:56:15	3.67	0.66
run12	12/21/2014	9:56:30	3.65	0.51
run12	12/21/2014	9:56:45	3.60	0.72
run12	12/21/2014	9:57:00	3.75	0.67
run12	12/21/2014	9:57:15	3.87	0.73
run12	12/21/2014	9:57:30	3.61	0.60
run12	12/21/2014	9:57:45	3.24	0.58
run12	12/21/2014	9:58:00	3.60	0.37
run12	12/21/2014	9:58:15	3.93	0.50
run12	12/21/2014	9:58:30	4.06	0.66
run12	12/21/2014	9:58:45	3.92	0.76
run12	12/21/2014	9:59:00	3.71	0.49
run12	12/21/2014	9:59:15	3.45	0.17
run12	12/21/2014	9:59:30	3.37	0.49
run12	12/21/2014	9:59:45	3.36	0.25
run12	12/21/2014	10:00:00	3.24	0.28
run12	12/21/2014	10:00:15	3.46	0.36
run12	12/21/2014	10:00:30	3.69	0.69
run12	12/21/2014	10:00:45	2.31	0.59
run12	12/21/2014	10:01:00	1.55	0.39
run12	12/21/2014	10:01:15	1.75	0.39
run12	12/21/2014	10:01:30	2.04	2.37
run12	12/21/2014	10:01:45	1.76	1.33
run12	12/21/2014	10:02:00	1.56	0.67
run12	12/21/2014	10:02:15	1.92	0.61
run12	12/21/2014	10:02:30	2.12	0.70
run12	12/21/2014	10:02:45	2.28	1.59
run12	12/21/2014	10:03:00	2.72	2.59
run12	12/21/2014	10:03:15	2.70	2.36

run12	12/21/2014	10:03:30	2.43	1.65
run12	12/21/2014	10:03:45	2.23	1.07
run12	12/21/2014	10:04:00	2.34	0.86
run12	12/21/2014	10:04:15	2.40	1.03
run12	12/21/2014	10:04:30	2.57	1.30
run12	12/21/2014	10:04:45	2.66	0.93
run12	12/21/2014	10:05:00	2.57	0.91
run12	12/21/2014	10:05:15	2.64	0.51
run12	12/21/2014	10:05:30	2.82	0.56
run12	12/21/2014	10:05:45	2.66	0.92
run12	12/21/2014	10:06:00	2.36	0.79
run12	12/21/2014	10:06:15	2.48	0.68
run12	12/21/2014	10:06:30	2.27	0.89
run12	12/21/2014	10:06:45	1.75	0.81
run12	12/21/2014	10:07:00	1.62	0.59
run12	12/21/2014	10:07:15	2.08	0.59
run12	12/21/2014	10:07:30	2.29	0.75
run12	12/21/2014	10:07:45	2.40	2.86
run12	12/21/2014	10:08:00	2.55	0.45
run12	12/21/2014	10:08:15	2.14	0.28
run12	12/21/2014	10:08:30	1.70	0.40
run12	12/21/2014	10:08:45	1.62	0.22
run12	12/21/2014	10:09:00	1.63	0.37
run12	12/21/2014	10:09:15	1.91	0.69
run12	12/21/2014	10:09:30	1.86	0.72
run12	12/21/2014	10:09:45	1.91	0.87
run12	12/21/2014	10:10:00	2.09	0.93
run12	12/21/2014	10:10:15	3.46	0.82
run12	12/21/2014	10:10:30	4.26	0.99
run12	12/21/2014	10:10:45	4.33	0.86
run12	12/21/2014	10:11:00	4.24	0.69
run12	12/21/2014	10:11:15	4.35	0.64
run12	12/21/2014	10:11:30	4.49	0.35
run12	12/21/2014	10:11:45	4.25	0.43
run12	12/21/2014	10:12:00	3.73	0.66
run12	12/21/2014	10:12:15	3.06	0.44
run12	12/21/2014	10:12:30	3.08	0.43
run12	12/21/2014	10:12:45	3.53	0.39
run12	12/21/2014	10:13:00	3.60	0.39
run12	12/21/2014	10:13:15	3.38	2.81
run12	12/21/2014	10:13:45	3.68	1.07
run12	12/21/2014	10:14:00	3.90	0.74
run12	12/21/2014	10:14:15	3.48	0.87
run12	12/21/2014	10:14:30	3.23	0.94
run12	12/21/2014	10:14:45	3.47	0.80
run12	12/21/2014	10:15:00	3.86	0.32
run12	12/21/2014	10:15:15	3.83	0.34
run12	12/21/2014	10:15:30	3.53	0.27
run12	12/21/2014	10:15:45	3.30	0.08
run12	12/21/2014	10:16:00	3.54	0.23
run12	12/21/2014	10:16:15	3.59	0.29
run12	12/21/2014	10:16:30	3.52	0.23
run12	12/21/2014	10:16:45	3.64	0.32
run12	12/21/2014	10:17:00	3.79	0.53
run12	12/21/2014	10:17:15	3.90	0.60
run12	12/21/2014	10:17:30	3.85	0.30
run12	12/21/2014	10:17:45	3.91	0.53
run12	12/21/2014	10:18:00	3.73	0.45
run12	12/21/2014	10:18:15	3.67	0.65

run12	12/21/2014	10:18:30	3.77	0.65
run12	12/21/2014	10:18:45	3.43	1.05
run12	12/21/2014	10:19:00	3.45	1.05
run12	12/21/2014	10:19:15	3.74	0.79
run12	12/21/2014	10:19:30	3.55	0.62
run12	12/21/2014	10:19:45	3.54	0.65
run12	12/21/2014	10:20:00	3.84	0.68
run12	12/21/2014	10:20:15	3.84	0.53
run12	12/21/2014	10:20:30	3.26	0.54
run12	12/21/2014	10:20:45	2.40	0.66
run12	12/21/2014	10:21:00	2.04	0.82
run12	12/21/2014	10:21:15	1.88	0.60
run12	12/21/2014	10:21:30	2.00	0.25
run12	12/21/2014	10:21:45	2.31	0.70
run12	12/21/2014	10:22:00	2.46	0.45
run12	12/21/2014	10:22:15	2.46	0.54
run12	12/21/2014	10:22:30	2.27	0.46
run12	12/21/2014	10:22:45	2.60	0.55
run12	12/21/2014	10:23:00	2.76	0.59
run12	12/21/2014	10:23:15	2.10	0.59
run12	12/21/2014	10:23:30	1.41	3.21
run12	12/21/2014	10:23:45	1.37	0.27
run12	12/21/2014	10:24:00	1.74	0.02
run12	12/21/2014	10:24:15	1.77	0.13
run12	12/21/2014	10:24:30	1.93	0.61
run12	12/21/2014	10:24:45	1.93	1.29
run12	12/21/2014	10:25:00	2.00	0.54
run12	12/21/2014	10:25:15	2.43	0.23
run12	12/21/2014	10:25:30	2.07	0.36
run12	12/21/2014	10:25:45	1.84	0.34
run12	12/21/2014	10:26:00	2.20	0.52
run12	12/21/2014	10:26:15	2.12	0.50
run12	12/21/2014	10:26:30	2.33	0.38
run12	12/21/2014	10:26:45	2.04	0.28
run12	12/21/2014	10:27:00	1.60	0.31
run12	12/21/2014	10:27:15	1.39	0.80
run12	12/21/2014	10:27:30	1.60	1.07
run12	12/21/2014	10:27:45	1.85	0.95
run12	12/21/2014	10:28:00	2.07	0.99
run12	12/21/2014	10:28:15	2.42	1.06
run12	12/21/2014	10:28:30	2.57	0.77
run12	12/21/2014	10:28:45	2.13	0.78
run12	12/21/2014	10:29:00	2.05	0.65
run12	12/21/2014	10:29:15	2.28	0.79
run12	12/21/2014	10:29:30	2.67	1.18
run12	12/21/2014	10:29:45	2.50	0.93
run12	12/21/2014	10:30:00	2.66	1.24
run12	12/21/2014	10:30:15	2.79	0.94
run12	12/21/2014	10:30:30	2.68	0.74
run12	12/21/2014	10:30:45	3.54	0.61
run12	12/21/2014	10:31:00	3.96	0.74
run12	12/21/2014	10:31:15	4.27	0.79
run12	12/21/2014	10:31:45	4.35	0.18
run12	12/21/2014	10:32:00	4.32	0.59
run12	12/21/2014	10:32:15	3.75	0.35
run12	12/21/2014	10:32:30	3.61	0.73
run12	12/21/2014	10:32:45	3.57	0.66
run12	12/21/2014	10:33:00	3.60	0.51
run12	12/21/2014	10:33:15	3.52	0.61

run12	12/21/2014	10:33:30	3.15	0.51				
run12	12/21/2014	10:33:45	3.13	0.97				
run12	12/21/2014	10:34:00	3.49	1.19				
run12	12/21/2014	10:34:15	3.76	1.24				
run12	12/21/2014	10:34:30	3.96	0.88				
run12	12/21/2014	10:34:45	3.99	1.07				
run12	12/21/2014	10:35:00	3.85	0.86				
run12	12/21/2014	10:35:15	3.76	1.20				
run12	12/21/2014	10:35:30	3.73	1.40				
run12	12/21/2014	10:35:45	3.70	1.21				
run12	12/21/2014	10:36:00	3.99	0.99				
run12	12/21/2014	10:36:15	4.15	0.84				
run12	12/21/2014	10:36:30	4.06	0.62				
run12	12/21/2014	10:36:45	3.77	0.97				
run12	12/21/2014	10:37:00	3.52	0.99				
run12	12/21/2014	10:37:15	3.74	1.19				
run12	12/21/2014	10:37:30	3.89	0.80				
run12	12/21/2014	10:37:45	3.97	0.51				
run12	12/21/2014	10:38:00	4.15	0.42				
run12	12/21/2014	10:38:15	4.23	0.66				
run12	12/21/2014	10:38:30	4.14	0.57				
run12	12/21/2014	10:38:45	4.02	0.66				
run12	12/21/2014	10:39:00	3.94	0.67				
run12	12/21/2014	10:39:15	3.66	0.66				
run12	12/21/2014	10:39:30	3.55	0.80				
run12	12/21/2014	10:39:45	3.34	0.86				
run12	12/21/2014	10:40:00	2.98	0.63				
run12	12/21/2014	10:40:15	3.19	0.88				
run12	12/21/2014	10:40:30	3.03	0.67				
run12	12/21/2014	10:40:45	2.26	0.18				
run12	12/21/2014	10:41:00	2.41	0.62				
run12	12/21/2014	10:41:15	2.94	0.53				
run12	12/21/2014	10:41:30	2.95	0.49				
run12	12/21/2014	10:41:45	2.64	0.37				
run12	12/21/2014	10:42:00	2.58	0.52				
run12	12/21/2014	10:42:15	2.61	0.90				
run12	12/21/2014	10:42:30	2.48	0.92				
run12	12/21/2014	10:42:45	2.43	1.01				
run12	12/21/2014	10:43:00	2.41	0.75				
run12	12/21/2014	10:43:15	2.43	1.06				
run12	12/21/2014	10:43:30	2.51	0.93				
run12	12/21/2014	10:43:45	2.66	1.24				
run12	12/21/2014	10:44:00	2.79	0.94				
run12	12/21/2014	10:44:15	2.78	0.74				
run12	12/21/2014	10:44:30	3.54	0.61				
run12	12/21/2014	10:44:45	3.96	0.74				
run12	12/21/2014	10:45:00	4.27	0.79				
C4R3 averun12	12/21/2014	9:42:45	3.04	0.80		62		
scg4	12/21/2014	10:45:30	4.83	0.60	CC66094/cg4	CO	5.13	0
scg4	12/21/2014	10:45:45	4.22	0.96	CC66094/cg4	CO	5.13	0
scg4	12/21/2014	10:46:00	3.17	0.58	CC66094/cg4	CO	5.13	0
scg4	12/21/2014	10:46:15	4.32	0.22	CC66094/cg4	CO	5.13	0
scg4	12/21/2014	10:46:30	4.86	0.29	CC66094/cg4	CO	5.13	0
scg4	12/21/2014	10:46:45	4.91	0.57	CC66094/cg4	CO	5.13	0
scg4	12/21/2014	10:47:00	4.97	0.54	CC66094/cg4	CO	5.13	0
scg4	12/21/2014	10:47:15	4.98	0.34	CC66094/cg4	CO	5.13	0
scg4	12/21/2014	10:47:30	4.95	0.30	CC66094/cg4	CO	5.13	0
o2zero1	12/21/2014	10:47:45	4.95	0.30	CC66094/cg4	CO	5.13	0
co2zero1	12/21/2014	10:48:00	4.95	0.30	CC66094/cg4	CO	5.13	0

cospan1	12/21/2014	10:48:15	4.95	0.30	CC66094/cg4	CO	5.13	0
scg8	12/21/2014	10:48:30	4.94	0.88	CC1076/cg8	O2	11.1 CO2	11.1
scg8	12/21/2014	10:48:45	4.87	0.74	CC1076/cg8	O2	11.1 CO2	11.1
scg8	12/21/2014	10:49:00	3.41	0.41	CC1076/cg8	O2	11.1 CO2	11.1
scg8	12/21/2014	10:49:15	0.71	0.39	CC1076/cg8	O2	11.1 CO2	11.1
scg8	12/21/2014	10:49:30	0.01	0.29	CC1076/cg8	O2	11.1 CO2	11.1
scg8	12/21/2014	10:49:45	0.00	0.19	CC1076/cg8	O2	11.1 CO2	11.1
scg8	12/21/2014	10:50:00	0.00	0.00	CC1076/cg8	O2	11.1 CO2	11.1
scg8	12/21/2014	10:50:15	0.00	0.00	CC1076/cg8	O2	11.1 CO2	11.1
scg8	12/21/2014	10:50:30	0.00	0.00	CC1076/cg8	O2	11.1 CO2	11.1
scg8	12/21/2014	10:50:45	0.00	0.03	CC1076/cg8	O2	11.1 CO2	11.1
scg8	12/21/2014	10:51:00	0.00	0.13	CC1076/cg8	O2	11.1 CO2	11.1
scg8	12/21/2014	10:51:15	0.00	0.07	CC1076/cg8	O2	11.1 CO2	11.1
o2span1	12/21/2014	10:51:30	0.00	0.13	CC1076/cg8	O2	11.1 CO2	11.1
co2span1	12/21/2014	10:51:45	0.00	0.13	CC1076/cg8	O2	11.1 CO2	11.1
cozero1	12/21/2014	10:52:00	0.00	0.13	CC1076/cg8	O2	11.1 CO2	11.1
thczero1	12/21/2014	10:52:15	0.00	0.13	CC1076/cg8	O2	11.1 CO2	11.1
scg11	12/21/2014	10:52:30	0.00	0.28	LL107680/cg11	THC	5.06	0
scg11	12/21/2014	10:52:45	0.27	1.87	LL107680/cg11	THC	5.06	0
scg11	12/21/2014	10:53:00	0.69	3.78	LL107680/cg11	THC	5.06	0
scg11	12/21/2014	10:53:15	0.34	4.44	LL107680/cg11	THC	5.06	0
scg11	12/21/2014	10:53:30	0.21	5.21	LL107680/cg11	THC	5.06	0
scg11	12/21/2014	10:53:45	0.19	4.98	LL107680/cg11	THC	5.06	0
scg11	12/21/2014	10:54:00	0.16	5.10	LL107680/cg11	THC	5.06	0
scg11	12/21/2014	10:54:15	0.19	4.98	LL107680/cg11	THC	5.06	0
scg11	12/21/2014	10:54:30	0.19	5.15	LL107680/cg11	THC	5.06	0
thcspan1	12/21/2014	10:54:45	0.19	4.98	LL107680/cg11	THC	5.06	0

APPENDIX G

Visible Emission Data

METCO ENVIRONMENTAL

90-100

FUGITIVE OR SMOKE EMISSION INSPECTION
OUTDOOR LOCATION

COMPANY Black Gold Rush OBSERVER R Adams

LOCATION Midland, Tx 18" AFFILIATION METCO Env

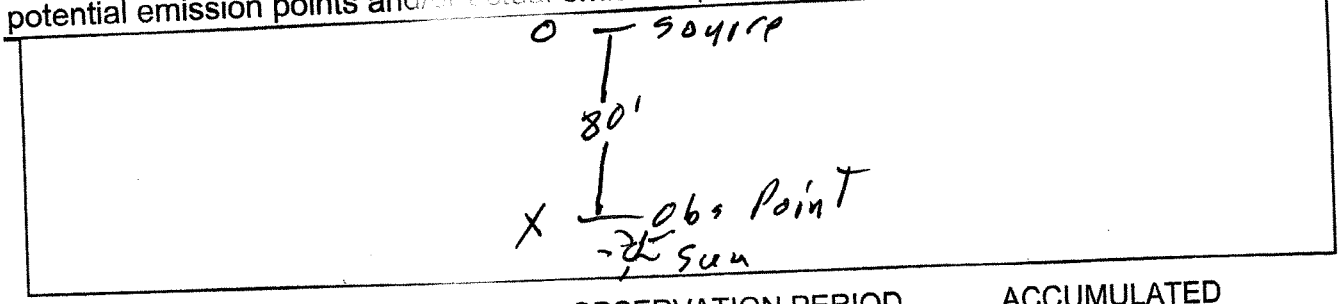
COMPANY REPRESENTATIVE _____ DATE 12-19-14

Sky Conditions Overcast Wind Direction S

Precipitation 0 Wind Speed 14

INDUSTRY Combustor PROCESS UNIT _____

Sketch process unit; indicate observer position relative to source and sun; indicate potential emission points and/or actual emission points.



OBSERVATIONS	CLOCK TIME	OBSERVATION PERIOD DURATION, MIN:SEC	ACCUMULATED EMISSION, TIME, MIN:SEC
Begin Observation	0935-0955	20:00	0:00
	1000-1020	20:00	0:00
	1030-1050	20:00	0:00
End Observation	1050	60:00	0:00

QA/QC Check
Completeness ✓ Legibility ✓ Accuracy ✓ Specifications ✓ Reasonableness ✓

Checked by: _____

METCO ENVIRONMENTAL

90-100

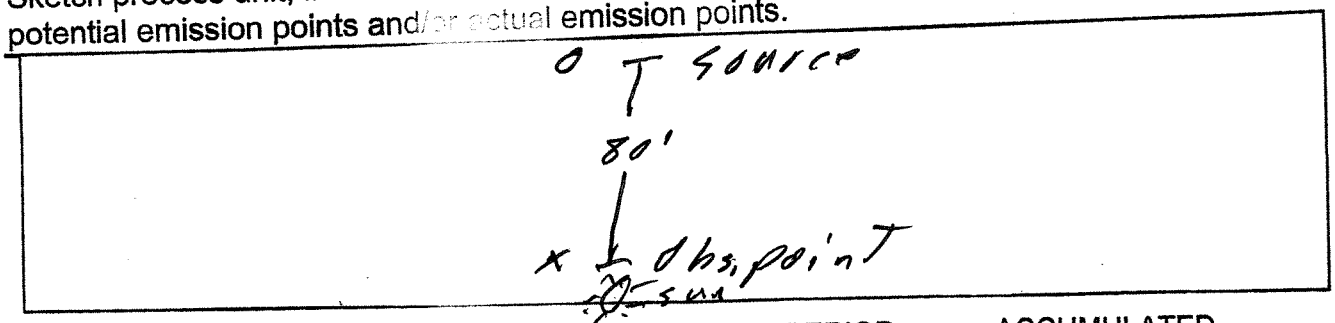
FUGITIVE OR SMOKE EMISSION INSPECTION
OUTDOOR LOCATION

COMPANY Black Gold Rush OBSERVER R Adams
LOCATION Midland, Tx 18" AFFILIATION METCO Env,
COMPANY REPRESENTATIVE _____ DATE 12-19-14

Sky Conditions Overcast Wind Direction N
Precipitation 0 Wind Speed 1N

INDUSTRY Combustors PROCESS UNIT _____

Sketch process unit; indicate observer position relative to source and sun; indicate potential emission points and/or actual emission points.



OBSERVATIONS	CLOCK TIME	OBSERVATION PERIOD DURATION, MIN:SEC	ACCUMULATED EMISSION, TIME, MIN:SEC
Begin Observation	1115-1135	20:00	0:00
	1140-1200	20:00	0:00
	1205-1225	20:00	0:00
End Observation	1225	60:00	0:00

QA/QC Check
Completeness ✓ Legibility ✓ Accuracy ✓ Specifications ✓ Reasonableness ✓

Checked by: _____

METCO ENVIRONMENTAL

FUGITIVE OR SMOKE EMISSION INSPECTION
OUTDOOR LOCATION

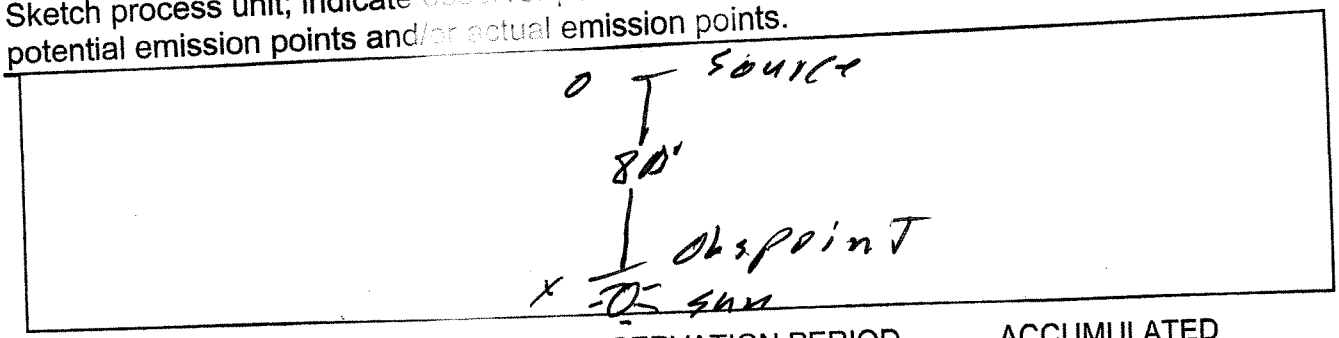
C10-100

COMPANY Black Gold Rush OBSERVER R Adams
LOCATION Midland, Tx 18" AFFILIATION METCO Env.
COMPANY REPRESENTATIVE _____ DATE 12/19/14

Sky Conditions Overcast Wind Direction N
Precipitation 0 Wind Speed 24

INDUSTRY Combustors PROCESS UNIT _____

Sketch process unit; indicate observer position relative to source and sun; indicate potential emission points and/or actual emission points.



OBSERVATIONS	CLOCK TIME	OBSERVATION PERIOD DURATION, MIN:SEC	ACCUMULATED EMISSION, TIME, MIN:SEC
Begin Observation	1235-1255	20:00	0:00
	1300-1320	20:00	0:00
	1325-1345	20:00	0:00
End Observation	1345	60:00	0:00

QA/QC Check
Completeness ✓ Legibility ✓ Accuracy ✓ Specifications ✓ Reasonableness ✓

Checked by: _____

METCO ENVIRONMENTAL

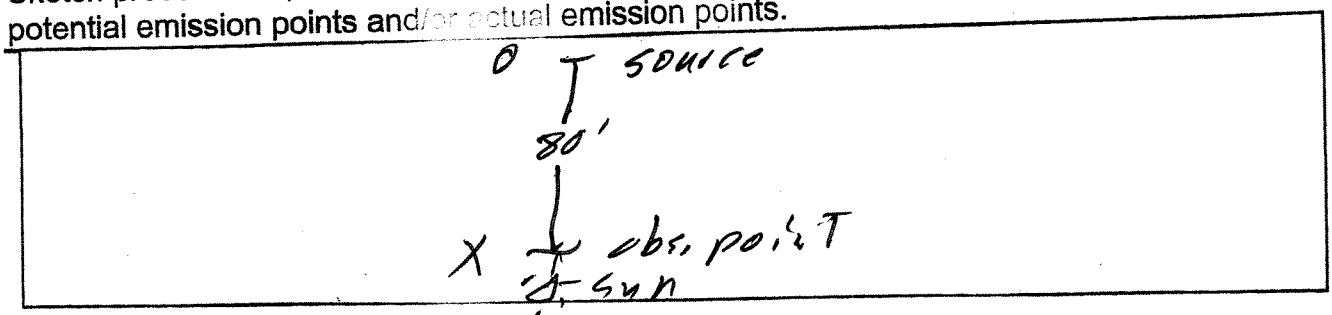
FUGITIVE OR SMOKE EMISSION INSPECTION
OUTDOOR LOCATION

COMPANY Black Gold Rush OBSERVER R Adams
LOCATION Midland, Tx 18" AFFILIATION METCO Env
COMPANY REPRESENTATIVE _____ DATE 12/9/14

Sky Conditions Overcast Wind Direction N
Precipitation 0 Wind Speed 14

INDUSTRY Combusters PROCESS UNIT _____

Sketch process unit; indicate observer position relative to source and sun; indicate potential emission points and/or actual emission points.



OBSERVATIONS	CLOCK TIME	OBSERVATION PERIOD DURATION, MIN:SEC	ACCUMULATED EMISSION, TIME, MIN:SEC
Begin Observation	1420-1440	20:00	0:00
	1445-1505	20:00	0:00
	1510-1530	20:00	0:00
End Observation	1530	60:00	0:00

QA/QC Check
Completeness ✓ Legibility ✓ Accuracy ✓ Specifications ✓ Reasonableness ✓

Checked by: _____

METCO
ENVIRONMENTAL

FUGITIVE OR SMOKE EMISSION INSPECTION
OUTDOOR LOCATION

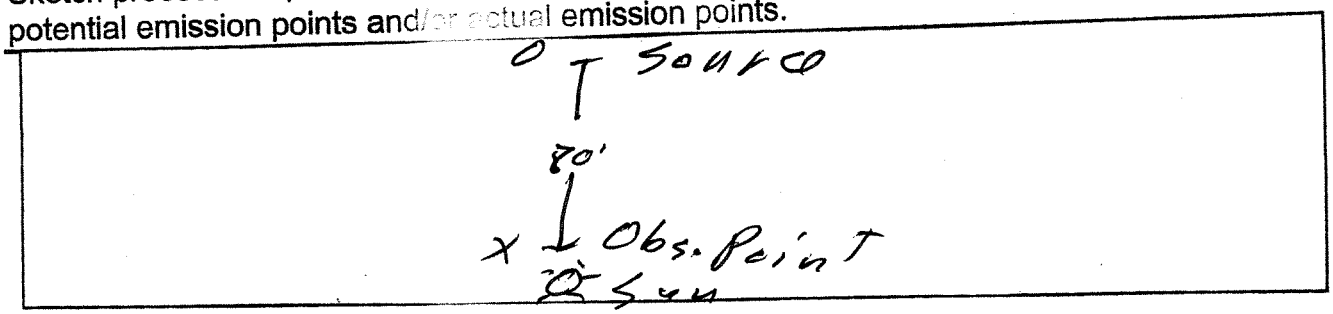
70 100 20

COMPANY Black Gold Rush OBSERVER R Adams
LOCATION Midland, Tx 18" AFFILIATION METCO Env
COMPANY REPRESENTATIVE _____ DATE 12/19/14

Sky Conditions Clear Wind Direction N
Precipitation 0 Wind Speed 14

INDUSTRY Combustors PROCESS UNIT _____

Sketch process unit; indicate observer position relative to source and sun; indicate potential emission points and/or actual emission points.



OBSERVATIONS	CLOCK TIME	OBSERVATION PERIOD DURATION, MIN:SEC	ACCUMULATED EMISSION, TIME, MIN:SEC
Begin Observation	1540-1600	20:00	0:00
	1605-1625	20:00	0:00
	1630-1650	20:00	0:00
End Observation	1650	60:00	0:00

QA/QC Check
Completeness ✓ Legibility ✓ Accuracy ✓ Specifications ✓ Reasonableness ✓

Checked by: _____

METCO ENVIRONMENTAL

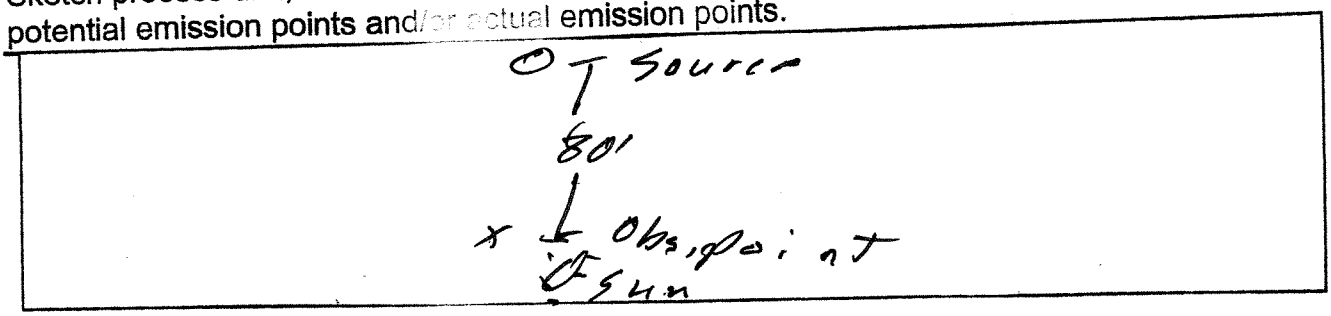
FUGITIVE OR SMOKE EMISSION INSPECTION
OUTDOOR LOCATION 70 100 70

COMPANY Black Gold Rush OBSERVER RAdams
LOCATION Midkiff Tx 18" AFFILIATION METCO Env
COMPANY REPRESENTATIVE _____ DATE 12/19/14

Sky Conditions Clear Wind Direction N
Precipitation 0 Wind Speed 1h

INDUSTRY Combustors PROCESS UNIT _____

Sketch process unit; indicate observer position relative to source and sun; indicate potential emission points and/or actual emission points.



OBSERVATIONS	CLOCK TIME	OBSERVATION PERIOD DURATION, MIN:SEC	ACCUMULATED EMISSION, TIME, MIN:SEC
Begin Observation	1700-1720	20:00	0:00
	1725-1745	20:00	0:00
	1750-1810	20:00	0:00
End Observation	1810	60:00	0:00

QA/QC Check
Completeness ✓ Legibility ✓ Accuracy ✓ Specifications ✓ Reasonableness ✓

Checked by: _____

METCO ENVIRONMENTAL

FUGITIVE OR SMOKE EMISSION INSPECTION
OUTDOOR LOCATION

30-70-30

COMPANY Black Gold Rush OBSERVER R Adams

LOCATION Midland, TX 78" AFFILIATION METCO Env.

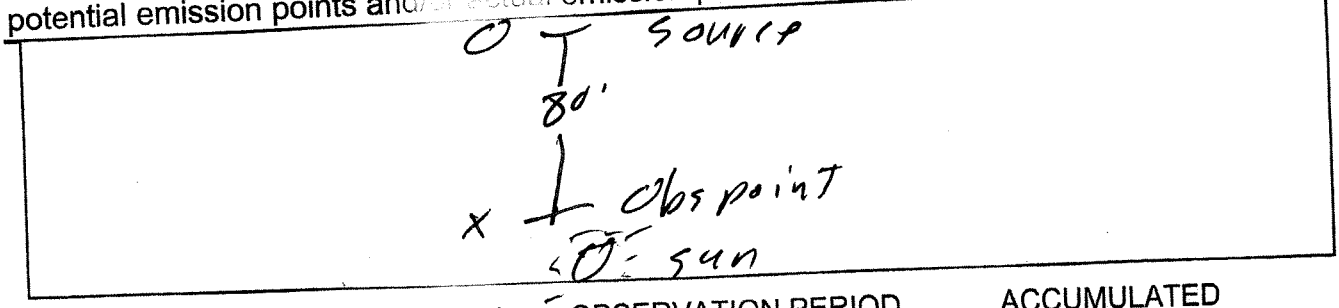
COMPANY REPRESENTATIVE _____ DATE 12/20/14

Sky Conditions Overcast Wind Direction S

Precipitation 0 Wind Speed 34

INDUSTRY Combustors PROCESS UNIT _____

Sketch process unit; indicate observer position relative to source and sun; indicate potential emission points.



OBSERVATIONS	CLOCK TIME	OBSERVATION PERIOD DURATION, MIN:SEC	ACCUMULATED EMISSION, TIME, MIN:SEC
Begin Observation	1115-1135	20:00	0:00
	1140-1200	20:00	0:00
	1205-1225	20:00	0:00
End Observation	1225	60:00	0:00

QA/QC Check
Completeness ✓ Legibility ✓ Accuracy ✓ Specifications ✓ Reasonableness ✓

Checked by: _____

METCO ENVIRONMENTAL

FUGITIVE OR SMOKE EMISSION INSPECTION
OUTDOOR LOCATION

30 of 30

COMPANY Black Gold Rush OBSERVER RAdams

LOCATION Midland TX 18" AFFILIATION METCO Env

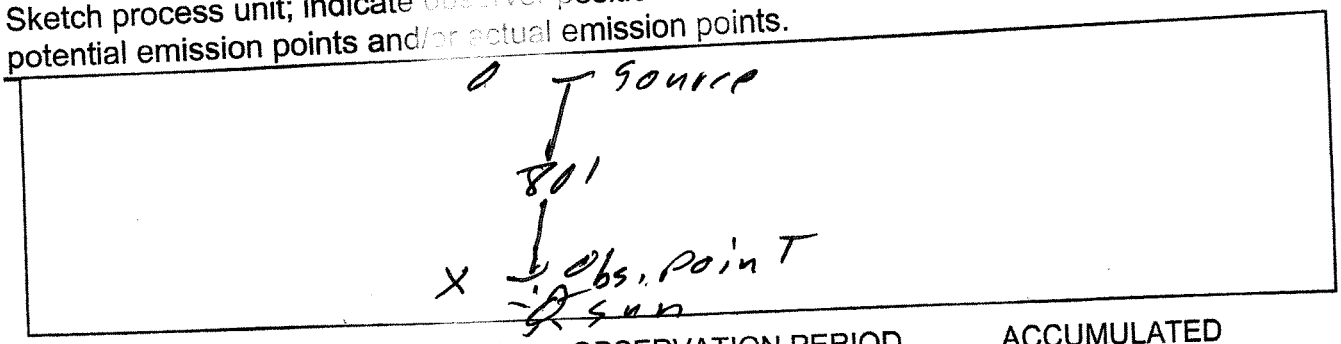
COMPANY REPRESENTATIVE _____ DATE 12/20/14

Sky Conditions Partly cloudy Wind Direction S

Precipitation 0 Wind Speed 2k

INDUSTRY Combustors PROCESS UNIT _____

Sketch process unit; indicate observer position relative to source and sun; indicate potential emission points and/or actual emission points.



OBSERVATIONS	CLOCK TIME	OBSERVATION PERIOD DURATION, MIN:SEC	ACCUMULATED EMISSION, TIME, MIN:SEC
Begin Observation	1233-1253	20:00	0:00
	1258-1318	20:00	0:00
	1323-1343	20:00	0:00
End Observation	1343	60:00	0:00

QA/QC Check Completeness ✓ Legibility ✓ Accuracy ✓ Specifications ✓ Reasonableness ✓

Checked by: _____

METCO ENVIRONMENTAL

FUGITIVE OR SMOKE EMISSION INSPECTION
OUTDOOR LOCATION

30-70-30

COMPANY Black Gold Rush OBSERVER R Adams

LOCATION Midland, TX 18" AFFILIATION METCO Env

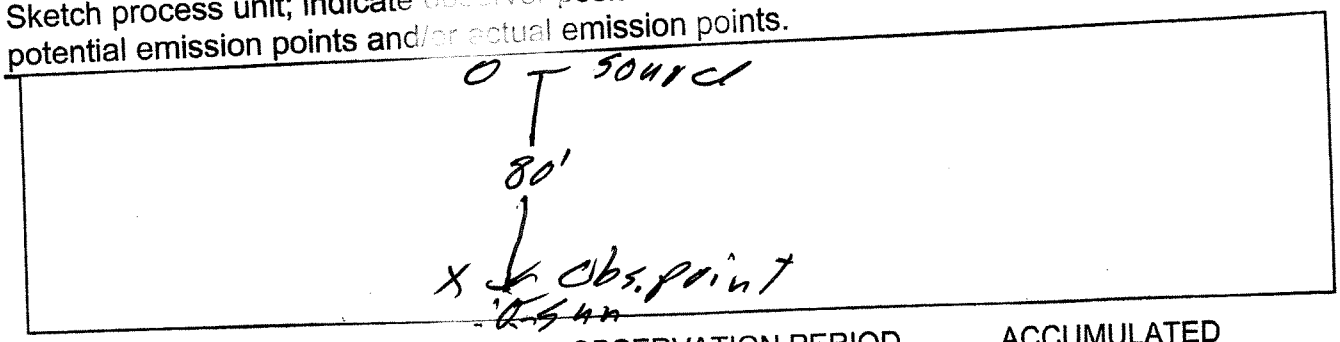
COMPANY REPRESENTATIVE _____ DATE 12/20/14

Sky Conditions partly cloudy Wind Direction S

Precipitation 0 Wind Speed 25

INDUSTRY Combustors PROCESS UNIT _____

Sketch process unit; indicate observer position relative to source and sun; indicate potential emission points.



OBSERVATIONS	CLOCK TIME	OBSERVATION PERIOD DURATION, MIN:SEC	ACCUMULATED EMISSION, TIME, MIN:SEC
Begin Observation	1355-1415	20:00	0:00
	1420-1440	20:00	0:00
	1445-1505	20:00	0:00
End Observation	1505	60:00	0:00

QA/QC Check
Completeness / Legibility / Accuracy / Specifications / Reasonableness /

Checked by: _____

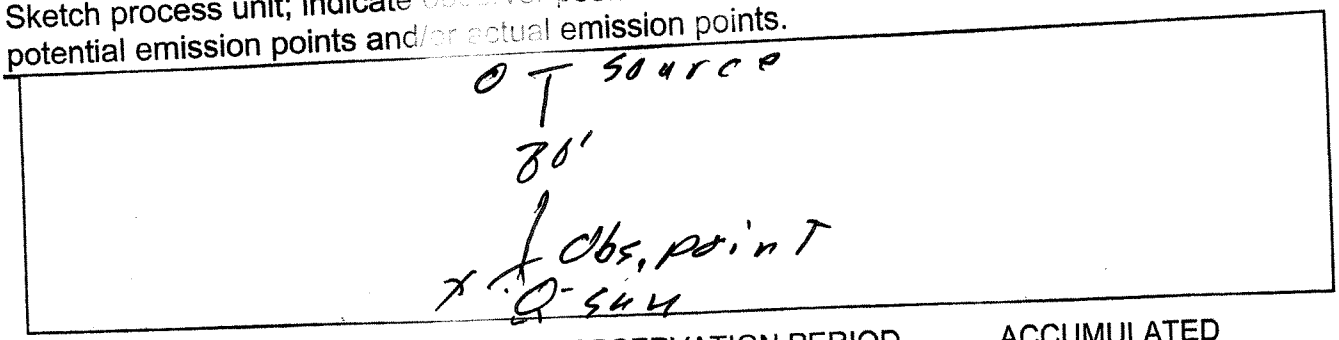
METCO ENVIRONMENTAL

FUGITIVE OR SMOKE EMISSION INSPECTION
OUTDOOR LOCATION

0-30-0

COMPANY Black Gold Rig 1 OBSERVER R Adams
LOCATION Midland, Tx 18th AFFILIATION METCO Env
COMPANY REPRESENTATIVE _____ DATE 12/20/14
Sky Conditions partly cloudy Wind Direction S
Precipitation 0 Wind Speed 2H
INDUSTRY Combusters PROCESS UNIT _____

Sketch process unit; indicate observer position relative to source and sun; indicate potential emission points and/or actual emission points.



OBSERVATIONS	CLOCK TIME	OBSERVATION PERIOD DURATION, MIN:SEC	ACCUMULATED EMISSION, TIME, MIN:SEC
Begin Observation	1520-1540	20:00	0:00
	1545-1605	20:00	0:00
	1618-1630	20:00	0:00
End Observation	1630	60:00	0:00

QA/QC Check
Completeness ✓ Legibility ✓ Accuracy ✓ Specifications ✓ Reasonableness ✓

Checked by: _____

METCO ENVIRONMENTAL

0-30-0

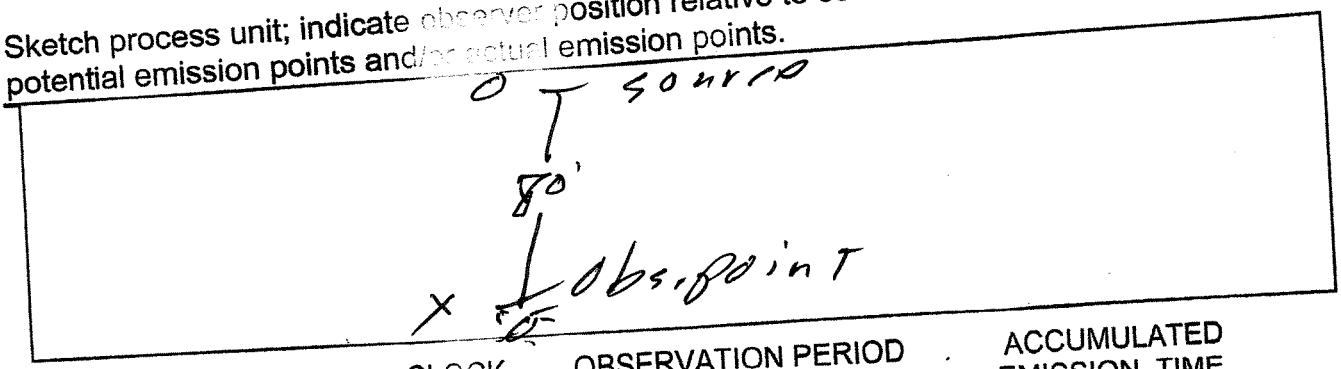
FUGITIVE OR SMOKE EMISSION INSPECTION
OUTDOOR LOCATION

COMPANY Black Gold Rush OBSERVER R Adams
LOCATION Midland TX 18" AFFILIATION METCO Env
COMPANY REPRESENTATIVE _____ DATE 12/20/14

Sky Conditions clear Wind Direction S
Precipitation 0 Wind Speed 24

INDUSTRY Combustors PROCESS UNIT _____

Sketch process unit; indicate observer position relative to source and sun; indicate potential emission points and/or actual emission points.



OBSERVATIONS	CLOCK TIME	OBSERVATION PERIOD DURATION, MIN:SEC	ACCUMULATED EMISSION, TIME, MIN:SEC
Begin Observation	1640-1700	20:00	0:00
	1705-1725	20:00	0:00
	1730-1750	20:00	0:00
	____	____	____
	____	____	____
	____	____	____
	____	____	____
	____	____	____
	____	____	____
End Observation	1750	60:00	0:00

QA/QC Check
Completeness ✓ Legibility ✓ Accuracy ✓ Specifications ✓ Reasonableness ✓

Checked by: _____

METCO ENVIRONMENTAL

FUGITIVE OR SMOKE EMISSION INSPECTION
OUTDOOR LOCATION

0-30-0

COMPANY Black Gold Rush OBSERVER R Adams

LOCATION Midland, Tx 18" AFFILIATION METCO Env

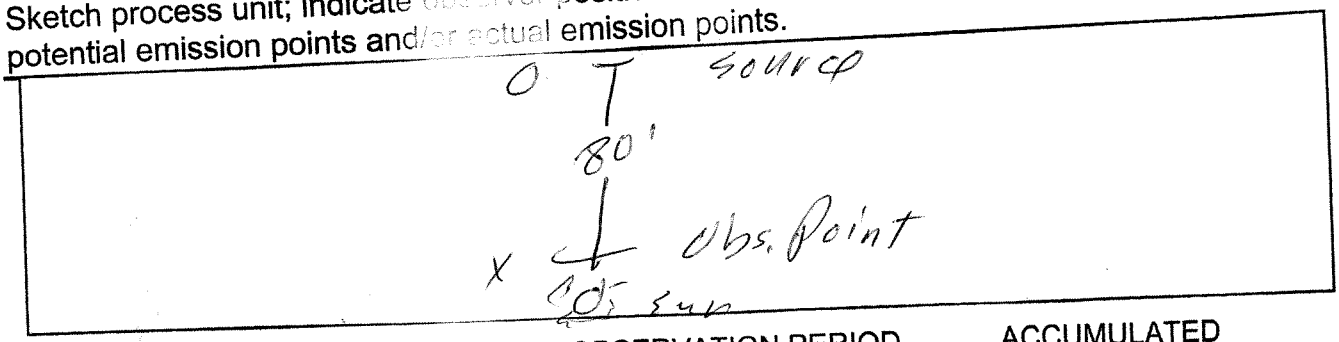
COMPANY REPRESENTATIVE _____ DATE 12/21/14

Sky Conditions partly cloudy Wind Direction S

Precipitation 0 Wind Speed 2K

INDUSTRY Combasters PROCESS UNIT _____

Sketch process unit; indicate observer position relative to source and sun; indicate potential emission points and/or actual emission points.



OBSERVATIONS	CLOCK TIME	OBSERVATION PERIOD DURATION, MIN:SEC	ACCUMULATED EMISSION, TIME, MIN:SEC
Begin Observation	0942-1002	20:00	0:00
	1007-1027	20:00	0:00
	1032-1052	20:00	0:00
End Observation	1052	60:00	0:00

QA/QC Check
Completeness / Legibility / Accuracy / Specifications / Reasonableness /

Checked by: _____


ACL
S-60
BatchPhoto - Trial Version
Dec-19-2014 09:51 AM
Run I-1


ACL
S-60
BatchPhoto - Trial Version
Dec-19-2014 11:27 AM
Run I-2



Run I-3



Run II-1



Run II-2



Run II-3



Run III-1



Run III-2



Run III-3



Run IV-1



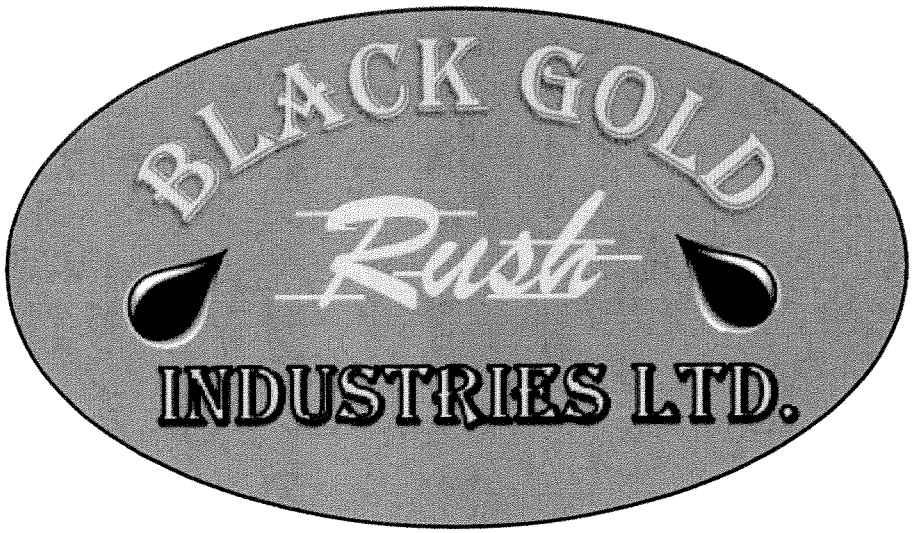
Run IV-2



Run IV-3

APPENDIX H

Plant Operational Data



COMBUSTOR TESTING- MIDLAND, TEXAS

December 2014

BGR - 18

Black Gold Rush Industries Ltd. BGR- LP/HP 18

Conditions

Black Gold Rush Industries Ltd.		BGR LP/HP 18	
CONDITION # 1	**90 - 100 % Flow Rate**		
Run #1			Standard Cubic Feet
TIME	**TEMP F°**	**PRESSURE (psig)**	**FLOW- SCFM**
9:35	41	3.5	7.5
9:40	41	3.0	7.5
9:45	41	3.0	7.5
9:50	41	3.0	7.5
9:55	42	3.0	7.5
10:00	41	3.0	7.3
10:05	42	3.0	7.5
10:10	42	3.0	7.5
10:15	43	3.0	7.5
10:20	42	3.0	7.5
10:25	43	3.0	7.4
10:30	42	3.0	7.5
10:35	43	3.0	7.5
10:40	44	3.0	7.5
10:45	44	3.0	7.6
10:50	44	3.0	7.5
10:55	44	3.0	7.5

Flow Meter Start	Flow Meter End	Total Cubic Feet
20459	**21021**	**562**

Black Gold Rush Industries Ltd.		BGR LP/HP 18	
CONDITION # 1	90 - 100 % Flow Rate		
Run # 2			Standard Cubic Feet
TIME	TEMP F°	PRESSURE (psig)	FLOW- SCFM
11:15	46	3.0	7.5
11:20	45	3.0	7.5
11:25	45	3.0	7.5
11:30	45	3.0	7.5
11:35	46	3.0	7.5
11:40	45	3.0	7.5
11:45	47	3.0	7.5
11:50	48	3.0	7.5
11:55	48	3.0	7.5
12:00	49	3.0	7.5
12:05	49	3.0	7.5
12:10	50	3.0	7.5
12:15	49	3.0	7.5
12:20	49	3.0	7.5
12:25	49	3.0	7.5

Flow Meter Start	Flow Meter End	Total Cubic Feet
21190	21749	559

Black Gold Rush Industries Ltd.		BGR LP/HP 18	
CONDITION # 1	90 - 100 % Flow Rate		
Run # 3			Standard Cubic Feet
TIME	TEMP F°	PRESSURE (psig)	FLOW- SCFM
12:35	51	2.9	7.5
12:40	51	2.9	7.5
12:45	51	2.9	7.5
12:50	51	2.9	7.4
12:55	50	2.9	7.5
1:00	51	3.0	7.5
1:05	51	3.0	7.5
1:10	51	3.0	7.5
1:15	51	3.0	7.5
1:20	51	3.0	7.5
1:25	51	3.0	7.5
1:30	50	3.0	7.5
1:35	51	3.0	7.5
1:40	51	3.0	7.5
1:45	51	3.0	7.5

Flow Meter Start	Flow Meter End	Total Cubic Feet
21753	22314	561

Black Gold Rush Industries Ltd.		BGR LP/HP 18	
CONDITION # 2	**70 – 100 - 70 % Flow Rate**		
Run # 1			Standard Cubic Feet
TIME	**TEMP F°**	**PRESSURE (psig)**	**FLOW- SCFM**
2:20 → 70%	57	1.8	5.4
2:25 ↑	62	1.8 – 3.0	6.0
2:30 → 100%	65	3.0	7.6
2:35 ↓	68	3.0 – 1.7	6.8
2:40 → 70%	67	1.7	5.5
2:45 ↑	67	1.7 – 3.0	6.8
2:50 → 100%	67	3.0	7.5
2:55 ↓	67	3.0-2.0	6.4
3:00 → 70%	71	2.0	5.7
3:05 ↑	71	2.0-3.0	6.6
3:10 → 100%	72	3.0	7.6
3:15 ↓	72	3.0-2.0	6.6
3:20 → 70%	74	2.0	5.7
3:25 ↑	74	3.0-2.0	6.6
3:30	73	2.0	7.7

Flow Meter Start	Flow Meter End	Total Cubic Feet
22524	**23019**	**495**

Black Gold Rush Industries Ltd.		BGR LP/HP 18	
CONDITION # 2	**70 – 100 - 70 % Flow Rate**		
Run # 2			Standard Cubic Feet
TIME	**TEMP F°**	**PRESSURE (psig)**	**FLOW- SCFM**
3:40 → 70%	73	1.8	5.5
3:45 ↑	74	1.8 – 3.0	6.6
3:50 → 100%	72	3.0	7.5
3:55 ↓	72	3.0 – 1.8	6.6
4:00 →70%	70	1.8	5.5
4:05 ↑	69	1.8 – 3.0	6.2
4:10 → 100%	69	3.0	7.4
4:15 ↓	68	3.0 – 1.8	6.4
4:20 → 70%	69	1.8	5.5
4:25 ↑	67	1.8 – 3.0	6.8
4:30 → 100%	67	3.0	7.4
4:35 ↓	66	3.0 – 1.8	6.4
4:40 → 70%	65	1.8	5.5
4:45 ↑	64	1.8-3.0	7.0
4:50 → 100%	61	2.7	7.5

Flow Meter Start	Flow Meter End	Total Cubic Feet
23042	**23529**	**487**

Black Gold Rush Industries Ltd.		BGR LP/HP 18	
CONDITION # 2	70 – 100 - 70 % Flow Rate		
Run # 3			Standard Cubic Feet
TIME	TEMP F°	PRESSURE (psig)	FLOW- SCFM
5:00 → 70%	59	1.8	5.5
5:05 ↑	57	1.8-2.7	6.6
5:10 → 100%	55	2.7	7.0
5:15 ↓	54	2.7 – 1.9	6.6
5:20 → 70%	53	1.9	5.7
5:25 ↑	52	1.9-3.0	6.8
5:30 → 100%	50	3.0	7.5
5:35 ↓	49	3.0-1.8	6.6
5:40 → 70%	49	1.8	5.5
5:45 ↑	48	1.8-3.0	6.4
5:50 → 100%	46	3.0	7.5
5:55 ↓	45	3.0-1.9	6.6
6:00 →70%	44	1.9	5.7
6:05 ↑	44	1.9-3.0	6.6
6:10 → 100%	43	3.0	7.5

Flow Meter Start	Flow Meter End	Total Cubic Feet
23559	23998	439

Black Gold Rush Industries Ltd.		BGR LP/HP 18	
CONDITION # 3	30 – 70 - 30 % Flow Rate		
Run # 1			Standard Cubic Feet
TIME	TEMP F°	PRESSURE (psig)	FLOW- SCFM
11:15 → 30%	48	.5	2.2
11:20 ↑	48	.5 – 1.4	3.0
11:25 → 70%	48	1.4	4.8
11:30 ↓	47	1.4-.5	3.4
11:35 → 30%	49	.5	2.2
11:40 ↑	49	.5 – 1.4	3.2
11:45 →70%	49	1.4	4.8
11:50 ↓	49	1.4-.7	3.2
11:55 → 30%	50	.7	2.5
12:00 ↑	50	.7 – 1.4	3.6
12:05 → 70%	50	1.4	4.8
12:10 ↓	50	1.4 - .5	3.4
12:15 → 30%	51	.5	2.1
12:20 ↑	51	.5 – 1.4	3.4
12:25 → 100%	52	1.4	4.8

Flow Meter Start	Flow Meter End	Total Cubic Feet
24502	24724	222

Black Gold Rush Industries Ltd.		BGR LP/HP 18	
CONDITION # 3	30 – 70 - 30 % Flow Rate		
Run # 2			Standard Cubic Feet
TIME	TEMP F°	PRESSURE (psig)	FLOW- SCFM
12:33 → 30%	54	.7	2.5
12:38 ↑	54	.7-1.4	3.4
12:43 → 70%	55	1.4	4.8
12:48 ↓	55	1.4 -.5	3.6
12:53 →30%	55	.5	2.2
12:58 ↑	57	.5-1.4	3.4
1:03 → 70%	58	1.4	4.8
1:08 ↓	60	1.4 -.7	3.6
1:13 → 30%	66	.7	2.6
1:18 ↑	66	.7 – 1.5	3.4
1:23 → 70%	71	1.5	4.9
1:28 ↓	72	1.5 - .7	3.4
1:33 →	73	.7	2.4
1:38 ↑	72	.7 – 1.5	3.4
1:43 → 70%	71	1.5	4.9

Flow Meter Start	Flow Meter End	Total Cubic Feet
24757	25003	246

Black Gold Rush Industries Ltd.		BGR LP/HP 18	
CONDITION # 3	30 – 70 - 30 % Flow Rate		
Run # 3			Standard Cubic Feet
TIME	TEMP F°	PRESSURE (psig)	FLOW- SCFM
1:55 → 30%	72	.7	2.5
2:00 ↑	68	.7-1.4	3.4
2:05 → 70%	67	1.4	4.8
2:10 ↓	66	1.4-.7	3.8
2:15 → 30%	68	.7	2.5
2:20 ↑	70	.7 – 1.6	3.4
2:25 → 70%	72	1.6	5.0
2:30 ↓	71	1.6 - .7	4.0
2:35 → 30%	73	.7	2.4
2:40 ↑	69	.7 – 1.5	3.4
2:45 → 70%	67	1.5	4.9
2:50 ↓	67	1.5 - .6	3.8
2:55 → 30%	68	.6	2.4
3:00 ↑	68	.6-1.5	3.6

Flow Meter Start	Flow Meter End	Total Cubic Feet
25037	25285	248

Black Gold Rush Industries Ltd.		BGR LP/HP 18	
CONDITION # 4	**0 – 30 - 0 % Flow Rate**		
Run # 1			Standard Cubic Feet
TIME	**TEMP F°**	**PRESSURE (psig)**	**FLOW- SCFM**
3:20 → 0%	72	.2	.7
3:25 ↑	72	.2-.7	1.6
3:30 → 30%	71	.7	2.4
3:35 ↓	71	.7-.3	1.6
3:40 → 0%	71	.3	.9
3:45 ↑	71	.3-.7	1.6
3:50 → 30%	69	.7	2.5
3:55 ↓	69	.7-.2	1.6
4:00 → 0%	69	.2	.8
4:05 ↑	69	.2-.7	1.6
4:10 → 30%	68	.7	2.5
4:15 ↓	67	.7-.2	1.6
4:20 → 0%	67	.2	.8
4:25 ↑	68	.2-.7	1.4

Flow Meter Start	Flow Meter End	Total Cubic Feet
25313	**25422**	**109**

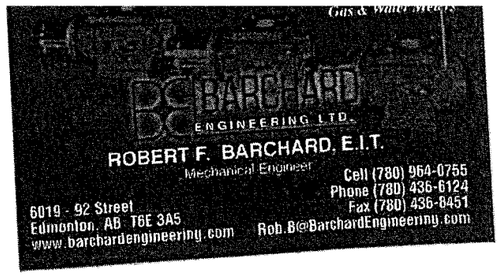
Black Gold Rush Industries Ltd.		BGR LP/HP 18	
CONDITION # 4	0 – 30 - 0 % Flow Rate		
Run # 2			Standard Cubic Feet
TIME	TEMP F°	PRESSURE (psig)	FLOW- SCFM
4:40 → 0%	68	.2	.8
4:45 ↑	67	.2-.7	1.6
4:50 → 30%	64	.7	2.5
4:55 ↓	62	.7-.2	1.6
5:00 → 0%	62	.2	.8
5:05 ↑	67	.2-.7	1.4
5:10 →0%	61	.7	2.5
5:15 ↓	59	.7-.2	2.0
5:20 → 0%	59	.2	.8
5:25 ↑	58	.7-.2	1.6
5:30 → 30%	57	.6	2.4
5:35 ↓	57	.6-.2	1.8
5:40 → 0%	56	.2	.8
5:45 ↑	55	.2-.7	1.6
5:50	55	.7	2.5

Flow Meter Start	Flow Meter End	Total Cubic Feet
25437	25545	108

Black Gold Rush Industries Ltd.	BGR LP/HP 18	
CONDITION # 4	0 – 30 - 0 % Flow Rate	
Run # 3		Standard Cubic Feet
TIME	TEMP F°	PRESSURE (psig)	FLOW- SCFM
9:42 → 0%	54	.2	.9
9:47 ↑	54	.2-.7	1.6
9:52 → 30%	56	.7	2.6
9:57 ↓	57	.7-.2	1.6
10:02 → 0%	60	.2	.8
10:07 ↑	60	.2-.7	1.6
10:12 → 30%	61	.7	2.5
10:17 ↓63	63	.7-.2	1.8
10:22 → 0%	64	.2	.8
10:27 ↑	64	.2-.5	1.6
10:32 → 30%	65	.5	2.4
10:37 ↓	66	.5-.2	1.6
10:42 → 0%	67	.2	.8
10:47 ↑	67	.2-.5	1.8

Flow Meter Start	Flow Meter End	Total Cubic Feet
25941	26057	116

DMD.Model 5 Prover
Date: 20/03/2014



Name:	A.C.L. Manufacturing
Location:	Barchard Engineering
Operator's Name or ID:	Vince
Master Meter Type:	2M(2300cfh/56.6m3)
Master Serial #:	9690005
Meter Output:	Uncorrected
Field Meter Type:	Romet RM30 Metric
Field Meter Serial #:	994911
Test Setup:	
Comments:	

Span Test Result: PASS +/- 2.00

Test Completed:	**10:34:23**	**10:38:06**
Flow Rate: (m3/h)	30.024	15.007
Test Volume: (m3)	1.000	0.500
Drive Rate or Pulses/Test:	0.010	0.010
Ambient Pressure: (kPa)	93.666	93.698
Master Temperature: (°C)	23.266	23.344
Master Pressure: (kPa)	-0.232	-0.074
Master Differential: (kPa)	0.060	0.030
Master Volume: (m3)	1.005	0.502
Meter Temperature: (°C)	22.408	22.251
Meter Pressure: (kPa)	-0.013	-0.014
Meter Differential: (kPa)	-0.014	-0.014
Test Duration:	00:02.00	00:02.01
Upper Pass/Fail Limit:	3.000	3.000
Lower Pass/Fail Limit:	3.000	3.000
% Pressure Correction:	-0.233	-0.064
% Temp. Correction:	-0.276	-0.352
% Uncorrected Proof:	100.562	100.701
% Corrected Proof:	100.051	100.282
% Accuracy:	99.949	99.719
% Error:	-0.051	-0.281
Single Test Result:	Pass	Pass

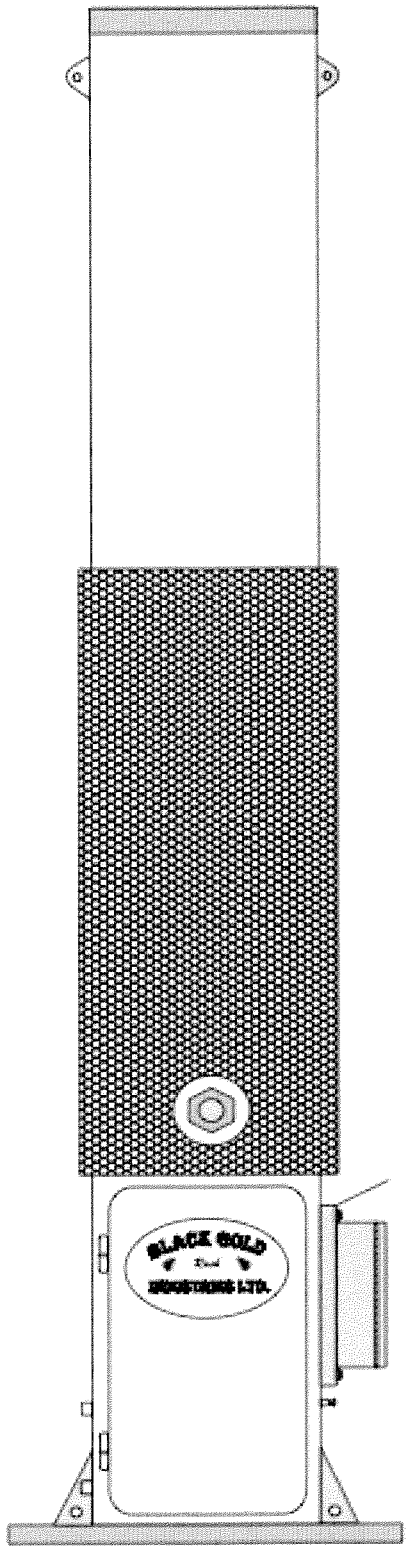
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APPENDIX I

BGR HP/LP Combustor Model BGR-18 Spec Sheet

BGR- LP COMBUSTOR
MODEL: BGR-18

Patent Pending



BGR Low Pressure Vapor Combustor

The BGR-18 is a highly versatile, low cost vapor combustor designed to destruct volatile organic compounds (VOC's) and BTEX's produced from oil storage tanks, dehys, and condensate & water storage tanks eliminating the need to install expensive vapor recovery units (VRU) and associated equipment.

The patented high efficiency burner inside the combustor chamber provides low pressure continuous burning capabilities, high combustion efficiency, low emissions, zero odors and increased flame stability with excellent turndown ratios for low pressure applications.

For more information see product specification sheet on reverse

==========

901 Main Ave East - Box 1898 - Sundre, AB, Canada T0M 1X0 – Phone (403) 638-2287 – Fax (403) 638-2281

Website: bgrindustries.com

BGR- LP COMBUSTOR
MODEL: BGR-18

PATENT PENDING

Specification Sheet

COMBUSTOR SPECIFICATION

- Total hydrocarbon destruction removal efficiency of 99.9% and meets the requirements of EPA 40 CFR 60 Subpart 0000 and AER Directive 60
- May be operated with or without continuous pilot
- 18" x 10' high-free standing
- Full stainless steel construction
- Maximum low pressure volume 12,960 scf/d with pilot
- LP Operating pressures from 0.2 psi to maximum 3.5 psi
- No visible flames
- Zero odors
- Excellent turndown ratio
- CSA approved ignition system

CONTROLLER SPECIFICATION

- CSA approved ACL 3200 Ignition Control System (meets CSA B149.3-10)
- Monitors and controls pilot or burners
- Remote stop and start
- Auto re-light, continuous trial for ignition
- 12/24 VDC operation (optional solar package available)
- Data logging & acquisition capabilities to meet EPA requirements
- Modbus capabilities

BURNER SPECIFICATION

- Patented burner assembly
- Full stainless steel nozzles
- Full stainless steel adjustable air dampers
- Adjustable primary and secondary air assist
- Extremely stable at wide range of flow rates, as low as 2oz/sq"
- No flame lift-off or impingement

901 Main Ave East - Box 1898 - Sundre, AB, Canada T0M 1X0 – Phone (403) 638-2287 – Fax (403) 638-2281

Website: bgrindustries.com

APPENDIX J

Chain of Custody

MEtCO Environmental ®

CHAIN OF CUSTODY RECORD

Page of

14-388A(OH)

Job No.:	14-388 (OH)	Project Manager:	B. Adams
Job Name:	Black Gold Rush	Project Supervisor:	S Lee
Location:	Midland, Tx	Method:	3C
Unit:	18" TO Outlet Stack		

SAMPLE I.D. Cond I	DATE	TIME	# OF CONT.	Absorb. Solution	Initial Vol.	SAMPLE ANALYSIS REQUIRED: PART	HCL	CL2	SO2	SO3		Archive	Recovered by	Mol. weight, O_2, CO_2, Methane, N_2, excess air REMARKS (Specific Compounds/Methods)
Run 1 bag	12/19/14	1042	1										S Lee	✓
Run 1 backup bag		↓	1									✓		✓
Run 2 bag		1220	1											✓
Run 2 backup bag		↓	1									✓		✓
Run 3 bag		1340	1											✓
Run 3 backup bag		↓	1									✓		✓
													✓	

Samples Received for Transport/Shipment by:		Date: 12/19/14	Time: 1345
Samples Received for Transport/Shipment by:		Date: 12/22/14	Time: 1045
Samples Received for Transport/Shipment by:		Date:	Time:
Samples Shipped Via:	FED EX PRIORITY	Date: 12-22-14	Time: 1530
Samples Received at Laboratory by:		Date: 12/22/14	Time: 1530
Samples Analyzed by:	12/23/14 TO 12/24/14 @1000	Date:	Time:
Samples Analyzed by:		Date:	Time:
Data Checked by:		Date: 1/27/15	Time: 0830

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VERSION 2
10 MARCH 2003

MECO Environmental ©

CHAIN OF CUSTODY RECORD

Page of

14-388A(OH)

Job No.:	14-388 (04)	Project Manager:	B. Adams
Job Name:	Black Gold Rush	Project Supervisor:	S Lee
Location:	Midland, Tx	Method:	3C
Unit:	18" TO Outlet Stack		

SAMPLE I.D.	DATE	TIME	# OF CONT.	Absorb. Solution	Initial Vol.	SAMPLE ANALYSIS REQUIRED: PART	HCL	CL2	SO2	SO3		Archive	Recovered by	REMARKS (Specific Compounds/Methods)
Conc. TI														Mol. weight, O_2, CO_2, Methane, N_2, excess air
Run 1 bag	12/19/14	1525	1										S Lee	✓
Run 1 backup bag	↓	↓	1									✓	↓	✓
Run 2 bag		1645	1											✓
Run 2 backup bag		↓	1									✓		✓
Run 3 bag		1805	1											✓
Run 3 backup bag		↓	1									✓		✓
	✓												↓	

Samples Received for Transport/Shipment by:		Date: 12/19/14	Time: 1815
Samples Received for Transport/Shipment by:		Date: 12/21/14	Time: 1045
Samples Received for Transport/Shipment by:		Date:	Time:
Samples Shipped Via:	FED EX → ENTHALPY DS	Date: 12-22-14	Time: 1530
Samples Received at Laboratory by:		Date: 12/22/14	Time: 1530
Samples Analyzed by:	12/23/14 r 12/24/14 e1000	Date:	Time:
Samples Analyzed by:		Date:	Time:
Data Checked by:		Date: 1/27/15	Time: 0830

VERSION 2
10 MARCH 2003

MACTEC Environmental

CHAIN OF CUSTODY RECORD

Page of

14-388A(OH)

Job No.:	14-388(OH)	Project Manager:	B. Adams
Job Name:	Black Gold Rush	Project Supervisor:	S Lee
Location:	Midland, Tx	Method:	3C
Unit:	18" TO Outlet Stack		

SAMPLE I.D. Cond III	DATE	TIME	# OF CONT.	Absorb. Solution	Initial Vol.	SAMPLE ANALYSIS REQUIRED: PART	HCL	CL2	SO2	SO3		Archive	Recovered by	REMARKS (Specific Compounds/Methods)
Run 1 bag	12/20/14	1220	1										S Lee	✓
Run 1 backup bag		↓	1									✓		✓
Run 2 bag		1340	1											✓
Run 2 backup bag		↓	1									✓		✓ Flat BDT 12/29/14
Run 3 bag		1500	1											✓
Run 3 backup bag	↓	↓	1									✓		✓

J4

Samples Received for Transport/Shipment by:		Date: 12/20/14	Time: 1518
Samples Received for Transport/Shipment by:		Date: 12/21/14	Time: 1045
Samples Received for Transport/Shipment by:		Date:	Time:
Samples Shipped Via:	FED EX → ENTHALPY	Date: 12-22-14	Time: 1530
Samples Received at Laboratory by:		Date: 12/22/14	Time: 1530
Samples Analyzed by:	12/23/14 + 12/24/14 @1000	Date:	Time:
Samples Analyzed by:		Date:	Time:
Data Checked by:		Date: 1/27/15	Time: 0830

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10 MARCH 2003

MACTEC Environmental

CHAIN OF CUSTODY RECORD

Page of

14-388A(OH)

Job No.:	14-388 (OH)	Project Manager:	B. Adams
Job Name:	Black Gold Rush	Project Supervisor:	L Lee
Location:	Midland, Tx	Method:	3C
Unit:	18" TO Outlet Stack		

SAMPLE I.D. Conc IV	DATE	TIME	# OF CONT.	Absorb. Solution	Initial Vol.	SAMPLE ANALYSIS REQUIRED: PART	HCL	Cl2	SO2	SO3		Archive	Recovered by	Mol. weight, O2, CO2, Methane, N2, excess air REMARKS (Specific Compounds/Methods)
Run 1 bag	12/20/14	1624	1											✓
Run 1 backup bag	12/20/14	1624	1									✓		✓
Run 2 bag	12/20/14	1743	1											✓
J-5 Run 2 backup bag	12/20/14	1743	1									✓		✓
Run 3 bag	12/21/14	1045	1											✓
Run 3 backup bag	12/21/14	1045	1									✓		✓

Samples Received for Transport/Shipment by:		Date: 12/21/14	Time: 1045
Samples Received for Transport/Shipment by:		Date:	Time:
Samples Received for Transport/Shipment by:		Date:	Time:
Samples Shipped Via:	FED EX → ENTHALPY	Date: 12-22-14	Time: 1520
Samples Received at Laboratory by:	12/23/14	Date: 12/22/14	Time: 1530
Samples Analyzed by:	12/24/14 @ 1000	Date:	Time:
Samples Analyzed by:		Date:	Time:
Data Checked by:		Date: 1/27/15	Time: 0830

VERSION 2
10 MARCH 2003

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CHAIN OF CUSTODY RECORD

Page of

14-388A(OH)

Job No.:	14-388 (OH)	Project Manager:	B. Adams
Job Name:	Black Gold Rush	Project Supervisor:	S Lee
Location:	Midland, Tx	Method:	18
Unit:	18" TO Inlet Duct		

SAMPLE I.D.	DATE	TIME	# OF CONT.	Absorb. Solution	Initial Vol.	SAMPLE ANALYSIS REQUIRED: PART	HCL	CL2	SO2	SO3	C1-C5: Hk, Nz, Benzene, Ar, CO, CO2, HHV, Propylene		Recovered by	ASTM 1945-03, ASTM D3588-98 REMARKS (Specific Compounds/Methods)
Canister # 1186	Cond I	12/19/14	1750	1							✓	✓	R Adams	✓
Canister # 1310	Cond II	12/19/14	1815	1							✓	✓	R Adams	✓
Canister # 1044	Cond III	12/21/14	1510	1							✓	✓	R Adams	✓
Canister # 1340	Cond IV	12/21/14	1100	1							✓	✓	R Adams	✓

Samples Received for Transport/Shipment by:	Brandon Hopper	Date:	12/21/14
Samples Received for Transport/Shipment by:		Time:	1130 dm
Samples Received for Transport/Shipment by:		Date:	
Samples Shipped Via:		Time:	
Samples Received at Laboratory by:	Temp=Amb	Date:	12-29-14
Samples Analyzed by:		Time:	1400
Samples Analyzed by:		Date:	
Data Checked by:		Time:	
		Date:	1/27/15
		Time:	0830

VERSION 2
10 MARCH 2003

APPENDIX K

Resumes of Test Personnel

ROBERT M. PATTERSON; President

Education	B. S. 1983, Central Michigan University; Mt. Pleasant, Michigan, in Geology and Earth Science-Meteorology.
Professional Training Courses	Attended a two-day short course, "Performing and Observing Source Sampling" in Dallas, Texas. Attended a one-day short course on basic supervision. Attended a four-week management course presented by the American Management Association, 1991-1992.
Certification	Certified Visible Emissions Evaluator Certified Cabot Full-Face Respirator Fit Tester
Professional Memberships	Source Evaluation Society American Management Association
Technical Experience	Participated in the sampling of over 1,000 sources, including several of which were sampled simultaneously using more than one sampling train. Thoroughly trained in all EPA testing procedures, 1986-present. Over twenty-six years experience with EPA and Texas Air Control Board methods of sampling - both stationary sources and ambient air. CFR, Title 40, Chapter I, Part 60, EPA Methods 1 through 25, and 101 through 110. Performance Specifications 1 through 5. CFR, Title 40, Chapter I, Part 50, Appendix A through F. "Sampling Procedures Manual, Texas Air Control Board, January 1983." Parts 1-1 through 14-6, Appendix B through Appendix M. Experienced with sampling Method 0010, Modified Method 5 Sampling Train; Method 0030, Volatile Organic Sampling Train; and various EPA and "Site Specific" multiple metal and acid gas sampling trains.

(continued)

PATTERSON, Rob (cont'd)

Technical Experience (cont'd)

Over twenty-six years experience with EPA and Texas Air Control Board methods of analysis of both stationary and ambient air samples. Particulate matter, SO_3, SO_2, H_2SO_4, NO_x, CO, CO_2, O_2, H_2S, F, TRS, HCl, Cl_2, NH_3, VOC, C_1-C_7, and other organics. Both laboratory and on-site analyses were performed.

Experienced in the sampling and analysis of commercial calibration gas cylinders for sulfur dioxide, oxides of nitrogen, carbon dioxide, oxygen, carbon monoxide, and C_1-C_7 hydrocarbons.

Thoroughly trained in the operation and routine maintenance of the following:

- MSA LIRA Model 202S Infrared Analyzer
- Analytical Instrument Development, Inc. Model 340A Calibration System
- Shimadzu GC-Mini 2 Gas Chromatograph
- Thermo Environmental Model 10AR Oxides of Nitrogen Analyzer
- Thermo Oxygen Analyzer
- Teledyne Model 326 Oxygen Analyzer
- Thermo Environmental Model 48 Carbon Monoxide Analyzer
- Thermo Environmental Model 40 Sulfur Dioxide Analyzer
- Ratfisch Model RS 100 Total Hydrocarbon Analyzer
- Western Research Model 721AT Sulfur Dioxide Analyzer
- Horiba Model PIR 2000 Carbon Dioxide Analyzer
- Ratfisch Model RS 55 Total Hydrocarbon Analyzer
- J.U.M. Model VE-7 Total Hydrocarbon Analyzer

JAMES R. MONFRIES; Senior Quality Assurance Manager

Education	B. S. 1975, University of Texas at Arlington; Arlington, Texas, in Biology with a minor in Chemistry. Graduate work at the University of Texas at Dallas in the Environmental Science Department.
Professional Training Courses	Attended a two-day short course, "Performing and Observing Source Sampling" in Dallas, Texas, July 1976.
Certification	Qualified Individual (Groups I, II, III, and IV) Certified Visible Emissions Evaluator
Professional Memberships	Air and Waste Management Association Source Evaluation Society - Past President
Technical Experience	Participated in the sampling of over 700 sources, serving in the supervisory capacity on over 500 sources. Many of the sources were sampled simultaneously using more than one sampling train at several points in the flue gas stream, 1976-present. Also supervised several ambient air monitoring studies, including a permanent five-station high volume air sampling network in South Texas, a permanent four-station high volume air sampling network in Pennsylvania, and a permanent seven-station sulfur dioxide sampling network in East Texas. Was Quality Assurance Manager for several ambient air monitoring studies; including a four-station high volume air sampling network for TSP and PM10 in Midlothian, Texas; a single-station high volume air sampling network for PM10 in South Texas, a two-station high volume air sampling network for TSP in Wichita Falls, Texas, and a four-station continuous air sampling network for TSP and PM10 in Jewett, Texas using Thermo Andersen FH 62 C14 Beta Gauge Dust Monitors.

(continued)

MONFRIES, James (cont'd)

Thirty years experience with EPA and Texas Commission on Environmental Quality methods of analysis of both source and ambient air samples for particulates, SO_2, SO_3, H_2SO_4, H_2S, HCl, Cl_2, NO_x, Hydrocarbons, and TRS.

Experienced in the analysis of commercial calibration gas cylinders for sulfur dioxide and oxides of nitrogen.

Experienced with VOST and Modified Method 5 Sampling Procedures.

Thoroughly trained in the operation and routine maintenance of the following:

- Lear Siegler, Inc. SM800 Stack Gas Monitor
- Du Pont Model 460/1 Photometric Analyzer System
- Lear Siegler, Inc. SM1000 Ambient SO_2 Monitor
- Calibrated Instruments Ultragas SO_2 Monitor
- Meloy 285E SO_2 Analyzer
- Meloy SA-700 Fluorescent SO_2 Analyzer
- MSA LIRA Model 202S Infrared Analyzer
- Analytical Instrument Development, Inc. Model 340A Calibration System
- Shimadzu GC-Mini 2 Gas Chromatograph
- Thermo Environmental Model 10S NO_x Analyzer
- Thermo Oxygen Analyzer
- Teledyne Model 326 Oxygen Analyzer
- Thermo Environmental Model 48 Carbon Monoxide Analyzer
- Thermo Environmental Model 40 Sulfur Dioxide Analyzer
- Ratfisch Model RS 103 Total Hydrocarbon Analyzer
- Western Research Model 721AT Sulfur Dioxide Analyzer
- Horiba Model PIR 2000 Carbon Dioxide Analyzer
- Ratfisch Model RS 55 Total Hydrocarbon Analyzer
- J.U.M. Model VE-7 Total Hydrocarbon Analyzer
- Thermo Andersen Model FH 62 C14 Dust Monitor

MICHAEL SHANE LEE; Associate

Education	B. S. Environmental Science-Biology, December 20, 1997; Sul Ross State University; Alpine, Texas.
Professional Training Courses	Attended 40-hour "Hazardous Waste Operations and Emergency Response" in accordance with CFR 1910.120, Dallas, Texas, July 1998. Also attended annual 8-hour refresher courses from 1999 to present. Attended a two-day short course, "Performing and Observing Source Sampling" in Dallas, Texas, August 1999.
Certifications	Qualified Individual (Group I) Certified Visible Emissions Evaluator HAZMAT certified Adult CPR certified Standard First Aid certified
Technical Experience	Participated in the sampling of over 400 sources, including several of which were sampled simultaneously using more than one sampling train. Thoroughly trained in all EPA testing procedures, 1998-present. Responsible for the certification of Continuous Monitoring Systems (CEMS) for NOx, SO_2, CO, CO_2, O_2, and Flow Rate primarily for the utility industry throughout the United States. Experienced with VOST Sampling Procedures (Method 0030). Experienced with calibration techniques for all field testing equipment.

(continued)

LEE, Shane (cont'd)

Thoroughly trained in the operation and routine maintenance of the following:

- Thermo Environmental Model 10S, 42C, and 42CHL Oxides of Nitrogen Analyzers
- Teledyne Model 326 Oxygen Analyzer
- Horiba Model PIR 2000 Carbon Dioxide Analyzer
- Thermo Environmental Model 48 Carbon Monoxide Analyzer.
- Western Research Model 721M Sulfur Dioxide Analyzer
- J.U.M. VE-7 Hydrocarbon Analyzer
- Shimadzu Gas Chromatograph 14 and 17a

METCO
ENVIRONMENTAL

ATTESTATION OF COMPLIANCE
(QUALIFIED INDIVIDUAL)

I, Michael S. Lee of TestAmerica Air Emission Corp. (DBA METCO Environmental
(Qualified Individual)
Understand and acknowledge that all test projects conducted under his/her supervision will conform to the METCO Environmental's quality manual and to this practice [ASTM D 7036-04] in all respects.

I, _____ of TestAmerica Air Emission Corp. (DBA METCO Environmental
(Technical Director)
I certify the aforementioned qualified individual has participated in at least 10 tests employing the methods for which they are qualified and passed the qualification exam(s).

Michael S. Lee
(Qualified Individual Signature/Date)

Michael S. Lee
(Printed Name)

_____
(Technical Director Signature/Date)

Ned Shappley
(Printed Name)

The relevant external qualification exam(s) were administered by the Source Evaluation Society.

Group 1 Exam Date 2/01/13 QSTI Number (if applicable) _____

Group 2 Exam Date 2/01/13 QSTI Number (if applicable) _____

Group 3 Exam Date 11/03/11 QSTI Number (if applicable) 2012-618

Group 4 Exam Date 02/01/13 QSTI Number (if applicable) _____

Group 5 Exam Date _____ QSTI Number (if applicable) _____

ROBERT E. ADAMS, Ph.D.; Project Manager

Education

Ph.D. Analytical Chemistry, 1977; University of Georgia, Athens, Georgia.

B.S. Chemistry, 1971; University of North Carolina, Chapel Hill, North Carolina.

Professional Memberships

American Chemical Society, Analytical Division
Air and Waste Management Association
Alpha Chi Sigma

Technical Experience

Participated in the sampling of multiple sources, including several of which were sampled simultaneously using more than one sampling train, from 1990-present.

As a Quality Assurance Director, conducted quality audits, implemented new methods, and improved laboratory operations for several environmental laboratories. Also, worked to develop proposals and review reports.

Supervised the development and reviewed, under stringent quality assurance/ quality control (QA/QC), generalized GC, HPLC, and GC/MS methods for the analysis of hazardous waste incinerator effluents. QA/QC plans were developed to control these experiments.

Developed procedures for the analysis of volatile and semi-volatile organic compounds as an Organic Lab Manager.

Managed the analysis of hazardous waste samples for EPA's Superfund program (2 contracts). This program involved the determination of volatiles and base/neutral/acid fractions by GC/MS and pesticides by GC/ECD.

(continued)

ADAMS, Robert E., Ph.D.; (continued)

Technical Experience (cont'd)

Thoroughly trained in the operation and routine maintenance of the following:

- Agilent 1090 HPLC
- Agilent 5971 GC/MS
- Agilent 5972 GC/MS
- Agilent 5973 GC/MS
- Agilent 5890 GC/FID/ECD/FPD
- Extractive FTIR
- Shimadzu GC 17 FID
- Shimadzu GC 14 FID/FPD
- Perkin-Elmer A Analyst Graphite Furnace AA
- Leeman Labs DRE ICP-AES
- Dionex 100 Ion Chromatograph

Professional Training Courses

Attended 40-hour Hazardous Waste Operations and Emergency Response in accordance with 29 CFR 1910.120, Dallas, Texas in February 2004. Also attended 8-hour HAZWOPER refresher course from 2005.

Certifications

Qualified Individual (Groups I and IV)
Adult CPR certified
Standard First Aid certified
HAZWOPER certified

Publications and Presentations

Adams, R.E.; Caudle, M.D. *The Use of Portable FTIR for Industrial Gas Analysis and Process Optimization*. Paper presented at the Air and Waste Management Association—Southern Section 2002 Annual Meeting and Technical Conference, Orange Beach, AL; 2002 September 15-18.

Weinberg, D.S.; Adams, R.E.; Manier, M.L. *Software Programs for Processing PCDF/PCDD GC/MS Data*. Paper presented at the 39th ASMA Conference on Mass Spectrometry and Allied Topics, Nashville, TN; 1991 May 19-24.

(continued)

ADAMS, Robert E., Ph.D.; (continued)

Publications and Presentations (cont'd)

Weinberg, D.S.; Adams, R.E.; Manier, M.L. *Evaluation of a Particle-Beam Liquid Chromatograph/Mass Spectrometer.* Paper presented at the 39th ASMA Conference on Mass Spectrometry and Allied Topics, Nashville, TN; 1991 May 19-24.

Adams, R.E.; Hass, J.R.; Smith, W.S.; Wong, T. *Sampling and Analysis for Volatile and Semivolatile POHC During RCRA Trial Burns: Techniques and Problems.* Proceedings of the 80th annual meeting of the Air Pollution Control Association, New York, NY; 1987, June 21-26.

Adams, R.E.; James, R.H.; Burford, L.A.; Miller, H.C.; Johnson, L.D. *Analytical Methods for Determination of POHC in Combustion Products.* Environ. Sci. Technol. 20: 761-769; 1986. Paper presented at the Symposium on Organic Emission from Combustion, 187th ACS national meeting; 1984 April; St. Louis, MO.

Adams, R.E.; Thomason, M.M.; Strother, D.L.; James, R.H.; Miller, H.C. *The Determination of PCDDs and PCDFs in PCB Oil From a Hazardous Waste Site.* Paper presented at the 5th International Symposium on Chlorinated Dioxins and Related Compounds. Bayreuth, Federal Republic of Germany; 1985, September 16-19. Chemosphere 15: 1113-1121; 1986.

James, R.H.; Adams, R.E.; Johnson, L.D. *A Simplified Sampling and Analysis System for the Determination of Volatile Organic Compounds in Combustion Effluents.* Proceedings of the 79th Annual Meeting of the Air Pollution Control Association. Minneapolis, MN; 1986, June 22-27.

James, R.H.; Adams, R.E.; Finkel, J.M.; Miller, H.C.; Johnson, L.D. *Evaluation of Analytical Methods for the Determination of POHC in Combustion Products.* J. Air Pollut. Control Assoc. 35: 959-989; 1985.

(continued)

ADAMS, Robert E., Ph.D.; (continued)

Publications and Presentations (cont'd)

James, R.H.; Adams, R.E.; Thomason, M.M.; Johnson, L.D. *Measuring Products of Combustion-Analytical Methods for POHCs and PICs*. Proceedings of the Fifth Annual National Symposium on Recent Advances in the Measurement of Air Pollutants. Raleigh, NC; 1985, May 14-16.

Thomason, M.M.; James, R.H.; Adams, R.E.; Johnson, L.D. *Products of Incomplete Combustion-Analytical Methods.* Proceedings of the Eleventh Annual Research Symposium on Land Disposal, Remedial Action, Incineration, and Treatment of Hazardous Waste. Cincinnati, OH; 1985, April 29-May 1.

Adams, R.E. *Positive and Negative Chemical Ionization Pyrolysis Mass Spectrometry of Polymers*. Anal. Chem. 55: 414-416; 1983. Paper presented at the 33rd Southeast regional ACS meeting. Lexington, KY; 1981 November.

Adams, R.E. *Pyrolysis Mass Spectrometry of Terephthalate Based Polyesters Using Chemical Ionization and Negative Ion Detection.* J. Polym. Sci. 20: 119-129; 1982. Paper presented at the Southeast-Southwest regional ACS meeting. New Orleans, LA; 1980 December.

Adams, R.E.; Carr, P.W. *Coulometric Flow Analyzer for Use With Immobilized Enzyme Reactors*. Anal. Chem. 50: 944-950; 1978. Invited paper at the 11th Great Lakes regional ACS meeting. Stevens Point, WI; 1977 June.

Adams, R.E.; Betso, S.R.; Carr, P.W. *Electrochemical pH-stat and Controlled Current Acid-Base Analyzer*. Anal. Chem. 48: 1989-1996; 1976. Paper presented at the 27th Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy. Cleveland, OH; 1976 March.

(continued)

ADAMS, Robert E., Ph.D.; (continued)

Publications and Presentations (cont'd)

Klatt, L.N.; Connell, D.R.; Adams, R.E.; Honigberg, I.L.; Price, J.C. *Voltametric Characterization of a Graphite-Teflon Electrode*. Analy. Chem. 47: 2470-2472; 1975.

Adams, R.E. *Development and Application of a Totally Electrochemical pH-stat and Controlled Current Acid-Base Analyzer for Biological Studies.* Athens, GA; University of Georgia; 1977. 151 p. Dissertation.

NED SHAPPLEY; Q/A Manager

Education	B. S. Biology, 1999; University of Kentucky; Lexington, Kentucky.
Professional Training Courses	Attended a 10-hour OSHA training course
Certifications	Qualified Individual (Groups I, II, and IV) Certified Visible Emissions Evaluator HAZMAT certified Adult CPR certified Standard First Aid certified
Technical Experience	Participated in the sampling of over 200 sources, including several of which were sampled simultaneously using more than sampling train. Thoroughly trained in all EPA testing procedures, 2001-present.

BRANDON HOPPER; Environmental Scientist II

Education	B. S. in Environmental Geoscience, December 2011; Texas A&M University in College Station, Texas.
Technical Experience	Participated in the sampling of over 50 sources, including several of which were sampled simultaneously using more than one sampling train. Thoroughly trained in all EPA testing procedures, 2011-present.

Phillip B Frohman; Environmental Scientist I

Education	Bachelor of Science, Biology; University of North Texas 2013
Technical Experience	Participated in the sampling of over 25 sources, including several of which were sampled simultaneously using more than one sampling train. Thoroughly trained in all EPA testing procedures, 2013-present.

From:	Ron BGR
To:	Mia, Marcia
Cc:	"Jason Huckaby"; Garwood, Gerri; "Hutcherson, Mike"; "Chris"
Subject:	RE: Stack Test Reports for Black Gold Rush
Date:	Monday, August 31, 2015 11:28:31 AM
Attachments:	image001.png image003.png

Marcia,

In response to your emails, we are pleased to provide the following responses to your questions for both the BGR-18 and BGR-24 manufacturer's test reports. Your questions were:

BGR-18:

1. Pilot usage – 60.5413(d)(12)(j) – requires pilot flame calculated or measured fuel usage. The report includes the pilot usage in the overall fuel flow rate (page 346-347 of report and in the cover report). Please provide or calculate the portion attributed to the pilot.
2. GC-TCD Calibration – 60.5413(d)(7)(i)(D) – requires that the GC-TCD calibration must be modified using EPA Alt-045. Please confirm as this is not stated in the report.

BGR-24:

1. Pilot usage – 60.5413(d)(12)(j) – requires pilot flame calculated or measured fuel usage. The report includes the pilot usage in the overall fuel flow rate (page 346-347 of report and in the cover report). Please provide or calculate the portion attributed to the pilot.
2. GC-TCD Calibration – 60.5413(d)(7)(i)(D) – requires that the GC-TCD calibration must be modified using EPA Alt-045. Please confirm as this is not stated in the report.
3. Digital Color photograph of the exhaust point – 60.5413(d)(10) – requires a digital color photograph from each of test runs. For the 24" unit, the photographs for run 11 and 12 are duplicates (see IV-2 and IV-3 on page 345 of Part 3 of report). Please submit the missing photograph.

BGR-18 Response:

1. Pilot Usage

The BGR-18 enclosed combustor consists of five (5) individual burners, which have the ability to be operated with the total flow going to all five (5) burners. The unit can also be operated in a way that designates one (1) of the burners as a pilot burner, leaving the other four (4) burners combusting inlet gas. During the tests at all operating conditions, the BGR-18 enclosed combustor was operated without the pilot burner operating separately. The pilot burner was also combusting propylene as a part of the total flow to the unit, which was a total flow into all five (5) burners of 7.5 scfm or 10,800 scfd at the 100% test condition. If the pilot burner were operated separately, it would be capable of separately combusting 2.19 scfm or 3,150 scfd, leaving 5.31 scfm or 7,650 scfd being combusted in the other four (4) burners. At the other test conditions, the pilot gas portion would follow the same ratio as with the 100% condition, as noted below:

- 70-100-70 condition: 5.4 to 7.7 scfm total flow through all five (5) burners, with 1.58 to

2.25 scfm in the pilot burner and 3.82 to 5.45 scfm in the other four (4) burners.

- 30-70-30 condition: 2.1 to 5.0 scfm total flow through all five (5) burners, with 0.61 to 1.46 scfm in the pilot burner and 1.49 to 3.54 scfm in the other four (4) burners.
- 0-30-0 condition: 0.7 to 2.6 scfm total flow through all five (5) burners, with 0.20 to 0.76 scfm in the pilot burner and 0.50 to 1.84 scfm in the other four (4) burners.

2. GC-TCD Calibration

The calibration was modified per EPA Alt-045. Unfortunately, this was not affirmatively stated in the METCO report or the lab report. The lab data are provided in Appendix E of the METCO report. The calibration reports are provided on pages E-143 through E-172. At the top of each page on the right side, the sample type is identified as a calibration; and calibration injections are identified as Injection 1 of 4; 2 of 4; and 3 of 4 for each fixed gas standard. Injection 4 of 4 was an air blank for each standard. The fixed gas standards are identified in the Sample Name line of the page (see the upper left part of the page) and are listed as #FG7, #FG3, #FG8, etc. Three (3) injections were accomplished for each standard as required.

BGR-24 Response:

1. Pilot Usage

The BGR-24 enclosed combustor consists of seven (7) individual burners, which have the ability to be operated with the total flow going to all seven (7) burners. The unit can also be operated in a way that designates one (1) of the burners as a pilot burner, leaving the other six (6) burners combusting inlet gas. During the tests at all operating conditions, the BGR-24 enclosed combustor was operated without the pilot burner operating separately. The pilot burner was also combusting propylene as a part of the total flow to the unit, which was a total flow into all seven (7) burners of 16.7 scfm or 24,048 scfd at the 100% test condition. If the pilot burner were operated separately, it would be capable of separately combusting 2.19 scfm or 3,150 scfd, leaving 14.51 scfm or 20,898 scfd being combusted in the other six (6) burners. At the other test conditions, the pilot gas portion would follow the same ratio as with the 100% condition, as noted below:

- 70-100-70 condition: 11.0 to 16.7 scfm total flow through all seven (7) burners, with 1.44 to 2.19 scfm in the pilot burner and 9.56 to 14.51 scfm in the other six (6) burners.
- 30-70-30 condition: 4.5 to 11.7 scfm total flow through all seven (7) burners, with 0.59 to 1.53 scfm in the pilot burner and 3.91 to 10.17 scfm in the other six (6) burners.
- 0-30-0 condition: 2.8 to 5.2 scfm total flow through all seven (7) burners, with 0.37 to 0.68 scfm in the pilot burner and 2.43 to 4.52 scfm in the other six (6) burners.

2. GC-TCD Calibration

The calibration was modified per EPA Alt-045. Unfortunately, this was not affirmatively stated in the METCO report or the lab report. The lab data are provided in Appendix E of the METCO report. The calibration reports are provided on pages E-143 through E-172. At the top of each page on the right side, the sample type is identified as a calibration; and

calibration injections are identified as Injection 1 of 4; 2 of 4; and 3 of 4 for each fixed gas standard. Injection 4 of 4 was an air blank for each standard. The fixed gas standards are identified in the Sample Name line of the page (see the upper left part of the page) and are listed as #FG7, #FG3, #FG8, etc. Three (3) injections were accomplished for each standard as required.

3. Digital photograph of the exhaust point

We have determined that METCO inadvertently included duplicate photographs for Runs 11 and 12. METCO has searched file drives on their network as well as the camera used during the tests. All photos are present on both the network and camera except the one for Run 11. Please note that the Method 22 was performed by a Method 9 certified opacity reader. He did not observe any visible emissions during any of the tests. He has been questioned, but does not remember anything specific regarding the missing photograph. We respectfully request approval of the report even though this photo is missing.

Please note that Ned Shappley is no longer with METCO. I have cc'd Mike Hutcherson of METCO on this response.

I am planning to call in for our previously scheduled 12 p.m. Central conference call unless I hear otherwise from you.

Thanks,
Ron

Ron Truelove
V.P. of U.S. Operations
Black Gold Rush Industries LTD.
(405) 203-3557
ron@bgrindustries.com
www.bgrindustries.com

From: Mia, Marcia [mailto:Mia.Marcia@epa.gov]
Sent: Wednesday, August 19, 2015 1:53 PM
To: Ron BGR <ron@bgrindustries.com>
Cc: 'Shappley, Ned' <nshappley@metcoenv.com>; 'Jason Huckaby' <Jason.Huckaby@erg.com>; Garwood, Gerri <Garwood.Gerri@epa.gov>
Subject: RE: Stack Test Reports for Black Gold Rush

Yes, I just got the 24" report and the same items for that unit.

In addition, one more item:

1. Digital Color photograph of the exhaust point – 60.5413(d)(10) – requires a digital color photograph from each of test runs. For the 24" unit, the photographs for run 11 and 12 are duplicates (see IV-2 and IV-3 on page 345 of Part 3 of report). Please submit the missing photograph.

Marcia B Mia
Office of Compliance/Air Branch
2227A WJCS
U.S. Environmental Protection Agency
202-564-7042

From: Ron BGR [mailto:ron@bgrindustries.com]
Sent: Wednesday, August 19, 2015 1:42 PM
To: Mia, Marcia
Cc: 'Shappley, Ned'; 'Jason Huckaby'; Garwood, Gerri
Subject: RE: Stack Test Reports for Black Gold Rush

Thank you Marcia. We can work with this, and will get you the information needed ASAP. I suspect that the same information will be needed for the BGR-24, so we will also pull it together.

Thanks,
Ron

From: Mia, Marcia [mailto:Mia.Marcia@epa.gov]
Sent: Wednesday, August 19, 2015 12:39 PM
To: Ron BGR <ron@bgrindustries.com>
Cc: 'Shappley, Ned' <nshappley@metcoenv.com>; Jason Huckaby <Jason.Huckaby@erg.com>; Garwood, Gerri <Garwood.Gerri@epa.gov>
Subject: RE: Stack Test Reports for Black Gold Rush

I have your 18" complete, but not the 24". Typically, we find similar issues, but if something else shows up for the 24" I will let you know.

The two outstanding issues with the 18" are:

1. Pilot usage – 60.5413(d)(12)(j) – requires pilot flame calculated or measured fuel usage. The report includes the pilot usage in the overall fuel flow rate (page 346-347 of report and in the cover report). Pls provide or calculate the portion attributed to the pilot.
2. GC-TCD Calibration – 60.5413(d)(7)(i)(D) – requires that the GC-TCD calibration must be modified using EPA Alt-045. Please confirm as this is not stated in the report.

Thanks.
Marcia B Mia

Office of Compliance/Air Branch
2227A WJCS
U.S. Environmental Protection Agency
202-564-7042

From: Ron BGR [mailto:ron@bgrindustries.com]
Sent: Wednesday, August 19, 2015 11:54 AM
To: Mia, Marcia
Cc: 'Shappley, Ned'
Subject: RE: Stack Test Reports for Black Gold Rush

Good morning Marcia,

I saw that the pre-publication copy of the new rules came out yesterday. I am sure that this has had you very busy.
I hate to keep bugging you, but could you provide a quick update. I know you were out all last week, so hopefully, you have had a chance to look at the contractor's report this week.

Thanks,
Ron

From: Mia, Marcia [mailto:Mia.Marcia@epa.gov]
Sent: Wednesday, August 05, 2015 9:11 AM
To: Ron BGR <ron@bgrindustries.com>
Cc: Shappley, Ned <nshappley@metcoenv.com>
Subject: RE: Stack Test Reports for Black Gold Rush

I just received word that the contractor would have them over to me this week. Unfortunately, I am out next week so it will be the following before I am able to organize our internal review. I will try to move that along as quickly as possible. Thank you.

Marcia B Mia
Office of Compliance/Air Branch
2227A WJCS
U.S. Environmental Protection Agency
202-564-7042

From: Ron BGR [mailto:ron@bgrindustries.com]
Sent: Wednesday, August 05, 2015 9:34 AM
To: Mia, Marcia
Cc: Shappley, Ned
Subject: Re: Stack Test Reports for Black Gold Rush

Marcia,

Could you provide an update to the review process? I would sure appreciate it.

Thank you,
Ron

On Jul 6, 2015, at 10:15 AM, Mia, Marcia <Mia.Marcia@epa.gov> wrote:

> Yes, I expect to get the initial review back from the contractor late this week. We typically meet internally after that and then either schedule a call with you or follow up in an email, any clarifications or missing elements. So likely over the next two weeks I will be in touch to let you know if we need to schedule a call. Otherwise, look for an email. Thanks.
>
> M
>
> Marcia B Mia
> Office of Compliance/Air Branch
> 2227A WJCS
> U.S. Environmental Protection Agency
> 202-564-7042
>
> ---
>
> **From:** Ron BGR [mailto:ron@bgrindustries.com]
> **Sent:** Monday, July 06, 2015 11:09 AM
> **To:** Mia, Marcia
> **Cc:** 'Shappley, Ned'
> **Subject:** RE: Stack Test Reports for Black Gold Rush
>
> You bet.
>
> Also, how is our review going? Have you been able to start working under the new budget?
>
> Thanks,
> Ron
>
> ---
>
> **From:** Mia, Marcia [mailto:Mia.Marcia@epa.gov]
> **Sent:** Monday, July 06, 2015 9:01 AM
> **To:** Ron BGR
> **Cc:** 'Shappley, Ned'
> **Subject:** RE: Stack Test Reports for Black Gold Rush
>
> Thanks Ron.

Marcia B Mia
Office of Compliance/Air Branch
2227A WJCS
U.S. Environmental Protection Agency
202-564-7042

From: Ron BGR [mailto:ron@bgrindustries.com]
Sent: Thursday, July 02, 2015 10:54 AM
To: Mia, Marcia
Cc: 'Shappley, Ned'
Subject: RE: Stack Test Reports for Black Gold Rush

Marcia,

We did not provide any confidential business information. Our submittals are all fine and we will not be submitting redacted versions.

Thanks,
Ron

From: Mia, Marcia [mailto:Mia.Marcia@epa.gov]
Sent: Tuesday, June 30, 2015 12:48 PM
To: Ron BGR
Cc: 'Shappley, Ned'
Subject: RE: Stack Test Reports for Black Gold Rush

Ron and Ned,

We received a request for records relating to our review of all of the tests to date. Yours was not included b/c we had not done your review yet. In the process of fulfilling the request under our Freedom of Information Act, we reached out to each of the manufacturer's to see if they wished to make any confidential business information claims.

We are sharing this same information with you.

If you believe that information you have submitted is entitled to confidential treatment, please specify the documents (or specific portions of the documents) that you consider to be confidential. If you wish to claim this information in your response as confidential, you must mark this information "CONFIDENTIAL" or with a similar designation. Information designated as confidential will be disclosed by EPA only to the extent allowed by, and by means of the procedures set forth in, 40 C.F.R. Part 2, Subpart B. Any information that is not specifically identified as subject to a claim of confidentiality may be disclosed to the public without further notice to you.

Please provide your response to me by close of business three business days after receipt of this email. If you do make claims of CBI, please re-submit a redacted version of your Performance Test to the Oil and Gas page (this is not subject to the three day notice, but as expeditiously as possible).

Please be aware that for any information that you assert a CBI claim, you will be required to substantiate your claims. In the past, the Agency has deemed publicly available information and the actual results of performance test of control devices used to comply with emissions standards under the Clean Air Act to not be entitled to confidential treatment.

Thank you for your attention to this. If you have any questions, please contact me at 202-564-8042.

Marcia B Mia
Office of Compliance/Air Branch
2227A WJCS
U.S. Environmental Protection Agency
202-564-7042

From: Ron BGR [mailto:ron@bgrindustries.com]
Sent: Wednesday, June 24, 2015 5:56 PM
To: Mia, Marcia; Johnson, Steffan
Cc: 'Shappley, Ned'
Subject: RE: Stack Test Reports for Black Gold Rush

That is awesome news Marcia. Thank you for the update.

Ron

From: Mia, Marcia [mailto:Mia.Marcia@epa.gov]
Sent: Wednesday, June 24, 2015 4:50 PM
To: Ron BGR; Johnson, Steffan
Cc: 'Shappley, Ned'
Subject: RE: Stack Test Reports for Black Gold Rush

Yes. Thank you for your email. We are a bit behind as we ran out of contract dollars to perform the work on the test reports and had to wait for our new budget. We should be able to get started again on June 30. According to my queue you should be first up when we start up again!

M

Marcia B Mia
Office of Compliance/Air Branch

2227A WJCS
U.S. Environmental Protection Agency
202-564-7042

From: Ron BGR [mailto:ron@bgrindustries.com]
Sent: Wednesday, June 24, 2015 5:33 PM
To: Mia, Marcia; Johnson, Steffan
Cc: 'Shappley, Ned'
Subject: RE: Stack Test Reports for Black Gold Rush

Marcia or Steffan,

Would it be possible to get a status of our Black Gold Rush testing reports submitted in February 2015? Have you begun the review? If not, when might you begin? When would expect your review to be complete?

Thanks,
Ron

From: Ron BGR [mailto:ron@bgrindustries.com]
Sent: Friday, May 29, 2015 7:44 AM
To: 'Mia, Marcia'; 'Johnson, Steffan'
Cc: 'Shappley, Ned'
Subject: RE: Stack Test Reports for Black Gold Rush

Marcia,

I wanted to check in to see how the Black Gold Rush certification test report reviews were coming. Any feedback would be appreciated.

Thanks,
Ron

From: Ron BGR [mailto:ron@bgrindustries.com]
Sent: Monday, March 23, 2015 10:41 AM
To: 'Mia, Marcia'; 'Johnson, Steffan'
Cc: 'Shappley, Ned'
Subject: RE: Stack Test Reports for Black Gold Rush

Thank you. I appreciate you letting me know.

Ron

From: Mia, Marcia [mailto:Mia.Marcia@epa.gov]

Sent: Monday, March 23, 2015 10:35 AM
To: Ron BGR; Johnson, Steffan
Cc: 'Shappley, Ned'
Subject: RE: Stack Test Reports for Black Gold Rush

We have not begun the review yet. We have some others which are ahead of yours. Steff and I are also involved in the NSPS OOOO amendments, which is under a tight schedule and we have had to focus a lot of our time on that effort.

Pls feel free to check in again in a couple of weeks.

M

Marcia B Mia
Office of Compliance/Air Branch
2227A WJCS
U.S. Environmental Protection Agency
202-564-7042

From: Ron BGR [mailto:ron@bgrindustries.com]
Sent: Friday, March 20, 2015 4:42 PM
To: Mia, Marcia; Johnson, Steffan
Cc: 'Shappley, Ned'
Subject: RE: Stack Test Reports for Black Gold Rush

Marcia or Stef,

I was wondering if you could provide an update as to where the Black Gold Rush BGR-24 and BGR-18 test report reviews are in the process. I would sure appreciate it.

Thanks,
Ron

From: Mia, Marcia [mailto:Mia.Marcia@epa.gov]
Sent: Wednesday, February 18, 2015 11:22 AM
To: Ron BGR
Subject: Re: Stack Test Reports for Black Gold Rush

Yes. Thanks for your submittal. We will put them into the queue.

Marcia B Mia
USEPA
Office of Compliance
MAMPD/Air Branch
202-564-7042
Mail Code 2223A

From: Ron BGR <ron@bgrindustries.com>
Sent: Thursday, February 12, 2015 3:53 PM
To: Mia, Marcia
Subject: Stack Test Reports for Black Gold Rush

Marcia,

Could you confirm that you received the NSPS Subpart OOOO certification test reports for the Black Gold Rush BGR-18 and BGR-24 from me yesterday?

Thanks,
Ron

Ron Truelove
V.P. of U.S. Operations
Black Gold Rush Industries LTD.
(405) 203-3557
ron@bgrindustries.com
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