DCN No.: 92-275-026-66-07
Radian No.: 275-026-66
EPA No.: 68-D9-0054

Determination of VOC, Ethanol, and Acetaldehyde Emissions from Commercial Bakeries

Site 4 Test Report

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September 1992

Radian Report Certification

This report has been reviewed by the following Radian personnel and is a true representation of the results obtained from the sampling program conducted at four commercial bakeries on behalf of the U.S. Environmental Protection Agency. The testing was conducted from May through July, 1992, except where noted, sampling and analytical methods were performed in accordance with U.S. EPA reference procedures.

APPROVAL:

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1.0 EXECUTIVE SUMMARY

Radian was contracted by The U.S. Environmental Protection Agency, Emissions Measurement Branch, to conduct Volatile Organic Compound (VOC) emissions testing at four commercial bakeries. This test report will present the results of the Site 4 test program. Tests were conducted on a variety of bakery ovens while baking different product types. The test procedures used were the U.S. EPA Stationary Source Testing Method 25A for VOCs and Method 18 for methane, ethanol and acetaldehyde determinations. Method 25A was used to quantify total hydrocarbons (THC). Method 18 was employed to quantify methane and two of the most prevalent VOC compounds (acetaldehyde and ethanol) in the bakery emission stream. Flow rates were measured using U.S. EPA Methods 1-4 and were used to calculate emission rates of the above gas stream components.

As a part of the test program, process conditions were monitored by a separate U.S. EPA contractor. Research Triangle Institute (RTI) monitored parameters such as product type, production rates, yeast concentration, proofing time and others. This report will only present the emissions data collected by Radian and will not include any process information. A separate report completed by RTI will incorporate the emission values presented in this report with the specific bakery process information.

Two sets of emission data were calculated. The first set presents VOC as ethanol emissions calculated using the Method 25A and Method 18 methane test results. (Ethanol concentrations typically made up over 98% of the total ethanol and acetaldehyde concentrations). The second data set presents emission rates of ethanol and acetaldehyde calculated from the Method 25A and the Method 18 ethanol and acetaldehyde test results.

VOC as ethanol emissions were determined by first averaging concentrations of THC over the respective test period. Non-methane hydrocarbon

concentrations were then determined by removing the methane concentration from the THC values. VOC as ethanol concentrations were determined by dividing the non-methane hydrocarbon concentration by the ethanol carbon equivalent correction factor (CECF). The CECF was empirically determined during and following the test program. The VOC as ethanol concentrations were then multiplied by the respective stack gas flow rates to determine VOC as ethanol emission rates.

Separate emissions rates of ethanol and acetaldehyde were calculated using both the Method 25A THC and Method 18 test results. The average ethanol-to-THC ratio was multiplied times the average THC concentration to determine an average ethanol concentration and formulate a larger averaging data base within the testing time period. Average acetaldehyde concentrations were calculated in the same manner. This procedure assumed that the proportion of ethanol to THC and acetaldehyde to THC remained constant throughout the test period. This assumption did not prove always to be true; however, concentrations determined in this manner were very similar to concentrations determined by averaging the Method 18 results alone. Results from both calculation methods are presented. Ethanol and acetaldehyde emission rates were then calculated by multiplying the average concentrations by the stack gas flow rates.

1.1 VOC as Ethanol Emissions

Site 4 emission rates varied from 12.7 - 30.5 lbs/hr for the Bread oven to 2.05 - 2.7 lbs/hr for the Bun oven. A complete listing of all test results is given in Section 3.0 and in the attached Appendices.

1.2 Ethanol and Acetaldehyde Emissions

The Site 4 ethanol emissions were 24.8 - 53.1 lbs/hr for the Bread oven and 2.3 - 3.1 lbs/hr for the Bun oven. The corresponding acetaldehyde emissions were 0.95 - 1.4 lbs/hr for the Bread oven and 0.7 - 0.09 for the Bun oven.

1.3 Data Quality Assurance

The majority of reference method QA acceptance criteria were met during this test program. There were 10 days of testing using two THC monitoring systems (20 system days). Method 25A daily calibration drift did not exceed the criterion of ±3% on nineteen of the twenty system days. The Site 1, Day 1 Method 25A test data exhibited a calibration drift of 3.2%; therefore, the drift was corrected by assuming linear drift between the initial and final calibration. Over 150 Method 25A calibration error checks were performed during the test program. The majority of these calibration error checks met the Method 25A criterion of ±5% of the gas concentration. Method 25A sample bias checks, as well as O_2 leak checks were also completed.

Method 18 QA/QC procedures were also followed. Initial and final calibrations were performed. Calibrations for ethanol and acetaldehyde were all completed using 3 to 5 calibration points. Multi-point calibrations were also performed on methane for Site 4 Test Days 1 and 2. On these days, a single point calibration was used on higher methane values. This procedure was not expected to effect data quality.

Sample bias checks were routinely conducted on the Method 18 sampling system and the majority verified acceptable non-biased sampling. However, some checks revealed sample bias caused by the loss of heat in the heated sample tubing adjacent to the gas chromatograph (GC). These data points were invalid and testing was discontinued until the problem was remedied and a successful bias check had been completed. More is discussed on this matter in Section 6.0.

1.4 Recommendations for Further Work

Further work is recommended to further characterize bakery emissions and to improve the test method. Compounds other than ethanol and acetaldehyde were not detected by the Method 18 analyses. However, trace (< 10 ppmv) levels of other compounds may be present in the bakery stream and although these compounds would not be expected to increase VOC emission rates, it would be interesting to identify them.

Another area which could be further examined is the comparison of Method 18 GC results to the Method 25A THC results. It was expected that the concentration of THC detected by the Method 25A analyzer would exceed the concentrations of the three targeted VOC compounds. However, throughout this test program, a higher concentration of compounds was determined by the GC than by the THC monitor. Comparisons were made by first correcting concentrations of each compound determined from the GC analysis from parts per million by volume (ppmv) to ppmv as Carbon (ppmC). This was done using the previously mentioned CECF of 1.42 for ethanol, 1.23 for acetaldehyde, and 1 for methane. The sum of the three corrected GC concentrations were then divided by the THC concentration. Typically, comparisons resulted in values of 120-140% of GC vs THC values. This error may be a result of inaccuracy in the CECF as it was applied to the sample gas matrix. Matrix effects may have somehow lowered the THC response (CECF) for ethanol as compared to the ethanol response in a dry, nitrogen calibration gas. Further work examining this Method 18 and Method 25A results comparison could be examined.

2.0 INTRODUCTION

2.1 Overview

The U.S. Environmental Protection Agency (U.S. EPA) has been requested to develop an alternative control technique (ACT) guidance document for controlling Volatile Organic Carbon (VOC) emissions from commercial baking operations. Interest has also been expressed in recalculating the AP-42[1] emission factors for bakery VOC emissions. Ethanol (C_2H_5OH) is the primary pollutant emitted from commercial bakeries.[2] Ethanol along with Carbon Dioxide (CO_2) is produced during the yeast metabolic process. Previous test data from bakeries has also revealed the presence of acetaldehyde (CH_3CHO).[2] Therefore, in conjunction with the development of an ACT document and new AP-42 emission factors, the U.S. EPA has contracted Radian Corporation to perform emissions testing of several commercial bakeries in order to gather the necessary background emissions data. This report will present the results of the U.S. EPA Bakeries test program for Site 4.

The test procedures used were the U.S. EPA Stationary Source Testing Method 25A for VOCs and Method 18 for methane, ethanol and acetaldehyde determinations. Method 25A was used to quantify total hydrocarbons (THC). Method 18 was employed to quantify methane and two of the most prevalent VOC compounds (acetaldehyde and ethanol) in the bakery emission stream. By combining both procedures, the VOC emissions were fully characterized.

As a part of this data gathering phase, U.S. EPA contracted Research Triangle Institute (RTI) to monitor the baking process parameters during the emissions

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[1]Compilation of Air Pollutant Emission Factors, Section 6.13, U.S. EPA (1972).

[2]Background Documentation for AP-42, Section 6.13, Bakeries, PES for U.S. EPA (1972).

tests. Items such as dough mixing process, fermentation (proofing) time, yeast concentration, production rates and others were monitored. However, this report will only present emissions data, that will be used with the process and production rate data to develop emission factors that will be presented in a separate document.

2.2 Test Objectives

The objectives of this test program was to determine VOC emission rates as well as ethanol and acetaldehyde emission rates. The data could then be used to determine of which air pollution control techniques would be effective for the bakery industry. As discussed above, it was also desirable to correlate the emissions data with process data to update and/or verify the emission factors for commercial bakeries.

2.3 Test Methods

Because each oven had at least two stacks, concentrations of THC were continuously and simultaneously monitored on each stack using two THC continuous emissions monitoring systems (CEMS). The THC data was typically recorded on every 10 seconds a computer disk. The resulting THC data were then averaged over each period of time corresponding to a distinct segment of the process operation (i.e., 30 minute sandwich bread baking process). Methane, ethanol and acetaldehyde concentrations were measured semi-continuously using discrete analyses by a Gas Chromatograph/Flame Ionization Detector (GC/FID). One GC/FID analyzer was used for this test program. One analysis of methane, acetaldehyde, and ethanol could be completed every 10 minutes; therefore, a full oven characterization could be completed every 20 minutes (2 stacks per oven).

Method 25A and Method 18 required extracting a sample stream of the gas from the stack through a heated Teflon® tube. A portion of the sample was directed to a THC analyzer which quantified THC on a real-time basis by a Flame Ionization

Detector (FID). The THC analyzer processes unconditional gas samples; therefore, concentrations are characterized ppmv, on a wet basis. A portion of the remaining gas stream was directed to the Method 18 gas chromatograph. The GC column separated individual hydrocarbons which were quantified with the FID.

Gas flow rate was determined by using the U.S. EPA Method 2. This method called for measuring the velocity of the gas stream and by multiplying it by the stack cross-sectional area, a volumetric flow rate was determined. Method 2 also called for point location determination to be made by Method 1, CO_2 and O_2 concentrations by Method 3 and moisture content by Method 4.

2.4 Data Reduction

As previously discussed, two sets of emission data were calculated. The first set presents VOC as ethanol emissions calculated using the Method 25A and the Method 18 methane test results. The second data set presents emission rates of ethanol and acetaldehyde calculated from the Method 25A and the Method 18 ethanol and acetaldehyde test results. The data reduction methods used are summarized in the following paragraphs.

Method 25A requires THC data to be reported in units of parts per million as Carbon (ppmC). Preliminary THC concentrations in units of ppmv as the calibration compound (i.e., propane) are multiplied by that respective compound's carbon equivalent correction factor (CECF) to correct the units to ppmC. The CECF for methane, ethane and propane are 1, 2 and 3, respectively. For example, if the Method 25A monitor was calibrated with propane, all resulting concentrations would be multiplied by the propane CECF of 3 to correct the concentration from ppmv as propane to ppmC. The THC values can be converted to ppmv of the compound of interest if 1) the specific CECF is known, and 2) the compound proportion of THC is known. For this test program, the THC monitors were calibrated with methane which has a CECF of 1, so the resulting

THC data was already in units of ppmC. However, correcting the THC concentration to VOC as ethanol concentration did require dividing the average non-methane THC concentration by the ethanol CECF. This process assumed that the non-methane hydrocarbons were made up entirely of ethanol. The resulting VOC as ethanol concentrations were then multiplied by the stack gas flow rates in order to determine VOC as ethanol emission rates.

Ethanol and acetaldehyde emissions were also calculated. Average ethanol and acetaldehyde concentrations were calculated by averaging the multiple Method 18 analytical results. However, only three Method 18 data points (per compound) were typically acquired per hour. In order to increase the number of data points in a given time period, the continuous Method 25A data was also used. An average ethanol-to-THC proportion from the above three analyses was calculated and then multiplied by the average THC value to calculate an average ethanol concentration. This method assumes that the ethanol-to-THC proportion is constant throughout the test run. Acetaldehyde calculations were performed in the same manner.

All data reduction procedures are fully explained in Section 7.0

2.5 Report Organization

A summary of the test results is presented in Section 3, a description of typical Oven Configurations and Sampling Locations is given in Section 4, and Sampling and Analytical Procedures are discussed in Section 5. Quality Assurance (QA) is presented in Section 6, and Data Reduction Procedures in Section 7. All field data and supporting calculations are included in the Appendices.

3.0 EMISSIONS RESULTS SUMMARY

This section will present the final results for the U.S. EPA Bakery Site 4 emissions test program. All raw data and calculations are included in the Appendices.

3.1 Test Program Summary

Four test sites were tested using Method 25A for THC determinations and Method 18 for methane, ethane, ethanol and acetaldehyde concentrations determinations. One of the test objectives was to quantify the VOC emissions which represent only the photochemically reactive volatile organic compounds. Non-reactive compounds such as methane and ethane are subtracted from the THC concentrations for determining VOC concentrations. The VOC concentrations and emissions for this test report were calculated by assuming that all of the non-methane hydrocarbons detected by the Method 25A tests were comprised of ethanol. This was consistently observed at all four test sites as ethanol concentrations determined from the Method 18 analyses typically made up over 98% of the total ethanol and acetaldehyde concentrations (target VOCs).

In Section 3, two sets of emissions data are given. The first data set presents emissions of VOC as ethanol as discussed above. The VOC concentration as ethanol was calculated by dividing the non-methane hydrocarbon concentration in units of ppmC by the ethanol THC Carbon Equivalent Correction Factor. The CECF was determined by observing the response of the THC analyzer to known concentrations of ethanol. The second data set presents emissions of ethanol and acetaldehyde emissions determined from the Method 18 ethanol and acetaldehyde results and the THC results. Emissions were calculated by multiplying the respective stack gas concentrations by the stack gas flow rate by the methods discussed above. All calculations are shown in Section 7.0.

Methane concentrations were higher than expected during the test program which did not allow for the resolution of the ethane GC peak at three of the test sites. However, ethane concentrations were expected to be fairly low and so the error in determining VOC is expected to be minimal.

The emissions of both direct- and indirect-fired ovens were measured (see Section 4.1.2) while baking a variety of bakery products. Production rate is the most critical factor related to the quantity of bakery VOC emissions. However, as discussed in the previous section, no product information or process data will be given in this report. The general category of ovens tested will be identified, differentiating direct-fired from indirect-fired and bread from bun ovens.

Thirty test runs were conducted for a typical sample period of 1 hour. Some of the runs were shorter than an hour due to the stoppage of the product being baked. Emissions was measured from only a single product at one time. Time periods when the ovens were in transient conditions, either from start up/shut down occurrences or from product changes or gaps in the product feed, were not included in the reported data base. However, all of the field data is included in the Appendices.

A general description of the commercial baking process and bakery ovens along with the types of ovens tested at each test site is given in Section 4. A total of two or three stacks were tested simultaneously from each oven. The total oven emissions were calculated by totaling the emissions from each of the stacks. Emissions from comfort hood stacks (see Figure 4-1) were not originally intended to be tested. However, it was noticed during the Site 2 test program that these emissions represented a significant portion of the total oven emission rates and from that point on, comfort hood emissions were tested.

3.2 Site 4 Test Results

A large bread oven and a small bun oven were tested at Site 4. The bread oven was tested for 3 days and the bun oven was tested on the fourth day. The bread oven was a direct-fired unit with four stacks; however, one of the stacks that was located longitudinally in center of the oven was a propane burner stack strictly used for oven startup conditions. This stack was not tested and the absence of flow and high temperature in this stack was verified on-site. The other three stacks were a front, rear, and a comfort hood stack. The comfort hood stack flow measurement location met the U.S. EPA Method 1 guidelines.

The Site 4 Bun oven was a direct-fired unit with two stacks. The front stack had minimal flow similar to the exhauster stack at the Site 3 bun oven. The other unusual item with the front stack was that the gas moisture levels were approximately 30% by volume (%v). This was due to the fact that the bun oven was operated with a small amount of steam (~5 psi) injected near the front entrance to give the buns a crisp crust. All other stacks tested had moisture levels approximately 5-6%v. The flow rate and moisture content in the rear stack appeared to be typical at approximately 100 acfm and 3%v, respectively.

3.2.1 Site 4 Test Log

Nine emissions tests were conducted on June 29 through July 2, 1992. Runs 22 - 28 were conducted on the Bread oven and Runs 29 and 30 were conducted on the Bun oven. Table 3-1 presents a summary of the Site 4 sampling activities.

3.2.2 Site 4 VOC as Ethanol Emissions Test Results

Table 3-2 presents the VOC as ethanol test results. The table presents THC concentrations (including methane) as well as VOC concentrations derived by

Table 3-1

Site 4 Bakery VOC Emissions Test Log EPA Bakeries (1992)

Run	Date	Sampling Time	Oven & Product Designation	Number of GC injections	
				Front	Rear
22	6/29/92	11:25-12:53	Bread O	5	5
23	6/29/92	13:25-14:21	Bread P	4	4
24	6/30/92	14:11-15:08	Bread Q	4	3
25	6/30/92	16:06-16:47	Bread R	3	2
26	7/01/92	10:14-11:57	Bread O	5	5
27	7/01/92	13:58-14:35	Bread O	2	2
28	7/01/92	15:04-16:18	Bread Q	4	3
29	7/02/92	10:08-14:20	Bun S	8	6
30	7/02/92	15:07-16:08	Bun T	3	3

Table 3–2. VOC Emissions Assuming 100 % Ethanol
EPA Bakeries, Site 4 (1992)

Run	Run 22			Run 23			Run 24		
Stack Location	**Front**	**Comfort**	**Rear**	**Front**	**Comfort**	**Rear**	**Front**	**Comfort**	**Rear**
THC Conc. (ppmC/wet)	3397.6	615.1	1612.0	3996.4	686.0	1981.8	3721.7	677.6	1991.1
Methane Concentrations									
Methane Conc. (ppmv/wet) [1]	1740	223.7	948.2	2090	168	972.8	1920	251	1316.7
Methane/THC Ratio	52.3	31.7	57	54.2	28.8	52.3	50.5	33.9	69.3
Methane Conc. (ppmC/wet) [2]	1776.9	195.0	918.8	2166.0	197.6	1036.5	1879.5	229.7	1379.8
VOC Emissions									
VOC Conc. (ppmC/wet) [3]	1620.7	420.1	693.2	1830.4	488.4	945.3	1842.2	447.9	611.3
VOC Conc. as Ethanol (ppmv/wet) [4]	1141.3	295.9	488.1	1289.0	344.0	665.7	1297.4	315.4	430.5
VOC Emission Rate as Ethanol (lb/hr) [4]	12.49	6.24	6.70	14.11	7.26	9.13	14.20	6.66	5.91
Total VOC Emissions as Ethanol (lbs/hr) [4]	25.431			30.499			26.760		

1 Values calculated from average methane concentrations determined from multiple GC analyses.

-- Values calculated from average Methane to THC ratios (CH4/THC) incorporating both GC and THC analyses:

2 Methane Conc. = Avg ($CH4_i / THC_i$) * (Avg THC)

3 VOC Conc. = Avg ($1 - CH4_i / THC_i$) * (Avg THC)

4 VOC Conc. as Ethanol = (VOC Conc) / 1.42 VOC Emissions as Ethanol = (VOC Conc. as Ethanol) * Flow;
where 1.42 is the empirically derived carbon equivalent correction factor

Table 3–2. VOC Emissions Assuming 100 % Ethanol, (cont.)
EPA Bakeries, Site 4 (1992)

Run	Run 25			Run 26			Run 27		
Stack Location	**Front**	**Comfort**	**Rear**	**Front**	**Comfort**	**Rear**	**Front**	**Comfort**	**Rear**
THC Conc. (ppmC/wet)	2607.7	369.8	1557.3	3172.5	601.3	1584.6	3088.6	584.6	1563.9
Methane Concentrations									
Methane Conc. (ppmv/wet) [1]	1405	122	1383.3	1223.5	195	834.3	1230	234	793.5
Methane/THC Ratio	0.614	0.425	0.883	0.407	0.326	0.532	39.5	34.5	53.1
Methane Conc. (ppmC/wet) [2]	1601.1	157.2	1375.1	1291.2	196.0	843.0	1220.0	201.7	830.4
VOC Emissions									
VOC Conc. (ppmC/wet) [3]	1006.6	212.6	182.2	1881.3	405.3	741.6	1868.6	382.9	733.5
VOC Conc. as Ethanol (ppmv/wet) [4]	708.9	149.7	128.3	1324.9	285.4	522.2	1315.9	269.7	516.5
VOC Emission Rate as Ethanol (lb/hr) [4]	7.76	3.16	1.76	14.50	6.02	7.17	14.40	5.69	7.09
Total VOC Emissions as Ethanol (lbs/hr) [4]	12.678			27.687			27.179		

1 Values calculated from average methane concentrations determined from multiple GC analyses.

-- Values calculated from average Methane to THC ratios (CH4/THC) incorporating both GC and THC analyses:

2 Methane Conc. = Avg ($CH4_i / THC_i$) * (Avg THC)

3 VOC Conc. = Avg ($1 - CH4_i / THC_i$) * (Avg THC)

4 VOC Conc. as Ethanol = (VOC Conc) / 1.42 VOC Emissions as Ethanol = (VOC Conc. as Ethanol) * Flow;
where 1.42 is the empirically derived carbon equivalent correction factor

Table 3–2. VOC Emissions Assuming 100 % Ethanol, (cont.)
EPA Bakeries, Site 4 (1992)

Run	Run 28			Run 29				Run 30			
Stack Location	Front	Comfort	Rear	Front [a]	Rear [a]	Front	Rear	Front [a]	Rear [a]	Front	Rear
THC Conc. (ppmC/wet)	3143.8	606.0	1781.4	463.8	213.3	643.0	203.8	517.6	263.1	800.8	261.6
Methane Concentrations											
Methane Conc. (ppmv/wet) [1]	1170	193	815.7	9.3	5.2	27.1	5.5	24.4	6.7	35.3	5.5
Methane/THC Ratio	0.367	0.362	0.478	0.018	0.012	0.042	0.028	0.044	0.025	0.042	0.022
Methane Conc. (ppmC/wet) [2]	1153.7	219.372	851.50	8.3484	2.5596	27.006	5.7064	22.7744	6.5775	33.633	5.7552
VOC Emissions											
VOC Conc. (ppmC/wet) [3]	1990.0	386.6	929.9	455.5	210.7	616.0	198.1	494.8	256.5	767.2	255.8
VOC Conc. as Ethanol (ppmv/wet) [4]	1401.4	272.3	654.9	320.7	148.4	433.8	139.5	348.5	180.6	540.3	180.2
VOC Emission Rate as Ethanol (lb/hr) [4]	15.34	5.75	8.99	0.24	1.83	0.33	1.72	0.26	2.22	0.41	2.22
Total VOC Emissions as Ethanol (lbs/hr) [4]	30.068			2.071		2.047		2.489		2.629	

[1] Values calculated from average methane concentrations determined from multiple GC analyses.

– – Values calculated from average Methane to THC ratios (CH4/THC) incorporating both GC and THC analyses:

[2] Methane Conc. = Avg ($CH4_i / THC_i$) * (Avg THC)

[3] VOC Conc. = Avg ($1 - CH4_i / THC_i$) * (Avg THC)

[4] VOC Conc. as Ethanol = (VOC Conc) / 1.42 VOC Emissions as Ethanol = (VOC Conc. as Ethanol) * Flow;
where 1.42 is the empirically derived carbon equivalent correction factor

[a] Testing was performed while steam was injected into the front of the oven.

removing the methane concentrations from the THC values (ppmC/wet). Concentrations of VOCs are also given in ppmv as ethanol, calculated as discussed above. Emission rates from each stack are calculated from the VOC as ethanol concentrations. The total oven VOC emissions are then calculated by totaling the emissions from both vent stacks.

3.2.3 Site 4 Ethanol and Acetaldehyde Emission Test Results

Table 3-3 presents the emission rates and concentrations of ethanol and acetaldehyde in two ways. The first method reports the ethanol concentration determined by averaging the results of the Method 18 analyses. The second method multiplies the average ethanol-to-THC ratio by the average THC value to determine average ethanol concentrations. The second method assumes a constant ethanol-to-THC proportion and by using the continuous THC data base (THC values every minute), incorporates a much larger data base for averaging. Ethanol emissions are calculated from concentrations determined by both methods. However, the total oven emissions were determined from concentrations using the THC data. Acetaldehyde values were calculated similarly. All data reduction procedures is given in Section 7.

3.2.4 Site 4 Method 25A and Method 18 Results

This section presents the results from the Method 18 analyses. The Method 25A THC concentrations are given for same time period that the GC injections were made. Typically, three injections were made during a test run at a specific sample location. The concentrations were then averaged. Some GC injections were made that did not fall into the test run time-frame. Results from these analyses are presented in the tables but are not included in the averages. Ethanol-to-THC and acetaldehyde-to-THC ratios were calculated for each injection as well. The ethanol and acetaldehyde values were not corrected to ppmC for this calculation; therefore, these

Table 3-3. Ethanol and Acetaldehyde Emissions Test Results (cont.)
EPA Bakeries, Site 4 (1992)

Run	Run 28			Run 29				Run 30			
Stack Location	Front	Comfort	Rear	Front [a]	Rear [a]	Front	Rear	Front [a]	Rear [a]	Front	Rear
THC Conc. (ppmC/wet)	3143.8	606.0	1781.4	463.8	213.3	643.0	203.8	517.6	263.1	800.8	261.6
Ethanol Emissions											
Ethanol Conc. (ppmv/wet) [1]	1480	439	871.3	369	190.6	481.3	192	349.5	196	611	205
Ethanol Conc. (ppmv/wet) [2]	1443.0	500.0	917.4	352.0	162.3	475.2	200.1	348.3	192.1	580.6	212.4
Ethanol/THC Ratio	0.459	0.825	0.515	0.759	0.761	0.739	0.982	0.673	0.73	0.725	0.812
Ethanol Emission Rate (lb/hr) [1]	16.20	9.26	11.96	0.28	2.35	0.37	2.36	0.27	2.41	0.46	2.52
Ethanol Emission Rate (lb/hr) [2]	15.79	10.55	12.59	0.27	2.00	0.36	2.46	0.26	2.36	0.44	2.62
Total Ethanol Emission Rate (lbs/hr) [2]	38.930			2.266		2.825		2.629		3.056	
Acetaldehyde Emissions											
Acetaldehyde Conc. (ppmv/wet) [1]	49.80	8.65	29.10	13.50	5.72	21.90	6.02	11.80	4.93	21.90	5.28
Acetaldehyde Conc. (ppmv/wet) [2]	49.04	9.82	30.28	12.52	4.84	21.60	6.28	11.90	4.84	20.82	5.44
Acetaldehyde/THC Ratio	0.016	0.016	0.017	0.027	0.023	0.034	0.031	0.023	0.018	0.026	0.021
Acetaldehyde Emission Rate (lb/hr) [1]	0.521	0.175	0.382	0.010	0.067	0.016	0.071	0.009	0.058	0.016	0.062
Acetaldehyde Emission Rate (lb/hr) [2]	0.513	0.198	0.397	0.009	0.057	0.016	0.074	0.009	0.057	0.015	0.064
Total Acetaldehyde Emission Rate (lbs/hr) [2]	1.109			0.066		0.090		0.066		0.079	

[1] Values calculated from average concentrations determined from multiple GC analyses.

[2] Values calculated from average Ethanol/THC and Acetaldehyde/THC ratios (ETOH/THC and AA/THC) incorporating both GC and THC analyses: ETOH Conc. = Avg ($ETOH_i/THC_i$) * (Avg THC): ETOH Emissions = (Avg ETOH Conc.) * Flow

AA Conc. = Avg (AA_i/THC_i) * (Avg THC): AA Emissions = (Avg AA Conc.) * Flow

[a] Testing was performed while steam was injected into the front of the oven.

Table 3-3. Ethanol and Acetaldehyde Emissions Test Results(cont.)
EPA Bakeries, Site 4 (1992)

Run	Run 25			Run 26			Run 27		
Stack Location	**Front**	**Comfort**	**Rear**	**Front**	**Comfort**	**Rear**	**Front**	**Comfort**	**Rear**
THC Conc. (ppmC/wet)	2607.7	369.8	1557.3	3172.5	601.3	1584.6	3088.6	584.6	1563.9
Ethanol Emissions									
Ethanol Conc. (ppmv/wet) [1]	1145	119	533.7	1485	339	793	1300	412	650.5
Ethanol Conc. (ppmv/wet) [2]	1303.9	153.5	531.0	1205.6	371.0	817.7	1291.0	355.4	677.2
Ethanol/THC Ratio	0.500	0.415	0.341	0.380	0.617	0.516	0.418	0.608	0.433
Ethanol Emission Rate (lb/hr) [1]	12.53	2.51	7.32	16.25	7.15	10.88	14.23	8.69	8.93
Ethanol Emission Rate (lb/hr) [2]	14.27	3.24	7.29	13.19	7.83	11.22	14.13	7.50	9.29
Total Ethanol Emission Rate (lbs/hr) [2]	24.794			32.242			30.921		
Acetaldehyde Emissions									
Acetaldehyde Conc. (ppmv/wet) [1]	42.90	4.89	27.10	43.50	6.75	26.50	42.50	8.31	25.90
Acetaldehyde Conc. (ppmv/wet) [2]	48.76	6.47	26.94	46.00	6.85	26.78	42.31	7.19	27.21
Acetaldehyde/THC Ratio	0.019	0.018	0.017	0.015	0.011	0.017	0.014	0.012	0.017
Acetaldehyde Emission Rate (lb/hr) [1]	0.449	0.099	0.356	0.455	0.136	0.348	0.445	0.168	0.340
Acetaldehyde Emission Rate (lb/hr) [2]	0.510	0.131	0.354	0.482	0.138	0.351	0.443	0.145	0.357
Total Acetaldehyde Emission Rate (lbs/hr) [2]	0.995			0.971			0.945		

1 Values calculated from average concentrations determined from multiple GC analyses.

2 Values calculated from average Ethanol/THC and Acetaldehyde/THC ratios (ETOH/THC and AA/THC) incorporating both GC and THC analyses: ETOH Conc. = Avg ($ETOH_i / THC_i$) * (Avg THC): ETOH Emissions = (Avg ETOH Conc.) * Flow

AA Conc. = Avg (AA_i / THC_i) * (Avg THC): AA Emissions = (Avg AA Conc.) * Flow

Table 3-3. Ethanol and Acetaldehyde Emissions Test Results
EPA Bakeries, Site 4 (1992)

Run	Run 22			Run 23			Run 24		
Stack Location	**Front**	**Comfort**	**Rear**	**Front**	**Comfort**	**Rear**	**Front**	**Comfort**	**Rear**
THC Conc. (ppmC/wet)	3397.6	615.1	1612.0	3996.4	686.0	1981.8	3721.7	677.6	1991.1
Ethanol Emissions									
Ethanol Conc. (ppmv/wet) [1]	1460	463	804	2030	555.5	1196	1880	386	1077
Ethanol Conc. (ppmv/wet) [2]	1498.3	396.7	796.3	2106.1	598.2	1268.4	1853.4	353.0	1132.9
Ethanol/THC Ratio	0.441	0.645	0.494	0.527	0.872	0.64	0.498	0.521	0.569
Ethanol Emission Rate (lb/hr) [1]	15.98	9.77	11.03	22.21	11.72	16.41	20.57	8.15	14.78
Ethanol Emission Rate (lb/hr) [2]	16.40	8.37	10.93	23.05	12.62	17.40	20.28	7.45	15.55
Total Ethanol Emission Rate (lbs/hr) [2]	35.696			53.075			43.278		
Acetaldehyde Emissions									
Acetaldehyde Conc. (ppmv/wet) [1]	46.80	8.80	27.70	63.00	6.25	37.00	61.90	11.60	37.60
Acetaldehyde Conc. (ppmv/wet) [2]	47.91	7.57	27.57	67.94	6.93	39.64	60.66	10.57	39.62
Acetaldehyde/THC Ratio	0.014	0.012	0.017	0.017	0.010	0.020	0.016	0.016	0.020
Acetaldehyde Emission Rate (lb/hr) [1]	0.490	0.178	0.364	0.659	0.126	0.486	0.648	0.234	0.494
Acetaldehyde Emission Rate (lb/hr) [2]	0.501	0.153	0.362	0.711	0.140	0.520	0.635	0.213	0.520
Total Acetaldehyde Emission Rate (lbs/hr) [2]	1.016			1.371			1.368		

[1] Values calculated from average concentrations determined from multiple GC analyses.

[2] Values calculated from average Ethanol/THC and Acetaldehyde/THC ratios (ETOH/THC and AA/THC) incorporating both GC and THC analyses: ETOH Conc. = Avg ($ETOH_i/THC_i$) * (Avg THC): ETOH Emissions = (Avg ETOH Conc.) * Flow

AA Conc. = Avg (AA_i/THC_i) * (Avg THC): AA Emissions = (Avg AA Conc.) * Flow

values cannot be considered volumetric proportions of the THC stream. Their purpose was to be multiplied by the average THC value to calculate average methane, ethanol, and acetaldehyde concentrations. This allowed ethanol and acetaldehyde concentrations to be calculated without incorporating the additional methane analysis.

Finally, a comparison of the total concentration of the three target compounds detected by the GC was made with the THC values for each discrete injection. This parameter is not required by the reference method QA procedures, but it was originally thought to be an indication what proportion of THC the three target compounds represented. It was expected that the sum of the GC concentrations would be somewhat lower that the total THC concentration taking into account trace concentrations of organics in the gas stream that were not detected by the GC analyses. However, this comparison may not be sufficiently accurate. The average ratio is calculated as follows:

$$\overline{\left(\frac{GC}{THC}\right)} = \frac{\sum_{i=1}^{N} \frac{GC_i}{THC_i}}{N} \times 100$$

where:

THC_i = THC concentrations determined from the Method 25A monitor at the same time as the GC injection (ppmC)

N = Number of GC injectors in the time period.

The units from the GC analyses have to be corrected to the same units as the THC concentrations (ppmC) as follows:

$$GC_i = \left(\frac{[ETOH]_i}{1.42} + \frac{[AA]_i}{1.23} + [CH_4]_i \right)$$

where:

$[ETOH]_i$	=	Ethanol concentration determined from a single GC analysis (ppmv/wet)
1.42	=	Ethanol THC Carbon Equivalent Correction Factor (empirically derived)
$[AA]_i$	=	Acetaldehyde concentration determined from a single GC analysis (ppmv/wet)
1.23	=	Acetaldehyde THC Carbon Equivalent Correction Factor (empirically derived)
$[CH_4]_i$	=	Methane concentration determined from a single GC analysis (ppmv/wet). NOTE: The methane CECF is 1.0.

The CECFs used for this test program were determined by challenging the THC analyzer with known, certified concentrations of ethanol and acetaldehyde and recording the response. For example, if a 200 ppmv ethanol gas standard responded as 300 ppmC THC, then the ethanol CECF was 1.5. The CECFs were determined over the entire range of concentrations observed during the test program. It is difficult to predict whether the THC analyzer responded to the ethanol in the bakery sample gas matrix the same (quantitatively) as to ethanol in a clean, dry calibration gas. Both sample gas moisture levels and O_2 levels were different than the calibration gas matrix (dry, N_2 balance). The unexpected high GC/THC ratios (> 100%) may have resulted from a variability in the actual sample CECF. Tables 3-4 and 3-5 present the Method 25A and Method 18 analytical results from the oven stacks and burner stacks, respectively.

Table 3-4. Method 25A and Method 18 Emissions Tests Results, Front Stacks, EPA Bakeries, Site 4 (1992).

FRONT/OVEN STACK									
RUN	TIME	METHOD 25A THC RESULTS[a] (ppmC/wet)	METHOD 18 GC RESULTS			GC/THC RATIO [b] (%)	THC PROPORTIONS [c]		
			ETHANOL (ppmv/wet)	METHANE (ppmv/wet)	ACET-ALDEHYDE (ppmv/wet)		ETH/THC RATIO	CH4/THC RATIO	AA/THC RATIO
22	11:53:36	3213.2	1540	1510	43.1	116.7	0.479	0.470	0.013
22	12:12:06	3421.4	1380	1970	50.5	116.7	0.403	0.576	0.015
22	**AVG -F [d]**	**3397.6**	**1460.0**	**1740.0**	**46.8**	**116.7**	**0.441**	**0.523**	**0.014**
22	11:35:36	699.3	376	224	8.33	109.8	0.538	0.320	0.012
22	12:30:16	846.2	592	229	10.2	127.9	0.700	0.271	0.012
22	12:48:26	604.3	421	218	7.89	136.6	0.697	0.361	0.013
22	**AVG -C.H. [d]**	**615.1**	**463.0**	**223.7**	**8.8**	**124.8**	**0.645**	**0.317**	**0.012**
NA	14:53:28	2041.7	767	1440	22.2	125.2	0.376	0.705	0.011
NA	15:12:28	1498.6	638	261	8.54	78.6	0.426	0.174	0.006
23	13:36:38	3792.9	2030	2150	65.9	134.8	0.535	0.567	0.017
23	13:56:08	3917.8	2030	2030	61.3	127.3	0.518	0.518	0.016
23	**AVG -F**	**3996.4**	**2030.0**	**2090.0**	**63.6**	**131.1**	**0.527**	**0.542**	**0.017**
23	14:17:08	762.0	677	132	6.82	144.6	0.888	0.173	0.009
23	14:35:28	507.7	434	204	5.69	162.9	0.855	0.402	0.011
23	**AVG -C.H.**	**686.0**	**555.5**	**168.0**	**6.3**	**153.8**	**0.872**	**0.288**	**0.010**

[a] THC averages calculated from the full CEM data base (not just the above entries)

[b] GC/THC RATIO = (ETOH/1.42+AA/1.23+CH4)/THC * 100 where: 1.42 = Ethanol CECF
1.23 = Acetaldehyde CECF

[c] THC proportions were calculated as:ETH/THC = ppmv ethanol/ppmC THC, CH4/THC = ppmv CH4/ pmC THC,
AA/THC = ppmv acetaldehyde/ ppmC THC

[d] F = Front Stack. CH = Comfort Hood Stack

NA = Not Applicable. Values were not used in the run averages.

Table 3-4. Method 25A and Method 18 Emissions Tests Results (cont), Front Stacks, EPA Bakeries, Site 4 (1992).

FRONT/OVEN STACK									
RUN	TIME	METHOD 25A THC RESULTS[a] (ppmC/wet)	METHOD 18 GC RESULTS ETHANOL (ppmv/wet)	METHANE (ppmv/wet)	ACETALDEHYDE (ppmv/wet)	GC/THC RATIO [b] (%)	THC PROPORTIONS [c] ETH/THC RATIO	CH4/THC RATIO	AA/THC RATIO
24	14:12:48	3914.0	1700	2200	66.2	120.0	0.434	0.562	0.017
24	14:30:38	3580.5	2030	1520	59	125.0	0.567	0.425	0.016
24	14:49:08	3871.5	1910	2040	60.4	124.7	0.493	0.527	0.016
24	**AVG -F [d]**	**3721.7**	**1880.0**	**1920.0**	**61.9**	**123.2**	**0.498**	**0.505**	**0.016**
24	15:07:08	740.2	386	251	11.6	109.9	0.521	0.339	0.016
24	**AVG -C.H. [d]**	**677.6**	**386**	**251**	**11.6**	**109.881**	**0.521**	**0.339**	**0.016**
NA	15:15	467.2	253	123	5.57	105	0.542	0.263	0.012
NA	15:25:18	401.6	187	157	3.66	106.3	0.466	0.391	0.009
25	16:06:38	286.8	119	122	4.89	103.6	0.415	0.425	0.017
25	**AVG C.H.**	**369.8**	**119**	**122**	**4.89**	**103.564**	**0.415**	**0.425**	**0.017**
25	16:24:58	2359.9	1230	1420	46.6	136.6	0.521	0.602	0.020
25	16:42:48	2218.6	1060	1390	39.2	132.7	0.478	0.627	0.018
25	**AVG -F**	**2607.7**	**1145.0**	**1405.0**	**42.9**	**134.6**	**0.499**	**0.614**	**0.019**
26	10:07:07	3156.1	1460	1380	46.1	111.2	0.463	0.437	0.015
26	10:26:37	2904.4	1590	964	41.8	112.7	0.547	0.332	0.014
26	11:21:17	2867.6	1500	1380	44.6	124.3	0.523	0.481	0.016
26	11:39:27	3091.2	1390	1170	41.6	103.4	0.450	0.378	0.013
26	**AVG -F**	**3172.5**	**1485.0**	**1223.5**	**43.5**	**112.9**	**0.496**	**0.407**	**0.015**
26	10:44:47	460.2	361	131	4.86	141.2	0.785	0.285	0.011
26	11:02:47	706.3	317	259	8.64	101.9	0.449	0.367	0.012
26	**AVG -C.H.**	**601.3**	**339.0**	**195.0**	**6.8**	**121.5**	**0.617**	**0.326**	**0.011**

[a] THC averages calculated from the full CEM data base (not just the above entries)

[b] GC/THC RATIO = (ETOH/1.42+AA/1.23+CH4)/THC * 100 where: 1.42 = Ethanol CECF
1.23 = Acetaldehyde CECF

[c] THC proportions were calculated as:ETH/THC = ppmv ethanol/ppmC THC, CH4/THC = ppmv CH4/ pmC THC, AA/THC = ppmv acetaldehyde/ ppmC THC

[d] F = Front Stack. CH = Comfort Hood Stack

NA = Not Applicable. Values were not incorporated into the averages.

Table 3-4. Method 25A and Method 18 Emissions Tests Results (cont), Front Stacks, EPA Bakeries, Site 4 (1992).

FRONT/OVEN STACK									
RUN	TIME	METHOD 25A THC RESULTS[a] (ppmC/wet)	METHOD 18 GC RESULTS ETHANOL (ppmv/wet)	METHANE (ppmv/wet)	ACET-ALDEHYDE (ppmv/wet)	GC/THC RATIO[b] (%)	THC PROPORTIONS[c] ETH/THC RATIO	CH4/THC RATIO	AA/THC RATIO
27	14:03:57	3110.3	1300	1230	42.5	100.6	0.418	0.395	0.014
27	**AVG**	**3088.6**	**1300.0**	**1230.0**	**42.5**	**100.6**	**0.418**	**0.395**	**0.014**
27	14:21:57	678.0	412	234	8.31	122.3	0.608	0.345	0.012
27	**AVG -C.H.[d]**	**584.6**	**412.0**	**234.0**	**8.3**	**122.3**	**0.608**	**0.345**	**0.012**
NA	14:39:57	464.5	207	135	3.6	93.3	0.446	0.291	0.008
NA	14:57:57	2019.3	569	1130	23.3	97.4	0.282	0.560	0.012
28	15:15:57	2932.2	1350	1240	50.5	109.8	0.460	0.423	0.017
28	15:41:37	3170.4	1350	1190	48.9	99.9	0.426	0.375	0.015
28	16:08:37	3549.6	1740	1080	50	101.8	0.490	0.304	0.014
28	**AVG**	**3143.8**	**1480.0**	**1170.0**	**49.8**	**103.8**	**0.459**	**0.367**	**0.016**
28	15:59:27	533.0	439	193	8.65	155.2	0.824	0.362	0.016
28	**AVG -C.H.**		**439.0**	**193.0**	**8.7**	**155.2**	**0.824**	**0.362**	**0.016**
NA	12:30:40	228.4	170	19.4	10.9	120.1	0.744	0.085	0.048
29	10:12:19	450.7	370.9	1.4	6.4	118.9	0.823	0.003	0.014
29	12:41:00	520.1	402	15	19	117.1	0.773	0.029	0.037
29	12:51:00	544.0	388	14.9	17.8	108.0	0.713	0.027	0.033
29	14:07:30	434.5	315	5.82	10.9	107.4	0.725	0.013	0.025
29	**AVG - ON[e]**	**463.8**	**369.0**	**9.3**	**13.5**	**112.9**	**0.759**	**0.018**	**0.027**
29	13:22:20	621.1	490	27.9	21	120.7	0.789	0.045	0.034
29	13:31:20	639.2	464	26.4	22.7	111.6	0.726	0.041	0.036
29	13:49:00	698.8	490	26.9	22.1	107.3	0.701	0.038	0.032
29	**AVG - OFF**	**643.0**	**481.3**	**27.1**	**21.9**	**113.2**	**0.739**	**0.042**	**0.034**

[a] THC averages calculated from the full CEM data base (not just the above entries)

[b] GC/THC RATIO = (ETOH/1.42+AA/1.23+CH4)/THC * 100 where: 1.42 = Ethanol CECF, 1.23 = Acetaldehyde CECF

[c] THC proportions were calculated as:ETH/THC = ppmv ethanol/ppmC THC, CH4/THC = ppmv CH4/ pmC THC, AA/THC = ppmv acetaldehyde/ ppmC THC

NA = Not Applicable. Values were not incorporated into the averages.

[d] F = Front Stack. CH = Comfort Hood Stack

[e] Steam was being injected into the front of the oven (normal operation).

Table 3–4. Method 25A and Method 18 Emissions Tests Results (cont), Front Stacks, EPA Bakeries, Site 4 (1992).

FRONT/OVEN STACK									
RUN	TIME	METHOD 25A THC RESULTS[a] (ppmC/wet)	METHOD 18 GC RESULTS			GC/THC RATIO [b] (%)	THC PROPORTIONS [c]		
			ETHANOL (ppmv/wet)	METHANE (ppmv/wet)	ACET–ALDEHYDE (ppmv/wet)		ETH/THC RATIO	CH4/THC RATIO	AA/THC RATIO
NA	14:25:30	489.4	293	231		8.97	134.5	0.599	0.472	0.018
30	14:46:40	640.1	332	49.7		7.64	82.9	0.519	0.078	0.012
30	15:04:20	477.0	351	21		9.9	111.5	0.736	0.044	0.021
30	15:42:00	501.5	363	13.3		15.6	109.3	0.724	0.027	0.031
30	15:59:50	492.7	352	13.7		14.1	107.8	0.715	0.028	0.029
30	**AVG – ON [d]**	**517.6**	**349.5**	**24.4**		**11.8**	**102.8**	**0.673**	**0.044**	**0.023**
30	15:22:20	842.2	611	35.3		21.9	110.4	0.725	0.042	0.026
30	**AVG – OFF**	**800.8**	**611.0**	**35.3**		**21.9**	**110.4**	**0.725**	**0.042**	**0.026**

[a] THC averages calculated from the full CEM data base (not just the above entries)

[b] GC/THC RATIO = (ETOH/1.42+AA/1.23+CH4)/THC * 100 where: 1.42 = Ethanol CECF
1.23 = Acetaldehyde CECF

[c] THC proportions were calculated as:ETH/THC = ppmv ethanol/ppmC THC, CH4/THC = ppmv CH4/ pmC THC,
AA/THC = ppmv acetaldehyde/ ppmC THC

NA = Not Applicable. Values were not incorporated into the averages.

[d] Steam was being injected into the front of the oven (normal operation).

Table 3–5. Method 25A and Method 18 Emissions Tests Results, Rear Stacks, EPA Bakeries, Site 4 (1992).

REAR/BURNER STACK									
RUN	TIME	METHOD 25A THC RESULTS[a] (ppmC/wet)	METHOD 18 GC RESULTS			GC/THC RATIO [b] (%)	THC PROPORTIONS [c]		
			ETHANOL (ppmv/wet)	METHANE (ppmv/wet)	ACET–ALDEHYDE (ppmv/wet)		ETH/THC RATIO	CH4/THC RATIO	AA/THC RATIO
22	11:27:06	1375.5	678.0	597	28.2	115.9	0.493	0.434	0.000
22	11:44:36	1619.8	716.0	754	28.7	111.5	0.442	0.465	0.018
22	12:03:06	1744.4	933.0	1320	29.1	153.7	0.535	0.757	0.017
22	12:20:56	1645.0	1040.0	790	27	139.8	0.632	0.480	0.016
22	12:39:06	1796.0	657.0	1280	25.7	125.0	0.366	0.713	0.014
22	**AVG**	**1612.0**	**804.8**	**948.2**	**27.7**	**129.2**	**0.494**	**0.570**	**0.016**
NA	12:57:16	1944.0	557.0	1450	22.2	116.7	0.287	0.746	0.011
NA	14:44:28	1227.8	421.0	1250	14.3	151.9	0.343	1.018	0.012
NA	15:02:48	1358.7	603.0	831	13.3	125.4	0.444	0.612	0.010
23	13:26:58	1830.3	1020.0	806	42.2	126.0	0.557	0.440	0.023
23	13:45:48	2028.6	1290.0	1280	38.2	155.7	0.636	0.631	0.019
23	14:07:48	1975.4	1660.0	1040	34.8	174.1	0.840	0.526	0.018
23	14:26:28	1545.1	814.0	765	32.6	126.9	0.527	0.495	0.021
23	**AVG**	**1961.8**	**1196.0**	**972.8**	**37.0**	**145.7**	**0.640**	**0.523**	**0.020**

[a] THC averages calculated from the full CEM data base (not just the above entries)

[b] GC/THC RATIO = (ETOH/1.42+AA/1.23+CH4)/THC * 100 where: 1.42 = Ethanol CECF
1.23 = Acetaldehyde CECF

[c] THC proportions were calculated as:ETH/THC = ppmv ethanol/ppmC THC, CH4/THC = ppmv CH4/ pmC THC,
AA/THC = ppmv acetaldehyde/ ppmC THC

NA = Not Applicable. Values were not incorporated into the averages.

Table 3–5. Method 25A and Method 18 Emissions Tests Results (cont), Rear Stacks, EPA Bakeries, Site 4 (1992).

REAR/BURNER STACK										
RUN	TIME	METHOD 25A THC RESULTS[a] (ppmC/wet)	METHOD 18 GC RESULTS			GC/THC RATIO [b] (%)	THC PROPORTIONS [c]		
			ETHANOL (ppmv/wet)	METHANE (ppmv/wet)	ACET–ALDEHYDE (ppmv/wet)		ETH/THC RATIO	CH4/THC RATIO	AA/THC RATIO
24	14:21:48	1968.0	911.0	1480		38.6	143.3	0.463	0.752	0.020
24	14:40:08	1936.4	1180.0	1230		36.9	152.4	0.609	0.635	0.019
24	14:58:18	1791.3	1140.0	1240		37.4	162.2	0.636	0.692	0.021
24	**AVG**	**1991.1**	**1077.0**	**1316.7**		**37.6**	**152.6**	**0.570**	**0.693**	**0.020**
25	16:15:28	1601.3	544.0	1400		30	138.0	0.340	0.874	0.019
25	16:33:58	1622.8	539.0	1380		26.8	134.2	0.332	0.850	0.017
25	16:51:48	1480.8	518.0	1370		24.6	144.2	0.350	0.925	0.017
25	**AVG**	**1557.3**	**533.7**	**1383.3**		**27.1**	**138.8**	**0.341**	**0.883**	**0.017**
26	10:16:27	1767.3	764.0	801		27.8	108.6	0.432	0.453	0.016
26	10:35:37	1517.9	900.0	835		28.2	141.5	0.593	0.550	0.019
26	10:53:47	1744.9	562.0	936		25.7	101.2	0.322	0.536	0.015
26	11:11:57	1615.8	573.0	909		26.6	108.6	0.355	0.563	0.016
26	11:30:27	1414.7	1060.0	731		26.2	160.3	0.749	0.517	0.019
26	11:49:27	1393.1	900.0	794		24.4	150.9	0.646	0.570	0.018
26	**AVG**	**1584.6**	**793.2**	**884.3**		**26.5**	**128.5**	**0.516**	**0.532**	**0.017**

[a] THC averages calculated from the full CEM data base (not just the above entries)

[b] GC/THC RATIO = (ETOH/1.42+AA/1.23+CH4)/THC * 100 where: 1.42 = Ethanol CECF
1.23 = Acetaldehyde CECF

[c] THC proportions were calculated as:ETH/THC = ppmv ethanol/ppmC THC, CH4/THC = ppmv CH4/ pmC THC, AA/THC = ppmv acetaldehyde/ ppmC THC

Table 3-5. Method 25A and Method 18 Emissions Tests Results (cont), Rear Stacks, EPA Bakeries, Site 4 (1992).

REAR/BURNER STACK									
RUN	TIME	METHOD 25A THC RESULTS[a] (ppmC/wet)	METHOD 18 GC RESULTS			GC/THC RATIO [b] (%)	THC PROPORTIONS [c]		
			ETHANOL (ppmv/wet)	METHANE (ppmv/wet)	ACET-ALDEHYDE (ppmv/wet)		ETH/THC RATIO	CH4/THC RATIO	AA/THC RATIO
	14:12:57	1535.8	782.0	788	26.4	125.7	0.509	0.513	0.017
27	14:30:57	1454.0	519.0	799	25.4	107.8	0.357	0.550	0.017
27	**AVG**	**1563.9**	**650.5**	**793.5**	**25.9**	**116.8**	**0.433**	**0.531**	**0.017**
NA	14:48:57	1303.2	321.0	1000	13.1	112.9	0.246	0.767	0.010
28	15:06:57	1765.3	698.0	884	30.1	108.3	0.395	0.501	0.017
28	15:32:37	1491.8	886.0	688	23.9	132.4	0.594	0.461	0.016
28	15:50:37	1851.0	1030.0	875	33.3	126.5	0.556	0.473	0.018
28	**AVG**	**1781.4**	**871.3**	**815.7**	**29.1**	**123.1**	**0.515**	**0.478**	**0.017**
NA	12:22:00	221.4	157.0	5.75	6.56	106.9	0.709	0.026	0.030
29	10:21:19	230.6	193.4	-1.7	3.1	120.0	0.839	-0.008	0.013
29	13:00:00	240.8	167.0	6.5	6.02	104.3	0.694	0.027	0.025
29	13:58:00	283.3	247.0	6.55	7.11	129.2	0.872	0.023	0.025
29	14:16:30	256.4	179.0	6.97	6.64	105.0	0.698	0.027	0.026
29	14:34:20	237.4	167.0	7.76	5.75	106.1	0.703	0.033	0.024
29	**AVG - ON [d]**	**213.3**	**190.7**	**5.2**	**5.7**	**112.9**	**0.761**	**0.020**	**0.023**
29	13:40:10	195.5	192.0	5.53	6.02	146.1	0.982	0.028	0.031
29	**AVG - OFF**	**203.8**	**192.0**	**5.5**	**6.0**	**146.1**	**0.982**	**0.028**	**0.031**

[a] THC averages calculated from the full CEM data base (not just the above entries)

[b] GC/THC RATIO = (ETOH/1.42+AA/1.23+CH4)/THC * 100 where: 1.42 = Ethanol CECF
1.23 = Acetaldehyde CECF

[c] THC proportions were calculated as:ETH/THC = ppmv ethanol/ppmC THC, CH4/THC = ppmv CH4/ pmC THC, AA/THC = ppmv acetaldehyde/ ppmC THC

[d] Steam was being injected into the front of the oven (normal operation).

NA = Not Applicable. Values were not incorporated into the averages.

Table 3-5. Method 25A and Method 18 Emissions Tests Results (cont), Rear Stacks, EPA Bakeries, Site 4 (1992).

REAR/BURNER STACK									
RUN	TIME	METHOD 25A THC RESULTS[a] (ppmC/wet)	METHOD 18 GC RESULTS			GC/THC RATIO [b] (%)	THC PROPORTIONS [c]		
			ETHANOL (ppmv/wet)	METHANE (ppmv/wet)	ACET-ALDEHYDE (ppmv/wet)		ETH/THC RATIO	CH4/THC RATIO	AA/THC RATIO
30	15:51:00	268.4	196.0	6.7		4.93	108.4	0.730	0.025	0.018
30	**AVG – ON [d]**	**263.1**	**196.0**	**6.7**		**4.9**	**108.4**	**0.730**	**0.025**	**0.018**
30	15:13:30	241.9	200.0	5.6		4.44	122.0	0.827	0.023	0.018
30	15:31:00	262.6	209.0	5.46		6.12	117.9	0.796	0.021	0.023
30	**AVG – OFF**	**261.6**	**204.5**	**5.5**		**5.3**	**120.0**	**0.811**	**0.022**	**0.021**

[a] THC averages calculated from the full CEM data base (not just the above entries)

[b] GC/THC RATIO = (ETOH/1.42+AA/1.23+CH4)/THC * 100 where: 1.42 = Ethanol CECF
1.23 = Acetaldehyde CECF

[c] THC proportions were calculated as:ETH/THC = ppmv ethanol/ppmC THC, CH4/THC = ppmv CH4/ pmC THC, AA/THC = ppmv acetaldehyde/ ppmC THC

[d] Steam was being injected into the front of the oven (normal operation).

The Site 4 Method 25A and Method 18 results are presented graphically for Runs 22-30 in Figures 3-1 through 3-9, respectively. Method 18 concentrations have been corrected to ppmC for these plots.

3.2.5 Site 4 Stack Gas Flow Rates

Table 3-6 present the stack gas flow rates determined for the Site 2 oven stacks. Flows were not corrected to a dry basis since Method 25A and 18 concentrations were determined on a wet basis and emissions calculations required both flows and concentrations be consistently on the same basis (wet or dry). Moisture content values are included in the Appendix.

3.3 Carbon Equivalent Correction Factor Determination

Table 3-7 presents the ethanol carbon equivalent correction factor (CECF) determination. As discussed before, the CECF is the relative response of the THC analyzer in units of ppmC to known concentrations of ethanol. The CECF was determined for both ethanol and acetaldehyde by observing the response of the THC analyzer in units of ppmC to known gas concentrations of the two target compounds. The observed response was divided by the known concentration to determine the CECF value. This was done both in the field and in the laboratory. Ethanol challenges were made in the field at only one concentration (typically 200 ppmv); therefore, it was decided to develop the ethanol CECF over a much wider range of concentrations that were encountered in the field. The CECF value used for this test program was determined in the laboratory using a wide range of ethanol concentration. The average CECF for ethanol was determined to be 1.42. The on-site ethanol QC challenges are presented in Section 6.0.

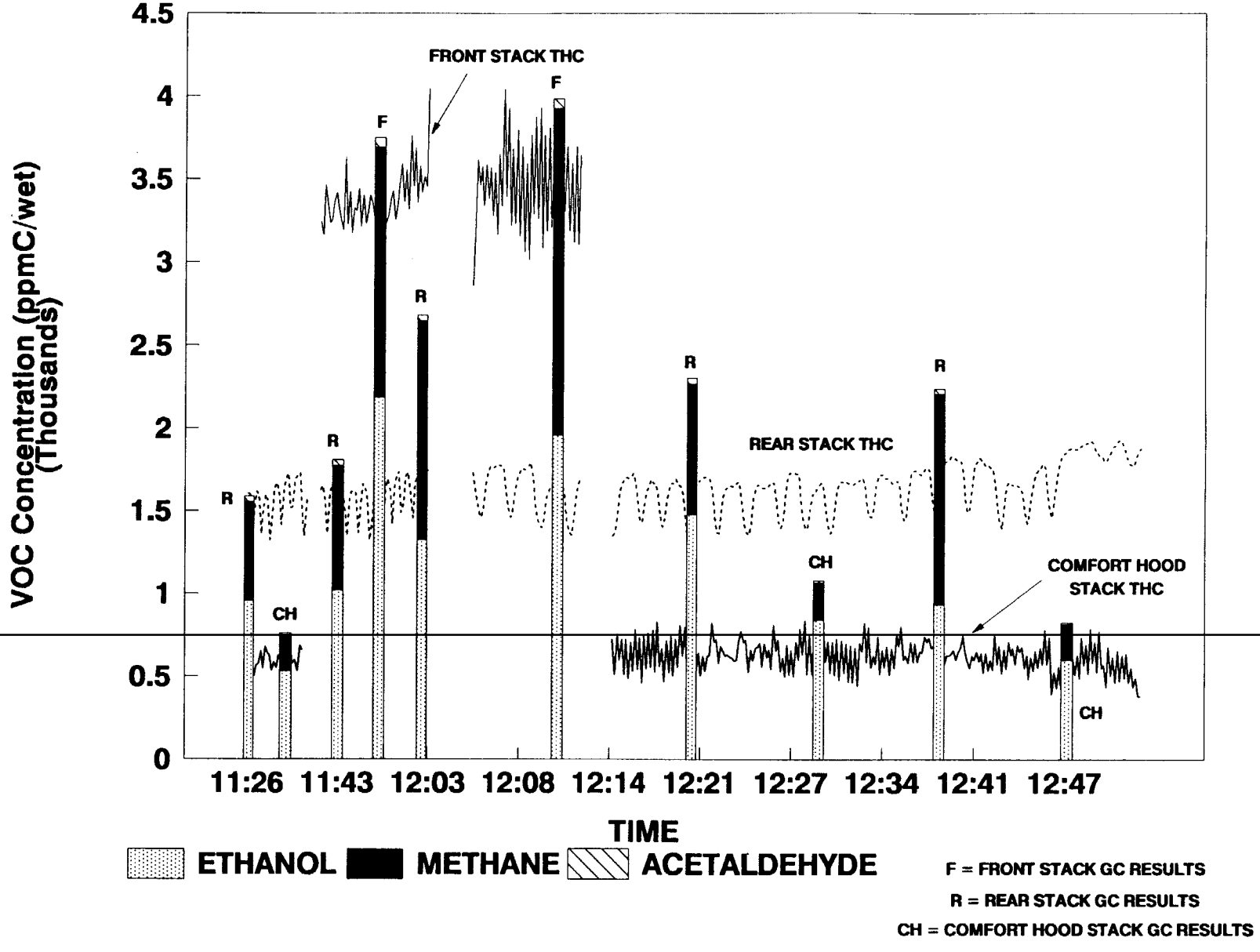

Figure 3-1. Run 22 Method 25A and Method 18 Results (adjusted to ppmC) .

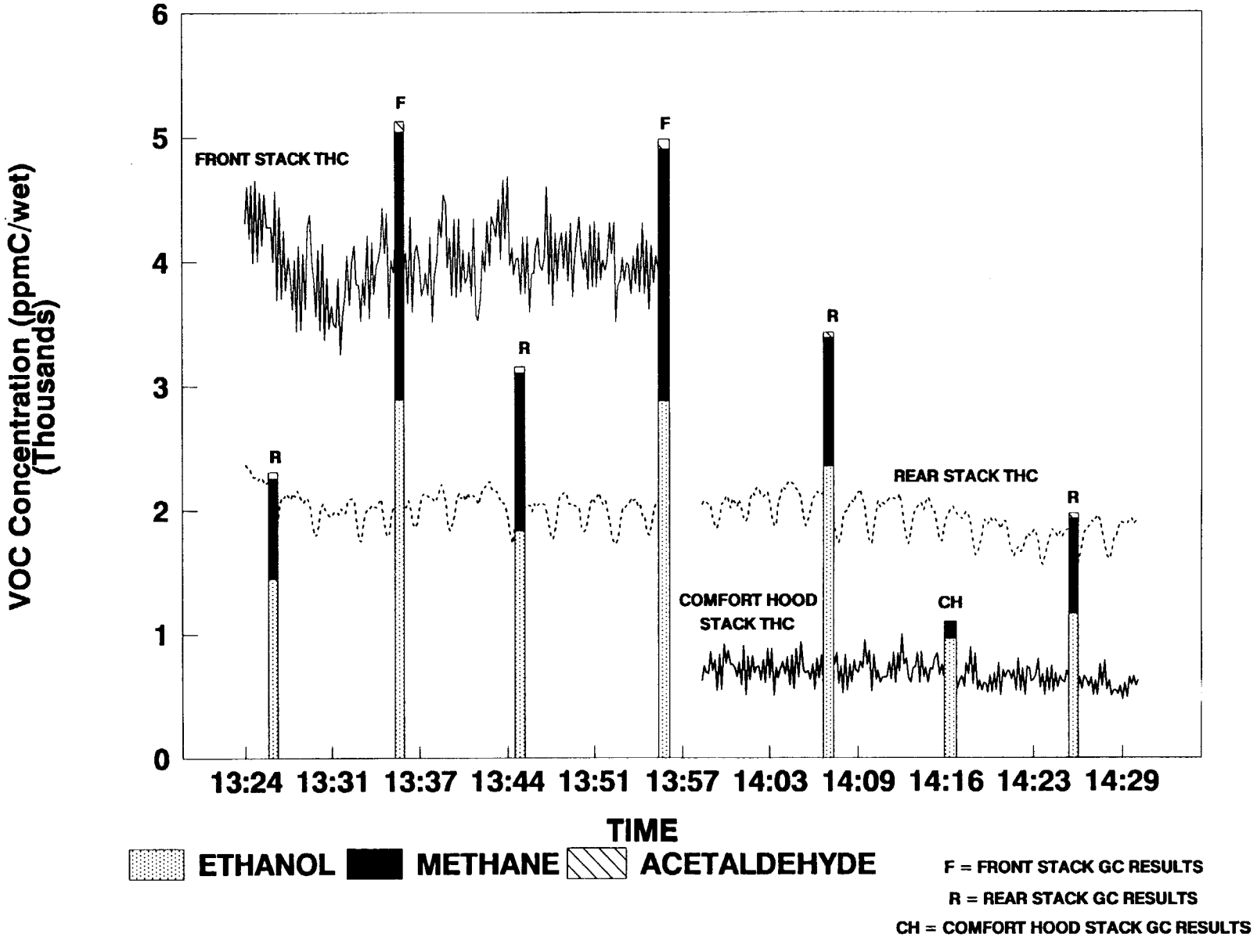

Figure 3-2. Run 23 Method 25A and Method 18 Results (adjusted to ppmC) .

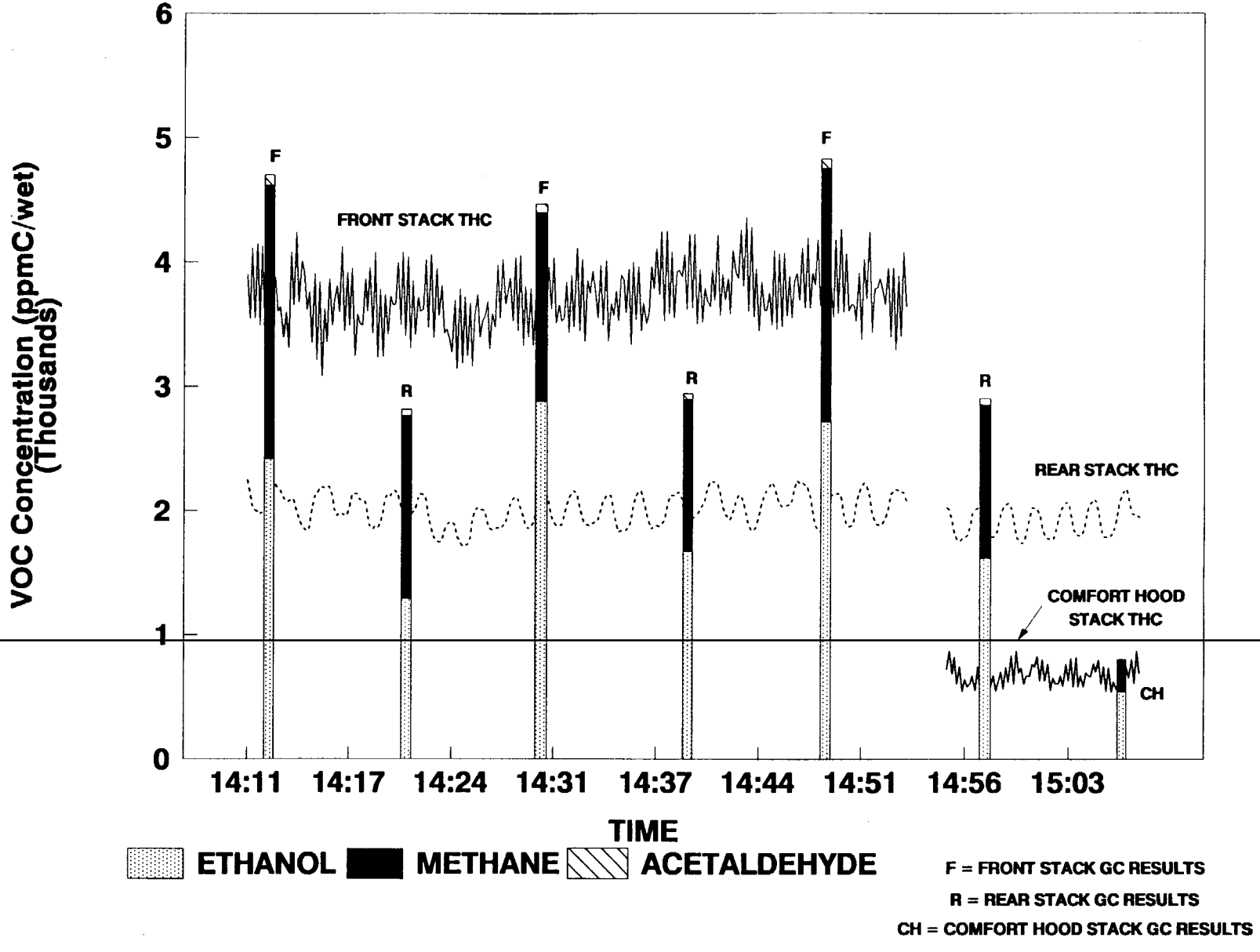

Figure 3-3. Run 24 Method 25A and Method 18 Results (adjusted to ppmC) .

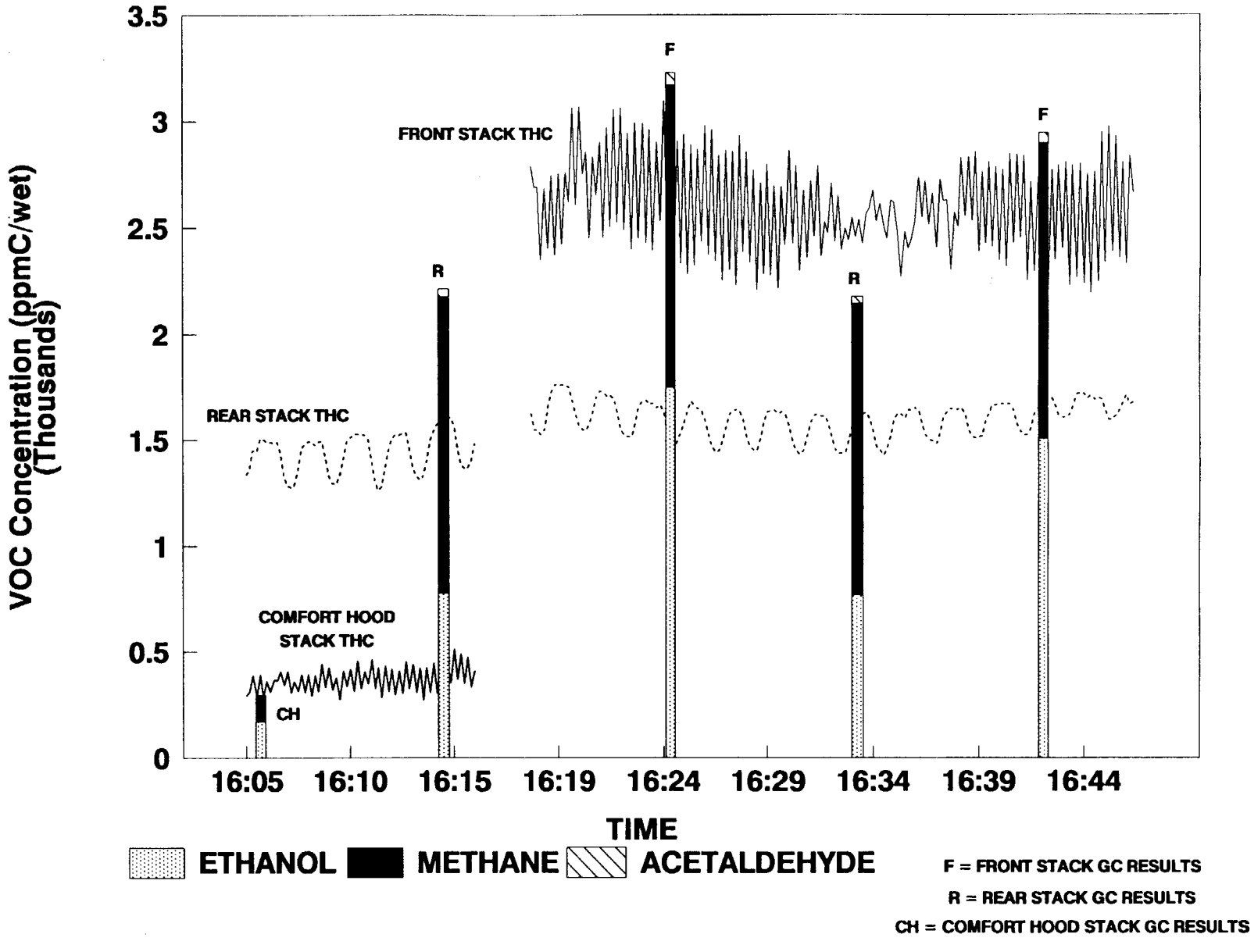

Figure 3-4. Run 25 Method 25A and Method 18 Results (adjusted to ppmC) .

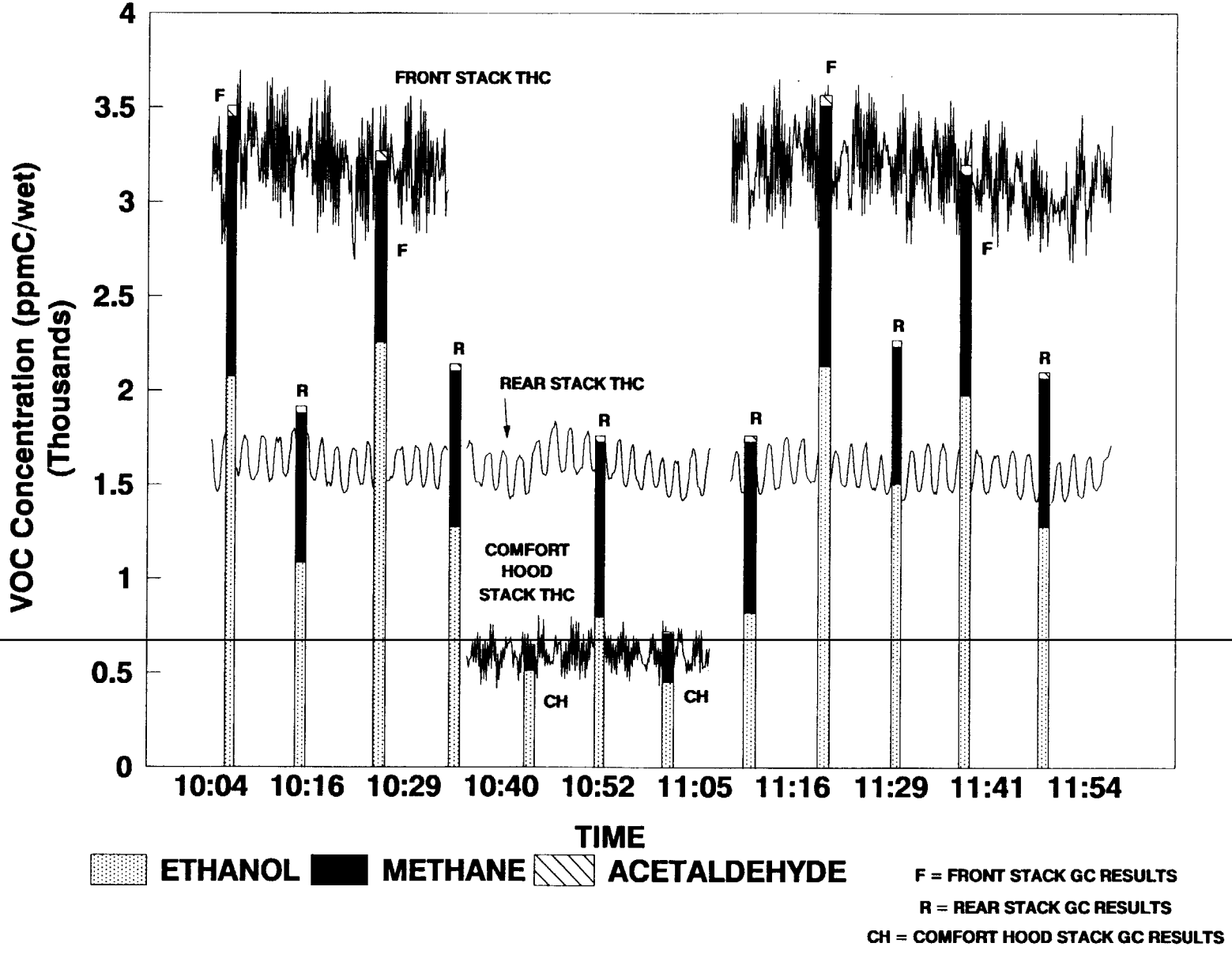

Figure 3-5. Run 26 Method 25A and Method 18 Results (adjusted to ppmC) .

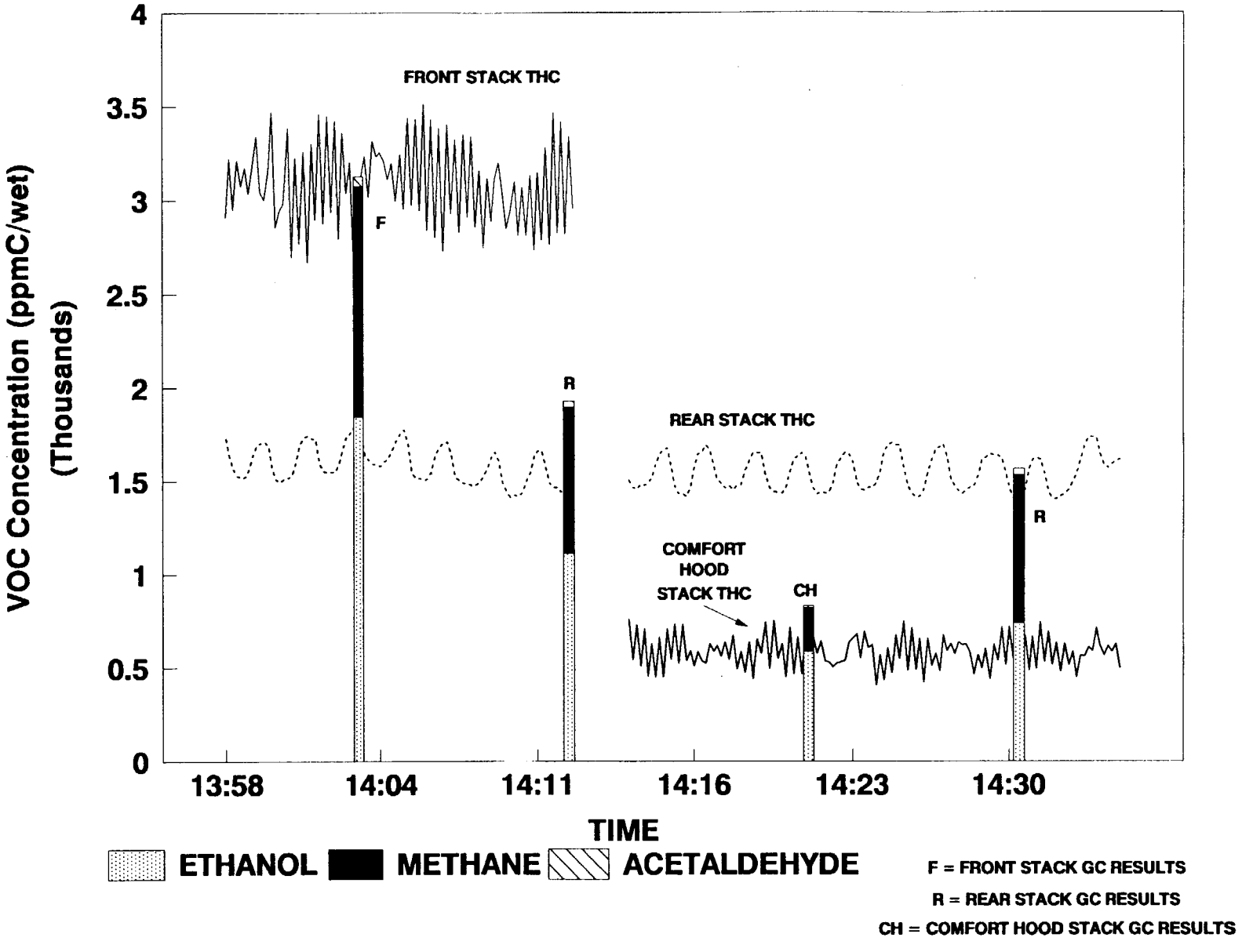

Figure 3-6. Run 27 Method 25A and Method 18 Results (adjusted to ppmC) .

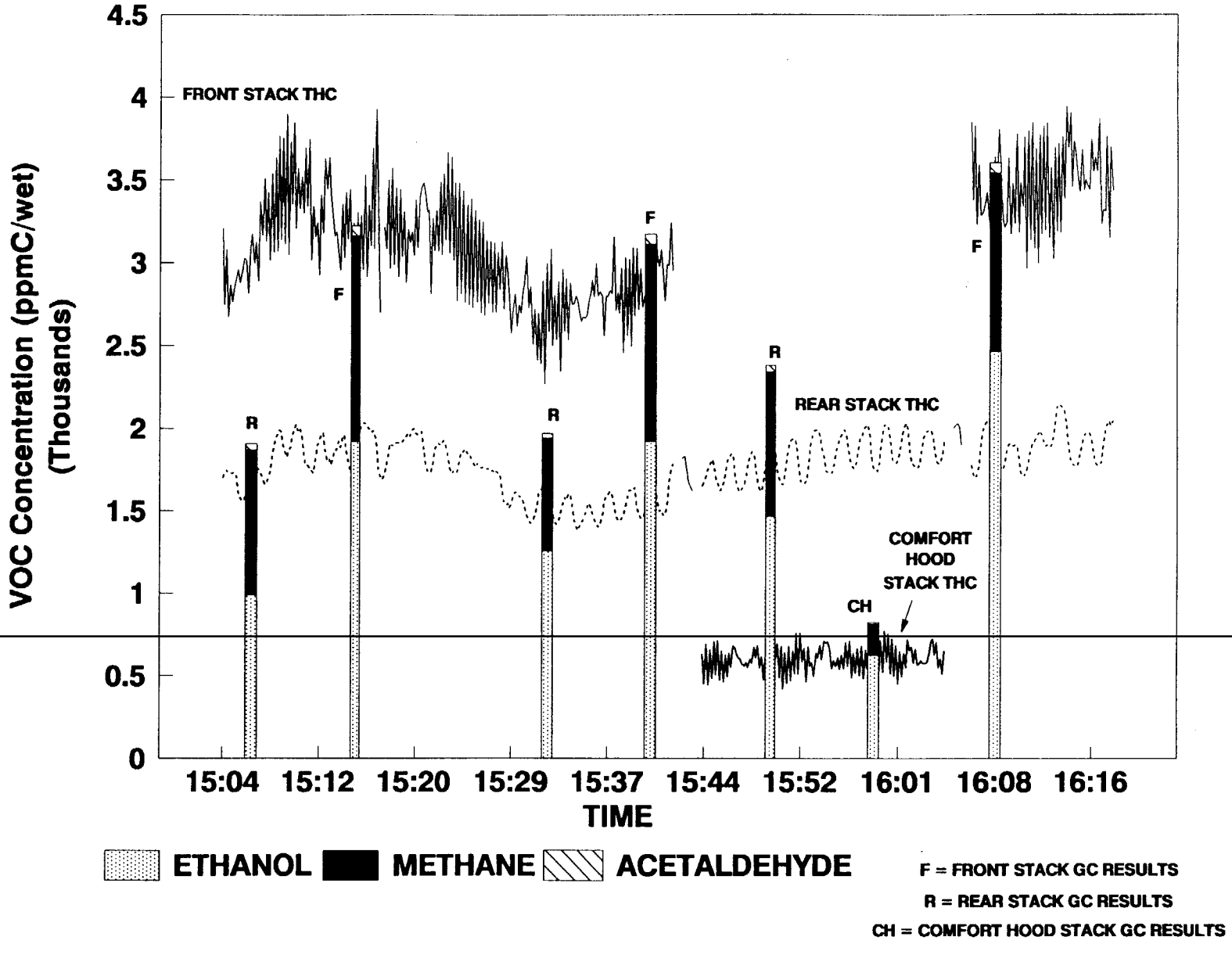

Figure 3-7. Run 28 Method 25A and Method 18 Results (adjusted to ppmC) .

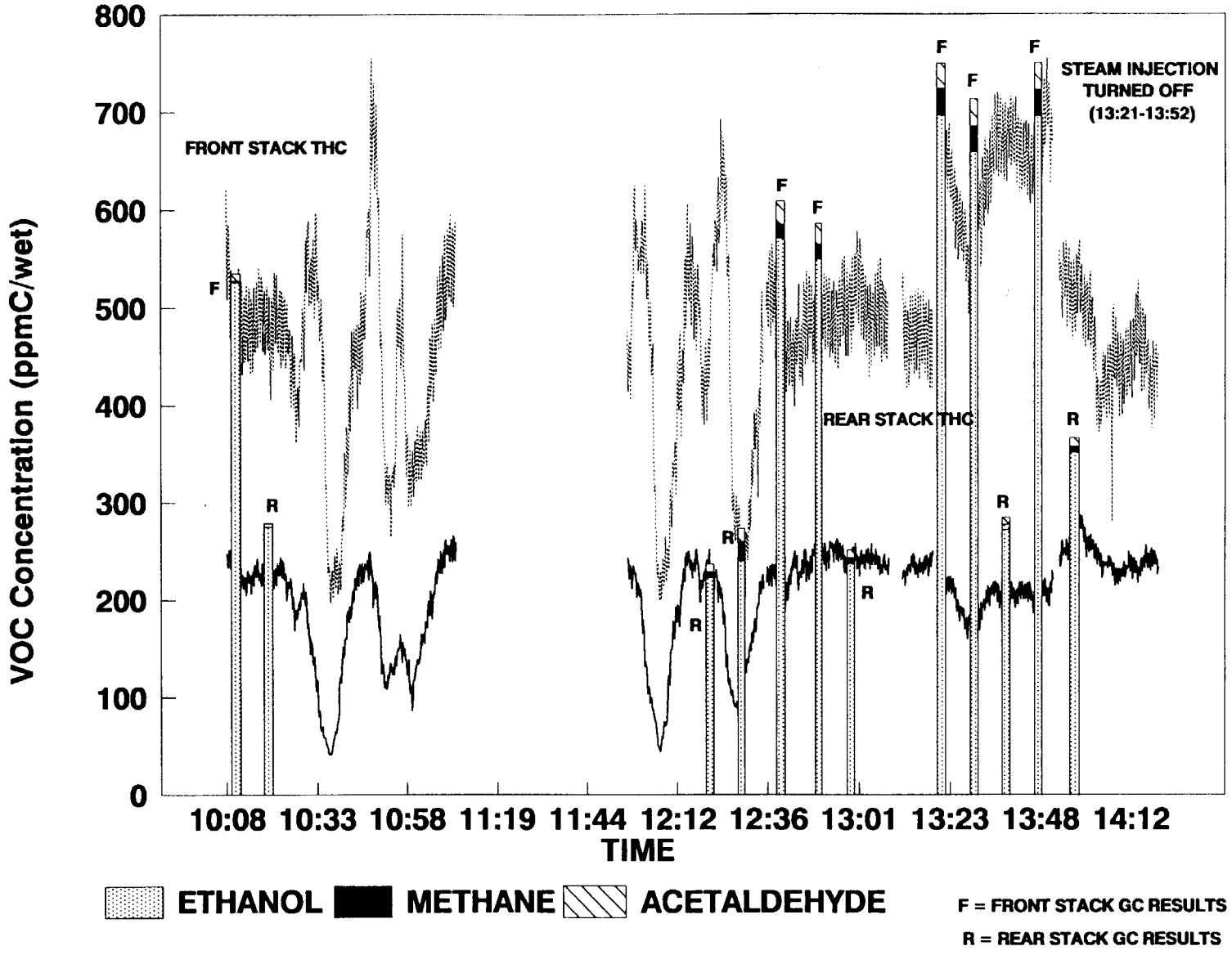

Figure 3-8. Run 29 Method 25A and Method 18 Results (adjusted to ppmC) .

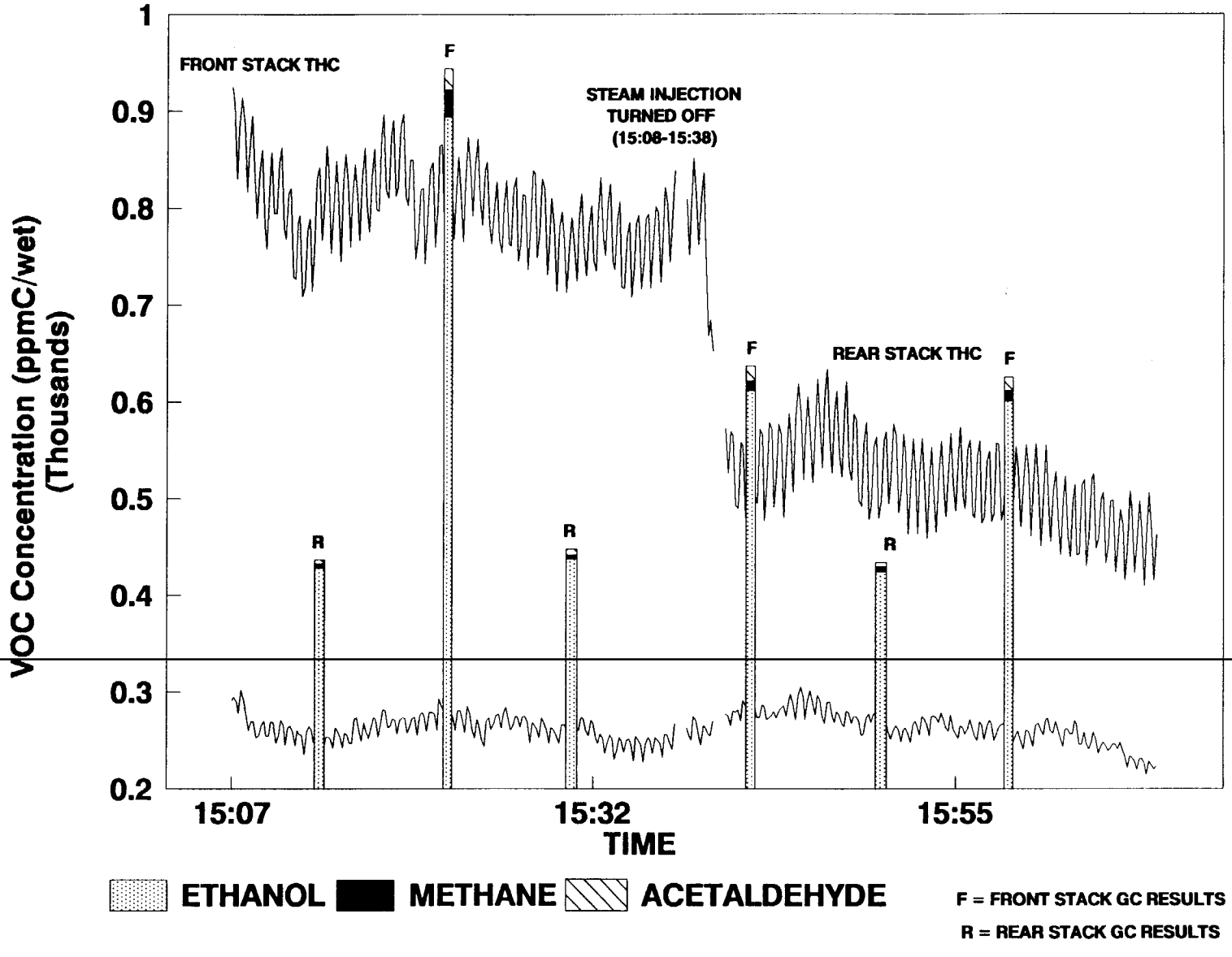

Figure 3-9. Run 30 Method 25A and Method 18 Results (adjusted to ppmC) .

Table 3–6. Summary of Flue Gas Sampling Parameters
Site 4 (1992)

Run Number	Location	Stack Gas Temperature (deg F)	Barometric Pressure (in. Hg)	Stack Gas Static Pressure (in H2O)	Volumetric Flow Rate (acfm)	Volumetric Flow Rate (scfm)
Run 22	Front	239	29.75	−0.07	2034.99	1531.47
	Comfort	134	29.75	0	3335.8475	2944.185
	Rear	160	29.75	−0.1	2265.88	1920.34
Run 23	Front	239	29.75	−0.07	2034.99	1531.47
	Comfort	134	29.75	0	3335.8475	2944.185
	Rear	160	29.75	−0.1	2265.88	1920.34
Run 24	Front	239	29.75	−0.07	2034.99	1531.47
	Comfort	134	29.75	0	3335.8475	2944.185
	Rear	160	29.75	−0.1	2265.88	1920.34
Run 25	Front	239	29.75	−0.07	2034.99	1531.47
	Comfort	134	29.75	0	3335.8475	2944.185
	Rear	160	29.75	−0.1	2265.88	1920.34
Run 26	Front	239	29.75	−0.07	2034.99	1531.47
	Comfort	134	29.75	0	3335.8475	2944.185
	Rear	160	29.75	−0.1	2265.88	1920.34
Run 27	Front	239	29.75	−0.07	2034.99	1531.47
	Comfort	134	29.75	0	3335.8475	2944.185
	Rear	160	29.75	−0.1	2265.88	1920.34
Run 28	Front	239	29.75	−0.07	2034.99	1531.47
	Comfort	134	29.75	0	3335.8475	2944.185
	Rear	160	29.75	−0.1	2265.88	1920.34
Run 29	Front [a]	239	29.75	0	141.245	106.455
	Rear [a]	161	29.75	0	2034.16	1723.32
	Front	239	29.75	0	141.245	106.455
	Rear	161	29.75	0	2034.16	1723.32
Run 30	Front [a]	239	29.75	0	141.245	106.455
	Rear [a]	161	29.75	0	2034.16	1723.32
	Front	239	29.75	0	141.245	106.455
	Rear	161	29.75	0	2034.16	1723.32

[a] Testing was performed while steam was injected into the front of the oven.

Table 2-7. In-House Ethanol Carbon Equivalent Corretion Factor Determination. EPA BAkeries (1992)

Ethanol QC Gas Conc. (ppmC)	Instrument Response (ppmC)	Carbon Equivalent Correction Factor
498	628	1.26
1000	1294	1.29
1470	2055	1.40
2000	2773	1.39
1470	2022	1.38
1470	2097	1.43
498	732	1.47
1000	1499	1.50
1470	2287	1.56
2000	2997	1.50
	AVG	1.42

Table 3-8 presents the acetaldehyde CECF determination. This procedure was performed in the field with a single concentration of acetaldehyde. Only relatively low sample concentrations were observed during the test program (< 50 ppmv); therefore, extensive CECF development did not need to be completed. The acetaldehyde CECF used for this test program was 1.23.

Table 2-8. Acetaldehyde Carbon Equivalent Correction Factor Determination. EPA BAkeries (1992)

Site	Test Day	Ethanol QC Gas Conc. (ppmC)	System 1		System 2	
			THC Instrument Response (ppmC)	Carbon Equivalent Correction Factor	THC Instrument Response (ppmC)	Carbon Equivalent Correction Factor
1	2	82.5	101.5	1.23	103.5	1.25
3	2	82.5	98.9	1.20	101	1.22
4	3	82.5	103.5	1.25	107	1.30
4	4	82.5	DOWN		100.5	1.22
			AVG	1.23	AVG	1.26

4.0 OVEN CONFIGURATIONS AND SAMPLING LOCATIONS

This section presents a general discussion of the oven stack locations, sampling port locations, and flow traverse point locations. Specific information is given for the Site 4 test program. The U.S. EPA Method 1 guidelines were used to determine the majority of test locations measuring gas flow rates. Method 25A and 18 samples were taken from the same port that the flow measurements were made. The sample point was located near the centroid of the duct (centrally located 10% area of the stack cross-section). All locations were at least 2 diameters upstream from the gas discharge to the atmosphere as required in Method 25A.

4.1 General Process Description

The following sections present a general description of the baking process and commercial baking ovens. It is not within the scope of this document to present detailed process information or production rates; therefore, these descriptions are only meant to familiarize the reader of the general principles and equipment used in the commercial baking industry.

4.1.1 Baking Process Description[1]

Bread baking at large commercial bread bakeries is a highly-mechanized process consisting of high-speed production lines with ovens capable of baking 20,000 pounds or more of bread per hour. The process starts with the mixing of flour, water, sugar, and yeast to form dough, thereby initiating a long series of complex biochemical changes which ends in the oven where the bread is baked.

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[1] Compilation of Air Pollutant Emission Factors (AP-42), Chapter 13.01, Bread Baking (Final Draft 1991)

There are four basic types of dough mixing processes: sponge dough, straight dough, brew, and continuous mix ("no-time"). These processes vary in the manner in which the various dough ingredients are mixed which determines the fermentation time available. Fermentation time can vary from 20 minutes or less for the continuous mix or "no-time" process, to 5 hours or more in the sponge dough process. The continuous mix or "no-time" process consists of mixing all of the dough ingredients at the same time; therefore, the fermentation time is minimized by using processing agents and higher temperatures. Sponge dough is formed when two-thirds of the flour, part of the water and the yeast are initially mixed and allowed to ferment before the remaining ingredients are added.

The baking process actually occurs in the oven which causes expansion of the loaf to final volume, crust formation, yeast and enzymatic activity inactivation, coagulation of dough proteins, partial gelatinization of starch, and reduction of loaf moisture. All of these processes are necessary to produce high quality, saleable bread products. To accomplish all of these product and process effects in the proper sequence, commercial bread ovens have between three and eight temperature gradient zones which are maintained in critical balance. Oven rise, which determines the final loaf volume and internal texture, occurs during the first 5-6 minutes of baking. Thermal degradation of the yeast occurs when the internal bread temperature reaches 140-145°F which stops the fermentation process. Protein is denatured between 140-180°F. At the end of the process, browning and crust color develop while ethanol and moisture are evaporated to cool the loaf and prevent the internal temperature from reaching the boiling point of water.[2]

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[2]J. W. Stitley, Baking Technology, Oven Emissions and Control Devices, American Institute of Baking, Manhattan, KS (1986).

There are three fundamental oven types: tunnel, tray, and spiral. Tunnel ovens, as shown in Figure 4-1 are long horizontal ovens where dough enters at one end and is conveyed to the opposite end where it exits as bread. Tray ovens as shown in Figure 4-2 are also horizonal; however, the dough enters the oven and exits on the same side after being conveyed the length of the oven. The tray is lowered to a second level and then conveyed to the exit near where it entered. In spiral ovens, dough enters at the top corner of the oven and is conveyed in a downward spiral to the bottom corner of the oven where it exits through an opening diagonally lower from where it entered the oven. No spiral ovens were tested during this test program. Tunnel and tray ovens typically contain three to five exhaust stacks with one stack typically used for purging the oven of natural gas during ignition and the remaining stacks used during normal baking operations. In contrast, spiral ovens usually contain just one stack which is used during both purging and normal operations.[3]

4.1.2 Oven Heating Systems[4]

Ovens may be divided into two general categories according to the manner in which they are heated, namely, direct-fired ovens and indirect-fired ovens. A third category makes use of semi-direct heating. In direct-fired ovens, the burners are located directly within the baking chamber and are usually ribbon type and burn natural gas. Modern ovens normally feature banks of ribbon burners located both above and below the baking surface, across the path of travel of the baking trays or oven band. Most such ovens are equipped with an external forced-air agitation system to augment the naturally formed convection currents within the baking chamber.

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[3]BAAQMD Staff Report Supporting Adoption of Rule 8-42 (July 1988).

[4] The Science of Baking, Lesson 26 Bakery Ovens, American Institute of Baking (no date)

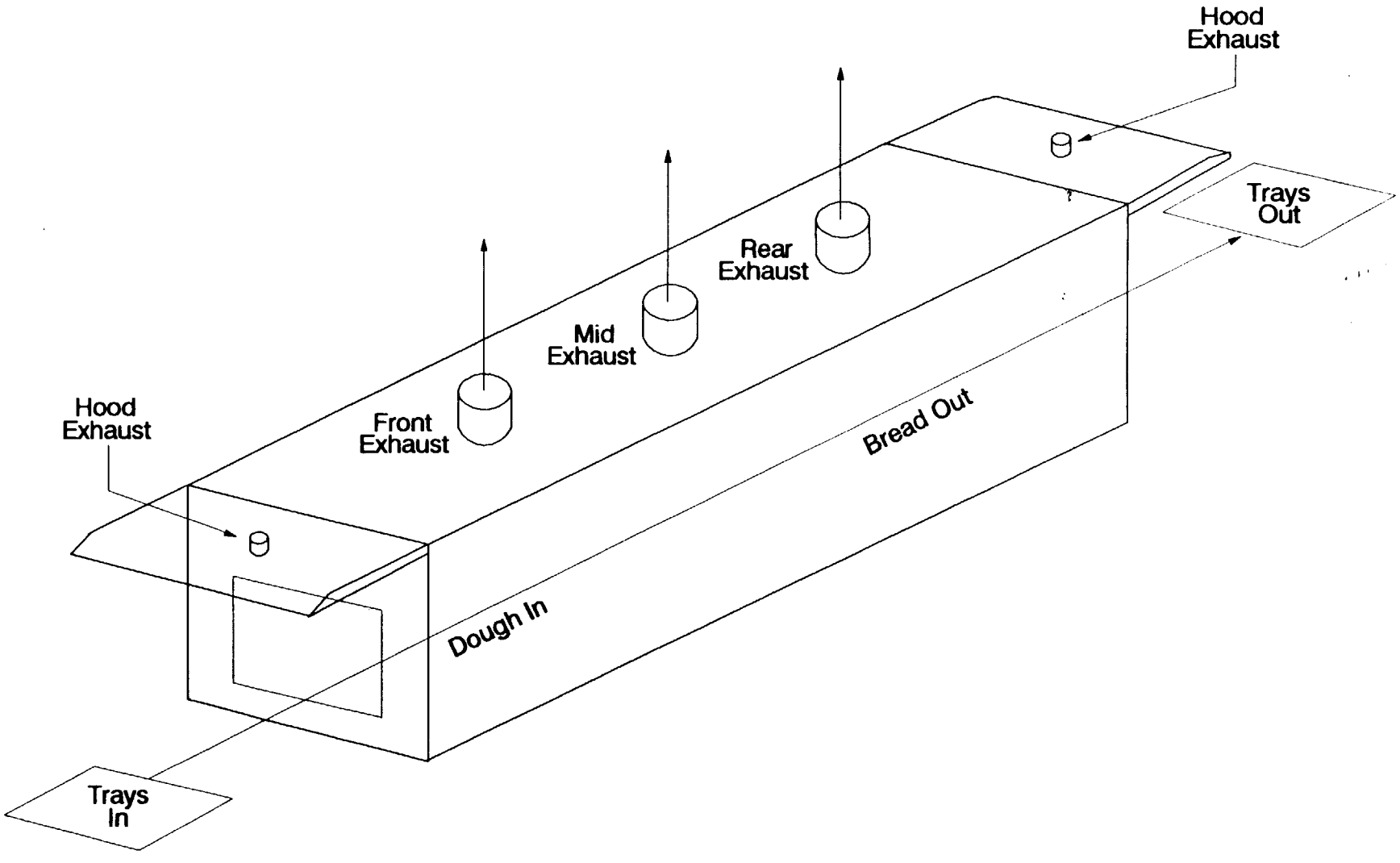


Figure 4-1. Generalized Schematic of a "Tunnel" Type Baking Oven EPA Bakeries (1992)

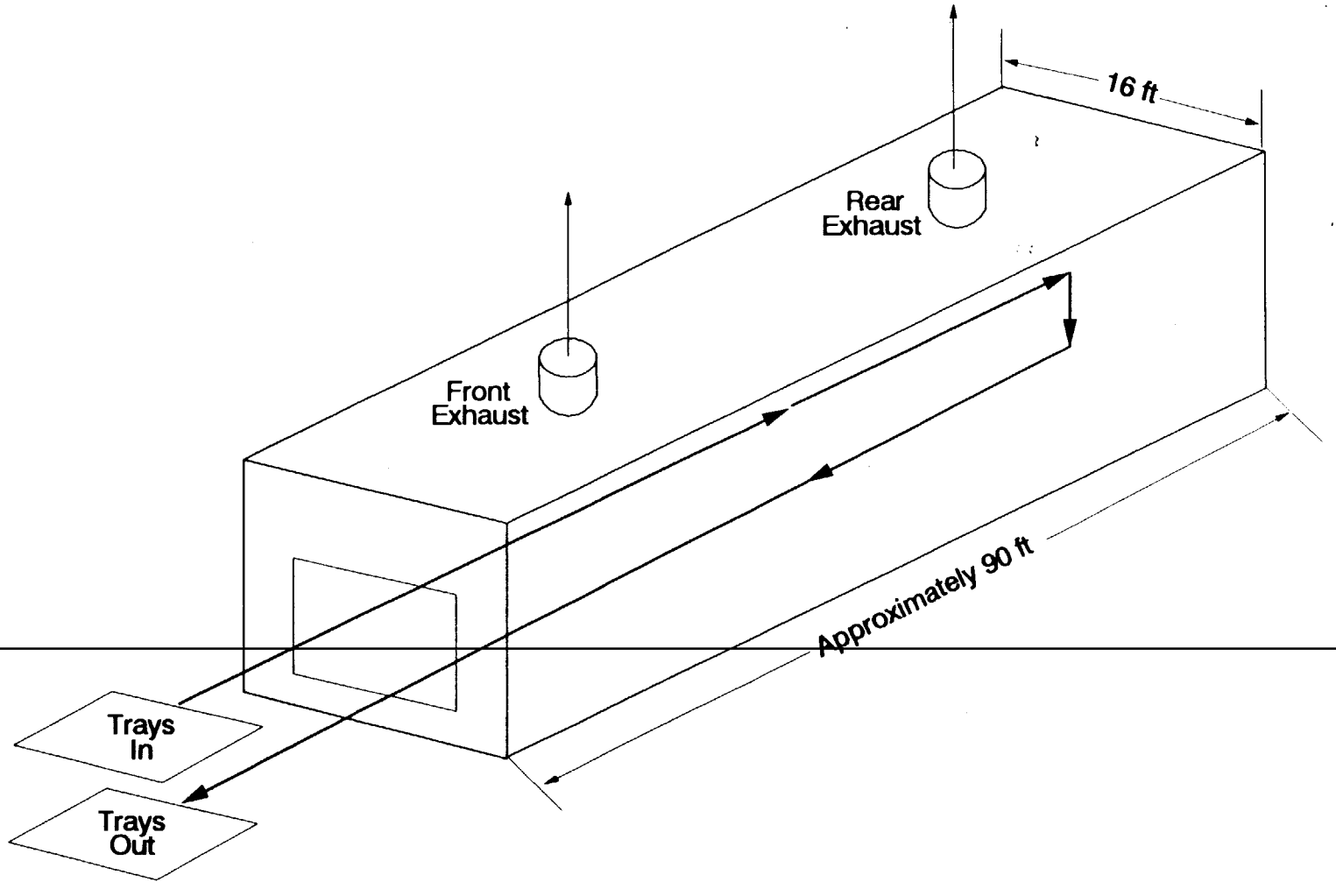


Figure 4-2. Generalized Schematic of a "Tray" Type Baking Oven EPA Bakeries (1992)

In indirect-fired ovens, the combustion chamber is isolated from the baking chamber. The heat is transferred from the hot combustion gases to the baking chamber by means of flues or radiator tubes. In these ovens, the products of combustion do not enter the baking chamber and thus do not come into direct contact with the baking products. The heat is generated by single high-capacity burners (one burner for each oven zone) and radiant heat is supplied by the flues and radiators within the baking chambers. Forced air agitation systems and improved oven efficiency are a general feature of indirect-fired ovens.

Semi-direct fired ovens (which are also referred to as semi-indirect fired ovens) closely resemble indirect-fired ovens in their use of separate combustion chambers and of radiator tubes for the heat transfer. In their case, however, the radiator tubes have either thin slots or small holes that allow the hot combustion gases to enter the baking chamber. These gases create convection currents whose intensity can be controlled by means of baffles. Thus, semi-direct fired ovens combine the advantages of both convection and radiant heat transfers.

4.2 Test Program Overview

This section will present a general discussion of the oven types and sample locations from all four sites. However, specific information will only be presented for the Site 4 facility.

This test program involved measuring the emissions from both direct- and indirect-fired ovens. Some of the indirect fired units had their heat exchanger tubes drilled out to promote better heating efficiency. However, maintenance records were incomplete and plant personnel were uncertain whether this had been completed or not. In some instances, maintenance personnel stated that their indirect-fired ovens had not been drilled out and yet high concentrations of unburned methane (>1000 ppmv) were

detected in the stack gases. So a strict direct/ indirect firing classification was not always possible.

Another important facet of the test program was that during steady-state operation, the gas flow in some of the stacks would almost be completely shut off with a flow damper to prevent oven heat loss. The Method 25A and 18 tests would detect fairly high concentrations of THC (>1000 ppmC) while flow rates would be minimal (< 100 cfm), resulting in fairly low emissions rates. The flow damper positions were always verified to ensure they were the same during both flow measurement tests and the Method 25A and 18 tests.

The majority of ovens tested had two stacks venting exhaust gases. If both stacks vented oven (baking) gases (i.e., direct-fired), they were referred to as the front stack and the rear stack depending on their respective location. Front stacks were located near the end of the oven where the bread dough entered, and the rear stacks were on the opposite end.

Indirect-fired ovens also typically had two stacks with one stack exhausting the oven gases and the other exhausting the burner gases. Gases from the burner stack were expected to be comprised mainly of unburned hydrocarbons (i.e. methane). However as previously mentioned, oven maintenance records were sometimes incomplete and what was expected to be purely a burner exhaust gas stream, was sometimes comprised of significant portions of gases from the baking processes (i.e. ethanol and acetaldehyde).

The majority of stacks were small roof vent ducts with an inside diameter (ID) ranging from 12 to 16 inches. As shown in Figures 4-1 and 4-2, the stacks were typically arranged in a straight line (i.e., in line with the orientation of the oven). Most had rain caps installed over the opening which was typically 6-15 feet above the roof. All stacks were accessed from the roofs of the facilities and sample ports were located

from 2-6 feet above the roof line. A 1.75 inch hole in the duct walls allowed for full insertion of the Method 25A and 18 sample probe. Two ports were located 90° apart at the same elevation. The sample port that was not being used was always capped off to prevent any ambient air from diluting the sample stream.

Approximately 100 to 150 feet of heated Teflon® tubing was used to transport the gas sample from the stack to the mobile continuous emissions monitoring (CEM) vehicle that was typically parked adjacent to the bakery wall. In cases where there were three stacks originating from the oven, one sampling probe/heat trace system would be alternated from the second and third stack.

A general description of sample locations for the Site 4 test program is presented according to the respective test site in the following section.

4.3 Site 4 Sample Locations

A large Bread oven and a small Bun oven were tested at Site 4. The Bread oven was tested for 3 test days. The CEM trailer had to be moved for the fourth and final test day in order to reach the Bun oven.

The Bread oven was a direct-fired unit with four stacks located on the unit. However, one of the stacks, located longitudinally in center of the oven, was a propane burner stack strictly used for oven start up conditions and was not tested. The absence of flow and high temperature at this stack was verified on-site. The other three stacks were a front, rear, and a comfort hood stack. The comfort hood stack flow measurement location met the U.S. EPA Method 1 guidelines. A 100-foot length of heat trace tubing was used on the rear stack and a 150-foot length was alternated between the front stack and the comfort hood stack.

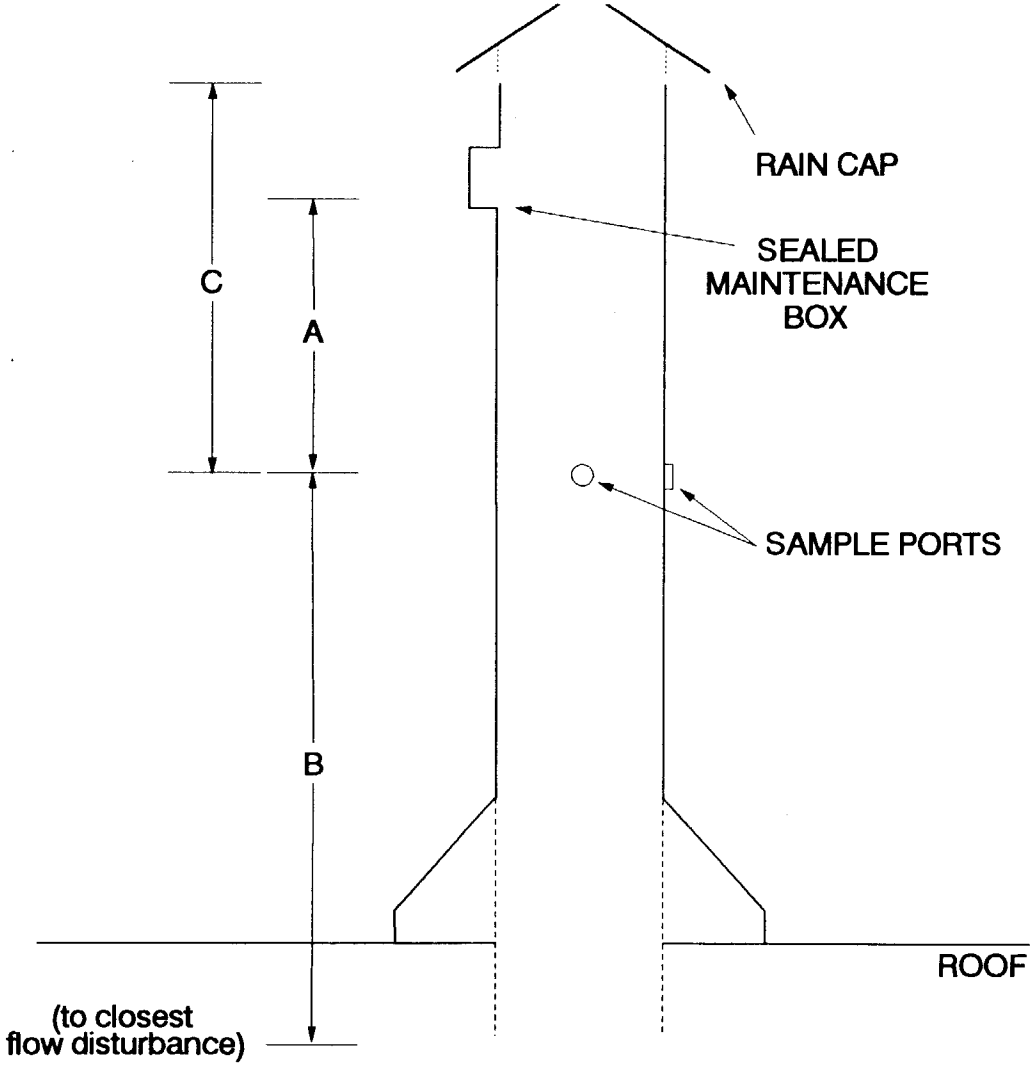
The sampling locations used on the Bread oven at Site 4 are shown in Figure 4-3. The Bread oven front stack was 14-inches ID without a rain cap. Ports were located approximately 5-feet (4.3 diameters) downstream and 1-feet (0.86 diameters) upstream from the closest flow disturbances. The ports were 9.0-feet (7.7 diameters) upstream of the final gas exit to atmosphere. Flow was measured at 16 traverse points.

The rear stacks on the Bread oven was 16-inches ID without a rain cap. Ports were located approximately 5.3-feet (4.0 diameters) downstream and 1-feet (0.75 diameters) upstream from the closest flow disturbances. The ports were approximately 10-feet (7.5 diameters) upstream of the final gas exit to atmosphere. Flow was measured at 16 traverse points.

The Bread oven comfort hood stack had a 24-inch ID without a rain cap. Ports were located 7-feet (3.5 diameters) downstream and 7-feet (3.5 diameters) upstream from the closest flow disturbances. Flow was measured at 16 traverse points.

The Bun oven at Site 4 was a direct-fired unit with two stacks. The front stack had minimal flow similar to the exhauster stack at the Site 3 bun oven and had unusually high gas moisture levels of approximately 30% by volume (%v). This was because the Bun oven was operated with a small amount of steam (approximately 5 psi) injected near the front entrance to give the buns a crisp crust. All other stacks that were tested had gas moisture levels of approximately 5-6%v. Flow rates in the rear stack appeared to be typical of the majority of stacks tested (approximately 1000 acfm). The rear stack was sampled using a 100-foot length of heat trace while the front stack necessitated a 150-foot section.

The sampling locations on the Bun oven at Site 4 are shown in Figure 4-4. The Bun oven front stack had a 14-inch ID with a rain cap located on top. Ports were located 12-feet (10.3 diameters) downstream and 8-feet (6.9 diameters) upstream from



SITE 4 BREAD OVEN
SAMPLING AND FLOW
MEASUREMENT LOCATIONS

Front Stack

14 in. ID	No. of Flow Traverse Pts.
A = ~1 ft	
B = ~ 5 ft	16
C = ~ 9 ft	

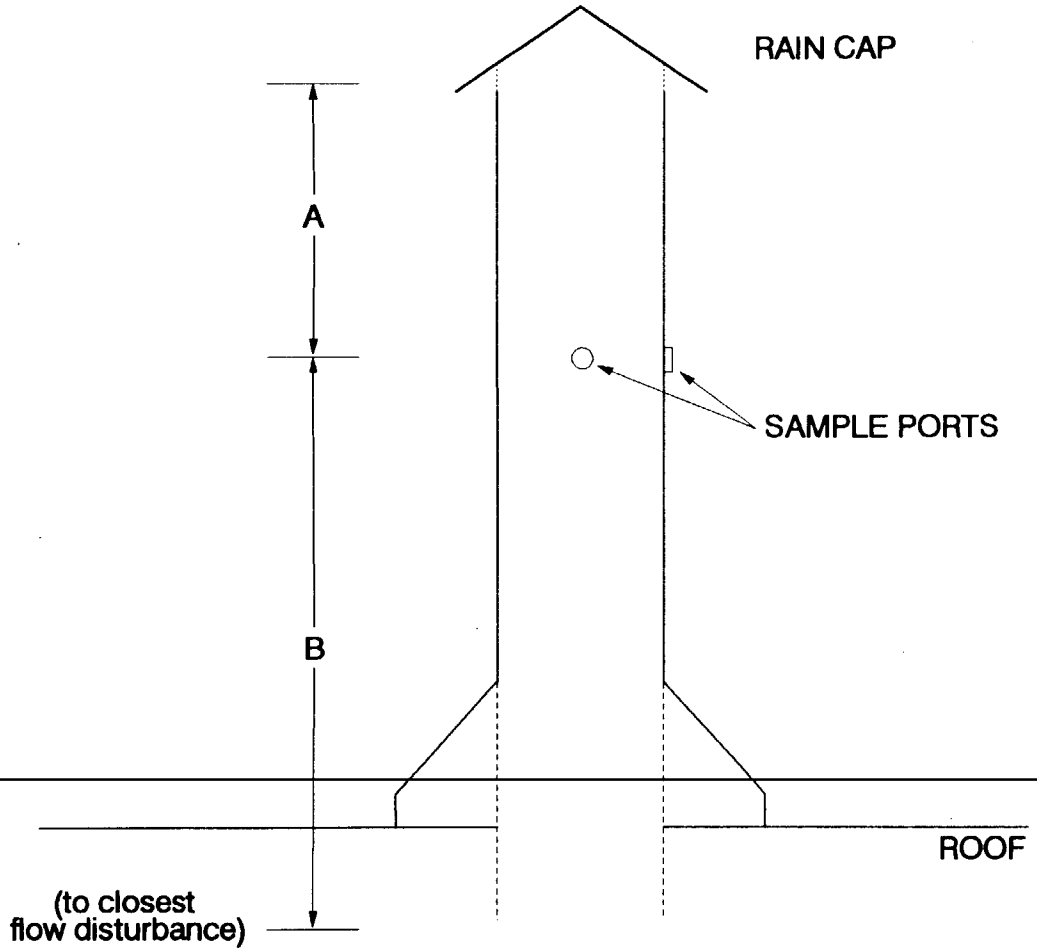
Rear Stack

16 in. ID	No. of Flow Traverse Pts.
A = 1.0 ft	
B = 5.3 ft	16
C = ~10 ft	

Comfort Hood Stack

24 in. ID	No. of Flow Traverse Pts.
A = NA ft	
B = ~ 7 ft	16
C = ~7 ft	

FIGURE 4-3. SITE 4 BREAD OVEN STACKS CONFIGURATIONS EPA BAKERIES (1992)



SITE 4 BUN OVEN
SAMPLING AND FLOW
MEASUREMENT LOCATIONS

Front Stack

14 in. ID	No. of Flow
A = ~8 ft	Traverse Pts.
B = > 12 ft	16

Rear Stack

16 in. ID	No. of Flow
A = ~7 ft	Traverse Pts.
B = ~11 ft	16

FIGURE 4-4. SITE 4 BUN OVEN STACK CONFIGURATION
EPA BAKERIES (1992)

the closest flow disturbances. Flow was measured at 16 traverse points.

The Bun oven rear stack had a 16-inch ID with a rain cap. Ports were located 11-feet (8.25 diameters) downstream and 7-feet (5.25 diameters) upstream from the closest flow disturbances. Flow was measured at 16 traverse points.

5.0 SAMPLING AND ANALYTICAL METHODS

This section briefly summarizes the procedures used for sampling and analysis. Procedures are presented for Method 25A testing in Section 5.1, Method 18 procedures in Section 5.2, and Methods 1-4 procedures in Section 5.3. The detailed protocols can be found in the U.S. EPA reference methods located in the appendices.

5.1 Method 25A Sampling and Analysis for THC

Total hydrocarbon concentration was determined on a continuous basis using the U.S. EPA Method 25A procedure. Procedures incorporate QA/QC protocols stipulated as "Measurement System Performance Specifications" in the reference methods. The QA parameters will be reported in Section 6.0 while the QC procedures are fully detailed in the test plan written for this test program.

The following discussion presents Sample Extraction Equipment and Procedures in Section 5.1.1, THC Analyzers and Operating Principal in Section 5.1.2, Data Acquisition Procedures in Section 5.1.3, Instrument Calibration in Section 5.1.4, and an Example Daily Operating Procedure in Section 5.1.5.

5.1.1 Sample Extraction Equipment and Procedure

A continuous gas sample was extracted from the stack and transported to the analyzer through a heated Teflon® sample line (heat trace). The gas only came into contact with inert materials such as stainless steel, glass, or teflon. The sample gas temperature was maintained above 100°C (212°F) so that there was no condensation of moisture or hydrocarbons in the tubing. A generalized schematic of a typical extractive system is shown in Figure 5-1.

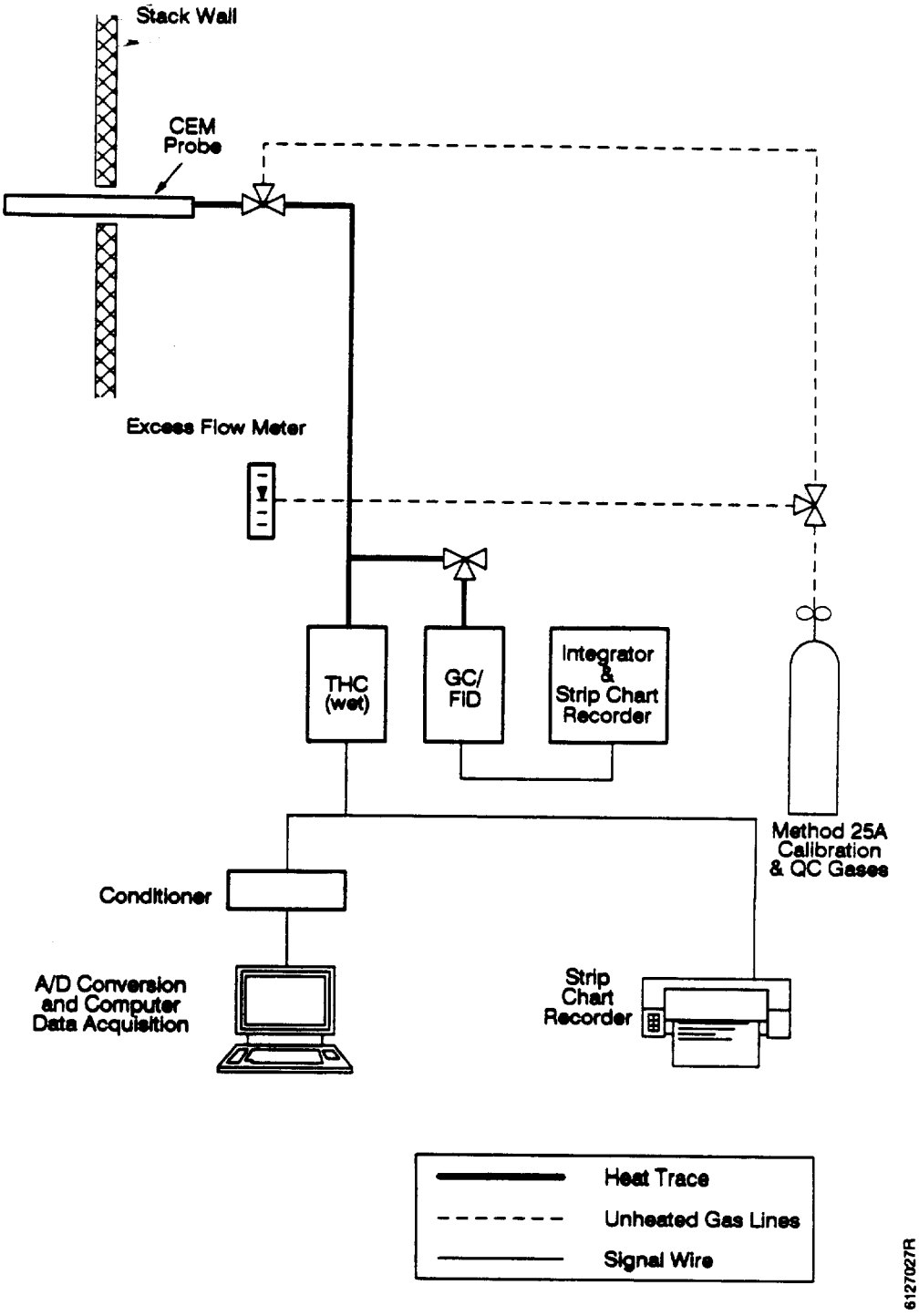


Figure 5-1. General Schematic of Method 18/25A Extractive Stack Gas Sampling System

The probe was used to extract gas from the stack was constructed of a short length of stainless steel or teflon tubing. The gas was extracted using a heated head pump that was placed just upstream of the THC analyzer. An excess flow dump was also upstream from the analyzer, so that the gas in the analyzer would not be under any back pressure created by the sample pump.

In addition to one heated sample tube for sample gas extraction, a separate tube was run from the calibration gas cylinders to the probe. This tube was connected to the system with a 3-way valve (calibration valve) at the junction of the probe and the heat trace. This allowed for leak checks, sample bias checks and calibration drift checks to be completed, as was discussed in Section 6. These procedures required a calibration or QC gas be directed to the probe and back through the entire sampling system. The difference between the resulting values and the values observed when the gas was passed directly to the instrument is referred to as sample bias. When the bias was above acceptable limits, corrective actions were implemented.

5.1.2 THC Analyzers and Analytical Principles

The THC analyzers used in Method 25A procedures employ a flame ionization detector (FID) to quantify the quantity of THC. As the flue gas enters the detection chamber, the hydrocarbons are combusted in a hydrogen flame. The ions and electrons formed in the flame enter an electron gap, decrease the gas resistance, and permit a flow in an electric circuit. The resulting current is proportional to the instantaneous concentration of the total hydrocarbons. These analyzers are not selective between species; however, different hydrocarbon species respond differently in the FID. Straight chain hydrocarbons (alkanes), alkenes, and aromatics respond in proportion to the number of carbons atoms in the molecule. For example, 100 ppmv propane (C_3H_8) responds approximately the same as 300 ppm methane (CH_4). When measuring THC of these type of compounds, there are no substantial inaccuracies in reporting THC as ppmv as methane. However, oxygenated compounds such as ethanol (CH_3CH_2OH) and

acetaldehyde (CH_3CHO) have a depressed response so that what appears to be 300 ppmv as methane may actually be 1200 ppmv ethanol. The resulting THC concentrations as ppmC were adjusted to ppmv ethanol or ppmv acetaldehyde based on the results of the Method 18 analysis.

5.1.3 Data Acquisition

The signal from the analyzer is typically an analog voltage response (i.e., 0-5 volts). The meter panel on the front of the instrument usually translates the voltage signal to concentration units (i.e., ppmv). However for long term data acquisition, the voltage signals coming from the electrical output leads need to be translated to actual concentration data. The system used to perform this function is known as the data acquisition system or DAS. This process will either be accomplished with the use of a strip chart recorder (SCR) or a computerized system. A SCR is the simplest procedure; howeverc additional man hours were needed to reduce the SCR trace to individual readings (i.e., 1/minute). If a computerized version is used, the analog signal is converted to a digital signal and directed to a computer so that the signal was translated to concentration units and saved to magnetic media. For this test program, a computerized DAS was used and a SCR was used as a back-up system.

5.1.4 Instrument Calibration

Calibrations were performed by passing known concentrations of a hydrocarbon gas standard through the instrument and recording the associated response. A response factor was then calculated and used to adjust sample gas responses to concentration units. Typical calibration calculations were completed as shown in Section 7. The THC instrument was calibrated twice daily. The first calibration was used to determine the response factor, and the second calibration was performed after completing the test runs so that calibration drift can be determined and the test data corrected for drift (if necessary). Calibrations were completed on a two point basis:

zero gas (generally N_2), and a high-range or "span" gas. Methane was used as the calibration gas, and the concentrations were reported as ppmv methane which are the same as ppmv Carbon (ppmC). The gas was certified by the manufacturer guaranteeing the concentration within ±2% accuracy.

Other QC operations were also performed to verify the accuracy of the data produced. These operations included calibration drift and calibration error determinations. Additional procedures such as linearity check, sample bias, leak checks, and gas stratification were also performed. These are further discussed in Section 6.

5.1.5 Example Daily Operating Procedure

The following is a detailed standard operating procedure for calibrating and operating the CEMS:

1. Turn on computer and printer, put printer on-line, and load the DAS program. Be sure that the THC instrument has been on with the FID flame lit for several hours.

2. Synchronize watch with sample location leaders.

3. Turn on strip chart recorders (SCR) and make appropriate notes on charts and in logbook (write down all procedures and observations in logbook and on SCRs as the day progresses).

4. Open all calibration gas cylinders so that they may be introduced to the instruments.

5. Perform daily pre-test leak check on CEMs as discussed in Section 6. If a zero gas is used for this procedure, zero all instruments at this time. Enter these values in the computer calibration routine. Be sure to check and maintain all flows throughout calibration and operation.

6. Introduce the THC span gas.

7. Make adjustments to the THC instrument as required and enter the value into the computer calibration routine.

8. Introduce QC gases to instruments to determine calibration error. Record at least one minute of data for each. If the QC gas response is not within $\pm 5\%$ of the calibration gas valve, the operator will recalibrate the instrument, or perform other corrective actions.

9. Begin sampling routine, with the computer on standby.

10. Start the data acquisition system when signaled by radio that system is in stack.

11. Carefully check all flows and pressures during the operation of the instruments and watch for apparent problems in any of the instruments, such as unusual readings or unreasonable fluctuations.

12. Stop the data acquisition system at the end of the test when signaled.

13. Perform the final calibration (Repeat Steps 5-8) except make no adjustments to the system. This procedure was completed through the calibration valve so that gas is extracted through the entire system.

15. Calculate calibration drift.

All QA/QC procedures are fully explained in Section 6.

5.2 Method 18 for Determining Ethanol and Acetaldehyde Concentrations

The following sections summarizes the sampling and analytical protocols for Method 18 testing procedures targeted for ethanol and acetaldehyde.

5.2.1 Sample Collection

A slip stream of sample gas was taken off the main heat trace line and directed to the GC injection loop as shown in Figure 5-2. Discrete GC injections were made to quantify the gas phase concentration of the two target analytes. This was accomplished by first allowing the gas to vent through the injection loop. Then the injection valve was turned so that the sample gas in the loop is directed into the GC/FID. The number of sample injections in a given testing time frame was determined based on how long it takes for the target compounds to elute from the GC column to the detector. This period of time is known as the retention time (RT). If other compounds are contained in the gas which elute at much longer RT than the target species, they may interfere with the later analyses and the column may have to be periodically cleaned. This is done by raising the oven temperature for a period of time. Cleaning the column decreases the number of GC injections that can be performed during the run time.

5.2.2 Sample Analysis

The U.S. EPA Method 18 analysis is performed using a GC/FID to separate hydrocarbon species present in the exhaust gas stream. The FID employed in the GC works in a similar manner to that discussed in Section 5.1.2. By using a column filled with a sorbent, the various hydrocarbons in a given gas stream were separated so that the instantaneous concentrations measured relate to a specific hydrocarbon. Before sampling the source gas, the GC/FID system was calibrated with standard gas mixtures containing the hydrocarbons of interest. The calibration procedure established both calibration curves (response factors) and retention times for the hydrocarbons. The retention times were used to identify similar compounds in the source samples and the calibration curve was used to quantify the concentrations of the hydrocarbons.

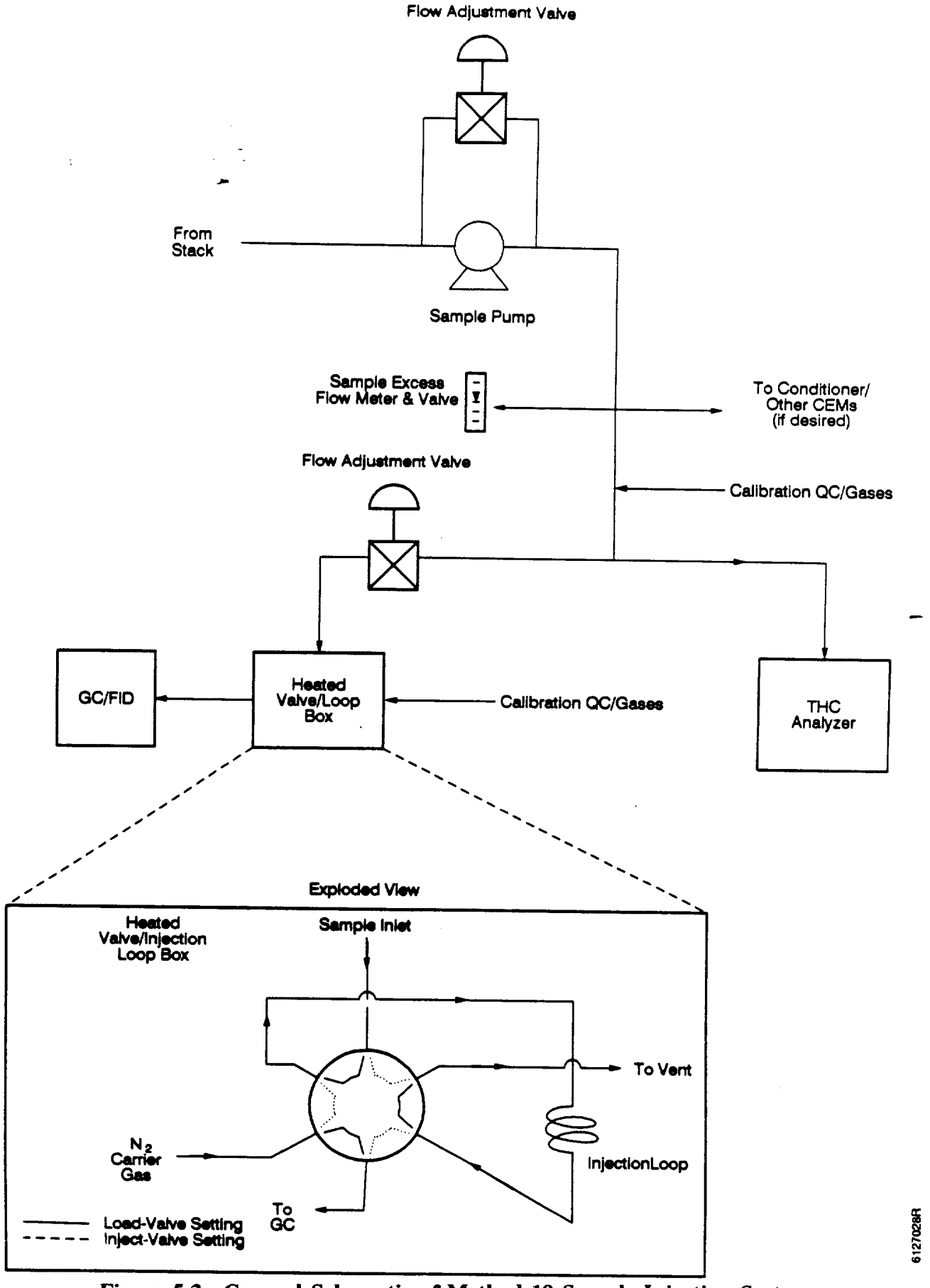


Figure 5-2. General Schematic of Method 18 Sample Injection System

To use Method 18 effectively, standards were prepared to include concentrations over the entire range expected. For ethanol, a suitable collection of standards for bakery emissions concentrations are 0, 200, 800, 2000 and 8000 ppmv ethanol. If stack concentrations are higher than the highest standard, then either higher standards need to be prepared or purchased or the sample needs to be diluted with a gas tight syringe. Levels of acetaldehyde were expected to be less than 100 ppmv, therefore, standards of 0, 20, and 80 ppmv acetaldehyde were used.

The response and retention times of the individual hydrocarbons were recorded on a strip chart recorder. An integrator was used to measure peak areas and compile retention times and area counts. The peaks on the integrator recording were identified from the established retention times for each hydrocarbon of interest and the associated concentrations determined using the calibration curve as a reference.

The column and conditions were as follows:

- Column - 80/120 Carbopack B AW/6.6% Carbowax 20M;
- Carrier Gas - N_2; and
- Temperature - 30°C (isothermal).

5.3 Determination of Volumetric Gas Flow Rates

Determination of gas flow rate incorporates the designation of traverse points by the U.S. EPA Method 1, the measurement of average duct gas velocity by Method 2, the measurement of gas molecular weight by Method 3, and the determination of gas moisture content by Method 4. The following sections discusses those procedures, and the U.S. EPA methods are included in the Appendices.

5.3.1 Method 2 Flow Rate by Pitot Tube

Methods 2 calls for flow determination by measuring the velocity pressure with either an S type pitot or a standard pitot. The following discussion presents the principals of a Method 2 flow determination.

The pitot tube measurements in the ducts were obtained by moving the pitot tube and thermocouple to each of the traverse points designated in Method 1. The velocity pressure and temperature readings at each of those points were recorded. A static duct pressure determined at a single sample point was usually sufficient. This was accomplished by first rotating the pitot tube perpendicular to the flow (as in the cyclonic flow check) until the pressure reading was zero. One leg of the tubing was then disconnected from the manometer and the static pressure was compared against ambient pressure. If the positive tube was left attached to the manometer and the reading was positive, then the overall static was positive. If the negative leg was left attached, and the reading was positive, then the static was negative. The average duct gas velocity and volumetric flow rate was then calculated as shown in Section 7.

5.3.2 Method 3 Molecular Weight Determination

The U.S. EPA Method 3 describes the procedures for obtaining the molecular weight of gas being sampled, which was necessary for the flow calculation. The composite molecular weight of the gas was determined from the relative amounts of individual constituents of the gas stream. In most cases, these principal constituents are oxygen, nitrogen, and carbon dioxide. Some stack gases, however, contain a significant amount of volatile organic or other compounds which can be included in the calculation.

The concentrations of O_2 and CO_2 were determined by a Fyrite analyzer. The molecular weights of such compounds were multiplied by their relative concentrations as shown in Section 7. The products were summed to give the dry

molecular weight of the gas being emitted. The final wet molecular weight calculation required gas moisture content values.

5.3.3 Method 4 Stack Gas Moisture Content

Method 4 is the U.S. EPA method for establishing the moisture content of a stack gas. There are two recognized ways to obtain this moisture content. The first measures the amount of direct condensation of gas moisture in an impinger train. An alternate approximation technique used for stack gases with a temperature lower than 59°C (138°F) employs a wet-bulb/dry-bulb measurement.

Method 4 explains how a sample of the gas is drawn into impingers and condensed using an ice bath. Following the condensation impingers is a desiccant impinger (filled with silica gel) which removes the remaining non-condensed moisture from the gas stream. At the end of the test, the volume of the gas was measured with a dry gas meter and recorded; the impinger weights and silica gel weights were also measured and recorded. These data were used to calculate the percent moisture in the gas stream.

It is important to perform sampling train leak checks at the start and finish of sampling as well as before and after a port change. The method only calls for a post-test leak check but completion of a pre-test leak check indicates that the post-test check was successful as well. To leak check the assembled train, the nozzle end was capped off and a vacuum was pulled in the system of 1 inch Hg higher than the highest measured vacuum. When the system is evacuated, the volume of gas flowing through the system was timed for 60 seconds. The leak rate was required to be less than 4% of the sample rate or 0.02 cfm, whichever was less. After the leak rate was determined, the cap was slowly removed from the nozzle end until the vacuum drops off, and then the pump was turned off.

If the leak rate requirement is not met, the train can be systematically checked by first capping the train at the filter, at the first impinger, etc., until the leak is located and corrected. In the event that a final leak rate is found to be above the minimum acceptable rate upon removal from a port, the run may be rejected.

When the sampling train was ready for operation, the leak rates and sampling stop/start times were recorded on the sampling test log. Other events that occur during sampling, such as pitot cleaning, thermocouple malfunctions, or any other unusual occurrences, were recorded on the test log.

6.0 QUALITY ASSURANCE/QUALITY CONTROL

Specific Quality Assurance/Quality Control (QA/QC) procedures were completed during the test program to ensure the production of useful and valid data throughout the course of the project.

Section 6.1 presents a summary of the QA program and parameters attained. The definitions of the terminology used in conjunction with QA/QC information is presented in Section 6.2. Section 6.3 presents the QA parameters for Method 25A tests. Section 6.4 presents the QA parameters for the Method 18 analyses. Section 6.5 presents a discussion of the carbon equivalent correction factors as well as a comparison of the two methods.

6.1 QA Summary

The majority of reference method QA acceptance criteria were met during this test program. There were 10 days of testing using two THC monitoring systems (20 system days). Method 25A daily calibration drift did not exceed the criterion of $\pm 3\%$ on nineteen of the twenty system days. The Site 1, Day 1 Method 25A test data exhibited calibration drift of 3.2% and the drift was corrected by assuming linear drift between the initial and final calibration. Method 25A calibration error was determined extensively over the course of the test program. Over 150 calibration error checks were performed during the test program and the majority these checks met the Method 25A criterion of $\pm 5\%$ of the gas concentration. Method 25A sample bias checks, as well as O_2 leak checks, were also completed. The majority of these QA parameters met the acceptance limits.

Extensive Method 18 QA/QC procedures were also followed. Initial and final calibrations were performed. Calibrations for ethanol and acetaldehyde were all completed using from 3 to 5 calibration points. Multi-point calibrations were also

performed on methane for low concentrations on all of the test days (< 900 ppmC). On five of the test days, a single point calibration was used on higher methane values. This was due to the detector "overranging". After checking the methane values determined from a single point calibration against a multi-point calibration curve, no substantial difference was found.

Sample bias checks were also extensively conducted on the Method 18 sampling system. The majority of checks verified acceptable non-biased sampling. However, some bias checks revealed sample bias caused by the loss of heat in the heated tubing adjacent to the GC. These data points were invalid and testing was not continued until the problem was remedied and a successful bias check had been completed.

6.2 Definitions

The overall QA/QC objective was to ensure precision, accuracy, completeness, comparability, and representativeness for each major measurement parameter called for in this test program. The terms used to define the QA/QC objectives are designed as follows:

- Data Quality: The characteristics of a product (measurement data) that bear on its ability to satisfy a given purpose. These characteristics are defined as follows:
  - Precision - A measure of mutual agreement among individual measurements of the same property, usually under prescribed similar conditions. Precision can be expressed in terms of the standard deviation (or the relative standard deviation).
  - Accuracy - The degree of agreement of a measurement (or an average of measurements of the same thing), X, with an accepted reference or true value, T, usually expressed as the difference between two values, X-T, or the difference as a percentage of the reference or true value, 100 (X-T)/T, and

sometimes expressed as a ratio, X/T. Accuracy is a measure of the bias in a system.

- Completeness - A measure of the amount of valid data obtained from a measurement system compared with the amount that was expected to be obtained under prescribed test conditions.

- Comparability - A measure of the confidence with which one data set can be compared with another.

- Representativeness - The degree to which data accurately and precisely represent a characteristic of a population, variations of a parameter at a sampling point, or an environmental condition.

- Quality Control: The overall system of activities whose purpose is to provide a quality product or service: for example, the routine application of procedures for obtaining prescribed standards of performance in the monitoring and measurement process.

- Quality Assurance: A system of activities whose purpose is to provide assurance that the overall quality control is being done effectively. The completion of QA procedures generates indicating parameters that are a measurement of the general quality of the data.

6.3 Method 25A Sampling and Analytical QA Parameters

6.3.1 Calibration Drift

The Method 25A Calibration drift values are given in Table 6-1.

6.3.2 Calibration Error

The calibration error checks are presented in Table 6-2. Table 6-3 presents on-site response THC response to ethanol QC challenges.

Table 6-1

Method 25A Calibration Drift EPA Bakeries (1992)

Site	Day	System 1 Drift (% of Range)		System 2 Drift (% of range)	
		Zero Drift	Span Drift	Zero Drift	Span Drift
1	1	0.04	3.22	0.03	-0.69
1	2	-0.01	-0.01	0.16	0.39
2	1	0.09	-0.13	0.04	-0.2
2	2	ND	-1.34	ND	-2.57
3	1	0.07	0.02	-0.14	-0.61
3	2	ND	-0.06	ND	-0.2
4	1	0.17	-0.08	-0.01	0.16
4	2	0.08	0.04	0.04	-0.47
4	3	0.03	-0.13	0.04	0.14
4	4	-0.09	-0.05	-0.01	-0.24

Note: Full range of analyzer was 0-10,000 ppmC. All calibrations performed with methane.

ND = Not determined

Table 6–2. Method 25A Calibration Error Results.
EPA Bakeries, Site 1 (1992)

Methane QC Gas Conc. (ppmC)	System 1		System 2	
	THC Instrument Response (ppmC)	Calibration Error (%)	THC Instrument Response (ppmC)	Calibration Error (%)
SITE 1 – DAY 1				
2000	2039	2.0	2124	6.2
803	805	0.2	GC DOWN	NA
80.2	81.9	2.1	GC DOWN	NA
199.1	198.4	−0.4	GC DOWN	NA
0	4.3	NA	20.3	NA
0	2.7	NA	12.9	NA
2000	1982	−0.9	1963	−1.9
199.1	199.5	0.2	209.3	5.1
2000	1981	−1.0	2089	4.5
803	804.2	0.1	853.5	6.3
199.1	204.3	2.6	224	12.5
SITE 1 – DAY 2				
2000	2014	0.7	1980	−1.0
803	801	−0.2	807	0.5
199.1	197	−1.1	210	5.5
80.2	77.3	−3.6	89.6	11.7
2000	2003	0.2	1937	−3.2
0	3.7	NA	14	NA
2000	1990	−0.5	1986	−0.7
803	805	0.2	803	0.0
199.1	202	1.5	206	3.5

Table 6-2. Method 25A Calibration Error Results, (cont).
EPA Bakeries, Site 2 (1992)

Methane QC Gas Conc. (ppmC)	System 1 THC Instrument Response (ppmC)	System 1 Calibration Error (%)	System 2 THC Instrument Response (ppmC)	System 2 Calibration Error (%)
SITE 2 – DAY 1				
1490	1512.6	1.5	1514.2	1.6
798	812.9	1.9	814.2	2.0
199.1	213.6	7.3	217.6	9.3
3980	3979.6	-0.0	4013.4	0.8
199.1	215.9	8.4	204.9	2.9
798	807.6	1.2	748.6	-6.2
1490	1496.5	0.4	1436.1	-3.6
3980	3931.3	-1.2	3752.8	-5.7
1490	1493.1	0.2	1515.3	1.7
80.2	90.9	13.3	92.5	15.3
80.2	89.7	11.8	87.5	9.1
80.2	89	11.0	88.5	10.3
0	11.1	NA	1.5	NA
80.2	90	12.2	86.8	8.2
798	809.7	1.5	772.4	-3.2
199.1	212	6.5	217.9	9.4
1490	1505.1	1.0	1524.3	2.3
3980	3966.9	-0.3	3953.9	-0.7
0	9.2	NA	4.1	NA
SITE 2 – DAY 2				
199.1	209.3	5.1	206.3	3.6
798	782.6	-1.9	801.2	0.4
1490	1467.5	-1.5	1488.9	-0.1
2000	2041.4	2.1	1936.4	-3.2
2000	2099.5	5.0	1937.6	-3.1
3980	3924	-1.4	3836.6	-3.6
80.2	97.7	21.8	86.8	8.2
199.1	159.4	-19.9	102	-48.8
798	813.2	1.9	754.8	-5.4
1490	1481.1	-0.6	1428.9	-4.1
2000	2008	0.4	2031	1.6
3980	3846	-3.4	3723	-6.5

Table 6-2. Method 25A Calibration Error Results, (cont).
EPA Bakeries, Site 3 (1992)

Methane QC Gas Conc. (ppmC)	System 1 THC Instrument Response (ppmC)	System 1 Calibration Error (%)	System 2 THC Instrument Response (ppmC)	System 2 Calibration Error (%)
SITE 3 – DAY 1				
798	817	2.4	769.7	-3.5
1490	1490	0.0	1390	-6.7
0	1.9	NA	3.4	NA
1490	1490.3	0.0	1419	-4.8
1490	1491.5	0.1	1429.2	-4.1
2000	2030.7	1.5	2071.6	3.6
0	7.1	NA	-14.1	NA
SITE 3 – DAY 2				
0	1.16	NA	-1.5	NA
80.2	77.7	-3.1	68.1	-15.1
199.1	198	-0.6	183	-8.1
80.2	75.3	-6.1	82.5	2.9
199.1	198.4	-0.4	188.4	-5.4
2000	2023	1.2	1909	-4.6
2030	2011	-0.9	1944	-4.2
798	801.5	0.4	783.2	-1.9
3960	3948	-0.3	3849	-2.8
80.2	77.2	-3.7	81.5	1.6
199.1	197.5	-0.8	189.7	-4.7
798	798	0.0	789.4	-1.1
2000	2016	0.8	1874	-6.3
3960	3945	-0.4	3847.2	-2.8
0	-1.97	NA	23.8	NA
1490	1484.5	-0.4	1518.8	1.9

Table 6–2. Method 25A Calibration Error Results, (cont).
EPA Bakeries, Site 3 (1992)

Methane QC Gas Conc. (ppmC)	System 1 THC Instrument Response (ppmC)	System 1 Calibration Error (%)	System 2 THC Instrument Response (ppmC)	System 2 Calibration Error (%)
SITE 4 – DAY 1				
3960	3964	0.1	3966	0.2
80.2	72.9	−9.1	64.4	−19.7
199.1	180.7	−9.2	179.9	−9.6
80.2	60.1	−25.1	60	−25.2
0	−21.8	NA	−6.6	NA
798	810.2	1.5	801.9	0.5
1490	1507.4	1.2	1504.8	1.0
2000	2036	1.8	1939	−3.1
SITE 4 – DAY 2				
3960	3954	−0.2	3960.4	0.0
1490	1506.7	1.1	1506.1	1.1
0	2.1	NA	5.1	NA
80.2	84.5	5.4	75.2	−6.2
199.1	207	4.0	192.6	−3.3
798	804.9	0.9	804.8	0.9
1490	1499	0.6	1509	1.3
2000	2030.2	1.5	1943.2	−2.8
3960	3938	−0.6	3981	0.5
0	8.3	NA	4.05	NA
3960	3964	0.1	3912	−1.2
200	201.6	0.8	192.2	−3.9
200	205.1	2.5	194.3	−2.8
80.2	83.8	4.5	82.9	3.4

Table 6–2. Method 25A Calibration Error Results, (cont).
EPA Bakeries, Site 3 (1992)

Methane QC Gas Conc. (ppmC)	System 1 THC Instrument Response (ppmC)	System 1 Calibration Error (%)	System 2 THC Instrument Response (ppmC)	System 2 Calibration Error (%)
SITE 4 – DAY 3				
3960	3963	0.1	3958	−0.1
3960	3949	−0.3	3873	−2.2
0	−0.7	NA	−0.3	NA
3960	3954	−0.2	3941	−0.5
0	14.5	NA	−0.2	NA
3960	3936.5	−0.6	3930.6	−0.7
0	−0.96	NA	−2.7	NA
3960	3967.2	0.2	3988.9	0.7
199.1	202	1.5	189.3	−4.9
0	2.7	NA	3.8	NA
3960	3947	−0.3	3974	0.4
3960	3964	0.1	3969	0.2
3960	3948	−0.3	3990	0.8
798	796.5	−0.2	808.9	1.4
1490	1486.6	−0.2	1516.6	1.8
2030	2017.3	−0.6	2019.1	−0.5
SITE 4 – DAY 4				
199.1	202	1.5	187.7	−5.7
798	803	0.6	799.7	0.2
2030	2034.8	0.2	2032.8	0.1
80.2	84.4	5.2	67.6	−15.7
0	0.6	NA	−10.8	NA
0	−3.9	NA	−4.6	NA
199.1	200.2	0.6	187.4	−5.9
200	206.8	3.4	191.7	−4.2
2030	2034.6	0.2	2047.5	0.9
0	5.3	NA	−0.8	NA
199.1	199.6	0.3	193.7	−2.7
80.2	766	855.1	76.3	−4.9
0	−2.4	NA	−0.9	NA
80.2	77.8	−3.0	75.5	−5.9
199.1	196	−1.6	183.8	−7.7
798	793.2	−0.6	774.6	−2.9
80.2	83.5	4.1	75.1	−6.4
199.1	202.6	1.8	187.1	−6.0
798	796	−0.3	794.9	−0.4

Table 6-3. On-Site Ethanol QC Challenges to the Method 25A THC Monitor EPA Bakeries (1992)

Site	Test Day	Ethanol QC Gas Conc. (ppmC)	System 1		System 2	
			THC Instrument Response (ppmC)	Carbon Equivalent Correction Factor	THC Instrument Response (ppmC)	Carbon Equivalent Correction Factor
1	1	200	267.5	1.34	238.4	1.19
1	1	200	275.5	1.38	280.5	1.40
1	2	10000	11862	1.19	13569	1.36
1	2	2000	2852	1.43	2948	1.47
1	2	2000	2421	1.21	2731	1.37
1	2	200	272	1.36	274	1.37
			AVG	1.32	AVG	1.36
2	1	200	305.9	1.53	295.5	1.48
2	1	200	310.6	1.55	259.9	1.30
			AVG	1.54	AVG	1.39
3	1	200	320	1.60	283	1.42
3	1	200	302.4	1.51	277	1.39
3	1	498	763.2	1.53	720	1.45
3	1	498	759.6	1.53	694.9	1.40
3	1	498	756.6	1.52	756.6	1.52
3	2	200	307	1.54	286.2	1.43
3	2	200	300.1	1.50	316	1.58
3	2	498	755.5	1.52	765.7	1.54
			AVG	1.53	AVG	1.46
4	1	200	313.5	1.57	299.1	1.50
4	3	200	309.1	1.55	307.6	1.54
4	3	200	313.4	1.57	306.3	1.53
4	3	200	300	1.50	302	1.51
4	4	200	304.6	1.52	307.9	1.54
4	4	200	312.8	1.56	304.1	1.52
4	4	200	297.8	1.49	298.9	1.49
4	4	200	296.8	1.48	304.4	1.52
4	4	200	308.4	1.54	297.2	1.49
4	4	200	DOWN		300.2	1.50
			AVG	1.53	AVG	1.51

6.4 Method 18 QA Parameters

All calibration data from the Method 18 analyses is included in the Appendices. Both an initial and final calibration were performed on each day. Excessive drift was not found during any of the test days.

6.4.1 Sample Bias

Table 6-4 presents the Method 18 sample bias checks for Sites 2-4. The Site 1 bias check results are included in the appendices.

Table 6-4. Method 18 Sample Bias Checks
EPA Bakeries (1992)

INJ. NO	Site/Day	Oven Location	Stack/ System Location	GAS CONC.(ppm)	GC ANALYTICAL RESULT	(%) DIFF	COMMENTS
190	4/1		Rack	80.2 METHANE	97.4	21	
191	4/1		Table	80.2 METHANE	84.7	5.6	
192	4/1		Rack	199.1 METHANE	200.5	0.7	
193	4/1		Table	199.1 METHANE	201.2	1	
194	4/1		Rack	80.2 METHANE	80	−0.2	
195	4/1		Rack	80.2 METHANE	78.1	−2.6	
196	4/1		Rack	80.2 METHANE	76.1	−5.1	
208	4/1		Rack	798 METHANE	804	0.8	SINGLE PT RUN 284 (6/30/92)
209	4/1		Table	798 METHANE	810	1.5	SINGLE PT RUN 284 (6/30/92)
210	4/1		Rack	1490 METHANE	1502	0.8	SINGLE PT RUN 286 (6/30/92)
211	4/1		Table	1490 METHANE	1514	1.6	SINGLE PT RUN 286 (6/30/92)
212	4/1		Rack	2000 METHANE	2040	2	SINGLE PT RUN 287 6/30/92)
	4/1						
213	4/1		Table	2000 METHANE	2003	0.1	SINGLE PT RUN 287 6/30/92)
233	4/1		Rack	199.1 METHANE	196.3	−1.4	SINGLE PT RUN 288
234	4/1		Table	199.1 METHANE	194	−2.6	SINGLE PT RUN 288
235	4/1		Table	200 ETHANOL	207	3.5	
255	4/2		Rack	3980 METHANE	3898	−1.6	
256	4/2		Table	3980 METHANE	4026	1.2	
257	4/2		Rack	1490 METHANE	1499	0.6	
258	4/2		Table	1490 METHANE	1540	3.4	
269	4/2		Table	80.2 METHANE	64.9	−19	RUN ANOTHER CHECK AT SEVERAL LEVELS
270	4/2		Rack	199.1 METHANE	194.8	−2.2	
271	4/2		Table	199.1 METHANE	197.3	−0.9	
272	4/2		Table	798 METHANE	788	−1.2	SINGLE PT RUN #284
273	4/2		Rack	798 METHANE	797	−0.1	SINGLE PT RUN #284
274	4/2		Table	1490 METHANE	1515	1.7	SINGLE PT RUN #286
275	4/2		Rack	1490 METHANE	1534	3	SINGLE PT RUN #286
276	4/2		Table	2000 METHANE	2037	1.9	SINGLE PT RUN # 287
277	4/2		Rack	2000 METHANE	2014	0.7	SINGLE PT RUN # 287
298	4/2		Table	200 ETHANOL	212	6	

Table 6-4. Method 18 Sample Bias Checks (Cont)
EPA Bakeries (1992)

INJ. NO	Site/Day	Oven Location	Stack/ System Location	GAS CONC.(ppm)	GC ANALYTICAL RESULT	(%) DIFF	COMMENTS
27	2/1		Front	1490 METHANE	14.89	0.1	S.P.,COMPARISON TO SYRINGE INJECTION RUN 28
41	2/1			N2	485.121	NA	SMALL BACKGROUND < 15ppm
45	2/1	Bun	Rear	80.2 METHANE	77	-3.9	USED USED FINAL METHANE CAL.
46	2/1	Bun	Rear	80.2 METHANE	78.8	-1.6	
47	2/1	Bun	Front [a]	80.2 METHANE	43.2	-46	PROBLEM/CHECK REPLACE
48	2/1	Bun	Front [a]	80.2 METHANE	56.3	-30	PROBLEM/CHECK, RERUN/REPLACE
49	2/1	Bun	Front [a]	80.2 METHANE	77	-3.9	BETTER/CHECK/REPLACE
50	2/1	Bun	Front [a]	80.2 METHANE	78.8	-1.7	BETTER/CHECK/REPLACE
51	2/1		b		78.7	-1.9	REPLACEMENT
52	2/1		b		78.8	-1.7	REPLACEMENT O.K.
68	2/1		Rear	80.2 METHANE	70.6	-12	
70	2/1		Front	798 METHANE	771	-3.4	SINGLE PT. RUN #26
71	2/1		Rear	199.1 METHANE	189	-5	
72	2/1		Front	199.1 METHANE	188	-5.5	
73	2/1		Front	200 ETHANOL	204	2	
74	2/1		Rear	200 ETHANOL	209	4.5	
122	2/2		Front	80.2 METHANE	77.8	-2.9	
123	2/2		Front	80.2 METHANE	78.9	-1.6	
116	2/2		Front	2000 METHANE	1896	-5.2	SINGLE PT, CAL. UAING RUN 152
130	2/2		Front	798 METHANE	777	-2.6	SINGLE PT, CAL. USING RUN 151
135	2/2		Front	2000 METHANE	2099	-5	SINGLE PT, RUN 152
136	2/2		Rear	2000 METHANE	2012	-0.6	SINGLE PT
137	2/2		Front	3980 METHANE	3975	-0.1	
131	2/2		Rear	798 METHANE	779	-2.4	SINGLE PT, RUN 151

a Nitta Moore Heat Trace check.
New 1/4 inch H.T. jumper to replace Nitta Moore.

Table 6-4. Method 18 Sample Bias Checks (Cont)
EPA Bakeries (1992)

INJ. NO	Site/Day	Oven Location	Stack/ System Location	GAS CONC (ppm)	GC ANALYTICAL RESULT	(%) DIFF	COMMENTS
20	3/1	Bun	Burner	798 METHANE	799	0.1	SINGLE PT, RUN#19
21	3/1	Bun	Oven	798 METHANE	776	−2.8	SINGLE PT, RUN #19
26	3/1		Burner	200 ETHANOL	203	1.5	INITIAL CAL.
42	3/1		Oven	1490 METHANE	1512	1.5	SINGLE PT, RUN #45
	3/1						
43	3/1		Burner	1490 METHANE	1508	1.2	SINGLE PT, RUN #45
65	3/1		Burner	498 ETHANOL	482	−3.2	
66	3/1		Oven	498 ETHANOL	486	−2.4	
67	3/1			80.2 METHANE	88.6	10.5	
68	3/1			80.2 METHANE	86.7	8.1	
69	3/1			199.1 METHANE	214	7.5	
70	3/1			199.1 METHANE	213	7	
104	3/2		Burner	80.2METHANE	73.1	−8.9	
105	3/2		Oven	80.2 METHANE	82.6	3	
106	3/2		Burner	199.1 METHANE	168	−15.6	RERUN
107	3/2		Burner	199.1 METHANE	196	−1.5	O.K.
108	3/2		Oven	199.1 METHANE	205	3	
124	3/2		Burner	80.2 METHANE	80.6	0.5	
125	3/2		Oven	199.1 METHANE	198	−0.5	
126	3/2		Burner	199.1 METHANE	199	0	
147	3/2		Burner	80.2 METHANE	89.9	12.1	PEAK WIDTH SUSPECT
148	3/2		Oven	80.2 METHANE	76.3	−4.9	
149	3/2		Burner	199.1 METHANE	201	1	
150	3/2		Oven	199.1 METHANE	201	1	
151	3/2		Burner	798 METHANE	800	0.2	SINGLE PT RUN #158
153	3/2		Burner	798 METHANE	705	−11.6	RUN MIOMER LEVELS
154	3/2		Burner	2000 METHANE	2027	1.3	SINGLE PT RUN #159
155	3/2		Oven	2000 METHANE	2027	1.3	SINGLE PT RUN #159
156	3/2		Burner	3960 METHANE	3978	0.4	SINGLE PT RUN #160
157	3/2		Oven	3960 METHANE	3973	0.3	SINGLE PT RUN #160
161	3/2		Burner	200 ETHANOL	204	2	
162	3/2		Oven	498 ETHANOL	511	2.6	RERUN
163	3/2		Burner	82.5 ACETALDEHYDE	81.6	−1.1	
164	3/2		Oven	82.5 ACETALDEHYDE	79.3	−3.9	

Table 6-4. Method 18 Sample Bias Checks (Cont)
EPA Bakeries (1992)

INJ. NO	Site/Day	Oven Location	Stack/ System Location	GAS CONC.(ppm)	GC ANALYTICAL RESULT	(%) DIFF	COMMENTS
391	4/4		Table	200 ETHANOL	152	-24	
398	4/4		Table	200 ETHANOL	175	-13	
419	4/4		Table	200 ETHANOL	181	-9.5	
421	4/4		Rack	80.2 METHANOL	82.7	3.1	
422	4/4		Table	80.2 METHANE	82.3	2.6	
423	4/4		Rack	199.1 METHANE	199.3	0.1	

7.0 DATA REDUCTION PROCEDURES

The following section details the calculations used for the U.S. EPA Bakeries test program.

7.1 Emission Calculations

The objective of the U.S. EPA Bakeries test program was to determine emissions of Total VOC as well as emissions of two of the primary VOC constituents, namely ethanol and acetaldehyde. The emission calculations were done using several methods. All rates are in units of lbs/hr.

7.1.1 VOC Emissions

Emission rates of VOC as ethanol were calculated by multiplying the average VOC as ethanol concentration by the stack gas flow rate as follows:

$$\overset{o}{VOC}_{ETOH} = [\overline{VOC_{ETOH}}] \times Q_a \times \left(\frac{P_s}{T_s \times R \times 10^6}\right)$$

Where:

Q_a = Volumetric flow of stack gas (acf/hr)

P_s = Absolute stack Pressure (in Hg)

T_s = Stack Gas Temperature (°R)

R = Universal Gas Constant (21.85 in Hg-cf/lb-mole-°R)

7.1.2 Ethanol and Acetaldehyde Emissions

Ethanol and acetaldehyde emissions were calculated by multiplying the average concentration by the stack gas flow rates. Average concentrations were determined as shown in Section 7.2.2 through 7.2.5. Emission rates were calculated as follows:

$$\overset{o}{ETOH} = [\overline{ETOH}] \times Q_s \times \left(\frac{P_s}{T_s \times R \times 10^6}\right)$$

$$\overset{o}{AA} = [\overline{AA}] \times Q_s \times \left(\frac{P_s}{T_s \times R \times 10^6}\right)$$

7.2 Average VOC Concentration Calculations

The calculations used for determining concentrations are given in the following section.

7.2.1 Average VOC as Ethanol Concentration

The average VOC as ethanol concentration (ppmV as ethanol) was calculated as follows:

$$[\overline{VOC}]_{ETOH} = \frac{[\overline{NMHC}]}{1.42}$$

where:

1.42 = Ethanol Carbon Equivalent Correction Factor (i.e., 10 ppmv ethanol = 14 ppmC THC)

The average non-methane hydrocarbon concentration (ppmC/wet) was calculated as follows:

$$[\overline{NMHC}] = \left(1 - \left[\overline{\frac{CH_4}{THC}}\right]\right) \times [\overline{THC}]$$

The average CH_4 to THC ratios (dimensionless) were calculated as follows:

$$\left[\overline{\frac{CH_4}{THC}}\right] = \frac{\sum_{i=1}^{N}\left(\frac{[CH_4]_i}{[THC]_i}\right)}{N}$$

where:

N = Number of GC injections during test period

$[CH_4]_i$ = CH_4 concentration at the time of the GC injection (ppmC/wet)

$[THC]_i$ = THC concentration at the time of the GC injection (ppmC/wet)

The average THC concentration (ppmC/wet) was calculated as follows:

$$[\overline{THC}] = \frac{\sum_{i=1}^{n}[THC]_i}{n}$$

where:

n = Number of THC readings during the test period

7.2.2 Average Ethanol Concentration

The average ethanol concentration (ppmV/wet) using both the Method 18 ethanol and Method 25A THC results was calculated as follows:

$$[\overline{ETOH}]_{THC} = \left[\frac{\overline{ETOH}}{\overline{THC}}\right] \times [\overline{THC}]$$

The average ethanol-to-THC ratios (ppmV/ppmC) were calculated as follows:

$$\left[\frac{\overline{ETOH}}{\overline{THC}}\right] = \frac{\sum_{i=1}^{N}\left(\frac{[ETOH]_i}{[THC]_i}\right)}{N}$$

where:

$[ETOH]_i$ = Ethanol Concentration from GC analysis (ppmv/wet)

N = Number of GC injections

7.2.3 Average Ethanol Concentration By GC Only

The average ethanol concentrations (ppmV/wet) determined from the Method 18 analyses were calculated as follows:

$$[\overline{ETOH}]_{GC} = \frac{\sum_{i=1}^{N} [ETOH]_i}{N}$$

7.2.4 Acetaldehyde Concentration By GC and THC

The average acetaldehyde concentration (ppmV/wet) determined using both the Method 18 acetaldehyde and Method 25A THC results was calculated as follows:

$$[\overline{AA}]_{THC} = \left[\overline{\frac{AA}{THC}}\right] \times \overline{[THC]}$$

The average acetaldehyde to THC ratios (ppmV/ppmC) were calculated as follows:

$$\left[\overline{\frac{AA}{THC}}\right] = \frac{\sum_{i=1}^{N} \left(\frac{[AA]_i}{[THC]_i}\right)}{N}$$

7.2.5 Average Acetaldehyde Concentration By GC Only

The average acetaldehyde concentration (ppmV/wet) determined from the Method 18 analyses was calculated as follows:

$$[\overline{AA}]_{GC} = \frac{\sum_{i=1}^{N} [AA]_i}{N}$$

7.2.6 Comparison Of GC And THC Results

The comparison of the corrected sum of ethanol, acetaldehyde, and methane Method 18 concentrations to the THC concentration was determined as follows:

$$\left(\frac{\overline{GC}}{THC}\right) = \frac{\sum_{i=1}^{N} \frac{GC_i}{THC_i}}{N} \times 100$$

where:

THC_i = THC concentrations determined from the Method 25A monitor at the same time as the GC injection (ppmC).

$$GC_i = \left(\frac{[ETOH]_i}{1.42} + \frac{[AA]_i}{1.23} + [CH_4]_i\right)$$

where:

$[ETOH]_i$ = Ethanol concentration determined from a single GC analysis (ppmv/wet)

$[AA]_i$ = Acetaldehyde concentration determined from a single GC analysis (ppmv/wet)

$[CH_4]_i$ = Methane concentration determined from a single GC analysis (ppmv/wet)

7.3 Method 25A Calculations

This section briefly summarizes calculations used for the Method 25A analysis. The computer controlled data acquisition system scanned each channel approximately 1800 times per minute and stored periodic averages on disk and hard copy. The averaging computer period varied throughout the test program ranging from 10 seconds to 1 minute. Pre-test calibration, post-test calibration drift checks, and calibration error checks were saved on disk. Instrument drift was evaluated after the post-test calibration with an acceptable criterion of ± 3. The computer DAS reported THC concentrations calculated as follows:

$$C_{sample} = RSP_{sample} \times RFAC + C_{rsp=0}$$

where:

C_{sample} = Observed concentration of sample gas (ppmv or %v, dry)

RSP_{sample} = Observed instrument sample voltage response (volts)

$C_{rsp=0}$ = Calculated concentration corresponding to an instrument response of 0 volts (Y intercept)

RFAC = Calibration response factor (slope)

$$RFAC = \frac{(SPAN - ZERO)}{(RSP_{span} - RSP_{zero})}$$

where:

SPAN = Concentration of high (span) calibration gas (ppmv)

ZERO = Concentration of low (zero) calibration gas (ppmv)

RSP_{span}	=	Observed instrument voltage response to the span calibration gas (volts)
RSP_{zero}	=	Observed instrument voltage response to the zero calibration gas (volts)

Span and zero calibration drifts are calculated as follows:

$$\text{Drift} = \frac{(C_F - C_I)}{FULL\ RANGE} \times 100$$

where:

Drift	=	Span calibration drift (% of Scale)
Full Range	=	Full Range of the Instrument (i.e. 0-500 ppmv)
C_F	=	Observed concentration predicted by the final calibration - (ppmv)
C_I	=	Observed concentration predicted by the initial calibration (ppmv)

Average concentrations of THC were calculated for the test duration of interest.

7.3.1 Method 18 Data Reduction

The concentration of ethanol, acetaldehyde, methane and ethane in the stack gas was determined directly as parts per million by volume (ppmv) on a wet basis. An electronic integrator would convert the GC electrical peak signals to a peak area value. A linear regression was completed using calibration gas concentration versus peak area response. Sample responses (peak areas) were then used in the calibration regression to determine the respective concentration.

7.3.2 Manual Gas Sampling Methods

Calculations for determining flow rate, moisture content, and gas molecular weight are described in Figures 7-1 and 7-2.

RADIAN SOURCE TEST
EPA METHODS
DEFINITION OF TERMS

Parameter	Units	Definition
t	min.	Total Sampling Time
D_n	in.	Sampling Nozzle Diameter
V_m	ft^3	Absolute Volume of Gas Sample Measured by DGM (uncorrected)
M_w	g	Total Mass of Water Collected
M_p	g	Total Mass of Particulate Collected
P_m	in. Hg	Absolute Meter Pressure
ΔH	in. H_2O	Average Static Pressure of DGM
T_m	°F	Average Temperature of DGM
P_{bar}	in. Hg	Barometric Pressure
$\%CO_2$	% vol-dry	Carbon Dioxide Content of Flue Gas
$\%O_2$	% vol-dry	Oxygen Content of Flue Gas
$\%N_2$	% vol-dry	Nitrogen Content of Flue Gas (by difference)
A_s	ft^3	Cross-sectional Area of Stack (Duct)
T_s	°F	Temperature of Stack
P_s	in. Hg	Absolute Stack Gas Pressure
Static	in. H_2O	Stack Static Pressure
$V_{m(std)}$	dscf	Volume of Gas Sampled at Standard, Dry Conditions[a]
V_w	scf	Volume of Water Vapor in Gas Sample, Std

Figure 7-1. Definition of Terms for Method 1-4 Calculations

RADIAN SOURCE TEST
EPA METHODS
DEFINITION OF TERMS
(Continued)

Parameter	Units	Definition
B_{ws}		Fraction of Water Vapor in Stack Gas
M_d		Fraction by Volume of Dry Gas in Gas Sample ($1-B_{ws}$)
MW_d	lb/lb mole	Molecular Weight of Dry Stack Gas, Dry Basis
MW_s	lb/lb mole	Molecular Weight of Stack Gas, Wet Basis
C_p		Pitot Coefficient (typically 0.84)
C_s	grains/ft^3	Concentration of Particulate in Flue Gas
E	lb/hr	Emission Rate of Particulate
Q_{sd}	dry, ft^3/min.	Average Stack Dry Volumetric Flow Rate
V_s	ft/sec	Velocity of Stack Gas
Y		Test Meter Calibration Coefficient
ΔP	in. H_2O	Stack Gas Velocity Pressure

Figure 7-1. Continued

RADIAN SOURCE TEST
EPA METHOD 2 - 5
SAMPLE CALCULATION

1) Volume of dry gas sampled at standard conditions (68°F, 29.92 in. Hg):

$$V_{m(std)} = \frac{Y \times V_m \times 528 \times [P_{bar} + (\Delta H/13.6)]}{29.92 \times (T_m + 460)}$$

2) Volume of water vapor at standard conditions:

$$V_w = \frac{0.04715 ft^3}{g \times M_w}$$

3) Fractional moisutre content in stack gas:

$$B_{ws} = \frac{V_w}{V_{m(std)} + V_w}$$

4) Mole fraction of dry stack gas:

$$M_d = 1 - B_{ws}$$

5) Absolute stack gas pressure:

$$P_s = P_{bar} + \frac{Static}{13.6}$$

Figure 7-2. Example of Method 1-4 Calculations

6) Average molecular weight of dry stack gas:

$$\text{Dry: } MW_d = (0.32 \times \%O_2) + (0.44 \times \%CO_2) + [0.28 \times (100 - (\%O_2 + \%CO_2))]$$

7) Stack gas velocity at stack conditions:

$$V_s = 85.49 \times 0.84 \times \sqrt{\Delta P} \times \sqrt{\frac{T_s + 460}{P_s \times MW_s}}$$

8) Average stack gas volumetric flow at dry, standard conditions:

$$Q_{sd} = V_s \times A_s \times M_d \times \frac{528 \times P_m}{T_s \times 29.92} \times \frac{60 \text{ sec}}{\text{min}}$$

Figure 7-2. Continued

APPENDIX D

Site 4

D.1 Method 25A (THC) Log

D.2 Method 25A (THC) Data

D.3 Method 18 Analytical Summary

D.4 Method 18 Chromatogram

D.5 Field Flow Measurements Data Sheets

D.6 Field H_2O Data Sheets

D.7 Flow Calculations

D.8 Test Log

D.9 Method 25A SCR Copies

Method D.1

Method 25A (THC) Log

RADIAN CORPORATION

CALCULATION SHEET

CALC. NO. _____

SIGNATURE CRP DATE 7/15/92 CHECKED _____ DATE _____

PROJECT EPA/EMB Bakeries JOB NO. _____

SUBJECT THC Log [redacted] S, to Y SHEET _____ OF _____ SHEETS

DAY 1 SITE Y (06/29/92)

TIME	EVENT	RESULT
[redacted] 10:34	CAL	0 & 3960
1042 - 1043	3960 QC	T = 3964 R 3966
1044 - 57	BREAD -	FRONT = T Rear = R
1051 - 1059	BREAD	COMFORT [redacted] = T REAR = R
1059 - 11:10	BREAD	CH (T) = R (R) =
1111 - 1116	80.2 QC	T = 72.9 R = 64.4
1117 - 1119	199.1 QC	T = 180.7 R = 179.9
1121 - 1125	80.2 QC	T = 60.1 R = 60.0
1126 - 1139	[redacted] Bread 2w or plain Itol	CH (T) : Rear (R) :
1139 - 1205	Bread 200z plain It	(F) T Rear (R)
1205 - 1213	Bread 20 oz P.I	Front (T) Rear (R)
1215 - 1253	Bread	CH (T) Rear R

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RADIAN CORPORATION

CALCULATION SHEET

CALC. NO. _____

SIGNATURE _____ DATE _____ CHECKED _____ DATE _____

PROJECT _____ JOB NO. _____

SUBJECT _____ SHEET _____ OF _____ SHEETS

DAY 1 (cont) SITE 4 (06/29/92)

TIME	EVENT	RESULT
1254 - 1257	Bread (LOOK) A LITTLE TRANSIENT	FRONT (T) = Rear (R) =
1300 - 1302	N_2	T = -21.8 R = -6.6
1306	Recal O: 3960 → 3975 T 4018.6 R	O 3960 - .02 + 0.592
1308 - 1311	798 QC	T = 810.2 R = 791.9
1315 - 1320	1490 QC	T = 1507.4 R = 1504.8
1321 - 1324	2000 QC	T 2036 R 1939
1326 - 1357	Bread	Front (T) = Rear (R) =
1357 - 1437	Bread	Ckt (T) = Rear (R) =
1439 - 1512	Bread	Front (T) = Rear (R) =
1514 - 1515	3960 QC (short shot)	T = 3931 R 3900
1515 - 1531	END OF Bread Run (Bcas low ??)	Ckt T R

1537 Front Ckt 1R 3960 3976 -.08 .16

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RADIAN CORPORATION

CALCULATION SHEET

CALC. NO. _____

SIGNATURE _____ DATE _____ CHECKED _____ DATE _____

PROJECT _____ JOB NO. _____

SUBJECT _____ SHEET _____ OF _____ SHEETS

Day 1 (cont) SITE 4 6/29/92

TIME	EVENT		RESULT		
			0	3960	
1537	Final cal	T →	0.17%	3952	-0.08
	"C" cal	R →	-0.01%	3976	0.16
1619-1621	200 Qc - C cal		T 192.4 R 186.7		
1622-1632	200 Ethanol - C cal		T - 296.1 R - 294.4		
1625-1626	200 Ethanol - B cal		T - 313.5 R 298.1		

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RADIAN CORPORATION

CALCULATION SHEET

CALC. NO. _____

SIGNATURE _____ DATE _____ CHECKED _____ DATE _____

PROJECT _____ JOB NO. _____

SUBJECT _____ SHEET _____ OF _____ SHEETS

SITE 4 DAY 2 (6/30/92)

TIME	EVENT	RESULT
1405	Cal	O : 3960
1406	3960 QC	T = 3954 R = 3960.9
1408 - 1410	1490 QC	T = 1506.7 R = 1506.1
1411 - 1454	Bread 14" Natural	Front (T) : Rear (R) =
1454 - 1508	Bread	CH (T) : Rear (R) =
1508 - 1541	Transient (?)	CH = Rear =
1542 - 1546	0 Gas QC	T = 2.1 R = 5.1
1548 - 1549	80.2 QC	T = 845 R = 75.2
1549 - 1553	199.1 QC	T = 207 R = 192.6
1554 - 1556	728 QC	T = 8049 R = 8044
1557 - 1600	1490 QC	T = 1499 R = 1509

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RADIAN CORPORATION

CALCULATION SHEET

CALC. NO. _____

SIGNATURE _____ DATE _____ CHECKED _____ DATE _____

PROJECT _____ JOB NO. _____

SUBJECT _____ SHEET _____ OF _____ SHEETS

SITE 4 (cont) Day 2 6/30/92

TIME	EVENT	RESULT
1601-1603	2000 QC	T = 2030.2 R = 1943.2
1604-1605	3960 QC	T = ~~3787.3~~ 3938 R = 3981
1605-1617	Bread - Spirit dep unheated	Cal (T) = Rean (R) =
1618-1647	Bread	F (T) = Rean (R) =
1647-1705	Transition?	
1705-1718	Transition?	
1745-1806	Partially Full Oven	F (T) = Rean (R) =
1812	Cal B	0 3960 T 8.3 → 0.08% 3964 0.0 % R 4.05 0.04% 3912 -0.47%
1815-1817	2000 QC - B cal	T = 201.6 R 192.2
1818-1819	2000 QC A cal	T = 205.1 R 194.3
1821-1822	200 Ethanol - A cal	T = 307.1 R 307.6

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RADIAN CORPORATION

CALCULATION SHEET

CALC. NO. _____

SIGNATURE _____ DATE _____ CHECKED _____ DATE _____

PROJECT _____ JOB NO. _____

SUBJECT _____ SHEET _____ OF _____ SHEETS

SITE 4 Day 2 (cont) (6/30/22)

TIME	EVENT	RESULT
1834 - 1836	80.2 A - Cal	83.8
		82.9
	80.2 AA A - cal	103.5
		107.0

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RADIAN CORPORATION

CALCULATION SHEET

CALC. NO. _____

SIGNATURE _____ DATE _____ CHECKED _____ DATE _____

PROJECT EPA/EMB Baberin JOB NO. _____

SUBJECT The Log SITE 4 SHEET _____ OF _____ SHEETS

SITE 4 - DAY 3 7/01/92

TIME	EVENT	RESULT
10:00	Cal	0 : 3960
1002 - 1003	3960 QC	T : 3963 R : 3958
1003 - 1034	BREAD - IDLE MAN	FRONT (T) = (R) =
1035 - 1107	BREAD	Cat (T) = Rear (R) =
1108 - 1157	BREAD	FRONT (T) Rear (R)
1158 - 1201	3960 QC	T : 3949 R - 3873
1204 - 1205	0 Gas	T - 0.7 R - 0.3
1206 - 1207	3960	T : 3954 R - 3941
1207 - 1331	Bread (Broke for Lunch)	FRONT (T) = Rear (R) =
1331	0 Gas	T : 14.7 R = -0.2
1337 - 1339	3960 QC	T = 3936.9 R - 3930.6

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RADIAN CORPORATION

CALCULATION SHEET

CALC. NO. _____

SIGNATURE _____ DATE _____ CHECKED _____ DATE _____

PROJECT EPA/EMB Baldwin JOB NO. _____

SUBJECT THC Log - Site 4 SHEET _____ OF _____ SHEETS

Site 4 - Day 3 (cont) 07/01/92

Time	Event		Result
1348	0 Gas		T = -0.96 R = -2.7
1349-1351	5260 QC		T 3867.2 R 3888.4
1354-1355	200 Ethanol		T 313.4 R 306.3
1356-1358	1991 QC		T 202.0 R 189.3
1357-1412	Bread	Italian	Front (T) = Rear (R) =
1413-1435	Bread	Ital	CH (T) Rear (R)
1436-1504	Transition		
1504-1543	Bread	Natural	Front (T) = Rear (R) =
1544-1605	Bread	Natural	FH (T) Rear (R)
1605-1618	Bread	Natural	Front (T) Rear (R)
1630	Cal	T	0 / 2.7 (0.092) — 5960 / 3847 (-0.13)
		R	5.8 (0.047) — 3874 (0.14)

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RADIAN CORPORATION

CALCULATION SHEET

CALC. NO. _____

SIGNATURE _____ DATE _____ CHECKED _____ DATE _____

PROJECT EPA/EMB Bakers JOB NO. _____

SUBJECT THC LOG - DAY 3, SITE 4 SHEET _____ OF _____ SHEETS

SITE 4 DAY 3 (cont) 07/01/12

TIME	EVENT		RESULT
1631-1632	3960 QC	B Cal	T - 3964 R - 3969
1632-1633	3960 QC	A Cal	T - 3948 R - 3980
1634-1640	798 QC	A Cal	T = 796.5 R 808.9
1643-1646	14900 QC	A cal	T = 14866 R = 15166
1651-1654	2030 QC	A Cal	T 2017.3 R 2019.1
1655-1657	200 EPhad	A Cal	T = 300.0 R = 302.0

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RADIAN CORPORATION

CALCULATION SHEET

CALC. NO. _____

SIGNATURE CRP DATE 7/17 CHECKED _____ DATE _____

PROJECT EMB / Bakers JOB NO. _____

SUBJECT THC Log SITE 4 SHEET _____ OF _____ SH

SITE 4 DAY 4 7/02/8

TIME	EVENT	RESULT
0948	Cal 0 & 2030	-
0952 - 0953	187.1 QC	T = 202.0 R = 187.7
0955 - 0955	788 QC	T = 803.6 R = 799.7
0958 - 0959 ~~2030 QC~~	2030 QC	T 2034.8 R 2032.8
1001 - 1001	80.2 QC	T 84.4 R 67.6
1002 - 1003	0 QC	T = 0.6 R = -10.8
1003 - 1004	0 QC	T: -3.4 R: -4.6
1006 - 1007	194.1 QC	T = 200.2 R = 187.4
(1007) 1011 - 1012	Bus Overview	Front (T) = Rear (R) =
1114 - 1114	200 Exhaust	T 304.6 R 307.1
1115 - 1116	200 QC	T 206.8 R 191.7

RADIAN CORPORATION

CALCULATION SHEET

CALC. NO. _____

SIGNATURE _____ DATE _____ CHECKED _____ DATE _____

PROJECT _____ JOB NO. _____

SUBJECT TGA LOD SHEET _____ OF _____ SHEETS

SITE 4 Day 4 (cont) 7/02/82

TIME	EVENT	RESULT
11:17	2030 QC	T 2034.6 R 2047.5
11:23	0 Gas	T 5.3 R -0.8
1126-1127	20% Ethane	T. 312.8 R. 304.1
1135-1140	Range Chg	—
1142-1143	Range Chg	—
11:49	"B" cal (new Rng) 0-1000	T 0.788 R 0.798
1150-1152	198.1 QC	T 198.6 R 193.7
1153-1154	80.2 QC	T = 76.6 R = 76.3
1155	0 Gas	T = -2.4 R = -0.9
1156-1157	20% Ethane	T = 297.9 R = 298.9
1157-1236	Burn (a little transient)	

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RADIAN CORPORATION

CALCULATION SHEET

CALC. NO. _____

SIGNATURE _____ DATE _____ CHECKED _____ DATE _____

PROJECT _____ JOB NO. _____

SUBJECT _____ SHEET _____ OF _____ SHEETS

SITE 4 DAY 4 (cont) (07/02/92)

TIME	EVENT	RESULT
1236 - 1304 10	BUN	FRONT (T) REAR (R)
1310 - 1311	200 Ethanol	T = 296.8 R = 304.4
1311 - 1320	BUN	FRONT (T) = REAR (R) =
1321 - 1352	BUN STEAM OFF	FRONT (T) REAR (R)
1352 - 1420	BUN STEAM ON	
1420 - 1433	BUN - ON (transient?)	
1433 - 1508	BUN - ON (ERRATIC)	(1506 - steam off) ←
1508 - 1538	BUN - STEAM OFF	← Rear stack finally stable
1538 - 1608	BUN - STEAM ON	
1610 - 1611	200 Ethanol	T = 308.4 R = 297.2
16:14	80.2	T = 77.8 R = 75.5
16:16	199.1	T = 196.0 R = 183.8

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RADIAN CORPORATION

CALCULATION SHEET

CALC. NO. _____

SIGNATURE _____ DATE _____ CHECKED _____ DATE _____

ROJECT _____ JOB NO. _____

SUBJECT _____ SHEET _____ OF _____ SHEETS

SITE Y Day 4 (cont) 7/02/92

TIME	EVENT	RESULT
1619-1620	798 QC	793.2 774.6
1625	Cal "C"	0 798
		T -9.2 (-0.092) 793 (-0.05
	Range was not changed (for % drift)	R 0.64 (0.01) 774.2 (-0.
		2.4%
1628-1630	80.2 QC ("C" cal)	T 83.5 R 75.1
1630-1633	197.1 QC ("C" cal)	T 202.6 R 187.1
1634-1636	798 (C cal)	T: 796.0 R: 794.7
1640-1641	82.5 A.A	R= 100.5 (only)
1645	200 Ethanol QC	R= 300.2 (only)

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Appendix D.2

Method 25A (THC) Data

06-29-1992 SITE 4 DAY 1

TIME	THC1 (ppmC)	THC2 (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
10:22:47	3.051819	-26.0025						
10:22:57	0.811281	-30.3790						
10:23:07	1.094061	-28.6122						
10:23:17	0.161614	-29.8301						
10:23:27	1.60348	-28.5915	ETH/THC	CH4/THC	AA/THC	ETH/THC	CH4/THC	AA/THC
10:23:37	-4.77048	-25.0911	0	0	0	0	0	
10:23:47	-4.40099	-24.3391						
10:23:57	-6.03808	-25.5381						
10:24:07	-7.17427	-23.3339						
10:24:17	-5.92069	-24.8940						
10:24:27	-5.56069	-26.3445						
10:24:37	-6.56017	-28.1393						
10:24:47	-6.92584	-29.1850						
10:24:57	-7.47036	-30.7567						
10:25:07	-5.47995	-30.1895						
10:25:17	-8.67014	-33.4690						
10:25:27	-8.01929	-29.893						
10:25:37	-6.40047	-33.2679						
10:25:47	-9.24522	-33.1092						
10:25:57	-8.55552	-30.5827						
10:26:07	-9.97985	-30.7513						
10:26:17	-10.5833	-31.7684						
10:26:27	-8.08997	-29.6003						
10:26:37	-9.78514	-31.7453						
10:26:47	-6.50306	-30.1170						
10:26:57	-5.39289	-29.8062						
10:27:07	-5.18100	-28.0602						
10:27:17	-5.37103	-28.1434						
10:27:27	-4.14994	-31.2557						
10:27:37	-5.53301	-29.2056						
10:27:47	2.489921	-40.1697						
10:27:57	-1.11037	-42.2669						
10:28:07	-4.08218	-33.3963						
10:28:17	-3.87234	-31.1144						
10:28:27	-7.02393	-30.0874						
10:28:37	-9.91910	-34.2718						
10:28:47	-10.8784	-31.3256						
10:28:57	453.0968	109.9126						
10:29:07	1870.895	1926.657						
10:29:17	3575.846	3649.415						
10:29:27	3813.314	3792.072						
10:29:37	3868.846	3826.894						
10:29:47	3886.336	3836.398						
10:29:57	3893.879	3845.583						
10:30:07	3896.074	3841.339						
10:30:17	3893.518	3844.077						
10:30:27	3896.45	3842.721						
10:30:37	3897.896	3850.304						
10:30:47	3902.266	3848.621						

06-29-1992 SITE 4 DAY 1

TIME	THC1 (ppmC)	THC2 (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
10:30:57	3896.354	3848.931						
10:31:07	3898.629	3846.295						
10:31:17	3899.001	3849.314						
10:31:27	3896.049	3853.902						
10:31:37	3897.497	3850.472						
10:31:47	3896.494	3848.403						
10:31:57	3899.531	3849.497						
10:32:07	3894.13	3847.964						
10:32:17	3897.231	3846.163						
10:32:27	3895.541	3845.58						
10:32:37	3898.734	3848.501						
10:32:47	3899.864	3847.769						
10:41:36	3446.064	1686.792						
10:42:19	3916.08	3921.549						
10:42:19	3916.08	3921.549						
10:42:19	3916.08	3921.549						
10:42:19	3916.08	3921.549						
10:42:26	3969.532	3969.562						
10:42:36	3963.624	3965.74						
10:42:46	3964.465	3963.004						
10:42:56	3966.15	3970.632						
10:43:06	3963.422	3972.502						
10:43:16	3959.091	3956.574						
			3966.335666					
10:43:26	3956.879	3960.951						
10:43:36	3455.909	2313.613						
10:43:46	3585.024	1653.472						
10:43:56	2949.844	1656.664						

FRONT ETH-OH (ppmV/wet)	FRONT CH4 (ppmV/wet)	FRONT ACETALDEHYDE (ppmV/wet)	REAR ETH-OH (ppmV/wet)	REAR CH4 (ppmV/wet)	REAR ACETALDEHYDE (ppmV/wet)

FRONT	REAR	BREAD
10:44:17 3641.393	1644.935	
10:44:17 3641.393	1644.935	
10:44:26 3388.018	1635.551	
10:44:36 3196.215	1624.729	
10:45:06 3373.812	1522.602	
10:45:36 3364.382	1306.116	
10:46:06 3398.421	1473.126	
10:46:36 3194.102	1606.077	
10:47:06 3370.932	1599.718	
10:47:36 3359.63	1354.698	
10:48:06 3304.594	1446.574	
10:48:36 3242.967	1567.489	
10:49:06 3304.684	1564.646	

06-29-1992 SITE 4 DAY 1

TIME	THC1 (ppmC)	THC2 (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
10:49:36	3251.308	1361.108						
10:50:06	3151.852	1582.307						
10:50:36	3219.826	1638.644						
10:51:06	3168.579	1632.285						
10:51:36	3089.212	1409.132	END					
			ETH-OH COMFORT HOOD	CH4 REAR	ACETALDEHYDE (ppmV/wet) SA	ETH-OH (ppmV/wet) REAR	CH4 (ppmV/wet) REAR	ACETALDEHYDE (ppmV/wet) REAR
10:52:06	569.2494	1412.973						
10:52:36	528.7239	1609.276						
10:53:06	579.9387	1560.385						
10:53:36	604.551	1562.745						
10:54:06	654.3077	1475.688						
10:54:36	563.2105	1396.165						
10:55:06	582.9838	1621.342						
10:55:36	674.1005	1594.938						
10:56:06	716.4795	1536.375						
10:56:36	652.0881	1302.187						
10:57:06	590.1745	1485.577						
10:57:36	636.3987	1604.716						
10:58:06	548.7744	1599.59						
10:58:36	730.4374	1494.611						
10:59:06	626.9485	1286.599	END					
			COMFORT HOOD	REAR	BREAD			
10:59:36	679.881	1462.38						
11:00:06	571.3074	1615.873						
11:00:36	566.0952	1624.067						
11:01:06	628.0299	1536.117						
11:01:36	623.9374	1345.879						
11:02:06	607.0504	1498.003						
11:02:36	582.7333	1590.145						
11:03:06	571.0388	1574.96						
11:03:36	644.1961	1456.146						
11:04:06	559.2113	1394.926						
11:04:36	580.1682	1603.558						
11:05:06	599.7937	1592.998						
11:05:36	638.4189	1527.732						
11:06:06	644.1376	1319.28						
11:06:36	585.0051	1519.372						
11:07:06	644.558	1564.487						
11:07:36	586.1511	1408.664						
11:08:06	571.8165	1332.24						
11:08:36	533.6595	1543.095						
11:09:06	561.8691	1565.385						
11:09:36	599.7167	1519.911						
11:10:06	664.3004	1282.067						
11:10:36	666.4808	1460.148	END					

06-29-1992 SITE 4 DAY 1

TIME	THC1 (ppmC)	THC2 (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
11:11:06	662.9105	820.6755						
11:11:36	138.7704	118.0046						
11:12:06	117.4147	88.37204						
11:12:36	108.8606	70.99995						
11:13:06	109.4386	65.77856						
11:13:36	76.3697	65.74963						
11:14:06	69.45724	63.10789						
			72.91347	00:00 **				
11:14:36	383.8911	761.8981						
11:15:06	552.8918	1311.361						
11:15:36	576.2192	1509.192						
11:16:06	552.7196	1608.887						
11:16:36	660.0187	1481.729						
11:17:06	214.452	200.1996						
11:17:36	180.9396	180.8936						
11:18:06	179.7591	179.9501						
11:18:36	180.2074	179.3571						
11:19:06	182.0149	179.2342						
			180.73025	00:00 **				
11:19:36	180.442	179.6792						
11:20:06	526.1602	1184.875						
11:20:36	468.8873	1045.609						
11:21:06	75.6114	67.75986						
11:21:36	63.90841	61.56675						
11:22:06	60.76289	60.48645						
11:22:36	60.13784	59.8824						
11:23:06	59.89618	59.67256						
11:23:36	59.26075	58.98514						
11:24:06	58.70875	58.98342						
11:24:36	58.60722	58.91964						
11:25:06	59.24546	59.04388						
			60.0659375	00:00 **				
			FRONT			REAR		
11:25:36	1170.84	455.3482	ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)

06-29-1992 SITE 4 DAY 1

TIME	THC1 (ppmC)	THC2 (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE: (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
			COMFORT HOOD	REAR	20 oz PLAIN ITALIAN BREAD			
11:26:14		1607.847	583.8016					
11:26:36		1600.457	590.6385					
11:27:06		1375.534	617.1183			678	597	28.2
11:27:36		1504.874	504.2939			ETH/THC	CH4/THC	AA/THC
11:28:06		1619.755	565.5775			49.28994848	43.40132632	2.050112901
11:28:36		1598.224	582.105					
11:29:06		1363.022	654.452					
11:29:36		1511.712	554.2865					
11:30:06		1599.227	681.857					
11:30:36		1571.514	646.8265					
11:31:06		1325.273	626.5502					
11:31:36		1447.147	537.9534					
11:32:06		1637.549	588.98					
11:32:36		1672.007	552.2245					
11:33:06		1626.257	630.5944					
11:33:36		1415.983	616.7642					
11:34:06		1619.139	586.0537					
11:34:36		1698.298	633.911					
11:35:06		1726.577	596.9457					
11:35:36		1517.091	699.3251	376	224	8.33		
11:36:06		1526.5	581.032	ETH/THC	CH4/THC	AA/THC		
11:36:36		1692.583	601.3449	53.76612393	32.03088234	1.191148437		
11:37:06		1713.903	534.227					
11:37:36		1731.59	686.5884					
11:38:06		1461.484	662.1595					
11:38:36		1350.797		1338.226				
11:39:06		1571.117		3313.349			REAR	
				604.624432	1558.720777			

TIME	THC1 (ppmC)	THC2 (ppmC)	ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE: 20(ppmV/wet) IT	ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
			FRONT	REAR				
11:39:46	3247.493	1630.984						
11:40:06	3166.749	1653.183						
11:40:36	3464.66	1567.522						
11:41:06	3353.134	1365.083						
11:41:36	3237.073	1600.319						
11:42:06	3258.492	1657.17						
11:42:36	3361.623	1635.972						
11:43:06	3420.322	1388.342						
11:43:36	3337.307	1583.337						
11:44:06	3256.681	1624.99						
11:44:36	3195.282	1619.801				716	754	28.7
11:45:06	3633.642	1499.52				ETH/THC	CH4/THC	AA/THC
11:45:36	3231.601	1351.456				44.20296073	46.54892792	1.771822588
11:46:06	3429.164	1575.994						
11:46:36	3177.95	1621.117						

06-29-1992 SITE 4 DAY 1

TIME	THC1 (ppmC)	THC2 (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
11:47:06	3327.417	1619.936						
11:47:36	3307.599	1608.456						
11:48:06	3446.308	1368.01						
11:48:36	3215.055	1517.323						
11:49:06	3403.45	1664.262						
11:49:36	3235.807	1635.887						
11:50:06	3302.727	1569.903						
11:50:36	3406.227	1323.62						
11:51:06	3353.387	1425.814						
11:51:36	3250.397	1616.977						
11:52:06	3171.723	1614.539						
11:52:36	3444.007	1552.176						
11:53:06	3428.658	1303.678						
11:53:36	3213.195	1447.227	1540	1510	43.1			
11:54:06	3232.006	1632.623	ETH/THC	CH4/THC	AA/THC			
11:54:36	3281.772	1693.521	47.92737446	46.99372431	1.341344051			
11:55:06	3383.238	1625.355						
11:55:36	3431.362	1425.186						
11:56:06	3258.029	1668.195						
11:56:36	3356.056	1721.113						
11:57:06	3459.778	1736.266						
11:57:36	3592.659	1489.009						
11:58:06	3366.042	1550.249						
11:58:36	3556.979	1711.385						
11:59:06	3319.37	1733.72						
11:59:36	3761.22	1604.489						
12:00:06	3459.378	1455.558						
12:00:36	3691.385	1670.661						
12:01:06	3360.949	1704.066						
12:01:36	3581.892	1733.58						
12:02:06	3419.498	1533.191						
12:02:36	3517.827	1629.919						
12:03:06	3459.201	1744.379				933	1320	29.1
12:03:17	4046.806	1743.894	END			ETH/THC	CH4/THC	AA/THC
			3383.930142	1580.590959		53.48608301	75.6716287	1.668215450
12:03:26			3544.366	1639.375				
12:03:47			4152.167	1565.9				
12:03:47			4152.167	1565.9				
12:03:56			3339.726	1436.768				
12:04:06			3121.181	1543.566				
12:04:16			3387.009	1674.664				
12:04:26			3557.104	1732.355				
12:04:36			3462.903	1776.776				
12:04:46			1299.839	1770.883				
12:04:56			108.7509	1759.07				
12:05:06			49.03715	1755.01				
12:05:16			2857.057	1769.579				

06-29-1992 SITE 4 DAY 1

TIME	THC1 (ppmC)	THC2 (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
					20 oz PLAIN			
			FRONT	REAR	ITALIAN			
12:05:33	2859.531	1732.943						
12:05:36	3157.571	1650.246						
12:05:46	3617.373	1557.54						
12:05:56	3466.55	1475.269						
12:06:06	3578.069	1465.967						
12:06:16	3340.396	1525.56						
12:06:26	3591.053	1658.258						
12:06:36	3384.522	1735.168						
12:06:46	3571.662	1766.063						
12:06:56	3279.708	1762.855						
12:07:06	3540.435	1761.588						
12:07:16	3165.751	1779.545						
12:07:26	3649.536	1776.318						
12:07:36	3338.059	1770.938						
12:07:46	4040.994	1762.772						
12:07:56	3397.512	1633.993						
12:08:06	3929.491	1518.151						
12:08:16	3219.471	1463.123						
12:08:26	3682.695	1485.391						
12:08:36	3235.497	1603.285						
12:08:46	3800.125	1689.286						
12:08:56	3156.481	1723.912						
12:09:06	3701.169	1760.858						
12:09:16	3063.756	1750.516						
12:09:26	3595.388	1751.587						
12:09:36	3013.904	1772.881						
12:09:46	3766.679	1793.977						
12:09:56	3294.377	1709.447						
12:10:06	3876.598	1538.913						
12:10:16	3265.452	1451.763						
12:10:26	3929.261	1406.878						
12:10:36	3088.441	1400.843						
12:10:46	3766.578	1450.503						
12:10:56	3188.313	1577.698						
12:11:06	3810.169	1623.756						
12:11:16	3208.137	1652.859						
12:11:26	3733.389	1653.313						
12:11:36	3163.356	1654.335						
12:11:46	3525.076	1639.971						
12:11:56	2988.148	1651.268						
12:12:06	3421.387	1654.969		1380	1970	50.5		
12:12:16	3309.945	1607.163		ETH/THC	CH4/THC	AA/THC		
12:12:26	3700.893	1446.716		40.33451930	57.57898770	1.476009583		
12:12:36	3190.728	1373.076						
12:12:46	3599.2	1356.493						
12:12:56	3120.779	1434.204						

06-29-1992 SITE 4 DAY 1

TIME	THC1 (ppmC)	THC2 (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
12:13:06	3700.984	1579.657						
12:13:16	3108.647	1659.002						
12:13:26	3643.439	1695.055	END					
			3444.421938	1619.303510				
12:13:37			2106.14	1698.454				
12:14:01			151.6107	1692.668				
12:14:01			151.6107	1692.668				
12:14:06			46.05719	1683.277				
12:14:16			21.16487	1671.713				
12:14:26			9.021204	1542.275				
12:14:36			409.9745	1404.287				
			(ppmV/wet)	(ppmV/wet)				
			COMFORT					
			HOOD	REAR				
12:14:46		1349.232	723.3141					
12:14:56		1366.578	512.4112					
12:15:06		1486.306	757.5472					
12:15:16		1614.877	602.4663					
12:15:26		1668.494	724.3962					
12:15:36		1691.447	513.3194					
12:15:46		1700.052	724.4645					
12:15:56		1699.021	491.8661					
12:16:06		1704.273	709.7815					
12:16:16		1728.58	535.0492					
12:16:26		1676.03	785.7257					
12:16:36		1546.971	546.3293					
12:16:46		1442.508	733.6922					
12:16:56		1434.29	462.1481					
12:17:06		1531.505	743.8906					
12:17:16		1619.964	548.9855					
12:17:26		1641.241	765.3582					
12:17:36		1692.73	557.8867					
12:17:46		1667.118	780.9391					
12:17:56		1669.328	531.2675					
12:18:06		1619.152	831.9079					
12:18:16		1482.87	562.7982					
12:18:26		1404.627	668.7028					
12:18:36		1450.458	472.0526					
12:18:46		1567.456	717.8889					
12:18:56		1642.14	523.938					
12:19:06		1670.195	743.1726					
12:19:16		1667.451	507.8775					
12:19:26		1691.613	724.1498					
12:19:36		1657.152	558.6593					
12:19:46		1652.324	809.7789					
12:19:56		1603.021	625.982					
12:20:06		1453.971	799.2911					

REAR

ACETALDEHYDE:	ETH-OH	CH4	ACETALDEHYDE
(ppmV/wet)	(ppmV/wet)	(ppmV/wet)	(ppmV/wet)
ITALIAN			

06-29-1992 SITE 4 DAY 1

TIME	THC1 (ppmC)	THC2 (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	FRONT GC RESULTS CH4 (ppmV/wet)	FRONT GC RESULTS ACETALDEHYDE: (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	REAR GC RESULTS CH4 (ppmV/wet)	REAR GC RESULTS ACETALDEHYDE (ppmV/wet)
12:20:16		1362.169		573.2441				
12:20:26		1349.965		661.978				
12:20:36		1406.025		489.2684				
12:20:46		1561.467		672.5154				
12:20:56		1645.041		526.9805		1040	790	27
12:21:06		1680.202		645.267		ETH/THC	CH4/THC	AA/THC
12:21:16		1693.644		506.8872		63.22030879	48.02311918	1.641296478
12:21:26		1704.606		625.3452				
12:21:36		1705.69		535.3163				
12:21:46		1703.181		625.603				
12:21:56		1689.979		629.3625				
12:22:06		1623.92		826.5344				
12:22:16		1463.49		711.4899				
12:22:26		1371.666		722.7997				
12:22:36		1365.177		583.3932				
12:22:46		1494.841		683.8798				
12:22:56		1586.67		665.017				
12:23:06		1631.56		624.476				
12:23:16		1648.191		631.7318				
12:23:26		1653.633		618.7859				
12:23:36		1648.412		612.5146				
12:23:46		1654.965		594.9694				
12:23:56		1670.428		600.9589				
12:24:06		1676.559		712.8245				
12:24:16		1559.077		775.3715				
12:24:26		1420.273		707.6263				
12:24:36		1373.032		720.2342				
12:24:46		1355.63		529.6718				
12:24:56		1427.361		662.8229				
12:25:06		1572.663		597.4785				
12:25:16		1639.723		674.2371				
12:25:26		1658.185		675.3702				
12:25:36		1646.756		703.1196				
12:25:46		1639.545		560.4415				
12:25:56		1638.601		699.6259				
12:26:06		1642.814		616.7659				
12:26:16		1659.082		662.7643				
12:26:26		1674.439		547.3466				
12:26:36		1671.917		811.4569				
12:26:46		1562.042		656.3613				
12:26:56		1433.763		722.7677				
12:27:06		1397.874		534.2052				
12:27:16		1443.423		612.5789				
12:27:26		1580.999		500.8458				
12:27:36		1684.016		693.396				
12:27:46		1728.294		511.9569				
12:27:56		1730.546		659.3323				
12:28:06		1730.983		503.0429				
12:28:16		1725.739		708.4904				

06-29-1992 SITE 4 DAY 1

TIME	THC1 (ppmC)	THC2 (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
12:28:26	1719.537	604.3161						
12:28:36	1590.262	789.3021						
12:28:46	1453.956	633.7136						
12:28:56	1395.438	835.3865						
12:29:06	1395.554	516.7783						
12:29:16	1502.161	753.9504						
12:29:26	1601.056	517.7624						
12:29:36	1602.273	725.2464						
12:29:46	1635.167	503.7375						
12:29:56	1658.068	677.5919						
12:30:06	1670.464	562.0651						
12:30:16	1638.518	846.1976	592	229	10.2			
12:30:26	1495.911	590.4095	ETH/THC	CH4/THC	AA/THC			
12:30:36	1393.956	713.7548	69.96001879	27.062237	1.205392215			
12:30:46	1364.887	524.4145						
12:30:56	1406.123	707.4137						
12:31:06	1533.245	509.0669						
12:31:16	1629.716	728.159						
12:31:26	1672.976	483.4936						
12:31:36	1678.378	718.5099						
12:31:46	1668.601	525.2318						
12:31:56	1673.011	698.64						
12:32:06	1668.928	470.2693						
12:32:16	1662.937	686.7461						
12:32:26	1662.223	464.7956						
12:32:36	1668.017	673.34						
12:32:46	1678.283	447.9874						
12:32:56	1689.595	701.1487						
12:33:06	1701.589	655.3218						
12:33:16	1658.785	824.7803						
12:33:26	1536.756	587.6758						
12:33:36	1472.51	797.9041						
12:33:46	1462.724	555.7392						
12:33:56	1520.462	624.9896						
12:34:06	1646.592	578.0047						
12:34:16	1705.355	741.5771						
12:34:26	1721.224	514.5359						
12:34:36	1719.73	659.7158						
12:34:46	1697.724	557.1391						
12:34:56	1698.386	680.198						
12:35:06	1687.47	512.958						
12:35:16	1666.803	669.7424						
12:35:26	1669.991	551.9565						
12:35:36	1684.968	757.3486						
12:35:46	1657.397	684.625						
12:35:56	1517.11	800.8704						
12:36:06	1444.11	604.4426						
12:36:16	1460.447	628.6391						
12:36:26	1603.912	584.2632						

06-29-1992 SITE 4 DAY 1

TIME	THC1 (ppmC)	THC2 (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
12:36:36		1724.221		707.3807				
12:36:46		1743.441		587.1871				
12:36:56		1744.829		701.5585				
12:37:06		1728.509		589.2523				
12:37:16		1719.484		651.6434				
12:37:26		1723.125		644.7523				
12:37:36		1757.014		742.7601				
12:37:46		1761.778		707.7653				
12:37:56		1745.911		733.9193				
12:38:06		1597.559		670.4775				
12:38:16		1504.257		685.6419				
12:38:26		1478.406		539.4205				
12:38:36		1546.575		560.2809				
12:38:46		1705.971		583.7267				
12:38:56		1786.1		600.3299				
12:39:06		1795.953		577.8327		657	1280	25.7
12:39:16		1802.428		629.3451		ETH/THC	CH4/THC	AA/THC
12:39:26		1808.534		630.8797		36.58224909	71.27135286	1.430995131
12:39:36		1831.854		633.8201				
12:39:46		1823.468		658.1591				
12:39:56		1810.666		600.1901				
12:40:06		1802.346		653.9058				
12:40:16		1803.11		673.6442				
12:40:26		1725.026		747.2189				
12:40:36		1568.254		647.6329				
12:40:46		1493.135		603.0875				
12:40:56		1515.134		553.2039				
12:41:06		1661.738		627.07				
12:41:16		1771.082		602.2372				
12:41:26		1795.534		649.9487				
12:41:36		1822.147		590.8923				
12:41:46		1809.783		641.1451				
12:41:56		1794.072		525.0618				
12:42:06		1768.721		642.0518				
12:42:16		1773.632		536.007				
12:42:26		1763.098		603.4422				
12:42:36		1744.775		541.076				
12:42:46		1673.51		758.7313				
12:42:56		1527.403		578.4357				
12:43:06		1432.799		689.7336				
12:43:16		1395.773		522.5266				
12:43:26		1540.252		665.8593				
12:43:36		1655.288		549.8795				
12:43:46		1676.554		707.9984				
12:43:56		1662.582		630.6918				
12:44:06		1658.011		673.5315				
12:44:16		1658.971		576.7048				
12:44:26		1652.602		691.5201				
12:44:36		1645.144		649.5385				

06-29-1992 SITE 4 DAY 1

TIME	THC1 (ppmC)	THC2 (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
12:44:46		1609.858	677.9686					
12:44:56		1491.794	554.1493					
12:45:06		1427.429	629.6127					
12:45:16		1459.099	486.8318					
12:45:26		1582.09	618.7792					
12:45:36		1675.221	537.3724					
12:45:46		1725.24	653.9686					
12:45:56		1748.095	556.2841					
12:46:06		1762.717	672.4749					
12:46:16		1789.952	572.7221					
12:46:26		1759.616	781.7188					
12:46:36		1608.814	578.321					
12:46:46		1496.976	737.6238					
12:46:56		1463.501	397.1629					
12:47:06		1579.48	528.5629					
12:47:16		1708.345	433.9594					
12:47:26		1775.791	557.6113					
12:47:36		1820.905	444.7491					
12:47:46		1848.077	552.9167					
12:47:56		1851.401	419.2624					
12:48:06		1873.51	543.1736					
12:48:16		1879.368	428.7205					
12:48:26		1883.371	604.2712	421	218	7.89		
12:48:36		1874.985	511.3589	ETH/THC	CH4/THC	AA/THC		
12:48:46		1876.72	630.2712	69.67070414	36.07651663	1.305705120		
12:48:56		1890.213	491.2957					
12:49:06		1899.431	735.7129					
12:49:16		1903.497	571.9949					
12:49:26		1909.917	693.5005					
12:49:36		1912.038	519.6592					
12:49:46		1923.33	789.6199					
12:49:56		1913.359	584.8741					
12:50:06		1867.652	707.137					
12:50:16		1850.343	527.6072					
12:50:26		1833.664	771.8513					
12:50:36		1830.797	554.4301					
12:50:46		1798.935	567.7257					
12:50:56		1809.143	438.7459					
12:51:06		1831.313	679.6932					
12:51:16		1860.968	507.5338					
12:51:26		1886.569	616.8577					
12:51:36		1900.717	467.2742					
12:51:46		1927.546	657.5465					
12:51:56		1932.21	474.9035					
12:52:06		1906.593	630.6939					
12:52:16		1863.65	493.6159					
12:52:26		1827.047	636.8317					
12:52:36		1789.996	468.6659					
12:52:46		1779.878	552.9863					

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TIME	THC1 (ppmC)	THC2 (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
12:52:56		1775.306	440.0713					
12:53:06		1826.713	491.3897					
12:53:16		1863.71	382.8264					
12:53:26		1879.148	380.8674	END				
AVG				620.2669794	1657.172171			
12:53:36	41.4837	1901.41						
12:53:46	0.727863	1908.416						
12:53:56		1915.471		-5.776555				
12:54:06		1918.936		-7.528883				
12:54:16	2569.491	1940.8						

TIME	THC1 (ppmC)	THC2 (ppmC)	FRONT ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
			FRONT	REAR	BREAD			
12:54:26	2879.361	1959.807	TRANSIENT					
12:54:36	3534.112	1964.385						
12:54:46	2900.419	1964.295						
12:54:56	3542.02	1946.423						
12:55:06	3080.415	1940.587						
12:55:16	3602.83	1943.533						
12:55:26	2881.036	1955.639						
12:55:36	3188.629	1970.295						
12:55:46	2952.65	1983.667						
12:55:56	3492.091	1997.709						
12:56:06	2795.59	2002.451						
12:56:16	3482.502	2004.819						
12:56:26	2898.389	2001.713						
12:56:36	3530.033	1987.733						
12:56:46	2927.348	1978.849						
12:56:56	3495.034	1960.821						
12:57:06	3058.043	1959.148						
12:57:16	3504.049	1944.022				557	1450	22.2
12:57:26	2923.981	1927.95				ETH/THC	CH4/THC	AA/THC
12:57:36	3244.555	1919.745				28.65193912	74.58763326	1.141962385
12:57:46	3156.42	1903.281						
12:57:56	3590.172	1883.595						
12:58:06	2937.102	1854.711						
12:58:16	3598.468	1805.411						
12:58:26	2944.754	1773.684						
12:58:36	3546.34	1765.006	END					
AVG	3218.705	1934.587						
12:58:46	2923.278	1757.822						
12:58:56	2881.594	1271.086						

06-29-1992 SITE 4 DAY 1

TIME	THC1 (ppmC)	THC2 (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE: (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
12:59:06	1196.843	416.4841						
12:59:16	339.1819	120.4803						
12:59:26	83.061	54.42556						
12:59:36	22.90529	25.78045						
12:59:55	13.6947	19.56992						
12:59:56	6.615147	16.33481						
13:00:06	-3.56826	21.20123						
13:00:16	-2.33923	17.26975						
13:00:26	-12.0496	6.546751						
13:00:36	-15.9511	-0.66778						
13:00:46	-20.0765	-5.65983						
13:00:56	-21.0272	-4.91421						
13:01:06	-20.6756	-4.76542						
13:01:16	-22.4248	-7.21468						
13:01:26	-22.5207	-6.73360						
13:01:36	-18.4373	-4.13902						
13:01:46	-25.9407	-10.8022						
13:01:56	-23.1316	-8.84436						
			-21.779345	00:00 **				
13:02:06	-23.9819	-9.94831						
13:02:16	-22.7860	-9.04863						
13:06:38	4028.167	4036.256						
13:06:49	3967.505	3971.533						
13:06:58	3960.573	3967.693						
13:07:08	3958.985	3966.939						
13:07:18	3919.564	3824.321						
13:07:28	3364.77	2071.002						
13:07:44	3180.728	1715.633						
13:08:05	2428.319	1037.772						
13:08:06	2428.319	1037.772						
13:08:08	833.211	816.5482						
13:08:18	829.9935	811.9337						
13:08:28	819.8622	800.8267						
13:08:38	816.5421	802.7065						
13:08:48	812.7995	803.5483						
13:08:58	810.992	803.7221						
13:09:08	808.3342	802.5715						
13:09:18	807.8024	802.5058						
13:09:28	808.1496	802.4413						

06-29-1992 SITE 4 DAY 1

TIME	THC1 (ppmC)	THC2 (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
13:09:38	807.899	804.6169						
13:09:48	808.812	801.9642						
13:09:58	816.577	802.6006						
13:10:09	815.6786	801.8051						
13:10:18	815.3107	802.8099						
13:10:28	814.4374	801.0251						
13:10:38	812.0441	799.9315						
13:10:48	805.0128	800.3307						
13:10:58	806.0444	801.4214						
13:11:08	806.4057	801.0381						
			810.1929153	00:00 **				
				00:00				
				00:00				
13:11:22	808.0374	801.0503						
13:11:28	931.2411	879.8024						
13:11:38	3285.814	1900.476						
13:11:48	3816.077	2174.399						
13:11:58	3900.779	2178.165						
13:12:08	3922.729	2167.777						
13:12:18	3929.455	2092.736						
13:12:28	4287.02	1982.786						
13:12:38	3592.05	1940.919						
13:12:48	4353.547	2022.113						
13:12:58	4029.857	2121.033						
13:13:08	4199.667	2177.746						
13:13:18	4438.444	2205.146						
13:13:28	3908.357	2234.636						
13:13:38	4188.674	2244.099						
13:13:48	3430.298	2258.332						
13:13:58	3833.48	2313.321						
13:14:08	3897.185	2351.396						
13:14:18	4270.158	2425.272						
13:14:28	4363.338	2451.349						
13:14:38	4504.927	2333.856						
13:14:59	4019.748	2079.154						
13:14:59	4019.748	2079.154						
13:15:08	1598.442	1510.642						
13:15:18	1534.343	1506.077						
13:15:28	1521.724	1506.517						
13:15:38	1515.766	1495.899						
13:15:48	1515.205	1509.531						
13:15:58	1517.747	1504.894						
13:16:08	1513.14	1504.072						
13:16:18	1507.3	1503.291						
13:16:28	1507.921	1505.943						
13:16:38	1508.902	1504.647						

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TIME	THC1 (ppmC)	THC2 (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
13:16:48	1511.456	1508.346						
13:16:58	1508.255	1505.675						
13:17:08	1521.297	1503.639						
13:17:18	1516.786	1503.999						
13:17:28	1509.475	1507.456						
13:17:38	1502.351	1502.774						
13:17:48	1504.008	1503.975						
13:17:58	1502.128	1502.545						
13:18:08	1504.074	1505.835						
13:18:18	1502.544	1503.565						
13:18:28	1504.63	1506.096						
13:18:38	1504.122	1505.232						
13:18:48	1502.948	1503.736						
13:18:58	1500.922	1501.727						
13:19:08	1501.292	1501.866						
13:19:18	1500.875	1502.9						
13:19:28	2057.165	1734.611						
13:19:38	4134.395	2387.024						
13:19:48	4225.317	2471.738						
13:19:58	4734.09	2369.31						
13:20:08	4119.404	2405.757						
13:20:18	4922.413	2408.271						
			1507.387312	00:00 **				
				00:00				
				00:00				
13:20:28	4161.112	2080.638						
13:20:41	3561.242	1670.745						
13:20:48	2041.836	1924.76						
13:20:58	2032.454	1930.294						
13:21:08	2031.04	1937.554						
13:21:18	2033.608	1936.114						
13:21:28	2031.665	1937.845						
13:21:38	2030.627	1938.785						
13:21:48	2030.683	1935.967						
13:21:58	2028.65	1936.481						
13:22:08	2027.179	1937.872						
13:22:18	2030.226	1937.215						
13:22:28	2029.565	1938.903						
13:22:38	2031.671	1940.063						
13:22:48	2030.513	1940.987						
13:22:58	2028.931	1942.197						
13:23:08	2033.359	1939.936						
13:23:18	2061.779	1941.211						
13:23:28	2062.179	1940.796						
13:23:38	2059.28	1942.854						
13:23:48	2052.775	1941.838						

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TIME	THC1 (ppmC)	THC2 (ppmC)
13:23:58	2032.057	1942.188
13:24:08	2029.338	1942.8
13:24:18	2024.641	1942.901
13:24:28	2655.506	2167.032
13:24:38	4314.727	2367.72
13:24:48	4603.475	2351.735
13:24:58	4188.116	2339.262
13:25:08	4616.348	2297.739
13:25:18	3993.728	2269.993
13:25:29	4655.651	2274.799
13:25:38	4005.159	2247.071
13:25:48	4563.123	2269.278
13:25:58	4129.579	2256.297
13:26:08	4544.876	2216.5
13:26:41	4276.723	2228.329
13:26:41	4276.723	2228.329
13:26:41	4276.723	2228.329
13:26:48	4003.344	1883.018
13:26:58	4570.879	1830.275
13:27:08	3696.974	1880.838
13:27:18	4443.694	2054.183
13:27:28	3706.307	2115.565
13:27:38	4253.667	2103.127
13:27:48	3770.614	2138.689
13:27:58	4038.979	2111.607
13:28:08	3903.756	2095.117
13:28:18	3621.071	2139.163
13:28:28	4016.682	2114.099
13:28:38	3440.767	2157.145
13:28:48	4133.542	2137.895
13:28:58	3454.514	2081.229
13:29:08	4069.056	2065.022
13:29:18	3621.741	2100.603
13:29:28	4270.389	2092.802
13:29:38	4383.359	2022.952
13:29:48	4013.497	1902.883
13:29:58	3826.379	1800.123
13:30:08	3564.231	1802.315
13:30:18	4096.771	1878.61
13:30:28	3449.063	2019.74
13:30:38	4151.25	2054.105
13:30:48	3372.265	2007.371

FRONT GC RESULTS

ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
2035.82	00:00 **	
	00:00	
	00:00	

FRONT

ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
FRONT	REAR	END

REAR GC RESULTS

ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)

REAR

ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
1020	806	42.2
ETH/THC	CH4/THC	AA/THC
55.72933029	44.03709825	2.305664449

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TIME	THC1 (ppmC)	THC2 (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
13:30:58	3876.077	1975.085						
13:31:08	3461.323	1954.926						
13:31:18	3649.649	1963.018						
13:31:28	3498.469	1986.049						
13:31:38	3474.057	1997.913						
13:31:48	3868.101	1970.258						
13:31:58	3257.649	2016.131						
13:32:08	3555.227	1994.044						
13:32:18	3731.683	1977.928						
13:32:28	4056.836	2069.39						
13:32:38	3653.603	2090.872						
13:32:48	3994.536	2096.565						
13:32:58	4137.293	2066.265						
13:33:08	3824.084	1897.052						
13:33:18	3814.251	1756.892						
13:33:28	3522.105	1753.255						
13:33:38	3866.459	1892.156						
13:33:48	3649.782	1973.612						
13:33:58	4217.175	2015.58						
13:34:08	3543.733	2018.135						
13:34:18	4159.444	2044.062						
13:34:28	3741.936	2029.251						
13:34:38	3967.364	2027.48						
13:34:48	4010.571	2064.112						
13:34:58	4139.721	2096.078						
13:35:08	4438.734	1980.058						
13:35:18	4069.29	1861.149						
13:35:28	4390.746	1791.368						
13:35:38	3544.661	1813.183						
13:35:48	4012.072	1968.288						
13:35:58	3911.736	2034.399						
13:36:08	4216.502	2030.413						
13:36:18	3821.209	2077.803						
13:36:28	4125.067	2118.171						
13:36:38	3792.899	2049.985	2030	2150	65.9			
13:36:48	3885.628	2006.217	ETH/THC	CH4/THC	AA/THC			
13:36:58	4082.499	2029.166	53.52106660	56.68487349	1.737457285			
13:37:08	3668.253	2081.928						
13:37:18	4366.657	2006.97						
13:37:28	3595.998	1893.369						
13:37:39	4076.163	1865.194						
13:37:48	4141.649	1902.103						
13:37:58	3999.998	2037.052						
13:38:08	3727.292	2118.712						
13:38:18	3799.604	2136.616						
13:38:28	3917.813	2137.625						
13:38:38	3731.013	2108.686						
13:38:48	4204.775	2111.797						
13:38:58	3513.526	2095.821						

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TIME	THC1 (ppmC)	THC2 (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	FRONT GC RESULTS CH4 (ppmV/wet)	FRONT GC RESULTS ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	REAR GC RESULTS CH4 (ppmV/wet)	REAR GC RESULTS ACETALDEHYDE (ppmV/wet)
13:39:08	3878.425	2067.616						
13:39:18	4011.374	2106.075						
13:39:28	4350.529	2159.914						
13:39:38	4195.235	2213.525						
13:39:48	4542.679	2141.265						
13:39:58	4466.718	2052.426						
13:40:08	3950.323	1879.687						
13:40:18	4194.035	1834.682						
13:40:28	3725.524	1886.704						
13:40:38	4348.771	1957.589						
13:40:48	3714.378	2090.45						
13:40:58	4349.049	2135.711						
13:41:08	3761.6	2097.482						
13:41:18	4100.229	2125.61						
13:41:28	3831.366	2076.076						
13:41:38	3883.652	2139.14						
13:41:48	4082.914	2111.259						
13:41:58	3726.186	2127.917						
13:42:08	4345.161	2114.019						
13:42:18	3574.825	2090.741						
13:42:28	3528.112	2050.49						
13:42:38	3704.518	2125.567						
13:42:48	4090.025	2177.79						
13:42:58	3921.845	2188.753						
13:43:09	4327.12	2221.069						
13:43:18	3968.049	2231.047						
13:43:28	4368.903	2174.828						
13:43:38	4293.739	2171.93						
13:43:48	4199.67	2153.466						
13:43:58	4504.649	2116.469						
13:44:08	4020.808	2061.723						
13:44:18	4659.104	2062.363						
13:44:28	4187.467	2031.207						
13:44:38	4686.379	1932.222						
13:44:48	3972.698	1806.783						
13:44:58	4118.438	1731.5						
13:45:08	3894.949	1828.268						
13:45:18	4024.74	1992.442						
13:45:28	4032.784	2069.012						
13:45:38	3737.558	2064.629						
13:45:48	4197.911	2028.619				1290	1280	38.2
13:45:58	3746.607	2022.839				ETH/THC	CH4/THC	AA/THC
13:46:08	4207.347	2039.602				63.59005806	63.09711187	1.883054432
13:46:18	3597.3	2039.698						
13:46:28	3905.187	1989.624						
13:46:38	3909.362	2052.135						
13:46:48	4103.92	2028.249						
13:46:58	4197.201	2046.855						
13:47:08	3977.053	2058.601						

06-29-1992 SITE 4 DAY 1

TIME	THC1 (ppmC)	THC2 (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	FRONT GC RESULTS CH4 (ppmV/wet)	FRONT GC RESULTS ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	REAR GC RESULTS CH4 (ppmV/wet)	REAR GC RESULTS ACETALDEHYDE (ppmV/wet)
13:47:18	3927.187	2047.888						
13:47:28	4042.559	2041.653						
13:47:38	4608.136	1981.01						
13:47:48	3819.617	1858.505						
13:47:58	4385.086	1779.293						
13:48:08	3647.017	1772.078						
13:48:18	4233.087	1867.097						
13:48:28	3846.023	2005.167						
13:48:38	4135.013	2104.019						
13:48:48	4233.194	2128.519						
13:48:58	3945.248	2140.668						
13:49:08	4247.169	2134.812						
13:49:18	3841.84	2059.873						
13:49:28	4312.208	2041.63						
13:49:38	3714.493	2036.364						
13:49:48	4016.605	2037.437						
13:49:58	4217.569	2027.093						
13:50:08	4362.203	2009.749						
13:50:18	4092.445	1861.125						
13:50:28	3936.15	1826.044						
13:50:38	4083.949	1842.87						
13:50:48	3779.061	1954.038						
13:50:58	4295.113	2055.257						
13:51:08	3798.814	2096.924						
13:51:18	4322.856	2066.432						
13:51:28	3794.473	2103.739						
13:51:38	4233.647	2138.296						
13:51:48	3849.684	2083.09						
13:51:58	4016.892	2048.728						
13:52:08	3929.727	2080.019						
13:52:18	4009.743	1989.641						
13:52:28	4314.089	1898.94						
13:52:38	4061.092	1785.902						
13:52:48	4317.391	1734.401						
13:52:58	3516.955	1735.388						
13:53:08	3800.341	1767.632						
13:53:18	3849.491	1928.768						
13:53:28	4033.307	2014.207						
13:53:38	3847.946	2013.351						
13:53:48	3994.406	2046.054						
13:53:58	3970.156	2053.82						
13:54:08	3738.717	2099.472						
13:54:18	4047.177	2076.156						
13:54:28	3822.445	2086.689						
13:54:38	4142.227	2033.251						
13:54:48	3755.51	2041.185						
13:54:58	4311.817	1936.713						
13:55:08	3738.091	1937.55						
13:55:18	4173.706	1822.094						

06-29-1992 SITE 4 DAY 1

TIME	THC1 (ppmC)	THC2 (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
13:55:28	3615.608	1798.416						
13:55:38	4132.975	1882.063						
13:55:48	3830.419	2007.991						
13:55:58	4057.083	2055.035						
13:56:08	3917.793	2074.615	2030	2030	61.3			
13:56:18	3910.84	2029.717	ETH/THC	CH4/THC	AA/THC			
13:56:28	3897.828	2071.515	51.81488659	51.81488659	1.564656427			
13:56:38	3754.442	2072.496						
13:56:48	3929.344	2045.656	END					
			avg	3996.376670 **				

TIME	FRONT ETH-OH (ppmV/wet)	FRONT CH4 (ppmV/wet)	FRONT ACETALDEHYDE (ppmV/wet)	REAR ETH-OH (ppmV/wet)	REAR CH4 (ppmV/wet)	REAR ACETALDEHYDE (ppmV/wet)
13:56:58	3858.871	1954.92				
13:57:31	1803.053	1845.984				
13:57:31	1803.053	1845.984				
13:57:32	1803.053	1845.984				
13:57:38	144.0336	2006.908				
13:57:48	665.217	2035.512				

TIME	COMFORT HOOD	REAR	SAMPLE
13:57:58	2048.763	627.4432	
13:58:08	2075.696	746.1326	
13:58:18	2065.716	691.2921	
13:58:28	2050.517	682.5668	
13:58:38	2044.78	860.4109	
13:58:48	1943.279	710.0154	
13:58:58	1879.563	795.6963	
13:59:08	1855.482	550.1792	
13:59:18	1932.509	840.079	
13:59:28	2052.741	556.9186	
13:59:38	2054.801	921.7317	
13:59:48	2113.131	763.8647	
13:59:58	2097.338	869.3859	
14:00:08	2017.596	755.5576	
14:00:18	2091.943	754.4646	
14:00:28	2065.474	732.8246	
14:00:38	2030.89	659.8799	
14:00:48	2085.49	773.5814	
14:00:58	2009.224	590.0624	
14:01:08	1937.584	909.3981	
14:01:18	1909.829	514.0041	
14:01:29	1940.255	822.3591	
14:01:38	2074.507	633.1125	
14:01:48	2141.174	827.7611	
14:01:58	2122.506	684.83	

06-29-1992 SITE 4 DAY 1

TIME	THC1 (ppmC)	THC2 (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
14:02:08		2179.914	738.0924					
14:02:18		2180.876	742.1143					
14:02:28		2122.464	631.9999					
14:02:38		2108.908	793.5307					
14:02:48		2123.271	608.6312					
14:02:58		2139.381	881.2863					
14:03:08		2066.721	646.4709					
14:03:18		1945.108	884.986					
14:03:28		1877.598	511.0918					
14:03:38		1876.403	732.453					
14:03:48		2060.208	646.4434					
14:03:58		2126.044	729.8484					
14:04:08		2188.424	777.4755					
14:04:18		2166.677	678.3701					
14:04:28		2215.739	813.3356					
14:04:38		2230.914	593.4863					
14:04:48		2217.229	829.5139					
14:04:58		2209.583	560.6544					
14:05:08		2168.507	883.7983					
14:05:18		2149.895	656.6003					
14:05:28		2092.166	935.9443					
14:05:38		1948.826	711.356					
14:05:48		1872.943	685.5296					
14:05:58		1923.468	702.3225					
14:06:08		1995.025	632.3884					
14:06:18		2091.225	761.9625					
14:06:28		2117.53	558.3417					
14:06:38		2151.357	808.125					
14:06:48		2128.903	646.8386					
14:06:58		2131.53	831.8839					
14:07:08		2133.744	576.743					
14:07:18		2158.155	828.7665					
14:07:28		2100.049	701.5546					
14:07:38		2063.436	818.5208					
14:07:48		1975.354	913.5778			1660	1040	34.8
14:07:58		1864.083	759.3445			ETH/THC	CH4/THC	AA/THC
14:08:08		1772.989	850.5814			84.03557033	52.64879105	1.761709546
14:08:18		1737.695	600.1455					
14:08:28		1799.416	746.6086					
14:08:38		1940.624	528.679					
14:08:48		1990.783	834.3873					
14:08:58		1996.391	550.1347					
14:09:08		2051.797	756.1921					
14:09:18		2075.167	613.7496					
14:09:28		2056.304	787.1841					
14:09:38		2119.657	710.8651					
14:09:48		2143.534	691.5488					
14:09:58		2165.145	781.1161					
14:10:08		2085.762	729.685					

06-29-1992 SITE 4 DAY 1

TIME	THC1 (ppmC)	THC2 (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
14:10:18		2036.46	954.7411					
14:10:28		1852.077	757.4211					
14:10:38		1759.585	867.5573					
14:10:48		1729.167	546.5264					
14:10:58		1859.513	838.2042					
14:11:08		1990.7	634.5583					
14:11:18		2070.798	709.9733					
14:11:28		2021.658	610.6397					
14:11:38		2054.095	650.9881					
14:11:48		2047.498	655.1713					
14:11:58		2065.061	652.9236					
14:12:08		2091.387	773.5506					
14:12:18		2099.08	638.1152					
14:12:28		2092.582	854.4733					
14:12:38		2086.156	606.7721					
14:12:48		2091.361	846.4305					
14:12:58		2131.842	699.5386					
14:13:08		2030.506	996.5952					
14:13:18		1881.918	758.395					
14:13:28		1778.57	808.0107					
14:13:38		1724.611	653.0662					
14:13:48		1829.56	608.2062					
14:13:58		1938.305	723.3292					
14:14:08		2004.748	740.0311					
14:14:18		2025.044	853.7067					
14:14:28		2055.613	606.8076					
14:14:38		2055.229	860.5558					
14:14:48		1998.706	658.0015					
14:14:58		2063.657	731.1351					
14:15:08		2101.07	611.4099					
14:15:18		2068.064	721.8266					
14:15:28		1989.074	715.2347					
14:15:38		1986.081	809.1787					
14:15:48		1861.613	847.1259					
14:15:58		1758.958	672.0058					
14:16:08		1749.025	759.7234					
14:16:18		1844.967	662.7049					
14:16:28		1939.382	774.8328					
14:16:38		1964.189	530.444					
14:16:48		2008.828	793.3666					
14:16:58		2029.628	519.8904					
14:17:08		1988.837	761.9886	677	132	6.82		
14:17:18		1965.462	563.6015	ETH/THC	CH4/THC	AA/THC		
14:17:28		1947.825	630.0394	88.84647355	17.32309381	0.895026513		
14:17:38		1928.542	664.1248					
14:17:48		1968.794	579.6854					
14:17:58		1986.656	766.7264					
14:18:08		1955.442	680.2485					
14:18:18		1883.347	895.9873					

06-29-1992 SITE 4 DAY 1

TIME	THC1 (ppmC)	THC2 (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
14:18:28		1732.087	598.6868					
14:18:38		1633.234	844.9861					
14:18:48		1661.739	552.4755					
14:18:58		1722.268	626.2233					
14:19:08		1816.924	545.1298					
14:19:19		1920.139	606.7285					
14:19:28		1896.554	596.3895					
14:19:38		1884.474	528.2572					
14:19:48		1934.779	673.8837					
14:19:58		1915.899	531.6556					
14:20:08		1926.972	685.8432					
14:20:18		1907.227	548.9458					
14:20:28		1883.345	766.5331					
14:20:38		1845.282	510.9489					
14:20:48		1915.444	711.5064					
14:20:58		1910.309	649.9193					
14:21:08		1825.387	707.0912					
14:21:18		1730.757	701.9688					
14:21:28		1668.356	638.963					
14:21:38		1627.06	713.7896					
14:21:48		1677.294	547.2493					
14:21:58		1701.193	807.6527					
14:22:08		1658.944	543.792					
14:22:18		1682.15	724.9279					
14:22:28		1759.129	512.1897					
14:22:38		1810.951	738.6683					
14:22:48		1791.914	718.8073					
14:22:58		1799.058	617.673					
14:23:08		1841.509	633.8997					
14:23:18		1815.137	673.7142					
14:23:28		1727.522	803.357					
14:23:38		1591.621	568.7892					
14:23:48		1559.554	679.3233					
14:23:58		1629.182	514.593					
14:24:08		1711.011	726.6768					
14:24:18		1778.144	543.8968					
14:24:28		1845.972	744.8303					
14:24:39		1830.177	533.3182					
14:24:48		1810.505	687.916					
14:24:58		1780.374	569.1105					
14:25:08		1823.658	662.4855					
14:25:18		1788.678	619.889					
14:25:28		1831.397	610.0097					
14:25:38		1841.492	702.72					
14:25:48		1839.893	654.1461					
14:25:58		1743.017	786.4211					
14:26:08		1615.221	570.6957					
14:26:18		1549.407	724.1826					
14:26:28		1545.058	548.0419			814	765	32.6

06-29-1992 SITE 4 DAY 1

TIME	THC1 (ppmC)	THC2 (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
14:26:38		1615.694	657.4564					
14:26:48		1722.81	554.6263			ETH/THC	CH4/THC	AA/THC
14:26:58		1818.227	662.0603			52.68410635	49.51270437	2.109953153
14:27:08		1854.585	632.2052					
14:27:18		1866.367	578.9814					
14:27:28		1916.505	650.7527					
14:27:38		1895.494	514.1594					
14:27:48		1928.052	627.0159					
14:27:58		1955.642	510.0196					
14:28:08		1916.744	759.756					
14:28:18		1818.805	582.7399					
14:28:28		1719.89	784.2468					
14:28:38		1632.115	551.7927					
14:28:48		1601.356	626.6431					
14:28:58		1654.836	502.1582					
14:29:08		1775.438	548.9451					
14:29:18		1786.289	543.0642					
14:29:28		1848.676	515.3856					
14:29:38		1904.299	581.2726					
14:29:48		1898.844	476.1115					
14:29:58		1885.991	604.7498					
14:30:08		1890.682	493.5834					
14:30:18		1922.72	655.0829					
14:30:28		1928.426	589.2366					
14:30:38		1884.54	662.4198					
14:30:48		1911.501	580.5287	1981.8				
14:30:58		1902.332	628.3648					
				1930.971050	685.9580055			
14:31:08		1863.149	571.2021					
14:31:18		1859.752	525.9071					
14:31:28		1876.224	614.2487					
14:31:38		1819.24	486.2338					
14:31:48		1804.734	634.5732					
14:31:58		1787.124	441.9629					
14:32:08		1780.553	623.9651					
14:32:18		1778.02	422.5493					
14:32:28		1775.013	658.2667					
14:32:38		1766.294	541.2413					
14:32:48		1757.085	517.6631					
14:32:58		1778.026	528.6863					
14:33:08		1737.393	562.3177					
14:33:18		1765.992	566.2					
14:33:28		1725.858	431.7356					
14:33:38		1736.634	601.8099					
14:33:48		1732.622	421.6653					
14:33:58		1708.492	594.6865					
14:34:08		1710.497	407.3972					

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TIME	THC1 (ppmC)	THC2 (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
14:34:18		1704.478	591.0535					
14:34:28		1708.685	513.3357					
14:34:38		1678.609	547.0218					
14:34:48		1694.603	518.7336					
14:34:58		1722.213	589.3345					
14:35:08		1723.291	518.175					
14:35:18		1699.668	417.0332					
14:35:28		1649.438	507.6983	434	204	5.69		
14:35:38		1642.986	394.8401	ETH/THC	CH4/THC	AA/THC		
14:35:48		1666.55	508.4567	85.48383951	40.18134392	1.120744347		
14:35:58		1678.342	383.3602					
14:36:08		1677.376	550.887					
14:36:18		1695.73	481.0731					
14:36:28		1698.625	569.7857	END				
				avg	662.7101004 **			
14:36:38				183.2164	1729.604			
14:36:48				39.05723	1704.771			
14:36:58				25.32466	1621.673			
14:37:08				29.11894	1617.872			
14:37:18				2553.212	1587.218			
14:37:28				2752.483	1570.902			
14:37:38				2801.504	1550.208			
14:37:48				3300.258	1578.689			
14:37:58				2526.29	1545.93			
14:38:08				2954.014	1554.302			
14:38:19				2615.238	1588.434			
14:38:28				2977.592	1625.607			
14:38:38				2567.967	1637.818			

			ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
			FRONT	REAR	SAMPLE			
14:39:02	3086.367	1569.707						
14:39:02	3086.367	1569.707						
14:39:08	2526.005	1571.043						
14:39:18	2663.339	1578.019						
14:39:28	2609.158	1553.111						
14:39:38	2781.815	1542.358						
14:39:48	2620.851	1499.194						
14:39:58	2987.632	1507.565						
14:40:08	2456.917	1493.703						
14:40:18	2993.687	1486.423						
14:40:28	2439.684	1458.295						
14:40:38	2839.335	1455.553						
14:40:48	2368.481	1448.264						
14:40:58	2705.247	1425.438						

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TIME	THC1 (ppmC)	THC2 (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	FRONT GC RESULTS CH4 (ppmV/wet)	FRONT GC RESULTS ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	REAR GC RESULTS CH4 (ppmV/wet)	REAR GC RESULTS ACETALDEHYDE (ppmV/wet)
14:41:08	2414.569	1406.444						
14:41:18	2560.607	1388.169						
14:41:28	2472.173	1427.048						
14:41:38	2352.185	1430.398						
14:41:48	2551.07	1385.579						
14:41:58	2060.257	1413.089						
14:42:08	2501.241	1414.662						
14:42:18	2126.803	1405.767						
14:42:28	2472.089	1381.561						
14:42:38	2209.415	1367.419						
14:42:48	2424.976	1329.016						
14:42:58	2092.72	1340.069						
14:43:08	2284.17	1336.153						
14:43:18	2455.867	1299.35						
14:43:28	2184.585	1295.965						
14:43:38	2298.076	1278.17						
14:43:48	2178.595	1266.78						
14:43:58	2275.816	1250.95						
14:44:08	2076.923	1248.283						
14:44:18	2174.254	1194.702						
14:44:28	2036.192	1227.778				421	1250	14.3
14:44:38	2134.243	1219.494				ETH/THC	CH4/THC	AA/THC
14:44:48	2096.663	1228.384				34.28958655	101.8099363	1.164705671
14:44:58	2035.115	1201.657						
14:45:08	2168.795	1210.149						
14:45:18	2020.191	1235.512						
14:45:28	2238.259	1233.62						
14:45:38	1943.355	1221.935						
14:45:48	2357.698	1220.408						
14:45:58	1879.379	1194.11						
14:46:08	2116.865	1206.366						
14:46:18	2052.184	1189.936						
14:46:28	2139.55	1201.01						
14:46:38	1962.93	1193.63						
14:46:48	2067.831	1203.609						
14:46:58	2046.972	1181.918						
14:47:08	1929.702	1218.097						
14:47:18	2132.271	1217.624						
14:47:28	1969.697	1234.2						
14:47:38	2171.572	1228.479						
14:47:48	2042.094	1198.948						
14:47:58	2177.214	1194.351						
14:48:08	2057.639	1264.791						
14:48:18	2123.544	1259.968						
14:48:28	2121.331	1280.321						
14:48:38	2095.521	1240.209						
14:48:48	2034.563	1244.715						
14:48:58	2040.504	1295.489						
14:49:08	2355.805	1289.411						

06-29-1992 SITE 4 DAY 1

TIME	THC1 (ppmC)	THC2 (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	FRONT GC RESULTS CH4 (ppmV/wet)	FRONT GC RESULTS ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	REAR GC RESULTS CH4 (ppmV/wet)	REAR GC RESULTS ACETALDEHYDE (ppmV/wet)
14:49:18	2078.741	1230.866						
14:49:28	2465.032	1283.307						
14:49:38	2167.841	1218.501						
14:49:48	2553.762	1208.759						
14:49:58	2075.253	1202.737						
14:50:08	2283.056	1254.642						
14:50:18	2154.348	1223.906						
14:50:28	2183.823	1255.418						
14:50:38	2175.404	1288.651						
14:50:48	2551.907	1268.574						
14:50:58	2039.546	1282.27						
14:51:08	2458.434	1230.984						
14:51:18	2063.747	1232.714						
14:51:28	2460.512	1222.654						
14:51:38	1951.161	1195.035						
14:51:48	2122.578	1222.575						
14:51:58	2178.612	1196.913						
14:52:08	2055.445	1205.708						
14:52:18	2017.085	1215.142						
14:52:28	1988.162	1223.867						
14:52:38	2238.145	1250.02						
14:52:48	1789.9	1233.222						
14:52:58	2280.145	1240.661						
14:53:08	2026.607	1238.201						
14:53:18	2350.837	1207.759						
14:53:28	2041.69	1178.064	767	1440	22.2			
14:53:38	2157.273	1213.801	ETH/THC	CH4/THC	AA/THC			
14:53:48	2105.498	1181.624	37.56691760	70.52980619	1.087334512			
14:53:58	2056.181	1159.592						
14:54:08	2085.384	1139.915						
14:54:18	2017.515	1134.514						
14:54:28	2296.986	1129.434						
14:54:38	1957.691	1108.536						
14:54:48	2325.789	1101.449						
14:54:58	1946.177	1104.094						
14:55:08	2322.592	1123.894						
14:55:18	2002.367	1085.322						
14:55:28	2203.589	1086.099						
14:55:38	1858.289	1104.115						
14:55:48	2026.057	1134.914						
14:55:58	2093.599	1139.244						
14:56:08	2003.863	1149.709						
14:56:18	2113.188	1173.112						
14:56:28	2013.064	1160.19						
14:56:38	1966.731	1131.049						
14:56:48	2403.941	1076.204						
14:56:58	1885.416	991.8619						
14:57:08	1999.515	992.994						
14:57:18	1897.961	1060.974						

06-29-1992 SITE 4 DAY 1

TIME	THC1 (ppmC)	THC2 (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
14:57:28	1963.478	1122.318						
14:57:38	1864.127	1127.877						
14:57:48	1923.29	1161.825						
14:57:58	1920.928	1153.433						
14:58:08	1858.494	1207.142						
14:58:18	1958.957	1219.892						
14:58:28	1872.831	1221.542						
14:58:38	2105.673	1261.934						
14:58:48	1954.254	1287.544						
14:58:58	2134.461	1276.186						
14:59:08	2023.679	1263.825						
14:59:18	2146.547	1260.564						
14:59:28	2063.989	1207.702						
14:59:38	2116.142	1237.375						
14:59:48	2175.766	1226.777						
14:59:58	2140.776	1248.441						
15:00:08	2262.089	1266.317						
15:00:18	2127.914	1314.756						
15:00:28	2347.692	1351.622						
15:00:38	2195.667	1376.506						
15:00:48	2351.727	1365.036						
15:00:58	2187.457	1350.317						
15:01:08	2329.559	1382.032						
15:01:18	2182.99	1380.84						
15:01:28	2400.127	1364.409						
15:01:38	2533.323	1327.893						
15:01:48	2385.774	1295.909						
15:01:58	2380.306	1302.362						
15:02:08	2303.489	1283.809						
15:02:18	2469.21	1313.203						
15:02:28	2224.956	1333.074						
15:02:38	2376.735	1361.592						
15:02:48	2252.694	1358.743				603	831	13.3
15:02:58	2571.57	1384.125				ETH/THC	CH4/THC	AA/THC
15:03:08	2198.515	1383.106				44.37925347	61.15946871	0.978845889
15:03:18	2575.494	1399.179						
15:03:28	2523.684	1418.104						
15:03:38	2367.348	1339.431						
15:03:48	2281.371	1303.407						
15:03:58	2259.593	1247.242						
15:04:08	2630.925	1204.554						
15:04:18	2150.469	1159.381						
15:04:28	2705.296	1126.413						
15:04:38	2204.761	1136.125						
15:04:48	2620.472	1113.395						
15:04:58	2196.627	1142.63						
15:05:08	2450.846	1130.649						
15:05:18	2218.244	1123.025						
15:05:28	2307.829	1105.864						

06-29-1992 SITE 4 DAY 1

TIME	THC1 (ppmC)	THC2 (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
15:05:38	2303.34	1083.832						
15:05:48	2102.14	1035.84						
15:05:58	2371.602	1054.701						
15:06:08	1991.553	1031.457						
15:06:18	2360.775	1038.93						
15:06:28	1939.925	999.9518						
15:06:38	2303.534	1002.925						
15:06:48	1967.383	978.6324						
15:06:58	2197.699	960.226						
15:07:08	1930.248	941.0724						
15:07:18	2074.766	936.9536						
15:07:28	1997.329	922.9818						
15:07:39	1955.714	925.7808						
15:07:48	2296.162	888.1661						
15:07:58	1772.244	873.1545						
15:08:08	1944.27	885.7056						
15:08:18	1794.218	869.8339						
15:08:28	2039.147	842.4862						
15:08:38	1706.151	810.3345						
15:08:48	2020.055	806.5727						
15:08:58	1762.126	823.735						
15:09:08	1958.256	827.494						
15:09:18	1954.565	811.8194						
15:09:28	1750.305	810.2729						
15:09:38	1754.053	803.0228						
15:09:48	1639.292	758.0726						
15:09:58	1912.336	761.8027						
15:10:08	1573.534	749.6542						
15:10:18	1918.409	733.5861						
15:10:28	1613.128	734.0299						
15:10:38	1828.127	711.5559						
15:10:48	1589.441	716.4879						
15:10:58	1726.271	705.8698						
15:11:08	1641.878	696.2165						
15:11:18	1599.526	684.5353						
15:11:28	1692.477	653.0831						
15:11:38	1484.869	656.7989						
15:11:48	1715.119	639.5394						
15:11:58	1419.428	624.4787						
15:12:08	1668.458	607.2251						
15:12:18	1377.144	612.671	END					
			avg	2157.497703 **				
15:12:28	1498.622	1802.103		638	261		8.54	
15:12:38	539.5359	2145.318		ETH/THC	CH4/THC		AA/THC	
15:12:48	578.9119	2094.571		42.57244321	17.41599949		0.569856841	
15:12:58	527.4776	1903.975						

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TIME	THC1 (ppmC)	THC2 (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
15:13:08	566.0472	1720.217						
15:13:18	531.7347	1648.421						
15:13:28	539.8698	1625.936						
15:13:38	508.7659	1557.487						
15:13:48	450.1749	1519.005						
15:13:58	504.097	1491.231						
15:14:08	470.4616	1463.043						
15:14:18	517.2126	1421.573						
15:14:35	339.5742	1388.889						
15:14:54	1071.609	3025.901						
15:14:54	1071.609	3025.901						
15:14:58	3903.514	3874.456						
15:15:08	3926.29	3891.789						
15:15:18	3934.77	3908.118						
			3930.53	00:00 **				
15:15:34	3942.136	3899.084						
15:15:53	412.0605	845.9368						
15:15:53	412.0605	845.9368						

TIME	COMFORT HOOD	REAR	SAMPLE	FRONT ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
15:15:59	242.6741	690.0545							
15:16:08	237.1611	657.6315							
15:16:18	210.8838	615.865							
15:16:28	210.0765	578.4409							
15:16:38	194.4711	543.9508							
15:16:48	191.2815	510.4524							
15:16:58	182.3131	478.8344							
15:17:08	172.204	453.2653							
15:17:18	170.4063	426.0651							
15:17:28	158.0712	405.1039							
15:17:38	160.8799	381.2509							
15:17:48	150.5234	362.1091							
15:17:58	153.5017	339.8755							
15:18:08	143.3886	322.4276							
15:18:18	147.2941	306.2327							
15:18:28	140.2264	292.0008							
15:18:38	138.15	276.9158							
15:18:48	121.9067	263.5338							
15:18:58	117.2702	258.8984							
15:19:08	124.1811	262.9702							
15:19:18	152.7804	267.785							
15:19:28	185.1244	270.2475							

06-29-1992 SITE 4 DAY 1

TIME	THC1 (ppmC)	THC2 (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	FRONT GC RESULTS CH4 (ppmV/wet)	FRONT GC RESULTS ACETALDEHYDE: (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	REAR GC RESULTS CH4 (ppmV/wet)	REAR GC RESULTS ACETALDEHYDE (ppmV/wet)
15:19:38	198.5958	275.3123						
15:19:48	207.4398	279.9138						
15:19:58	219.0939	283.8271						
15:20:08	217.5105	275.0277						
15:20:18	218.9654	255.032						
15:20:28	230.125	222.7017						
15:20:38	230.5068	196.8533						
15:20:49	234.1448	183.0187						
15:20:58	233.8584	175.7036						
15:21:08	233.146	165.9261						
15:21:18	232.163	157.2895						
15:21:28	227.8167	150.7514						
15:21:38	223.3388	141.8494						
15:21:48	218.502	132.1047						
15:21:58	213.4206	125.9823						
15:22:08	204.5921	122.7235						
15:22:18	200.4724	117.9284						
15:22:28	195.3815	113.2728						
15:22:38	188.2313	110.6097						
15:22:48	178.6796	107.8718						
15:22:58	173.795	102.3244						
15:23:08	172.145	96.10034						
15:23:18	170.987	89.46204						
15:23:28	163.6835	86.4102						
15:23:38	158.8929	80.75961						
15:23:48	155.7359	78.15522						
15:23:58	150.6348	74.10821						
15:24:08	146.0481	70.66155						
15:24:18	143.3278	67.6646						
15:24:28	140.1138	65.37972	?????????					
15:24:38	137.5904	64.89659	?????????					
15:24:48	134.63	63.53521	?????????					
15:24:58	130.7957	61.91533	?????????					
15:25:08	123.9157	59.50378	?????????					
15:25:18	117.692	58.12706	?????????					
15:25:28	115.1102	56.99954	?????????					
15:25:38	113.8056	56.7356	?????????					
15:25:48	110.2709	55.57937	?????????					
15:25:59	106.5847	53.86017	?????????					
15:26:08	105.4267	53.60669	?????????					
15:26:18	100.6857	51.98051	?????????					
15:26:28	95.58754	50.9236	?????????					
15:26:38	93.96667	50.42307	?????????					
15:26:48	92.06123	49.64091	?????????					
15:26:58	92.92884	48.75881	?????????					
15:27:08	90.94463	49.86257	?????????					
15:27:18	88.54022	50.30496	?????????					
15:27:28	88.2488	48.90744	?????????					
15:27:38	86.4326	50.21193	?????????					

06-29-1992 SITE 4 DAY 1

TIME	THC1 (ppmC)	THC2 (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
15:27:48	86.50328	49.9302	?????????					
15:27:58	87.60653	48.80143	?????????					
15:28:08	85.62812	47.52237	?????????					
15:28:18	84.02995	48.03424	?????????					
15:28:28	83.27939	47.18239	?????????					
15:28:38	83.16695	45.85342	?????????					
15:28:48	83.32555	45.17766	?????????					
15:28:58	81.95262	45.66447	?????????					
15:29:08	80.73589	44.81517	?????????					
15:29:18	80.35165	44.80228	?????????					
15:29:28	78.44149	44.28272	?????????					
15:29:38	78.87611	43.78669	?????????					
15:29:48	77.05444	43.88875	?????????					
15:29:58	76.99642	43.29712	?????????					
15:30:08	76.69845	44.04267	?????????					
15:30:18	76.787	42.66833	?????????					
15:30:28	76.67689	42.72547	?????????					
15:30:38	76.53023	42.79254	?????????					
15:30:48	76.35332	41.0765	?????????					
15:30:58	75.27396	41.61505	?????????					
15:31:08	73.88387	40.36068	?????????					
15:31:18	74.91579	40.22408	?????????					
15:31:28	75.00814	41.109						
15:31:38	77.10968	39.12577	END					
15:40:22	29.30942	30.70868						
15:41:22	27.37462	29.68715						
15:42:22	26.16888	28.24188						
15:43:22	25.16556	27.90699						
15:44:22	23.26623	27.5386						
15:45:22	21.45342	27.40266						
15:46:22	20.46874	26.29006						
15:47:22	21.04416	24.8529						
15:48:22	19.38025	23.928						
15:49:22	18.57483	23.28748						
15:50:22	18.04177	22.4155						
15:51:22	16.5308	22.3903						
15:52:22	15.49782	22.61715						
15:53:22	32.93882	48.63649						
15:54:22	10.95089	0.180391						
15:55:22	-10.4883	-5.21869						
15:56:22	-10.1180	-6.65978						
15:57:22	-10.2832	-6.02885						
15:58:22	-11.4576	-7.53753						
15:59:22	-11.0118	-6.63419						
16:00:22	-10.4709	-7.37112						

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TIME	THC1 (ppmC)	THC2 (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	FRONT GC RESULTS CH4 (ppmV/wet)	FRONT GC RESULTS ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	REAR GC RESULTS CH4 (ppmV/wet)	REAR GC RESULTS ACETALDEHYDE (ppmV/wet)
16:01:22	-7.73855	-6.31687						
16:02:22	-2.75975	-6.82278						
16:03:22	-8.84666	-6.30299						
16:04:22	11.51324	0.563958						
16:05:22	-5.73579	-9.71394						
16:06:22	-12.4739	-9.43959						
16:07:22	-15.9116	-10.6422						
16:08:22	-15.8516	-10.8894						
16:09:22	-14.9926	-10.1718						
16:10:22	-14.8001	-9.88502						
16:11:22	-8.32849	-7.62795						
16:12:22	-5.44939	-7.77114						
16:13:22	-5.31880	-7.85915						
16:14:22	-6.21156	-8.38721						
16:15:22	-5.76413	-8.04866						
16:16:22	-5.48393	-8.40686						
16:17:22	-2.61694	-8.00759						
16:18:22	-5.79227	-8.69314						
16:18:52	145.2192	161.8659						
16:18:52	145.2192	161.8659						
16:18:52	145.2192	161.8659						
16:19:18	191.8012	191.0489						
16:19:19	191.8012	191.0489						
16:19:22	188.4628	186.3205						
16:19:32	185.0497	189.588						
16:19:42	184.5064	188.3871						
16:19:52	185.3749	184.3148						
16:20:02	184.3167	185.2082						
16:20:12	184.8257	186.6563						
16:20:22	193.2205	185.8923						
16:20:32	200.0132	185.851						
16:20:42	198.6367	186.3887						
16:20:52	200.2838	184.6948						
16:21:02	199.5984	185.076						
16:21:12	200.2867	185.5767						
16:21:22	197.6256	184.8666						
16:21:35	194.8988	185.7682						
16:21:42	156.3317	174.2926						
16:21:52	29.6086	34.87508						
16:22:20	0.087452	4.718669						

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TIME	THC1 (ppmC)	THC2 (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
16:22:21	0.087452	4.718669						
16:22:22	278.5449	293.8854						
16:22:32	287.7721	289.1677						
16:22:42	292.524	291.7206						
16:22:52	295.4875	293.2863						
16:23:02	296.3444	293.2863						
16:23:12	296.4415	294.7784						
16:23:22	295.9486	296.2672						
			296.0555	294.40455				
16:23:32	294.8903	299.771						
16:23:42	301.0226	296.7039						
16:23:52	301.5844	296.2308						
16:24:02	302.9695	295.5156						
16:24:33	287.2951	306.5049						
16:24:33	287.2951	306.5049						
16:24:34	287.2951	306.5049						
16:24:55	297.4286	299.1415						
16:24:55	297.4286	299.1415						
16:25:17	312.6353	299.7659						
16:25:18	312.6353	299.7659						
16:25:22	312.8215	300.0795						
16:25:32	314.1778	298.3741						
16:25:42	315.2594	297.7247						
			313.5058	299.14202				
16:25:58	315.9797	297.1868						
16:26:02	314.9744	297.8044						
16:26:12	315.2371	297.958						
16:26:22	166.7599	167.2964						
16:26:32	33.52651	15.62941						
16:26:42	25.15895	2.998198						
16:26:52	20.23926	-3.44143						
16:27:02	18.4521	-7.08573						
16:27:12	16.82632	-7.79365						
16:27:22	17.2137	-8.17013						
16:27:32	15.91079	-7.53457						
16:27:42	11.43349	-7.10561						
16:27:52	11.23298	-8.15852						
16:28:02	10.71152	-7.20551						
16:28:12	12.28973	-9.27168						
	12.40177	-10.4820						
16:28:32	11.30668	-8.83452						
16:28:42	13.87442	-10.9209						

BAKERY SITE 4
DAY 1

MON
6/29/92

[illegible]
06-29-1992 [illegible]
CALIBRATION FILE NAME =C:\CHICO\[illegible].CAL

Chan.	Name	Units	Zero		Span		Slope	Int.
			Conc.	Resp	Conc.	Resp.		
1	THC1	PPM	0.00	0.0110	3960.00	3.964	1001.792	-10.97
2	O2	%	0.00	0.0004	20.90	0.085	247.888	-0.11
3	THC2	PPM	0.00	-.0011	3980.00	3.772	1054.614	1.18
4		PPM	0.00	0.0092	3960.00	3.958	1002.937	-9.26

Press shift-PrtSc to print this table
Press <C> to Continue

RADIAN CORPORATION 3960 DC U T :

Field Testing and Process Engineering Dept.
Continuous Emissions Monitoring Data
SAXERIES
.PA
Performed for:
Date Printed = 06-29-1992 Current Time = 10:41:31
File Name = C:\CEMDATA\062992.PRN Calibration File:C:\CEMDATA\0628A.CAL

06-29-1992 Time	THC1 PPM	O2 %	THC2 PPM	PPM
10:41:36	3944.4	15.3	-1493.1	1686.8
10:42:19	3916.1	4.1	-28.2	3921.5
10:42:19	3916.1	4.1	-28.2	3921.5
10:42:19	3916.1	4.1	-28.2	3921.5
10:42:19	3916.1	4.1	-28.2	3921.5
10:42:26	3969.5	0.5	-364.6	3969.6
10:42:36	3963.6	-0.1	-48.1	3965.7
10:42:46	3964.5	-0.6	-51.4	3962.6
10:42:56	3966.1	-0.4	-58.5	3970.6
10:43:06	3963.4	-0.1	-63.1	3972.5
10:43:16	3959.1	-0.8	-54.4	3956.6
Avg.=	3959.7	2.8	-204.2	3942.8

3964 3966

RADIAN CORPORATION 30.2 U T L

Field Testing and Process Engineering Dept.
Continuous Emissions Monitoring Data
BAKERIES
.PA
Performed for:
Date Printed = 06-29-1992 Current Time = 11:11:18
File Name = C:\CEMDATA\062992.PRN Calibration File:C:\CEMDATA\062[illegible].CAL

06-29-1992 Time	THC1 PPM	O2 %	THC2 PPM	PPM
11:11:36	138.8	15.2	-5063.7	118.0
11:12:06	117.4	17.4	-4273.9	88.4
11:12:36	108.9	17.9	-3950.8	71.0
11:13:06	109.4	17.2	-3784.3	65.6
11:13:36	76.4	17.4	-3821.1	65.7
11:14:06	65.5	18.2	-3796.3	63.1
Avg.=	103.4	17.5	-4098.7	78.2

64.4

72.9

FAEI-N CORPORATION 199.1 21 U F L

Field Testing and Process Engineering Dept.
Continuous Emissions Monitoring Data
SERIES
FA
Performed for:
Date Printed = 06-29-1992 Current Time = 11:12:45
File Name = C:\CEMDATA\062992.PRN Calibration File:C:\CEMDAT4\0628R.CAL

06-29-1992 Time	THC1 PPM	O2 %	THC2 PPM	PPM
11:17:06	214.5	16.8	-5163.2	200.2
11:17:36	180.9	18.4	-5246.1	188.5
11:18:06	179.8	18.8	-2733.5	193.0
11:18:36	180.1	18.7	-5221.3	179.4
11:19:06	182.0	18.7	-5245.3	179.1
AVG=	187.5	18.3	-4722.6	185.3

180.7 179.9

RADIAN CORPORATION 80.1 R T 1

Field Testing and Process Engineering Dept.
Continuous Emissions Monitoring Data
BATTERIES
,PA
Performed for:
Date Printed = 08-29-1992 Current Time = 11:26:19
File Name = C:\DEMO47A\080292.PRN Calibration File:C:\DEMO47A\080292.CAL

08-29-1992 Time	THC1 PPM	O2 %	THC2 PPM	PPM
10:21:06	75.2	17.9	-3981.0	67.8
10:21:36	67.9	18.7	-3978.0	61.2
10:22:06	62.8	18.6	-3773.2	60.3
10:22:36	60.1	18.9	-3775.9	59.4
10:23:06	59.9	18.8	-3760.3	59.7
10:23:36	59.3	18.9	-3758.9	59.6
10:24:06	58.7	18.8	-3743.7	59.0
10:24:36	58.6	18.8	-3728.2	58.9
10:25:06	59.2	18.9	-3756.4	59.0
Avg.=	61.9	18.7	-3674.2	60.6

RADIAN CORPORATION M I N U T E

Field Testing and Process Engineering Dept.
Continuous Emissions Monitoring Data
SERIES
.PA
Performed for:
Date Printed = 06-29-1992 Current Time = 12:59:50
File Name = C:\CEMDATA\062992.PRN Calibration File:C:\CEMDATA\0628A.CAL

06-29-1992 Time	THC1 PPM	O2 %	THC2 PPM	PPM
12:59:55	13.7	0.1	-3656.0	19.6
12:59:56	6.6	-0.6	-3872.8	16.3
13:00:06	-3.6	-1.2	-3692.9	21.2
13:00:16	-2.3	-1.3	-3675.2	17.2
13:00:26	-12.0	-1.1	-3719.0	6.5
13:00:36	-16.0	-1.2	-3719.0	-0.7
13:00:46	-20.1	-1.7	-3597.3	-5.7
13:00:56	-21.0	-1.4	-3594.6	-4.9
13:01:06	-20.7	-1.7	-3546.0	-4.8
13:01:16	-22.4	-1.2	-3611.1	-7.2
13:01:26	-22.5	-1.6	-3716.7	-6.7
13:01:36	-18.4	-1.3	-3638.2	-4.1
13:01:46	-25.9	-1.9	-3673.5	-10.8
13:01:56	-23.1	-1.2	-3624.1	-8.9
Avg.=	~~-13.1~~	-1.2	-3667.2	~~1.3~~

-21.8 -6.6

CALIBRATION SUMMARY
08-29-1992 13:05:31
CALIBRATION FILE NAME =C:\CEMDATA\0829B.CAL

Chan.	Name	Units	Zero Conc.	Zero Resp.	Span Conc.	Span Resp.	Slope	Int.
1	THC1	PPM	0.00	-.0141	3960.00	3.951	996.112	14.01
2	O2	%	0.00	0.0004	20.90	0.085	247.998	-0.11
3	THC2	PPM	0.00	-.0011	3980.00	3.772	1054.814	1.18
4		PPM	0.00	0.0060	3960.00	4.016	987.522	-5.95

Press Shift-PrtSc to Print Out Table
Press <C> to Continue

CEM INSTRUMENT DRIFT SUMMARY
08-29-1992 13:05:51

Chan.	Name	Units	Zero Conc. (Actual)	Zero Conc. Observed	Span (Actual)	Span Observed	Drift % of Scale Zero	Drift % of Scale Span
1	THC1	PPM	0.000	%-25.050	3960.00	3957.50	-0.25	-0.02
2	O2	%	0.000	0.000	20.90	0.00	0.00	-83.66
3	THC2	PPM	0.000	0.000	3980.00	0.00	0.00	-39.80
4		PPM	0.000	%-3.221	3960.00	4018.58	-0.83	0.59

Press Shift-PrtSc to Print Out Table
Press <C> to Continue

ADIAN CORPORATION 798 C1 U 1 1

ield Testing and Process Engineering Dept.
ontinuous Emissions Monitoring Data
AKERIES
PA
erformed for:
ate Printed = 06-29-1992 Current Time = 13:08:01
ile Name = C:\CEMDATA\062992.PRN Calibration File:C:\CEMDATA\0629B.CAL

06-29-1992 Time	THC1 PPM	O2 %	THC2 PPM	PPM
3:00:05	2428.3	1.0	-1183.4	1037.8
3:00:06	2428.3	1.0	-1183.4	1037.8
3:00:09	833.2	7.2	-4305.6	916.5
3:00:18	830.0	3.9	-4218.5	811.9
3:00:28	819.9	0.0	-4216.7	800.8
3:00:36	816.5	-0.1	-4216.8	802.7
3:00:48	812.6	-0.4	-4230.2	803.5
3:00:58	811.0	-0.9	-2976.2	803.7
3:01:08	806.3	-1.1	-3998.2	802.6
3:01:18	807.8	-1.1	-4233.9	802.5
3:01:28	808.1	-1.1	-3985.7	802.4
3:01:38	807.9	-0.9	-4191.2	804.6
3:01:48	808.8	-1.0	-4237.7	802.0
3:01:58	816.6	-1.0	-4231.1	802.6
3:10:09	815.7	-1.1	-4233.4	801.8
3:10:18	815.3	-1.0	-4246.5	802.8
3:10:28	814.4	-1.1	-4248.8	801.0
3:10:38	812.2	-1.0	-4128.4	799.9
3:10:48	805.0	-1.1	-4220.3	802.3
3:10:58	806.0	-1.1	-4237.2	801.4
3:11:09	806.4	-1.1	-4236.1	801.2
AVG.=	967.3	-0.2	-3850.3	925.7

810.2 801.9

RADIAN CORPORATION 1490 C I U T L

Field Testing and Process Engineering Dept.
Continuous Emissions Monitoring Data
REFINERIES
PA
Performed for:
Date Printed = 06-29-1992 Current Time = 13:14:54
File Name = C:\CEMDATA\062992.PRN Calibration File:C:\CEMDATA\06292.CAL

06-29-1992 Time	THC1 PPM	O2 %	THC2 PPM	PPM
13:14:59	4019.7	18.2	-243.7	2279.2
13:14:59	4019.7	18.2	-243.7	2279.2
13:15:09	1998.4	15.6	-595.1	1610.1
13:15:19	1534.3	6.9	-976.8	1508.1
13:15:29	1521.7	2.5	-1114.5	1501.5
13:15:39	1515.9	0.9	-961.0	1499.9
13:15:49	1513.2	1.3	-1162.9	1509.5
13:15:59	1511.7	-0.1	-995.5	1503.9
13:16:09	1510.1	-0.1	-961.1	1501.1
13:16:19	1507.3	-0.2	-1134.3	1503.3
13:16:29	1507.9	-0.2	-969.6	1525.9
13:16:39	1509.6	-0.3	-1008.2	1504.6
13:16:49	1511.5	-0.3	-1012.2	1508.3
13:16:59	1509.7	-0.2	-1007.9	1505.7
13:17:09	1521.7	-0.3	-1034.6	1521.6
13:17:19	1516.6	-0.3	-1030.2	1504.0
13:17:29	1509.5	-0.2	-1019.9	1507.5
13:17:39	1502.4	-0.2	-993.1	1502.2
13:17:49	1504.2	-0.3	-1034.6	1504.0
13:17:59	1502.1	-0.2	-1037.7	1501.5
13:18:09	1504.1	-0.2	-1065.4	1505.0
13:18:19	1502.5	-0.3	-1049.6	1503.1
13:18:29	1504.6	0.1	-1027.3	1506.1
13:18:39	1504.1	-0.2	-1147.0	1505.2
13:18:49	1502.9	-0.2	-1223.6	1503.7
13:18:59	1502.9	-0.4	-1149.4	1501.7
13:19:09	1501.3	-0.2	-1017.4	1501.9
13:19:19	1508.9	-0.1	-977.1	1502.9
13:19:29	2057.2	-0.3	-1131.0	1734.6
13:19:39	4134.4	-0.4	-974.9	2387.6
13:19:49	4225.3	0.7	-530.7	2471.7
13:19:59	4734.1	9.4	-303.9	2369.7
13:20:09	4119.4	14.6	-930.0	2405.8
13:20:19	4922.4	16.0	-1141.6	2488.7
Avg.=	2105.0	2.9	-950.3	1678.1

1507.4 1504.8

SITE 4
DAY 1

RADIAN CORPORATION 2000 D U T L OLD C,

Field Testing and Process Engineering Dept.
Continuous Emissions Monitoring Data
BAKERIES
.PA
Performed for:
Date Printed = 06-29-1992 Current Time = 13:20:36
File Name = C:\CEMDATA\062992.PRN Calibration File:C:\CEMDATA\062PE.CAL

06-29-1992 Time	THC1 PPM	O2 %	THC2 PPM	PPM
13:20:41	3561.2	17.6	-684.3	1670.7
13:20:48	2041.8	15.8	-662.0	1924.8
13:20:58	2032.5	14.2	-593.7	1930.3
13:21:08	2031.0	17.9	-807.6	1937.6
13:21:18	2033.6	18.5	-911.4	1936.1
13:21:28	2031.7	18.6	-1093.5	1937.8
13:21:38	2030.6	19.0	-1017.4	1938.8
13:21:48	2030.7	19.5	-1110.8	1936.0
13:21:58	2029.6	19.7	-928.3	1936.5
13:22:08	2027.2	19.8	-765.5	1937.9
13:22:18	2030.2	19.8	-615.8	1937.2
13:22:28	2029.6	19.9	-741.8	1938.9
13:22:38	2031.7	20.0	-679.8	1942.1
13:22:48	2030.5	19.9	-1158.6	1941.0
13:22:58	2029.9	19.9	-732.5	1942.2
13:23:08	2033.4	19.9	-607.0	1939.9
13:23:18	2041.0	19.9	-722.2	1941.2
13:23:28	2062.2	19.8	-777.2	1940.9
13:23:38	2059.3	19.9	-853.5	1942.9
13:23:48	2052.8	19.8	-1399.7	1941.9
13:23:58	2032.1	19.8	-1214.8	1942.2
13:24:08	2029.2	19.9	-555.1	1942.8
13:24:18	2024.6	19.9	-852.0	1942.9
Avg.=	2102.4	19.1	-916.9	1927.0

143

2038 1939

HOLIAN CORPORATION 3950 SC L T L

Field Testing and Process Engineering Dept.
Continuous Emissions Monitoring Data
VAX SERIES
EPA
Performed for:
Date Printed = 08-29-1992 Current Time = 15:14:46
File Name = D:\CEMDATA\062992.PRN Calibration File:C:\CEMDATA\062992.CAL

08-29-1992 Time	THCI PPM	O2 %	THCI PPM	PPM
15:14:54	1071.6	17.5	-1004.0	3025.9
15:14:54	1071.6	17.5	-1004.0	3025.9
15:14:59	3903.9	17.6	-1122.6	3874.5
15:15:09	3926.7	14.5	-296.3	3891.8
15:15:19	3934.3	7.2	-55.4	3908.1
Avg.=	2781.4	14.9	-695.8	3545.2

3931 3900

CALIBRATION SUMMARY
08-04-1991 15:27:10
CALIBRATION FILE NAME =C:\EMLAN\CALDATA.CAL

Chan.	Name	Units	Zero Conc.	Zero Resp.	Span Conc.	Span Resp.	Slope	Int.
1	TMC1	PPM	0.00	0.0027	3960.00	3.952	1002.255	-2.69
2	O2	%	0.00	0.0004	20.90	0.085	247.888	-0.11
3	TMC2	PPM	0.00	-.0011	3980.00	3.771	1054.819	1.19
4		PPM	0.00	0.0059	3980.00	4.032	983.310	-4.09

Press Shift-PrtSc to Print Out Table
Press [Z] to Continue

ZERO INSTRUMENT DRIFT SUMMARY
08-04-1991 15:27:50

Chan.	Name	Units	Zero Conc. Actual	Zero Conc. Observed	Span Actual	Span Observed	Drift % of Scale: Zero	Span
1	TMC1	PPM	0.000	%16.656	3960.00	3951.99	0.17	-0.09
2	O2	%	0.000	0.000	20.90	0.00	0.00	-61.69
3	TMC2	PPM	0.000	0.000	3980.00	0.00	0.00	-39.80
4		PPM	0.000	%-1.046	3960.00	3975.91	-0.01	0.16

Press Shift-PrtSc to Print Out Table
Press (C) to Continue

197.1 C1

RADIAN CORPORATION 200 C. D T . (C CAL

Field Testing and Process Engineering Dept.
Continuous Emissions Monitoring Data
BAKERIES
EPA
Performed for:
Date Printed = 06-29-1992 Current Time = 16:19:10
File Name = C:\CEMDATA\062992.PRN Calibration File:C:\CEMDATA\062990.CAL

06-29-1992 Time	THC1 PPM	O2 %	TH22 PPM	PPM
5:19:18	191.8	19.3	-5256.3	191.0
5:19:19	191.8	19.3	-5256.1	191.0
5:19:22	188.5	19.1	-5302.6	186.3
5:19:32	185.0	19.3	-526[illegible]	199.[illegible]
5:19:42	184.5	19.3	-5239.[illegible]	183.4
5:19:52	185.4	19.5	-5211.2	184.3
5:20:02	190.3	19.4	-5237.5	185.2
5:20:12	189.8	19.4	-5235.9	186.7
5:20:22	193.2	19.3	-5240.1	185.9
5:20:32	202.0	19.4	-5237.7	187.4
5:20:42	198.1	19.4	-5237.1	186.4
5:20:52	200.2	19.2	-524[illegible]	184.7
5:21:02	195.6	19.4	-5242.5	189.[illegible]
5:21:12	202.3	19.4	-5244.[illegible]	185.[illegible]
5:21:22	197.6	19.3	-5240.3	181.9
AVG.=	192.3	19.3	-5245.4	186.[illegible]

ADIAN CORPORATION 200 ETHANOL [illegible]

Data Testing and Process Engineering Dept.
Continuous Emissions Monitoring Data
SERIES
PA
Performed for:
Date Printed = 06-24-1992 Current Time = 16:22:14
File Name = C:\CEMDATA\062992.PPM Calibration File:C:\CEMDATA\062990.CAL

06-29-1992 Time	THC1 PPM	O2 %	THC2 PPM	PPM
6:22:20	0.1	19.0	-3685.0	4.7
6:22:21	0.1	19.0	-3685.0	4.7
6:22:22	278.5	18.5	-5317.5	293.[illegible]
6:22:32	287.8	19.4	-2395.7	295.2
6:22:42	292.5	19.4	-4759.1	291.7
6:22:52	295.5	19.1	-5236.2	293.7
6:23:02	296.3	19.3	-5172.5	293.3
6:23:12	296.4	19.3	-5174.2	294.6
6:23:22	295.9	19.4	-5177.5	295.3
Avg.=	229.0	19.1	-4622.1	229.1

296.1 294.4

[illegible] CORPORATION 200 ETHANOL [illegible]

Field Testing and Process Engineering Dept.
Continuous Emissions Monitoring Data
[illegible]SERIES
FID
Performed for:
Date Printed = 06-25-1992 Current Time = 16:25:11
File Name = C:\CEMDATA\062592.PRN Calibration File:C:\CEMDATA\062592.CAL

06-25-1992 Time	THC1 PPM	O2 %	HCl PPM	PPM
8:25:17	312.6	18.9	-5249.3	294.8
8:25:18	312.6	18.9	-5249.3	294.8
8:25:22	312.6	19.2	-5217.5	300.1
8:25:32	314.2	19.4	-5182.7	299.4
8:25:42	316.3	19.3	-5161.2	297.7
Avg.=	313.5	19.1	-5223.6	295.1

6/30/92 SITE 4 DAY 2

	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
14:06:34	3992.553	4001.554						
14:06:38	3955.572	3963.571						
14:06:48	3952.432	3959.218						
14:06:58	3954.385	3960.036	ETH/THC	CH4/THC	AA/THC	ETH/THC	CH4/THC	AA/THC
	3954.129	3960.941	0	0	0	0	0	0
14:07:08	3961.632	3968.104						
14:07:18	3955.959	3968.402						
14:07:28	3674.33	3295.094						
14:07:38	3631.633	2093.326						
14:07:48	3108.629	2600.493						
14:07:58	1671.134	1592.472						
14:08:08	1546.793	1531.644						
14:08:23	1525.886	1524.542						
14:08:28	1509.273	1514.29						
14:08:38	1504.401	1512.126						
14:08:48	1512.504	1504.701						
14:08:58	1510.649	1504.906						
14:09:08	1512.525	1506.657						
14:09:18	1508.636	1504.534						
14:09:28	1511.323	1505.004						
14:09:38	1512.455	1506.587						
14:09:48	1502.264	1503.902						
14:09:58	1498.157	1503.055						
14:10:08	1496.151	1501.223						
14:10:18	1502.634	1506.238						
	1506.747	1506.101						
14:10:28	1498.213	1504.915						
14:10:38	2491.19	1758.276	FRONT			REAR		
14:10:52	2491.19	1758.276	ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
14:10:58	3240.55	2255.103						
			FRONT	REAR				
14:11:08	3897.419	2249.936						
14:11:18	3550.055	2143.517						
14:11:28	4111.85	2043.496						
14:11:38	3551.18	2005.157						
14:11:48	4150.501	1997.774						
14:11:58	3498.292	1976.939						
14:12:08	4129.244	1988.054						

6/30/92 SITE 4 DAY 2

	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE: (ppmV/wet)	:	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
14:12:18	3275.182	1988.728				:			
14:12:28	3984.186	2068.651				:			
14:12:38	3376.511	2162.45				:			
14:12:48	3914.019	2188.673	1700	2200	66.2	:			
14:12:58	3879.496	2219.428	ETH/THC	CH4/THC	AA/THC	:			
14:13:08	3604.091	2180.213	43.43361644	56.20820951	1.691356122	:			
14:13:18	3642.758	2162.779				:			
14:13:28	3395.249	2103.48				:			
14:13:38	3599.688	2076.849				:			
14:13:48	3315.975	2079.66				:			
14:13:58	4080.971	2089.851				:			
14:14:08	3655.229	2093.933				:			
14:14:18	4243.131	2008.716				:			
14:14:28	3678.762	1947.732				:			
14:14:38	4011.36	1878.813				:			
14:14:48	3917.84	1854.908				:			
14:14:58	3621.519	1838.459				:			
14:15:08	3764.712	1869.636				:			
14:15:18	3357.289	2008.363				:			
14:15:28	3910.854	2117.9				:			
14:15:38	3215.905	2129.265				:			
14:15:48	3842.086	2181.783				:			
14:15:58	3084.247	2194.206				:			
14:16:08	3623.733	2186.223				:			
14:16:18	3359.692	2196.157				:			
14:16:28	3865.493	2195.937				:			
14:16:38	3497.731	2129.935				:			
14:16:48	3685.068	2020.832				:			
14:16:58	3812.936	1965.259				:			
14:17:08	3599.728	1972.946				:			
14:17:18	4127.445	1984.751				:			
14:17:28	3449.026	1964.548				:			
14:17:38	3921.006	1974.934				:			
14:17:48	3492.024	2029.7				:			
14:17:58	3949.579	2123.69				:			
14:18:08	3249.285	2138.683				:			
14:18:18	3585.394	2135.88				:			
14:18:28	3505.866	2089.269				:			
14:18:38	3494.663	2085.061				:			
14:18:48	3865.013	2072.558				:			
14:18:58	3607.965	1987.756				:			
14:19:08	3961.07	1878.4				:			
14:19:18	3432.289	1854.397				:			
14:19:28	4082.557	1879.979				:			
14:19:38	3237.44	1864.881				:			
14:19:48	3782.809	1893.072				:			
14:19:58	3243.297	1986.294				:			
14:20:08	3740.669	2097.163				:			

6/30/92 SITE 4 DAY 2

	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE: ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
14:20:18	3420.526	2134.049						
14:20:28	3727.145	2119.613						
14:20:38	3657.657	2160.203						
14:20:48	3663.79	2163.357						
14:20:58	3999.225	2134.628						
14:21:08	3499.38	2043.301						
14:21:18	4084.877	1972.782						
14:21:28	3407.255	1969.464						
14:21:38	4044.188	1961.634						
14:21:48	3309.657	1968.025				911	1480	38.6
14:21:58	3853.835	1986.084				ETH/THC	CH4/THC	AA/THC
14:22:08	3414.687	2004.178				46.29006237	75.20229671	1.961357198
14:22:18	3726.858	2101.793						
14:22:28	3603.901	2136.5						
14:22:38	3621.348	2130.618						
14:22:48	4019.795	2105.15						
14:22:58	3475.04	1969.147						
14:23:08	4069.531	1864.198						
14:23:18	3390.818	1792.338						
14:23:28	3948.419	1753.374						
14:23:38	3572.844	1747.18						
14:23:48	3813.29	1755.015						
14:23:58	3426.978	1835.524						
14:24:08	3460.14	1884.026						
14:24:18	3389.261	1905.332						
14:24:28	3278.212	1912.562						
14:24:38	3694.273	1885.964						
14:24:48	3144.448	1801.755						
14:24:58	3790.962	1745.03						
14:25:08	3186.265	1715.862						
14:25:18	3721.571	1724.894						
14:25:28	3248.113	1724.058						
14:25:38	3672.23	1783.425						
14:25:48	3164.381	1910.913						
14:25:58	3573.245	1998.203						
14:26:08	3738.35	2021.816						
14:26:18	3394.986	2011.008						
14:26:28	3526.181	2008.046						
14:26:38	3559.098	1998.733						
14:26:48	3681.393	1900.176						
14:26:58	3303.364	1855.282						
14:27:08	3588.205	1850.162						
14:27:18	3476.855	1855.12						
14:27:28	3981.846	1862.494						
14:27:38	3551.931	1855.322						
14:27:48	4019.817	1875.737						
14:27:58	3664.06	1896.638						
14:28:08	3751.472	1961.403						

6/30/92 SITE 4 DAY 2

	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE: (ppmV/wet)	:	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
14:28:18	3874.926	2046.024				:			
14:28:28	3528.169	2095.498				:			
14:28:38	4040.094	2107.908				:			
14:28:48	3452.017	2093.534				:			
14:28:58	4055.497	2025.76				:			
14:29:08	3329.919	1950.781				:			
14:29:18	3805.213	1888.805				:			
14:29:28	3400.556	1856.916				:			
14:29:38	3787.201	1873.358				:			
14:29:48	3328.596	1894.531				:			
14:29:58	3736.833	1970.745				:			
14:30:08	3469.985	2060.494				:			
14:30:18	3603.349	2101.935				:			
14:30:28	3698.49	2135.426				:			
14:30:38	3580.544	2143.309	2030	1520	59	:			
14:30:48	3962.425	2071.176	ETH/THC	CH4/THC	AA/THC	:			
14:30:58	3624.452	1956.112	56.69529546	42.45164980	1.647794301	:			
14:31:08	4039.127	1908.767				:			
14:31:18	3511.238	1886.833				:			
14:31:28	3656.66	1886.358				:			
14:31:38	3528.851	1884.97				:			
14:31:48	3549.921	1953.426				:			
14:31:58	3838.625	2038.392				:			
14:32:08	3436.934	2099.342				:			
14:32:18	3895.448	2143.277				:			
14:32:28	3484.518	2157.53				:			
14:32:38	4117.12	2140.896				:			
14:32:48	3446.413	2038.059				:			
14:32:58	4025.817	1946.62				:			
14:33:08	3361.966	1896.816				:			
14:33:18	3854.773	1887.255				:			
14:33:28	3752.069	1878.627				:			
14:33:38	3931.234	1895.705				:			
14:33:48	3753.078	1914.155				:			
14:33:58	3551.132	1932.032				:			
14:34:08	3978.797	2000.86				:			
14:34:18	3498.051	2075.593				:			
14:34:28	4012.089	2118.559				:			
14:34:38	3370.271	2128.954				:			
14:34:48	3668.458	2122.289				:			
14:34:58	3573.234	1990.894				:			
14:35:08	3769.759	1895.138				:			
14:35:18	3533.286	1830.707				:			
14:35:28	3898.247	1838.868				:			
14:35:38	3860.526	1844.109				:			
14:35:48	3599.566	1847.087				:			
14:35:58	3949.307	1870.13				:			
14:36:08	3338.409	1922.983				:			

6/30/92 SITE 4 DAY 2

	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
14:36:18	4002.846	2032.02						
14:36:28	3540.777	2115.169						
14:36:38	3965.429	2154.243						
14:36:48	3446.807	2158.962						
14:36:58	3674.129	2104.612						
14:37:08	3507.141	1987.436						
14:37:18	3592.537	1911.224						
14:37:28	3967.603	1854.996						
14:37:38	3791.651	1875.072						
14:37:48	4110.259	1883.078						
14:37:58	3743.303	1876.925						
14:38:08	4250.633	1887.866						
14:38:18	3524.931	1922.728						
14:38:28	4255.253	2013.289						
14:38:38	3586.953	2096.691						
14:38:48	4088.378	2126.546						
14:38:58	3555.516	2120.439						
14:39:08	3927.231	2144.393						
14:39:18	3936.285	2151.252						
14:39:28	3886.005	2094.028						
14:39:38	4063.408	1977.365						
14:39:48	3622.33	1930.548						
14:39:58	4228.039	1937.134						
14:40:08	3633.609	1936.443				1180	1230	36.9
14:40:18	4225.916	1951.971				ETH/THC	CH4/THC	AA/THC
14:40:28	3503.52	1966.395				60.93646959	63.51852339	1.905555701
14:40:38	3943.879	2005.664						
14:40:48	3520.665	2043.343						
14:40:58	3793.948	2082.072						
14:41:08	3695.005	2177.404						
14:41:18	3639.171	2238.325						
14:41:28	3945.615	2234.096						
14:41:38	3692.709	2231.188						
14:41:48	4222.039	2220.342						
14:41:58	3571.786	2152.357						
14:42:08	3901.844	2041.013						
14:42:18	3697.757	1973.857						
14:42:28	3876.233	1947.8						
14:42:38	3583.482	1930.378						
14:42:48	4102.404	1983.326						
14:42:58	3920.889	2069.852						
14:43:08	3868.849	2122.163						
14:43:18	4261.418	2126.177						
14:43:28	3808.763	2079.213						
14:43:38	4358.724	1968.27						
14:43:48	3603.123	1886.826						
14:43:58	4285.917	1844.265						
14:44:08	3559.166	1849.17						

6/30/92 SITE 4 DAY 2

	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE: (ppmV/wet)	:	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
14:44:18	3952.279	1868.17				:			
14:44:28	3448.566	1960.955				:			
14:44:38	3839.23	2054.775				:			
14:44:48	3614.248	2132.151				:			
14:44:58	3614.429	2159.271				:			
14:45:08	3759.513	2196.497				:			
14:45:18	3500.96	2227.995				:			
14:45:28	4102.456	2210.526				:			
14:45:38	3456.008	2131.097				:			
14:45:48	4071.582	2054.782				:			
14:45:58	3479.741	2036.66				:			
14:46:08	4076.505	2046.076				:			
14:46:18	3568.163	2043.503				:			
14:46:28	3892.916	2047.774				:			
14:46:38	3552.937	2075.715				:			
14:46:48	3845.368	2175.029				:			
14:46:58	3912.946	2243.958				:			
14:47:08	3694.1	2225.457				:			
14:47:18	4113.319	2231.022				:			
14:47:28	3633.281	2209.408				:			
14:47:38	4196.674	2185.033				:			
14:47:48	3634.28	2126.003				:			
14:47:58	3913.422	2010.517				:			
14:48:08	3819.544	1886.135				:			
14:48:18	4179.509	1852.792				:			
14:48:28	3653.614	1835.042				:			
14:48:38	3955.022	1845.364				:			
14:48:48	3710.864	1925.072				:			
14:48:58	3882.528	2015.158				:			
14:49:08	3871.513	2121.292		1910	2040	60.4 :			
14:49:18	3557.537	2133.411		ETH/THC	CH4/THC	AA/THC :			
14:49:28	4183.082	2132.468		49.33471746	52.69257781	1.560113578 :			
14:49:38	3589.34	2139.636				:			
14:49:48	4267.048	2116.053				:			
14:49:58	3600.432	1982.139				:			
14:50:08	4070.822	1894.819				:			
14:50:18	3610.032	1875.569				:			
14:50:28	3662.565	1883.299				:			
14:50:38	3650.961	1924.211				:			
14:50:48	3527.764	2041.115				:			
14:50:58	3913.421	2139.601				:			
14:51:08	3377.818	2196.909				:			
14:51:18	4027.314	2221.155				:			
14:51:28	3710.197	2203.139				:			
14:51:38	4248.249	2130.056				:			
14:51:48	3437.095	1983.999				:			
14:51:58	3784.701	1922.697				:			
14:52:08	3793.42	1889.783				:			

6/30/92 SITE 4 DAY 2

	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
14:52:18	3867.94	1886.33						
14:52:28	3789.323	1896.785						
14:52:38	3660.858	1927.83						
14:52:48	3957.02	2009.374						
14:52:58	3402.904	2122.844						
14:53:08	3955.313	2159.86						
14:53:18	3292.592	2171.292						
14:53:28	3893.135	2165.889						
14:53:38	3405.092	2150.938						
14:53:48	4079.238	2149.522						
14:53:58	3638.954	2081.996	END					
avg			3721.666011	2014.113127				
14:54:08			3942.156	1946.875				
14:54:18			3315.195	1868.955				
14:54:28			320.8134	1830.523				
14:54:38			120.4511	1823.586				
14:54:48			74.30093	1844.109				
14:54:58			61.24244	1937.991				
14:55:08			57.01695	2027.269				
14:55:18			526.2097	2054.54				
			COMFORT HOOD	REAR				
14:55:28	2023.247	721.3536						
14:55:38	2008.134	873.3304						
14:55:48	1900.073	689.1277						
14:55:58	1812.528	816.2419						
14:56:08	1764.445	606.4617						
14:56:18	1755.808	748.7752						
14:56:28	1778.022	550.3549						
14:56:38	1787.27	642.7482						
14:56:48	1804.199	585.0167						
14:56:58	1884.574	608.3309						
14:57:08	1976.173	672.8838						
14:57:18	2011.442	552.6233						
14:57:28	2018.482	745.9375						
14:57:38	2014.405	591.8278						
14:57:48	1924.855	780.6799						
14:57:58	1845.26	557.1421						
14:58:08	1802.581	756.8991						
14:58:18	1791.325	570.5814				1140	1240	37.4
14:58:28	1791.307	678.002				ETH/THC	CH4/THC	AA/THC
14:58:38	1804.403	548.0287				63.64004298	69.22250289	2.087840006
14:58:48	1881.758	615.7909						
14:58:58	1983.455	706.9265						

6/30/92 SITE 4 DAY 2

	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE: (ppmV/wet)	:	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
14:59:08		2036.372	569.3973			:			
14:59:18		2051.271	740.4162			:			
14:59:28		2061.188	622.9293			:			
14:59:38		2015.488	835.3527			:			
14:59:48		1888.632	603.0566			:			
14:59:58		1787.379	873.8635			:			
15:00:08		1757.686	697.1466			:			
15:00:18		1738.202	740.0958			:			
15:00:28		1752.331	604.8622			:			
15:00:38		1848.009	671.8557			:			
15:00:48		1956.399	666.1112			:			
15:00:58		2028.41	763.3353			:			
15:01:08		2027.203	745.715			:			
15:01:18		2005.968	825.9804			:			
15:01:28		1958.617	633.9875			:			
15:01:38		1852.067	804.2003			:			
15:01:48		1790.424	634.7706			:			
15:01:58		1772.903	766.6453			:			
15:02:08		1769.079	557.6824			:			
15:02:18		1774.194	653.275			:			
15:02:28		1844.809	603.3409			:			
15:02:38		1952.116	610.7759			:			
15:02:48		2005.555	668.9258			:			
15:02:58		2041.822	590.4299			:			
15:03:08		2069.841	769.1274			:			
15:03:18		2059.276	633.5616			:			
15:03:28		1946.93	810.9592			:			
15:03:38		1843.918	583.9517			:			
15:03:48		1805.872	817.0514			:			
15:03:58		1799.714	583.9508			:			
15:04:08		1796.43	668.3968			:			
15:04:18		1844.202	589.8542			:			
15:04:28		1947.303	695.3444			:			
15:04:38		2027.893	676.3655			:			
15:04:48		2064.359	661.8751			:			
15:04:58		2094.402	772.083			:			
15:05:08		2075.025	704.1892			:			
15:05:18		1966.968	798.9005			:			
15:05:28		1832.746	605.3207			:			
15:05:38		1790.891	747.5001			:			
15:05:48		1786.643	549.2892			:			
15:05:58		1785.294	738.7894			:			
15:06:08		1810.934	546.3113			:			
15:06:18		1842.785	620.0175			:			
15:06:28		1947.309	561.1625			:			
15:06:38		2065.873	660.9481			:			
15:06:48		2125.786	588.1808			:			
15:06:58		2160.949	631.545			:			

6/30/92 SITE 4 DAY 2

	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
15:07:08		2177.337	740.2429	386	251	11.6		
15:07:18		2078.325	658.2613	ETH/THC	CH4/THC	AA/THC		
15:07:28		1979.935	800.6384	52.14504590	33.90778891	1.567053192		
15:07:38		1965.946	609.5533					
15:07:48		1956.975	871.4243					
15:07:58		1951.515	696.747	END				
avg				677.5626078	1916.8585			
				TANSIENT ??				
15:08:08	712.048	1920.129						
15:08:18	626.1704	1933.294						
15:08:28	711.3862	2013.45						
15:08:38	583.1957	2067.983						
15:08:48	530.1298	2104.763						
15:08:58	615.3072	2113.461						
15:09:08	529.0776	2120.864						
15:09:18	670.3631	2111.006						
15:09:28	564.5407	2122.147						
15:09:38	714.9551	2089.725						
15:09:48	548.6201	2052.895						
15:09:58	649.6956	2051.089						
15:10:08	606.3181	2095.132						
15:10:18	645.1376	2101.881						
15:10:28	626.0235	2099.517						
15:10:38	579.1294	2105.332						
15:10:48	680.8773	2086.489						
15:10:58	495.3337	2086.38						
15:11:08	643.7786	2082.838						
15:11:18	462.0834	2094.687						
15:11:28	599.9605	2077.587						
15:11:38	479.7609	2084.544						
15:11:48	559.5645	2093.136						
15:11:58	552.0869	2094.696						
15:12:08	496.7184	2083.222						
15:12:18	596.1438	2066.376						
15:12:28	474.1166	2064.836						
15:12:38	596.2981	2049.191						
15:12:48	456.5027	2045.217						
15:12:58	622.3584	2050.048						
15:13:08	448.3994	2037.673						
15:13:18	636.6635	2033.166						
15:13:28	551.1891	2029.204						
15:13:38	543.8653	2038.39						
15:13:48	563.0821	2037.947						
15:13:58	559.8842	2048.197						
15:14:08	540.6068	2056.07						
15:14:18	454.5275	2055.944						

6/30/92 SITE 4 DAY 2

	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE: (ppmV/wet)	:	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
15:14:28	551.0231	2053.66				:			
15:14:38	458.1764	2042.52				:			
15:14:48	591.0736	2045.917				:			
15:14:58	454.8074	2049.02				:			
15:15:08	582.8945	2048.328				:			
15:15:18	443.3809	2052.091				:			
15:15:28	519.546	2040.134				:			
15:15:38	432.8327	2052.601				:			
15:15:48	461.0282	2059.637				:			
15:15:58	467.2169	2065.854	253	123	5.57	:			
15:16:08	491.1639	2061.588	ETH/THC	CH4/THC	AA/THC	:			
15:16:18	586.9185	1973.188	54.15043847	26.32610250	1.19216578	:			
15:16:28	420.0084	1910.132				:			
15:16:38	670.2104	1906.067				:			
15:16:48	460.4272	1921.99				:			
15:16:58	537.0497	1939.04				:			
15:17:08	423.1125	1982.97				:			
15:17:18	393.5947	2052.211				:			
15:17:28	432.5241	2076.239				:			
15:17:38	363.4055	2060.208				:			
15:17:48	404.2167	2041.718				:			
15:17:58	339.6311	2056.888				:			
15:18:08	445.5782	2054.612				:			
15:18:18	336.437	2058.88				:			
15:18:28	409.1852	2072.797				:			
15:18:38	369.6866	2072.436				:			
15:18:48	431.0451	2094.403				:			
15:18:58	408.7134	2086.814				:			
15:19:08	320.6616	2083.841				:			
15:19:18	434.511	2081.995				:			
15:19:28	317.3613	2083.726				:			
15:19:38	394.0463	2072.727				:			
15:19:48	332.4386	2053.494				:			
15:19:58	357.8115	2031.163				:			
15:20:08	369.9776	2021.902				:			
15:20:18	372.412	2024.734				:			
15:20:28	433.1606	2008.654				:			
15:20:38	353.0616	1983.065				:			
15:20:48	427.8144	1948.477				:			
15:20:58	337.9807	1933.226				:			
15:21:08	342.8642	1908.319				:			
15:21:18	353.2724	1894.347				:			
15:21:28	338.773	1886.398				:			
15:21:38	392.3817	1873.662				:			
15:21:48	319.1087	1853.794				:			
15:21:58	434.5701	1846.091				:			
15:22:08	322.7131	1825.003				:			
15:22:18	421.5609	1782.543				:			

6/30/92 SITE 4 DAY 2

			FRONT GC RESULTS				REAR GC RESULTS		
	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	:	ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
15:22:28	439.6119	1747.734				:			
15:22:38	362.0362	1717.109				:			
15:22:48	481.8061	1707.121				:			
15:22:58	387.964	1701.315				:			
15:23:08	480.3889	1692.798				:			
15:23:18	414.9478	1685.537				:			
15:23:28	541.3841	1667.086				:			
15:23:38	400.9149	1668.344				:			
15:23:48	506.1064	1657.448				:			
15:23:58	424.9225	1620.115				:			
15:24:08	495.5927	1579.929				:			
15:24:18	397.8225	1551.961				:			
15:24:28	398.5193	1524.78				:			
15:24:38	388.012	1504.262				:			
15:24:48	386.329	1498.456				:			
15:24:58	407.1175	1493.042				:			
15:25:08	380.5128	1516.615				:			
15:25:18	401.5601	1532.901		187	157	3.66 :			
15:25:28	357.8784	1538.322		ETH/THC	CH4/THC	AA/THC :			
15:25:38	464.6155	1530.65		46.56837170	39.09750993	0.911445136 :			
15:25:48	362.1101	1520.267				:			
15:25:58	485.4394	1516.342				:			
15:26:08	376.5957	1519.719				:			
15:26:18	450.5362	1510.454				:			
15:26:28	391.0831	1497.417				:			
15:26:38	422.3207	1493.942				:			
15:26:48	392.3629	1497.27				:			
15:26:58	399.6293	1491.135				:			
15:27:08	403.822	1496.972				:			
15:27:18	364.7491	1499.866				:			
15:27:28	414.635	1509.126				:			
15:27:38	356.1114	1511.056				:			
15:27:48	463.6268	1527.109				:			
15:27:58	374.2609	1537.638				:			
15:28:08	501.778	1543.534				:			
15:28:18	391.6096	1558.745				:			
15:28:28	485.8641	1569.472				:			
15:28:38	411.7646	1572.291				:			
15:28:48	473.5314	1564.816				:			
15:28:58	412.2723	1593.869				:			
15:29:08	436.9571	1602.991				:			
15:29:18	398.8284	1604.943				:			
15:29:28	379.3043	1596.174				:			
15:29:38	377.5358	1603.407				:			
15:29:48	296.0584	1618.082				:			
15:29:58	419.8451	1636.583				:			
15:30:08	312.6219	1626.797				:			
15:30:18	415.0399	1615.421				:			

6/30/92 SITE 4 DAY 2

	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE: (ppmV/wet)	:	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
15:30:28	315.0306	1640.371				:			
15:30:38	449.4773	1663.8				:			
15:30:48	329.7127	1684.201				:			
15:30:58	444.1779	1709.777				:			
15:31:08	347.945	1709.357				:			
15:31:18	381.1817	1710.945				:			
15:31:28	348.3934	1707.053				:			
15:31:38	389.9136	1691.227				:			
15:31:48	357.5194	1684.327				:			
15:31:58	366.9865	1673.757				:			
15:32:08	408.4856	1640.907				:			
15:32:18	298.6087	1624.325				:			
15:32:28	379.5518	1617.801				:			
15:32:38	282.8692	1620.161				:			
15:32:48	454.6616	1632.399				:			
15:32:58	351.166	1638.499				:			
15:33:08	447.8493	1652.764				:			
15:33:18	400.4466	1658.005				:			
15:33:28	444.5937	1663.056				:			
15:33:38	478.0391	1658.698				:			
15:33:48	468.9119	1669.459				:			
15:33:58	490.421	1663.457				:			
15:34:08	454.9925	1661.886				:			
15:34:18	485.7752	1644.112				:			
15:34:28	404.5195	1651.838				:			
15:34:38	469.6045	1645.957				:			
15:34:48	333.7483	1639.989				:			
15:34:58	442.4917	1631.786				:			
15:35:08	308.9279	1624.926				:			
15:35:18	428.6439	1620.861				:			
15:35:28	329.5127	1601.569				:			
15:35:38	389.9488	1569.995				:			
15:35:48	358.6211	1570.686				:			
15:35:58	358.4363	1576.834				:			
15:36:08	382.9268	1593.98				:			
15:36:18	324.922	1581.174				:			
15:36:28	400.1487	1567.308				:			
15:36:38	319.9044	1579.98				:			
15:36:48	462.6881	1575.002				:			
15:36:58	348.9937	1577.122				:			
15:37:08	532.178	1558.373				:			
15:37:18	434.608	1531.627				:			
15:37:28	524.4285	1421.262				:			
15:37:38	409.8802	1362.118				:			
15:37:48	439.4593	1341.079				:			
15:37:58	350.4919	1349.864				:			
15:38:08	335.1016	1400.794				:			
15:38:18	401.6924	1467.447				:			

6/30/92 SITE 4 DAY 2

			FRONT GC RESULTS				REAR GC RESULTS		
	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE: (ppmV/wet)	:	ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
15:38:28	359.62	1489.436				:			
15:38:38	439.3746	1499.421				:			
15:38:48	363.0015	1496.017				:			
15:38:58	437.6628	1506.15				:			
15:39:08	388.4827	1508.703				:			
15:39:18	448.6558	1511.964				:			
15:39:28	376.4695	1511.672				:			
15:39:38	506.9859	1498.141				:			
15:39:48	359.0281	1429.436				:			
15:39:58	463.1268	1343.063				:			
15:40:08	401.6359	1312.821				:			
15:40:18	432.2363	1334.335				:			
15:40:28	419.1686	1373.077				:			
15:40:38	483.0143	1475.704				:			
15:40:48	439.7254	1547.226				:			
15:40:58	445.2201	1578.445				:			
15:41:08	443.7834	1569.924				:			
15:41:18	392.07	1566.035				:			
15:41:28	484.8417	1561.951				:			
15:41:38	422.2665	1563.549				:			
15:41:48	502.7638	1451.007				:			
15:41:58	376.3546	1378.945				:			
15:42:08	469.016	1354.162				:			
						:			
						:			
						:			
15:42:29	344.0627	1363.814				:			
15:42:30	344.0627	1363.814				:			
15:42:38	96.662	84.06927				:			
15:42:48	47.21896	47.72938				:			
15:42:58	25.87532	32.0696				:			
15:43:08	17.17798	26.63781				:			
15:43:18	14.46806	23.44374				:			
15:43:28	14.61625	23.13948				:			
15:43:38	15.58249	28.89569				:			
15:43:48	13.22352	15.68958				:			
15:43:58	15.45264	14.7205				:			
15:44:08	15.9004	15.87973				:			
15:44:18	13.47931	14.89227				:			
15:44:28	11.75137	12.64414				:			
15:44:38	9.419714	12.63391				:			
15:44:48	3.684755	10.13951				:			
15:44:58	2.491412	7.377443				:			
15:45:08	2.688372	8.124977				:			
15:45:18	3.207311	5.067982				:			
15:45:28	2.184555	5.250599				:			
15:45:38	-0.42694	2.998253				:			
15:45:48	0.228158	1.736232				:			

6/30/92 SITE 4 DAY 2

	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE: (ppmV/wet)	:	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
15:45:58	2.52298	5.559171				:			
15:46:08	3.505312	6.072835				:			
15:46:18	1.382643	3.537153				:			
	2.146855	5.080516				:			
						:			
						:			
15:46:28	1.232216	3.829116				:			
15:46:38	103.1255	718.9788				:			
15:46:48	366.2788	1487.325				:			
15:46:58	298.091	1543.755				:			
15:47:08	293.9726	352.9425				:			
15:47:18	102.5146	97.42347				:			
15:47:28	92.4967	86.43533				:			
15:47:38	86.01645	79.61434				:			
15:47:48	84.46342	77.46738				:			
15:48:00	78.73041	76.76862				:			
15:48:08	84.03354	74.97099				:			
15:48:18	86.62121	75.1702				:			
15:48:28	86.42117	74.20065				:			
15:48:38	86.83236	74.83095				:			
15:48:48	88.25812	74.57759				:			
15:48:58	84.17177	75.87149				:			
15:49:08	206.7967	749.0904				:			
15:49:18	259.631	429.5222				:			
15:49:28	206.5386	196.2284				:			
15:49:39	205.6826	193.4997				:			
15:49:48	205.0995	192.5867				:			
15:49:58	206.0006	192.1559				:			
15:50:08	204.856	192.439				:			
15:50:18	205.5467	191.8967				:			
15:50:28	206.3022	191.9328				:			
15:50:38	204.8269	192.7589				:			
15:50:48	207.6954	192.763				:			
15:50:58	208.9974	192.1985				:			
15:51:08	208.1437	192.8992				:			
15:51:18	208.8979	192.3914				:			
15:51:28	209.3954	192.1018				:			
15:51:38	207.9432	193.2393				:			
15:51:48	208.5793	192.342				:			
15:51:58	209.3392	192.259				:			
15:52:08	205.0272	193.7113				:			
15:52:22	204.8458	193.3056				:			
15:52:28	203.2486	194.2908				:			
15:52:38	205.1941	192.6189				:			
15:52:48	251.9144	770.9986				:			
15:52:58	425.1574	1342.909				:			
15:53:08	295.8101	1352.545				:			
15:53:18	363.7907	1349.541				:			

6/30/92 SITE 4 DAY 2

			FRONT GC RESULTS			REAR GC RESULTS		
	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
15:53:28	271.2072	1378.277						
15:53:38	353.8171	1473.07						
15:53:48	309.0039	686.5591						
15:54:02	681.5724	796.586						
15:54:08	798.7191	804.8883						
15:54:18	800.1487	805.2161						
15:54:28	810.0227	805.0098						
15:54:38	808.9788	809.7795						
15:54:48	803.9863	799.6632						
15:54:58	803.8583	798.7522						
15:55:08	804.8174	802.9766						
15:55:18	804.5173	804.0549						
15:55:28	803.3801	804.0824						
15:55:38	804.7511	807.5525						
15:55:48	805.709	808.123						
15:55:58	803.1922	807.691						
15:56:08	804.8394	804.6885						
15:56:18	763.2247	796.8881						
	804.8501	804.7991						
15:56:28	807.8539	811.6219						
15:56:38	780.47	799.9854						
15:56:48	798.0686	808.455						
15:56:58	771.1529	797.8968						
15:57:29	576.8534	864.869						
15:57:29	576.8534	864.869						
15:57:29	576.8534	864.869						
15:57:38	1503.201	1503.34						
15:57:48	1505.636	1504.991						
15:57:58	1506.091	1510.263						
15:58:08	1498.644	1510.949						
15:58:18	1494.252	1508.238						
15:58:28	1496.433	1509.077						
15:58:38	1499.391	1511.564						
15:58:48	1498.595	1510.271						
15:58:58	1497.771	1511.907						
15:59:08	1498.159	1511.298						
15:59:18	1498.329	1513.153						
15:59:28	1498.473	1512.603						
15:59:38	1496.92	1510.125						
15:59:48	1494.238	1506.598						

6/30/92 SITE 4 DAY 2

	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE: (ppmV/wet)	:	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
15:59:58	1503.043	1504.855				:			
16:00:08	1389.731	1463.018				:			
16:00:18	578.1661	1288.324				:			
	1499.278	1509.282				:			
						:			
						:			
16:00:28	460.008	1316.882				:			
16:00:38	1514.962	1819.639				:			
16:00:48	1985.849	1914.685				:			
						:			
						:			
						:			
16:01:08	2025.02	1936.798				:			
16:01:09	2025.02	1936.798				:			
16:01:18	2037.674	1939.197				:			
16:01:28	2046.919	1938.306				:			
16:01:38	2051.412	1940.553				:			
16:01:48	2043.202	1940.624				:			
16:01:58	2026.236	1941.37				:			
16:02:08	2026.652	1941.7				:			
16:02:18	2024.533	1945.7				:			
16:02:28	2024.433	1947.014				:			
16:02:38	2025.553	1945.721				:			
16:02:48	2025.021	1946.812				:			
16:02:58	2025.869	1948.067				:			
16:03:08	2023.812	1949.955				:			
16:03:18	2027.031	1947.425				:			
16:03:28	2024.374	1945.075				:			
	2030.172	1943.194				:			
						:			
						:			
16:03:43	2023.675	1943.145				:			
16:03:48	2258.809	2888.07				:			
						:			
						:			
						:			
16:04:00	3041.862	3513.313				:			
16:04:08	3830.446	3909.455				:			
16:04:18	3898.627	3955.921				:			
16:04:28	3925.19	3972.275				:			
16:04:38	3940.879	3975.658				:			
16:04:48	3936.133	3988.625				:			
16:04:58	3937.624	3988.083				:			
	3938.212	3981.160				:			
						:			
						:			
16:05:08	3949.983	3980.218				:			
16:05:18	3970.099	3977.625				:			

6/30/92 SITE 4 DAY 2

	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
16:05:47	3693.956	2991.542						
16:05:47	3693.956	2991.542						
			COMFORT					
			HOOD	REAR				
16:05:48		1337.994	296.3556					
16:05:58		1359.823	312.358					
16:06:08		1453.138	388.0426					
16:06:18		1448.76	290.4363					
16:06:28		1506.356	392.8581					
16:06:38		1505.573	286.7734	119	122	4.89		
16:06:48		1494.338	361.9232	ETH/THC	CH4/THC	AA/THC		
16:06:58		1491.369	312.6839	41.49617781	42.54229994	1.705179071		
16:07:08		1488.967	366.8987					
16:07:18		1489.953	363.5651					
16:07:28		1442.256	409.1747					
16:07:38		1329.16	343.9726					
16:07:48		1285.03	409.0642					
16:07:58		1278.522	308.0604					
16:08:08		1283.262	360.5702					
16:08:18		1363.434	314.9543					
16:08:28		1461.734	393.3455					
16:08:38		1483.869	311.1944					
16:08:48		1492.281	393.3279					
16:08:58		1490.847	294.1204					
16:09:08		1477.965	388.0459					
16:09:18		1490.175	312.9851					
16:09:28		1495.349	442.9					
16:09:38		1421.572	333.7991					
16:09:48		1331.655	428.2973					
16:09:58		1296.295	319.71					
16:10:08		1294.487	379.2939					
16:10:18		1329.505	276.6434					
16:10:28		1410.396	409.7889					
16:10:38		1491.522	337.3958					
16:10:48		1513.995	419.401					
16:10:58		1528.394	315.0791					
16:11:08		1530.654	458.4472					
16:11:18		1530.957	328.6572					
16:11:28		1523.884	405.6608					
16:11:38		1504.913	351.3904					
16:11:48		1389.307	465.5147					
16:11:58		1304.156	327.4129					
16:12:08		1264.435	426.6249					
16:12:18		1280.089	286.3802					
16:12:28		1375.124	433.6776					
16:12:38		1457.568	315.6065					

6/30/92 SITE 4 DAY 2

	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE: (ppmV/wet)	:	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
16:12:48		1504.786	420.6289			:			
16:12:58		1523.465	298.29			:			
16:13:08		1525.2	410.7519			:			
16:13:18		1533.824	304.605			:			
16:13:28		1536.339	453.1435			:			
16:13:38		1469.651	327.2688			:			
16:13:48		1366.842	440.778			:			
16:13:58		1333.144	312.0076			:			
16:14:08		1310.826	423.5488			:			
16:14:18		1332.97	275.3205			:			
16:14:28		1397.663	426.454			:			
16:14:38		1500.058	310.394			:			
16:14:48		1546.209	449.1488			:			
16:14:58		1575.678	305.9588			:			
16:15:08		1586.426	444.8117			:			
16:15:18		1596.626	347.9045			:			
16:15:28		1601.265	446.4307			:	544	1400	30
16:15:38		1606.299	355.7769			:	ETH/THC	CH4/THC	AA/THC
16:15:48		1566.099	515.4293			:	33.97313998	87.43087496	1.873518749
16:15:58		1462.396	371.9149			:			
16:16:08		1383.743	490.8174			:			
16:16:18		1370.165	353.5583			:			
16:16:28		1369.054	475.5082			:			
16:16:38		1403.385	334.9392			:			
16:16:48		1485.349	410.4203	END		:			
avg				369.8239014	1442.037686	:			
						:			
						:			
						:			
16:16:58				66.10149	1585.339	:			
16:17:08				45.69385	1617.586	:			
16:17:18				24.21743	1631.904	:			
16:17:28				101.4464	1644.858	:			
16:17:38				2126.488	1671.986	:			
16:17:48				2593.621	1673.014	:			
16:17:58				2597.153	1667.62	:			
						:			
						:			
						:			
				FRONT	REAR	:			
16:18:14	2787.49	1628.387				:			
16:18:29	2691.715	1547.751				:			
16:18:30	2691.715	1547.751				:			
16:18:38	2350.813	1525.838				:			
16:18:48	2686.392	1551.157				:			
16:18:58	2403.937	1667.846				:			
16:19:08	2747.917	1730.939				:			
16:19:18	2373.718	1762.632				:			

6/30/92 SITE 4 DAY 2

	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
16:19:28	2756.131	1761.168						
16:19:38	2424.305	1761.205						
16:19:48	2763.858	1762.629						
16:19:58	2622.186	1747.832						
16:20:08	3064.354	1683.166						
16:20:18	2607.211	1621.1						
16:20:28	3067.925	1566.42						
16:20:38	2752.639	1550.69						
16:20:48	2856.116	1550.097						
16:20:58	2449.972	1578.066						
16:21:08	2833.543	1637.952						
16:21:18	2654.688	1705.954						
16:21:28	2902.048	1730.135						
16:21:38	2453.985	1726.143						
16:21:48	2971.988	1708.251						
16:21:58	2504.171	1709.403						
16:22:08	3056.942	1696.13						
16:22:18	2526.808	1631.171						
16:22:28	3063.532	1546.838						
16:22:38	2491.024	1525.28						
16:22:48	2944.585	1517.59						
16:22:58	2399.467	1514.756						
16:23:08	2994.435	1577.14						
16:23:18	2449.823	1662.187						
16:23:28	2993.081	1685.613						
16:23:38	2429.701	1686.708						
16:23:48	2963.487	1670.628						
16:23:58	2394.905	1676.482						
16:24:08	2901.103	1655.44						
16:24:18	2534.1	1668.298						
16:24:28	3097.259	1627.504						
16:24:38	2453.744	1544.676						
16:24:48	3091.032	1492.696						
16:24:58	2359.867	1470.733		1230	1420	46.6		
16:25:08	2909.241	1497.22		ETH/THC	CH4/THC	AA/THC		
16:25:18	2332.086	1544.114		52.12158142	60.17288262	1.974687556		
16:25:28	2938.893	1577.641						
16:25:38	2282.858	1644.698						
16:25:48	2889.204	1680.376						
16:25:58	2324.734	1661.98						
16:26:08	2870.769	1649.683						
16:26:18	2434.161	1639.365						
16:26:28	2978.237	1591.544						
16:26:38	2374.037	1520.15						
16:26:48	2961.424	1469.556						
16:26:58	2345.208	1445.178						
16:27:08	2841.555	1450.339						
16:27:18	2251.417	1498.059						

6/30/92 SITE 4 DAY 2

	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
16:27:28	2866.009	1562.629						
16:27:38	2301.655	1625.56						
16:27:48	2859.073	1633.12						
16:27:58	2231.344	1644.806						
16:28:08	2933.23	1636.82						
16:28:18	2388.281	1594.936						
16:28:28	2855.1	1515.711						
16:28:38	2337.578	1464.343						
16:28:48	2770.967	1453.654						
16:28:58	2208.072	1452.525						
16:29:08	2709.854	1515.755						
16:29:18	2281.552	1588.25						
16:29:28	2797.24	1632.061						
16:29:38	2277.537	1641.282						
16:29:48	2698.462	1641.781						
16:29:58	2217.88	1627.835						
16:30:08	2692.295	1632.695						
16:30:18	2417.227	1628.767						
16:30:28	2862.177	1563.923						
16:30:38	2428.38	1487.317						
16:30:48	2792.65	1450.187						
16:30:58	2299.233	1433.435						
16:31:08	2676.96	1451.441						
16:31:18	2359.502	1521.425						
16:31:28	2718.759	1586.461						
16:31:38	2460.109	1615.676						
16:31:48	2791.449	1622.422						
16:31:58	2366.346	1615.218						
16:32:08	2527.181	1613.355						
16:32:18	2477.28	1585.01						
16:32:28	2707.348	1518.748						
16:32:38	2435.035	1457.891						
16:32:48	2651.772	1438.325						
16:32:58	2394.785	1438.997						
16:33:08	2498.318	1441.388						
16:33:18	2441.681	1498.177						
16:33:28	2547.964	1580.877						
16:33:38	2458.561	1616.67						
16:33:48	2537.633	1627.333						
16:33:58	2424.557	1622.802				539	1380	26.8
16:34:08	2558.472	1631.25				ETH/THC	CH4/THC	AA/THC
16:34:18	2594.756	1601.913				33.21415674	85.03810076	1.651464565
16:34:28	2677.823	1540.752						
16:34:38	2530.64	1469.459						
16:34:48	2611.731	1452.158						
16:34:58	2520.101	1430.027						
16:35:08	2448.073	1459.702						
16:35:18	2629.13	1525.145						

6/30/92 SITE 4 DAY 2

	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
16:35:28	2618.364	1598.831						
16:35:38	2479.616	1623.125						
16:35:48	2271.592	1621.794						
16:35:58	2481.695	1603.484						
16:36:08	2402.534	1642.752						
16:36:18	2442.08	1640.382						
16:36:28	2525.847	1653.256						
16:36:38	2736.358	1634.199						
16:36:48	2547.332	1570.633						
16:36:58	2719.065	1523.406						
16:37:08	2515.846	1504.352						
16:37:18	2661.727	1495.896						
16:37:28	2407.931	1483.03						
16:37:38	2726.886	1538.056						
16:37:48	2626.103	1609.975						
16:37:58	2628.491	1631.361						
16:38:08	2305.522	1647.349						
16:38:18	2569.758	1639.834						
16:38:28	2505.069	1645.164						
16:38:38	2826.739	1653.795						
16:38:48	2555.177	1621.63						
16:38:58	2832.801	1546.503						
16:39:08	2534.422	1516.82						
16:39:18	2855.377	1509.563						
16:39:28	2386.967	1514.32						
16:39:38	2763.241	1519.546						
16:39:48	2426.465	1589.214						
16:39:58	2806.548	1625.224						
16:40:08	2410.76	1663.648						
16:40:18	2783.875	1664.721						
16:40:28	2346.561	1673.944						
16:40:38	2774.185	1670.516						
16:40:48	2317.847	1676.126						
16:40:58	2844.811	1669.734						
16:41:08	2429.037	1645.253						
16:41:18	2843.635	1579.428						
16:41:28	2451.587	1543.249						
16:41:38	2839.68	1523.523						
16:41:48	2253.831	1526.832						
16:41:58	2714.118	1555.34						
16:42:08	2297.51	1621.36						
16:42:18	2736.556	1651.649						
16:42:28	2188.926	1692.278						
16:42:38	2765.595	1694.344						
16:42:48	2218.62	1700.215	1060	1390	39.2			
16:42:58	2773.426	1699.269	ETH/THC	CH4/THC	AA/THC			
16:43:08	2351.445	1667.274	47.77744724	62.65155817	1.766864086			
16:43:18	2793.218	1619.202						

6/30/92 SITE 4 DAY 2

	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE: (ppmV/wet)	:	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
16:43:28	2405.238	1608.86				:			
16:43:38	2808.341	1607.265				:			
16:43:48	2229.115	1619.489				:			
16:43:58	2794.679	1653.095				:			
16:44:08	2268.785	1716.666				:			
16:44:18	2799.112	1722.868				:			
16:44:28	2239.774	1719.669				:			
16:44:38	2753.041	1698.932				:			
16:44:48	2194.457	1711.827				:			
16:44:58	2763.991	1693.662				:			
16:45:08	2248.581	1701.254				:			
16:45:18	2948.345	1692.394				:			
16:45:28	2337.724	1650.294				:			
16:45:38	2977.475	1598.886				:			
16:45:48	2389.307	1599.957				:			
16:45:58	2929.188	1617.914				:			
16:46:08	2356.114	1641.323				:			
16:46:18	2810.057	1674.738				:			
16:46:28	2329.562	1716.523				:			
16:46:38	2838.143	1670.196				:			
16:46:48	2666.706	1679.936				:			
16:46:58			END		3782.839	:			
avg			2600.877508		1601.210670	:			
						:			
						:			
						:			
16:47:08	2923.383	1463.355				:			
16:47:18	3216.388	1380.462				:			
16:47:28	2681.774	1333.706				:			
16:47:38	3202.682	1308.685				:			
16:47:48	2566.926	1299.73				:			
16:47:58	3053.956	1272.019				:			
16:48:08	2528.259	1256.461				:			
16:48:18	2938.712	1238.684				:			
16:48:28	2427.992	1213.882				:			
16:48:38	2873.614	1197.169				:			
16:48:48	2250.388	1164.87				:			
16:48:58	2704.425	1150.973				:			
16:49:08	2142.27	1157.668				:			
16:49:18	2634.88	1175.861				:			
16:49:28	2122.661	1200.35				:			
16:49:38	2581.121	1208.612				:			
16:49:48	2079.454	1219.618				:			
16:49:58	2479.952	1223.273				:			
16:50:08	1866.871	1249.889				:			
16:50:18	2315.002	1333.208				:			
16:50:28	1950.535	1423.587				:			
16:50:38	2446.752	1444.654				:			

6/30/92 SITE 4 DAY 2

	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
16:50:48	1990.93	1449.309						
16:50:58	2461.885	1453.228						
16:51:08	2032.092	1453.17						
16:51:18	2493.927	1471.659						
16:51:28	2124.065	1464.865						
16:51:38	2548.557	1464.345						
16:51:48	2206.502	1480.836				518	1370	24.6
16:51:58	2597.816	1496.395				ETH/THC	CH4/THC	AA/THC
16:52:08	2263.195	1509.011				34.98024089	92.51530892	1.661223795
16:52:18	2695.967	1523.634						
16:52:28	2470.766	1536.602						
16:52:38	2763.902	1460.007						
16:52:48	2469.442	1400.437						
16:52:58	2745.043	1396.983						
16:53:08	2467.745	1398.916						
16:53:18	2703.182	1432.292						
16:53:28	2515.527	1407.973						
16:53:38	2573.059	1401.737						
16:53:48	2207.989	1409.108						
16:53:58	2304.15	1475.882						
16:54:08	2247.344	1545.75						
16:54:18	2402.848	1583.922						
16:54:28	2297.781	1575.012						
16:54:38	2316.563	1583.896						
16:54:48	2381.503	1572.557						
16:54:58	2354.166	1563.822						
16:55:08	2405.891	1558.036						
16:55:18	2519.361	1550.935						
16:55:28	2611.682	1496.778						
16:55:38	2544.712	1409.221						
16:55:48	2594.878	1343.233						
16:55:58	2402.862	1285.99						
16:56:08	2525.296	1249.996						
16:56:18	2280.108	1256.01						
16:56:28	2468.594	1327.638						
16:56:38	2285.218	1430.883						
16:56:48	2425.814	1465.671						
16:56:58	2200.298	1485.666						
16:57:08	2369.311	1472.614						
16:57:18	2114.396	1474.024						
16:57:28	2320.727	1470.635						
16:57:38	2292.452	1472.921						
16:57:48	2538.76	1451.091						
16:57:58	2292.942	1366.652						
16:58:08	2571.417	1309.867						
16:58:18	2367.673	1299.198						
16:58:28	2539.919	1305.097						
16:58:38	2135.839	1315.564						

6/30/92 SITE 4 DAY 2

	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE: (ppmV/wet) :	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
16:58:48	2458.113	1350.514			:			
16:58:58	2209.048	1424.994			:			
16:59:08	2420.521	1479.106			:			
16:59:18	2178.289	1502.777			:			
16:59:28	2416.728	1489.13			:			
16:59:38	2073.638	1489.365			:			
16:59:48	2409.184	1474.543			:			
16:59:58	2101.379	1479.696			:			
17:00:08	2543.395	1469.909			:			
17:00:18	2238.699	1409.503			:			
17:00:28	2587.054	1331.587			:			
17:00:38	2306.166	1295.086			:			
17:00:48	2681.912	1282.764			:			
17:00:58	2229.77	1289.86			:			
17:01:08	2511.263	1299.386			:			
17:01:18	2143.201	1381.709			:			
17:01:28	2288.805	1441.34			:			
17:01:38	2459	1489.805			:			
17:01:48	2191.661	1515.146			:			
17:01:58	2384.447	1512.749			:			
17:02:08	2344.222	1506.151			:			
17:02:18	2530.302	1464.173			:			
17:02:28	2373.598	1438.114			:			
17:02:38	2497.324	1403.207			:			
17:02:48	2415.221	1355.378			:			
17:02:58	2377.755	1340.843			:			
17:03:08	2261.523	1365.429			:			
17:03:18	2325.664	1433.917			:			
17:03:28	2346.38	1513.949			:			
17:03:38	2284.876	1531.086			:			
17:03:48	2373.658	1522.268			:			
17:03:58	2265.807	1522.665			:			
17:04:08	2494.479	1544.282			:			
17:04:18	2350.424	1555.252			:			
17:04:28	2578.684	1560.009			:			
17:04:38	2344.653	1589.837			:			
17:04:48	2681.623	1586.242			:			
17:04:58	522.5376	1535.959			:			
17:05:08	177.2885	1498.25			:			
17:05:18	77.38997	1486.407			:			
17:05:28	97.82378	1516.063			:			
17:05:38	152.5728	1566.367			:			
17:05:48	90.12246	1572.496			:			
17:05:58	78.11404	1592.663			:			
17:06:08	74.91444	1583.712			:			
17:06:18	99.24073	1581.383			:			
17:06:28	105.3461	1605.702			:			
17:06:38	76.09446	1616.98			:			

6/30/92 SITE 4 DAY 2

	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
17:06:48	30.87972	1628.461						
17:06:58	39.53532	1640.627						
17:07:08	56.32256	1629.818						
17:07:18	77.15915	1636.988						
17:07:28	118.6279	1619.682						
17:07:38	79.37238	1633.628						
17:07:48	105.2023	1626.436						
17:07:58	111.9146	1641.571						
17:08:08	68.48501	1648.78						
17:08:18	109.4222	1640.865						
17:08:28	46.19714	1617.068						
17:08:38	65.27251	1615.651						
17:08:48	122.9853	1613.413						
17:08:58	92.6816	1624.184						
17:09:08	2048.551	1625.803						
17:09:18	2796.92	1637.817						
17:09:28	2482.47	1655.897						
17:09:38	2733.074	1669.142						
17:09:48	2483.655	1646.178						
17:09:58	2672.433	1637.064						
17:10:08	2538.104	1638.779						
17:10:18	2538.083	1625.677						
17:10:28	2597.528	1628.106						
17:10:38	2403.974	1626.245						
17:10:48	2675.078	1626.798						
17:10:58	2288.087	1630.827						
17:11:08	2738.13	1622.769						
17:11:18	2237.073	1614.067						
17:11:28	2762.864	1610.604						
17:11:38	2219.694	1607.354						
17:11:48	2771.921	1604.985						
17:11:58	2238.939	1599.99						
17:12:08	2673.555	1593.811						
17:12:18	2275.334	1581.751						
17:12:28	2683.922	1568.924						
17:12:38	2269.394	1553.99						
17:12:48	2620.787	1552.563						
17:12:58	2295.356	1559.51						
17:13:08	2531.236	1545.582						
17:13:18	2357.608	1540.775						
17:13:28	2407.803	1539.41						
17:13:38	2416.49	1525.079						
17:13:48	2271.977	1515.491						
17:13:58	2434.944	1507.698						
17:14:08	2181.408	1500.78						
17:14:18	2505.047	1493.308						
17:14:28	2085.736	1475.218						
17:14:38	2486.203	1463.892						

6/30/92 SITE 4 DAY 2

	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE: (ppmV/wet)	:	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
17:14:48	2003.957	1456.099				:			
17:14:58	2446.458	1448.026				:			
17:15:08	1966.693	1440.956				:			
17:15:18	2378.561	1437.468				:			
17:15:28	2043.046	1421.015				:			
17:15:38	2350.04	1419.468				:			
17:15:48	1895.828	1408.474				:			
17:15:58	2000.441	1408.388				:			
17:16:13	1937.76	1399.06				:			
17:16:18	1890.337	1391.807				:			
17:16:47	1790.824	1377.714				:			
17:16:47	1790.824	1377.714				:			
17:16:48	2423.816	1382.765				:			
17:16:58	1946.726	1364.34				:			
17:17:14	1957.954	1360.403				:			
17:17:18	1663.443	1348.137				:			
17:17:28	2080.484	1350.593				:			
17:17:38	1744.302	1347.322				:			
17:17:48	2078.017	1350.533				:			
17:17:58	1745.314	1347.873				:			
						:			
						:			
						:			
			FRONT	REAR		:			
17:18:08	2125.044	1350.912				:			
17:18:18	1656.762	1350.045				:			
17:18:28	1889.05	1355.335				:			
17:18:38	1772.356	1360.009				:			
17:18:48	2172.53	1343.129				:			
17:18:58	1956.158	1254.573				:			
17:19:08	2175.537	1175.12				:			
17:19:18	2003.047	1135.962				:			
17:19:28	2024.375	1122.839				:			
17:19:38	1887.949	1114.999				:			
17:19:48	1801.785	1136.822				:			
17:19:58	1824.326	1176.509				:			
17:20:08	1706.966	1224.698				:			
17:20:18	1779.305	1225.838				:			
17:20:28	1630.752	1224.687				:			
17:20:38	1729.969	1221.979				:			
17:20:48	1595.281	1232.38				:			
17:20:58	1750.942	1227.946				:			
17:21:08	1621.189	1250.387				:			
17:21:18	1781.47	1247.378				:			
17:21:28	1717.089	1234.076				:			
17:21:38	1828.296	1174.615				:			
17:21:48	1770.472	1111.997				:			
17:21:58	1811.515	1088.261				:			

6/30/92 SITE 4 DAY 2

	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
17:22:08	1259.574	1093.345						
17:22:18	1722.015	1108.232						
17:22:28	1754.203	1134.183						
17:22:38	1729.378	1191.347						
17:22:48	1799.635	1223.939						
17:22:58	1672.569	1232.649						
17:23:08	1803.217	1230.656						
17:23:18	1665.792	1234.704						
17:23:28	1874.593	1253.878						
17:23:38	1754.669	1225.15						
17:23:48	2014.904	1151.83						
17:23:58	1867.501	1106.909						
17:24:08	2024.601	1102.648						
17:24:18	1852.936	1126.562						
17:24:28	1976.671	1129.469						
17:24:38	1848.383	1164.31						
17:24:48	1969.745	1214.717						
17:24:58	1850.283	1281.719						
17:25:08	1925.75	1312.002						
17:25:18	1846.661	1327.179						
17:25:28	1884.042	1337.414						
17:25:38	1901.665	1372.831						
17:25:48	1953.279	1385.494						
17:25:58	2097.687	1392.866						
17:26:08	2110.845	1349.58						
17:26:18	2237.204	1326.732						
17:26:28	2134.454	1313.677						
17:26:38	2382.86	1317.311						
17:26:48	2176	1344.745						
17:26:58	2420.651	1364.048						
17:27:08	2202.992	1408.879						
17:27:18	2436.788	1486.508						
17:27:28	2217.672	1538.322						
17:27:38	2408.943	1558.611						
17:27:48	2270.187	1567.309						
17:27:58	2406.457	1565.665						
17:28:08	2324.06	1582.81						
17:28:18	2521.4	1549.721						
17:28:28	2501.143	1526.891						
17:28:38	2632.871	1489.495						
17:28:48	2654.46	1472.177						
17:28:58	2734.661	1474.517						
17:29:08	2720.49	1518.733						
17:29:18	2670.751	1570.978						
17:29:28	2887.208	1670.947						
17:29:38	2718.002	1713.373						
17:29:48	2925.166	1728.413						
17:29:58	2701.278	1717.311						

6/30/92 SITE 4 DAY 2

			FRONT GC RESULTS				REAR GC RESULTS		
	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE: (ppmV/wet)	:	ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
17:30:08	2971.851	1707.377				:			
17:30:18	2724.677	1698.051				:			
17:30:28	3003.681	1698.324				:			
17:30:38	2737.793	1738.04				:			
17:30:48	2993.675	1745.406				:			
17:30:58	2789.717	1758.786				:			
17:31:08	2991.545	1768.466				:			
17:31:18	2764.269	1788.892				:			
17:31:28	3059.296	1806.747				:			
17:31:38	2854.932	1825.671				:			
17:31:48	3147.811	1830.579				:			
17:31:58	2831.407	1853.65				:			
17:32:08	3192.888	1822.982				:			
17:32:18	2954.095	1798.77				:			
17:32:28	3042.367	1762.228				:			
17:32:38	3005.282	1764.224				:			
17:32:48	2857.154	1768.706				:			
17:32:58	3103.823	1794.77				:			
17:33:08	2758.568	1792.288				:			
17:33:18	3223.622	1803.99				:			
17:33:28	2648.005	1803.323				:			
17:33:38	3205.371	1785.482				:			
17:33:48	2652.692	1774.136				:			
17:33:58	3228.931	1773.762				:			
17:34:08	2618.36	1786.606				:			
17:34:18	3201.317	1793.335				:			
17:34:28	2718.115	1793.441				:			
17:34:38	3230.429	1803.756				:			
17:34:48	2680.973	1815.256				:			
17:34:58	3163.456	1818.657				:			
17:35:08	2779.049	1809.345				:			
17:35:18	3193.144	1802.359				:			
17:35:28	3089.776	1798.58				:			
17:35:38	3005.739	1793.052				:			
17:35:48	2767.433	1782.824				:			
17:35:58	2843.934	1780.559				:			
17:36:08	3091.803	1789.136				:			
17:36:18	2696.008	1780.173				:			
17:36:28	3116.57	1773.242				:			
17:36:38	2659.448	1778.894				:			
17:36:48	3193.718	1799.407				:			
17:36:58	2615.099	1789.598				:			
17:37:08	3227.919	1780.558				:			
17:37:18	2562.831	1779.928				:			
17:37:28	3190.113	1775.932				:			
17:37:38	2578.358	1779.215				:			
17:37:48	3089.82	1783.522				:			
17:37:58	2582.154	1775.884				:			

6/30/92 SITE 4 DAY 2

	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	:	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
17:38:08	3021.136	1759.155				:			
17:38:18	2497.514	1751.915				:			
17:38:28	2885.049	1749.547				:			
17:38:38	2617.139	1748.858				:			
17:38:48	2803.06	1747.704				:			
17:38:58	2667.912	1751.267				:			
17:39:08	2697.058	1738.01				:			
17:39:18	2720.628	1723.875				:			
17:39:28	2483.628	1730.136				:			
17:39:38	2779.639	1725.229				:			
17:39:48	2367.928	1717.627				:			
17:39:58	2770.549	1715.946				:			
17:40:08	2304.786	1706.946				:			
17:40:18	2804.138	1711.794				:			
17:40:28	2363.43	1700.167				:			
17:40:38	2843.417	1672.681				:			
17:40:48	2148.002	1668.205				:			
17:40:58	2567.986	1650.391				:			
17:41:08	2576.863	1620.115				:			
17:41:18	2756.149	1503.146				:			
17:41:28	2390.847	1403.776				:			
17:41:38	2762.457	1360.56				:			
17:41:48	2425.309	1335.571				:			
17:41:58	2503.435	1319.775				:			
17:42:08	2289.394	1322.397				:			
17:42:18	2238.378	1382.2				:			
17:42:28	2310.539	1418.24				:			
17:42:38	2018.531	1430.7				:			
17:42:48	2211.36	1418.099				:			
17:42:58	1824.892	1413.807				:			
17:43:08	2133.255	1387.696				:			
17:43:18	1845.421	1363.006				:			
17:43:28	2248.752	1342.665				:			
17:43:38	1763.266	1326.665				:			
17:43:48	2114.021	1294.607				:			
17:43:58	1904.679	1203.442				:			
17:44:08	2058.665	1154.389				:			
17:44:18	1871.921	1143.93				:			
17:44:28	2011.183	1147.487				:			
17:44:38	1826.565	1167.644				:			
17:44:48	1821.84	1186.167				:			
17:44:58	1813.467	1213.695				:			
17:45:08	1796.602	1262.023				:			
17:45:18	1854.037	1280.237				:			
17:45:28	1753.883	1277.444				:			
17:45:38	1812.638	1279.053				:			
17:45:48	1701.356	1267.797				:			
17:45:58	1843.544	1266.354				:			

6/30/92 SITE 4 DAY 2

			FRONT GC RESULTS				REAR GC RESULTS	
	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE: (ppmV/wet) :	ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
17:46:08	1750.838	1239.492			:			
17:46:18	1925.901	1203.237			:			
17:46:28	1777.616	1152.028			:			
17:46:38	2015.614	1126.068			:			
17:46:48	1839.286	1124.837			:			
17:46:58	1996.157	1131.638			:			
17:47:08	1833.925	1140.042			:			
17:47:18	1948.726	1165.299			:			
17:47:28	1888.891	1227.259			:			
17:47:38	1920.25	1274.307			:			
17:47:48	1822.394	1299.092			:			
17:47:58	1862.464	1287.946			:			
17:48:08	1887.064	1271.04			:			
17:48:18	1885.626	1255.476			:			
17:48:28	1994.222	1258.831			:			
17:48:38	1892.087	1252.079			:			
17:48:48	2110.086	1256.261			:			
17:48:58	1962.846	1254.646			:			
17:49:08	2114.334	1254.428			:			
17:49:18	1943.284	1256.422			:			
17:49:28	2132.972	1255.509			:			
17:49:38	1958.621	1251.308			:			
17:49:48	2150.78	1248.109			:			
17:49:58	1956.227	1259.481			:			
17:50:08	2141.319	1262.494			:			
17:50:18	2051.214	1269.28			:			
17:50:28	2147.539	1275.366			:			
17:50:38	2082.656	1280.217			:			
17:50:48	2182.867	1285.694			:			
17:50:58	2082.595	1296.18			:			
17:51:08	2118.343	1306.874			:			
17:51:18	2138.109	1314.874			:			
17:51:28	2210.044	1315.56			:			
17:51:38	2403.608	1318.067			:			
17:51:48	2307.936	1327.519			:			
17:51:58	2449.643	1342.229			:			
17:52:08	2255.062	1361.806			:			
17:52:18	2408.751	1375.886			:			
17:52:28	2143.364	1389.025			:			
17:52:38	2407.367	1401.383			:			
17:52:48	2072.903	1409.679			:			
17:52:58	2375.543	1427.837			:			
17:53:08	2150.484	1438.821			:			
17:53:18	2543.779	1448.07			:			
17:53:28	2154.065	1470.947			:			
17:53:38	2592.668	1475.548			:			
17:53:48	2323.832	1501.284			:			
17:53:58	2500.51	1513.124			:			

6/30/92 SITE 4 DAY 2

	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE: (ppmV/wet)	:	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
17:54:08	2204.915	1525.148				:			
17:54:18	2356.175	1527.922				:			
17:54:28	2296.724	1533.892				:			
17:54:38	2345.412	1549.016				:			
17:54:48	2266.859	1537.465				:			
17:54:58	2341.872	1517.664				:			
17:55:08	2436.614	1511.286				:			
17:55:18	2295.603	1508.289				:			
17:55:28	2486.746	1509.533				:			
17:55:38	2182.78	1505.655				:			
17:55:48	2517.546	1511.579				:			
17:55:58	2242.78	1518.343				:			
17:56:08	2660.444	1460.037				:			
17:56:18	2193.888	1352.912				:			
17:56:28	2580.374	1312.723				:			
17:56:38	2194.141	1301.732				:			
17:56:48	2502.056	1299.3				:			
17:56:58	2098.581	1298.477				:			
17:57:08	2352.062	1294.298				:			
17:57:18	2134.036	1306.153				:			
17:57:28	2238.381	1343.161				:			
17:57:38	1986.107	1356.468				:			
17:57:48	2078.578	1342.338				:			
17:57:58	2040.548	1330.377				:			
17:58:08	2026.59	1313.93				:			
17:58:18	2066.179	1292.647				:			
17:58:28	2067.408	1235.638				:			
17:58:38	2236.085	1148.571				:			
17:58:48	2022.92	1100.944				:			
17:58:58	2281.152	1074.659				:			
17:59:08	1969.353	1071.882				:			
17:59:18	2178.966	1064.803				:			
17:59:28	1800.385	1075.772				:			
17:59:38	2108.745	1136.453				:			
17:59:48	1789.768	1187.71				:			
17:59:58	2013.834	1204.202				:			
18:00:08	1602.035	1205.587				:			
18:00:18	1800.939	1192.12				:			
18:00:28	1687.69	1192.078				:			
18:00:38	1828.237	1184.688				:			
18:00:48	1718.745	1184.475				:			
18:00:58	1960.333	1170.79				:			
18:01:08	1872.22	1132.997				:			
18:01:18	1931.438	1060.897				:			
18:01:28	1928.637	1025.154				:			
18:01:38	1917.385	1024.472				:			
18:01:48	2011.586	1041.866				:			
18:01:58	1809.977	1039.464				:			

6/30/92 SITE 4 DAY 2

	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	:	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
18:02:08	1905.386	1046.444				:			
18:02:18	1717.556	1091.288				:			
18:02:28	1850.003	1141.43				:			
18:02:38	1694.394	1148.992				:			
18:02:48	1812.829	1137.285				:			
18:02:58	1682.751	1151.04				:			
18:03:08	1770.146	1147.045				:			
18:03:18	1730.725	1124.764				:			
18:03:28	1825.845	1163.168				:			
18:03:38	1770.232	1167.836				:			
18:03:48	1915.683	1124.465				:			
18:03:58	1903.393	1062.953				:			
18:04:08	1936.814	1033.421				:			
18:04:18	1969.607	1026.15				:			
18:04:28	1935.637	1025.145				:			
18:04:38	1960.507	1037.768				:			
18:04:48	1841.636	1061.189				:			
18:04:58	2004.492	1085.949				:			
18:05:08	1886.11	1156.033				:			
18:05:18	2079.183	1201.069				:			
18:05:28	1880.296	1198.408				:			
18:05:38	2018.223	1197.494				:			
18:05:48	1876.551	1204.174				:			
18:05:58	1992.226	1215.165				:			
18:06:08	1957.267	1211.715				:			
18:06:20	2138.066	1152.079				:			
18:06:28	2033.416	1109.479				:			
18:06:39	2205.168	1089.061				:			
18:06:48	2059.565	1092.619				:			
18:06:58	2171.396	1094.967				:			
18:07:08	1954.745	1111.46				:			
18:07:18	2007.81	1151.152				:			
18:07:28	2186.662	2339.742				:			
18:07:38	3763.421	3742.683				:			
						:			
						:			
18:14:58	2187.185	1424.527				:			
18:15:06	2306.024	1434.822				:			
						:			
						:			
						:			
18:15:27	1886.671	1435.495				:			
18:15:27	1886.671	1435.495				:			
18:15:35	262.0034	213.1868				:			
18:15:45	221.7957	198.5038				:			
18:15:55	210.4318	195.3353				:			
18:16:05	205.2558	194.6099				:			
18:16:15	203.4773	193.2928				:			

6/30/92 SITE 4 DAY 2

	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
18:16:25	201.7485	192.594						
18:16:35	202.0461	191.7077						
18:16:45	201.4307	191.1095						
18:16:55	199.4662	192.5187						
	201.6337	192.2445						
18:17:05	200.6702	190.6374						
18:17:24	202.3519	189.5616						
18:17:25	200.5086	190.4464						
18:17:42	199.4009	190.902						
18:17:58	202.8234	196.094						
18:17:59	202.8234	196.094						
18:18:05	207.094	192.8419						
18:18:15	207.0807	192.9052						
18:18:25	205.8568	193.6893						
18:18:35	205.0872	194.0658						
18:18:46	208.0218	191.9629						
18:18:55	205.7267	193.4055						
18:19:05	205.0883	194.3915						
18:19:15	204.8909	194.5521						
18:19:25	206.4197	193.4382						
18:19:35	849.3721	494.7						
18:19:45	1726.222	1142.316						
18:19:55	2025.059	1253.877						
18:20:06	1806.496	1165.905						
18:20:15	555.9254	329.6097						
18:20:25	320.6892	308.6791						
18:20:35	314.4231	309.2361						
18:20:45	311.6794	303.6554						
18:20:55	310.3663	305.1723						
18:21:05	308.7754	305.3849						
18:21:30	311.7107	306.647						
18:21:31	311.7107	306.647						
18:21:35	307.6396	305.3791						
18:21:46	308.1505	309.1014						
18:21:55	307.7166	306.6278						
18:22:05	307.5205	308.0305						
18:22:15	309.0212	309.1664						
18:22:26	308.9421	308.8727						
18:22:36	309.5409	308.1774						
18:22:46	307.5484	308.5103						

6/30/92 SITE 4 DAY 2

			FRONT GC RESULTS				REAR GC RESULTS		
	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE: (ppmV/wet)	:	ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
18:22:55	731.3231	447.6168				:			
18:23:05	1766.45	955.2586				:			
18:23:15	1804.818	1067.153				:			
18:23:25	1913.935	1141.172				:			
18:23:35	1715.7	1167.914				:			
18:23:45	1804.042	1167.69				:			
18:23:55	1756.523	1177.479				:			
18:24:05	1744.824	1185.573				:			
18:24:15	1736.432	1191.663				:			
18:24:25	1710.546	1183.45				:			
18:24:35	1929.441	1165.944				:			
18:24:45	1654.298	1112.601				:			
18:24:55	1830.952	1076.734				:			
18:25:05	1697.507	1049.688				:			
18:25:16	1970.274	1054.153				:			
18:25:25	1539.901	1067.151				:			
18:25:35	1826.654	1095.916				:			
18:25:45	1681.818	1147.589				:			
18:25:55	1755.218	1171.147				:			
18:26:05	1615.084	1172.665				:			
18:26:15	1704.487	1154.842				:			
18:26:25	1672.034	1152.512				:			
18:26:35	1719.406	1146.991				:			
18:26:45	1733.312	1143.274				:			
18:26:55	1814.787	1143.91				:			
18:27:05	1900.225	1123.039				:			
18:27:15	1814.524	1061.794				:			
18:27:25	1921.393	1030.491				:			
18:27:35	1818.453	1014.859				:			
18:27:46	1996.676	1044.604				:			
18:27:56	1828.201	1042.165				:			
18:28:05	1974.959	1046.17				:			
18:28:15	1759.627	1058.023				:			
18:28:25	1903.475	1091.807				:			
18:28:35	1776.953	1153.567				:			
18:28:45	1946.695	1194.411				:			
18:28:55	1841.644	1219.953				:			
18:29:05	1922.161	1223.71				:			
18:29:15	1872.721	1248.439				:			
18:29:25	2033.644	1277.972				:			
18:29:35	1995.99	1247.211				:			
18:29:45	2105.993	1194.317				:			
18:29:55	2169.448	1172.147				:			
18:30:05	2178.53	1170.767				:			
18:30:15	2249.706	1176.751				:			
18:30:26	2080.986	1175.539				:			
18:30:35	2135.605	1203.037				:			
18:30:45	2029.122	1254.783				:			

6/30/92 SITE 4 DAY 2

	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
18:30:55	2145.891	1321.517						
18:31:05	1951.144	1363.961						
18:31:15	2307.444	1380.207						
18:31:25	1956.83	1376.602						
18:31:35	2342.032	1366.039						
18:31:45	2027.052	1350.033						
18:31:55	2381.34	1357.484						
18:32:05	2039.888	1356.298						
18:32:15	2474.636	1362.366						
18:32:25	2088.218	1337.224						
18:32:35	2389.33	1273.079						
18:32:45	2160.137	1215.076						
18:32:56	2377.687	1204.386						
18:33:06	2101.928	1211.836						
18:33:15	2226.476	1223.624						
18:33:25	2060.31	1238.034						
18:33:35	2155.247	1268.763						
18:33:45	2161.797	1371.65						
18:33:55	2014.914	1402.239						
18:34:05	2081.996	1415.936						
18:34:27	1900.202	1409.441						
18:34:27	1900.202	1409.441						
18:34:35	131.3618	101.7675						
18:34:45	113.1634	86.15923						
18:34:56	100.8878	94.51043						
18:35:05	91.08211	118.0396						
18:35:16	88.00804	124.1306						
18:35:25	79.82274	113.4449						
18:35:36	83.96591	91.93649						
18:35:46	82.96677	87.58553						
18:35:55	83.22186	84.2076						
18:36:05	83.39712	79.72942						
18:36:15	83.22709	77.62863						
18:36:25	86.16102	76.05542						
	83.84631	82.85718						
18:36:35	83.93082	74.68968						
18:36:45	144.558	83.85009						
18:36:55	1830.632	1082.025						
18:37:05	2042.422	1532.778						
18:37:15	2100.715	1561.231						
18:37:25	2019.184	1544.183						
18:37:35	2380.091	1521.189						
18:37:45	1097.181	568.6177						

6/30/92 SITE 4 DAY 2

			FRONT GC RESULTS				REAR GC RESULTS		
	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE: (ppmV/wet)	:	ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
18:37:55	162.9038	127.7472				:			
18:38:06	128.5258	119.2154				:			
18:38:15	119.9517	115.2066				:			
18:38:26	114.6625	114.3923				:			
						:			
						:			
						:			
18:38:47	110.6605	113.8498				:			
18:38:47	110.6605	113.8498				:			
18:38:56	106.2075	111.3049				:			
18:39:05	105.8485	108.0016				:			
18:39:15	103.1824	108.2248				:			
18:39:25	103.749	104.5082				:			
18:39:35	100.9672	105.4746				:			
18:39:45	102.3283	106.5882				:			
18:39:55	101.8809	104.9626				:			
	103.4519	107.0092				:			
						:			
						:			
18:40:05	102.1751	107.0085				:			
18:40:15	102.1111	104.513				:			
18:40:25	101.2481	107.1882				:			
18:40:36	107.9176	107.5877				:			
18:40:46	1827.44	876.5769				:			
18:40:55	2117.456	1465.39				:			
18:41:05	2389.96	1507.63				:			
18:41:15	2252.733	1521.29				:			
18:41:25	2573.031	1494.994				:			
18:41:35	2217.208	1440.586				:			
18:41:45	2604.384	1376.517				:			
18:41:55	2291.93	1337.527				:			
18:42:05	2542.934	1320.204				:			
18:42:15	2142.299	1317.706				:			
18:42:25	2449.606	1355.075				:			
18:42:35	2337.804	1421.214				:			
18:42:45	2335.876	1466.21				:			
18:42:55	2159.523	1482.424				:			
18:43:05	2254.705	1474.519				:			

SITE 4
DAY 2

[illegible]
06-30-1992 [illegible]
CALIBRATION FILE NAME = C:\CEMDATA\0630A.C4L

Chan.	Name	Units	Zero		Span		Drift	Adj.
			Conc.	Resp.	Conc.	Resp.		
1	THC1	PPM	0.00	-.0025	3960.00	3.959	999.637	2.84
2	02	%	0.00	2.0004	20.90	0.085	247.885	-0.11
3	THC2	PPM	0.00	-.0011	3980.00	3.772	1054.814	1.15
4		PPM	0.00	0.0005	3962.00	3.965	999.924	-0.59

Press Shift-PrtSc to Print Out Table
Press <D> to Continue

[illegible] CORPORATION [illegible] DI

ield Testing and Process Engineering Dept.
ontinuous Emissions Monitoring Data
AMPLES
PA
erformed for:
ate Printed = 06-30-1992 Current Time = 10:06:34
ile Name = C:\CEMDATA\0630PA.PPM Calibration File:C:\CEMDATA\0630A.C4L

06-30-1992 Time	THC1 PPM	02 %	THC2 PPM	PPM
4:06:34	3953.6	-0.2	-627.5	4001.6
4:06:39	3955.6	-0.5	-616.0	3963.6
4:06:49	3951.4	-0.6	-40.9	3993.2
4:06:59	3951.4	-0.7	-41.7	3993.2

Avg.=	3963.7	-0.4	-336.1	3971.1

[illegible] [illegible] [illegible] 1992 09

Field Testing and Process Engineering Dept.
Continuous Emissions Monitoring Data
SERIES
 94
Performed for:
Date Printed = 06-30-1992 Current Time = 14:09:22
File Name = C:\CEMDATA\063092.PRN Calibration File:C:\CEMDATA\0630A.CAL

6-30-1992 Time	THC1 PPM	O2 %	THC2 PPM	PPM
14:06:23	1525.9	1.3	-1155.5	1524.5
14:06:28	1509.3	1.4	-1197.2	1514.7
14:06:38	1504.4	1.2	-1067.1	1512.1
14:06:48	1512.5	0.0	-987.0	1504.7
14:06:58	1510.6	-0.5	-993.0	1509.9
14:07:08	1512.5	-0.3	-986.0	1506.7
14:07:18	1508.6	-0.4	-1013.4	1504.5
14:07:28	1511.3	-0.3	-1029.6	1505.9
14:07:38	1512.5	-0.2	-1220.3	1501.6
14:07:48	1502.3	-0.5	-1186.2	1503.9
14:07:58	1498.2	-0.4	-1161.8	1503.1
14:08:08	1496.2	-0.8	-1277.5	1501.2
14:08:18	1502.6	-0.3	-1141.1	1508.2
Avg.	1508.2	0.0	-1110.4	1507.5

-NDIA\ CORPORATION 2 QC

Field Testing and Process Engineering Dept.
Continuous Emissions Monitoring Data
-AERIES
PA
erformed for:
ate Printed = 06-30-1992 Current time = 15:42:25
ile Name = D:\CEMDATA\06300[illegible].PRN Calibration File:\CEMunit[illegible].CAL

TABLE

ROCK

06-30-1992 Time	THC1 PPM	O2 %	THC2 PPM	PPM
5:42:29	344.1	17.6	-1050.1	1363.8
5:42:30	344.1	17.6	-1056.1	1363.8
5:42:39	96.7	14.6	-4047.0	84.1
5:42:48	47.2	13.7	-3727.0	40.7
5:42:58	25.9	13.4	-3680.1	32.1
5:43:08	17.2	12.6	-3714.1	28.6
5:43:18	14.5	9.8	-3725.2	23.4
5:43:28	14.6	6.3	-3755.2	22.1
5:43:38	15.6	2.9	-3705.7	20.9
5:43:48	13.2	0.2	-3722.2	15.7
5:43:58	15.5	-0.3	-3767.4	14.7
5:44:08	15.9	-0.4	-3762.8	15.9
5:44:18	13.5	-0.6	-3777.8	14.9
5:44:28	11.8	-1.1	-3751.3	12.6
5:44:38	9.4	-1.1	-3679.9	12.6
5:44:48	3.7	-1.3	-3577.2	10.1
5:44:58	2.5	-1.4	-3573.7	7.4
5:45:08	2.7	-1.2	-3541.3	6.1
5:45:18	3.2	-1.2	-3586.1	5.1
5:45:28	2.2	-1.2	-3574.5	5.3
5:45:38	-0.4	-1.3	-3539.0	3.8
5:45:48	0.2	-1.1	-3599.3	1.7
5:45:58	2.5	-1.1	-3583.4	5.6
5:46:08	3.5	-1.2	-3592.5	6.1
5:46:18	1.4	-1.2	-3613.2	3.5
Avg.=	40.8	3.7	-3468.1	125.1

2.1 5.1

[DIAM CORPORATION 32.2 QC

ield Testing and Process Engineering Dept.
ontinuous Emissions Monitoring Data
AMPLES
PA
erformed for;
ate Printed = 06-30-1992 Current Time = 15:47:55
ile Name = C:\CEMDATA\063QP2.PRN Calibration File:C:\CEMDATA\@63DA.CAL

06-30-1992	THC1	O2	THC2	
Time	PPM	%	PPM	PPM
5:48:00	78.7	12.9	-3844.8	76.8
5:48:09	84.0	15.1	-3832.4	75.0
5:48:19	88.6	16.3	-3809.3	75.2
5:48:29	86.4	17.2	-3812.6	74.0
5:48:39	86.9	17.9	-3827.9	74.8
Avg.=	84.5	15.9	-3825.4	75.2

ADIAN CORPORATION 1991.1 QE

ield Testing and Process Engineering Dept.
ontinuous Emissions Monitoring Data
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erformed for:
ate Printed = 06-30-1992 Current Time = 15:49:34
ile Name = C:\CEMDATA\QE3092.PRN Calibration File:C:\CEMDATA QE30N.CAL

06-30-1992 Time	THC1 PPM	O2 %	THC2 PPM	PPM
5:49:39	205.7	18.4	-2335.6	193.5
5:49:48	205.1	18.6	-3204.3	192.4
5:49:58	206.0	18.6	-5160.2	192.2
5:50:08	204.9	18.7	-5241.7	192.4
5:50:18	205.5	18.6	-5245.1	191.9
5:50:28	206.3	18.8	-5229.9	191.9
5:50:38	204.8	18.5	-5203.5	192.8
5:50:48	207.7	18.8	-2387.6	192.8
5:50:58	209.0	18.5	-5140.4	192.2
5:51:08	208.1	18.7	-3103.6	192.9
5:51:18	208.9	18.7	-5159.0	192.4
5:51:28	209.4	18.7	-5235.2	192.1
5:51:38	207.9	18.8	-5233.7	193.2
5:51:48	208.6	18.5	-5251.4	192.3
5:51:58	209.3	18.6	-5240.5	192.3
5:52:08	205.8	18.9	-5239.9	193.7
Avg.=	207.0	18.7	-4598.8	192.6

ADIAN CORPORATION 799 GL

ield Testing and Process Engineering Dept.
ontinuous Emissions Monitoring Data
-SERIES
PA
erformed for:
ate Printed = 06-30-1992 Current Time = 15:53:57
ile Name = C:\CEMDATA\063092.PRN Calibration File:C:\CEMDATA\063PA.CAL

06-30-1992 Time	THC1 PPM	O2 %	THC2 PPM	PPM
5:54:02	801.6	13.4	-4217.7	796.6
5:54:08	798.7	15.5	-4368.7	804.9
5:54:18	800.1	14.7	-4257.5	805.2
5:54:28	810.0	10.2	-4250.0	805.8
5:54:38	809.0	4.6	-4243.7	809.8
5:54:48	804.0	0.5	-4232.7	799.7
5:54:58	803.9	-2.1	-4244.4	798.8
5:55:08	804.8	-0.2	-4261.5	803.8
5:55:18	804.5	-0.4	-4247.8	804.1
5:55:28	803.4	-0.5	-4246.3	804.1
5:55:38	804.8	-0.4	-4123.1	807.6
5:55:48	805.7	-0.5	-4244.9	803.1
5:55:58	803.2	-0.5	-4250.7	807.7
5:56:08	804.8	-0.5	-4256.3	804.7
5:56:19	763.2	-0.7	-3827.7	796.9
Avg.=	793.4	4.0	-4218.5	803.7

ADIAN CORPORATION 1498 SO

ield Testing and Process Engineering Dept.
ontinuous Emissions Monitoring Data
SERIES
SO
erformed for:
ate Printed = 01-30-1992 Current Time = 15:5 :29
ile Name = C:\CEMDATA 013092.PRN Calibration File:C:\CEMDATA\013084.CAL

Ja-30-1992 Time	HCl PPM	O2 %	SO2 PPM	PPM
1:57:29	576.9	-0.4	-3804.2	864.9
5:57:29	576.9	-0.9	-3804.2	864.9
5:57:29	576.9	-0.9	-3804.2	864.9
5:57:38	1503.2	-0.5	-3043.9	1503.3
5:57:48	1505.6	-0.0	-1918.3	1505.0
5:57:58	1506.1	0.3	-1328.2	1518.2
5:58:08	1498.6	0.2	-1895.7	1510.9
5:58:18	1494.3	-0.0	-1047.8	1505.2
5:58:28	1496.4	-0.4	-1023.0	1509.1
5:58:38	1499.4	-0.3	-971.4	1511.6
5:58:48	1496.6	-0.2	-1183.4	1512.3
5:58:58	1497.0	-0.3	-1008.0	1511.9
5:59:08	1498.2	-0.5	-996.6	1511.3
5:59:18	1498.3	-0.2	-962.8	1513.2
5:59:28	1498.5	-0.3	-1107.2	1512.5
5:59:38	1496.9	-0.3	-1111.7	1510.1
5:59:49	1494.2	-0.4	-1186.7	1505.5
5:59:58	1503.0	-0.4	-1126.4	1504.9
6:00:08	1389.7	-2.2	-1050.5	1463.0
6:00:18	578.2	-0.1	-1194.7	1289.2
Avg.=	1307.4	-0.3	-1636.0	1389.3

1499.3 1509.3

-SIAK CORPORATION 2000 QC

:eld Testing and Process Engineering Dept.
ontinuous Emissions Monitoring Data
:,EMIES
^A
erformed for:
:te Printed = 06-30-1992 Current Time = 15:01:03
le Name = I:\CEMDATA\063092.PRN Calibration File:C:\CEMDATA\0630A.CAL

06-30-1992 Time	THC1 PPM	O2 %	THC2 PPM	PPM
:01:08	2025.0	5.7	-1474.9	1936.8
:01:8[illegible]	2025.8	5.[illegible]	-1474.9	1936.8
:01:18	2037.7	11.2	-918.7	1939.2
:01:28	2046.9	12.5	-825.3	1938.2
:01:38	2051.4	15.4	-824.3	1940.6
:01:48	2043.2	16.9	-918.7	1940.8
:01:58	2026.2	18.1	-924.4	1941.4
:02:08	2026.7	18.8	-926.4	1941.7
:02:19	2024.5	19.1	-1188.2	1945.7
:02:28	2024.4	19.4	-936.0	1947.8
:02:38	2025.6	19.7	-802.4	1945.7
:02:48	2025.8	19.7	-710.0	1946.8
:02:58	2026.9	19.9	-672.4	1949.1
:03:08	2027.8	19.8	-673.2	1950.8
:03:18	2027.8	19.8	-582.3	1947.4
:03:28	2024.4	19.9	-541.2	1949.1
Avg=	2030.2	16.4	-891.8	1943.2

-CIBA CORPORATION 3960 QC

Field Testing and Process Engineering Dept.
Continuous Emissions Monitoring Data
SERIES
QA
Performed for:
File Printed = 06-30-1992 Current time = 15:03:55
File Name = C:\CEMDATA\063092.PPM Calibration File:C:\CEMDATA\063094.CAL

06-30-1992 Time	THC1 PPM	O2 %	THC2 PPM	PPM
13:04:00	3841.9	19.6	-409.8	3913.3
13:04:08	3830.4	17.7	-304.6	3905.5
13:04:18	3898.6	16.8	-53.3	3955.9
13:04:28	3925.2	14.8	-5[illegible].9	3972.1
13:04:38	3940.9	12.4	-47.9	3975.7
13:04:48	3936.1	9.5	-59.7	3999.1
13:04:58	3937.6	7.7	-54.8	3998.1
AVG.=	3787.3	12.2	-141.0	3900.5

CALIBRATION SUMMARY
04-30-1992 10:12:39
CALIBRATION FILE NAME =C:\CEMDATA\0a302.CAL

Chan.	Name	Units	Zero Conc.	Zero Resp.	Span Conc.	Span Resp.	Slope	Int.
1	THC1	PPM	0.00	0.0054	3960.00	3.963	1000.712	-5.37
2	O2	%	0.00	0.0004	22.90	0.085	247.888	-0.11
3	THC2	PPM	0.00	-.0011	3980.00	3.772	1054.814	1.18
4		PPM	0.00	0.0046	3960.00	3.917	1011.081	-4.70

Press Shift-PrtSc to Print Out Table
Press <C> to Continue

CEM INSTRUMENT CHIEF SUMMARY
04-30-1992 10:13:11

Chan.	Name	Units	Zero Conc. Value	Zero Observed/Actual	Span Observed	Drift % of span Zero	Span
1	THC1	PPM	0.000	0.000	3962.00	3963.43	0.05	0.1
2	O2	%	0.000	0.000	20.90	0.087	0.71	-97.61
3	THC2	PPM	0.000	0.000	3962.00	0.00	0.00	99.95
4		PPM	0.000	0.000	3962.00	3963.00	0.00	-0.04

[illegible]

Date-Time	THCl PPM	O2 %	THO2 PPM	PPM
9:15:27	1886.7	16.7	-2036.4	1435.6
9:15:27	1856.7	16.7	-2036.4	1435.5
9:15:38	262.8	18.7	-5201.8	213.2
9:15:48	231.6	18.8	-5210.8	193.4
9:15:58	210.4	17.4	-5127.6	196.3
9:16:08	205.7	18.8	-5205.3	194.2
9:16:18	203.5	18.4	-5200.9	193.3
9:16:28	201.7	18.7	-5419.0	192.2
9:16:38	202.0	18.7	-5172.8	191.7
9:16:48	201.2	18.8	-5239.9	191..
9:16:58	199.5	18.8	-5242.8	192.5
AVG.=	516.5	17.4	-4474.1	421.3

201.6 192.2

RADIAN CORPORATION 200 01 9C -3 CAL:

Field Testing and Process Engineering Dept.
Continuous Emissions Monitoring Data
RAKERIES
,PA
Performed for:
Date Printed = 0s-30-1992 Current Time = 1s:1?:5s
File Name = C:\CEMDATA\0s3052.PRN Calibration File:C:\CEMCAL\0s30s?.CAL

0s-30-1992 Time	THC1 PPM	O2 %	THC2 PPM	PPM
18:17:58	202.2	18.5	-526s.6	196.1
18:17:59	202.8	18.5	-52es.6	19s.1
18:18:05	207.1	18.4	-5427.9	192.8
18:18:15	207.1	18.4	-5184.8	191.5
18:18:25	205.5	18.5	-5196.3	193.7
18:18:35	205.1	18.4	-523s.8	194.1
Avg.=	205.1	18.7	-4925.6	194.3

[illegible] CORPORATION 200 ETHANOL DR [illegible]A 5[illegible]

Field Testing and Process Engineering Dept.
Continuous Emissions Monitoring Data
AVERAGES
for
performed for:
Date Printed = 06-30-1992 Current Time = 10:20:27
File Name = D:\CEMDATA\063092.PRN Calibration File:D:\CEMDATA\063084.CAL

06-30-1992 Time	THC1 PPM	O2 %	THC2 PPM	PPM
8:21:30	311.7	-0.9	-5184.9	306.6
8:21:31	311.7	-0.9	-5184.9	306.6
8:21:35	307.6	-1.1	-5229.1	305.4
8:21:46	308.2	-0.7	-5191.4	307.1
8:21:55	307.7	-0.9	-5185.1	306.6
8:22:05	307.9	-0.8	-5190.3	306.8
8:22:15	309.0	-0.6	-5176.8	308.2
8:22:26	308.9	-0.7	-5177.2	308.2
Ave.=	307.1	-0.8	-5187.5	307.6

RADIAN CORPORATION 90.1 02 (& CAL)

Field Testing and Process Engineering Dept.
Continuous Emissions Monitoring Data
SERIES
PA
Performed run;
Date Printed = 06-30-1992 Current Time = 16:39:28
File Name = C:\CEMLP\PA-063092.PRN Calibration File:C:\CEMLP\PA-063092.CAL

06-30-1992 Time	THC1 PPM	O2 %	THC2 PPM	PPM
8:34:27	1900.2	17.1	-967.7	1409.4
8:34:27	1902.3	17.1	-967.7	1409.4
8:34:35	131.4	15.6	-4478.7	101.5
8:34:45	113.2	16.9	-3961.4	85.2
8:34:55	100.9	17.5	-4212.1	94.5
8:35:05	91.1	18.2	-5099.2	116.8
8:35:16	96.0	18.2	-5342.4	124.1
8:35:25	79.6	18.1	-4982.9	113.4
8:35:36	84.0	18.5	-4852.6	91.9
8:35:46	83.0	18.6	-2775.7	87.6
8:35:55	83.2	18.2	-3997.1	84.2
8:36:05	83.4	18.2	-3865.7	79.7
8:36:15	83.2	18.4	-3844.9	77.6
8:36:25	86.2	18.4	-3873.6	76.1
Avg.=	358.8	17.8	-3620.7	282.4

83.8 82.9

-GINA CORPORATION 82.5 ACETALDEHYDE

.eld Testing and Process Engineering Dept.
ontinuous Emissions Monitoring Data
-ASPIES
FA
erformed for:
ate Printed = 0s-30-1992 Current Time = 18:38:43
ile Name = D:\CEMDATA\063092.PRN Calibration File:D:\CEMDATA\063DP.CAL

0s-30-1992 Time	THC1 PPM	O2 %	THC2 PPM	PPM
8:38:47	110.7	6.1	-4764.2	113.6
8:35:47	110.7	6.1	-4764.2	113.6
8:32:06	106.2	4.0	-4779.9	111.3
8:29:05	105.8	3.7	-4652.0	109.6
8:26:15	103.2	2.9	-4572.6	106.2
8:23:25	103.7	2.8	-4526.6	106.5
8:20:35	101.8	2.8	-4386.5	104.5
8:17:45	102.3	2.9	-4453.2	105.2
8:14:55	101.9	2.6	-4445.9	105.2
Avg.=	105.1	3.7	-4594.0	109.5

103.5 107.0

7/1/92 SITE 4 DAY 3

TIME	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	:	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
08:54:13	0.621894	0.392765				:			
08:54:19	2.373968	-1.43979				:			
08:54:49	1.130121	-0.33181				:			
08:55:19	1.268839	0.061211							
08:55:49	1.266964	0.116289							
08:56:19	1.779859	-0.37253							
08:56:49	1.338124	-0.44860							
08:57:19	0.892932	-0.06442							
08:57:49	655.9596	120.0857							
08:58:19	3203.185	1718.341							
08:58:49	3077.571	1835.807							
08:59:19	3244.408	1798.957							
08:59:49	2401.259	1072.387							
09:00:19	123.1795	57.04308							
09:00:49	33.29956	13.70478							
09:01:19	10.58133	11.19934							
09:01:49	8.802417	9.570146							
09:02:19	6.495167	6.7261							
09:02:49	6.084173	3.954888							
09:03:19	4.498019	2.470232							
09:03:49	1982.522	1138.432							
09:04:19	2969.623	1597.933							
09:04:49	3077.622	1736.963							
09:05:19	3154.675	1734.704							
09:05:49	3043.582	2890.292							
09:06:19	3950.748	4014.331							
09:06:49	3964.329	4023.538							
09:07:19	3990.811	4028.655							
09:07:49	4005.754	4037.376							
09:08:19	4008.974	4047.785							
09:08:49	4000.257	4059.883							
09:09:19	4000.131	4070.176							
09:09:49	3999.07	4050.344							
09:10:19	3990.814	4024.962							
09:10:49	3174.439	2014.871							
09:11:19	3190.723	1803.226							
09:11:49	3248.347	1755.545							
09:12:19	228.287	85.99158							
09:12:49	38.44585	22.43079							
09:13:19	16.29238	18.22126							
09:13:49	10.49117	14.34862							
09:14:19	6.029039	8.32064							
09:14:49	2890.656	1601.534							
09:15:19	3252.911	1548.607							
09:15:49	3020.125	1553.5							
09:16:19	3072.077	1738.911							
09:16:49	3118.203	1797.034							
09:17:19	3336.583	1619.822							

7/1/92 SITE 4 DAY 3

TIME	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	FRONT GC RESULTS CH4 (ppmV/wet)	FRONT GC RESULTS ACETALDEHYDE: (ppmV/wet) :	REAR GC RESULTS ETH-OH (ppmV/wet)	REAR GC RESULTS CH4 (ppmV/wet)	REAR GC RESULTS ACETALDEHYDE (ppmV/wet)
09:17:49	3323.981	1568.185						
09:18:19	3017.032	1719.137						
09:18:49	3442.056	2918.857						
09:19:19	3414.913	1718.057						
09:19:49	3316.374	1564.016						
09:20:19	3424.387	1563.852						
09:20:49	3301.069	2193.206						
09:21:19	3964.175	3836.284						
09:21:49	4012.663	3953.467						
09:22:20	3983.91	3985.406						
09:22:20	3983.91	3985.406						
09:22:20	3983.91	3985.406						
09:22:29	3967.686	3997.854						
09:22:39	3971.174	4005.83						
09:22:49	3973.203	4006.586						
09:22:59	397Q.147	3986.816						
09:23:09	3970.746	3989.299						
09:23:19	3971.502	3996.473						
09:23:29	3971.281	3978.831						
09:23:39	3946.837	3967.889						
09:23:49	3971.782	3961.421						
09:23:59	3971.983	3966.155						
09:24:09	3973.219	3972.287						
09:24:19	3970.689	3968.742						
09:24:29	3993.179	3968.354						
09:24:39	3995.492	3976.832						
09:24:49	3997.85	3975.57						
09:24:59	3969.536	3980.222						
09:25:09	3964.41	3976.878						
09:25:19	3964.542	3984.206						
09:25:29	3967.657	3984.82						
09:25:39	3965.914	3990.831						
09:25:49	3966.705	3986.071						
09:25:59	3967.9	3973.371						
09:26:09	3965.076	3952.422						
09:26:19	3973.667	3959.844						
09:26:29	3968.353	3958.851						
09:26:39	3963.814	3959.653						
09:26:49	3945.325	3960.833						
09:26:59	3948.793	3965.527						
09:27:09	3950.624	3970.222						
09:27:19	3963.5	3979.827						
09:27:29	3964.068	3979.196						
09:27:39	3960.037	3976.936						
09:27:49	3959.294	3976.352						
09:27:59	3950.113	3961.096						
09:28:09	3496.44	3182.047						
09:28:19	3535.463	1829.001						

7/1/92 SITE 4 DAY 3

TIME	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	FRONT GC RESULTS CH4 (ppmV/wet)	FRONT GC RESULTS ACETALDEHYDE: (ppmV/wet)	REAR GC RESULTS : ETH-OH (ppmV/wet)	REAR GC RESULTS CH4 (ppmV/wet)	REAR GC RESULTS ACETALDEHYDE (ppmV/wet)
09:28:29	3237.601	2371.393						
09:28:39	2151.565	1985.703						
09:28:49	2070.28	1960.635						
09:28:59	2057.356	1949.195						
09:29:09	2046.138	1952.88						
09:29:19	2045.105	1948.58						
09:29:29	2044.02	1947.472						
09:29:39	2042.365	1946.234						
09:29:49	2037.376	1949.651						
09:29:59	2038.307	1949.47						
09:30:09	2037.556	1945.8						
09:30:19	2038.281	1946.655						
09:30:29	2040.931	1943.844						
09:30:39	2038.673	1944.218						
09:30:49	2035.365	1947.543						
09:30:59	2040.018	1944.408						
09:31:09	2036.802	1946.485						
09:31:19	2036.964	1948.571						
09:31:29	2038.062	1949.35						
09:31:39	2040.168	1948.24						
09:31:49	2055.971	1948.298						
09:31:59	2070.403	1946.871						
09:32:09	2068.454	1948.105						
09:32:19	2057.157	1947.682						
09:32:29	2038.198	1949.729						
09:32:39	2037.297	1948.735						
09:32:49	2035.349	1950.79						
09:32:59	1167.526	591.2462						
09:33:09	112.3974	61.3615						
09:33:19	51.03609	30.29868						
09:33:29	28.91041	14.37936						
09:33:39	17.58645	12.39386						
09:33:49	13.17321	10.80179						
09:33:59	10.86825	14.78246						
09:34:09	10.81543	0.824595						
09:34:19	9.88334	1.078628						
09:34:29	9.289614	-3.24666						
09:34:39	8.115344	-1.30402						
09:34:49	7.418288	0.993564						
09:34:59	9.011792	-0.84595						
09:35:09	7.037998	0.85394						
09:35:19	5.090975	2.443106						
09:35:29	3.865573	0.371335						
09:35:39	3.782904	3.157175						
09:35:49	3.694069	1.94623						
09:35:59	3.369198	0.991913						
09:36:09	3.264418	1.003382						
09:36:19	2.44052	1.680448						

7/1/92 SITE 4 DAY 3

TIME	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	FRONT GC RESULTS CH4 (ppmV/wet)	FRONT GC RESULTS ACETALDEHYDE: (ppmV/wet) :	REAR GC RESULTS ETH-OH (ppmV/wet)	REAR GC RESULTS CH4 (ppmV/wet)	REAR GC RESULTS ACETALDEHYDE (ppmV/wet)
09:36:29	3.67109	1.117357						
09:36:39	1.609305	1.348431						
09:36:49	2.872846	-0.74263						
09:36:59	1.72295	0.492074						
09:37:09	911.3326	494.8601						
09:37:19	1271.603	1061.273						
09:37:29	1447.365	1479.39						
09:37:39	1488.252	1503.968						
09:37:49	1491.919	1512.822						
09:37:59	1513.186	1503.366						
09:38:09	1516.512	1504.628						
09:38:19	1512.503	1508.03						
09:38:29	1505.37	1522.514						
09:38:39	1503.87	1510.013						
09:38:49	1500.761	1512.216						
09:38:59	1496.661	1506.308						
09:39:09	1499.27	1509.229						
09:39:19	1499.767	1512.456						
09:39:29	1498.724	1511.353						
09:39:39	1501.488	1515.564						
09:39:49	1500.071	1513.84						
09:39:59	1500.887	1513.209						
09:40:09	1503.583	1515.895						
09:40:19	1504.34	1519.365						
09:40:29	1501.239	1512.074						
09:40:39	1500.521	1509.959						
09:40:49	1501.269	1511.577						
09:40:59	1501.148	1509.119						
09:41:09	1555.843	1518.814						
09:41:19	3032.083	1654.949						
09:41:29	1354.976	963.8996						
09:41:39	847.6433	820.7431						
09:41:49	823.199	810.8788						
09:41:59	817.5437	805.8195						
09:42:09	815.4211	809.0107						
09:42:19	812.2494	806.2928						
09:42:29	810.1835	805.9213						
09:42:39	807.7294	805.5699						
09:42:49	807.7256	807.144						
09:42:59	806.7173	809.4146						
09:43:09	808.6321	811.5238						
09:43:19	809.6039	809.3621						
09:43:29	807.4936	807.8354						
09:43:39	808.8758	808.2938						
09:43:49	804.1281	808.2502						
09:43:59	807.2153	814.1749						
09:44:09	805.1526	801.2036						
09:44:19	805.2707	801.7689						

7/1/92 SITE 4 DAY 3

TIME	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
09:44:29	803.2105	799.6285						
09:44:39	808.1068	800.9899						
09:44:49	810.2323	799.752						
09:44:59	811.4092	799.0856						
09:45:09	812.8599	801.1265						
09:45:19	805.0108	802.1078						
09:45:29	802.7948	801.1644						
09:45:39	802.9178	800.5135						
09:45:49	802.5327	799.8264						
09:45:59	1251.701	1609.967						
09:46:09	3527.272	3732.347						
09:46:19	3856.956	3877.662						
09:46:29	3916.497	3909.806						
09:46:39	3929.932	3922.507						
09:46:49	3934.218	3921.834						
09:46:59	3946.759	3927.62						
09:47:09	3940.843	3924.526						
09:47:19	3947.951	3929.744						
09:47:29	3942.252	3925.695						
09:47:39	3891.973	3795.608						
09:47:49	2075.285	1043.936						
09:47:59	321.9584	223.7964						
09:48:09	245.297	199.4448						
09:48:19	225.736	197.4362						
09:48:29	216.4492	201.4867						
09:48:39	213.494	194.0077						
09:48:49	210.9289	192.7803						
09:48:59	208.1508	192.9499						
09:49:09	208.7263	191.1084						
09:49:19	207.623	190.5725						
09:49:29	207.6635	191.9362						
09:49:39	208.6571	190.9844						
09:49:49	207.3361	191.7115						
09:49:59	205.5256	190.8082						
09:50:09	204.1746	190.6231						
09:50:19	203.1779	191.3092						
09:50:29	205.1307	189.2334						
09:50:39	203.5026	190.4706						
09:50:49	303.2989	208.161						
09:50:59	166.5236	41.28146						
09:51:09	14.64241	10.79967						
09:51:19	108.0464	132.5373						
09:51:29	196.5656	187.9095						
09:51:39	201.0514	189.6273						
09:51:49	203.1006	188.5488						
09:51:59	203.6501	188.3424						
09:52:09	203.8517	188.47						
09:52:19	203.691	188.9574						

7/1/92 SITE 4 DAY 3

TIME	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	FRONT GC RESULTS CH4 (ppmV/wet)	FRONT GC RESULTS ACETALDEHYDE: (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	REAR GC RESULTS CH4 (ppmV/wet)	REAR GC RESULTS ACETALDEHYDE (ppmV/wet)
09:52:29	202.5009	189.6825						
09:52:39	857.4995	157.1342						
09:52:49	54.34052	8.509449						
09:52:59	13.39019	9.838452						
09:53:09	9.011893	0.008583						
09:53:19	6.286876	-2.52732						
09:53:29	2.544938	-1.41460						
09:53:39	2.753432	-1.37297						
09:53:49	3.57893	2.77339						
09:53:59	127.6673	763.1068						
09:54:09	3349.835	3610.685						
09:54:19	3797.996	3832.934						
09:54:29	3892.908	3890.58						
09:54:39	3918.498	3904.34						
09:54:49	3929.602	3909.335						
09:54:59	3938.438	3912.008						
09:55:09	3957.48	3917.672						
09:55:19	3953.923	3917.646						
09:55:29	3954.064	3916.903						
09:55:39	3958.246	3956.219						
09:55:49	3962.087	3958.712						
09:55:59	3956.764	3961.464						
10:02:07	3984.016	3983.735						
10:02:17	3956.869	3958.097						
10:02:27	3963.116	3954.266						
10:02:37	3966.913	3960.059						
10:02:47	3965.568	3959.471						
10:02:57	3971.085	3962.593						
10:03:07	3966.443	3960.251						
10:03:17	3958.633	3957.12						
10:03:27	3249.738	2370.09						
10:03:37	3085.493	1675.07						
10:03:47	3192.031	1714.449						
10:03:57	3092.372	1743.288						

TIME	FRONT ETH-OH FRONT	FRONT CH4 REAR	FRONT ACETALDEHYDE: IT(ppmV/wet) BR	REAR ETH-OH (ppmV/wet)	REAR CH4 (ppmV/wet)	REAR ACETALDEHYDE (ppmV/wet)
10:04:07	3054.705	1733.461				
10:04:17	3345.999	1734.045				
10:04:27	3141.354	1634.295				
10:04:37	3350.861	1536.33				
10:04:47	3105.454	1480.294				
10:04:57	3452.013	1458.891				

	ETH/THC	CH4/THC	AA/THC	ETH/THC	CH4/THC	AA/THC
	0	0	0	0	0	0

7/1/92 SITE 4 DAY 3

TIME	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	FRONT GC RESULTS CH4 (ppmV/wet)	FRONT GC RESULTS ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	REAR GC RESULTS CH4 (ppmV/wet)	REAR GC RESULTS ACETALDEHYDE (ppmV/wet)
10:05:07	3087.39	1467.543						
10:05:17	3273.997	1496.229						
10:05:27	2773.358	1575.846						
10:05:37	3039.142	1674.672						
10:05:47	2786.969	1741.304						
10:05:57	3272.826	1762.252						
10:06:07	2732.731	1782.74						
10:06:17	3438.048	1788.101						
10:06:27	2990.622	1733.422						
10:06:37	3466.148	1626.488						
10:06:47	2910.695	1594.08						
10:06:57	3269.239	1576.3						
10:07:07	3156.107	1582.327	1460	1380	46.1			
10:07:17	3621.473	1582.136	ETH/THC	CH4/THC	AA/THC			
10:07:27	3203.14	1584.794	46.25952162	43.72475331	1.460660237			
10:07:37	3696.123	1541.608						
10:07:47	2959.078	1569.459						
10:07:57	3252.24	1653.12						
10:08:07	3102.668	1718.875						
10:08:17	3358.275	1737.307						
10:08:27	2960.645	1762.129						
10:08:37	3501.236	1737.868						
10:08:47	3320.801	1732.399						
10:08:57	3532.242	1609.414						
10:09:07	3237.776	1555.692						
10:09:17	3522.9	1524.222						
10:09:27	3288.306	1522.988						
10:09:37	3478.209	1522.228						
10:09:47	3395.922	1542.348						
10:09:57	3266.209	1547.45						
10:10:07	3105.568	1572.842						
10:10:17	3123.231	1632.573						
10:10:27	3338.401	1735.502						
10:10:37	3098.447	1758.039						
10:10:47	3368.659	1754.906						
10:10:57	3076.433	1744.227						
10:11:07	3637.943	1734.833						
10:11:17	3116.426	1634.802						
10:11:27	3617.774	1545.995						
10:11:37	3169.532	1509.173						
10:11:47	3657.603	1525.682						
10:11:57	3002.383	1523.228						
10:12:07	3509.301	1550.787						
10:12:17	3009.695	1660.574						
10:12:27	3572.659	1725.302						
10:12:37	2993.83	1751.682						
10:12:47	3491.209	1720.592						
10:12:57	2909.592	1749.819						

7/1/92 SITE 4 DAY 3

TIME	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	FRONT GC RESULTS CH4 (ppmV/wet)	FRONT GC RESULTS ACETALDEHYDE: (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	REAR GC RESULTS CH4 (ppmV/wet)	REAR GC RESULTS ACETALDEHYDE (ppmV/wet)
10:13:07	3564.656	1748.607						
10:13:17	3047.988	1651.286						
10:13:27	3594.644	1566.528						
10:13:37	3046.751	1553.816						
10:13:47	3608.178	1536.021						
10:13:57	3075.463	1557.602						
10:14:07	3347.628	1559.629						
10:14:17	2948.782	1650.167						
10:14:27	3371.979	1694.484						
10:14:37	2870.124	1774.674						
10:14:47	3232.628	1785.495						
10:14:57	3197.757	1801.531						
10:15:07	3398.605	1732.865						
10:15:17	3248.447		1014.504					
10:15:27	3384.881		858.2205					
10:15:37	3227.612	1506.365						
10:15:47	3166.616	1535.948						
10:15:57	3259.627	1623.047						
10:16:07	3219.75	1712.368						
10:16:17	3316.545	1752.896						
10:16:27	3129.078	1767.296				764	801	27.8
10:16:37	3442.291	1771.526				ETH/THC	CH4/THC	AA/THC
10:16:47	3273.121	1729.276				43.22988339	45.32347722	1.573024552
10:16:57	3548.255	1583.425						
10:17:07	3035.162	1540.6						
10:17:17	3219.101	1536.817						
10:17:27	3088.818	1521.66						
10:17:37	3550.463	1521.326						
10:17:47	2835.168	1545.05						
10:17:57	3379.259	1594.021						
10:18:07	2917.718	1680.443						
10:18:17	3478.985	1710.092						
10:18:27	2941.02	1748.878						
10:18:37	3644.221	1725.156						
10:18:47	3007.311	1631.202						
10:18:57	3559.874	1533.672						
10:19:07	3063.923	1487.796						
10:19:17	3611.619	1510.516						
10:19:27	2996.708	1508.393						
10:19:37	3419.76	1489.308						
10:19:47	2878.905	1508.908						
10:19:57	3380.735	1595.572						
10:20:07	2892.251	1679.008						
10:20:17	3312.251	1690.758						
10:20:27	2870.167	1701.05						
10:20:37	3329.444	1684.011						
10:20:47	3119.866	1643.421						
10:20:57	3319.979	1518.512						

7/1/92 SITE 4 DAY 3

TIME	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	FRONT GC RESULTS CH4 (ppmV/wet)	FRONT GC RESULTS ACETALDEHYDE: (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	REAR GC RESULTS CH4 (ppmV/wet)	REAR GC RESULTS ACETALDEHYDE (ppmV/wet)
10:21:07	3121.523	1477.121						
10:21:17	3327.587	1452.918						
10:21:27	3206.425	1457.115						
10:21:37	3248.083	1458.849						
10:21:47	3038.12	1477.928						
10:21:57	3072.581	1550.156						
10:22:07	3193.748	1624.205						
10:22:17	2828.062	1662.597						
10:22:27	2726.941	1690.641						
10:22:37	2693.632	1693.139						
10:22:47	3235.061	1678.549						
10:22:57	2947.462	1679.48						
10:23:07	3339.007	1564.381						
10:23:17	2920.46	1519.996						
10:23:27	3444.833	1498.171						
10:23:37	2899.885	1502.261						
10:23:47	3328.695	1500.919						
10:23:57	2793.62	1556.768						
10:24:07	3427.639	1650.064						
10:24:17	2839.514	1726.842						
10:24:27	3409.218	1728.365						
10:24:37	3169.294	1700.534						
10:24:47	3495.781	1581.168						
10:24:57	2902.247	1519.866						
10:25:07	3177.581	1479.111						
10:25:17	2791.178	1471.415						
10:25:27	3176.522	1518.728						
10:25:37	2797.66	1637.627						
10:25:47	3503.878	1690.906						
10:25:57	2874.191	1714.298						
10:26:07	3449.526	1711.135						
10:26:17	3039.154	1686.799						
10:26:27	3512.892	1574.626						
10:26:37	2904.442	1532.631	1590	964	41.8			
10:26:47	3311.298	1518.786	ETH/THC	CH4/THC	AA/THC			
10:26:57	3108.972	1516.863	54.74373390	33.19054055	1.439174891			
10:27:07	3360.743	1522.047						
10:27:17	3280.711	1544.109						
10:27:27	3185.355	1532.345						
10:27:37	3090.389	1559.2						
10:27:47	3124.943	1640.892						
10:27:57	3176.969	1674.027						
10:28:07	2966.367	1686.62						
10:28:17	3214.938	1685.583						
10:28:27	2876.09	1680.948						
10:28:37	3283.46	1694.458						
10:28:47	3083.286	1701.252						
10:28:57	3509.689	1615.861						

7/1/92 SITE 4 DAY 3

TIME	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE: (ppmV/wet)	:	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
10:29:07	3001.439	1534.455				:			
10:29:17	3528.077	1497.739				:			
10:29:27	3069.617	1494.887				:			
10:29:37	3561.262	1513.839				:			
10:29:47	2936.777	1518.111				:			
10:29:57	3083.892	1533.231				:			
10:30:07	2870.588	1599.706				:			
10:30:17	3353.748	1672.424				:			
10:30:27	2831.03	1708.595				:			
10:30:37	3374.095	1698.374				:			
10:30:47	2846.339	1692.372				:			
10:30:57	3543.038	1683.026				:			
10:31:07	3021.056	1591.848				:			
10:31:17	3480.48	1496.964				:			
10:31:27	3033.25	1483.645				:			
10:31:37	3480.683	1486.096				:			
10:31:47	2835.617	1509.652				:			
10:31:57	3384.911	1565.954				:			
10:32:07	2936.322	1668.57				:			
10:32:17	3325.637	1708.786				:			
10:32:27	3131.248	1721.523				:			
10:32:37	3322.107	1706.483				:			
10:32:47	2927.656	1649.786				:			
10:32:57	3162.058	1525.729				:			
10:33:07	3339.912	1487.804				:			
10:33:17	3240.549	1477.514				:			
10:33:27	3111.243	1471.857				:			
10:33:37	3145.499	1517.504				:			
10:33:47	3288.232	1616.013				:			
10:33:57	3134.369	1669.138				:			
10:34:07	3388.409	1685.615				:			
10:34:17	2922.466	1702.155				:			
10:34:27	3044.024	1702.452				:			
10:34:37	3062.51	1681.651				:			
10:34:47			END	3475.571 **		:			
AVG			1565.000567	790.1268406		:			
						:			
						:			
						:			
10:34:57			2974.441	1508.701		:			
10:35:07			1774.529	1472.231		:			
10:35:17			156.9819	1461.486		:			
10:35:27			63.2842	1463.818		:			
10:35:37			47.53834	1517.868		:	900	835	28.2
10:35:47			154.2719	1631.034		:	ETH/THC	CH4/THC	AA/THC
						:	59.29369352	55.01137121	1.857869063
			COMFORT		ITALIAN	:			
			HOOD	REAR	BREAD	:			

7/1/92 SITE 4 DAY 3

TIME	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	FRONT GC RESULTS CH4 (ppmV/wet)	FRONT GC RESULTS ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	REAR GC RESULTS CH4 (ppmV/wet)	REAR GC RESULTS ACETALDEHYDE (ppmV/wet)
10:35:57		1690.131	585.9972					
10:36:07		1699.678	582.483					
10:36:17		1734.896	526.0478					
10:36:27		1717.257	571.5195					
10:36:37		1719.574	573.3497					
10:36:47		1623.319	665.3032					
10:36:57		1556.276	552.7499					
10:37:07		1513.208	683.5643					
10:37:17		1510.026	550.4294					
10:37:27		1512.181	712.2009					
10:37:37		1509.104	531.0187					
10:37:47		1493.619	694.2454					
10:37:57		1487.433	433.3755					
10:38:07		1547.244	652.0867					
10:38:17		1630.054	463.9377					
10:38:27		1652.875	666.6936					
10:38:37		1657.071	456.3634					
10:38:47		1658.809	659.0079					
10:38:57		1666.493	534.3264					
10:39:07		1661.733	760.6898					
10:39:17		1558.885	520.9093					
10:39:27		1493.762	755.1804					
10:39:37		1467.042	559.5201					
10:39:47		1471.53	677.6696					
10:39:57		1482.935	413.9563					
10:40:07		1513.79	598.9584					
10:40:17		1601.926	461.8014					
10:40:27		1660.642	617.8499					
10:40:37		1682.316	523.4209					
10:40:47		1675.273	634.761					
10:40:57		1658.563	568.3959					
10:41:07		1644.563	690.447					
10:41:17		1506.41	625.0043					
10:41:27		1446.388	661.8479					
10:41:37		1419.631	655.1482					
10:41:47		1439.057	688.1235					
10:41:57		1433.269	624.9486					
10:42:07		1474.203	526.4809					
10:42:17		1560.791	618.6393					
10:42:27		1620.518	579.5712					
10:42:37		1636.615	580.6101					
10:42:47		1657.51	455.8073					
10:42:57		1642.081	600.4482					
10:43:07		1642.995	497.5367					
10:43:17		1620.17	718.1017					
10:43:27		1511.417	556.535					
10:43:37		1446.932	706.5644					
10:43:47		1450.321	564.5269					

7/1/92 SITE 4 DAY 3

TIME	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE: (ppmV/wet) :	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
10:43:57		1455.566	709.3141			:		
10:44:07		1503.692	422.7046			:		
10:44:17		1599.734	667.4229			:		
10:44:27		1667.818	432.834			:		
10:44:37		1680.821	586.2134			:		
10:44:47		1713.175	460.1523	361	131	4.86 :		
10:44:57		1726.938	583.8204	ETH/THC	CH4/THC	AA/THC :		
10:45:07		1731.424	470.3298	78.45228634	28.46883521	1.056172054 :		
10:45:17		1737.708	803.4388			:		
10:45:27		1645.862	581.4103			:		
10:45:37		1568.116	701.1635			:		
10:45:47		1554.496	572.9799			:		
10:45:57		1553.711	784.304			:		
10:46:07		1547.395	533.9852			:		
10:46:17		1574.605	625.5391			:		
10:46:27		1669.888	539.0563			:		
10:46:37		1739.773	599.1036			:		
10:46:47		1770.823	538.1191			:		
10:46:57		1799.193	560.6359			:		
10:47:07		1804.961	542.6082			:		
10:47:17		1838.608	624.2314			:		
10:47:27		1815.921	699.3127			:		
10:47:37		1707.493	595.4132			:		
10:47:47		1632.327	663.1121			:		
10:47:57		1586.438	650.8657			:		
10:48:07		1563.192	668.6342			:		
10:48:17		1569.175	481.0054			:		
10:48:27		1572.902	612.1139			:		
10:48:37		1598.685	466.9277			:		
10:48:47		1674.256	658.9529			:		
10:48:57		1778.255	490.8253			:		
10:49:07		1797.525	675.1874			:		
10:49:17		1803.62	511.8715			:		
10:49:27		1784.877	797.9767			:		
10:49:37		1690.795	540.9832			:		
10:49:47		1595.144	754.6578			:		
10:49:57		1572.41	509.8893			:		
10:50:07		1552.338	777.1672			:		
10:50:17		1561.727	535.8191			:		
10:50:27		1570.744	767.9477			:		
10:50:37		1589.707	463.9694			:		
10:50:47		1586.625	658.0887			:		
10:50:57		1670.743	505.6583			:		
10:51:07		1738.845	707.2213			:		
10:51:17		1760.703	472.5533			:		
10:51:27		1768.107	661.0223			:		
10:51:37		1785.98	520.9572			:		
10:51:47		1747.262	728.1774			:		

7/1/92 SITE 4 DAY 3

TIME	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	FRONT GC RESULTS CH4 (ppmV/wet)	FRONT GC RESULTS ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	REAR GC RESULTS CH4 (ppmV/wet)	REAR GC RESULTS ACETALDEHYDE (ppmV/wet)
10:51:57		1643.155	567.7695					
10:52:07		1586.223	740.6447					
10:52:17		1568.771	637.9156					
10:52:27		1581.317	662.7714					
10:52:37		1562.837	621.1461					
10:52:47		1575.558	632.7642					
10:52:57		1615.12	579.856					
10:53:07		1697.033	556.7778					
10:53:17		1724.211	640.3235					
10:53:27		1750.886	602.5089					
10:53:37		1741.013	651.3182					
10:53:47		1744.9	587.7408			562	936	25.7
10:53:57		1663.421	715.3693			ETH/THC	CH4/THC	AA/THC
10:54:07		1571.734	553.6906			32.20814946	53.64204252	1.472863774
10:54:17		1525.199	698.1388					
10:54:27		1535.371	539.6495					
10:54:37		1531.735	702.1537					
10:54:47		1561.787	499.6774					
10:54:57		1560.404	657.228					
10:55:07		1587.765	515.2113					
10:55:17		1645.512	647.7974					
10:55:27		1720.911	490.4365					
10:55:37		1740.214	698.8024					
10:55:47		1739.615	549.8926					
10:55:57		1660.869	718.9805					
10:56:07		1547.629	571.2914					
10:56:17		1501.177	774.2573					
10:56:27		1488.453	511.4505					
10:56:37		1498.064	700.988					
10:56:47		1519.371	477.8884					
10:56:57		1589.969	669.6753					
10:57:07		1655.641	457.274					
10:57:17		1703.786	639.9857					
10:57:27		1718.193	530.0704					
10:57:37		1665.2	697.8112					
10:57:47		1555.487	569.8489					
10:57:57		1520.734	686.804					
10:58:07		1518.68	570.0246					
10:58:17		1498.116	670.6164					
10:58:27		1474.857	609.2203					
10:58:37		1476.682	588.4138					
10:58:47		1503.664	549.7753					
10:58:57		1593.394	544.4963					
10:59:07		1625.127	546.6329					
10:59:17		1665.266	508.6143					
10:59:27		1661.864	580.7281					
10:59:37		1687.444	558.7783					
10:59:47		1626.371	688.6349					

7/1/92 SITE 4 DAY 3

TIME	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE: (ppmV/wet)	:	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
10:59:57		1581.339	602.3636			:			
11:00:07		1510.935	710.9867			:			
11:00:17		1489.712	544.896			:			
11:00:27		1486.063	673.1216			:			
11:00:37		1489.2	532.9257			:			
11:00:47		1522.838	634.9575			:			
11:00:57		1603.679	432.0878			:			
11:01:07		1621.29	631.114			:			
11:01:17		1644.714	521.6673			:			
11:01:27		1632.751	777.196			:			
11:01:37		1545.378	508.2649			:			
11:01:47		1477.675	749.1428			:			
11:01:57		1443.661	503.8142			:			
11:02:07		1434.989	708.4999			:			
11:02:17		1439.425	451.3348			:			
11:02:27		1460.951	668.6429			:			
11:02:37		1525.641	468.2079			:			
11:02:47		1605.219	706.327	317	259	8.64 :			
11:02:57		1627.609	531.3665	ETH/THC	CH4/THC	AA/THC :			
11:03:07		1613.04	646.2056	44.88006263	36.66856852	1.223229467 :			
11:03:17		1628.164	588.2158			:			
11:03:27		1542.446	741.2651			:			
11:03:37		1439.701	662.0625			:			
11:03:47		1415.972	735.3741			:			
11:03:57		1417.526	623.6118			:			
11:04:07		1430.395	585.5165			:			
11:04:17		1430.034	577.6392			:			
11:04:27		1476.063	500.1646			:			
11:04:37		1542.236	569.2137			:			
11:04:47		1640.874	508.7653			:			
11:04:57		1653.137	551.73			:			
11:05:07		1694.928	510.0237			:			
11:05:17		1685.922	671.9209			:			
11:05:27		1647.197	537.754			:			
11:05:37		1545.459	730.6469			:			
11:05:47		1491.969	591.3617			:			
11:05:57		1482.949	703.1404			:			
11:06:07		1446.852	501.6411			:			
11:06:17		1442.076	729.834			:			
11:06:27		1447.022	524.0773			:			
11:06:37		1493.905	534.7247			:			
11:06:47		1571.136	531.4287			:			
11:06:57		1618.414	630.0696			:			
11:07:07		1682.754	537.4871			:			
11:07:17		1698.241	632.4258	END		:			
AVG				601.2639910	1598.268941	:			
						:			
						:			

7/1/92 SITE 4 DAY 3

TIME	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	FRONT GC RESULTS CH4 (ppmV/wet)	FRONT GC RESULTS ACETALDEHYDE: (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	REAR GC RESULTS CH4 (ppmV/wet)	REAR GC RESULTS ACETALDEHYDE (ppmV/wet)
11:07:27			555.117	1651.907				
11:07:37			56.4298	1571.472				
11:07:47			10.46135	1510.11				
11:07:57			3.195362	1500.833				
11:08:07			2244.09	1503.917				
11:08:17			2936.625	1509.646				
11:08:27			3606.315	1508.044				
			FRONT	REAR	ITALIAN BREAD			
11:08:37	2895.496	1519.221						
11:08:47	3471.673	1534.626						
11:08:57	2887.035	1594.157						
11:09:07	3443.154	1639.053						
11:09:17	2892.017	1678.218						
11:09:27	3442.572	1678.564						
11:09:37	3120.241	1663.542						
11:09:47	3519.128	1535.79						
11:09:57	3114.485	1479.929						
11:10:07	3526.132	1455.703						
11:10:17	3204.677	1463.847						
11:10:27	3505.159	1447.153						
11:10:37	3262.573	1452.872						
11:10:47	3158.765	1479.938						
11:10:57	2853.897	1585.464						
11:11:07	3067.588	1642.017						
11:11:17	3055.772	1658.309						
11:11:27	2977.131	1661.041						
11:11:37	3160.788	1657.892						
11:11:47	3132.821	1669.753						
11:11:57	3422.258	1615.786				573	909	26.6
11:12:07	3016.904	1495.725				ETH/THC	CH4/THC	AA/THC
11:12:17	3458.821	1452.37				35.46261695	56.25744993	1.646257610
11:12:27	3130.759	1450.316						
11:12:37	3513.724	1457.238						
11:12:47	3040.342	1492.671						
11:12:57	3390.407	1527.663						
11:13:07	2891.011	1625.983						
11:13:17	3140.306	1681.888						
11:13:27	2937.73	1721.625						
11:13:37	3412.502	1710.001						
11:13:47	2924.166	1708.524						
11:13:57	3618.997	1611.832						
11:14:07	2957.745	1509.793						
11:14:17	3552.333	1471.528						
11:14:27	3039.813	1482.04						

7/1/92 SITE 4 DAY 3

TIME	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	FRONT GC RESULTS CH4 (ppmV/wet)	FRONT GC RESULTS ACETALDEHYDE: (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	REAR GC RESULTS CH4 (ppmV/wet)	REAR GC RESULTS ACETALDEHYDE (ppmV/wet)
11:14:37	3651.422	1482.691						
11:14:47	2989.559	1481.85						
11:14:57	3489.116	1529.721						
11:15:07	2857.823	1600.339						
11:15:17	3415.587	1663.999						
11:15:27	2915.952	1728.745						
11:15:37	3315.322	1749.63						
11:15:47	3074.065	1754.128						
11:15:57	3398.978	1737.254						
11:16:07	2978.486	1664.268						
11:16:17	3232.75	1579.35						
11:16:27	3375.3	1535.258						
11:16:37	3466.926	1503.403						
11:16:47	3294.689	1509.343						
11:16:57	3285.467	1515.763						
11:17:07	3425.288	1589.858						
11:17:17	3296.62	1678.699						
11:17:27	3313.03	1700.539						
11:17:37	3136.729	1739.005						
11:17:47	3385.767	1745.469						
11:17:57	3210.704	1747.813						
11:18:07	3513.468	1635.831						
11:18:17	3108.823	1554.786						
11:18:27	3485.851	1536.111						
11:18:37	3104.101	1527.279						
11:18:47	3573.824	1508.582						
11:18:57	3073.969	1519.45						
11:19:07	3551.79	1516.776						
11:19:17	2904.939	1514.496						
11:19:27	3390.691	1546.671						
11:19:37	2863.713	1623.341						
11:19:47	3421.782	1664.927						
11:19:57	2892.535	1696.827						
11:20:07	3430.359	1689.76						
11:20:17	2942.348	1703.425						
11:20:27	3584.011	1656.711						
11:20:37	3043.127	1571.904						
11:20:47	3620.824	1496.965						
11:20:57	3197.75	1468.939						
11:21:07	3493.533	1469.997						
11:21:17	2867.572	1506.844	1500	1380	44.6			
11:21:27	3130.554	1552.428	ETH/THC	CH4/THC	AA/THC			
11:21:37	3032.987	1627.65	52.30906146	48.12433654	1.555322760			
11:21:47	3219.526	1658.817						
11:21:57	2964.512	1686.879						
11:22:07	3191.189	1669.466						
11:22:17	3108.261	1657.603						
11:22:27	3270.818	1584.99						

7/1/92 SITE 4 DAY 3

TIME	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
11:22:37	3256.259	1518.092						
11:22:47	3327.563	1501.277						
11:22:57	3321.885	1494.144						
11:23:07	3261.268	1491.879						
11:23:17	3298.994	1503.976						
11:23:27	2958.478	1578.793						
11:23:37	3021.697	1649.318						
11:23:47	2958.798	1719.112						
11:23:57	3443.367	1721.321						
11:24:07	3097.78	1675.148						
11:24:17	3598.249	1566.715						
11:24:27	3189.57	1524.119						
11:24:37	3625.426	1490.035						
11:24:47	3080.058	1493.552						
11:24:57	3499.98	1484.809						
11:25:07	2930.861	1542.075						
11:25:17	3466.389	1621.587						
11:25:27	2938.258	1686.045						
11:25:37	3481.377	1711.114						
11:25:47	3067.81	1730.512						
11:25:57	3577.892	1616.559						
11:26:07	2989.587	1549.372						
11:26:17	3558.073	1518.765						
11:26:27	3047.736	1493.626						
11:26:37	3532.398	1475.7						
11:26:47	3094.52	1488.477						
11:26:57	3485.571	1470.352						
11:27:07	3042.859	1494.233						
11:27:17	3322.625	1528.662						
11:27:27	3072.842	1575.964						
11:27:37	3280.585	1651.408						
11:27:47	3183.395	1665.741						
11:27:57	3376.403	1599.236						
11:28:07	3313.224	1509.663						
11:28:17	3270.52	1470.081						
11:28:27	3310.544	1448.935						
11:28:37	3197.928	1455.053						
11:28:47	3245.583	1462.766						
11:28:57	3025.092	1496.897						
11:29:07	3240.932	1560.577						
11:29:17	2987.012	1609.241						
11:29:27	3254.05	1651.212						
11:29:37	2937.514	1646.487						
11:29:47	3400.751	1615.954						
11:29:57	3065.354	1572.347						
11:30:07	3478.716	1488.163						
11:30:17	3051.062	1445.773						
11:30:27	3577.773	1414.677				1060	731	26.2

7/1/92 SITE 4 DAY 3

TIME	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	FRONT GC RESULTS CH4 (ppmV/wet)	FRONT GC RESULTS ACETALDEHYDE: (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	REAR GC RESULTS CH4 (ppmV/wet)	REAR GC RESULTS ACETALDEHYDE (ppmV/wet)
11:30:37	3152.63	1422.074						
11:30:47	3504.724	1422.68				ETH/THC	CH4/THC	AA/THC
11:30:57	2783.705	1446.667				74.92876465	51.67257260	1.852012862
11:31:07	3005.482	1497.37						
11:31:17	2905.513	1582.932						
11:31:27	3278.686	1634.91						
11:31:37	2780.807	1682.568						
11:31:47	3379.052	1682.631						
11:31:57	2917.965	1675.388						
11:32:07	3419.866	1639.614						
11:32:17	3092.21	1540.451						
11:32:27	3484.027	1472.044						
11:32:37	3122.088	1466.178						
11:32:47	3451.254	1465.004						
11:32:57	3073.149	1478.276						
11:33:07	3299.3	1518.516						
11:33:17	2996.028	1598.726						
11:33:27	3242.49	1669.906						
11:33:37	3187.959	1703.786						
11:33:47	3062.379	1722.949						
11:33:57	2954.928	1710.091						
11:34:07	3152.981	1657.429						
11:34:17	3334.306	1515.035						
11:34:27	3131.169	1479.839						
11:34:37	3454.104	1451.256						
11:34:47	3248.097	1464.785						
11:34:57	3389.601	1449.592						
11:35:07	2961.011	1510.411						
11:35:17	3345.646	1592.166						
11:35:27	2934.258	1677.694						
11:35:37	3356.209	1698.609						
11:35:47	2886.456	1728.485						
11:35:57	3423.288	1703.51						
11:36:07	2996.801	1668.397						
11:36:17	3416.876	1536.266						
11:36:27	3000.354	1490.95						
11:36:37	3539.649	1474.091						
11:36:47	3089.57	1473.411						
11:36:57	3507.262	1459.393						
11:37:07	2999.298	1472.83						
11:37:17	3315.864	1494.362						
11:37:27	2832.129	1572.478						
11:37:37	3287.488	1637.635						
11:37:47	2829.274	1680.966						
11:37:57	3239.516	1698.004						
11:38:07	2798.224	1697.348						
11:38:17	3175.727	1703.268						
11:38:27	3200.292	1701.852						

7/1/92 SITE 4 DAY 3

TIME	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	FRONT GC RESULTS CH4 (ppmV/wet)	FRONT GC RESULTS ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	REAR GC RESULTS CH4 (ppmV/wet)	REAR GC RESULTS ACETALDEHYDE (ppmV/wet)
11:38:37	3331.087	1583.199						
11:38:47	3026.514	1502.623						
11:38:57	3263.108	1482.01						
11:39:07	3277.001	1486.93						
11:39:17	3389.02	1469.598						
11:39:27	3091.242	1469.418	1390	1170	41.6			
11:39:37	3112.009	1500.376	ETH/THC	CH4/THC	AA/THC			
11:39:47	3069.773	1589.449	44.96574516	37.84886463	1.345737409			
11:39:57	2985.408	1660.948						
11:40:07	3183.057	1690.327						
11:40:17	2953.959	1665.18						
11:40:27	3121.45	1649.382						
11:40:37	2950.778	1658.674						
11:40:47	3351.958	1605.696						
11:40:57	3043.175	1520.731						
11:41:07	3417.517	1473.205						
11:41:17	3074.825	1451.371						
11:41:27	3437.13	1464.753						
11:41:37	3024.65	1461.917						
11:41:47	3245.776	1502.268						
11:41:57	2819.408	1606.158						
11:42:07	3125.651	1642.143						
11:42:17	2894.131	1658.846						
11:42:27	3264.996	1644.018						
11:42:37	2764.608	1659.682						
11:42:47	3366.931	1657.694						
11:42:57	3059.357	1611.19						
11:43:07	3432.322	1544.128						
11:43:17	3019.489	1509.882						
11:43:27	3401.314	1490.039						
11:43:37	3046.639	1487.243						
11:43:47	3290.819	1499.101						
11:43:57	2848.847	1521.626						
11:44:07	3134.755	1606.121						
11:44:17	2934.224	1647.992						
11:44:27	3107.612	1671.181						
11:44:37	2993.367	1686.347						
11:44:47	3150.198	1675.687						
11:44:57	3269.852	1621.157						
11:45:07	3180.546	1515.073						
11:45:17	3236.009	1450.448						
11:45:27	3110.833	1437.993						
11:45:37	3277.109	1423.492						
11:45:47	2971.898	1439.913						
11:45:57	3109.116	1465.007						
11:46:07	2867.447	1553.433						
11:46:17	3111.795	1620.82						
11:46:27	2795.621	1664.464						

7/1/92 SITE 4 DAY 3

TIME	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	FRONT GC RESULTS CH4 (ppmV/wet)	FRONT GC RESULTS ACETALDEHYDE: (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	REAR GC RESULTS CH4 (ppmV/wet)	REAR GC RESULTS ACETALDEHYDE (ppmV/wet)
11:46:37	3037.322	1656.351						
11:46:47	2820.612	1671.395						
11:46:57	3242.413	1630.467						
11:47:07	2833.502	1532.234						
11:47:17	3287.163	1486.635						
11:47:27	2906.313	1451.736						
11:47:37	3336.413	1417.517						
11:47:47	2894.604	1409.624						
11:47:57	3197.642	1436.004						
11:48:07	2736.753	1512.028						
11:48:17	3174.219	1573.705						
11:48:27	2810.814	1617.044						
11:48:37	3085.396	1611.044						
11:48:47	2937.092	1609.696						
11:48:57	3165.544	1582.583						
11:49:07	2768.447	1511.428						
11:49:17	2968.848	1423.932						
11:49:27	3004.636	1393.113				900	794	24.4
11:49:37	3077.663	1400.944				ETH/THC	CH4/THC	AA/THC
11:49:47	2896.687	1408.942				64.60351744	56.99465872	1.751473139
11:49:57	3018.265	1419.324						
11:50:07	2938.993	1482.22						
11:50:17	2962.532	1568.557						
11:50:27	3008.228	1609.728						
11:50:37	2879.052	1618.723						
11:50:47	3033.844	1624.423						
11:50:57	2954.331	1555.592						
11:51:07	3036.824	1450.224						
11:51:17	2908.927	1425.649						
11:51:27	3217.68	1413.146						
11:51:37	2859.134	1433.671						
11:51:47	2827.512	1440.469						
11:51:57	2695.949	1474.354						
11:52:07	3079.602	1557.763						
11:52:17	2680.755	1640.219						
11:52:27	3094.249	1656.666						
11:52:37	2784.832	1671.163						
11:52:47	3301.03	1614.004						
11:52:57	2961.706	1514.446						
11:53:07	3345.49	1448.405						
11:53:17	3013.322	1442.938						
11:53:27	3465.6	1436.769						
11:53:37	3080.691	1430.972						
11:53:47	3249.88	1438.584						
11:53:57	2720.586	1507.03						
11:54:07	2962.982	1587.27						
11:54:17	2916.071	1623.25						
11:54:27	3083.943	1645.651						

7/1/92 SITE 4 DAY 3

TIME	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	FRONT GC RESULTS CH4 (ppmV/wet)	FRONT GC RESULTS ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	REAR GC RESULTS CH4 (ppmV/wet)	REAR GC RESULTS ACETALDEHYDE (ppmV/wet)
11:54:37	2842.757	1657.346						
11:54:47	3220.446	1643.71						
11:54:57	3000.52	1531.067						
11:55:07	3251.803	1484.255						
11:55:17	3069.889	1481.949						
11:55:27	3310.173	1471.656						
11:55:37	3307.906	1476.036						
11:55:47	3267.162	1493.211						
11:55:57	3029.613	1500.842						
11:56:07	3026.301	1522.787						
11:56:17	3268.861	1588.875						
11:56:27	3023.319	1633.431						
11:56:37	3217.025	1636.026						
11:56:47	2995.009	1647.653						
11:56:59	3195.956	1648.723						
11:57:07	2948.787	1667.412						
11:57:17	3405.816	1713.42	END					
AVG			3160.052648	1565.747382				
11:57:27	3712.888	3493.984						
11:57:37	3673.166	3738.189						
11:57:47	3579.149	3789.035						
11:57:57	3571.092	3809.537						
11:58:07	3613.411	3810.33						
11:58:17	3718.719	3819.108						
11:58:27	3836.9	3819.703						
11:58:48	3891.198	3832.38						
11:58:48	3891.198	3832.38						
11:58:57	3905.146	3835.15						
11:59:07	3919.62	3833.785						
11:59:17	3909.22	3841.914						
11:59:27	3922.52	3846.849						
11:59:37	3926.231	3852.983						
11:59:47	3941.125	3857.082						
11:59:57	3950.763	3862.262						
12:00:07	3951.613	3863.698						
12:00:17	3951.516	3872.296						
12:00:27	3947.767	3873.505						
12:00:37	3945.424	3873.593						
12:00:47	3951.079	3881.433						
12:00:57	3951.637	3881.717						
12:01:07	3950.406	3882.146						
12:01:17	3948.479	3886.268						

7/1/92 SITE 4 DAY 3

TIME	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	FRONT GC RESULTS CH4 (ppmV/wet)	FRONT GC RESULTS ACETALDEHYDE: (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	REAR GC RESULTS CH4 (ppmV/wet)	REAR GC RESULTS ACETALDEHYDE (ppmV/wet)
12:01:27	3943.894	3289.521						
	3948.980	3873.4						
12:01:38	1185.851	197.455						
12:01:47	132.7129	74.15652						
12:01:57	76.21027	43.65696						
12:02:07	43.41689	30.46873						
12:02:17	38.82259	23.92336						
12:02:27	25.28188	16.66711						
12:02:37	13.99763	14.9533						
12:02:47	14.26608	13.29276						
12:02:57	10.02661	13.99663						
12:03:07	8.550628	12.6962						
12:03:17	10.23094	13.27092						
12:03:27	8.981228	7.407822						
12:03:37	4.967702	6.337786						
12:03:47	3.655672	2.945763						
12:04:00	2.566302	2.062728						
12:04:07	2.62576	2.368879						
12:04:17	0.700488	0.937350						
12:04:27	3.168119	1.493338						
12:04:37	2.842466	1.555171						
12:04:47	0.297772	-0.02314						
12:04:57	-0.49867	-0.31430						
12:05:07	-1.90240	-0.61747						
	-0.70110	-0.31830						
12:05:17	-0.09407	0.972756						
12:05:27	-0.21544	0.58277						
12:05:37	121.8876	1056.863						
12:05:47	3192.147	3643.993						
12:05:57	3826.843	3875.35						
12:06:17	3916.17	3919.985						
12:06:17	3967.956	3945.18						
12:06:27	3951.77	3939.824						
12:06:37	3951.969	3936.789						
12:06:47	3950.152	3940.765						
12:06:57	3957.948	3941.534						
12:07:07	3959.368	3943.449						
12:07:17	3955.475	3942.834						
			3954.447	3940.865833				

7/1/92 SITE 4 DAY 3

TIME	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
12:07:27	3949.072	3229.14						
12:07:37	3630.286	1839.21						
12:07:47	2951.804	1683.488						
12:07:57	3256.395	1600.82						
			FRONT	REAR	BREAD - NO GC			
12:08:07	3040.552	1555.84						
12:08:17	3510.128	1533.765						
12:08:27	2849.968	1535.737						
12:08:37	3433.736	1560.492						
12:08:47	2875.788	1652.875						
12:08:57	3380.96	1676.759						
12:09:07	2802.247	1702.671						
12:09:17	3376.791	1707.821						
12:09:27	2926.912	1652.972						
12:09:37	3389.044	1527.622						
12:09:47	2840.223	1489.724						
12:09:57	3340.842	1452.144						
12:10:07	2960.675	1449.487						
12:10:17	3313.773	1450.022						
12:10:27	2971.619	1452.206						
12:10:37	2916.062	1467.411						
12:10:47	2693.177	1553.4						
12:10:57	2868.415	1598.579						
12:11:07	2852.24	1612.882						
12:11:17	2731.686	1626.667						
12:11:27	2752.579	1636.838						
12:11:37	2854.531	1643.127						
12:11:47	3057.15	1583.741						
12:11:57	2864.211	1480.467						
12:12:07	3244.6	1418.095						
12:12:17	2914.154	1412.219						
12:12:27	3187.569	1405.162						
12:12:37	2763.224	1419.54						
12:12:47	3153.716	1468.746						
12:12:57	2771.906	1543.308						
12:13:07	2721.077	1601.093						
12:13:17	3172.957	1617.627						
12:13:27	2860.955	1607.048						
12:13:37	3052.796	1581.944						
12:13:47	2667.757	1496.557						
12:13:57	2908.184	1437.169						
12:14:07	2902.112	1410.339						
12:14:17	2999.471	1425.485						
12:14:27	2854.676	1432.738						

7/1/92 SITE 4 DAY 3

TIME	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	FRONT GC RESULTS CH4 (ppmV/wet)	FRONT GC RESULTS ACETALDEHYDE: (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	REAR GC RESULTS CH4 (ppmV/wet)	REAR GC RESULTS ACETALDEHYDE (ppmV/wet)
12:14:37	2971.558	1434.251						
12:14:47	2731.576	1463.772						
12:14:57	2813.306	1532.766						
12:15:07	2869.863	1586.843						
12:15:17	2804.384	1619.302						
12:15:27	3045.711	1613.311						
12:15:37	2836.84	1534.672						
12:15:47	3116.372	1480.148						
12:15:57	2933.709	1437.644						
12:16:07	3270.167	1406.954						
12:16:17	2716.071	1408.614						
12:16:27	2799.289	1425.361						
12:16:37	2737.685	1487.502						
12:16:47	3160.004	1543.218						
12:16:57	2628.166	1604.073						
12:17:07	3220.791	1589.52						
12:17:17	2787.247	1597.269						
12:17:27	3213.367	1515.641						
12:17:37	2727.878	1451.821						
12:17:47	3195.679	1427.397						
12:17:57	2754.439	1418.817						
12:18:07	3204.948	1409.719						
12:18:17	2667.601	1456.321						
12:18:27	3257.734	1524.363						
12:18:37	2959.511	1578.321						
12:18:47	3128.633	1587.157						
12:18:57	2791.281	1585.197						
12:19:07	2920.897	1597.779						
12:19:17	2955.3	1609.734						
12:19:27	2957.967	1524.127						
12:19:37	2976.07	1467.017						
12:19:47	3109.621	1436.435						
12:19:57	3083.374	1444.031						
12:20:07	3254.323	1446.949						
12:20:17	2920.118	1476.604						
12:20:27	3036.46	1520.342						
12:20:37	2975.279	1603.133						
12:20:47	2975.186	1670.468						
12:20:57	3073.895	1693.425						
12:21:07	2934.558	1706.148						
12:21:17	3387.904	1685.372						
12:21:27	3025.288	1570.862						
12:21:37	3375.702	1491.102						
12:21:47	3044.854	1467.908						
12:21:57	3491.671	1454.697						
12:22:07	2927.4	1460.457						
12:22:17	3266.334	1490.226						
12:22:27	2951.06	1602.337						

7/1/92 SITE 4 DAY 3

TIME	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	FRONT GC RESULTS CH4 (ppmV/wet)	FRONT GC RESULTS ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	REAR GC RESULTS CH4 (ppmV/wet)	REAR GC RESULTS ACETALDEHYDE (ppmV/wet)
12:22:37	3100.325	1662.853						
12:22:47	2815.358	1694.105						
12:22:57	2946.724	1683.775						
12:23:07	2758.173	1709.824						
12:23:17	3397.826	1707.544						
12:23:27	2949.159	1641.052						
12:23:37	3492.787	1551.073						
12:23:47	3080.688	1512.898						
12:23:57	3565.834	1490.8						
12:24:07	3053.8	1498.233						
12:24:17	3469.503	1491.469						
12:24:27	2918.579	1511.653						
12:24:37	3365.993	1583.038						
12:24:47	2960.17	1650.943						
12:24:57	3247.086	1681.042						
12:25:07	3088.311	1676.481						
12:25:17	3055.828	1653.835						
12:25:27	2761.31	1682.971						
12:25:37	3069.15	1694.69						
12:25:47	3298.591	1636.869						
12:25:57	3157.385	1529.834						
12:26:07	3255.868	1489.964						
12:26:17	3178.177	1479.679						
12:26:27	3407.567	1478.111						
12:26:37	3164.68	1485.528						
12:26:47	3333.266	1499.651						
12:26:57	2905.687	1528.455						
12:27:07	3488.58	1595.474						
12:27:17	2872.159	1663.518						
12:27:27	3290.006	1682.508						
12:27:37	2942.054	1686.985						
12:27:47	3261.533	1666.577						
12:27:57	2834.715	1679.588						
12:28:07	3098.228	1617.186						
12:28:17	2960.387	1520.921						
12:28:27	3338.29	1462.959						
12:28:37	2937.143	1456.157						
12:28:47	3512.395	1470.192						
12:28:57	3043.96	1474.17						
12:29:07	3470.187	1464.517						
12:29:17	2830.831	1502.519						
12:29:27	3282.108	1589.993						
12:29:37	2870.751	1649.938						
12:29:47	3191.295	1683.377						
12:29:57	2924.771	1700.286						
12:30:07	3058.508	1704.924						
12:30:17	2762.066	1684.742						
12:30:27	3099.243	1639.792						

7/1/92 SITE 4 DAY 3

TIME	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	FRONT GC RESULTS CH4 (ppmV/wet)	FRONT GC RESULTS ACETALDEHYDE: (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	REAR GC RESULTS CH4 (ppmV/wet)	REAR GC RESULTS ACETALDEHYDE (ppmV/wet)
12:30:37	3087.261	1566.334						
12:30:47	3162.41	1511.607						
12:30:57	3085.889	1489.311						
12:31:07	3188.696	1492.705						
12:31:17	3171.161	1509.589						
12:31:27	2980.749	1536.134						
12:31:37	2984.841	1582.968						
12:31:47	2813.771	1670.514						
12:31:57	3035.325	1740.363						
12:32:07	2605.581	1761.43						
12:32:17	3176.965	1747.344						
12:32:27	2946.499	1739.696						
12:32:37	3410.605	1645.523						
12:32:47	2992.239	1580.781						
12:32:57	3437.254	1574.506						
12:33:07	2965.099	1587.812						
12:33:17	3453.662	1536.973						
12:33:27	2761.085	1561.705						
12:33:37	3068.498	1597.072						
12:33:47	2620.474	1699.671						
12:33:57	3133.729	1797.75						
12:34:07	2652.194	1843.078						
12:34:17	3174.169	1845.175						
12:34:27	2706.374	1862.023						
12:34:37	3188.098	1862.928						
12:34:47	2913.411	1863.146						
12:34:57	3414.278	1767.212						
12:35:07	3012.306	1673.037						
12:35:17	3429.509	1636.327						
12:35:27	3120.691	1641.133						
12:35:37	3405.712	1641.254						
12:35:47	3155.144	1653.26						
12:35:57	3105.971	1692.454						
12:36:07	2792.18	1813.782						
12:36:17	2968.214	1848.164						
12:36:27	3038.366	1847.254						
12:36:37	2922.394	1848.381						
12:36:47	2947.462	1856.35						
12:36:57	2895.56	1852.588						
12:37:07	3183.202	1855.578						
12:37:17	2812.431	1856.574						
12:37:27	3153.139	1891.847						
12:37:37	2905.383	1910.884						
12:37:47	3427.107	1893.05						
12:37:57	3189.947	1836.716						
12:38:07	3741.734	1716.993						
12:38:17	3292.195	1601.777						
12:38:27	3792.211	1548.985						

7/1/92 SITE 4 DAY 3

TIME	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	FRONT GC RESULTS CH4 (ppmV/wet)	FRONT GC RESULTS ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	REAR GC RESULTS CH4 (ppmV/wet)	REAR GC RESULTS ACETALDEHYDE (ppmV/wet)
12:38:37	3113.916	1548.893						
12:38:47	3264.32	1542.19						
12:38:57	2968.928	1558.433						
12:39:07	3443.477	1617.01						
12:39:17	2793.173	1651.806						
12:39:27	3360.763	1640						
12:39:37	2810.714	1648.686						
12:39:47	3323.905	1650.396						
12:39:57	2899.286	1646.108						
12:40:07	3360.712	1588.258						
12:40:17	2807.874	1546.482						
12:40:27	3304.988	1504.103						
12:40:37	2905.3	1510.334						
12:40:47	3252.639	1536.796						
12:40:57	2911.133	1537.844						
12:41:07	2904.977	1557.441						
12:41:17	2604.215	1656.535						
12:41:27	2871.114	1718.173						
12:41:37	2939.411	1716.756						
12:41:47	2964.11	1733.463						
12:41:57	2888.375	1715.237						
12:42:07	2854.774	1667.345						
12:42:17	3219.472	1645.165						
12:42:27	3067.585	1521.084						
12:42:37	3228.604	1456.282						
12:42:47	3072.647	1434.732						
12:42:57	3305.266	1420.393						
12:43:07	2799.764	1436.01						
12:43:17	3090.658	1494.63						
12:43:27	2784.771	1570.822						
12:43:37	3149.263	1623.804						
12:43:47	2605.635	1632.064						
12:43:57	2755.896	1625.438						
12:44:07	2588.086	1628.189						
12:44:17	3006.299	1601.714						
12:44:27	2672.744	1590.883						
12:44:37	3291.654	1526.632						
12:44:47	2757.154	1448.381						
12:44:57	3290.06	1408.259						
12:45:07	2811.825	1400.782						
12:45:17	3292.444	1388.469						
12:45:27	2696.283	1398.531						
12:45:37	3153.429	1426.291						
12:45:47	2672.132	1505.056						
12:45:57	3094.766	1511.615						
12:46:07	2772.234	1522.471						
12:46:17	2811.061	1522.729						
12:46:27	2567.575	1527.719						

7/1/92 SITE 4 DAY 3

TIME	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	FRONT GC RESULTS CH4 (ppmV/wet)	FRONT GC RESULTS ACETALDEHYDE: (ppmV/wet) :	REAR GC RESULTS ETH-OH (ppmV/wet)	REAR GC RESULTS CH4 (ppmV/wet)	REAR GC RESULTS ACETALDEHYDE (ppmV/wet)
12:46:37	2898.168	1508.915			:			
12:46:47	2854.709	1421.601			:			
12:46:57	2873.013	1334.923			:			
12:47:07	3049.083	1315.546			:			
12:47:17	2919.516	1315.558			:			
12:47:27	2809.872	1326.819			:			
12:47:37	2748.875	1366.323			:			
12:47:47	2888.663	1436.291			:			
12:47:57	2554.732	1486.432			:			
12:48:07	2556.896	1504.76			:			
12:48:17	2415.365	1512.382			:			
12:48:27	2910.778	1507.936			:			
12:48:37	2547.327	1452.563			:			
12:48:47	2972.157	1352.498			:			
12:48:57	2552.194	1327.63			:			
12:49:07	3115.321	1318.512			:			
12:49:17	2584.573	1310.067			:			
12:49:27	3011.415	1325.625			:			
12:49:37	2743.401	1403.273			:			
12:49:47	3036.938	1464.395			:			
12:49:57	2606.708	1473.904			:			
12:50:07	2718.354	1501.198			:			
12:50:17	2578.88	1512.066			:			
12:50:27	2688.499	1509.766			:			
12:50:37	2624.323	1459.317			:			
12:50:47	2794.279	1366.372			:			
12:50:57	2828.977	1354.033			:			
12:51:07	2964.851	1344.693			:			
12:51:17	2791.685	1346.715			:			
12:51:27	2910.097	1355.799			:			
12:51:37	2807.721	1378.011			:			
12:51:47	2724.619	1422.278			:			
12:51:57	2739.007	1493.684			:			
12:52:07	2651.503	1540.16			:			
12:52:17	2849.882	1546.167			:			
12:52:27	2865.388	1519.485			:			
12:52:37	2990.555	1464.184			:			
12:52:47	2908.76	1434.034			:			
12:52:57	3214.598	1396.24			:			
12:53:07	2986.697	1392.677			:			
12:53:17	3231.114	1394.033			:			
12:53:27	2883.377	1399.688			:			
12:53:37	3091.107	1419.461			:			
12:53:47	2749.893	1501.735			:			
12:53:57	3066.88	1546.276			:			
12:54:07	2642.167	1578.506			:			
12:54:17	3022.951	1593.698			:			
12:54:27	2680.564	1604.024			:			

7/1/92 SITE 4 DAY 3

TIME	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	FRONT GC RESULTS CH4 (ppmV/wet)	FRONT GC RESULTS ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	REAR GC RESULTS CH4 (ppmV/wet)	REAR GC RESULTS ACETALDEHYDE (ppmV/wet)
12:54:37	3226.583	1550.839						
12:54:47	2695.436	1483.59						
12:54:57	3222.601	1453.541						
12:55:07	2777.454	1446.951						
12:55:17	3269.434	1436.883						
12:55:27	2883.245	1448.591						
12:55:37	3247.072	1458.329						
12:55:47	2615.681	1485.115						
12:55:57	2903.438	1507.261						
12:56:07	2814.57	1584.02						
12:56:17	3090.87	1616.695						
12:56:27	2906.949	1623.056						
12:56:37	3129.448	1603.887						
12:56:47	2866.785	1566.496						
12:56:57	3029.695	1460.342						
12:57:07	3068.362	1412.625						
12:57:17	3055.912	1395.461						
12:57:27	3003.128	1380.717						
12:57:37	3150.04	1398.085						
12:57:47	3039.632	1425.905						
12:57:57	3015.837	1433.982						
12:58:07	2959.683	1490.068						
12:58:17	2965.108	1558.933						
12:58:27	2962.764	1632.104						
12:58:37	2887.315	1640.688						
12:58:47	3228.29	1618.344						
12:58:57	2847.7	1549.166						
12:59:07	2963.458	1476.871						
12:59:17	2933.569	1459.707						
12:59:27	3411.007	1458.868						
12:59:37	2972.413	1471.95						
12:59:47	3391.385	1483.981						
12:59:57	2937.853	1562.27						
13:00:07	3136.352	1614.977						
13:00:17	2968.011	1657.636						
13:00:27	3372.554	1684.202						
13:00:37	2918.464	1690.244						
13:00:47	3564.76	1618.019						
13:00:57	3032.891	1535.277						
13:01:07	3572.668	1511.396						
13:01:17	3127.233	1478.604						
13:01:27	3510.324	1486.117						
13:01:37	2899.879	1527.528						
13:01:47	3160.884	1547.987						
13:01:57	3058.921	1633.68						
13:02:07	3273.163	1705.951						
13:02:17	2977.493	1738.626						
13:02:27	3515.205	1718.911						

7/1/92 SITE 4 DAY 3

TIME	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	FRONT GC RESULTS CH4 (ppmV/wet)	FRONT GC RESULTS ACETALDEHYDE: (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	REAR GC RESULTS CH4 (ppmV/wet)	REAR GC RESULTS ACETALDEHYDE (ppmV/wet)
13:02:37	3227.468	1660.682						
13:02:47	3453.69	1568.281						
13:02:57	3199.829	1514.018						
13:03:07	3455.215	1508.493						
13:03:17	3304.357	1492.896						
13:03:27	3274.479	1525.806						
13:03:37	3310.945	1558.599						
13:03:47	3296.991	1640.783						
13:03:57	3335.173	1680.627						
13:04:07	3201.658	1706.743						
13:04:17	3465.971	1700.631						
13:04:27	3228.136	1630.089						
13:04:37	3484.882	1543.947						
13:04:47	3150.12	1515.153						
13:04:57	3570.582	1520.992						
13:05:07	3110.277	1514.721						
13:05:17	3483.474	1536.196						
13:05:27	2932.232	1573.145						
13:05:37	3475.977	1627.379						
13:05:47	2995.851	1710.63						
13:05:57	3544.415	1729.293						
13:06:07	3221.258	1724.915						
13:06:17	3608.281	1590.976						
13:06:27	3080.262	1518.167						
13:06:37	3301.681	1498.802						
13:06:47	3218.744	1503.837						
13:06:57	3497.529	1470.597						
13:07:07	2980.469	1519.233						
13:07:17	3542.712	1581.701						
13:07:27	3086.774	1669.832						
13:07:37	3512.315	1685.077						
13:07:47	3210.899	1702.308						
13:07:57	3590.509	1645.279						
13:08:07	3282.459	1534.393						
13:08:17	3491.909	1484.736						
13:08:27	3233.311	1487.997						
13:08:37	3428.624	1467.448						
13:08:47	3248.794	1478.321						
13:08:57	3225.72	1507.79						
13:09:07	3237.606	1539.961						
13:09:17	3173.094	1618.936						
13:09:27	3329.515	1669.888						
13:09:37	3082.885	1670.495						
13:09:47	3452.822	1684.846						
13:09:57	3162.391	1612.408						
13:10:07	3462.99	1506.793						
13:10:17	3135.783	1482.255						
13:10:27	3560.93	1486.028						

7/1/92 SITE 4 DAY 3

TIME	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	FRONT GC RESULTS CH4 (ppmV/wet)	FRONT GC RESULTS ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	REAR GC RESULTS CH4 (ppmV/wet)	REAR GC RESULTS ACETALDEHYDE (ppmV/wet)
13:10:37	3061.052	1492.5						
13:10:47	3188.259	1502.391						
13:10:57	2910.446	1537.054						
13:11:07	3453.453	1607.397						
13:11:17	2921.744	1689.635						
13:11:27	3502.774	1707.438						
13:11:37	2963.02	1709.018						
13:11:47	3460.449	1711.529						
13:11:57	3094.903	1695.607						
13:12:07	3588.463	1545.439						
13:12:17	3102.829	1503.677						
13:12:27	3580.554	1484.517						
13:12:37	3183.639	1491.646						
13:12:47	3634.648	1493.123						
13:12:57	3080.345	1505.643						
13:13:07	3436.068	1525.605						
13:13:17	3085.708	1619.139						
13:13:27	3401.827	1693.371						
13:13:37	3250.232	1715.102						
13:13:47	3165.713	1720.313						
13:13:57	2928.588	1723.442						
13:14:07	3157.667	1724.406						
13:14:17	3394.423	1648.891						
13:14:27	3241.461	1554.744						
13:14:37	3390.517	1524.308						
13:14:47	3259.118	1540.742						
13:14:57	3510.322	1535.292						
13:15:07	3163.588	1552.094						
13:15:17	3392.531	1579.423						
13:15:27	3042.578	1662.096						
13:15:37	3485.811	1707.499						
13:15:47	3026.895	1744.66						
13:15:57	3548.389	1719.026						
13:16:07	3054.346	1616.014						
13:16:17	3575.254	1518.717						
13:16:27	3101.979	1491.68						
13:16:37	3621.34	1483.548						
13:16:47	3183.262	1500.766						
13:16:57	3511.343	1502.431						
13:17:07	2902.142	1588.409						
13:17:17	3178.923	1649.709						
13:17:27	3084.778	1696.256						
13:17:37	3474.193	1691.631						
13:17:47	3156.778	1704.531						
13:17:57	3571.012	1562.802						
13:18:07	3034.833	1504.82						
13:18:17	3518.836	1494.504						
13:18:27	3144.451	1479.417						

7/1/92 SITE 4 DAY 3

TIME	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	FRONT GC RESULTS CH4 (ppmV/wet)	ACETALDEHYDE: (ppmV/wet) :	REAR GC RESULTS ETH-OH (ppmV/wet)	REAR GC RESULTS CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
13:18:37	3487.904	1474.683			:			
13:18:47	3088.589	1520.044			:			
13:18:57	3306.491	1536.455			:			
13:19:07	3026.817	1619.068			:			
13:19:17	3270.171	1658.714			:			
13:19:27	3064.514	1764.32			:			
13:19:37	3208.392	1772.184			:			
13:19:47	3288.42	1728.076			:			
13:19:57	3302.041	1644.495			:			
13:20:07	3387.598	1581.527			:			
13:20:17	3323.85	1532.143			:			
13:20:27	3583.775	1499.222			:			
13:20:37	3402.479	1505.865			:			
13:20:47	3613.874	1476.332			:			
13:20:57	3029.253	1510.544			:			
13:21:07	3129.812	1579.09			:			
13:21:17	3014.804	1672.85			:			
13:21:27	3428.773	1708.298			:			
13:21:37	2892.304	1747.615			:			
13:21:47	3543.264	1742.755			:			
13:21:57	3093.735	1631.268			:			
13:22:07	3682.242	1551.697			:			
13:22:17	3031.999	1538.42			:			
13:22:27	3627.051	1544.461			:			
13:22:37	3102.16	1535.114			:			
13:22:47	3686.403	1534.749			:			
13:22:57	3086.182	1548.265			:			
13:23:07	3471.56	1553.952			:			
13:23:17	2914.978	1596.889			:			
13:23:27	3460.423	1671.488			:			
13:23:37	3019.458	1740.812			:			
13:23:47	3440.344	1746.191			:			
13:23:57	3068.062	1753.918			:			
13:24:07	3591.534	1697.063			:			
13:24:17	3315.519	1594.302			:			
13:24:27	3648.856	1517.202			:			
13:24:37	3239.855	1479.088			:			
13:24:47	3536.084	1484.279			:			
13:24:57	3225.576	1491.361			:			
13:25:07	3308.508	1517.857			:			
13:25:17	3131.062	1558.823			:			
13:25:27	3154.55	1638.259			:			
13:25:37	3168.26	1696.305			:			
13:25:47	3029.971	1723.998			:			
13:25:57	3219.241	1746.948			:			
13:26:07	3049.641	1759.25			:			
13:26:17	3428.682	1674.633			:			
13:26:27	3101.4	1586.109			:			

7/1/92 SITE 4 DAY 3

TIME	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	FRONT GC RESULTS CH4 (ppmV/wet)	FRONT GC RESULTS ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	REAR GC RESULTS CH4 (ppmV/wet)	REAR GC RESULTS ACETALDEHYDE (ppmV/wet)
13:26:37	3525.362	1528.931						
13:26:47	3127.626	1514.728						
13:26:57	3586.774	1502.46						
13:27:07	2844.817	1526.05						
13:27:17	3466.971	1540.362						
13:27:27	2934.126	1628.198						
13:27:37	3475.736	1671.796						
13:27:47	2910.512	1687.756						
13:27:57	3414.063	1686.12						
13:28:07	2931.058	1701.688						
13:28:17	3513.41	1649.33						
13:28:27	3040.488	1539.35						
13:28:37	3590.083	1492.486						
13:28:47	3021.732	1509.139						
13:28:57	3505.914	1502.915						
13:29:07	3042.547	1505.432						
13:29:17	3404.749	1509.842						
13:29:27	2972.953	1549.062						
13:29:37	3310.439	1596.538						
13:29:47	2995.063	1604.857						
13:29:57	3264.541	1622.539						
13:30:07	3201.972	1599.819						
13:30:17	3276.454	1524.896						
13:30:27	3321.177	1481.5						
13:30:37	3162.544	1471.844						
13:30:47	3050.386	1465.199						
13:30:57	2617.78	1141.006						
13:31:07	2674.37	1374.346						
13:31:17	1582.821	253.6896						
13:31:27	308.4697	43.43453						
13:31:37	181.1678	31.9779						
13:31:47	132.5725	16.68926						
13:31:57	107.6225	11.33471						
13:32:07	87.47714	13.96026						
13:32:17	71.84235	12.52821						
13:32:27	63.21348	11.48553						
13:32:37	54.09141	4.776774						
13:32:47	46.30645	3.346386						
13:32:57	42.88166	0.314948						
13:33:07	44.85075	0.801007						
13:33:17	40.76276	0.166783						
13:33:27	39.96772	0.158400						
13:33:37	33.23516	-1.15865						
13:33:47	29.42753	0.086226						
13:33:57	27.36269	-0.37373						

7/1/92 SITE 4 DAY 3

TIME	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	FRONT GC RESULTS CH4 (ppmV/wet)	FRONT GC RESULTS ACETALDEHYDE: (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	REAR GC RESULTS CH4 (ppmV/wet)	REAR GC RESULTS ACETALDEHYDE (ppmV/wet)
13:34:07	26.17829	-0.32010						
13:34:17	25.05909	0.088898						
13:34:27	22.47699	-1.35122						
13:34:37	18.84668	-0.83944						
13:34:47	19.069	0.433378						
13:34:57	20.19605	-0.61561						
13:35:07	18.37259	-1.24880						
13:35:17	14.72181	-2.22652						
13:35:27	16.17346	0.037045						
13:35:37	13.24654	-0.95096						
13:35:47	14.29089	-0.39585						
13:35:57	12.58171	-1.32222						
13:36:07	17.24479	1.051977						
13:36:17	13.09143	0.815404						
13:36:27	14.47517	1.078438						
			14.478225	-0.23908782				
13:36:37	974.2785	2131.4						
13:36:47	3538.729	3719.322						
13:36:57	3848.288	3871.813						
13:37:07	3914.924	3906.347						
13:37:25	3931.886	3917.143						
13:37:27	3946.616	3932.874						
13:37:37	3939.901	3924.52						
13:37:47	3932.136	3917.596						
13:37:57	3939.074	3925.455						
13:38:07	3936.837	3929.869						
13:38:17	3935.084	3934.273						
13:38:27	3937.013	3936.046						
13:38:37	3931.757	3926.667						
13:38:47	3939.728	3937.625						
13:38:57	3932.921	3936.872						
13:39:07	3934.422	3934.625						
			3936.862636	3930.583818				
13:39:17	3936.26	3940.447						
13:39:27	3937.02	3936.705						
13:39:37	3936.382	3573.102						
13:39:47	1143.854	241.8207						
13:39:57	154.7906	91.2897						
13:40:07	96.47812	52.16048						
13:40:17	63.06159	37.90408						
13:40:27	46.12616	28.69005						

7/1/92 SITE 4 DAY 3

TIME	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	FRONT GC RESULTS CH4 (ppmV/wet)	FRONT GC RESULTS ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	REAR GC RESULTS CH4 (ppmV/wet)	REAR GC RESULTS ACETALDEHYDE (ppmV/wet)
13:40:37	44.08394	25.52939						
13:40:47	43.0654	24.3737						
13:40:57	37.63959	19.28731						
13:41:07	33.02574	15.11637						
13:41:17	37.46974	14.59165						
13:41:27	31.19157	13.75392						
13:41:37	25.20878	4.953646						
13:41:47	24.24993	5.075355						
13:41:57	24.06596	4.827928						
13:42:07	18.503	0.893625						
13:42:17	20.3842	2.189391						
13:42:27	13.68424	2.57233						
13:42:37	7.145173	1.138907						
13:42:47	2.867707	-1.1798						
13:42:57	9.971004	1.11372						
13:43:07	9.433967	0.899622						
13:43:17	9.031632	0.157506						
13:43:27	5.902352	1.119719						
13:43:37	7.546441	-0.81974						
13:43:47	11.70926	0.476108						
13:43:57	9.093297	-0.13557						
13:44:07	5.740638	0.394930						
13:44:17	4.675366	0.466554						
13:44:27	3.002182	-0.25094						
13:44:37	4.809351	0.679077						
13:44:47	4.436596	0.721933						
13:44:57	2.154644	-1.29985						
13:45:07	0.924662	-1.70260						
13:45:17	2.453845	-1.11418						
13:45:27	2.320123	0.614186						
13:45:37	2.683525	-1.96437						
13:45:47	1.353651	-0.62870						
13:45:57	-0.79446	-2.59620						
13:46:07	0.280634	-1.81901						
13:46:17	-2.18544	-2.54068						
13:46:27	-0.23254	-1.12703						
13:46:37	-0.72560	-2.36768						
13:46:47	-2.09264	-3.40716						
13:46:57	1.746395	-0.31963						
13:47:07	-1.38381	-3.25824						
13:47:17	0.976990	-1.57911						
13:47:27	-1.88505	-2.34853						
13:47:37	1.560526	-2.45711						
13:47:58	-0.85893	-2.71046						
13:47:58	-0.85893	-2.71046						

7/1/92 SITE 4 DAY 3

TIME	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	FRONT GC RESULTS CH4 (ppmV/wet)	ACETALDEHYDE: (ppmV/wet) :	REAR GC RESULTS ETH-OH (ppmV/wet)	REAR GC RESULTS CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
13:48:07	-1.69114	-3.19414			:			
13:48:17	0.995085	-3.21345			:			
13:48:27	-2.39750	-1.88208			:			
	-0.96228	-2.74212			:			
					:			
					:			
13:48:37	0.433906	-2.34720			:			
13:48:47	-1.84084	-1.93021			:			
13:48:57	-0.77187	161.9133			:			
13:49:07	2333.344	3255.847			:			
13:49:17	3740.754	3862.649			:			
13:49:27	3913.069	3958.034			:			
13:49:37	3948.214	3980.326			:			
					:			
					:			
					:			
13:49:48	3953.087	3977.15			:			
13:49:57	3965.526	3984.79			:			
13:50:07	3967.114	3987.319			:			
13:50:17	3968.845	3990.819			:			
13:50:27	3962.677	3986.309			:			
13:50:37	3972.281	3995.61			:			
13:50:47	3970.607	3990.035			:			
13:50:57	3963.557	3987.601			:			
	3967.229	3988.926			:			
					:			
					:			
13:51:07	3965.262	3986.778			:			
13:51:17	3966.757	3993.102			:			
13:51:27	3850.28	3678.309			:			
13:51:37	2856.586	1892.464			:			
13:51:47	3207.494	1691.482			:			
13:51:57	2667.53	1679.31			:			
13:52:07	3219.103	1658.064			:			
13:52:17	2823.399	1567.036			:			
13:52:27	2751.087	1392.55			:			
13:52:37	555.6452	417.7026			:			
13:52:47	418.9291	363.4287			:			
13:52:57	375.0617	335.3508			:			
13:53:07	351.8556	317.781			:			
13:53:17	337.9276	314.3517			:			
13:53:27	330.6729	315.3081			:			
13:53:37	326.9953	316.0514			:			
					:			
					:			
					:			
13:53:53	324.9536	312.402			:			
13:53:57	316.1119	305.7921			:			

7/1/92 SITE 4 DAY 3

TIME	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	FRONT GC RESULTS CH4 (ppmV/wet)	FRONT GC RESULTS ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	REAR GC RESULTS CH4 (ppmV/wet)	REAR GC RESULTS ACETALDEHYDE (ppmV/wet)
13:54:07	314.8412	305.8244						
13:54:17	313.8798	306.9502						
13:54:27	312.4028	307.1864						
13:54:37	313.7307	307.0847						
13:54:47	310.8029	304.1579						
13:54:57	311.6931	307.1061						
	313.3517	306.3002						
13:55:07	311.7941	306.0635						
13:55:17	309.7711	305.845						
13:55:27	736.5117	458.4366						
13:55:37	718.1951	294.028						
13:55:47	221.9354	190.5939						
13:55:57	209.797	189.9736						
13:56:07	206.7498	188.5781						
13:56:24	202.9834	190.3009						
13:56:27	200.1667	191.7988						
13:56:37	202.6726	188.4903						
13:56:47	202.3732	188.1774						
13:56:57	202.048	187.8191						
13:57:07	201.9461	187.2571						
13:57:17	201.8118	187.331						
13:57:34	204.5583	185.1562						
13:57:37	2750.566	1702.758						
13:57:47	2692.373	1725.377						
13:57:57	3102.538	1734.297						
			FRONT	REAR	ITALIAN BREAD			
13:58:07	2910.703	1730.104						
13:58:17	3222.32	1634.584						
13:58:27	2949.881	1562.695						
13:58:37	3211.94	1528.06						
13:58:47	3075.147	1516.315						
13:58:57	3173.803	1523.124						
13:59:07	3034.434	1559.316						
13:59:17	3179.665	1635.033						
13:59:27	3338.154	1688.096						
13:59:37	3040.357	1704.402						
13:59:47	3001.779	1715.089						
13:59:57	3148.211	1689.899						
14:00:07	3469.481	1581.081						
14:00:17	2854.481	1509.193						
14:00:27	2941.555	1498.167						
14:00:37	2979.432	1509.559						
14:00:47	3384.796	1520.289						

7/1/92 SITE 4 DAY 3

TIME	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	FRONT GC RESULTS CH4 (ppmV/wet)	FRONT GC RESULTS ACETALDEHYDE: (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	REAR GC RESULTS CH4 (ppmV/wet)	REAR GC RESULTS ACETALDEHYDE (ppmV/wet)
14:00:57	2698.276	1534.654						
14:01:07	3226.151	1595.508						
14:01:17	2769.669	1692.921						
14:01:27	3258.412	1736.458						
14:01:37	2669.969	1744.478						
14:01:47	3300.18	1725.885						
14:01:57	2895.095	1725.365						
14:02:07	3460.29	1596.983						
14:02:17	2876.574	1554.928						
14:02:27	3452.234	1547.305						
14:02:37	2937.379	1551.642						
14:02:47	3423.243	1549.617						
14:02:57	2796.109	1588.178						
14:03:07	3359.971	1671.174						
14:03:17	3037.646	1740.008						
14:03:27	3201.433	1758.634						
14:03:37	2698.48	1787.697						
14:03:47	3118.566	1789.201						
14:03:57	3110.319	1754.673	1300	1230	42.5			
14:04:07	3236.08	1640.683	ETH/THC	CH4/THC	AA/THC			
14:04:17	3019.236	1612.647	41.79635593	39.54578292	1.366419328			
14:04:27	3314.249	1594.134						
14:04:37	3232.398	1587.088						
14:04:47	3253.802	1580.52						
14:04:57	3212.195	1603.728						
14:05:07	3110.066	1621.515						
14:05:17	3196.741	1665.468						
14:05:27	2996.891	1717.29						
14:05:37	3245.37	1757.164						
14:05:47	2954.672	1775.934						
14:05:57	3443.166	1701.587						
14:06:07	2976.201	1546.708						
14:06:17	3435.13	1520.123						
14:06:27	2943.672	1514.427						
14:06:37	3512.302	1503.347						
14:06:47	2840.302	1511.961						
14:06:57	3432.336	1549.331						
14:07:07	2801.051	1640.47						
14:07:17	3387.042	1680.157						
14:07:27	2729.807	1704.209						
14:07:37	3403.939	1711.448						
14:07:47	2929.795	1642.569						
14:07:57	3324.633	1520.057						
14:08:07	2832.7	1505.236						
14:08:17	3352.253	1489.489						
14:08:27	2909.474	1487.165						
14:08:37	3340.229	1479.175						
14:08:47	2858.661	1478.648						

7/1/92 SITE 4 DAY 3

TIME	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
14:08:57	3160.095	1495.688						
14:09:07	2748.03	1526.045						
14:09:17	3119.793	1570.963						
14:09:27	2890.057	1628.222						
14:09:37	3116.003	1657.258						
14:09:47	3200.299	1608.234						
14:09:57	3042.347	1492.481						
14:10:07	2849.888	1443.932						
14:10:17	2937	1415.694						
14:10:27	3099.183	1426.184						
14:10:37	2816.16	1417.011						
14:10:47	3069.538	1438.71						
14:10:57	2813.494	1499.568						
14:11:07	3135.278	1548.497						
14:11:17	2737.143	1636.821						
14:11:27	3146.746	1663.747						
14:11:37	2786.706	1663.912						
14:11:47	3283.38	1572.725						
14:11:57	2764.145	1488.582						
14:12:07	3469.668	1467.4						
14:12:17	2825.733	1464.919						
14:12:27	3416.469	1441.953						
14:12:37	2820.645	1441.066						
14:12:47	3338.377	1460.419						
14:12:57	2956.858	1535.75	END			782	788	26.4
AVG			3088.595144	1589.981933		ETH/THC	CH4/THC	AA/THC
						50.91974605	51.31043464	1.71902979
14:13:07			1708.869	1590.47				
14:13:17			156.6276	1628.162				
14:13:27			98.22157	1600.069				
14:13:37			390.6902	1655.949				
14:13:47			691.3347	1668.505				
14:13:57			583.3946	1616.034				
			COMFORT HOOD	REAR	ITALIAN BREAD			
14:14:07	1504.681	761.2988						
14:14:17	1467.068	545.6729						
14:14:27	1456.549	729.7269						
14:14:37	1482.331	509.942						
14:14:47	1477.915	707.853						
14:14:57	1487.734	457.401						
14:15:07	1516.737	629.1419						
14:15:17	1587.615	449.55						
14:15:27	1640.532	664.9581						
14:15:37	1671.147	452.5461						

7/1/92 SITE 4 DAY 3

TIME	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	FRONT GC RESULTS CH4 (ppmV/wet)	FRONT GC RESULTS ACETALDEHYDE: (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	REAR GC RESULTS CH4 (ppmV/wet)	REAR GC RESULTS ACETALDEHYDE (ppmV/wet)
14:15:47		1676.976	708.3309					
14:15:57		1581.508	548.8828					
14:16:07		1474.212	735.7237					
14:16:17		1435.624	525.8633					
14:16:27		1429.38	733.5762					
14:16:37		1416.599	539.0421					
14:16:47		1462.085	591.3188					
14:16:57		1566.709	507.653					
14:17:07		1645.701	587.3123					
14:17:17		1654.895	537.9591					
14:17:27		1692.747	522.9399					
14:17:37		1670.047	631.1732					
14:17:47		1584.333	589.621					
14:17:57		1507.203	620.2923					
14:18:07		1488.654	560.2285					
14:18:17		1463.612	639.8254					
14:18:27		1474.542	545.0211					
14:18:37		1453.35	676.6722					
14:18:47		1475.489	493.3719					
14:18:57		1481.149	586.6597					
14:19:07		1556.791	476.1668					
14:19:17		1608.788	639.6627					
14:19:27		1650.805	442.2336					
14:19:37		1649.374	653.5776					
14:19:47		1649.479	577.6761					
14:19:57		1533.37	742.4308					
14:20:07		1463.317	495.1669					
14:20:17		1441.55	751.4026					
14:20:27		1438.15	550.2963					
14:20:37		1437.41	628.9155					
14:20:47		1461.73	452.3332					
14:20:57		1548.293	718.1091					
14:21:07		1618.34	469.9749					
14:21:17		1634.413	664.8779					
14:21:27		1650.844	469.9818					
14:21:37		1630.138	676.895					
14:21:47		1552.178	485.8809					
14:21:57		1462.083	677.9756	412	234	8.31		
14:22:07		1429.89	578.4881	ETH/THC	CH4/THC	AA/THC		
14:22:17		1441.817	644.3873	60.76914862	34.51451645	1.225707827		
14:22:27		1437.117	534.4995					
14:22:37		1440.179	531.3031					
14:22:47		1488.006	504.9726					
14:22:57		1588.989	525.4742					
14:23:07		1622.888	530.6121					
14:23:17		1654.661	541.1022					
14:23:27		1643.262	637.4695					
14:23:37		1603.037	659.0008					

7/1/92 SITE 4 DAY 3

TIME	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	FRONT GC RESULTS CH4 (ppmV/wet)	FRONT GC RESULTS ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	REAR GC RESULTS CH4 (ppmV/wet)	REAR GC RESULTS ACETALDEHYDE (ppmV/wet)
14:23:47		1493.323		683.4497				
14:23:57		1458.3		551.3453				
14:24:07		1450.895		695.5201				
14:24:17		1466.677		606.8973				
14:24:27		1465.25		624.3319				
14:24:37		1487.898		406.4729				
14:24:47		1551.99		568.8295				
14:24:57		1657.34		436.7702				
14:25:07		1693.658		606.0999				
14:25:17		1706.167		473.846				
14:25:27		1692.843		676.7402				
14:25:37		1693.743		549.8911				
14:25:47		1574.952		750.77				
14:25:57		1478.221		487.3613				
14:26:07		1435.485		713.7004				
14:26:17		1411.328		490.4094				
14:26:27		1417.083		655.5416				
14:26:37		1453.55		423.7558				
14:26:47		1547.379		657.1386				
14:26:57		1615.901		513.4772				
14:27:07		1673.857		577.5365				
14:27:17		1685.804		482.4195				
14:27:27		1696.386		676.2948				
14:27:37		1628.192		592.2153				
14:27:47		1511.2		628.2878				
14:27:57		1472.134		575.0132				
14:28:07		1446.935		638.1074				
14:28:17		1434.971		621.8063				
14:28:27		1449.235		626.9481				
14:28:37		1464.674		587.6854				
14:28:47		1473.959		465.841				
14:28:57		1532.879		569.47				
14:29:07		1615.184		497.0745				
14:29:17		1623.199		601.3358				
14:29:27		1644.972		444.3996				
14:29:37		1637.798		624.9069				
14:29:47		1639.303		540.3133				
14:29:57		1615.643		717.074				
14:30:07		1543.387		516.1759				
14:30:17		1463.813		720.0704				
14:30:27		1408.899		551.4692				
14:30:37		1436.299		683.0859				
14:30:47		1437.246		432.3128				
14:30:57		1453.991		671.8549		519	799	25.4
14:31:07		1566.34		487.4579		ETH/THC	CH4/THC	AA/THC
14:31:17		1615.694		666.6151		35.69485643	54.95219709	1.746915902
14:31:27		1624.373		495.8209				
14:31:37		1617.052		742.9843				

7/1/92 SITE 4 DAY 3

TIME	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	FRONT GC RESULTS CH4 (ppmV/wet)	ACETALDEHYDE: (ppmV/wet) :	REAR GC RESULTS ETH-OH (ppmV/wet)	REAR GC RESULTS CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
14:31:47		1541.06	532.9195		:			
14:31:57		1445.761	694.2442		:			
14:32:07		1405.788	520.4913		:			
14:32:17		1404.949	634.9021		:			
14:32:27		1421.341	481.0493		:			
14:32:37		1431.171	627.3146		:			
14:32:47		1452.993	515.1592		:			
14:32:57		1495.417	587.4722		:			
14:33:07		1538.713	449.5435		:			
14:33:17		1617.537	566.1887		:			
14:33:27		1691.454	561.8333		:			
14:33:37		1736.438	610.8009		:			
14:33:47		1737.929	588.7824		:			
14:33:57		1732.765	712.2004		:			
14:34:07		1648.484	622.7312		:			
14:34:17		1586.465	566.7523		:			
14:34:27		1569.899	615.96		:			
14:34:37		1591.453	585.9854		:			
14:34:47		1608.652	625.3632		:			
14:34:57		1616.652	501.037	END	:			
AVG				584.5879412 1545.272587	:			
					:			
					:			
					TRANSITION :			
14:35:07	542.4115	1619.4			:			
14:35:17	414.9552	1661.525			:			
14:35:27	512.3617	1720.694			:			
14:35:37	418.3489	1776.4			:			
14:35:47	560.178	1785.719			:			
14:35:57	463.866	1810.86			:			
14:36:07	610.0366	1822.331			:			
14:36:17	430.124	1829.83			:			
14:36:27	588.0912	1829.75			:			
14:36:37	417.8742	1826.649			:			
14:36:47	604.9308	1815.548			:			
14:36:57	424.5706	1806.141			:			
14:37:07	584.4775	1788.102			:			
14:37:17	415.7171	1788.116			:			
14:37:27	556.1786	1782.445			:			
14:37:37	419.9039	1781.972			:			
14:37:47	506.3048	1768.272			:			
14:37:57	414.9257	1760.812			:			
14:38:07	577.671	1745.306			:			
14:38:17	463.45	1765.399			:			
14:38:27	549.3312	1774.47			:			
14:38:37	467.5961	1770.845			:			
14:38:47	498.3262	1752.954			:			
14:38:57	440.0228	1734.515			:			

7/1/92 SITE 4 DAY 3

TIME	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
14:39:07	525.4344	1705.711						
14:39:17	424.7355	1692.952						
14:39:27	453.7955	1683.509						
14:39:37	410.6639	1690.461						
14:39:47	438.9189	1671.995						
14:39:57	464.4997	1687.414	207	135	3.6			
14:40:07	482.123	1684.059	ETH/THC	CH4/THC	AA/THC			
14:40:17	536.5326	1677.278	44.56407614	29.06352792	0.775027411			
14:40:27	417.5484	1688.955						
14:40:37	599.6849	1703.986						
14:40:47	551.347	1680.357						
14:40:57	483.2311	1697.182						
14:41:07	233.799	1689.394						
14:41:17	2323.295	1681.108						
14:41:27	2616.931	1693.801						
14:41:37	2626.295	1689.005						
14:41:47	2679.784	1677.541						
14:41:57	2537.54	1666.612						
14:42:07	2914.984	1676.612						
14:42:17	2470.456	1635.457						
14:42:27	2770.905	1623.503						
14:42:37	2503.747	1613.846						
14:42:47	2951.793	1602.578						
14:42:57	2446.462	1611.145						
14:43:07	2626.434	1625.912						
14:43:17	2380.041	1629.028						
14:43:27	2779.248	1631.379						
14:43:37	2311.686	1617.864						
14:43:47	2805.549	1611.119						
14:43:57	2293.26	1635.639						
14:44:07	2802.201	1632.735						
14:44:17	2278.076	1613.741						
14:44:27	2806.129	1582.973						
14:44:37	2436.221	1560.99						
14:44:47	2762.801	1543.555						
14:44:57	2195.858	1522.145						
14:45:07	2516.536	1506.997						
14:45:17	2317.33	1503.891						
14:45:27	2551.013	1492.578						
14:45:37	2170.184	1480.34						
14:45:47	2549.263	1461.038						
14:45:57	2136.409	1426.977						
14:46:07	2390.798	1400.769						
14:46:17	2104.07	1401.277						
14:46:27	2263.092	1374.941						
14:46:37	2100.372	1391.564						
14:46:47	2225.161	1406.863						
14:46:57	2207.047	1426.392						

7/1/92 SITE 4 DAY 3

TIME	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	FRONT GC RESULTS CH4 (ppmV/wet)	FRONT GC RESULTS ACETALDEHYDE: (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	REAR GC RESULTS CH4 (ppmV/wet)	REAR GC RESULTS ACETALDEHYDE (ppmV/wet)
14:47:07	2014.052	1428.206						
14:47:17	2234.147	1429.94						
14:47:27	2142.972	1430.133						
14:47:37	2251.759	1422.115						
14:47:47	1961.559	1392.382						
14:47:57	2167.276	1386.498						
14:48:07	1940.299	1362.912						
14:48:17	2263.233	1354.358						
14:48:27	1916.336	1344.449						
14:48:37	2239.732	1358.42						
14:48:47	1828.722	1336.372						
14:48:57	2191.712	1303.213				321	1000	13.1
14:49:07	1767.596	1297.457				ETH/THC	CH4/THC	AA/THC
14:49:17	2130.323	1290.334				24.63143016	76.73342730	1.005207897
14:49:27	1737.403	1288.493						
14:49:37	2100.762	1283.698						
14:49:47	1741.735	1276.797						
14:49:57	2078.837	1277.304						
14:50:07	1759.177	1273.674						
14:50:17	1974.063	1282.076						
14:50:27	1783.31	1261.968						
14:50:37	1873.947	1254.552						
14:50:47	1675.175	1246.606						
14:50:57	1723.395	1249.077						
14:51:07	1711.073	1236.558						
14:51:17	1700.618	1247.96						
14:51:27	1775.449	1237.553						
14:51:37	1615.693	1230.936						
14:51:47	1716.771	1219.818						
14:51:57	1613.947	1238.647						
14:52:07	1784.72	1271.454						
14:52:17	1664.114	1292.039						
14:52:27	1887.576	1291.653						
14:52:37	1810.35	1273.082						
14:52:47	1958.19	1208.859						
14:52:57	1769.676	1171.725						
14:53:07	1962.164	1166.651						
14:53:17	1741.447	1155.832						
14:53:27	1844.862	1149.148						
14:53:37	1694.681	1178.267						
14:53:47	1803.472	1227.075						
14:53:57	1600.402	1257.058						
14:54:07	1710.596	1269.772						
14:54:17	1591.149	1262.025						
14:54:27	1674.463	1271.546						
14:54:37	1639.627	1283.262						
14:54:47	1686.374	1286.945						
14:54:57	1626.385	1278.651						

7/1/92 SITE 4 DAY 3

TIME	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
14:55:07	1709.824	1307.826						
14:55:17	1704.78	1313.13						
14:55:27	1773.941	1299.318						
14:55:37	1788.854	1271.648						
14:55:47	1819.05	1274.508						
14:55:57	1833.947	1290.967						
14:56:07	1779.6	1320.1						
14:56:17	1825.393	1338.175						
14:56:27	1784.275	1352.252						
14:56:37	1884.032	1328.809						
14:56:47	1758.043	1314.459						
14:56:57	1880.765	1315.384						
14:57:07	1795.154	1310.121						
14:57:17	1984.368	1321.677						
14:57:27	1803.718	1321.807						
14:57:37	2007.661	1320.116						
14:57:47	1816.826	1317.773						
14:57:57	2019.26	1335.912	569	1130	23.3			
14:58:07	1834.073	1285.616	ETH/THC	CH4/THC	AA/THC			
14:58:17	2082.945	1249.555	28.1786397	55.96109465	1.153888058			
14:58:27	1960.452	1229.052						
14:58:37	2098.757	1230.606						
14:58:47	1954.417	1252.628						
14:58:57	2102.929	1311.624						
14:59:07	2036.744	1350.523						
14:59:17	2152.201	1361.533						
14:59:27	2033.441	1348.121						
14:59:37	2117.119	1380.248						
14:59:47	2042.68	1385.186						
14:59:57	2120.242	1394.306						
15:00:07	2066.056	1435.711						
15:00:17	2213.631	1461.869						
15:00:27	2323.051	1443.707						
15:00:37	2317.198	1410.928						
15:00:47	2337.421	1387.518						
15:00:57	2317.525	1376.07						
15:01:07	2301.252	1374.669						
15:01:17	2284.163	1455.475						
15:01:27	2489.622	1501.345						
15:01:37	2375.635	1563.2						
15:01:47	2573.496	1581.475						
15:01:57	2407.356	1590.7						
15:02:07	2701.413	1633.181						
15:02:17	2411.195	1647.87						
15:02:27	2690.12	1671.078						
15:02:37	2462.031	1686.678						
15:02:47	3033.497	1689.707						
15:02:57	2630.687	1696.16						

7/1/92 SITE 4 DAY 3

TIME	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	FRONT GC RESULTS CH4 (ppmV/wet)	ACETALDEHYDE: (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	REAR GC RESULTS CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
15:03:07	3230.669	1652.196						
15:03:17	2652.01	1590.114						
15:03:27	3266.292	1564.769						
15:03:37	2618.083	1559.132						
15:03:47	3111.603	1572.365						
15:03:57	2522.649	1635.43						
					NATURAL			
			FRONT	REAR	BREAD			
15:04:07	3209.231	1701.035						
15:04:17	2748.817	1732.932						
15:04:27	3080.898	1745.399						
15:04:37	2674.441	1733.373						
15:04:47	2870.747	1731.165						
15:04:57	2765.56	1731.588						
15:05:07	2856.751	1734.667						
15:05:17	2916.527	1705.09						
15:05:27	2960.007	1621.069						
15:05:37	2878.714	1582.266						
15:05:47	2947.292	1557.661						
15:05:57	3029.74	1569.374						
15:06:07	3016.378	1618.006						
15:06:17	2819.269	1695.302						
15:06:27	3090.015	1725.489						
15:06:37	3173.147	1741.104						
15:06:47	2999.918	1756.323						
15:06:57	3125.301	1765.33				698	884	30.1
15:07:07	2892.823	1755.598				ETH/THC	CH4/THC	AA/THC
15:07:17	3373.536	1744.406				39.53934958	50.07562325	1.705063642
15:07:27	3169.736	1697.791						
15:07:37	3509.303	1665.028						
15:07:47	3132.642	1669.336						
15:07:57	3428.476	1690.264						
15:08:07	3016.417	1738.363						
15:08:17	3541.721	1822.37						
15:08:27	3065.174	1899.507						
15:08:37	3634.868	1942.805						
15:08:47	3070.233	1966.233						
15:08:57	3765.962	1989.581						
15:09:07	3139.368	1980.119						
15:09:17	3754.779	1899.814						
15:09:27	3114.377	1860.564						
15:09:37	3900.142	1825.545						
15:09:47	3050.332	1869.623						
15:09:57	3733.231	1885.781						
15:10:07	3357.014	1962.921						
15:10:17	3851.484	1983.941						

7/1/92 SITE 4 DAY 3

TIME	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	FRONT GC RESULTS CH4 (ppmV/wet)	FRONT GC RESULTS ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	REAR GC RESULTS CH4 (ppmV/wet)	REAR GC RESULTS ACETALDEHYDE (ppmV/wet)
15:10:27	3210.676	2024.148						
15:10:37	3571.317	1984.994						
15:10:47	3328.715	2004.156						
15:10:57	3519.133	1960.067						
15:11:07	3302.035	1848.405						
15:11:17	3697.695	1782.724						
15:11:27	3342.713	1777.667						
15:11:37	3744.955	1763.304						
15:11:47	3014.207	1744.113						
15:11:57	3345.938	1731.594						
15:12:07	3157.627	1815.315						
15:12:17	3245.295	1897.057						
15:12:27	2925.572	1926.351						
15:12:37	3412.527	1956.652						
15:12:47	3181.593	1972.998						
15:12:57	3631.126	1872.047						
15:13:07	3448.744	1798.992						
15:13:17	3638.304	1813.008						
15:13:27	3418.254	1782.922						
15:13:37	3285.389	1818.21						
15:13:47	3163.923	1871.104						
15:13:57	3189.572	1870.752						
15:14:07	3072.032	1921.668						
15:14:17	2959.279	1885.464						
15:14:27	3355.631	1943.374						
15:14:37	3032.429	1958.833						
15:14:47	3431.062	1873.943						
15:14:57	3144.34	1809.234						
15:15:07	3446.545	1751.717						
15:15:17	2926.235	1728.271						
15:15:27	3242.967	1735.512						
15:15:37	2808.224	1813.15						
15:15:47	3306.842	1910.027						
15:15:57	2932.232	1971.719		1350	1240	50.5		
15:16:07	3284.625	2006.733		ETH/THC	CH4/THC	AA/THC		
15:16:17	2959.048	2032.33		46.04001320	42.28860472	1.722237531		
15:16:27	3534.014	2034.334						
15:16:37	2919.33	2024.566						
15:16:47	3350.258	2000.83						
15:16:57	3106.53	1978.328						
15:17:07	3694.115	1984.474						
15:17:17	3085.153	1980.417						
15:17:27	3928.205	1920.59						
15:17:37	3353.211	1759.605						
15:17:47	2701.257	1710.281						
15:17:57		1689.466			1283.963			
15:18:07	3215.535	1720.729						
15:18:17	3086.472	1775.723						

7/1/92 SITE 4 DAY 3

TIME	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	FRONT GC RESULTS CH4 (ppmV/wet)	ACETALDEHYDE: (ppmV/wet) :	REAR GC RESULTS ETH-OH (ppmV/wet)	REAR GC RESULTS CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
15:18:27	3499.565	1843.047			:			
15:18:37	2965.937	1909.103			:			
15:18:47	3574.386	1899.64			:			
15:18:57	2986.907	1902.732			:			
15:19:07	3455.18	1914.648			:			
15:19:17	2914.256	1913.918			:			
15:19:27	3447.031	1908.833			:			
15:19:37	3039.928	1917.907			:			
15:19:47	3307.732	1932.986			:			
15:19:57	2880.633	1948.228			:			
15:20:07	3202.751	1973.132			:			
15:20:17	3123.106	1954.236			:			
15:20:27	3188.506	1992.622			:			
15:20:37	3045.42	1997.316			:			
15:20:47	3384.587	1969.893			:			
15:20:57	3092.95	1962.182			:			
15:21:07	3394.934	1969.793			:			
15:21:17	3464.166	1979.625			:			
15:21:27	3485.756	1882.249			:			
15:21:37	3407.956	1788.975			:			
15:21:47	3306.516	1740.081			:			
15:21:57	3321.211	1738.997			:			
15:22:07	2813.084	1735.864			:			
15:22:17	3272.243	1774.313			:			
15:22:27	3076.515	1867.923			:			
15:22:37	3318.379	1903.636			:			
15:22:47	3071.057	1909.554			:			
15:22:57	3493.828	1898.779			:			
15:23:07	3047.821	1913.976			:			
15:23:17	3541.786	1925.267			:			
15:23:27	3140.095	1901.828			:			
15:23:37	3672.524	1844.458			:			
15:23:47	3057.65	1762.082			:			
15:23:57	3642.226	1726.467			:			
15:24:07	3016.217	1741.85			:			
15:24:17	3485.344	1731.31			:			
15:24:27	2771.843	1734.718			:			
15:24:37	3486.461	1794.58			:			
15:24:47	2812.563	1860.636			:			
15:24:57	3436.273	1857.394			:			
15:25:07	2761.197	1877.594			:			
15:25:17	3353.635	1848.199			:			
15:25:27	2744.42	1845.005			:			
15:25:37	3387.16	1820.807			:			
15:25:47	2730.183	1804.313			:			
15:25:57	3320.034	1766.087			:			
15:26:07	2761.198	1788.562			:			
15:26:17	3265.479	1773.888			:			

7/1/92 SITE 4 DAY 3

TIME	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	FRONT GC RESULTS CH4 (ppmV/wet)	FRONT GC RESULTS ACETALDEHYDE: (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	REAR GC RESULTS CH4 (ppmV/wet)	REAR GC RESULTS ACETALDEHYDE (ppmV/wet)
15:26:27	2699.642	1759.637						
15:26:37	3248.916	1764.845						
15:26:47	2684.233	1765.205						
15:26:57	3139.801	1751.58						
15:27:07	2760.549	1755.984						
15:27:17	3133.258	1742.413						
15:27:27	2701.073	1744.695						
15:27:37	3121.354	1728.514						
15:27:47	2700.651	1738.143						
15:27:57	3063.778	1726.878						
15:28:07	2838.514	1718.726						
15:28:17	3133.062	1627.757						
15:28:27	2722.723	1553.926						
15:28:37	3045.821	1536.913						
15:28:47	2933.069	1547.79						
15:28:57	2793.106	1519.257						
15:29:07	2575.01	1545.327						
15:29:17	2720.375	1591.532						
15:29:27	2814.284	1612.272						
15:29:37	2617.227	1609.193						
15:29:47	2749.506	1591.342						
15:29:57	2699.462	1576.709						
15:30:07	2825.139	1567.342						
15:30:17	2875.016	1529.923						
15:30:27	3040.441	1475.665						
15:30:37	2729.862	1443.866						
15:30:47	2855.318	1426.836						
15:30:57	2510.252	1441.539						
15:31:07	2722.018	1472.837						
15:31:17	2413.722	1528.793						
15:31:27	2698.608	1604.029						
15:31:37	2392.168	1631.844						
15:31:47	2894.756	1629.834						
15:31:57	2266.496	1657.672						
15:32:07	2996.666	1672.759						
15:32:17	2584.612	1664.165						
15:32:27	3088.276	1585.379						
15:32:37	2499.096	1491.758				886	688	23.9
15:32:47	2805.121	1432.733				ETH/THC	CH4/THC	AA/THC
15:32:57	2539.385	1419.153				59.39301146	46.12008113	1.602136539
15:33:07	2892.594	1439.162						
15:33:17	2346.752	1484.707						
15:33:27	2963.309	1541.157						
15:33:37	2589.314	1584.106						
15:33:47	2908.072	1564.137						
15:33:57	2534.991	1600.518						
15:34:07	2880.176	1601.204						
15:34:17	2752.962	1535.912						

7/1/92 SITE 4 DAY 3

TIME	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	FRONT GC RESULTS CH4 (ppmV/wet)	FRONT GC RESULTS ACETALDEHYDE: (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	REAR GC RESULTS CH4 (ppmV/wet)	REAR GC RESULTS ACETALDEHYDE (ppmV/wet)
15:34:27	2756.338	1443.233						
15:34:37	2801.887	1405.515						
15:34:47	2767.488	1383.014						
15:34:57	2705.017	1406.884						
15:35:07	2650.294	1428.349						
15:35:17	2677.306	1448.361						
15:35:27	2667.098	1479.929						
15:35:37	2682.063	1524.017						
15:35:47	2770.19	1548.853						
15:35:57	2818.777	1522.975						
15:36:07	2897.05	1487.361						
15:36:17	2796.228	1451.192						
15:36:27	2998.496	1420.089						
15:36:37	2802.234	1403.224						
15:36:47	2828.792	1424.47						
15:36:57	2796.061	1470.276						
15:37:07	2560.043	1561.403						
15:37:17	2802.422	1586.415						
15:37:27	2794.112	1591.95						
15:37:37	2836.885	1620.017						
15:37:47	2817.685	1600.774						
15:37:57	3161.648	1545.118						
15:38:07	2715.696	1471.965						
15:38:17	2823.252	1449.323						
15:38:27	2695.782	1440.637						
15:38:37	2969.8	1450.804						
15:38:47	2457.628	1476.95						
15:38:57	3034.689	1524.34						
15:39:07	2562.832	1585.719						
15:39:17	3027.222	1629.192						
15:39:27	2496.133	1625.012						
15:39:37	3095.208	1635.409						
15:39:47	2683.837	1643.401						
15:39:57	3089.944	1516.43						
15:40:07	2717.666	1487.737						
15:40:17	2966.661	1457.094						
15:40:27	2736.448	1458.616						
15:40:37	2806.699	1487.396						
15:40:47	2727.985	1490.868						
15:40:57	2882.715	1560.457						
15:41:07	2817.513	1630.177						
15:41:17	3052.116	1665.539						
15:41:27	3017.445	1687.397						
15:41:37	3170.404	1615.251		1350	1190	48.9		
15:41:47	3024.473	1549.287		ETH/THC	CH4/THC	AA/THC		
15:41:57	2981.611	1499.89		42.58132402	37.53464858	1.542390181		
15:42:07	3083.865	1506.904						
15:42:17	2948.352	1475.547						

7/1/92 SITE 4 DAY 3

TIME	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE: (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
15:42:27	2770.19	1477.509						
15:42:37	2991.635	1535.049						
15:42:47	2986.293	1677.299						
15:42:57	3246.966	1746.626						
15:43:07	2955.161	1784.452	END					
AVG			3038.266872	1720.064927				
15:43:17		1818.19		3400.609				
15:43:27		1830.08		2486.78				
15:43:37		1766.708		239.6471				
15:43:47		1678.576		81.96923				
15:43:57		1641.423		49.10344				
15:44:07		1622.314		227.1891				
			COMFORT HOOD	REAR	NATURAL BREAD			
15:44:17		1654.052	632.3032					
15:44:27		1682.245	453.7296					
15:44:37		1716.755	692.6025					
15:44:47		1766.305	449.1866					
15:44:57		1790.583	659.7422					
15:45:07		1810.343	485.5906					
15:45:17		1757.966	710.2104					
15:45:27		1692.566	509.3653					
15:45:37		1661.5	716.8469					
15:45:47		1623.333	474.5166					
15:45:57		1644.563	652.7097					
15:46:07		1677.418	466.9254					
15:46:17		1744.056	625.7949					
15:46:27		1812.254	498.0497					
15:46:37		1820.981	638.5013					
15:46:47		1845.87	557.1447					
15:46:57		1839.851	681.7992					
15:47:07		1710.778	673.7962					
15:47:17		1651.421	634.1611					
15:47:27		1625.44	607.224					
15:47:37		1620.777	600.5256					
15:47:47		1637.186	572.5368					
15:47:57		1664.158	562.3834					
15:48:07		1720.999	582.7723					
15:48:17		1786.217	554.5179					
15:48:27		1841.824	602.7231					
15:48:37		1856.66	579.7715					
15:48:47		1840.39	673.8527					
15:48:57		1748.34	610.3375					

7/1/92 SITE 4 DAY 3

TIME	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	FRONT GC RESULTS CH4 (ppmV/wet)	ACETALDEHYDE: (ppmV/wet) :	REAR GC RESULTS ETH-OH (ppmV/wet)	REAR GC RESULTS CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
15:49:07		1662.988	684.6086		:			
15:49:17		1624.265	554.7345		:			
15:49:27		1624.24	616.4885		:			
15:49:37		1698.219	477.3852		:			
15:49:47		1812.586	632.7657		:			
15:49:57		1898.008	540.3898		:			
15:50:07		1921.004	654.4611		:			
15:50:17		1938.728	544.525		:			
15:50:27		1938.674	795.3226		:			
15:50:37		1850.973	606.2234		:	1030	875	33.3
15:50:47		1724.753	695.2481		:	ETH/THC	CH4/THC	AA/THC
15:50:57		1685.68	492.2973		:	55.64640867	47.27243455	1.799053795
15:51:07		1663.309	682.1132		:			
15:51:17		1661.618	424.0845		:			
15:51:27		1734.535	641.7031		:			
15:51:37		1837.765	457.4094		:			
15:51:47		1907.126	680.3287		:			
15:51:57		1932.479	472.2241		:			
15:52:07		1934.15	655.4629		:			
15:52:17		1933.032	514.6208		:			
15:52:27		1894.722	762.5316		:			
15:52:37		1772.425	511.737		:			
15:52:47		1682.368	759.9554		:			
15:52:57		1663.378	587.0488		:			
15:53:07		1669.074	669.2732		:			
15:53:17		1686.703	468.2627		:			
15:53:27		1782.817	678.0324		:			
15:53:37		1892.075	561.6695		:			
15:53:47		1951.564	583.5647		:			
15:53:57		1985.105	499.9332		:			
15:54:07		1989.291	636.1002		:			
15:54:17		1987.551	610.1859		:			
15:54:27		1949.772	687.1026		:			
15:54:37		1874.368	602.786		:			
15:54:47		1817.766	712.4987		:			
15:54:57		1743.853	701.8413		:			
15:55:07		1733.202	707.3337		:			
15:55:17		1735.67	666.6801		:			
15:55:27		1731.931	546.2795		:			
15:55:37		1781.64	593.4705		:			
15:55:47		1867.261	558.4276		:			
15:55:57		1915.274	610.6288		:			
15:56:07		1941.004	542.6566		:			
15:56:17		1964.634	627.1901		:			
15:56:27		1993.246	546.4112		:			
15:56:37		1978.634	703.6317		:			
15:56:47		1892.38	560.9798		:			
15:56:57		1805.561	712.2447		:			

7/1/92 SITE 4 DAY 3

TIME	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	FRONT GC RESULTS CH4 (ppmV/wet)	FRONT GC RESULTS ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	REAR GC RESULTS CH4 (ppmV/wet)	REAR GC RESULTS ACETALDEHYDE (ppmV/wet)
15:57:07		1769.505	491.9297					
15:57:17		1760.536	637.6827					
15:57:27		1781.351	520.2719					
15:57:37		1850.934	667.746					
15:57:47		1935.7	504.9286					
15:57:57		1951.486	682.2173					
15:58:07		1999.445	485.2896					
15:58:17		2014.47	659.4796					
15:58:27		2022.883	545.5079					
15:58:37		1982.968	785.8532					
15:58:47		1830.74	507.7485					
15:58:57		1759.649	715.7744					
15:59:07		1750.84	505.5372					
15:59:17		1740.416	659.7764					
15:59:27		1792.378	533.0326	439	193	8.65		
15:59:37		1895.657	718.7288	ETH/THC	CH4/THC	AA/THC		
15:59:47		1993.948	523.309	82.35894014	36.20791673	1.622790050		
15:59:57		2021.044	772.2274					
16:00:07		2021.181	586.8004					
16:00:17		2004.434	755.9196					
16:00:27		1904.658	514.9343					
16:00:37		1817.958	726.4479					
16:00:47		1793.643	499.8673					
16:00:57		1792.486	683.6109					
16:01:07		1811.098	453.2906					
16:01:17		1876.403	650.738					
16:01:27		1957.315	498.4648					
16:01:37		2010.737	639.9724					
16:01:47		2035.341	551.1215					
16:01:57		1999.675	719.6744					
16:02:07		1868.17	657.9198					
16:02:17		1789.211	673.7164					
16:02:27		1779.338	580.6962					
16:02:37		1760.883	662.5981					
16:02:47		1762.53	569.5874					
16:02:57		1785.3	577.283					
16:03:07		1850.499	593.8007					
16:03:17		1936.278	579.3537					
16:03:27		1969.807	576.8297					
16:03:37		1983.771	582.2225					
16:03:47		1993.018	630.5216					
16:03:57		1981.933	710.9897					
16:04:07		1953.02	722.4596					
16:04:17		1870.073	629.1441					
16:04:27		1798.739	705.3735					
16:04:37		1789.829	552.1129					
16:04:47		1799.851	606.3374					
16:04:57		1840.412	511.1899					

7/1/92 SITE 4 DAY 3

TIME	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)		FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE: (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
16:05:07		1927.732	648.872	END					
AVG				1827.234166	606.0267142				
16:05:17		2003.302			416.8986				
16:05:27		2019.876			38.93217				
16:05:37		2028.372			17.80091				
16:05:47		2006.589			911.5056				
16:05:57		1896.978			3333.754				
				NATURAL					
				FRONT	REAR	BREAD			
16:06:07	3849.02	1777.939							
16:06:17	3378.067	1721.49							
16:06:27	3830.835	1697.379							
16:06:37	3232.731	1718.408							
16:06:47	3592.586	1772.296							
16:06:57	3283.344	1909.813							
16:07:07	3301.793	1991.592							
16:07:17	3354.421	2027.307							
16:07:27	3426.1	2045.05							
16:07:37	3253.882	2054.4							
16:07:47	3529.98	2071.246							
16:07:57	3460.314	2036.266							
16:08:07	3642.98	1914.677							
16:08:17	3431.852	1815.92							
16:08:27	3809.122	1776.007							
16:08:37	3549.612	1758.628		1740	1080	50			
16:08:47	3262.339	1748.101		ETH/THC	CH4/THC	AA/THC			
16:08:57	3215.849	1786.678		49.01944212	30.42586062	1.408604658			
16:09:07	3247.29	1862.637							
16:09:17	3634.959	1905.207							
16:09:27	3175.469	1909.163							
16:09:37	3479.116	1895.679							
16:09:47	3240.813	1902.239							
16:09:57	3780.253	1892.172							
16:10:07	3186.952	1820.376							
16:10:17	3484.409	1736.931							
16:10:27	3345.003	1708.782							
16:10:37	3763.874	1715.113							
16:10:47	2967.534	1742.608							
16:10:57	3799.507	1796.876							
16:11:07	3139.935	1868.892							
16:11:17	3848.368	1907.265							
16:11:27	3087.475	1923.238							
16:11:37	3691.993	1940.214							

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TIME	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
16:11:47	2997.917	1965.163						
16:11:57	3776.211	1985.889						
16:12:07	3173.041	1969.185						
16:12:17	3827.305	1921.416						
16:12:27	3194.927	1893.967						
16:12:37	3845.135	1901.207						
16:12:47	3150.237	1906.456						
16:12:57	3574.991	1892.587						
16:13:07	3022.786	1940.059						
16:13:17	3701.522	2023.552						
16:13:27	3192.113	2128.033						
16:13:37	3722.765	2148.132						
16:13:47	3186.193	2140.175						
16:13:57	3764.625	2127.127						
16:14:07	3386.874	2110.694						
16:14:17	3944.522	2039.739						
16:14:27	3699.406	1897.422						
16:14:37	3909.255	1815.978						
16:14:47	3459.16	1794.662						
16:14:57	3737.762	1779.399						
16:15:07	3659.151	1768.809						
16:15:17	3533.668	1779.785						
16:15:27	3428.554	1839.715						
16:15:37	3687.481	1897.062						
16:15:47	3439.336	1955.094						
16:15:57	3503.176	1968.083						
16:16:07	3471.452	1972.133						
16:16:17	3441.82	1972.33						
16:16:27	3747.392	1944.139						
16:16:37	3551.233	1857.419						
16:16:47	3640.177	1795.23						
16:16:57	3556.271	1777.33						
16:17:07	3869.643	1774.735						
16:17:17	3235.531	1794.33						
16:17:27	3324.523	1876.667						
16:17:37	3308.99	1979.181						
16:17:47	3766.595	2019.792						
16:17:57	3150.185	2047.306						
16:18:07	3702.19	2017.071						
16:18:17	3436.704	2044.085	END					
AVG			3486.467513	1900.158473				
16:18:27	2709.001	1343.616						
16:18:37	207.2244	89.68388						
16:18:47	77.73862	48.02515						
16:18:57	41.28258	32.62492						

7/1/92 SITE 4 DAY 3

TIME	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	FRONT GC RESULTS CH4 (ppmV/wet)	FRONT GC RESULTS ACETALDEHYDE: (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	REAR GC RESULTS CH4 (ppmV/wet)	REAR GC RESULTS ACETALDEHYDE (ppmV/wet)
16:19:07	26.69202	22.82236						
16:19:17	17.80005	18.10136						
16:19:27	20.33061	14.71348						
16:19:37	15.94352	19.48981						
16:19:47	6.642861	17.6555						
16:19:57	4.214091	16.31649						
16:20:07	3.126354	15.78945						
16:20:17	-0.30895	11.28205						
16:20:27	0.621178	11.21442						
16:20:37	0.119923	8.400772						
16:20:47	-0.91858	7.876093						
16:20:57	-2.20737	5.362522						
16:21:07	-1.72973	5.645154						
16:21:17	-0.27659	5.726757						
16:21:27	-0.44100	4.711506						
16:21:37	-3.23834	3.500355						
16:21:47	-3.12824	2.993042						
16:21:57	-3.51031	2.597371						
16:22:07	1131.609	2048.214						
16:22:17	3546.137	3669.339						
16:22:27	3865.615	3849.16						
16:22:37	3922.61	3891.624						
16:22:47	3934.838	3897.779						
16:22:57	3942.48	3907.384						
16:23:07	3943.625	3912.41						
16:23:17	2918.08	2157.17						
16:23:27	189.1252	120.8423						
16:23:37	68.99012	54.58644						
16:23:47	46.02175	41.3432						
16:23:57	33.15618	32.26465						
16:24:07	16.74959	24.24504						
16:24:17	12.80372	20.60922						
16:24:27	9.170536	18.77717						
16:24:37	4.410043	21.0927						
16:24:47	3.718242	16.93991						
16:24:57	2.769294	17.11948						
16:25:07	0.252987	13.07982						
16:25:17	-0.23657	8.588187						
16:25:27	-0.95231	7.673341						
16:25:37	-0.65184	7.802567						
16:25:47	-1.97051	4.502983						
16:25:57	-5.04108	2.558031						
16:31:06	3990.74	3995.819						
16:31:10	3990.74	3995.819						
16:31:11	3990.74	3995.819						
16:31:15	3966.264	3967.141						

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TIME	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	FRONT GC RESULTS CH4 (ppmV/wet)	FRONT GC RESULTS ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	REAR GC RESULTS CH4 (ppmV/wet)	REAR GC RESULTS ACETALDEHYDE (ppmV/wet)
16:31:25	3962.5	3966.948						
16:31:35	3963.708	3972.728						
	3964.157	3968.939						
16:31:45	3962.395	3967.352						
16:31:59	3921.324	3989.175						
16:32:20	3948.388	3991.955						
16:32:20	3948.388	3991.955						
16:32:25	3949.167	3989.635						
16:32:35	3947.009	3987.489						
16:32:45	3948.447	3990.23						
16:32:55	3944.831	3989.48						
16:33:05	3945.188	3986.533						
16:33:15	3944.604	3988.19						
16:33:25	3903.782	3315.883						
16:33:35	3727.8	2032.729						
16:33:45	3503.467	1983.85						
16:33:55	3726.662	2063.172						
16:34:18	3286.266	2128.837						
16:34:19	3286.266	2128.837						
16:34:25	855.2215	823.4807						
16:34:35	833.641	816.5374						
16:34:45	823.2117	810.8482						
16:34:55	815.114	811.9177						
16:35:05	812.016	809.8821						
16:35:15	807.4005	802.2965						
16:35:25	802.7642	807.0934						
16:35:35	800.4199	808.5079						
16:35:45	799.1055	807.5221						
16:35:55	799.0448	809.0067						
16:36:05	796.9479	807.8616						
16:36:15	798.1911	803.8079						
16:36:25	798.8674	809.9906						
16:36:35	797.1328	807.5239						
16:36:45	796.4741	808.501						
16:36:55	796.4886	809.7489						
16:37:05	796.8311	808.3616						
16:37:15	796.4855	808.7673						
16:37:25	797.3193	808.3694						
16:37:35	797.0002	809.8936						
16:37:45	797.1866	808.2869						
16:37:55	800.4116	807.7237						
16:38:05	800.9882	808.8521						
16:38:15	794.4833	808.1774						

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TIME	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	FRONT GC RESULTS CH4 (ppmV/wet)	FRONT GC RESULTS ACETALDEHYDE: (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	REAR GC RESULTS CH4 (ppmV/wet)	REAR GC RESULTS ACETALDEHYDE (ppmV/wet)
16:38:25	796.7686	808.686						
16:38:35	795.1127	807.8182						
16:38:45	794.9298	807.8203						
16:38:55	795.0595	809.1995						
16:39:05	793.7164	808.9623						
16:39:15	794.4669	811.2773						
16:39:25	794.8312	812.6059						
16:39:35	794.6527	810.9833						
16:39:45	794.8544	810.823						
16:39:55	795.2227	811.3842						
16:40:05	793.9891	808.7496						
16:40:15	794.5837	808.3859						
16:40:25	794.7935	808.9937						
	796.5453	808.8863						
16:40:36	793.5774	806.9008						
16:40:45	794.455	809.4178						
16:40:55	793.1826	809.077						
16:41:05	1885.249	1186.281						
16:41:15	1420.354	1372.729						
16:41:25	1474.725	1501.08						
16:41:35	1481.018	1514.477						
16:41:45	1485.221	1509.77						
16:41:55	1483.7	1509.85						
16:42:05	1490.63	1514.159						
16:42:15	1494.923	1514.394						
16:42:25	1495.35	1517.363						
16:42:35	1486.58	1513.89						
16:42:45	1485.007	1514.584						
16:42:55	1487.47	1517.438						
16:43:05	1487.834	1517.574						
16:43:15	1487.47	1520.399						
16:43:30	1493.011	1520.052						
16:43:35	1486.374	1519.227						
16:43:45	1490.287	1521.142						
16:43:55	1486.26	1519.273						
16:44:05	1486.036	1516.824						
16:44:15	1484.739	1514.069						
16:44:25	1486.561	1516.832						
16:44:35	1485.411	1515.919						
16:44:45	1486.906	1514.109						
16:44:55	1486.762	1515.723						
16:45:05	1488.309	1515.129						
16:45:15	1486.332	1515.517						

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TIME	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	FRONT GC RESULTS CH4 (ppmV/wet)	FRONT GC RESULTS ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	REAR GC RESULTS CH4 (ppmV/wet)	REAR GC RESULTS ACETALDEHYDE (ppmV/wet)
16:45:25	1484.814	1515.417						
16:45:35	1477.593	1510.764						
	1486.565	1516.598						
16:45:45	1486.524	1514.856						
16:45:55	1486.276	1518.055						
16:46:05	1683.728	1533.177						
16:46:15	3703.234	1824.587						
16:46:25	3317.886	1850.477						
16:46:35	4044.471	1851.105						
16:46:45	2259.921	1755.964						
16:46:55	2036.221	1945.329						
16:47:05	2048.365	1946.32						
16:47:15	2042.563	1947.799						
16:47:25	2040.499	1948.336						
16:47:35	2033.411	1951.322						
16:47:45	2023.857	1952.186						
16:47:55	2022.297	1955.738						
16:48:05	2022.771	1959.612						
16:48:15	2020.996	1961.532						
16:48:25	2144.005	1958.504						
16:48:35	3540.529	1882.916						
16:48:45	3206.052	1887.125						
16:48:55	3681.381	1945.017						
16:49:05	3376.109	2064.228						
16:49:15	3796.212	2118.591						
16:49:25	3357.688	2133.077						
16:49:35	3714.002	2137.038						
16:49:45	3451.552	2108.272						
16:49:55	3829.699	2104.879						
16:50:05	3687.643	1992.756						
16:50:15	3848.88	1893.658						
16:50:25	3696.189	1872.402						
16:50:35	3753.408	1864.48						
16:50:45	3450.862	1876.278						
16:50:55	3479.994	1931.54						
16:51:05	2291.32	2094.162						
16:51:15	2056.162	2023.409						
16:51:33	2035.846	2016.638						
16:51:35	2018.149	2008.238						
16:51:45	2025.31	2008.809						
16:51:55	2021.762	2007.59						
16:52:05	2019.243	2009.975						
16:52:15	2017.953	2014.253						

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TIME	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	FRONT GC RESULTS CH4 (ppmV/wet)	FRONT GC RESULTS ACETALDEHYDE: (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	REAR GC RESULTS CH4 (ppmV/wet)	REAR GC RESULTS ACETALDEHYDE (ppmV/wet)
16:52:25	2013.71	2016.902						
16:52:35	2015.652	2019.193						
16:52:45	2018.885	2022.303						
16:52:55	2013.629	2018.033						
16:53:05	2016.706	2026.796						
16:53:15	2013.338	2025.259						
16:53:25	2014.651	2028.093						
16:53:35	2017.356	2030.18						
16:53:45	2016.174	2031.384						
	2017.322	2019.072						
16:53:56	2014.804	2025.287						
16:54:05	2014.47	2037.176						
16:54:15	2010.243	2033.825						
16:54:25	2456.699	1476.509						
16:54:35	573.5134	390.5977						
16:54:45	354.1529	331.8786						
16:54:55	324.1006	314.2784						
16:55:05	312.9708	310.3555						
16:55:26	308.6035	304.6099						
16:55:26	308.6035	304.6099						
16:55:35	302.1368	304.0127						
16:55:45	301.0876	302.644						
16:55:55	300.2852	301.4015						
16:56:05	300.5416	300.6765						
16:56:15	300.1421	301.6689						
16:56:25	300.2365	301.3854						
16:56:35	297.9484	301.4171						
16:56:45	298.9895	302.3489						
16:56:55	297.5359	300.7148						
16:57:05	301.1487	304.0136						
	300.0052	302.0283						
16:57:15	297.2672	301.1892						
16:57:25	299.7134	299.943						
16:57:35	1200.872	647.3136						
16:57:45	3091.56	1976.686						
16:57:55	3266.478	2173.103						
16:58:05	3347.296	2184.869						
16:58:15	3360.295	2192.033						
16:58:25	3320.391	2189.419						
16:58:35	3369.416	2192.261						
16:58:45	3352.862	2180.24						

7/1/92 SITE 4 DAY 3

TIME	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	FRONT GC RESULTS CH4 (ppmV/wet)	FRONT GC RESULTS ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	REAR GC RESULTS CH4 (ppmV/wet)	REAR GC RESULTS ACETALDEHYDE (ppmV/wet)
16:58:55	3733.275	2176.527						
16:59:05	3127.474	2168.536						
16:59:15	3250.142	2163.125						
16:59:25	3070.088	2153.488						
16:59:35	3512.216	2156.863						
16:59:45	2913.376	2132.909						
16:59:55	3586.667	2104.425						
17:00:05	2939.983	2101.716						
17:00:15	3602.81	2108.374						
17:00:25	2872.834	2101.907						
17:00:35	3622.476	2090.919						
17:00:45	2848.592	2091.97						
17:00:55	3574.473	2073.057						
17:01:05	2858.817	2049.661						
17:01:15	3608.111	2064.243						
17:01:25	2796.483	2057.691						
17:01:35	3533.933	2050.427						
17:01:45	2772.291	2036.079						
17:01:55	3526.068	2034.775						
17:02:05	2782.519	2036.505						
17:02:15	3527.127	2020.213						
17:02:25	2751.849	2001.864						
17:02:35	3426.518	2003.59						
17:02:45	2773.876	1991.678						
17:02:55	3401.525	1986.267						
17:03:05	2735.815	1972.862						
17:03:15	3320.937	1943.9						
17:03:25	2750.871	1942.846						
17:03:35	3268.279	1921.036						
17:03:45	2865.598	1923.38						
17:03:55	3333.778	1866.63						
17:04:05	2915.166	1884.855						
17:04:15	3291.69	1889.566						
17:04:25	2833.244	1874.689						
17:04:35	3150.013	1870.034						
17:04:45	2823.381	1844.459						
17:04:55	3010.97	1814.829						
17:05:05	2759.343	1796.766						
17:05:15	2945.665	1779.356						
17:05:25	2699.776	1766.565						
17:05:35	2875.497	1746.359						
17:05:45	2621.573	1729.843						
17:05:55	2727.914	1711.976						
17:06:05	2747.22	1704.771						
17:06:15	2563.248	1669.665						
17:06:25	2709.69	1597.695						
17:06:35	2433.902	1596.08						
17:06:45	2827.329	1634.128						

7/1/92 SITE 4 DAY 3

TIME	THC 1 (TABLE) (ppmC)	THC 2 (RACK) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	FRONT GC RESULTS CH4 (ppmV/wet)	FRONT GC RESULTS ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	REAR GC RESULTS CH4 (ppmV/wet)	REAR GC RESULTS ACETALDEHYDE (ppmV/wet)
17:06:55	2341.8	1646.595						
17:07:05	2942.496	1638.241						
17:07:15	2232.14	1624.6						
17:07:25	2702.992	1610.265						
17:07:35	2182.244	1579.2						
17:07:45	2634.346	1558.595						
17:07:55	2151.506	1534.707						
17:08:05	2543.739	1521.014						
17:08:15	2170.06	1514.416						
17:08:25	2516.039	1502.344						
17:08:35	2273.427	1501.595						
17:08:45	2398.843	1501.359						
17:08:55	2216.639	1487.729						
17:09:05	2224.315	1459.35						
17:09:15	2212.293	1434.397						
17:09:25	1969.457	1419.928						
17:09:35	934.4203	431.8845						
17:09:45	65.10709	28.05683						
17:09:55	35.1818	14.83353						
17:10:05	17.53614	-5.43936						
17:10:15	-6.81453	-16.0180						
17:10:25	-15.7093	-13.6887						
17:10:35	-16.7225	-18.4023						
17:10:45	-16.8128	-20.6568						
17:10:55	-16.4786	-21.0725						
17:11:05	-16.3298	-18.7150						
17:11:15	-15.5098	-22.2918						
17:11:25	-16.3854	-20.1192						
17:11:37	-16.6875	-20.6612						
17:11:45	-17.8851	-19.8531						
17:11:55	-16.3299	-17.2703						
17:12:05	-15.3689	-20.0461						

SITE 4
DAY 3

...ration Summary
07-01-1992 10:59:08
CALIBRATION FILE NAME =C: \CEMDATA\ 0701A.CAL

Chan.	Name	Units	Zero Conc.	Zero Resp.	Span Conc.	Span Resp.	Slope	Int.
1	THC1	PPM	0.00	0.0071	3960.00	3.956	1002.020	-7.12
2	O2	%	0.00	0.0004	20.90	0.085	247.888	-0.11
3	THC2	PPM	0.00	-.0011	3980.00	3.772	1054.814	1.18
4		PPM	0.00	0.0103	3960.00	3.965	1001.227	-10.29

Press Shift-PrtSc to Print Out Table
Press (E) to Continue

[AN CORPORATION PAGE 01

ic Testing and Process Engineering Dept.
ionous Emissions Monitoring Data
EPIEE

formed for:
e Printed = 07-01-1992 Current Time = 10:02:15
e Name = C:\CEMDATA\07@192.PRN Calibration File:C:\CEMDATA\0701A.CAL

-01-1992	THC1	O2	THC2	
PE	PPM	%	PPM	PPM
22:17	3956.9	-0.6	-1698.5	3958.1
22:27	3963.1	-0.6	-775.1	3954.7
22:37	3966.9	-0.2	-55.5	3960.1
22:47	3965.6	-0.1	-86.7	3961.7

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Yo.=          3963.1     -0.4   -546.4   3958.0
=============================================================================================================================================
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DOW CORPORATION 3960 QC

ela Testing and Process Engineering Dept.
ntinuous Emissions Monitoring Data
SERIES
A
rformed for:
ta Printed = 07-01-1992 Current Time = 11:59:45
le Name = C:\CEMDATA\070192.PRN Calibration File:C:\CEMDATA\070101.CAL

7-01-1992 Time	THC1 PPM	O2 %	THC2 PPM	PPM
:58:48	3891.2	0.1	-93.9	3832.4
:58:48	3891.2	0.1	-93.9	3832.4
:58:57	3905.1	-0.3	-149.8	3935.2
:59:07	3919.6	-0.4	-74.7	3937.9
:59:17	3909.2	-0.4	-71.5	3841.9
:59:27	3922.5	0.1	-57.0	3946.6
:59:37	3926.2	-0.1	-55.9	3853.0
:59:47	3941.1	-0.3	-60.2	3857.1
:59:57	3953.8	-0.3	-55.1	3962.3
:00:07	3951.6	-0.3	-62.9	3863.7
:00:17	3951.5	0.2	-56.0	3872.3
:00:27	3947.8	-0.3	-55.4	3873.5
:00:37	3945.4	-0.4	-63.6	3873.6
:00:47	3951.1	-0.3	-58.1	3881.4
:00:57	3951.6	0.0	-61.2	3981.7
:01:07	3950.4	-0.2	-58.6	3882.1
:01:17	3948.5	-0.0	-55.5	3886.3
1:27	3943.9	-0.2	-215.7	3289.5
/g.=	3933.3	-0.2	-77.7	3877.7

3949 3873

...ION & Gas Co

...ld Testing and Process Engineering Dept
...Stationary Emissions Monitoring Data
...EM185

...formed for:
...e Printed = 0...-01-1992 Current Time = 12:02:57
...e Name = C:\CEM\DATA\070192.PRN Calibration File:C:\CEM\DATA\070101.CAL

-01-1992	THC1	O2	THC2	
ne	PPM	%	PPM	PPM
04:02	2.6	-0.8	-3459.6	2.1
04:07	2.5	-1.3	-3584.7	2.4
04:17	0.7	-1.3	-3521.2	0.9
04:27	3.2	-1.5	-3523.4	3.6
04:37	2.6	-1.5	-3525.5	1.6
04:47	0.3	-1.7	-3579.9	-0.0
04:57	-0.5	-1.5	-3596.3	-0.3
05:07	-1.9	-1.7	-3547.2	-0.6
D.=	1.2	-1.3	-3536.9	0.9

-0.7 -0.3

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ILHN CORPORATION      3960 QC

eld Testing and Process Engineering Dept.
tinuous Emissions Monitoring Data
'ERIES
4
formed for:
te Printed = 07-01-1992  Current time = 12:06:14
le Name = C:\CEMDATA\070192.PRN   Calibration File: C:\CEMDATA\070192.CAL


1-01-1992      THC1    O2      THC2
me             PPM     %       PPM     PPM
==========================================================================================================================
==========
:06:17       3916.2     0.1   -52.6  3920.0
06:17       3948.8     0.3 -2257.7  3945.2
06:27       3951.8     0.2  -285.7  3939.8
06:37       3952.0    -0.3   -52.8  3934.9
06:47       3950.2     0.1   -58.0  3940.9
06:57       3957.9    -0.3   -54.4  3941.5
07:07       3959.4     0.0  -193.1  3943.4
07:17       3955.9    -0.4   -53.5  3942.8
==========================================================================================================================
==========
o.=         3951.4    -0.0  -367.2  3938.8
==========================================================================================================================
==========
```

12:06 3960 ac

T = 3954

R 3941

1331 0 Gas

T = 14.5

R = −0.2

...ION CORPORATION 3750 GC

...id Testing and Process Engineering Dept.
...tinuous Emissions Monitoring Data
...ERIES

...rmed for:
...e Printed = 07-01-1992 Current Time = 13:37:22
...e Name = C:\CEMDATA\070192.PRN Calibration File:C:\CEMDATA\070104.Cal

...-01-1992	THC1	O2	THC2	
...me	PPM	%	PPM	PPM
...37:25	3931.9	0.0	-59.1	3917.1
...37:27	3946.6	0.5	-1270.1	3932.6
...37:37	3939.9	0.2	-72.1	3924.5
...37:47	3932.1	-0.5	-59.8	3917.2
...37:57	3939.1	-0.2	-64.1	3925.9
...38:07	3936.8	0.1	-63.9	3929.9
...38:17	3935.1	0.1	-62.7	3934.3
...38:27	3937.0	0.3	-54.6	3936.0
...38:37	3931.9	-0.4	-56.1	3926.7
...38:47	3939.7	0.0	-66.6	3927.6
...38:57	3932.9	0.1	-55.4	3936.9
...39:07	3934.4	-0.3	-60.2	3934.6
...=	3936.4	-0.0	-162.0	3929.5

3936.9 3930.4

-DYNM CORPORATION @ QC

sis Testing and Process Engineering Dept.
ntinuous Emissions Monitoring Data
'ERIES
A
rformed for:
te Printed = 07-01-1992 Current Time = 13:47:55
le Name = C:\CEMDATA\070192.PRN Calibration File:C:\CEMDATA\070101.CAL

7-01-1992 Time	THC1 PPM	O2 %	THC2 PPM	PPM
:47:58	-0.9	-1.3	-3558.9	-2.7
:47:58	-0.9	-1.3	-3558.9	-2.7
:45:07	-1.7	-1.2	-3560.3	-3.2
:46:17	1.0	-1.3	-3514.7	-3.2
:48:27	-2.4	-1.3	-3558.4	-1.9
vg.=	~~-1.0~~	-1.3	-3550.6	~~-2.5~~

-.96 -2.7

IAN CORPORATION 3900 SE

ild Testing and Process Engineering Dept.
tinuous Emissions Monitoring Data
ERIES
4
formed for:
e Printed = 07-01-1992 Current Time = 13:07:45
e Name = C:\CEMDATA\070192.PRN Calibration File:C:\CEMDATA\070101.CAL

-01-1992	THC1	O2	THC2	
me	PPM	%	PPM	PPM
49:48	3953.1	-0.1	-206.8	3977.2
49:57	3965.5	-0.1	-262.7	3994.8
50:07	3967.1	0.0	-51.1	3987.3
50:17	3968.8	-0.0	-57.0	3990.3
50:27	3962.7	-0.0	-195.2	3986.3
50:37	3972.2	0.3	-159.2	3999.1
50:47	3970.6	-0.3	-55.6	3990.0
50:57	3963.6	-0.1	-53.0	3997.2
0.=	3965.5	-0.1	-130.1	3987.5

39672 3988.9

ADIAN CORPORATION 200 ETHANOL GC

ield Testing and Process Engineering Dept.
ontinuous Emissions Monitoring Data
AMPLES
PA
erformed for:
ate Printed = 07-01-1992 Current Time = 13:53:50
ile Name = C:\CEMDATA\070192.PRN Calibration File:C:\CEMDATA\070104.CAL

07-01-1992 Time	THC1 PPM	O2 %	THC2 PPM	PPM
13:53:53	325.0	-1.1	-5166.9	312.4
13:53:57	316.1	-1.1	-5248.2	305.6
13:54:07	314.8	-1.1	-5156.1	305.8
13:54:17	313.9	-1.1	-5184.5	307.0
13:54:27	312.4	-1.0	-5168.3	307.2
13:54:37	313.7	-1.1	-5177.9	307.1
13:54:47	310.8	-1.1	-5134.9	304.2
13:54:57	311.7	-0.9	-5167.7	307.1
Avg.=	314.8	-1.1	-5175.6	306.1

313.4 306.3

CIBA CORPORATION 1992-01-02

Old Testing and Process Engineering Dept.
Continuous Emissions Monitoring Data
SERIES
4
Formed for:
te Printed = 07-01-1992 Current Time = 13:56:21
le Name = C:\CEMDATA\070192.PRN Calibration File:C:\CEMDATA\070114.CAL

7-01-1992	THC1	O2	THC2	
ime	PPM	%	PPM	PPM
:56:24	203.0	15.7	-5228.9	190.3
:56:27	202.2	17.1	-5327.2	191.9
:56:37	201.7	17.9	-5239.7	193.5
:56:47	202.4	18.5	-5234.3	188.2
:56:57	202.0	18.8	-2682.7	187.8
G.M	202.9	17.6	-4742.6	189.3

CALIBRATION SUMMARY
07-01-1992 16:29:47
CALIBRATION FILE NAME =C:\CEMDATA\07018.CAL

Chan.	Name	Units	Zero Conc.	Zero Resp.	Span Conc.	Span Resp.	Slope	Int.
1	THC1	PPM	0.00	0.0098	3960.00	3.943	1006.879	-9.85
2	O2	%	0.00	0.0004	20.90	0.085	247.688	-0.11
3	THC2	PPM	0.00	-.0011	3980.00	3.772	1054.914	1.18
4		PPM	0.00	0.0141	3960.00	3.979	998.577	-14.04

Press Shift-PrtSc to Print Out Table
Press <C> to Continue

CEM INSTRUMENT DRIFT SUMMARY
07-01-1992 16:30:06

Chan.	Name	Units	Zero Conc. Actual	Zero Conc. Observed	Span Actual	Span Observed	Drift % of Scale Zero	Drift % of Scale Span
1	THC1	PPM	0.000	2.686	3960.00	3946.73	0.07	-0.13
2	O2	%	0.000	0.000	20.90	0.00	0.00	-23.68
3	THC2	PPM	0.000	0.000	3980.00	0.00	0.00	-39.80
4		PPM	0.000	3.789	3960.00	3973.90	0.04	0.14

Press Shift-PrtSc to Print Out Table
Press <C> to Continue

DIAN CORPORATION 3480 GC (3 CAL.

eld Testing and Process Engineering Dept.
ntinuous Emissions Monitoring Data
ERIES
1
rformed for:
te Printed = 07-01-1992 Current Time = 16:30:50
le Name = C:\CEMDATA\070192.PRN Calibration File:C:\CEMDATA\0701P.CAL

7-01-1992 Time	THC1 PPM	O2 %	THC2 PPM	PPM
:31:06	3990.7	-0.2	299.5	3995.8
:31:10	3990.7	-0.2	289.5	3995.8
:31:11	3990.7	-0.2	289.5	3995.8
:31:15	3966.7	-0.2	911.0	3967.1
:31:25	3962.5	-0.5	855.7	3966.9
:31:35	3963.7	0.1	906.9	3972.7
0.=	3977.4	-0.2	523.7	3982.4

3964 3969

-DIAN CORPORATION 3960 OC (A CAL)

el: Testing and Process Engineering Dept.
ntinuous Emissions Monitoring Data
ERIES
9
rformed for:
te Printed = 07-01-1992 Current Time = 16:32:16
le Name = C:\CEMDATA\070192.PRN Calibration File:C:\CEMDATA\07012.CAL

7-01-1992	THC1	O2	THC2	
me	PPM	%	PPM	PPM
:32:20	3946.4	-0.2	86.0	3992.0
:32:20	3948.4	-0.2	88.0	3992.0
:32:25	3949.2	0.2	815.5	3989.5
:32:35	3947.0	-0.0	1287.9	3987.5
:32:45	3948.4	-0.1	1341.4	3990.2
:32:55	3944.8	-0.2	1394.3	3989.5
/0.=	3947.7	-0.1	825.8	3990.1

A (2)

DI-M CORPORATION 798 GC HA CAL

eld Testing and Process Engineering Dept.
ntinuous Emissions Monitoring Data
SERIES
e
rformed for:
te Printed = 07-01-1992 Current Time = 10:34:14
le Name = C:\CEMDATA\070192.PRN Calibration File:C:\CEMDATA\070HA.CAL

7-01-1992 Time	THC1 PPM	O2 %	THC2 PPM	PPM
:34:19	3286.3	14.5	-491.8	2126.8
:34:19	3286.3	14.5	-481.8	2126.8
:34:25	855.2	13.2	-4222.1	823.5
:34:35	833.6	13.2	-4218.3	816.5
:34:45	823.2	11.2	-4233.7	810.8
:34:55	815.1	1.9	-3936.4	811.5
:35:05	811.0	3.8	-4190.1	809.9
:35:15	807.4	0.1	-4225.2	802.7
:35:25	802.2	-0.6	-4232.8	807.1
:35:35	800.4	-0.7	-4218.2	809.5
:35:45	799.1	-1.0	-4239.6	807.5
:35:55	799.0	-1.0	-4241.1	809.0
:36:05	798.9	-1.0	-4246.9	807.9
:36:15	798.2	-1.0	-4212.1	807.8
:36:25	798.9	-1.0	-4233.2	810.0
:36:35	797.1	-1.1	-4250.4	807.5
:36:45	796.5	-1.0	-4241.9	808.5
:36:55	796.5	-1.0	-4251.0	808.7
:37:05	796.8	-1.0	-4232.1	806.4
:37:15	796.5	-1.0	-4242.6	809.9
:37:25	797.3	-1.1	-4239.6	808.4
:37:35	797.0	-1.1	-4233.9	809.9
:37:45	797.2	-1.1	-4246.1	809.3
:37:55	800.4	-1.0	-4217.8	807.7
:38:05	801.0	-0.9	-4236.5	808.4
:38:15	799.5	-1.0	-4224.8	805.2
:38:25	798.8	-1.1	-4225.8	808.7
:38:35	798.1	-1.1	-4189.2	807.8
:38:45	798.9	-1.1	-4245.0	807.8
:38:55	799.1	-1.1	-4200.1	809.2
:39:05	797.7	-1.1	-4189.0	807.0
:39:15	798.5	-1.0	-4201.3	811.3
:39:25	798.8	-1.0	-4218.9	812.6
:39:35	798.7	-1.0	-4250.2	811.9
:39:45	799.9	-1.1	-4236.7	810.2
:39:55	799.2	-1.1	-4243.8	811.4
:40:05	798.0	-1.1	-4189.2	808.7
:40:15	798.1	-1.1	-4235.7	809.4
:40:25	798.9	-1.1	-4247.4	809.8
1.=	796.7	1.2	-4030.1	877.1

796.5 808.9

TIAN CORPORATION 1490 QC

Cid Testing and Process Engineering Dept.
tinuous Emissions Monitoring Data
ERIES

formed for:
e Printed = 07-01-1992 Current time = 15:43:25
e Name = C:\CEMDATA\070192.PRN Calibration File:C:\CEMLA\[illegible]

-01-1992 me	THC1 PPM	O2 %	THC2 PPM	PPM
43:30	1493.0	-0.4	-1071.0	1520.1
43:35	1486.4	-0.3	-1142.8	1519.2
43:45	1490.3	-0.2	-1128.5	1521.1
43:55	1486.3	-0.2	-999.0	1519.3
44:05	1486.0	-0.3	-1199.3	1516.8
44:15	1484.7	-0.3	-1022.9	1514.1
44:25	1486.6	-0.2	-984.1	1516.6
44:35	1485.4	-0.4	-1221.4	1515.9
44:45	1496.9	-0.4	-1025.0	1514.1
44:55	1486.6	-0.5	-985.4	1515.7
45:05	1488.3	-0.4	-977.1	1515.1
45:15	1486.3	-0.2	-1294.9	1515.5
45:25	1484.8	-0.4	-1083.9	1515.4
45:35	1477.6	-1.1	-1003.7	1510.8
o.=	1486.4	-0.4	-1078.5	1516.4

1486.6 1516.4

LIAN CORPORATION 1030 S. BC

eld Testing and Process Engineering Dept.
ntinuous Emissions Monitoring Data
SERIES
)
rformed for:
te Printed = 07-01-1992 Current Time = 15:51:29
le Name = C:\CEMDATA\070192.PRN Calibration File:C:\CEMDATA\070IA.CAL

7-01-1992 Time	THC1 PPM	O2 %	THC2 PPM	PPM
:51:33	2035.8	10.4	-630.1	2016.6
:51:39	2018.1	1.0	-1819.7	2009.2
:51:45	2025.3	0.2	-795.2	2003.0
:51:55	2021.8	-0.3	-872.9	2007.6
:52:05	2019.2	-0.5	-1263.4	2010.0
:52:15	2018.0	-0.2	-1029.9	2014.7
:52:25	2013.7	-0.1	-1057.5	2016.9
:52:35	2015.7	-0.2	-966.7	2019.2
:52:45	2018.9	-0.3	-957.7	2022.3
:52:55	2013.6	-0.7	-949.7	2019.0
:53:05	2016.7	0.0	-1037.9	2026.8
:53:15	2013.3	-0.2	-1017.0	2025.3
:53:25	2014.7	-0.1	-887.3	2028.1
:53:35	2017.4	-0.3	-893.8	2030.2
:53:45	2016.2	0.0	-905.9	2031.4
vg.=	2018.6	0.6	-1005.6	2018.9

2117.3 2019

SIAN CORPORATION 222 ETHANOL QC

eld Testing and Process Engineering Dept.
ntinuous Emissions Monitoring Data
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rformed for:
te Printed = 07-01-1992 Current Time = 16:55:22
le Name = C:\CEMDATA\070192.PRN Calibration File:C:\CEMDATA\070101.CAL

7-01-1992	THC1	O2	THC2	
me	PPM	%	PPM	PPM
:55:26	305.2	-0.7	-5173.3	304.6
:55:2e	305.8	-0.7	-5173.3	304.e
:55:35	302.1	-1.1	-5205.9	304.0
:55:45	301.1	-1.2	-3401.5	302.2
:55:55	300.3	-1.1	-4725.1	301.4
:56:05	300.5	-1.1	-5175.5	300.7
:5e:15	300.1	-1.0	-517e.4	301.7
:56:25	309.2	-1.0	-5173.0	301.4
:56:35	299.9	-1.0	-5182.3	301.4
:56:45	299.2	-1.1	-5179.2	302.3
:56:55	299.5	-1.1	-5182.1	300.7
:57:05	301.1	-1.0	-5211.4	304.0
0.0	301.4	-1.0	-4996.3	302.5

300.0 302.0

07-02-1992 SITE 4 DAY 4

TIME	THC 1 (table) (ppmC)	THC 2 (rack) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE: (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
10:08:29	620.5727	246.1376	BUN					
10:08:39	547.3288	247.3852						
10:08:49	508.7693	235.708						
10:08:59	552.0175	233.3678						
10:09:09	585.2689	251.2953						
10:09:19	549.1914	249.5761						
10:09:29	469.0615	251.1735						
10:09:39	506.0863	232.5052						
10:09:49	538.9927	245.6525						
10:09:59	518.4122	243.6318						
10:10:09	443.7019	237.9193						
10:10:19	451.3704	232.4947						
10:10:29	499.2904	245.8182						
10:10:39	515.0322	252.6783						
10:10:49	460.908	251.5444						
10:11:07	448.5573	249.2195						
10:11:09	512.8911	251.5904						
10:11:19	521.6238	244.4812						
10:11:29	479.9561	241.4368						
10:11:39	460.3065	221.4611						
10:11:49	503.4382	221.4917						
10:11:59	540.9483	238.7615						
10:12:09	518.6556	233.1691						
10:12:19	450.7391	232.5662	370.9204389	1.378519016	6.410099769			
10:12:29	484.3081	212.2423	ETH/THC	CH4/THC	AA/THC			
10:12:39	528.2086	226.148	82.29160482	0.305835241	1.422130844			
10:12:49	512.9927	225.7792						
10:12:59	432.2051	224.7275						
10:13:09	457.5654	211.8801						
10:13:19	504.6256	219.0963						
10:13:29	511.5913	223.7953						
10:13:39	444.7374	222.2165						
10:13:49	446.5192	205.3588						
10:13:59	501.4611	210.1258						
10:14:09	524.0424	226.5193						
10:14:19	467.6699	230.6037						
10:14:29	445.4481	224.7704						
10:14:39	491.9369	217.8897						
10:14:49	519.9753	225.5794						
10:14:59	482.1003	221.106						
10:15:09	432.4682	217.2473						
10:15:19	474.7101	206.8015						
10:15:29	510.4323	224.6776						
10:15:39	496.2533	226.8267						
10:15:49	435.0056	229.5219						
10:15:59	469.201	214.8476						
10:16:09	517.6332	231.8252						
10:16:19	521.1205	236.1764						

07-02-1992 SITE 4 DAY 4

TIME	THC 1 (table) (ppmC)	THC 2 (rack) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
10:16:29	454.8972	234.4811						
10:16:39	456.5611	224.4825						
10:16:49	504.2129	234.9079						
10:16:59	526.9703	243.0572						
10:17:09	473.5385	235.7639						
10:17:19	459.7247	224.2227						
10:17:29	502.0867	220.524						
10:17:39	541.7225	228.4759						
10:17:49	512.5571	224.4646						
10:17:59	464.3138	220.3473						
10:18:09	497.9324	215.2334						
10:18:19	532.7395	237.5372						
10:18:29	518.9822	233.442						
10:18:39	455.9529	233.704						
10:18:49	474.7234	215.6656						
10:18:59	509.0706	230.7989						
10:19:09	517.5004	229.4334						
10:19:19	452.6958	230.584						
10:19:29	462.5325	221.6775						
10:19:39	508.94	222.0945						
10:19:49	522.2358	222.1556						
10:19:59	465.4729	222.454						
10:20:09	456.9375	216.6248						
10:20:19	492.928	217.9638						
10:20:29	511.8582	236.3998						
10:20:39	460.3603	238.1496						
10:20:49	406.4904	231.8085						
10:20:59	465.3418	215.8805						
10:21:09	510.0818	231.8312						
10:21:19	494.6631	230.6485				193.4104938	-1.74423363	3.104865694
10:21:29	436.6766	229.4241				ETH/THC	CH4/THC	AA/THC
10:21:39	478.1079	212.7458				83.85508417	-0.75623021	1.346146059
10:21:49	535.8989	231.593						
10:21:59	536.9091	231.8751						
10:22:09	463.8596	232.9942						
10:22:19	465.7676	215.2256						
10:22:29	514.2855	226.6392						
10:22:39	534.4888	237.8845						
10:22:49	471.8186	233.7793						
10:22:59	454.3483	225.0408						
10:23:09	495.5694	226.1023						
10:23:19	519.0809	243.9526						
10:23:29	479.8902	229.7366						
10:23:39	438.9412	227.5714						
10:23:49	472.0814	223.5847						
10:23:59	517.2936	241.5028						
10:24:09	503.4713	238.3026						
10:24:19	446.5844	237.8532						

07-02-1992 SITE 4 DAY 4

TIME	THC 1 (table) (ppmC)	THC 2 (rack) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE: (ppmV/wet) :	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
10:24:29	477.0889	220.859			:			
10:24:39	511.3199	226.2237			:			
10:24:49	509.2985	227.1427			:			
10:24:59	439.1373	215.3091			:			
10:25:09	442.4137	200.1518			:			
10:25:19	489.0515	211.5119			:			
10:25:29	505.3936	213.1344			:			
10:25:39	457.9485	218.7033			:			
10:25:49	453.1715	212.2099			:			
10:25:59	478.067	213.139			:			
10:26:09	477.0361	222.5803			:			
10:26:19	417.8037	218.438			:			
10:26:29	397.718	210.2048			:			
10:26:39	451.9037	191.2941			:			
10:26:49	471.9381	203.0394			:			
10:26:59	446.8245	203.0005			:			
10:27:09	397.4987	190.0066			:			
10:27:19	439.4134	168.7009			:			
10:27:29	454.0209	184.9157			:			
10:27:39	436.6974	188.325			:			
10:27:49	362.4596	189.8107			:			
10:27:59	377.0214	180.7875			:			
10:28:09	404.3067	186.3248			:			
10:28:19	419.228	193.1394			:			
10:28:29	378.3917	197.4026			:			
10:28:39	392.7576	198.5056			:			
10:28:49	437.5337	190.5076			:			
10:28:59	446.9857	197.8424			:			
10:29:09	447.6809	207.2452			:			
10:29:19	444.8864	201.8565			:			
10:29:29	502.9572	201.1278			:			
10:29:39	489.8253	217.6039			:			
10:29:49	492.858	206.9458			:			
10:29:59	436.1929	199.98			:			
10:30:09	503.5886	194.9635			:			
10:30:19	524.5527	208.5439			:			
10:30:29	569.2803	197.3738			:			
10:30:39	516.4788	182.6877			:			
10:30:49	568.3577	171.7741			:			
10:30:59	577.7708	176.4726			:			
10:31:09	589.1977	160.407			:			
10:31:19	503.0824	162.974			:			
10:31:29	529.8011	144.1478			:			
10:31:39	536.1791	159.6638			:			
10:31:49	551.3002	152.2938			:			
10:31:59	504.3205	156.0463			:			
10:32:09	511.7642	139.1606			:			
10:32:19	549.8734	133.3459			:			

07-02-1992 SITE 4 DAY 4

TIME	THC 1 (table) (ppmC)	THC 2 (rack) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
10:32:29	571.0005	138.7167						
10:32:39	533.4634	141.9304						
10:32:49	489.2839	126.7196						
10:32:59	550.9985	107.0996						
10:33:09	597.4117	117.0861						
10:33:19	592.4589	118.1744						
10:33:29	515.3366	114.232						
10:33:39	507.2975	89.30662						
10:33:49	528.5779	80.2738						
10:33:59	521.4813	86.98775						
10:34:09	477.5414	82.34674						
10:34:19	465.919	69.98664						
10:34:29	487.532	65.75381						
10:34:39	509.547	69.03278						
10:34:49	461.7983	69.86886						
10:34:59	424.478	61.95187						
10:35:09	448.7918	58.1618						
10:35:19	466.6419	59.04699						
10:35:29	406.6	57.67168						
10:35:39	331.4193	57.67744						
10:35:49	313.9214	52.29734						
10:35:59	318.2993	52.03872						
10:36:09	288.1044	49.71664						
10:36:19	234.5638	46.83077						
10:36:29	228.1879	44.02069						
10:36:39	233.7585	41.40533						
10:36:49	230.5224	42.25964						
10:36:59	196.4135	40.89711						
10:37:09	199.3083	40.90818						
10:37:19	219.1193	42.00397						
10:37:29	230.4894	49.24139						
10:37:39	208.3667	51.33974						
10:37:49	202.1235	56.84583						
10:37:59	224.3242	57.32778						
10:38:09	245.7546	62.5479						
10:38:19	234.5237	65.3634						
10:38:29	212.6458	62.59158						
10:38:39	228.2826	63.75301						
10:38:49	254.421	71.02516						
10:38:59	246.044	73.56297						
10:39:09	206.4166	75.50532						
10:39:19	215.5761	84.55709						
10:39:29	236.6136	113.4275						
10:39:39	240.1348	120.4588						
10:39:49	210.2627	120.8513						
10:39:59	214.1412	114.6044						
10:40:09	254.7779	130.7481						
10:40:19	284.9973	147.4561						

07-02-1992 SITE 4 DAY 4

TIME	THC 1 (table) (ppmC)	THC 2 (rack) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
10:40:29	272.2042	151.9819						
10:40:39	271.3792	140.8574						
10:40:49	312.7364	145.1422						
10:40:59	351.8941	159.3759						
10:41:09	327.8823	160.3876						
10:41:19	295.3395	161.8498						
10:41:29	325.0581	160.7123						
10:41:39	377.2368	183.8086						
10:41:49	368.8493	189.0271						
10:41:59	329.1016	185.9025						
10:42:09	356.7577	177.387						
10:42:19	410.0037	193.442						
10:42:29	420.5816	192.4059						
10:42:39	372.6355	191.6629						
10:42:49	385.3919	181.7328						
10:42:59	443.4272	192.4472						
10:43:09	475.9284	207.6975						
10:43:19	405.9337	209.3895						
10:43:29	393.5515	197.7139						
10:43:39	452.6579	201.6195						
10:43:49	478.5383	221.8995						
10:43:59	443.6186	222.1115						
10:44:09	437.1844	212.0789						
10:44:19	467.2419	211.0565						
10:44:29	483.3698	229.3299						
10:44:39	441.2042	227.9273						
10:44:49	396.4198	232.8368						
10:44:59	456.7251	214.2063						
10:45:09	483.0456	235.0412						
10:45:19	477.0211	237.1101						
10:45:29	420.6974	234.8052						
10:45:39	475.0827	217.5363						
10:45:49	516.3524	224.8714						
10:45:59	509.4602	237.8841						
10:46:09	432.1378	231.4022						
10:46:19	447.8496	220.0484						
10:46:29	497.6576	218.6983						
10:46:39	513.4833	237.4037						
10:46:49	468.027	237.4272						
10:46:59	467.8553	232.097						
10:47:09	527.424	231.4638						
10:47:19	566.1257	240.8945						
10:47:29	579.235	235.8236						
10:47:39	572.2989	231.016						
10:47:49	596.0292	221.0161						
10:47:59	592.0356	247.0562						
10:48:09	601.4202	250.0391						
10:48:19	531.8185	244.9191						

07-02-1992 SITE 4 DAY 4

TIME	THC 1 (table) (ppmC)	THC 2 (rack) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	FRONT GC RESULTS CH4 (ppmV/wet)	FRONT GC RESULTS ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	REAR GC RESULTS CH4 (ppmV/wet)	REAR GC RESULTS ACETALDEHYDE (ppmV/wet)
10:48:29	595.145	225.5508						
10:48:39	688.9677	233.8554						
10:48:49	754.6554	224.3514						
10:48:59	673.668	220.6947						
10:49:09	640.7343	192.4476						
10:49:19	687.6746	203.5911						
10:49:29	729.9478	212.5544						
10:49:39	655.9406	218.8415						
10:49:49	620.8624	201.8831						
10:49:59	661.7559	215.443						
10:50:09	707.8982	209.849						
10:50:19	686.0446	202.0335						
10:50:29	617.7857	184.513						
10:50:39	597.4312	168.5103						
10:50:49	612.6578	183.9231						
10:50:59	571.0134	176.0775						
10:51:09	466.1338	158.9424						
10:51:19	458.8455	124.2948						
10:51:29	476.1204	133.9794						
10:51:39	458.5783	134.1544						
10:51:49	387.6526	133.3296						
10:51:59	364.3259	117.247						
10:52:09	360.1178	110.0995						
10:52:19	358.8487	115.1492						
10:52:29	310.2075	116.2471						
10:52:39	297.5599	112.2125						
10:52:49	321.5484	108.5339						
10:52:59	340.0925	115.5904						
10:53:09	325.163	123.1603						
10:53:19	298.5464	119.6819						
10:53:29	326.5341	122.7931						
10:53:39	328.761	135.0806						
10:53:49	313.3295	133.361						
10:53:59	264.8802	133.5695						
10:54:09	291.3426	125.9332						
10:54:19	316.3527	128.6168						
10:54:29	331.003	123.1575						
10:54:39	320.7821	130.9688						
10:54:49	339.5308	123.8005						
10:54:59	315.3971	134.0581						
10:55:09	330.8883	142.0102						
10:55:19	339.1143	136.6708						
10:55:29	375.3505	132.7998						
10:55:39	443.8331	145.3024						
10:55:49	500.5015	150.455						
10:55:59	493.7643	148.3964						
10:56:09	459.5455	149.3309						
10:56:19	460.5844	151.0895						

07-02-1992 SITE 4 DAY 4

TIME	THC 1 (table) (ppmC)	THC 2 (rack) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE: (ppmV/wet) :	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
10:56:29	509.6351	164.5018			:			
10:56:39	509.6402	157.9144			:			
10:56:49	438.3219	151.2394			:			
10:56:59	446.021	135.9356			:			
10:57:09	520.4604	156.7704			:			
10:57:19	574.621	150.655			:			
10:57:29	501.6814	146.6377			:			
10:57:39	431.6901	143.372			:			
10:57:49	432.3619	150.4427			:			
10:57:59	425.9551	139.1992			:			
10:58:09	355.2055	138.8683			:			
10:58:19	326.6494	123.8558			:			
10:58:29	354.8688	123.2374			:			
10:58:39	369.8237	123.3677			:			
10:58:49	335.2132	138.9866			:			
10:58:59	295.7887	121.8262			:			
10:59:09	323.1595	104.7994			:			
10:59:19	355.1702	111.8398			:			
10:59:29	343.8783	113.2086			:			
10:59:39	296.1374	103.7389			:			
10:59:49	317.1559	86.81169			:			
10:59:59	352.9851	99.91036			:			
11:00:09	350.5811	115.8346			:			
11:00:19	306.283	118.3626			:			
11:00:29	320.5011	119.7555			:			
11:00:39	357.7357	124.3429			:			
11:00:49	363.5944	128.2308			:			
11:00:59	323.3406	132.089			:			
11:01:09	322.076	135.9097			:			
11:01:19	360.7729	138.9162			:			
11:01:29	381.7368	134.8417			:			
11:01:39	351.0782	134.5544			:			
11:01:49	323.8972	138.6819			:			
11:01:59	353.0322	139.4359			:			
11:02:09	374.2423	152.6494			:			
11:02:19	360.3104	164.6335			:			
11:02:29	323.9511	159.3282			:			
11:02:39	337.0735	153.6376			:			
11:02:49	368.4159	161.4011			:			
11:02:59	374.3998	164.7726			:			
11:03:09	337.5219	162.7458			:			
11:03:19	340.1855	155.876			:			
11:03:29	369.601	177.3032			:			
11:03:39	384.8374	175.8283			:			
11:03:49	349.3196	177.272			:			
11:03:59	338.1833	171.8773			:			
11:04:09	378.7561	186.5656			:			
11:04:19	419.9762	198.9681			:			

07-02-1992 SITE 4 DAY 4

TIME	THC 1 (table) (ppmC)	THC 2 (rack) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
11:04:29	393.9614	191.076						
11:04:39	362.4238	184.4012						
11:04:49	409.8555	186.4461						
11:04:59	468.7511	209.7296						
11:05:09	464.0727	204.3416						
11:05:19	408.5927	190.529						
11:05:29	433.3404	181.0498						
11:05:39	483.0877	200.8637						
11:05:49	478.0379	203.7494						
11:05:59	403.7201	208.6617						
11:06:09	420.6438	205.4529						
11:06:19	469.4691	219.8648						
11:06:29	489.4196	223.6014						
11:06:39	432.3286	228.9737						
11:06:49	437.6724	217.0377						
11:06:59	493.0632	227.1958						
11:07:09	531.5027	242.2991						
11:07:19	477.62	240.0186						
11:07:29	456.8631	233.6536						
11:07:39	502.0954	227.9073						
11:07:49	543.5107	249.6008						
11:07:59	511.5135	245.6929						
11:08:09	457.8481	236.642						
11:08:19	501.1343	227.7104						
11:08:29	553.8904	247.5954						
11:08:39	542.1498	251.1633						
11:08:49	476.7248	252.325						
11:08:59	509.1223	233.6324						
11:09:09	569.2111	258.2354						
11:09:19	574.4592	261.8479						
11:09:29	487.5272	254.3884						
11:09:39	501.0081	247.1985						
11:09:49	564.705	247.9032						
11:09:59	580.3162	256.5537						
11:10:09	527.3683	250.4592						
11:10:19	511.2841	243.1132						
11:10:29	567.041	240.2127						
11:10:39	596.3716	262.0983						
11:10:49	557.1585	260.2973						
11:10:59	505.4779	252.8986						
11:11:09	541.1503	239.5926						
11:11:19	582.1855	266.0267						
11:11:29	573.871	263.7548						
11:11:39	501.2629	254.1644						
11:11:49	534.0516	240.3758						
11:11:59	590.7189	258.9889	END					
AVG			209.7118868	91.34697552				

07-02-1992 SITE 4 DAY 4

TIME	THC 1 (table) (ppmC)	THC 2 (rack) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	FRONT GC RESULTS CH4 (ppmV/wet)	FRONT GC RESULTS ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	REAR GC RESULTS CH4 (ppmV/wet)	REAR GC RESULTS ACETALDEHYDE (ppmV/wet)
11:12:09			598.3441	261.9875				
11:12:19			519.6852	257.4158				
11:12:29			438.6472	327.0219				
11:12:39			289.0957	318.3655				
11:12:49			284.4333	301.9994				
11:12:59			288.9842	303.3762				
11:13:09			295.0262	303.5038				
11:13:19			296.3202	309.407				
11:13:36			300.4453	310.731				
11:13:39			307.1495	304.7439				
11:13:49			301.3328	311.1403				
11:13:59			304.5531	307.5611				
11:14:09			305.6089	304.9234				
			304.661075	307.092175				
11:14:19			306.0369	308.2812				
11:14:29			306.9691	309.1529				
11:14:39			324.5488	298.2856				
11:14:49			253.5964	266.3147				
11:14:59			214.0364	193.3536				
11:15:09			213.1866	188.3161				
11:15:19			208.0251	193.5933				
11:15:29			205.5827	192.4651				
11:15:39			206.2637	191.3811				
11:15:49			207.0945	190.8318				
11:15:59			207.1678	190.4173				
			206.82676	191.73772				
11:16:09			206.1812	191.6069				
11:16:19			206.528	191.2094				
11:16:29			207.5835	190.3167				
11:16:39			421.596	203.1318				
11:16:49			540.0157	241.9029				
11:16:59			1631.464	1218.836				
11:17:09			1944.173	1987.175				

07-02-1992 SITE 4 DAY 4

TIME	THC 1 (table) (ppmC)	THC 2 (rack) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
11:17:24			2012.131	2027.726				
11:17:29			2027.95	2045.57				
11:17:39			2025.367	2052.097				
11:17:49			2033.695	2051.212				
11:17:59			2039.839	2045.76				
11:18:09			2039.817	2043.16				
11:18:19			2041.172	2047.185				
			2034.64	2047.497333				
11:18:29			2040.136	2046.355				
11:18:39			2039.689	2049.154				
11:18:49			1632.544	1963.405				
11:18:59			690.0452	366.7165				
11:19:09			667.7263	269.7082				
11:19:19			575.9659	256.262				
11:19:29			533.1001	257.8967				
11:19:39			602.3428	251.9171				
11:19:49			655.8634	263.2296				
11:19:59			985.465	1073.336				
11:20:09			115.3036	182.8753				
11:20:19			49.76864	27.03181				
11:20:29			31.76793	14.995				
11:20:39			19.7675	5.92184				
11:20:49			15.81542	3.554765				
11:20:59			16.96551	3.098092				
11:21:09			12.37899	4.764507				
11:21:19			11.76839	1.986157				
11:21:29			12.46167	3.810305				
11:21:39			10.56196	4.535247				
11:21:49			9.783731	3.89597				
11:21:59			6.683145	2.41853				
11:22:09			9.569	-0.991837				
11:22:19			6.606087	1.245973				
11:22:29			4.893378	1.980641				
11:22:39			6.248443	-1.951659				
11:22:49			3.977091	2.097688				
11:22:59			4.99393	-1.48214				
11:23:09			3.929949	-1.313746				
11:23:19			5.170986	-0.8702525				
11:23:29			8.461664	-0.2992851				
11:23:39			8.064414	-2.206037				
11:23:49			4.325894	-1.87868				
11:23:59			4.757223	0.2302769				
11:24:09			6.681722	-0.8893775				
11:24:19			4.597189	-1.479379				
11:24:29			7.562408	0.4617843				
11:24:39			101.7839	3.993817				

07-02-1992 SITE 4 DAY 4

TIME	THC 1 (table) (ppmC)	THC 2 (rack) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	FRONT GC RESULTS CH4 (ppmV/wet)	FRONT GC RESULTS ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	REAR GC RESULTS CH4 (ppmV/wet)	REAR GC RESULTS ACETALDEHYDE (ppmV/wet)
11:24:49			254.8927	175.8956				
11:24:59			303.3402	295.2973				
11:25:09			307.2434	300.5267				
11:25:19			308.6808	301.6463				
11:25:34			310.4953	303.2266				
11:25:39			312.3292	301.397				
11:25:49			312.7058	304.1328				
11:25:59			312.494	303.3404				
11:26:09			312.2301	304.0605				
11:26:19			313.8909	304.148				
11:26:29			312.889	304.632				
11:26:39			312.7625	304.6585				
11:26:49			313.8386	305.3051				
11:26:59			314.1939	305.8939				
11:27:09			312.846	303.4531				
11:27:19			312.4442	306.1093				
11:27:29			416.7706	303.8493				
11:27:39			606.1734	277.8828				
11:27:49			534.3265	261.7156				
11:27:59			539.671	249.7472				
11:28:09			614.0421	247.3233				
11:28:19			642.7303	267.6095				
11:28:29			571.5758	258.4013				
11:28:39			514.5071	256.4086				
11:28:49			567.0479	252.2895				
11:28:59			620.0678	269.471				
11:29:09			578.499	261.3383				
11:29:19			491.546	257.7195				
11:29:29			523.6924	241.25				
11:29:39			596.2073	252.7895				
11:29:49			609.28	247.956				
11:29:59			493.1328	238.586				
11:30:09			510.449	215.7963				
11:30:19			568.1027	230.253				
11:30:29			599.5142	233.6516				
11:30:39			515.274	232.6252				
11:30:49			496.996	221.4198				
11:30:59			558.1273	227.962				
11:31:09			585.8443	236.3709				
11:31:19			539.3086	224.3202				
11:31:29			484.0756	220.8977				
11:31:39			537.9074	197.9979				
11:31:49			594.3472	210.2783				
11:31:59			580.9663	208.2336				
11:32:09			493.3614	205.6402				
11:32:19			510.8239	187.5677				
11:32:29			556.9797	211.178				
11:32:39			549.0866	221.893				

07-02-1992 SITE 4 DAY 4

TIME	THC 1 (table) (ppmC)	THC 2 (rack) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
11:32:49			455.3027	224.821				
11:32:59			467.2272	220.7584				
11:33:09			513.1663	225.6649				
11:33:19			538.2157	230.1956				
11:33:29			386.7494	236.7048				
11:33:39			79.7578	35.3468				
11:33:49			46.9974	2.091089				
11:33:59			33.82274	2.844929				
11:34:09			27.61836	0.376337				
11:34:19			21.86629	-0.8778713				
11:34:29			23.37769	0.8250336				
11:34:39			19.33589	0.4350152				
11:34:49			21.3772	1.777271				
11:34:59			20.69923	-0.2518973				
11:35:17			20.70323	2.250944				
11:35:19			20.22144	-0.6627936				
11:35:29			19.63337	0.09622433				
11:35:39			16.0192	0.3400753				
11:35:49			19.75653	-2.282633				
11:35:59			17.45951	4.980581				
11:36:09			118.0075	2.227591				
11:36:19			144.0383	-1.667017				
11:36:29			135.1803	-1.711469				
11:36:39			129.5495	-3.270452				
11:36:49			115.9487	-6.447883				
11:36:59			117.5216	-4.384162				
11:37:09			116.5806	-5.217726				
11:37:19			117.4441	-7.607577				
11:37:29			115.854	-11.31811				
11:37:39			116.2711	-12.64785				
11:37:49			117.3301	-12.75624				
11:37:59			122.9305	-10.9994				
11:38:09			123.4735	-11.46359				
11:38:19			128.0499	-10.08136				
11:38:29			129.5204	-10.00851				
11:38:39			131.2064	-8.64524				
11:38:49			130.6126	-9.865517				
11:38:59			132.0025	-10.09118				
11:39:09			136.1321	-10.98284				
11:39:19			138.5885	-10.06277				
11:39:29			138.2658	-9.991965				
11:39:39			135.7686	-11.43338				
11:39:49			138.5595	-10.75978				
11:39:59			142.0876	-12.43962				
11:40:09			142.9593	-10.77612				
11:40:19			141.4599	-11.90618				
11:40:29			143.6987	-12.70769				
11:40:39			292.4979	-10.26799				

07-02-1992 SITE 4 DAY 4

TIME	THC 1 (table) (ppmC)	THC 2 (rack) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE: (ppmV/wet) :	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
11:40:49			3740.163	1451.779	:			
11:40:59			349.3478	2371.591	:			
11:41:09			28.44548	2424.591	:			
11:41:19			527.9518	384.2533	:			
11:41:29			449.1183	1672.599	:			
11:41:39			212.4335	2382.976	:			
11:41:49			142.7345	2431.175	:			
11:41:59			158.2473	2385.476	:			
11:42:09			163.5894	2223.132	:			
11:42:22			156.137	2175.846	:			
11:42:29			158.2036	2466.177	:			
11:42:39			2042.626	2435.301	:			
11:42:49			4718.59	2404.637	:			
11:42:59			4946.707	2311.379	:			
11:43:09			983.1601	417.1311	:			
11:43:19			460.421	58.34553	:			
11:43:29			338.698	32.71424	:			
11:43:39			270.0122	15.38275	:			
11:43:49			223.111	8.699677	:			
11:43:59			200.3958	5.74385	:			
11:44:09			175.3504	2.467531	:			
11:44:19			151.9471	0.4965774	:			
11:44:29			142.0609	-1.546931	:			
11:44:39			138.7029	-1.913267	:			
11:44:49			133.8682	-3.413485	:			
11:44:59			129.1867	-3.805364	:			
11:45:09			38.13798	-8.09398	:			
11:45:19			-3.307854	-4.17825	:			
					:			
			new thc range		:			
11:50:30	266.3892	477.5056			:			
					:			
					:			
					:			
11:50:43			211.7553	207.263	:			
11:50:50			203.0287	197.2746	:			
11:51:00			200.8517	195.1953	:			
11:51:10			199.3272	193.5622	:			
11:51:20			198.3714	192.5513	:			
11:51:30			198.1573	192.0345	:			
11:51:40			197.7687	191.3739	:			
			199.5841666	193.6653	:			
					:			
					:			
11:51:50			197.6112	191.0672	:			
11:52:00			285.7444	191.2264	:			
11:52:10			522.5693	218.6098	:			
11:52:20			381.1895	246.1305	:			

07-02-1992 SITE 4 DAY 4

TIME	THC 1 (table) (ppmC)	THC 2 (rack) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
11:52:30			99.01728	126.0622				
11:52:40			83.2109	80.23632				
11:52:50			78.98268	77.98554				
11:53:00			77.53345	77.03599				
11:53:15			77.21227	76.62738				
11:53:20			76.3838	76.53416				
11:53:30			76.56223	76.21323				
11:53:40			76.51279	76.11224				
11:53:50			76.37572	76.01295				
11:54:00			76.18788	76.04218				
11:54:10			76.30544	75.80667				
11:54:20			76.36138	75.76906				
11:54:30			110.9421	78.03999				
11:54:40			4.620418	14.19403				
11:54:50			-0.5730205	0.6979054				
11:55:00			-3.238791	-0.420344				
11:55:18			-0.544715	-0.8566887				
11:55:20			-3.448644	-0.9142466				
11:55:30			-3.181338	-0.7802402				
11:55:40			-3.382283	-0.9166932				
11:55:50			-3.604002	-1.592069				
11:56:00			6.165037	-1.414266				
11:56:10			190.6157	90.03411				
11:56:24			284.1515	278.9166				
11:56:30			296.52	297.3421				
11:56:40			298.4652	299.0532				
11:56:50			298.4615	300.4179				
			297.8155666	298.9377333				
11:57:00			299.1458	301.1269				
11:57:10			299.6281	301.6547				
11:57:20			299.4156	300.4993				
11:57:30			417.8733	248.8371				
11:57:40			436.0634	229.9864				
11:57:50			478.6421	228.032				
			FRONT	REAR				
11:58:00	476.0023	243.5946	TRANSIENT					
11:58:10	427.5888	242.1308						
11:58:20	414.0981	234.7273						
11:58:30	462.3889	222.0162						
11:58:40	465.7177	235.6044						
11:58:50	449.2055	233.6127						

07-02-1992 SITE 4 DAY 4

TIME	THC 1 (table) (ppmC)	THC 2 (rack) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE: (ppmV/wet) :	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
11:59:00	405.041	227.7966			:			
11:59:10	492.0566	211.9325			:			
11:59:20	503.6047	228.2411			:			
11:59:30	526.8871	235.0204			:			
11:59:40	496.5188	234.6085			:			
11:59:50	585.6572	226.4133			:			
12:00:00	612.9745	226.9632			:			
12:00:10	624.9094	228.4503			:			
12:00:20	558.4903	217.3555			:			
12:00:30	588.92	203.0274			:			
12:00:40	589.0621	206.2042			:			
12:00:50	581.4874	217.7288			:			
12:01:00	548.9326	213.7822			:			
12:01:10	538.2045	209.6479			:			
12:01:20	551.8875	203.745			:			
12:01:30	555.2004	211.3813			:			
12:01:40	562.4211	200.6697			:			
12:01:50	534.1774	196.9463			:			
12:02:00	590.7388	166.0403			:			
12:02:10	576.8517	179.3545			:			
12:02:20	587.1726	175.647			:			
12:02:30	535.1426	165.8289			:			
12:02:40	556.1659	132.1668			:			
12:02:50	619.1153	135.8846			:			
12:03:00	626.6316	134.9499			:			
12:03:10	545.9747	129.9469			:			
12:03:20	509.331	115.5533			:			
12:03:30	540.4681	103.5026			:			
12:03:40	548.2902	109.5976			:			
12:03:50	498.3923	111.2586			:			
12:04:00	459.9022	101.8871			:			
12:04:10	482.7411	94.36511			:			
12:04:20	506.8897	96.72592			:			
12:04:30	490.6916	100.1722			:			
12:04:40	431.2987	91.54425			:			
12:04:50	441.0277	86.61253			:			
12:05:00	463.4101	86.52741			:			
12:05:10	414.9154	83.61288			:			
12:05:20	314.8163	78.76976			:			
12:05:30	310.1589	75.63544			:			
12:05:40	319.2852	75.18166			:			
12:05:50	299.6364	71.20387			:			
12:06:00	242.2987	65.47104			:			
12:06:10	223.313	57.0825			:			
12:06:20	236.0056	50.94453			:			
12:06:30	237.882	49.40144			:			
12:06:40	209.5701	47.51298			:			
12:06:50	199.6661	45.10715			:			

07-02-1992 SITE 4 DAY 4

TIME	THC 1 (table) (ppmC)	THC 2 (rack) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
12:07:00	220.6674	43.80993						
12:07:10	228.7118	49.123						
12:07:20	212.3572	55.04972						
12:07:30	200.4357	59.37964						
12:07:40	222.9151	57.42023						
12:07:50	242.4815	61.47574						
12:08:00	231.7784	73.51984						
12:08:10	211.0609	75.16502						
12:08:20	229.3786	71.55757						
12:08:30	264.6061	70.63385						
12:08:40	260.4719	74.26958						
12:08:50	221.9406	72.06314						
12:09:00	219.7298	78.09082						
12:09:10	244.8773	103.2873						
12:09:20	252.9402	119.1799						
12:09:30	232.5289	122.4448						
12:09:40	232.6602	112.3765						
12:09:50	277.1439	125.2316						
12:10:00	315.5181	145.0032						
12:10:10	297.6125	149.7952						
12:10:20	274.6288	149.8992						
12:10:30	296.9159	154.1261						
12:10:40	340.679	177.8507						
12:10:50	341.8245	172.6899						
12:11:00	326.4395	169.9077						
12:11:10	341.1839	160.5391						
12:11:20	359.4407	182.6704						
12:11:30	362.7426	192.7451						
12:11:40	307.4571	191.0004						
12:11:50	332.9917	177.2578						
12:12:00	404.3936	194.6817						
12:12:10	444.8084	193.081						
12:12:20	404.2628	191.9454						
12:12:30	395.3254	172.5156						
12:12:40	449.3843	180.1387						
12:12:50	476.1383	198.0519						
12:13:00	424.2239	204.3163						
12:13:10	366.539	215.7756						
12:13:20	407.9691	209.796						
12:13:30	457.5252	224.4226						
12:13:40	455.0708	231.7735						
12:13:50	422.4195	228.5381						
12:14:00	479.0597	218.7919						
12:14:10	547.0306	242.584						
12:14:20	552.5981	246.1435						
12:14:30	479.312	248.0625						
12:14:40	508.6725	235.6797						
12:14:50	585.4351	247.7924						

07-02-1992 SITE 4 DAY 4

TIME	THC 1 (table) (ppmC)	THC 2 (rack) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE: (ppmV/wet)	:	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
12:15:00	605.8556	249.3949				:			
12:15:10	527.2265	249.935				:			
12:15:20	506.9057	235.4141				:			
12:15:30	564.4519	230.8027				:			
12:15:40	587.1522	239.7375				:			
12:15:50	526.7277	241.0707				:			
12:16:00	482.12	229.35				:			
12:16:10	528.8196	222.4368				:			
12:16:20	572.6646	237.8413				:			
12:16:30	538.2518	231.418				:			
12:16:40	467.2462	241.9644				:			
12:16:50	501.7116	229.0806				:			
12:17:00	541.4515	251.8481				:			
12:17:10	522.0673	249.7746				:			
12:17:20	453.2385	251.416				:			
12:17:30	489.6689	237.6012				:			
12:17:40	536.9819	237.607				:			
12:17:50	544.2147	234.3504				:			
12:18:00	492.5418	221.595				:			
12:18:10	488.2442	199.8305				:			
12:18:20	507.2828	197.2443				:			
12:18:30	497.6476	219.8984				:			
12:18:40	423.9063	219.4295				:			
12:18:50	387.4087	212.6047				:			
12:19:00	432.3102	215.5037				:			
12:19:10	443.1144	227.5739				:			
12:19:20	412.7862	228.3853				:			
12:19:30	379.5081	229.3532				:			
12:19:40	440.4962	219.9092				:			
12:19:50	466.7244	236.2103				:			
12:20:00	436.3658	241.1366				:			
12:20:10	383.6592	238.4313				:			
12:20:20	433.4217	231.3856				:			
12:20:30	466.2944	243.7012				:			
12:20:40	469.2898	251.9948				:			
12:20:50	418.0279	240.4823				:			
12:21:00	444.923	215.2824				:			
12:21:10	481.0077	212.8916				:			
12:21:20	504.476	229.1319				:			
12:21:30	515.6786	225.0902				:			
12:21:40	521.6184	204.2088				:			
12:21:50	554.5555	199.489				:			
12:22:00	552.0229	221.4483				:	157	5.75	6.56
12:22:10	564.8423	224.265				:	ETH/THC	CH4/THC	AA/THC
12:22:20	542.1951	228.3174				:	70.89690912	2.59654285	2.962316712
12:22:30	589.6313	222.8385				:			
12:22:40	586.6344	231.2042				:			
12:22:50	582.0772	223.0486				:			

07-02-1992 SITE 4 DAY 4

TIME	THC 1 (table) (ppmC)	THC 2 (rack) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	FRONT GC RESULTS CH4 (ppmV/wet)	FRONT GC RESULTS ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	REAR GC RESULTS CH4 (ppmV/wet)	REAR GC RESULTS ACETALDEHYDE (ppmV/wet)
12:23:00	536.5052	215.8085						
12:23:10	603.7718	197.5329						
12:23:20	615.3514	219.231						
12:23:30	633.0044	218.0189						
12:23:40	565.9132	213.5733						
12:23:50	585.5545	201.6749						
12:24:00	650.8965	212.1441						
12:24:10	692.8056	208.3259						
12:24:20	643.3099	204.6194						
12:24:30	606.2189	189.0161						
12:24:40	632.3785	175.0212						
12:24:50	673.7668	187.328						
12:25:00	646.1451	181.9246						
12:25:10	587.7892	161.6753						
12:25:20	598.4726	131.4246						
12:25:30	635.7708	144.1189						
12:25:40	628.0165	143.6917						
12:25:50	554.8851	135.7759						
12:26:00	531.9167	117.851						
12:26:10	552.9597	112.9712						
12:26:20	554.9993	119.1161						
12:26:30	463.9176	114.8863						
12:26:40	404.3683	106.1675						
12:26:50	398.2937	101.7538						
12:27:00	380.1473	107.0006						
12:27:10	309.7313	107.1206						
12:27:20	290.4984	98.19819						
12:27:30	305.9793	94.51419						
12:27:40	309.9946	92.67786						
12:27:50	274.6765	90.5746						
12:28:00	260.8429	89.86609						
12:28:10	290.2067	89.59641						
12:28:20	306.7761	95.634						
12:28:30	291.7078	93.5303						
12:28:40	258.5244	87.82063						
12:28:50	276.3631	88.13326						
12:29:00	296.7419	90.15741						
12:29:10	289.108	94.99606						
12:29:20	247.6863	95.23806						
12:29:30	244.9017	92.3685						
12:29:40	262.8995	95.80862						
12:29:50	259.5857	95.46275						
12:30:00	231.8089	94.45866						
12:30:10	220.8676	99.57137						
12:30:20	242.6304	113.1987						
12:30:30	257.0228	123.8637						
12:30:40	228.367	129.5594	170	19.4	10.9			
12:30:50	203.1659	125.0527	ETH/THC	CH4/THC	AA/THC			

07-02-1992 SITE 4 DAY 4

TIME	THC 1 (table) (ppmC)	THC 2 (rack) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
12:31:00	229.6956	124.6768	74.44157868	8.495097803	4.773018868			
12:31:10	268.8592	138.5468						
12:31:20	264.2661	136.4344						
12:31:30	240.2105	139.6763						
12:31:40	259.6906	135.1741						
12:31:50	301.1855	147.0089						
12:32:00	303.4653	152.5022						
12:32:10	271.1272	154.7563						
12:32:20	283.1341	147.2926						
12:32:30	329.9032	165.399						
12:32:40	354.8809	166.6918						
12:32:50	317.4452	164.2454						
12:33:00	325.4278	156.485						
12:33:10	365.0261	174.6716						
12:33:20	392.0822	180.4778						
12:33:30	367.7645	173.8477						
12:33:40	354.11	166.8103						
12:33:50	374.2467	170.7398						
12:34:00	398.4091	189.6866						
12:34:10	363.9953	194.4889						
12:34:20	305.4021	195.9085						
12:34:30	380.814	195.7879						
12:34:40	416.1536	217.9188						
12:34:50	417.4504	217.8167						
12:35:00	377.7442	218.9217						
12:35:10	432.0759	206.4884						
12:35:20	492.585	220.8166						
12:35:30	517.0533	225.4136						
12:35:40	443.072	226.0904						
12:35:50	444.5607	211.6891						
			FRONT	REAR				
12:36:00	497.3083	218.2825						
12:36:10	526.6717	233.9678						
12:36:20	490.9177	229.5458						
12:36:30	479.8383	219.2304						
12:36:40	536.251	214.3561						
12:36:50	557.7684	235.12						
12:37:00	515.9059	226.6579						
12:37:10	470.8287	224.5087						
12:37:20	519.1496	213.9819						
12:37:30	564.5611	237.0993						
12:37:40	547.4745	234.8705						
12:37:50	483.7693	232.9912						
12:38:00	505.5149	221.1802						
12:38:10	545.7322	236.4585						

07-02-1992 SITE 4 DAY 4

TIME	THC 1 (table) (ppmC)	THC 2 (rack) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
12:38:20	527.399	226.6476						
12:38:30	447.7844	219.8982						
12:38:40	483.8435	202.3962						
12:38:50	526.6648	215.848						
12:39:00	538.2798	226.6317						
12:39:10	459.3615	227.5472						
12:39:20	455.5262	227.5965						
12:39:30	503.9601	229.1768						
12:39:40	513.8184	245.6975						
12:39:50	442.7277	235.2881						
12:40:00	434.0227	229.0314						
12:40:10	487.1213	201.9047						
12:40:20	527.8538	212.6079						
12:40:30	519.1777	208.3179						
12:40:40	453.8209	203.0067						
12:40:50	487.1541	183.0781						
12:41:00	520.0576	205.1823	402	15	19			
12:41:10	501.7269	217.7636	ETH/THC	CH4/THC	AA/THC			
12:41:20	412.6729	208.729	77.29912994	2.884295893	3.653441464			
12:41:30	442.1575	199.4478						
12:41:40	486.488	204.8604						
12:41:50	483.9133	220.227						
12:42:00	420.1564	225.863						
12:42:10	425.8738	218.0464						
12:42:20	476.0761	215.8418						
12:42:30	490.1459	231.6051						
12:42:40	438.4972	232.0879						
12:42:50	415.9542	239.8962						
12:43:00	456.9307	230.1755						
12:43:10	477.8284	247.0745						
12:43:20	449.0797	245.1682						
12:43:30	398.8033	249.7753						
12:43:40	443.3194	232.8006						
12:43:50	487.3933	244.45						
12:44:00	488.8316	245.2429						
12:44:10	441.6451	233.0558						
12:44:20	467.7546	209.8307						
12:44:30	502.9092	216.7215						
12:44:40	524.4181	226.8611						
12:44:50	426.1721	228.9877						
12:45:00	430.4909	225.1288						
12:45:10	472.0373	222.7319						
12:45:20	485.1026	241.425						
12:45:30	433.4473	238.39						
12:45:40	419.9793	234.4353						
12:45:50	481.2079	226.8411						
12:46:00	525.8821	250.5829						
12:46:10	494.3533	251.6146						

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TIME	THC 1 (table) (ppmC)	THC 2 (rack) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE: (ppmV/wet)	:	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
12:46:20	440.7773	247.7706				:			
12:46:30	499.1122	218.9316				:			
12:46:40	536.5766	233.2145				:			
12:46:50	515.4768	240.0663				:			
12:47:00	447.0756	237.6462				:			
12:47:10	482.5624	220.826				:			
12:47:20	530.8745	230.0869				:			
12:47:30	531.9518	243.0734				:			
12:47:40	467.7791	244.9602				:			
12:47:50	475.568	231.1567				:			
12:48:00	515.7776	227.5737				:			
12:48:10	522.8804	252.3069				:			
12:48:20	457.4168	250.9889				:			
12:48:30	442.7175	250.7452				:			
12:48:40	502.9073	245.6285				:			
12:48:50	509.5644	257.3495				:			
12:49:00	467.5269	245.808				:			
12:49:10	428.3786	247.114				:			
12:49:20	480.1566	226.548				:			
12:49:30	520.0291	249.0186				:			
12:49:40	502.1852	252.7341				:			
12:49:50	439.3963	265.9756				:			
12:50:00	467.1809	246.517				:			
12:50:10	494.7839	248.8615				:			
12:50:20	511.0537	255.014				:			
12:50:30	463.758	255.324				:			
12:50:40	470.3114	243.6717				:			
12:50:50	519.7922	245.9482				:			
12:51:00	544.0319	257.179		388	14.9	17.8 :			
12:51:10	484.3035	249.5796		ETH/THC	CH4/THC	AA/THC :			
12:51:20	467.5331	247.6017		71.31934726	2.738809985	3.271866962 :			
12:51:30	511.9267	235.9579				:			
12:51:40	534.188	258.477				:			
12:51:50	494.0468	252.1034				:			
12:52:00	457.2602	247.0355				:			
12:52:10	495.9371	230.1765				:			
12:52:20	531.2737	248.2432				:			
12:52:30	516.0397	249.1739				:			
12:52:40	459.6113	249.9945				:			
12:52:50	491.8793	232.4707				:			
12:53:00	530.6174	247.7641				:			
12:53:10	529.8979	259.6957				:			
12:53:20	448.9706	260.2454				:			
12:53:30	464.4614	252.8454				:			
12:53:40	510.9811	256.3626				:			
12:53:50	517.0982	258.1549				:			
12:54:00	455.9722	250.1415				:			
12:54:10	452.4882	249.5764				:			

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TIME	THC 1 (table) (ppmC)	THC 2 (rack) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
12:54:20	508.3078	238.8613						
12:54:30	526.7986	257.2171						
12:54:40	476.1515	255.1032						
12:54:50	442.7115	259.8547						
12:55:00	484.2021	241.8408						
12:55:10	516.9157	263.0851						
12:55:20	497.8073	260.1879						
12:55:30	437.2104	252.4307						
12:55:40	477.7353	240.0637						
12:55:50	526.4066	255.6362						
12:56:00	530.6499	258.8737						
12:56:10	459.8768	252.0054						
12:56:20	478.8865	241.2303						
12:56:30	533.8143	245.5753						
12:56:40	548.5881	256.5485						
12:56:50	471.1541	248.9673						
12:57:00	471.8708	234.7453						
12:57:10	529.1412	227.6854						
12:57:20	552.9627	245.4409						
12:57:30	491.9907	243.2206						
12:57:40	450.2976	240.1833						
12:57:50	503.6663	226.8179						
12:58:00	539.6646	246.3092						
12:58:10	510.5932	239.9388						
12:58:20	450.4598	246.148						
12:58:30	503.5556	233.6329						
12:58:40	534.8987	248.8978						
12:58:50	522.6094	247.138						
12:59:00	454.7865	249.1026						
12:59:10	485.3696	237.2915						
12:59:20	544.3685	242.2716						
12:59:30	551.7618	254.1634						
12:59:40	478.0363	254.1718						
12:59:50	477.3913	243.5312						
13:00:00	524.9406	240.7865				167	6.5	6.02
13:00:10	554.6287	257.7281				ETH/THC	CH4/THC	AA/THC
13:00:20	518.1221	250.4016				69.35604778	2.699486889	2.500140165
13:00:30	493.0103	237.0764						
13:00:40	547.8333	231.6663						
13:00:50	578.1827	245.8452						
13:01:00	546.5922	240.5824						
13:01:10	483.9709	239.3574						
13:01:20	529.3966	224.9275						
13:01:30	570.6517	243.576						
13:01:40	555.23	249.9088						
13:01:50	471.4459	250.7645						
13:02:00	501.8568	237.116						
13:02:10	544.2166	242.7509						

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TIME	THC 1 (table) (ppmC)	THC 2 (rack) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE: (ppmV/wet)	:	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
13:02:20	543.5267	246.8547				:			
13:02:30	467.169	245.0621				:			
13:02:40	466.8108	233.0634				:			
13:02:50	517.298	231.8752				:			
13:03:00	532.8627	251.7662				:			
13:03:10	477.5185	249.4721				:			
13:03:20	451.364	246.6607				:			
13:03:30	501.3	237.9152				:			
13:03:40	521.6685	253.1357				:			
13:03:50	486.2436	245.3746				:			
13:04:00	426.2657	242.5229				:			
13:04:10	483.2621	231.6324				:			
13:04:20	523.8173	247.6191				:			
13:04:30	507.7545	246.7506				:			
13:04:40	441.0678	257.6283				:			
13:04:50	476.3338	235.9484				:			
13:05:00	515.7433	247.8992				:			
13:05:10	511.7781	245.4064				:			
13:05:20	450.3074	243.3709				:			
13:05:30	460.3547	236.5945				:			
13:05:40	518.2928	237.4592				:			
13:05:50	536.602	252.4344				:			
13:06:00	482.9556	247.3472				:			
13:06:10	459.8663	240.7125				:			
13:06:20	523.277	231.5915				:			
13:06:30	546.7925	245.2413				:			
13:06:40	506.7974	244.8767				:			
13:06:50	460.0845	243.4669				:			
13:07:00	508.3178	225.9404				:			
13:07:10	551.0749	234.9088				:			
13:07:20	527.4158	234.9409				:			
13:07:30	443.5086	235.7996				:			
13:07:40	479.3005	227.986				:			
13:07:50	526.4695	239.1293				:			
13:08:00	520.1995	245.2662				:			
13:08:10	452.1115	246.7516				:			
13:08:20	465.5479	232.8167				:			
13:08:30	518.1505	230.8861				:			
13:08:40	518.403	235.4682				:			
13:08:50	455.1924	233.778				:			
13:09:00	447.0106	229.973				:			
13:09:10	506.8826	226.5901				:			
13:09:20	502.7309	242.8323	END			:			
AVG			492.6554875	238.4319223		:			
						:			
						:			
						:			
13:09:30			514.8738	497.4995		:			

07-02-1992 SITE 4 DAY 4

TIME	THC 1 (table) (ppmC)	THC 2 (rack) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	FRONT GC RESULTS CH4 (ppmV/wet)	FRONT GC RESULTS ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	REAR GC RESULTS CH4 (ppmV/wet)	REAR GC RESULTS ACETALDEHYDE (ppmV/wet)
13:09:40			297.5857	309.039				
13:09:55			293.9286	303.7058				
13:10:00			297.4009	304.204				
13:10:10			298.268	303.8953				
13:10:20			297.941	304.3119				
13:10:30			296.4023	305.9873				
13:10:40			297.1973	306.0338				
13:10:50			297.3043	305.9549				
13:11:09			298.239	306.7946				
13:11:10			502.2095	225.6416				
13:11:20			524.4338	231.7171				
13:11:30			526.2003	237.5057				
13:11:40			446.9466	235.6035				
13:11:50			453.2431	226.9589				

TIME	BUN FRONT	BUN REAR
13:12:00	520.434	221.4278
13:12:10	535.8784	230.1852
13:12:20	476.4952	230.0233
13:12:30	435.7811	223.5394
13:12:40	487.2299	215.1111
13:12:50	509.0042	227.4956
13:13:00	475.0399	230.9639
13:13:10	416.5094	233.6004
13:13:20	466.0305	225.1049
13:13:30	497.4709	236.7096
13:13:40	486.5719	235.8951
13:13:50	420.4282	235.5378
13:14:00	455.2634	228.16
13:14:10	505.5843	230.9775
13:14:20	512.3204	243.772
13:14:30	442.0254	245.3262
13:14:40	442.4855	240.0718
13:14:50	496.3218	233.0103
13:15:00	512.5593	247.681
13:15:10	458.7036	244.3718
13:15:20	431.8449	233.2132
13:15:30	483.2971	226.5732
13:15:40	516.2957	239.1846
13:15:50	493.4182	234.405
13:16:00	435.8132	235.0172
13:16:10	472.5308	223.656
13:16:20	520.5959	236.429
13:16:30	505.5759	239.0213
13:16:40	426.4684	242.6603
13:16:50	450.4022	228.2149

07-02-1992 SITE 4 DAY 4

TIME	THC 1 (table) (ppmC)	THC 2 (rack) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
13:17:00	508.6487	230.0968						
13:17:10	513.2473	237.8348						
13:17:20	445.3282	238.2561						
13:17:30	442.4147	226.6245						
13:17:40	500.1638	230.8408						
13:17:50	517.7755	240.2819						
13:18:00	462.8045	244.7592						
13:18:10	431.8753	235.3497						
13:18:20	482.62	231.0164						
13:18:30	505.0872	245.9839						
13:18:40	468.5675	241.2225						
13:18:50	426.2224	241.5079						
13:19:00	467.4143	224.7115						
13:19:10	508.4774	237.9675						
13:19:20	486.8899	245.1924						
13:19:30	417.0249	248.0453						
13:19:40	443.1877	233.9388						
13:19:50	498.5253	243.0666						
13:20:00	495.7793	248.0263						
13:20:10	415.061	250.1673	END					
AVG			474.50989	235.444592				
13:20:20			451.5524	233.0244				
13:20:30			570.9783	236.8005				
13:20:40			646.9037	234.553				
13:20:50			657.7099					
			FRONT	REAR				
13:21:00	676.406	215.8922	STEAM OFF					
13:21:10	720.5041	215.8913						
13:21:20	733.3056	225.4716						
13:21:30	709.7739	223.4275						
13:21:40	634.0386	218.9237						
13:21:50	650.9338	205.5948						
13:22:00	694.0747	221.7061						
13:22:10	697.8101	222.791						
13:22:20	621.0714	221.503	490	27.9	21			
13:22:30	642.3226	205.5485	ETH/THC	CH4/THC	AA/THC			
13:22:40	679.6673	223.1572	78.89592082	4.492237124	3.381253749			
13:22:50	680.9567	221.1837						
13:23:00	617.6467	224.3701						
13:23:10	645.0967	208.2909						
13:23:20	675.7026	218.4775						
13:23:30	688.6329	222.1233						

07-02-1992 SITE 4 DAY 4

TIME	THC 1 (table) (ppmC)	THC 2 (rack) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
13:23:40	617.9796	224.4469						
13:23:50	609.348	206.6214						
13:24:00	643.5836	208.0775						
13:24:10	661.1234	221.7205						
13:24:20	627.8211	221.1562						
13:24:30	587.4786	212.6148						
13:24:40	616.3296	202.0869						
13:24:50	641.6089	212.702						
13:25:00	619.8972	211.6327						
13:25:10	559.5622	202.9991						
13:25:20	588.2073	188.005						
13:25:30	623.8613	200.4328						
13:25:40	618.6523	199.8584						
13:25:50	548.7126	195.2542						
13:26:00	566.2673	178.4251						
13:26:10	605.9566	192.4107						
13:26:20	618.2164	190.6142						
13:26:30	568.3456	193.2464						
13:26:40	557.2819	183.4982						
13:26:50	593.6974	191.2744						
13:27:00	607.875	191.1736						
13:27:10	563.6711	190.3664						
13:27:20	546.7235	185.3279						
13:27:30	578.0108	169.9234						
13:27:40	600.1111	174.7297						
13:27:50	580.7838	181.7082						
13:28:00	526.1176	175.3893						
13:28:10	549.2302	160.1656						
13:28:20	563.6564	174.9864						
13:28:30	559.1158	180.453						
13:28:40	493.6861	184.3664						
13:28:50	518.2081	175.1481						
13:29:00	557.715	186.4725						
13:29:10	582.698	192.1357						
13:29:20	527.8198	193.8577						
13:29:30	534.4648	187.6202						
13:29:40	583.9169	193.8907						
13:29:50	600.8461	202.3467						
13:30:00	555.6938	203.8742						
13:30:10	547.6501	197.4224						
13:30:20	575.1258	195.9521						
13:30:30	602.186	206.2764						
13:30:40	592.4695	198.4294						
13:30:50	563.4389	190.3358						
13:31:00	597.7564	180.2807						
13:31:10	642.8087	195.728						
13:31:20	639.1987	186.3426	464	26.4	22.7			
13:31:30	578.7468	175.041	ETH/THC	CH4/THC	AA/THC			

07-02-1992 SITE 4 DAY 4

TIME	THC 1 (table) (ppmC)	THC 2 (rack) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE: (ppmV/wet)	:	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
13:31:40	599.5318	168.6652	72.59088605	4.130171103	3.551321365	:			
13:31:50	628.5449	191.2219				:			
13:32:00	619.8336	195.744				:			
13:32:10	541.9268	197.5874				:			
13:32:20	553.4991	179.9491				:			
13:32:30	620.3183	191.4236				:			
13:32:40	654.0764	194.8314				:			
13:32:50	606.8783	200.7699				:			
13:33:00	582.9214	190.6658				:			
13:33:10	632.8262	188.9028				:			
13:33:20	673.9459	199.7152				:			
13:33:30	651.9722	207.1415				:			
13:33:40	599.7003	209.475				:			
13:33:50	631.664	196.6644				:			
13:34:00	661.3553	214.1773				:			
13:34:10	656.3246	210.2127				:			
13:34:20	595.2454	212.735				:			
13:34:30	619.6434	193.9431				:			
13:34:40	662.3266	211.4996				:			
13:34:50	680.3534	210.7686				:			
13:35:00	606.4419	214.232				:			
13:35:10	632.7324	205.1335				:			
13:35:20	681.4146	214.6143				:			
13:35:30	695.1976	216.0993				:			
13:35:40	645.9882	218.1291				:			
13:35:50	636.1567	203.4334				:			
13:36:00	688.1118	208.9415				:			
13:36:10	717.2726	219.0074				:			
13:36:20	690.0322	216.7186				:			
13:36:30	639.8857	202.9216				:			
13:36:40	680.7828	197.9343				:			
13:36:50	719.5026	215.8822				:			
13:37:00	713.6284	211.7498				:			
13:37:10	632.9461	203.4608				:			
13:37:20	665.8282	190.8152				:			
13:37:30	707.4706	208.8237				:			
13:37:40	716.3267	207.9316				:			
13:37:50	635.8948	208.5179				:			
13:38:00	652.1394	187.9843				:			
13:38:10	688.2951	203.7755				:			
13:38:20	706.5093	214.7929				:			
13:38:30	643.926	218.2245				:			
13:38:40	630.5967	204.7984				:			
13:38:50	683.6733	212.029				:			
13:39:00	708.4921	217.3875				:			
13:39:10	668.9788	214.0443				:			
13:39:20	628.5981	209.8779				:			
13:39:30	667.6489	203.7677				:			

07-02-1992 SITE 4 DAY 4

TIME	THC 1 (table) (ppmC)	THC 2 (rack) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
13:39:40	703.5427	219.002						
13:39:50	701.0859	219.7241						
13:40:00	652.4019	206.5256						
13:40:10	679.2238	195.5273				192	5.53	6.02
13:40:20	714.5817	213.5772				ETH/THC	CH4/THC	AA/THC
13:40:30	715.4692	214.9447				98.19600638	2.828249559	3.078853950
13:40:40	644.353	218.4366						
13:40:50	658.6674	200.6832						
13:41:00	695.0935	210.7552						
13:41:10	709.1096	212.4485						
13:41:20	649.5126	209.4792						
13:41:30	648.137	192.0164						
13:41:40	701.4404	198.8302						
13:41:50	715.4181	207.3706						
13:42:00	664.3061	211.3155						
13:42:10	624.0585	200.25						
13:42:20	670.8752	195.4381						
13:42:30	695.9665	212.1719						
13:42:40	678.0772	218.4661						
13:42:50	618.4384	210.7356						
13:43:00	652.6981	200.9313						
13:43:10	690.345	214.3941						
13:43:20	690.6843	216.6095						
13:43:30	619.5418	218.8742						
13:43:40	633.3095	200.811						
13:43:50	674.3857	211.8314						
13:44:00	688.6472	211.8872						
13:44:10	623.1534	216.292						
13:44:20	625.8588	201.0734						
13:44:30	672.687	206.6186						
13:44:40	690.9397	213.3767						
13:44:50	646.2962	218.018						
13:45:00	613.7545	198.2028						
13:45:10	657.7156	202.9394						
13:45:20	687.5779	215.4144						
13:45:30	661.4686	218.2744						
13:45:40	605.9163	210.4503						
13:45:50	640.1425	199.3521						
13:46:00	674.1069	208.7374						
13:46:10	676.8609	199.9621						
13:46:20	615.516	197.762						
13:46:30	638.8765	186.9287						
13:46:40	683.9324	207.1637						
13:46:50	687.3329	210.1217						
13:47:00	610.4338	210.6512						
13:47:10	616.6238	191.7774						
13:47:20	655.3787	193.0894						
13:47:30	667.1256	193.5773						

07-02-1992 SITE 4 DAY 4

TIME	THC 1 (table) (ppmC)	THC 2 (rack) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE: (ppmV/wet) :	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
13:47:40	615.4233	196.2087			:			
13:47:50	606.8831	184.5349			:			
13:48:00	654.9777	188.2801			:			
13:48:10	682.9352	202.5872			:			
13:48:20	667.6298	202.5529			:			
13:48:30	609.5598	196.516			:			
13:48:40	656.4377	189.0245			:			
13:48:50	695.7695	210.2245			:			
13:49:00	698.8158	214.8201	490	26.9	22.1 :			
13:49:10	637.1131	219.0042	ETH/THC	CH4/THC	AA/THC :			
13:49:20	668.2287	203.3686	70.11862067	3.849369175	3.162492891 :			
13:49:30	725.6704	217.1523			:			
13:49:40	733.8548	222.0524			:			
13:49:50	665.6912	220.2903			:			
13:50:00	687.757	198.4386			:			
13:50:10	733.3491	209.9629			:			
13:50:20	754.7003	212.4633			:			
13:50:30	697.3193	209.1992			:			
13:50:40	685.467	196.1824			:			
13:50:50	727.6681	193.9559			:			
13:51:00	729.1458	210.5958			:			
13:51:10	680.1877	218.2848			:			
13:51:20	626.3513	212.9911			:			
13:51:30	665.3236	206.9704			:			
13:51:40	703.5194	229.4015			:			
13:51:50	670.5632	221.7781	END		:			
AVG			642.9589736	203.8062150	:			
					:			
					:			
					:			
13:52:00			580.4402	227.6875	:			
13:52:10			604.9973	220.0194	:			
13:52:20			644.0643	236.8027	:			
13:52:30			647.1389	239.1107	:			
					:			
					:			
			FRONT	REAR	:			
13:52:40	557.8689	245.7353	STEAM ON		:			
13:52:50	527.7554	233.8846			:			
13:53:00	544.6054	241.3055			:			
13:53:10	543.4683	258.8622			:			
13:53:20	507.1318	261.49			:			
13:53:30	488.986	256.3173			:			
13:53:40	528.4101	245.1653			:			
13:53:50	566.0508	250.935			:			
13:54:00	545.2941	253.2251			:			
13:54:10	509.8877	251.8103			:			
13:54:20	528.2936	245.4496			:			

07-02-1992 SITE 4 DAY 4

TIME	THC 1 (table) (ppmC)	THC 2 (rack) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	FRONT GC RESULTS CH4 (ppmV/wet)	FRONT GC RESULTS ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	REAR GC RESULTS CH4 (ppmV/wet)	REAR GC RESULTS ACETALDEHYDE (ppmV/wet)
13:54:30	567.8862	262.2968						
13:54:40	558.137	259.7766						
13:54:50	480.2144	254.947						
13:55:00	499.341	241.1765						
13:55:10	545.7133	252.4905						
13:55:20	560.601	259.9236						
13:55:30	502.3788	268.2927						
13:55:40	485.1325	263.78						
13:55:50	527.4285	264.5538						
13:56:00	546.601	273.0369						
13:56:10	500.7869	278.2372						
13:56:20	466.9743	268.7198						
13:56:30	513.2457	267.6232						
13:56:40	548.5748	291.1649						
13:56:50	526.082	288.384						
13:57:00	474.9916	297.2122						
13:57:10	499.7998	277.1936						
13:57:20	553.4807	291.9913						
13:57:30	551.805	296.2122						
13:57:40	493.9807	294.7204						
13:57:50	515.2399	278.9548						
13:58:00	559.5082	283.2747				247	6.55	7.11
13:58:10	569.1671	287.2793				ETH/THC	CH4/THC	AA/THC
13:58:20	514.6176	285.7636				87.19451472	2.312243204	2.509931172
13:58:30	494.1708	273.1523						
13:58:40	521.2319	275.849						
13:58:50	543.3795	286.0526						
13:59:00	509.9275	279.0905						
13:59:10	467.9241	267.9851						
13:59:20	494.7897	259.2305						
13:59:30	533.0225	274.1939						
13:59:40	515.5128	272.0493						
13:59:50	458.9329	259.7486						
14:00:00	483.5791	244.0417						
14:00:10	525.5671	260.2505						
14:00:20	526.4327	263.4186						
14:00:30	466.2802	264.854						
14:00:40	472.2464	249.1449						
14:00:50	516.3304	262.7785						
14:01:00	536.6437	266.0851						
14:01:10	471.7913	267.5185						
14:01:20	458.6662	250.8214						
14:01:30	502.8884	255.6164						
14:01:40	510.0591	261.8586						
14:01:50	457.3828	259.9865						
14:02:00	434.5363	243.7865						
14:02:10	468.7308	241.9885						
14:02:20	490.6612	255.1007						

07-02-1992 SITE 4 DAY 4

TIME	THC 1 (table) (ppmC)	THC 2 (rack) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE: (ppmV/wet)	:	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
14:02:30	452.1174	257.2933				:			
14:02:40	416.7413	246.5198				:			
14:02:50	378.296	237.0903				:			
14:03:00	428.4651	252.8848				:			
14:03:10	420.7421	251.2131				:			
14:03:20	372.4076	246.2048				:			
14:03:30	381.0123	234.5047				:			
14:03:40	416.9301	244.3185				:			
14:03:50	424.9997	248.0089				:			
14:04:00	380.3431	244.4433				:			
14:04:10	390.2904	223.4989				:			
14:04:20	437.3326	227.5708				:			
14:04:30	453.5004	239.2394				:			
14:04:40	396.513	239.2314				:			
14:04:50	398.3601	235.7424				:			
14:05:00	435.3955	235.0201				:			
14:05:10	451.017	236.799				:			
14:05:20	407.2373	238.9135				:			
14:05:30	385.4652	236.2769				:			
14:05:40	428.6101	232.5159				:			
14:05:50	461.2432	244.3508				:			
14:06:00	429.9	244.9043				:			
14:06:10	390.7972	243.6076				:			
14:06:20	420.4437	234.2207				:			
14:06:30	462.4272	243.3324				:			
14:06:40	458.1222	239.4447				:			
14:06:50	402.9909	236.9642				:			
14:07:00	280.6295	224.8573				:			
14:07:10	492.6547	237.1481				:			
14:07:20	502.7851	237.368				:			
14:07:30	434.4511	232.0437	315	5.82	10.9	:			
14:07:40	426.6226	215.1894	ETH/THC	CH4/THC	AA/THC	:			
14:07:50	474.8752	217.7404	72.50528310	1.339621421	2.508912970	:			
14:08:00	490.0424	230.2557				:			
14:08:10	431.8522	232.4778				:			
14:08:20	419.2877	221.869				:			
14:08:30	455.9041	215.8795				:			
14:08:40	474.2605	232.0957				:			
14:08:50	429.9564	232.1883				:			
14:09:00	387.6635	229.8981				:			
14:09:10	432.3623	218.6978				:			
14:09:20	472.539	228.8681				:			
14:09:30	447.5302	232.6678				:			
14:09:40	390.4565	231.4916				:			
14:09:50	436.5829	223.9662				:			
14:10:00	467.1806	233.0412				:			
14:10:10	464.9243	238.6349				:			
14:10:20	400.4442	235.9764				:			

4-1-92

07-02-1992 SITE 4 DAY 4

TIME	THC 1 (table) (ppmC)	THC 2 (rack) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
14:10:30	420.2401	223.0297						
14:10:40	470.4114	227.9758						
14:10:50	478.754	235.3574						
14:11:00	408.9389	233.4873						
14:11:10	409.2664	232.1692						
14:11:20	464.9407	234.3146						
14:11:30	479.4129	249.2598						
14:11:40	434.4683	247.8451						
14:11:50	416.1655	238.8475						
14:12:00	461.654	228.8656						
14:12:10	486.4221	245.501						
14:12:20	452.907	244.0948						
14:12:30	407.1226	239.7957						
14:12:40	449.3235	221.3515						
14:12:50	488.2674	234.9185						
14:13:00	483.7104	243.403						
14:13:10	424.3775	240.5758						
14:13:20	451.5608	227.4771						
14:13:30	497.2366	231.8448						
14:13:40	513.993	238.5251						
14:13:50	449.6512	239.6779						
14:14:00	453.0607	224.262						
14:14:10	509.9696	217.7479						
14:14:20	527.5522	232.9969						
14:14:30	465.4274	232.2873						
14:14:40	442.2957	227.4442						
14:14:50	494.5529	224.2836						
14:15:00	507.139	238.5146						
14:15:10	471.552	242.978						
14:15:20	413.5323	241.7741						
14:15:30	463.7926	229.2244						
14:15:40	499.1865	239.678						
14:15:50	489.6037	245.6763						
14:16:00	415.5799	244.244						
14:16:10	445.8298	232.988						
14:16:20	492.5338	246.1001						
14:16:30	492.2171	256.4295				179	6.97	6.64
14:16:40	433.2858	251.5195				ETH/THC	CH4/THC	AA/THC
14:16:50	431.858	240.1779				69.80476115	2.718096006	2.589405665
14:17:00	463.5763	232.7977						
14:17:10	466.9413	248.0396						
14:17:20	406.6963	246.6761						
14:17:30	396.1611	241.9458						
14:17:40	441.1665	230.3232						
14:17:50	449.7036	248.5414						
14:18:00	408.2173	252.5948						
14:18:10	376.5762	244.8926						
14:18:20	435.892	233.7368						

07-02-1992 SITE 4 DAY 4

TIME	THC 1 (table) (ppmC)	THC 2 (rack) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
14:18:30	465.7071	250.0163						
14:18:40	450.7436	250.2393						
14:18:50	385.5596	249.3182						
14:19:00	433.9214	236.1277						
14:19:10	448.826	245.169						
14:19:20	462.9787	241.5216						
14:19:30	404.8718	240.9341						
14:19:40	432.7935	226.3882						
14:19:50	454.9364	233.5249	END					
AVG			466.7554585	246.9615140				
			FRONT	END				
14:20:00	463.1204	243.4664	TRANSIENT					
14:20:10	443.7731	236.9605						
14:20:20	485.9402	229.4311						
14:20:30	539.1712	226.9379						
14:20:40	538.5532	241.1111						
14:20:50	516.273	241.8064						
14:21:00	505.322	240.3955						
14:21:10	565.5018	232.9238						
14:21:20	574.6023	240.0123						
14:21:30	593.542	233.4745						
14:21:40	544.4682	227.6753						
14:21:50	600.1248	205.2966						
14:22:00	592.4037	219.2914						
14:22:10	592.1811	209.7624						
14:22:20	543.2421	215.3145						
14:22:30	578.1228	200.5651						
14:22:40	571.4677	209.5543						
14:22:50	581.7212	203.7312						
14:23:00	545.3364	200.7392						
14:23:10	572.4061	175.4704						
14:23:20	658.097	165.5353						
14:23:30	698.2726	176.7958						
14:23:40	646.8536	174.7697						
14:23:50	599.9077	144.768						
14:24:00	599.2894	126.3569						
14:24:10	620.6735	109.9236						
14:24:20	606.5054	13.05772						
14:24:30	540.1149	73.54093						
14:24:40	532.6569	104.3765						
14:24:50	577.2064	11.46567						
14:25:00	568.0129	100.3909						
14:25:10	505.8746	107.7279						
14:25:20	463.5103	100.9177						
14:25:30	489.3887	99.13316	293		231	8.97		
14:25:40	497.1454	105.4982	ETH/THC		CH4/THC	AA/THC		

07-02-1992 SITE 4 DAY 4

TIME	THC 1 (table) (ppmC)	THC 2 (rack) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
14:25:50	403.3465	108.8616	59.87061000	47.20174372	1.832898879			
14:26:00	347.7831	103.5423						
14:26:10	348.6055	98.69632						
14:26:20	338.0267	97.0442						
14:26:30	285.1436	92.91404						
14:26:40	251.7132	87.59798						
14:26:50	268.1908	85.06626						
14:27:00	277.2577	79.60464						
14:27:10	263.5972	73.7151						
14:27:20	236.3581	66.83714						
14:27:30	248.1061	66.04525						
14:27:40	262.1438	71.32129						
14:27:50	253.5028	74.8737						
14:28:00	217.8508	76.39034						
14:28:10	227.6413	79.64581						
14:28:20	248.0698	81.19472						
14:28:30	248.3912	84.88422						
14:28:40	214.6819	84.78168						
14:28:50	212.385	86.52647						
14:29:00	237.4041	91.39664						
14:29:10	252.5163	90.82053						
14:29:20	223.5303	92.14066						
14:29:30	203.7221	96.15459						
14:29:40	224.6825	109.6725						
14:29:50	243.0744	133.4393						
14:30:00	226.1827	138.0337						
14:30:10	203.3053	134.8153						
14:30:20	225.3183	139.9562						
14:30:30	267.1776	156.5684						
14:30:40	278.1439	163.7159						
14:30:50	246.391	165.3777						
14:31:00	260.9743	159.7311						
14:31:10	310.6145	172.631						
14:31:20	327.4403	181.8635						
14:31:30	291.0511	187.3978						
14:31:40	294.0548	175.6309						
14:31:50	340.5678	186.1606						
14:32:00	370.6475	206.5355						
14:32:10	334.0854	204.7827						
14:32:20	316.6989	192.925						
14:32:30	368.7575	193.4601						
14:32:40	419.0607	210.5208						
14:32:50	402.6883	208.879						
AVG			404.7649653	146.6709020				
			BUN					
14:33:00	367.0501	201.8717	ERATIC ??					

07-02-1992 SITE 4 DAY 4

TIME	THC 1 (table) (ppmC)	THC 2 (rack) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
14:33:10	416.262	194.2419						
14:33:20	467.3847	212.7847						
14:33:30	462.3618	220.4863						
14:33:40	388.3982	227.615						
14:33:50	418.5452	217.8442						
14:34:00	455.3651	233.9033						
14:34:10	474.3536	236.1864						
14:34:20	420.6118	237.4057				167	7.76	5.75
14:34:30	444.2127	226.648				ETH/THC	CH4/THC	AA/THC
14:34:40	513.6072	229.5492				70.34371963	3.268666253	2.422014298
14:34:50	528.6909	247.8181						
14:35:00	465.0326	251.3601						
14:35:10	457.479	244.4588						
14:35:20	513.6404	235.4139						
14:35:30	540.5536	255.633						
14:35:40	490.7384	259.0698						
14:35:50	459.0212	250.9974						
14:36:00	520.8541	237.542						
14:36:10	562.3531	257.0727						
14:36:20	530.5527	258.8828						
14:36:30	464.4093	258.9053						
14:36:40	514.7583	243.8507						
14:36:50	563.4918	264.0197						
14:37:00	566.8572	268.681						
14:37:10	491.54	270.058						
14:37:20	512.6056	254.0444						
14:37:30	565.911	261.9153						
14:37:40	579.5103	270.0695						
14:37:50	498.856	267.9473						
14:38:00	494.6551	259.0189						
14:38:10	554.4141	261.7596						
14:38:20	594.6902	276.2089						
14:38:30	531.3126	280.4451						
14:38:40	494.0993	270.405						
14:38:50	551.4019	266.7804						
14:39:00	591.571	286.0793						
14:39:10	563.2123	280.5646						
14:39:20	493.1167	274.3044						
14:39:30	557.0835	259.3865						
14:39:40	620.2042	277.6567						
14:39:50	619.624	282.2737						
14:40:00	556.5796	290.9955						
14:40:10	578.5423	280.7459						
14:40:20	596.4788	288.3055						
14:40:30	576.4808	301.7432						
14:40:40	486.9069	294.2891						
14:40:50	502.9235	282.208						
14:41:00	558.2509	289.564						

07-02-1992 SITE 4 DAY 4

TIME	THC 1 (table) (ppmC)	THC 2 (rack) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
14:41:10	556.3384	290.0997						
14:41:20	488.1445	284.5526						
14:41:30	470.2119	271.9402						
14:41:40	550.6248	260.9959						
14:41:50	559.8643	289.7537						
14:42:00	514.9088	301.4998						
14:42:10	458.7919	299.8651						
14:42:20	521.1917	279.7991						
14:42:30	559.0451	298.4871						
14:42:40	556.6991	308.321						
14:42:50	513.5015	302.7833						
14:43:00	560.9072	289.3996						
14:43:10	589.2328	296.563						
14:43:20	610.453	312.9406						
14:43:30	567.7658	307.6027						
14:43:40	637.9286	301.7497						
14:43:50	738.888	307.8984						
14:44:00	777.7885	323.8						
14:44:10	717.3797	324.7578						
14:44:20	686.1579	322.7838						
14:44:30	761.4872	307.9131						
14:44:40	831.1602	324.1775						
14:44:50	774.1923	308.0372						
14:45:00	749.2532	297.0167						
14:45:10	783.379	262.1405						
14:45:20	855.6044	273.0342						
14:45:30	846.2629	263.5511						
14:45:40	739.7622	270.2255						
14:45:50	735.3285	247.9927						
14:46:00	773.5327	265.1119						
14:46:10	748.2371	250.2007						
14:46:20	601.9691	253.6318						
14:46:30	577.4581	216.9894						
14:46:40	640.138	222.8724	332	49.7	7.64			
14:46:50	649.0654	236.4541	ETH/THC	CH4/THC	AA/THC			
14:47:00	574.7921	221.9384	51.86381686	7.763950898	1.193492653			
14:47:10	568.0622	187.8337						
14:47:20	643.6481	173.7113						
14:47:30	645.2288	172.2065						
14:47:40	569.566	164.1179						
14:47:50	496.3031	150.3997						
14:48:00	529.4434	141.2237						
14:48:10	568.9655	151.505						
14:48:20	541.1246	167.5553						
14:48:30	466.5523	167.6903						
14:48:40	498.549	170.3231						
14:48:50	533.4956	178.9773						
14:49:00	519.2195	186.9082						

07-02-1992 SITE 4 DAY 4

TIME	THC 1 (table) (ppmC)	THC 2 (rack) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE: (ppmV/wet)	:	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
14:49:10	443.3721	198.8066				:			
14:49:20	459.1967	188.6937				:			
14:49:30	513.7155	190.2161				:			
14:49:40	521.3282	184.5506				:			
14:49:50	452.7727	184.6533				:			
14:50:00	451.9436	195.6834				:			
14:50:10	472.3129	217.2796				:			
14:50:20	474.1328	230.2139				:			
14:50:30	430.6603	227.2139				:			
14:50:40	394.3745	221.5837				:			
14:50:50	441.6563	217.3691				:			
14:51:00	459.6965	246.5167				:			
14:51:10	436.0161	230.7577				:			
14:51:20	383.3332	212.7548				:			
14:51:30	436.8844	210.8197				:			
14:51:40	452.9724	228.1376				:			
14:51:50	427.5944	223.1898				:			
14:52:00	377.9334	216.3716				:			
14:52:10	434.124	202.9642				:			
14:52:20	475.634	230.9974				:			
14:52:30	476.7688	239.7031				:			
14:52:40	447.4221	232.4547				:			
14:52:50	452.9783	214.375				:			
14:53:00	458.2303	231.8791				:			
14:53:10	480.5157	238.1909				:			
14:53:20	480.6947	229.0403				:			
14:53:30	494.4441	215.8137				:			
14:53:40	558.2946	234.7961				:			
14:53:50	557.9612	254.0642				:			
14:54:00	516.3666	243.826				:			
14:54:10	445.5037	232.4953				:			
14:54:20	548.0372	227.6237				:			
14:54:30	650.8184	247.0586				:			
14:54:40	647.6198	237.4477				:			
14:54:50	579.979	219.0375				:			
14:55:00	619.5613	203.5796				:			
14:55:10	708.1816	220.3324				:			
14:55:20	684.4961	211.1787				:			
14:55:30	598.0554	208.965				:	5.28		4.21
14:55:40	633.7976	204.4377				:			
14:55:50	701.1768	212.8806				:			
14:56:00	695.2743	199.49				:			
14:56:10	638.1682	202.6582				:			
14:56:20	654.0583	181.0236				:			
14:56:30	717.5602	179.7688				:			
14:56:40	720.3876	169.4765				:			
14:56:50	599.6965	168.4138				:			
14:57:00	566.1323	142.3286				:			

07-02-1992 SITE 4 DAY 4

TIME	THC 1 (table) (ppmC)	THC 2 (rack) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
14:57:10	582.951	131.3857						
14:57:20	583.8981	132.6055						
14:57:30	481.849	130.8754						
14:57:40	428.9078	117.8225						
14:57:50	444.3475	105.6596						
14:58:00	449.7337	106.4603						
14:58:10	407.5959	106.8264						
14:58:20	359.0477	106.4824						
14:58:30	395.4419	106.6367						
14:58:40	419.4796	120.9133						
14:58:50	395.2348	137.9828						
14:59:00	358.4281	136.7067						
14:59:10	399.1096	126.2001						
14:59:20	437.6048	137.5396						
14:59:30	423.3492	148.2935						
14:59:40	386.7024	142.7472						
14:59:50	448.8291	150.4328						
15:00:00	481.7259	143.0645						
15:00:10	445.4054	138.8262						
15:00:20	389.6598	139.3718						
15:00:30	413.2746	163.2679						
15:00:40	424.6224	176.9261						
15:00:50	373.6918	183.9119						
15:01:00	337.9355	171.9928						
15:01:10	383.5449	181.0166						
15:01:20	422.1245	204.1502						
15:01:30	384.4315	195.9839						
15:01:40	364.1382	184.5162						
15:01:50	419.0242	203.7076						
15:02:00	449.3145	235.1851						
15:02:10	403.6134	235.3539						
15:02:20	384.1062	230.4787						
15:02:30	441.3994	242.1028						
15:02:40	480.5135	263.7823						
15:02:50	431.4103	263.7571						
15:03:00	429.2732	238.649						
15:03:10	509.2729	242.8942						
15:03:20	541.2126	248.905						
15:03:30	475.5914	248.7637						
15:03:40	484.1281	226.8725						
15:03:50	563.1856	250.7766						
15:04:00	583.4457	261.7987						
15:04:10	501.5328	254.4572						
15:04:20	476.9512	240.3581		351	21	9.9		
15:04:30	543.2605	273.2548		ETH/THC	CH4/THC	AA/THC		
15:04:40	547.6357	279.1899		73.59243461	4.402966173	2.075684053		
15:04:50	479.2031	278.0738						
15:05:00	508.4362	267.3749						

07-02-1992 SITE 4 DAY 4

TIME	THC 1 (table) (ppmC)	THC 2 (rack) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE: (ppmV/wet)	:	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
15:05:10	573.13	282.862				:			
15:05:20	573.2925	282.7966				:			
15:05:30	511.9364	287.5049				:			
15:05:40	570.0023	272.5651				:			
15:05:50	628.9249	289.5381				:			
15:06:00	600.3752	300.3101				:			
15:06:10	516.6821	295.2091				:			
15:06:20	578.0865	275.987				:			
						:			
						:			
						:			
						:			
15:06:30	624.3696	289.857				:			
15:06:40	675.2543	303.8513				:			
15:06:50	728.7973	291.9644				:			
15:07:00	834.3888	273.4907				:			
						:			
						:			
						:			
			FRONT	REAR		:			
15:07:10	925.4308	290.4884	STEAM OFF			:			
15:07:20	907.9682	294.2665				:			
15:07:30	829.6753	289.8302				:			
15:07:40	880.8868	278.2491				:			
15:07:50	914.5327	301.8439				:			
15:08:00	885.8503	290.8665				:			
15:08:10	816.5168	274.1123				:			
15:08:20	859.2099	260.4445				:			
15:08:30	895.0198	269.3772				:			
15:08:40	842.348	269.2975				:			
15:08:50	789.7496	252.6677				:			
15:09:00	835.4946	254.4607				:			
15:09:10	859.4678	264.6078				:			
15:09:20	782.2057	270.196				:			
15:09:30	758.2077	254.3279				:			
15:09:40	818.8425	254.3988				:			
15:09:50	858.0352	268.7067				:			
15:10:00	794.212	268.2498				:			
15:10:10	794.1639	247.0031				:			
15:10:20	847.4515	254.928				:			
15:10:30	862.8187	270.6348				:			
15:10:40	779.2094	266.0483				:			
15:10:50	768.4747	244.5969				:			
15:11:00	815.0493	262.404				:			
15:11:10	820.4164	264.3243				:			
15:11:20	729.293	258.4542				:			
15:11:30	726.9766	244.4384				:			
15:11:40	784.7626	260.0294				:			

07-02-1992 SITE 4 DAY 4

TIME	THC 1 (table) (ppmC)	THC 2 (rack) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
15:11:50	793.1365	255.8912						
15:12:00	709.2096	255.0216						
15:12:10	718.0901	235.4345						
15:12:20	776.5283	259.1652						
15:12:30	789.594	263.9325						
15:12:40	714.8941	261.4869						
15:12:50	755.3948	247.7148						
15:13:00	829.8765	265.2765						
15:13:10	842.5786	257.3274						
15:13:20	767.203	251.0622						
15:13:30	809.9326	241.8601				200	5.6	4.44
15:13:40	864.765	252.8891				ETH/THC	CH4/THC	AA/THC
15:13:50	839.9946	253.5642				82.69243252	2.315388110	1.835772002
15:14:00	753.4211	251.1606						
15:14:10	801.105	242.0009						
15:14:20	848.6848	262.7326						
15:14:30	813.9756	259.7026						
15:14:40	744.6688	253.9904						
15:14:50	828.288	241.9618						
15:15:00	856.1008	257.2224						
15:15:10	827.4566	255.1714						
15:15:20	760.0256	246.5983						
15:15:30	812.6866	246.6964						
15:15:40	845.4167	271.7133						
15:15:50	812.2872	273.2591						
15:16:00	766.9683	261.1566						
15:16:10	831.8362	249.0187						
15:16:20	862.4652	267.8785						
15:16:30	803.739	259.7748						
15:16:40	775.2786	252.1471						
15:16:50	832.1256	262.3878						
15:17:00	861.1583	274.1303						
15:17:10	798.8514	271.799						
15:17:20	796.647	253.5007						
15:17:30	874.9139	266.085						
15:17:40	896.6154	281.1305						
15:17:50	819.1923	280.7704						
15:18:00	810.2206	262.5308						
15:18:10	873.5784	264.491						
15:18:20	890.8268	272.2277						
15:18:30	812.1971	270.5895						
15:18:40	821.0828	256.3433						
15:18:50	883.4354	270.4018						
15:19:00	897.2979	272.8579						
15:19:10	811.7125	272.4436						
15:19:20	802.3762	257.4043						
15:19:30	849.3108	262.4631						
15:19:40	849.6216	272.311						

07-02-1992 SITE 4 DAY 4

TIME	THC 1 (table) (ppmC)	THC 2 (rack) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE: (ppmV/wet) :	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
15:19:50	746.7584	273.4299			:			
15:20:00	769.2776	255.0671			:			
15:20:10	818.9467	276.1641			:			
15:20:20	820.4556	278.7513			:			
15:20:30	742.1733	275.2711			:			
15:20:40	785.8468	258.8402			:			
15:20:50	839.8121	278.6194			:			
15:21:00	846.7517	278.6935			:			
15:21:10	759.5464	277.0385			:			
15:21:20	806.2587	259.8933			:			
15:21:30	864.0848	292.6008			:			
15:21:40	865.4354	285.5564			:			
15:21:50	767.0943	279.7714			:			
15:22:00	810.1004	263.7364			:			
15:22:10	864.0073	276.4387			:			
15:22:20	842.248	279.1529	611	35.3	21.9 :			
15:22:30	768.1308	272.0208	ETH/THC	CH4/THC	AA/THC :			
15:22:40	810.429	259.973	72.5439538	4.191164597	2.600184268 :			
15:22:50	852.7458	280.316			:			
15:23:00	814.3563	280.845			:			
15:23:10	764.6476	269.7413			:			
15:23:20	825.2049	257.492			:			
15:23:30	872.954	285.3342			:			
15:23:40	839.2734	276.7442			:			
15:23:50	791.5977	261.6512			:			
15:24:00	845.0843	251.5314			:			
15:24:10	871.585	271.1248			:			
15:24:20	811.3123	263.9691			:			
15:24:30	781.6818	249.687			:			
15:24:40	838.7578	243.2531			:			
15:24:50	847.7911	269.1912			:			
15:25:00	782.5457	272.851			:			
15:25:10	763.1622	261.0504			:			
15:25:20	802.9009	267.8186			:			
15:25:30	827.5553	275.6265			:			
15:25:40	768.2791	276.3911			:			
15:25:50	753.7994	262.0672			:			
15:26:00	802.5345	276.9108			:			
15:26:10	828.4849	284.1635			:			
15:26:20	763.2029	270.2619			:			
15:26:30	760.3759	260.1607			:			
15:26:40	820.5947	264.698			:			
15:26:50	832.024	274.852			:			
15:27:00	745.2024	272.8629			:			
15:27:10	763.4205	263.3454			:			
15:27:20	814.837	274.1163			:			
15:27:30	812.1474	274.7828			:			
15:27:40	736.7362	269.7128			:			

07-02-1992 SITE 4 DAY 4

TIME	THC 1 (table) (ppmC)	THC 2 (rack) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
15:27:50	779.3923	246.7787						
15:28:00	839.2494	268.2126						
15:28:10	836.1092	264.8866						
15:28:20	748.5948	261.5739						
15:28:30	774.3428	252.6847						
15:28:40	830.4707	273.246						
15:28:50	820.2267	266.8163						
15:29:00	731.1658	259.6321						
15:29:10	766.759	246.5026						
15:29:20	810.3016	263.2412						
15:29:30	781.1859	260.7293						
15:29:40	714.4349	254.6479						
15:29:50	780.6451	246.6855						
15:30:00	796.4372	265.6107						
15:30:10	766.4739	266.1189						
15:30:20	712.8221	262.935						
15:30:30	758.051	253.0494						
15:30:40	790.7222	269.6823						
15:30:50	759.7202	261.7483						
15:31:00	724.6695	262.6331						
15:31:10	787.5034	259.3841						
15:31:20	815.6312	272.9836						
15:31:30	762.6813	272.6511						
15:31:40	730.554	259.6482						
15:31:50	780.6332	254.9387						
15:32:00	803.0645	270.3544						
15:32:10	746.4164	267.0923						
15:32:20	735.2828	252.5514						
15:32:30	794.6645	246.471						
15:32:40	831.8481	256.3836						
15:32:50	769.1156	251.5909						
15:33:00	751.1436	236.6995						
15:33:10	804.208	247.0231						
15:33:20	825.5656	255.2847						
15:33:30	746.2439	251.4593						
15:33:40	736.8394	229.8363						
15:33:50	786.7791	239.1613						
15:34:00	806.9603	252.8081						
15:34:10	718.8245	249.5054						
15:34:20	717.507	237.5177						
15:34:30	770.7042	249.9184						
15:34:40	785.2232	250.7867						
15:34:50	707.992	245.6243						
15:35:00	738.794	228.7509						
15:35:10	784.3204	253.9785						
15:35:20	792.9081	250.0302						
15:35:30	716.6724	245.8605						
15:35:40	743.0193	227.2266						

209	5.46	6.12
ETH/THC	CH4/THC	AA/THC
79.57869743	2.078945875	2.330247025

07-02-1992 SITE 4 DAY 4

TIME	THC 1 (table) (ppmC)	THC 2 (rack) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
15:35:50	789.2185	245.8212						
15:36:00	793.7913	252.6881						
15:36:10	717.304	249.3685						
15:36:20	761.9438	236.3297						
15:36:30	801.8215	252.6675						
15:36:40	794.5997	249.4915						
15:36:50	722.937	246.1431						
15:37:00	770.3579	232.5939						
15:37:10	821.9563	255.8171						
15:37:20	803.3836	255.5787						
15:37:30	743.7167	247.3339						
15:37:40	793.3587	240.3461						
15:37:50	839.3293	267.3081	END					
AVG			800.7988135	261.5887935				
15:38:00	809.042	263.2386						
15:38:10	751.7502	254.7615						
15:38:20	807.2842	249.588						
15:38:30	851.6568	274.1385						
15:38:40	813.7457	270.8085						
15:38:50	762.3683	257.2074						
15:39:00	809.3408	244.7996						
15:39:10	836.0259	264.9329						
15:39:20	757.1044	263.061						
15:39:30	667.6367	256.3586						
15:39:40	684.7927	254.1406						
15:39:50	652.1237	269.5683						
			FRONT	REAR				
15:40:00	572.0179	276.813	STEAM ON					
15:40:10	525.6902	274.869						
15:40:20	569.1077	264.7893						
15:40:30	564.8881	280.5764						
15:40:40	492.0612	278.5423						
15:40:50	489.6237	281.2674						
15:41:00	557.8292	270.1612						
15:41:10	554.2454	291.2878						
15:41:20	480.2052	285.005						
15:41:30	488.6698	282.7669						
15:41:40	567.3687	273.4227						
15:41:50	571.049	286.4375						
15:42:00	501.4867	281.3918	363	13.3	15.6			
15:42:10	494.5932	273.1076	ETH/THC	CH4/THC	AA/THC			
15:42:20	571.815	273.7631	72.38477112	2.652114203	3.110750494			

07-02-1992 SITE 4 DAY 4

TIME	THC 1 (table) (ppmC)	THC 2 (rack) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
15:42:30	565.5754	286.4916						
15:42:40	476.351	284.9958						
15:42:50	514.8574	270.9194						
15:43:00	578.5516	272.8758						
15:43:10	571.0565	276.143						
15:43:20	490.3099	279.7623						
15:43:30	522.9999	272.6868						
15:43:40	576.827	278.8987						
15:43:50	565.4603	282.4967						
15:44:00	479.9634	285.7086						
15:44:10	538.7076	274.6929						
15:44:20	588.0117	290.2026						
15:44:30	567.4577	297.8062						
15:44:40	505.8433	287.8625						
15:44:50	583.6995	270.7839						
15:45:00	618.2554	295.9248						
15:45:10	588.3552	305.3926						
15:45:20	518.7714	294.1307						
15:45:30	562.4296	271.3703						
15:45:40	605.1599	291.3346						
15:45:50	564.7083	301.1184						
15:46:00	515.9335	288.626						
15:46:10	580.5392	276.2684						
15:46:20	623.123	296.7312						
15:46:30	573.709	291.2673						
15:46:40	531.4763	274.567						
15:46:50	603.2064	267.1149						
15:47:00	634.0563	288.9879						
15:47:10	561.6044	289.4902						
15:47:20	525.7657	277.0193						
15:47:30	590.0084	268.3617						
15:47:40	611.4941	279.5797						
15:47:50	545.3315	275.7494						
15:48:00	521.9651	267.2572						
15:48:10	588.3634	263.7637						
15:48:20	620.9671	280.5383						
15:48:30	532.4027	278.4146						
15:48:40	518.1863	267.4832						
15:48:50	587.4562	274.4948						
15:49:00	581.477	274.2036						
15:49:10	497.5929	269.8359						
15:49:20	491.6221	254.7497						
15:49:30	555.3263	256.6499						
15:49:40	579.1364	272.7842						
15:49:50	478.046	276.9767						
15:50:00	492.4189	268.2198						
15:50:10	553.6304	276.8117						
15:50:20	563.9075	279.3281						

07-02-1992 SITE 4 DAY 4

TIME	THC 1 (table) (ppmC)	THC 2 (rack) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE: (ppmV/wet)	:	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
15:50:30	478.9146	274.1973				:			
15:50:40	496.8341	251.8376				:			
15:50:50	560.3557	260.12				:			
15:51:00	568.8854	268.4067				:	196	6.7	4.93
15:51:10	494.3478	257.8524				:	ETH/THC	CH4/THC	AA/THC
15:51:20	520.8792	250.6738				:	73.02351245	2.496211905	1.836764879
15:51:30	577.0612	260.3401				:			
15:51:40	565.1088	264.977				:			
15:51:50	485.1361	260.6592				:			
15:52:00	509.7	248.2501				:			
15:52:10	566.356	259.8316				:			
15:52:20	546.6754	262.9906				:			
15:52:30	463.2597	256.3271				:			
15:52:40	516.1215	248.0147				:			
15:52:50	561.5607	266.0779				:			
15:53:00	525.9199	269.0304				:			
15:53:10	462.7319	262.4599				:			
15:53:20	526.7098	255.3509				:			
15:53:30	562.472	274.4819				:			
15:53:40	514.3914	271.3356				:			
15:53:50	458.8582	265.9227				:			
15:54:00	521.0146	254.2093				:			
15:54:10	553.2504	274.2482				:			
15:54:20	506.8836	274.7795				:			
15:54:30	464.9224	273.1972				:			
15:54:40	526.0461	268.2797				:			
15:54:50	559.4962	278.026				:			
15:55:00	509.2951	270.6281				:			
15:55:10	480.687	262.8093				:			
15:55:20	531.5253	258.7644				:			
15:55:30	567.9755	275.4575				:			
15:55:40	515.5022	262.0205				:			
15:55:50	487.121	256.5471				:			
15:56:00	547.6747	252.3475				:			
15:56:10	573.8007	264.2151				:			
15:56:20	502.5301	263.1445				:			
15:56:30	489.1158	256.3435				:			
15:56:40	549.9729	260.7489				:			
15:56:50	560.7515	270.6945				:			
15:57:00	482.222	261.5839				:			
15:57:10	479.6133	254.1485				:			
15:57:20	543.1723	250.0998				:			
15:57:30	559.952	268.6506				:			
15:57:40	474.4925	265.9379				:			
15:57:50	479.4085	250.4164				:			
15:58:00	539.0051	263.2125				:			
15:58:10	548.7841	270.6106				:			
15:58:20	475.8883	267.1883				:			

07-02-1992 SITE 4 DAY 4

TIME	THC 1 (table) (ppmC)	THC 2 (rack) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
15:58:30	484.2756	249.4389						
15:58:40	556.8058	254.8168						
15:58:50	556.1836	262.9866						
15:59:00	477.1652	265.8057						
15:59:10	488.0627	266.3184						
15:59:20	533.917	269.4449						
15:59:30	524.6364	272.4133						
15:59:40	456.0078	261.3722						
15:59:50	492.6502	246.8531	352	13.7	14.1			
16:00:00	553.4644	254.9544	ETH/THC	CH4/THC	AA/THC			
16:00:10	529.4247	259.4334	71.45029069	2.780877791	2.862071303			
16:00:20	470.0138	249.8958						
16:00:30	517.7418	240.2634						
16:00:40	556.0698	260.1454						
16:00:50	522.7902	258.774						
16:01:00	461.0341	251.8452						
16:01:10	512.7483	243.4938						
16:01:20	557.1514	264.6188						
16:01:30	510.4309	267.3148						
16:01:40	450.5591	261.0444						
16:01:50	509.7614	255.0605						
16:02:00	555.4188	270.9865						
16:02:10	508.0547	272.4253						
16:02:20	454.7322	259.4813						
16:02:30	507.3551	256.968						
16:02:40	528.3855	269.7322						
16:02:50	471.7458	259.5178						
16:03:00	441.7661	251.66						
16:03:10	498.4272	242.9927						
16:03:20	523.043	261.2634						
16:03:30	462.6606	261.0987						
16:03:40	439.3315	256.3736						
16:03:50	497.0096	256.5616						
16:04:00	515.3108	270.6488						
16:04:10	440.9767	265.4984						
16:04:20	442.3501	245.5566						
16:04:30	513.4201	245.155						
16:04:40	520.0828	258.1614						
16:04:50	429.5161	246.7312						
16:05:00	460.5212	240.3749						
16:05:10	520.3181	247.7577						
16:05:20	525.4651	258.2652						
16:05:30	448.1705	250.9772						
16:05:40	458.1673	236.4165						
16:05:50	499.8131	243.702						
16:06:00	506.7298	247.2468						
16:06:10	432.8639	244.3745						
16:06:20	452.0872	239.1514						

07-02-1992 SITE 4 DAY 4

TIME	THC 1 (table) (ppmC)	THC 2 (rack) (ppmC)	FRONT GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE: (ppmV/wet)	:	REAR GC RESULTS ETH-OH (ppmV/wet)	CH4 (ppmV/wet)	ACETALDEHYDE (ppmV/wet)
16:06:30	497.3962	241.8473				:			
16:06:40	497.3829	245.9342				:			
16:06:50	423.1518	245.1031				:			
16:07:00	449.1717	240.444				:			
16:07:10	488.3872	247.6091				:			
16:07:20	472.4136	238.6831				:			
16:07:30	414.8072	232.9115				:			
16:07:40	447.7557	221.6335				:			
16:07:50	507.652	233.4523				:			
16:08:00	486.9507	231.7482				:			
16:08:10	422.544	227.6124				:			
16:08:20	455.8486	219.7589				:			
16:08:30	497.2669	230.0072				:			
16:08:40	466.022	231.2664				:			
16:08:50	409.0592	226.2001				:			
16:09:03	459.6125	214.4757				:			
16:09:10	505.618	228.179				:			
16:09:20	465.1087	223.8949				:			
16:09:30	414.4058	220.1143				:			
16:09:40	462.0951	223.0603	END			:			
AVG			517.6111653	263.1163597		:			

[illegible]
07-02-1992 0[illegible]
Calibration File Name was CEMDATA\[illegible].CAL

Chan.	Name	Units	Zero		Span		Status	Tol.
			Conc.	Resp.	Conc.	Resp.		
1	THC1	PPM	0.00	0.0012	2030.00	1.027	1021.936	-1.18
2	O2	%	0.00	0.0004	20.90	0.065	247.909	-0.11
3	THC2	PPM	0.00	-.0011	3980.00	1.772	1054.814	1.10
4		PPM	0.00	0.0005	2030.00	1.027	1030.523	-0.59

Table

Rack

Press Shift-PrtSc to Print Out Table
Press <C> to Continue

[illegible] CORPORATION [illegible]

Weld Testing and Process Engineering Dept.
Continuous Emissions Monitoring Data
SPARKPLUG
PA
Performed for:
Date Printed = 07-02-1992 Current Time = 09:51:52
File Name = C:\CEMDATA\[illegible].PRN Calibration File = CEMDATA\[illegible].CAL

07-02-1992	THC1	O2	THC2	
Time	PPM	%	PPM	PPM
9:51:51	229.9	18.8	-3472.5	193.1
9:51:52	229.9	18.8	-3472.5	193.1
9:51:52	229.9	18.8	-3472.5	193.1
9:51:53	342.9	18.8	-3472.5	206.1

:52:19	201.6	18.7	-5226.7	198.9
:52:29	201.2	18.8	-5235.4	198.2
:52:39	201.6	18.9	-5231.5	186.9
:52:49	201.9	18.9	-5240.1	197.5
9:52:59	202.8	18.5	-5239.6	187.2
Ave.=	225.6	18.8	-4709.1	192.3

202.0 187.7

RADIAN CORPORATION 799 02

Field Testing and Process Engineering Dept.
Continuous Emissions Monitoring Data
BATTERIES
B4
Performed for:
Date Printed = 07-02-1992 Current Time = 09:54:37
File Name = C:\CEMDATA\070292.PRN Calibration File: CEMCAL\070...

07-02-1992 Time	THC1 PPM	O2 %	THC2 PPM	PPM
09:54:33	798.8	5.4	-4250.9	806.9
09:54:39	801.2	0.7	-4343.5	798.1
09:54:49	801.6	-0.1	-4245.6	797.2
09:54:59	804.6	-0.2	-4247.3	801.2
09:55:09	804.8	-0.5	-4259.9	801.8
Avg.=	800.6	1.0	-4269.5	801.1

803.0 779.7

MEDIAN CORPORATION 2030 01

Field Testing and Process Engineering Dept.
Continuous Emissions Monitoring Data
BATTERIES
EPA
Performed for:
Date Printed = 07-02-1992 Current Time = 09:57:55
File Name = C:\CEMDATA\070292.PRN Calibration File:C:\CEMDATA\0702A.CAL

07-02-1992 Time	THC1 PPM	O2 %	THC2 PPM	PPM
09:57:59	1670.8	2.7	-1539.6	1920.7
09:58:09	1947.9	0.4	-930.2	2017.9
09:58:19	2009.4	0.8	-851.6	2028.9
09:58:29	2025.7	-0.1	-787.5	2026.4
09:58:39	2026.5	0.1	-768.9	2029.2
09:58:49	2029.2	-0.0	-843.1	2025.0
09:58:59	2030.7	-0.1	-836.3	2034.5
Ave.=	1959.6	0.5	-946.7	2014.1

2034.8 2032.8

RADIAN CORPORATION 88.2 QC

Field Testing and Process Engineering Dept.
Continuous Emissions Monitoring Data
MK-SERIES
PC
erformed for:
ate Printed = 07-02-1992 Current Time = 10:00:1?
ile Name = C:\CEM\DATA\07-0292.PRN Calibration File: CEMDATA.CAL

27-02-1992 Time	HCl PPM	O2 %	HCl PPM	PPM
0:00:39	84.9	17.8	-3674.3	71.4
0:00:49	83.6	18.6	-3775.0	66.5
0:00:59	85.0	18.9	-3778.4	67.7
0:01:09	82.7	18.9	-3793.0	67.7
0:01:19	85.6	19.0	-3771.9	67.2
0:01:29	84.0	19.1	-3773.9	67.3
Avg.=	85.3	18.7	-3792.4	68.3

54.4 867.6

RADIAN CORPORATION @ QC

Field Testing and Process Engineering Dept.
Continuous Emissions Monitoring Data
84:SERIES
.PA
Performed for:
Date Printed = 07-02-1992 Current Time = 10:02:33
File Name = C:\CEMDATA\270291.PRN Calibration File:C:\CEMDATA\270226.CA.

07-02-1992 Time	THC1 PPM	O2 %	THC2 PPM	PPM
10:02:39	0.6	0.9	-3587.4	-9.0
0:02:44	0.7	0.2	-3749.6	-10.7
Avg.=	0.6	0.6	-3778.5	-10.8

0.6 -10.8

RADIAN CORPORATION @ QC

Field Testing and Process Engineering Dept.
Continuous Emissions Monitoring Data
PARKERIES
.PM
Performed for:
Date Printed = 07-02-1992 Current Time = 10:03:15
File Name = C:\CEMDATA\070292.PRN Calibration File:: CEMDATA 070292.CAL

07-02-1992 Time	THC1 PPM	O2 %	THC2 PPM	PPM
10:03:19	0.7	-0.5	-3696.7	-5.4
10:03:29	-3.7	-1.0	-3624.6	-5.3
10:03:39	-4.3	-0.9	-3669.3	-4.0
10:03:49	-3.7	-1.0	-3629.8	-3.7
Avg.=	-2.6	-0.9	-3654.9	-5.1

-3.9 -4.6

[illegible] CORPORATION [illegible] JUNIPER CC

Field Testing and Process Engineering Dept.
Continuous Emissions Monitoring Data
NUMERICS
PSI
Performed for:
Date Printed = 07-02-1991 Current Time = 10:06:54
File Name = C:\CEM2K78A\070291.PRN Calibration File: C:\CEM2K78A\070291.CAL

07-02-1991 Time	THC1 PPM	O2 %	THC2 PPM	PPM
0:06:56	201.5	17.0	-5248.3	185.7
0:06:59	197.0	16.9	-5315.5	190.3
0:07:02	201.0	18.0	-5276.0	187.0
0:07:19	201.2	19.1	-5206.1	195.1
Avg.=	200.2	17.5	-5260.4	187.4

RADIAN CORPORATION 230 ETHANOL QC

Field Testing and Process Engineering Dept.
Continuous Emissions Monitoring Data
BATTERIES
.PRN
Performed for:
Date Printed = 07-02-1992 Current Time = 11:13:32
File Name = C:\CEMDATA\070292.PRN Calibration File:C:\CEMDATA\070292A.CAL

07-02-1992 Time	THC1 PPM	O2 %	THC2 PPM	PPM
11:13:36	300.4	4.7	-5166.9	310.7
11:13:39	307.1	2.2	-5234.3	304.7
11:13:49	301.3	4.4	-5179.7	311.1
11:13:59	304.6	5.1	-5169.6	307.6
11:14:09	305.6	6.7	-5175.9	304.9
Avg.=	303.9	4.8	-5185.7	307.8

304.6 307.1

RADIAN CORPORATION 200 S: DC

Field Testing and Process Engineering Dept.
Continuous Emissions Monitoring Data
BATTERIES
/PH
Performed for:
Date Printed = 07-02-1992 Current Time = 11:15:07
File Name = C:\CEMDATA\070292.PRN Calibration File:C:\CEMDATA\070209.CAL

07-02-1992 Time	THC1 PPM	O2 %	THC2 PPM	PPM
11:15:09	213.2	-0.4	-5219.3	188.3
11:15:19	208.0	3.8	-3260.1	193.6
11:15:29	205.6	9.6	-4754.6	192.5
11:15:39	206.3	14.5	-5244.3	191.7
11:15:49	207.1	16.3	-5240.2	190.8
11:15:59	207.2	17.3	-5240.9	190.8
Avg.=	207.9	10.2	-4826.6	191.2

206.8 191.7

RADIAN CORPORATION 2030 GC

Field Testing and Process Engineering Dept.
Continuous Emissions Monitoring Data
BAKERIES
,PA
Performed for:
Date Printed = 07-02-1992 Current Time = 11:17:21
File Name = C:\CEMDATA\070292.PPM Calibration File:C:\CEMDATA\070224.CAL

07-02-1992 Time	THC1 PPM	O2 %	THC2 PPM	PPM
11:17:24	2012.1	16.1	-1095.8	2027.7
11:17:29	2028.2	9.4	-1451.0	2049.6
11:17:39	2025.4	5.9	-847.9	2052.1
11:17:49	2033.7	2.2	-929.6	2051.3
11:17:59	2039.8	1.0	-1181.5	2048.9
11:18:09	2039.6	0.1	-858.0	2043.1
11:18:19	2041.2	0.2	-754.3	2047.2
Avg.=	2031.4	4.9	-1005.6	2044.7

2034.6 2047.5

ARIAN CORPORATIO. 0 845

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AMPLES
 24
erformed for:
ate Printed = 07-02-1992 Current Time = 11:21:15
ile Name = C:\CEMDATA\07020921.PRN Calibration File: LEADVILL.CAL

07-02-1992 Time	THC1 PPM	O2 %	THC2 PPM	PPM
1:23:49	4.3	-0.5	-3145.7	-1.9
1:23:59	4.8	-0.6	-3505.6	0.1
1:24:29	6.7	-0.9	-3576.5	-0.9
Avg.=	5.3	-0.6	-3575.9	-0.9

-BIAN CORPORATION 200 E.HANDEL DR

Field Testing and Process Engineering Dept.
Continuous Emissions Monitoring Data
BAKERIES
.PA
Performed for:
Date Printed = 07-02-1992 Current Time = 11:25:31
File Name = C:\CEMDATA.070292.PRN Calibration File:C:\CEMDATA\070292.CAL

07-02-1992 Time	THC1 PPM	O2 %	THC2 PPM	PPM
11:25:34	310.5	-0.6	-5198.4	303.2
11:25:39	312.3	-0.5	-5236.3	301.4
11:25:49	312.7	-0.5	-5182.2	304.1
11:25:59	312.6	-0.7	-5191.5	303.3
11:26:09	312.2	-0.8	-5198.5	304.1
11:26:19	313.9	-0.6	-5185.6	304.1
11:26:29	312.9	-0.9	-5194.9	304.6
11:26:39	312.8	-0.9	-5200.0	304.9
11:26:49	313.8	-0.9	-5187.4	305.3
11:26:59	314.2	-0.8	-5192.8	305.9
Avg.=	312.8	-0.7	-5195.8	304.1

RADIAN INFORMATION @ SAS RANGE CHANGE

Field Testing and Process Engineering Dept.
Continuous Emissions Monitoring Data
ENERGIES
PA
erformed for:
ate Printed = 07-02-1992 Interval Time = 00:05:00
ile Name = C:\CEM\DATA\07020921.PRN Distribution File:C:\ENDATA\data.txt

07-02-1992 Time	THC1 PPM	O2 %	THC2 PPM	PPM
1:35:17	20.7	-0.8	-3733.6	1.3
1:35:19	20.2	-1.8	-3966.3	-0.7
1:35:29	19.6	-0.9	-3673.8	0.1
1:35:39	16.8	-0.7	-3552.5	0.3
1:35:49	19.8	-2.9	-3667.8	-2.3
1:35:59	17.5	-0.6	-3713.7	5.9
1:36:09	115.2	-0.4	-3821.1	1.2
1:36:19	144.0	-0.6	-3913.9	-1.7
1:36:29	135.2	-0.7	-3709.1	-1.7
1:36:39	129.3	-0.7	-3889.2	-2.3
1:36:49	115.9	-0.6	-3815.4	-6.4
1:36:59	117.8	-0.6	-3811.2	-4.4
1:37:09	116.2	-1.1	-3828.8	-5.2
1:37:19	113.4	-0.6	-3620.3	-1.2
1:37:29	115.9	-0.9	-3814.4	11.3
1:37:39	115.3	-0.9	-3[illegible]	[illegible]
1:37:49	117.3	-0.9	-3[illegible]	12.9
1:37:59	124.7	-0.[illegible]	-3820.9	7.2
1:38:09	127.3	-0.9	-3822.4	-1.[illegible]
1:38:[illegible]	128.0	-0.6	-382[illegible]	-10.[illegible]
1:38:[illegible]	[illegible]9.5	-0.[illegible]	-3[illegible].4	10.9
1:38:39	131.7	-0.4	-3811.5	-5.3
1:38:49	130.6	-0.5	-3[illegible].1	-9.9
1:38:59	132.8	-0.5	-3[illegible].5	-10.1
1:39:09	134.1	-0.5	-3[illegible].9	-11.0
1:39:19	135.6	-0.4	-3821.2	-10.1
1:39:29	136.3	-0.5	-3[illegible].6	-10.0
1:39:29	135.[illegible]	-0.6	-3827.[illegible]	-11.4
1:39:49	138.6	-0.5	-[illegible]29.6	-10.3
1:39:59	140.1	-0.6	-3850.1	-12.4
1:40:09	143.0	-0.5	-3838.7	-12.8
Avg.	127.7	-0.[illegible]	-3[illegible].6	-3.[illegible]

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Radian Research and Process Engineering Dept.
Continuous Emissions Monitoring Data
AMS100
PA
Performed for:
Date Printed = 07-02-1992 Current Time = 11:42:19
File Name = C:\CEMDATA\070292.PRN Calibration File:C:\CEMDATA\070292.CAL

07-02-1992 Time	THCl PPM	O2 %	THC2 PPM	PPM
11:42:22	155.1	17.4	-468.0	2175.8
11:42:29	152.2	16.5	-491.7	2456.2
11:42:39	2042.6	16.5	-465.0	2435.3
11:42:49	4718.6	17.1	-324.9	2424.6
Avg.=	1768.9	16.9	-487.7	2370.5

CALIBRATION SUMMARY
07-02-1992 11:49:17
CALIBRATION FILE NAME =C:\CEMDATA\070292.CAL

Chan.	Name	Units	Zero		Span		Slope	Int
			Conc.	Resp.	Conc.	Resp.		
1	THC1	PPM	0.00	-.0003	796.00	7.979	99.909	0.81
2	O2	%	0.00	0.0004	20.90	0.085	247.868	-0.11
3	THC2	PPM	0.00	-.0011	3980.00	3.772	1054.814	1.15
4		PPM	0.00	0.0044	796.00	7.978	100.075	-0.44

Press Shift-PrtSc to Print Out Table
Press <C> to Continue

[illegible] CORPORATION [illegible] C[

[illegible]eld Testing and Process Engineering Dept.
[illegible]ntinuous Emissions Monitoring Data
[illegible]KERIES
[illegible]2
[illegible]erformed For:
[illegible]ate Printed = 07-02-1992 Current Time = 11:50:41
[illegible]le Name = C:\CEMDATA\070292.PRN Calibration File:C:\CEMDATA\070292.CAL

27-02-1992 Time	THC1 PPM	O2 %	THC2 PPM	PPM
1:50:43	211.9	1.5	360.8	207.3
1:50:52	203.8	9.3	-176.6	197.1
1:51:00	206.5	14.9	-389.4	195.1

11:50:28	198.4	18.9	-850.9	192.8
11:50:32	196.2	19.9	-788.3	192.8
11:50:40	197.8	15.8	-746.3	191.4
Avg.=	201.3	14.5	-375.5	195.8

199.6 193.7

RADIAN CORPORATION 80.2 QC

Field Testing and Process Engineering Dept.
Continuous Emissions Monitoring Data
BAKERIES
.PA
Performed for:
Date Printed = 07-02-1992 Current Time = 11:53:12
File Name = C:\CEMDATA\07022.PRN Calibration File:C:\CEMDATA\07020.CAL

07-02-1992 Time	THC1 PPM	O2 %	THC2 PPM	PPM
11:53:15	77.2	18.9	-4321.5	76.6
11:53:20	76.4	18.9	-4466.5	76.5
11:53:30	76.6	19.1	-4321.4	76.2
11:53:40	76.5	19.2	-4330.1	76.1
11:53:50	76.4	19.2	-4333.2	76.0
Avg.=	76.6	19.1	-4354.5	76.3

R-DIAN CORPORATION @ BAE BC

Field Testing and Process Engineering Dept.
Continuous Emissions Monitoring Data
BAKERIES
.PA
Performed for:
Date Printed = 07-02-1992 Current Time = 11:55:15
File Name = C:\CEMDATA\070292.PRN Calibration File:C:\CEMDATA\0702B.CAL

07-02-1992 Time	THC1 PPM	O2 %	THC2 PPM	PPM
11:55:18	-0.5	1.2	-3806.7	-0.9
11:55:20	-3.4	-0.6	-3950.8	-0.9
11:55:30	-3.2	-0.7	-3805.9	-0.8
Avg.=	-2.4	-0.0	-3854.5	-0.9

RADIAN CORPORATION 200 ETHANOL DE

Field Testing and Process Engineering Dept.
Continuous Emissions Monitoring Data
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.PA
Performed for:
Date Printed = 07-02-1992 Current Time = 11:56:21
File Name = C:\CEMDATA\070292.PPM Calibration File:C:\CEMDATA\070228.CAL

07-02-1992 Time	THC1 PPM	O2 %	THC2 PPM	PPM
11:56:24	284.2	-0.5	-2548.9	276.5
11:56:30	296.5	-0.3	-1774.9	297.3
11:56:40	298.5	-0.1	-749.1	299.1
11:56:50	298.5	0.4	-215.1	300.4
Avg.=	294.4	-0.1	-1321.0	293.9

297.8

298.9

-DIAN CORPORATION 200 ETHANOL 2I

.ale Testing and Process Engineering Dept.
ontinuous Emissions Monitoring Data
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94
erformed for:
ate Printed = 07-02-1992 Current Time = 13:09:51
.le Name = C:\CEMDATA\070292.PRN Calibration File:C:\CEMDATA 200ZE.CAL

07-02-1992 Time	THC1 PPM	O2 %	THC2 PPM	PPM
9:09:55	293.9	10.2	479.5	303.7
9:10:02	297.4	5.1	-484.5	304.2
9:12:10	298.3	1.7	277.1	303.9
9:10:20	297.9	0.9	125.5	304.1
9:10:30	296.4	0.6	-45.7	305.2
Avg.=	296.8	4.6	70.5	304.4

RADIAN CORPORATION 200 ETHANOL

Field Testing and Process Engineering Dept.
Continuous Emissions Monitoring Data
BAKERIES
PG
erformed for:
ate Printed = 07-02-1992 Current Time = 16:09:59
ile Name = C:\CEMDATA\070292.PRN Calibration File:C:\CEMDATA\070292.CAL

07-02-1992 Time	THC1 PPM	O2 %	THC2 PPM	PPM
10:02	316.8	19.8	189.3	304.5
10:10	311.6	13.5	650.3	296.2
10:20	310.6	4.2	324.5	296.7
10:30	309.8	1.4	201.0	296.3
10:40	309.9	1.5	164.2	297.9
10:50	309.9	0.2	118.0	297.7
11:00	307.7	0.3	-79.0	297.5
11:10	306.1	0.1	-156.5	297.4
11:20	305.0	-0.2	-129.5	297.3
11:30	305.1	-0.1	-137.5	297.5
Avg.=	309.3	4.1	117.1	297.9

308.4 297.2

'ADIAN CORPORATION 30.2 C1

'ield Testing and Process Engineering Dept.
Continuous Emissions Monitoring Data
'AMERIES
,PA
'erformed for:
Date Printed = 07-02-1992 Current Time = 16:13:34
File Name = C:\CEMDATA\070292.PRN Calibration File:C:\CEMDATA\07020.CAL

07-02-1992	THC1	02	THC2	
Time	PPM	%	PPM	PPM
16:13:40	76.5	18.6	-4628.7	75.3
16:13:50	77.8	19.0	-4343.7	75.6
16:14:00	77.6	19.0	-4337.6	75.5
16:14:10	77.3	19.1	-4343.1	75.4
Avg.=	77.8	18.9	-4413.2	75.5

[illegible] CORPORATION 1991 01 02

[illegible] Testing and Process Engineering Dept.
Continuous Emissions Monitoring Data
[illegible]SERIES
[illegible]
Performed for:
Date Printed = 07-02-1992 Current Time = 16:16:19
File Name = C:\CEMDATA\070291.PPM Calibration Files: CEMDATA [illegible]

07-02-1992 Time	THC1 PPM	O2 %	THC2 PPM	PPM
15:16:23	195.9	20.3	-1013.2	183.6
15:16:30	196.1	20.3	-1339.8	193.8
15:16:40	195.9	20.3	-905.4	187.8
15:16:50	196.0	20.3	-797.7	183.6
Avg.	196.0	20.3	-935.3	187.8

ADIAN CORPORATION 799 DE

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PA
erformed for:
ate Printed = 07-02-1992 Current Time = 16:19:24
ile Name = C:\CEMDATA\070292.PPM Calibration File:C:\CEMDATA\70215.CAL

07-02-1992 Time	THC1 PPM	O2 %	THC2 PPM	PPM
16:19:22	793.2	0.4	5496.4	774.1
16:19:32	793.0	0.4	4916.5	775.7
16:19:40	793.3	0.2	5354.3	774.3
16:19:52	793.1	0.3	5230.6	775.7
16:20:02	793.2	0.3	5495.6	774.7
Avg.=	793.2	0.3	5278.7	774.6

CALIBRATION SUMMARY
07-02-1992 16:25:31
CALIBRATION FILE NAME =C:\CEMDATA\070200.CAL

Chan.	Name	Units	Zero		Span		Slope	Int.
			Conc.	Read.	Conc.	Read.		
1	THC1	PPM	0.00	-.1201	796.00	7.925	99.443	9.95
2	O2	%	0.00	0.0004	20.90	0.085	247.895	-0.11
3	THC2	PPM	0.00	-.0211	3980.00	3.772	1054.814	1.19
4		PPM	0.00	0.0107	798.00	7.742	101.238	-1.21

Press Shift-PrtSc to Print Out Table
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CEM INSTRUMENT DRIFT SUMMARY
07-02-1992 16:25:51

Chan.	Name	Units	Zero Conc.		Span		Drift % of Scale	
			Actual	Observed	Actual	Observed	Zero	Span
1	THC1	PPM	0.000	-9.177	798.00	792.55	-0.09	-0.68
2	O2	%	0.000	0.002	20.90	2.00	0.00	-23.62
3	THC2	PPM	0.000	0.000	3980.00	0.00	0.20	-39.80
4		PPM	0.000	0.638	798.00	774.19	0.01	-0.24

Press Shift-PrtSc to Print Out Table
Press <C> to Continue

ADIAN CORPORATION 82.2 @C :C CAL.

ield Testing and Process Engineering Dept.
ontinuous Emissions Monitoring Data
AKERIES
PA
erformed for:
ate Printed = 07-02-1992 Current Time = 16:27:56
ile Name = C:\CEMDATA\070292.PRN Calibration File:C:\CEMDATA\070210.CAL

07-02-1992 Time	THC1 PPM	O2 %	THC2 PPM	PPM
:28:00	84.4	18.2	-4903.4	74.7
:28:09	84.4	18.2	-4903.4	74.7
:28:09	84.4	18.9	-4426.4	75.2
:28:19	84.3	19.2	-4361.7	75.2
:28:29	84.0	19.3	-4361.9	75.3
:28:39	94.0	19.4	-4360.0	75.7
:28:49	97.8	19.4	-4366.5	75.3
:28:59	83.9	19.4	-4366.1	75.2
:29:09	93.9	19.4	-4367.1	75.1
:29:19	82.8	19.5	-4366.1	75.7
:29:29	82.4	19.4	-4370.3	75.2
:29:39	82.5	19.4	-4364.7	75.0
:29:49	82.2	19.4	-4361.8	75.1
:29:59	82.1	19.2	-4450.4	75.1
-VG.=	83.5	18.9	-4452.4	75.1

RADIAN CORPORATION 195.1 HC CAL

Field Testing and Process Engineering Dept.
Continuous Emissions Monitoring Data
BAKERIES
,PA
Performed for:
Date Printed = 07-02-1992 Current Time = 16:30:28
File Name = C:\CEMDATA\070292.PRN Calibration File:C:\CEMDATA\0701D.CAL

07-02-1992 Time	THC1 PPM	O2 %	THC2 PPM	PPM
16:30:24	82.1	19.4	-4347.7	75.1
16:30:29	195.0	19.8	-3463.9	179.9
16:30:39	198.4	20.2	-2143.1	184.0
16:30:49	202.1	20.4	-1252.5	186.1
16:30:59	200.5	20.4	-803.5	186.6
16:31:09	200.7	20.5	-915.1	186.7
16:31:19	203.1	20.5	-979.3	186.9
16:31:29	204.0	20.4	-892.0	187.0
16:31:39	204.1	20.5	-838.5	187.3
16:31:49	204.0	20.5	-920.4	187.5
16:31:59	204.0	20.4	-805.7	187.6
16:32:09	204.1	20.4	-796.6	187.6
16:32:19	204.1	20.5	-820.7	187.7
16:32:29	203.9	20.5	-872.2	187.7
16:32:39	204.1	20.5	-834.0	187.7
16:32:49	202.3	20.5	-759.4	187.7
16:32:59	201.6	20.5	-751.6	187.7
Avg.=	195.1	20.3	-1288.0	179.8

202.6 187.1

DATAN CORPORATION 795 FC CAL

Field Testing and Process Engineering Dept.
Continuous Emissions Monitoring Data
BATTERIES
PA
Performed for:
Date Printed = 07-02-1992 Current Time = 15:01:35
File Name = C:\CEMDATA\070292.PRN Calibration File:C:\CEMDATA\070201.CAL

07-02-1992 Time	THC1 PPM	O2 %	THC2 PPM	PPM
6:33:41	284.0	20.4	-1015.8	193.9
6:33:49	634.0	20.6	-979.1	43[illegible]
6:33:59	785.2	20.7	1955.8	775.0
6:34:09	797.2	16.9	3615.2	798.[illegible]
6:34:19	800.1	5.2	4576.9	797.[illegible]
6:34:29	794.5	1.8	5105.4	797.[illegible]
6:34:39	794.6	1.1	5382.5	794.[illegible]
6:34:49	795.4	0.7	5461.9	794.[illegible]
6:34:59	795.8	0.8	5368.4	795.[illegible]
6:35:29	795.5	0.5	5522.3	796.0
6:35:19	795.6	0.2	5325.6	795.8
6:35:29	795.6	0.3	5319.4	796.[illegible]
6:35:39	795.9	0.3	5478.2	796.[illegible]
6:35:49	795.9	0.1	4486.5	796.9
Avg.=	741.4	6.4	3970.0	724.2

RADIAN CORPORATION 92.5 RACM ONLY (4CFT A)

Field Testing and Process Engineering Dept.
Continuous Emissions Monitoring Data
OAKERIES
EPA
Performed for:
Date Printed = 07-02-1992 Current Time = 16:40:06
File Name = C:\CEMDATA\070292.PRN Calibration File:C:\CEMDATA\07021.CAL

07-02-1992 Time	THC1 PPM	O2 %	THC2 PPM	PPM
16:40:11	3.2	0.4	-1438.8	100.1
16:40:15	3.2	0.4	-1438.8	100.1
16:40:16	3.2	0.4	-1438.8	100.1
16:40:19	6.1	-0.1	-1986.8	99.6
16:40:29	4.3	-0.0	-1285.6	100.7
16:40:39	3.4	0.1	-1347.7	101.2
16:40:49	3.6	-0.4	-1378.7	101.7
Avg.=	3.9	0.1	-1473.9	100.5

-[IBM CORPORATION 283 ET-HOOL QC PAC*

Calc Testing and Process Engineering Dept
Continuous Emissions Monitoring Data
-[EPIES
Pl
nformed for:
ate Printed = 07-02-1992 Current Time = 6:45:33
ile Name = C:\CEMDATA\070292.PRN Calibration File:C:\CEMDATA\072C.CAL

07-02-1992 Time	THC1 PPM	O2 %	THC2 PPM	PPM
6:45:26	1.7	20.8	-192.4	297.1
6:45:29	2.3	7.7	-711.0	302.1
6:45:39	3.1	2.9	-1502.9	302.5
6:45:49	2.8	1.0	-1163.2	300.3
6:45:59	4.0	0.6	-742.2	295.9
Avg.=	2.8	6.4	-661.5	300.2

Appendix D.3

Method 18 Analytical Summary

RADIAN CORPORATION

CALCULATION SHEET

CALC. NO. _____

SIGNATURE M.D. _____ DATE 7-18-92 CHECKED _____ DATE _____

PROJECT MAIER'S BAKERY, READING, PA JOB NO. _____

SUBJECT INITIAL CAL CURVE 6-29-92 SHEET _____ OF _____ SHEETS

Ethanol

Run#	Conc.(ppm)	AREA
174	498	1,406,393
176	2000	5,731,518
177	4000	11,476,696

r = 1.000
m = 2,875
b = -23,302

ACETALDEHYDE

Run #	Conc.(ppm)	AREA
178	1.52	52,953
179	3.03	99,612
180	27.5	936,896
181	41.2	1,436,775
182	82.5	2,777,342

r = 0.9998
m = 33,772
b = 8,716

METHANE

Run#	Conc.(ppm)	AREA
185	80.2	3,006,488
186	199.1	7,504,925
187	266	9,852,435
188	399	14,505,464
189	532	19,108,000

r = 0.9998
m = 35,497
b = 314,548

4-81-3361

RADIAN CORPORATION

CALCULATION SHEET

CALC. NO. _____

SIGNATURE M.D. [signature] DATE 7-18-92 CHECKED _____ DATE _____

PROJECT MAYERS BAKERY & READING PA JOB NO. _____

SUBJECT 6-29-92 DATA REVIEW SHEET _____ OF _____ SHEETS

Run #	TIME	LOCATION	METHANE AREA / CONC.	Acetaldehyde AREA / CONC.	Ethanol AREA / CONC.
197	11:27:15	BREAD OVEN REAR	21,334,416 597	964,489 28.2	1,926,545 678
198	11:36:01	Comfort Hood	8,213,808 224	290,060 8.33	1,059,196 376
199	11:44:53	REAR	22,190,464 954	978,373 28.7	2,034,337 716
200	11:53:50	FRONT	31,047,040 1510	1,462,973 43.1	4,404,701 1540
201	12:03:10	REAR	27,058,768 1320	991,576 29.1	2,659,818 933
202	12:12:10	FRONT	33,071,104 1970	1,714,945 50.5	3,930,488 1380
203	12:21:00	REAR	23,265,392 790	922,168 27.0	2,956,998 1040
204	12:30:19	~~FRONT~~ COMFORT HOOD	8,382,195 229	355,105 10.2	1,678,043 592
205	12:39:14	REAR	26,358,256 1280	876,583 25.7	1,861,973 657
206	12:48:30	COMFORT HOOD	7,982,208 218	275,330 7.89	1,186,662 421
207	12:59:25	REAR	29,792,678 1450	757,876 22.2	1,571,019 557
214	13:27:00	REAR	23,720,112 806	1,435,515 42.2	2,921,893 1020
215	13:36:35	OVEN FRONT	36,161,504 2150	2,235,963 65.9	5,802,205 2030
216	13:45:50	REAR	26,245,088 1280	1,298,712 38.2	3,686,566 1290
217	13:56:12	FRONT	34,089,696 2030	2,079,283 61.3	5,803,056 2030
218	14:07:55	REAR	21,849,760 1040	1,183,452 34.8	4,758,634 1660
219	14:17:10	Comfort Hood	4,944,350 132	239,021 6.82	1,922,273 677

4-81-3361

RADIAN CORPORATION

CALCULATION SHEET

CALC. NO. _____

SIGNATURE [signature] DATE 7-14-92 CHECKED _____ DATE _____

PROJECT MAIERS BAKERY; READING, PA. JOB NO. _____

SUBJECT 6-29-92 DATA REVIEW CONT'D. SHEET _____ OF _____ SHEETS

Run #	TIME	LOCATION	METHANE AREA/CONC.	Acetaldehyde AREA/CONC.	Ethanol AREA/CONC.
220	14:26:24	REAR	22,497,840 765	1,710,593 32.6	2,315,256 814
221	14:35:29	Comfort Hood	6,864,117 204	200,857 5.69	1,225,855 434
222	14:44:30	REAR	25,648,928 1250	491,836 14.3	1,196,288 421
223	14:53:24	FRONT	29,613,972 1440	758,033 22.2	2,180,803 767
224	15:02:55	REAR	24,47,776 831	457,208 13.3	1,709,783 603
225	15:12:30	FRONT	8,869,466 261	297,014 8.54	1,810,432 638

4-81-3361

RADIAN CORPORATION

CALCULATION SHEET

CALC. NO. _____

SIGNATURE M.D. DATE 7-18-92 CHECKED _____ DATE _____

PROJECT MALCOLM BAKERY; READING, PA. JOB NO. _____

SUBJECT 6-30-92 Initial CALIBRATION SHEET _____ OF _____ SHEETS

Ethanol

Run #	Conc (ppm)	AREA
242	200	558,154
243	1000	2,705,864
244	2000	5,377,759

r = 1.000
m = 2,677
b = 24,774

Acetaldehyde

Run #	Conc (ppm)	AREA
245	1.52	48,119
246	3.03	101,420
247	27.5	921,660
248	41.2	1,372,470
249	82.5	2,634,802

r = 0.9997
m = 32,003
b = 18,792

METHANE

Run #	Conc (ppm)	AREA
250	40.1	1,601,960
251	80.2	2,887,301
252	199.1	7,066,973
253	399	13,642,784
254	532	17,865,232

r = 0.9998
m = 33,188
b = 313,203

SINGLE PT METHANE

Run #	Conc. (ppm)	AREA
272	718	23,481,920
274	1490	30,554,960
276	2000	33,620,672

4-81-3361

RADIAN CORPORATION

CALCULATION SHEET

CALC. NO. _____

SIGNATURE M.D. [signature] DATE 7-18-92 CHECKED _____ DATE _____

PROJECT MAIERS BAKERY; READING, PA. JOB NO. _____

SUBJECT 6-30-92 DATA REVIEW SHEET _____ OF _____ SHEETS

RUN #	TIME	LOCATION	METHANE AREA/CONC.	Acetaldehyde AREA/CONC.	Ethanol AREA/CONC.
259	14:12:50	BREAD OVEN FRONT	36,977,088 2,200	2,135,986 66.2	4,565,971 1700
260	14:21:50	REAR	30,304,640 1480	1,254,903 38.6	2,462,354 911
261	14:30:45	FRONT	31,196,080 1520	1,905,738 59.0	5,455,027 2030
262	14:40:15	REAR	25,253,968 1230	1,199,248 36.9	3,170,934 1180
263	14:44:15	FRONT	34,386,752 2040	1,953,016 60.4	5,142,717 1910
264	14:58:20	REAR	25,483,616 1240	1,214,634 37.4	3,070,634 1140
265	15:07:15	Comfort Flood	8,634,430 251	389,067 11.6	1,060,168 386
266	15:16:05	Comfort Flood	4,418,442 123	197,181 5.57	702,850 253
267	15:25:19	Comfort Flood	5,518,672 157	135,956 3.66	524,169 187
278	16:06:44	Comfort Flood	4,348,904 122	175,156 4.89	343,294 119
279	16:15:35	REAR	28,626,448 1400	978,162 30.0	1,482,317 544
280	16:25:05	FRONT	29,237,816 1420	1,541,801 46.6	3,312,032 1230
281	16:34:00	REAR	28,341,392 1380	876,877 26.8	1,467,930 539
282	16:42:54	FRONT	28,561,936 1390	1,274,064 39.2	2,852,496 1060
283	16:51:44	REAR	28,082,128 1370	806,422 24.6	1,410,680 518

4-81-3361

RADIAN CORPORATION

CALCULATION SHEET

CALC. NO. _____

SIGNATURE M.D. _____ DATE 7-18-92 CHECKED _____ DATE _____

PROJECT MALERS BAKERY; READING, PA. JOB NO. _____

SUBJECT 7-1-92 CALIBRATION SHEET _____ OF _____ SHEETS

→ INITIAL CAL. RANGE Changed from 0 to 2. for 1st 5 minutes
RANGE FOR Ethanol still the same

METHANE

Run #	Conc. (ppm)	AREA
315	199.1	1,823,073
314	798	6,936,250
311	1410	12,334,792
310	2000	17,459,920

r = 0.9989
m = 8560
b = 35,930

Acetaldehyde

Run #	Conc. (ppm)	AREA
303	16.5	143,773
317	27.5	231,226
318	41.2	353,311
319	82.5	683,474

r = 0.9999
m = 8190
b = 9339

Ethanol

Run #	Conc. (ppm)	AREA
300	200	638,555
301	1000	2,918,501
302	2000	5,694,093

r = 0.9999
m = 2,807
b = 89,286

4-81-3361

RADIAN CORPORATION

CALCULATION SHEET

CALC. NO. _____

SIGNATURE M.D. [signature] DATE 7-18-92 CHECKED _____ DATE _____

PROJECT MAIERS BAKERY : READING, PA JOB NO. _____

SUBJECT 7-1-92 DATA REVIEW SHEET _____ OF _____ SHEETS

Run #	TIME	LOCATION	METHANE AREA/CONC.	Acetaldehyde AREA/CONC.	Ethanol AREA/CONC.
320	10:07:14	FRONT	11,824,176 1380	386,768 46.1	4,202,029 1460
321	10:16:30	REAR	6,890,989 801	237,290 27.8	2,234,021 764
322	10:26:42	FRONT	8,287,261 ~~9644.20~~	351,65 41.8	4,567,261 1590
323	10:35:45	REAR	7,184,371 835	240,657 28.2	2,617,120 900
324	10:44:54	Comfort Hood	1,153,903 131	49,121 4.86	1,102452 361
~~325~~	10:53:50	REAR	8049,162 936	219,839 25.7	1,666,418 562
~~326~~	11:02:54	Comfort Hood	2,251,349 259	80,071 8.64	978,061 317
~~327~~	11:12:05	REAR	7,814,413 909	227,572 26.6	1,696,852 573
~~328~~	11:21:24	FRONT	11,875,528 1380	374,776 44.6	4,302,685 1500
~~329~~	11:30:34	REAR	6,292,394 731	224,386 26.2	3,070,390 1060
~~330~~	11:39:30	FRONT	10,060,760 1,170	349,812 41.6	3,996,912 1390
331	11:49:30	REAR	6,824,562 794	209,303 24.4	2,618,000 900
~~336~~	14:04:00	FRONT	10,607,080 1230	357,201 42.5	3,751,624 1300
337	14:13:00	REAR	6,783,936 788	225,583 26.4	2,284,218 782
~~338~~	14:22:05	Comfort Hood	2,041,574 234	77,427 8.31	1,241,005 412
~~339~~	14:30:59	REAR	6,874,592 799	217,386 25.4	1,546,710 519
340	14:39:51	Comfort Hood	1,195,216 135	38,863 3.60	~~6,746~~ 671,699 207

4-81-3361

RADIAN CORPORATION

CALCULATION SHEET

CALC. NO. _____

SIGNATURE M.D. [signature] DATE 7-18-92 CHECKED _____ DATE _____

PROJECT MAIERS BAKERY: READING, PA. JOB NO. _____

SUBJECT 7-1-92 DATA REVIEW CONTD. SHEET _____ OF _____ SHEETS

Run #	TIME	Location	Methane AREA/CONC.	Acetaldehyde AREA/CONC.	Ethanol AREA/CONC.
341	14:49:00	REAR	8,623,635 1000	116,893 13.1	989,349 ~~360~~ 321
342	14:58:05	FRONT	9,725,402 1130	199,920 23.3	1,685,475 ~~620~~ 569
343	15:07:00	REAR	7,603,152 884	255,936 30.1	2,047,411 ~~755~~ 698
344	15:16:00	FRONT	10,684,448 1240	423,053 50.5	3,887,584 ~~1440~~ 1350
345	15:32:44	REAR	5,926,973 688	205,053 23.9	2,575,288 ~~953~~ 886
346	15:41:40	FRONT	10,223,280 1190	409,711 48.9	3,867,520 ~~1430~~ 1350
347	15:50:35	REAR	7,523,357 875	281,774 33.3	2,909,584 ~~1110~~ 1030
348	15:54:29	Comfort Aloe	1,691,161 193	80,194 8.65	1,322,836 ~~485~~ 439
349	16:08:45	FRONT	9,301,594 1080	418,603 50.0	4,971,746 ~~1848~~ 1740

4-81-3361

RADIAN CORPORATION

CALCULATION SHEET

CALC. NO. _____

SIGNATURE M.D. [signature] DATE 8-6-92 CHECKED _____ DATE _____

PROJECT MAIER'S BAKERY JOB NO. _____

SUBJECT QC CHECKS: 7-1-92 SHEET _____ OF _____ SHEETS

Run #	I.D.	AREA CONC.	Percent Difference	Comments
332	CH_4 @ 3980 ppm TABLE	25,470,064 / 3794	-4.7%	SINGLE PT RUN 304
333	CH_4 @ 3980 ppm RACK	25,555,088 / 3808	-4.3%	↓
335	Ethane @ 200 ppm TABLE	613,159 / 187	-6.5%	
354	CH_4 @ 798 ppm TABLE	6,585,359 / 765	-4.1%	
355	CH_4 @ 798 ppm RACK	6,577,274 / 764	-4.3%	
356	CH_4 @ 1490 ppm TABLE	12,465,192 / 1452	-2.5%	
357	CH_4 @ 1490 ppm RACK	12,298,512 / 1433	-3.8%	
358	CH_4 @ 2000 ppm TABLE	16,850,376 / 1965	-1.8%	
359	CH_4 @ 2030 ppm RACK	16,484,334 / 1921	-5.4%	
360	Ethane @ 200 ppm RACK	591,933 / 179	-10%	

4-81-3361

RADIAN CORPORATION

CALCULATION SHEET

CALC. NO. _____

SIGNATURE M.D. [illegible] DATE 7-19-92 CHECKED _____ DATE _____

PROJECT MAIER'S BAKERY DATA REVIEW JOB NO. _____

SUBJECT 7-2-92 READING, PA DATA REVIEW SHEET _____ OF _____ SHEETS

Ethanol

Run #	Conc. (ppm)	AREA
387	200	564,325
430	1000	3,009,386
431	2000	5,820,877

r = 0.9997
m = 2.916
b = 21,293

ACETALDEHYDE

Run #	Conc. (ppm)	AREA
388	8.25	257,633
389	41.2	1,185,292
390	82.5	~~1,477,602~~ 3,665,814

r = 0.9978
m = 32.575
b = -63,187

METHANE

Run #	Conc. (ppm)	AREA
435	26.7	1062894
436	40.11	1,531,107
437	80.2	2,895,762

r = 0.9999
m = 34.207
b = 153.796

4-81-3361

RADIAN CORPORATION

CALCULATION SHEET

CALC. NO. _____

SIGNATURE M.D. _____ DATE 7/8/92 CHECKED _____ DATE _____

PROJECT MAIERS BAKERY & READING PA JOB NO. _____

SUBJECT 7-2-92 DATA REVIEW SHEET _____ OF _____ SHEETS

Run #	TIME	LOCATION	METHANE AREA/CONC.	Acetaldehyde AREA/CONC.	Ethanol AREA/CONC.
380	10:12:20	FRONT	200,951	145,622	1,102,897
381	10:21:20	REAR	94,131	37,954	585,278
	WATER PROBLEM		CONDENSING IN LINE		RANGE CHANGE
393	12:22:00	REAR	354,596 5.75	150,576 6.56	480,838 157
394	12:30:55	FRONT	814,073 19.4	292,304 10.9	518,347 170
395	12:41:05	FRONT	666,486 15.0	556,589 19.0	1,192,466 402
396	12:51:00	FRONT	663,414 14.9	517,353 17.8	1,152,163 388
397	13:00:05	REAR	376,113 6.50	132,896 6.02	507,893 167
TEAM OFF 398	13:22:21	FRONT	1,107,073 27.9	620,695 21.0	1,449,015 490
400	13:31:20	FRONT	1,056,625 26.4	677,694 22.7	1,374,655 464
401	13:40:15	REAR	342,852 5.53	132,931 6.02	581,088 192
402	13:49:00	FRONT	1,073,157 26.9	657,058 22.1	1,450,544 490
403	13:58:08	REAR	377,768 6.55	168,552 7.11	747,015 247
404	14:07:30	FRONT	352,863 5.82	292,145 10.9	941,012 315
405	14:16:32	REAR	392,186 6.97	153,044 6.64	544,813 179
406	14:25:31	FRONT	8,044,112 231	228,868 8.97	876,864 293
407	14:34:25	REAR	419,392 7.76	124,008 5.75	509,396 167

4-81-3361

RADIAN CORPORATION

CALCULATION SHEET

CALC. NO. _____

SIGNATURE M.D. [illegible] DATE 7-18-92 CHECKED _____ DATE _____

PROJECT MALEYS BATTERY, READING, PA JOB NO. _____

SUBJECT 7-2-92 DATA REVIEW CONTD. SHEET _____ OF _____ SHEETS

Run #	TIME	LOCATION	METHANE AREA/ppm	Acetaldehyde AREA/CONC	Ethanol AREA/CONC
410	14:46:45	FRONT	1,854,136 49.7	185,757 7.64	989,376 332
411	14:55:35	REAR	340,371 5.45	73,982 4.21	—
412	15:04:25	FRONT	871,437 21.0	259,254 9.90	1,044,765 351
413	15:13:30	REAR	345,272 5.60	81,492 4.44	605,152 200
414	15:22:14	FRONT	1,362,490 35.3	635,112 21.9	1,802,480 611
415	15:31:05	REAR	340,703 5.46	136,159 6.12	629,582 209
416	15:42:04	FRONT	607,931 13.3	444,446 15.6	1,078,940 363
417	15:51:00	REAR	383,122 6.70	97,377 4.93	592,525 196
418	15:59:15	FRONT	622,412 13.7	395,041 14.1	1,047,944 352
~~419~~					

4-81-3361

Appendix D.4

Method 18 Chromatogram

SITE #04

JUN 25. 1992 10:20:50

* LIST: LIST
PEAK CAPACITY: 1244

ZERO = 5. 0.113
ATT 2^ = 6
CHT SP = 1.0
AR REJ = 10000
THRSH = 4
PK WD = 0.10

MAIERS; READING, PA

*TIME 08:40:40
JUN 25. 1992 08:40:40

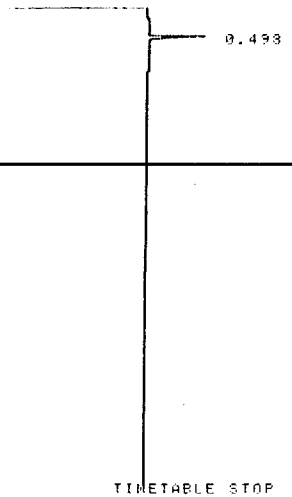
*DATE 06:29:92
JUN 29. 1992 08:40:57

* LIST: TIME @

   8.500 STOP

* EXT # BREAK

* RUN # 172   JUN 29. 1992 08:45:50 QC CHECK
START

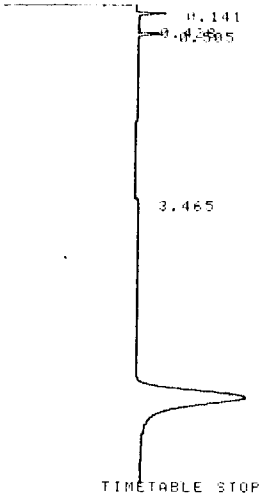


RUN# 172   JUN 29. 1992 08:45:50

AREA%
      RT   AREA TYPE WIDTH   AREA%
    .498   77429   BB   .034 100.00000

TOTAL AREA= 77429
MUL FACTOR=1.0000E+00

START



check Column Pressure

TIMETABLE STOP

RUN# 173 JUN 29, 1992 09:02:38

AREA%

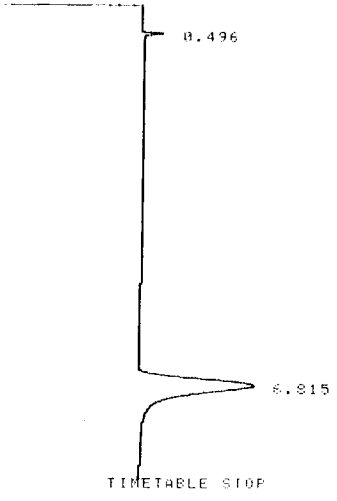
RT	AREA	TYPE	WIDTH	AREA%
.141	43359	PV	.035	3.21163
.505	41350	VB	.044	3.06282
6.972	1265353	PB	.311	93.72557

TOTAL AREA=1350062
MUL FACTOR=1.0000E+00

02/14/96 Ethanol @ 478 ppm

* RUN # 174 JUN 29, 1992 09:29:49

START



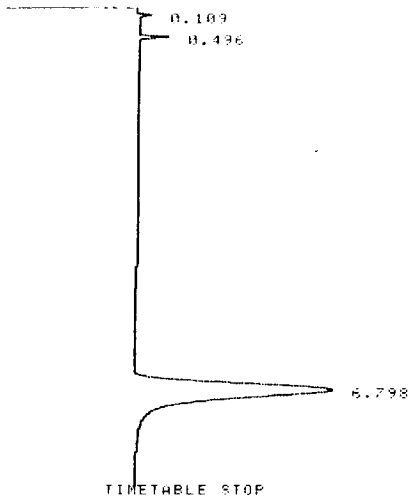
TIMETABLE STOP

AREA%

RT	AREA	TYPE	WIDTH	AREA%
.496	34983	VB	.041	2.42706
6.815	1406393	PB	.317	97.57293

TOTAL AREA=1441376
MUL FACTOR=1.0000E+00

* RUN # 175 JUN 29, 1992 09:42:34
START



TIMETABLE STOP

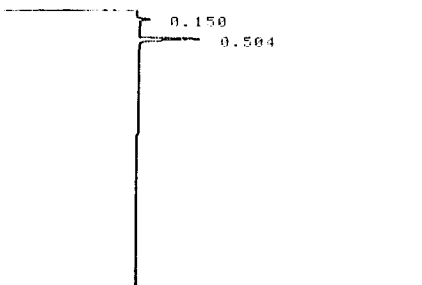
RUN# 175 JUN 29, 1992 09:42:34

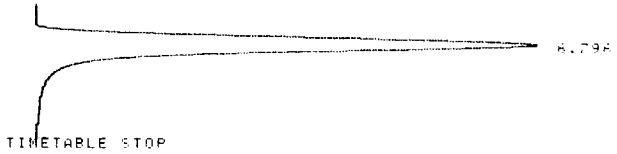
AREA%

RT	AREA	TYPE	WIDTH	AREA%
.109	21127	BB	.039	.88059
.496	53065	BB	.046	2.21180
6.798	2324989	PB	.312	96.90762

TOTAL AREA=2399181
MUL FACTOR=1.0000E+00

* RUN # 176 JUN 29, 1992 09:54:31
START





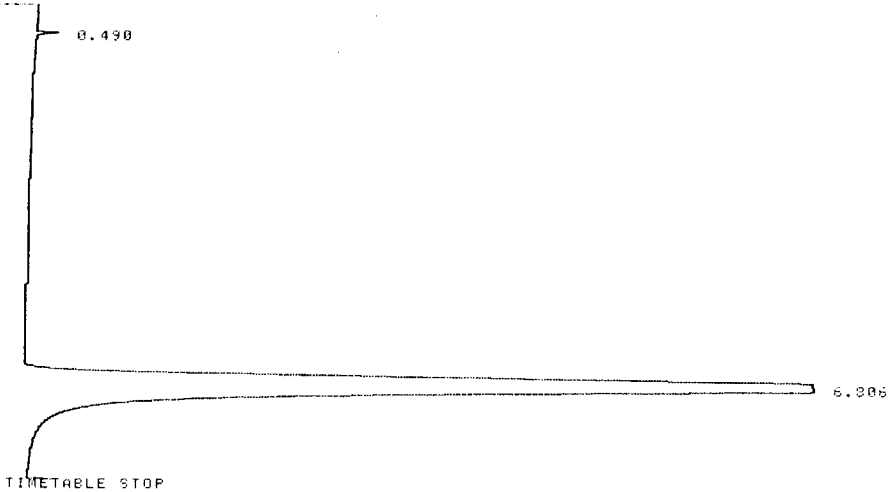
RUN# 176 JUN 29, 1992 09:54:31

AREA%

RT	AREA	TYPE	WIDTH	AREA%
.150	22644	PB	.044	.38646
.504	104915	VB	.045	1.79055
6.796	5731818	PB	.307	97.82301

TOTAL AREA=5859376
MUL FACTOR=1.0000E+00

* RUN # 177 JUN 29, 1992 10:04:00 Acetone Ethanol @ 4000ppm
START



RUN# 177 JUN 29, 1992 10:04:00

AREA%

RT	AREA	TYPE	WIDTH	AREA%
.490	34552	BV	.038	.30016
6.806	11476696	PB	.303	99.69984

TOTAL AREA=1.1511E+07
MUL FACTOR=1.0000E+00

* RUN # 178 JUN 29, 1992 10:18:44 (:) M. AM. (-)MM Acetylene @(.5:)ppm
START

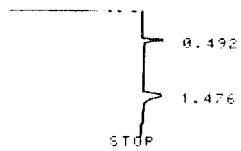
PUN# 178 JUN 29, 1992 10:19:44

AREA%

RT	AREA	TYPE	WIDTH	AREA%
.504	196310	PB	.042	78.75616
1.473	52953	PB	.119	21.24382

TOTAL AREA= 249263
MUL FACTOR=1.0000E+00

* PUN # 179 JUN 29, 1992 10:21:48
START



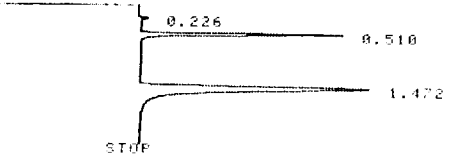
PUN# 179 JUN 29, 1992 10:21:48

AREA%

RT	AREA	TYPE	WIDTH	AREA%
.492	35614	VB	.042	26.33666
1.476	99612	PB	.119	73.66336

TOTAL AREA= 135226
MUL FACTOR=1.0000E+00

* PUN # 180 JUN 29, 1992 10:31:35
START

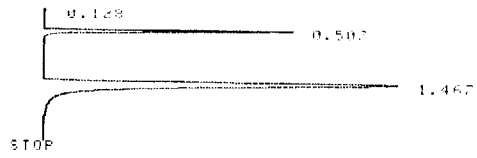


PUN# 180 JUN 29, 1992 10:31:35

AREA%

RT	AREA	TYPE	WIDTH	AREA%
.226	19588	PB	.055	1.54019
.510	315310	BB	.041	24.79254
1.472	936896	PB	.108	73.66726

TOTAL AREA=1271794
MUL FACTOR=1.0000E+00



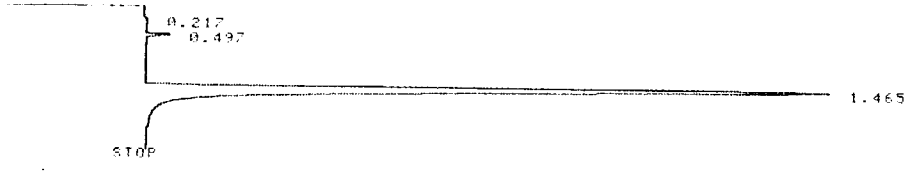
RUN# 181 JUN 29, 1992 10:35:42

AREA%

PT	AREA	TYPE	WIDTH	AREA%
.128	11121	BB	.062	.61162
.507	370387	PB	.039	20.37015
1.467	1436775	PB	.108	79.01821

TOTAL AREA=1818283
MUL FACTOR=1.0000E+00

* RUN # 182 JUN 29, 1992 10:39:31 Alan moves cursor to 82.5 ppm
START



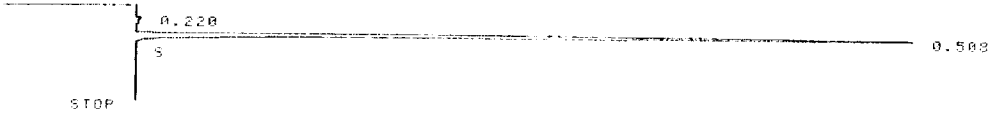
RUN# 182 JUN 29, 1992 10:39:31

AREA%

PT	AREA	TYPE	WIDTH	AREA%
.217	12593	BB	.082	.44437
.497	43944	BB	.046	1.55067
1.465	2777342	PB	.108	98.00496

TOTAL AREA=2833878
MUL FACTOR=1.0000E+00

* RUN # 183 JUN 29, 1992 10:46:26 Alan moves cursor to 20.5 ppm
START



RUN# 183 JUN 29, 1992 10:46:26

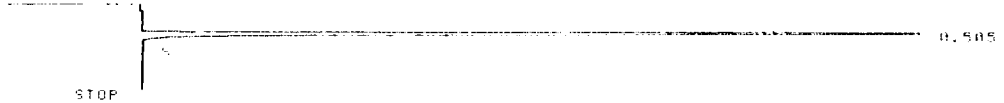
AREA%

PT	AREA	TYPE	WIDTH	AREA%
.503	1562938	SBB	.038	100.00000

TOTAL AREA=1562938

+ RUN # 184 JUN 29, 1992 10:48:27

START



PUN# 184 JUN 29, 1992 10:48:27

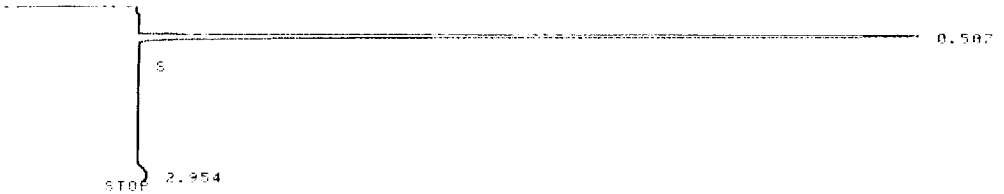
APEA:

PT	APEA	TYPE	WIDTH	APEA%
.505	1324686	SBB	.038	100.00000

TOTAL APEA=1324686
MUL FACTOR=1.0000E+00

+ RUN # 185 JUN 29, 1992 10:50:19

START



PUN# 185 JUN 29, 1992 10:50:19

APEA:

PT	APEA	TYPE	WIDTH	APEA%
.507	3006488	SPB	.037	96.38368
2.954	112804	I BH	.260	3.61633

TOTAL APEA=3119293
MUL FACTOR=1.0000E+00

+ RUN # 186 JUN 29, 1992 10:54:33

START

PUN# 186 JUN 29, 1992 10:54:33

APEA:

PT	APEA	TYPE	WIDTH	APEA%
.232	14198	BB	.079	.19883
.508	7504925	SBB	.037	99.81120

TOTAL APEA=7519123

```
* RUN # 187      JUN 29, 1992  10:59:19
START
```

```
RUN#   187          JUN 29, 1992  10:59:19

AREA%
      PT       AREA TYPE  WIDTH       AREA%
    .220      14852   BB    .077      .15052
    .509    9852435  SBB    .038    99.84947

TOTAL AREA=9.8673E+06
MUL FACTOR=1.0000E+00
```

```
* RUN # 188      JUN 29, 1992  11:01:49
START
```

```
RUN#   188          JUN 29, 1992  11:01:49

AREA%
      PT       AREA TYPE  WIDTH       AREA%
    .510   14505464  SBB    .038    99.92867
    .794      10352   BB    .041      .07133

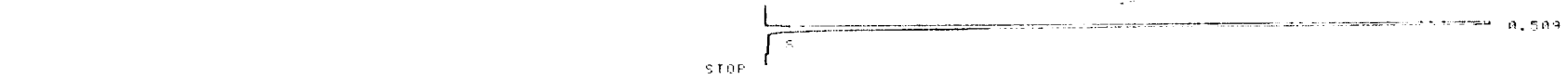
TOTAL AREA=1.4516E+07
MUL FACTOR=1.0000E+00
```

```
* RUN # 189      JUN 29, 1992  11:06:28
START
```

```
RUN#   189          JUN 29, 1992  11:06:28

AREA%
      PT       AREA TYPE  WIDTH       AREA%
    .155      10922   PB    .062      .05709
    .507   19108000  SBB    .037    99.87674
    .791      12665   BB    .039      .06620

TOTAL AREA=1.9132E+07
MUL FACTOR=1.0000E+00
```



RUN# 190 JUN 29, 1992 11:11:43

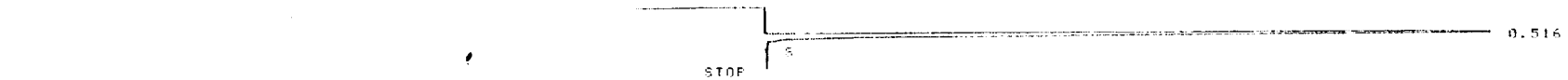
AREA%

RT	AREA	TYPE	WIDTH	AREA%
.509	3773430	SHB	.038	100.00000

TOTAL AREA=3773430
MUL FACTOR=1.0000E+00

TAPE C * RUN # 191 JUN 29, 1992 11:13:50 850 ppm

START



RUN# 191 JUN 29, 1992 11:13:50

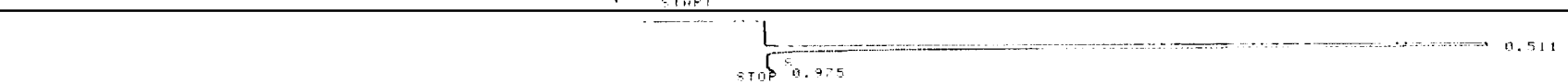
AREA%

RT	AREA	TYPE	WIDTH	AREA%
.516	3320342	SHB	.037	100.00000

TOTAL AREA=3320342
MUL FACTOR=1.0000E+00

Rack * RUN # 192 JUN 29, 1992 11:17:25 1511 ppm methane

START



RUN# 192 JUN 29, 1992 11:17:25

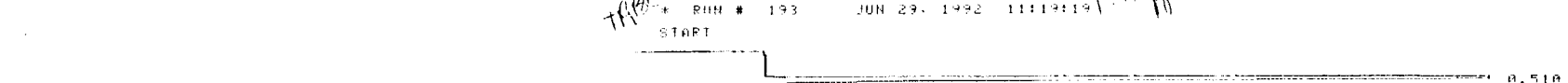
AREA%

RT	AREA	TYPE	WIDTH	AREA%
.511	7433792	SHB	.037	99.60970
.975	29127	I VH	.083	.39029

TOTAL AREA=7462918
MUL FACTOR=1.0000E+00

TAPE C * RUN # 193 JUN 29, 1992 11:19:19 1511 ppm methane

START



```
      PT       AREA TYPE  WIDTH       AREA%
    .510    7455674  SNB    .038   100.00000

TOTAL AREA=7455674
MUL FACTOR=1.0000E+00
```

Plate + RUN # 194 JUN 29, 1992 11:21:35 30.7 ppm Melt ... Run 01

START

STOP

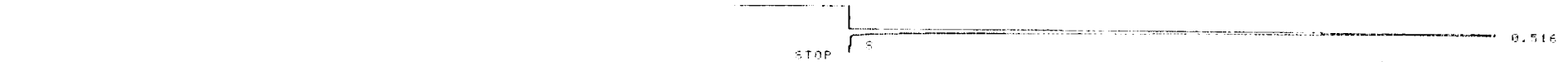
```
RUN#   194          JUN 29, 1992  11:21:35

AREA%
      PT       AREA TYPE  WIDTH       AREA%
    .507    3155418  SPB    .036   100.00000

TOTAL AREA=3155418
MUL FACTOR=1.0000E+00
```

Plate + RUN # 195 JUN 29, 1992 11:22:59 30.7 ppm Melt ... Run 02

START



STOP

```
RUN#   195          JUN 29, 1992  11:22:59

AREA%
      PT       AREA TYPE  WIDTH       AREA%
    .516    3088570  SPB    .037   100.00000

TOTAL AREA=3088570
MUL FACTOR=1.0000E+00
```

Plate + RUN # 196 JUN 29, 1992 11:24:40 30.7 ppm Melt Run 03

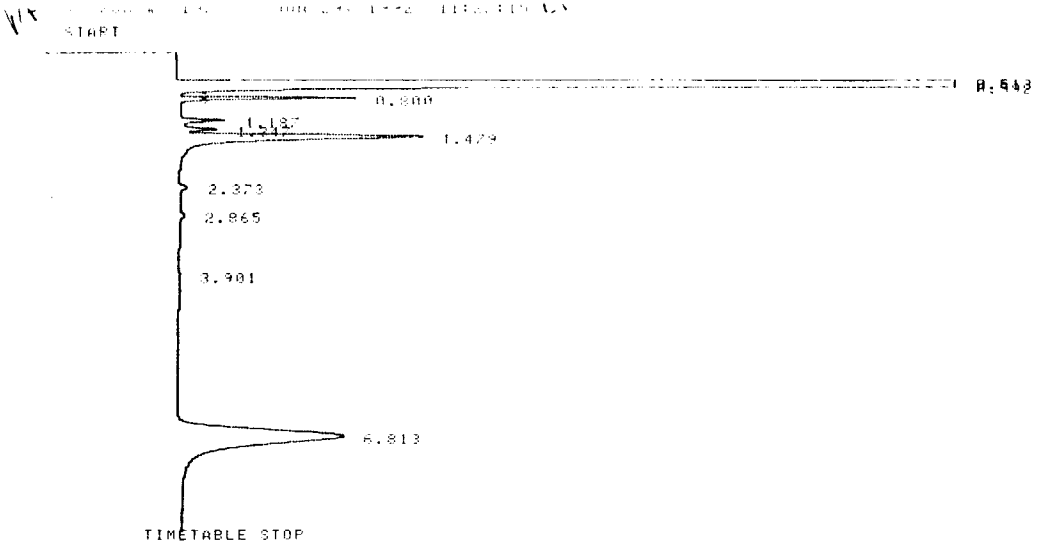
START

STOP

```
RUN#   196          JUN 29, 1992  11:24:40

AREA%
      PT       AREA TYPE  WIDTH       AREA%
    .513    3015718  SPB    .037   100.00000

TOTAL AREA=3015718
MUL FACTOR=1.0000E+00
```



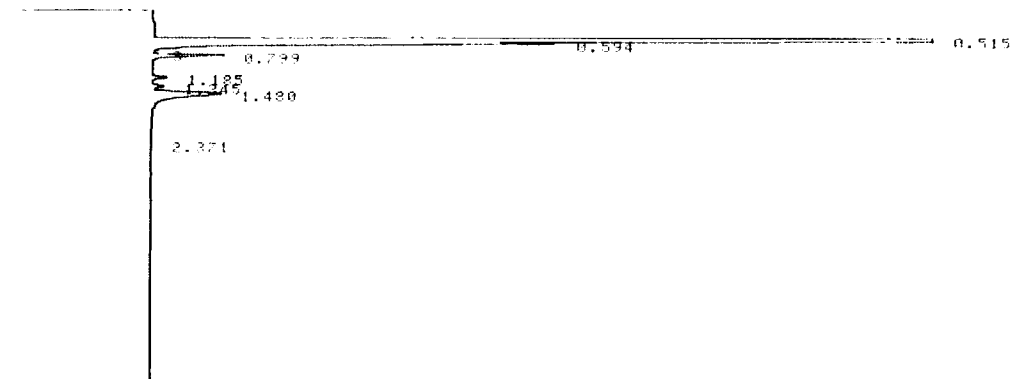
RUN# 197 JUN 29, 1992 11:27:15

AREA%

RT	AREA	TYPE	WIDTH	AREA%
.513	21334416	SBB	.041	83.88080
.592	671033	TBB	.032	2.63831
.800	268840	BB	.040	1.05700
1.187	98898	PV	.060	.38884
1.347	78251	VV	.060	.30766
1.479	960489	VB	.107	3.77637
2.373	34726	PV	.091	.13653
2.865	36030	VV	.120	.14166
3.901	24988	PV	.197	.09825
6.813	1926545	PB	.313	7.57462

TOTAL AREA=2.5434E+07
MUL FACTOR=1.0000E+00

TABLE Comfort Head



TIMETABLE STOP

RUN# 199 JUN 29, 1992 11:36:01

AREA%

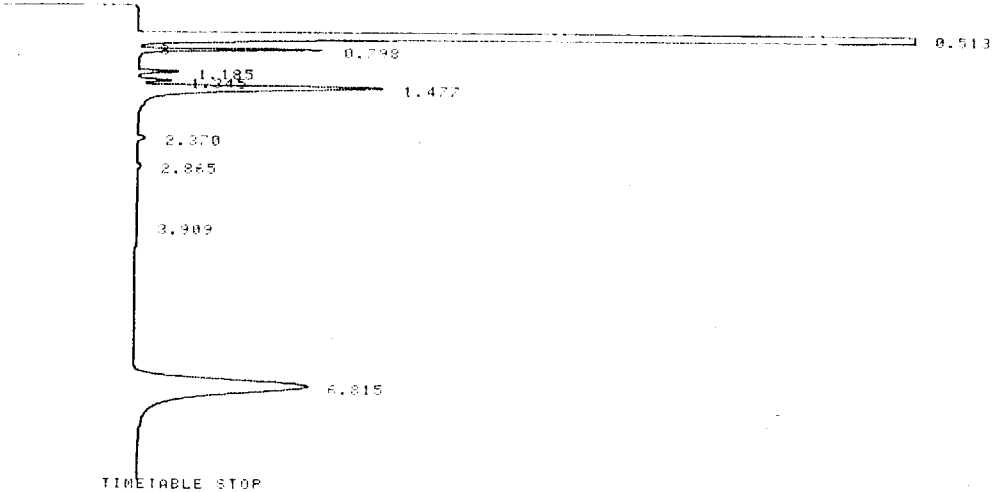
PT	AREA	TYPE	WIDTH	AREA%
.515	8213009	SHB	.039	82.55152
.594	209767	TBB	.030	2.10944
.799	107525	BB	.039	1.08077
1.185	28784	BV	.047	.28932
1.345	28769	VV	.057	.28917
1.480	290060	VB	.110	2.91548
2.371	11843	BB	.081	.11904
6.815	1059196	PB	.314	10.64631

TOTAL AREA=9.9489E+06
MUL FACTOR=1.0000E+00

RACK

BREAD OVEN REAR

* RUN # 199 JUN 29, 1992 11:44:59
START



TIMETABLE STOP

RUN# 199 JUN 29, 1992 11:44:59

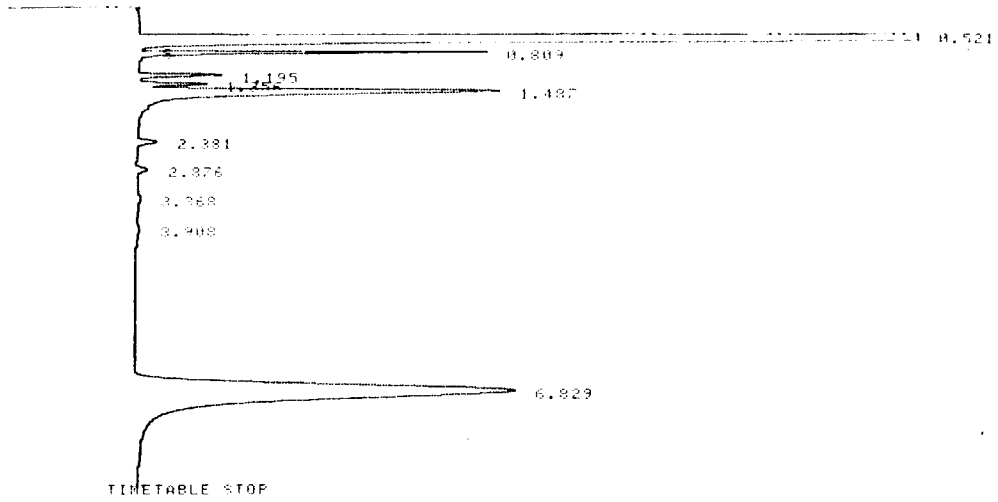
AREA%

PT	AREA	TYPE	WIDTH	AREA%
.513	22190464	SBB	.043	86.26480
.798	276289	BB	.039	1.07407
1.185	74419	BP	.047	.28930
1.345	70210	PV	.055	.27294
1.477	978373	VB	.107	3.80340
2.370	32192	BP	.084	.12515
2.865	26055	PV	.103	.10129
3.909	41338	VP	.282	.16070
6.815	2034337	PB	.314	7.90843

TABLE

* RUN # 200 JUN 29, 1992 11:53:50 BREAD OVEN FRONT

START



TIMETABLE STOP

RUN# 200 JUN 29, 1992 11:53:50

AREA%

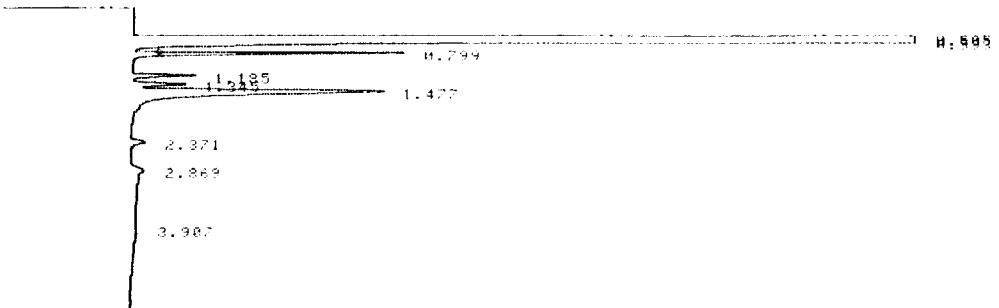
PT	AREA	TYPE	WIDTH	AREA%
.521	31047040	/SHB	.060	81.83277
.809	529378	BB	.040	1.39532
1.195	152694	PV	.048	.40247
1.356	142215	VV	.055	.37485
1.487	1462373	VB	.108	3.85606
2.381	65141	PP	.084	.17170
2.876	45344	PV	.097	.11952
3.368	38863	BV	.192	.10243
3.908	51295	VP	.249	.13520
6.829	4404701	PB	.310	11.60976

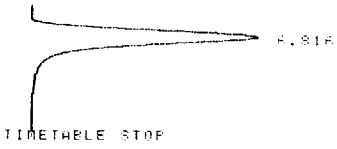
TOTAL AREA=3.7940E+07
MUL FACTOR=1.0000E+00

RACK

* RUN # 201 JUN 29, 1992 12:03:10 Bread Oven Rear

START





RUN# 201 JUN 29, 1992 12:03:10

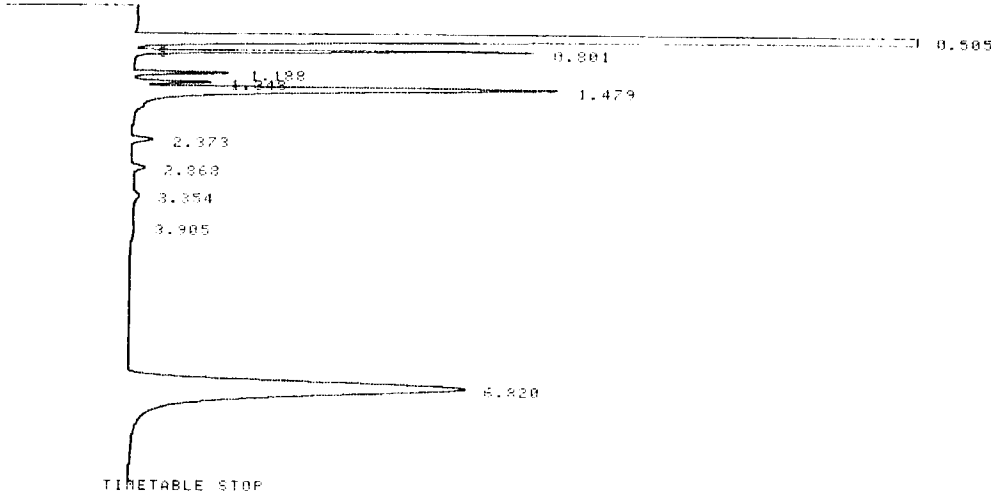
AREA%

PT	AREA	TYPE	WIDTH	AREA%
.505	27058768	SBB	.052	83.31638
.593	826854	TBB	.030	2.54596
.799	407948	BB	.039	1.25611
1.185	114868	PV	.048	.35369
1.345	104999	VV	.054	.32330
1.477	991576	VB	.106	3.05315
2.371	50486	PV	.087	.15545
2.869	91385	VV	.167	.28138
3.907	170439	VV	.542	.52480
6.816	2659818	PB	.313	8.18982

TOTAL AREA=3.2477E+07
MUL FACTOR=1.0000E+00

TABLE

* RUN # 202 JUN 29, 1992 12:12:10 BREAD OVEN FRONT
START



RUN# 202 JUN 29, 1992 12:12:10

AREA%

PT	AREA	TYPE	WIDTH	AREA%
.505	33071104	SPB	.064	82.97734
.801	605023	BB	.040	1.51804
1.188	173743	PV	.048	.43593
1.348	161840	VV	.055	.40607
1.479	1714995	VB	.108	4.30302

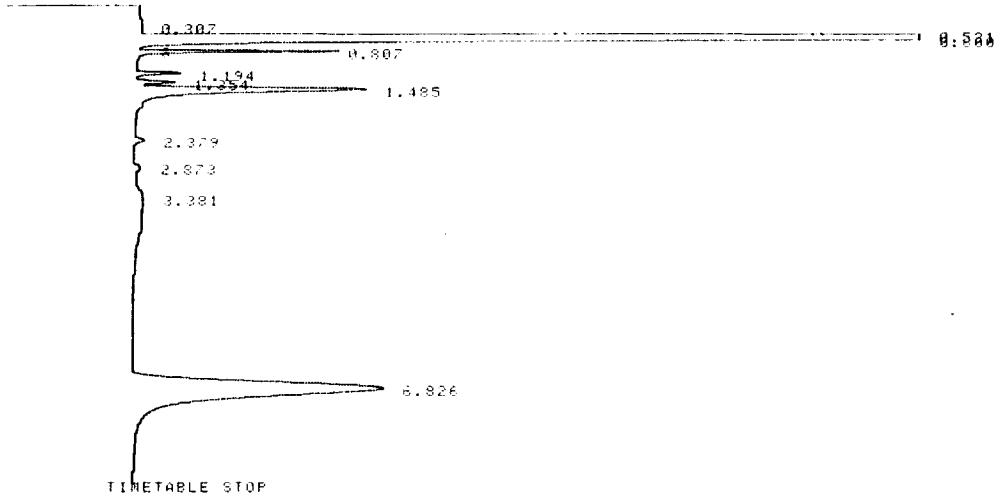
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
3.905	42579	PP	.229	.10683
6.820	3930188	PB	.310	9.86183

TOTAL AREA=3.9856E+07
MUL FACTOR=1.0000E+00

RAW

BREAD OVEN REAR

* RUN # 203 JUN 29, 1992 12:21:00
START



TIMETABLE STOP

RUN# 203 JUN 29, 1992 12:21:00

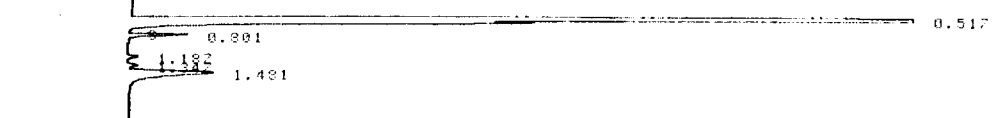
AREA%

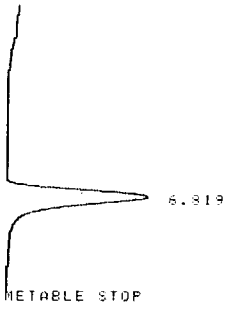
RT	AREA	TYPE	WIDTH	AREA%
.307	32930	PH	.259	.11525
.521	23265392	SHB	.045	81.42803
.600	612083	TBB	.030	2.14227
.807	302181	BB	.039	1.05762
1.194	82617	BP	.048	.28916
1.354	79245	PV	.055	.27735
1.485	922168	VB	.107	3.22755
2.379	37527	PP	.084	.13134
2.873	47370	PV	.140	.16579
3.381	233226	VV	.523	.81628
6.826	2956998	PB	.313	10.34939

TOTAL AREA=2.8572E+07
MUL FACTOR=1.0000E+00

TABLE

* RUN # 204 JUN 29, 1992 12:30:19 COMFORT MODE
START





TIMETABLE STOP

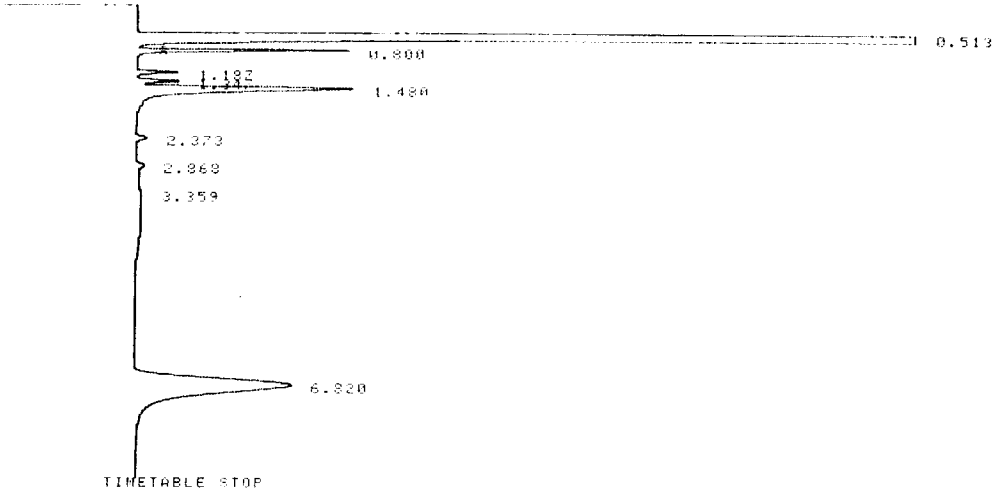
RUN# 204 JUN 29, 1992 12:30:19

AREA%

RT	AREA	TYPE	WIDTH	AREA%
.517	8382195	SPB	.041	78.16214
.801	92386	BB	.040	.86148
1.187	21820	BP	.047	.20347
1.347	24565	PV	.055	.22906
1.481	355105	VB	.109	3.31128
2.375	31068	BV	.143	.28970
2.878	138933	VV	.291	1.29552
6.819	1679043	PB	.314	15.64738

TOTAL AREA=1.0724E+07
MUL FACTOR=1.0000E+00

RACK * RUN # 205 JUN 29, 1992 12:39:14 BREAD OVEN REAR
START



TIMETABLE STOP

RUN# 205 JUN 29, 1992 12:39:14

AREA%

RT	AREA	TYPE	WIDTH	AREA%

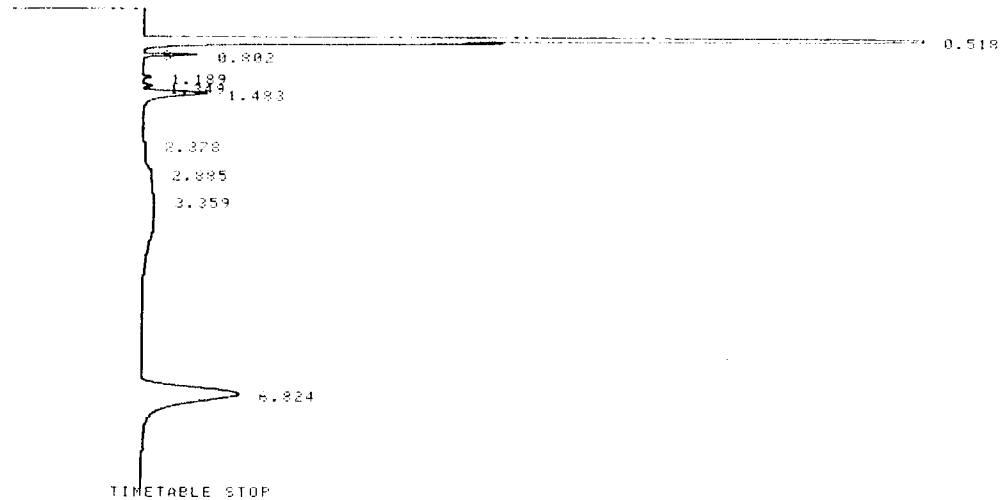
1.347	87775	VV	.050	.29414
1.480	876583	VB	.108	3.93751
2.373	42759	BV	.085	.14329
2.968	57259	VV	.143	.19189
3.359	154497	VV	.503	.51941
6.820	1864479	PB	.314	6.24971

TOTAL AREA=2.9941E+07
MUL FACTOR=1.0000E+00

TABLE

* RUN # 206 JUN 29, 1992 12:48:30 CONFIDENT MUDD

START



TIMETABLE STOP

RUN# 206 JUN 29, 1992 12:48:30

AREA%

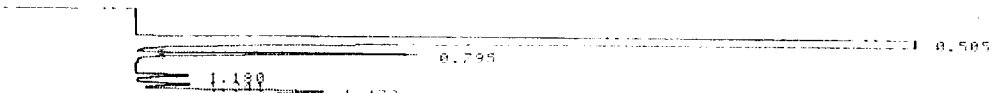
PT	AREA	TYPE	WIDTH	AREA%
.518	7982208	SPB	.040	79.09222
.802	84265	BB	.040	.83495
1.199	19238	PV	.048	.19062
1.349	23749	VV	.058	.23532
1.483	275330	VB	.110	2.72812
2.378	23283	BV	.125	.23070
2.885	113135	VV	.273	1.12101
3.359	384412	VV	.731	3.80897
6.824	1186662	PB	.317	11.75812

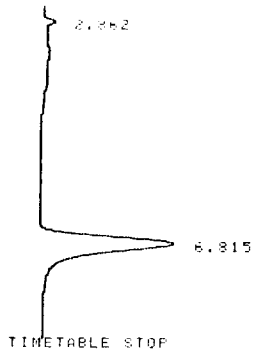
TOTAL AREA=1.0092E+07
MUL FACTOR=1.0000E+00

RACK

* RUN # 207 JUN 29, 1992 13:57:25 REAL

START





RUN# 207 JUN 29, 1992 12:57:25

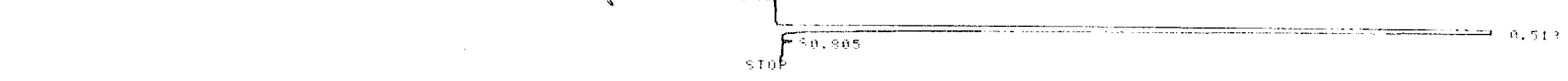
AREA%

PT	AREA	TYPE	WIDTH	AREA%
.505	29792672	SHB	.057	90.66067
.795	420889	BB	.039	1.28079
1.180	99340	BV	.049	.30230
1.341	113774	VV	.055	.34622
1.473	757876	VB	.107	2.30626
2.367	55717	PP	.084	.16955
2.362	42456	PV	.103	.12920
6.815	1579019	PB	.313	4.80504

TOTAL AREA=3.2862E+07
MUL FACTOR=1.0000E+00

QC CHECK: HEAT TRACE
Methane @ high levels

RAW



798 ppm Methane

RUN# 208 JUN 29, 1992 13:08:44

AREA%

TOTAL AREA=3.4000E+07
MUL FACTOR=1.0000E+00

TABLE

+ RUN # 209 JUN 29, 1992 13:10:35 700 ppm Methane
START

RUN# 209 JUN 29, 1992 13:10:35

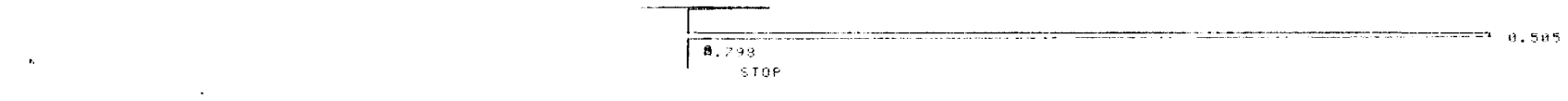
AREA%

PT	AREA	TYPE	WIDTH	AREA%
.513	24138816	SPB	.046	99.92030
.799	19233	BB	.039	.07961

TOTAL AREA=2.4158E+07
MUL FACTOR=1.0000E+00

BASE

+ RUN # 210 JUN 29, 1992 13:15:40 1400 ppm Methane
START



RUN# 210 JUN 29, 1992 13:15:40

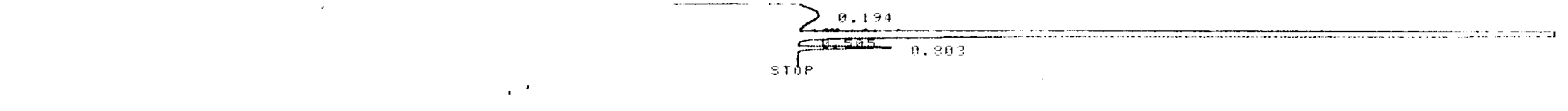
AREA%

PT	AREA	TYPE	WIDTH	AREA%
.505	30285360	SPB	.050	99.53472
.798	141575	BB	.038	.46530

TOTAL AREA=3.0427E+07
MUL FACTOR=1.0000E+00

TABLE

+ RUN # 211 JUN 29, 1992 13:17:14 1400 ppm Methane
START

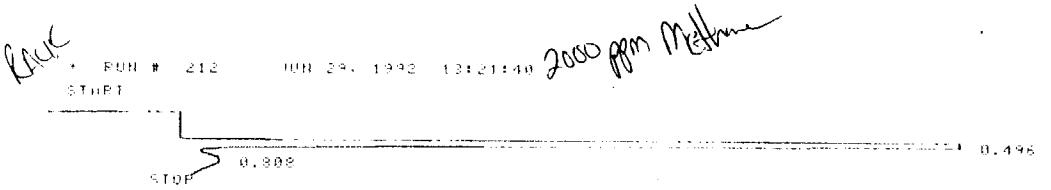


RUN# 211 JUN 29, 1992 13:17:14

AREA%

PT	AREA	TYPE	WIDTH	AREA%
.194	167117	BP	.243	.54167
.505	30538768	PB	.059	98.98403
.803	146231	BB	.039	.47430

RACK



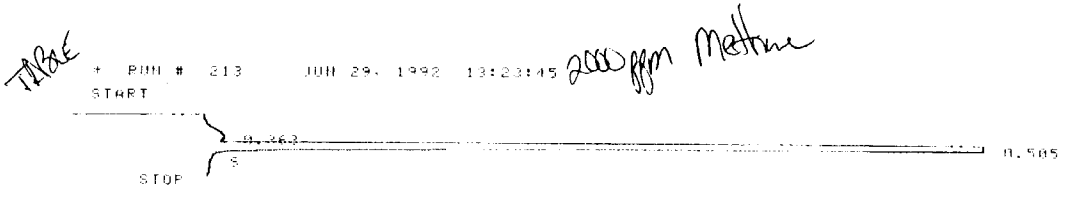
RUN# 212 JUN 29, 1992 13:21:40

AREA%

PT	AREA	TYPE	WIDTH	AREA%
.496	33666048	SHH	.065	99.41085
.808	199515	ITBB	.232	.58914

TOTAL AREA=3.3866E+07
MUL FACTOR=1.0000E+00

TABLE



RUN# 213 JUN 29, 1992 13:23:45

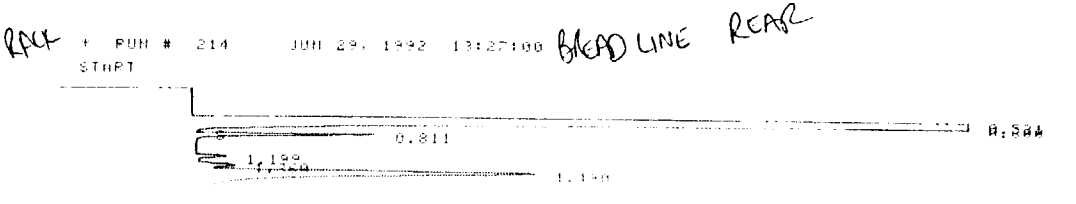
AREA%

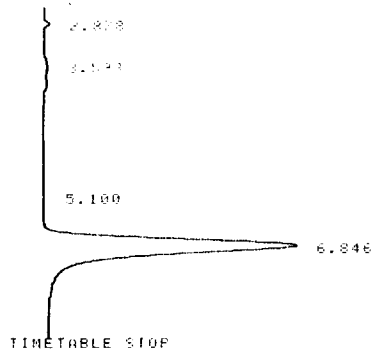
PT	AREA	TYPE	WIDTH	AREA%
.363	165998	PH	.232	.49961
.505	33059840	SHB	.064	99.50038

TOTAL AREA=3.3226E+07
MUL FACTOR=1.0000E+00

*

RACK





TIMETABLE STOP

RUN# 214 JUN 29, 1992 13:27:00

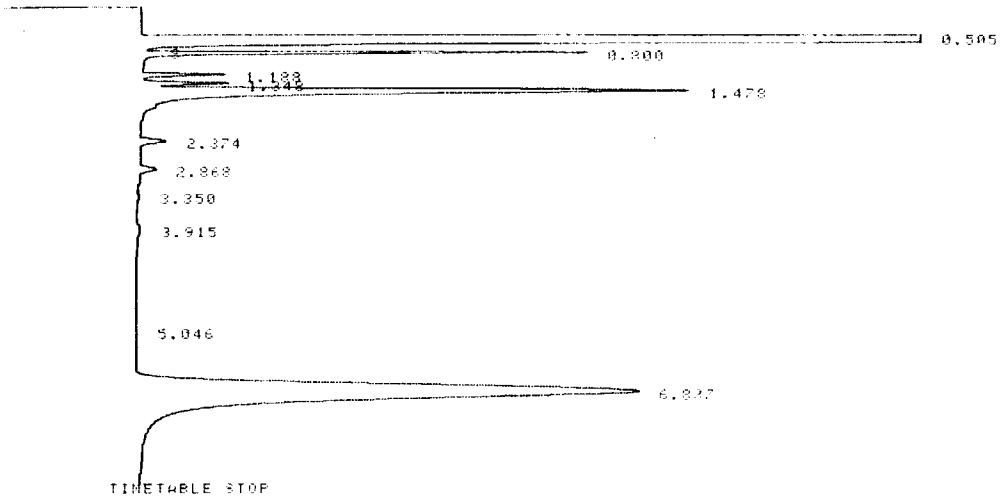
AREA:

PT	AREA	TYPE	WIDTH	AREA%
.521	23720112	SPB	.046	80.17683
.600	875248	TBB	.033	2.95844
.811	271023	BB	.040	.91609
1.199	57011	BV	.048	.19270
1.360	93248	VV	.064	.31519
1.490	1435515	VB	.113	4.85231
2.384	31113	BP	.081	.10517
2.878	26007	PV	.098	.08791
3.593	74461	PV	.319	.25169
5.100	79136	PB	.598	.26749
6.846	2921893	PB	.312	9.87635

TOTAL AREA=2.9585E+07
MUL FACTOR=1.0000E+00

TABLE RUN # 215 JUN 29, 1992 13:36:39 OVEN FRONT

START



TIMETABLE STOP

AREAS

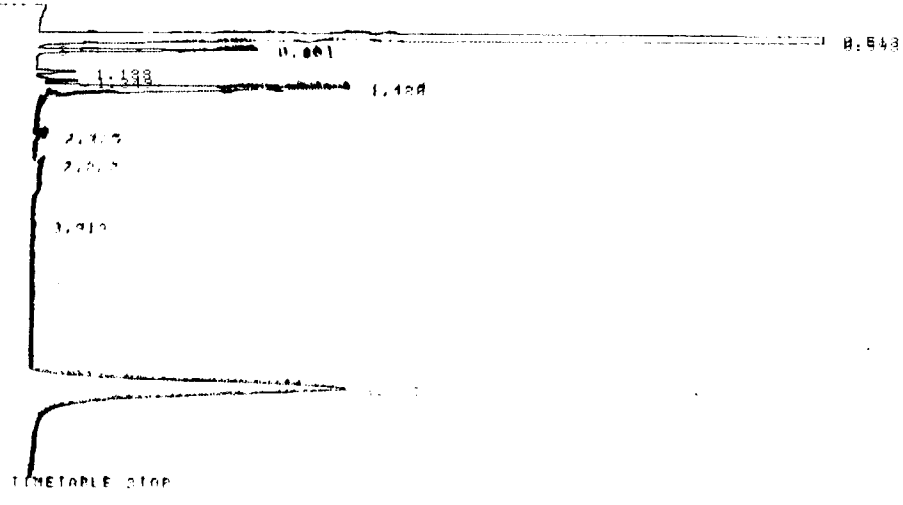
RT	AREA	TYPE	WIDTH	AREA%
.505	3616504	SHB	.070	79.41324
.800	573591	BB	.040	1.47417
1.188	155464	BV	.049	.34141
1.348	190085	VV	.057	.41744
1.478	2235963	VV	.109	4.91034
2.374	89636	BV	.087	.19685
2.968	77598	VV	.108	.17041
3.350	23501	VB	.134	.05161
3.915	67345	BB	.298	.14789
5.046	58993	VB	.499	.12956
6.837	5802305	BB	.310	12.74207

TOTAL AREA=4.5536E+07
MUL FACTOR=1.0000E+00

RAIL

* RUN # 216 JUN 29, 1992 13:45:50 REAR

START



RUN# 216 JUN 29, 1992 13:45:50

AREAS

RT	AREA	TYPE	WIDTH	AREA%
.505	3616504	SHB	.070	79.41324
.800	573591	BB	.040	1.47417
1.188	155464	BV	.049	.34141
1.348	190085	VV	.057	.41744
1.478	2235963	VV	.109	4.91034
2.374	89636	BV	.087	.19685
2.968	77598	VV	.108	.17041
3.350	23501	VB	.134	.05161
3.915	67345	BB	.298	.14789
5.046	58993	VB	.499	.12956
6.837	5802305	BB	.310	12.74207

TOTAL AREA=4.5536E+07
MUL FACTOR=1.0000E+00

TIMETABLE STOP

THIBLE

RUN# 217 JUN 29, 1992 13:56:12

AREA%

RT	AREA	TYPE	WIDTH	AREA%
.513	34089696	SHB	.066	79.05962
.805	597305	BB	.039	1.38525
1.191	139158	PV	.049	.32273
1.352	171779	VV	.057	.39838
1.482	2079283	VV	.110	4.82220
2.378	74987	BP	.083	.17391
2.872	61029	PV	.100	.14154
3.363	25684	VP	.141	.05957
3.920	77032	PP	.305	.17865
6.841	5803056	PB	.310	13.45824

TOTAL AREA=4.3119E+07
MUL FACTOR=1.0000E+00

* ATT 2 BREAK

* REPORT

RUN# 217 JUN 29, 1992 13:56:12

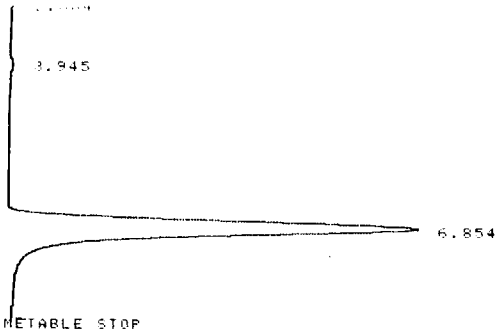
AREA%

RT	AREA	TYPE	WIDTH	AREA%
.513	34089696	SHB	.066	79.05962
.805	597305	BB	.039	1.38525
1.191	139158	PV	.049	.32273
1.352	171779	VV	.057	.39838
1.482	2079283	VV	.110	4.82220
2.378	74987	BP	.083	.17391
2.872	61029	PV	.100	.14154
3.363	25684	VP	.141	.05957
3.920	77032	PP	.305	.17865
6.841	5803056	PB	.310	13.45824

TOTAL AREA=4.3119E+07
MUL FACTOR=1.0000E+00

* RUN # 218 JUN 29, 1992 14:07:55 REAL

RA: JUST ART



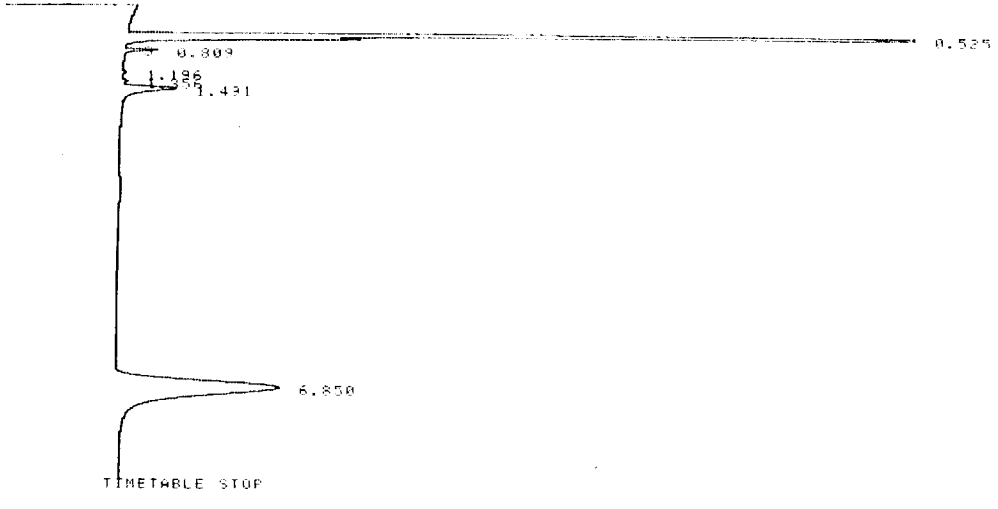
RUN# 218 JUN 29, 1992 14:07:55

AREA%

RT	AREA	TYPE	WIDTH	AREA%
.530	21849760	VBHB	.042	74.75066
.602	959082	TBB	.035	3.28113
.814	251490	BB	.039	.86038
1.201	52313	PP	.047	.17897
1.361	64642	PV	.057	.22115
1.493	1183452	VB	.107	4.04873
2.387	27167	BB	.077	.09294
2.884	25610	PV	.100	.08761
3.945	58065	PP	.268	.19865
6.854	4758634	PB	.311	16.27985

TOTAL AREA=2.9230E+07
MUL FACTOR=1.0000E+00

TABLE * RUN # 219 JUN 29, 1992 14:17:10 Comfort Hood
START



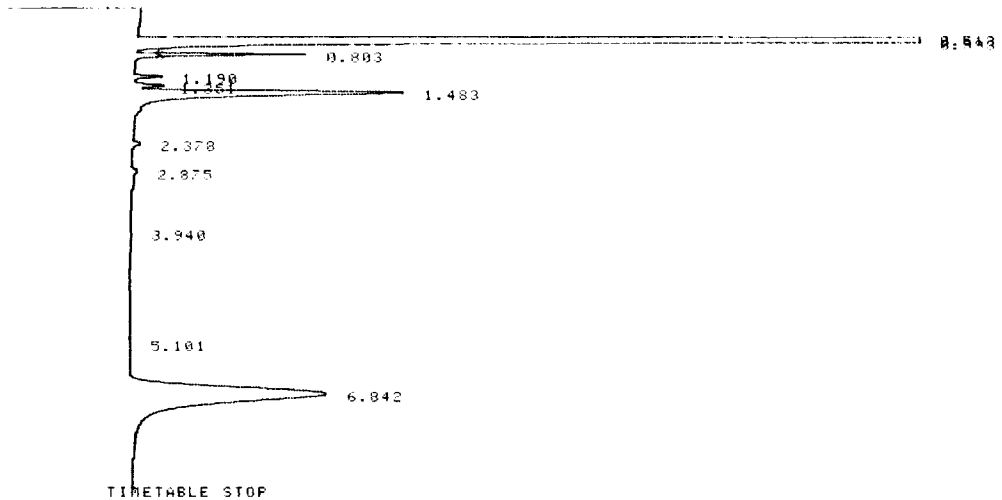
RUN# 219 JUN 29, 1992 14:17:10

RT	AREA	TYPE	WIDTH	AREA%
.525	4949357	SPB	.040	68.82730
.803	54137	BB	.040	.75285
1.196	10904	BV	.046	.15163
1.356	15286	VV	.061	.21257
1.491	239021	VB	.113	3.32390
6.850	1922273	PB	.314	26.73174

TOTAL AREA=7190976
MUL FACTOR=1.0000E+00

RAIL

* RUN # 220 JUN 29, 1992 14:26:29 REAR
START



TIMETABLE STOP

RUN# 220 JUN 29, 1992 14:26:29

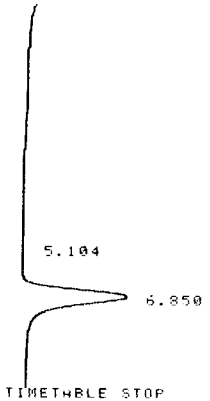
AREA%

RT	AREA	TYPE	WIDTH	AREA%
.513	22497840	SBB	.043	32.65910
.593	748754	TBB	.033	2.75099
.803	256455	BB	.040	.94224
1.190	54595	PP	.048	.20059
1.351	68603	PV	.057	.25205
1.483	1110593	VB	.109	4.08042
2.378	29990	BB	.082	.11019
2.875	29151	BV	.109	.10710
3.940	37579	PP	.285	.13807
5.101	65819	PB	.612	.24182
6.842	2318256	PB	.316	8.51749

TOTAL AREA=2.7218E+07
MUL FACTOR=1.0000E+00

TRACE

* RUN # 221 JUN 29, 1992 14:35:29 Comfort Road
START



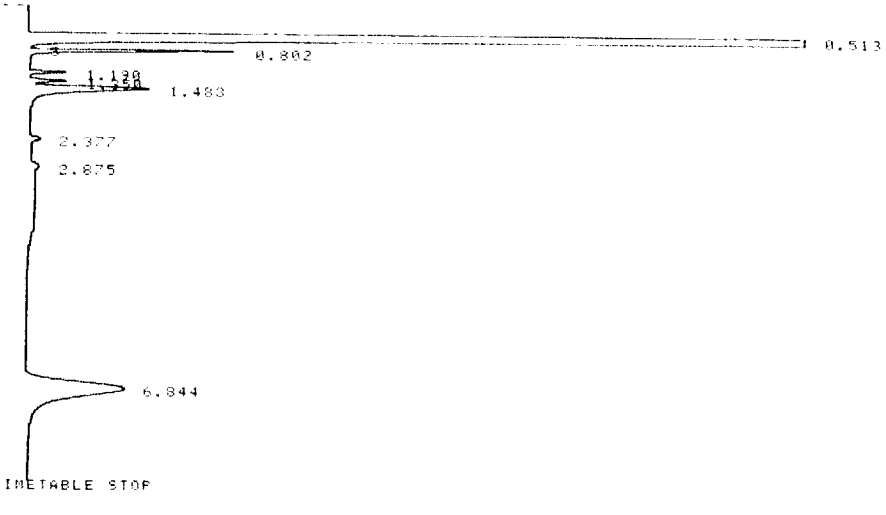
RUN# 221 JUN 29, 1992 14:35:29

AREA%

RT	AREA	TYPE	WIDTH	AREA%
.525	6861117	SHB	.039	81.18448
.810	74984	BB	.040	.88725
1.196	14526	BP	.045	.17188
1.356	19875	PV	.057	.23517
1.492	200857	VB	.111	2.37665
5.104	54054	PB	.585	.63960
6.850	1225855	PB	.318	14.50499

TOTAL AREA=8.4513E+06
MUL FACTOR=1.0000E+00

RAW * RUN # 222 JUN 29, 1992 14:44:30 REAL
START



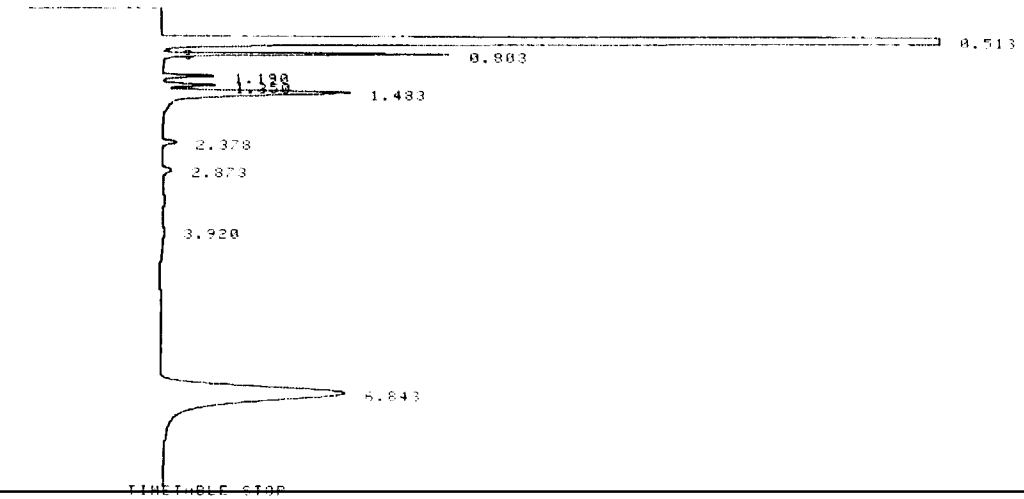
RUN# 223 JUN 29, 1992 14:44:30

RT	AREA	TYPE	WIDTH	AREA%
.513	25648928	VSHB	.049	92.06813
.802	309993	BB	.040	1.11274
1.190	69435	PV	.048	.24924
1.350	81781	VV	.055	.29356
1.483	491836	VB	.108	1.76547
2.377	38481	PP	.083	.13813
2.875	31913	PV	.108	.11455
6.844	1186288	VB	.320	4.25824

TOTAL AREA=2.7853E+07
MUL FACTOR=1.0000E+00

TABLE

* RUN # 223 JUN 29, 1992 14:53:29 FLOAT
START



TIMED TABLE STOP

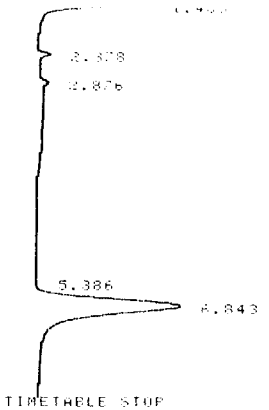
RUN# 223 JUN 29, 1992 14:53:29

AREA%:

RT	AREA	TYPE	WIDTH	AREA%
.513	23613872	VSHB	.057	88.67642
.803	430065	BB	.040	1.28780
1.190	97447	PV	.048	.29180
1.350	114429	VV	.055	.34265
1.483	758033	VB	.107	2.26987
2.378	56664	PV	.087	.16968
2.873	61914	VV	.132	.18540
3.920	82214	VP	.366	.24618
6.843	2180803	PB	.317	6.53024

TOTAL AREA=3.3395E+07
MUL FACTOR=1.0000E+00

* RUN # 224 JUN 29, 1992 15:02:55 PACK - PEAK
START



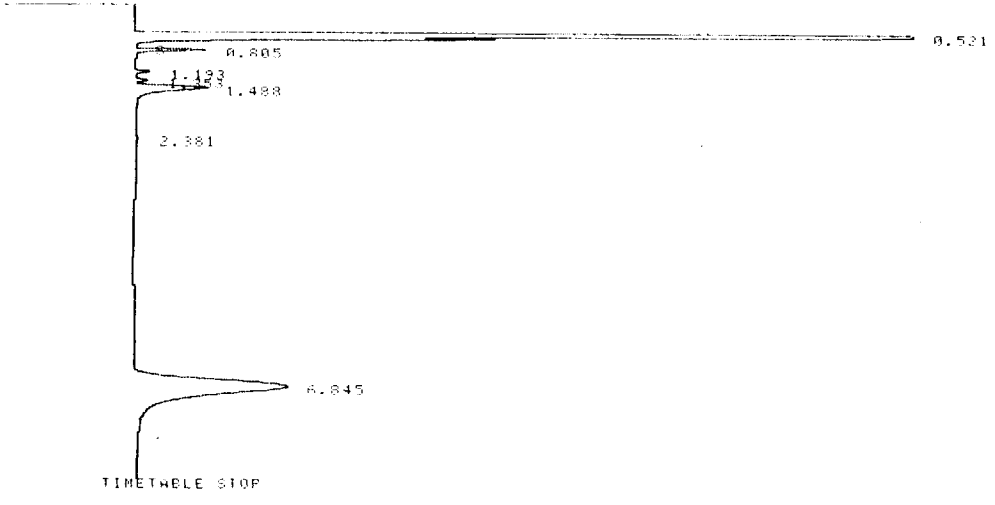
RUN# 224 JUN 29, 1992 15:02:55

AREA%

PT	AREA	TYPE	WIDTH	AREA%
.513	24467776	VSHB	.047	87.61222
.600	569344	TBB	.028	2.03866
.804	321790	BB	.039	1.15224
1.190	83918	PV	.048	.30049
1.352	84865	VV	.055	.30388
1.485	457208	VB	.107	1.63713
2.378	50369	PV	.099	.18036
2.876	95162	VV	.208	.34075
5.386	87235	PV	.948	.31236
6.843	1704703	VB	.317	6.12196

TOTAL AREA=2.7927E+07
MUL FACTOR=1.0000E+00

TABLE * RUN # 225 JUN 29, 1992 15:13:30 FRONT
START



RUN# 225 JUN 29, 1992 15:12:30

AREA%

RT	AREA	TYPE	WIDTH	AREA%
.521	8869466	SHB	.039	79.44122
.805	107109	BB	.039	.95934
1.193	28122	PV	.047	.25188
1.353	29446	VV	.056	.26374
1.488	297014	VB	.109	2.66027
2.381	23230	BV	.121	.20806
6.845	1810422	PB	.315	16.21509

TOTAL AREA=1.1165E+07
MUL FACTOR=1.0000E+00

* TIME

BREAK

*
*

* RUN # 226 JUN 29, 1992 15:22:46
START

0.500

1.484

5.106

6.835

TIMETABLE STOP

Ethanol @ 498 ALM 029496
SYRINGE Possibly low conc from 4000ppm
CLEAN RESHOT

SYRINGE/REGULATOR
PROBLEM

RUN# 226 JUN 29, 1992 15:28:46

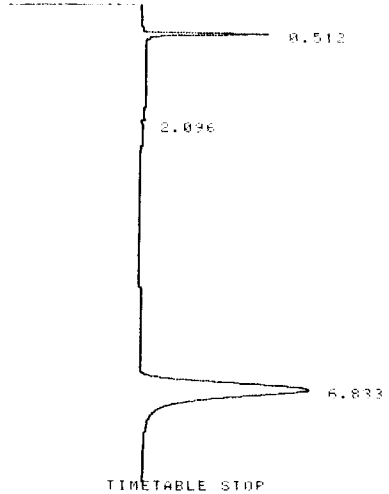
AREA%

RT	AREA	TYPE	WIDTH	AREA%
.500	38775	BB	.044	2.10397
1.484	47664	PB	.164	2.58506
5.106	63301	PB	.421	3.43314
6.835	1694083	PB	.315	91.87885

TOTAL AREA=1843823
MUL FACTOR=1.0000E+00

* RUN # 227 JUN 29, 1992 15:32:15
START

1.5 dilution - ACN @ 11208 Ethanol @ RT
New Syringe



TIMETABLE STOP

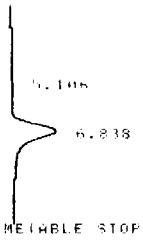
RUN# 227 JUN 29, 1992 15:32:15

AREA%

RT	AREA	TYPE	WIDTH	AREA%
.512	217914	BB	.046	8.99492
2.096	28074	PV	.180	1.15882
6.833	2176646	PB	.343	89.84624

TOTAL AREA=2422635
MUL FACTOR=1.0000E+00

* RUN # 228 JUN 29, 1992 15:43:16
START



RUN# 228 MON 29, 1992 15:43:14

AREAS

PT	AREA	TYPE	WIDTH	AREAS
.495	34904	VB	.043	5.40287
5.106	100.00	PB	[illegible]	[illegible]
6.838	31.21	PB	.029	0.01744

[illegible]
MIN FACTOR=1.0000E+00

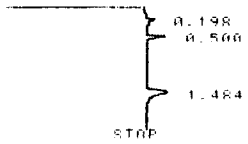
* LIST: LIST
PEAK CAPACITY: 1944

ZERO = 5. 0.013
ATT 2^ = 6
CHT SP = 1.0
AR REJ = 10000
THRSH = 4
PK WD = 0.10

* LIST: LIST
PEAK CAPACITY: 1944

ZERO = 5. -0.002
ATT 2^ = 6
CHT SP = 1.0
AR REJ = 10000
THRSH = 4
PK WD = 0.10

* RUN # 229 MON 29, 1992 15:56:45 AAL 13774 Acetaldehyde @ 303 ppm
START



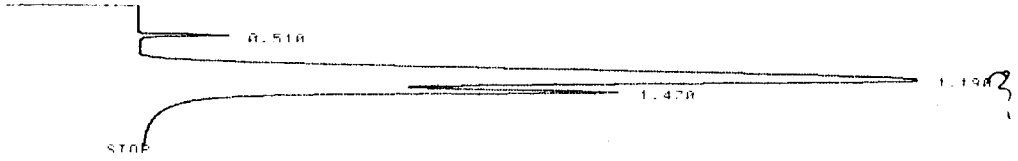
RUN# 229 MON 29, 1992 15:56:45

AREAS

PT	AREA	TYPE	WIDTH	AREAS
198	19148	BB	.051	13.41407

TOTAL AREA= 146189
MULT FACTOR=1.0000E+00

* RUN # 230 JUN 29, 1992 16:02:03
START



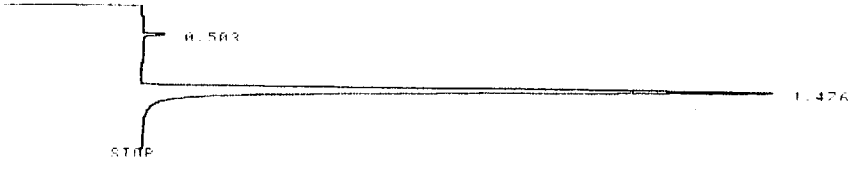
RUN# 230 JUN 29, 1992 16:02:03

AREA%

RT	AREA	TYPE	WIDTH	AREA%
.510	147227	VB	.043	1.35173
1.190	8261129	PV	.282	75.84733
1.470	2483432	VB	.141	22.80097

TOTAL AREA=1.0892E+07
MULT FACTOR=1.0000E+00

* RUN # 231 JUN 29, 1992 16:05:51 ALM 002105 Acetaldehyde @ 82.5ppm
START



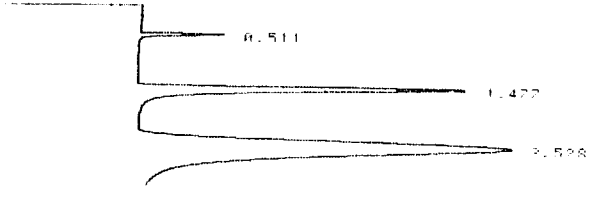
RUN# 231 JUN 29, 1992 16:05:51

AREA%

RT	AREA	TYPE	WIDTH	AREA%
.503	49893	VB	.056	1.94188
1.476	2519534	PB	.186	98.05812

TOTAL AREA=2569427
MULT FACTOR=1.0000E+00

* RUN # 232 JUN 29, 1992 16:10:10 1:2 dilution ALM 002105 Acetaldehyde @ 41.2ppm
START



RUN# 233 JUN 29, 1992 16:18:18

AREA%

RT	AREA	TYPE	WIDTH	AREA%
.511	142682	BB	.043	2.32036
1.477	1339442	PB	.108	21.63217
2.528	4673629	T PH	.330	76.04746

TOTAL AREA=6145674
MULTIPLIER=1.0000E+00

RACK * RUN # 233 JUN 29, 1992 16:19:01 QC CHECK 1991 ppm Methane
START

0.523

STOP

RUN# 233 JUN 29, 1992 16:19:01

AREA%

RT	AREA	TYPE	WIDTH	AREA%
.523	7283315	SHR	.037	100.00000

TOTAL AREA=7283315
MULTIPLIER=1.0000E+00

TABLE * RUN # 234 JUN 29, 1992 16:21:14 QC CHECK 1991 ppm Methane
START

0.516

STOP

RUN# 234 JUN 29, 1992 16:21:14

AREA%

RT	AREA	TYPE	WIDTH	AREA%
.516	7199411	SBB	.037	100.00000

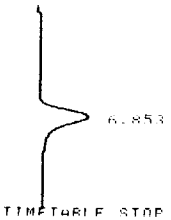
TOTAL AREA=7199411
MULTIPLIER=1.0000E+00

TABLE * RUN # 235 JUN 29, 1992 16:23:59 QC CHECK HEAT TRACE Ethane @ 200ppm
START

0.529

1.503

1.865



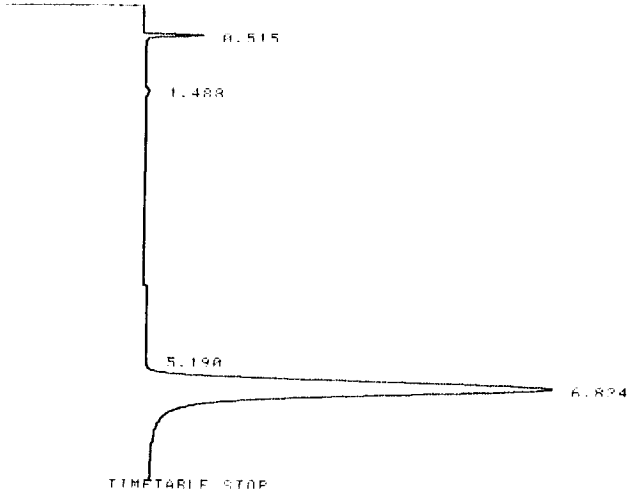
RUN# 235 JUN 29, 1992 16:23:59

AREA%

RT	AREA	TYPE	WIDTH	AREA%
.529	144098	VB	.047	10.72536
1.865	570911	BB	.336	42.49582
4.120	57335	BB	.359	4.26774
6.853	571116	BB	.317	42.51107

TOTAL AREA=1343459
MULTIPLICATION FACTOR=1.0000E+00

* RUN # 236 JUN 29, 1992 16:39:32 1.2 dilution ALM 011208 Ethanol @ 2000ppm
START



Problem w/ Ethanol Resistor/Syringe CHANGE OUT CHECK 6-30-92 Initial CAL.

RUN# 236 JUN 29, 1992 16:39:32

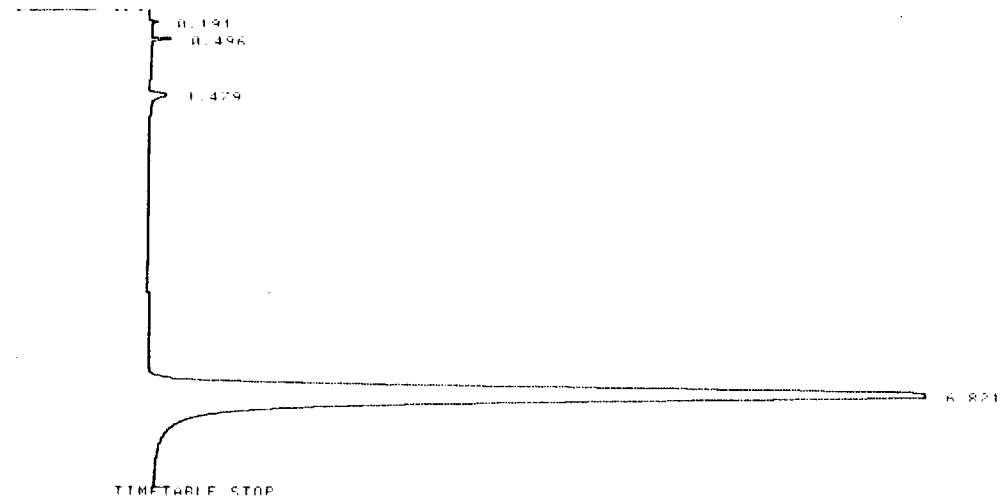
AREA%

RT	AREA	TYPE	WIDTH	AREA%
.515	105894	VB	.046	2.10365
1.488	29393	BB	.138	.58361
5.190	171769	BB	.792	3.41067
6.824	4729168	BB	.311	93.90307

TOTAL AREA=5036224
MULTIPLICATION FACTOR=1.0000E+00

Cal to 4000ppm

```
* RUN #  237      JUN 29, 1992  16:50:43
START
```




```
RUN#   237          JUN 29, 1992  16:50:43

AREA%
      RT       AREA TYPE  WIDTH      AREA%
    .191      17508   RR   .058     .18335
    .496      32459   RV   .040     .33993
   1.479      81971   RR   .117     .85845
   6.821    9416755   RR   .306   98.61824

TOTAL AREA=9.5487E+06
MUL FACTOR=1.0000E+00
```

```
* RUN #  238      JUN 29, 1992  17:02:21
START
```

```
RUN#   238          JUN 29, 1992  17:02:21

AREA%
      RT       AREA TYPE  WIDTH      AREA%
    .250      11485   VR   .039     .39639
    .514    2885918   SRR  .037   99.60362

TOTAL AREA=2897403
MUL FACTOR=1.0000E+00
```

```
* RUN #  239      JUN 29, 1992  17:06:03
START: not read
```

STOP

RUN# 239 JUN 29, 1992 17:06:03

AREA%

RT	AREA	TYPE	WIDTH	AREA%
.515	2104029	BMB	.037	100.00000

TOTAL AREA=2104029
MULTIPLIER=1.00000E+00

* RUN # 240 JUN 29, 1992 17:10:45
START

1:2 dilution 798 ppm = 399 ppm

0.515

0.798

STOP

Ethanol @ 2000 ppm ↓

RUN# 240 JUN 29, 1992 17:10:45

AREA%

RT	AREA	TYPE	WIDTH	AREA%
.515	13977080	BMB	.037	100.00000

TOTAL AREA=1.3977E+07
MULTIPLIER=1.00000E+00

* RUN # 241 JUN 29, 1992 17:15:02
START

0.518

0.536

CHANGE PAPER

CHANGE OUT REGULATOR ON 2000 & 4000 ppm Ethanol Stds.

5.105

5.295

TIMETABLE STOP

ATHENS VALLEY
6-30-92
READING, PA.

AREA%

RT	AREA	TYPE	WIDTH	AREA%

Power failed
JUN 30, 1992 11:15:33

.510	103976	BB	.044	.89654
2.526	6509408	BB	.323	56.12774
5.105	93999	BB	.631	.81051
6.795	4898186	BB	.388	42.16520

TOTAL AREA=1.1597E+07
MIN FACTOR=1.0000E+00

* REPORT

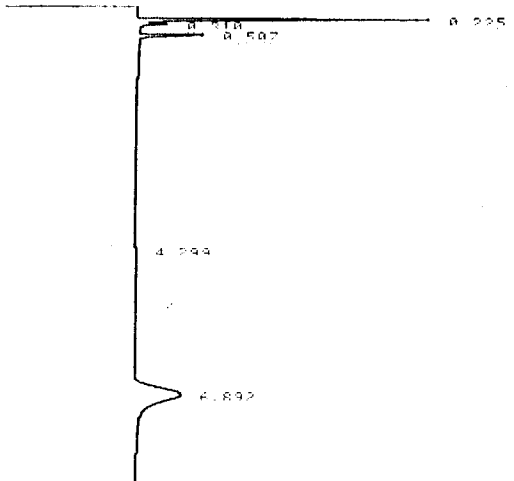
RUN# 241 JUN 29, 1992 17:15:03

AREA%

RT	AREA	TYPE	WIDTH	AREA%
.510	103976	BB	.044	.89654
2.526	6509408	BB	.323	56.12774
5.105	93999	BB	.631	.81051
6.795	4898186	BB	.388	42.16520

TOTAL AREA=1.1597E+07
MIN FACTOR=1.0000E+00

* RUN # 242 JUN 30, 1992 10:37:39
START



ALM018821 Ethanol @ 200 ppm

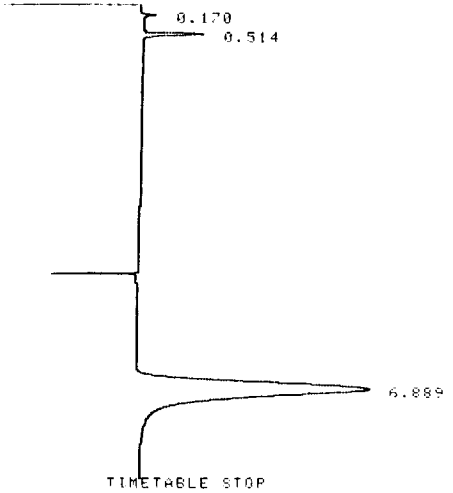
RUN# 242 JUN 30, 1992 12:37:39

AREA%

RT	AREA	TYPE	WIDTH	AREA%
.225	369037	VV	.032	34.58515
.310	42143	VB	.036	3.94953
.507	97705	BB	.038	9.15665
6.892	558154	PB	.315	52.30869

TOTAL AREA=1067039
MUL FACTOR=1.0000E+00

* RUN # 243 JUN 30, 1992 12:49:19
START



RUN# 243 JUN 30, 1992 12:49:19

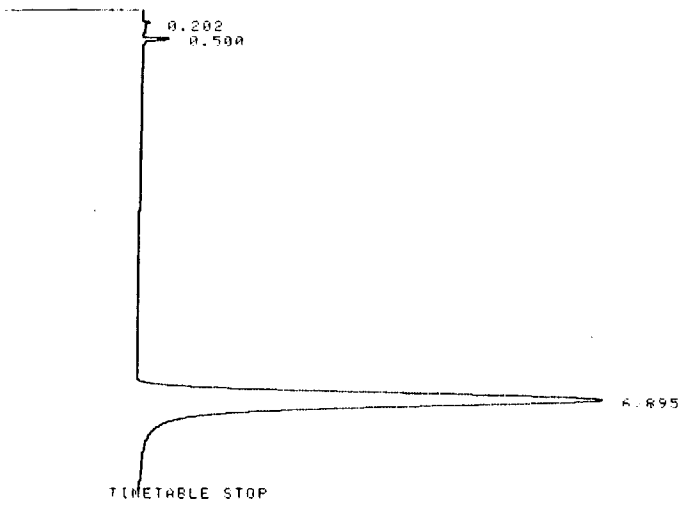
AREA%

RT	AREA	TYPE	WIDTH	AREA%
.170	25553	BV	.046	.89740
.514	116043	VB	.050	4.07532
6.889	2705864	PB	.313	95.02730

TOTAL AREA=2847461

ALM 001096 Ethanol @ 2000ppm

* RUN # 244 JUN 30, 1992 12:59:09
START



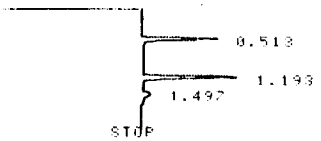
RUN# 244 JUN 30, 1992 12:59:09

AREA%

RT	AREA	TYPE	WIDTH	AREA%
.202	20880	BB	.071	.38373
.500	42639	BB	.040	.78362
6.895	5377754	PB	.309	98.83264

TOTAL AREA=5441270
MUL FACTOR=1.0000E+00

* RUN # 245 JUN 30, 1992 13:09:50 1:2dil AAL 13774 Acetaldehyde @1.52ppm
START

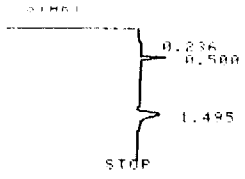


RUN# 245 JUN 30, 1992 13:09:50

AREA%

RT	AREA	TYPE	WIDTH	AREA%
.513	132051	VB	.046	36.43058
1.193	182303	PV	.050	50.29422
1.497	48119	VB	.116	13.27520

TOTAL AREA= 362473
MUL FACTOR=1.0000E+00



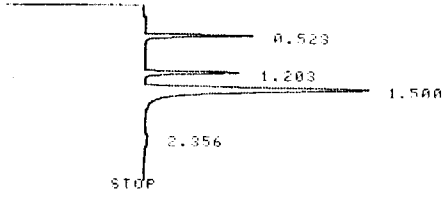
RUN# 246 JUN 30, 1992 13:13:01

AREA%

RT	AREA	TYPE	WIDTH	AREA%
.236	14658	PB	.130	9.36493
.500	40434	BB	.040	25.83313
1.495	101428	PB	.118	64.80195

TOTAL AREA= 156520
MUL FACTOR=1.0000E+00

* RUN # 247 JUN 30, 1992 13:17:36 1:3 dil. ALM002105 Acetaldehyde@27.5ppm
START



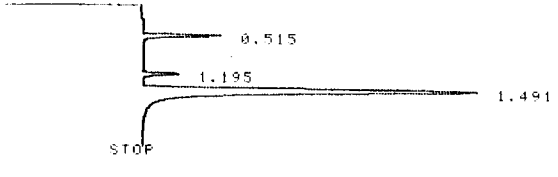
RUN# 247 JUN 30, 1992 13:17:36

AREA%

RT	AREA	TYPE	WIDTH	AREA%
.523	184214	BB	.044	13.65407
1.203	183623	PP	.050	13.61027
1.500	921660	VB	.109	68.31408
2.356	59654	BP	.309	4.42159

TOTAL AREA=1349151
MUL FACTOR=1.0000E+00

* RUN # 248 JUN 30, 1992 13:21:35 1:2 dil ALM002105 Acetaldehyde@41.2ppm
START



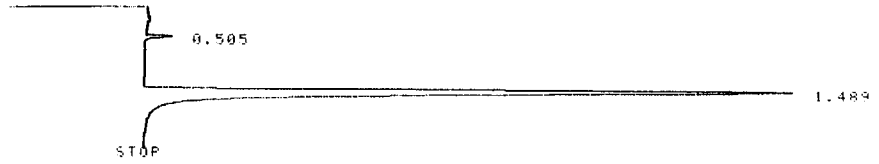
RUN# 248 JUN 30, 1992 13:21:35

AREA%

1.195	68495	VP	.050	4.34379
1.491	1372470	PB	.108	87.03866

TOTAL AREA=1576851
MUL FACTOR=1.0000E+00

* RUN # 249 JUN 30, 1992 13:24:28 ALM002105 Acetaldehyde @ 82.5 ppm
START



RUN# 249 JUN 30, 1992 13:24:28

AREA%

PT	AREA	TYPE	WIDTH	AREA%
.505	48216	PB	.046	1.79708
1.489	2634802	PB	.108	98.20291

TOTAL AREA=2683018
MUL FACTOR=1.0000E+00

* RUN # 250 JUN 30, 1992 13:29:35 1.2 dil. IL-2046 METHANE @ 40.1 ppm
START

RUN# 250 JUN 30, 1992 13:29:35

AREA%

PT	AREA	TYPE	WIDTH	AREA%
.519	1601960	SBB	.039	96.08141
1.195	65334	I PH	.048	3.91857

TOTAL AREA=1667294
MUL FACTOR=1.0000E+00

* RUN # 251 JUN 30, 1992 13:31:08 IL-2046 METHANE @ 80.2 ppm
START

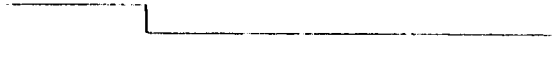
RUN# 251 JUN 30, 1992 13:31:08

AREA%

PT	AREA	TYPE	WIDTH	AREA%

MIN FACTOR=1.0000E+00

* RUN # 252 JUN 30, 1992 13:34:43 ATL-4029 METHANE @ 1991 ppm
START



STOP

RUN# 252 JUN 30, 1992 13:34:43

AREA%

FT	AREA	TYPE	WIDTH	AREA%
.515	7066973	SHB	.038	100.00000

TOTAL AREA=7066973
MUL FACTOR=1.0000E+00

* RUN # 253 JUN 30, 1992 13:38:36 1.2 dil. ALM-011031 METHANE @ 399 ppm
START

RUN# 253 JUN 30, 1992 13:38:36

AREA%

FT	AREA	TYPE	WIDTH	AREA%
.259	25222	BH	.173	.18379
.520	13642784	SHB	.039	99.41430
1.196	55152	FB	.049	.40189

TOTAL AREA=1.3723E+07
MUL FACTOR=1.0000E+00

* RUN # 254 JUN 30, 1992 13:41:43 2/3 ALM-011031 METHANE @ 532 ppm
START

RUN# 254 JUN 30, 1992 13:41:43

AREA%

FT	AREA	TYPE	WIDTH	AREA%
.519	17865232	SPB	.039	99.72422
.806	11995	BB	.039	.06696
1.195	37419	FB	.052	.20887

TOTAL AREA=1.7915E+07
MIN FACTOR=1.0000E+00

```
* LIST: LIST
PEAK CAPACITY:  1244

ZERO    =  5, -0.462
ATT 2**  =  6
CHT SP  =  1.0
AR REJ  =  10000
THRSH   =  4
PK WD   =  0.10
```

Charged INK JET

```
*                                                          P/P ERR0

        LIST
PEAK CAPACITY:  1244

ZERO    =  5, 0.115
ATT 2**  =  6
CHT SP  =  1.0
AR REJ  =  10000
THRSH   =  4
PK WD   =  0.10
```

RACK

```
*  RUN #  255     JUN 30, 1992  14:03:33
START
                                                          0.505
                S
     STOP

RUN#   255          JUN 30, 1992  14:03:33

AREA%
      RT      AREA TYPE  WIDTH      AREA%
    .505  38839728 VSHB   .075  100.00000

TOTAL AREA=3.8839E+07
MUL FACTOR=1.0000E+00
```

3960 METHANE

TABLE

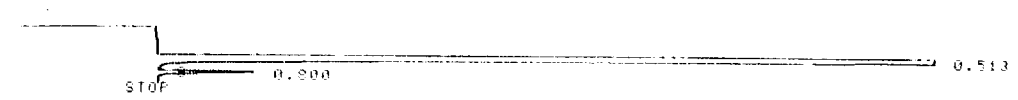
```
*  RUN #  256     JUN 30, 1992  14:05:10
START
                                                          0.505
                S
     STOP

RUN#   256          JUN 30, 1992  14:05:10

AREA%
      RT      AREA TYPE  WIDTH      AREA%
    .505  39960960 VSPB   .077  100.00000

TOTAL AREA=3.9961E+07
MUL FACTOR=1.0000E+00
```

3960 METHANE



PUN# 257 JUN 30, 1992 14:08:00

AREA%

RT	AREA	TYPE	WIDTH	AREA%
.513	30231040	VSHB	.058	99.51933
.800	146017	BB	.039	.48068

TOTAL AREA=3.0377E+07
MUL FACTOR=1.0000E+00

TABLE * PUN # 258 JUN 30, 1992 14:09:25 1490 ppm Methane
START

PUN# 258 JUN 30, 1992 14:09:25

AREA%

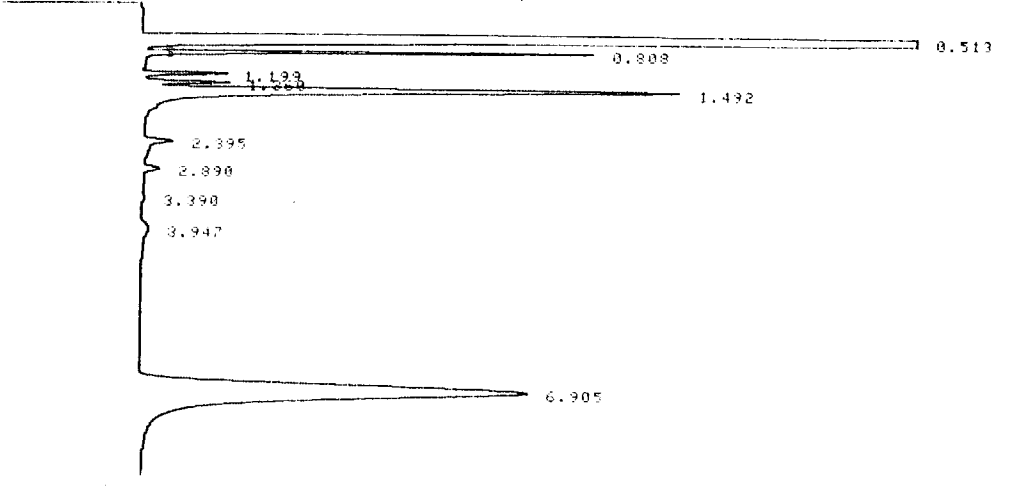
RT	AREA	TYPE	WIDTH	AREA%
.505	31072720	VSPB	.060	99.53674
.806	144619	BB	.039	.46326

TOTAL AREA=3.1217E+07
MUL FACTOR=1.0000E+00

*TIME 14:13:05
JUN 30, 1992 14:13:05

*TIME 14:12:29
JUN 30, 1992 14:12:29

TABLE * PUN # 259 JUN 30, 1992 14:12:50 BREAD OVEN FRONT
START



RUN# 259 JUN 30, 1992 14:12:50

AREA%

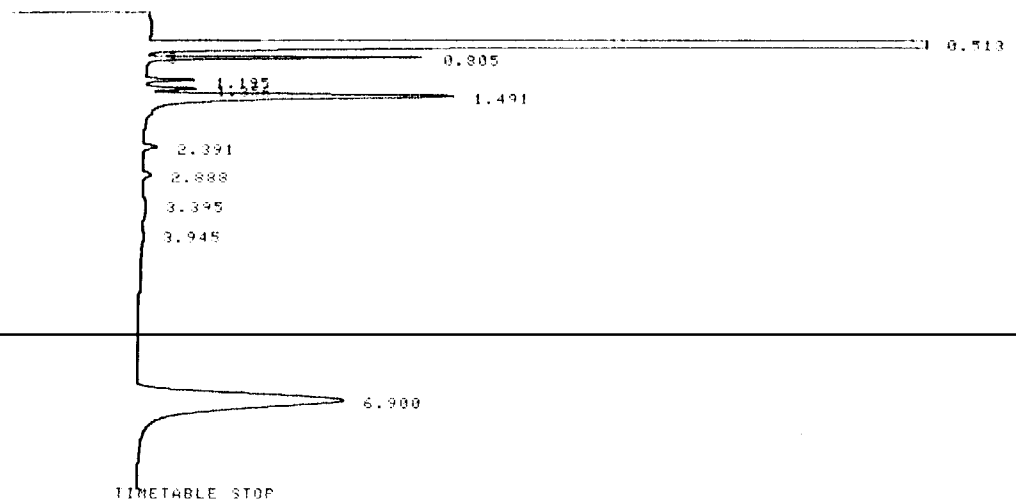
RT	AREA	TYPE	WIDTH	AREA%
.513	36977088	SBB	.071	82.01283
.908	697315	BB	.040	1.54660
1.199	155718	PP	.048	.34537
1.360	179245	PV	.056	.39755
1.492	2135986	VB	.106	4.73748
2.395	161195	BV	.136	.35752
2.890	76377	VV	.106	.16940
3.390	27971	VP	.141	.06204
3.947	110108	PV	.306	.24421
6.905	4565971	PB	.312	10.12704

TOTAL AREA=4.5087E+07
MUL FACTOR=1.0000E+00

RACK

RUN # 260 JUN 30, 1992 14:21:50 OVEN, REAR

START



RUN# 260 JUN 30, 1992 14:21:50

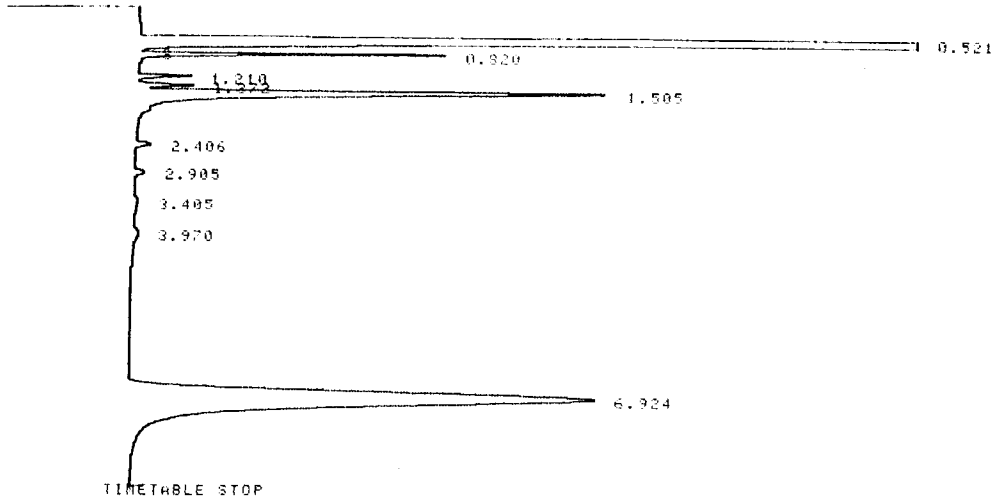
AREA%

RT	AREA	TYPE	WIDTH	AREA%
.513	30304640	SPB	.058	86.73066
.905	416654	BB	.040	1.19245
1.195	91576	PP	.048	.26209
1.356	108608	PV	.056	.31083
1.491	1254903	VB	.109	3.59148
2.391	52552	BP	.086	.15040
2.888	52130	PV	.118	.14919
3.395	122546	VV	.410	.35072
3.945	75147	VV	.320	.21507
6.900	2462351	PB	.315	7.04716

TOTAL AREA=3.4941E+07

TABLE

```
*  RUN #  261      JUN 30, 1992  14:30:45   OVEN, FRONT
START
```




```
TIMETABLE STOP

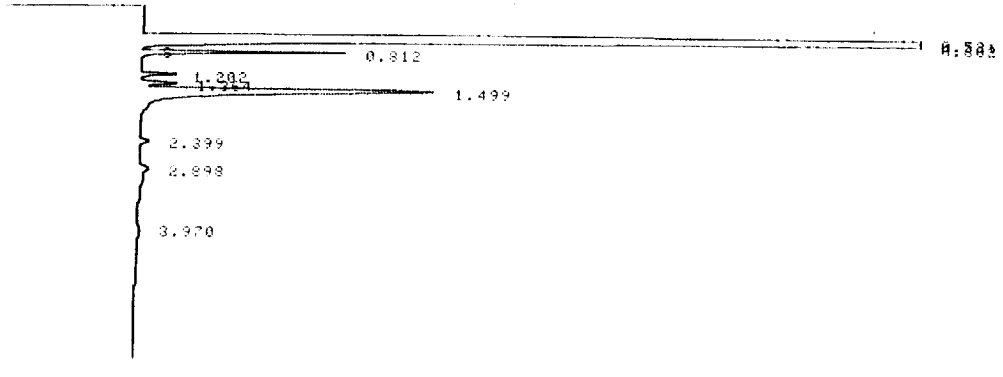
RUN#    261          JUN 30, 1992  14:30:45

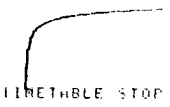
AREA%
      RT       AREA TYPE  WIDTH      AREA%
    .521   31196080  SHB   .060   78.95987
    .820     459709   BB   .040    1.16356
   1.210      98067   PP   .048     .24822
   1.372     117984   PV   .056     .29863
   1.505    1905738   VB   .109    4.82358
   2.406      55648   BP   .034     .14085
   2.905      49571   VV   .104     .12547
   3.405      74947   VV   .259     .18970
   3.970      96036   VV   .300     .24308
   6.924    5455027   PB   .312   13.80713

TOTAL AREA=3.9509E+07
MUL FACTOR=1.0000E+00
```

RACK

```
*  RUN #  262      JUN 30, 1992  14:40:15   REAR
START
```





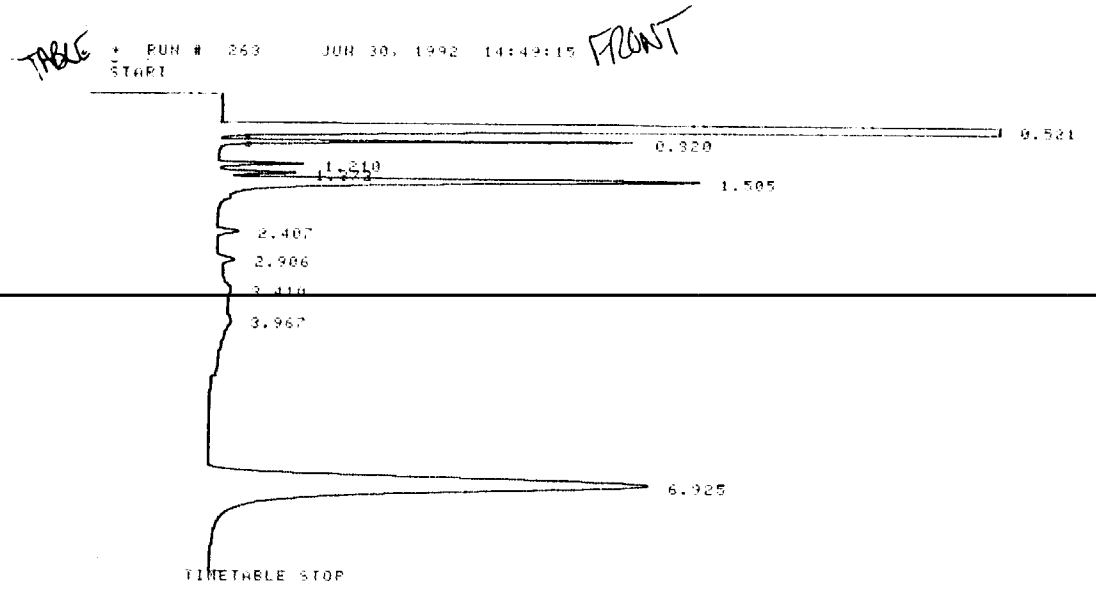
RUN# 262 JUN 30, 1992 14:40:15

AREA%

RT	AREA	TYPE	WIDTH	AREA%
.521	25253968	SPB	.049	81.27965
.602	750122	TBB	.032	2.41426
.812	309572	BB	.040	.99636
1.202	68401	PP	.048	.22015
1.364	79716	PV	.056	.25657
1.499	1199948	VB	.108	3.86202
2.399	38509	BV	.087	.12394
2.898	129518	VV	.271	.41685
3.970	69796	VV	.350	.22464
6.910	3170934	PB	.316	10.20562

TOTAL AREA=3.1070E+07
MUL FACTOR=1.0000E+00

TABLE



RUN# 263 JUN 30, 1992 14:49:15

AREA%

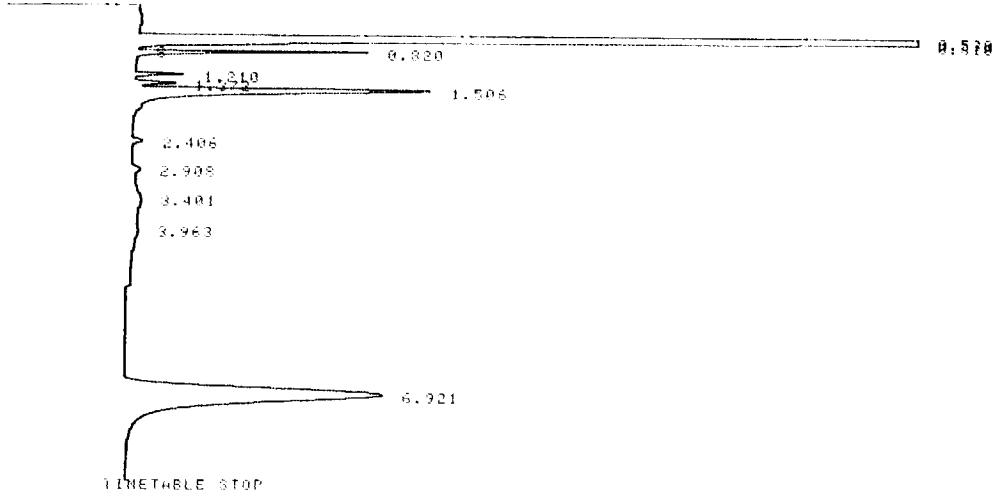
RT	AREA	TYPE	WIDTH	AREA%
.521	24386752	SPB	.066	78.99197
.820	627754	BB	.040	1.44205
1.210	160030	PV	.049	.36773
1.372	164448	VV	.056	.37776
1.505	1953016	VB	.109	4.48640
2.407	78558	BV	.087	.18046
2.906	125098	VV	.161	.28737

[illegible] PB .712 11.81365

TOTAL AREA 1.2532E+07
MUL FACTOR=1.0000E+00

REAR

* RUN # 264 JUN 30, 1992 14:58:20 REAR
START



RUN# 264 JUN 30, 1992 14:58:20

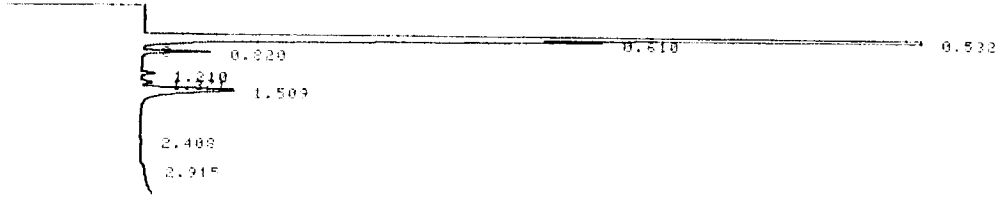
AREA%

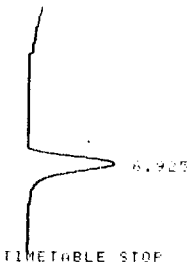
PI	APEA	TYPE	WIDTH	AREA%
.530	25483616	SPB	.049	80.52739
.610	804526	TBB	.031	2.54228
.820	348436	BB	.040	1.10105
1.210	91838	PP	.048	.29021
1.372	91089	PV	.056	.28784
1.506	1214634	VB	.109	3.83820
2.406	39228	PB	.082	.12396
2.908	43211	BV	.115	.13655
3.401	239514	VV	.515	.75686
3.963	219179	VV	.542	.69260
6.921	3070634	PB	.315	9.70310

TOTAL APEA=3.1646E+07
MUL FACTOR=1.0000E+00

TABLE

* RUN # 265 JUN 30, 1992 15:07:15 COMFORT HOOD
START





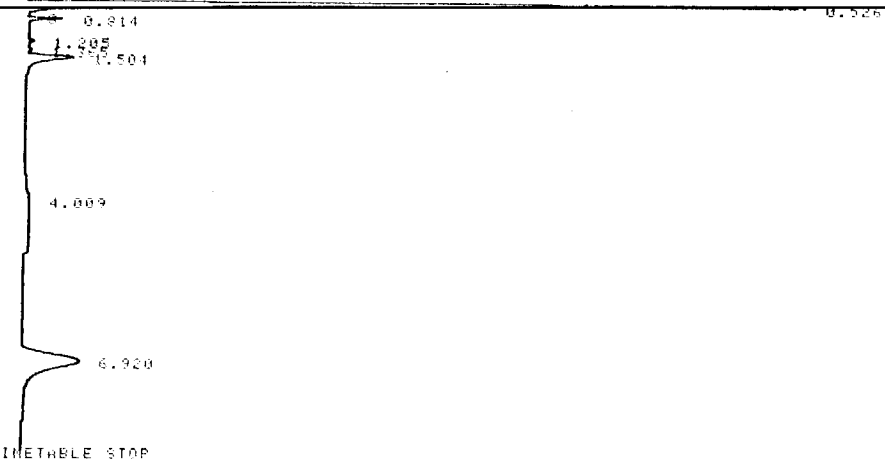
RUN# 265 JUN 30, 1992 15:07:15

AREA:

RT	AREA	TYPE	WIDTH	AREA%
.532	8639430	SPB	.040	76.10458
.610	233611	TBB	.031	2.05788
.820	106546	BB	.040	.93856
1.210	28514	PP	.049	.25118
1.371	27679	PV	.057	.24382
1.509	389067	VB	.107	3.42728
2.408	10926	BB	.081	.09625
2.915	56685	BV	.206	.49934
3.616	799429	VB	1.294	7.04216
6.925	1060168	PB	.321	9.33900

TOTAL AREA=1.1352E+07
MUL FACTOR=1.0000E+00

TABLE * RUN # 266 JUN 30, 1992 15:16:05 COMFORT HOOD
START



RUN# 266 JUN 30, 1992 15:16:05

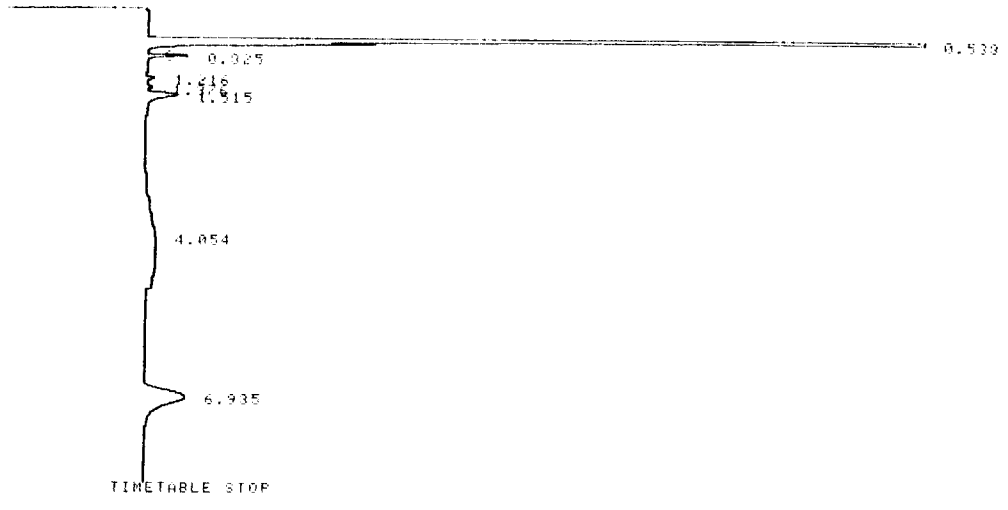
AREA:

RT	AREA	TYPE	WIDTH	AREA%

1.205	1e+07	PV	.051	.29105
1.365	14231	VV	.061	.26119
1.504	137151	VB	.103	3.47251
4.089	286199	VP	1.134	5.04019
6.920	702850	PB	.320	12.37773

TOTAL APEA=5678342
MUL FACTOR=1.0000E+00

TABLE * RUN # 267 JUN 30, 1992 15:25:19 COMPOSITE (1000)



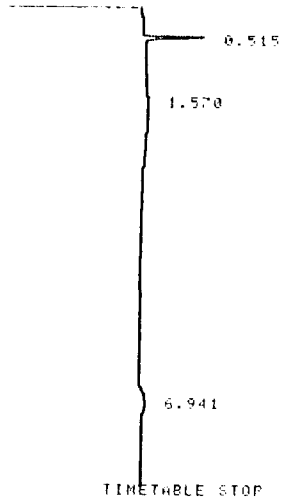
RUN# 267 JUN 30, 1992 15:25:19

APEA:

PT	APEA	TYPE	WIDTH	APEA%
.538	5528672	SBB	.040	79.31786
.825	65822	BB	.040	.94433
1.216	18539	PV	.049	.26669
1.376	19710	VV	.061	.28277
1.515	135956	VB	.110	1.95051
4.054	677354	VB	1.374	9.71775
6.935	524169	PB	.320	7.52006

TOTAL APEA=6970272
MUL FACTOR=1.0000E+00

* RUN # 268 JUN 30, 1992 15:36:59 QC CHECK AIR
START



RUN# 268 JUN 30, 1992 15:36:59

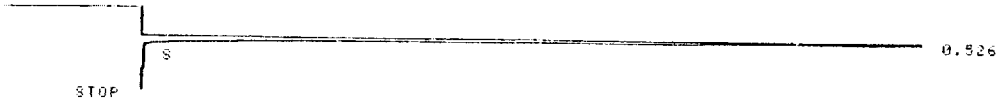
AREA%:

PT	AREA	TYPE	WIDTH	AREA%
.515	87736	PB	.037	19.86339
1.570	273236	BV	1.271	61.86051
6.941	80725	PB	.343	18.27610

TOTAL AREA= 441697
MUL FACTOR=1.0000E+00

QC CHECKS

TABLE * RUN # 269 JUN 30, 1992 15:48:00 80.2ppm methane
START

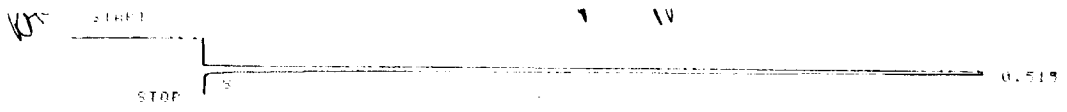


RUN# 269 JUN 30, 1992 15:48:00

AREA%:

PT	AREA	TYPE	WIDTH	AREA%
.526	2466808	SHB	.029	100.00000

TOTAL AREA=2466808
MUL FACTOR=1.0000E+00



RUN# 270 JUN 30, 1992 15:50:24

AREA%

PT	AREA	TYPE	WIDTH	AREA%
.515	6777373	SHB	.027	100.00000

TOTAL AREA=6777373
MUL FACTOR=1.0000E+00

TABLE * RUN # 271 JUN 30, 1992 15:52:09 199.1 ppm Methane
START: not ready

RUN# 271 JUN 30, 1992 15:52:09

AREA%

PT	AREA	TYPE	WIDTH	AREA%
.542	6061517	SHB	.039	100.00000

TOTAL AREA=6061517
MUL FACTOR=1.0000E+00

TABLE * RUN # 272 JUN 30, 1992 15:54:45 798 ppm Methane
START

RUN# 272 JUN 30, 1992 15:54:45

AREA%

PT	AREA	TYPE	WIDTH	AREA%
.149	122035	BP	.218	.51644
.521	23481920	SPB	.045	99.37411
.806	25867	BP	.048	.10947

TOTAL AREA=2.3630E+07
MUL FACTOR=1.0000E+00

RACK * RUN # 273 JUN 30, 1992 15:56:05 798 ppm Methane
START

RUN# 273 JUN 30, 1992 15:57:05

AREA%

PT	AREA	TYPE	WIDTH	AREA%
.150	29467	PH	.162	.12332
.521	23787648	SHB	.016	99.57290
.813	15442	BB	.035	.06169
1.223	57069	I BH	.194	.23909

TOTAL AREA=2.3870E+07
MUL FACTOR=1.0000E+00

TABLE

* RUN # 274 JUN 30, 1992 15:58:04 1490 ppm methane
START not read

RUN# 274 JUN 30, 1992 15:58:04

AREA%

PT	AREA	TYPE	WIDTH	AREA%
.513	30554960	SPB	.059	99.51222
.807	149767	BV	.039	.48777

TOTAL AREA=3.0705E+07
MUL FACTOR=1.0000E+00

RACK

* RUN # 275 JUN 30, 1992 15:59:40 1490 ppm Methane
START

RUN# 275 JUN 30, 1992 15:59:40

AREA%

PT	AREA	TYPE	WIDTH	AREA%
.513	30942352	SHB	.059	99.53709
.810	143907	BB	.040	.46293

TOTAL AREA=3.1086E+07
MUL FACTOR=1.0000E+00

TABLE

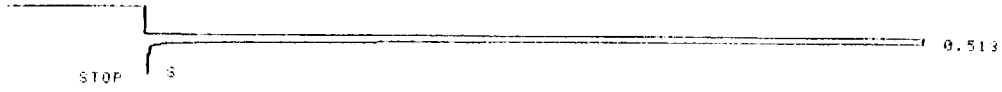
* RUN # 276 JUN 30, 1992 16:01:55 2000 ppm methane
START

RUN# 276 JUN 30, 1992 16:01:55

.513 33620672 SHB .065 100.00000

TOTAL AREA=3.3621E+07
MUL FACTOR=1.0000E+00

RACK * RUN # 277 JUN 30, 1992 16:03:29 2000 ppm Methane
START



RUN# 277 JUN 30, 1992 16:03:29

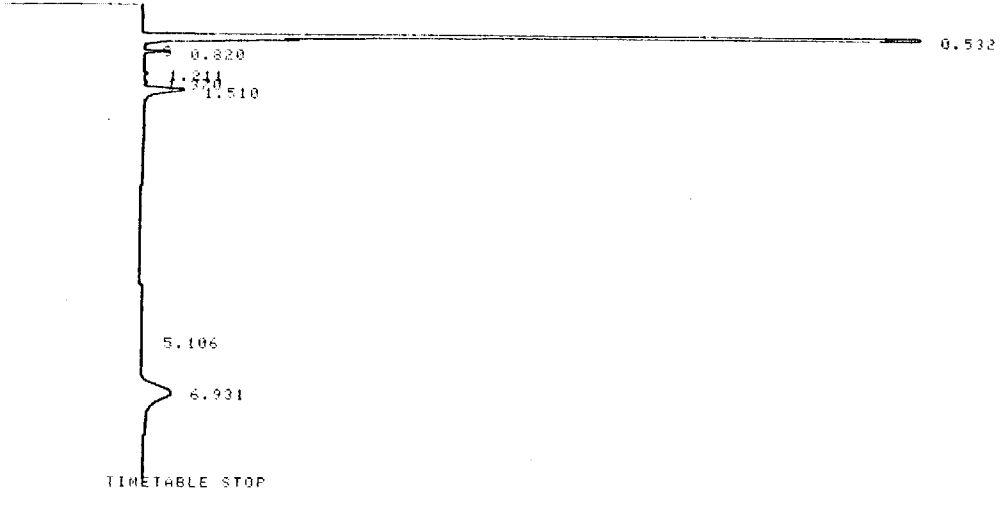
AREA%:

PT	AREA	TYPE	WIDTH	AREA%
.513	33242432	SHB	.064	100.00000

TOTAL AREA=3.3242E+07
MUL FACTOR=1.0000E+00

SPLIT TOPPED WHEAT

TABLE * RUN # 278 JUN 30, 1992 16:06:44 COMFORT HOOD
START



RUN# 278 JUN 30, 1992 16:06:44

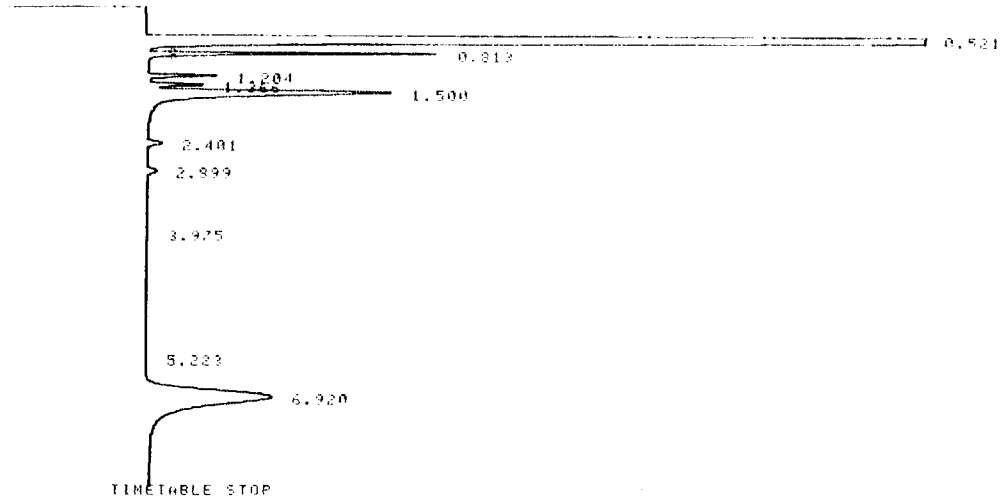
AREA%:

PT	AREA	TYPE	WIDTH	AREA%
.532	4348509	SHB	.040	86.82496
.820	43638	BB	.041	.87130
1.211	12017	PV	.050	.23994
1.370	12785	VV	.062	.25527
1.510	175156	VB	.110	3.49727
5.106	72962	PB	.548	1.45680
6.931	343296	PB	.325	6.85445

RACK

* RUN # 229 JUN 30 1992 16:15:35 REAR

START



RUN# 229 JUN 30, 1992 16:15:25

AREA:

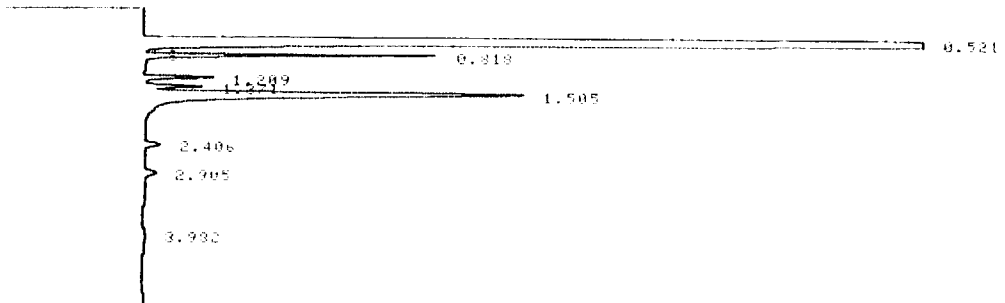
PT	AREA	TYPE	WIDTH	AREA:
.521	20620442	SHB	.055	89.48608
.813	432664	BB	.040	1.35591
1.204	129436	BV	.049	.40470
1.366	115675	VV	.055	.36167
1.500	473162	VB	.107	3.05837
2.401	55256	BP	.036	.17464
2.899	45135	VV	.103	.14131
3.975	37686	BP	.287	.11793
5.223	84705	PB	.800	.26484
6.920	1482217	PB	.218	4.63468

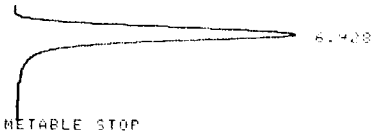
TOTAL AREA=3.1983E+07
MUL FACTOR=1.0000E+00

TABLE

* RUN # 230 JUN 30, 1992 16:25:05 FRONT

START





TIMETABLE STOP

RUN# 280 JUN 30, 1992 16:25:05

AREA%

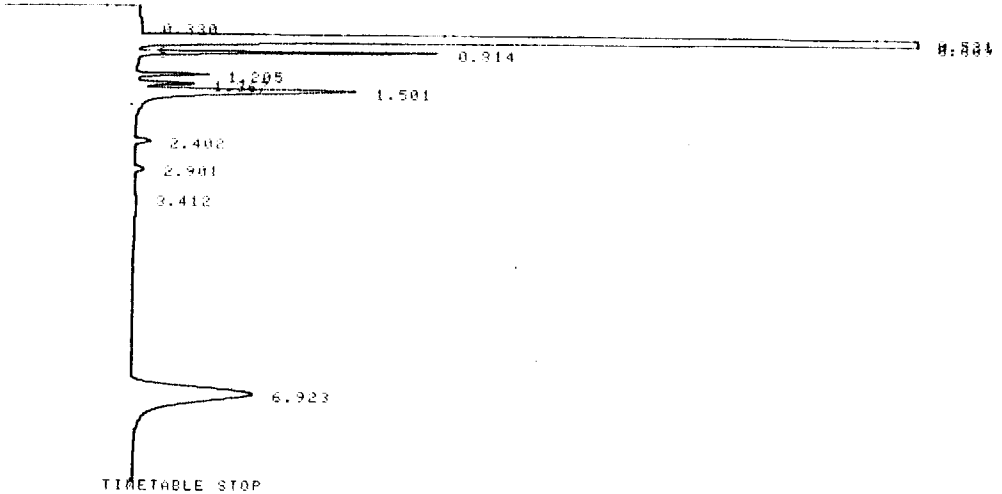
PT	AREA	TYPE	WIDTH	AREA%
.521	29237216	BBB	.056	83.47917
.818	451250	BB	.040	1.28842
1.209	131566	PV	.049	.37565
1.371	118985	VV	.055	.33973
1.505	1511301	VB	.107	4.31655
2.406	57372	BV	.087	.16381
2.905	77108	VV	.138	.22016
3.982	59261	PP	.282	.16920
5.165	66799	PB	.655	.19073
6.928	3312032	PB	.316	9.45663

TOTAL AREA=3.5023E+07
MUL FACTOR=1.0000E+00

BACK

* RUN # 281 JUN 30, 1992 16:34:00 REAR

START



TIMETABLE STOP

RUN# 281 JUN 30, 1992 16:34:00

AREA%

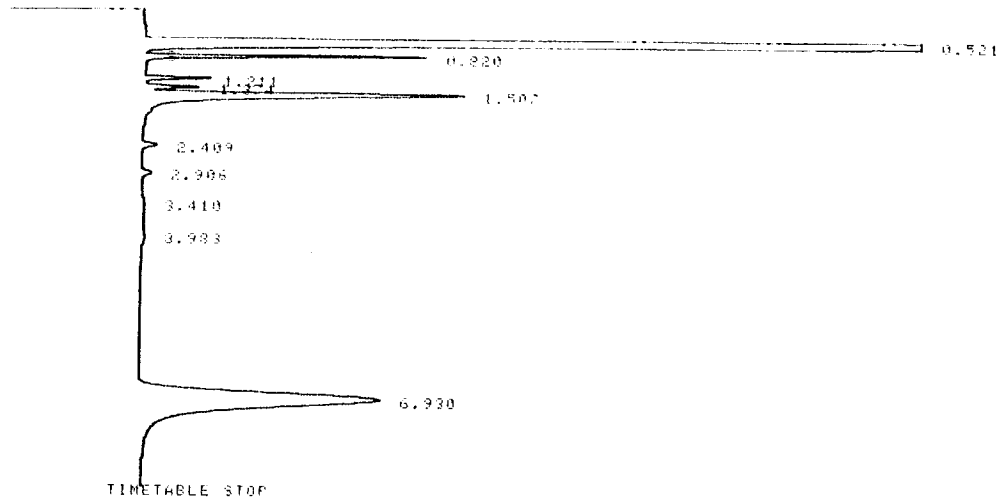
PT	AREA	TYPE	WIDTH	AREA%
.330	37354	PH	.275	.11556
.521	28341392	BHB	.055	87.68051
.609	748455	TBB	.028	2.31552
.814	454625	BB	.010	1.40649
1.205	136702	PV	.019	.42293

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
3.401	43811	PP	.102	.12554
3.414	[illegible]	BV	.[illegible]	.11397
[illegible]	[illegible]	PB	.317	1.54137

TOTAL APEA=3.3323E+07
MUL FACTOR=1.0000E+00

TABLE

* RUN # 282 JUN 30, 1992 16:42:54 FRONT
START



TIMETABLE STOP

PUN# 282 JUN 30, 1992 16:42:54

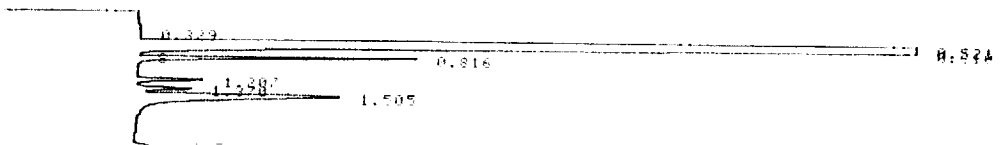
APEA%

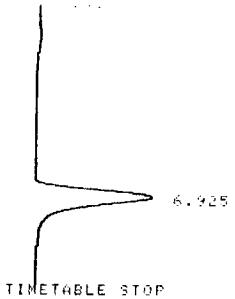
PT	APEA	TYPE	WIDTH	APEA%
.521	28561936	SHB	.055	85.17734
.820	422209	BB	.040	1.25911
1.211	122992	BP	.048	.36679
1.374	110138	PV	.054	.32863
1.507	1274069	VB	.106	3.79953
2.409	51548	BP	.084	.15373
2.906	42503	PP	.097	.12675
3.410	34896	BV	.224	.10407
3.983	59483	VP	.286	.17739
6.930	2852496	PB	.317	8.50671

TOTAL APEA=3.3532E+07
MUL FACTOR=1.0000E+00

RACK

* RUN # 283 JUN 30, 1992 16:51:49 REAR
START





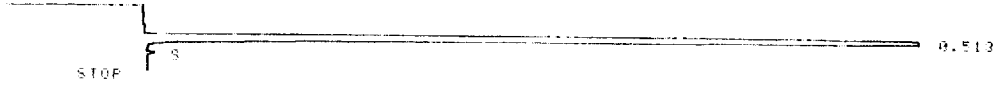
RUN# 283 JUN 30, 1992 16:51:43

AREA%

RT	AREA	TYPE	WIDTH	AREA%
.349	37389	PH	.291	.11667
.521	29082128	VHB	.054	87.62762
.610	827669	IBB	.029	2.58266
.816	433008	BB	.040	1.35116
1.207	124864	BP	.048	.38963
1.370	113084	PV	.055	.35287
1.505	806422	VB	.106	2.51636
2.405	53839	BP	.085	.16800
2.909	43491	VV	.108	.13571
3.415	114557	VV	.488	.35746
6.925	1410680	PB	.317	4.40189

TOTAL AREA=3.2047E+07
MUL FACTOR=1.0000E+00

* RUN # 284 JUN 30, 1992 17:03:01 Alm-011030I CH4@ 798ppm
START



RUN# 284 JUN 30, 1992 17:03:01

AREA%

RT	AREA	TYPE	WIDTH	AREA%
.513	23789760	SPB	.046	100.00000

TOTAL AREA=2.3790E+07
MUL FACTOR=1.0000E+00

* RUN # 285 JUN 30, 1992 17:06:41 1.2 dil. AAL-021793 CH4@ 600 ppm
START

PT	APEH TYPE	WIDTH	APEH%
.513	25512941 VBB	.041	100.00000

TOTAL APEH=2.5513E+07
NUL FACTOR=1.0000E+00

* RUN # 286 JUN 30, 1992 17:10:30 Acm-029377 methane @ 1490ppm
STRPT

RUN# 286 JUN 30, 1992 17:10:30

APEH%

PT	APEH	TYPE	WIDTH	APEH%
.521	30049392	VBB	.059	99.54522
.916	137479	BB	.040	.45478

TOTAL APEH=3.0187E+07
NUL FACTOR=1.0000E+00

* RUN # 287 JUN 30, 1992 17:12:17 AAL - 021793 CH_4 @ 2000 ppm
STRPT: not read

RUN# 287 JUN 30, 1992 17:12:17

APEH%

PT	APEH	TYPE	WIDTH	APEH%
.521	29013952	VBB	.063	99.28321
1.376	208145	I BH	.330	.71618

TOTAL APEH=3.3252E+07
NUL FACTOR=1.0000E+00

* RUN # 288 JUN 30, 1992 17:17:02 2/3 d1. Acm-029520 CH_4 @ 2653 ppm
STRPT

RUN# 288 JUN 30, 1992 17:17:02

APEH%

PT	APEH	TYPE	WIDTH	APEH%
.513	25693016	VBB	.053	100.00000

* RUN # 289 JUN 30, 1992 17:20:34 3/4 ml ALM-024520 CH4@ 2985 ppm
START

RUN# 289 JUN 30, 1992 17:20:34

AREA%:

PT	AREA	TYPE	WIDTH	AREA%
.513	36663744	SBB	.071	100.00000

TOTAL AREA=3.6664E+07
MUL FACTOR=1.0000E+00

* RUN # 290 JUN 30, 1992 17:23:57 ALM 024520 CH4 @ 3980 ppm
START

RUN# 290 JUN 30, 1992 17:23:57

AREA%:

PT	AREA	TYPE	WIDTH	AREA%
.505	39505232	SBB	.076	100.00000

TOTAL AREA=3.9506E+07
MUL FACTOR=1.0000E+00

* RUN # 291 JUN 30, 1992 17:29:59 AAL-13774 Acetylene @ 3.05 ppm
START

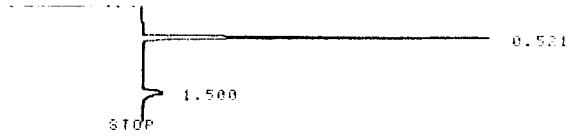
RUN# 291 JUN 30, 1992 17:29:59

AREA%:

PT	AREA	TYPE	WIDTH	AREA%
.234	14688	PB	.091	1.18703
.523	1057979	VBR	.038	85.50166
.945	74201	BP	.292	5.99663
1.501	90510	PB	.108	7.31466

TOTAL AREA=1237378

* RUN # 292 JUN 30, 1992 17:33:46 AAL-13774 Acetaldehyde @ 30.3 ppm
START



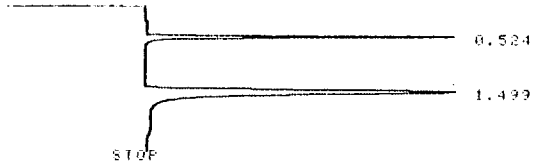
RUN# 292 JUN 30, 1992 17:33:46

APEAK

PT	APEAK	TYPE	WIDTH	APEAK%
.521	510285	BB	.039	84.50682
1.500	93551	BB	.111	15.49320

TOTAL APEAK= 603839
MUL FACTOR=1.0000E+00

* RUN # 293 JUN 30, 1992 17:38:41 1:2 dil. ACM-002105 Acetaldehyde @ 41.2 ppm
START



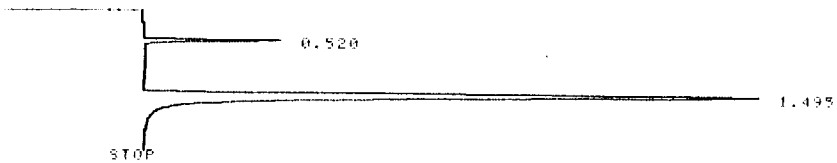
RUN# 293 JUN 30, 1992 17:38:41

APEAK

PT	APEAK	TYPE	WIDTH	APEAK%
.524	468378	PB	.039	27.31927
1.499	1246082	PB	.107	72.68074

TOTAL APEAK=1714460
MUL FACTOR=1.0000E+00

* RUN # 294 JUN 30, 1992 17:41:32 ACM002105 Acetaldehyde @ 82.5 ppm
START



RUN# 294 JUN 30, 1992 17:41:32

APEAK

PT	APEAK	TYPE	WIDTH	APEAK%
.520	211528	BB	.040	7.98422

MUL FACTOR=1.0000E+00

* RUN # 295 JUN 30, 1992 17:47:40
START

0.248
0.521
0.818
1.504
5.195
6.931

TIMETABLE STOP

Ethanol @ 200 SYRINGE Problem

PUN# 295 JUN 30, 1992 17:47:40

AREA:

PT	AREA	TYPE	WIDTH	AREA%
.248	21031	BV	.127	3.51734
.521	140401	VV	.044	23.48146
.818	104914	VV	.353	17.54641
1.504	78331	VV	.137	13.10052
5.195	155935	PB	.900	26.07946
6.931	97311	BB	.338	16.27484

TOTAL AREA= 597923
MUL FACTOR=1.0000E+00

* RUN # 296 JUN 30, 1992 17:58:06
START

0.300
0.505
0.810
1.510

1:3 dil Ethanol @ 666.7 ppm SYRINGE Problem

TIMETABLE STOP

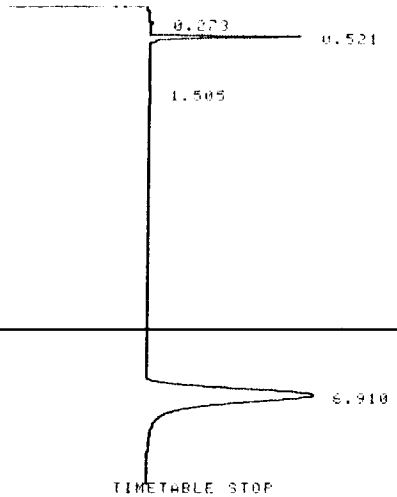
RUN# 296 JUN 30, 1992 17:58:06

AREA%

PT	AREA	TYPE	WIDTH	AREA%
.300	498816	VV	.206	22.57699
.505	491764	VP	.070	22.25781
.810	758322	PB	.326	34.32253
1.510	21882	PV	.142	.99040
6.919	438616	PB	.322	19.85227

TOTAL AREA=2209400
MUL FACTOR=1.0000E+00

* RUN # 297 JUN 30, 1992 18:08:59
STRPT



Ethanol @ 2000
SYRINGE Injection
PROBLEM

TIMETABLE STOP

RUN# 297 JUN 30, 1992 18:08:59

AREA%

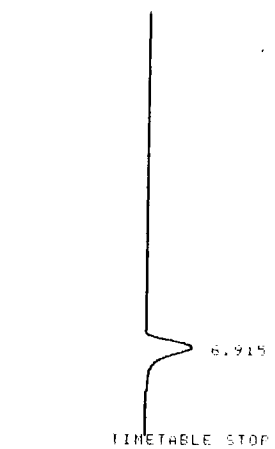
PT	AREA	TYPE	WIDTH	AREA%
.273	17406	BB	.080	.76628
.521	242561	BB	.042	10.67852
1.505	20129	PB	.119	.88616
6.910	1991389	PB	.315	87.66902

TOTAL AREA=2271485
MUL FACTOR=1.0000E+00

TABLE

* RUN # 299 JUN 30, 1992 18:21:24 ALM 018821 QC CHECK
STRPT

Injectors



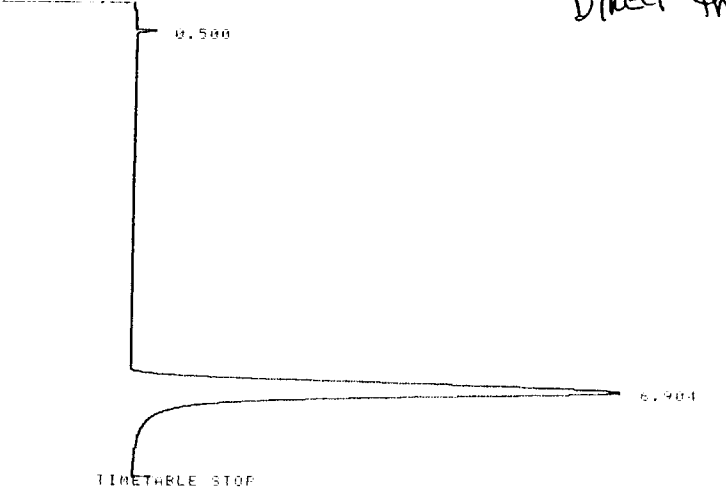
RUN# 298 JUN 30, 1992 18:21:24

APEA:

PT	APEA	TYPE	WIDTH	APEA%
.527	170767	VB	.046	22.30857
6.915	594710	PB	.322	77.69143

TOTAL APEA= 765477
MUL FACTOR=1.0000E+00

* RUN # 299 JUN 30, 1992 18:33:25 ALM 001086 Ethanol @ 2000ppm
DIRECT through ¼" line
START



RUN# 299 JUN 30, 1992 18:33:25

APEA:

PT	APEA	TYPE	WIDTH	APEA%
.500	37885	VV	.044	.67201
6.904	5594601	PB	.305	99.32800

MUL FACTOR=1.0000E+00

*

Power failed
JUN 30, 1992 23:41:19

BREAK

*

1/4" Cal * RUN # 300 JUL 1, 1992 08:23:02 Jun 010821 Ethanol @ 200 ppm

START

0.170
0.511

5.105

6.811

TIMETABLE STOP

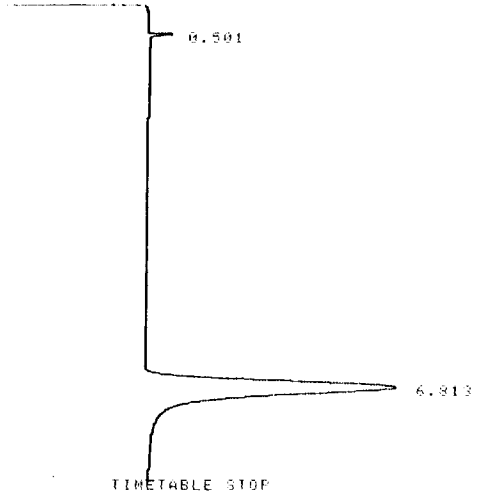
RUN# 300 JUL 1, 1992 08:22:02

BREAK

5.105	127787	PP	.614	11.26125
6.811	838555	PB	.335	71.79162

TOTAL AREA= 9994526
MUL FACTOR=1.0000E+00

1/4" CAL * RUN # 301 JUL 1, 1992 08:35:20 ALM 029486 Ethanol @ 1000 ppm
START



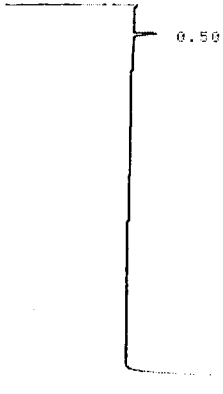
RUN# 301 JUL 1, 1992 08:35:20

AREA%

RT	AREA	TYPE	WIDTH	AREA%
.501	12550	VE	.045	1.47027
6.813	2413501	PB	.312	98.52973

TOTAL AREA=2963050
MUL FACTOR=1.0000E+00

1/4" CAL. * RUN # 302 JUL 1, 1992 08:45:20 ALM 001086 Ethanol @ 2000 ppm
START



TIMETABLE STOP

RUN# 302 JUL 1, 1992 00:45:20

AREA%

RT	AREA	TYPE	WIDTH	AREA%
.503	38147	BB	.040	.66548
6.820	5694093	PB	.307	99.33450

TOTAL AREA=5732240
MUL FACTOR=1.0000E+00

KAMAN changed from 0 to 2 for 1st 5 minutes

* RUN # 303 JUL 1, 1992 09:05:37 1.5dil Ammonia 2105 Acetaldehyde @ Ke 15ppm
START

0.510

1.475

STOP

RUN# 303 JUL 1, 1992 09:05:37

AREA%

RT	AREA	TYPE	WIDTH	AREA%
.510	50244	BB	.045	25.89670
1.475	143773	PB	.103	74.10330

TOTAL AREA= 194017
MUL FACTOR=1.0000E+00

* RUN # 304 JUL 1, 1992 09:10:41 3960 ppm Methane Still offscale @ Range 2
START

1/4" COL. LINE

STOP

0.513

RUN# 301 JUL 1, 1992 09:10:41

AREA%

RT	AREA	TYPE	WIDTH	AREA%
.513	26712496	PBM	.051	100.00000

TOTAL AREA=2.6712E+07
MUL FACTOR=1.0000E+00

* RUN # 305 JUL 1, 1992 09:15:50 200 ppm Methane
START

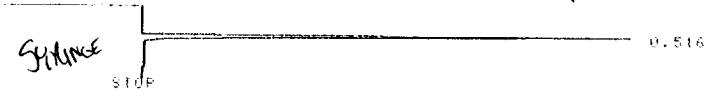
RUN# 305 JUL 1, 1992 09:15:50

AREA%

PT	AREA	TYPE	WIDTH	AREA%
.516	752313	SRB	.038	100.00000

TOTAL AREA= 752313
MUL FACTOR=1.0000E+00

* RUN # 306 JUL 1, 1992 09:19:46 2000 from Matthew
START



RUN# 306 JUL 1, 1992 09:19:46

AREA%

PT	AREA	TYPE	WIDTH	AREA%
.516	721337	SRB	.038	100.00000

TOTAL AREA= 721337
MUL FACTOR=1.0000E+00

TABLE * RUN # 307 JUL 1, 1992 09:24:14 3960 Matthew
START

RUN# 307 JUL 1, 1992 09:24:14

AREA%

PT	AREA	TYPE	WIDTH	AREA%
.513	26676128	SPH	.051	100.00000

TOTAL AREA=2.6676E+07
MUL FACTOR=1.0000E+00

RACK * RUN # 308 JUL 1, 1992 09:27:10 3960 CHG
START

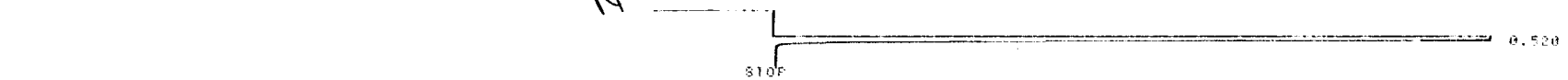
RUN# 308 JUL 1, 1992 09:27:10

AREA%

PT	AREA	TYPE	WIDTH	AREA%

TOTAL AREA=2.6725E+07
NUL FACTOR=1.0000E+00

RACK * RUN # 309 JUL 1, 1992 09:29:24 2000 ppm CH_4
START



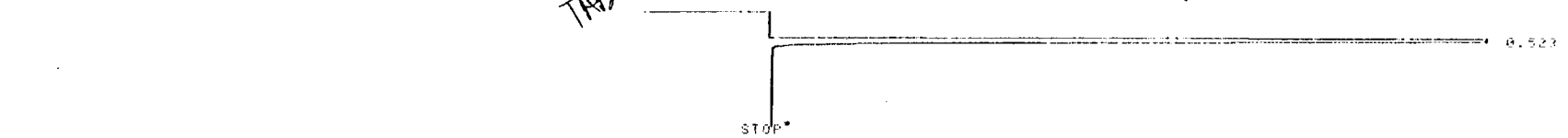
RUN# 309 JUL 1, 1992 09:29:21

AREA%

PT	AREA	TYPE	WIDTH	AREA%
.520	17479616	ISBH	.038	100.00000

TOTAL AREA=1.7480E+07
NUL FACTOR=1.0000E+00

TABLE * RUN # 310 JUL 1, 1992 09:31:40 2000 ppm CH_4
START



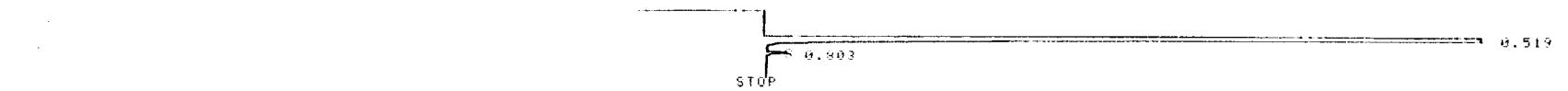
RUN# 310 JUL 1, 1992 09:31:40

AREA%

PT	AREA	TYPE	WIDTH	AREA%
.523	17459920	SBB	.037	100.00000

TOTAL AREA=1.7460E+07
NUL FACTOR=1.0000E+00

TABLE * RUN # 311 JUL 1, 1992 09:37:50 1440 ppm CH_4
START



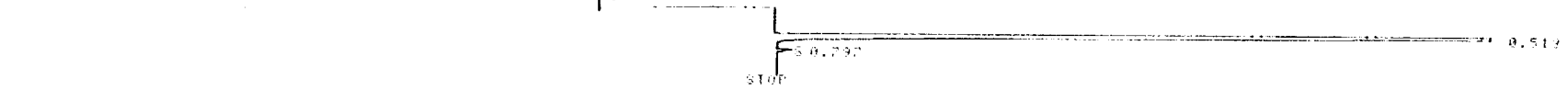
RUN# 311 JUL 1, 1992 09:37:50

AREA%

PT	AREA	TYPE	WIDTH	AREA%
.519	12334792	SBB	.038	99.71542
.903	35201	BB	.040	.28457

TOTAL AREA=1.2370E+07

RAL * RUN # 312 JUL 1, 1992 09:39:41
START



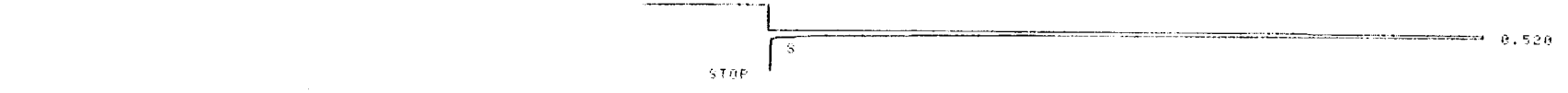
RUN# 312 JUL 1, 1992 09:39:44

AREA%

PT	AREA	TYPE	WIDTH	AREA%
.519	9921651	SPB	.039	99.72333
.797	27529	BB	.039	.27669

TOTAL AREA=9.9492E+06
MUL FACTOR=1.0000E+00

RAL * RUN # 313 JUL 1, 1992 09:42:34 798 ppm CH4
START



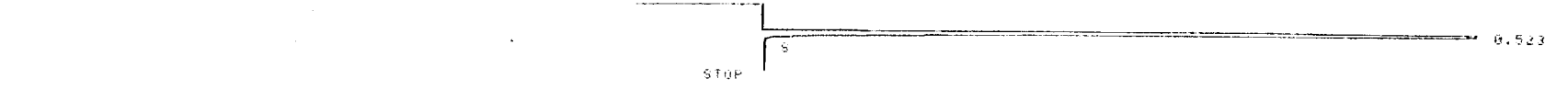
RUN# 313 JUL 1, 1992 09:42:34

AREA%

PT	AREA	TYPE	WIDTH	AREA%
.520	6946259	SBB	.039	100.00000

TOTAL AREA=6946259
MUL FACTOR=1.0000E+00

TABLE * RUN # 314 JUL 1, 1992 09:44:35 798 ppm CH4
START



RUN# 314 JUL 1, 1992 09:44:35

AREA%

PT	AREA	TYPE	WIDTH	AREA%
.523	6936250	SPB	.039	100.00000

TOTAL AREA=6936250
MUL FACTOR=1.0000E+00

RAL * RUN # 315 JUL 1, 1992 09:49:15 1991 ppm CH4
START

STOP

RUN# 315 JUL 1, 1992 09:49:15

APEA%

PT	APEA	TYPE	WIDTH	APEA%
.515	1823073	SBB	.038	100.00000

TOTAL APEA=1823073
MUL FACTOR=1.0000E+00

TABLE * RUN # 316 JUL 1, 1992 09:51:19 199.1 ppm CH_4
START: not read

0.524

STOP

RUN# 316 JUL 1, 1992 09:51:19

APEA%

PT	APEA	TYPE	WIDTH	APEA%
.524	1785042	SHB	.033	100.00000

TOTAL APEA=1785042
MUL FACTOR=1.0000E+00

* RUN # 317 JUL 1, 1992 09:55:08 1.3 Acetaldehyde @ 27.5 ppm
START Arm 002105

0.515

1.491

STOP

RUN# 317 JUL 1, 1992 09:55:08

APEA%

PT	APEA	TYPE	WIDTH	APEA%
.515	95002	PB	.040	29.12135
1.491	231226	PB	.107	70.87866

TOTAL APEA= 326228
MUL FACTOR=1.0000E+00

* RUN # 318 JUL 1, 1992 09:58:21 1.2 Arm 002105 Acetaldehyde @ 41.2 ppm
START

0.515

STOP

RUN# 318 JUL 1, 1992 09:58:21

AREA%

RT	AREA	TYPE	WIDTH	AREA%
.515	75604	BB	.040	17.66799
1.480	352311	PB	.108	82.33200

TOTAL AREA= 427915
MUL FACTOR=1.0000E+00

* RUN # 319 JUL 1, 1992 10:01:30 ALM 002105 Acetaldehyde @ 825ppm
START

0.504

1.475

STOP

RUN# 319 JUL 1, 1992 10:01:30

AREA%

RT	AREA	TYPE	WIDTH	AREA%
.504	19762	BB	.065	2.81015
1.475	683474	PB	.108	97.18986

TOTAL AREA= 703236
MUL FACTOR=1.0000E+00

TABLE

* RUN # 320 JUL 1, 1992 10:07:14 FRONT
START

0.145

0.306

0.800

0.515

1.480

2.370

2.863

6.930

7.370

7.745

8.091

TIMETABLE STOP

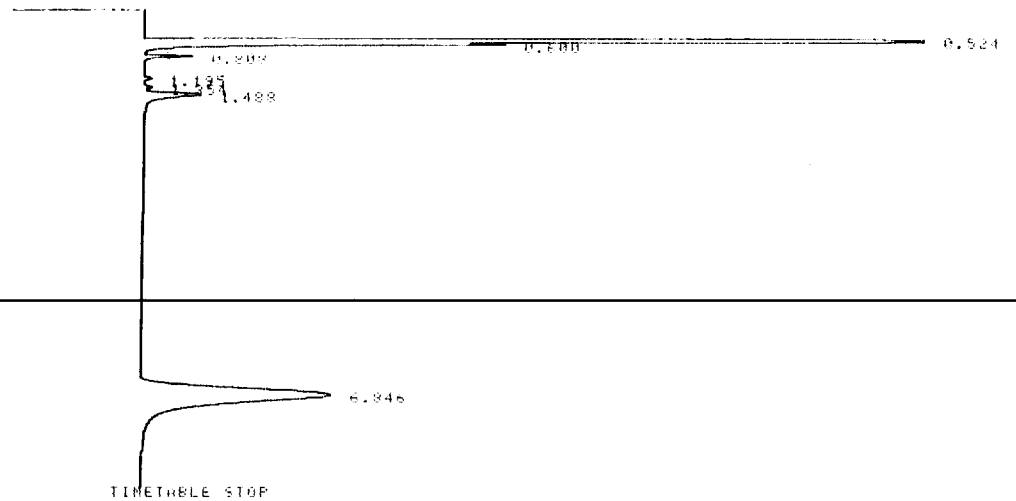
RUN# 320 JUL 1, 1992 10:07:14

AREA:

PT	AREA	TYPE	WIDTH	AREA%
.496	66215	BP	.096	.39177
.516	11824176	SPB	.010	69.92755
.900	148238	BV	.047	.87667
.905	25319	VB	.026	.14974
1.045	30788	PB	.025	.18208
1.187	28032	PP	.047	.16578
1.347	33699	PV	.056	.19929
1.480	386768	VB	.100	2.28732
2.370	15629	PB	.083	.09243
2.862	11839	PB	.097	.07002
6.836	4202029	PV	.309	24.85056
7.370	105922	VV	.156	.62642
7.715	30508	VB	.109	.18042

TOTAL AREA=1.6909E+07
NOL FACTOR=1.0000E+00

BACK * RUN # 321 JUL 1, 1992 10:16:30 REAR
START



TIMETABLE STOP

RUN# 321 JUL 1, 1992 10:16:30

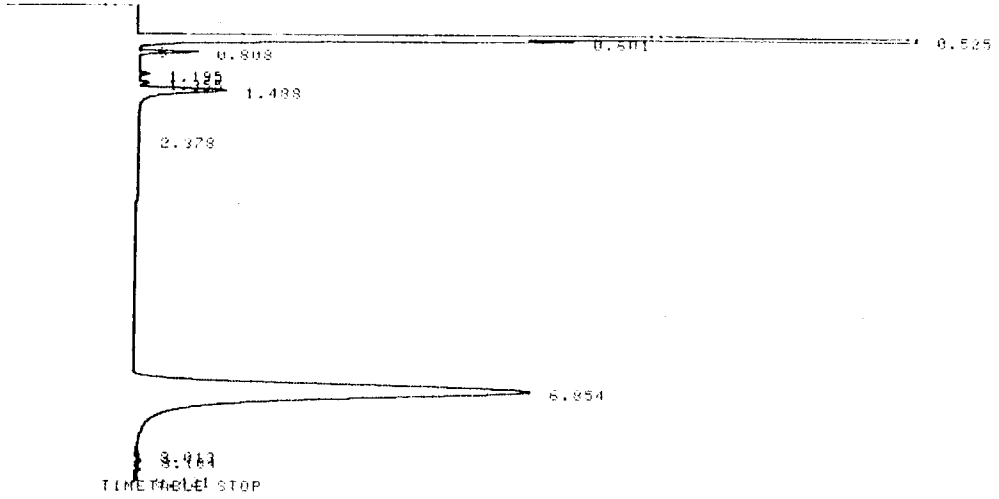
AREA%:

PT	AREA	TYPE	WIDTH	AREA%
.524	6890989	SPB	.039	71.41366
.600	173755	TBB	.032	1.80058
.808	77099	BB	.040	.79900
1.195	16420	PV	.047	.17017
1.354	19825	VV	.059	.20545
1.488	237290	VB	.196	2.45912
6.846	2234021	PB	.311	23.15193

TOTAL AREA=9.6494E+06
NOL FACTOR=1.0000E+00

TIME 10:26:15
JUL 1, 1992 10:26:15

BLE + RUN # 322 JUL 1, 1992 10:26:42 FRONT
STRPT



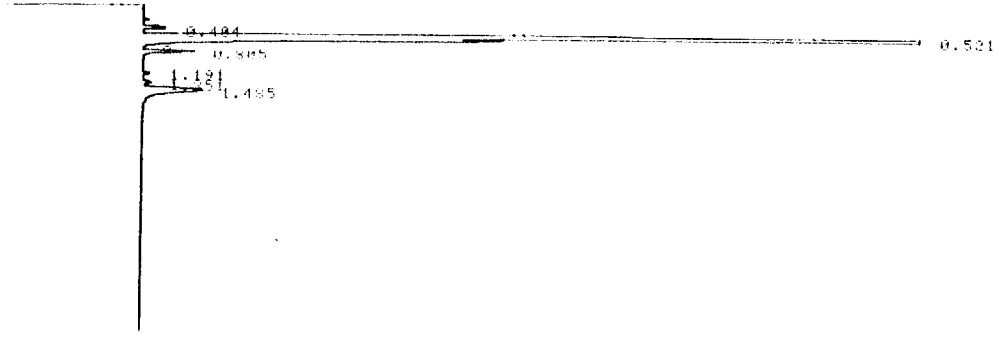
RUN# 322 JUL 1, 1992 10:26:42

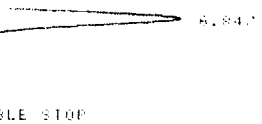
AREA%

PT	AREA	TYPE	WIDTH	AREA%
.525	8297261	SBB	.039	60.88595
.601	219073	TBB	.032	1.60951
.808	94340	BB	.040	.69311
1.195	20357	PP	.047	.14956
1.355	21239	PV	.055	.17908
1.488	351651	VB	.106	2.58356
2.379	11276	PB	.083	.08284
6.854	4567261	PB	.307	33.55534
8.104	35672	PB	.119	.26208

TOTAL AREA=1.3611E+07
MUL FACTOR=1.0000E+00

RACK + RUN # 323 JUL 1, 1992 10:35:45 REAR
STRPT





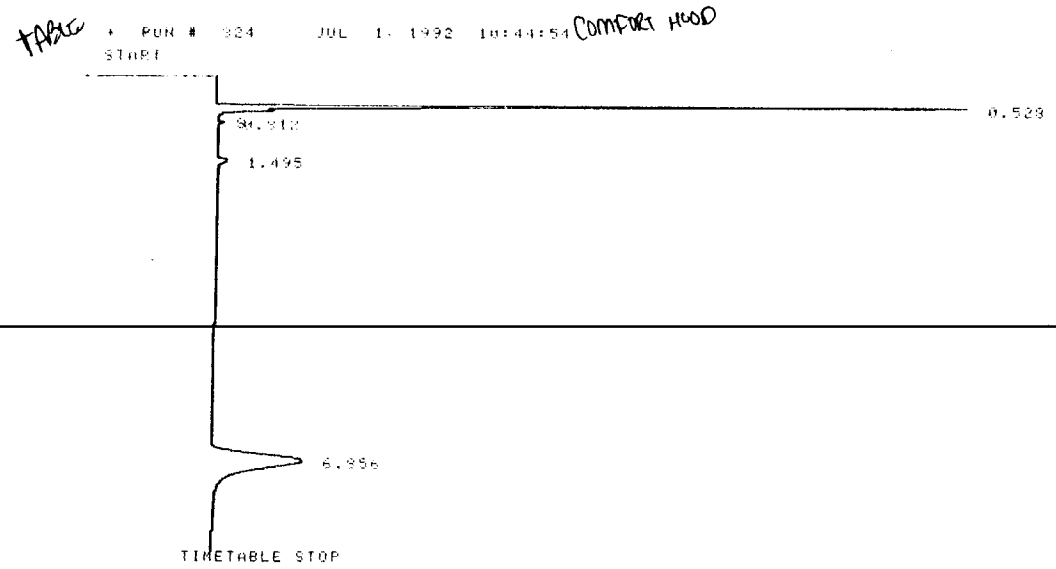
RUN# 323 JUL 1, 1992 10:35:45

APEAS

PI	APEA	TYPE	WIDTH	APEA%
.481	39322	PB	.042	.37586
.521	7104271	SBB	.041	70.46419
.905	78304	BB	.040	.76800
1.191	16902	BF	.047	.16592
1.351	20096	FV	.055	.19710
1.485	240657	VB	.105	2.36036
6.947	2617120	PB	.311	25.66864

TOTAL APEA=1.0196E+07
MUL FACTOR=1.0000E+00

TABLE

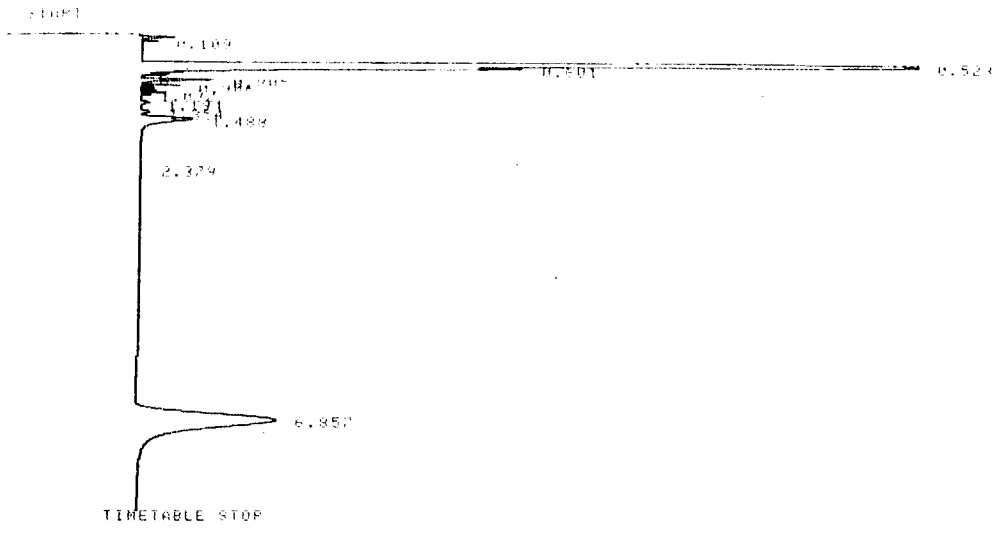


RUN# 324 JUL 1, 1992 10:44:54

APEAS

PI	APEA	TYPE	WIDTH	APEA%
.523	1153903	SBB	.041	49.77608
.812	12712	BB	.029	.51345
1.495	49121	VB	.106	2.11394
6.956	1102452	PB	.316	17.55662

TOTAL APEA=2318189
MUL FACTOR=1.0000E+00



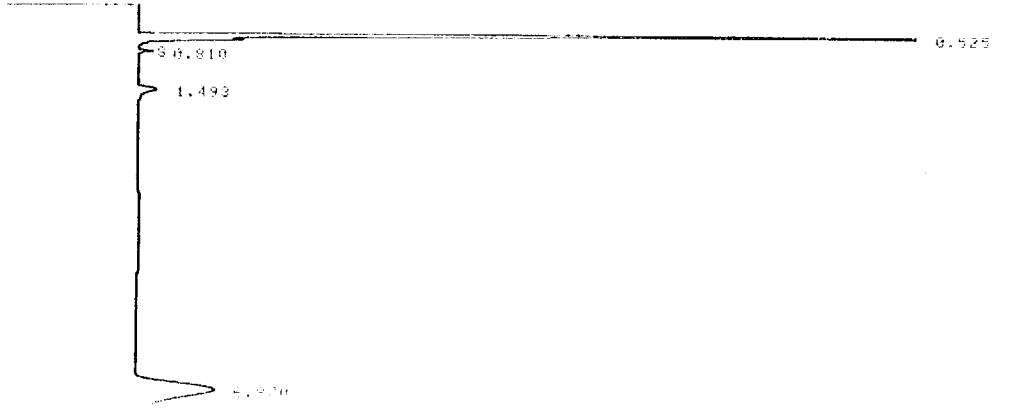
RUN# 325 JUL 1, 1992 10:53:50

AREAS

RT	AREA	TYPE	WIDTH	AREA%
.523	8049162	SPB	.039	77.38048
.601	168145	TBB	.028	1.62690
.905	95416	BV	.033	.92805
.906	45884	VB	.029	.44396
1.032	36213	PB	.042	.35038
1.194	19621	BV	.048	.18995
1.354	23109	VV	.055	.22359
1.488	219839	VB	.107	2.12708
2.379	10970	PB	.083	.10614
6.857	1666418	PB	.313	16.12360

TOTAL AREA=1.0335E+07
MUL FACTOR=1.0000E+00

TABLE + RUN # 326 JUL 1, 1992 11:02:54 Compound Head



TIMETABLE STOP

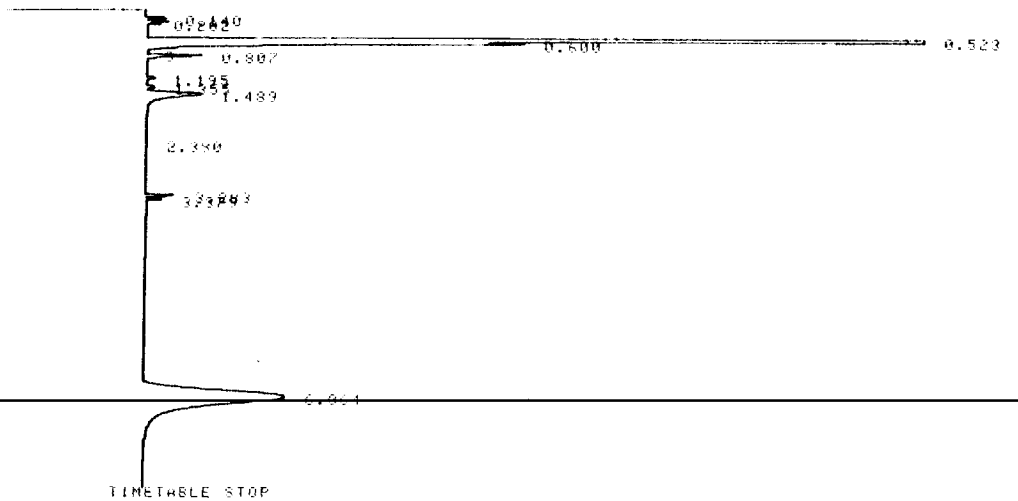
RUN# 326 JUL 1, 1992 11:02:54

AREA%

RT	AREA	TYPE	WIDTH	AREA%
.525	2251349	SPB	.040	67.52582
.810	24575	BB	.040	.73709
1.493	80071	VB	.107	2.40161
6.870	978061	PB	.317	29.33549

TOTAL AREA=3334054
NUL FUCTOR=1.0000E+00

BACK * RUN # 327 JUL 1, 1992 11:12:05 REAR
START



TIMETABLE STOP

RUN# 327 JUL 1, 1992 11:12:05

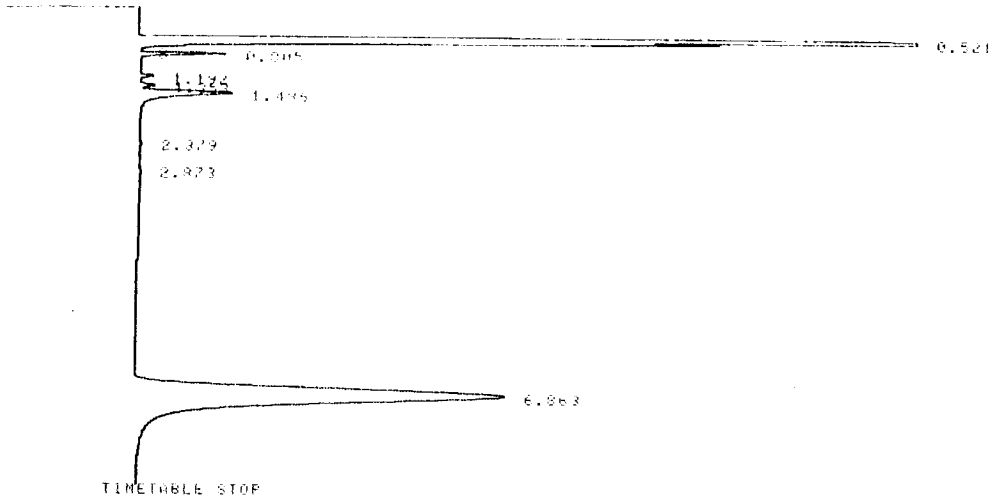
AREA%

RT	AREA	TYPE	WIDTH	AREA%
.140	28887	PV	.032	.26423
.202	38059	VB	.039	.37402
.523	7914413	SPB	.039	76.79569
.600	177305	TBB	.030	1.74246
.807	37473	BB	.040	.95961
1.135	19961	BP	.047	.18634
1.355	22490	PV	.055	.22102
1.489	227572	VB	.106	2.23645
2.380	10639	PB	.084	.10455
2.683	39755	VV	.033	.39069
3.379	15181	VB	.023	.14922
6.864	1696852	PB	.313	16.67572

TOTAL AREA=1.0176E+07
NUL FUCTOR=1.0000E+00

TAPS

RUN # 328 JUL 1, 1992 11:21:29 FLOW



TIMETABLE STOP

RUN# 328 JUL 1, 1992 11:21:29

AREAS

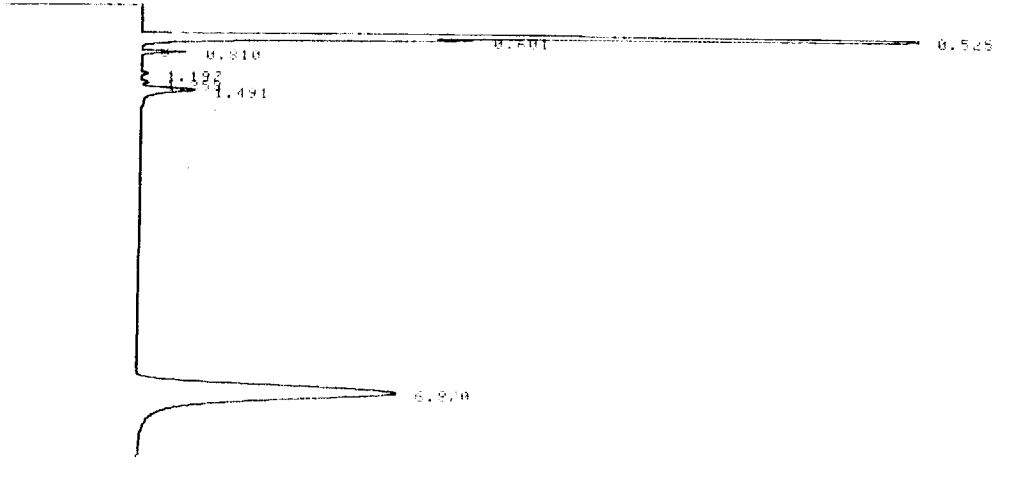
RT	AREA	TYPE	WIDTH	AREA%
.521	1197529	SHB	.040	70.781/0
.805	133136	BB	.040	.79252
1.192	28794	PP	.048	.17156
1.353	33793	PV	.055	.20142
1.486	374776	VB	.105	2.23378
2.379	16201	PB	.023	.09656
2.873	12779	PB	.022	.07617
6.863	1202685	PB	.310	25.64530

TOTAL AREA=1.6778E+07
MUL FACTOR=1.0000E+00

BACK

RUN # 329 JUL 1, 1992 11:20:21 REAR

START



RUN# 329 JUL 1, 1992 11:30:34

AREA%

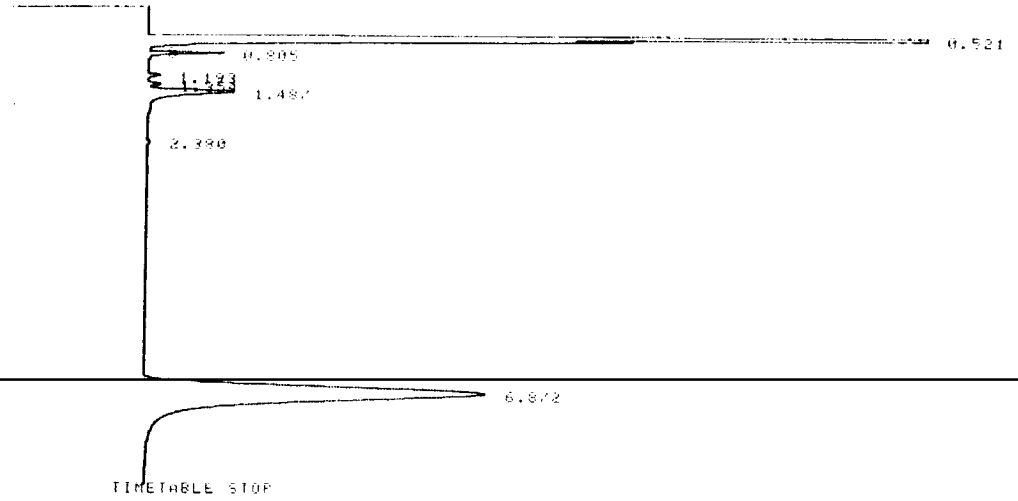
PT	AREA	TYPE	WIDTH	AREA%
.525	6242394	SPB	.039	63.85437
.601	161227	IBB	.031	1.63611
.810	71817	BB	.040	.72879
1.197	15383	PP	.049	.15610
1.358	18692	PV	.056	.18968
1.491	224396	VB	.107	2.27704
6.870	3070390	PB	.311	31.15791

TOTAL AREA=9.8542E+06
MUL FACTOR=1.0000E+00

TABLE

RUN # 330 JUL 1, 1992 11:29:30 FRONT

START



TIMETABLE STOP

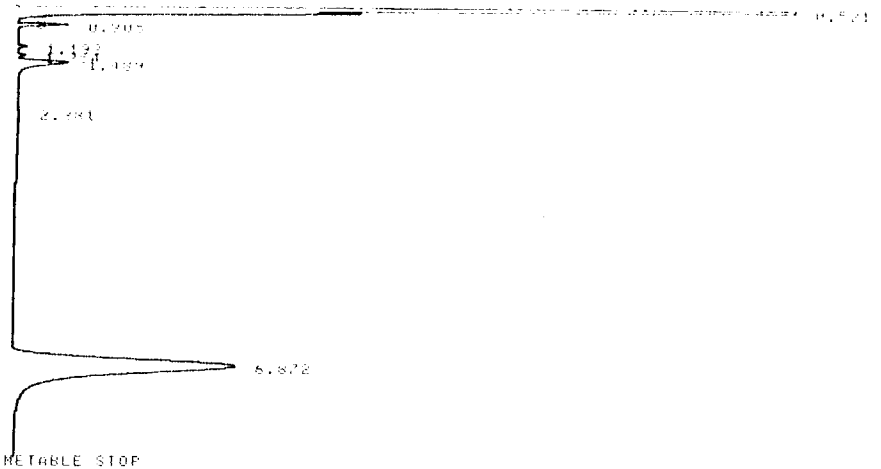
RUN# 330 JUL 1, 1992 11:29:30

AREA%

PT	AREA	TYPE	WIDTH	AREA%
.521	10060760	SPB	.040	68.96493
.805	113460	BB	.040	.77775
1.193	24882	PP	.048	.17056
1.354	29485	PV	.055	.20212
1.487	349812	VB	.107	2.39791
2.380	12914	BB	.080	.08852
6.872	3996412	PB	.311	27.39821

TOTAL AREA=1.4588E+07
MUL FACTOR=1.0000E+00

BACK RUN # 331 JUL 1, 1992 11:49:20 REAR



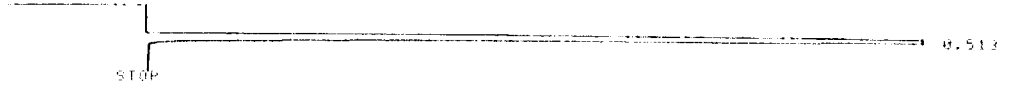
RUN# 331 JUL 1 1992 11:49:30

AREA%

RT	AREA	TYPE	WIDTH	AREA%
.521	6829562	SPB	.040	69.62266
.885	78999	BB	.040	.80534
1.193	20112	PP	.048	.20503
1.354	19844	PV	.055	.20230
1.439	209303	VB	.106	2.13370
2.381	33577	BV	.207	.34229
6.372	2618000	PB	.313	26.68870

TOTAL AREA=9.8094E+06
MUL FACTOR=1.0000E+00

TABLE * RUN # 332 JUL 1, 1992 11:59:14 3960 ppm CH_4
START



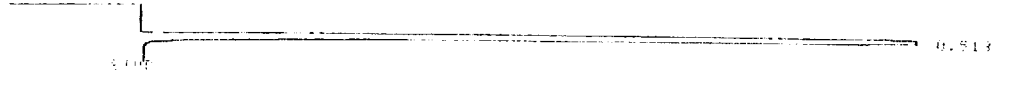
RUN# 332 JUL 1, 1992 11:59:14

AREA%

RT	AREA	TYPE	WIDTH	AREA%
.513	25470064	SPH	.049	100.00000

TOTAL AREA=2.547E+07
MUL FACTOR=1.0000E+00

RACK * RUN # 333 JUL 1, 1992 12:08:56 3960 ppm CH_4
START



RUN# 333 JUL 1, 1992 12:00:55

AREA:

PT	AREA TYPE	WIDTH	AREA%
.513	25555000 SPH	.049	100.00000

TOTAL AREA=2.5555E+07
MUL FACTOR=1.0000E+00

SYRINGE

* RUN # 334 JUL 1, 1992 13:33:26 CH4 @ 8007 ppm
START

RUN# 334 JUL 1, 1992 13:33:26

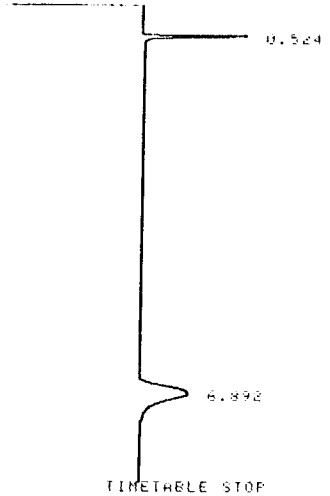
AREA%

PT	AREA	TYPE	WIDTH	AREA%
.296	18374	BH	.051	2.65048
.521	674860	SHB	.038	97.34950

TOTAL AREA= 693234
MUL FACTOR=1.0000E+00

TABLE

* RUN # 335 JUL 1, 1992 13:54:00 Ethanol @ 200 ppm
START



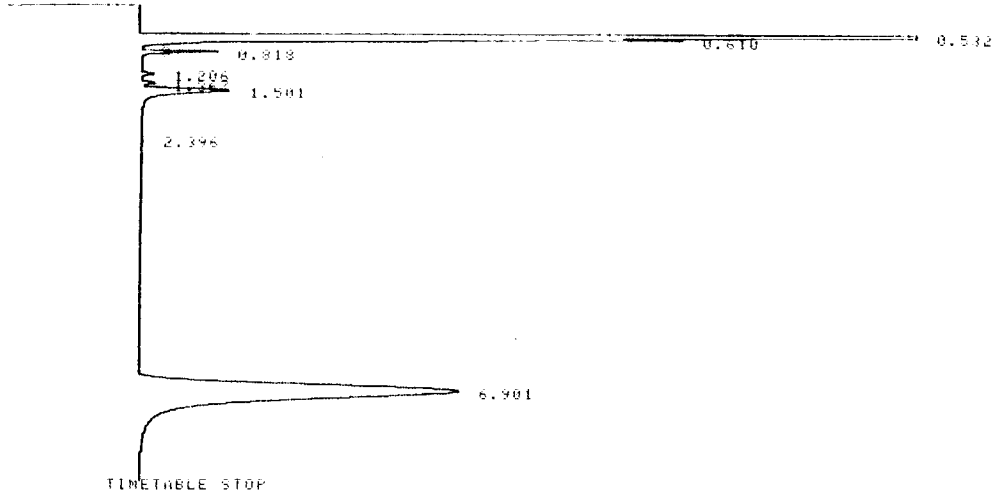
RUN# 335 JUL 1, 1992 13:54:00

5.942 61.154 PE .321 24.69223

TOTAL APEA= .59432
MUL FACTOR=1.0000E+00

TABLE

* RUN # 336 JUL 1, 1992 14:04:00 FRONT, BV
START



TIMETABLE STOP

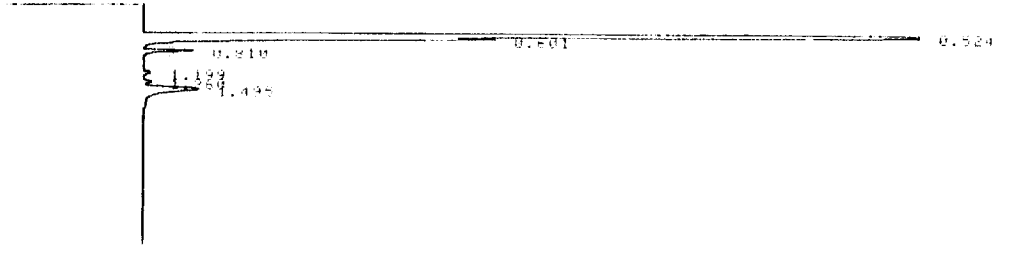
RUN# 336 JUL 1, 1992 14:04:00

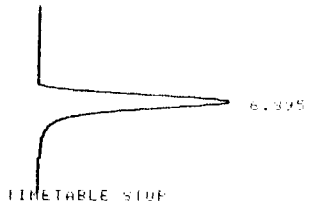
APERA

PI	APER	TYPE	WIDTH	APER%
.532	1060700	SPB	.039	59.38900
.610	266401	TBB	.031	14.75527
.818	122144	BB	.040	.80478
1.206	25607	PP	.043	1.1531
1.367	31069	PV	.056	1.20995
1.501	45791	VB	.106	2.25253
2.396	14336	PB	.081	.09446
6.901	3751624	PB	.312	24.71873

TOTAL APEA=1.5177E+07
MUL FACTOR=1.0000E+00

KAUL * RUN # 337 JUL 1, 1992 14:13:00 LEAR
START





RUN# 337 JUL 1, 1992 14:13:00

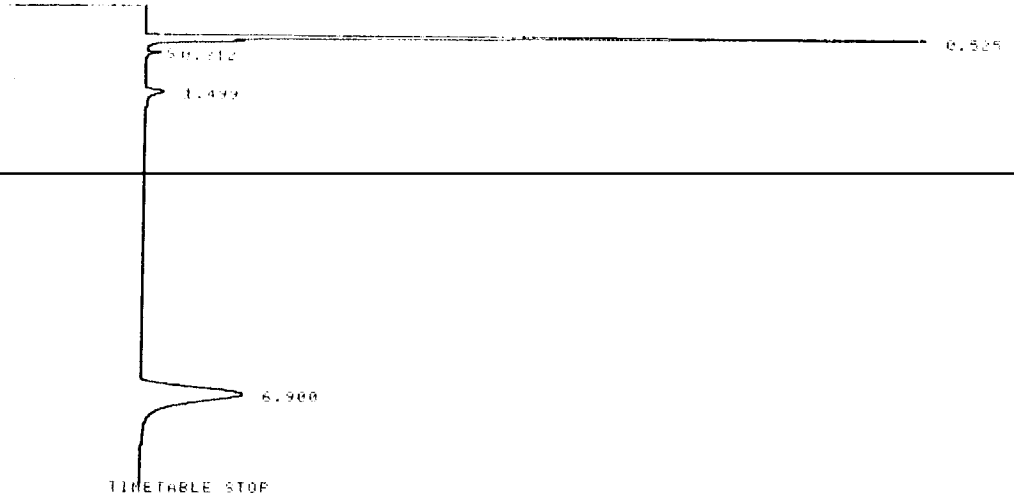
APEN%

PT	APEN	TYPE	WIDTH	APEN%
.524	6783936	SPB	.040	70.80950
.601	172730	IBB	.031	1.80292
.810	77709	BB	.010	.81111
1.199	16617	PP	.048	.17345
1.360	19753	PV	.055	.20618
1.495	225582	VB	.106	2.35459
6.995	2284219	PB	.316	23.84226

TOTAL APEN=9.5805E+06
NUL FACTOR=1.0000E+00

TABLE

* RUN # 338 JUL 1, 1992 14:22:05 COMFORT HOOD
START

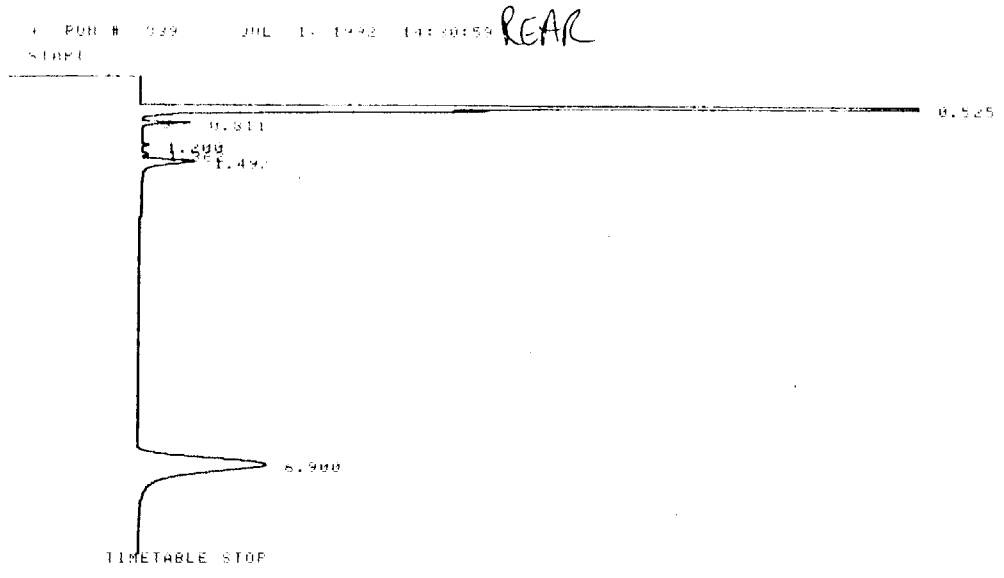


RUN# 338 JUL 1, 1992 14:22:05

APEN%

PT	APEN	TYPE	WIDTH	APEN%
.525	2041574	SPB	.012	60.25742
.812	22509	BB	.010	.66441
1.499	77427	VB	.103	2.28566
6.900	1245005	PB	.319	36.79229

RACK



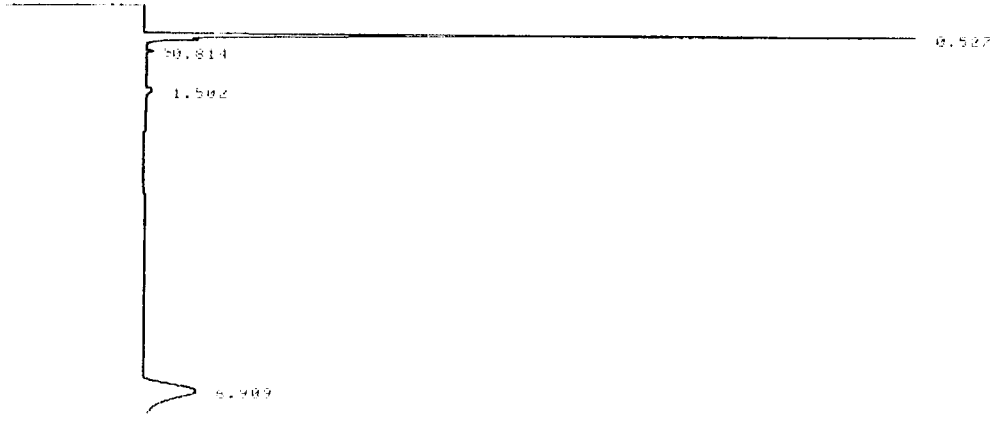
RUN# 339 JUL 1. 1992 14:30:59

AREA%

PT	AREA	TYPE	WIDTH	AREA%
.525	68?4992	SBB	.041	78.56109
.911	76296	BB	.040	.87184
1.000	16292	BP	.048	.18617
1.352	19467	PP	.055	.22245
1.497	21?296	PB	.106	2.48409
5.900	1545710	PB	.318	17.67438

TOTAL AREA=8.?511E+06
MUL FACTOR=1.0000E+00

TABLE



TIMETABLE STOP

RUN# 340 JUL 1, 1992 14:39:59

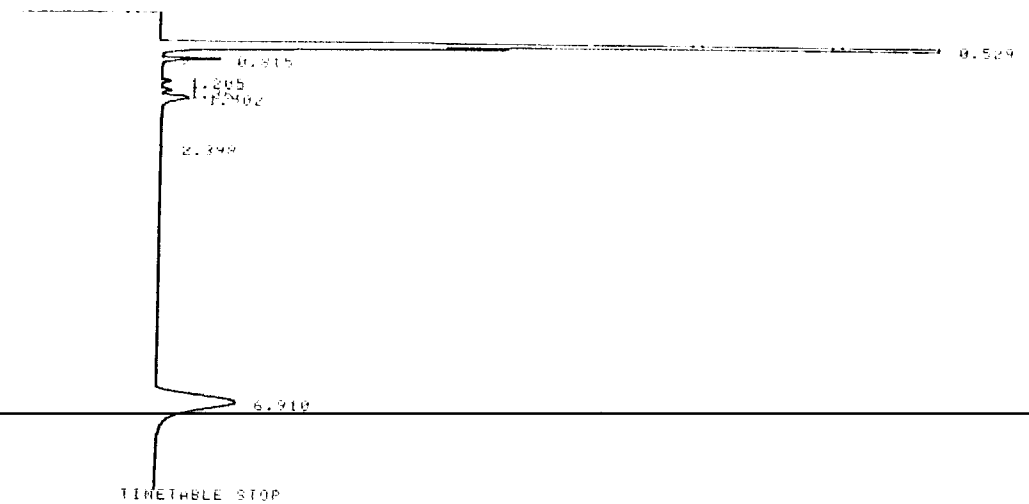
APERS

PT	APER	TYPE	WIDTH	APER%
.527	1195216	SHB	.041	62.26722
.814	13717	BB	.040	.71462
1.502	38863	VV	.112	2.02465
6.909	671699	PB	.321	34.99254

TOTAL APER=1919495
NOR FACTOR=1.0000E+00

BACK

* RUN # 341 JUL 1, 1992 14:49:00 REAR
START



TIMETABLE STOP

RUN# 341 JUL 1, 1992 14:49:00

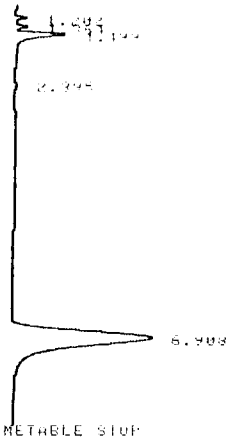
APERS

PT	APER	TYPE	WIDTH	APER%
.529	9623635	SPB	.040	87.27539
.815	94171	BB	.040	.95306
1.205	20691	PV	.048	.20940
1.367	24578	VV	.055	.24874
1.502	116893	VB	.106	1.18301
2.399	11634	PB	.094	.11774
6.910	989349	PB	.320	10.01270

TOTAL APER=9.0009E+06
NOR FACTOR=1.0000E+00

TABLE

* RUN # 342 JUL 1, 1992 11:53:05 FRONT
START



TIMETABLE STOP

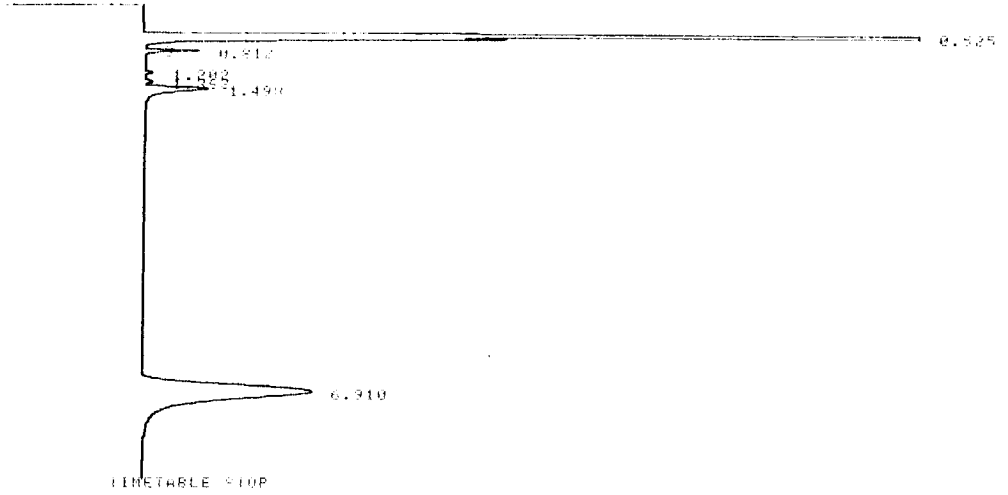
RUN# 342 JUL 1, 1992 11:53:05

AREA%

PI	AREA	TYPE	WIDTH	AREA%
.526	9725442	SMB	.041	82.53031
.813	106942	BB	.010	.90752
1.202	24154	BV	.010	.20498
1.364	28899	VV	.056	.24524
1.499	199910	VB	.107	1.69645
2.395	13272	BB	.004	.11263
6.908	1685475	BB	.310	14.30305

TOTAL AREA=1.1784E+07
NOL FACTOR=1.0000E+00

BACK * RUN # 343 JUL 1, 1992 15:07:00 REAR
START



TIMETABLE STOP

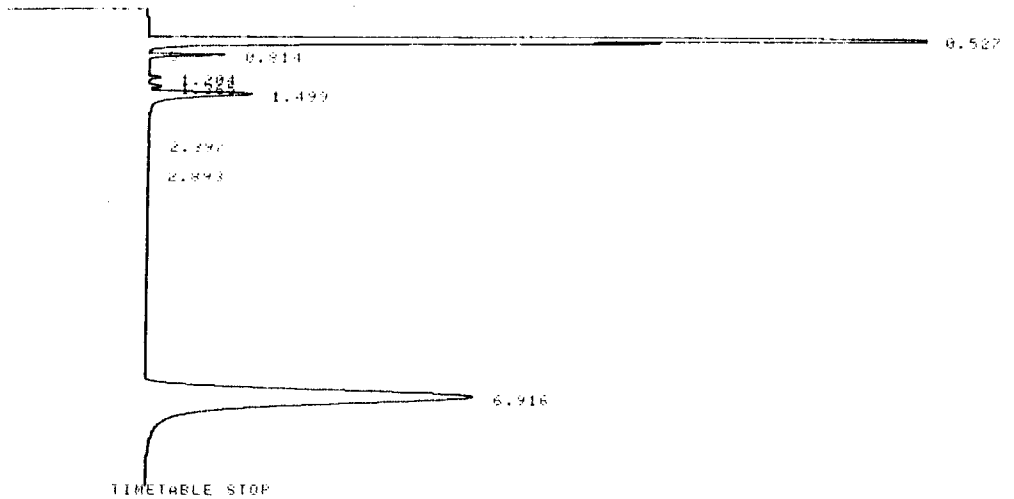
AREA%

PI	AREA	TYPE	WIDTH	AREA%
.525	7503152	SHB	.041	75.80691
.814	9350.	BB	.010	.09269
1.202	19156	PP	.042	.19102
1.363	21468	BV	.055	.21405
1.498	255936	VB	.106	2.55180
6.910	2047111	PB	.317	20.41362

TOTAL AREA=1.0030E+07
MUL FACTOR=1.0000E+00

TABLE

* RUN # 344 JUL 1, 1992 15:16:00 FRONT
START



TIMETABLE STOP

RUN# 344 JUL 1, 1992 15:16:00

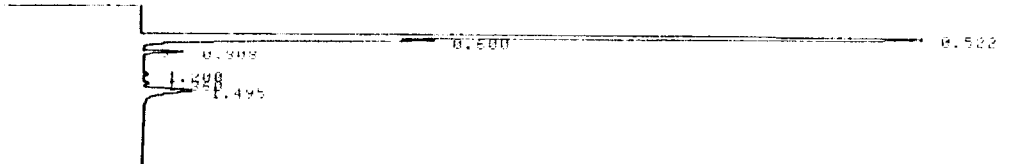
AREA%

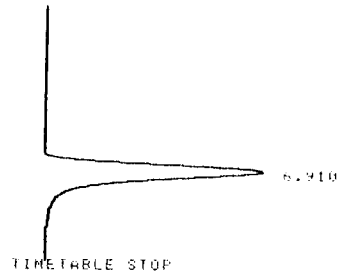
PI	AREA	TYPE	WIDTH	AREA%
.527	10684448	SHB	.041	70.30864
.814	118489	BB	.010	.77971
1.204	25923	PP	.013	.17059
1.365	31141	BV	.056	.20492
1.499	423053	VB	.106	2.78389
2.397	13816	PB	.031	.09092
2.893	12042	BV	.047	.07924
6.916	3387594	PB	.315	22.58212

TOTAL AREA=1.5196E+07
MUL FACTOR=1.0000E+00

RACK

* RUN # 345 JUL 1, 1992 15:32:44 REAR
START





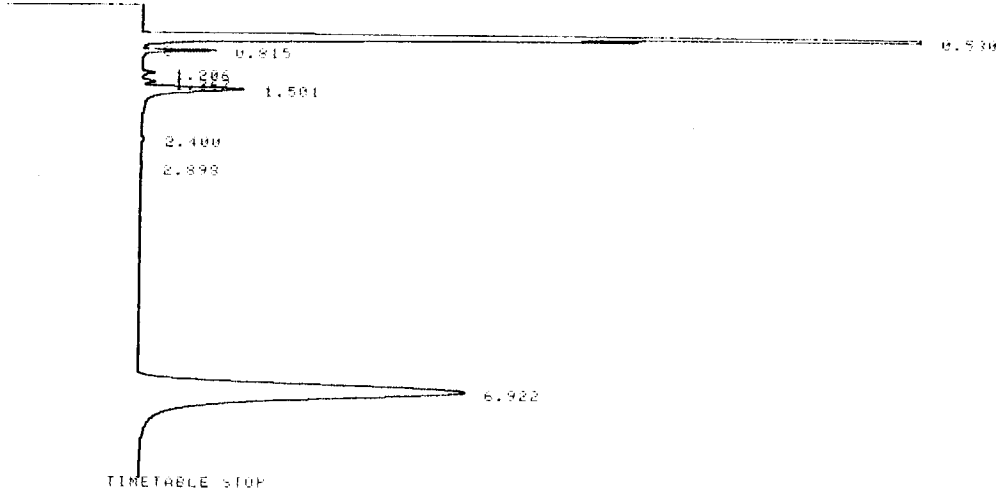
RUN# 345 JUL 1, 1992 15:32:44

AREA:

PT	AREA	TYPE	WIDTH	AREA%
.522	5926973	SPB	.040	66.31840
.600	131753	TBB	.030	1.47422
.808	66355	BB	.010	.74246
1.200	14391	BP	.049	.16102
1.360	17336	PV	.057	.19398
1.495	205053	VB	.106	2.29439
6.910	2575288	PB	.316	28.81555

TOTAL AREA=8.9371E+06
NUL FACTOR=1.0000E+00

TABLE * RUN # 346 JUL 1, 1992 15:41:40 FRONT
START



RUN# 346 JUL 1, 1992 15:41:40

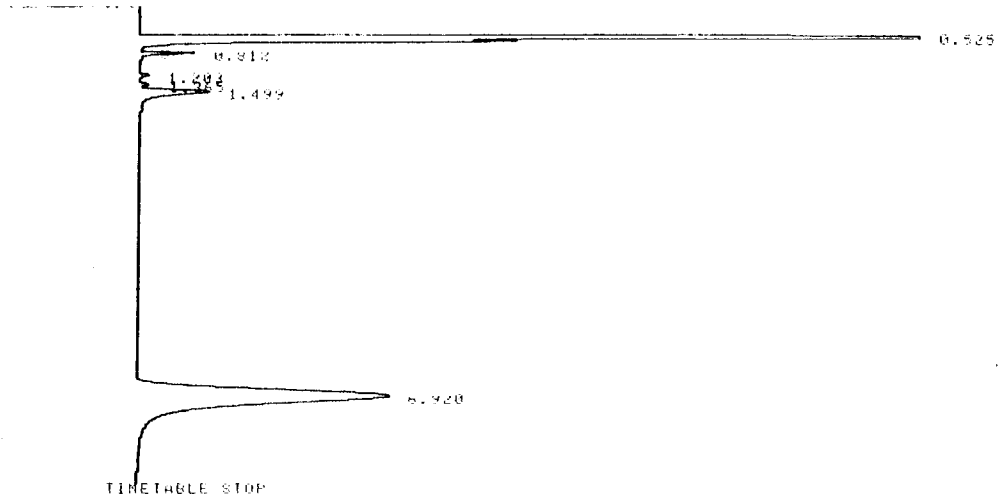
AREA:

PT	AREA	TYPE	WIDTH	AREA%
.530	10222280	SBB	.041	69.57133
.815	113032	BB	.040	.76920
1.206	24557	BP	.049	.16711
1.367	29919	PV	.056	.20360
1.501	102711	VB	.102	2.79911

TOTAL AREA=1.0916E+07
NOR FACTOR=1.0000E+00

REAR

* RUN # 344 JUL 1, 1992 15:50:29
START



TIMETABLE STOP

RUN# 347 JUL 1, 1992 15:50:39

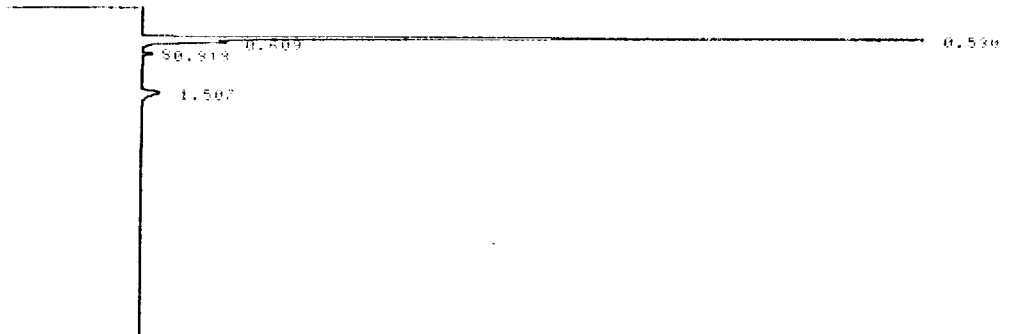
AREAS

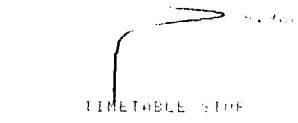
PI	AREA	TYPE	WIDTH	AREA%
.525	7523357	SPB	.041	68.92301
.912	82324	BB	.040	.75419
1.203	17563	BP	.04[illegible]	.16090
1.265	20995	PV	.056	.19234
1.499	281724	VB	.107	2.58139
6.920	2989584	PB	.316	27.38820

TOTAL AREA=1.0916E+07
NOR FACTOR=1.0000E+00

TABLE

* RUN # 348 JUL 1, 1992 15:59:29 COMFORT HOOD
START





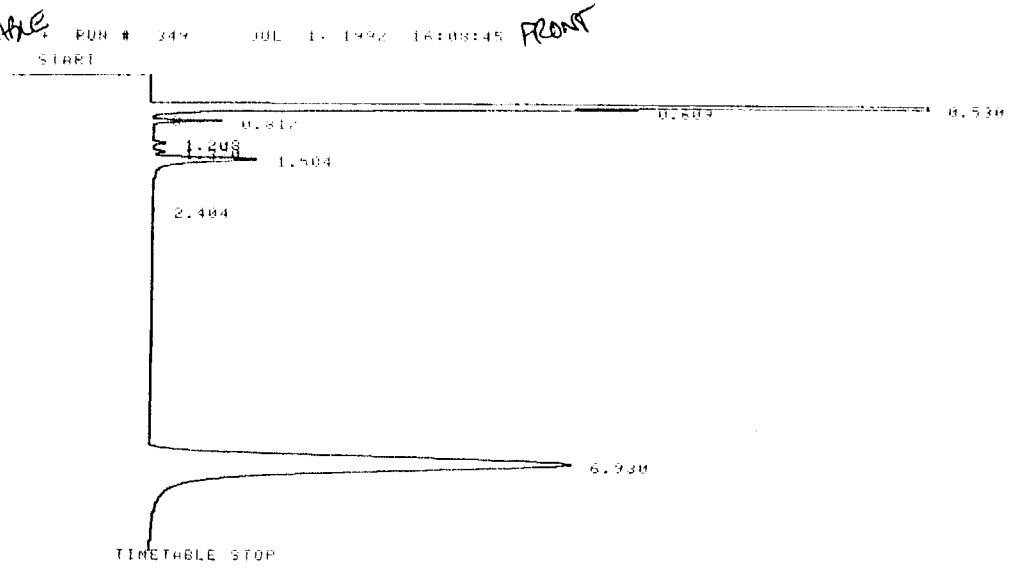
RUN# 348 JUL 1, 1992 15:54:29

AREA%

RT	AREA	TYPE	WIDTH	AREA%
.539	1691161	SBB	.040	52.62235
.609	40879	IBB	.031	1.27080
.818	19566	BB	.040	.62039
1.507	80194	VB	.109	2.54274
6.927	1322936	PB	.319	41.94371

TOTAL AREA=3153837
MUL FACTOR=1.0000E+00

TABLE RUN # 349 JUL 1, 1992 16:03:45 FRONT

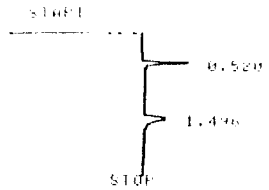


RUN# 349 JUL 1, 1992 16:03:45

AREA%

RT	AREA	TYPE	WIDTH	AREA%
.530	9301594	SBB	.040	61.61587
.609	224248	IBB	.031	1.48580
.817	110599	BB	.040	.73263
1.208	28087	PV	.049	.18605
1.370	28374	VV	.056	.18796
1.504	418603	VB	.107	2.77292
2.404	12600	BB	.032	.08347
6.930	4971446	PB	.313	32.93530

TOTAL AREA=1.509&E+07
MUL FACTOR=1.0000E+00



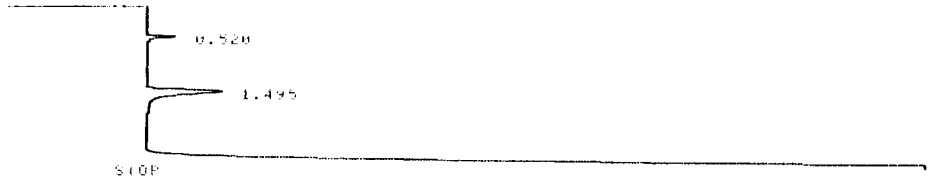
RUN# 350 JUL 1, 1992 16:20:38

AREA%

PI	AREA	TYPE	WIDTH	AREA%
.520	94272	PV	.052	41.71882
1.496	131698	VB	.146	58.28118

TOTAL AREA= 225970
MUL FACTOR=1.0000E+00

* RUN # 351 JUL 1, 1992 16:24:36 1.2 dil. ACM 002105 Acetaldehyde @ 41.2ppm
START



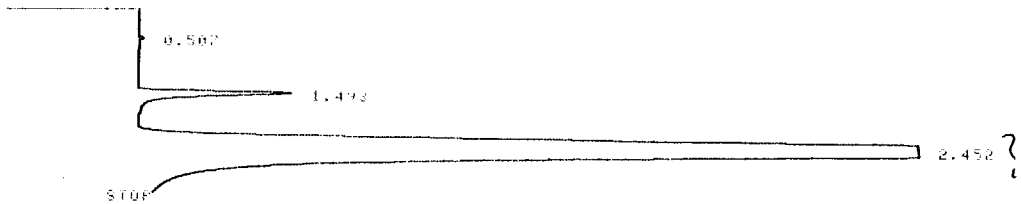
RUN# 351 JUL 1, 1992 16:24:36

AREA%

PI	AREA	TYPE	WIDTH	AREA%
.520	48247	BB	.043	13.76596
1.495	302236	PB	.104	86.23404

TOTAL AREA= 350483
MUL FACTOR=1.0000E+00

* RUN # 352 JUL 1, 1992 16:29:02 ACM 002105 Acetaldehyde @ 88.5ppm
START



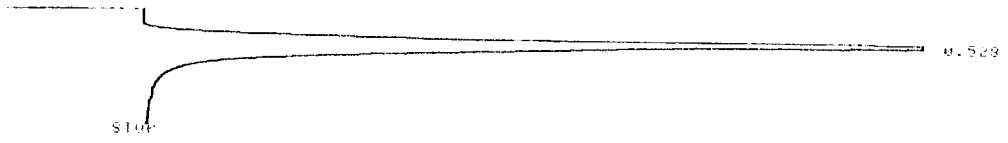
RUN# 352 JUL 1, 1992 16:29:02

AREA%

PI	AREA	TYPE	WIDTH	AREA%

TOTAL AREA=1.504±E+07
MUL FACTOR=1.0000E+00

* RUN # 353 JUL 1, 1992 16:35:19
START



RUN# 353 JUL 1, 1992 16:35:19

AREA%

PT	AREA	TYPE	WIDTH	AREA%
.528	12869848	ISPH	.068	100.00000

TOTAL AREA=1.28?0E+07
MUL FACTOR=1.0000E+00

TABLE * RUN # 354 JUL 1, 1992 16:38:14 798 ppm CH_4
START not ready

RUN# 354 JUL 1, 1992 16:38:14

AREA%

PT	AREA	TYPE	WIDTH	AREA%
.525	6585357	SBB	.038	100.00000

TOTAL AREA=6585357
MUL FACTOR=1.0000E+00

RACK * RUN # 355 JUL 1, 1992 16:40:10 798 ppm CH_4
START

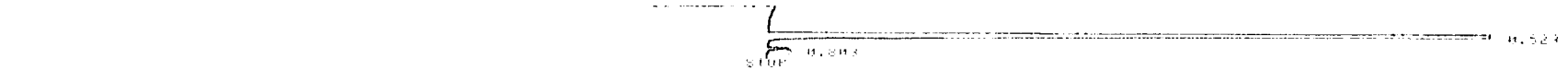
RUN# 355 JUL 1, 1992 16:40:10

AREA%

PT	AREA	TYPE	WIDTH	AREA%
.525	6577274	SBB	.038	100.00000

TOTAL AREA=6577274
MUL FACTOR=1.0000E+00

TANK * RUN # [illegible] JUL 1, 1992 16:[illegible] 1490 ppm CH4
START



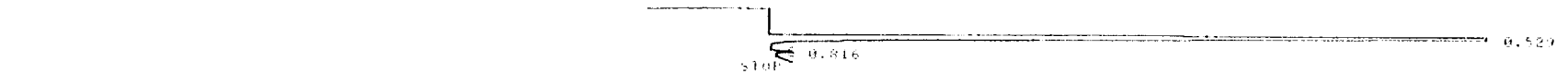
RUN# [illegible] JUL 1, 1992 16:42:35

AREA%

PT	APEH	TYPE	WIDTH	APEH%
.523	12465192	SPB	.037	99.71722
.903	35243	BB	.038	.282?7

TOTAL APEH=1.2501E+07
MUL FACTOR=1.0000E+00

RACK * RUN # 357 JUL 1, 1992 16:41:05 1490 ppm CH4
START: not read



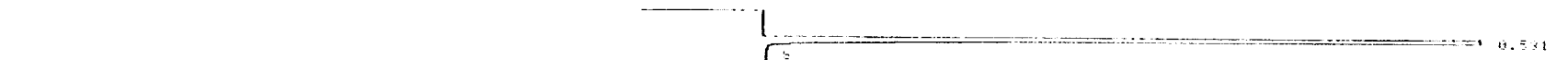
RUN# 357 JUL 1, 1992 16:44:05

AREA%

PT	APEH	TYPE	WIDTH	APEH%
.529	12299512	SBB	.039	99.67152
.916	40522	BV	.044	.32849

TOTAL APEH=1.2339E+07
MUL FACTOR=1.0000E+00

TANK * RUN # 358 JUL 1, 1992 16:47:40 2000 ppm CH4
START



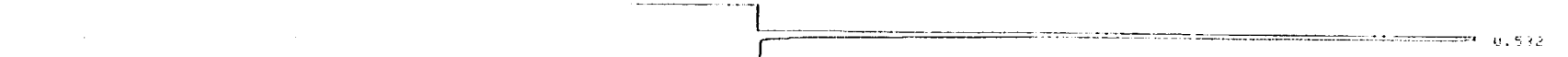
RUN# 358 JUL 1, 1992 16:4[illegible]:40

AREA%

PT	APEH	TYPE	WIDTH	APEH%
.531	16859276	SBB	.037	100.00000

TOTAL APEH=1.6859E+07
MUL FACTOR=1.0000E+00

RACK * RUN # 359 JUL 1, 1992 16:51:55 2030 ppm CH4
START



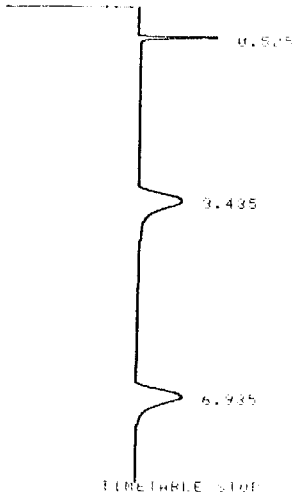
RUN# [illegible] JUL 1, 1992 16:51:58

AREAS

PT	AREA TYPE	WIDTH	AREA%
.532	[illegible]	.033	100.00000

TOTAL AREA=1.6484E+07
AUX FACTOR=1.0000E+00

RAW * RUN # 360 JUL 1, 1992 16:55:35 200 ppm Ethanol
START



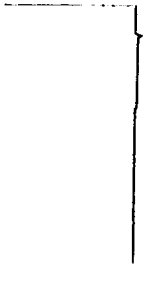
RUN# [illegible] JUL 1 1992 16:55:35

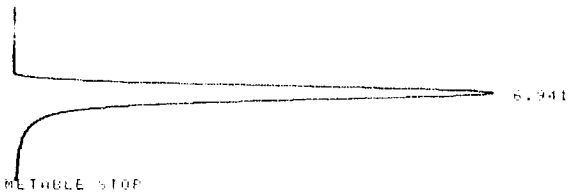
AREAS

PT	AREA	TYPE	WIDTH	AREA%
.525	128083	BB	.041	9.91427
3.435	572020	PB	.328	44.27277
6.935	591933	PB	.321	45.81297

TOTAL AREA=1292036
AUX FACTOR=1.0000E+00

1/4 bm * RUN # 361 JUL 1, 1992 17:06:00 2000 ppm Ethanol Alm 001086
START





RUN# 361 JUL 1, 1992 1:06:00

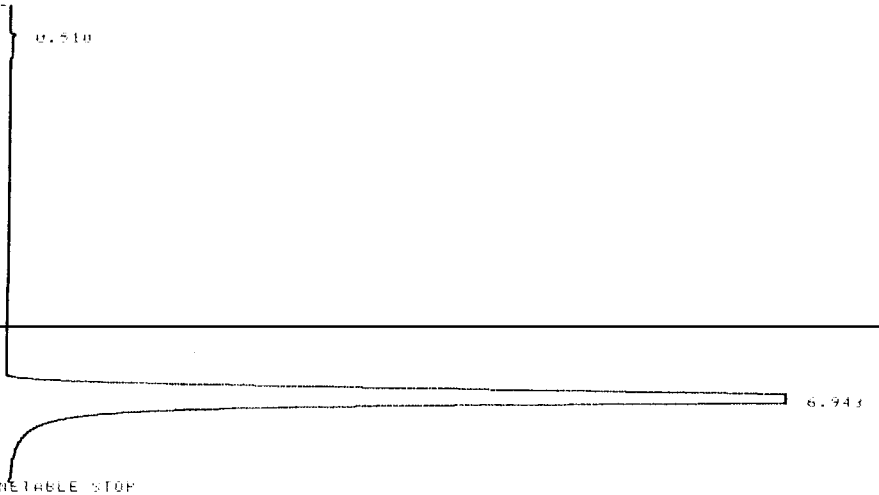
APEH%

RT	APEH TYPE	WIDTH	APEH%
6.941	5645667	PB	.316	100.00000

TOTAL APEH=5.645667
MUL FACTOR=1.0000E+00

* RUN # 362 JUL 1, 1992 17:16:49 4000ppm Ethanol Alm 011208
START

"Hi" Line



RUN# 362 JUL 1, 1992 17:15:14

APEH%

RT	APEH TYPE	WIDTH	APEH%
6.943	11488794	PB	.314	100.00000

TOTAL APEH=1.1489E+07
MUL FACTOR=1.0000E+00

* LIST: LIST
PEAK CAPACITY: 1244

ZERO = 5.141

PT WD = 0.10

*

Power failed
JUL 1, 1992 17:31:21

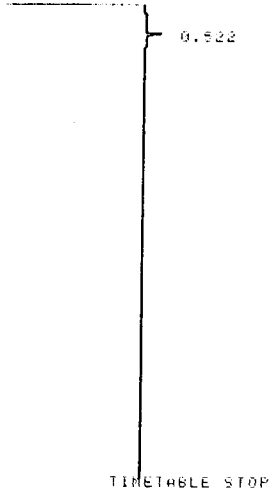
BREAK

*TIME 18:562:**:40
JUL 1, 1992 18:56:40

* LIST: LIST
PEAK CAPACITY: 1244

ZERO - 5, -1.651
ATT 2^ = 6
CHI SP = 1.0
AP REJ = 10000
THRSH = 4
PT WD = 0.10

* RUN # 363 JUL 2, 1992 08:22:05
START



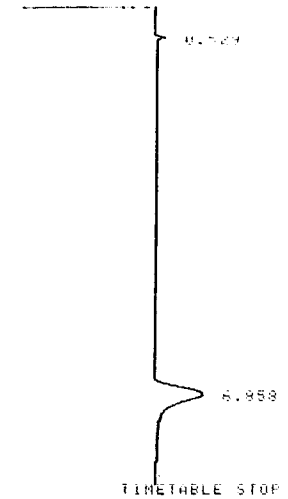
RUN# 363 JUL 2, 1992 08:22:05

AREA:

PT	AREA	TYPE	WIDTH	AREA%
.522	25537	BB	.039	100.00000

TOTAL AREA= 25537
MUL FACTOR=1.0000E+00

74 Lr START



RUN# 364 JUL 2, 1992 08:34:10

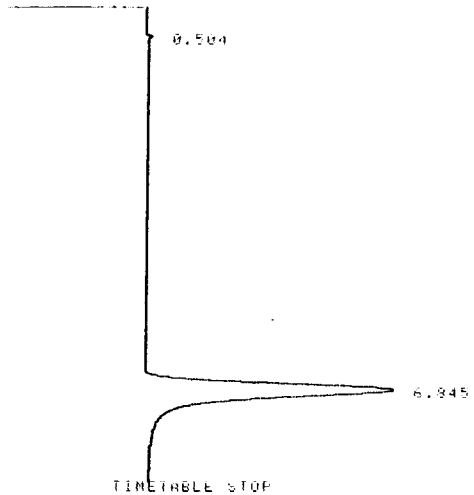
AREA%

MI	AREA	TYPE	WIDTH	AREA%
.529	23182	PB	.056	3.67211
6.959	608118	PB	.324	96.32789

TOTAL AREA= 631300
MUL FACTOR=1.00000E+00

* RUN # 365 JUL 2, 1992 08:45:15 ALM 029484 Ethanol @ 1000 ppm

START

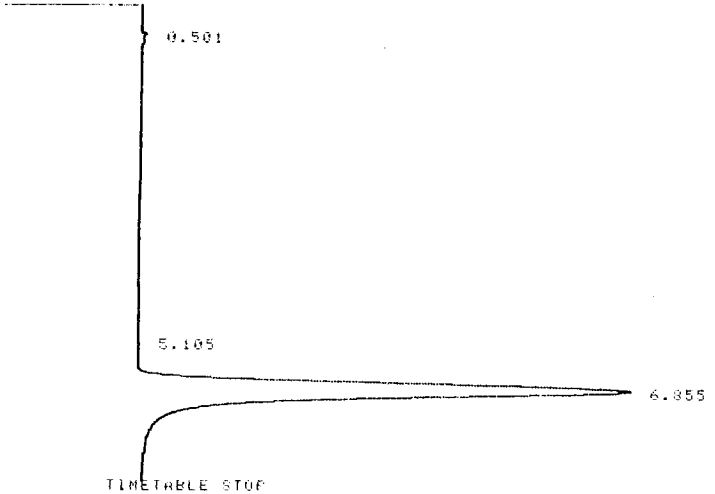


RUN# 365 JUL 2, 1992 08:45:15

5.345 2899502 PB .312 100.00000

TOTAL AREA=2899502
MUL FACTOR=1.0000E+00

1/4" * RUN # 366 JUL 2, 1992 08:55:55 ALM 001086 Ethanol @ 2000 ppm
START



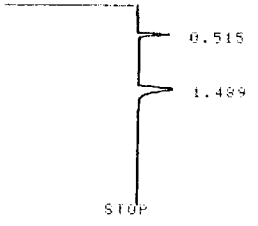
RUN# 366 JUL 2, 1992 08:55:55

AREA%

PT	AREA	TYPE	WIDTH	AREA%
5.105	53487	PB	.640	.93897
6.855	5642855	PB	.308	99.06102

TOTAL AREA=5696342
MUL FACTOR=1.0000E+00

* RUN # 367 JUL 2, 1992 09:09:59 1.5 µl. ALM 00 2105
START Acetaldehyde @ 1.5 ppm

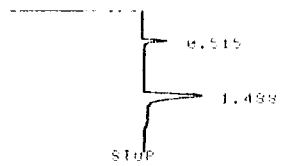


RUN# 367 JUL 2, 1992 09:09:59

AREA%

PT	AREA	TYPE	WIDTH	AREA%
.515	53417	PB	.044	26.57253
1.489	147606	PB	.109	73.42747

* RUN # 368 JUL 2, 1992 09:15:04 1,3dl ALM 002105 Acetaldehyde @ 275ppm
START



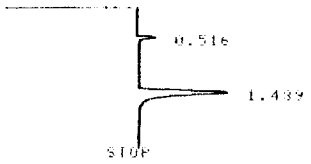
RUN# 368 JUL 2, 1992 09:15:04

AREAS:

PT	AREA	TYPE	WIDTH	AREA%
.515	42202	PB	.044	14.34447
1.488	252002	BV	.111	85.65555

TOTAL AREA= 294204
MUL FACTOR=1.0000E+00

* RUN # 369 JUL 2, 1992 09:19:12 1.2 dl. ALM 002105 Acetaldehyde @ 41.2ppm
START



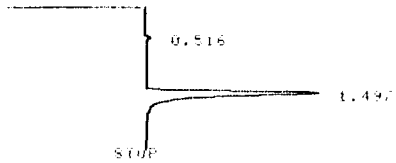
RUN# 369 JUL 2, 1992 09:19:12

AREAS:

PT	AREA	TYPE	WIDTH	AREA%
.516	33296	VB	.046	8.41590
1.489	362436	PB	.100	91.58410

TOTAL AREA= 395732
MUL FACTOR=1.0000E+00

* RUN # 370 JUL 2, 1992 09:23:27 ALM 002105 Acetaldehyde @ 825ppm
START



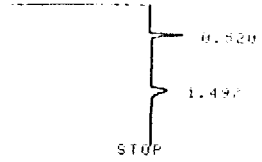
RUN# 370 JUL 2, 1992 09:23:27

AREAS:

PT	AREA	TYPE	WIDTH	AREA%
.516	11092	BB	.045	1.61901
1.497	[illegible]	PB	.104	[illegible]

1.10 ml ALM 002105 Acetaldehyde @ 8.25 ppm

```
* RUN # 371      JUL  2, 1992  09:32:42
START
```




```
RUN#   371          JUL  2, 1992  09:32:42

AREA%
      RT       AREA TYPE  WIDTH      AREA%
    .520      55139   PB   .044   43.17990
   1.497      72557   PB   .108   56.82010

TOTAL AREA= 127696
MUL FACTOR=1.0000E+00
```

1/4 ml

```
* RUN # 372      JUL  2, 1992  09:51:40
START
```

1996 ppm CH_4

```
RUN#   372          JUL  2, 1992  09:51:40

AREA%
      RT       AREA TYPE  WIDTH      AREA%
    .523   1913677   SPB   .039  100.00000

TOTAL AREA=1913677
MUL FACTOR=1.0000E+00
```

1/4 ml

```
* RUN # 373      JUL  2, 1992  09:53:55
START
```

796 ppm CH_4

```
RUN#   373          JUL  2, 1992  09:53:55

AREA%
      RT       AREA TYPE  WIDTH      AREA%
    .524   6951338   SHB   .038  100.00000

TOTAL AREA=6951338
MUL FACTOR=1.0000E+00
```

1/4 ml

```
* RUN # 374      JUL  2, 1992  09:58:00
START
```

1440 ppm CH_4

RUN# x/1 JUL 2, 1992 09:56:00

AREA%

PT	AREA	TYPE	WIDTH	AREA%
.520	12871752	BB	.039	99.72192
.905	35905	BB	.039	.27817

TOTAL AREA=1.2908E+07
MUL FACTOR=1.0000E+00

1/4" * RUN # 375 JUL 2, 1992 09:57:45 2030 ppm CH4
START

0.529

STOP

RUN# 375 JUL 2, 1992 09:57:45

AREA%

PT	AREA	TYPE	WIDTH	AREA%
.529	17551920	ISBH	.039	100.00000

TOTAL AREA=1.7552E+07
MUL FACTOR=1.0000E+00

1/4" * RUN # 376 JUL 2, 1992 10:00:06 80.2 ppm CH4
START

0.525

STOP

RUN# 376 JUL 2, 1992 10:00:06

AREA%

PT	AREA	TYPE	WIDTH	AREA%
.525	738086	SBB	.039	100.00000

TOTAL AREA= 738086
MUL FACTOR=1.0000E+00

TABLE * RUN # 377 JUL 2, 1992 10:05:05 & 1991 ppm CH4
START

0.520

STOP

RUN# 377 JUL 2, 1992 10:05:05

[illegible]

TOTAL AREA=1720823
MUL FACTOR=1.0000E+00

BACK

+ RUN # 378 JUL 2, 1992 10:06:55 @ 199.1ppm CH_4
START not ready

RUN# 378 JUL 2, 1992 10:06:55

AREA%

RT	AREA	TYPE	WIDTH	AREA%
.526	1720824	SPB	.039	100.00000

TOTAL AREA=1720824
MUL FACTOR=1.0000E+00

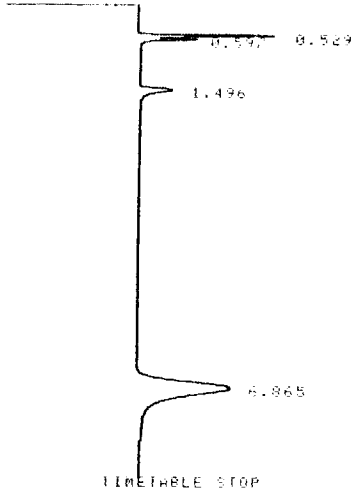
+ RUN # 379 JUL 2, 1992 10:11:23
START
STOP

RUN# 379 JUL 2, 1992 10:11:23

NO RUN PEAKS STORED

TABLE

+ RUN # 380 JUL 2, 1992 10:12:20 FRONT
START

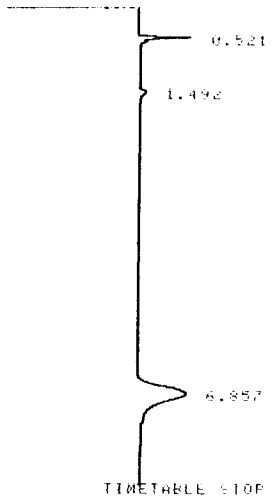


APEA%

PI	APEA	TYPE	WIDTH	APEA%
.521	200451	BB	.034	12.96245
.542	95895	VB	.042	6.20533
1.496	145622	PB	.109	9.42314
6.965	1102897	PB	.212	71.38806

TOTAL APEA=1545365
MUL FACTOR=1.0000E+00

REAR * RUN # 381 JUL 2, 1992 10:21:20 REAR
START



TIMETABLE STOP

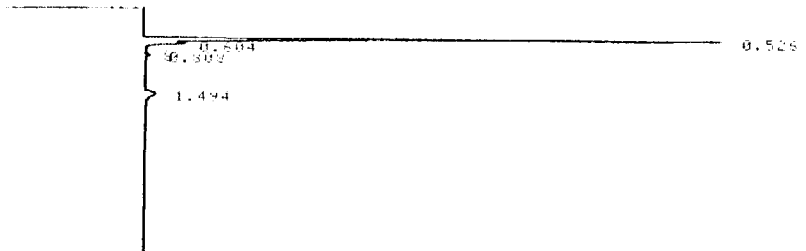
RUN# 381 JUL 2, 1992 10:21:20

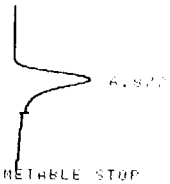
APEA%

PI	APEA	TYPE	WIDTH	APEA%
.521	94131	BB	.047	13.12181
1.492	37954	BB	.113	5.29075
6.957	5852.8	PB	.319	81.58742

TOTAL APEA= 717363
MUL FACTOR=1.0000E+00

TABLE RUN # 382 JUL 2, 1992 10:30:25 FRONT
START





RUN# 382 JUL 2, 1992 10:30:25

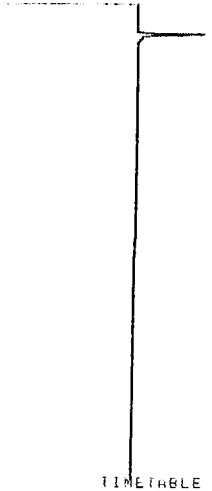
AREAS

PT	AREA	TYPE	WIDTH	AREA%
.526	797257	SBB	.036	40.70030
.604	23302	TBB	.030	1.18958
.908	10211	BB	.037	.52120
1.494	54334	VB	.113	2.77377
1.977	1073044	PB	.383	54.81506

TOTAL AREA=1958848
NUL FACTOR=1.00000E+00

RAIL

RUN # 383 JUL 2, 1992 10:39:15 REAR
SIMPI



RANGE change from 2 to 0 for 1st 5minutes still stays to 4@5min.

RUN# 383 JUL 2, 1992 10:39:15

AREAS

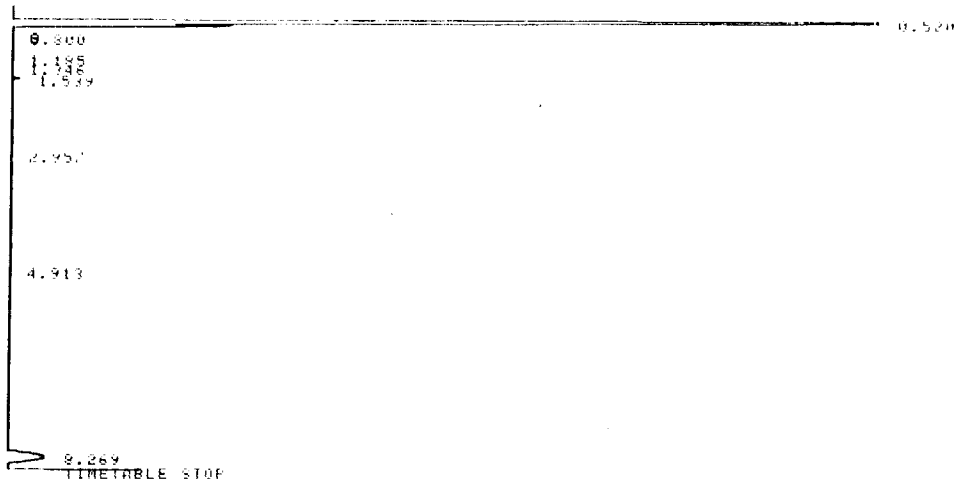
PT	AREA	TYPE	WIDTH	AREA%
.522	91944	PV	.035	100.00000

TOTAL AREA= 91944
NUL FACTOR=1.0000E+00

RANGE to ZERO (1-5 mins.)

TABLE

RUN # 384 JUL 2, 1992 10:49:58



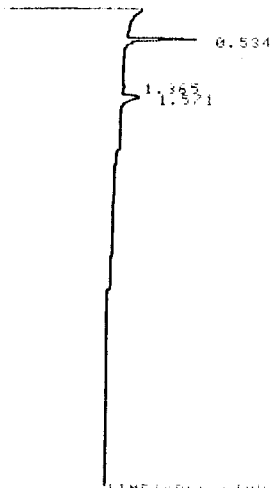
RUN# 384 JUL 2, 1992 10:48:50

AREA%

PT	AREA	TYPE	WIDTH	AREA%
.520	58.9290	BB	.036	77.19901
.800	68336	BB	.037	.89730
1.135	48427	FV	.069	.63588
1.346	90434	VV	.096	1.18746
1.539	350051	VB	.128	4.59641
2.857	18973	FV	.187	.24782
4.913	98995	VB	.493	1.29974
9.269	1061363	I PB	.294	13.93641

TOTAL AREA=7615757

RAGL * RUN # 385 JUL 2, 1992 10:57:48 REAR
STAPI



RUN# 385 JUL 2, 1992 10:57:48

AREA%

PT	AREA	TYPE	WIDTH	AREA%
.534	108564	BB	.039	50.95346
1.365	14555	VV	.078	6.83335
1.511	89835	VB	.119	42.16320

TOTAL AREA= 213065
MUL FACTOR=1.0000E+00

* RUN # 386 JUL 2, 1992 11:13:50 TABLE 200ppm Ethanol QC CHECK
Condensate in HEAT TRACE JUMPER
START

0.512

TIMETABLE STOP

RUN# 386 JUL 2, 1992 11:13:50

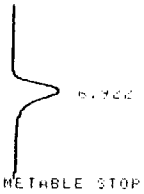
AREA%

PT	AREA	TYPE	WIDTH	AREA%
.512	96988	VB	.040	100.00000

TOTAL AREA= 96988
MUL FACTOR=1.0000E+00

TABLE * RUN # 387 JUL 2, 1992 11:27:17 200ppm Ethanol QC CHECK
START

0.515



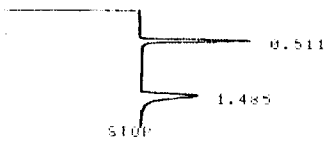
RUN# 387 JUL 2, 1992 11:27:17

AREA%

PT	AREA	TYPE	WIDTH	AREA%
.515	154862	BB	.045	21.52303
.962	564365	PB	.342	78.46694

TOTAL AREA= .19199
MUL FACTOR=1.0000E+00

Stopwatch * RUN # 388 JUL 2, 1992 11:45:51 1/10 dl Alm 002105 Acceptable @ 8.25
START



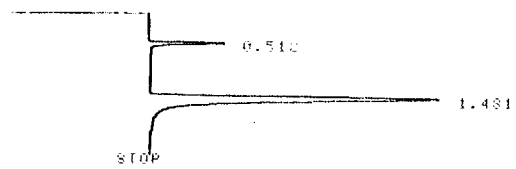
RUN# 388 JUL 2, 1992 11:45:51

AREA%

PT	AREA	TYPE	WIDTH	AREA%
.511	185655	VB	.045	41.88134
1.485	257633	BB	.119	58.11866

TOTAL AREA= 443288
MUL FACTOR=1.0000E+00

Stopwatch * RUN # 389 JUL 2, 1992 11:48:48 1.2 dl. Alm 00 2105 Acceptable 41.2
START



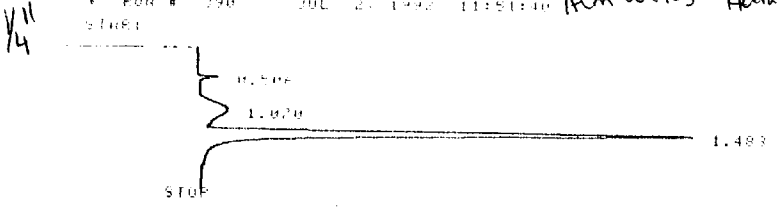
RUN# 389 JUL 2, 1992 11:48:48

AREA%

PT	AREA	TYPE	WIDTH	AREA%
.512	121731	BB	.044	9.21361
1.481	1195242	BB	.109	90.68640

TOTAL AREA=1316.973

Run 002105 Acetaldehyde @ 82.5 ppm



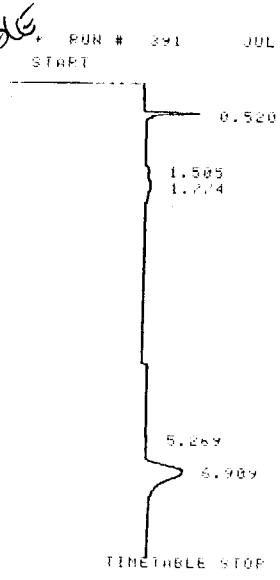
RUN# 390 JUL 2, 1992 11:51:40

APEAKS

PT	APEAK	TYPE	WIDTH	APEAK%
.506	34519	VB	.047	1.49421
1.070	305037	PV	.205	13.22532
1.483	1971602	VB	.108	85.28998

TOTAL APEAK=2311189
NUL FACTOR=1.0000E+00

RABBIT



200 ppm Ethanol QC CHECK

RUN# 391 JUL 2, 1992 11:56:50

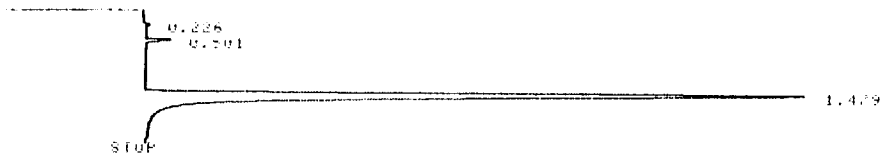
APEAKS

PT	APEAK	TYPE	WIDTH	APEAK%
.520	98450	BB	.047	10.98517
1.505	30351	PV	.120	3.38660
1.774	111263	VV	.381	12.41486
5.269	192564	PB	.899	21.48653
6.909	463530	PB	.326	51.72683

TOTAL APEAK= 896208
NUL FACTOR=1.0000E+00

Skane

* RUN # 392 JUL 2, 1992 12:07:48
START



Alm 002108 Acetaldehyde @ 82.5ppm

RUN# 392 JUL 2, 1992 12:07:48

AREA:

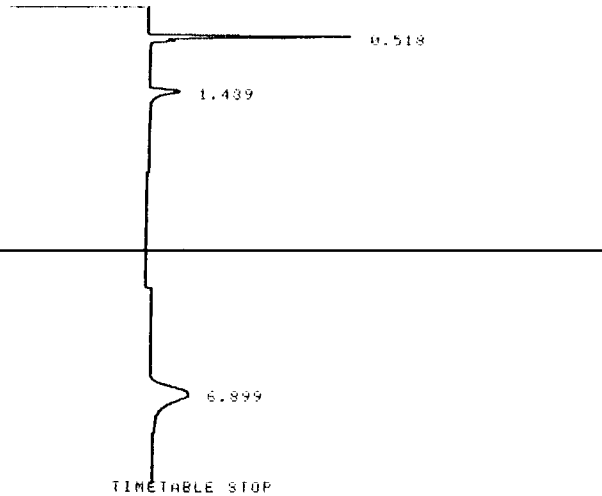
PT	AREA	TYPE	WIDTH	AREA%
.226	12642	PB	.063	.46436
.501	43976	BB	.044	1.61532
1.479	2665814	PB	.108	97.92032

TOTAL AREA=2722432
MUL FACTOR=1.0000E+00

RACK

* RUN # 393 JUL 2, 1992 12:22:00
START

REAR

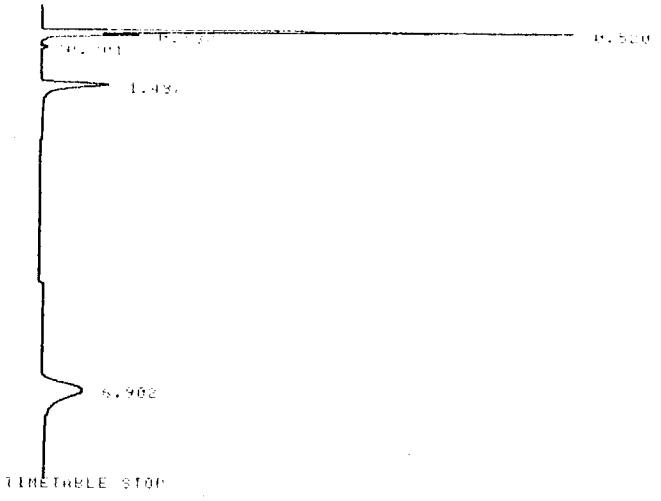


RUN# 393 JUL 2, 1992 12:22:00

AREA:

PT	AREA	TYPE	WIDTH	AREA%
.519	350596	VB	.046	35.70187
1.489	150576	VV	.122	15.33345
6.999	480838	PB	.329	48.96467

TOTAL AREA= 982010
MUL FACTOR=1.0000E+00



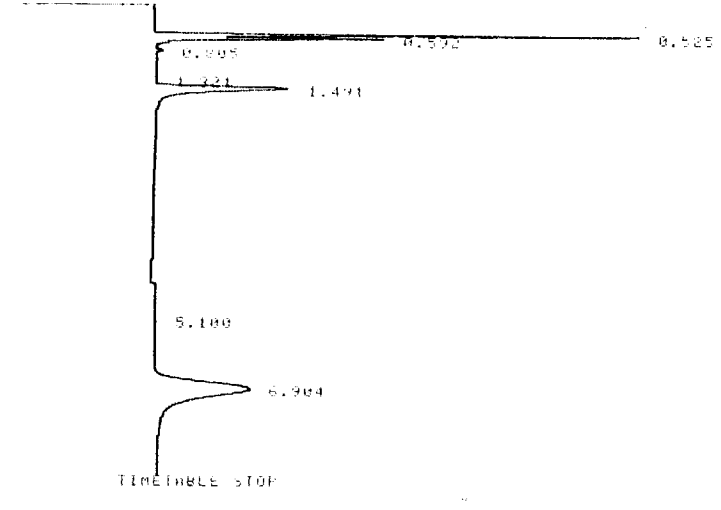
RUN# 394 JUL 2, 1992 12:30:55

AREA%

PI	AREA	TYPE	WIDTH	AREA%
.520	819073	SHB	.041	47.43596
.583	83683	TBB	.033	4.84642
.801	13289	BV	.043	.76962
1.482	292304	PB	.114	16.92851
6.902	518247	PB	.338	30.01959

TOTAL AREA=1726696
NOL FACTOR=1.0000E+00

TABLE RUN # 395 JUL 2, 1992 12:41:05 FRONT
START

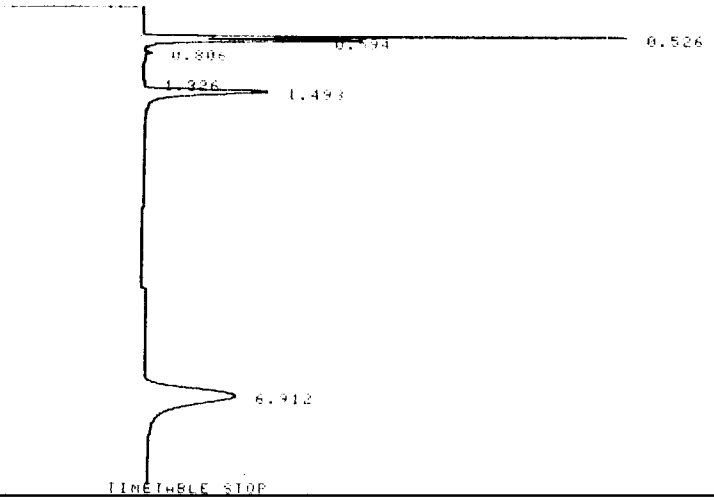


AREA%

RT	AREA	TYPE	WIDTH	AREA%
.525	666436	PV	.075	23.42538
.594	355133	VP	.040	12.48236
.805	14012	PB	.040	.49250
1.491	556583	VB	.111	19.56322
5.100	60393	PB	.370	2.12272
6.904	1192466	PB	.335	41.91323

TOTAL AREA=2845078
MUL FACTOR=1.0000E+00

TABLE * RUN # 396 JUL 2, 1992 12:51:00 FRONT
START



TIMETABLE STOP

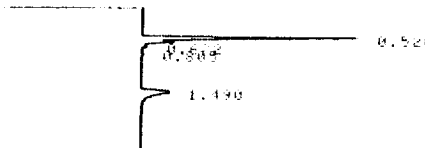
RUN# 396 JUL 2, 1992 12:51:00

AREA%

RT	AREA	TYPE	WIDTH	AREA%
.526	663414	VV	.036	24.69161
.594	339663	VB	.040	12.64192
.806	14207	BP	.040	.52877
1.493	517353	PB	.109	19.25536
6.912	1152163	PB	.335	42.88235

TOTAL AREA=2686800
MUL FACTOR=1.0000E+00

RAIL * RUN # 397 JUL 2, 1992 13:00:05 REAR
START



RUN# 397 JUL 2, 1992 13:00:05

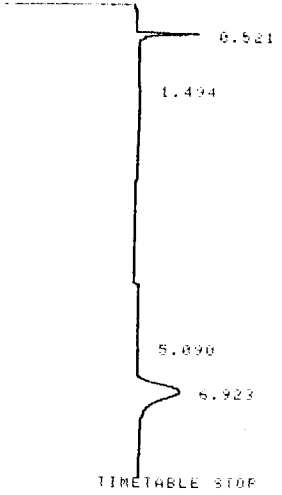
AREA%

RT	AREA	TYPE	WIDTH	AREA%
.520	376113	VV	.046	36.98616
1.490	132896	VB	.116	13.06871
6.921	507893	PB	.342	49.94514

TOTAL AREA=1016902
MUL FACTOR=1.0000E+00

TABLE

* RUN # 398 JUL 2, 1992 13:10:25 200 ppm Ethanol QC CHECK
START



RUN# 398 JUL 2, 1992 13:10:25

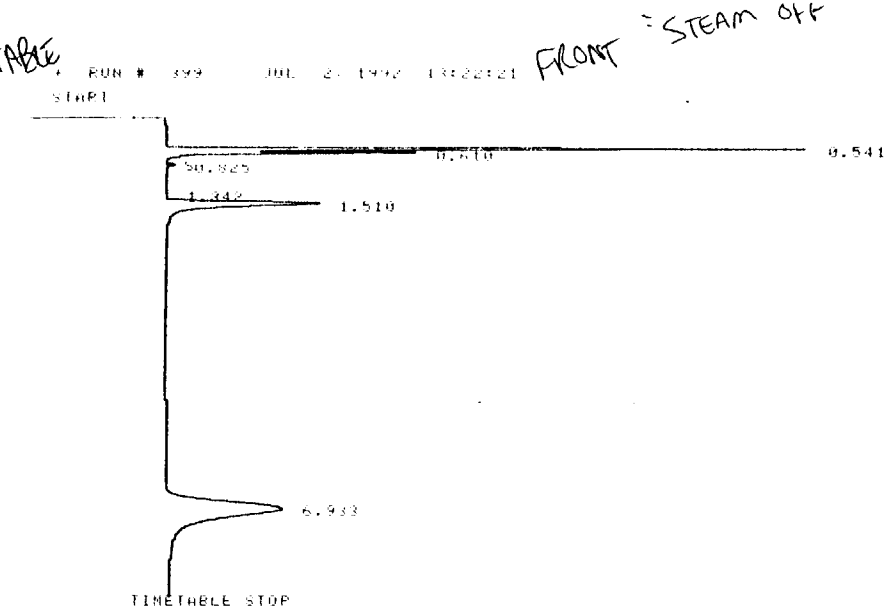
AREA%

RT	AREA	TYPE	WIDTH	AREA%
.521	116212	VB	.050	14.16437
1.494	25577	VV	.161	3.11742
5.090	147733	PB	.657	18.00627
6.923	530931	PB	.437	64.71190

TOTAL AREA=820453

TABLE

FRONT = STEAM OFF



RUN# 399 JUL 2, 1992 13:22:21

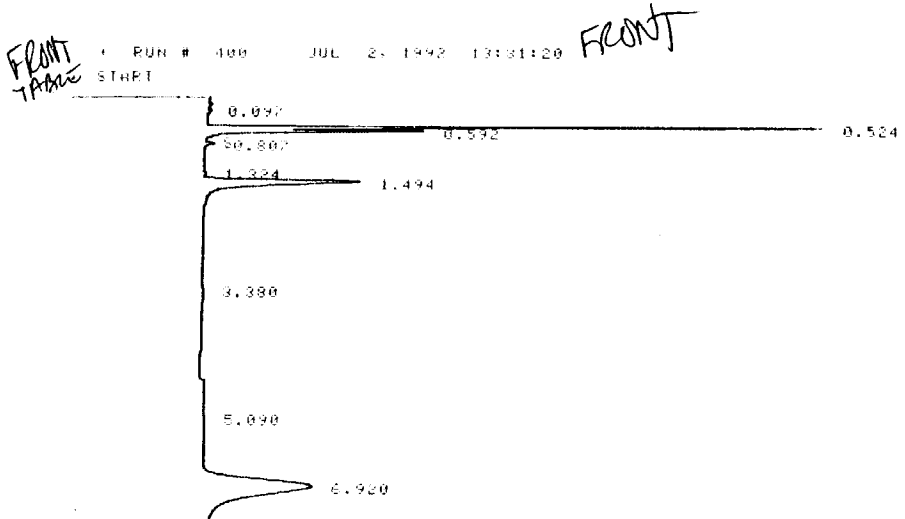
AREA%

PT	AREA	TYPE	WIDTH	AREA%
.541	1107073	SHB	.044	32.45339
.610	216666	TBB	.021	6.35148
.825	17821	BV	.042	.52242
1.510	620695	PB	.108	18.19542
6.933	1449015	PB	.336	42.47728

TOTAL AREA=3411270
NOL FACTOR=1.0000E+00

FRONT TABLE

FRONT



RUN# 400 JUL 2, 1992 13:31:20

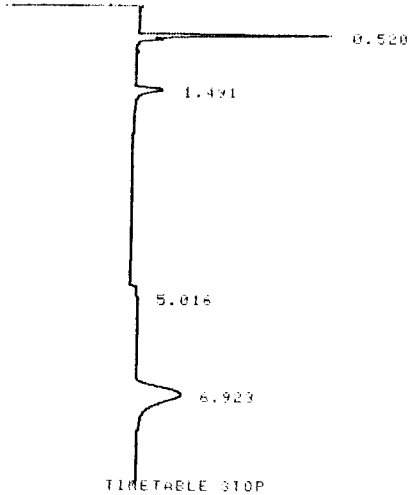
AREAS

PI	AREA	TYPE	WIDTH	AREA%
.097	18942	PB	.112	.54418
.524	1056625	SBB	.044	30.35533
.592	184139	TBB	.031	5.29005
.907	27192	BV	.056	.78119
1.324	21909	PV	.115	.62941
1.494	677694	VV	.114	19.46918
3.390	36725	VV	.249	1.05506
5.090	82974	PB	.431	2.38372
6.920	1374655	PB	.335	39.49189

TOTAL AREA=3480854
NOL FACTOR=1.0000E+00

RACK

* RUN # 401 JUL 2, 1992 13:40:15 REAR
START



TIMETABLE STOP

RUN# 401 JUL 2, 1992 13:40:15

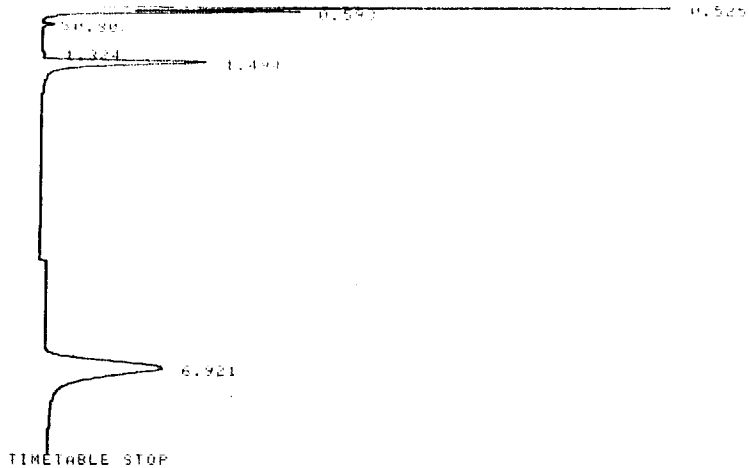
AREAS

PI	AREA	TYPE	WIDTH	AREA%
.520	342852	VB	.047	31.72200
1.491	132931	PB	.119	12.29929
5.016	23921	PB	.113	2.21419
6.923	581088	PB	.342	53.76453

TOTAL AREA=1080802
NOL FACTOR=1.0000E+00

TRACK

* RUN # 402 JUL 2, 1992 13:49:00 FRONT



RUN# 402 JUL 2, 1992 13:49:00

AREA%

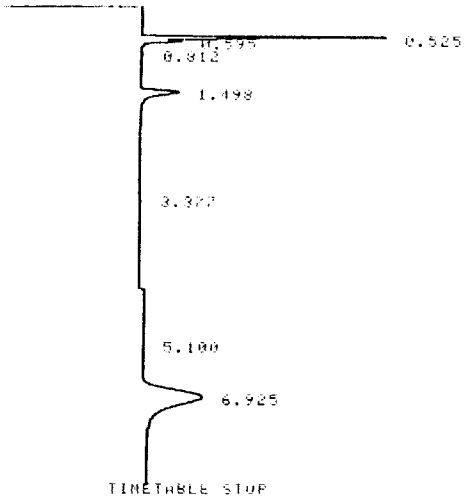
PI	AREA	TYPE	WIDTH	AREA%
.525	107157	SBB	.044	31.31162
.593	225997	IBB	.032	6.59394
.907	20583	BV	.042	.60070
1.494	657053	PB	.107	19.17106
6.921	1450544	PB	.333	42.32267

TOTAL AREA=3427344
MUL FACTOR=1.0000E+00

FAIL

RUN # 403 JUL 2, 1992 13:58:03 REAR

START

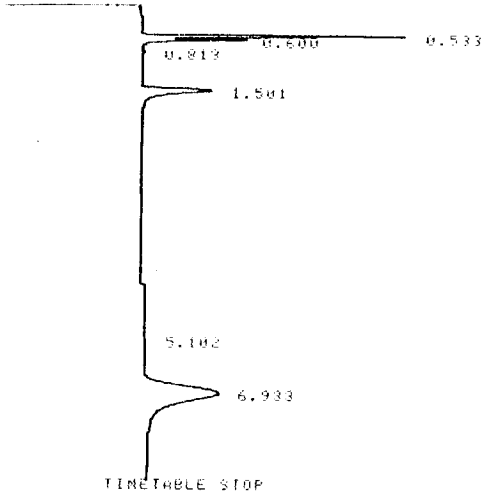


PT	AREA	TYPE	WIDTH	AREA%
.525	377758	VV	.040	25.14685
.595	69.97	VB	.043	4.64617
1.498	168552	PP	.113	11.21998
3.377	24442	BV	.251	1.62703
5.100	119674	PB	.620	7.96633
6.925	742015	PB	.338	49.39365

TOTAL AREA=1502248
MUL FACTOR=1.0000E+00

TABLE FRONT

* RUN # 404 JUL 2, 1992 14:07:30
START



TIMETABLE STOP

RUN# 404 JUL 2, 1992 14:07:30

AREA%

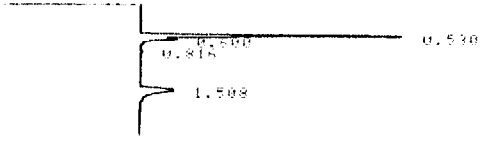
PT	AREA	TYPE	WIDTH	AREA%
.533	352863	VV	.024	18.71349
.600	161085	VB	.040	8.54287
1.501	292145	VB	.108	15.49341
5.102	138503	PB	.624	7.34527
6.933	941012	PB	.332	49.90498

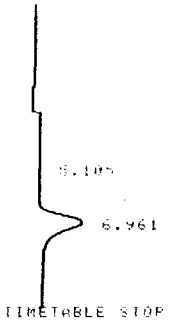
TOTAL AREA=1885608
MUL FACTOR=1.0000E+00

* TIME AREA

BACK

* RUN # 405 JUL 2, 1992 14:16:42 BACK
START





TIMETABLE STOP

RUN# 405 JUL 2, 1992 14:16:32

APEAK

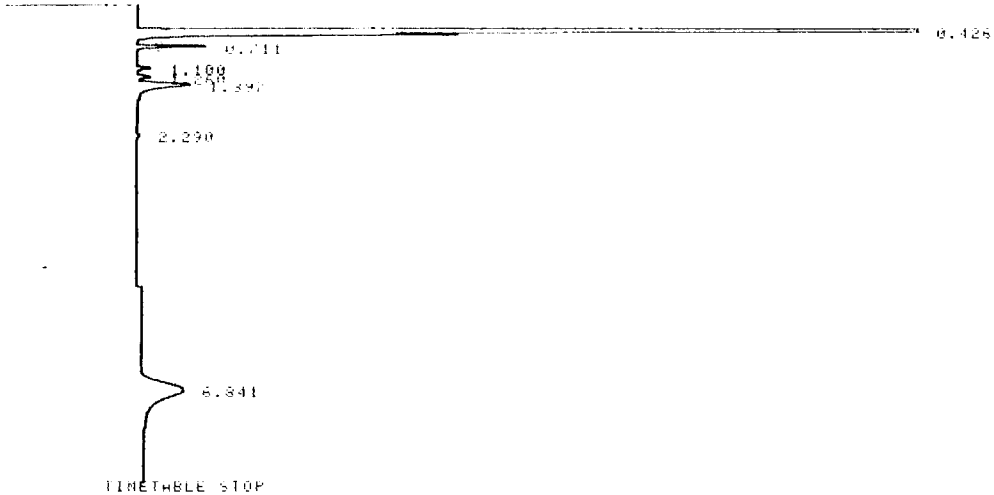
PT	APER	TYPE	WIDTH	APEAK
.520	392186	VV	.049	29.04326
.600	63907	VP	.044	4.73262
1.508	152049	PB	.113	11.33402
5.105	196396	PB	.627	14.54407
6.961	544813	PB	.339	40.34602

TOTAL APEAK=1350351
MUL FACTOR=1.000000E+00

* PLOT
STOP

TABLE

* RUN # 406 JUL 2, 1992 14:25:31 FRONT
START



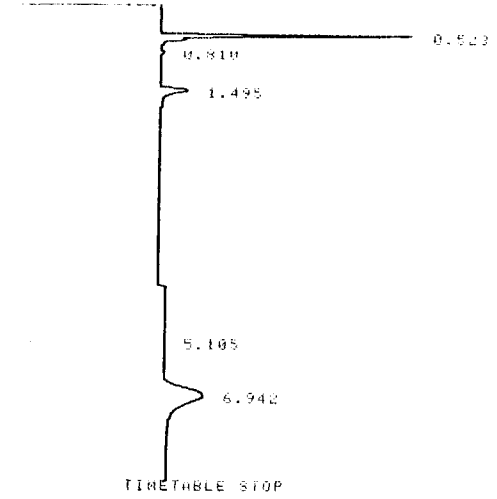
TIMETABLE STOP

RUN# 406 JUL 2, 1992 14:25:31

.711	105383	BV	.059	1.14539
1.100	27505	BV	.048	.29878
1.250	34995	VV	.058	.37502
1.397	228868	VB	.110	2.45261
2.290	12371	BB	.073	.13257
5.341	876564	PB	.523	9.39672

TOTAL AREA=9.331bE+05
MUL FACTOR=1.0000E+00

RAIL * RUN # 407 JUL 2, 1992 14:34:25 REAR
START



RUN# 407 JUL 2, 1992 14:34:25

AREA%

PT	AREA	TYPE	WIDTH	AREA%
.523	419392	VB	.043	36.06392
1.495	124008	PB	.111	10.66357
5.105	110117	PB	.542	9.467307
6.942	509396	PB	.338	43.80346

TOTAL AREA=1162913
MUL FACTOR=1.0000E+00

* RUN # 408 JUL 2, 1992 14:43:20
START

STOP

STARTED LATE

```
* RUN # 409      JUL  2, 1992  14:46:25
STAPI not ready
STOP
```

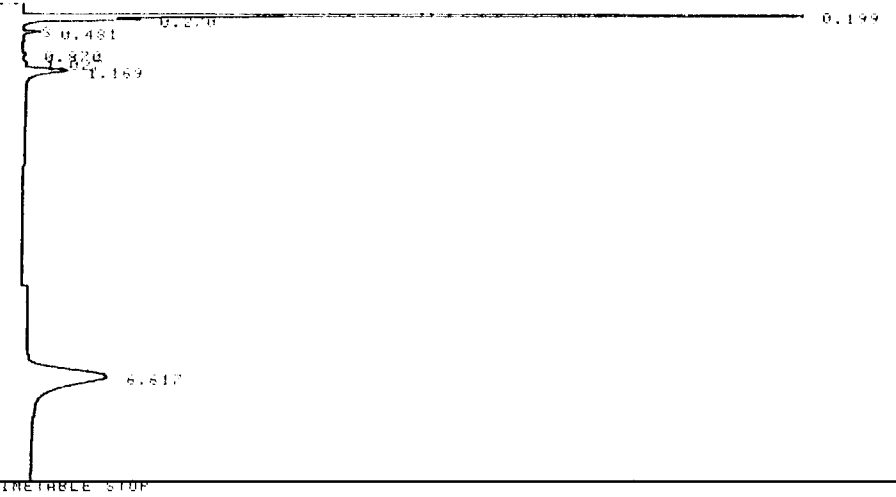
```
RUN#   409          JUL  2, 1992  14:46:25

NO RUN PERM's STOPED
```

TABLE

```
* RUN # 410      JUL  2, 1992  14:46:45
STAPI
```

FLOWS




```
RUN#   410          JUL  2, 1992  14:46:45

AREA%
      PT       AREA TYPE  WIDTH      AREA%
    .199    1354136  SPB   .035   58.28474
    .270      98120  IBB   .036    2.77005
    .481      30639  BV    .041     .96314
    .970      19221  PV    .105     .60421
   1.027      13921  VV    .072     .43761
   1.169     185757  VB    .110    5.83927
   5.617     989376  PB    .341   31.10102

TOTAL AREA=3181170
MUL FACTOR=1.0000E+00
```

RACE

```
* RUN # 411      JUL  2, 1992  14:55:35
STAPI
```

REAR

TIMETABLE STOP

RUN# 411 JUL 2, 1992 14:55:35

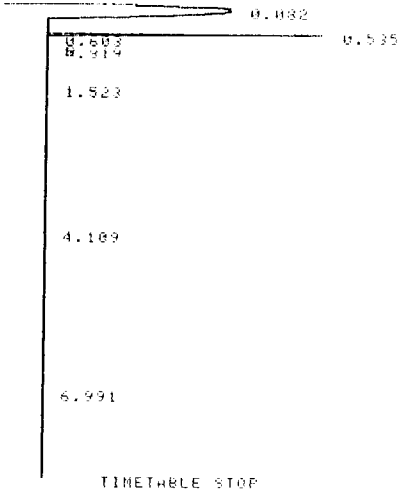
AREA%:

PT	AREA	TYPE	WIDTH	AREA%
.523	3403/1	BV	.042	53.33456
.592	53945	VV	.051	8.45293
1.550	73982	PB	.123	11.59264
5.106	169883	PB	.523	26.61989

TOTAL AREA= 638181
NUL FACTOR=1.0000E+00

TAPE

* RUN # 412 JUL 2, 1992 15:01:25 FRONT
START



TIMETABLE STOP

RUN# 412 JUL 2, 1992 15:01:25

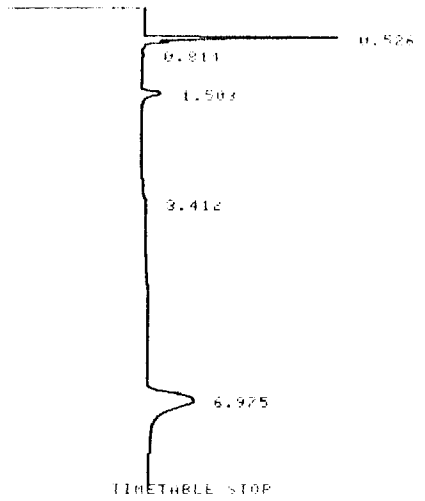
AREA%:

PT	AREA	TYPE	WIDTH	AREA%
.032	983118	BP	.233	28.36217
.535	[illegible]	[illegible]	.079	25.11[illegible]

1.523	259254	PB	.110	7.317927
4.109	1e4903	PB	.?2e	4.90156
6.991	1044?e5	BB	.451	30.14064

TOTAL APEA=3466301
MUL FACTOR=1.0000E+00

REAR * PUN # 413 JUL 2, 1992 15:13:30 REAR
START



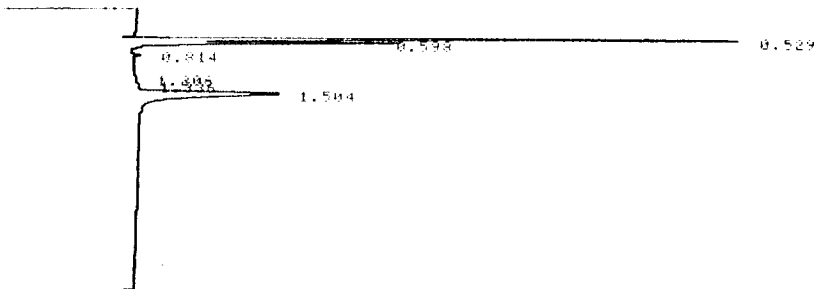
PUN# 413 JUL 2, 1992 15:13:30

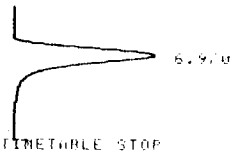
APEAS

PT	APEA	TYPE	WIDTH	APEA%
.526	345272	VB	.046	32.39874
1.503	81492	VB	.106	7.64683
3.412	33780	PV	.320	3.16976
6.975	605152	PB	.345	56.78467

TOTAL APEA=1065696
MUL FACTOR=1.0000E+00

TABLE * PUN # 414 JUL 2, 1992 15:22:19 FRONT
START





RUN# 414 JUL 2, 1992 15:22:19

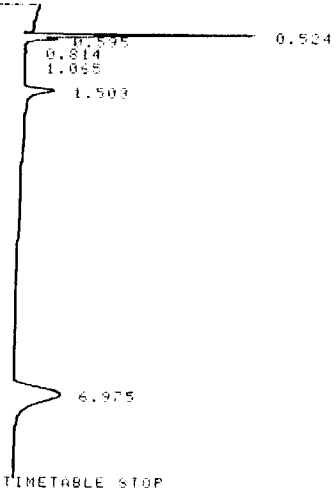
AREA%

RI	AREA	TYPE	WIDTH	AREA%
.529	1362990	SBB	.059	32.50059
.592	262799	TBB	.032	6.26646
.814	20859	TBV	.045	.49738
1.206	61623	TVV	.274	1.46940
1.336	31876	TVV	.101	.76009
1.504	651112	TVV	.117	15.52581
6.970	1802480	PB	.337	42.98026

TOTAL AREA=4193739
MUL FACTOR=1.0000E+00

BACK

* RUN # 415 JUL 2, 1992 15:31:05 REAR
START



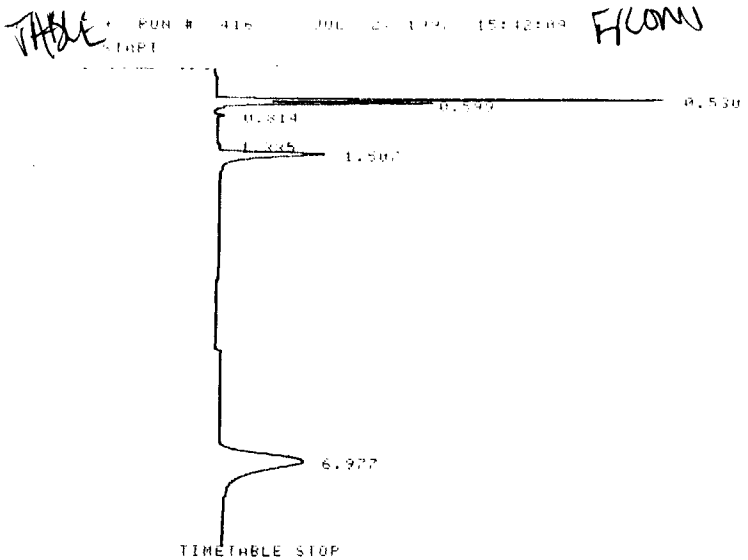
RUN# 415 JUL 2, 1992 15:31:05

AREA%

RI	AREA	TYPE	WIDTH	AREA%
.524	340703	FV	.038	29.21330
.595	59617	VB	.046	5.11262
1.503	136159	VB	.120	11.67684
6.975	629582	PB	.343	53.99219

TOTAL AREA=1166061
MUL FACTOR=1.0000E+00

TABLE



FLOW

RUN# 416 JUL 2, 1992 15:42:09

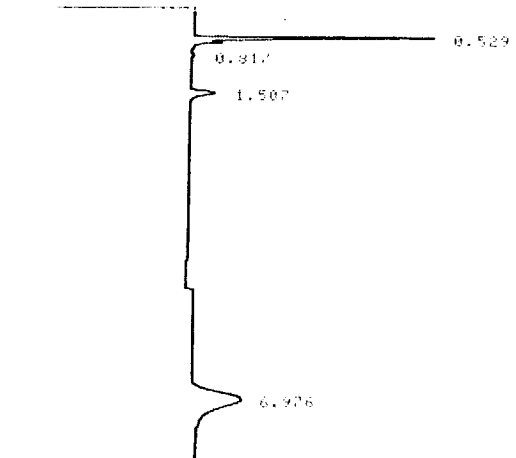
AREA:

PI	AREA	TYPE	WIDTH	AREA%
.530	807931	VV	.036	24.44433
.599	327803	VP	.029	13.18065
.814	17423	PV	.045	.70056
1.335	10489	VV	.070	.42175
1.507	444446	VB	.109	17.87075
6.977	1078910	PB	.341	43.38195

TOTAL AREA=2487802

MUL FACTOR=1.0000E+00

RACK



REAR

RUN# 417 JUL 2, 1992 15:51:00

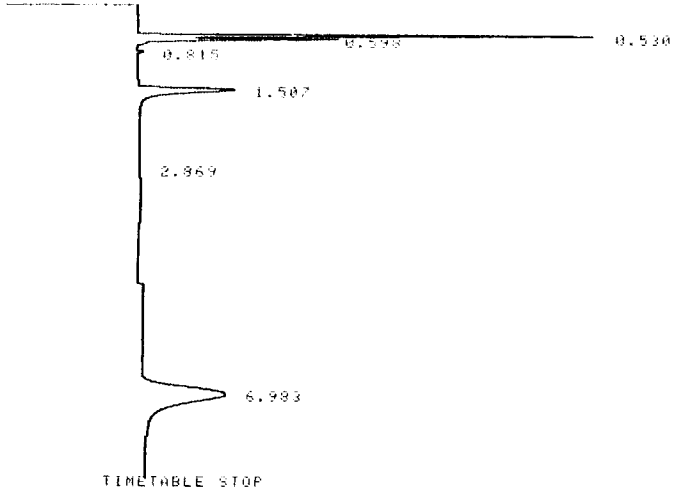
AREA%

PT	AREA	TYPE	WIDTH	AREA%
.529	382122	BB	.043	35.70488
1.507	97377	VB	.101	9.07501
6.976	592525	PB	.330	55.22013

TOTAL AREA=1073024
MUL FACTOR=1.0000E+00

TABLE

* RUN # 418 JUL 2, 1992 15:59:55 FRONT
START



TIMETABLE STOP

RUN# 418 JUL 2, 1992 15:59:55

AREA%

PT	AREA	TYPE	WIDTH	AREA%
.530	622412	VV	.036	25.36646
.598	312858	VB	.040	12.75056
.815	14608	PB	.042	.59535
1.507	395041	PB	.107	16.09993
2.869	60769	BV	.511	2.47664
6.983	1047994	PB	.339	42.71107

TOTAL AREA=2453682
MUL FACTOR=1.0000E+00

TABLE

* RUN # 419 JUL 2, 1992 15:10:59 FRONT - 200 ppm Ethanol Cyl
START

RUN# 419 JUL 2, 1992 16:10:59

AREA%

PT	AREA	TYPE	WIDTH	AREA%
.521	77165	PV	.040	10.45261
.593	14223	VV	.045	1.926662
5.101	97214	PB	.598	13.18194
6.983	549535	PB	.340	74.43885

TOTAL AREA= 738237
MUL FACTOR=1.0000E+00

RACK * RUN # 420 JUL 2, 1992 16:22:10 798 ppm Methane
START

RUN# 420 JUL 2, 1992 16:22:10

AREA%

PT	AREA	TYPE	WIDTH	AREA%
.521	23488256	SBB	.045	99.91955
.917	19315	BB	.041	.082146

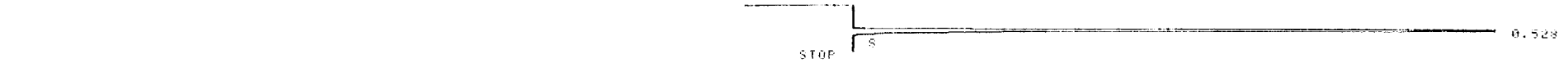
TOTAL AREA=2.3507E+07
MUL FACTOR=1.0000E+00

RACK * RUN # 421 JUL 2, 1992 16:27:15 80.2 ppm Methane
START

RUN# 421 JUL 2, 1992 16:27:15

TOTAL AREA=2981002
MUL FACTOR=1.0000E+00

TABLE * RUN # 422 JUL 2, 1992 16:29:20 80.2 ppm Methane
START not read



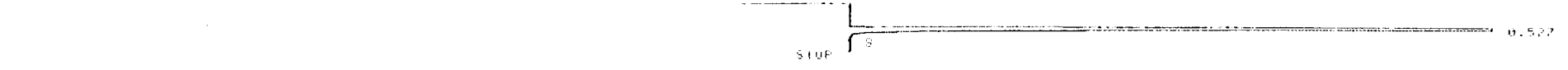
RUN# 422 JUL 2, 1992 16:29:20

AREA%

RT	AREA	TYPE	WIDTH	AREA%
.528	2969962	SHB	.039	100.00000

TOTAL AREA=2969962
MUL FACTOR=1.0000E+00

RACHEL RUN # 423 JUL 2, 1992 16:31:05 199.1 ppm CH4
START



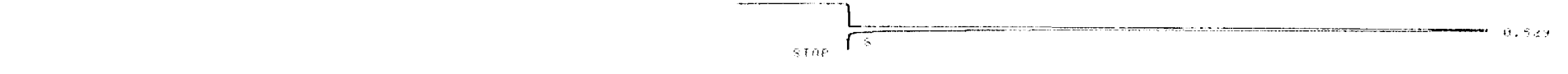
RUN# 423 JUL 2, 1992 16:31:05

AREA%

RT	AREA	TYPE	WIDTH	AREA%
.527	6970403	SBB	.039	100.00000

TOTAL AREA=6970403
MUL FACTOR=1.0000E+00

* RUN # 424 JUL 2, 1992 16:32:51
START



RUN# 424 JUL 2, 1992 16:32:51

AREA%

RT	AREA	TYPE	WIDTH	AREA%
.529	4226003	SPB	.039	100.00000

TOTAL AREA=4226003
MUL FACTOR=1.0000E+00

MARK * RUN # [illegible] JUL 2, 1992 [illegible] 79.8 ppm CH4

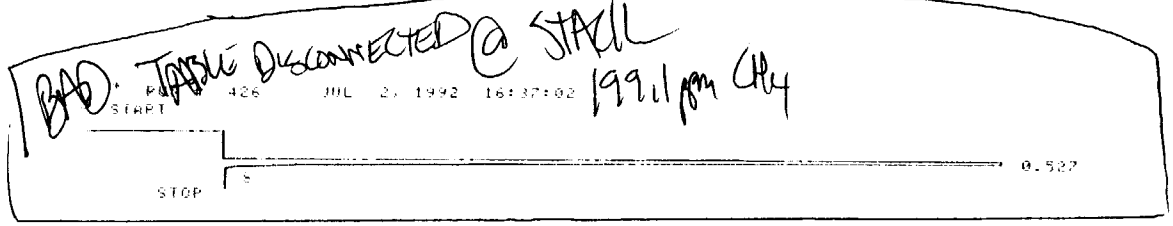
RUN# 425 JUL 2, 1992 16:34:29

AREA%

PT	AREA	TYPE	WIDTH	AREA%
.521	24407744	SMB	.047	99.90746
.818	22613	BP	.047	.09256

TOTAL AREA=2.4430E+07
MUL FACTOR=1.0000E+00

BAD: Tape Disconnected @ Stack 1991 pm CH4



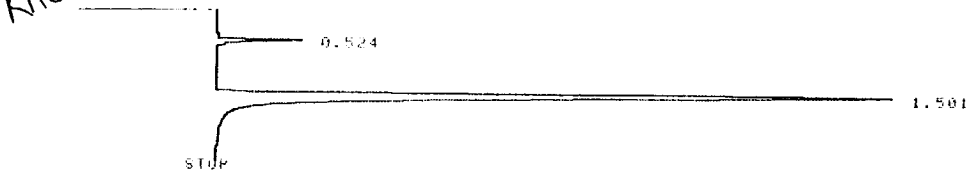
RUN# 426 JUL 2, 1992 16:37:02

AREA%

PT	AREA	TYPE	WIDTH	AREA%
.527	7424666	SPB	.039	100.00000

TOTAL AREA=7424666
MUL FACTOR=1.0000E+00

Rack 825 ppm Acetaldehyde



RUN# 427 JUL 2, 1992 16:40:07

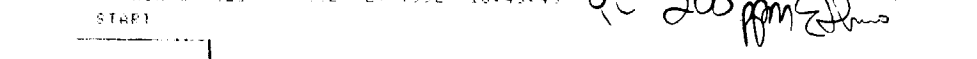
AREA%

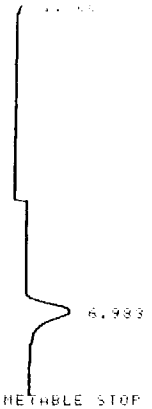
PT	AREA	TYPE	WIDTH	AREA%
.524	150709	VP	.045	5.13721
1.501	2782968	PB	.110	94.86279

TOTAL AREA=2933677
MUL FACTOR=1.0000E+00

Rack

QC 200 ppm Ethanol





RUN# 423 JUL 2, 1992 16:45:45

AREA:

RT	AREA	TYPE	WIDTH	AREA%
.524	104175	PB	.045	8.82186
1.506	41001	VB	.151	3.47209
6.932	1035698	PB	.600	87.70605

TOTAL AREA=1180874
MUL FACTOR=1.0000E+00

TO WIDE USE Height

* RUN # 429 JUL 2, 1992 16:56:05
START

200 ppm Ethanol

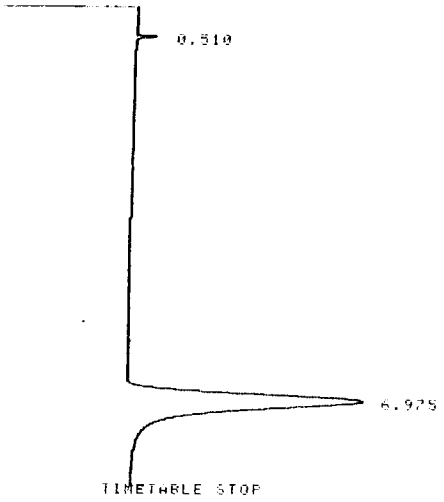
RUN# 429 JUL 2, 1992 16:56:05

AREA:

RT	AREA	TYPE	WIDTH	AREA%
.524	91079	PB	.040	1.55184

TOTAL AREA= 3009+
MUL FACTOR=1.0000E+00

* RUN # 430 JUL 2, 1992 17:05:40 1000 ppm Ethanol
START



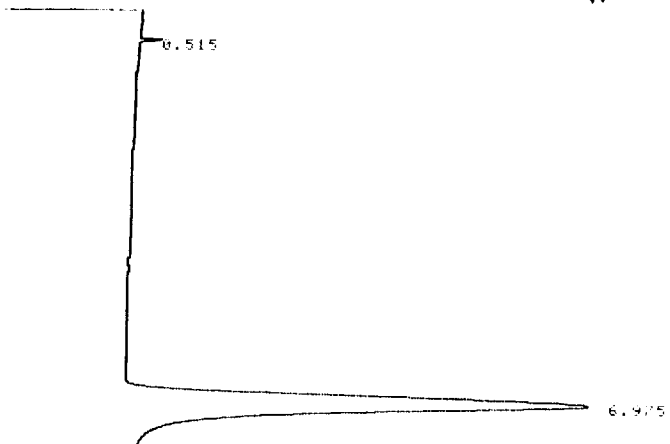
RUN# 430 JUL 2, 1992 17:05:40

AREA%

Rf	AREA	TYPE	WIDTH	AREA%
.510	31642	BB	.037	1.04050
6.975	3009386	PB	.343	98.95949

TOTAL AREA=3041029
MUL FACTOR=1.0000E+00

* RUN # 431 JUL 2, 1992 17:15:15 2000 ppm Ethanol
START



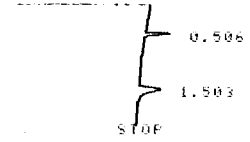
RUN# 431 JUL 2, 1992 17:15:15

AREA%

PT	AREA	TYPE	WIDTH	AREA%
.515	34162	PB	.036	.58346
6.475	5820837	PB	.336	99.41654

TOTAL AREA=5855037
MUL FACTOR=1.0000E+00

* RUN # 432 JUL 2, 1992 17:24:37 3,03 ppm Acetaldehyde
START



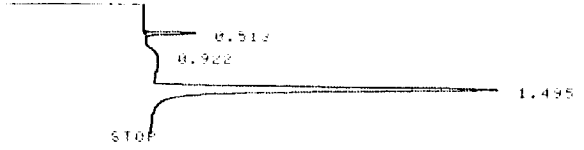
RUN# 432 JUL 2, 1992 17:24:37

AREA%

PT	AREA	TYPE	WIDTH	AREA%
.506	38039	BB	.037	27.67697
1.503	99557	BB	.111	72.32304

TOTAL AREA= 137656
MUL FACTOR=1.0000E+00

* RUN # 433 JUL 2, 1992 17:30:42 40. 41.2 Acetaldehyde
START: not read>



RUN# 433 JUL 2, 1992 17:30:42

AREA%

PT	AREA	TYPE	WIDTH	AREA%
.513	94467	VP	.047	5.51933
.922	183795	PV	.400	10.73939
1.495	1433150	VB	.110	83.74077

TOTAL AREA=1711412
MUL FACTOR=1.0000E+00

* RUN # 434 JUL 2, 1992 17:33:30 82.5 Acetaldehyde
START

RUN# 434 JUL 2, 1992 17:33:30

AREA%

PT	AREA	TYPE	WIDTH	AREA%
.511	46729	VB	.048	1.65986
1.499	2768502	PB	.109	98.34016

TOTAL AREA=2815230
MUL FACTOR=1.0000E+00

* RUN # 435 JUL 2, 1992 17:36:25 26.7 ppm CH_4
START

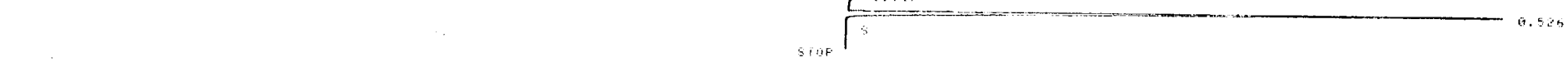
RUN# 435 JUL 2, 1992 17:36:25

AREA%

PT	AREA	TYPE	WIDTH	AREA%
.525	1062899	SMB	.039	100.00000

TOTAL AREA=1062899
MUL FACTOR=1.0000E+00

* RUN # 436 JUL 2, 1992 17:37:48 40.1 ppm CH_4
START not ready



RUN# 436 JUL 2, 1992 17:37:48

AREA%

PT	AREA	TYPE	WIDTH	AREA%
.117	26224	BP	.103	1.68391
.526	1531107	SPB	.039	98.31610

TOTAL AREA=1557331
MUL FACTOR=1.0000E+00

* RUN # 437 JUL 2, 1992 17:39:38 60.2 ppm CH_4
START

```
Run#    132                  Mon  2- Feb-92  17:09:38

AREA%
      RT       AREA TYPE  WIDTH       AREA%
    .562    2895762 SMB    .049   100.00000

TOTAL AREA=2895762
MUL FACTOR=1.0000E+00



*  LIST: METH  @

RUN PARAMETERS
ZERO    =  5
ATT 2   =  5
UNI SP  =  1.0
AR REJ  =  10000
THRSH   =  4
PK WD   =  0.10

TIMETABLE EVENTS
   0.500 STOP

CALIBRATION
NO CALIB TBL

INTEGRATION PLOT TYPE ..... FILTERED

RUN DATA STORAGE
Store signal data ........... NO
Store processed peaks ....... NO
REPORT OPTIONS
Suppress local report ....... NO
HEIGHT% report .............. NO
Report uncalibrated peaks ... NO
Extended report ............. NO

POST-RUN LIST OPTIONS
Store post-run report ....... NO
External post-run report .... NO
List run parameters ......... NO
List timetable .............. NO
List calibration table ...... NO
List remote method .......... NO
Form-feed before report ..... NO
Form-feed after report ...... NO
Skip perforations in report . NO
Skip perforations in plot ... NO

*
```

Appendix D.5

Field Flow Measurements Data Sheets

EPA METHOD 1

TRAVERSE POINT LOCATION FOR CIRCULAR DUCTS

PLANT SITE 4

DATE 6-29-92

SAMPLING LOCATION FRONT STACK

INSIDE OF FAR WALL TO OUTSIDE OF NIPPLE (DISTANCE A)

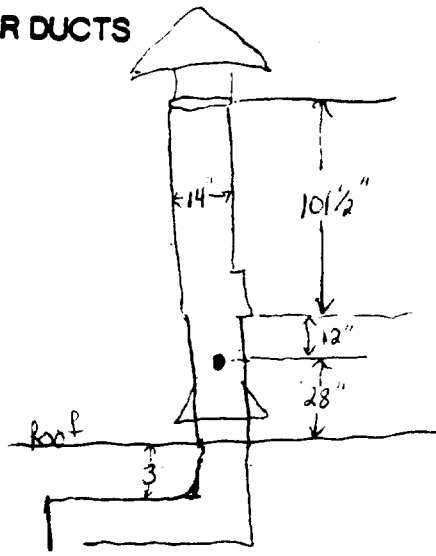
INSIDE OF NEAR WALL TO OUTSIDE OF NIPPLE (DISTANCE B)

INSIDE STACK DIMENSIONS (DISTANCE (A) - (B)

NEAREST UPSTREAM DISTURBANCE

NEAREST DOWNSTREAM DISTURBANCE

CALCULATOR



SCHEMATIC OF TRAVERSE POINT LAYOUT

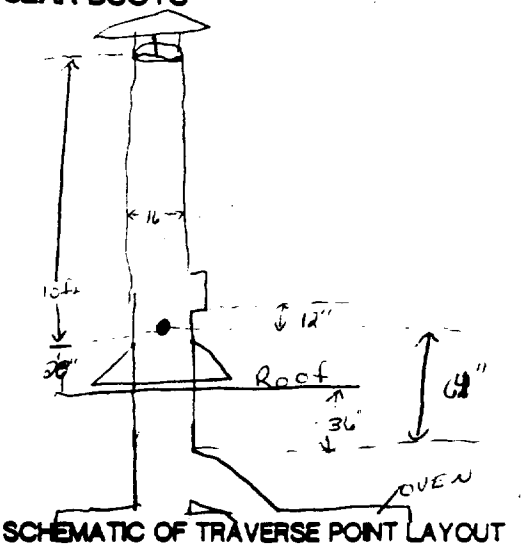
TRAVERSE POINT NUMBER	FRACTION OF INSIDE STACK DIMENSIONS	INSIDE STACK DIMENSIONS	PRODUCT OF COLUMNS 2 AND 3 (TO NEAREST 1/8 INCH)	DISTANCE B	TRAVERSE POINT LOCATION FROM OUTSIDE OF NIPPLE (SUM OF COLUMNS 4 AND 5)
1	96.8	14			13
2	89.5				12.5
3	80.6				11.3
4	67.7				9.5
5	32.3				4.5
6	19.4				2.7
7	10.5				1.5
8	3.2				1

Figure 6-5. Method 1 Point Location Sheet.

EPA METHOD 1

TRAVERSE POINT LOCATION FOR CIRCULAR DUCTS

PLANT Site 4 Bakery
DATE 6-29-92
SAMPLING LOCATION Rear Stack
INSIDE OF FAR WALL TO OUTSIDE OF NIPPLE (DISTANCE A)
INSIDE OF NEAR WALL TO OUTSIDE OF NIPPLE (DISTANCE B)
INSIDE STACK DIMENSIONS (DISTANCE (A) - (B) 16"
NEAREST UPSTREAM DISTURBANCE
NEAREST DOWNSTREAM DISTURBANCE 10'
CALCULATOR



SCHEMATIC OF TRAVERSE POINT LAYOUT

TRAVERSE POINT NUMBER	FRACTION OF INSIDE STACK DIMENSIONS	INSIDE STACK DIMENSIONS	PRODUCT OF COLUMNS 2 AND 3 (TO NEAREST 1/8 INCH)	DISTANCE B	TRAVERSE POINT LOCATION FROM OUTSIDE OF NIPPLE (SUM OF COLUMNS 4 AND 5)
A 1	96.8	16"			15.5
2	89.5				14.3
3	80.6				12.9
4	67.7				10.8
5	32.3				5.2
6	19.4				3.1
7	10.5				1.7
8	3.2				.5

Figure 6-5. Method 1 Point Location Sheet.

EPA METHOD 1

TRAVERSE POINT LOCATION FOR CIRCULAR DUCTS

PLANT Side 4

DATE 6-29-92

SAMPLING LOCATION Comfort zone Stack

INSIDE OF FAR WALL TO OUTSIDE OF NIPPLE (DISTANCE A)

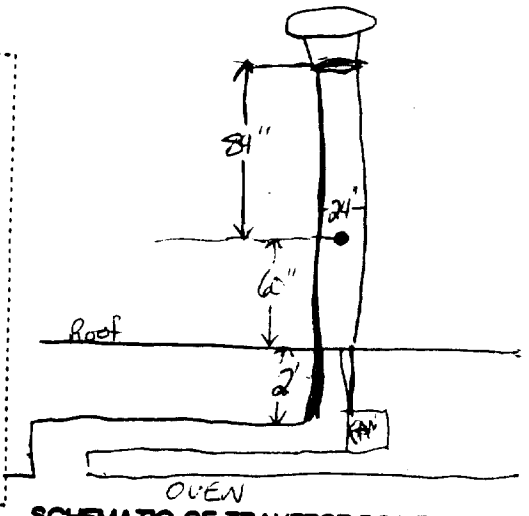
INSIDE OF NEAR WALL TO OUTSIDE OF NIPPLE (DISTANCE B)

INSIDE STACK DIMENSIONS (DISTANCE (A) - (B)

NEAREST UPSTREAM DISTURBANCE

NEAREST DOWNSTREAM DISTURBANCE

CALCULATOR



SCHEMATIC OF TRAVERSE POINT LAYOUT

TRAVERSE POINT NUMBER	FRACTION OF INSIDE STACK DIMENSIONS	INSIDE STACK DIMENSIONS	PRODUCT OF COLUMNS 2 AND 3 (TO NEAREST 1/8 INCH)	DISTANCE B	TRAVERSE POINT LOCATION FROM OUTSIDE OF NIPPLE (SUM OF COLUMNS 4 AND 5)
1	96.8	24"			23.8
2	89.5				21.5
3	80.6				19.3
4	67.7				16.2
5	32.3				7.7
6	19.4				4.7
7	10.5				2.5
8	3.2				1

Figure 6-5. Method 1 Point Location Sheet.

PRELIMINARY VELOCITY TRAVERSE

PLANT Bakery Stk 4
DATE 7/1/92
LOCATION Bread Oven – FRONT, REAR, COMFORT HOOD
INSIDE STACK DIMENSIONS
BAROMETRIC PRESSURE, in. Hg
STACK GAUGE PRESSURE, in. H_2O
OPERATOR JP/CBP

AHEAD REAR RUN 1

TRAVERSE POINT NUMBER	VELOCITY HEAD (ΔPs), in. H_2O	STACK TEMPERATURE (°F)
A1	.25	155
2	.28	157
3	.24	159
4	.22	160
5	.17	161
6	.15	161
7	.13	161
8	.12	161
	STATIC –0.10	
B1	.18	160
2	.17	160
3	.18	161
4	.17	162
5	.21	162
6	.22	162
7	.21	162
8	.19	162
AVERAGE		

Comfort Hood
SCHEMATIC OF TRAVERSE POINT LAYOUT

TRAVERSE POINT NUMBER	VELOCITY HEAD (ΔPs), in. H_2O	STACK TEMPERATURE (°F)
A 1	.09	135
2	.08	136
3	.07	130
4	.07	130
5	.10	133
6	.09	130
7	.08	133
8	.08	134
B 1	.09	131
2	.08	129
3	.08	133
4	.08	131
5	.09	132
6	.09	130
7	.07	134
8	.07	130
	Static –0.08	

Figure 6-6. Preliminary Velocity and Cyclonic Flow Sheet.

PRELIMINARY VELOCITY TRAVERSE

PLANT Site 4
DATE 6-29-92
LOCATION Rear Stack / Front / Comfort
INSIDE STACK DIMENSIONS 16" / 14" / 24"
BAROMETRIC PRESSURE in. Hg
STACK GAUGE PRESSURE in. H_2O
OPERATOR

REAR

BRD REAR RUN 2

TRAVERSE POINT NUMBER	VELOCITY HEAD (ΔPs), in. H_2O	STACK TEMPERATURE (°F)
A 1	.24	163
2	.24	165
3	.23	167
4	.19	168
5	.15	169
6	.14	168
7	.13	168
8	.12	166
A 1	.11	123
2	.10	123
3	.10	126
4	.09	125
5	.11	125
6	.11	127
7	.10	124
8	.09	125
AVERAGE		

BRD CH RUN 3

BF RUN 1

SCHEMATIC OF TRAVERSE POINT LAYOUT

TRAVERSE POINT NUMBER	VELOCITY HEAD (ΔPs), in. H_2O	STACK TEMPERATURE (°F)
A 1	.26	237
2	.26	239
3	.27	242
4	.24	243
5	.24	240
6	.22	237
7	.18	236
8	.17	236
B 1	.18	231
2	.19	233
3	.20	240
4	.21	239
5	.26	240
6	.25	243
7	.25	243
8	.25	240

Figure 6-6. Preliminary Velocity and Cyclonic Flow Sheet.

PRELIMINARY VELOCITY TRAVERSE

PLANT Site 4
DATE 6-29-92
LOCATION Stacks
INSIDE STACK DIMENSIONS
BAROMETRIC PRESSURE, in. Hg
STACK GAUGE PRESSURE, in. H_2O
OPERATOR

SCHEMATIC OF TRAVERSE POINT LAYOUT

TRAVERSE POINT NUMBER	VELOCITY HEAD (ΔPs), in. H_2O	STACK TEMPERATURE (°F)
B 1	.11	125
2	.10	127
3	.10	127
4	.09	128
5	.09	126
6	.08	125
7	.08	126
8	.09	126
A 1	.25	228
2	.28	226
3	.27	229
4	.25	228
5	.24	234
6	.27	233
7	.23	235
8	.21	235
AVERAGE		

C.H. RUN 1

TRAVERSE POINT NUMBER	VELOCITY HEAD (ΔPs), in. H_2O	STACK TEMPERATURE (°F)
B 1	.11	108
2	.11	108
3	.09	107
4	.08	107
5	.09	107
6	.08	107
7	.08	107
8	.07	107
A 1	.09	124
2	.09	124
3	.09	124
4	.08	125
5	.10	122
6	.10	122
7	.09	123
8	.08	124

Figure 6-6. Preliminary Velocity and Cyclonic Flow Sheet.

PRELIMINARY VELOCITY TRAVERSE

PLANT Site 4
DATE 7-1-92
LOCATION Rear Stack
INSIDE STACK DIMENSIONS 16
BAROMETRIC PRESSURE in. Hg
STACK GAUGE PRESSURE in. H_2O
OPERATOR JBP

BTD Pitot Run 4

TRAVERSE POINT NUMBER	VELOCITY HEAD (ΔPs), in. H_2O	STACK TEMPERATURE (°F)
B 1	.17	167
2	.18	168
3	.15	168
4	.15	168
5	.20	168
6	.20	168
7	.20	168
8	.21	169
A 1	.33	
2	.32	
3	.30	
4	.21	
5	.27	
6	.23	
7	.23	
8	.22	
AVERAGE		

SCHEMATIC OF TRAVERSE POINT LAYOUT

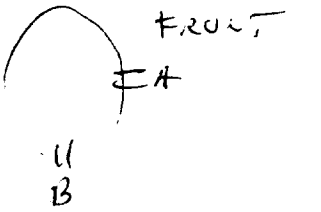
TRAVERSE POINT NUMBER	VELOCITY HEAD (ΔPs), in. H_2O	STACK TEMPERATURE (°F)

Figure 6-6. Preliminary Velocity and Cyclonic Flow Sheet.

PRELIMINARY VELOCITY TRAVERSE

Trailer

PLANT Site 4
DATE 7-1-92
LOCATION Front
INSIDE STACK DIMENSIONS 14
BAROMETRIC PRESSURE, in. Hg
STACK GAUGE PRESSURE, in. H_2O
OPERATOR



SCHEMATIC OF TRAVERSE POINT LAYOUT

TRAVERSE POINT NUMBER	VELOCITY HEAD (ΔPs), in. H_2O	STACK TEMPERATURE (°F)
A 1	.09	246
2	.08	249
3	.08	248
4	.07	255
5	.06	257
6	.06	250
7	.04	248
8	.03	244
B 1	.19	251
2	.19	250
3	.20	248
4	.19	244
5	.29	251
6	.29	251
7	.30	250
8	.27	250
AVERAGE		

TRAVERSE POINT NUMBER	VELOCITY HEAD (ΔPs), in. H_2O	STACK TEMPERATURE (°F)
B 1	.10	132
2	.11	134
3	.10	134
4	.09	135
5	.10	136
6	.09	132
7	.10	134
8	.09	133
A 1	.10	132
2	.10	132
3	.09	134
4	.08	133
5	.10	136
6	.11	131
7	.09	133
8	.09	134

Figure 6-6. Preliminary Velocity and Cyclonic Flow Sheet.

Revision 3/90

PRELIMINARY VELOCITY TRAVERSE

14:50
AMBIENT = 92,
PROPANE STACK = 97°F

PLANT Site 4 Bakery
DATE 6-30-92
LOCATION Rear / Comfort Zone / Front
INSIDE STACK DIMENSIONS 16" 24", 14"
BAROMETRIC PRESSURE in. Hg
STACK GAUGE PRESSURE in. H_2O
OPERATOR JBP

SCHEMATIC OF TRAVERSE POINT LAYOUT

RD Rear Run
14:30
Fyrite at 1620
O_2 20.5%
CO_2 1.5%

TRAVERSE POINT NUMBER	VELOCITY HEAD (ΔPs), in. H_2O	STACK TEMPERATURE (°F)
A1	.24	170
2	.24	171
3	.23	172
4	.20	172
5	.15	172
6	.13	171
7	.13	171
8	.12	168
STATIC	-.12	
A1	.10	141
A2	.10	139
A3	.09	137
A4	.08	135
A5	.09	135
A6	.09	134
A7	.08	134
A8	.06	129
AVERAGE		

14:45 hrs
L47

Revised F.V
14:40
Fyrite at 1615
O_2 17%
CO_2 0.5%

CONFUSED

Fyrite at 16.15
O_2 19.5%
CO_2 0%

BRD CH Run 4

TRAVERSE POINT NUMBER	VELOCITY HEAD (ΔPs), in. H_2O	STACK TEMPERATURE (°F)
A1	0.30	242
2	.30	249
3	.27	250
4	.25	249
5	.26	253
6	.25	248
7	.23	245
8	.22	250
STATIC	= -0.1	
B1	08	130
2	07	133
3	08	134
4	09	134
5	07	133
6	08	133
7	06	134
8	05	132
STATIC	= -0.06	

Figure 6-6. Preliminary Velocity and Cyclonic Flow Sheet.

EPA METHOD 1

TRAVERSE POINT LOCATION FOR CIRCULAR DUCTS

PLANT Site 4

DATE 7-2 92

SAMPLING LOCATION Front Bun oven

INSIDE OF FAR WALL TO OUTSIDE OF NIPPLE (DISTANCE A)

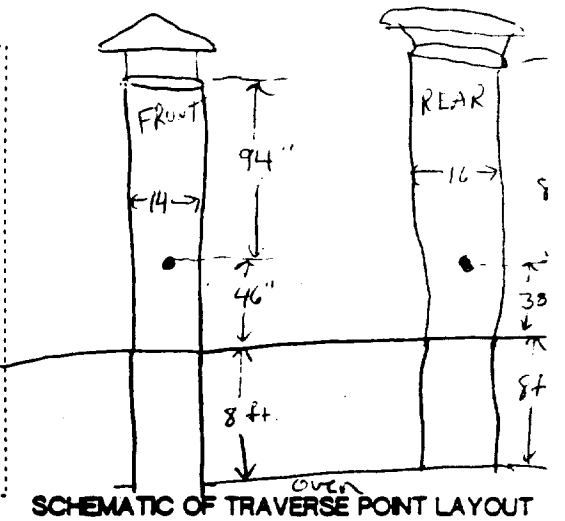
INSIDE OF NEAR WALL TO OUTSIDE OF NIPPLE (DISTANCE B)

	FRONT	REAR
INSIDE STACK DIMENSIONS (DISTANCE (A) - (B))	14"	16"

NEAREST UPSTREAM DISTURBANCE

NEAREST DOWNSTREAM DISTURBANCE

CALCULATOR



SCHEMATIC OF TRAVERSE POINT LAYOUT

TRAVERSE POINT NUMBER	FRACTION OF INSIDE STACK DIMENSIONS	INSIDE STACK DIMENSIONS	PRODUCT OF COLUMNS 2 AND 3 (TO NEAREST 1/8 INCH)	DISTANCE B	TRAVERSE POINT LOCATION FROM OUTSIDE OF NIPPLE (SUM OF COLUMNS 4 AND 5)
FRONT 1					
2					
3					
4					
5					
6					
7					
8					
REAR 1					
2					
3					
4					
5					
6					
7					
8					

Figure 6-5. Method 1 Point Location Sheet.

PRELIMINARY VELOCITY TRAVERSE

PLANT _____
DATE 7-2-92
LOCATION Bun OVEN
INSIDE STACK DIMENSIONS _____
BAROMETRIC PRESSURE, in. Hg _____
STACK GAUGE PRESSURE, in. H_2O _____
OPERATOR _____

TRAVERSE POINT NUMBER	VELOCITY HEAD (ΔPs), in. H_2O	STACK TEMPERATURE (°F)
B 1	130 ft/min	235
2	140 "	236
3	140 "	240
4	160 "	241
5	200 "	242
6	210 "	241
7		239
8		242
AVERAGE		

SCHEMATIC OF TRAVERSE POINT LAYOUT

TRAVERSE POINT NUMBER	VELOCITY HEAD (ΔPs), in. H_2O	STACK TEMPERATURE (°F)
A 1	.19	159
2	.20	159
3	.21	159
4	.20	159
5	.15	160
6	.14	159
7	.12	160
8	.11	160
B 1	.15	160
2	.16	160
3	.16	163
4	.17	164
5	.16	164
6	.15	164
7	.14	162
8	.12	162

Figure 6-6. Preliminary Velocity and Cyclonic Flow Sheet.

PRELIMINARY VELOCITY TRAVERSE

PLANT Site 4
DATE 7-2-92
LOCATION ~~Front Control Room~~ Bun oven
INSIDE STACK DIMENSIONS (14"F), (16R)
BAROMETRIC PRESSURE in. Hg
STACK GAUGE PRESSURE in. H_2O
OPERATOR JBP

SCHEMATIC OF TRAVERSE POINT LAYOUT

Oven Front 1020 hrs O_2 = 19% BUN RUN 1

TRAVERSE POINT NUMBER	VELOCITY HEAD (ΔPs), in. H_2O	STACK TEMPERATURE (°F)
A 1	120 ft/m	226
2	130	226
3	130	226
4	140	227
5	140	227
6	"	227
7	"	226
8	"	225

FRONT 1330 hrs (Steam on) BUN RUN 2

TRAVERSE POINT NUMBER	VELOCITY HEAD (ΔPs), in. H_2O	STACK TEMPERATURE (°F)
A 1	100 ft/min	239
2	105 "	240
3	110 "	244
4	120 "	251
5	130 "	245
6	140 "	244
7	"	241
8	"	234
AVERAGE		

Oven Rear 1600 hrs O_2 19% BUN RUN 2

TRAVERSE POINT NUMBER	VELOCITY HEAD (ΔPs), in. H_2O	STACK TEMPERATURE (°F)
A 1	.20	154
2	.20	154
3	.21	154
4	.20	154
5	.15	154
6	.14	155
7	.13	154
8	.13	154

FRONT (Steam on) 1500 hrs. BUN RUN 3

TRAVERSE POINT NUMBER	VELOCITY HEAD (ΔPs), in. H_2O	STACK TEMPERATURE (°F)
A 1	85 ft/min	246
2	95 "	246
3	105 "	247
4	110 "	248
5	125 "	247
6	150 "	247
7	"	245
8	"	242

Figure 6-6. Preliminary Velocity and Cyclonic Flow Sheet.

Appendix D.6

Field H2O Data Sheets

FIELD MOISTURE DETERMINATION REFERENCE METHOD

Plant Site 4 Bakery
Location Rear stack
Operator SBP
Date 4-30-92
Run No. 1
Ambient temperature 95
Barometric pressure
Probe length m (ft) 3

SCHEMATIC OF STACK CROSS SECTION

30.6 mls extruded

Traverse point number (14:15)	Sampling time (θ), min.	Stack temperature °C (°F)	Pressure differential across orifice meter ΔH mm (in.) H_2O	Meter reading gas sample volume m^3 (ft^3)	ΔV_m m^3 (ft^3)	Gas Sample temperature at dry gas meter		Temperature of gas leaving condenser or last impinger °C (°F)
						Inlet (Tm_{in}). °C (°F)	Outlet (Tm_{out}). °C (°F)	
A 1	10	170	1.5	105.827		105	105	60
2	20	170	1.5	111.5		105	104	60
3	30	170	1.5	117.3		110	105	60
				124.672				
Total								
Average					Avg.	Avg.	Avg.	

Figure 6-9. Method 4 Field Data Sheet.

FIELD MOISTURE DETERMINATION REFERENCE METHOD

Bread

Plant Site 4 — Blocked Bleed
Location Front Stack
Operator JBP
Date 7-1-92
Run No.
Ambient temperature 90
Barometric pressure
Probe length m (ft) 3'

SCHEMATIC OF STACK CROSS SECTION

626 mls extracted

Traverse point number	Sampling time (θ), min.	Stack temperature °C (°F)	Pressure differential across orifice meter ΔH mm (in.) H_2O	Meter reading gas sample volume m^3 (ft^3)	ΔV_m m^3 (ft^3)	Gas Sample temperature at dry gas meter: Inlet ($T_{m_{in}}$), °C (°F)	Gas Sample temperature at dry gas meter: Outlet ($T_{m_{out}}$), °C (°F)	Temperature of gas leaving condenser or last impinger °C (°F)
1	10	250	1.5	25.768		106	105	60
2	20	250	1.5	33.2		109	106	60
3	30	250	1.5	39.6		111	107	60
				46.142				
Total								
Average					Avg.	Avg.	Avg.	

6-19

Figure 6-9. Method 4 Field Data Sheet.

FIELD MOISTURE DETERMINATION REFERENCE METHOD

Plant Side 4 Bread
Location Comfort Zone Stack
Operator JBP
Date 7-29-92 1400 hrs
Run No. 1
Ambient temperature 90
Barometric pressure
Probe length m (ft) 3 ~~ft~~

Init. LC 0.006 at 5" Hg
Final LC 0.004 at 6" Hg

SCHEMATIC OF STACK CROSS SECTION

15.0 lbs entrained

Traverse point number	Sampling time (θ), min.	Stack temperature °C (°F)	Pressure differential across orifice meter ΔH mm (in.) H_2O	Meter reading gas sample volume m^3 (ft^3)	ΔV_m m^3 (ft^3)	Gas Sample temperature at dry gas meter		Temperature of gas leaving condenser or last impinger °C (°F)
						Inlet ($T_{m_{in}}$), °C (°F)	Outlet ($T_{m_{out}}$), °C (°F)	
1	10	125	1.5	85.212		106	105	60
2	20	125	1.5	92.2		108	106	58
3	30	125	1.5	98.8		111	107	55
				105.608				
Total								
Average					Avg.	Avg.	Avg.	

6-10

Figure 6-9. Method 4 Field Data Sheet.

MOISTURE RECOVERY FORM FOR METHOD 4

PLANT Site 4
DATE 6-29-92
RUN NUMBER 1 Bread
SAMPLING LOCATION Comfort zone Stack
SAMPLING TYPE M4
SAMPLING BOX NUMBER
CLEAN-UP PERSON JBP
SOLVENT RINSES
SAMPLE IDENTIFICATION CODE
XAD TRAP NUMBER

IMPINGER NUMBER	IMPINGER SOLUTION	AMOUNT OF SOLUTION (g)	IMPINGER TIP CONFIGURATION	IMPINGER WEIGHT (grams)		
				FINAL	INITIAL	WEIGHT GAIN
1	H_2O			592.4	584.2	8.2
2	H_2O			624.9	623.5	1.4
3	MT			480.5	479.7	0.8
4	Silica Gel			757.8	753.2	4.6

Revision 3/90

TOTAL WEIGHT GAIN (grams) 15.0

Figure 6-8. Method 4 Train Preparation and Recovery Sheet.

MOISTURE RECOVERY FORM FOR METHOD 4

PLANT Site 4
DATE 6-30-92
RUN NUMBER 1 ~ 1500 hrs.
SAMPLING LOCATION Rear Stack Breech
SAMPLING TYPE M4
SAMPLING BOX NUMBER
CLEAN-UP PERSON JBP
SOLVENT RINSES
SAMPLE IDENTIFICATION CODE
XAD TRAP NUMBER

IMPINGER NUMBER	IMPINGER SOLUTION	AMOUNT OF SOLUTION (g)	IMPINGER TIP CONFIGURATION	IMPINGER WEIGHT (grams)		
				FINAL	INITIAL	WEIGHT GAIN
1	H_2O			615.2	592.4	22.8
2	H_2O			627.1	624.9	2.2
3	MT			481.9	480.5	1.4
4	Silica Gel			762.0	757.8	4.2

Revision 3/90

TOTAL WEIGHT GAIN (grams) 30.6

Figure 6-8. Method 4 Train Preparation and Recovery Sheet.

MOISTURE RECOVERY FORM FOR METHOD 4

PLANT Site 4
DATE 7-1-92
RUN NUMBER 1
SAMPLING LOCATION Front Stack Bleed
SAMPLING TYPE M4
SAMPLING BOX NUMBER
CLEAN-UP PERSON TBP
SOLVENT RINSES
SAMPLE IDENTIFICATION CODE
XAD TRAP NUMBER

IMPINGER NUMBER	IMPINGER SOLUTION	AMOUNT OF SOLUTION (g)	IMPINGER TIP CONFIGURATION	IMPINGER WEIGHT (grams)		
				FINAL	INITIAL	WEIGHT GAIN
1	H_2O			663.7	614.9	48.8
2	H_2O			634.5	627.0	7.5
3	MT			482.2	481.5	0.7
4	Silica Gel			767.0	761.4	5.6

Revision: 3/90

TOTAL WEIGHT GAIN (grams) 62.6

Figure 6-8. Method 4 Train Preparation and Recovery Sheet.

FIELD MOISTURE DETERMINATION REFERENCE METHOD

Plant: Site 4 BUN
Location: BUN - REAR
Operator: IBP
Date: 7-2-92 1035 hrs.
Run No.: 1
Ambient temperature: 80
Barometric pressure:
Probe length m (ft):

Init. LC 0.006 at 5" Hg
Final LC. 0.003 at 5" Hg

SCHEMATIC OF STACK CROSS SECTION

Traverse point number	Sampling time (θ), min.	Stack temperature °C (°F)	Pressure differential across orifice meter ΔH mm (in.) H_2O	Meter reading gas sample volume m^3 (ft^3)	ΔV_m m^3 (ft^3)	Gas Sample temperature at dry gas meter: Inlet ($T_{m_{in}}$), °C (°F)	Gas Sample temperature at dry gas meter: Outlet ($T_{m_{out}}$), °C (°F)	Temperature of gas leaving condenser or last impinger °C (°F)
1	10	154	1.5	46.371		90	89	64
2	20	155	1.5	53.1		92	89	60
3	30	154	1.5	59.6		93	89	58
				66.411				
Total								
Average					Avg.	Avg.	Avg.	

Figure 6-9. Method 4 Field Data Sheet.

FIELD MOISTURE DETERMINATION REFERENCE METHOD

Plant Site 4
Location FRONT RUN
Operator JBP
Date 7-2-92 1130 hrs.
Run No. 1
Ambient temperature 85
Barometric pressure
Probe length m (ft) 3"
Int LC 0.005 at 5"
Final LC 0.004 at 8"

SCHEMATIC OF STACK CROSS SECTION

Traverse point number	Sampling time (θ), min.	Stack temperature °C (°F)	Pressure differential across orifice meter ΔH mm (in.) H_2O	Meter reading gas sample volume m^3 (ft^3)	ΔV_m m^3 (ft^3)	Gas Sample temperature at dry gas meter		Temperature of gas leaving condenser or last impinger °C (°F)
						Inlet ($T_{m_{in}}$), °C (°F)	Outlet ($T_{m_{out}}$), °C (°F)	
1	10	230	1.5	66.543		90	89	64
2	20	231	1.5	73.2		94	90	58
3	30	232	1.5	79.4		97	80	58
				86.694				
Total								
Average					Avg.	Avg.	Avg.	

Figure 6-9. Method 4 Field Data Sheet.

MOISTURE RECOVERY FORM FOR METHOD 4

PLANT Site 4
DATE 7-2-92
RUN NUMBER 1
SAMPLING LOCATION ~~Burn Comfort boot~~ Bun Rear
SAMPLING TYPE M4
SAMPLING BOX NUMBER
CLEAN-UP PERSON JBP
SOLVENT RINSES
SAMPLE IDENTIFICATION CODE
XAD TRAP NUMBER

IMPINGER NUMBER	IMPINGER SOLUTION	AMOUNT OF SOLUTION (g)	IMPINGER TIP CONFIGURATION	IMPINGER WEIGHT (grams)		
				FINAL	INITIAL	WEIGHT GAIN
1	H_2O			666.9	662.7	4.2
2	H_2O			635.9	633.7	2.2
3	MT			482.5	481.7	0.8
4	Silica Gel			769.9	766.1	3.8

Revision 3/90

TOTAL WEIGHT GAIN (grams) 11.0

Figure 6-8. Method 4 Train Preparation and Recovery Sheet.

MOISTURE RECOVERY FORM FOR METHOD 4

PLANT _____

DATE _____

RUN NUMBER _____

SAMPLING LOCATION Run Front

SAMPLING TYPE _____

SAMPLING BOX NUMBER _____

CLEAN-UP PERSON _____

SOLVENT RINSES _____

SAMPLE IDENTIFICATION CODE _____

XAD TRAP NUMBER _____

IMPINGER NUMBER	IMPINGER SOLUTION	AMOUNT OF SOLUTION (g)	IMPINGER TIP CONFIGURATION	IMPINGER WEIGHT (grams)		
				FINAL	INITIAL	WEIGHT GAIN
				779.0	666.9	112.1
				714.6	635.9	78.7
				484.2	482.5	1.7
				774.8	769.9	4.9

Revision 3/90

TOTAL WEIGHT GAIN (grams) 197.4

Figure 6-8. Method 4 Train Preparation and Recovery Sheet.

Appendix D.7

Flow Calculations

PLANT	SITE 4	STD METERED VOLUME (scf).....	18.88
DATE	6/29/92	MOISTURE COLLECTED (g).....	15.00
SAMPLING LOCATION	BREAD COMFORT HO	% O2.....	19.00 *
RUN	BREAD CH - RUN1	% CO2.....	0.00 *
AMBIENT TEMPERATURE	90.00	%N2.....	81.00
BAROMETRIC PRESSURE	29.80	PERCENT MOISTURE IN STACK.....	3.61
STATIC PRESSURE (in H2	-0.07	MOLE FRAC. of DRY STACK GAS.....	0.96
OPERATOR	CRP	DRY MOLECULAR W	28.76
METER TEMP (deg. F)....	107.33	WET MOLECULAR W	28.37
METER ORIFICE dH (" H2	1.50	STACK DIAMETER (I	24.00
METERED VOLUME (cu.ft.	20.40	STACK AREA (sq ft)	3.14
METER Y.....	0.9947		

Traverse Point Number	Velocity Head P (in H2O)	Stack Ts (F)	Square Root of P	Stack Gas Velocity (fps)	Stack Gas Velocity (fpm)
A1	0.110	128	0.33	19.86	1191.51
A2	0.110	127	0.33	19.84	1190.50
A3	0.090	127	0.30	17.95	1076.85
A4	0.080	127	0.28	16.92	1015.26
A5	0.090	127	0.30	17.95	1076.85
A6	0.080	127	0.28	16.92	1015.26
A7	0.080	127.00	0.28	16.92	1015.26
A8	0.070	127.00	0.26	15.83	949.69
B1	0.090	124	0.30	17.90	1074.09
B2	0.090	124	0.30	17.90	1074.09
B3	0.090	124	0.30	17.90	1074.09
B4	0.080	125	0.28	16.89	1013.53
B5	0.100	122	0.32	18.84	1130.25
B6	0.100	122	0.32	18.84	1130.25
B7	0.090	123.00	0.30	17.89	1073.17
B8	0.080	124.00	0.28	16.88	1012.66
Averages		125.31	0.30	17.83	1069.60

STACK GAS ACTUAL VOL FLOW (acfm)	3360.24
STACK GAS STANDARD VOL FLOW (scfm)	3018.64
STACK GAS STANDARD DRY VOL FLOW (dscf	2909.62

* ASSUMED FROM A PREVIOUS RUN

PLANT	SITE 4	STD METERED VOLUME (scf).....	NC
DATE	7/01/92	MOISTURE COLLECTED (g).....	NC
SAMPLING LOCATION	BREAD COMFORT HO	% O2.....	19.50 *
RUN	BREAD CH - RUN5	% CO2.....	0.00 *
AMBIENT TEMPERATURE	92.00	%N2.....	80.50
BAROMETRIC PRESSURE	29.67	PERCENT MOISTURE IN STACK.....	3.62 *
STATIC PRESSURE (in H2	-0.07	MOLE FRAC. of DRY STACK GAS.....	0.96
OPERATOR	CRP	DRY MOLECULAR W	28.78
METER TEMP (deg. F)....	NC	WET MOLECULAR W	28.39
METER ORIFICE dH (" H2	NC	STACK DIAMETER (I	24.00
METERED VOLUME (cu.ft.	NC	STACK AREA (sq ft)	3.14
METER Y.....	NC		

Traverse Point Number	Velocity Head P (in H2O)	Stack Ts (F)	Square Root of P	Stack Gas Velocity (fps)	Stack Gas Velocity (fpm)
A1	0.100	132	0.32	19.03	1142.03
A2	0.110	314	0.33	22.83	1369.65
A3	0.100	134	0.32	19.07	1143.96
A4	0.090	135	0.30	18.10	1086.17
A5	0.100	136	0.32	19.10	1145.88
A6	0.090	132	0.30	18.06	1083.42
A7	0.100	134.00	0.32	19.07	1143.96
A8	0.090	133.00	0.30	18.07	1084.34
B1	0.100	132	0.32	19.03	1142.03
B2	0.100	132	0.32	19.03	1142.03
B3	0.090	134	0.30	18.09	1085.25
B4	0.080	133	0.28	17.04	1022.32
B5	0.100	136	0.32	19.10	1145.88
B6	0.110	131	0.33	19.95	1196.76
B7	0.090	133.00	0.30	18.07	1084.34
B8	0.090	134.00	0.30	18.09	1085.25
Averages		144.69	0.31	18.86	1131.42

STACK GAS ACTUAL VOL FLOW (acfm)	3554.47
STACK GAS STANDARD VOL FLOW (scfm)	3077.40
STACK GAS STANDARD DRY VOL FLOW (dscf	2966.05

* ASSUMED FROM A PREVIOUS RUN

PLANT	SITE 4		STD METERED VOLUME (scf).....	NC	
DATE	7/01/92		MOISTURE COLLECTED (g).....	NC	
SAMPLING LOCATION	BREAD COMFORT HO		% O2.....	19.00	*
RUN	BREAD CH - RUN6		% CO2.....	0.00	*
AMBIENT TEMPERATURE	92.00		%N2.....	81.00	
BAROMETRIC PRESSURE	29.67		PERCENT MOISTURE IN STACK.....	3.62	*
STATIC PRESSURE (in H2	-0.08		MOLE FRAC. of DRY STACK GAS.....	0.96	
OPERATOR	CRP		DRY MOLECULAR W	28.76	
METER TEMP (deg. F)....	NC		WET MOLECULAR W	28.37	
METER ORIFICE dH (" H2	NC		STACK DIAMETER (I	24.00	
METERED VOLUME (cu.ft.	NC		STACK AREA (sq ft)	3.14	
METER Y.....	NC				

Traverse Point Number	Velocity Head P (in H2O)	Stack Ts (F)	Square Root of P	Stack Gas Velocity (fps)	Stack Gas Velocity (fpm)
A1	0.090	135	0.30	18.11	1086.55
A2	0.080	136	0.28	17.09	1025.27
A3	0.070	130	0.26	15.90	954.21
A4	0.070	130	0.26	15.90	954.21
A5	0.100	133	0.32	19.06	1143.39
A6	0.090	130	0.30	18.03	1081.97
A7	0.080	133.00	0.28	17.04	1022.68
A8	0.080	134.00	0.28	17.06	1023.55
B1	0.090	131	0.30	18.05	1082.89
B2	0.080	129	0.28	16.99	1019.23
B3	0.080	133	0.28	17.04	1022.68
B4	0.080	131	0.28	17.02	1020.96
B5	0.090	132	0.30	18.06	1083.80
B6	0.090	130	0.30	18.03	1081.97
B7	0.070	134.00	0.26	15.96	957.44
B8	0.070	130.00	0.26	15.90	954.21
Averages		131.94	0.29	17.20	1032.17

STACK GAS ACTUAL VOL FLOW (acfm)	3242.67
STACK GAS STANDARD VOL FLOW (scfm)	2867.85
STACK GAS STANDARD DRY VOL FLOW (dscf	2764.09

* ASSUMED FROM A PREVIOUS RUN

PLANT	SITE 4	STD METERED VOLUME (scf).....	NC
DATE	6/30/92	MOISTURE COLLECTED (g).....	NC
SAMPLING LOCATION	BREAD COMFORT HO	% O2.....	19.50
RUN	BREAD CH - RUN4	% CO2.....	0.00
AMBIENT TEMPERATURE	92.00	%N2.....	80.50
BAROMETRIC PRESSURE	29.73	PERCENT MOISTURE IN STACK.....	3.62 *
STATIC PRESSURE (in H2	-0.06	MOLE FRAC. of DRY STACK GAS.....	0.96
OPERATOR	CRP	DRY MOLECULAR W	28.78
METER TEMP (deg. F)....	NC	WET MOLECULAR W	28.39
METER ORIFICE dH (" H2	NC	STACK DIAMETER (I	24.00
METERED VOLUME (cu.ft.	NC	STACK AREA (sq ft)	3.14
METER Y.....	NC		

Traverse Point Number	Velocity Head P (in H2O)	Stack Ts (F)	Square Root of P	Stack Gas Velocity (fps)	Stack Gas Velocity (fpm)
A1	0.100	141	0.32	19.16	1149.51
A2	0.100	139	0.32	19.13	1147.60
A3	0.090	137	0.30	18.11	1086.89
A4	0.080	135	0.28	17.05	1023.01
A5	0.090	135	0.30	18.08	1085.06
A6	0.090	134	0.30	18.07	1084.15
A7	0.080	134.00	0.28	17.04	1022.15
A8	0.060	129.00	0.24	14.69	881.47
B1	0.080	130	0.28	16.98	1018.70
B2	0.070	133	0.26	15.92	955.32
B3	0.080	134	0.28	17.04	1022.15
B4	0.090	134	0.30	18.07	1084.15
B5	0.070	133	0.26	15.92	955.32
B6	0.080	133	0.28	17.02	1021.28
B7	0.060	134.00	0.24	14.75	885.20
B8	0.050	132.00	0.22	13.45	806.71
Averages		134.19	0.28	16.90	1014.14

STACK GAS ACTUAL VOL FLOW (acfm)	3186.01
STACK GAS STANDARD VOL FLOW (scfm)	2812.85
STACK GAS STANDARD DRY VOL FLOW (dscf	2711.08

* ASSUMED FROM A PREVIOUS RUN

PLANT	SITE 4	STD METERED VOLUME (scf).....	NC	
DATE	6/29/92	MOISTURE COLLECTED (g).....	NC	
SAMPLING LOCATION	BREAD COMFORT HO	% O2.....	19.00	*
RUN	BREAD CH - RUN3	% CO2.....	0.00	*
AMBIENT TEMPERATURE	90.00	%N2.....	81.00	
BAROMETRIC PRESSURE	29.80	PERCENT MOISTURE IN STACK.....	3.62	*
STATIC PRESSURE (in H2	-0.07	MOLE FRAC. of DRY STACK GAS.....	0.96	
OPERATOR	CRP	DRY MOLECULAR W	28.76	
METER TEMP (deg. F)....	NC	WET MOLECULAR W	28.37	
METER ORIFICE dH (" H2	NC	STACK DIAMETER (I	24.00	
METERED VOLUME (cu.ft.	NC	STACK AREA (sq ft)	3.14	
METER Y.....	NC			

Traverse Point Number	Velocity Head P (in H2O)	Stack Ts (F)	Square Root of P	Stack Gas Velocity (fps)	Stack Gas Velocity (fpm)
A1	0.110	123	0.33	19.77	1186.45
A2	0.100	123	0.32	18.85	1131.23
A3	0.100	126	0.32	18.90	1134.14
A4	0.090	125	0.30	17.92	1075.02
A5	0.110	125	0.33	19.81	1188.48
A6	0.110	127	0.33	19.84	1190.51
A7	0.100	124.00	0.32	18.87	1132.20
A8	0.090	125.00	0.30	17.92	1075.02
Averages		124.75	0.32	18.99	1139.13

STACK GAS ACTUAL VOL FLOW (acfm)	3578.69
STACK GAS STANDARD VOL FLOW (scfm)	3217.97
STACK GAS STANDARD DRY VOL FLOW (dscf	3101.54

* ASSUMED FROM A PREVIOUS RUN

PLANT	SITE 4	STD METERED VOLUME (scf).....	NC	
DATE	6/29/92	MOISTURE COLLECTED (g).....	NC	
SAMPLING LOCATION	BREAD COMFORT HO	% O2.....	19.00	*
RUN	BREAD CH - RUN2	% CO2.....	0.00	*
AMBIENT TEMPERATURE	90.00	%N2.....	81.00	
BAROMETRIC PRESSURE	29.80	PERCENT MOISTURE IN STACK.....	3.62	*
STATIC PRESSURE (in H2	-0.07	MOLE FRAC. of DRY STACK GAS.....	0.96	
OPERATOR	CRP	DRY MOLECULAR W	28.76	
METER TEMP (deg. F)....	NC	WET MOLECULAR W	28.37	
METER ORIFICE dH (" H2	NC	STACK DIAMETER (I	24.00	
METERED VOLUME (cu.ft.	NC	STACK AREA (sq ft)	3.14	
METER Y.....	NC			

Traverse Point Number	Velocity Head P (in H2O)	Stack Ts (F)	Square Root of P	Stack Gas Velocity (fps)	Stack Gas Velocity (fpm)
A1	0.110	125	0.33	19.81	1188.48
A2	0.100	127	0.32	18.92	1135.11
A3	0.100	127	0.32	18.92	1135.11
A4	0.090	128	0.30	17.96	1077.78
A5	0.090	126	0.30	17.93	1075.94
A6	0.080	125	0.28	16.89	1013.54
A7	0.080	126.00	0.28	16.91	1014.41
A8	0.090	126.00	0.30	17.93	1075.94
Averages		126.25	0.30	18.16	1089.53

STACK GAS ACTUAL VOL FLOW (acfm)	3422.87
STACK GAS STANDARD VOL FLOW (scfm)	3069.98
STACK GAS STANDARD DRY VOL FLOW (dscf	2958.91

* ASSUMED FROM A PREVIOUS RUN

PLANT	SITE 4	STD METERED VOLUME (scf).....	18.86
DATE	6/29/92	MOISTURE COLLECTED (g).....	62.60
SAMPLING LOCATION	BREAD-FRONT	% O2.....	17.00
RUN	BREAD FRONT - RUN 1	% CO2.....	0.50
AMBIENT TEMPERATURE	90.00	%N2.....	82.50
BAROMETRIC PRESSURE	29.80	PERCENT MOISTURE IN STACK.....	13.54
STATIC PRESSURE (in H2	-0.10	MOLE FRAC. of DRY STACK GAS.....	0.86
OPERATOR	CRP	DRY MOLECULAR W	28.76
METER TEMP (deg. F)....	107.33	WET MOLECULAR W	27.30
METER ORIFICE dH (" H2	1.50	STACK DIAMETER (I	14.00
METERED VOLUME (cu.ft.	20.37	STACK AREA (sq ft)	1.07
METER Y.....	0.9947		

Traverse Point Number	Velocity Head P (in H2O)	Stack Ts (F)	Square Root of P	Stack Gas Velocity (fps)	Stack Gas Velocity (fpm)
A1	0.260	237	0.51	33.89	2033.13
A2	0.260	239	0.51	33.93	2036.04
A3	0.270	242	0.52	34.65	2079.28
A4	0.240	243	0.49	32.70	1961.76
A5	0.240	240	0.49	32.63	1957.57
A6	0.220	237	0.47	31.17	1870.20
A7	0.180	236.00	0.42	28.17	1690.45
A8	0.170	236.00	0.41	27.38	1642.82
B1	0.180	231.00	0.42	28.07	1684.36
B2	0.190	233.00	0.44	28.88	1733.02
B3	0.200	240.00	0.45	29.78	1787.01
B4	0.210	239.00	0.46	30.50	1829.83
B5	0.260	240.00	0.51	33.96	2037.50
B6	0.280	243.00	0.53	35.32	2118.94
B7	0.250	243.00	0.50	33.37	2002.21
B8	0.250	240	0.50	33.30	1997.93
Averages		238.69	0.48	31.73	1903.62

STACK GAS ACTUAL VOL FLOW (acfm)	2034.99
STACK GAS STANDARD VOL FLOW (scfm)	1531.47
STACK GAS STANDARD DRY VOL FLOW (dscf	1324.18

PLANT	SITE 4	STD METERED VOLUME (scf).....	NC
DATE	6/30/92	MOISTURE COLLECTED (g).....	NC
SAMPLING LOCATION	BREAD FRONT	% O2.....	17.00
RUN	BREAD FRONT-RUN2	% CO2.....	0.50
AMBIENT TEMPERATURE	90.00	%N2.....	82.50
BAROMETRIC PRESSURE	29.73	PERCENT MOISTURE IN STACK.....	13.56 *
STATIC PRESSURE (in H2	-0.10	MOLE FRAC. of DRY STACK GAS.....	0.86
OPERATOR	CRP	DRY MOLECULAR W	28.76
METER TEMP (deg. F)....	NC	WET MOLECULAR W	27.30
METER ORIFICE dH (" H2	NC	STACK DIAMETER (I	14.00
METERED VOLUME (cu.ft.	NC	STACK AREA (sq ft)	1.07
METER Y.....	NC		

Traverse Point Number	Velocity Head P (in H2O)	Stack Ts (F)	Square Root of P	Stack Gas Velocity (fps)	Stack Gas Velocity (fpm)
A1	0.300	242	0.55	36.57	2194.49
A2	0.300	249	0.55	36.76	2205.41
A3	0.270	250	0.52	34.90	2093.71
A4	0.250	249	0.50	33.55	2013.25
A5	0.260	253	0.51	34.32	2058.91
A6	0.250	248	0.50	33.53	2011.83
A7	0.230	245.00	0.48	32.09	1925.59
A8	0.220	250.00	0.47	31.50	1889.93
Averages		248.25	0.51	34.15	2049.21

STACK GAS ACTUAL VOL FLOW (acfm)	2190.63
STACK GAS STANDARD VOL FLOW (scfm)	1622.42
STACK GAS STANDARD DRY VOL FLOW (dscf	1402.47

* ASSUMED FROM A PREVIOUS RUN

PLANT	SITE 4	STD METERED VOLUME (scf).....	NC
DATE	7/01/92	MOISTURE COLLECTED (g).....	NC
SAMPLING LOCATION	BREAD-FRONT	% O2.....	17.00 *
RUN	BREAD-FRONT-RUN3	% CO2.....	0.50 *
AMBIENT TEMPERATURE	90.00	%N2.....	82.50
BAROMETRIC PRESSURE	29.67	PERCENT MOISTURE IN STACK.....	13.56 *
STATIC PRESSURE (in H2	-0.10	MOLE FRAC. of DRY STACK GAS.....	0.86
OPERATOR	CRP	DRY MOLECULAR W	28.76
METER TEMP (deg. F)....	NC	WET MOLECULAR W	27.30
METER ORIFICE dH (" H2	NC	STACK DIAMETER (I	14.00
METERED VOLUME (cu.ft.	NC	STACK AREA (sq ft)	1.07
METER Y.....	NC		

Traverse Point Number	Velocity Head P (in H2O)	Stack Ts (F)	Square Root of P	Stack Gas Velocity (fps)	Stack Gas Velocity (fpm)
A1	0.330	237	0.57	38.26	2295.69
A2	0.320		0.57	30.61	1836.30
A3	0.300		0.55	29.63	1777.99
A4	0.260		0.51	27.59	1655.22
A5	0.270		0.52	28.11	1686.75
A6	0.230		0.48	25.95	1556.80
A7	0.230		0.48	25.95	1556.80
A8	0.220		0.47	25.38	1522.58
Averages		237.00	0.52	34.51	2070.87

STACK GAS ACTUAL VOL FLOW (acfm)	2213.79
STACK GAS STANDARD VOL FLOW (scfm)	1662.69
STACK GAS STANDARD DRY VOL FLOW (dscf	1437.28

* ASSUMED FROM A PREVIOUS RUN

PLANT	SITE 4	STD METERED VOLUME (scf).....	NC	
DATE	7/01/92	MOISTURE COLLECTED (g).....	NC	
SAMPLING LOCATION	BREAD-FRONT	% O2.....	17.00	*
RUN	BREAD-FRONT-RUN4	% CO2.....	0.50	*
AMBIENT TEMPERATURE	90.00	%N2.....	82.50	
BAROMETRIC PRESSURE	29.67	PERCENT MOISTURE IN STACK.....	13.56	*
STATIC PRESSURE (in H2	-0.10	MOLE FRAC. of DRY STACK GAS.....	0.86	
OPERATOR	CRP	DRY MOLECULAR W	28.76	
METER TEMP (deg. F)....	NC	WET MOLECULAR W	27.30	
METER ORIFICE dH (" H2	NC	STACK DIAMETER (I	14.00	
METERED VOLUME (cu.ft.	NC	STACK AREA (sq ft)	1.07	
METER Y.....	NC			

Traverse Point Number	Velocity Head P (in H2O)	Stack Ts (F)	Square Root of P	Stack Gas Velocity (fps)	Stack Gas Velocity (fpm)
A1	0.090	246	0.30	20.11	1206.60
A2	0.080	249	0.28	19.00	1140.01
A3	0.080	248	0.28	18.99	1139.21
A4	0.070	255	0.26	17.85	1070.89
A5	0.060	251	0.24	16.48	988.67
A6	0.060	250	0.24	16.47	987.98
	0.04	248.00			
A7	0.030	244.00	0.17	11.59	695.65
Averages		248.88	0.26	17.21	1032.52

STACK GAS ACTUAL VOL FLOW (acfm)	1103.77
STACK GAS STANDARD VOL FLOW (scfm)	815.11
STACK GAS STANDARD DRY VOL FLOW (dscf	704.61

* ASSUMED FROM A PREVIOUS RUN

PLANT	SITE 4	STD METERED VOLUME (scf).....	NC	
DATE	7/01/92	MOISTURE COLLECTED (g).....	NC	
SAMPLING LOCATION	BREAD-FRONT	% O2.....	17.00	*
RUN	BREAD-FRONT-RUN5	% CO2.....	0.50	*
AMBIENT TEMPERATURE	90.00	%N2.....	82.50	
BAROMETRIC PRESSURE	29.67	PERCENT MOISTURE IN STACK.....	13.56	*
STATIC PRESSURE (in H2	-0.10	MOLE FRAC. of DRY STACK GAS.....	0.86	
OPERATOR	CRP	DRY MOLECULAR W	28.76	
METER TEMP (deg. F)....	NC	WET MOLECULAR W	27.30	
METER ORIFICE dH (" H2	NC	STACK DIAMETER (I	14.00	
METERED VOLUME (cu.ft.	NC	STACK AREA (sq ft)	1.07	
METER Y.....	NC			

Traverse Point Number	Velocity Head P (in H2O)	Stack Ts (F)	Square Root of P	Stack Gas Velocity (fps)	Stack Gas Velocity (fpm)
A1	0.190	251	0.44	29.32	1759.36
A2	0.190	250	0.44	29.30	1758.12
A3	0.200	248	0.45	30.02	1801.25
A4	0.190	249	0.44	29.28	1756.88
A5	0.290	251	0.54	36.23	2173.58
A6	0.290	251	0.54	36.23	2173.58
	0.30	250.00			
A7	0.270	250.00	0.52	34.93	2095.81
Averages		250.00	0.48	32.19	1931.15

STACK GAS ACTUAL VOL FLOW (acfm)	2064.43
STACK GAS STANDARD VOL FLOW (scfm)	1522.12
STACK GAS STANDARD DRY VOL FLOW (dscf	1315.77

* ASSUMED FROM A PREVIOUS RUN

PLANT	SITE 4	STD METERED VOLUME (scf).....	NC	
DATE	6/29/92	MOISTURE COLLECTED (g).....	NC	
SAMPLING LOCATION	BREAD-FRONT	% O2.....	17.00	*
RUN	BREAD-FRONT-RUN6	% CO2.....	0.50	*
AMBIENT TEMPERATURE	90.00	%N2.....	82.50	
BAROMETRIC PRESSURE	29.80	PERCENT MOISTURE IN STACK.....	13.56	*
STATIC PRESSURE (in H2	-0.10	MOLE FRAC. of DRY STACK GAS.....	0.86	
OPERATOR	CRP	DRY MOLECULAR W	28.76	
METER TEMP (deg. F)....	NC	WET MOLECULAR W	27.30	
METER ORIFICE dH (" H2	NC	STACK DIAMETER (I	14.00	
METERED VOLUME (cu.ft.	NC	STACK AREA (sq ft)	1.07	
METER Y.....	NC			

Traverse Point Number	Velocity Head P (in H2O)	Stack Ts (F)	Square Root of P	Stack Gas Velocity (fps)	Stack Gas Velocity (fpm)
A1	0.250	228	0.50	33.01	1980.88
A2	0.280	226	0.53	34.89	2093.32
A3	0.270	229	0.52	34.33	2060.09
A4	0.250	228	0.50	33.01	1980.88
A5	0.240	234	0.49	32.49	1949.31
A6	0.270	233	0.52	34.43	2066.07
	0.23	235.00			
A7	0.210	235.00	0.46	30.41	1824.73
Averages		231.00	0.50	33.24	1994.58

STACK GAS ACTUAL VOL FLOW (acfm)	2132.23
STACK GAS STANDARD VOL FLOW (scfm)	1622.38
STACK GAS STANDARD DRY VOL FLOW (dscf	1402.44

* ASSUMED FROM A PREVIOUS RUN

PLANT	SITE 4	STD METERED VOLUME (scf).....	17.49
DATE	7/01/92	MOISTURE COLLECTED (g).....	30.60
SAMPLING LOCATION	BREAD REAR STACK	% O2.....	20.50 *
RUN	BREAD REAR - RUN1	% CO2.....	0.00 *
AMBIENT TEMPERATURE	95.00	%N2.....	79.50
BAROMETRIC PRESSURE	29.80	PERCENT MOISTURE IN STACK.....	7.62
STATIC PRESSURE (in H2	-0.10	MOLE FRAC. of DRY STACK GAS.....	0.92
OPERATOR	CRP	DRY MOLECULAR W	28.82
METER TEMP (deg. F)....	105.67	WET MOLECULAR W	28.00
METER ORIFICE dH (" H2	1.50	STACK DIAMETER (I	16.00
METERED VOLUME (cu.ft.	18.85	STACK AREA (sq ft)	1.40
METER Y.....	0.9947		

Traverse Point Number	Velocity Head P (in H2O)	Stack Ts (F)	Square Root of P	Stack Gas Velocity (fps)	Stack Gas Velocity (fpm)
A1	0.250	155	0.50	30.82	1849.43
A2	0.280	157	0.53	32.67	1960.43
A3	0.240	159	0.49	30.30	1817.95
A4	0.220	160	0.47	29.03	1741.96
A5	0.170	161	0.41	25.54	1532.50
A6	0.150	161	0.39	23.99	1439.54
A7	0.130	161.00	0.36	22.34	1340.14
A8	0.120	161.00	0.35	21.46	1287.56
B1	0.180	160	0.42	26.26	1575.66
B2	0.170	160	0.41	25.52	1531.27
B3	0.180	161	0.42	26.28	1576.93
B4	0.170	162	0.41	25.56	1533.74
B5	0.210	162	0.46	28.41	1704.66
B6	0.220	162	0.47	29.08	1744.77
B7	0.210	162.00	0.46	28.41	1704.66
B8	0.190	162.00	0.44	27.02	1621.45
Averages		160.38	0.44	27.05	1622.82

STACK GAS ACTUAL VOL FLOW (acfm)	2265.88
STACK GAS STANDARD VOL FLOW (scfm)	1920.34
STACK GAS STANDARD DRY VOL FLOW (dscf	1774.01

* ASSUMED FROM A PREVIOUS RUN

PLANT	SITE 4	STD METERED VOLUME (scf).....	NC
DATE	6/29/92	MOISTURE COLLECTED (g).....	NC
SAMPLING LOCATION	BREAD REAR STACK	% O2.....	20.50 *
RUN	BREAD REAR - RUN 2	% CO2.....	0.00 *
AMBIENT TEMPERATURE	95.00	%N2.....	79.50
BAROMETRIC PRESSURE	29.80	PERCENT MOISTURE IN STACK.....	7.63 *
STATIC PRESSURE (in H2	-0.11	MOLE FRAC. of DRY STACK GAS.....	0.92
OPERATOR	CRP	DRY MOLECULAR W	28.82
METER TEMP (deg. F)....	NC	WET MOLECULAR W	27.99
METER ORIFICE dH (" H2	NC	STACK DIAMETER (I	16.00
METERED VOLUME (cu.ft.	NC	STACK AREA (sq ft)	1.40
METER Y.....	NC		

Traverse Point Number	Velocity Head P (in H2O)	Stack Ts (F)	Square Root of P	Stack Gas Velocity (fps)	Stack Gas Velocity (fpm)
A1	0.240	163	0.49	30.40	1823.89
A2	0.240	165	0.49	30.45	1826.81
A3	0.230	167	0.48	29.85	1791.21
A4	0.190	168	0.44	27.16	1629.32
A5	0.150	169	0.39	24.15	1448.84
A6	0.140	168	0.37	23.31	1398.60
A7	0.130	168.00	0.36	22.46	1347.72
A8	0.120	166.00	0.35	21.55	1292.79
Averages		166.75	0.42	26.17	1570.08

STACK GAS ACTUAL VOL FLOW (acfm)	2192.25
STACK GAS STANDARD VOL FLOW (scfm)	1839.00
STACK GAS STANDARD DRY VOL FLOW (dscf	1698.63

* ASSUMED FROM A PREVIOUS RUN

PLANT	SITE 4	STD METERED VOLUME (scf).....	NC	
DATE	6/30/92	MOISTURE COLLECTED (g).....	NC	
SAMPLING LOCATION	BREAD REAR STACK	% O2.....	20.50	
RUN	BREAD REAR - RUN3	% CO2.....	0.00	**
AMBIENT TEMPERATURE	95.00	%N2.....	79.50	
BAROMETRIC PRESSURE	29.73	PERCENT MOISTURE IN STACK.....	7.63	*
STATIC PRESSURE (in H2	-0.12	MOLE FRAC. of DRY STACK GAS.....	0.92	
OPERATOR	CRP	DRY MOLECULAR W	28.82	
METER TEMP (deg. F)....	NC	WET MOLECULAR W	27.99	
METER ORIFICE dH (" H2	NC	STACK DIAMETER (I	16.00	
METERED VOLUME (cu.ft.	NC	STACK AREA (sq ft)	1.40	
METER Y.....	NC			

Traverse Point Number	Velocity Head P (in H2O)	Stack Ts (F)	Square Root of P	Stack Gas Velocity (fps)	Stack Gas Velocity (fpm)
A1	0.240	170	0.49	30.60	1836.28
A2	0.240	171	0.49	30.63	1837.74
A3	0.230	172	0.48	30.01	1800.47
A4	0.200	172	0.45	27.98	1678.94
A5	0.150	172	0.39	24.23	1454.01
A6	0.130	171	0.36	22.54	1352.54
A7	0.130	171.00	0.36	22.54	1352.54
A8	0.120	168.00	0.35	21.61	1296.38
Averages		170.88	0.42	26.27	1576.04

STACK GAS ACTUAL VOL FLOW (acfm)	2200.56
STACK GAS STANDARD VOL FLOW (scfm)	1829.57
STACK GAS STANDARD DRY VOL FLOW (dscf	1689.92

* ASSUMED FROM A PREVIOUS RUN
** ESTIMATED

PLANT	SITE 4	STD METERED VOLUME (scf).....	NC
DATE	7/01/92	MOISTURE COLLECTED (g).....	NC
SAMPLING LOCATION	BREAD REAR STACK	% O2.....	20.50 *
RUN	BREAD REAR - RUN 4	% CO2.....	0.00 *
AMBIENT TEMPERATURE	95.00	%N2.....	79.50
BAROMETRIC PRESSURE	29.67	PERCENT MOISTURE IN STACK.....	7.63 *
STATIC PRESSURE (in H2	-0.11	MOLE FRAC. of DRY STACK GAS.....	0.92
OPERATOR	CRP	DRY MOLECULAR W	28.82
METER TEMP (deg. F)....	NC	WET MOLECULAR W	27.99
METER ORIFICE dH (" H2	NC	STACK DIAMETER (I	16.00
METERED VOLUME (cu.ft.	NC	STACK AREA (sq ft)	1.40
METER Y.....	NC		

Traverse Point Number	Velocity Head P (in H2O)	Stack Ts (F)	Square Root of P	Stack Gas Velocity (fps)	Stack Gas Velocity (fpm)
A1	0.170	167	0.41	25.72	1543.30
A2	0.180	168	0.42	26.49	1589.31
A3	0.150	168	0.39	24.18	1450.84
A4	0.150	168	0.39	24.18	1450.84
A5	0.200	168	0.45	27.92	1675.28
A6	0.200	168	0.45	27.92	1675.28
A7	0.200	168.00	0.45	27.92	1675.28
A8	0.210	169.00	0.46	28.63	1718.02
Averages		168.00	0.43	26.62	1597.25

STACK GAS ACTUAL VOL FLOW (acfm)	2230.18
STACK GAS STANDARD VOL FLOW (scfm)	1858.99
STACK GAS STANDARD DRY VOL FLOW (dscf	1717.10

* ASSUMED FROM A PREVIOUS RUN

PLANT	SITE 4		STD METERED VOLUME (scf).....	19.19	
DATE	7/02/92		MOISTURE COLLECTED (g).....	197.40	
SAMPLING LOCATION	BUN FRONT STACK *		% O2.....	19.00	**
RUN	BUN F. STACK-RUN1		% CO2.....	0.00	**
AMBIENT TEMPERATURE	85.00		%N2.....	81.00	
BAROMETRIC PRESSURE	29.81		PERCENT MOISTURE IN STACK.....	32.67	
STATIC PRESSURE (in H2	0.00		MOLE FRAC. of DRY STACK GAS.....	0.67	
OPERATOR	CRP		DRY MOLECULAR W	28.76	
METER TEMP (deg. F)....	91.67		WET MOLECULAR W	25.25	
METER ORIFICE dH (" H2	1.50		STACK DIAMETER (I	14.00	
METERED VOLUME (cu.ft.	20.15		STACK AREA (sq ft)	1.07	
METER Y.....	0.9947				

Traverse Point Number	Velocity Head P (in H2O)	Stack Ts (F)	Square Root of P	Stack Gas Velocity (fps)	Stack Gas Velocity (fpm)	
A1		226		120.00	120.00	
A2		226		130.00	130.00	
A3		226		130.00	130.00	
A4		227		140.00	140.00	
A5		227		160.00	160.00	
A6		227				***
A7		226				***
A8		225				***
Averages		226.25			136.00	

STACK GAS ACTUAL VOL FLOW (acfm)	145.39
STACK GAS STANDARD VOL FLOW (scfm)	111.45
STACK GAS STANDARD DRY VOL FLOW (dscf	75.04

* NOT COMPLETED USING EPA METHODS 2 (HOT WIRE ANEMOMETER USED AT ABOVE ITS RATED TEMPERATURE OF 180 DEGREES F)

** ASSUMED FROM A PREVIOUS RUN

*** COULD NOT REACH THESE POINTS

PLANT	SITE 4	STD METERED VOLUME (scf).....	NC	
DATE	7/02/92	MOISTURE COLLECTED (g).....	NC	
SAMPLING LOCATION	BUN FRONT STACK *	% O2.....	19.00	**
RUN	BUN F. STACK-RUN2	% CO2.....	0.00	**
AMBIENT TEMPERATURE	85.00	%N2.....	81.00	
BAROMETRIC PRESSURE	29.81	PERCENT MOISTURE IN STACK.....	32.71	**
STATIC PRESSURE (in H2	0.00	MOLE FRAC. of DRY STACK GAS.....	0.67	
OPERATOR	CRP	DRY MOLECULAR W	28.76	
METER TEMP (deg. F)....	NC	WET MOLECULAR W	25.24	
METER ORIFICE dH (" H2	NC	STACK DIAMETER (I	14.00	
METERED VOLUME (cu.ft.	NC	STACK AREA (sq ft)	1.07	
METER Y.....	NC			

Traverse Point Number	Velocity Head P (in H2O)	Stack Ts (F)	Square Root of P	Stack Gas Velocity (fps)	Stack Gas Velocity (fpm)	
A1		239			100.00	
A2		240			105.00	
A3		244			110.00	
A4		251			120.00	
A5		245			130.00	
A6		244			140.00	
A7		241.00				***
A8		234.00				***
Averages		242.25			117.50	

STACK GAS ACTUAL VOL FLOW (acfm)	125.61
STACK GAS STANDARD VOL FLOW (scfm)	94.10
STACK GAS STANDARD DRY VOL FLOW (dscf	63.31

* NOT COMPLETED USING EPA METHOD 2 (HOT WIRE ANEMOMETER USED AT ABOVE ITS RATED TEMPERATURE OF 180 DEGREES F)

** ASSUMED FROM A PREVIOUS RUN

*** COULD NOT REACH THESE POINTS

PLANT	SITE 4		STD METERED VOLUME (scf).....	19.19	
DATE	7/02/92		MOISTURE COLLECTED (g).....	197.40	
SAMPLING LOCATION	BUN FRONT STACK *		% O2.....	19.00	**
RUN	BUN F. STACK-RUN3		% CO2.....	0.00	**
AMBIENT TEMPERATURE	85.00		%N2.....	81.00	
BAROMETRIC PRESSURE	29.81		PERCENT MOISTURE IN STACK.....	32.67	
STATIC PRESSURE (in H2	0.00		MOLE FRAC. of DRY STACK GAS.....	0.67	
OPERATOR	CRP		DRY MOLECULAR W	28.76	
METER TEMP (deg. F)....	91.67		WET MOLECULAR W	25.25	
METER ORIFICE dH (" H2	1.50		STACK DIAMETER (I	14.00	
METERED VOLUME (cu.ft.	20.15		STACK AREA (sq ft)	1.07	
METER Y.....	0.9947				

Traverse Point Number	Velocity Head P (in H2O)	Stack Ts (F)	Square Root of P	Stack Gas Velocity (fps)	Stack Gas Velocity (fpm)	
A1		246			85.00	
A2		246			95.00	
A3		247			105.00	
A4		248			110.00	
A5		247			125.00	
A6		247			150.00	
A7		245.00				***
A8		242.00				***
Averages		246.00			111.67	

STACK GAS ACTUAL VOL FLOW (acfm)	119.37
STACK GAS STANDARD VOL FLOW (scfm)	88.95
STACK GAS STANDARD DRY VOL FLOW (dscf	59.89

* NOT COMPLETED USING EPA METHOD 2 (HOT WIRE ANEMOMETER USED AT ABOVE ITS RATED TEMPERATURE OF 180 DEGREES F)

** ASSUMED FROM A PREVIOUS RUN

*** COULD NOT REACH THESE POINTS

PLANT	SITE 4	STD METERED VOLUME (scf).....	NC	
DATE	7/02/92	MOISTURE COLLECTED (g).....	NC	
SAMPLING LOCATION	BUN FRONT STACK *	% O2.....	19.00	**
RUN	BUN F. STACK-RUN4	% CO2.....	0.00	**
AMBIENT TEMPERATURE	85.00	%N2.....	81.00	
BAROMETRIC PRESSURE	29.81	PERCENT MOISTURE IN STACK.....	32.71	**
STATIC PRESSURE (in H2	0.00	MOLE FRAC. of DRY STACK GAS.....	0.67	
OPERATOR	CRP	DRY MOLECULAR W	28.76	
METER TEMP (deg. F)....	NC	WET MOLECULAR W	25.24	
METER ORIFICE dH (" H2	NC	STACK DIAMETER (I	14.00	
METERED VOLUME (cu.ft.	NC	STACK AREA (sq ft)	1.07	
METER Y.....	NC			

Traverse Point Number	Velocity Head P (in H2O)	Stack Ts (F)	Square Root of P	Stack Gas Velocity (fps)	Stack Gas Velocity (fpm)	
A1		235			130.00	
A2		236			140.00	
A3		240			140.00	
A4		241			160.00	
A5		242			200.00	
A6		241			210.00	
A7		239.00				***
A8		242.00				***
Averages		239.50			163.33	

STACK GAS ACTUAL VOL FLOW (acfm)	174.61
STACK GAS STANDARD VOL FLOW (scfm)	131.32
STACK GAS STANDARD DRY VOL FLOW (dscf	88.36

* NOT COMPLETED USING EPA METHOD 2 (HOT WIRE ANEMOMETER USED AT ABOVE ITS RATED TEMPERATURE OF 180 DREES F)

** ASSUMED FROM A PREVIOUS RUN

*** COULD NOT REACH THESE POINTS

PLANT	SITE 4	STD METERED VOLUME (scf).....	19.13
DATE	7/2/92	MOISTURE COLLECTED (g).....	11.00
SAMPLING LOCATION	BUN REAR STACK	% O2.....	19.00
RUN	BUN REAR - RUN 1	% CO2.....	0.50 *
AMBIENT TEMPERATURE ...	80.00	%N2.....	80.50
BAROMETRIC PRESSURE ...	29.81	PERCENT MOISTURE IN STACK.....	2.64
STATIC PRESSURE (in H2O)	-0.07	MOLE FRAC. of DRY STACK GAS.....	0.97
OPERATOR	CRP	DRY MOLECULAR WEIGHT.....	28.84
METER TEMP (deg. F)....	90.33	WET MOLECULAR WEIGHT.....	28.55
METER ORIFICE dH (" H2O)	1.50	STACK DIAMETER (IN)	16.00
METERED VOLUME (cu.ft.).	20.04	STACK AREA (sq ft)	1.40
METER Y.....	0.9947		

Traverse Point Number	Velocity Head DP (in H2O)	Stack Ts (°F)	Square Root of DP	Stack Gas Velocity (fps)	Stack Gas Velocity (fpm)
A1	0.190	159	0.44	26.69	1601.29
A2	0.200	159	0.45	27.38	1642.89
A3	0.210	159	0.46	28.06	1683.46
A4	0.200	159	0.45	27.38	1642.89
A5	0.150	160	0.39	23.73	1423.93
A6	0.140	159	0.37	22.91	1374.54
A7	0.120	160.00	0.35	21.23	1273.61
A8	0.110	160.00	0.33	20.32	1219.38
B1	0.15	160.00	0.39	23.73	1423.93
B2	0.16	160.00	0.40	24.51	1470.63
B3	0.16	163.00	0.40	24.57	1474.19
B4	0.17	164.00	0.41	25.35	1520.78
B5	0.16	164.00	0.40	24.59	1475.37
B6	0.15	164.00	0.39	23.81	1428.52
B7	0.14	162.00	0.37	22.96	1377.87
B8	0.12	162.00	0.35	21.26	1275.66
Averages		160.88	0.40	24.28	1456.86

STACK GAS ACTUAL VOL FLOW (acfm)	2034.16
STACK GAS STANDARD VOL FLOW (scfm)	1723.32
STACK GAS STANDARD DRY VOL FLOW (dscfm)	1677.83

* ESTIMATED

PLANT	SITE 4	STD METERED VOLUME (scf).....	NC
DATE	7/2/92	MOISTURE COLLECTED (g).....	NC
SAMPLING LOCATION	BUN REAR STACK	% O2.....	19.00
RUN	BUN REAR - RUN2	% CO2.....	0.50 *
AMBIENT TEMPERATURE ...	80.00	%N2.....	80.50
BAROMETRIC PRESSURE ...	29.81	PERCENT MOISTURE IN STACK.....	2.64 **
STATIC PRESSURE (in H2O)	0.00	MOLE FRAC. of DRY STACK GAS.....	0.97
OPERATOR	CRP	DRY MOLECULAR WEIGHT.....	28.84
METER TEMP (deg. F)....	NC	WET MOLECULAR WEIGHT.....	28.55
METER ORIFICE dH (" H2O)	NC	STACK DIAMETER (IN)	16.00
METERED VOLUME (cu.ft.).	NC	STACK AREA (sq ft)	1.40
METER Y.....	NC		

Traverse Point Number	Velocity Head DP (in H2O)	Stack Ts (°F)	Square Root of DP	Stack Gas Velocity (fps)	Stack Gas Velocity (fpm)
A1	0.200	154	0.45	27.27	1636.12
A2	0.200	154	0.45	27.27	1636.12
A3	0.210	154	0.46	27.94	1676.53
A4	0.200	154	0.45	27.27	1636.12
A5	0.150	154	0.39	23.62	1416.92
A6	0.140	155	0.37	22.83	1369.99
A7	0.130	154.00	0.36	21.98	1319.08
A8	0.130	154.00	0.36	21.98	1319.08
Averages		154.13	0.41	25.02	1501.26

STACK GAS ACTUAL VOL FLOW (acfm)	2096.16
STACK GAS STANDARD VOL FLOW (scfm)	1795.62
STACK GAS STANDARD DRY VOL FLOW (dscfm)	1748.21

* ESTIMATED

** ASSUMED FROM A PREVIOUS RUN

Appendix D.8

Test Log

6/25 Thurs

0945 On Sit

Broke down location and got packed up by ~1130.

~1200 On the road to Reading

~1330 Arrived in Reading. Discussed power with Terry Schultz (Rich Reidenhauer was not there). Ended up deciding to park adjacent to bread oven because power was so close by and it would have been a 200' stretch to either oven if we decided to split the distance between the two. (We would have also been in the way for 1 week.)

~1530 Mike & John finished up and we all went to the hotel. They left the hotel to go to the airport for weekend off.

1900 I went back on-site. Examined back pressure regulator problems w/ the Rack (core). I backed it out and then it wouldn't go back in (max sample pressure was ~1 psi). Replumbed unit so I had two "T"s on bypass line (took the reg. out of the loop). Plumbed a needle valve on one - to try and control sample pressure with, put a ball valve on the other - as a gross control and incase we need to install new pressure gauge.

~2230 Off Sit

6/24 - Fri

07:45 On Site
Lit FIDS. Rack system (needle valve control) looks marginal. It will work but doesn't look great. Spent all morning calls about 1) back-up TTC monitor (new one)
2) new back pressure regulator
3) new sample pressure guage
Agreed to get all three. Should be set up w/ delivery of #2 on Sat, #3 on Monday — and we will fly in w/ #1 on Sunday night.
As I was getting ready to leave noticed the liners aren't moving the paper properly (no digital display) - Screwed w/ that a while but couldn't get it to work. Called PPK to set up getting another one Sunday night

1330 - off Site

~1600 Strided drive to airport. Stopped at Shrehman's (Norristown) and picked up power cable

~ 1730 Arrived at airport. Flight is 1 1/4 hours late

6/27 Sat

OFF

6/28 Sun

1945 Caught Flight to Phills

2130 Started Drive to Reading, PA

2300 Arrived @ Hotel

6/29 Mon

0745 On S.G

Installed new Regulator (Back Pressure). Pressure does not respond very well - so I set it and let it be. It stabilized at 385 psi & that's where I ~~did~~ calibrated.

1126 On-line.

Looks like the old comfort hood has a fair amount of emissions. ~ 700 ppm, but high flow. We will split between the front stack and comfort hood.

R	# INJ (total)	F	# Inj (total)	CH	# Inj (total)
11:26 -	IIII	11:40 - 1213	11	11:26 - 11:40	111
	1			12:15	

PRODUCT ENDED

Continued sampling the bread oven, switching back & forth from the comfort hood & front oven stack till 15:15. At that point they opened the stack dampers to let the heat out ~~of~~ (Clean stack damper). Emissions in the rear stack went down to near zero while the front shot up temporarily, then went down.

1515 Finished my final cal by 15:45 or so, then shut DC's till 1715. Mike had much lower response (~176) on direct injections than in the morning. Will investigate tomorrow

1715 Off - S.G

6/30 Tuesday

	FLOW		MOISTURE	Drawing
Bread Rear	6/30 1/2 ⇒ 14:30	6/29 - 1/2 ⇒ 12:00	6/30 - 14:15	✓
Bread Front	6/30 1/2 ⇒ 14:40	6/29 - FULL ⇒ 12:30 1/2 15:10	6/	✓
Comfort Hood	6/30 Full ⇒ 14:45	6/29 - 1/2 ⇒ 13:00 1/2 13:30 FULL 15:00	6/29 14:00	✓

12~~00~~ On-~~site~~

Got ~~everything~~ going

1400 On line

Ships worked well. Had a leak at the pumps initially due to probably the heads heating / cooling / heating - so I left them on at the end of the day.

Set up a ventilation system for the GC ~~exhaust~~ sample lines. Checked temperatures of the GC sample line (heat trace jumped - Rack was 120°F, Table was 105. Seems a little low but because we haven't had much problem in Iraq, its not a ~~too~~ problem. (T/C wire was too big to fit all the way in)

1900 Off Site

7/1 Wednesday

0815 On S.C
FIDS at sight up. Calibrated and on line @ 10:10. Ran till 12:00

1230 - 1330 Broke for lunch

1400 Ran till ~ 16:45. Were going to try and get another product at ~~@~~ 19:00 but finally decided not to.

1700 Moved to the Bum Oven. Got at up @ 1900

19:00 Off-Sta

7/2 Thursday

0815 On S.t. Fids hit right up. Preliminary look at the sheets revealed very low concentrations ~200 Rear, 500 front (ppmV) Sampled till about 11:00 hrs and it turned out that steam was being injected into the oven to give the buns a crisp crust. This steam went up the stack with a resulting moisture level of 25-30% H_2O. — the high moisture content created a problem with the GC (front, heat trace jumper. Mike lost all Ethanol in this line. Replaced heat control w/ Variac — which heated up the line OK. Still getting only about 85% on the Ethanol QC's.

Wally got the oven operators to turn off the steam. Emissions on the front oven shot up from 500 to 700 ppm. When they started the steam again levels went back down. (Ran the monitors on 0-1000 scale). On the second product line (smaller Kaiser Roll), the emission levels jumped up to 800-900 when the steam was turned off. — We went in and looked at the stack, which had a drain hose. Lifted it off the floor and there was about 3 ounces of condensate in it. The only explanation is that steam is removing some of the Ethanol Emissions

1800 hr Mike off to the airport

1900 hr John on the road

1930 C.P. off-S.t.

7/3 Friday

0830 Returned Avis Keys

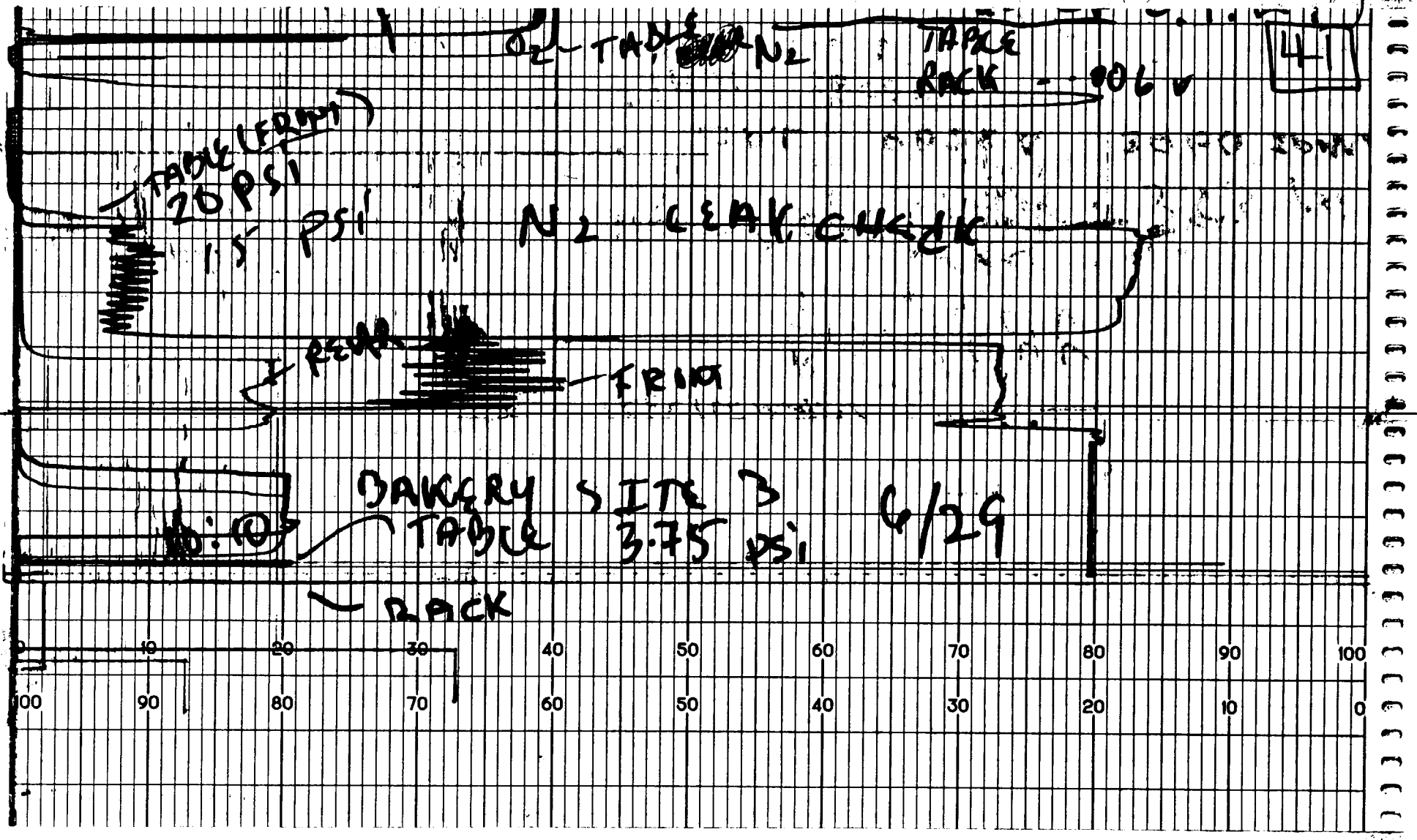
1430 Caught Flight back to RDU

Appendix D.9

Method 25A SCR Copies

SITE 04
MAIERS BAKERY
READING, PA.

SITE 04 - PAGE 01



4-2
RETURN (BACK)
TABLE (TRAIN)
TIME
Na 2D GAS (BACK)
TABLE (BACK)
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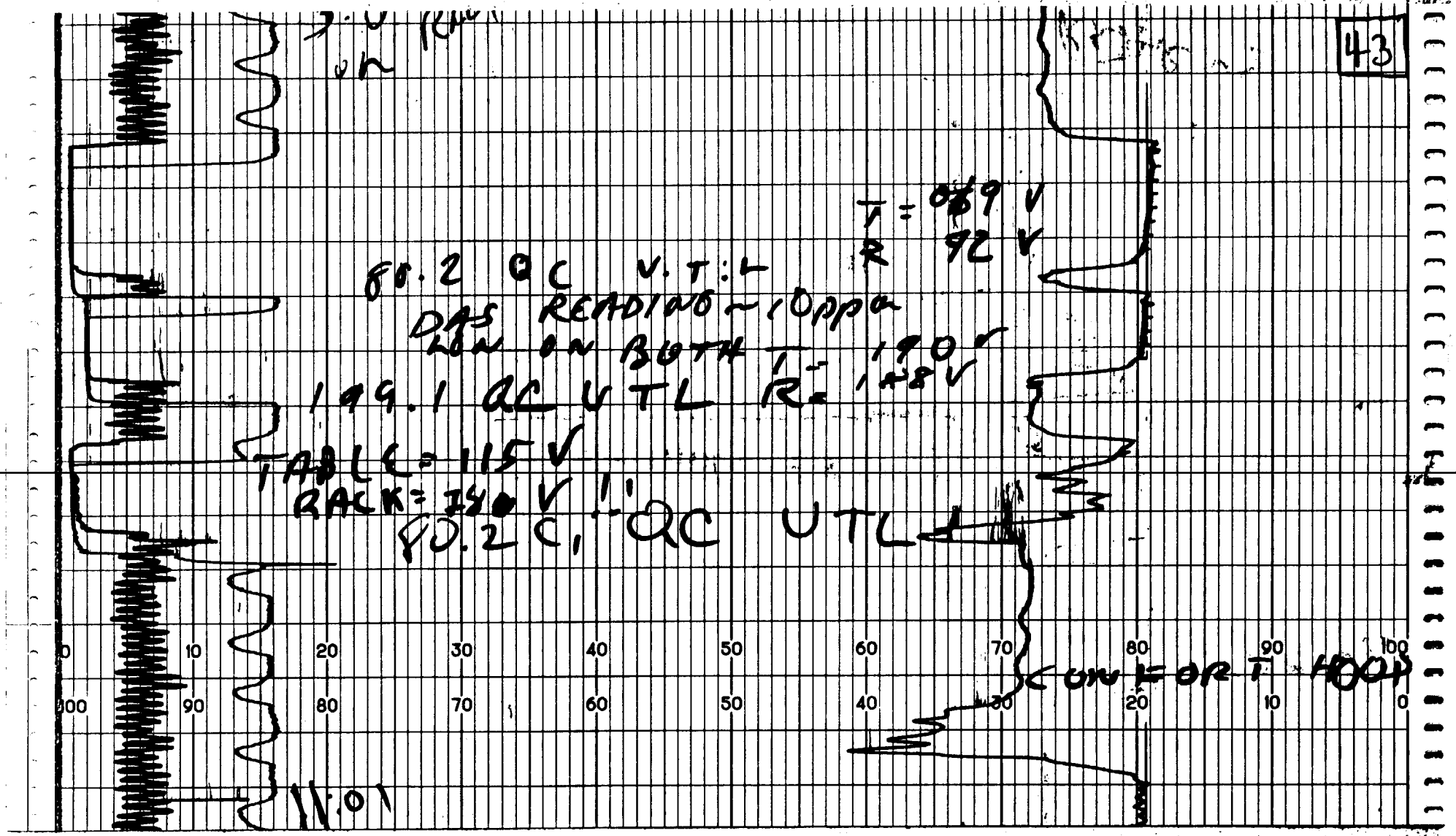
PART NO. 10/8011


43
80.2 QC V.T.L
T = 089 V
R 92 V
DAS READOUT ~ (OPPA
ZERO ON BOTH T R = 180 V
199.1 QC V T L R = 148 V
TABLE = 115 V
RACK = 134 V
80.2 C, QC V T L
11.01
CAN F OR T HOLD

11:45 Hammond Pendulum
11:48 Chemo started
Front 2
Rear 2
SEIZURE
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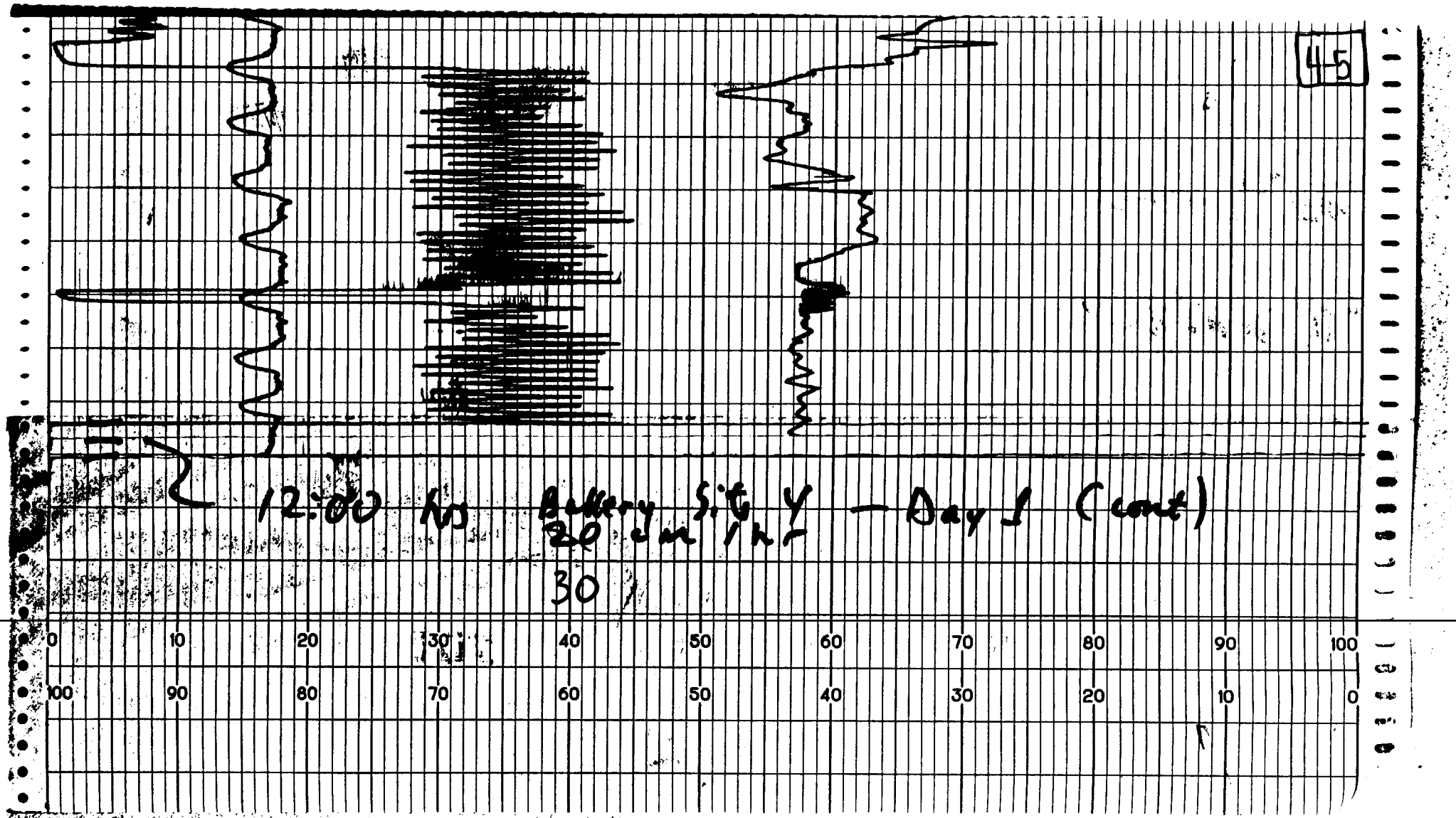
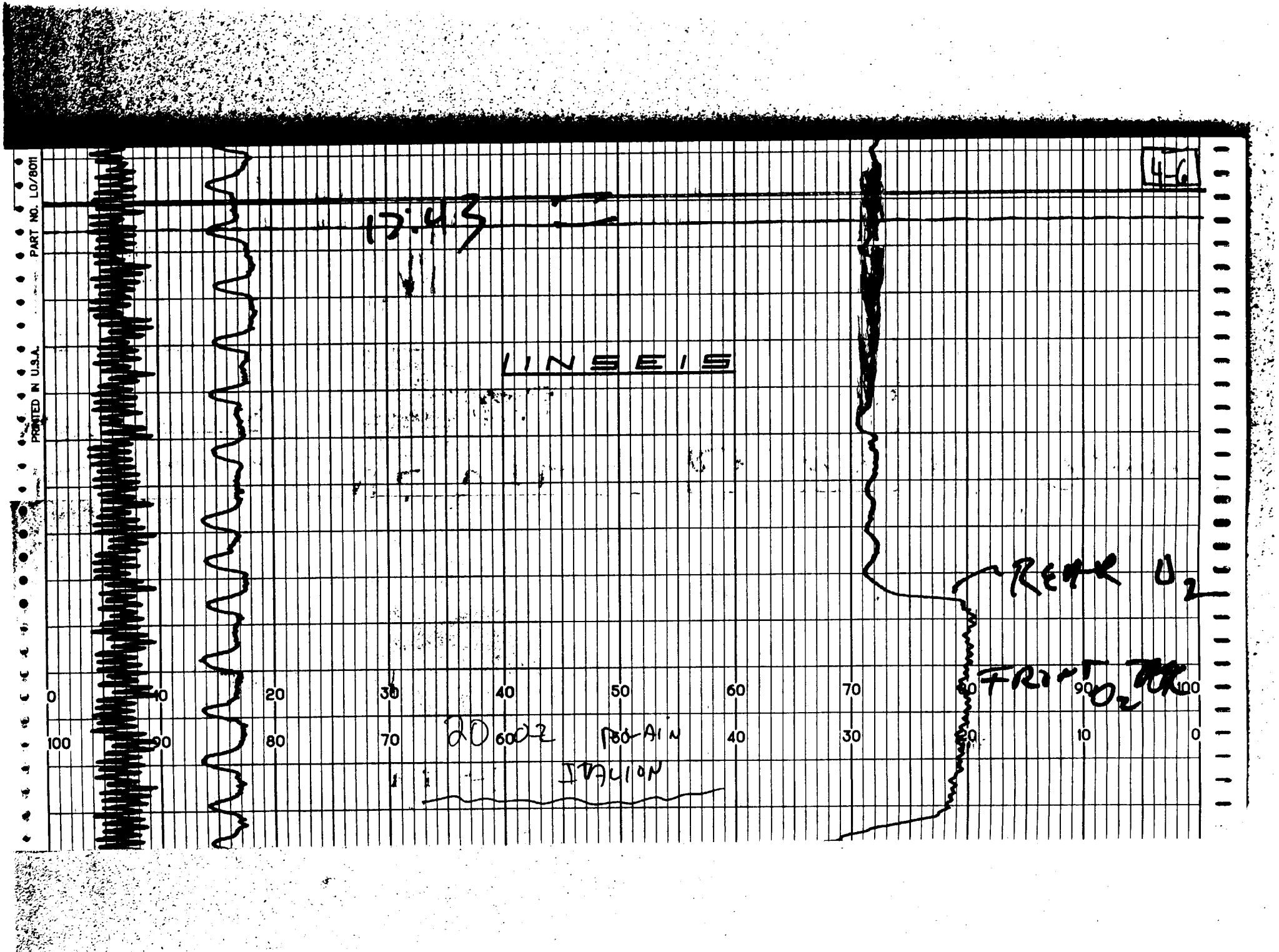
PART NO. LO/8011


12:00 MN
Battery Sit. Y — Day 1 (cont)
20
30
0 10 20 30 40 50 60 70 80 90 100
100 90 80 70 60 50 40 30 20 10 0


PART NO. LO/8011
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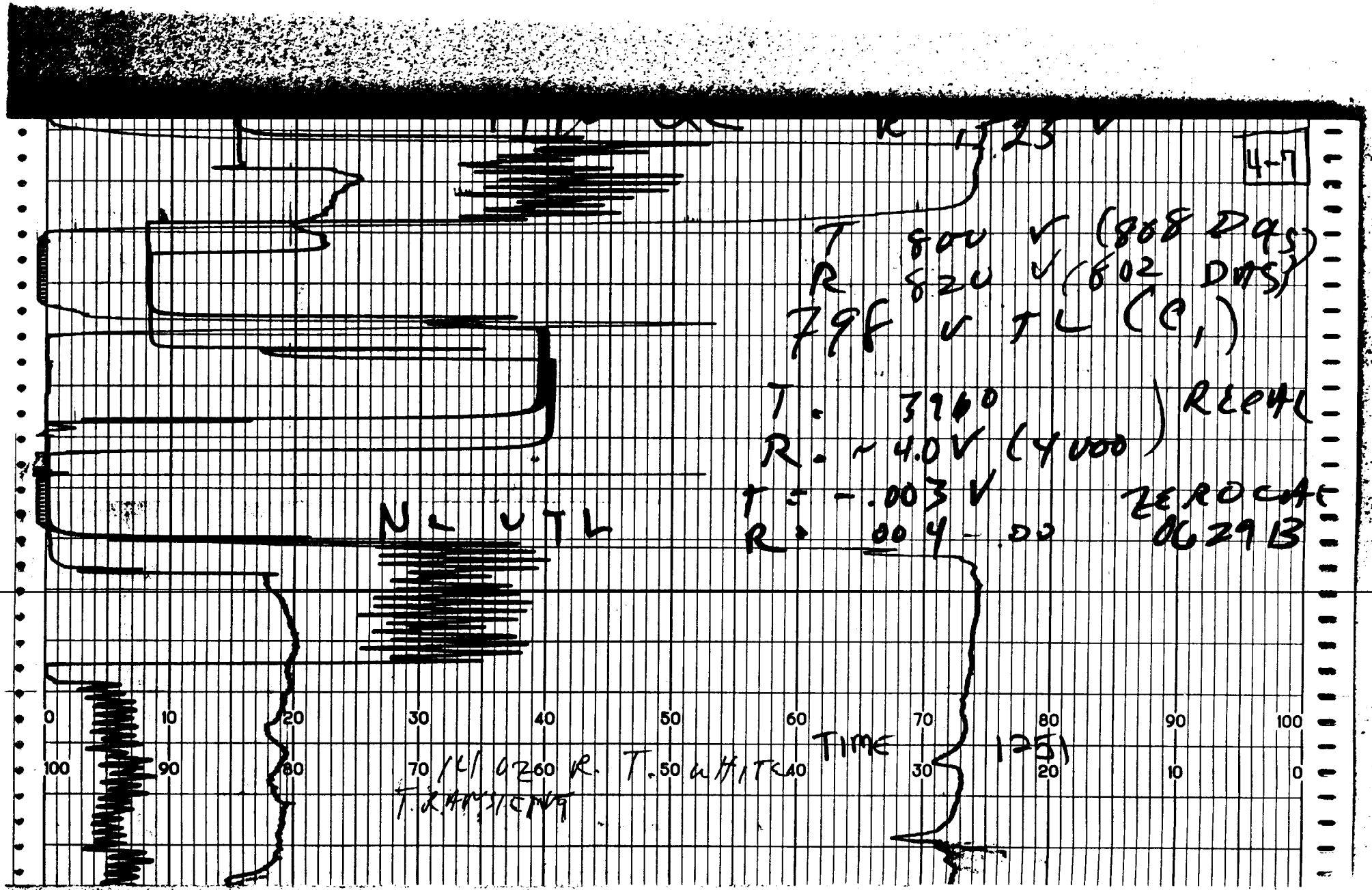
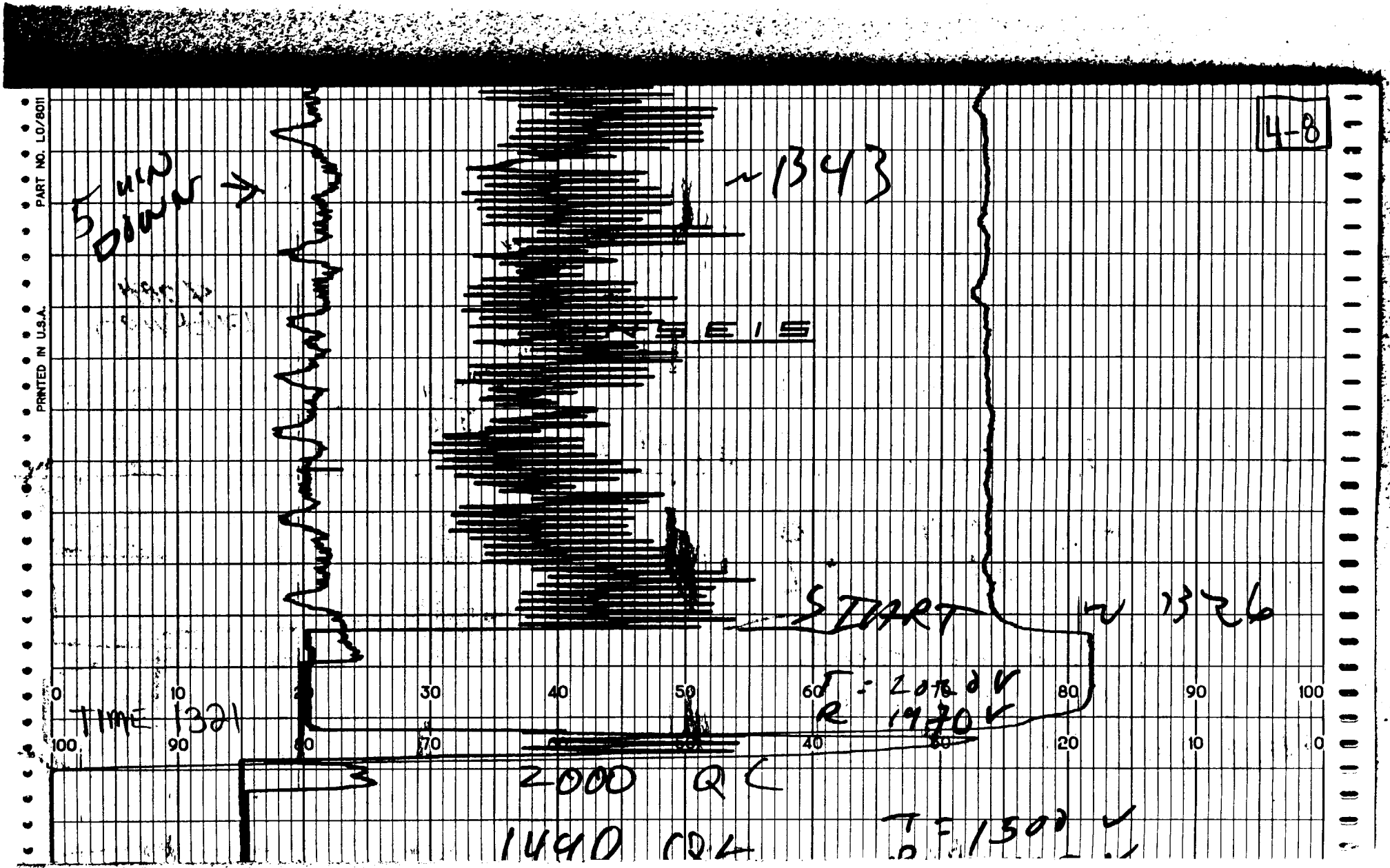
4-6
12:45
LINSEIS
REAR O2
FRONT O2
0
10
20
30
40
50
60
70
80
90
100
100
90
80
70
60
40
30
20
10
0


4-7
T 800 V (808 DYS)
R 820 V (802 DYS)
79F V TL (C,)
T: 3960
R: ~4.0V (4000) RECH
T: -.003 V ZERO CAL
R: .004 - .00 0629B
NL VTL
0 10 20 30 40 50 60 70 80 90 100
100 90 80 70 60 50 40 30 20 10 0
TIME
1251


4-8
PART NO. L0/8011
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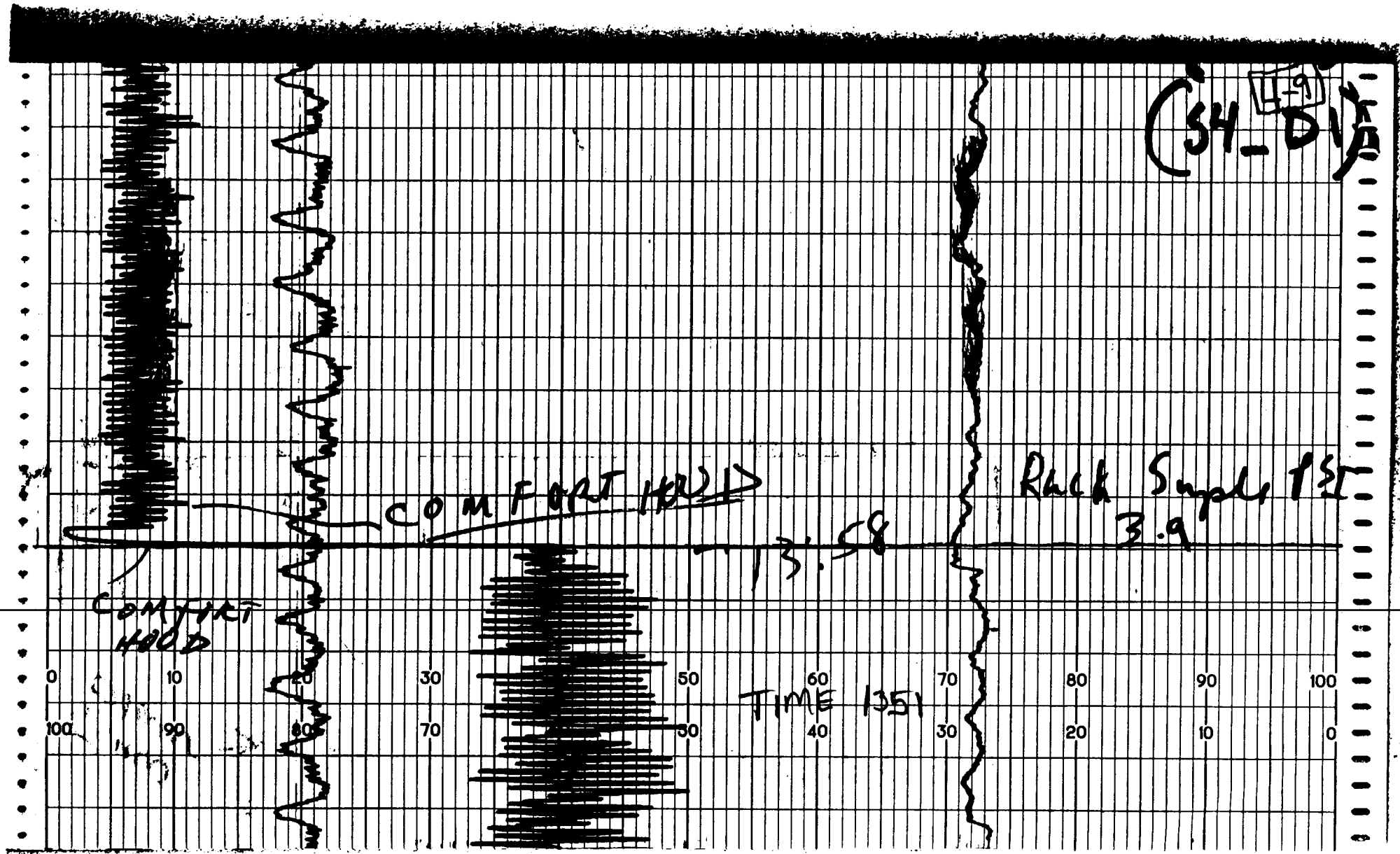
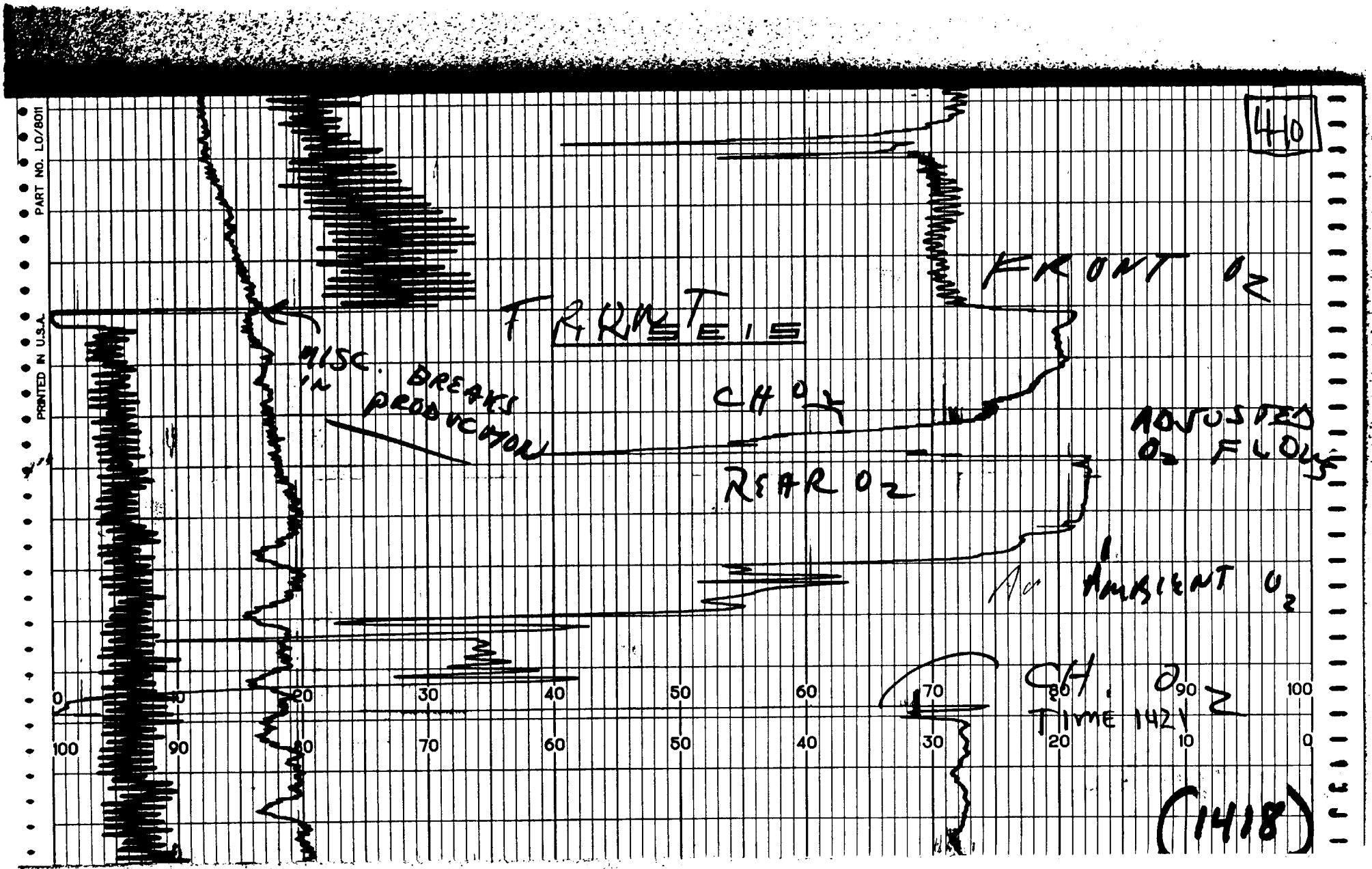
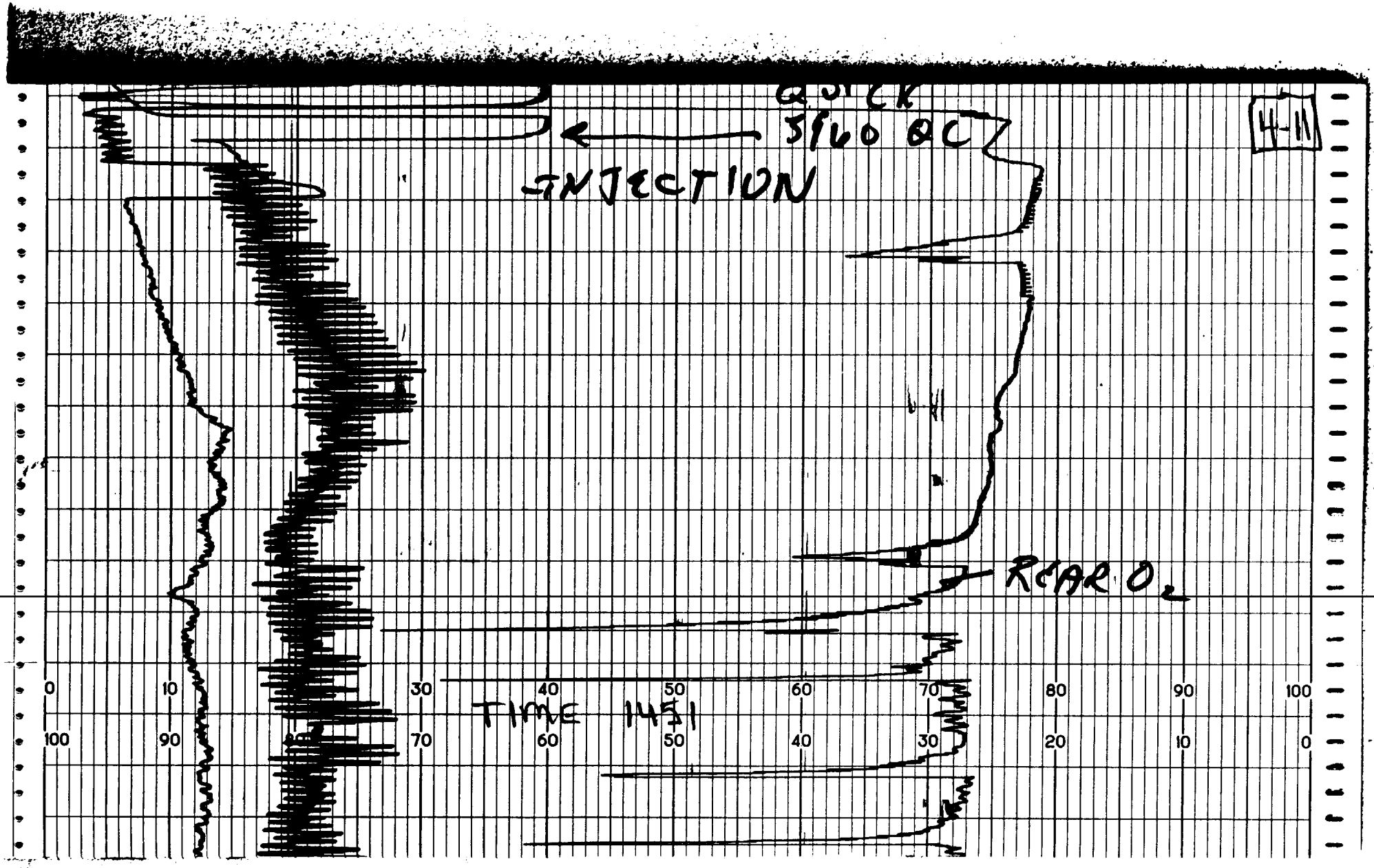
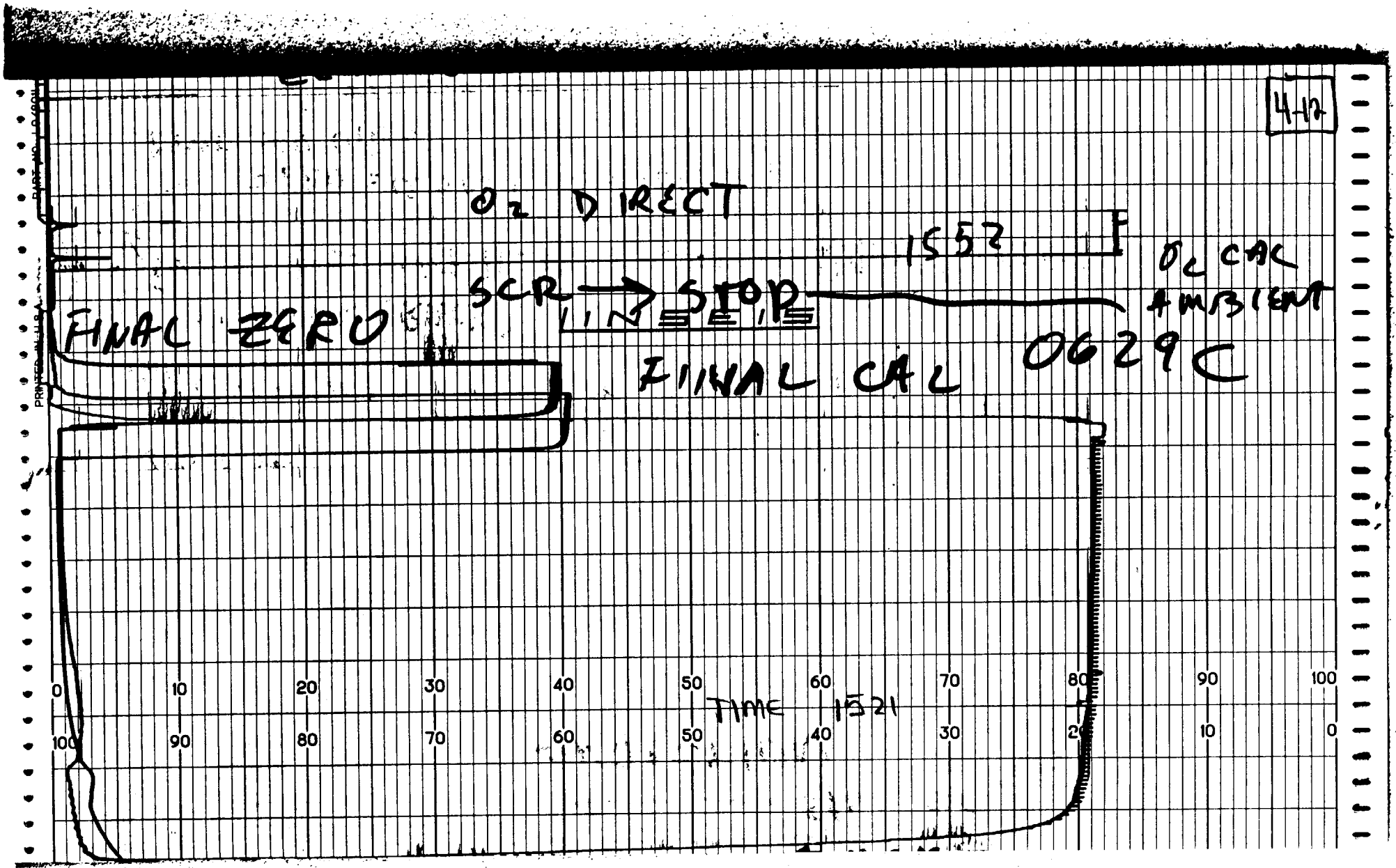
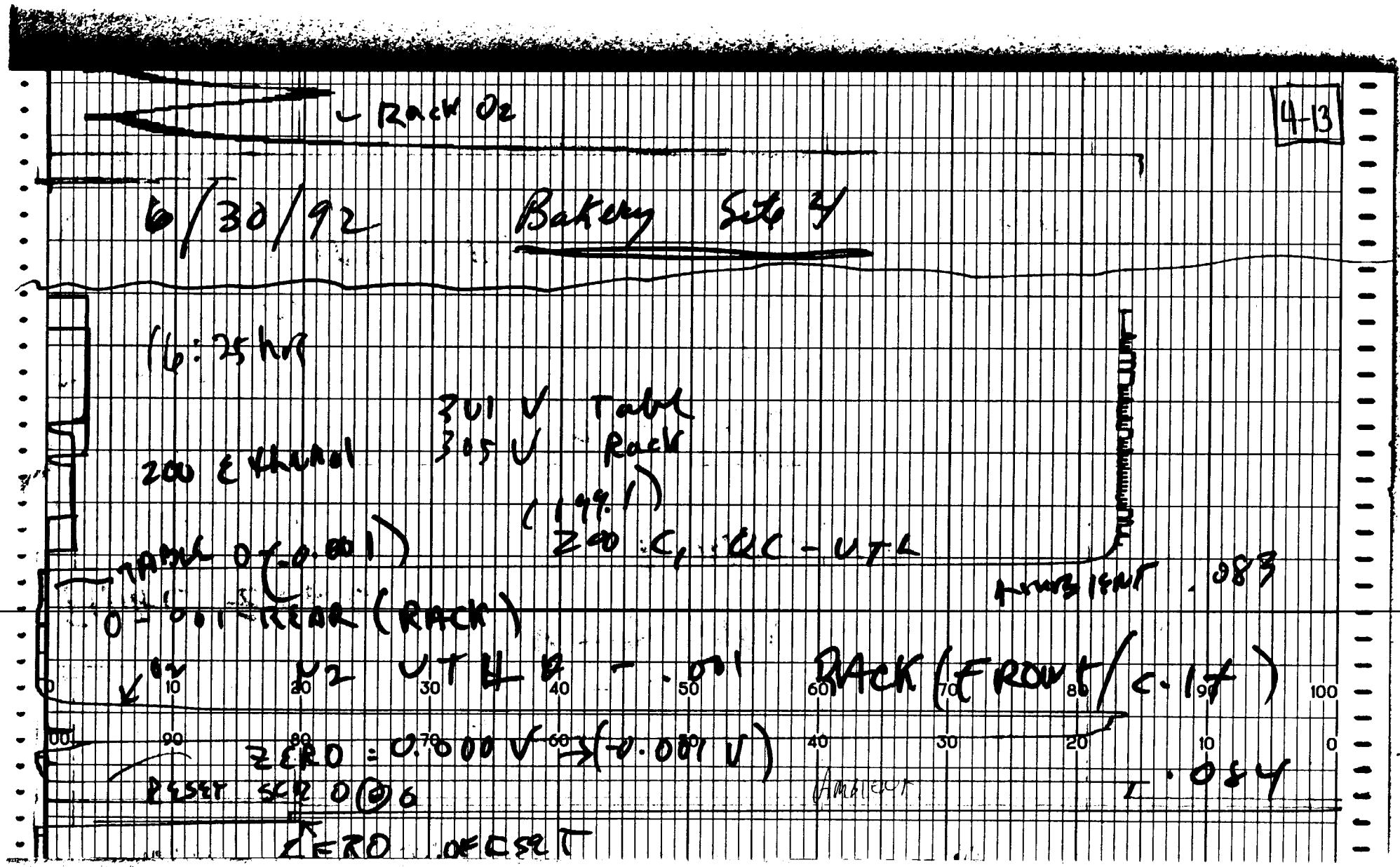
Fluid Power
~1343
SIGNET
~1326
Time 1321
2000 QC
1440 QC
T F 1500 L

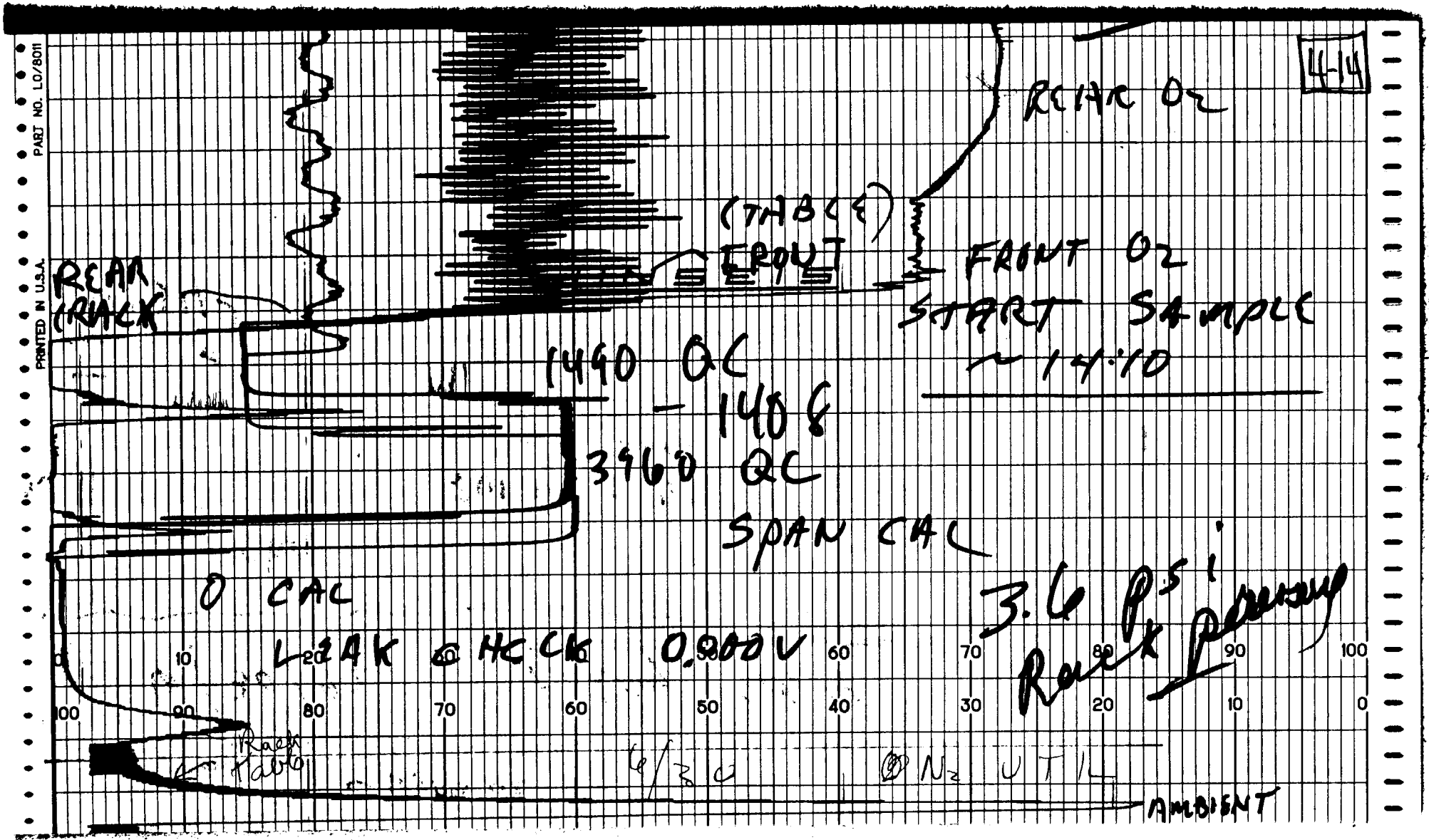

(54_D1)
COMFORT HOOD
-13.58
Rock Support PSI
3.9
COMFORT HOOD
0
10
20
30
50
60
70
80
90
100
TIME 1351
100
90
80
70
50
40
30
20
10
0

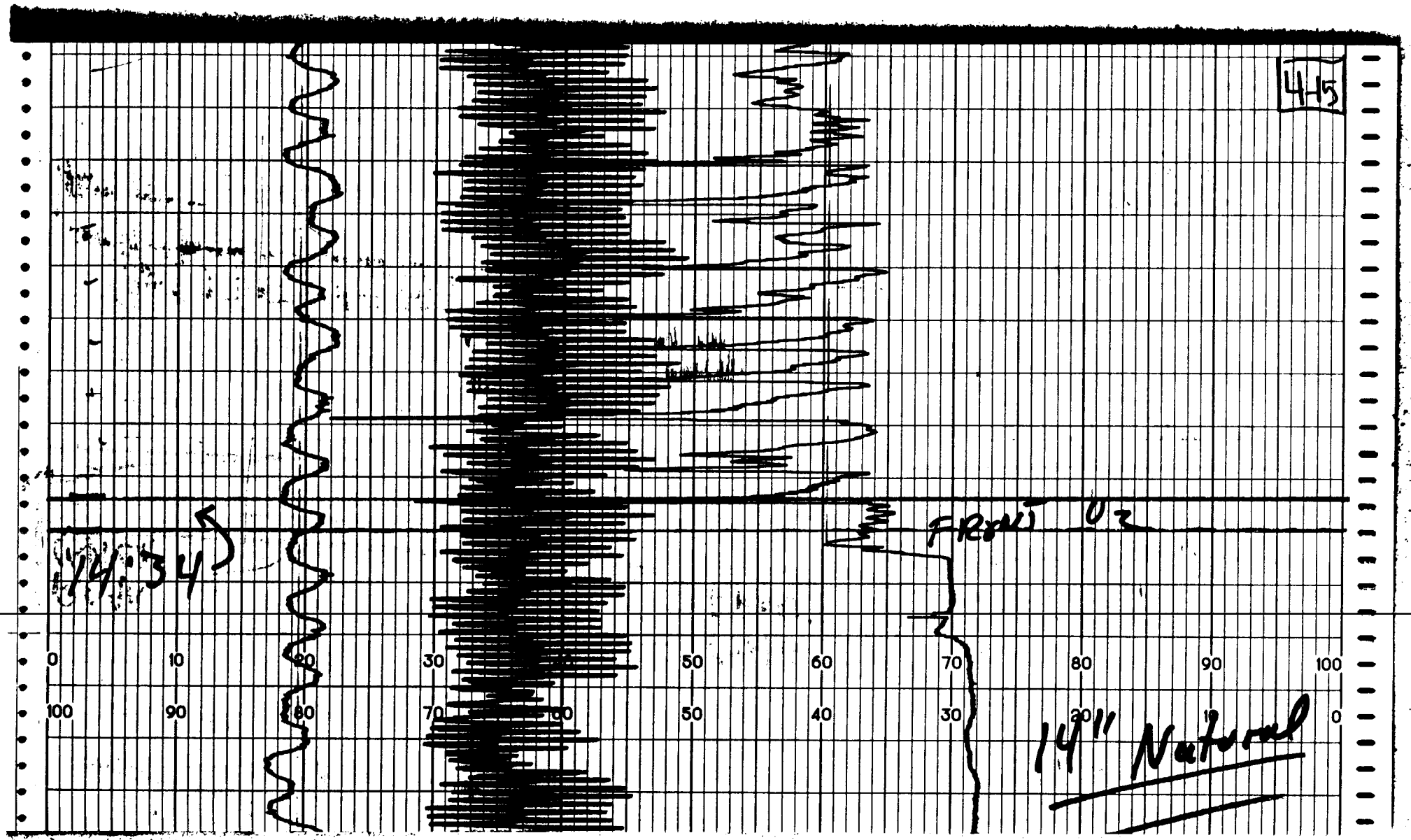

PART NO. LO/8011
PRINTED IN U.S.A.
410
FRONT O2
TRANSITS
915C IN
BREAKS PRODUCTION
CHOK
ADJUSTED O2 FLOW
REAR O2
Ar
AMBIENT O2
CH4 O2
TIME 1421
(1418)
0 10 20 30 40 50 60 70 80 90 100
100 90 80 70 60 50 40 30 20 10 0


4-11
GAS CK
3960 QC
INJECTION
REAR O2
0
10
30
40
50
60
70
80
90
100
TIME 1451
100
90
70
60
50
40
30
20
10
0

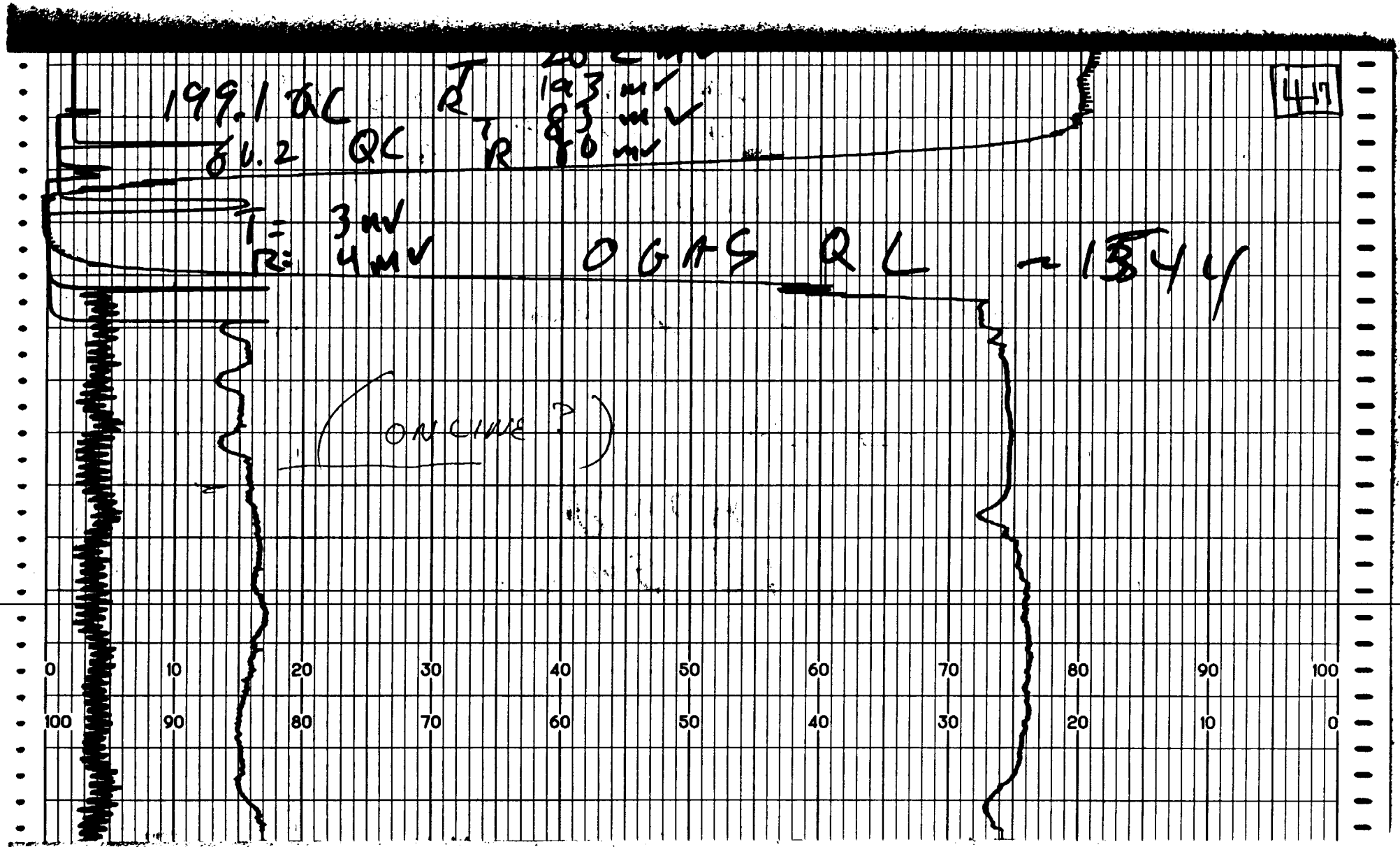

4-12
O2 DIRECT
1552
F
O2 CAL
AMBIENT
SCR → STOP
LINE
FINAL ZERO
FINAL CAL
0629
0
10
20
30
40
50
60
70
80
90
100
TIME 1521

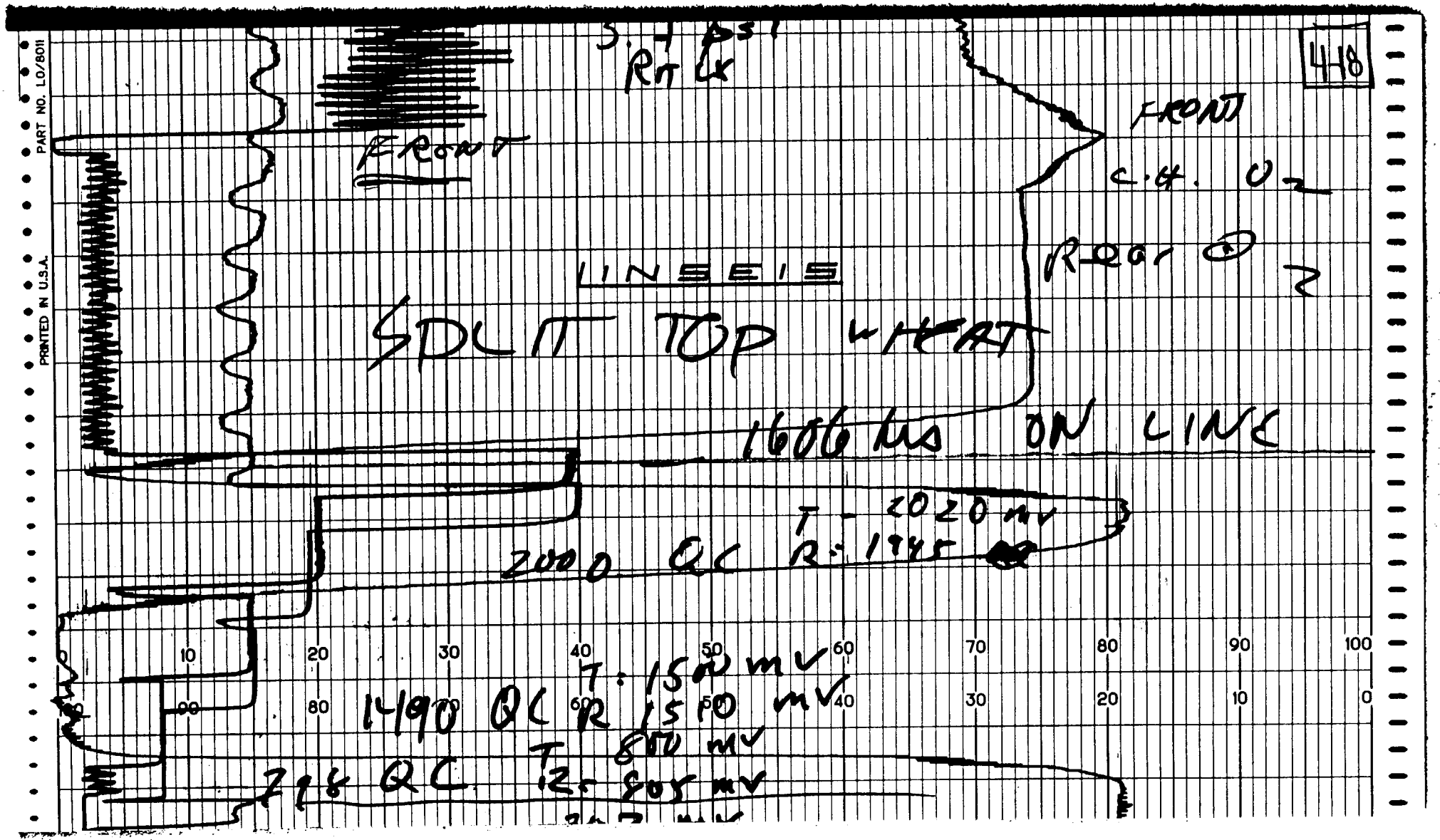

Rack O2
6/30/92
Bakery Set 4
16:25 hrs
301 V Table
305 V Rack
200 Channel
(99.1)
Z90 C1 ADC - UTL
Name 0 (-0.001)
0 = 0.001 Clear (Rack)
Ambient .083
UTL = -.001 Rack (Front) (-.17)
ZERO = 0.000 V => (-0.001 V)
Reset scr 0 @ 6
Zero offset
Ambient
.084

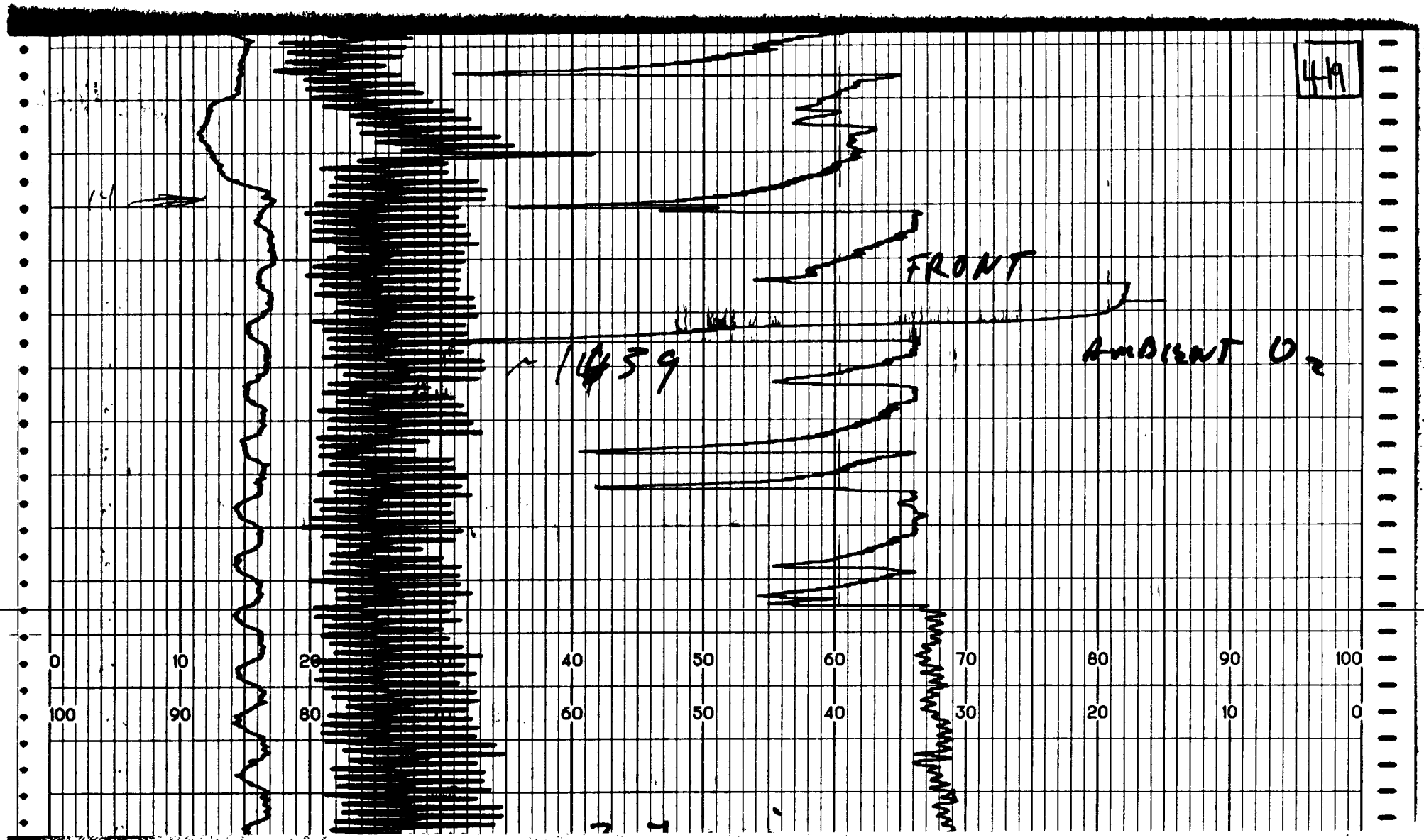

4-14
REAR O2
(THBCE)
EROUT
FRONT O2
START SAMPLE
~ 14:10
REAR CRACK
1490 QC
1406
3960 QC
SPAN CAL
0 CAL
3.6 PSI
Rock Pressure
LEAK & HC CAL
0.900V
@ N2 UTIL
AMBIENT
PART NO. LO/8011
PRINTED IN U.S.A.

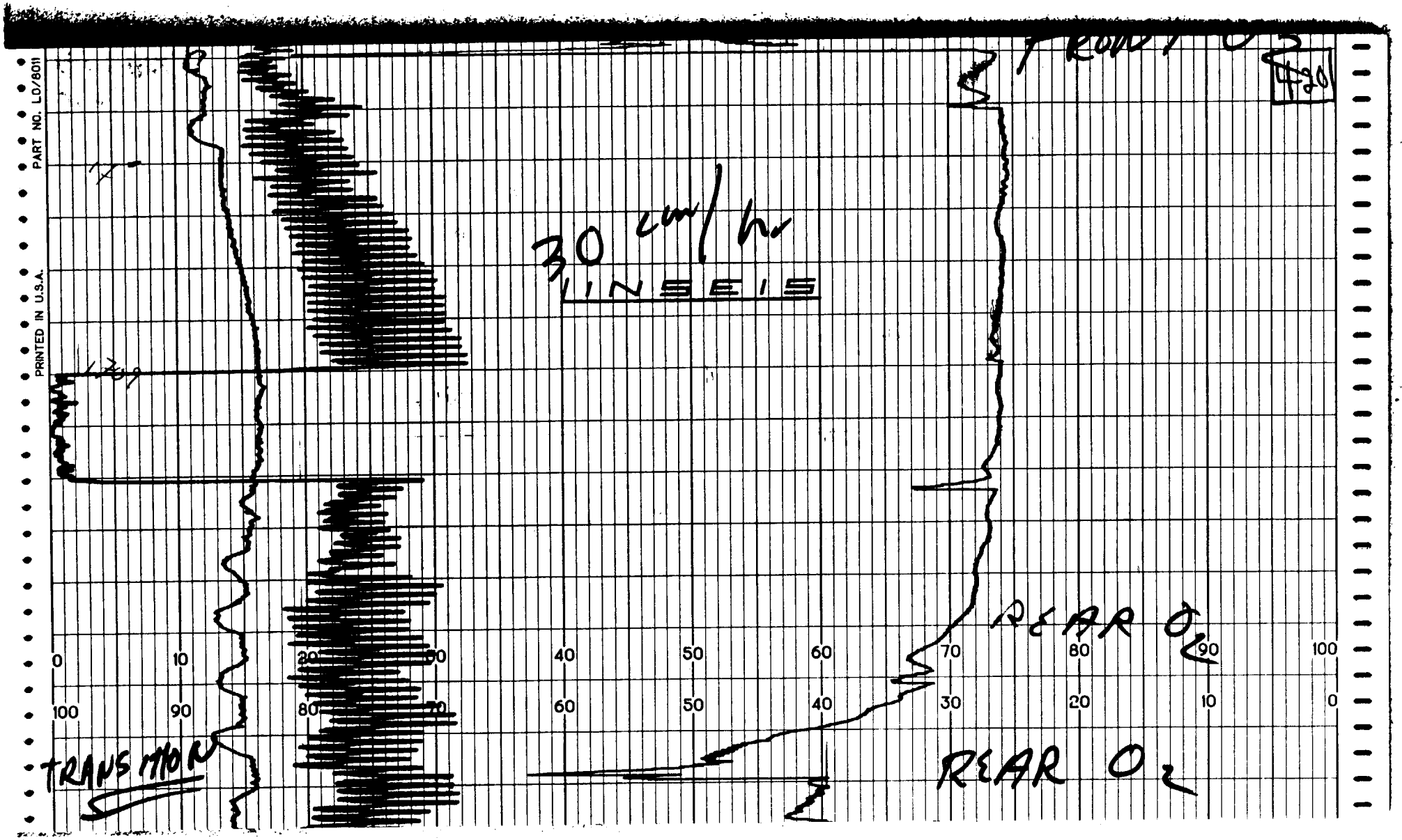

4-15
14:34
FIRST O2
0
10
20
30
50
60
70
80
90
100
100
90
80
70
50
40
30
20
10
0
14" Natural

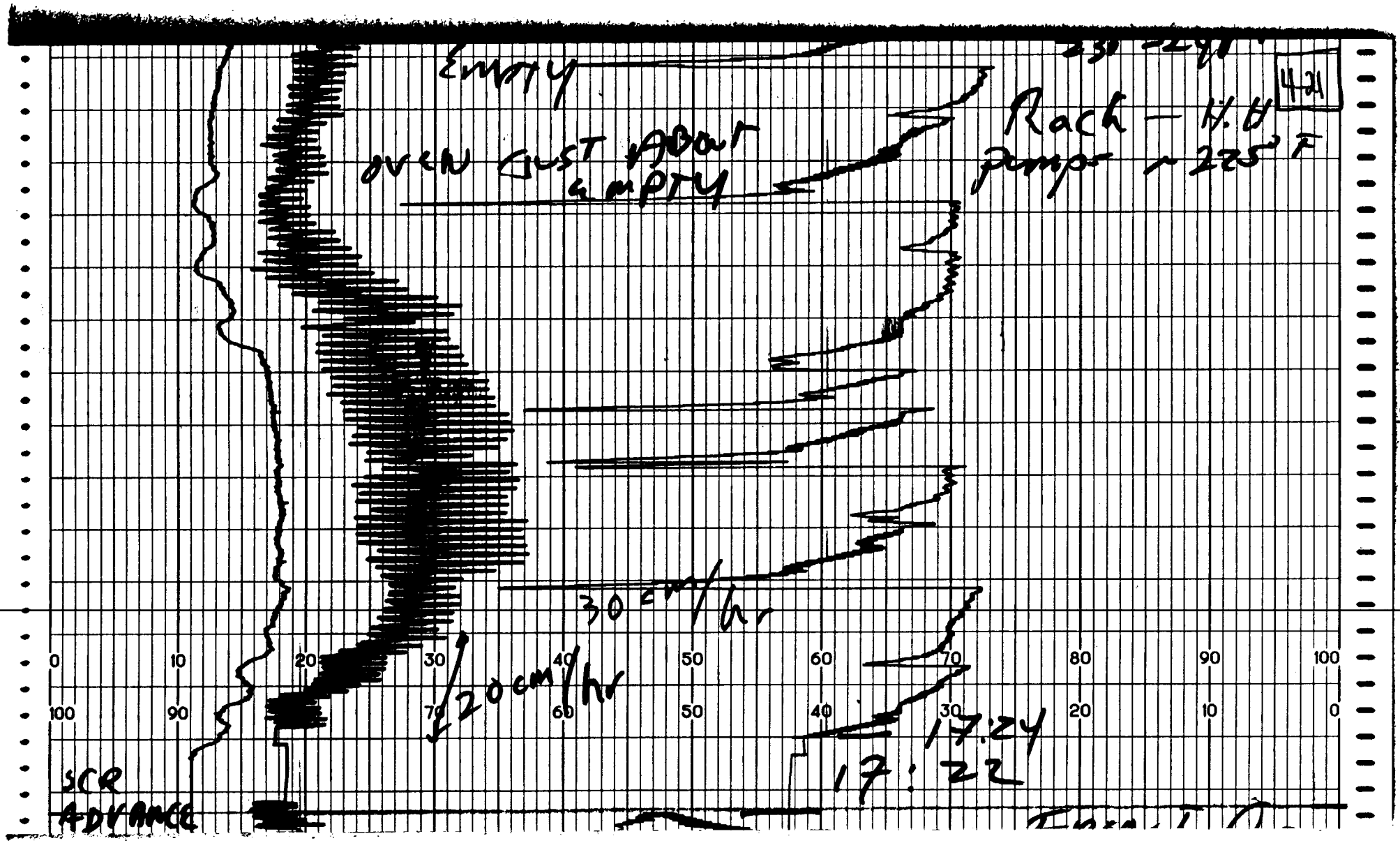
H+N
Return of
Complete
muscle
control
100
90
80
70
60
50
40
30
20
10
0
PRINTED IN U.S.A.
PART NO. LO/6011

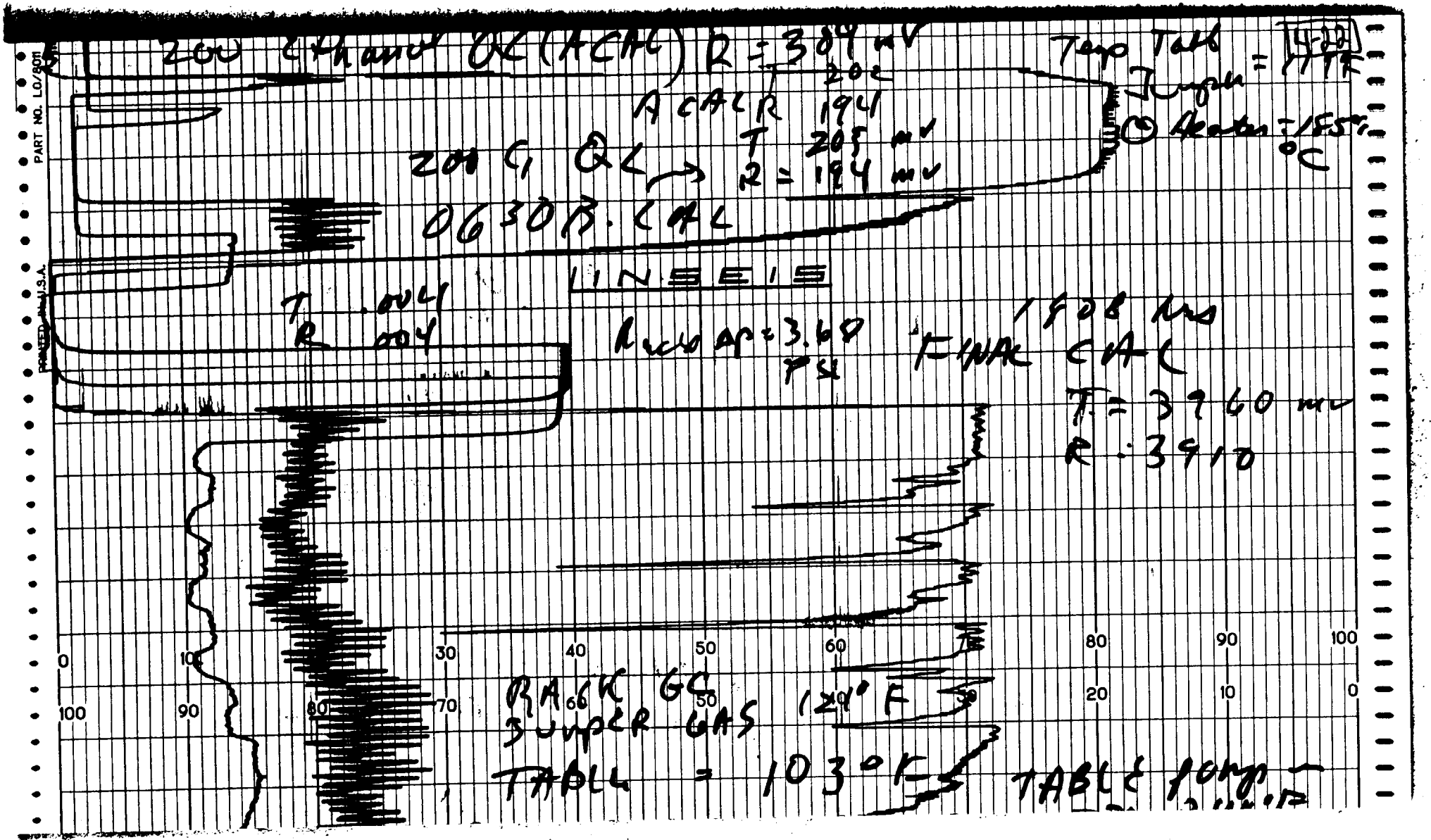

199.1 QC
84.2 QC
T: 3 MV
R: 4 MV
OGAS QL -1354
(ON CLINE ?)
0 10 20 30 40 50 60 70 80 90 100
100 90 80 70 60 50 40 30 20 10 0

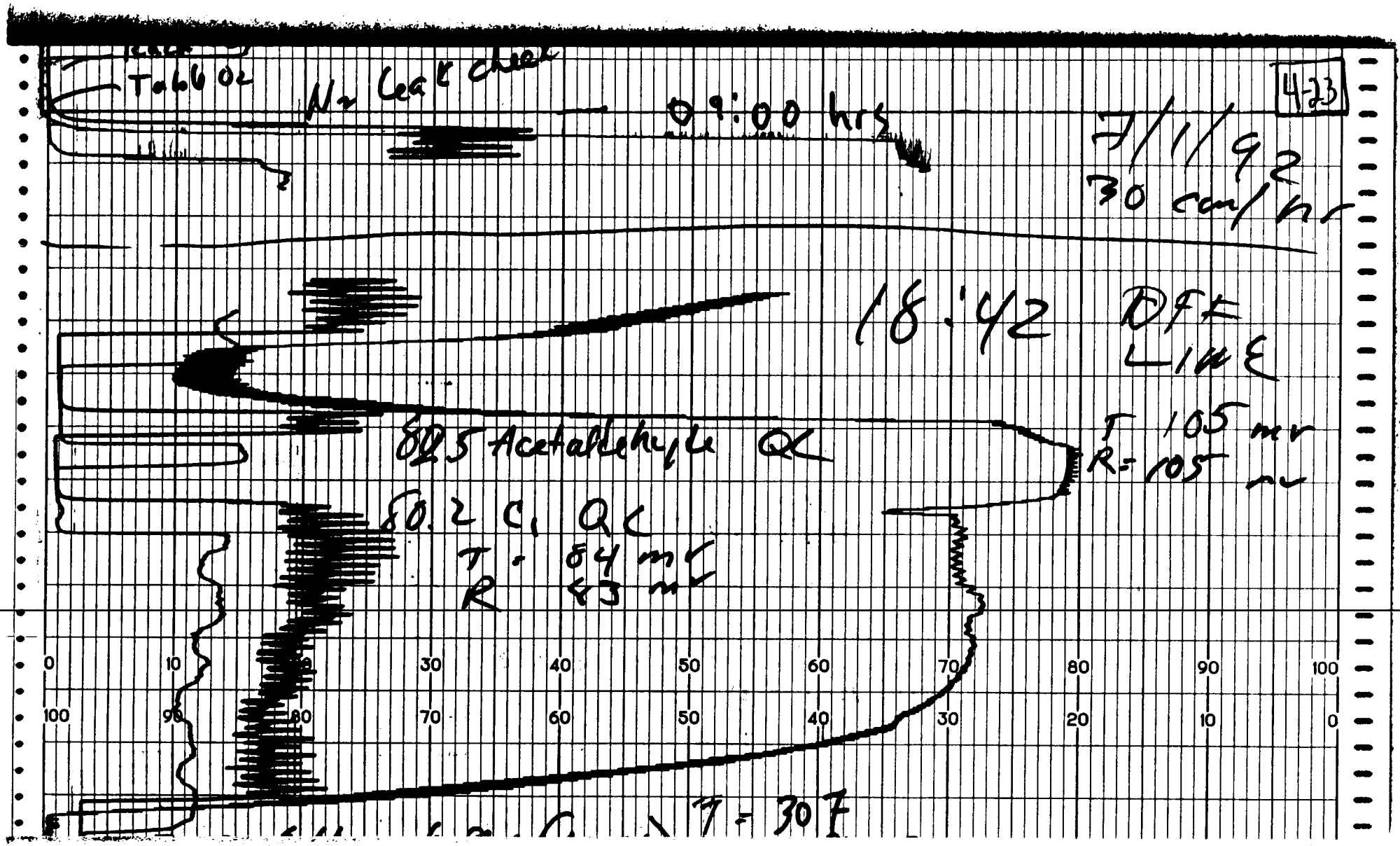

PART NO. L0/8011
PRINTED IN U.S.A.
48
RT LX
FRONT
FRONT
C.4. O
R-OO1 O 2
LINSEIS
SPLIT TOP HEART
1606 MS ON LINE
T - 2020 mV
2000 QC R: 1945
10
20
30
40
50
60
70
80
90
100
90
80
60
40
30
20
10
0
T: 1500 mV
1490 QC R 1500 mV
T: 800 mV
716 QC T2: 805 mV

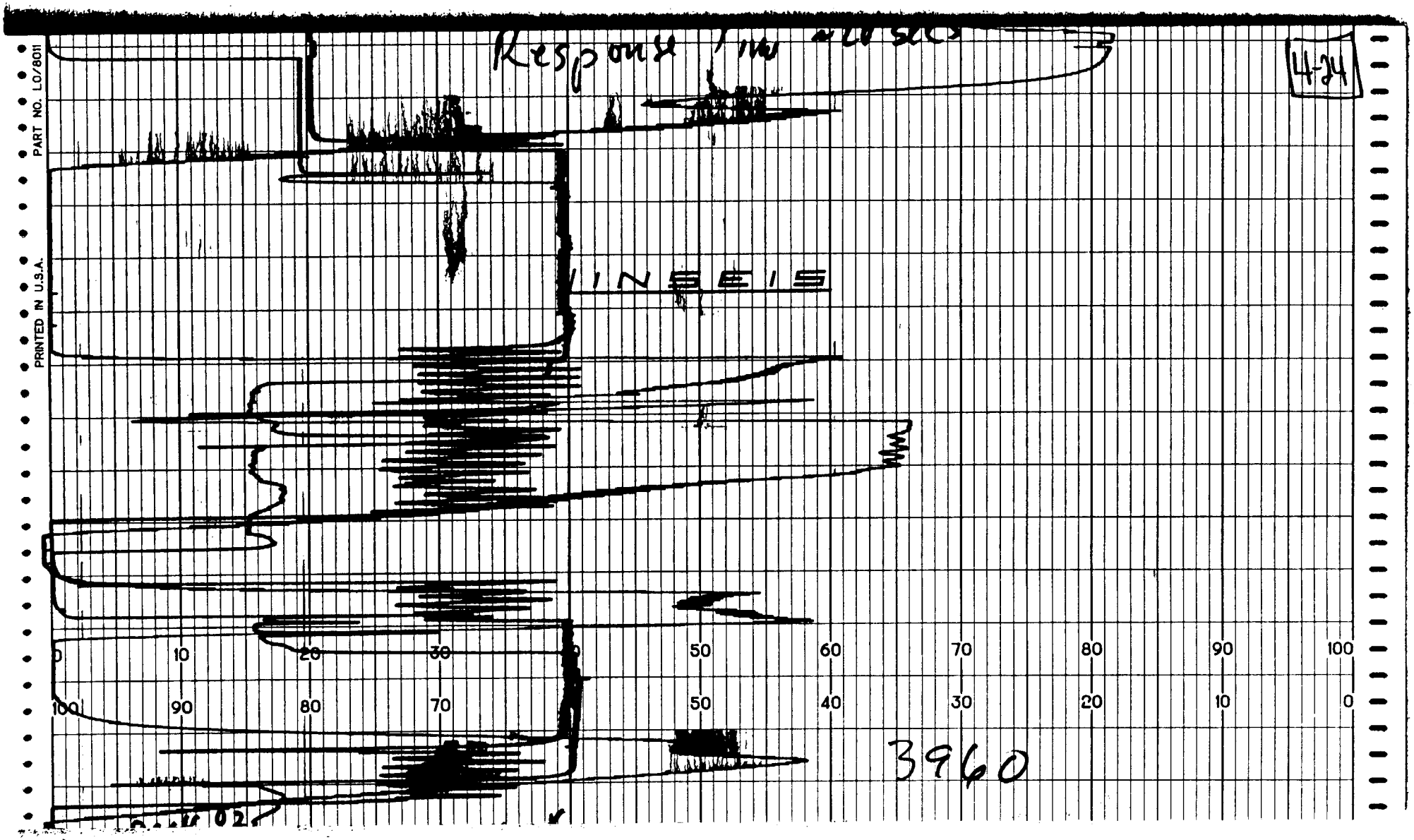

4-19
FRONT
~ 1459
AMBIENT O2
0
10
20
40
50
60
70
80
90
100
100
90
80
60
50
40
30
20
10
0

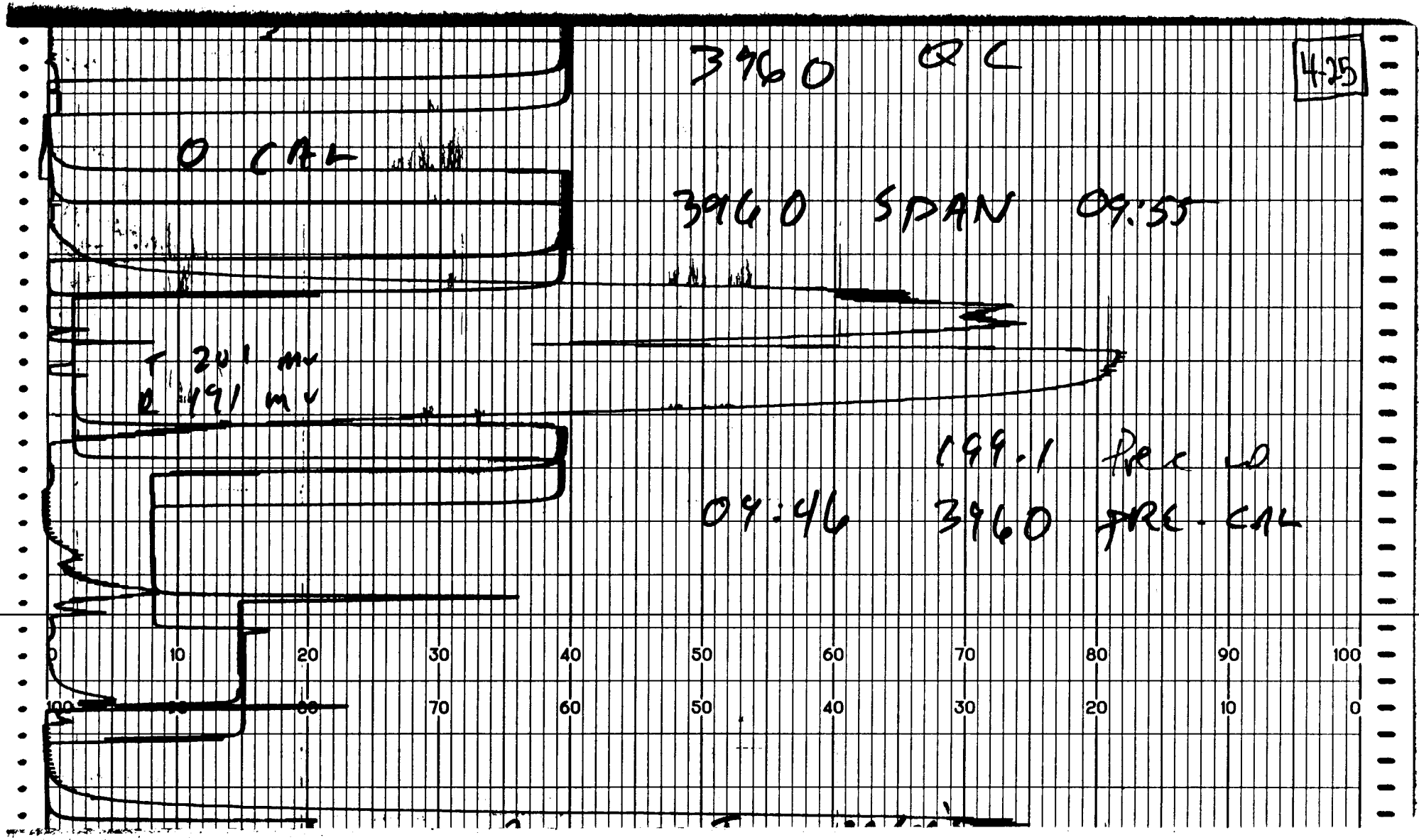

PART NO. LO/8011
PRINTED IN U.S.A.
30 cm/hr
LINSEIS
REAR O2
REAR O2
TRANSMON
0
10
20
30
40
50
60
70
80
90
100
100
90
80
70
60
50
40
30
20
10
0

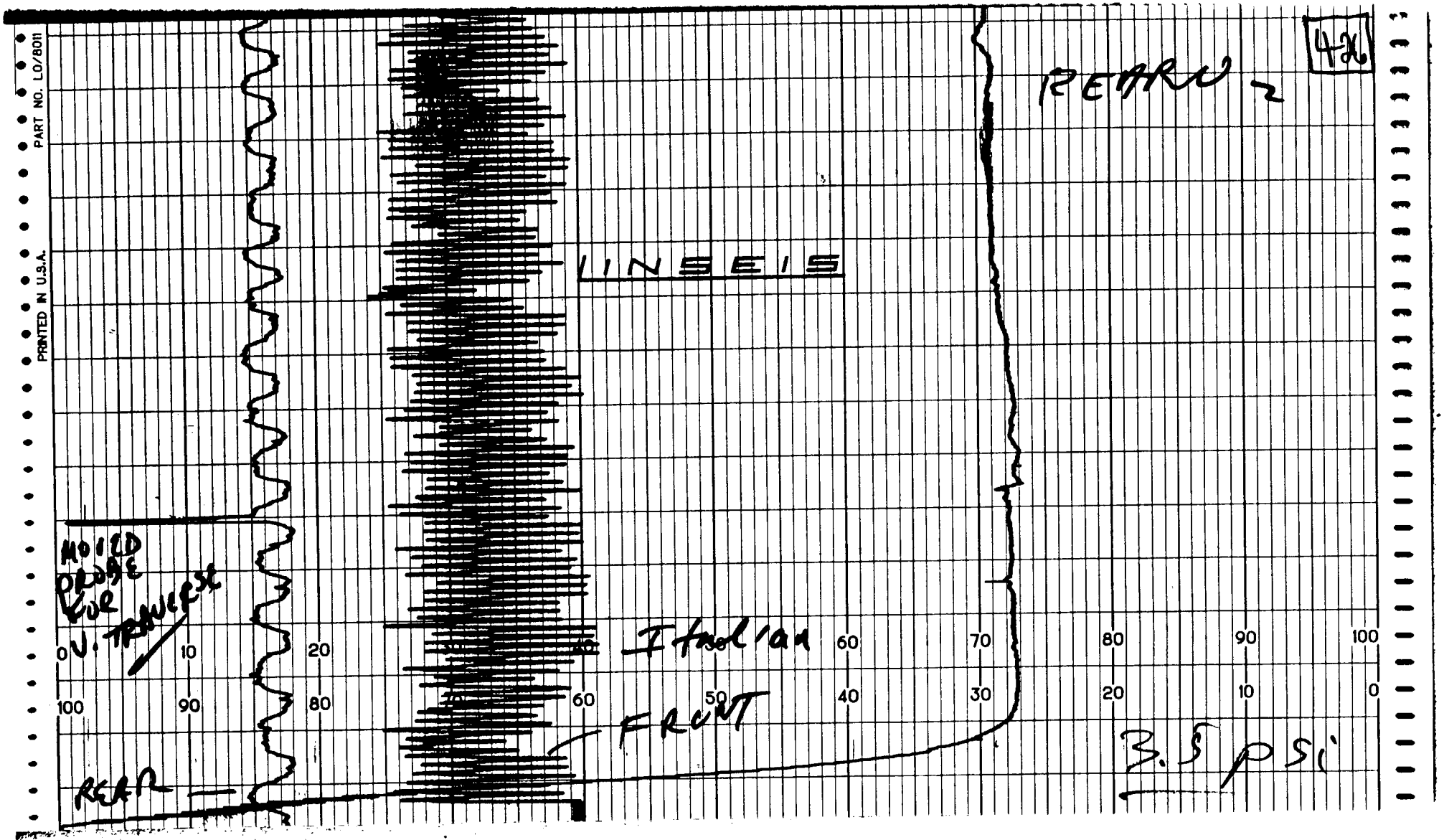

Empty
oven just door
empty
Rack — H.U
pump — 225° F
4-21
30 cm/hr
120 cm/hr
0
10
20
30
40
50
60
70
80
90
100
100
90
70
60
50
40
30
20
10
0
17:24
17:22
SCR
ADVANCE

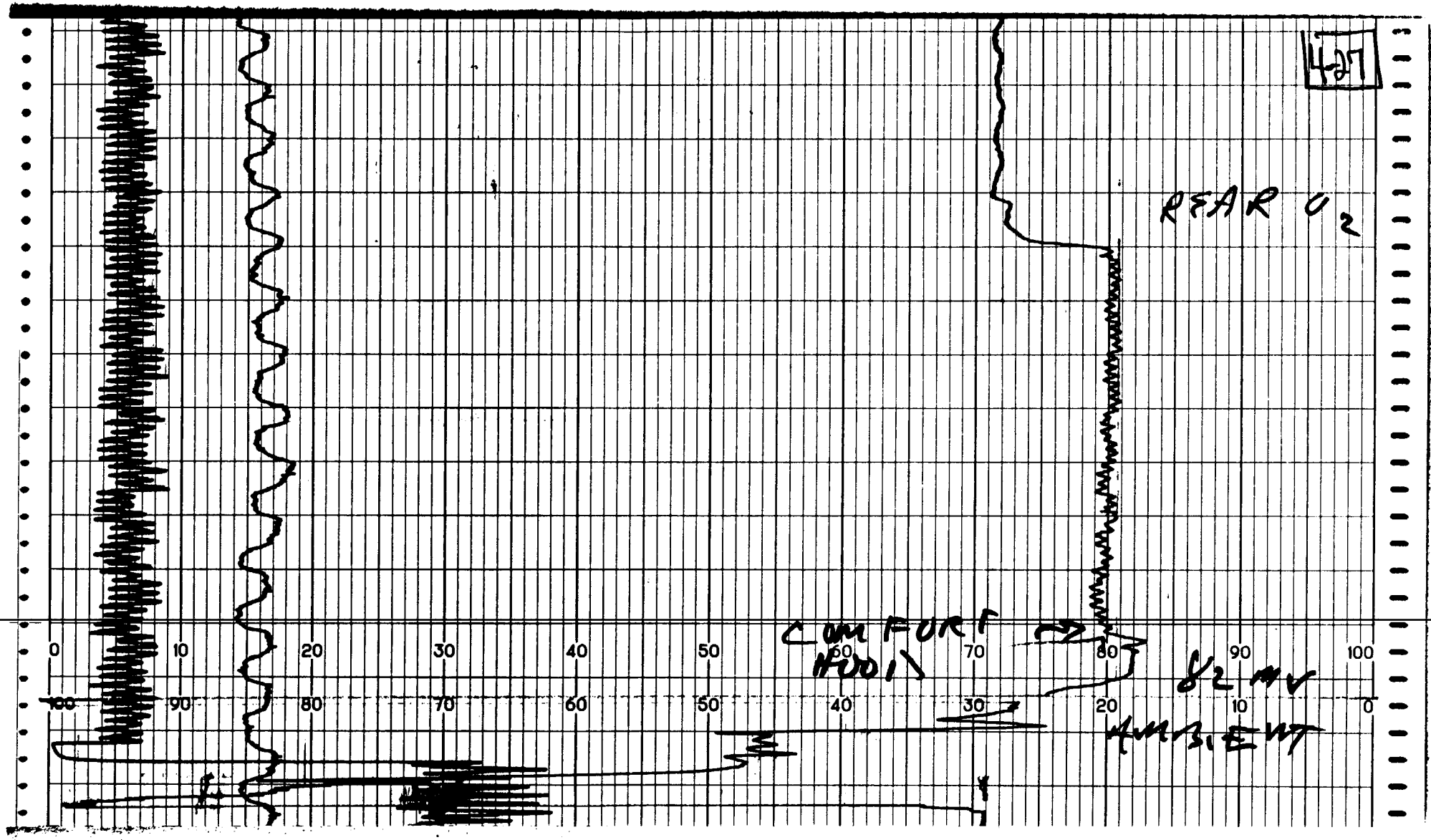

200 Channel GC (ACHC) R = 384 mV
ACALR 1941
200 Ch GC → T = 205 mV
R = 184 mV
0630B.CAL
LINSEIS
R .004
R .004
Area Ar = 3.68
FS
T-MAK 1508 ms
T = 3960 mV
R = 3910
Tokyo Talk
Jumper = 1/16"
@ Heater = 155°C
RACK GC
JUMPER GAS 129° F
TABLE = 103°F
TABLE temp
PART NO. LO/80M
PRINTED IN U.S.A.

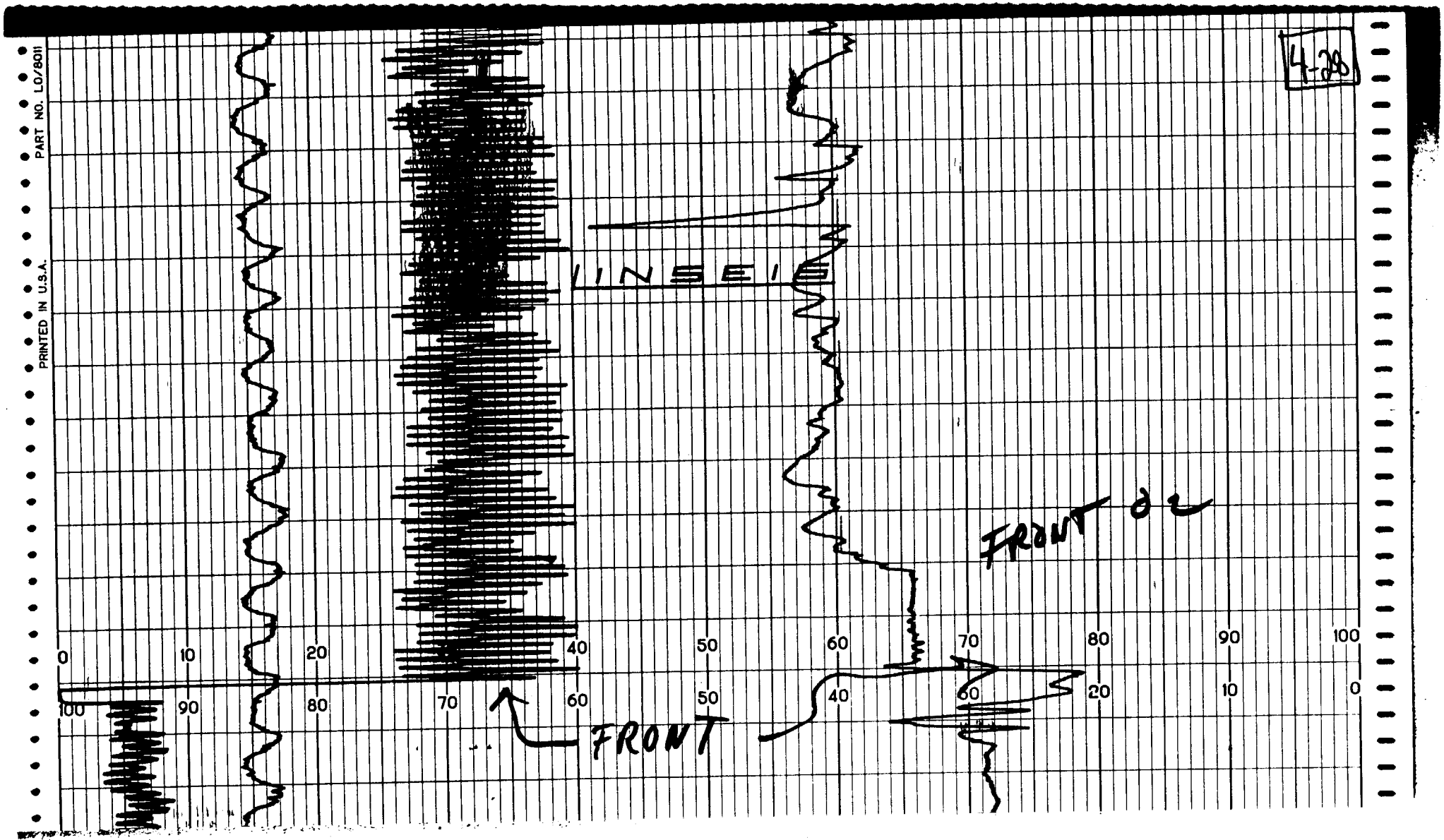

T=66 02
N2 Leak check
09:00 hrs
7/1/92
30 cm/hr
4-23
18:42
OFF
LINE
825 Acetaldehyde QC
T 105 mv
R= 105 mv
80.2 Cl QC
T - 84 mv
R 83 mv
0 10 20 30 40 50 60 70 80 90 100
100 90 80 70 60 50 40 30 20 10 0
T = 30 F

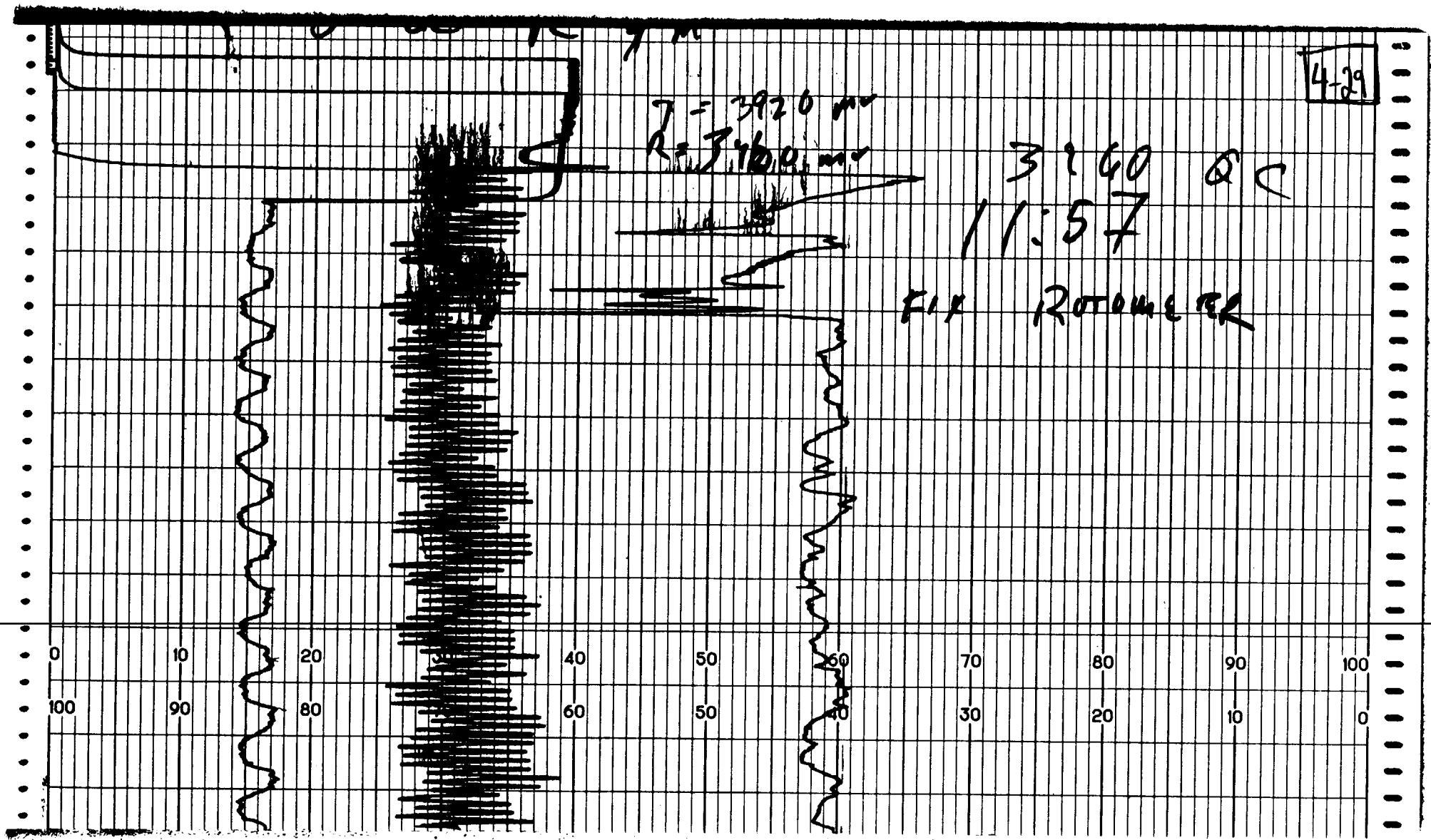

Response Time
4-24
LINES
PART NO. LO/8011
PRINTED IN U.S.A.
0 10 20 30 40 50 60 70 80 90 100
100 90 80 70 50 40 30 20 10 0
3960

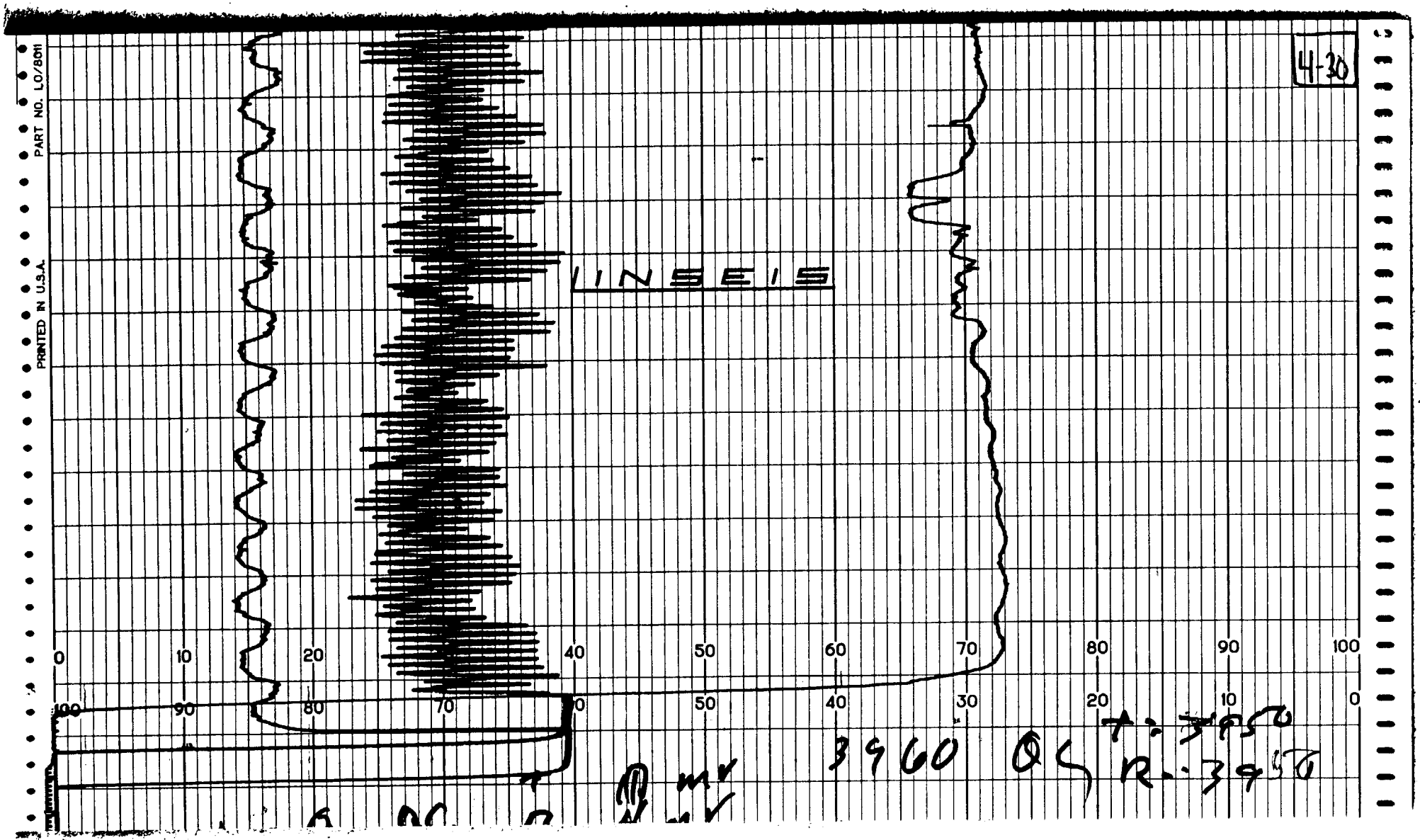

3960 QC
4-25
0 CAL
3960 SPAN 09:55
T 201 mv
R 491 mv
199.1 Rec No
09:46 3960 PRE-CAL
0 10 20 30 40 50 60 70 80 90 100
100 90 80 70 60 50 40 30 20 10 0


PART NO. LO/8011
PRINTED IN U.S.A.
42
REARW
LINSEIS
MOLD PROBE FOR V. TRANSDUCER
0
10
20
30
40
50
60
70
80
90
100
Thermocouple
FRONT
REAR
B.5 psi


4-27
REAR O_2
0
10
20
30
40
50
60
70
80
90
100
COMFORT
HOOD
O_2 MV
AMBIENT


4-28
PART NO. LO/8011
PRINTED IN U.S.A.
LINSEED
FRONT
FRONT
0
10
20
40
50
60
70
80
90
100
100
90
80
70
60
50
40
60
20
10
0


4-29
T = 3920 mv
R = 3960 mv
3960 ΩC
11:57
FIX ROTOMETER
0
10
20
40
50
60
70
80
90
100
100
90
80
60
50
40
30
20
10
0


4-30
LINSEIS
PART NO. L0/8011
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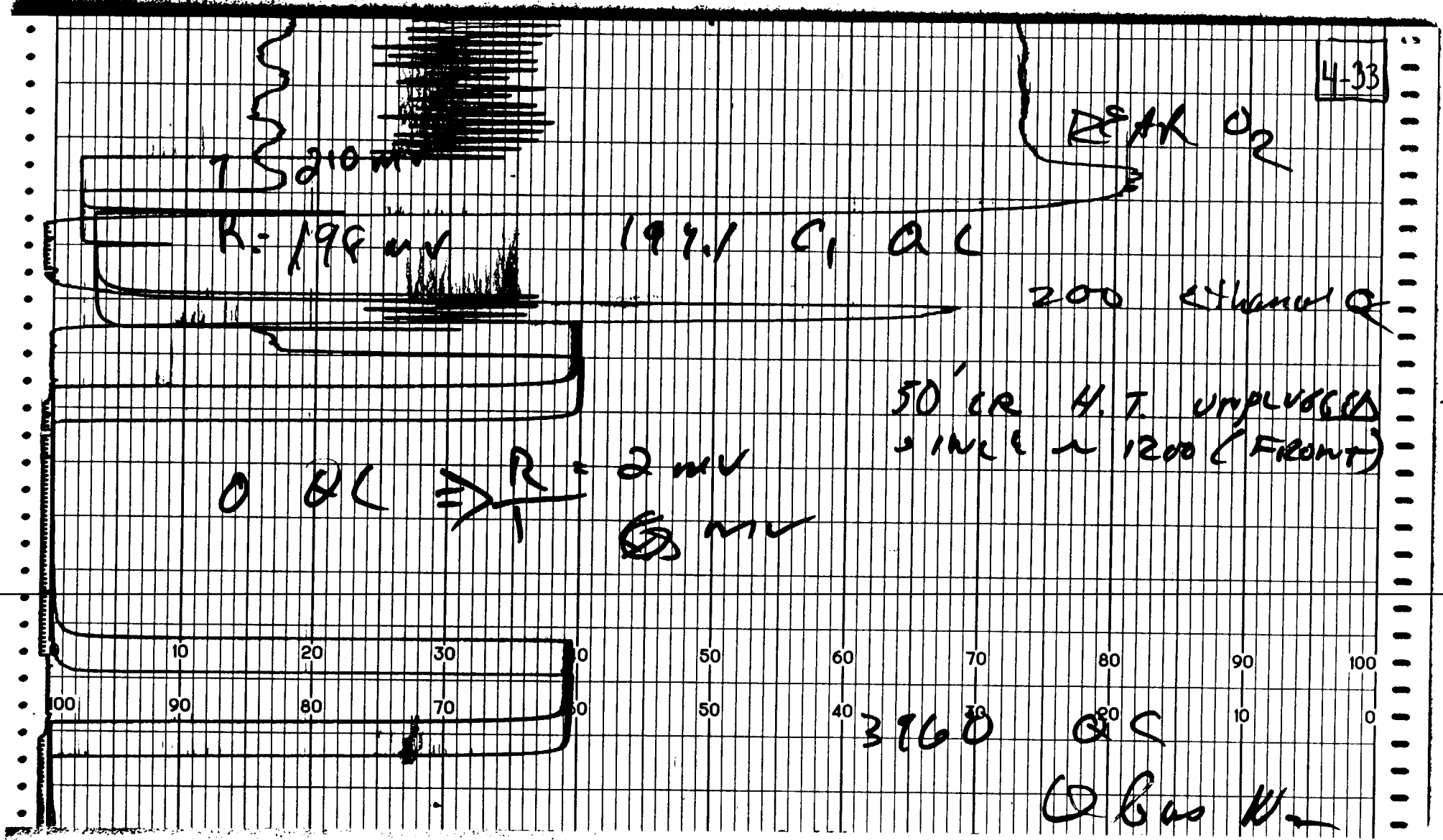
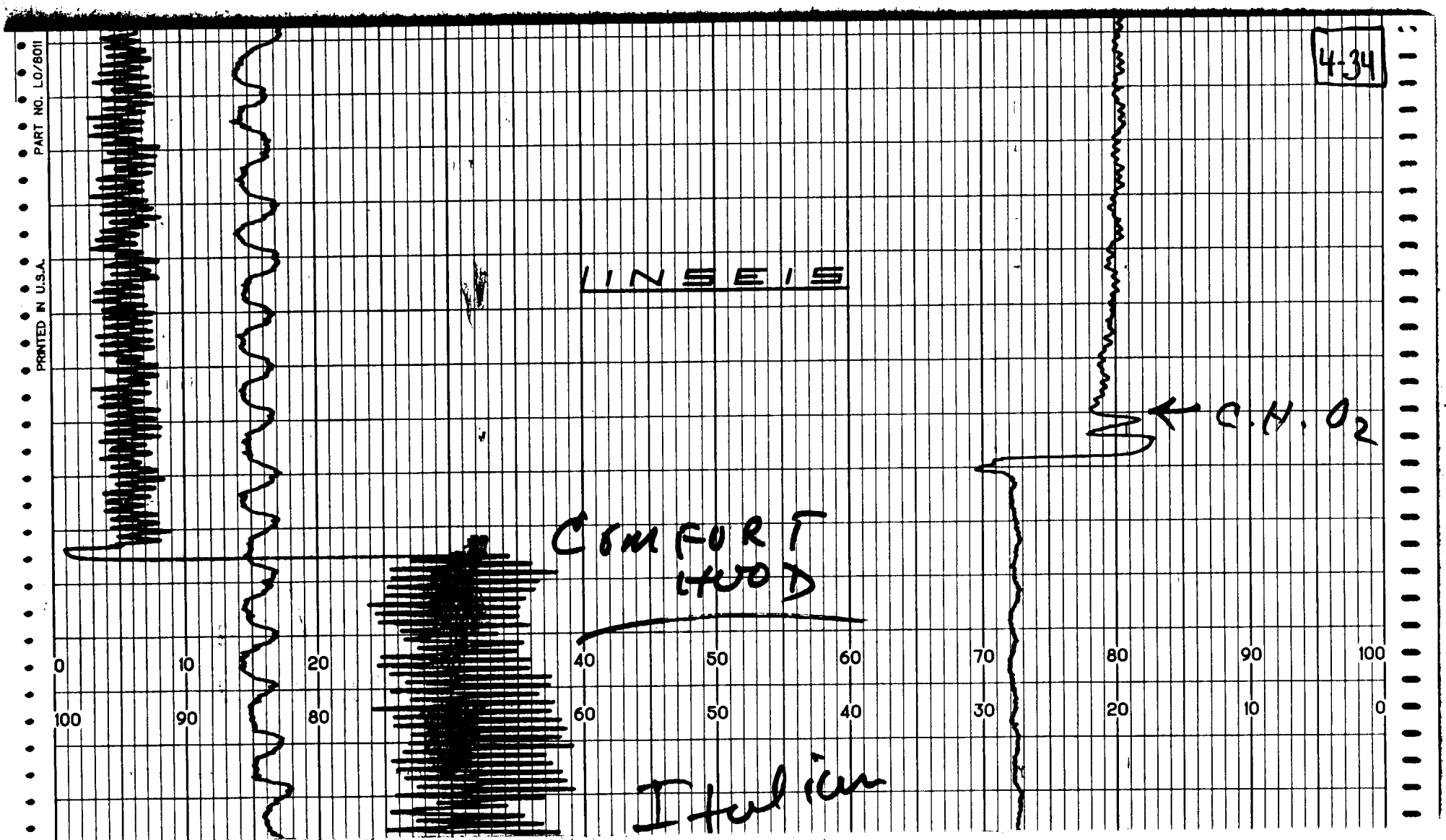
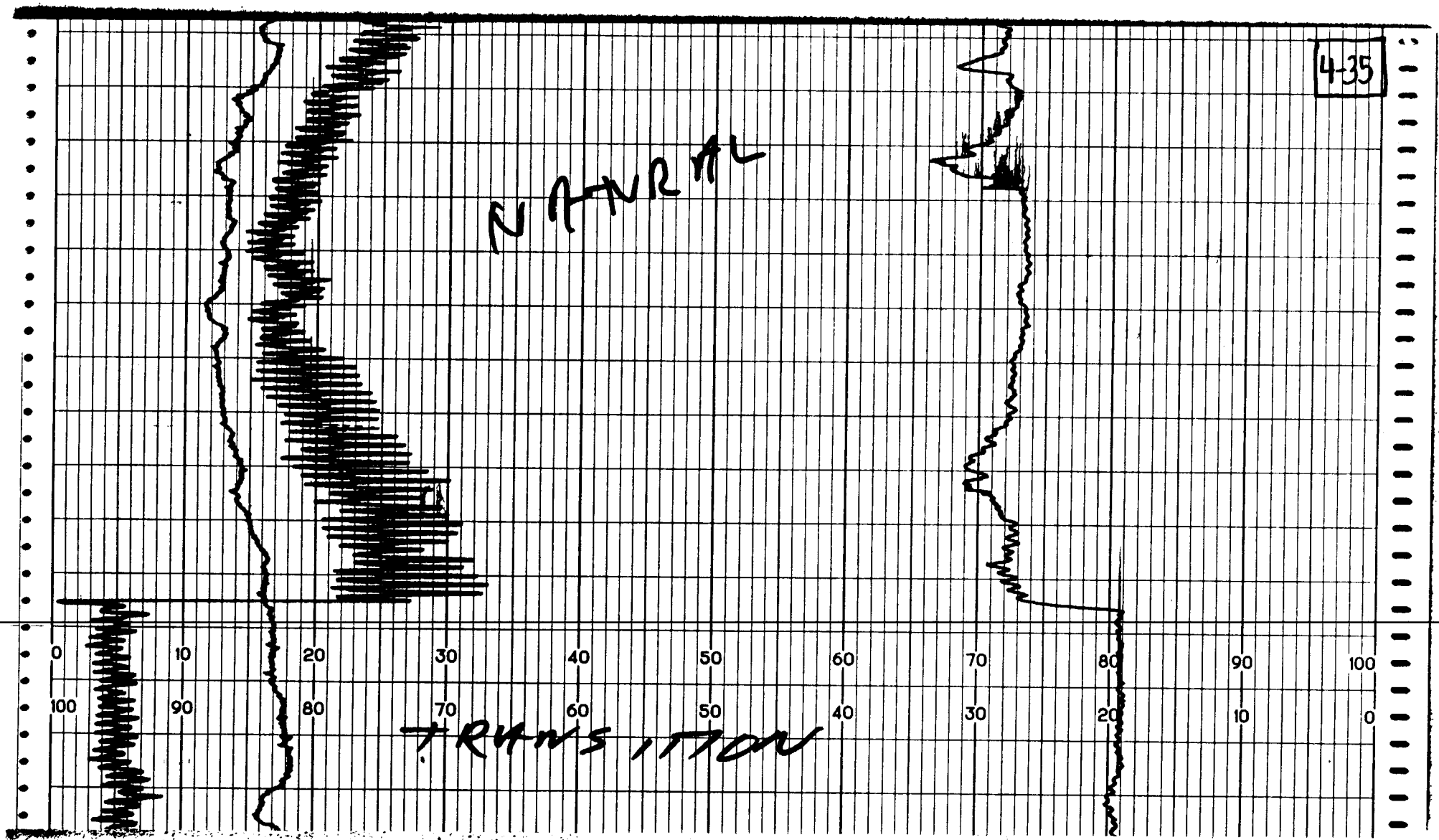
0 10 20 40 50 60 70 80 90 100
100 90 80 70 0 50 40 30 20 10 0
3960
3960

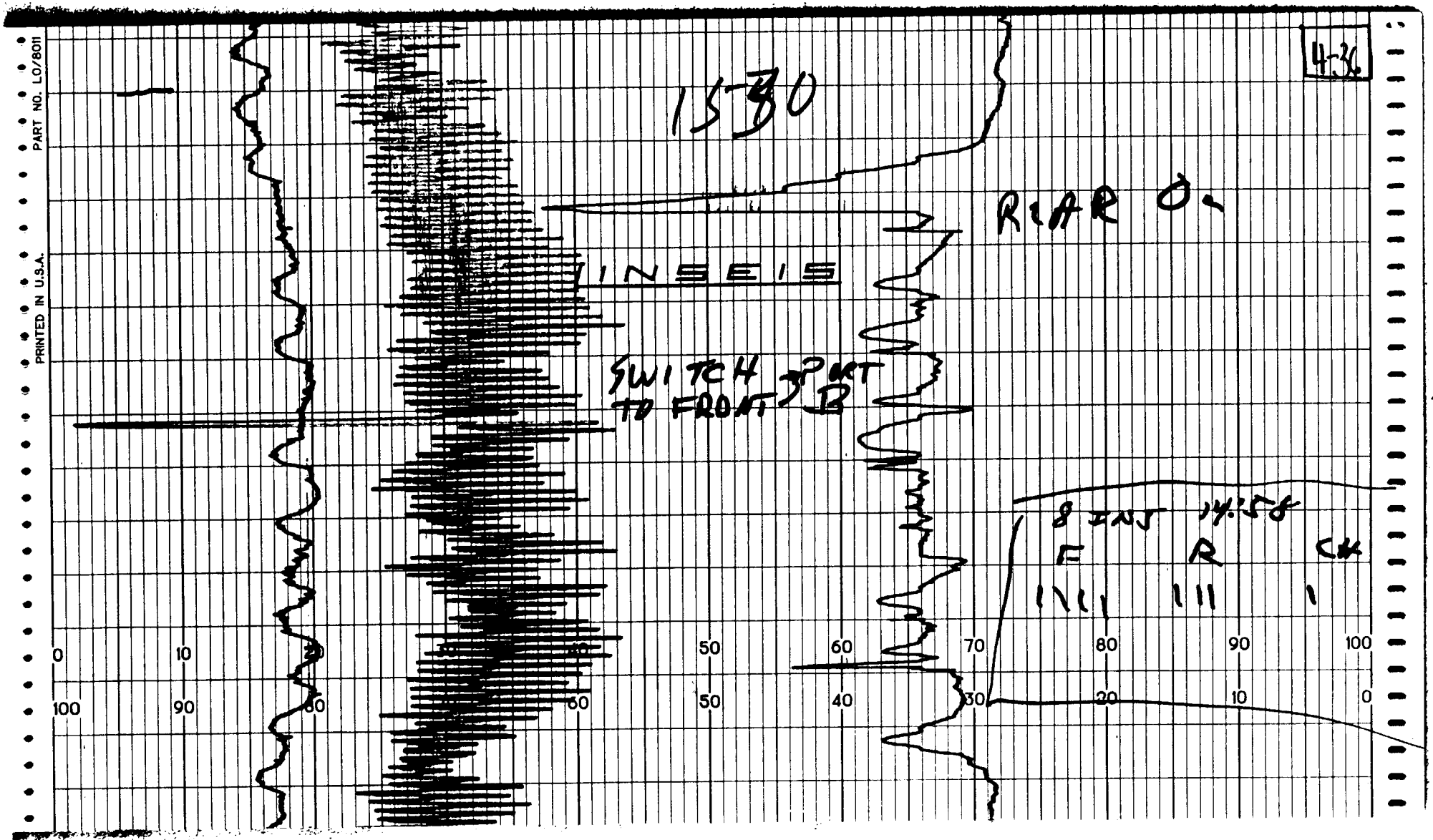
4-31
100
0
90
10
80
20
70
30
60
40
50
50
40
60
20
80
10
90
0
100

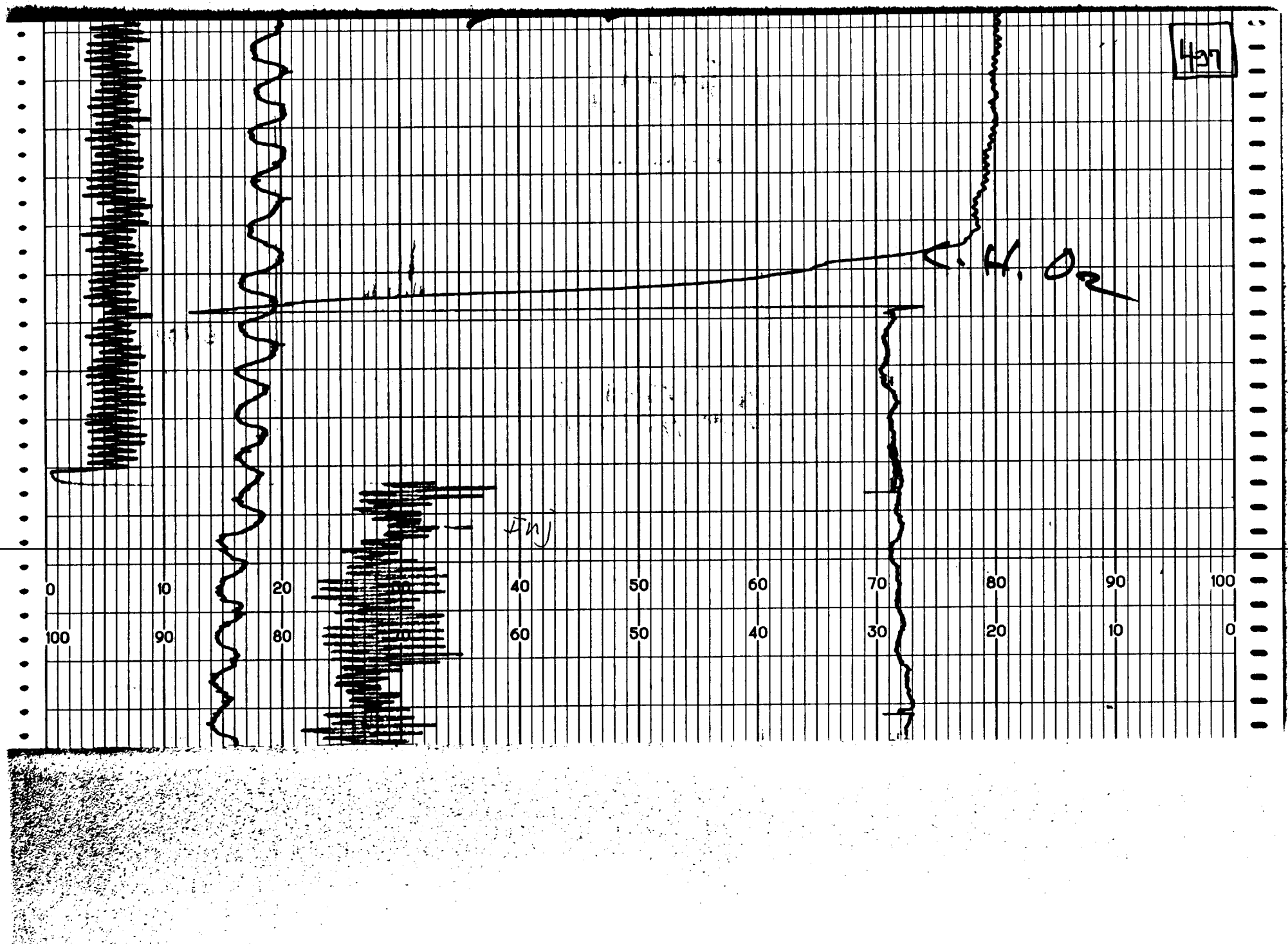
4-32
1/3-23
VINSELS
PRINTED IN U.S.A.
PART NO. L0/8811

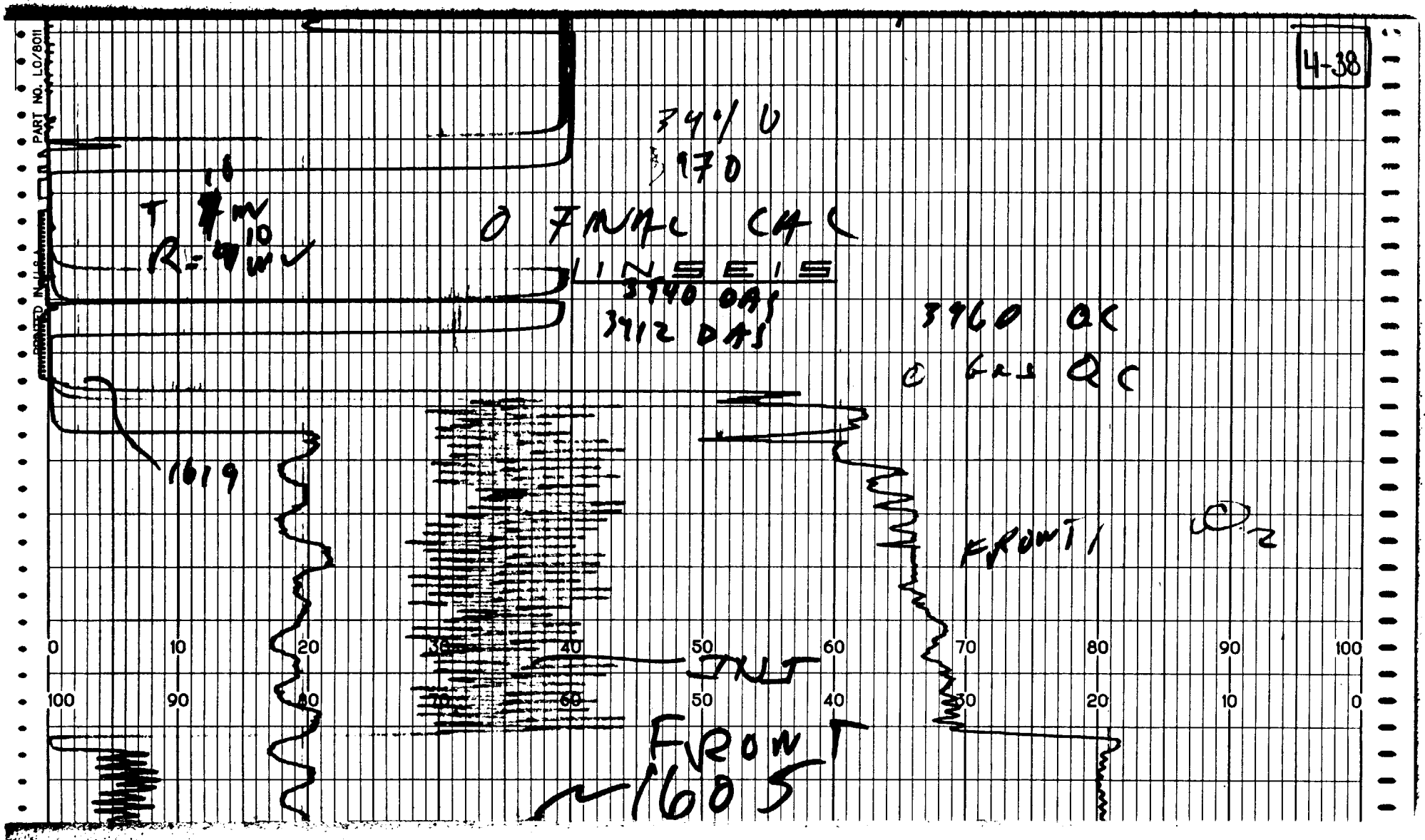

T 210 mv
R 196 mv
1921 C1 Q C
RANK O2
200 Ethanol Q
50 CR H.T. unplugged
1 inch ~ 1200 ¢ FRONT
O Q C ΔR/T = 2 mv
10 mv
10 20 30 40 50 60 70 80 90 100
100 90 80 70 60 50 40 30 20 10 0
3960 Q S
O Gas W

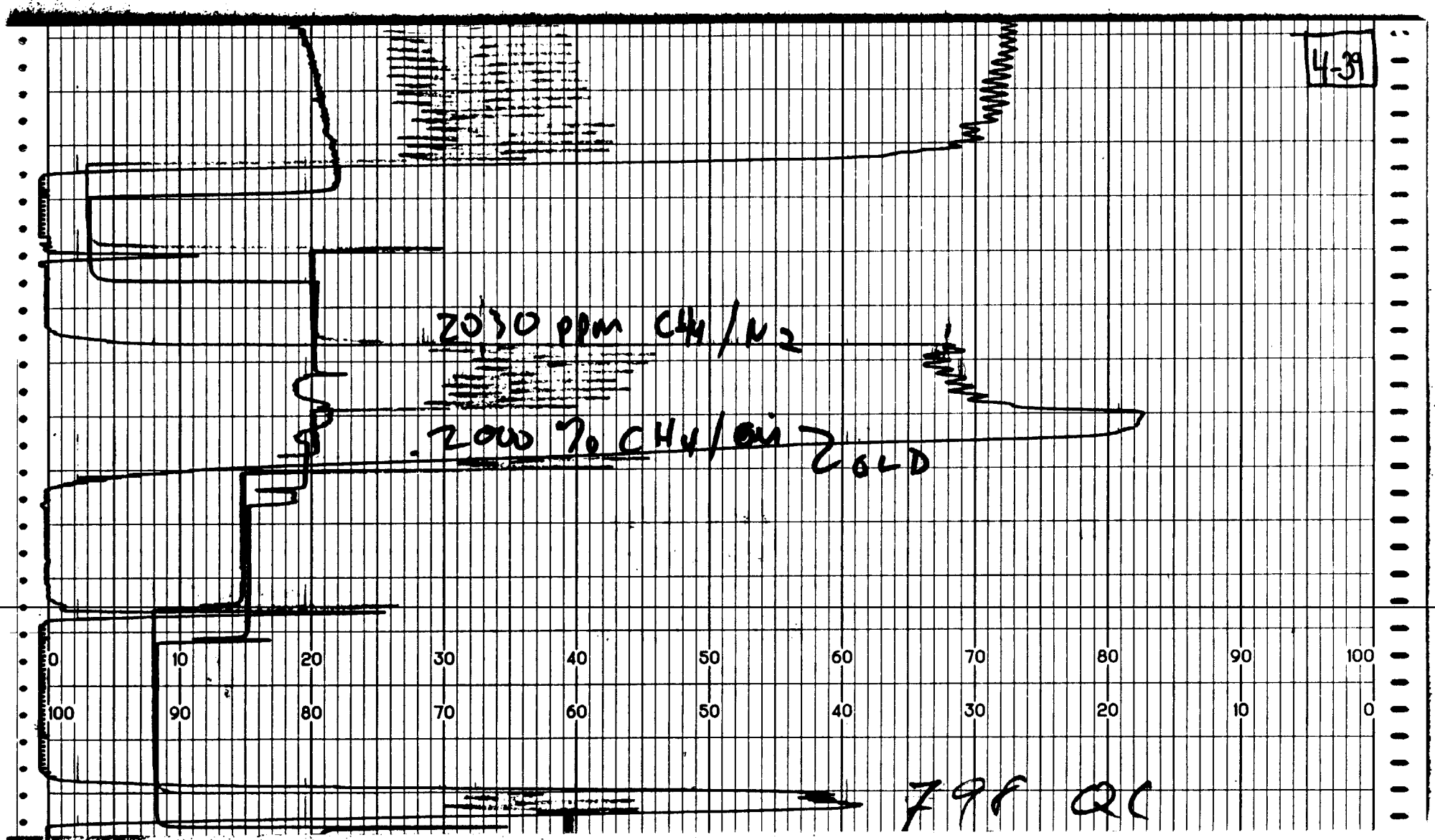

4-34
PART NO. LO/8011
PRINTED IN U.S.A.
LINDE IS
C.H. O2
COMFORT
LIMIT
0
10
20
40
50
60
70
80
90
100
100
90
80
60
50
40
30
20
10
0
INHALED

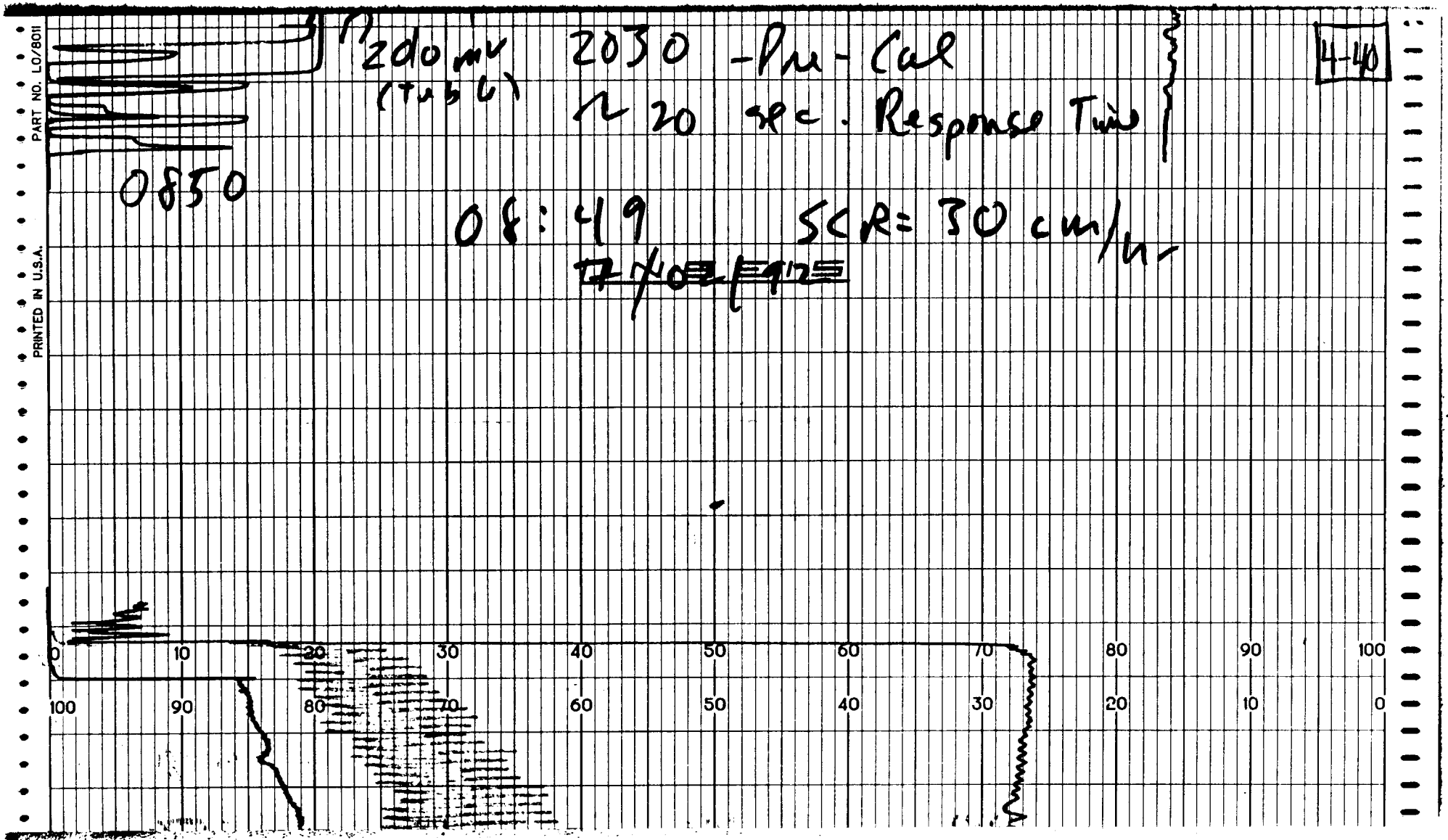

4-35
NATURAL
TRANSITION
0
10
20
30
40
50
60
70
80
90
100
100
90
80
70
60
50
40
30
20
10
0


4-36
1530
REAR O.
INSEIS
SWITCH TO FRONT
8 INJ 14:58
E R CK
0 10 20 30 40 50 60 70 80 90 100
100 90 80 60 50 40 30 20 10 0
PART NO. LO/8011
PRINTED IN U.S.A.


4527
C.P. 02
Inj
0
10
20
30
40
50
60
70
80
90
100
100
90
80
60
50
40
30
20
10
0


4-38
PRINTED IN U.S.A. PART NO. L0/8011
3740 ft
3970
T 10 mv
R= 10 mv
OFNAC CHC
LINSEIS
3740 ft
3742 ft
3960 ft
CO gas QC
1619
FRONT
CO2
0 10 20 30 40 50 60 70 80 90 100
100 90 80 60 50 40 30 20 10 0
FRONT
1605


4-39
2030 ppm CH4/N2
2000 ppm CH4/air
GLD
0
10
20
30
40
50
60
70
80
90
100
100
90
80
70
60
50
40
30
20
10
0
796 QC


4-40
200 mv
(Tube C)
2030 - Pre-Cal
20 sec. Response Time
0850
08:49
SCR= 30 cm/hr
0 10 20 30 40 50 60 70 80 90 100
100 90 80 70 60 50 40 30 20 10 0
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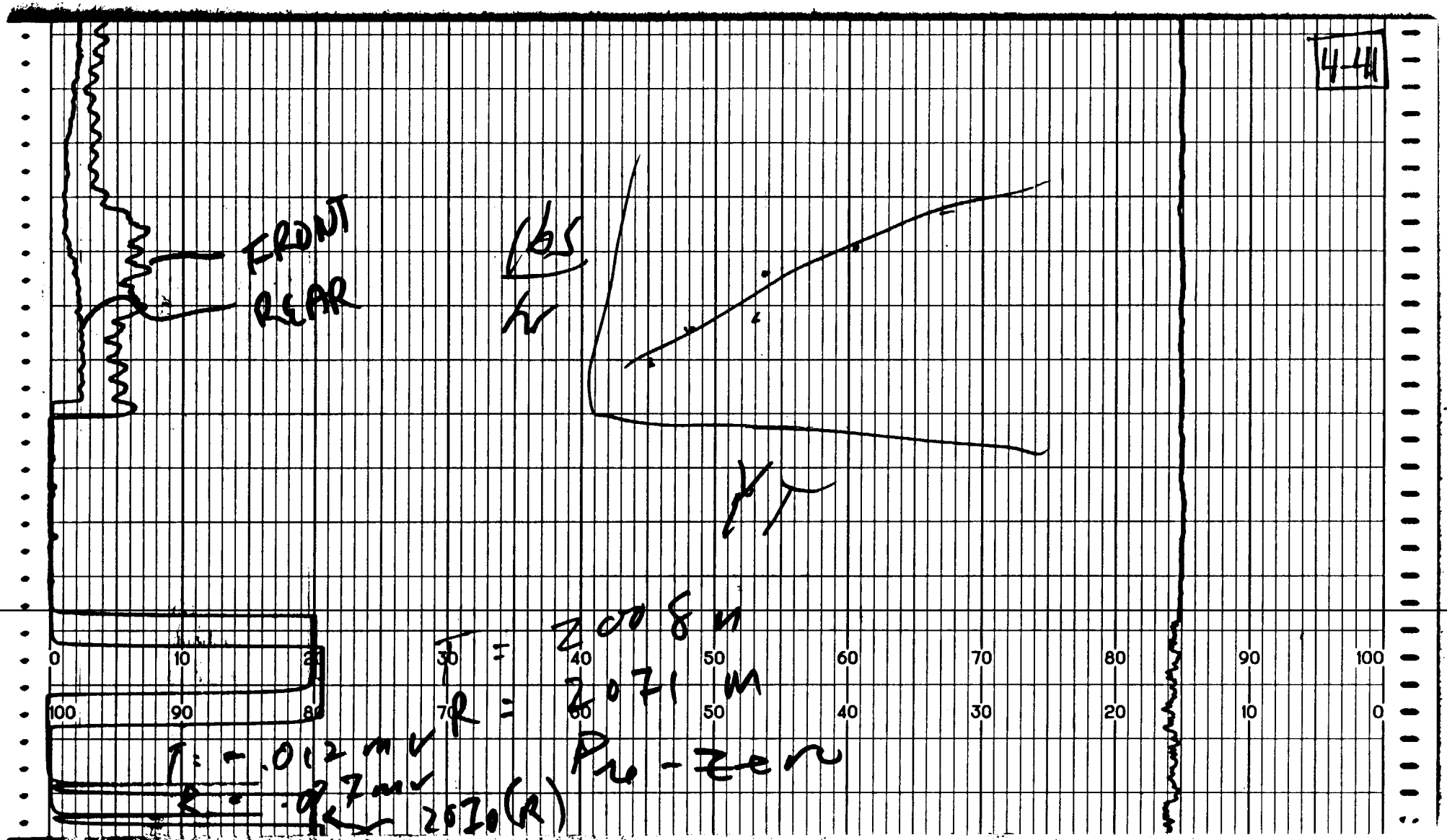
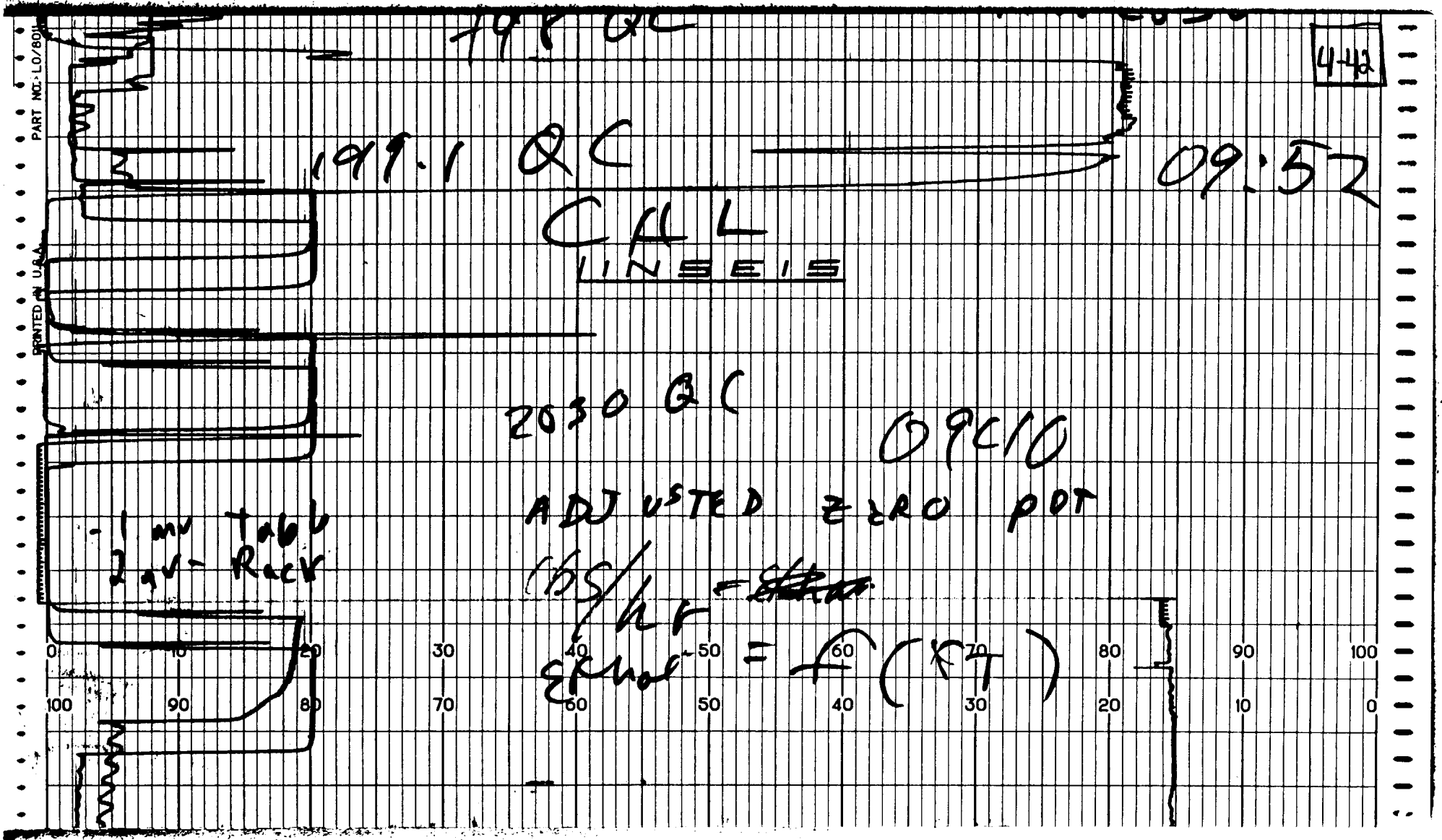

4-41
FRONT
REAR
lbs
hr
0
10
20
30
40
50
60
70
80
90
100
100
90
80
70
60
50
40
30
20
10
0
T = 2008 in
R = 2071 in
T: +.012 mv
R: -.027 mv
2520(R) Pre-Zero


4-42
198 QC
199.1 QC
09.52
CALL
LINSEIS
2030 QC
09C10
ADJUSTED ZERO POT
-1 mV to 0
2 mV - Recr
0 10 20 30 40 50 60 70 80 90 100
100 90 80 70 60 50 40 30 20 10 0
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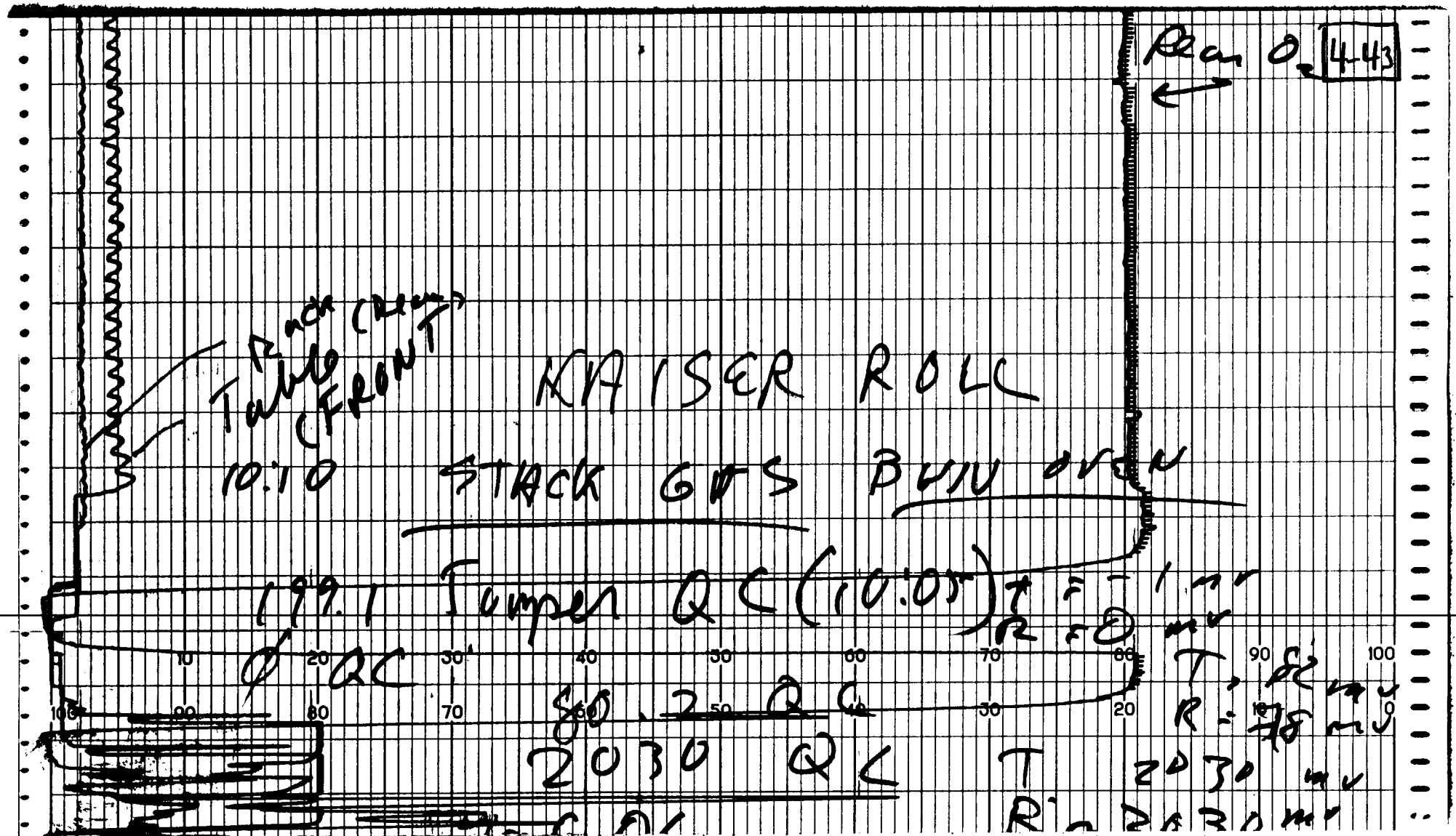
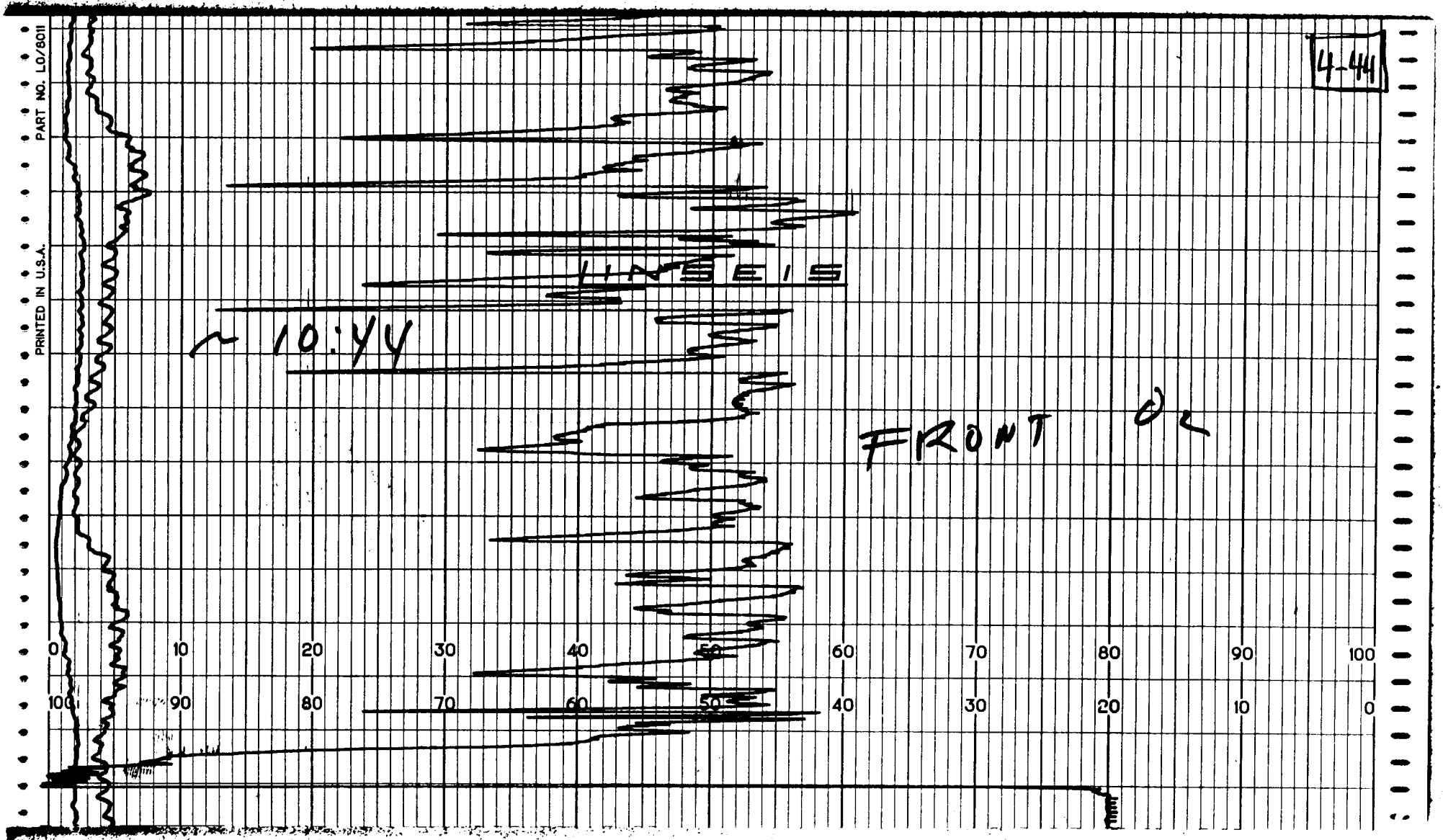

Rear 0 4-43
Tamper (Rear Chest)
Tamper (Front)
10:10
KAISER ROLL
STACK GATS BUN area
1991 Tamper QC (10:05) T = 1 mv
R = 0 mv
Ø QC
80 250 QC
2030 QC
T 2030 mv
R 2 R 0 mv


4-44
PART NO. L0/8011
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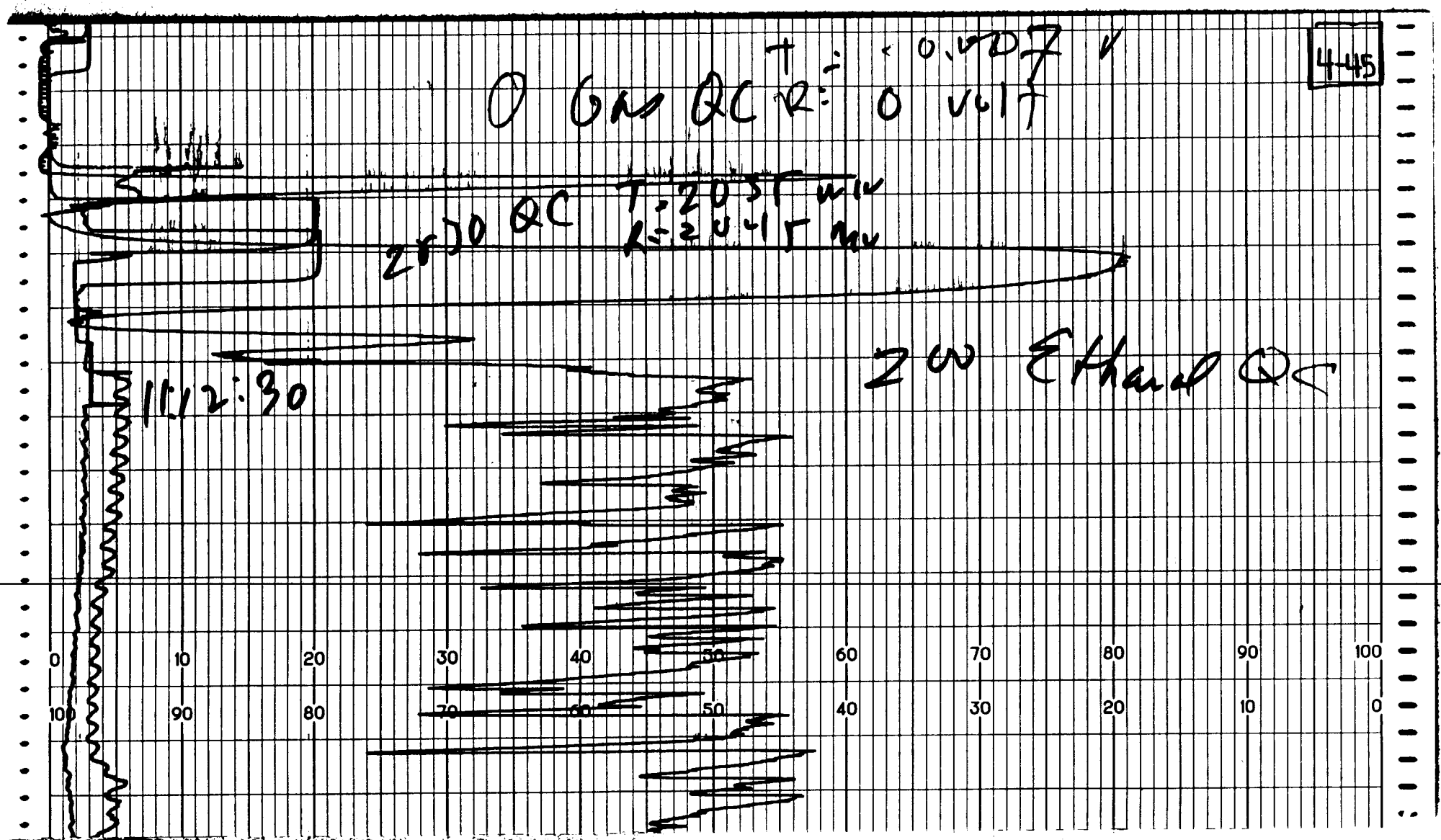
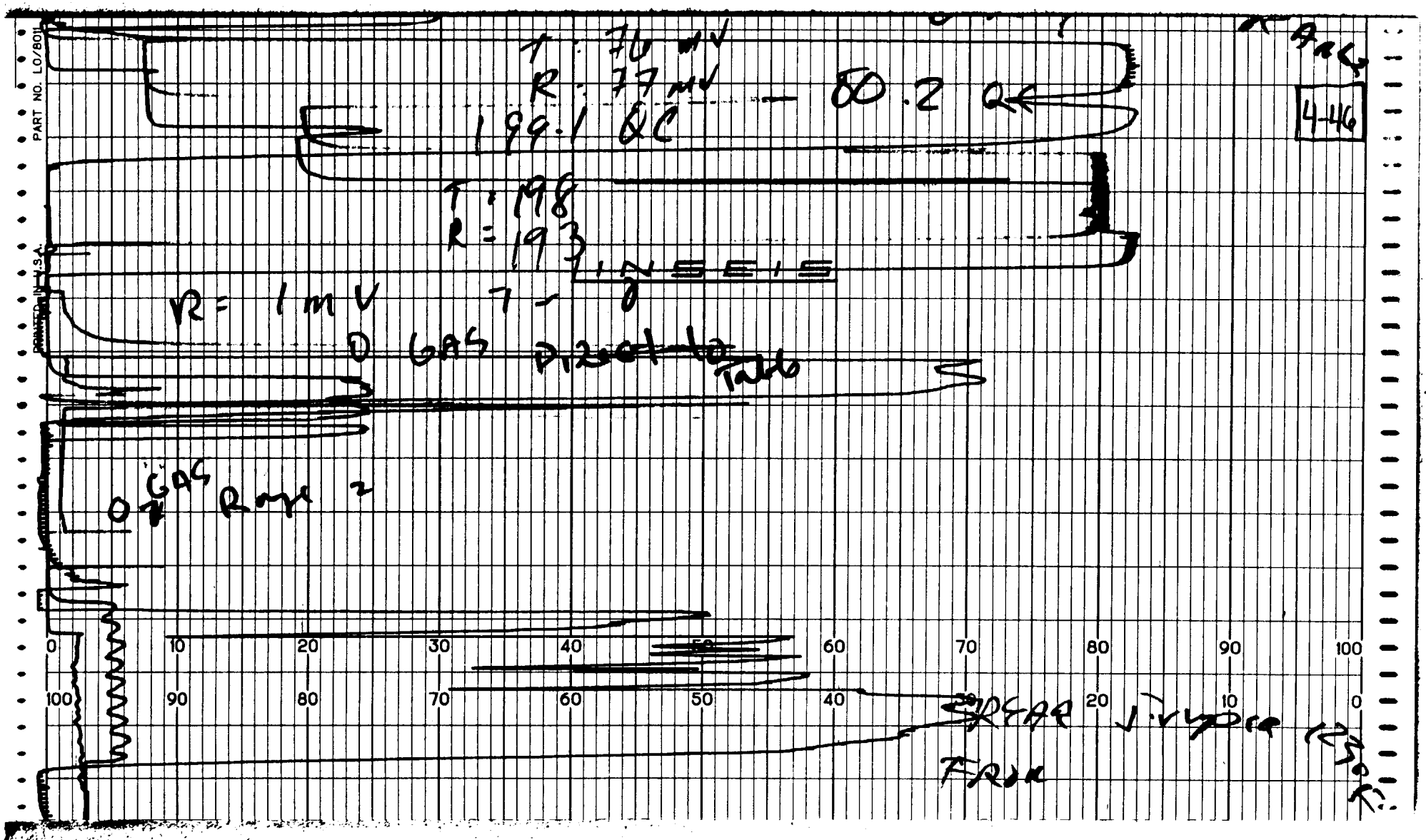
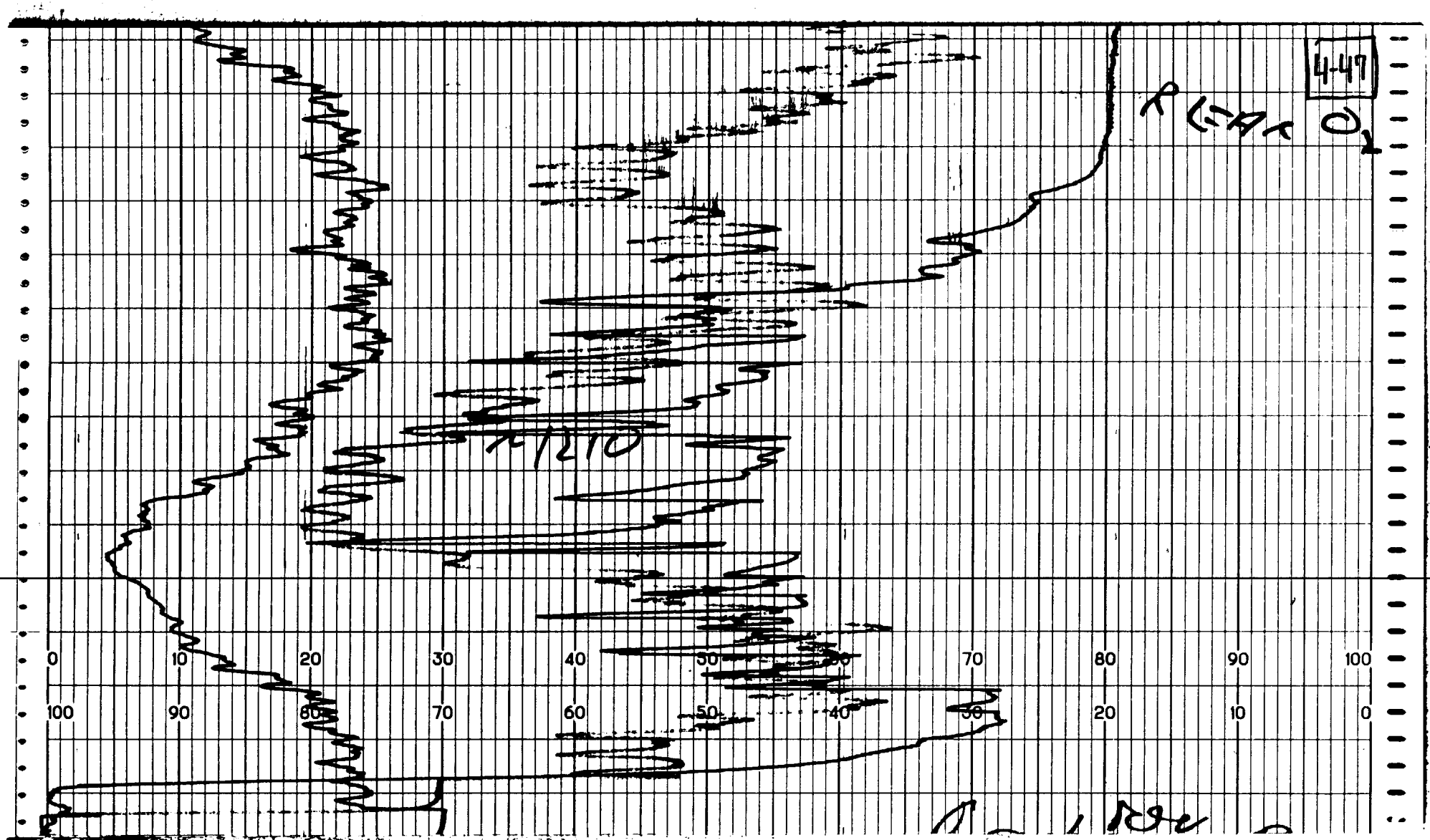
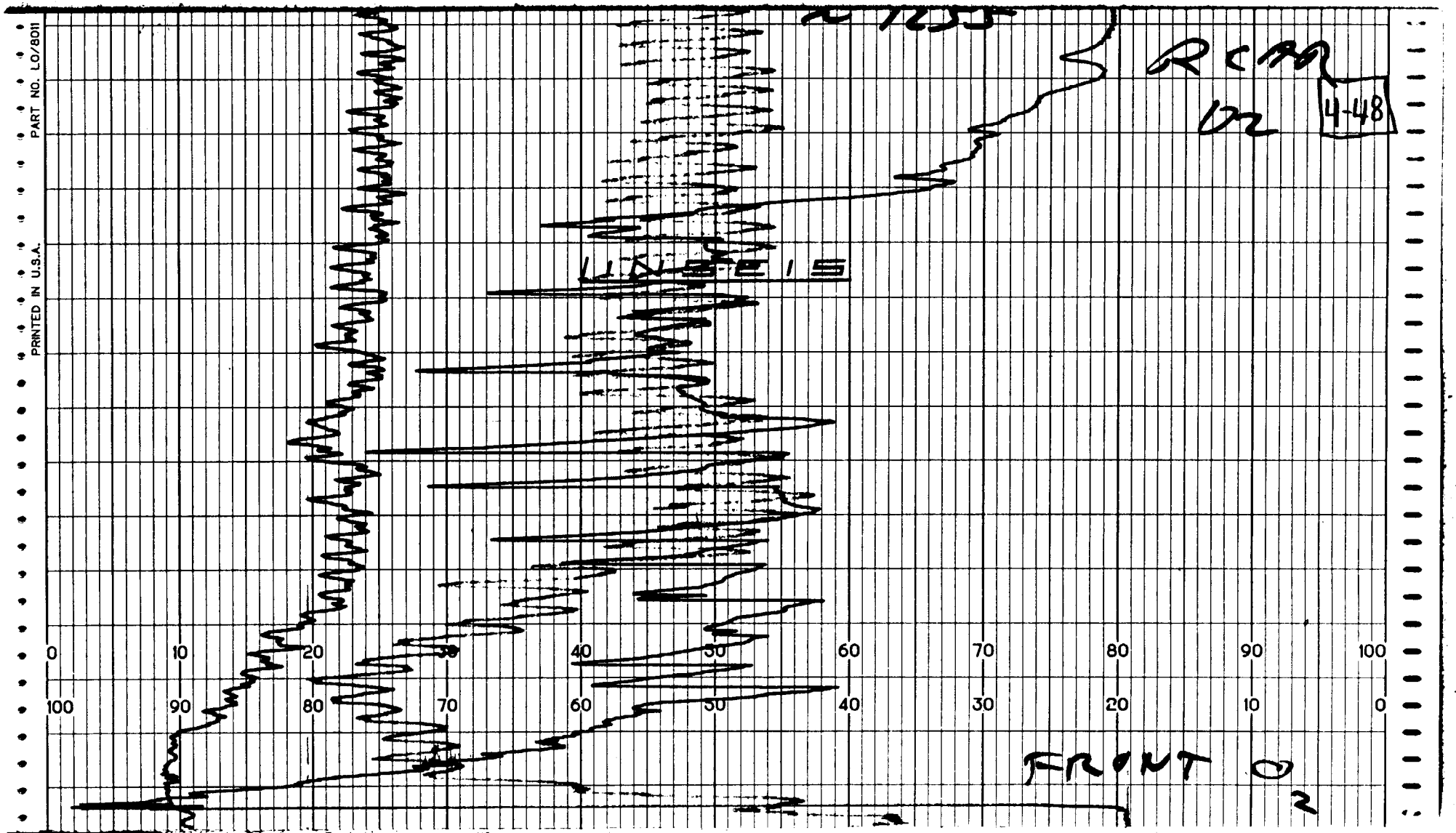
LANSEIS
~ 10:44
FRONT OF
0 10 20 30 40 50 60 70 80 90 100
100 90 80 70 60 50 40 30 20 10 0


4-45
T = +0.707 V
0 GAS QC R = 0 volt
2030 QC T = 20.5 mV
R = 20.15 mV
11:12:30
2W Exhaust QC
0
10
20
30
40
50
60
70
80
90
100
100
90
80
70
60
50
40
30
20
10
0


T: 76 mV
R: 77 mV
199.1 QC — 80.2 Q
T: 198
R: 193
R= 1 mV
0 GAS
0 GAS
4-46
0 10 20 30 40 50 60 70 80 90 100
100 90 80 70 60 50 40 30 20 10 0


4-47
REAR O2
0
10
20
30
40
50
60
70
80
90
100
100
90
80
70
60
50
40
30
20
10
0


PART NO. LO/8011
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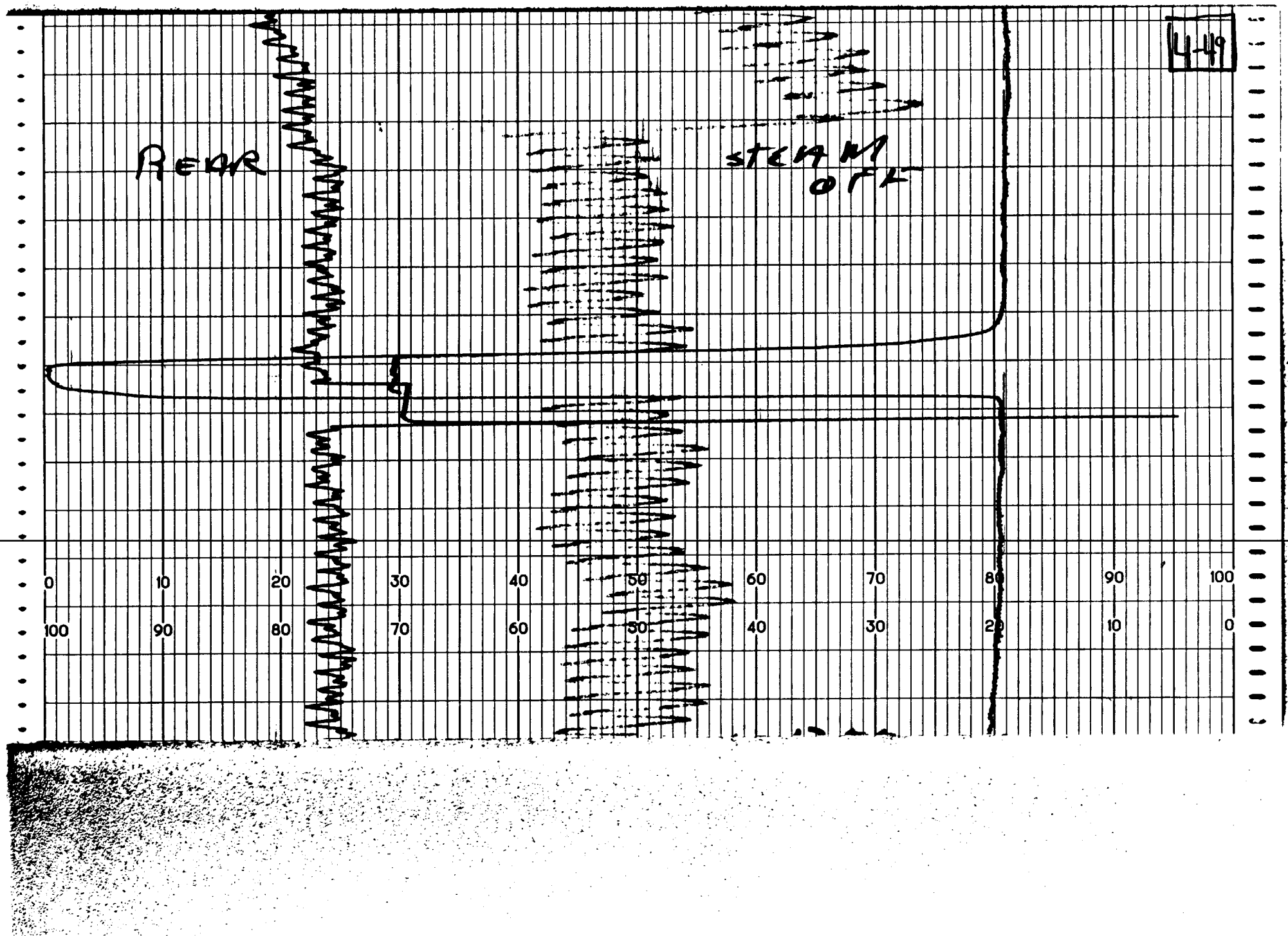
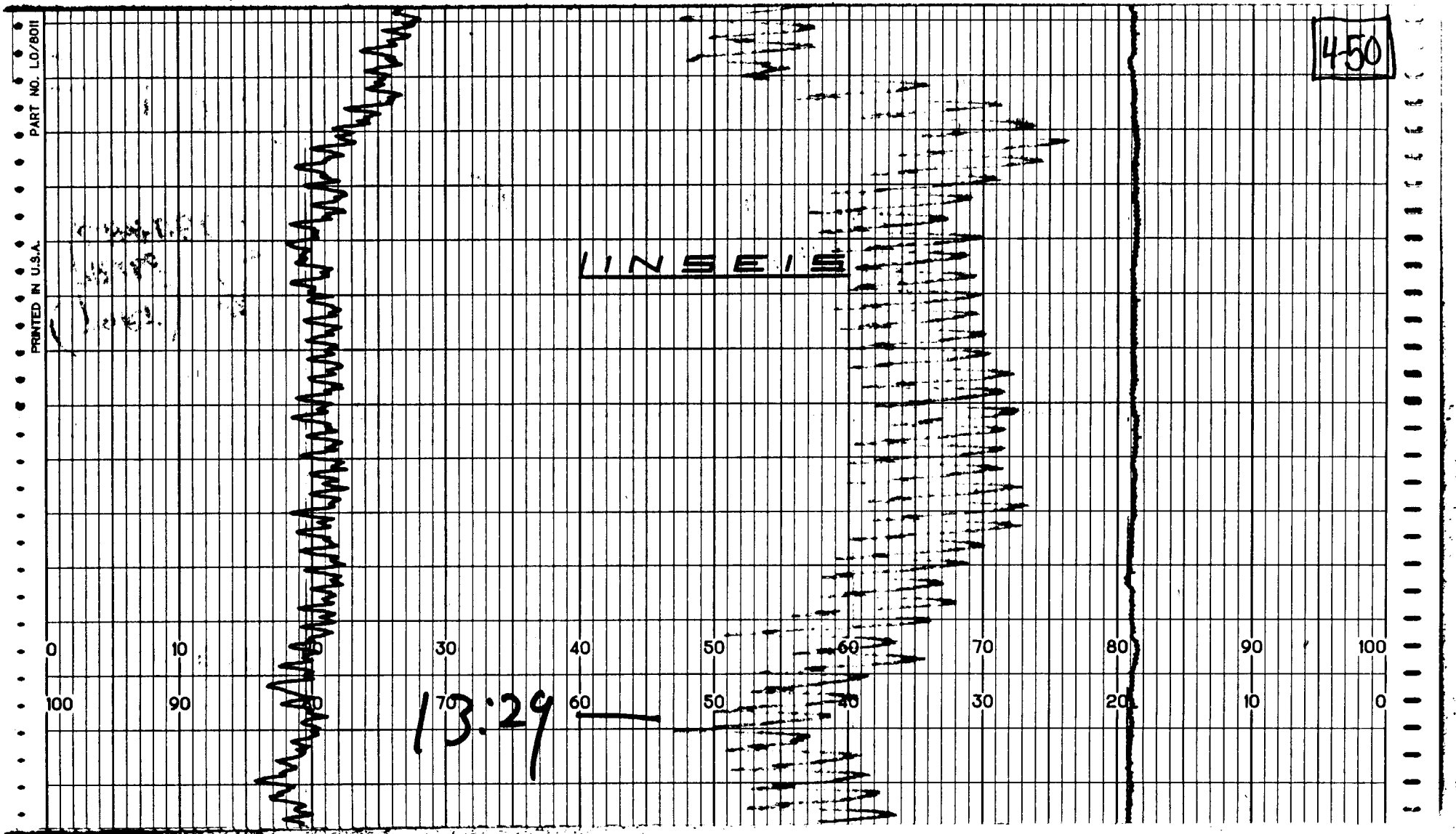
4-48
LINE 15
FRONT O2
0
10
20
30
40
50
60
70
80
90
100


4-49
REAR
STEAM
OFF
0
10
20
30
40
50
60
70
80
90
100
100
90
80
70
60
50
40
30
20
10
0


450
LINSEIS
0
10
30
40
50
60
70
80
90
100
100
90
70
60
50
40
30
20
10
0
13:29
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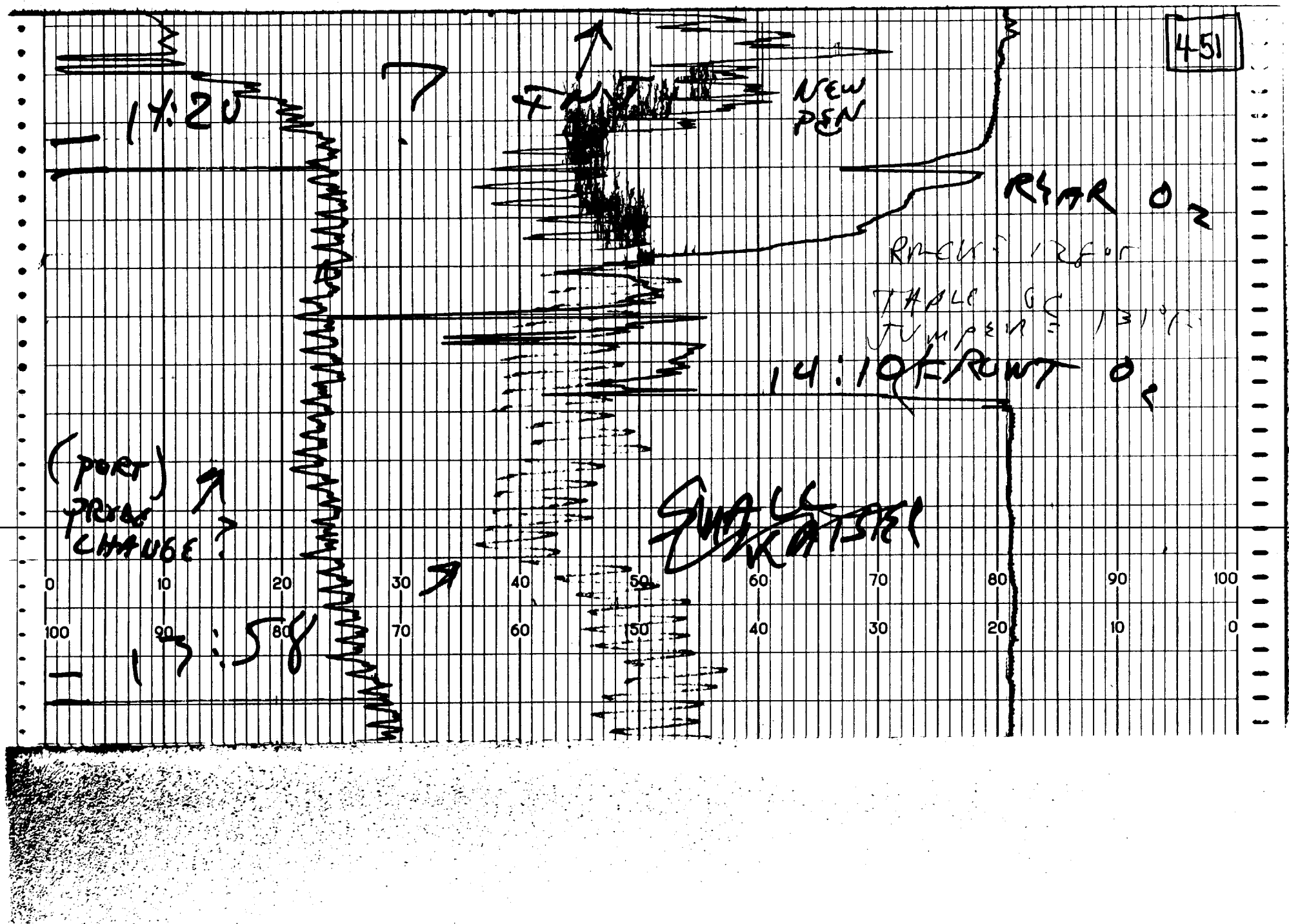
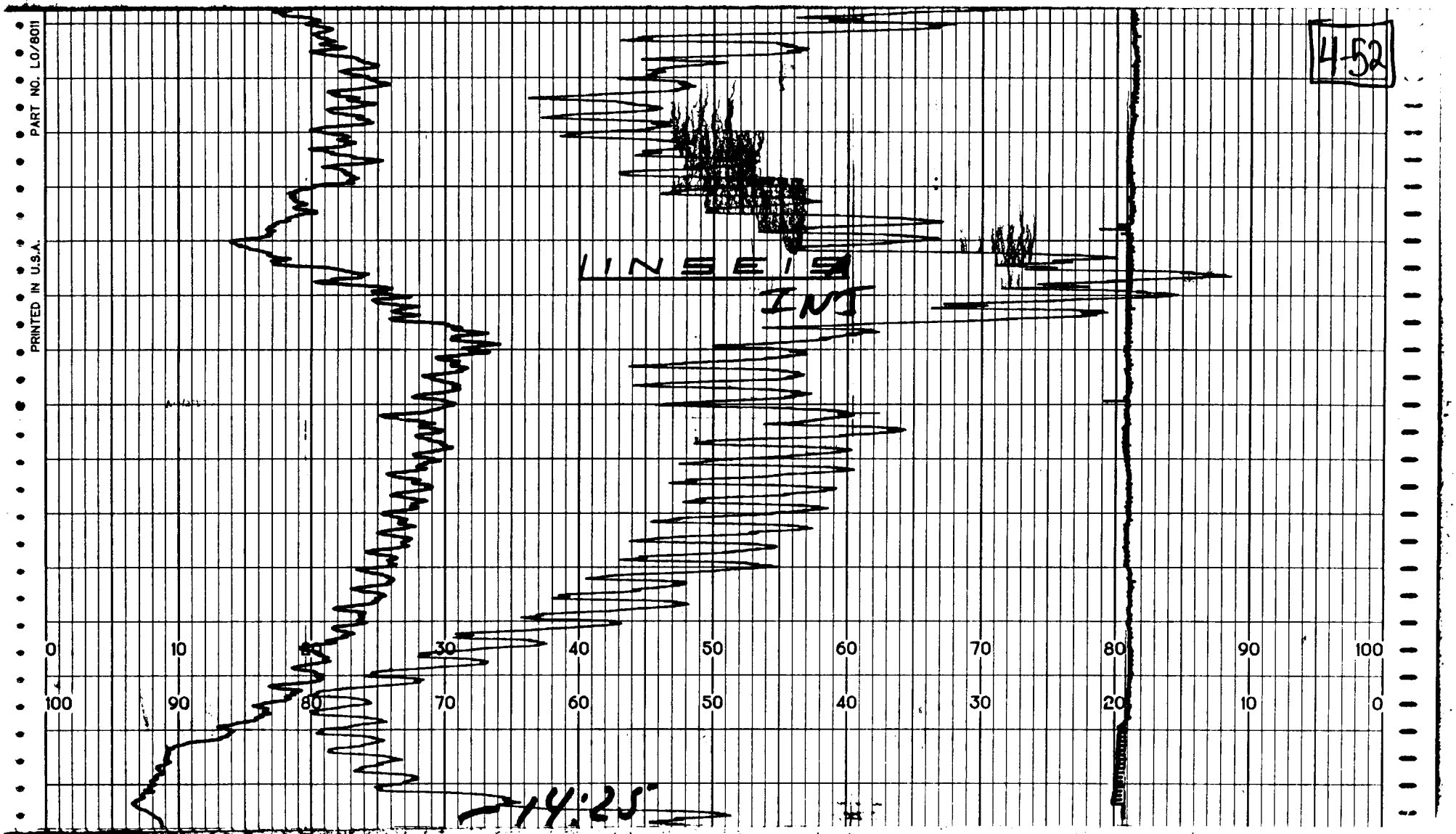

4-51
14:25
NEW PEN
REAR ON
14:10 FRONT ON
(PORT) PRESS CHANGE
13:58
0 10 20 30 40 50 60 70 80 90 100
100 90 80 70 60 50 40 30 20 10 0


4-52
LINSEIS
INT
0
10
20
30
40
50
60
70
80
90
100
100
90
80
70
60
50
40
30
20
10
0
-14.25
PART NO. LO/8011
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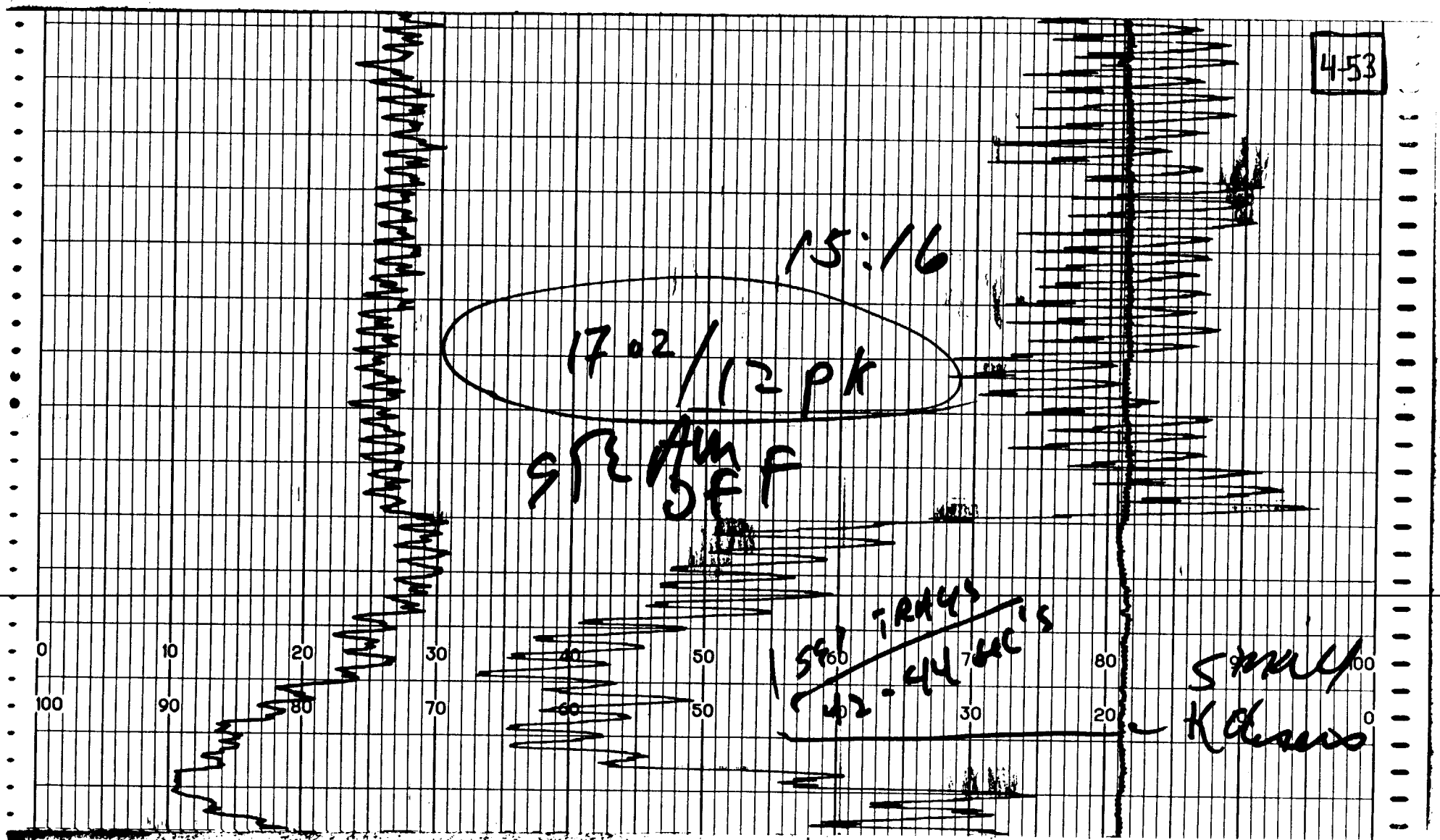
4-53
15:16
17.2/12 pk
SFR AM SF
0
10
20
30
40
50
60
70
80
90
100
100
90
80
70
60
50
40
30
20
0

454
N 11
(16 ch)
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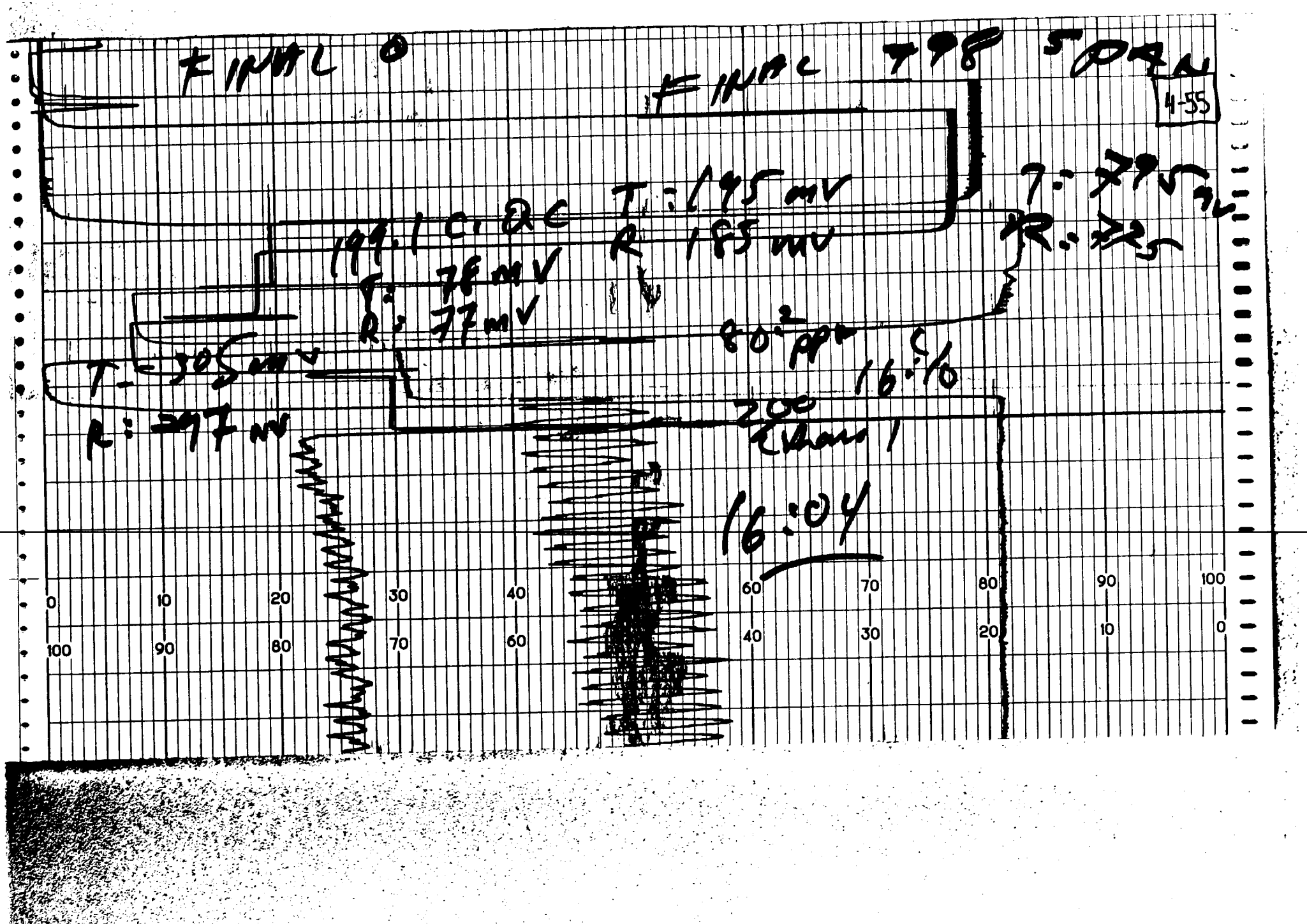
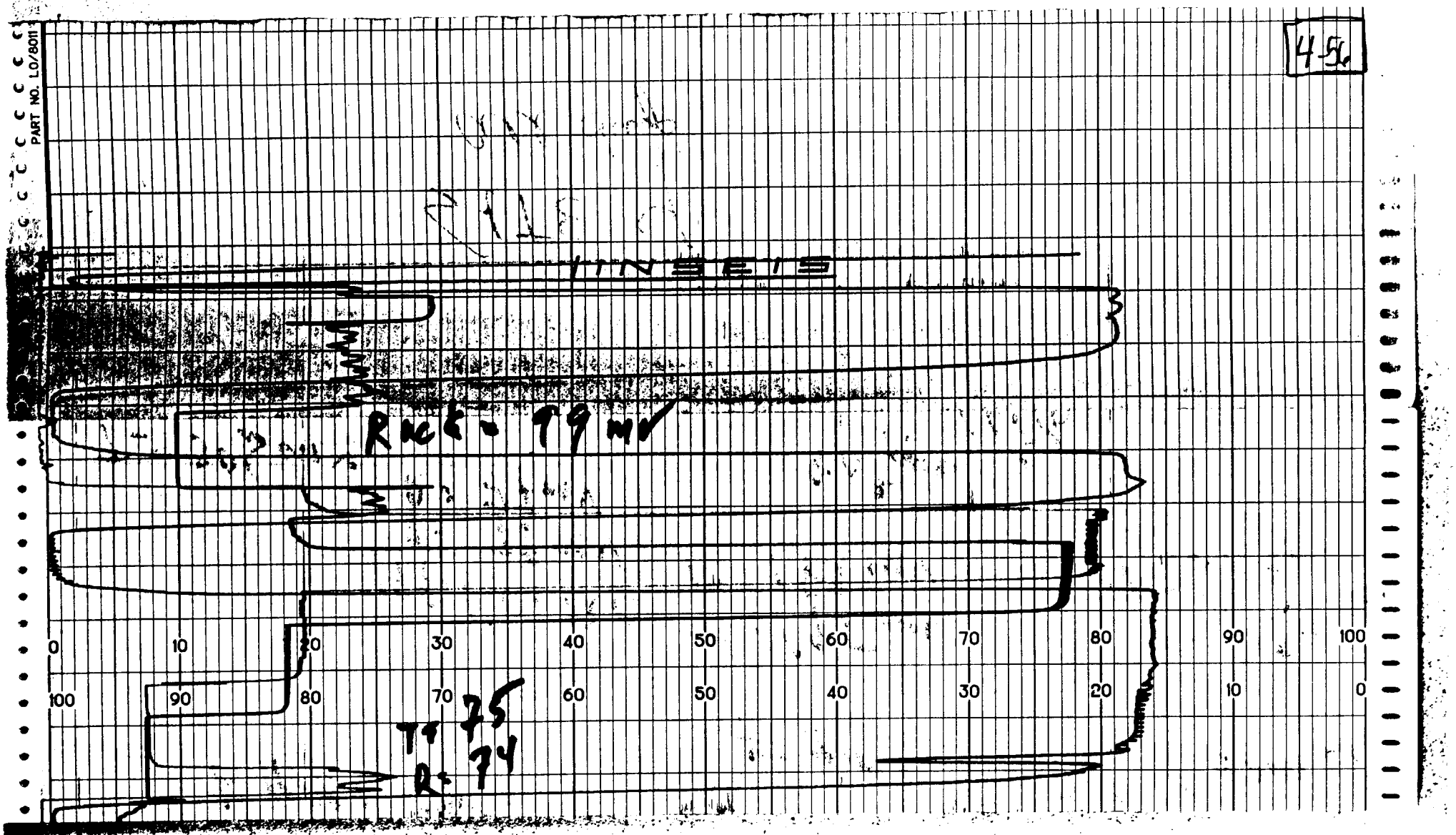
PART NO. L0/8011


FINAL 0
FINAL TOP
4-55
T: 195 mV
R: 185 mV
T: 305 mV
R: 297 mV
T: 76 mV
R: 77 mV
80 PPM
200 Rheo 1
16:10
16:04
0
10
20
30
40
60
70
80
90
100
100
90
80
70
60
40
30
20
10
0


14-56
PART NO. LO/8011
RUCK- 79 MV
0 10 20 30 40 50 60 70 80 90 100
100 90 80 70 60 50 40 30 20 10 0
T: 75
R: 74