

Note: This is a reference cited in AP 42, *Compilation of Air Pollutant Emission Factors, Volume I Stationary Point and Area Sources*. AP42 is located on the EPA web site at [www.epa.gov/ttn/chief/ap42/](http://www.epa.gov/ttn/chief/ap42/)

The file name refers to the reference number, the AP42 chapter and section. The file name "ref02\_c01s02.pdf" would mean the reference is from AP42 chapter 1 section 2. The reference may be from a previous version of the section and no longer cited. The primary source should always be checked.

AP-42 Section 9.7  
Reference 15  
Report Sect. 4  
Reference 7

**WESTFIELD GIN**  
11054 West Mount Whitney Ave.  
Riverdale, CA 93656

**PM10 & TOTAL PARTICULATE TESTING  
TRASH CYCLONE**

**November 12, 1992**

Prepared By:

**BTC ENVIRONMENTAL, INC.**  
1536 Eastman Avenue  
Ventura, CA 93003

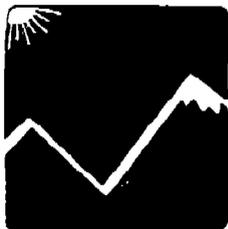
Job Number  
23024

Laboratory Report Number  
292-161

Test Team Leader  
Cam Donnahoo

Results Verified By:  
Tom Porter  
Vice President - Air Test Division

**BTC** ENVIRONMENTAL  
INCORPORATED



San Joaquin Valley  
Unified Air Pollution Control District

Post - 1997  
Facility



## PERMIT TO OPERATE

PERMIT NO: C-1379-1-1

EXPIRATION DATE: 08/31/97

LEGAL OWNER OR OPERATOR: WESTFIELD GINNING CO.  
MAILING ADDRESS: 11054 W MT. WHITNEY  
RIVERDALE, CA 93656

LOCATION: 24896 S BUTTE, FIVE POINTS

### EQUIPMENT DESCRIPTION:

COTTON GIN COMPLETE WITH TRUCK UNLOADING, DRYING, CLEANING, DELINTING, LINT CLEANING, CONTROLLED BY 11-40", 2-34", 4-76", 3-60", 2-38", & 1-28" 1D-3D CYCLONES. RATING = 1195.5 HP.

## CONDITIONS

- 1 - No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than 3 minutes in any one hour which is dark or darker than Ringelmann 1 or equivalent 20% opacity.
- 2 - Material removed from dust collector(s) shall be disposed of in a manner preventing entrainment into the atmosphere.
- 3 - The Owner/Operator shall maintain records of the type, weight, and number of bales of cotton ginned for a period of at least two years and make the records available to the District inspector upon request.
- 4 - The quantity of cotton ginned at this facility shall not exceed 384 bales in any one day.
- 5 - The emissions of PM10 from the modified gin shall not exceed 269 lb/day, nor 0.7 lbs/bale.

(CONDITIONS CONTINUE ON THE NEXT PAGE)

This Permit to Operate remains valid through the permit expiration date listed above, subject to payment of annual permit fees and compliance with permit conditions and all applicable local, state, and federal regulations. This permit is valid only at the location specified above, and becomes void upon any transfer of ownership or location. Any modification of the equipment or operation, as defined in District Rule 2201, will require a new permit. This permit shall be posted as prescribed in District Rule 2010.

DAVID L. CROW

Executive Director/APCO

During 1992 Source Test baling  
rate was 13.2 bales / hour.

## CONTINUED CONDITIONS FOR C-1379-1-1

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- 6 - The total particulate matter concentration from any operation in the facility shall not exceed 0.1 grains per dry standard cubic foot.
- 7 - The unloading system, lint cleaner fan, moist air fans, and feeder dust fan shall be controlled by eleven (11) 40 inch diameter "1D-3D" cyclone collectors.
- 8 - The trash stockpiler collection system shall be controlled by two (2) 38 inch diameter "1D-3D" cyclone collectors.
- 9 - The battery condensers and #1 lint cleaning system shall be controlled by four (4) 76 inch "1D-3D" cyclone collectors.
- 10 - By March 1st of each year, report daily process rate (bales/day), operating hours/day and number of days operated/season to the District.
- 11 - The lint cleaner trash shall be controlled by three (3) 60 inch 1D-3D cyclone collectors.
- 12 - The overflow main trash and seed separator shall be controlled by two (2) 34 inch 1D-3D cyclone collectors.
- 13 - The seed blower system shall be controlled by one (1) 28 inch 1D-3D cyclone collector.

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**PARTICULATE EMISSION SUMMARY**

**TRASH CYCLONE**

	<b>Run #1</b>	<b>Run #2</b>	<b>Run #3</b>	<b>Average</b>
<b>Total Particulate</b>				
<b>gr/DSCF</b>	0.0745	0.0773	0.0826	<b>0.0781</b>
<b>lb/hr</b>	2.49	2.65	2.86	<b>2.67</b>
<b>lb/bale</b>	0.19	0.19	0.21	<b>0.20</b>
<b>Particulate Size Distribution</b>				
<b>+10<math>\mu</math> (%)</b>	70.96	66.47	76.92	<b>71.45</b>
<b>+10<math>\mu</math> (lb/hr)</b>	1.77	1.76	2.20	<b>1.91</b>
<b>+10<math>\mu</math> (lb/bale)</b>	0.13	0.13	0.16	<b>0.14</b>
<b>-10<math>\mu</math> (%)</b>	29.04	33.53	23.08	<b>28.55</b>
<b>-10<math>\mu</math> (lb/hr)</b>	0.72	0.89	0.66	<b>0.76</b>
<b>-10<math>\mu</math> (lb/bale)</b>	0.06	0.06	0.05	<b>0.06</b>
<b>Bales/hr</b>	13.2	13.8	13.2	

**I. INTRODUCTION**

## **INTRODUCTION**

On November 12, 1992, BTC Environmental performed source emissions tests for PM-10 particulate matter on the Trash Cyclone. The cyclone is located at the Westfield Gin, 11054 West Mount Whitney Ave., Riverdale, California. Sampling was done in triplicate for total particulate and PM-10 particulate size distribution. Production rates, in bales per hour, was taken by Westfield personnel. 846-5671

## **SAMPLING AND ANALYTICAL PROCEDURES**

**STACK GAS ANALYSIS:** The oxygen and carbon dioxide content of the exhaust gases were assumed to be ambient air. Oxygen = 20.9% and Carbon Dioxide = 0.05%.

**STACK GAS VELOCITY:** The stack gas velocity was determined using an "S" type pitot tube connected to a magnehelic gauge. The "S" type pitot was used to determine the stack velocity profile for each run. Sampling was conducted from one (1) horizontal port. A total of eight (8) traverse points was utilized. The sample duct was in an horizontal configuration thus only one (1) sample port was accessible

The stack temperature was determined using a thermocouple and an indicating pyrometer. The proportion of water was determined gravimetrically and the dry molecular weight of the stack gas determined by E.P.A. Method 3, equation 3-2. Stack velocities were calculated using E.P.A. Method 2, equation 2-9; gas volumetric flow rate was determined by equation 2-10.

**TOTAL PARTICULATE EMISSIONS:** A CARB Method 5 sampling train was utilized to determine the total particulate emission from the cyclones. The sample train consisted of a stainless steel nozzle, a heated stainless steel probe, a heated glass fiber filter and cooled impingers. After the weight is obtained from the filter, probe and nozzle rinses; the total solids in the impingers is added to the front-end catch to satisfy APCD rules.

**PARTICULE SIZE DISTRIBUTION:** A sample was taken isokinetically from the stack using a Gill cascade impactor. A modified CARB Method 501 was utilized. The impactor consisted of two (2) slotted discs, a back up filter and cooled impingers. The first two (2) discs are +10 $\mu$  and the backup filter and impingers are -10 $\mu$ . The total weights obtained from each fraction were added together to obtain the total particulate weight. The total weight was used to determine the % of the +10 $\mu$  and the -10 $\mu$  fraction. The total weight obtained from the total particulate runs are used to determine the +10 $\mu$  and the -10 $\mu$  results reported in grains/dscf, lb/hr and lb/bale.

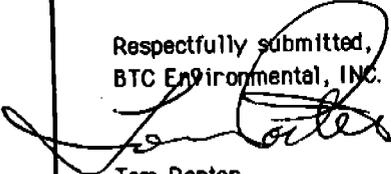
**LEAK CHECKS:** Leak rates were conducted on the sampling train and the pitot tubes before and after each test. The leak check for the sampling train was done at the nozzle. Any leak rate greater than 0.02 cfm was corrected for in the volume calculations.

All calculations for lb/hr were done by using the flow rate of the stack gas. All values were calculated by using APCD standard conditions (60°F & 29.92 in Hg).

All glassware was inspected before and after each run to insure that no breakage had occurred during the sampling. No problems were encountered during the sampling except for an occasional plug-up in the gin system.

If you have any questions concerning the above results please contact the undersigned at 805-644-1095.

Respectfully submitted,  
BTC Environmental, INC.

  
Tom Porter  
Vice President - Air Test Division

**II. WET TEST METHODS DATA SUMMARIES**

**FIELD DATA SUMMARY  
TOTAL PARTICULATE  
TRASH CYCLONE**

	Run#1	Run#2	Run#3
Vic - Volume of water collected, ml	4.5	2.5	5.3
Vm - Gas volume, meter cond., dcf	31.136	33.263	33.565
Y - Meter calibration factor	1.039	1.039	1.039
Pbar - Barometric pressure, in. Hg	30.33	30.30	30.21
Pg - Stack static pressure, in. H2O	-0.05	-0.05	-0.05
$\Delta H$ - Avg. meter press. diff., in. H2O	1.211	1.373	1.390
Tm - Absolute meter temperature, °R	543.8	565.9	565.1
Vm(std) - Standard sample gas vol., dscf	31.4569	32.2730	32.5170
Bws - Water vapor part in gas stream	0.7	0.4	0.8
CO2 - Dry concentration, volume %	0.1	0.1	0.1
O2 - Dry concentration, volume %	20.9	20.9	20.9
Md - Mol wt. stack gas, dry, g/gmole	28.844	28.844	28.844
Ms - Mol wt. stack gas, wet, g/gmole	28.772	28.805	28.762
Cp - Pitot tube coef., dimensionless	0.866	0.866	0.866
$\Delta p$ - Avg. of sq. roots of each $\Delta p$	0.311	0.320	0.327
Ts - Absolute stack Temp. °R	534.1	540.5	549.3
A - Area of stack, square feet	3.69	3.69	3.69
Qstd - Volumetric flow rate, dscfm	3909	4007	4041
An - Area of nozzle, square feet	0.0005275	0.0005275	0.0005275
t - Sampling time, minutes	60	60	60
I - Isokinetic variation, percent	90.2	90.3	90.2

**FIELD DATA SUMMARY  
PM10 PARTICULATE  
TRASH CYCLONE**

	Run#1	Run#2	Run#3
Vlc - Volume of water collected, ml	-	-	-
Vm - Gas volume, meter cond., dcf	35.516	36.734	37.477
Y - Meter calibration factor	0.976	0.976	0.976
Pbar - Barometric pressure, in. Hg	30.33	30.30	30.21
Pg - Stack static pressure, in. H2O	-0.05	-0.05	-0.05
ΔH - Avg. meter press. diff., in. H2O	1.268	1.278	1.321
Tm - Absolute meter temperature, °R	533.4	565.9	558.0
Vm(std) - Standard sample gas vol., dscf	34.3522	33.4574	34.5171
Bws - Water vapor part in gas stream	0.7	0.4	0.8
CO2 - Dry concentration, volume %	0.1	0.1	0.1
O2 - Dry concentration, volume %	20.9	20.9	20.9
Md - Mol wt. stack gas, dry, g/gmole	28.844	28.844	28.844
Ms - Mol wt. stack gas, wet, g/gmole	28.768	28.801	28.757
Cp - Pitot tube coef., dimensionless	0.866	0.866	0.866
Δp - Avg. of sq. roots of each Δp	0.318	0.311	0.320
Ts - Absolute stack Temp. °R	534.1	540.5	547.9
A - Area of stack, square feet	3.69	3.69	3.69
Qstd - Volumetric flow rate, dscfm	3989	3895	3962
An - Area of nozzle, square feet	0.0005275	0.0005275	0.0005275
t - Sampling time, minutes	60	60	60
I - Isokinetic variation, percent	100.2	100.0	101.4

**FIELD DATA & CALCULATIONS SUMMARY**

Client: **Westfield Gin**  
 Site: **Riverdale**  
 Unit: **Trash Cyclone**

Date: **11/12/92**  
 Type: **T std = 60 F**  
 Run: **1-Part**

<b>Wlc</b>	Water Condensate Weight	4.5	g		
<b>Vlc</b>	Water Condensate Volume	4.5	ml		
<b>Vm</b>	Metered Sample Gas Volume	31.136	dcf		
<b>Lp</b>	Avg. Leak Rate	0.000	cf		
<b>Vh</b>	Leak Corrected Sample Gas Volume	31.136	dcf		
<b>Y</b>	Dry Gas Meter Calibration Factor	1.039			
<b>Pbar</b>	Barometric Pressure	30.33	in. Hg		
<b>Pg</b>	Static Pressure	-0.05	in. H2O		
<b>Ps</b>	Stack Pressure, Absolute	30.33	in. Hg		
<b>Δ H</b>	Dry Gas Meter Press. Differential, Average	1.221	in. H2O		
<b>Tm</b>	Dry Gas Meter Temperature, Average	83.8	deg. F	543.8	deg. R
<b>Vm(std)</b>	Sample Gas Volume	31.4569	dscf		
<b>Vm(wet)</b>	Sample Gas Volume, Wet	31.6662	scf		
<b>Vw(std)</b>	Water Vapor Volume	0.2093	scf		
<b>Bws</b>	Water Content of Stack Gas	0.007		0.7	%
<b>CO2</b>	Carbon Dioxide, Dry	0.1	%		
<b>O2</b>	Oxygen, Dry	20.9	%		
<b>N2</b>	Nitrogen, Dry	79.1	%		
<b>Md</b>	Molecular Wt. of Stack Gas, Dry	28.844	lb/lb mole		
<b>Mw</b>	Molecular Wt. of Stack Gas, Wet	28.772	lb/lb mole		
<b>Cp</b>	Pitot Calibration Factor	0.866			
<b>Δ P</b>	Velocity Head, Average Square Root	0.311	in. H2O		
<b>Ts</b>	Stack Gas Temperature, Average	74.1	deg. F	534.1	deg. R
<b>As</b>	Area of Stack	3.69	sq ft	26.0	in. dia.
<b>Vs</b>	Stack Gas Velocity	18.03	ft/sec		
<b>Qa</b>	Actual Flow Rate	3,988	cfm		
<b>Qad</b>	Actual Flow Rate, Dry	3,961	dcfm		
<b>Q(std)</b>	Stack Gas Flow Rate	3,909	dscfm		
<b>An</b>	Nozzle Area	0.0005275	sq ft	0.311	in. dia.
<b>Theta</b>	Sampling Time	60	min.		
<b>I</b>	Isokinetics	90.2	%		

**FIELD DATA & CALCULATIONS SUMMARY**

Client: **Westfield Gln**  
 Site: **Riverdale**  
 Unit: **Trash Cyclone**

Date: **11/12/92**  
 Type: **T std - 60 F**  
 Run: **2-Part**

<b>Wlc</b>	Water Condensate Weight	2.5	g		
<b>Vlc</b>	Water Condensate Volume	2.5	ml		
<b>Vm</b>	Metered Sample Gas Volume	33.263	dcf		
<b>Lp</b>	Avg. Leak Rate	0.000	cf		
<b>Vh</b>	Leak Corrected Sample Gas Volume	33.263	dcf		
<b>Y</b>	Dry Gas Meter Calibration Factor	1.039			
<b>Pbar</b>	Barometric Pressure	30.30	in. Hg		
<b>Pg</b>	Static Pressure	-0.05	in. H2O		
<b>Ps</b>	Stack Pressure, Absolute	30.30	in. Hg		
<b>Δ H</b>	Dry Gas Meter Press. Differential, Average	1.373	in. H2O		
<b>Tm</b>	Dry Gas Meter Temperature, Average	105.9	deg. F	565.9	deg. R
<b>Vm(std)</b>	Sample Gas Volume	32.2730	dscf		
<b>Vm(wet)</b>	Sample Gas Volume, Wet	32.3893	scf		
<b>Vw(std)</b>	Water Vapor Volume	0.1163	scf		
<b>Bws</b>	Water Content of Stack Gas	0.004		0.4	%
<b>CO2</b>	Carbon Dioxide, Dry	0.1	%		
<b>O2</b>	Oxygen, Dry	20.9	%		
<b>N2</b>	Nitrogen, Dry	79.1	%		
<b>Md</b>	Molecular Wt. of Stack Gas, Dry	28.844	lb/lb mole		
<b>Mw</b>	Molecular Wt. of Stack Gas, Wet	28.805	lb/lb mole		
<b>Cp</b>	Pitot Calibration Factor	0.866			
<b>Δ P</b>	Velocity Head, Average Square Root	0.320	in. H2O		
<b>Ts</b>	Stack Gas Temperature, Average	80.5	deg. F	540.5	deg. R
<b>As</b>	Area of Stack	3.69	sq ft	26.0	in. dia.
<b>Vs</b>	Stack Gas Velocity	18.66	ft/sec		
<b>Qa</b>	Actual Flow Rate	4,128	cfm		
<b>Qad</b>	Actual Flow Rate, Dry	4,113	dcfm		
<b>Q(std)</b>	Stack Gas Flow Rate	4.007	dscfm		
<b>An</b>	Nozzle Area	0.0005275	sq ft	0.311	in. dia.
<b>Theta</b>	Sampling Time	60	min.		
<b>I</b>	Isokinetics	90.3	%		

**FIELD DATA & CALCULATIONS SUMMARY**

Client: **Westfield Gin**  
 Site: **Riverdale**  
 Unit: **Trash Cyclone**

Date: **11/12/92**  
 Type: **T std - 60 F**  
 Run: **3-Part**

<b>Wlc</b>	Water Condensate Weight	5.3	g		
<b>Vlc</b>	Water Condensate Volume	5.3	ml		
<b>Vm</b>	Metered Sample Gas Volume	33.565	dcf		
<b>Lp</b>	Avg. Leak Rate	0.000	cf		
<b>Vh</b>	Leak Corrected Sample Gas Volume	33.565	dcf		
<b>Y</b>	Dry Gas Meter Calibration Factor	1.039			
<b>Pbar</b>	Barometric Pressure	30.21	in. Hg		
<b>Pg</b>	Static Pressure	-0.05	in. H2O		
<b>Ps</b>	Stack Pressure, Absolute	30.21	in. Hg		
<b>Δ H</b>	Dry Gas Meter Press. Differential, Average	1.390	in. H2O		
<b>Tm</b>	Dry Gas Meter Temperature, Average	105.1	deg. F	565.1	deg. R
<b>Vm(std)</b>	Sample Gas Volume	32.5170	dscf		
<b>Vm(wet)</b>	Sample Gas Volume, Wet	32.7635	scf		
<b>Vw(std)</b>	Water Vapor Volume	0.2465	scf		
<b>Bws</b>	Water Content of Stack Gas	0.008		0.8	%
<b>CO2</b>	Carbon Dioxide, Dry	0.1	%		
<b>O2</b>	Oxygen, Dry	20.9	%		
<b>N2</b>	Nitrogen, Dry	79.1	%		
<b>Md</b>	Molecular Wt. of Stack Gas, Dry	28.844	lb/lb mole		
<b>Mw</b>	Molecular Wt. of Stack Gas, Wet	28.762	lb/lb mole		
<b>Cp</b>	Pitot Calibration Factor	0.866			
<b>Δ P</b>	Velocity Head, Average Square Root	0.327	in. H2O		
<b>Ts</b>	Stack Gas Temperature, Average	89.3	deg. F	549.3	deg. R
<b>As</b>	Area of Stack	3.69	sq ft	26.0	in. dia.
<b>Vs</b>	Stack Gas Velocity	19.26	ft/sec		
<b>Qa</b>	Actual Flow Rate	4,260	cfm		
<b>Qad</b>	Actual Flow Rate, Dry	4,228	dcfm		
<b>Q(std)</b>	Stack Gas Flow Rate	4,041	dscfm		
<b>An</b>	Nozzle Area	0.0005275	sq ft	0.311	in. dia.
<b>Theta</b>	Sampling Time	60	min.		
<b>I</b>	Isokinetics	90.2	%		

**FIELD DATA & CALCULATIONS SUMMARY**

Client: **Westfield Gln**  
 Site: **Riverdale**  
 Unit: **Trash Cyclone**

Date: **11/12/92**  
 Type: **T std - 60 F**  
 Run: **1-PM10**

<b>Vm</b>	Metered Sample Gas Volume	<b>35.516</b>	<b>dcf</b>		
<b>Lp</b>	Avg. Leak Rate	<b>0.000</b>	<b>cf</b>		
<b>Vh</b>	Leak Corrected Sample Gas Volume	<b>35.516</b>	<b>dcf</b>		
<b>Y</b>	Dry Gas Meter Calibration Factor	<b>0.976</b>			
<b>Pbar</b>	Barometric Pressure	<b>30.33</b>	<b>in. Hg</b>		
<b>Pg</b>	Static Pressure	<b>-0.05</b>	<b>in. H2O</b>		
<b>Ps</b>	Stack Pressure, Absolute	<b>30.33</b>	<b>in. Hg</b>		
<b>Δ H</b>	Dry Gas Meter Press. Differential, Average	<b>1.268</b>	<b>in. H2O</b>		
<b>Tm</b>	Dry Gas Meter Temperature, Average	<b>73.4</b>	<b>deg. F</b>	<b>533.4</b>	<b>deg. R</b>
<b>Vm(std)</b>	Sample Gas Volume	<b>34.3522</b>	<b>dscf</b>		
<b>Bws</b>	Water Content of Stack Gas	<b>0.007</b>		<b>0.7</b>	<b>%</b>
<b>CO2</b>	Carbon Dioxide, Dry	<b>0.1</b>	<b>%</b>		
<b>O2</b>	Oxygen, Dry	<b>20.9</b>	<b>%</b>		
<b>N2</b>	Nitrogen, Dry	<b>79.1</b>	<b>%</b>		
<b>Md</b>	Molecular Wt. of Stack Gas, Dry	<b>28.844</b>	<b>lb/lb mole</b>		
<b>Mw</b>	Molecular Wt. of Stack Gas, Wet	<b>28.768</b>	<b>lb/lb mole</b>		
<b>Cp</b>	Pitot Calibration Factor	<b>0.866</b>			
<b>Δ P</b>	Velocity Head, Average Square Root	<b>0.318</b>	<b>in. H2O</b>		
<b>Ts</b>	Stack Gas Temperature, Average	<b>74.1</b>	<b>deg. F</b>	<b>534.1</b>	<b>deg. R</b>
<b>As</b>	Area of Stack	<b>3.69</b>	<b>sq ft</b>	<b>26.0</b>	<b>in. dia.</b>
<b>Vs</b>	Stack Gas Velocity	<b>18.40</b>	<b>ft/sec</b>		
<b>Qa</b>	Actual Flow Rate	<b>4,071</b>	<b>cfm</b>		
<b>Qad</b>	Actual Flow Rate, Dry	<b>4,042</b>	<b>dcfm</b>		
<b>Q(std)</b>	Stack Gas Flow Rate	<b>3,989</b>	<b>dscfm</b>		
<b>An</b>	Nozzle Area	<b>0.0005275</b>	<b>sq ft</b>	<b>0.311</b>	<b>in. dia.</b>
<b>Theta</b>	Sampling Time	<b>60</b>	<b>min.</b>		
<b>I</b>	Isokinetics	<b>100.2</b>	<b>%</b>		

**FIELD DATA & CALCULATIONS SUMMARY**

Client: **Westfield Gin**  
 Site: **Riverdale**  
 Unit: **Trash Cyclone**

Date: **11/12/92**  
 Type: **T std - 60 F**  
 Run: **2-PH10**

<b>Vm</b>	Metered Sample Gas Volume	<b>36.734</b>	<b>dcf</b>		
<b>Lp</b>	Avg. Leak Rate	<b>0.000</b>	<b>cf</b>		
<b>Vh</b>	Leak Corrected Sample Gas Volume	<b>36.734</b>	<b>dcf</b>		
<b>Y</b>	Dry Gas Meter Calibration Factor	<b>0.976</b>			
<b>Pbar</b>	Barometric Pressure	<b>30.30</b>	<b>in. Hg</b>		
<b>Pg</b>	Static Pressure	<b>-0.05</b>	<b>in. H2O</b>		
<b>Ps</b>	Stack Pressure, Absolute	<b>30.30</b>	<b>in. Hg</b>		
<b>Δ H</b>	Dry Gas Meter Press. Differential, Average	<b>1.278</b>	<b>in. H2O</b>		
<b>Tm</b>	Dry Gas Meter Temperature, Average	<b>105.9</b>	<b>deg. F</b>	<b>565.9</b>	<b>deg. R</b>
<b>Vm(std)</b>	Sample Gas Volume	<b>33.4574</b>	<b>dscf</b>		
<b>Bws</b>	Water Content of Stack Gas	<b>0.004</b>		<b>0.4</b>	<b>%</b>
<b>CO2</b>	Carbon Dioxide, Dry	<b>0.1</b>	<b>%</b>		
<b>O2</b>	Oxygen, Dry	<b>20.9</b>	<b>%</b>		
<b>N2</b>	Nitrogen, Dry	<b>79.1</b>	<b>%</b>		
<b>Md</b>	Molecular Wt. of Stack Gas, Dry	<b>28.844</b>	<b>lb/lb mole</b>		
<b>Ms</b>	Molecular Wt. of Stack Gas, Wet	<b>28.801</b>	<b>lb/lb mole</b>		
<b>Cp</b>	Pitot Calibration Factor	<b>0.866</b>			
<b>Δ P</b>	Velocity Head, Average Square Root	<b>0.311</b>	<b>in. H2O</b>		
<b>Ts</b>	Stack Gas Temperature, Average	<b>80.5</b>	<b>deg. F</b>	<b>540.5</b>	<b>deg. R</b>
<b>As</b>	Area of Stack	<b>3.69</b>	<b>sq ft</b>	<b>26.0</b>	<b>in. dia.</b>
<b>Vs</b>	Stack Gas Velocity	<b>18.14</b>	<b>ft/sec</b>		
<b>Qa</b>	Actual Flow Rate	<b>4.014</b>	<b>cfm</b>		
<b>Qad</b>	Actual Flow Rate, Dry	<b>3.998</b>	<b>dcfm</b>		
<b>Q(std)</b>	Stack Gas Flow Rate	<b>3.895</b>	<b>dscfm</b>		
<b>An</b>	Nozzle Area	<b>0.0005275</b>	<b>sq ft</b>	<b>0.311</b>	<b>in. dia.</b>
<b>Theta</b>	Sampling Time	<b>60</b>	<b>min.</b>		
<b>I</b>	Isokinetics	<b>100.0</b>	<b>%</b>		

**FIELD DATA & CALCULATIONS SUMMARY**

Client: **Westfield Gas**  
 Site: **Riverdale**  
 Unit: **Trash Cycles**

Date: **11/12/92**  
 Type: **T std - 60 F**  
 Run: **3-PH10**

<b>Vm</b>	Metered Sample Gas Volume	<b>37.477</b>	<b>dcf</b>		
<b>Lp</b>	Avg. Leak Rate	<b>0.000</b>	<b>cf</b>		
<b>Vh</b>	Leak Corrected Sample Gas Volume	<b>37.477</b>	<b>dcf</b>		
<b>Y</b>	Dry Gas Meter Calibration Factor	<b>0.976</b>			
<b>Pbar</b>	Barometric Pressure	<b>30.21</b>	<b>in. Hg</b>		
<b>Pg</b>	Static Pressure	<b>-0.05</b>	<b>in. H2O</b>		
<b>Ps</b>	Stack Pressure, Absolute	<b>30.21</b>	<b>in. Hg</b>		
<b>ΔH</b>	Dry Gas Meter Press. Differential, Average	<b>1.321</b>	<b>in. H2O</b>		
<b>Tm</b>	Dry Gas Meter Temperature, Average	<b>98.0</b>	<b>deg. F</b>	<b>558.0</b>	<b>deg. R</b>
<b>Vm(std)</b>	Sample Gas Volume	<b>34.5171</b>	<b>dscf</b>		
<b>Bws</b>	Water Content of Stack Gas	<b>0.008</b>		<b>0.8</b>	<b>%</b>
<b>CO2</b>	Carbon Dioxide, Dry	<b>0.1</b>	<b>%</b>		
<b>O2</b>	Oxygen, Dry	<b>20.9</b>	<b>%</b>		
<b>N2</b>	Nitrogen, Dry	<b>79.1</b>	<b>%</b>		
<b>Md</b>	Molecular Wt. of Stack Gas, Dry	<b>28.844</b>	<b>lb/lb mole</b>		
<b>Ms</b>	Molecular Wt. of Stack Gas, Wet	<b>28.757</b>	<b>lb/lb mole</b>		
<b>Cp</b>	Pitot Calibration Factor	<b>0.866</b>			
<b>ΔP</b>	Velocity Head, Average Square Root	<b>0.320</b>	<b>in. H2O</b>		
<b>Ts</b>	Stack Gas Temperature, Average	<b>87.9</b>	<b>deg. F</b>	<b>547.9</b>	<b>deg. R</b>
<b>As</b>	Area of Stack	<b>3.69</b>	<b>sq ft</b>	<b>26.0</b>	<b>in. dia.</b>
<b>Vs</b>	Stack Gas Velocity	<b>18.84</b>	<b>ft/sec</b>		
<b>Qa</b>	Actual Flow Rate	<b>4,168</b>	<b>cfm</b>		
<b>Qad</b>	Actual Flow Rate, Dry	<b>4,135</b>	<b>dcfm</b>		
<b>Q(std)</b>	Stack Gas Flow Rate	<b>3,962</b>	<b>dscfm</b>		
<b>An</b>	Nozzle Area	<b>0.0005275</b>	<b>sq ft</b>	<b>0.311</b>	<b>in. dia.</b>
<b>Theta</b>	Sampling Time	<b>60</b>	<b>min.</b>		
<b>I</b>	Isokinetics	<b>101.4</b>	<b>%</b>		

ver. 1.3

BTC ENVIRONMENTAL  
EPA methods 2, 3, 4, 5, 6, 8

CONSTANTS & CONVERSIONS

Tstd = 60, 68, or 70 °F	1 in. Hg = 13.6 in. H2O
Pstd = 29.92 in. Hg	1 lb = 453.6 g
R = 21.85(in. Hg-cu ft/lb mole-°R)	1 lb = 7000 grain
Dw = 0.9982(g/ml)	1 g = 15.432 grain
MW(H2O) = 18.0 lb/lb mole	1 mg = 0.001 g
MW(Sulfur) = 32.03 lb/lb mole	1 hr = 60 min.
M(H2SO4) = 98.08 lb/lb mole	1 part/vol X = 1*10 <sup>6</sup> ppmv X
MW(SO2) = 64.06 lb/lb mole	1 bbl = 42 gal
K(H2SO4) = 0.5 mg-g mole/g-meq	M = 1000
K(SO2) = 0.5 mg-g mole/g-meq	La = 0.02 cfm
Kp = 85.49(ft/sec(sqrt(lb/lb mole-in.Hg/°R-in. H2O)))	
Kw,[cu ft/g-°R] = R / (453.6*MW(H2O)*Pstd)	
Kf,[scf-ppm/lb mole] = R * (Tstd+460) * (1*10 <sup>6</sup> ) / Pstd	

INTERMEDIATE CALCULATIONS

F,[scf/MMBtu] = F Factor * ( Tstd + 460 ) / 528
Ph,[in. Hg] = Pbar + ( ΔH / 13.6)
N2,[%] = 100 - (O2% + CO2%)
Vlc,[ml] = Ww / Dw
Qa,[cfm] = 60 * Vs * As
Qad,[dcfm] = Qa * (1 - Bws)

CFR 40 - EPA EQUATIONS

eq. 2-8	T[°R] = T[°F]+460
eq. 2-6	Ps, [in. Hg] = Pbar+(Pg/13.6)
eq. 5-3	Bws, [%] = Vw(std) / { Vw(std) + Vm(std) }
eq. 3-2	Md, [lb/lb-mole] = 0.44*CO2%+0.32*O2%+0.28*(N2%+CO%)
eq. 2-5	Ms, [lb/lb mol] = Md*(1-Bws)+(MW(H2O)*Bws )
eq. 5-2	Vw(std), [scf] = Ww * Kw * (Tstd+460)
eq. 5-1	Vn, [cf] = Vm - ((Lp-La) * Theta)
eq. 5-1	Vm(std), [sdcf] = Vm * Y * ( (Tstd+460) / (Tm+460) ) * Ph / Pstd
eq. 2-9	Vs, [ft./sec.] = Kp*Cp*(ΔP*(Ts+460))/( Ps*Ms)^0.5
eq. 2-10	Qstd, [dscfm] =Qad*(Tstd+460)*Ps/((Ts+460)*Pstd)
eq. 5-8	I,[%] =100*(Ts+460)*Vm(std)*Pstd/(60*Vs*Theta*An*Ps*(1-Bws)*(Tstd+460))
eq. 5-6	Cx, [grain/dscf] = Wx,g*15.432/Vm(std)
eq. 8-2,3	Wx, [mg] = (Vt-Vtb)*N(std)*(Vsoln/Valq)*MWx*Kx
	Cx, [grain/dscf] = Wx,mg*0.001*15.432/Vm(std)
	CWx, [grain/scf] = Cx*(1-Bws)
	CCx, [grain/dscf @ 12% CO2] = Cx*12.0/CO2%
	CWCx, [grain/scf @ 12% CO2%] = CCx
	CPx, [ppmv dry] = Cx*Kf/(MWx*7000)
	CPCx, [ppmv @ N% O2] = CPX * ((20.9-N%)/(20.9-O2%))
	CFx, [lb/hr] = Cx*Q(std)*60/7000
	CEx, [lb/MMBtu] = F*(Cx/7000)*(20.9/(20.9-O2%))
	CBx, [lb/bbl] = CEx*(Fuel Btu/MM)*(Fuel lb/gal)*42
	CEsx, [lb S/MMBtu] = CEx*(MW(S) / MWx)

Where x represents, Particulate, Sulfuric Acid, Sulfate, or Sulfur Dioxide respectively.

**III. WET TEST METHODS CALCULATIONS**

**CALCULATED EMISSION RESULTS**

Client: **Westfield Gin**  
Site: **Riverdale**  
Unit: **Trash Cyclone**

Date: **11/12/92**  
Type: **T std - 60 F**  
Run: **2-Part**

**PM10 PARTICULATE**

<b>WT</b>	Total Particulate Weight	0.1616	g
<b>Ct</b>	Total Particulate Emissions	<b>0.0773</b>	grain/dscf
<b>CFE</b>	Particulate Flow Rate	<b>2.65</b>	lb/hr
	+10 $\mu$ Particulate	<b>66.47</b>	%
	+10 $\mu$ Particulate	<b>1.76</b>	lb/hr
	-10 $\mu$ Particulate	<b>33.53</b>	%
	-10 $\mu$ Particulate	<b>0.89</b>	lb/hr

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**CALCULATED EMISSION RESULTS**

**Client: Westfield Gin**  
**Site: Riverdale**  
**Unit: Trash Cyclone**

**Date: 11/12/92**  
**Type: T ~~std~~ - 60 F**  
**Run: 3-Part**

**PM10 PARTICULATE**

<b>WT</b>	Total Particulate Weight	0.1741	g
<b>CE</b>	Total Particulate Emissions	<b>0.0826</b>	grain/dscf
<b>CFT</b>	Particulate Flow Rate	<b>2.86</b>	lb/hr
	+10 $\mu$ Particulate	<b>76.92</b>	%
	+10 $\mu$ Particulate	<b>2.20</b>	lb/hr
	-10 $\mu$ Particulate	<b>23.08</b>	%
	-10 $\mu$ Particulate	<b>0.66</b>	lb/hr

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**V. LABORATORY ANALYSIS**

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**IMPINGER WEIGHTS**

Client : Westfield Gin  
 Site : Riverdale  
 Unit : Tresh Cyclone

Date : 11/12/92  
 Job # : 23024  
 Lab # : 292-161

Run#/Box#: 1

Imp. #1: 

gross	576.9
tare	576.4
final	0.5

Imp. #2: 

gross	574.3
tare	573.2
final	1.1

Imp. #3: 

gross	460.2
tare	459.7
final	0.5

Imp. #4: 

gross	606.2
tare	603.8
final	2.4

**TOTAL** 4.5

Run#/Box#: 3

Imp. #1: 

gross	602.3
tare	601.4
final	0.9

Imp. #2: 

gross	602.2
tare	599.8
final	2.4

Imp. #3: 

gross	474.8
tare	473.7
final	1.1

Imp. #4: 

gross	588.8
tare	587.9
final	0.9

**TOTAL** 5.3

Run#/Box#: 2

Imp. #1: 

gross	591.2
tare	590.0
final	1.2

Imp. #2: 

gross	570.3
tare	570.1
final	0.2

Imp. #3: 

gross	440.7
tare	439.7
final	1.0

Imp. #4: 

gross	662.4
tare	662.3
final	0.1

**TOTAL** 2.5

Run#/Box#: \_\_\_\_\_

Imp. #1: 

gross	
tare	
final	0.0

Imp. #2: 

gross	
tare	
final	0.0

Imp. #3: 

gross	
tare	
final	0.0

Imp. #4: 

gross	
tare	
final	0.0

**TOTAL** 0.0

**PARTICULATE WEIGHTS : DATA & CALCULATIONS**

Client : Westfield Qin Date : 11/12/92  
Site : Riverdale Job # : 2304  
Unit : Trash Cyclone Lab # : 292-161  
Run : 1

**BLANKS**

Acetone (Avg) Volume: 100 ml  
Gross: 66.4630 gms. Tare: 66.4626 gms. Residue: 0.0004 gms.  
DI Water (Avg) Volume: 100 ml  
Gross: 64.8326 gms. Tare: 64.8319 gms. Residue: 0.0007 gms.

**WEIGHTS & VOLUMES**

Filter Gross: 0.4470 gms. Tare: 0.3995 gms. Net: 0.0475 gms.  
Probe Rinse -  
Acetone: 50 ml \* 4E-06 gms./ml = Net: -0.0002 gms.  
DI Water: 90 ml \* 7E-06 gms./ml = Net: -0.0006 gms.  
Gross: 67.1746 gms. Tare: 67.0712 gms. Net: 0.1034<sup>26</sup> gms.  
Impinger Catch -  
DI Water: 400 ml \* 7E-06 gms./ml = Net: -0.0028 gms.  
Total: 400 ml Aliquot: 400 ml  
Gross: 70.7631 gms. Tare: 70.7586 gms. Net: 0.0017 gms.  
**Total Particulate Weight = 0.1518 gms.**

**PARTICULATE WEIGHTS : DATA & CALCULATIONS**

Client : Westfield Gln Date : 11/12/92  
Site : Riverdale Job # : 2304  
Unit : Trash Cyclone Lab # : 292-161  
Run : 2

**BLANKS**

Acetone (Avg) Volume: 100 ml  
Gross: 66.4630 gms. Tare: 66.4626 gms. Residue: 0.0004 gms.  
DI Water (Avg) Volume: 100 ml  
Gross: 64.8326 gms. Tare: 64.8319 gms. Residue: 0.0007 gms.

**WEIGHTS & VOLUMES**

Filter Gross: 0.4528 gms. Tare: 0.3983 gms. Net: 0.0545 gms.  
Probe Rinse -  
Acetone: 50 ml \* 4E-06 gms./ml = Net: -0.0002 gms.  
DI Water: 120 ml \* 7E-06 gms./ml = Net: -0.0008 gms.  
Gross: 68.0399 gms. Tare: 67.9420 gms. Net: 0.0979 gms.  
Impinger Catch -  
DI Water: 400 ml \* 7E-06 gms./ml = Net: -0.0028 gms.  
Total: 400 ml Aliquot: 400 ml  
Gross: 66.6240 gms. Tare: 66.6110 gms. Net: 0.0102 gms.  
**Total Particulate Weight = 0.1616 gms.**

**PARTICULATE WEIGHTS : DATA & CALCULATIONS**

Client : Westfield Gin                      Date : 11/12/92  
Site : Riverdale                              Job # : 2304  
Unit : Trash Cyclone                      Lab # : 292-161  
Run : 3

**BLANKS**

Acetone (Avg)                                      Volume: 100 ml  
Gross: 66.4630 gms.      Tare: 66.4626 gms.      Residue: 0.0004 gms.  
  
DI Water (Avg)                                      Volume: 100 ml  
Gross: 64.8326 gms.      Tare: 64.8319 gms.      Residue: 0.0007 gms.

**WEIGHTS & VOLUMES**

Filter      Gross: 0.4561 gms.      Tare: 0.4141 gms.      Net: 0.0420 gms.  
  
Probe Rinse -  
Acetone: 50 ml \* 4E-06 gms./ml      =      Net: -0.0002 gms.  
DI Water: 120 ml \* 7E-06 gms./ml      =      Net: -0.0008 gms.  
Gross: 67.4900 gms.      Tare: 67.3575 gms.      Net: 0.1325 gms.  
  
Impinger Catch -  
DI Water: 400 ml \* 7E-06 gms./ml      =      Net: -0.0028 gms.  
  
Total: 400 ml      Aliquot: 400 ml  
Gross: 67.5278 gms.      Tare: 67.5244 gms.      Net: 0.0006 gms.  
  
**Total Particulate Weight      =      0.1741 gms.**

**PM10 PARTICULATE WEIGHTS : DATA & CALCULATIONS**

Client : <u>Westfield Gin</u>	Date : <u>11/12/92</u>
Site : <u>Riverdale</u>	Job # : <u>23024</u>
Unit : <u>Trash Cyclone</u>	Lab # : <u>292-161</u>
Run : <u>1</u>	

**BLANKS**

Acetone (Avg)	Volume: <u>100</u> ml
Gross: <u>66.4630</u> gms.	Tare: <u>66.4626</u> gms. Residue: <u>0.0004</u> gms.
DI Water (Avg)	Volume: <u>100</u> ml
Gross: <u>64.8326</u> gms.	Tare: <u>64.8319</u> gms. Residue: <u>0.0007</u> gms.

**WEIGHTS & VOLUMES**

Filter	Gross: <u>0.0954</u> gms.	Tare: <u>0.0889</u> gms.	Net: <u>0.0065</u> gms.
Filter	Gross: <u>0.0975</u> gms.	Tare: <u>0.0884</u> gms.	Net: <u>0.0091</u> gms.
+ 10 μ Rinse -			
Acetone:	<u>85</u> ml * <u>4E-06</u> gms./ml	=	Net: <u>-0.0003</u> gms.
DI Water:	<u>85</u> ml * <u>7E-06</u> gms./ml	=	Net: <u>-0.0006</u> gms.
Gross:	<u>66.4497</u> gms.	Tare: <u>66.3538</u> gms.	Net: <u>0.0959</u> gms.
	<b>+ 10μ Total Weight</b>	=	<u>0.1106</u> gms.
Filter	Gross: <u>0.1545</u> gms.	Tare: <u>0.1120</u> gms.	Net: <u>0.0425</u> gms.
- 10 μ Rinse			
DI Water:	<u>350</u> ml * <u>7E-06</u> gms./ml	=	Net: <u>-0.0024</u> gms.
Acetone:	<u>50</u> ml * <u>4E-06</u> gms./ml	=	Net: <u>-0.0002</u> gms.
Total:	<u>400</u> ml	Allquot: <u>400</u> ml	
Gross:	<u>66.0448</u> gms.	Tare: <u>66.0394</u> gms.	Net: <u>0.0028</u> gms.
	<b>- 10μ Total Weight</b>	=	<u>0.0453</u> gms.
	<b>Total Weight</b>	=	<u>0.1558</u> gms.
	<b>+ 10 μ</b>		<u>70.96</u> %
	<b>- 10 μ</b>		<u>29.04</u> %

**PM10 PARTICULATE WEIGHTS : DATA & CALCULATIONS**

Client : <u>Westfield Gln</u>	Date : <u>11/12/92</u>
Site : <u>Riverdale</u>	Job # : <u>23024</u>
Unit : <u>Trash Cyclone</u>	Lab # : <u>292-161</u>
Run : <u>2</u>	

**BLANKS**

Acetone (Avg)	Volume: <u>100</u> ml
Gross: <u>66.4630</u> gms.	Tare: <u>66.4626</u> gms. Residue: <u>0.0004</u> gms.
DI Water (Avg)	Volume: <u>100</u> ml
Gross: <u>64.8326</u> gms.	Tare: <u>64.8319</u> gms. Residue: <u>0.0007</u> gms.

**WEIGHTS & VOLUMES**

Filter	Gross: <u>0.0941</u> gms.	Tare: <u>0.0884</u> gms.	Net: <u>0.0057</u> gms.
Filter	Gross: <u>0.0951</u> gms.	Tare: <u>0.0883</u> gms.	Net: <u>0.0068</u> gms.
<b>+10 μ Rinse -</b>			
Acetone:	<u>85</u> ml * <u>4E-06</u> gms./ml	=	Net: <u>-0.0003</u> gms.
DI Water:	<u>85</u> ml * <u>7E-06</u> gms./ml	=	Net: <u>-0.0006</u> gms.
	Gross: <u>65.6247</u> gms.	Tare: <u>65.5115</u> gms.	Net: <u>0.1132</u> gms.
	<b>+10μ Total Weight</b>	=	<u>0.1248</u> gms.
Filter	Gross: <u>0.1607</u> gms.	Tare: <u>0.1162</u> gms.	Net: <u>0.0445</u> gms.
<b>-10 μ Rinse</b>			
DI Water:	<u>450</u> ml * <u>7E-06</u> gms./ml	=	Net: <u>-0.0031</u> gms.
Acetone:	<u>50</u> ml * <u>4E-06</u> gms./ml	=	Net: <u>-0.0002</u> gms.
	Total: <u>500</u> ml Aliquot: <u>500</u> ml		
	Gross: <u>67.2598</u> gms.	Tare: <u>67.2380</u> gms.	Net: <u>0.0185</u> gms.
	<b>-10μ Total Weight</b>	=	<u>0.0630</u> gms.
	<b>Total Weight</b>	=	<u>0.1877</u> gms.
	<b>+ 10 μ</b>		<u>66.47</u> %
	<b>- 10 μ</b>		<u>33.53</u> %

**PM10 PARTICULATE WEIGHTS : DATA & CALCULATIONS**

Client : <u>Westfield Gln</u>	Date : <u>11/12/92</u>
Site : <u>Riverdale</u>	Job # : <u>23024</u>
Unit : <u>Trash Cyclone</u>	Lab # : <u>292-161</u>
Run : <u>3</u>	

**BLANKS**

Acetone (Avg)	Volume: <u>100</u> ml
Gross: <u>66.4630</u> gms.	Tare: <u>66.4626</u> gms. Residue: <u>0.0004</u> gms.
DI Water (Avg)	Volume: <u>100</u> ml
Gross: <u>64.8326</u> gms.	Tare: <u>64.8319</u> gms. Residue: <u>0.0007</u> gms.

**WEIGHTS & VOLUMES**

Filter	Gross: <u>0.0898</u> gms.	Tare: <u>0.0857</u> gms.	Net: <u>0.0041</u> gms.
Filter	Gross: <u>0.0924</u> gms.	Tare: <u>0.0883</u> gms.	Net: <u>0.0041</u> gms.

+ 10 μ Rinse -

Acetone:	<u>85</u> ml * <u>4E-06</u> gms./ml	=	Net: <u>-0.0003</u> gms.
DI Water:	<u>85</u> ml * <u>7E-06</u> gms./ml	=	Net: <u>-0.0006</u> gms.
Gross:	<u>66.1568</u> gms.	Tare: <u>66.0166</u> gms.	Net: <u>0.1402</u> gms.

**+ 10μ Total Weight = 0.1475 gms.**

Filter	Gross: <u>0.1560</u> gms.	Tare: <u>0.1139</u> gms.	Net: <u>0.0421</u> gms.
--------	---------------------------	--------------------------	-------------------------

- 10 μ Rinse

DI Water:	<u>350</u> ml * <u>7E-06</u> gms./ml	=	Net: <u>-0.0024</u> gms.
Acetone:	<u>50</u> ml * <u>4E-06</u> gms./ml	=	Net: <u>-0.0002</u> gms.
Total:	<u>400</u> ml	Aliquot: <u>400</u> ml	
Gross:	<u>66.8649</u> gms.	Tare: <u>66.8601</u> gms.	Net: <u>0.0022</u> gms.

**- 10μ Total Weight = 0.0443 gms.**

**Total Weight = 0.1917 gms.**

+ 10 μ	<u>76.92</u> %
- 10 μ	<u>23.08</u> %

BTC Environmental, Incorporated  
1536 Eastman Avenue, Suite B  
Ventura, CA. 93003  
(805) 644-1095

Prepared For: BTCE Air Department December 7, 1992

ATTENTION: Tom Porter

Laboratory No: 922874 Job No: 292-161  
Date Received: 13-NOV-92 Sampled By: Cam  
Client: West Field

RESULTS

On November 13, 1992, Twenty-six (26) samples were received for analysis by BTC Environmental, Inc. The samples were identified and assigned the lab numbers listed below. This report consists of 2 pages excluding the cover letter.

<u>SAMPLE DESCRIPTION</u>	<u>BTCE LAB NUMBER</u>
1	92287401
2	92287402
3	92287403
4	92287404
5	92287405
6	92287406
7	92287407
8	92287408
9	92287409
10	92287410
11	92287411
12	92287412
13	92287413
14	92287414
15	92287415
16	92287416
17	92287417

Dan Farah  
Dan A. Farah, Ph.D  
Director - Analytical Operations

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The test results reported represent only the items being tested and may not represent the entire material from which the sample was taken.

BTC Environmental, Incorporated  
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Ventura, CA. 93003  
(805) 644-1095

- CONTINUED -

<u>SAMPLE DESCRIPTION</u>	<u>BTCE LAB NUMBER</u>
18	92287418
19	92287419
20	92287420
21	92287421
22	92287422
23	92287423
24	92287424
25	92287425
26	92287426

Dan Farah  
Dan A. Farah, Ph.D  
Director - Analytical Operations

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The test results reported represent only the items being tested and may not represent the entire material from which the sample was taken.

10/2

PARTICULATE ANALYSIS WEIGHT SHEET

CLIENT: WESTFIELD  
 SITE: \_\_\_\_\_  
 UNIT: \_\_\_\_\_

DATE: \_\_\_\_\_  
 JOB#: 292-161  
 LAB#: 922874

Flask #	Sample ID	Final Wght	Tare Wght
45	170ml -4	66.4496 4498	66.3537 .3540
46	400ml -5	66.0448 .0448	66.0392 .0395
48	170ml -9	65.6246 .6248	65.5115 .5115
49	500ml -10	67.2597 .2598	67.2378 .2382
50	170ml -14	66.1567 .1568	66.0165 .0167
51	400ml -15	66.8648 .8650	66.8600 .8602
53	140ml #1 } -16	67.1745 .1746	67.0711 .0714
54	400ml } -17	70.7629 .7633	70.7584 .7588
55	170ml #2 } -19	68.0998 .0900	67.9419 .9421

29

2 of 2

PARTICULATE ANALYSIS WEIGHT SHEET

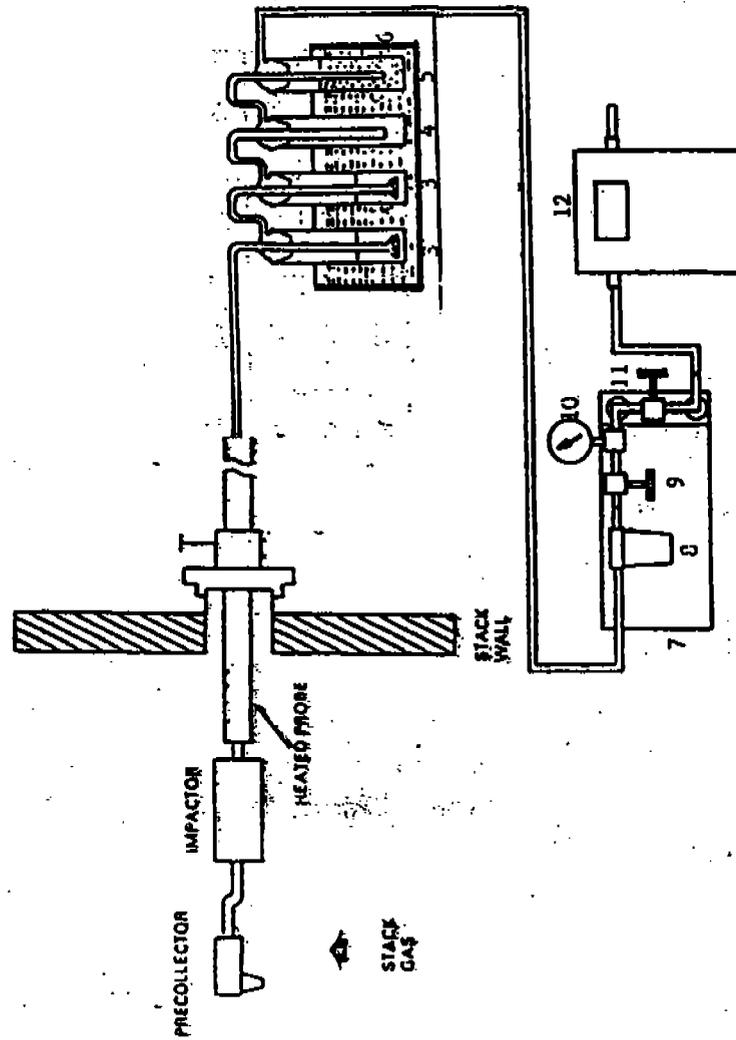
CLIENT: WESTFIELD  
 SITE: \_\_\_\_\_  
 UNIT: \_\_\_\_\_

DATE: \_\_\_\_\_  
 JOB#: 292-161  
 LAB#: 922874

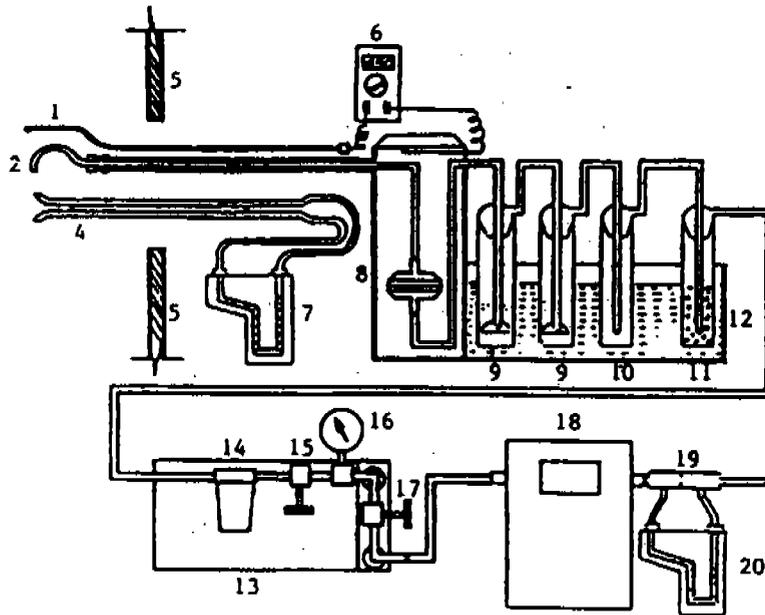
Flask #	Sample ID	Final Wght	Tare Wght
56	#2 (-20) 400ml	66.6239 .6241	66.6109 .6111 ✓
58	r (-22) 170ml	67.4879 .4901	67.3575 .3575 ✓
59	#3 (-23) 400ml	67.5278 .5277	<del>67.5243</del> .5245 ✓
60	-25 100ml BK	66.4629 .4631	<del>66.4626</del> 4628 ✓
62	-26 100ml DI	64.8325 .8327	64.8318 .8320 ✓
FILTERS		(21) 0.0954 (253)	0.0889 ✓
		(22) 0.0975 252	0.0884 ✓
		(23) 0.1545 228	0.1120 ✓
		(26) 0.0941 268	0.0884 ✓
		(27) 0.0951 269	0.0883 ✓
		(28) 0.1607 236	0.1142 ✓
		(29) 0.0898 266	0.0857 ✓
		(30) 0.0924 267	0.0883 ✓
		(31) 0.1560 235	0.1139 ✓
		(32) 0.4470 231	0.3995 ✓
		(21) 0.4528 232	0.3983 ✓
		(24) 0.4561 233	0.4141 ✓

**VI. METHODOLOGY**

PM-10 PARTICULATE SAMPLING TRAIN



- |   |   |
|---|---|
| 1. Stack Wall                               | 8. Filter for Pump                        |
| 2. Probe                                    | 9. Metering Valve                         |
| 3. Impinger with 100 ml of H <sub>2</sub> O | 10. Vacuum Gauge                          |
| 4. Empty Bubbler                            | 11. By-pass Valve                         |
| 5. Bubbler with Silica Gel                  | 12. Temperature Compensated Dry Gas Meter |
| 6. Ice Bath                                 |   |
| 7. Sealed Pump (Leak Free)                  |   |

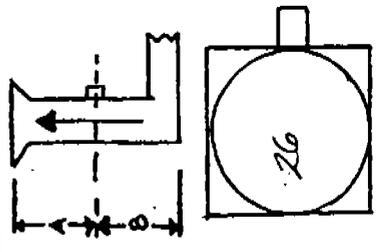


- |   |   |
|---|---|
| 1. Temperature Sensor                       | 11. Bubbler with Silica Gel               |
| 2. Nozzle                                   | 12. Ice Bath                              |
| 3. Glass lined Stainless Steel Probe-Heated | 13. Sealed Pump (Leak Free)               |
| 4. S-type Pitot Tube                        | 14. Filter for Pump                       |
| 5. Stack Wall                               | 15. Metering Valve                        |
| 6. Temperature Sensor Meter                 | 16. Vacuum Gauge                          |
| 7. Pitot Tube Inclined Manometer            | 17. By-pass Valve                         |
| 8. Heated Box with Filter                   | 18. Temperature Compensated Dry Gas Meter |
| 9. Impinger with 100 ml H <sub>2</sub> O    | 19. Orifice                               |
| 10. Empty Bubbler                           | 20. Orifice Inclined Manometer            |

Particulate Sampling Train Set-up with Heated Probe and Heated Filter

**VII. RAW DATA**

PLANT: 1. Westfield Gas  
 LOCATION: West Mt. Whitney  
 COUNTY: Sierra  
 UNIT: Stack Stack Pile  
 DATE: 11/12/82  
 RUN NO./METHOD: 15 PAT  
 COLD BOX NO.: 1  
 METER BOX NO.: D  
 METER FACTOR: 1.0392 / 2.4338  
 PITOT # FACTOR: 1.066  
 PYROMETER #: T7  
 MAGNETIC FACTOR: APM-15 ΔH M-12



FILTER NO. 2-31  
 AMBIENT TEMP.: 55  
 BARAMETRIC PRESS. IN. HG.: 30.33  
 ASSUMED MOISTURE: 0.07  
 HEATER BOX SETTING: 6  
 PROBE LENGTH, FT.: 6  
 NOZZLE DIAMETER, IN.: 3/11  
 PROBE HEATER SETTING: on  
 APPROX. WIND VEL., MPH: on  
 SAMPLE BOX TEMP., (F): on  
 STATIC PRESSURE: -0.05 \*H2O  
 OFFSET: 0 in. PORT DIA.: 3 in. (M-F)

TRAVERSE POINT NUMBER	DISTANCE INCHES	O2 (%)	CO2 (%)	SAMPLE TIME MIN.	STACK TEMP. (Ts), F	VELOCITY IN. H2O		PRESSURE DIFF ORIFICE METER (ΔH)	DRY GAS SAMPLE VOLUME (VM), FT.	GAS SAMPLE TEMP. @ DRY GASMETER		PUMP VACUUM IN. HG.	TEMP. LAST IMPINGER (F)
						ΔP	ΔP			INLET (Tm),	OUTLET (Tm)		
1	67			0.0	72	.11	.332	1.38	290.911	57	57		
2	87			7.5	69	.11	.332	1.38	295.1	71	61		
3	50			7.5	69	.11	.332	1.38	277.1	68	65		
4	80			22.5	71	.10	.316	1.25	302.9	97	65		
5	126			30	74	.10	.316	1.25	307.0	107	76		
6	209			37.5	77	.10	.316	1.25	311.1	110	83		
7	233			45	77	.08	.283	1.00	314.2	111	87		
8	252			52.5	82	.07	.265	.88	315.7	113	92		
				60					322.047				
				10.61									
	ZERO												
	SPAN												
AVERAGE		20.9	0.05	60	74.1		.311	1.22	31.76		83.8		

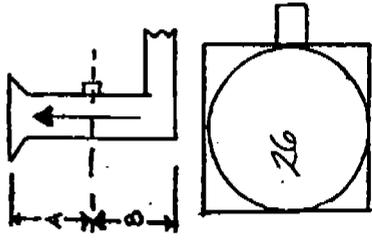
  

PITOT LEAK CHECK:		SAMPLE TRAIN LEAK:	
BEFORE:	TOP ΔP = 3.7	BEFORE:	CRM@ 12 IN. HG.
AFTER:	ΔP = 3.7	AFTER:	CRM@ 70 IN. HG.
	TOP ΔP = 2.0		
	ΔP = 1.0		

COMMENTS: PURGE 12:51

171089  
 367872  
 367872

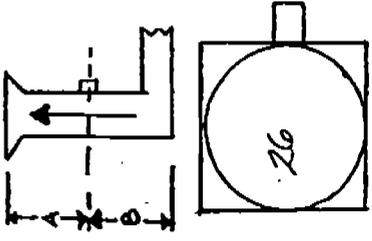
PLANT: West Mt. Whitney  
 LOCATION: West Mt. Whitney  
 COUNTY: Sierra  
 UNIT: Sierra Steel Piler  
 DATE: 11/12/92  
 RUN NO. METHOD: B-1.5 PAT  
 COLD BOX NO.: 2  
 METER BOX NO.: D  
 METER FACTOR: 1.0312 AND 2.4338  
 PITOT # FACTOR: #1 8666  
 PYROMETER #: T7  
 MAGNEHELIC FACTOR: APM-15  $\Delta H M-12$   
1.015 0.994



FILTER NO. Z-52  
 AMBIENT TEMP.: 68  
 BARMETRIC PRESS., IN. HG.: 30.30  
 ASSUMED MOISTURE: 0.07  
 HEATER BOX SETTING: On  
 PROBE LENGTH, FT.: 6  
 NOZZLE DIAMETER, IN.: 3/16  
 PROBE HEATER SETTING: On  
 APPROX. WIND VEL., MPH: Cal  
 SAMPLE BOX TEMP., (F): 60  
 STATIC PRESSURE: -1.09 "H<sub>2</sub>O  
 OFFSET: 0 in. PORT DIA.: 3 in. (M-F)

TRAVERSE POINT NUMBER	DISTANCE INCHES	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	SAMPLE TIME MIN.	STACK TEMP. (T <sub>s</sub> ), F	VELOCITY IN. H <sub>2</sub> O		PRESSURE DIFF ORIFICE METER (ΔH) IN. H <sub>2</sub> O	DRY GAS SAMPLE VOLUME (VM), FT.	GAS SAMPLE TEMP. @ DRY GAS METER (T <sub>m</sub> ), (F)		PUMP VACUUM IN. HG.	TEMP. LAST IMPINGER (F)
						ΔP	ΔP			INLET	OUTLET		
1	6.7			0.0	78	.11		1.60	377.015	88	88		
2	2.7			7.5	78	.12		1.60	326.1	102	93	2	
3	5.0			15	77	.11		1.46	330.9	113	93		
4	8.4			22.5	80	.105		1.40	335.6	116	95		
5	7.6			30	81	.10		1.33	337.6	119	98	1	
6	20.9			37.5	81	.10		1.33	343.5	120	101		
7	23.3			45	82	.08		1.06	347.8	123	103		
8	25.2			52.5	87	.09		1.10	351.4	125	110		
				60					356.278				
AVERAGE													
PITOT LEAK CHECK:						BEFORE: <u>4.7</u>		BOTTOM AP = <u>4.7</u>		BEFORE: <u>0.002</u>		SAMPLE TRAIN LEAK: CRM@ <u>15</u> IN. HG.	
ZERO						AFTER: <u>4.7</u>		TOP AP = <u>4.0</u>		AFTER: <u>0.005</u>		CRM@ <u>6</u> IN. HG.	
SPAN						BOTTOM AP = <u>3.1</u>		TOP AP = <u>2.8</u>		PURGE		<u>13.31</u>	
						AP = <u>2.9</u>				COMMENTS:			

PLANT: 1. Y&C-200 Gas  
 LOCATION: West Mt. Whitney  
 COUNTY: Sierra  
 UNIT: STRAK 21000 Pilew  
 DATE: 11/12/92  
 RUN NO/METHOD: 3/5 PACT  
 COLD BOX NO.: 0  
 METER BOX NO.: D  
 METER FACTOR: 1.0392 / AW 24338  
 PITOT #/FACTOR: 01 8666  
 PYROMETER #: T7  
 MAGNEHELIC FACTOR: APM-15 ΔH M-12  
1.015  
0.994



FILTER NO. 2-23  
 AMBIENT TEMP.: 77  
 BARMETRIC PRESS., IN. HG.: 30.21  
 ASSUMED MOISTURE: 0.07  
 HEATER BOX SETTING: 0.0  
 PROBE LENGTH, FT.: 0  
 NOZZLE DIAMETER, IN.: 3/16  
 PROBE HEATER SETTING: on  
 APPROX. WIND VEL., MPH: 0.0  
 SAMPLE BOX TEMP., (F): 0.0  
 STATIC PRESSURE: -0.05 "H2O  
 OFFSET: 0 in. PORT DIA.: 3 in. (M-F)

TRAVERSE POINT NUMBER	DISTANCE INCHES	O2 (%)	CO2 (%)	SAMPLE TIME MIN.	STACK TEMP. (Ts) F	VELOCITY IN. H2O		PRESSURE DIFF ORIFICE METER (ΔH) IN. H2O	DRY GAS SAMPLE VOLUME (VM), FT.	GAS SAMPLE TEMP. @ DRY GAS METER (Tm),		PUMP VACUUM IN. HG.	TEMP. LAST IMPINGER (F)
						ΔP	ΔP			INLET	OUTLET		
1	6.7			0.0	81	0.08		1.00	355.465	80	81		
2	2.7			2.5	83	.11		1.41	359.5	101	93		
3	5.0			1.5	93	.11		1.28	313.7	107	98	52	
4	8.4			2.6	88	.11		1.422	317.5	115	93		
5	7.6			3.0	87	.11		1.43	371.3	120	97		
6	20.9			37.5	91	.12		1.57	278.1	124	102		
7	23.3			45	94	.12		1.57	380.5	127	105		
8	25.2			52.5	95	.11		1.49	381.8	130	109		
				60					389.030				
				7.80									
	ZERO												
	SPAN												
AVERAGE		20.9	0.05	1.0	89.75			1.390	33.865		105.1		

PITOT LEAK CHECK:  
 BEFORE: TOP ΔP = 2.2 BOTTOM ΔP = 2.3  
 AFTER: TOP ΔP = 2.9 BOTTOM ΔP = 2.8  
 ΔP = 2.4 ΔP = 2.8  
 ΔP = 3.0 ΔP = 2.8

SAMPLE TRAIN LEAK:  
 BEFORE: 0.008 IN. HG. CRM@ 17  
 AFTER: 0.008 IN. HG. CRM@ 17

COMMENTS: PURGE 13.36



**VIII. QUALITY ASSURANCE**

**MAGNEHELIC CALIBRATION**

DATE: 8/18/92  
 GAGE ID # M-1  
 RANGE 0-5 in. H2O

SCHEDULED CALIBRATION:  
 SEMI ANNUAL   
 BI-MONTHLY   
 OTHER

REFERENCE  
 ID # 0-10" DWYER MANO

**LEAK CHECK :**

System:	† Set @ 10 in. H2O	vacuum 10 in. P F	pressure 10 in. P F
Point:	†† Set @ 90 % FS in. H2O	vacuum in. P F	pressure in. P F

Point	Incline Delta P Pinc	Magnehelic Delta P Pmag	% Deviation (Pinc-Pmag)/Pinc x 100
1	1.00	1.00	0.000%
	1.00	1.00	0.000%
	1.00	1.00	0.000%
average	1.00	1.00	** 0.000%
2	2.00	2.00	0.000%
	2.00	2.00	0.000%
	2.00	2.00	0.000%
average	2.00	2.00	** 0.000%
3	3.00	2.94	2.000%
	3.00	2.94	2.000%
	3.00	2.94	2.000%
average	3.00	2.94	** 2.000%
4	4.00	3.92	2.000%
	4.00	3.92	2.000%
	4.00	3.91	2.250%
average	4.00	3.92	** 2.083%
5	5.00	4.95	1.000%
	5.00	4.95	1.000%
	5.00	4.95	1.000%
average	5.00	4.95	** 1.000%

STANDARD CORRECTION FACTOR  
 AVERAGE DEVIATION  
 STANDARD DEVIATION  
 95% CONFIDENCE INTERVAL  
 PRECISION( within +/- 3%)

1.010
0.010
0.009
0.023
-1.00

† If pressure or vacuum decreases by more than 1 in. in 5 minutes then remove from service.  
 †† If pressure or vacuum decreases by more than 5% in 5 minutes then remove from service.  
 \*\* These values must be within +/- 5% before the magnehelic can be put into operation.

Calibration by: KK Reviewed by: \_\_\_\_\_

48

**MAGNEHELIC CALIBRATION**

DATE: 8/18/92  
 GAGE ID # M-2  
 RANGE 0-5 in. H2O

SCHEDULED CALIBRATION:  
 SEMI ANNUAL   
 BI-MONTHLY   
 OTHER

REFERENCE ID # 0-2

**LEAK CHECK:**

System:	† Set @ 10 in. H2O	vacuum 10 in. P F	pressure 10 in. P F
Point:	†† Set @ 90 % FS in. H2O	vacuum in. P F	pressure in. P F

Point	Incline Delta P Pinc	Magnehelic Delta P Pmag	% Deviation (Pinc-Pmag)/Pinc x 100
1	0.50	0.49	2.000%
	0.50	0.49	2.000%
	0.50	0.49	2.000%
average	0.50	0.49	** 2.000%
2	1.00	1.00	0.000%
	1.00	1.00	0.000%
	1.00	1.00	0.000%
average	1.00	1.00	** 0.000%
3	1.50	1.50	0.000%
	1.50	1.50	0.000%
	1.50	1.50	0.000%
average	1.50	1.50	** 0.000%
4	1.75	1.76	0.571%
	1.75	1.76	0.571%
	1.75	1.76	0.571%
average	1.75	1.76	** 0.571%
5	2.00	2.00	0.000%
	2.00	2.00	0.000%
	2.00	2.00	0.000%
average	2.00	2.00	** 0.000%

**STANDARD CORRECTION FACTOR**  
 AVERAGE DEVIATION  
 STANDARD DEVIATION  
 95% CONFIDENCE INTERVAL  
 PRECISION( within +/- 3%)

1.003
0.005
0.008
0.019
-1.00

† If pressure or vacuum decreases by more than 1 in. in 5 minutes then remove from service.  
 †† If pressure or vacuum decreases by more than 5% in 5 minutes then remove from service.  
 \*\* These values must be within +/- 5% before the magnehelic can be put into operation.

Calibration by: KK

Reviewed by: \_\_\_\_\_

**MAGNEHELIC CALIBRATION**

DATE: 8/18/92  
 GAGE ID # M-15  
 RANGE 0-10.0 in. H2O

SCHEDULED CALIBRATION:

SEMI ANNUAL   
 BI-MONTHLY   
 OTHER

REFERENCE ID # M-15

**LEAK CHECK:**

System:	† Set @ 10 in. H2O	vacuum 10 in. P F	pressure 10 in. P F
Point:	†† Set @ 90 % FS in. H2O	vacuum in. P F	pressure in. P F

Point	Incline Delta P Pinc	Magnehelic Delta P Pmag	% Deviation (Pinc-Pmag)/Pinc x 100
1	1.00	1.00	0.000%
	1.00	1.00	0.000%
	1.00	1.00	0.000%
average	1.00	1.00	** 0.000%
2	2.00	1.95	2.500%
	2.00	1.95	2.500%
	2.00	1.95	2.500%
average	2.00	1.95	** 2.500%
3	3.00	2.95	1.667%
	3.00	2.95	1.667%
	3.00	2.95	1.667%
average	3.00	2.95	** 1.667%
4	4.00	3.95	1.250%
	4.00	3.95	1.250%
	4.00	3.95	1.250%
average	4.00	3.95	** 1.250%
5	5.00	4.90	2.000%
	5.00	4.90	2.000%
	5.00	4.90	2.000%
average	5.00	4.90	** 2.000%

**STANDARD CORRECTION FACTOR**

AVERAGE DEVIATION  
 STANDARD DEVIATION  
 95% CONFIDENCE INTERVAL  
 PRECISION( within +/- 3%)

1.015
0.015
0.008
0.021
-1.00

† If pressure or vacuum decreases by more than 1 in. in 5 minutes then remove from service.  
 †† If pressure or vacuum decreases by more than 5% in 5 minutes then remove from service.  
 \*\* These values must be within +/- 5% before the magnehelic can be put into operation.

Calibration by: K.K

Reviewed by: \_\_\_\_\_

### MAGNEHELIC CALIBRATION

DATE: 8/18/92  
 GAGE ID # M-12  
 RANGE 0-10.0 in. H2O

SCHEDULED CALIBRATION:  
 SEMI ANNUAL   
 BI-MONTHLY   
 OTHER

REFERENCE ID # M-12

**LEAK CHECK:**

System:	† Set @ 10 in. H2O	vacuum 10 in. P F	pressure 10 in. P F
Point:	†† Set @ 90 % FS in. H2O	vacuum in. P F	pressure in. P F

Point	Incline Delta P <i>Pinc</i>	Magnehelic Delta P <i>Pmag</i>	% Deviation $(Pinc - Pmag) / Pinc \times 100$
1	0.50	0.52	4.000%
	0.50	0.52	4.000%
	0.50	0.52	4.000%
	average	0.50	0.52
2	1.00	1.02	2.000%
	1.00	1.02	2.000%
	1.00	1.02	2.000%
	average	1.00	1.02
3	1.50	1.48	1.333%
	1.50	1.48	1.333%
	1.50	1.48	1.333%
	average	1.50	1.48
4	1.75	1.75	0.000%
	1.75	1.75	0.000%
	1.75	1.75	0.000%
	average	1.75	1.75
5	2.00	1.97	1.500%
	2.00	1.97	1.500%
	2.00	1.97	1.500%
	average	2.00	1.97

STANDARD CORRECTION FACTOR  
 AVERAGE DEVIATION  
 STANDARD DEVIATION  
 95% CONFIDENCE INTERVAL  
 PRECISION( within +/- 3%)

0.994
0.018
0.013
0.032
-0.98

† If pressure or vacuum decreases by more than 1 in. in 5 minutes then remove from service.  
 †† If pressure or vacuum decreases by more than 5% in 5 minutes then remove from service.  
 \*\* These values must be within +/- 5% before the magnehelic can be put into operation.

Calibration by: K.R.K

Reviewed by: \_\_\_\_\_



1536 Eastman Avenue  
Ventura, CA 93003  
(805) 644-1095

CHAIN OF CUSTODY RECORD

Address: \_\_\_\_\_

Phone #: \_\_\_\_\_ Contact: \_\_\_\_\_

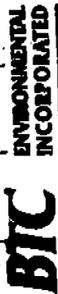
BILL 3 of 3 MIC 22A

PROJ. NO.	PROJECT NAME	SAMPLE NO.	DATE	TIME	GRAB	SAMPLE I.D.	NO. OF CONTAINERS	REMARKS	CHECK IF RUSH	
292-161	West Field		11/12			Filter 2-63 Run1	1	<p>Table Reader BOSTON</p> <p>Results w/ neg</p>		
						Filter 2-62 Run1	1			
						Filter 2-28 Run1	1			
						Front 1/2 Run1	1			
						Back 1/2 Run1	1			
						Filter 2-68 Run2	1			
						Filter 2-69 Run2	1			
						Filter 2-36 Run2	1			
						Front 1/2 Run2	1			
						Back 1/2 Run2	1			
						Filter 2-66 Run3	1			
						Filter 2-67 Run3	1			
						Filter 2-35 Run3	1			
						Front 1/2 Run3	1			
						Back 1/2 Run3	1			

The undersigned hereby acknowledges having received a copy of the Fee Schedule/General Information and Conditions, the provisions of which are a part of this agreement.

Received by: (Signature)	Received by: (Signature)	Date/Time	Date/Time
		11/12/93 9:30	
Received for Laboratory by: (Signature)	Received for Laboratory by: (Signature)	Name	Address
		Yena Dime	
Received by: (Signature)	Received by: (Signature)	Phone No.	

WHITE COPY \_\_\_\_\_ CANARY COPY \_\_\_\_\_ PINK COPY \_\_\_\_\_



1536 Eastman Avenue  
Ventura, CA 93003  
(805) 644-1095

CHAIN OF CUSTODY RECORD

Phone #: \_\_\_\_\_ Contact: \_\_\_\_\_

BILL'S CHEMISTRY (SIGNED) 074

PROJ. NO.	PROJECT NAME	NO.	DATE	TIME	CONF	GRAB	SAMPLE I.D.	NO. OF CONTAINERS	ANALYSIS	REMARKS	CHECK IF RUSH
200106	Westfield		11-12				Run 1 Probe Trash	1	X		
							Run 1 Filter trash	1	X		
							Run 2 Probe trash	1	X		
							Run 2 Filter trash	1	X		
							Run 3 Probe trash	1	X		
							Run 3 Filter trash	1	X		
							Blank A-2000	1	X		
							Blank DI	1	X		

53  
'6 7 18 -19 -20 -21 -22 -23 24 25 26

The undersigned hereby acknowledges having received a copy of the Fee Schedule/General Information and Conditions, the provisions of which are a part of this agreement.

Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
<i>[Signature]</i>	11/12/97 9:30	<i>[Signature]</i>			
Received for Laboratory by: (Signature)		NAME		ADDRESS	
					PHONE NO.

WHITE COPY \_\_\_\_\_ CANARY COPY \_\_\_\_\_ PINK COPY \_\_\_\_\_

SOURCE TESTING SAMPLE INFORMATION SHEET

PM10 PART. ANALYSIS

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874

METHOD: PM10

CLIENT: West Field

LAB NO GIVEN: 292-161

PROJECT NAME: \_\_\_\_\_

PROJECT NO: \_\_\_\_\_

SITE: \_\_\_\_\_

SAMPLER: \_\_\_\_\_

DATE SAMPLED: 11-12-92

NO.	RUN 1	# of cont	TOT VOL or FIL #	TOT RES	GROSS WT
1	FILTER (slotted) +10 2-63	1	#	N/A	X
2	FILTER (slotted) +10 2-52	1	#	N/A	X
3	FILTER (solid) -10 K-29	1	#	N/A	X
4	IMPACTOR (front half) +10	1	170	Y	
5	PROBE+IMPINGERS(back half) -10	1	400	Y	

NO.	RUN 2	# of cont	TOT VOL or FIL #	TOT RES	GROSS WT
6	FILTER (slotted) +10 2-68	1	#	N/A	X
7	FILTER (slotted) +10 2-69	1	#	N/A	Y
8	FILTER (solid) -10 K-36	1	#	N/A	Y
9	IMPACTOR (front half) +10	1	170	X	
10	PROBE+IMPINGERS(back half) -10	1	560	X	

NO.	RUN 3	# of cont	TOT VOL or FIL #	TOT RES	GROSS WT
11	FILTER (slotted) +10 2-66	1	#	N/A	Y
12	FILTER (slotted) +10 2-67	1	#	N/A	Y
13	FILTER (solid) -10 K-35	1	#	N/A	Y
14	IMPACTOR (front half) +10	1	170		
15	PROBE+IMPINGERS(back half) -10	1	400		

Comments: Acetone

(54)

SAMPLE INFORMATION SHEET

PARTICULATE ANALYSIS  
\*\*\*\*\*

874

METHOD: Meth 5  
 CLIENT: West Field  
 PROJECT NAME: West Field  
 SITE: West Field  
 SAMPLER: \_\_\_\_\_

LAB NO GIVEN: \_\_\_\_\_  
 PROJECT NO: 292-161  
 DATE SAMPLED: 11-12-92

NO.	RUN 1	# of cont	TOT VOL	TOT WGHT	GROSS WGHT
16	PROBE (Front Half)	1	140 ml	X	
17	IMPINGERS # 1+2+3	1	400 ml	X	
18	FILTER <u>Z-31</u>	1	N/A		X

NO.	RUN 2	# of cont	TOT VOL	TOT WGHT	GROSS WGHT
19	PROBE (Front Half)	1	170 ml	X	
20	IMPINGERS # 1+2+3	1	400 ml	X	
21	FILTER <u>Z-32</u>	1	N/A		X

NO.	RUN 3	# of cont	TOT VOL	TOT WGHT	GROSS WGHT
27	PROBE (Front Half)	1	170 ml	X	
38	IMPINGERS # 1+2+3	1	400 ml	X	
19	FILTER <u>Z-33</u>	1	N/A		X
19	Acetone Blank	1	170 ml	X	
19	DT Blank	1	170 ml	X	

Comments: \_\_\_\_\_