

**BAY AREA
AIR QUALITY MANAGEMENT DISTRICT**

Office Memorandum

July 30, 1991

TO: C. Ullery, Permit Engineer

VIA: K. Kunaniec, Senior Source Test Engineer
G. Karels, Source Test Manager

FROM: C. McClure, Source Test Engineer *CMC*

SUBJECT: Emission Sampling at Waste Fibre Recovery Corp.
Plant #3673 June 11 & 13, 1991

I have reviewed the submitted sampling documentation and note the following:

- A) The Source Test Manager was notified as required in the Manual of Procedures, Volume IV, Section 1.5.1.
- B) Source Test Staff observed sampling on June 11, 1991.
- C) Sampling was conducted on this ambient source by C.A.R.B. Method 17, inlet and outlet simultaneously.
- D) Source Test Section was not contacted for approval of stack design and location of sampling ports as required in Condition 2705, Item #12. Port location was acceptable.

This test documentation is acceptable and demonstrates compliance with Regulation 2-1-403, Condition 2705, Item #7.

INTEROFFICE MEMO

7/10/91

TO: Gale Karels, Source Test

FROM: Craig Ullery, Permits *CUU*
7/10/91

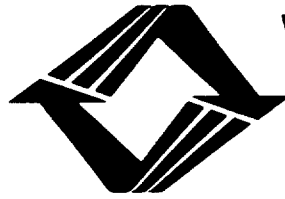
SUBJECT: Source Test Data Review: *Waste Fibre Recovery, A# 4750*

Please review that attached source test data for accuracy and send me a memo with any comments, including your approval of the test data.

Thank you.

*Note: A/C condition # 7 limit baghouse
emissions to 0.01 grain/dscf and
baghouse efficiency is required to be
99.99% .*

*Chuck,
Please Handle*



**WASTE FIBRE
RECOVERY**

June 26, 1991

Mr. Craig S. Ullery
Air Quality Engineer II
Permit Services Division
Bay Area Air Quality Management District
939 Ellis Street
San Francisco, CA 94109

Dear Craig:

Enclosed please find the Particulate Emissions Test prepared by Best Environmental Incorporated, indicating that Waste Fibre Recovery has met its criteria necessary for completion of our Permit to Operate and expansion to sixteen hours of operation per day. Waste Fibre Recovery is currently in the process of acceptance testing for the balance of the facility necessary to close out our turn key contract. As a result, it is necessary that we be able to operate our facility at the full sixteen hour days as soon as possible.

By this letter, Waste Fibre Recovery is requesting permission to begin operating at a maximum of sixteen hours per day rather than the eight hours per day.

I am advised by Best Environmental that the test report will be mailed directly to you for certification and issuance of our permit to operate at these new levels.

Your timely consideration of this request is greatly appreciated.

Very truly yours,

WASTE FIBRE RECOVERY

Dale E. Mesplé
Chief Executive Officer

DEM:klb
Enclosure

cc: D. Cunha
M. Doty
D. Allen

C.D.I. / WASTE FIBER RECOVERY
Hayward, CA

Particulate Emissions Test
Test Date: June 11 & 13, 1991

BEST ENVIRONMENTAL, INC.

27343 Industrial Boulevard, Unit E.

Hayward, California 94545

(415) 784-0706

June 24, 1991

C.D.I. Management Inc.

1906 West Wintont.

Hayward, California 94545

To: Mr. Marv Doty

Subject: Particulate Baghouse Efficiency Testing

Test Date: June, 11,13, 1991

Sampling Location: Simultaneous baghouse inlet and outlet
located at the Waste Fiber Recovery plant in Hayward, California.

Sampling Personnel: Daniel Cartner, Regan Best, Tracy Prevo, Dan
Ashland, and Steve Booth of BEST ENVIRONMENTAL.

Test Program: Triplicate simultaneous tests for particulates and
water vapor were performed at each location. Integrated bag
samples were collected for CO2 and O2 analysis. A fyrite was used
for the analysis of CO2 and O2. Particulate filter weights were
weighed to the nearest 0.1 mg on an American Scientific Product
182 balance.

Sampling Methods: The following Source Test Methods of the Bay
Area Air Quality Management District (BAAQMD) were used:

Method ST-15	Particulates (inlet)
Method ST-24	CO2 & O2 Integrated Sampling
EPA Method-17	Particulates (outlet)
Method ST-17	Stack Velocity and Volumetric Flowrate
Method ST-23	Water Vapor Sampling
Method ST-18	Traverse Point Determination

Instrumentation:

RAC Particulate Meter Box Module

Lear-Sieglar Model LS-100 Method 5 Module

Best Environmental Particulate Probes

American Scientific Products Model 182 Balance

Best Environmental M17 Umbilical and Impinger Set

Instrumentation (Cont.):

Gelman 47mm SS Filter Holders

CO2 & O2 Fyrites

Test Results: Tables 1 and 2 presents the results of the baghouse inlet and outlet locations, respectively. Inlet average particulate emission rate and concentration was 1209.4 lbs/hr and 3.068 gr/dscf, respectively. Outlet average particulate emission rate and concentration was 0.168 lbs/hr and 0.0005 gr/dscf, respectively. Average particulate removal efficiency was 99.986%. ✓

Field data sheets, laboratory analysis reports, particulate calculation sheets and sample chain of custody forms are contained in the appendix to this report. ✓

If there are any questions concerning this report, please contact me or Tracy Prevo at (415) 784-0706.

Submitted by,



Daniel G. Cartner
Air Pollution Consultant

TABLE 1
PARTICULATE EMISSIONS RESULTS
Baghouse Inlet

TEST #	1	2	3	AVERAGE
TEST DATE	6-11-91	6-13-91	6-13-91	
TEST TIME	1214-1318	0949-1057	1125-1248	
SAMPLE VOLUME (SDCF)	27.341	27.082	23.115	
SAMPLE WT. (mg)	4868.3	5485.6	4991.7	4.99g
VELOCITY (ft/sec)	64.51	65.10	61.59	63.73
ISOKINETIC (%)	96.7	93.6	95.3	
DUCT TEMP. (degrees F)	70.4	69.0	70.5	70.0
FLOWRATE (SDCFM)	46117	47171	44788	46025
FLOWRATE (ACFM)	48641	49086	46448	48058
H2O (volume %)	1.92	2.20	1.59	1.90
CONCENTRATION (gr/dscf)	2.7474	3.1254	3.3321 ✓	3.0683
EMISSIONS (lbs/hr)	1085.84	1263.47	1278.97 ✓	1209.43

WHERE,

Sample Volume = Standard dry cubic feet
Sample Weight = Particulate collected in milligrams
Temperature = Degrees fahrenheit
Velocity = Stack gas velocity in feet per second
SDCFM = Standard dry cubic feet per minute
ACFM = Actual cubic feet per minute
H2O, volume % = Stack gas percent water vapor
Concentration = Particulate conc. in grains per SDCF
Emissions = Emission rate in pounds per hour

Calculations,

$C_s = 15.432 \times \text{Sample Wt.} / \text{Sample Volume}$

$\text{Emissions} = 0.00857 \times C_s \times \text{SDCFM}$

$$\text{Baghouse Eff} = \frac{\frac{\text{lb/hr}}{\text{IN-OUT}} \times 100}{\frac{\text{IN}}{\text{lb/hr}}} = \frac{1209.43 - 0.168}{1209.43} = 99.9861$$

ROUND TO
99.99 ✓
OK

#3
 $G = 15.43 \frac{\text{Wt. (mg)}}{\text{V}_0}$
 $15.43 \cdot \frac{4.99}{23.115} \checkmark$
 $G_3 = 3.339 \text{ gr/SDCF}$
 $M_3 = \frac{Q_3 \cdot G_3}{116.67} \checkmark$
 $m_3 = 1278 \text{ lb/hr}$

TABLE 2
PARTICULATE EMISSIONS RESULTS
Baghouse Outlet

TEST #	1	2	3	AVERAGE
TEST DATE	6-11-91	6-13-91	6-13-91	
TEST TIME	1214-1319	0949-1048	1121-1232	
SAMPLE VOLUME (SDCF)	40.397	40.060	39.608	
SAMPLE WT. (mg)	1.0	0.9	1.6	
VELOCITY (ft/sec)	62.21	60.62	60.10	60.98
ISOKINETIC (%)	99.9	100.3	101.1	
DUCT TEMP. (degrees F)	73.5	63.8	69.9	69.1
FLOWRATE (SDCFM)	44238	43727	42893	43619
FLOWRATE (ACFM)	46904	45707	45314	45975
H2O (volume %)	1.86	1.88	1.78	1.84
CONCENTRATION (gr/dscf)	0.0004	0.0003	0.0006	0.0005
EMISSIONS (lbs/hr)	0.145	0.130	0.229	0.168

WHERE,

Sample Volume = Standard dry cubic feet
Sample Weight = Particulate collected in milligrams
Temperature = Degrees fahrenheit
Velocity = Stack gas velocity in feet per second
SDCFM = Standard dry cubic feet per minute
ACFM = Actual cubic feet per minute
H2O, volume % = Stack gas percent water vapor
Concentration = Particulate conc. in grains per SDCF
Emissions = Emission rate in pounds per hour

Calculations,

$C_s = 15.432 \times \text{Sample Wt.} / \text{Sample Volume}$

$\text{Emissions} = 0.00857 \times C_s \times \text{SDCFM}$

$$G_3 = 15.43 \cdot \frac{WP(g)}{V_0}$$

$$15.43 \cdot \frac{(0.0016g)}{39.608}$$

$$G_3 = .000639 \text{ gr/SDCF}$$

$$M_3 = \frac{G_3 \cdot Q_3}{116.67}$$

$$M_3 = .229 \text{ lb/hr} = .23 \text{ lb/hr}$$

BEST ENVIRONMENTAL
PARTICULATE EMISSION CALCULATIONS

DATE	6-11-91	TEST METHOD	BA ST-15	CLIENT	CHEM DOTY
Run No.	1	METER BOX	RAC #1	LOCATION	Bag-inlet
TEST TIME	1214-1318			FUEL	N. A.

Pitot Factor (Kp)	0.840	Meter temp. (Tm)	83.0	Total condensate (Vw)	11.3
Barom. press. (Pbar)	29.98	Meter press. (^H)	0.7	Total particulate (mg)	4868.3
Static Press.	-14.00	Vel. Avg SQRT(P)	1.123	Sample vol. uncorr. (Vm)	28.688
Stack press.	28.95	Stack Area (As)	12.57	Stack gas CO2%	0.00
Stack temp. (Ts)	70.4	Nozzle dia. (d)	0.154	Stack gas O2%	20.9
Sample time (O)	60.0	Meter factor (Y)	0.9731	Stack gas N2%	79.1

A. Gas Volume (Vm)std = $17.71 (Vm) Y ((Pbar+H/13.6)/Tm+460) =$ 27.341 Vm std

B. Volume H2O collected (Vw)std = $0.0473 (Vw) =$ 0.534 Vw std

C. Total Sample Volume (Vt) = $(Vm)std + (Vw)std =$ 27.876 Vt std

D. Moisture Content (%H2O) = $(Vw \text{ std}/Vt \text{ std}) \times 100 =$ 1.917 %

E. Stack Gas Velocity (Vs) = $85.49 Kp (P) SQRT(Ts + 460/Ms Ps) =$ 64.513 ft/sec

F. Stack Gas Molecular Wgt.
 $((CO2\% \times 0.44 + O2\% \times 0.32 + N2\% \times 0.28)(1-H2O\%/100)) + 18(H2O\%/100) =$ 28.628 M.W.s

G. Stack Gas Volumetric Flowrate
 $(Vs)(As) 1062.6 (Ps/Ts + 460)(1-\%H2O/100) =$ 46117 SDCFM

H. Particulate Concentration (Cs) = $s/Vm \text{ std} \times 0.01543 =$ 2.7474 gr/dscf

I. Particulate Emission Rate = $0.00857 \times Cs \times SDCFM =$ 1085.840 Lbs/hr

J. % Isokinetic (I) = $17.38(Vt)(Ts+460)/(dx)(O)(Ps)(Vs) =$ 96.690 %

K. ACFM = $(Vs)(As) \times 60 =$ 48641 ACFM

BEST ENVIRONMENTAL
PARTICULATE EMISSION CALCULATIONS

DATE	6-13-91	TEST METHOD	BA ST-15	CLIENT	CHEM DOTY
Run No.	2	METER BOX	RAC #1	LOCATION	Bag-inlet
TEST TIME	0949-1057			FUEL	N.A.

Pitot Factor (Kp)	0.840	Meter temp. (Tm)	79.1	Total condensate (Vw)	12.9
Barom. press. (Pbar)	30.16	Meter press. (^H)	0.7	Total particulate (mg)	5485.6
Static Press.	-11.00	Vel. Avg SQRT(P)	1.142	Sample vol. uncorr. (Vm)	28.045
Stack press.	29.35	Stack Area (As)	12.57	Stack gas CO2%	0.0
Stack temp. (Ts)	69.0	Nozzle dia. (d)	0.154	Stack gas O2%	20.9
Sample time (t)	60.0	Meter factor (Y)	0.9731	Stack gas N2%	79.1

A. Gas Volume (Vm)std = $17.71 (Vm) Y ((Pbar+H/13.6)/Tm+460) =$ 27.082 Vm std

B. Volume H2O collected (Vw)std = $0.0473 (Vw) =$ 0.610 Vw std

C. Total Sample Volume (Vt) = $(Vm)std + (Vw)std =$ 27.692 Vt std

D. Moisture Content (%H2O) = $(Vw \text{ std}/Vt \text{ std}) \times 100 =$ 2.203 %

E. Stack Gas Velocity (Vs) = $85.49 Kp (P) \text{ SQRT}(Ts + 460/Ms Ps) =$ 65.105 ft/sec

F. Stack Gas Molecular Wgt.
 $((CO2\% \times 0.44 + O2\% \times 0.32 + N2\% \times 0.28)(1-H2O\%/100)) + 18(H2O\%/100) =$ 28.597 M.W.s

G. Stack Gas Volumetric Flowrate
 $(Vs)(As) 1062.6 (Ps/Ts + 460)(1-\%H2O/100) =$ 47171 SDCFM

H. Particulate Concentration (Cs) = $s/Vm \text{ std} \times 0.01543 =$ 3.1254 gr/dscf

I. Particulate Emission Rate = $0.00857 \times Cs \times SDCFM =$ 1263.467 Lbs/hr

J. % Isokinetic (I) = $17.38(Vt)(Ts+460)/(dx d)(t)(Ps)(Vs) =$ 93.633 %

K. ACFM = $(Vs)(As) \times 60 =$ 49086 ACFM

BEST ENVIRONMENTAL
PARTICULATE EMISSION CALCULATIONS

DATE	6-13-91	TEST METHOD	BA ST-15	CLIENT	CHEM DOTY
Run No.	3	METER BOX	RAC #1	LOCATION	Bag-inlet
TEST TIME	1125-1248			FUEL	N.A.

Pitot Factor (Kp)	0.840	Meter temp. (Tm)	84.7	Total condensate (Vw)	7.9
Barom. press. (Pbar)	30.16	Meter press. (ΔH)	0.6	Total particulate (mg)	4991.7
Static Press.	-11.00	Vel. Avg SQRT(P)	1.080	Sample vol. uncorr. (Vm)	24.187
Stack press.	29.35	Stack Area (As)	12.57	Stack gas CO2%	0.0
Stack temp. (Ts)	70.5	Nozzle dia. (d)	0.154	Stack gas O2%	20.9
Sample time (O)	53.0	Meter factor (Y)	0.9731	Stack gas N2%	79.1

A. Gas Volume (Vm)std = $17.71 (Vm) Y ((Pbar+H/13.6)/Tm+460) =$ 23.115 Vm std

B. Volume H2O collected (Vw)std = $0.0473 (Vw) =$ 0.374 Vw std

C. Total Sample Volume (Vt) = $(Vm)std + (Vw)std =$ 23.489 Vt std

D. Moisture Content (%H2O) = $(Vw \text{ std}/Vt \text{ std}) \times 100 =$ 1.591 %

E. Stack Gas Velocity (Vs) = $85.49 Kp (P) SQRT(Ts + 460/Ms Ps) =$ 61.586 ft/sec

F. Stack Gas Molecular Wgt.
 $((CO2\% \times 0.44 + O2\% \times 0.32 + N2\% \times 0.28)(1-H2O\%/100)) + 18(H2O\%/100) =$ 28.664 M.W.s

G. Stack Gas Volumetric Flowrate
 $(Vs)(As) 1062.6 (Ps/Ts + 460)(1-\%H2O/100) =$ 44788 SDCFM

H. Particulate Concentration (Cs) = $s/Vm \text{ std} \times 0.01543 =$ 3.3321 gr/dscf

I. Particulate Emission Rate = $0.00857 \times Cs \times SDCFM =$ 1278.970 Lbs/hr

J. % Isokinetic (I) = $17.38(Vt)(Ts+460)/(dx d)(O)(Ps)(Vs) =$ 95.317 %

K. ACFM = $(Vs)(As) \times 60 =$ 46448 ACFM

BEST ENVIRONMENTAL
PARTICULATE EMISSION CALCULATIONS

DATE	6-11-91	TEST METHOD	BA ST-15	CLIENT	CHEM DOTY
Run No.	1	METER BOX	LSI #2	LOCATION	Bag-outle
TEST TIME	1214-1319			FUEL	N.A.

Pitot Factor (Kp)	0.840	Meter temp. (Tm)	102.9	Total condensate (Vw)	16.2
Barom. press. (Pbar)	29.98	Meter press. (^H)	1.6	Total particulate (mg)	1.0
Static Press.	-14.00	Vel. AvgSQRT(P)	1.080	Sample vol. uncorr. (Vm)	42.000
Stack press.	28.95	Stack Area (As)	12.57	Stack gas CO2%	0.00
Stack temp. (Ts)	73.5	Nozzle dia. (d)	0.188	Stack gas O2%	20.9
Sample time (O)	60.0	Meter factor (Y)	1.0157	Stack gas N2%	79.1

A. Gas Volume (Vm)std = $17.71 (Vm) Y ((Pbar+H/13.6)/Tm+460) =$ 40.397 Vm std

B. Volume H2O collected (Vw)std = $0.0473 (Vw) =$ 0.766 Vw std

C. Total Sample Volume (Vt) = $(Vm)std + (Vw)std =$ 41.164 Vt std

D. Moisture Content (%H2O) = $(Vw \text{ std}/Vt \text{ std}) \times 100 =$ 1.861 %

E. Stack Gas Velocity (Vs) = $85.49 Kp (P) \text{ SQRT}(Ts + 460/Ms Ps) =$ 62.218 ft/sec

F. Stack Gas Molecular Wgt.
 $((CO2\% \times 0.44 + O2\% \times 0.32 + N2\% \times 0.28)(1-H2O\%/100)) + 18(H2O\%/100) =$ 28.634 M.W.s

G. Stack Gas Volumetric Flowrate
 $(Vs)(As) 1062.6 (Ps/Ts + 460)(1-\%H2O/100) =$ 44243 SDCFM

H. Particulate Concentration (Cs) = $s/Vm \text{ std} \times 0.01543 =$ 0.0004 gr/dscf

I. Particulate Emission Rate = $0.00857 \times Cs \times SDCFM =$ 0.145 Lbs/hr

J. % Isokinetic (I) = $17.38(Vt)(Ts+460)/(dx)(O)(Ps)(Vs) =$ 99.922 %

K. ACFM = $(Vs)(As) \times 60 =$ 46910 ACFM

BEST ENVIRONMENTAL
PARTICULATE EMISSION CALCULATIONS

DATE	6-13-91	TEST METHOD	BA ST-15	CLIENT	CHEM DOTY
Run No.	2	METER BOX	LSI #2	LOCATION	Bag-outlet
TEST TIME	0949-1048			FUEL	N.A.

Pitot Factor (Kp)	0.840	Meter temp. (Tm)	100.3	Total condensate (Vw)	16.2
Barom. press. (Pbar)	30.16	Meter press. (^H)	1.5	Total particulate (mg)	0.9
Static Press.	-18.00	Vel. Avg SQRT(P)	1.060	Sample vol. uncorr. (Vm)	41.221
Stack press.	28.84	Stack Area (As)	12.57	Stack gas CO2%	0.0
Stack temp. (Ts)	63.8	Nozzle dia. (d)	0.188	Stack gas O2%	20.9
Sample time (O)	60.0	Meter factor (Y)	1.0157	Stack gas N2%	79.1

A. Gas Volume (Vm)std = $17.71 (Vm) Y ((Pbar+H/13.6)/Tm+460) =$ 40.060 Vm std

B. Volume H2O collected (Vw)std = $0.0473 (Vw) =$ 0.766 Vw std

C. Total Sample Volume (Vt) = $(Vm)std + (Vw)std =$ 40.826 Vt std

D. Moisture Content (%H2O) = $(Vw \text{ std}/Vt \text{ std}) \times 100 =$ 1.877 %

E. Stack Gas Velocity (Vs) = $85.49 Kp (P) \text{ SQRT}(Ts + 460/Ms Ps) =$ 60.629 ft/sec

F. Stack Gas Molecular Wgt.
 $((CO2\% \times 0.44 + O2\% \times 0.32 + N2\% \times 0.28)(1-H2O\%/100)) + 18(H2O\%/100) =$ 28.633 M.W.s

G. Stack Gas Volumetric Flowrate
 $(Vs)(As) 1062.6 (Ps/Ts + 460)(1-\%H2O/100) =$ 43732 SDCFM

H. Particulate Concentration (Cs) = $s/Vm \text{ std} \times 0.01543 =$ 0.0003 gr/dscf

I. Particulate Emission Rate = $0.00857 \times Cs \times SDCFM =$ 0.130 Lbs/hr

J. % Isokinetic (I) = $17.38(Vt)(Ts+460)/(dxd)(O)(Ps)(Vs) =$ 100.246 %

K. ACFM = $(Vs)(As) \times 60 =$ 45712 ACFM

BEST ENVIRONMENTAL
PARTICULATE EMISSION CALCULATIONS

DATE	6-13-91	TEST METHOD	BA ST-15	CLIENT	CHEM DOTY
Run No.	3	METER BOX	LSI #2	LOCATION	Bag-outle
TEST TIME	1121-1232			FUEL	N. A.

Pitot Factor (Kp)	0.840	Meter temp. (Tm)	106.7	Total condensate (Vw)	15.2
Barom. press. (Pbar)	30.16	Meter press. (^H)	1.5	Total particulate (mg)	1.6
Static Press.	-18.00	Vel. AvgSQRT(P)	1.045	Sample vol. uncorr. (Vm)	41.220
Stack press.	28.84	Stack Area (As)	12.57	Stack gas CO2%	0.0
Stack temp. (Ts)	69.9	Nozzle dia. (d)	0.188	Stack gas O2%	20.9
Sample time (O)	60.0	Meter factor (Y)	1.0157	Stack gas N2%	79.1

A. Gas Volume (Vm)std = $17.71 (Vm) Y ((Pbar+H/13.6)/Tm+460) =$ 39.608 Vm std

B. Volume H2O collected (Vw)std = 0.0473 (Vw) = 0.719 Vw std

C. Total Sample Volume (Vt) = (Vm)std + (Vw)std = 40.327 Vt std

D. Moisture Content (%H2O) = $(Vw \text{ std}/Vt \text{ std}) \times 100 =$ 1.783 %

E. Stack Gas Velocity (Vs) = $85.49 Kp (P) SQRT(Ts + 460/Ms Ps) =$ 60.108 ft/sec

F. Stack Gas Molecular Wgt.
 $((CO2\% \times 0.44 + O2\% \times 0.32 + N2\% \times 0.28)(1-H2O\%/100)) + 18(H2O\%/100) =$ 28.643 M.W.s

G. Stack Gas Volumetric Flowrate
 $(Vs)(As) 1062.6 (Ps/Ts + 460)(1-H2O\%/100) =$ 42897 SDCFM

H. Particulate Concentration (Cs) = $s/Vm \text{ std} \times 0.01543 =$ 0.0006 gr/dscf

I. Particulate Emission Rate = $0.00857 \times Cs \times SDCFM =$ 0.229 Lbs/hr

J. % Isokinetic (I) = $17.38(Vt)(Ts+460)/(dx)(O)(Ps)(Vs) =$ 101.041 %

K. ACFM = $(Vs)(As) \times 60 =$ 45319 ACFM

BEST ENVIRONMENTAL Particulate Field Data Sheet

Run # 1 Method BA ST15

Plant Chem Duty Alt 1.620 XH2O Assum. 3 Filter 25:11 F. wt. (mg) 4,868.3
 Date 6/11/91 Meter Yd 0.9731 Pilot Cp. 0.84 Pilot .84 R.H. Wt. (mg) —
 Location Inlet - Cyclone PBar. 29.98 Noz. Diam. 0.154 Net Imp Vol -2 Gel Wt. (mg) 13.3
 Port Dia. 3" x 7" length Stat Press -14 Noz. I.D. BA 40 Tot Imp Vol 1.98 XCO2 Actual .04
 Stack I.D. 48" XCO2 Assum 20.9 Meter LSI 2 Sample Time 60 XCO2 Actual 20.9
 Search Area 12.566 ft2 XCO2 Assum .04 Probe BA 7' Sqrt AP Ave 1.123 Tot. Moisture —
 Personnel DC/TP Pre leak ck .006 cfm 15 Hg Post leak ck .009 cfm 17 Std Vm —

Sample Point	Clock Time	Vel. dp	M.R. cfm	Drift. dH	Gas Meter Volume ft2	Gas Meter		Temperatures F				Probe	Pump Vac.	Comments
						In	Out	Stack	Imp.	Filter				
1	✓ 1	1214	.65	.37	412.413	74	70	68	49	—	—	—	4	
2	2	19	.94	.48		90	70	69	49	—	—	—	7	
3	3	24	1.0	.51	416.0	91	70	68	49	—	—	—	10	
4	4	29	1.48	.25		94	71	70	49	—	—	—	14	
5	5	34	1.75	.89		94	71	70	49	—	—	—	15	
6	6	39	1.60	.82		97	72	70	49	—	—	—	14	
7		1244			425.552									
8						90	76	73	49	—	—	—	17	
9	5 1	1248	1.70	.89		90	76	73	49	—	—	—	17	
10	2	53	1.50	.79	428.8	90	77	73	49	—	—	—	15	
11	3	58	1.50	.79	431.8	95	77	74	49	—	—	—	15	
12	4	1303	1.35	.60	434.8	97	77	70	49	—	—	—	14	
13	5	08	1.00	.64	436.8	97	78	70	49	—	—	—	14	
14	6	13	.95	.51	439.2	97	78	70	49	—	—	—	12	
15		1318			441.101									
16								(83.0)	(70.4)					
17				(.67)	(28.688)									
18														
19														
20														
21														
22														
23														
24														
25														
26														
27														
28	Average													

Notes:

As = 64.55
 Ave. Vs = 47,482 SCFM
 Sample I.D. = 99.9%

Final Imp Vol =

• 88
77
165

37
12
27

441.5
12.4
27

BEST ENVIRONMENTAL Particulate Field Data Sheet

Run # 2 Method BA ST-15

Plant Chem Doty
 Date 6/3/91
 Location 7 1/2 E
 Port Dia. 1 1/2
 Stack I.D. 48"
 Stack Area 12.57 ft²
 Personnel RB/JP

Orif. 1.620 XH₂O Assum. 2%
 Meter Yd. 0.9731 Pitot Co. 0.84
 PBar. 30.16 Noz. Diam. 0.154
 Stat Press 30.18 Noz. I.D. 4E
 XH₂O Assum. 20.9 Meter # LSI #2
 XCO₂ Assum. 0 Probe # 6' BA
 Pre leak ck 0.002 cf = 18 Hg Post leak ck 0.010 cf = 24 Hg
0 0.010 25

Filter 10/11/28 Filt. Wt. (mg) 5.475.6
 Pitot # 84 B.H. Wt. (mg) -
 Net Imp Vol 4 Gel Wt. (mg) 3.9
 Tot Imp Vol 20.4 XCO₂ Actual 0
 Sample Time 60 XH₂O Actual 20.9
 Sort AP Ave 1.142 Tot. Moisture -
 Std Vm 27.083

Sample Point	Clock Time	Vel. ΔP	M.R. cfm	Orif. ΔH	Gas Meter Volume ft ³	Gas Meter		Temperatures F				Pump Vac.	Comments
						In	Out	Stack	Imp.	Filter	Probe		
1	8949	1.45	.48	0.67	442.983	67	64	69				6	
2	8952	1.45	.49	0.68	443.5	77	64	67				7	
3	8957	1.65	.52	0.78	449.9	86	65	67				10	
4	1002	1.65	.525	0.78	450.5	89	65	68				12	
5	1007	1.60	.52	0.76	453.1	89	67	68				13	
6	1012	1.25	.46	0.59	455.5	89	68	67				15	\$20
7	Stop	1017			457.611								
8													
9	1027	1.20	.46	.61	457.938	72	70	71				5	
10	1032	1.25	.48	.65	460.2	95	71	72				5	
11	1037	1.8	.58	.94	462.4	100	72	69				7	
12	1042	0.8	.39	.42	465.5	102	73	69				4	
13	1047	0.85	.40	.45	466.9	102	74	70				4	
14	1052	0.75	.42	0.50	469.2	104	75	71				5	
15	End	1057			471.355								
16													
17													
18													
19													
20													
21													
22													
23													
24													
25													
26													
27													
28	Average												

Notes: change thimble after 1st port

MS =
 Ave. Vs =
 Sample I.D. =

Final Imp Vol = 100 104

BEST ENVIRONMENTAL Particulate Field Data Sheet

Run # 3 Method ST-15

Plant Chem Poty
 Date 6/3/91
 Location Inlet
 Port Dia. 1.5
 Stack I.D. 48
 Search Area 4.59 ft²
 Personnel RB/JP

Alt 162 Meters 1.3
 Meter 9731 Filter 50/11
 Speed 30.16 Filter C. 1.84
 Stat 1.8 Net Imp Vol -2
 xCO₂ Assum 20.9 Meter LS12
 xCO₂ Assum 20.9 Probe 6' BA
 Pre leak ck 0.14 cfs 24 Post leak ck 0.08 cfs 25

Flow at Imp 4991.7
 F.H. at Imp -
 Gel wt. Imp 3.9
 xCO₂ Actual 04
 xCO₂ Actual 20.9
 Tot. Moisture -
 Std Va -

Sample Point	Clock Time	Vel. dP	M.R. cfs	Drift. dH	Gas Meter Volume ft ²	Gas Meter In	Gas Meter Out	Temperatures F Stack	Imp.	Filter	Probe	Pump Vac.	Comments
1	1125	1.10	.45	0.56	471.634	78	78	80				5	
2	1130	1.15	.47	0.61	473.9	96	77	72				5	
3	1135	1.70	.57	0.91	476.2	100	76	70				7	
4	1150	.90	.41	0.47	479.0	96	74	68				5	-Stop 1140
5	1205	.85	.40	0.46	481.1	99	76	68				5	Restart 1151
6	1201	0.70	.37	0.37	483.1	101	76	70				4	
7	stop				484.858								
8													
9	1208	1.45	0.52	0.77	484.858	90	75	71				7	
10	1213	1.30	0.50	0.70	487.4	102	76	69				8	1213 STOP
11	1235	1.70	0.57	0.90	489.8	93	76	71				11	Restart 1214
12	1234	1.20	0.48	0.64	492.6	96	76	69				11	STOP 1215.5
13	1243	1.01	0.44	0.54	493.9	98	76	67				23	Restart 1249.5
14					495.821								
15													
16													
17													
18													
19													
20													
21													
22													
23													
24													
25													
26													
27													
28	Average												

Notes: Process stopped 1138
Stop at 1246

Ms =
 Ave. Vs =
 Sample I.D. =

BEST ENVIRONMENTAL Particulate Field Data Sheet

Run # 1 Method # 17 BA

Plant CH2M DOTY
 Date 6-11
 Location OUTLET
 Port Dia. 7"
 Stack I.D. 98"
 Stack Area 12.566 ft²
 Personnel SB/DA

Q# 1.853 XH₂O Assum. 2.0
 Meter Yd 1.0157 Pilot Co. 89
 PBar. 29.98 Noz. Diam. 188
 Stat Press -14.0 Noz. I.D. 5C
 XCO₂ Assum 20.9 Meter # RAC #2
 XCO₂ Assum .04 Probe # 3" BA
 Pre leak ck .002 cf = 19 "Hg Post leak ck .013 cf = () "Hg

CG.
40/21
3" BA
4
20.4
1.080

Filt. Wt. (mg) 1.0
 B.H. Wt. (mg) -
 Gel Wt. (mg) 12.2
 XCO₂ Actual .04
 XCO₂ Actual 20.9
 Tot. Moisture 0.69
 Std Wt. 30.383

Sample Point	Clock Time	Vel. ft/min	M.R. cf/min	Drift. ft/min	Gas Meter Volume ft ²	Gas Meter		Temperatures F				Pump Vac.	Comments
						In	Out	Stack	Imp.	Filter	Probe		
1	19	1.2	.708	1.603	171.2	88	74	71.5				12	1.095
2	24	1.35	.760	1.828	174.8	100	74	70.0				14	1.162
3	29	1.3	.754	1.780		112	75	70.5				17	1.190
4	34	1.2	.732	1.659		122	77	71				14.5	1.095
5	39	1.05	.689	1.456		128	80	73.5				13	1.025
6	END 44	1.05	.694	1.467	188.866	132	84	73.5				13	1.025
7													
8													
9	1249				188.866								
10	54	1.25	.746	1.720		114	88	75				14.5	1.118
11	59	1.25	.756	1.741	195.8	126	90	75				15	1.118
12	1304	1.2	.745	1.682	199.3	132	91	75				14.5	1.095
13	09	1.15	.731	1.615		134	93	75.5				14.5	1.022
14	14	1.1	.717	1.550		135	94	75				14	1.049
15	1319	.94	.662	1.321	209.837	134	94	76				11.5	.970
16													
17													
18													
19													
20													
21													
22													
23													
24													
25													
26													
27													
28	Average												

<1.618> <102.9> <73.5>

Notes:

49.239
 Std. Vol.
 209.837
 167.837
 32.000

383.620

Ave. Vs =
 Sample I.D. =

Final Imp Vol =

BEST ENVIRONMENTAL Particulate Field Data Sheet

Run # 2 Method # 17 BA

Plant Chem Doty
 Date 6-11-91
 Location Outlet
 Port Dia. 3"
 Stack I.D. 48"
 Stack Area 12.566 ft²
 Personnel SB/DA

Q_{sc} 1.853 XH₂O Assum. 2.0
 Meter Yd 1.0157 Pilot Cp .84
 PBar. 27.8 Noz. Diam. .188
 Stat Press 18.0 Noz. I.D. 5C
 XCO₂ Assum 20.9 Meter # RAC #2
 XCO₂ Assum 04 Probe # 3" BA
 Pre leak ck .002 cfs 17 "Hg Post leak ck .002 cfs 17 "Hg

Wool Filt
 Filter # 17451
 Pilot # 3" BA
 Net Imp Vol 204
 Tot Imp Vol 204
 Sample Time 60
 Sort AP Ave 1.660

Filter Wt. (mg) 0.9
 P. Wt. (mg) -
 Sol. Wt. (mg) 12.2
 XCO₂ Actual .04
 XCO₂ Actual 20.9
 Tot. Moisture .820
 Std Va 40.058

211.756

✓ DP

Sample Point	Clock Time	Vel. dP	M.R. cfs	Drift. dH	Gas Meter Volume ft ²		Gas Meter In Out		Temperatures F				Pump Vac.	Comments
									Stack	Imp.	Filter	Probe		
1	9:49	1.10	.703	1.42	215.000		84	68	63				12.5	1.049
2	9:54	1.25	.749	1.63	218.382		95	68	63				14.5	1.118
3	9:59	1.20	.739	1.585	221.698		108	70	62				14	1.095
4	10:04	1.15	.720	1.53	225.210		116	72	61				14	1.072
5	10:09	1.08	.695	1.50	228.581		124	75	64				14	1.039
6	10:14	.84	.631	1.20	231.741		128	78	64				11.5	.943
7	10:19													
8					231.741		120	80	65				14	1.086
9	10:18	1.18	.726	1.58	235		120	80	65				15	1.105
10	10:23	1.22	.739	1.65	238.912		128	83	64				16.5	1.146
11	10:28	1.30	.762	1.77	242.520		134	86	63				15	1.072
12	10:33	1.15	.718	1.58	246.111		138	88	64				14	1.039
13	10:38	1.08	.643	1.49	249.623		140	90	65				12	.959
14	10:43	.92	.641	1.27	252.977		142	93	66					
15	10:48				252.977									
16														
17														
18														
19														
20														
21														
22														
23														
24														
25														
26														
27														
28	Average													

Notes:

Ms =
 Ave. Vs =
 Sample I.D. =

Final Imp Vol =

99.93 ISO
252.977
211.756
41.221

Wool Filt
27944

FEST ENVIRONMENTAL Particulate Field Data Sheet

Run # 3 Method 17 BA

Plant Chem Doty
 Date 6-13-91
 Location Outlet
 Port Dia. 3"
 Stack I.D. 48"
 Stack Area 12.566 ft²
 Personnel JB/DN

Grav 1.853
 Meter 1.0157
 Volum 30.16
 Stat Press -18.0
 CO₂ Assay 20.9
 CO₂ Assay .04
 Free Leak ck .002

Wool Filt
 Filter 27444
 Pilot 3" BA
 Net Imp Vol 3
 Tot Imp Vol
 Sample Time 60
 Sqrt AP Ave 1.045
 Sqrt AP Ave .001
 Sqrt AP Ave 17

Flow St. (mg) 1.6
 F.H. St. (mg) -
 Gel St. (mg) 12.2
 CO₂ Actual .04
 CO₂ Actual 20.9
 Tot. Moisture 829
 Std Vn 39.607

253.304

<101.203 ISO>

Sample Point	Clock Time	Vel. dP	M.R. cfs	Drift. dH	Gas Meter		Gas Meter		Temperatures F				Pump Vac.	Comments
					Volume ft ³		In	Out	Stack	Imp.	Filter	Probe		
1	11:25	1.15	708	1.555	256.481		118	88	77				12.5	1.072
2	11:26	1.22	734	1.69	260.085		114	90	70				13.5	1.105
3	11:31	1.30	759	1.81	263.808		124	90	69				14.5	1.140
4	11:36	1.05	682	1.47	266.951		130	90	68				12	1.025
5	11:41	1.08	692	1.51	270.396		128	90	68				12	1.039
6	11:46	.85	613	1.18	273.539		124	90	70				10	.922
7	END 11:51				273.539									
8														
9														
10	12:02	1.13	707	1.57	276.939		124	92	70				12.5	1.063
11	12:07	1.20	729	1.68	280.546		128	92	69				13.5	1.095
12	12:12	1.15	713	1.62	284.198		130	93	69				13	1.072
13	12:17	1.08	690	1.50	287.695		120	90	70				12	1.039
14	12:22	1.10	698	1.525	291.117		120	90	89				12.5	1.049
15	12:27	.84	609	1.17	294.524		124	90	70				10	.917
16	END 12:32				294.524									
17														
18														
19														
20														
21														
22														
23														
24														
25														
26														
27														
28	Average													

<1.522>

<106.7>

<69.9>

44.261.2
 SCFM

294.524
 253.304
 41.220

264.423
 11:39

Notes:

Ms =
 Ave. Vs =
 Sample I.D. =

BA Thimble Filters

CLIENT NAME	Sample ID	ID #	grossweight	Date	grossweight	ate	Net gain	Name
Chem Doty inlet	R3F	#50	<75.0906>	6/10/91	80.0451	6/18	4,954.8mg	
					80.0456			
					<80.0454>			
↓	R3Nog	T135	<1.5226>	3/91	1.5575	6/18	35.0mg	
					1.5576			
					<1.5576>			
Chem Doty Outlet	R1F1	#40	<109.0060>	6/11/91	109.0063	6/18		
	41mm filter				109.0060		0.1mg	
					<109.0061>			
↓	R1F2	#21	<78.3663>	6/10/91	78.3663	6/18	∅ mg	
					78.3664			
					<78.3663>			
↓	R1, R2Nog	T132	<1.5323>	3/91	1.5344	6/18	1.9mg + 2.9mg each	
					1.5340			
					<1.5342>			

BA Thimble filters

CLIENT NAME	Sample ID	ID #	reweight	Date	grossweight	ate	Net gain	Name
Chem Boty Outlet	R2F1	51	<108.4934>	6/11/91	108.4936	6/18		
	41mm filter				108.4921			
					108.4931			
							φ	
					108.4929		-0.5mg	
	R2F2	17	<78.2620>	6/10/91	78.2623	6/18	0.0mg	TP.
					78.2618			
					<78.2620>			
	R3F1	44	<109.7049>	6/11/91	109.7055	6/18	0.3mg	TP
	41mm filter				109.7050			
					<109.7050>			
	R3F2	27	<75.5824>	5/91	75.5816	6/18	-0.8mg	TP
					75.5816		φ	
	R3Noy	T133	<1.5237>	3/91	1.5253	6/18	1.3mg	TP
					1.5250			
					<1.5250>			

BA Thimble Filters



CLIENT NAME	Sample ID	ID #	areweight	Date	grossweight	ate	Net gain	Name
Chem Boty Inlet	RIF	#25	<79.9810>	6/91	84.8319	6/18	4,851.1mg	
					84.8323			
					<84.8321>			
	R123F	#11	<76.1150>	6/91	76.1210	6/18		
					76.1203	6/19		
					76.1208	6/20		
					polin (76.1207)		5.7mg ÷ 3 = 1.9mg each	
	R1 Noy	T106	<1.5050>	3/91	1.5203	6/18	15.3mg	
					1.5203			
					< >			
	R2F1	#10	<78.3013>	6/91	82.0913	6/18	3,790.2mg TP	
					82.0917			
					<82.0915>			
	R2F2	#28	<76.4813>	6/91	78.1440	6/18	1,662.9mg TP	
					78.1444			
					<78.1442>			
↓	R2Noy	T134	<1.5200>	3/91	1.5505	6/18	30.6mg TP	
					1.5506			
					<1.5506>			

BEST ENVIRONMENTAL
27343 Industrial Blvd. #E
Hayward, CA 94545

P.O.#=

Project Manager

Don Carter

Phone #: (415) 784-0700
FAX #: (415) 784-0597

Lab Name

Best Environmental

Location:

Inlet

Client:

Chem Botu

Location:

Hayward

I attest that the proper field sampling procedures were used during the collection of these samples.

Don Carter, Project Best

Field Sample ID

Volume

"Inlet"

CONTAINERS:

WATER

AIR

OTHER

HCl

HNO₃

H₂SO₄

ICE

NONE

OTHER

DATE

TIME

Matrix

Method Preserved

Sampling

CARB 429

CARB 428

CARB 410A

CARB 430

CARB 421

CARB 425

CARB 422

CARB 106

EPA Determination of metals emissions in Exhaust gases (DRAFT)

EPA 6010 [Pd] (Fused metals, chlorides)

CARB 426

CARB 423

CARB 427

(PAH's)

(Dioxins)

410B (Benzene)

(Aldehydes)

(HCl)

(Cr & Cr 6)

(Halog. Org's)

(Vinyl Chloride)

(Cyanide)

(Arsenic)

(Phenols)

CHAIN-OF-CUSTODY RECORD
AND ANALYSIS REQUEST

ANALYSIS REQUEST

Pg. 1 of 2

CUSTODY RECORD

SPECIAL HANDLING

24 HOURS ☐

EXPEDITED 48 HOURS ☐

NTAT ☐

OTHER _____ (#) BUSINESS DAYS

Return tedlars _____
Return cooler _____
Return bottles _____

SPECIAL DETECTION LIMITS (Specify)

REMARKS:

SPECIAL REPORTING REQUIREMENTS
Air samples- total qty.
to be reported

Lab Use Only
Lot #:

Storage Location
Work Order #:

Particulates BA ST15

Relinquished by Sampler

Relinquished by:

Relinquished by:

Date

6/13/91

Date

Date

Time

1600

Time

Time

Received by:

Received by:

Received by Laboratory:

Way bill #

BEST ENVIRONMENTAL Particulate Field Data Sheet

Run # _____ Method # _____

OK

Plant Chem Doty
 Date 3-15-91
 Location outlet Baghouse
 Port Dia. _____
 Stack I.D. _____
 Stack Area _____ ft²
 Personnel _____

ΔH _____
 Meter Yd _____
 Bar. 29.88
 Stat Press _____
 %O₂ Assum _____
 %CO₂ Assum _____
 Pre leak ck 0.10 cfm 14 "Hg Post leak ck _____ cfm _____ "Hg

%H₂O Assum _____
 Pitot Co _____
 Noz. Diam. 0.83
 Noz. I.D. 0.83
 Meter # _____
 Probe # _____

Filter # 20 + 7
 Pitot # _____
 Net Imp Vol 14
 Tot Imp Vol 214
 Sample Time _____
 Sqrt ΔP Ave _____

F. wt. (mg) _____
 R.H. wt. (mg) _____
 Gel wt. (mg) _____
 %CO₂ Actual _____
 %O₂ Actual _____
 Tot. Moisture _____
 Std Vn _____

1437

164.662

Sample Point	Clock Time	Vel. ΔP	M.R. cfm	Orif. ΔH	Gas Meter Volume ft ²	Temperatures F				Pump Vac.	Comments
						In	Out	Stack	Imp. Filter	Probe	
1 232	1	1.2	1.95	1.75		78	76	77			10 1/2 1.015
2 37	2	1.25	1.15	1.4		90	70	74			11 1.118
3 40	3	1.15	1.68	1.7		94	61	72			10 1.022
4 47	4	1.15	1.612	1.7		98	76	72			10 1.072
5 52	5	1.0	1.647	1.5		100	70	71			8 1/2 1.00
6 57	6										
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
24											
25											
26											
27											
Average											

Notes:

Ms =
 Ave. Vs =
 Sample I.D. =

BEST ENVIRONMENTAL Particulate Field Data Sheet

Run # 1 Method # CARB m7

Plant Chem-Doty
 Date 3/15/91
 Location Cyclone - inlet
 Port Dim. 1 1/2"
 Stack I.D. 48" - round
 Stack Area ft²
 Personnel TP/CT

Q_{sc} 1.543 XH₂O Assum. 2 Filter # 10,19 F... wt. (mg)
 Meter Yd 0.9731 Pitot Cp 0.84 Pitot # BA 6' E.H. wt. (mg)
 PBar. 29.88 Noz. Diam. 0.154 Net Imp Vol 22 Gel Wt. (mg) +3
 Stat Press -14.8 Noz. I. BA 4D Tot Imp Vol 220 XCO₂ Actual
 XCO₂ Assum 20.95 Meter # LSI #2 Sample Time 30 XCO₂ Actual
 XCO₂ Assum 0.04 Probe # BA 6" Sqrt ΔP Ave Tot. Moisture
 Fre leak ck 0.016 cfm 17 "Hg Post leak ck 0.016 cfm 15 "Hg Std Vm

Sample Point	Clock Time	Vel. ΔP	M.R. cfm	Orif. ΔH	Gas Meter Volume ft ²	Gas Meter		Temperatures F				Pump Vac.	Comments
						In	Out	Stack	Imp.	Filter	Probe		
1	E1	2:10	1.18	0.6	247.890	80	78	60					
2	E2	2:12:30	1.25	0.64	249.186	86	74	60				5"	
3		2:15			250.243								
4	E3	2:35	1.22	0.62	250.243	84	84	61					
5	E4	2:37:30	1.14	0.58	251.356	91	78	62					
6	E5	2:40	1.42	0.78	252.513	95	76	62				5"	
7	E6	2:42:30	1.65	0.85	253.743	98	76	62					
8		2:45			255.112								
9	E7	2:49	0.95	0.50	255.112	90	80	59					
10	E8	2:51:30	0.98	0.48	256.121	98	78	60				4"	
11	E9	2:54	.93	0.48	257.134	100	78	59					
12	E10	2:56:30	0.92	0.48	258.126	102	78	60					
13	E11	2:59	0.82	0.43	259.117	104	78	60					
14	E12	3:01:30	0.77	0.4	260.067	104	78	56					
15		3:04			260.984								
16													
17													
18													
19													
20													
21													
22													
23													
24													
25													
26													
27													
28	Average												

Notes:

Ms =
 Ave. Vs =
 Sample I.D. =

1. Visible particulate emissions from S1, Wood Waste Incoming Stockpile Operation (truck unloading, wood waste handling and transport to shredder feed conveyors, wind erosion, vehicle movement) or from the load-out of purged baghouse dust storage shall not exceed Ringelmann #0.5 in excess of 3 minutes per 60 minute period (or equivalent opacity) nor shall it result in fallout on adjacent property. ✓
2. The wood waste income stockpile operation (S1) shall receive water applications as necessary to comply with Condition #1. S2, Conveyor Transfer Point shall be abated by A2, Water Jet Spray Bar. ✓
3. Visible particulate emissions from S2 Shredder Feed Conveyor of transfer point, S3, Shredder, S4, Vibrating Conveyor (Shredder Discharge), S5, Trommel Screen or S6, Air Separator shall not exceed Ringelmann #0.5 in excess of 3 minutes per 60-minute period. ✓
4. S3, Shredder, S4, Vibrating Conveyor (Shredder Discharge), S5, Trommel Screen, and S6, Air Separator shall be controlled at all times by A3, baghouse. S3, S4, S5, and S6 shall not be operated if A3, Baghouse malfunctions. A-3 BAGHOUSE ✓
5. A3 Baghouse shall be inspected and maintained on a monthly basis (or more frequently, if recommended by manufacturer). Visible emissions from the emission point of A3 shall require immediate shutdown of S3, S4, S5, and S6, and inspection of the baghouse. ✓ NO VISIBLE
6. A District approved logbook shall be accurately maintained on a monthly basis of the periodic baghouse inspection required by Condition #5. Replacement of bags, or any repair made to the baghouse shall be recorded. This logbook shall be made readily available at the request of the District. ✓ BAGHOUSE LOG BOOK
7. Emissions from A3 Baghouse shall not exceed 0.01 grains/sdcf of exhaust gas volume nor shall baghouse efficiently be less than 99.99%. ✓
8. A District approved source test of A3, Baghouse shall be performed, and the source test data submitted to the District, within 60 days of start-up. The source test results shall include grain loading, baghouse efficiency and process rate and shall be performed while equipment is operating at, or near, maximum capacity. } PROCESS RATE
9. The District's source test group shall be notified in writing, at least 10 days prior to the source test date. ✓
10. If Sources S1, S2, S3, S4, S5, or S6 are unable to meet their respective particulate emissions limitations, Waste Fibre Recovery Corporation shall additionally install one or more of the following abatement device, as deemed necessary by the APCO:
 - a. Addition water spray.
 - b. Wind screen or additional enclosure.
 - c. Additional filtration systems.✓
10. Any visible emissions from the chip bins or chip storage pile shall require Waste Fibre Corporation to apply for permits from these operations. ✓
12. Prior to commencing installation of A3, Baghouse, Waste Fibre Recovery Corporation shall contact the District's Source Test Section for:
 - a. Approval of stack design and location of sampling ports. ✓

Fibre Recovery Corporation shall contact the District's Source Test Section for:

- a. Approval of stack design and location of sampling ports. ✓
- b. Approval of source test methods to be used. ✓
13. Waste Fibre Recovery Corporation shall provide dust suppression on West Winton Avenue between Cabot Boulevard and Hesperian Boulevard if dust emissions from vehicle traffic in and out of Waste Fibre Recovery Corporation causes more than ten verified compliance within any 90-day period. ✓
14. During the start-up periods (as defined in Regulation 2-1-209), not to exceed 60 days unless extended in accordance with Regulation 2-1-411, or until written notice is granted by the APCO, Waste Fibre Recovery Corporation shall not operate Sources S2, S3, S4, S5, and S6 more than 8 hours/day. During this same period throughput shall be limited to no more than 200 tons/hour and 1600 tons/day at the sources specified above. ✓
15. Except as limited by Condition #14, Waste Fibre Recovery Corporation shall not operate Sources S2, S3, S4, S5 and

device	READ	"to"	ADVANCE	339	1	ADVANCE	COPY	COPY	COPY
modes	DISK	devices	PAGE	CN		LINE	ALL	PAGE	LINE

suppression on West Clinton Avenue between Cabot Boulevard and Hesperian Boulevard if dust emissions from vehicle traffic in and out of Waste Fibre Recovery Corporation causes more than ten verified compliance within any 90-day period.

14. During the start-up periods (as defined in Regulation 2-1-209), not to exceed 60 days unless extended in accordance with Regulation 2-1-411, or until written notice is granted by the APCO, Waste Fibre Recovery Corporation shall not operate Sources S2, S3, S4, S5, and S6 more than 8 hours/day. During this same period throughput shall be limited to no more than 200 tons/hour and 1600 tons/day at the sources specified above.
15. Except as limited by Condition #14, Waste Fibre Recovery Corporation shall not operate Sources S2, S3, S4, S5 and S6 more than 16 hours/day. Maximum throughput shall be limited to no more than 200 tons/hour and 3200 tons/day at the sources specified above.
16. Waste Fibre Recovery Corporation shall maintain a District approved log to track hourly and daily throughputs necessary to show compliance with Conditions #14 and #15.

list condition NUMBER >>

Application: 1673 <<archived applicati record>>
 Plant #: 3673
 Plant name: Waste Fibre Recovery Corporation
 Location: 1906 W Winton Ave, Hayward, CA 94544
 UTM coordinates: (None yet)
 Project title: Wood waste process
 Contact: Dale E Mesple, Executive Vice President
 Company name: Waste Fibre Recovery Corporati
 Mailing address: P O Box 677, Antioch, CA 94509
 Phone: (415) 625-9372
 Engineer: Craig S Ullery [394]
 Received: 08/22/88 . . Completeness review due by: 09/21/88
 Incomplete: 09/13/88 Cancellation due by: 03/14/91
 Re-activated: 03/04/91 . . Completeness review due by: 04/03/91
 A/C: 06/08/89 Expiration due by: 06/08/91
 Filing fee: \$1,050
 Initial fee: \$1,500
 Billed: \$2,550 02/15/91
 Paid: \$450 (log#:29978)
 Paid: \$1727.25 (log#:2167)
 Total paid: \$2177.25
 Final disposition: A/C granted 06/08/89
 RFP: Yes

Net Emissions Change Attributable to this A/C
 Effective date of change 06/13/89 Entry date 06/13/89

	lbs/day annual average -----	
particulates	87.00	<150 ppd, cumulative <150 ppd
organics(precursor)	.00	
nitrogen oxides	.00	
sulfur dioxide	.00	
carbon monoxide	.00	
organics(non-precursor)	.00	

Source: S-1; Incoming Wood Waste Stockpile Area

Codes: NEW/NON

Condition id#: 2705

Estimated Start-up: 02/04/91

Actual Start-up: 02/04/91

Source: S-2; Apron Feed Conveyors (1 transfer point)

Codes: NEW/NON

Condition id#: 2705

Estimated Start-up: 02/04/91

Actual Start-up: 02/04/91

Source: S-3; Shredder Operation

Codes: NEW/NON

Condition id#: 2705

Estimated Start-up: 02/04/91

Actual Start-up: 02/04/91

Source: S-4; Shredder Discharge Conveyors

Codes: NEW/NON

Condition id#: 2705

Estimated Start-up: 02/04/91

Actual Start-up: 02/04/91

Condition id#: 2705
Estimated Start-up: 02/04/91
Actual Start-up: 02/04/91

Source: S-6; Air Separator Operation

Codes: NEW/NON

Condition id#: 2705
Estimated Start-up: 02/04/91
Actual Start-up: 02/04/91

Source: S-7; 10,000 gallon Diesel above ground storage tank

Codes: EXE/NON

list application NUMBER >>

For FUTURE records, add 'F' or 'f' to Pl#. (: 129f)

For ARCHIVE records, add 'A' or 'a' to Pl#. (ex: 129a)

Otherwise, program will default to 'CURRENT' files.

PLANT# 3673

No sources found

No Abatement Devices

No Emission Points

PLANT#								
device	READ	"to"	ADVANCE	155	8 ADVANCE	COPY	COPY	COPY
modes	DISK	devices	PAGE	CN	LINE	ALL	PAGE	LINE

Plant number 3673
Business name Waste Fibre Recovery Corporation
Location address 1906 W Winton Ave
City Hayward, CA 94544
Telephone (415) 625-9372
Mailing address P O Box 677
City Antioch, CA 94509
Principal product Wood chips
Parent company
Contact Dale E Mesple
Title Executive Vice President
Address P O Box 677
City Antioch, CA 94509
Telephone (415) 625-9372
Permit engr, current ... Carol Lee (497)
Permit engr, former Craig S Ullery (394)
Inspection Area # 120 - John F Semerau (569)
Inspection Materials ... 02/11/91
Ownership type Private
Number of employees 24
Property area, acres ... 5
Inside city limits Yes
Permit month

list DETAIL for plant # >>

CONTACTED S.T. TO APPROVE #12ⁿ STACK DESIGN &

PORTS

a) S.T. METHODS

CARB METHOD 5 FRONT 1/2
OR ~~EE~~

DATE OF TEST 15TH

CONTACT AT FIRM JACK FRASER CDI > BOILERS
MARV WOODIE CDI

CRAIG ULLERY

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

SOURCE TEST FIELD OBSERVATION SHEET

COMPANY NAME WASTE FIBRE RECYCLING #3673 DATE 6/11/91

ADDRESS 1900 W. WILSON AV. CITY HAYWARD

REPRESENTATIVE _____ TELEPHONE () _____

TEST CONTRACTOR BEST ENVIR

REPRESENTATIVE _____ TELEPHONE () _____

BAAQMD OBSERVER H. DOE / C. MCCLURE

SOURCE OPERATION A-3 BAKHOUSE IN & OUT

SAMPLE TYPE(S) CARB 17 - IN STACK FILTRATION

TEST PROCEDURE 12 POINTS / RUN.

DEVIATIONS FROM BAAQMD METHOD MODIFIED METHOD 17

2 SLOBBIES 1ST FAPT FILTER - 2ND GLASS WOOL

POST RUN #1 LEAK CHECKS - OK. RUN #2 PRIOR LEAK

POST 2ND RUN FAN BROKE - RUN #2 ON HAND

MISCELLANEOUS COMMENTS BAKHOUSE DP = .2" H₂O

POST-TEST REVIEW COMMENTS (Complete after results are reported) _____

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

SOURCE TEST FIELD OBSERVATION SHEET

COMPANY NAME WASTE FIBRE RECOVERY #3673 DATE 6/11/91
 ADDRESS 1906 W. WINTON AVE. CITY HAYWARD

REPRESENTATIVE DALE E. MESPLE TELEPHONE (415) 625-9372

TEST CONTRACTOR BEST ENVIRONMENTAL

REPRESENTATIVE _____ TELEPHONE () _____

BAAPCD OBSERVER H. 001

SOURCE OPERATION Efficiency of Baghouse A-3

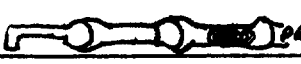
SAMPLE TYPE(S) PARTICULATES INLET & OUTLET

TEST PROCEDURE ~~BAAPCD METHOD 17 (ETA) WOOD CHIP PRODUCER~~

INLET: LSI Stack sampler 10X#2 Yd=0.9731, ΔH@1.600 ft/min

OUTLET: RAC Stack sampler Box Yd=1.0157, ΔH@1.853

INSTACK FILTER 2 STUBBIES GLASS NOZZLES.

 1ST STUBBY - PLAT FILTER } UNHEATED ~ HEATED PRESS
 2ND STUBBY - GLASS WOOL } UNHEATED ~ HEATED PRESS

DEVIATIONS FROM BAAQMD METHOD ~~NO STUBBIES AS IN METHOD 15 NO MEAS.~~

STUBBIES USED BUT NOT THOSE STUBBIES PACKED W/ GLASS
 WOOL TO MEASURE PRESSURE DROP.

MISCELLANEOUS COMMENTS AMBIENT CONDITIONS, DRY PROCESS, AMBIENT TEMPS.

SCRAP WOOD → WOOD CHIPS FOR INCINERATOR CONDENSATOR (SAL.)

LEAK CHECK GOOD ~ 0.015 @ 16", observe water measurement.

OBSERVED RUN #1, RUN #2 - READY - FAN DOWN IN PLANT (SHAKER-SAMPLER)

 POST-TEST REVIEW COMMENTS (Complete after results are reported) _____

S.T. OBSERVATION
PLT# 3673 COND# 2705

PARTICULATE IN & OUT A-3

3/15/90

1906 W. WINTON
HAYWARD

Δ P BAGHOUSE 1050 - .35" H₂O $\rightarrow$ TO 0.6" H₂O

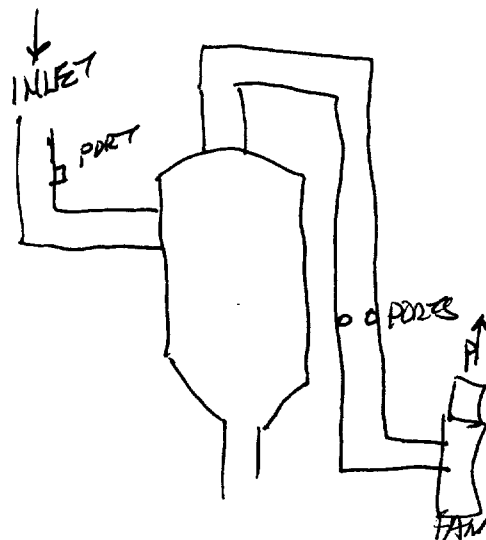
BPST FENURD - DAN CARZNER

PICOT TUBES LEAK CHECKED

BAGHOUSE INLET: 1 PORT - 15" H₂O

Δ P'S TRAVERSE 1 $\rightarrow$ 1.25

BAGHOUSE EXHAUST: 2-90° PORTS - 20" H₂O



INLET

CARB-17

NO HEAT

STUBBIE-PACKED W/ G-WOOL

GLASS NOZZLE

LEAK CHECK - OK

ROMA STARTED 1432

OUTLET

CARB-17

NO HEAT

~~STUBBIE~~

~~GLASS NOZZLE~~

LEAK CHECK - OK

ROMA STARTED 1430

SWITCHED TO IN
STACK FIRST FILTER
2 LEAKS
OK

MARVIN NOTICE

OBSERVATION

3/15/91

WASTE FIBRE RECOVERY CORP.
PLT# 3673 COND ID# 2705

2705

PAR #4

S-3 SHREDDER
S-4 VIBRATING CONVEYOR
S-6 AIR SEPARATOR

TO
A-3

- #5 NO VISIBLE EMISSIONS
- #6 BAGHOUSE LOG BOOK
- #7 A-3 $\rightarrow$ 99.99% EFE
\$ 94/SBCF $<$ 0.01 gr/SBCF
- #8 PROCESS RATE DURING TESTING 200 TPH MAX
- #9 S.T. NOTIFIED IN WRITING 10 DAYS PRIOR
- #12 S.T. SECTION A) APPROVAL OF STACK DESIGN & POINTS
B) APPROVAL OF TEST METHODS
- #16 HOURLY & DAILY THROUGHPUT.