Homer
Bill
~~Martin~~/M
SF

woodgrain millwork

August 9, 2005

William Rogers
Permit Coordinator
Idaho Department of Environmental Quality
1410 N. Hilton
Boise, ID 83706-1255

RE: Cyclone J and L Baghouse Replacement

Mr. Rogers

This letter is to inform you of our intent to not replace Cyclones J with a baghouse as previously considered in correspondence dating back 2-4 years ago with Eileen Loerch pertaining to Prevention of Significant Deterioration (PSD) determinations. Previously it was shown in a in the PSD applicably portion of the Tier I/Tier II permit application that PSD is applicable to Cyclones J and L when using the grain loading emission factor of 0.03 grains/dscf. Cyclone sampling at this facility has established DEQ accepted site wide throughput based emission factors for the cyclones. (Letter from William Rogers dated May 19, 2004).

The accepted emission factors for Woodgrain's Cyclones are 0.9 lb/Bone Dry Tone (BDT) for Particulate Matter (PM) and 0.6 lb/BDT for PM_{10}. The yearly PM and PM_{10} emissions from Cyclones J are 1.73 tons/year and 1.15 tons/year respectively . The yearly PM and PM_{10} emissions from Cyclone L were 2.33 tons/year and 1.55 tons/year respectively. The PSD applicability triggers for PM and PM_{10} are 25 and 15 tons/year, respectively. Thus PSD is not applicable for either Cyclone, however Cyclone L was replaced with a baghouse in early 2004. The yearly PM_{10} emissions from Baghouse L are 0.003 tons/year.

At this time there Best Available Control Technology (BACT) requirements are not applicable for either cyclone, however as stated above BACT was installed on Cyclone L as a good faith measure. There are no plans to install a baghouse on Cyclone J.

If you have any question please feel free to contact me with any questions. My direct line is 208-452-8264.

Sincerely,

Stephen Coe

Stephen Coe
Corporate Environmental Manager

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Department of Environmental Quality
State Air Program

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APR 15 2003
Department of Environmental Quality
State Air Program

April 14, 2003

Bill Rogers
Idaho Department of Environmental Quality
1410 North Hilton
Boise, Idaho 83706-1255

RE: Tier II 585/586 Modeling Date

Dear Mr. Rogers:

Attached is the 585/586 modeling data discussed by Almer Casile and Gretchen Hoy on April 11, 2003. This data is from revision 31 of the Woodgrain permit file and was part of the submittal to DEQ dated January 15, 2003. For some unknown reason, when Almer and I updated the permit binder, Tab 11, this revision of the data was not inserted in your binder. It does match the data in my copy of the permit binder.

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Sincerely,

David Lindsey
Vice President

CC: DEQ - Almer Casile

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Process Point 585 and 586 chemicals (all point sources)

											Max hrly limits	Average TOTALS(1)	OEL/URF mg/m^3	EL [lb/hr]	AAC/AACC mg/m3(585), ug/m3 (586)		Compare /Model?	1/100,000 for T-RACT
Glycol ethers	--	NA	1.46E+00	5.61E+00	1.18E-01	NA	NA	1.76E-01	NA	NA	8.10E+00	7.38E+00	19.00	1.27		limits from 2-Ethoxyethanol		
Eth Benz	100-41-4	NA	NA	8.30E-01	NA	5.68E-03	NA	NA	NA	NA	9.19E-01	8.35E-01	435.00	29.00			NA	
Styrene	100-42-5	NA	NA	NA	NA	6.68E-05	NA	NA	NA	NA	7.35E-05	6.68E-05	--	6.67			NA	
Allyl Glycidyl Ether	106-92-3	NA	NA	NA	NA	8.85E-04	NA	NA	NA	NA	9.74E-04	8.85E-04	22.00	1.47			NA	
Ethylene glycol	107-21-1	NA	1.05E-03	NA	1.91E-03	2.31E-01	3.27E-04	NA	NA	NA	2.58E-01	2.35E-01	127.00	0.846			NA	
Propylene Glycol Monomethyl Ether	107-98-2	NA	NA	NA	NA	3.63E-03	NA	NA	NA	NA	3.99E-03	3.63E-03	360.00	24.00			NA	
Vinyl Acet	108-05-4	NA	5.98E-02	2.60E-03	3.76E-03	1.20E-02	2.87E-03	5.64E-03	NA	NA	9.54E-02	8.67E-02	0.30	-	-			
Meth Iso Ket	108-10-1	NA	NA	1.98E+00	NA	8.71E-04	NA	NA	NA	NA	2.18E+00	1.98E+00	205.00	13.70			NA	
Isopropyl Ace	108-21-4	NA	2.56E-02	1.28E+01	NA	NA	NA	NA	NA	NA	1.42E+01	1.29E+01	1040.00	69.30			NA	
1-methoxy-2-propanol acetate	108-65-6	NA	NA	NA	NA	1.52E-03	NA	NA	NA	NA	1.68E-03	1.52E-03	n/a	24.00			NA	
Toluene	108-88-3	NA	2.38E-01	1.25E+01	NA	5.29E-02	8.68E-03	NA	NA	NA	1.40E+01	1.28E+01	375.00	25.00			NA	
Monochlorobenzene	108-90-7	NA	NA	NA	NA	1.34E-05	NA	NA	NA	NA	1.47E-05	1.34E-05	350.00	23.30			NA	
Phenol	108-95-2	NA	NA	NA	NA	NA	2.00E-04	NA	NA	NA	2.20E-04	2.00E-04	19.00	1.27			NA	
Propyl Acetate	109-60-4	NA	NA	1.17E+01	NA	NA	NA	NA	NA	NA	1.29E+01	1.17E+01	840.00	56.00			NA	
Isobutyl Acet	110-19-0	NA	NA	9.51E+00	NA	NA	NA	NA	NA	NA	1.05E+01	9.51E+00	700.00	46.70			NA	
M n-Amyl K	110-43-0	NA	6.38E-02	3.07E-01	NA	NA	NA	NA	NA	NA	4.08E-01	3.71E-01	235.00	15.70			NA	
n-Hexane	110-54-3	NA	NA	NA	NA	2.86E-02	NA	NA	NA	NA	3.15E-02	2.86E-02	180.00	12.00			NA	
Diethylene Triamine	111-40-0	NA	NA	NA	NA	1.60E-04	NA	NA	NA	NA	1.76E-04	1.60E-04	4.00	0.27			NA	
Ethylene glycol monobutyl ether	111-76-2	NA	7.10E-02	NA	2.82E-02	6.68E+00	NA	NA	NA	NA	7.46E+00	6.78E+00	120.00	8.00	8.00		NA	
Ethyl glycol monobutyl ether acetate	112-07-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.00E+00	0.00E+00	120.00	8.00		limits from EGBG	NA	
Diethylene glycol monoethyl ether acetat	112-15-2	NA	1.35E-02	NA	NA	NA	1.04E-02	NA	NA	NA	2.63E-02	2.39E-02	120.00	8.00		limits from EGBG	NA	
Diethylene glycol monobutyl ether	112-34-5	NA	NA	NA	9.48E-03	NA	0.00E+00	NA	NA	NA	1.04E-02	9.48E-03	120.00	8.00		limits from EGBG	NA	
Di(2-ethylhexyl)phthalate	117-81-7	NA	4.00E-01	NA	NA	NA	NA	NA	NA	NA	4.40E-01	4.00E-01	2.4E-07	2.6E-02		from roll manufact o	0.440	
Triethylamine	121-44-8	NA	NA	2.82E-04	NA	NA	NA	NA	NA	NA	3.10E-04	2.82E-04	4.10	0.27			NA	
HydroQui	123-31-9	NA	NA	NA	3.53E-05	NA	NA	5.29E-05	NA	NA	9.70E-05	8.81E-05	2.00	0.13			NA	
Diacetone Alcohol	123-42-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.00E+00	0.00E+00	240.00	16.00			NA	
N Butyl Ac	123-86-4	NA	1.19E-02	2.71E-01	NA	NA	NA	NA	NA	NA	3.11E-01	2.83E-01	710.00	47.30			NA	
1,4-Dioxane	123-91-1	NA	NA	NA	0.00E+00	NA	NA	NA	NA	NA	0.00E+00	0.00E+00	1.40E-06	4.80E-03	7.10E-01		NA	
Ethy Acet	124-17-4	NA	NA	NA	1.76E-01	NA	NA	2.64E-01	NA	NA	4.85E-01	4.41E-01	120.00	8.00		limits from EGBG	NA	
Tetrachloroethylene	127-18-4	NA	NA	NA	NA	2.16E-03	NA	NA	NA	NA	2.38E-03	2.16E-03	4.8E-07	1.3E-02			NA	
Xylene	1330-20-7	NA	NA	4.90E+00	NA	2.34E-02	NA	NA	NA	NA	5.41E+00	4.92E+00	435.00	29.00			NA	
Ethyl Acet	141-78-6	NA	2.31E-02	1.25E+01	NA	NA	NA	NA	NA	NA	1.38E+01	1.25E+01	1400.00	93.30			NA	
Heptane	142-82-5	NA	NA	3.87E-01	NA	NA	NA	NA	NA	NA	4.26E-01	3.87E-01	1640.00	109.00			NA	
2-(thiocyanmethylthio)benzothiazole	21564-17-0	NA	NA	NA	NA	6.68E-01	NA	NA	NA	NA	7.35E-01	6.68E-01	-	-	-			
Trimethylbenzene	25551-13-7	NA	NA	NA	NA	1.65E-03	6.68E-04	NA	NA	NA	2.55E-03	2.32E-03	123.00	8.20			NA	
Dipropylene Glycol Methyl Ether	34590-94-8	NA	NA	NA	NA	6.80E-03	NA	NA	NA	NA	7.48E-03	6.80E-03	600.00	40.00			NA	
Formaldehyde	50-0-0	NA	3.52E-03	NA	5.11E-04	1.20E-02	2.70E-02	7.67E-04	NA	NA	4.83E-02	4.39E-02	1.30E-05	5.1E-04	7.7E-02		0.048	
Trimethyl-pentane	540-84-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.00E+00	0.00E+00	350.00	23.30			NA	
Ethanol	64-17-5	NA	4.99E-02	2.09E+01	1.20E-01	NA	NA	NA	NA	NA	2.31E+01	2.10E+01	1880.00	125.00			NA	
Aromatic solvent	64742-94-5	NA	NA	NA	NA	8.68E+00	NA	NA	NA	NA	9.55E+00	8.68E+00	-	-	-			
Methanol	67-56-1	NA	1.97E-03	1.38E-02	4.68E-02	NA	3.51E-03	3.00E-02	NA	NA	1.06E-01	9.60E-02	260.00	17.30			NA	
IsoProp	67-63-0	NA	NA	1.64E+01	1.25E-04	1.10E-02	NA	NA	NA	NA	1.80E+01	1.64E+01	980.00	65.30			NA	
Acetone	67-64-1	NA	6.23E-01	2.87E+00	NA	8.26E-02	1.60E-02	NA	NA	NA	3.95E+00	3.59E+00	1780.00	119.00			NA	
Benzene	71-43-2	NA	NA	NA	NA	2.67E-05	NA	NA	NA	NA	2.94E-05	2.67E-05	8.3E-06	8.0E-04			NA	
1,1,1, Trichloroethane	71-55-6	NA	NA	NA	NA	2.24E-03	NA	NA	NA	NA	2.47E-03	2.24E-03	-	-	-	1,1,2 tri chlor is 586		
Acetaldehyde	75-07-0	NA	1.35E-01	NA	2.17E-04	NA	NA	3.26E-04	NA	NA	1.49E-01	1.36E-01	2.2E-06	3.0E-03		B#1 - from coldVAE	0.149	
Methylene Chloride	75-09-2	NA	NA	NA	2.04E-03	4.74E-04	NA	NA	NA	NA	2.77E-03	2.52E-03	4.1E-06	1.6E-03			0.003	
Ethylene Oxide	75-21-8	NA	NA	NA	0.00E+00	NA	NA	NA	NA	NA	0.00E+00	0.00E+00	1.4E-04	6.7E-05	1.0E-02		NA	
Prop Ox	75-56-9	NA	NA	NA	5.88E-06	NA	NA	8.81E-06	NA	NA	1.62E-05	1.47E-05	48.00	3.20			NA	
MEK	78-93-3	NA	4.16E-01	1.96E+01	NA	9.71E-04	NA	NA	NA	NA	2.20E+01	2.00E+01	590.00	39.30			NA	
Trichloroethylene	79-01-6	NA	NA	NA	NA	6.30E-03	NA	NA	NA	NA	6.93E-03	6.30E-03	269.00	17.93			NA	
Stoddard Solvent	8052-41-3	NA	NA	NA	0.00E+00	NA	NA	NA	NA	NA	0.00E+00	0.00E+00	525.00	35.00	26.25		NA	
Naphthalene	91-20-3	NA	NA	NA	NA	9.35E-01	NA	NA	NA	NA	1.03E+00	9.35E-01	50.00	3.33			NA	
Orthodichlorobenzene	95-50-1	NA	NA	NA	NA	2.10E-04	NA	NA	NA	NA	2.31E-04	2.10E-04	390.00	20.00			NA	
1,2,4 Trimethylbenzene	95-63-6	NA	NA	NA	NA	1.00E+03	NA	NA	NA	NA	1.10E+03	1.00E+03	-	-	-			
Cumene	98-82-8	NA	NA	NA	NA	8.92E-08	NA	NA	NA	NA	9.81E-08	8.92E-08	245.00	16.30			NA	
	hrly totals	0.0	3.6	133.0	0.5	1,017.5	0.1	0.5	0.0	0.0								
	max hrly totals	0.00	4.31	159.80	0.61	1220.94	0.08	0.57	0.00	0.00								

Notes:
Green: a 585 chemical
Orange: a 586 chemical
Red: new chemical on list this version
If emissions are above EL - then ambient impacts need to be compared to AAC (or AACC for 585's)
1) Totals are PTE BEFORE emission controls.

585/586 Modeling data

Data is in lb/hr

		No "Bldg"	BLDG 1	BLDG 2	BLDG 3	BLDG 4	BLDG 5	BLDG 6	BLDG 9	BLDG 10
	HR/YR	7,488	4,992	4,992	7,488	7,488	7,488	4,992	7,488	5,250
PM10 FROM PROCESS POINT SOURCES (includes only non-fugitive, no fugitives associated with these points)										
Bldg 1		NA	0.00E+00	NA	NA	NA	NA	NA	NA	NA
Bldg 2		NA	NA	0.00E+00	NA	NA	NA	NA	NA	NA
Bldg 3		NA	NA	NA	0.00E+00	NA	NA	NA	NA	NA
Bldg 4		NA	NA	NA	NA	0.00E+00	NA	NA	NA	NA
Bldg 5		NA	NA	NA	NA	NA	0.00E+00	NA	NA	NA
Bldg 6		NA	NA	NA	NA	NA	NA	0.00E+00	NA	NA
Bldg 9		NA	NA	NA	NA	NA	NA	NA	0.00E+00	NA
Bldg 11		NA	NA	NA	NA	NA	NA	NA	NA	0.00E+00
Cyclone B	7,488	1.49E-02	NA	NA	NA	NA	NA	NA	NA	NA
Cyclone F	7,488	0.00E+00	NA	NA	NA	NA	NA	NA	NA	NA
Cyclone C	7,488	1.03E-02	NA	NA	NA	NA	NA	NA	NA	NA
Cyclone I	7,488	5.92E-03	NA	NA	NA	NA	NA	NA	NA	NA
Cyclone G	7,488	1.78E-02	NA	NA	NA	NA	NA	NA	NA	NA
Cyclone E	7,488	3.95E-02	NA	NA	NA	NA	NA	NA	NA	NA
Cyclone J	7,488	2.52E-02	NA	NA	NA	NA	NA	NA	NA	NA
Cyclone K	7,488	2.52E-02	NA	NA	NA	NA	NA	NA	NA	NA
Cyclone L	7,488	3.59E-02	NA	NA	NA	NA	NA	NA	NA	NA
Cyclone D (temporary?)	7,488	5.01E-04	NA	NA	NA	NA	NA	NA	NA	NA
Electric PVC Vac Oven	7,488	0.00E+00	NA	NA	NA	NA	NA	NA	NA	NA
Proposed Baghouse E	7,488	1.58E-04	NA	NA	NA	NA	NA	NA	NA	NA
Proposed Baghouse M5	7,488	0.00E+00	NA	NA	NA	NA	NA	NA	NA	NA
Proposed Baghouse L	7,488	1.44E-04	NA	NA	NA	NA	NA	NA	NA	NA
Proposed Baghouse J	7,488	1.01E-04	NA	NA	NA	NA	NA	NA	NA	NA
Proposed Baghouse G	7,488	7.11E-05	NA	NA	NA	NA	NA	NA	NA	NA
Baghouse M	7,488	6.72E-04	NA	NA	NA	NA	NA	NA	NA	NA
BURNERS/OVEN SOURCES - PM10										
NG Oven B5	2,000	NA	1.30E-03	NA	NA	NA	NA	NA	NA	NA
N&S RF ovens	4,000	NA	NA	1.04E-02	NA	NA	NA	NA	NA	NA
Burner/Ovens	6,240	NA	NA	NA	7.01E-03	NA	NA	NA	NA	NA
Burner/Ovens	4,992	NA	NA	NA	NA	NA	NA	5.89E-03	NA	NA
BURNERS/OVEN SOURCES - Total VOC's										
NG Oven B5	2,000	NA	9.39E-04	NA	NA	NA	NA	NA	NA	NA
N&S RF ovens	4,000	NA	NA	7.51E-03	NA	NA	NA	NA	NA	NA
Burner/Ovens	6,240	NA	NA	NA	5.07E-03	NA	NA	NA	NA	NA
Burner/Ovens	4,992	NA	NA	NA	NA	NA	NA	3.44E-03	NA	NA
BURNERS/OVEN SOURCES - SO2										
NG Oven B5	2,000	NA	1.02E-04	NA	NA	NA	NA	NA	NA	NA
N&S RF ovens	4,000	NA	NA	8.19E-04	NA	NA	NA	NA	NA	NA
Burner/Ovens	6,240	NA	NA	NA	5.53E-04	NA	NA	NA	NA	NA
Burner/Ovens	4,992	NA	NA	NA	NA	NA	NA	3.75E-04	NA	NA
BURNERS/OVEN SOURCES - CO										
NG Oven B5	2,000	NA	1.43E-02	NA	NA	NA	NA	NA	NA	NA
N&S RF ovens	4,000	NA	NA	1.15E-01	NA	NA	NA	NA	NA	NA
Burner/Ovens	6,240	NA	NA	NA	7.75E-02	NA	NA	NA	NA	NA
Burner/Ovens	4,992	NA	NA	NA	NA	NA	NA	5.25E-02	NA	NA
BURNERS/OVEN SOURCES - NOx										
NG Oven B5	2,000	NA	1.71E-02	NA	NA	NA	NA	NA	NA	NA
N&S RF ovens	4,000	NA	NA	1.37E-01	NA	NA	NA	NA	NA	NA
Burner/Ovens	6,240	NA	NA	NA	9.22E-02	NA	NA	NA	NA	NA
Burner/Ovens	4,992	NA	NA	NA	NA	NA	NA	6.25E-02	NA	NA
STORAGE PM 10 (all fugitive)										
1 Portable Storage Bin	4,992	0.01	NA	NA	NA	NA	NA	NA	NA	NA
3 East Loadout Bins	7,488	0.15	NA	NA	NA	NA	NA	NA	NA	NA
4 West Loadout Bins	7,488	0.15	NA	NA	NA	NA	NA	NA	NA	NA
5 Shavings Bin	7,488	0.12	NA	NA	NA	NA	NA	NA	NA	NA
6 Fines Bin (sawdust)	7,488	0.53	NA	NA	NA	NA	NA	NA	NA	NA
7 Fines Bin	7,488	0.95	NA	NA	NA	NA	NA	NA	NA	NA
8 Fines Bin	7,488	0.47	NA	NA	NA	NA	NA	NA	NA	NA
Transfer PM 10 (all fugitive)										
1 Truck transfer to P25		0.23	NA	NA	NA	NA	NA	NA	NA	NA
3 Truck transfer to off site		0.09	NA	NA	NA	NA	NA	NA	NA	NA
4* Trucked (sold)		0.40	NA	NA	NA	NA	NA	NA	NA	NA
5 Truck transfer from ST 7		0.88	NA	NA	NA	NA	NA	NA	NA	NA
6 Truck Transfer from ST8		0.88	NA	NA	NA	NA	NA	NA	NA	NA

AIR QUALITY MODELING REPORT

PURPOSE

This air quality modeling analysis was be prepared for Woodgrain Millwork's to assess the impact of revised PM_{10} emission rates on some sources in their Tier II air permit application. Therefore, this modeling update consists only of remodeling for PM_{10}, as per an agreement between Woodgrain Millworks and the IDEQ program office. This modeling report describes the PM_{10} air quality modeling reanalysis for the Woodgrain Millwork Fruitland facility. The modeling methodology will be consistent with the modeling protocol approved by Idaho Department of Environmental Quality (IDEQ) March 11, 2005 in an EMAIL from Air Modeling Coordinator Kevin Schilling and the conditions put on that approval. The modeling methodology is virtually unchanged from the methodology approved by IDEQ for the facility's earlier Tier II air permit modeling. Major features of the analysis include 11 point sources, all cyclones and baghouses, and more than a dozen fugitive sources modeled as volume sources as per IDEQ's comments during the Tier II permit application process and this analysis' modeling protocol. Source data changes from the previous analysis include updated emission factors for some PM_{10} sources, and updates to the facility baghouse and cyclone emission point source data. Cyclone emission factors used in this modeling analysis are consistent with the emission factors documented in the April 23, 2004 report "Fruitland Idaho Facility Cyclone Particle Size Distribution and Cyclone Emission Factor Determination" report. The department approved the use of these emission factors in a letter from Bill Rogers dated May 19, 2004.

MODEL DESCRIPTION / JUSTIFICATION

The model chosen is ISCST3, the US EPA approved Industrial Source Complex model. This model, probably the most used regulatory model in the US and designed for the type of application here, is the most appropriate of the models recommended for regulatory use for this application. It was applied as recommended in EPA's *Guideline on Air Quality Models* (2001), utilizing that document's regulatory default options, consistent with the methodology approved by IDEQ and conditions IDEQ placed upon that approval. The Prime building downwash option in ISCST3 was utilized to ensure appropriate impact estimates in building cavities.

EMISSION AND SOURCE DATA

As recommended by the IDEQ program office, the only criteria pollutant to be remodeled is PM_{10}. All PM_{10} emissions identified in the facility's emission inventory except the onsite vehicular traffic emissions will be included in the modeling.

Point sources parameters were verified by Woodgrain Millwork facility staff for this analysis. The flow rates used represent actual mean operating values, determined from flow measurements and/or fan curve analysis. The flow rates and control efficiencies applied are consistent with the values used in the Cyclone Emission factor determination approved by IDEQ. The temperatures

used in the model are conservatively low. The point sources do not include any fuel consumption. All point sources represent filtration of air from inside the buildings. The temperatures used are indoor air temperatures representative of indoor conditions in winter, and below those which occur during summer and warmer weather.

Volume source parameterizations were based on measurements and information verified onsite by Woodgrain Millwork personnel. Since all fugitive sources are near buildings, horizontal dimensions were based upon the actual size of the vent or process release point, and vertical dimensions were determined as per IDEQ and EPA guidance as a function of the height of the nearby building. Storage emissions for the chip bins were modeled from the top of the storage vessels during transfer of materials in or out. Measured dimensions of that area were used to calculate the model sigma y parameter. Transfer point emissions were based on the dimensions of the openings at the base of the storage bins and the short distance to trucks underneath. Three oven processes, each with emissions well below 1 ton per year, had multiple or indirect venting. They were very conservatively modeled as volume sources with no loft. Two other oven processes (P28 and P29), each also with emissions well below 1 ton per year, were vented directly outside. They were conservatively modeled as volume sources with source parameters representative of the actual vents and no loft.

All the transfer sources represent short drops from overhead storage bins into truck beds. TR-4, TR-5, and TR-6 were given 90% control efficiencies. Those drops occur inside a tunnel approximately 80 feet long. The tunnel has hard walls on both sides and above. Once the trucks enter, a rolldown door closes the end they entered in. The only opening is at the far end of the tunnel, at least 40 feet from each of those drop points. Truck beds are tarped before the trucks leave the tunnel. TR-1 and TR-3 emissions were estimated to have a 75% control efficiency. The TR-3 drop occurs in the same tunnel, but approximately 15 feet from the open end. The TR-1 drop occurs in a similar process in the center of a separate tunnel approximately 40 feet long. That tunnel has the same design as the first tunnel except that there is no roll down door at the entry end. No control efficiencies were assumed for storage emissions despite the fact that calculations assume 100% open operations and the actual processes are actually nearly completely enclosed. To be overly conservative for both the 24 hour and annual averaging period, all PM_{10} sources were modeled as continuously emitting despite the fact that higher hourly emission rates were calculated from annual throughput assuming limited operations for every source.

Volume source sigma y horizontal parameters were calculated as the mean size of the horizontal side of the area of emissions divided by 4.3, as recommended in ISCST3 Users Guide, Volume 2 for single volume sources. All volume sources modeled were on or in the immediate vicinity of a facility building. Therefore, all model volume source vertical dimensions were derived from the heights of facility buildings. Table 1 shows the heights of all facility buildings, and the volume sources which are near that building and use its dimensions to calculate the model

volume source vertical dimension parameter. The volume source vertical dimension sigma z values were calculated as per guidance in the ISCST3 Model Users Guide, Volume 2 by dividing the building height by 2.15.

Table 1 Model Volume Source Vertical Dimensions

Building Number	Bldg Height (ft)	Volume Source Vert. Dimension, Sigma Z (ft)	Volume Sources affected
1	23	10.70	
2	22	10.24	P28, P29, P36
3	20	9.31	P9, ST3, ST4
4	20	9.31	ST1, TR1, ST3, ST4
5	25.5	11.86	ST5-8, TR3-6
6	24.5	11.40	P16
9	25	11.63	
10	14	6.52	

Changes from the modeling analyses prepared in support of Woodgrain Millwork's Tier II permit application include the addition of Cyclones D and H, and the removal of Cyclone F. Emission points I and J were corrected to cyclones, and emission point G was corrected to a baghouse. Emission rates and exhaust flow rates from all stack sources were also updated with information collected by Woodgrain Millwork staff. Tables 2a and 2b provide the draft model source parameters for PM_{10} point and volume sources to be included in the modeling analysis.

TABLE 2a
PM_{10} Point Source Model Parameters

Description	Source ID	Easting (X) (m)	Northing (Y) (m)	Base Elevation (m)	Stack Height (ft)	Temp. (°F)	Exit Velocity (ft/s)	Stack Diameter (ft)	PM_{10} Emiss. (lb/hr)
Cyclone B	CYCLONEB	506698.6	4874105	673.9	29	68	58.11	4	0.0414
Cyclone C [1]	CYCLONEC	506693.8	4874105	673.9	26	68	0.0033	5	0.0286
Cyclone I	CYCLONEI	506682.1	4874012	673.9	29.5	68	90.13	4	0.00781
Baghouse G [2]	BAGHG	506699	4874085	673.9	29.5	68	0.0033	0.0033	0.00004
Baghouse E [2]	BAGHE	506706.8	4874091	674	29.5	68	0.0033	0.0033	0.00009
Cyclone J [3]	CYCLONEJ	506680.5	4873906	673.7	29.5	68	0.0033	0.0033	0.13137
Cyclone K	CYCLONEK	506684.7	4873906	673.8	35	68	64.39	5	0.26274
Baghouse L [2]	BAGHL	506689.4	4873906	673.8	29.5	68	0.0033	0.0033	0.00059

Baghouse M [2]	BAGHM	506692.7	4873906	673.8	29.5	68	0.0033	0.0033	0.00075
Cyclone D	CYCLONED	506698.8	4874105	673.9	26.0	68	54.98	4	0.00144
Cyclone H [1]	CYCLONEH	506635.3	4874047	673.6	29.5	68	0.0033	4	0.33096

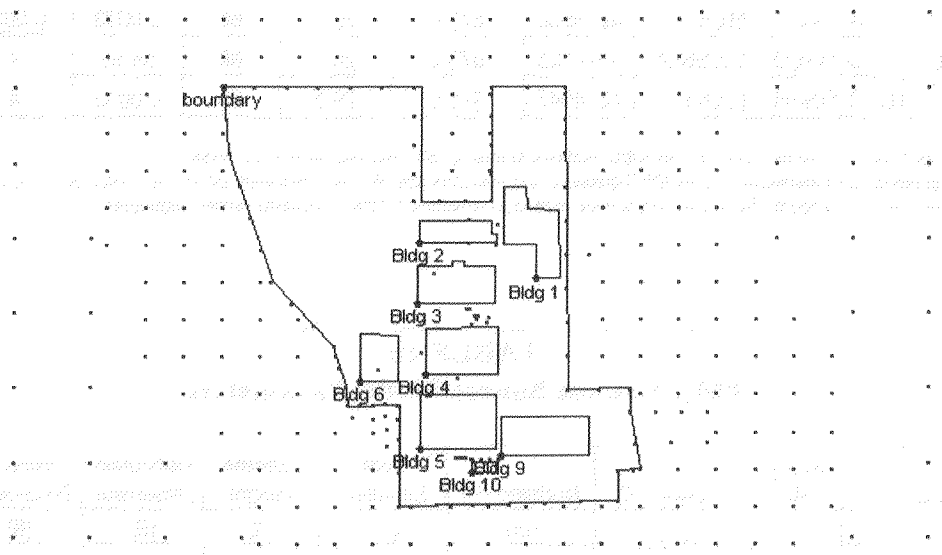
1 Cyclones C and H have rain caps. As per IDEQ Modeling Guidance, exit velocities set to 0.001 m/sec
2 All baghouses vent horizontally. As per IDEQ guidance, exit velocities and stk. Diameters were set to 0.001 m/sec and 0.001m respectively
3 Cyclone J vents downward. Stack parameters were revised as described for the horizontally venting baghouses

TABLE 2b
PM_{10} Volume Source Model Parameters

Description	Source ID	Easting (X)	Northing (Y)	Base Elevation	Release Height	Horizontal Dimension	Vertical Dimension	PM_{10} Emiss.
		(m)	(m)	(m)	(ft)	(ft)	(ft)	(lb/hr)
sm storage bin	ST1	506785.4	4874125	674.2	5.7999	3.4334	9.3176	0.01
chip storage bin	ST3	506708	4874096	674	43.5	1.3963	9.3176	0.06
chip storage bin	ST4	506702.6	4874096	673.9	43.5	1.2818	9.3176	0.15
chip storage bin	ST5	506700.4	4873903	673.9	47.6001	1.2131	11.8438	0.12
chip storage bin	ST6	506712.8	4873903	674	47.6001	1.2131	11.8438	0.53
chip storage bin	ST7	506724	4873903	674.1	42	1.2818	11.8438	0.95
chip storage bin	ST8	506735.3	4873903	674.2	42	1.2818	11.8438	0.47
chip bin to truck	TR1	506718	4874086	674.1	15	3.258	9.3176	0.078
chip bin to truck	TR3	506696.9	4873903	673.9	14	3.3724	11.8438	0.030
chip bin to truck	TR4	506709.4	4873903	674	14	3.3724	11.8438	0.045
chip bin to truck	TR5	506720.7	4873903	674.1	14	3.3724	11.8438	0.098
chip bin to truck	TR6	506732.2	4873903	674.2	14	3.3724	11.8438	0.098
2 NG ovens (priming)	P9	506649.5	4874153	673.7	2.5	0.6943	9.3176	0.00701
2 NG ovens (satin)	P16	506576.4	4874024	673.3	24.5	0.9308	11.3845	0.00475
North RF oven	P28	506695.5	4874193	673.6	2	0.9308	10.2362	0.00735
South RF oven	P29	506695.5	4874224	673.6	8	0.9308	10.2362	0.00303
Electric PVC oven	P36	506733.7	4874218	673.6	7	0.8164	10.2362	0.00130

Figure 1 provides a plot plan showing facility location, buildings, and property boundary. The dots within the property boundary show the model sources, the dots outside the property boundary show the innermost model receptors.

Figure 1 Model facility layout

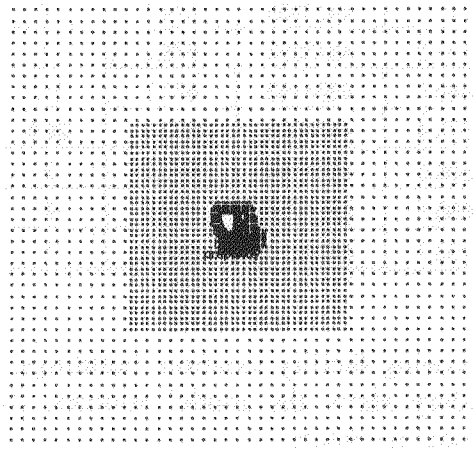


The annual average impact analysis very conservatively uses the same emission rates used for the 24-hour average impact analysis, even though many of the emission rates were calculated consistent with the limited number of operations for each source and therefore overestimate annual average emissions.

RECEPTOR NETWORK

Receptors were placed at and beyond the facility property boundary. A large scale view of the receptor network is provided in Figure 2.

Figure 2 Outer Receptor Network



The property boundary is generally close to many facility buildings and emission points, as shown in Figure 1. To control public access, the east side of the facility has a cinder block fence

along the entire property boundary. The south side has an intermittent fence. All emission points near the south side have a building between them and the property boundary. The west side is bordered by a drain canal, an obstacle to human passage. The north side has intermittent fencing, including a fence between the facility and Chevron property (which is fully surrounded by fencing). The site has "Private Property / No Trespassing" signs, as well as onsite security to prevent unauthorized access on facility property. These access limitations support the use of the property boundary as the start of ambient air.

Receptors were placed at 50-meter intervals around the property boundary, with grid spacing of 25 meters or less along the south boundary and in the southwest corner where historic modeling and draft runs for this analysis indicated maximum impacts. Three or four more rows of receptors were placed at the same spacing to yield a 50 meter grid network extending 200 meters from the property boundary. From there, moving away, the network included receptors 100 meters apart out to 1.5 kilometers from the facility, then at 200-meter intervals to 3.5 kilometers. Maximum PM-10 impacts were found to occur on the property boundary, at the southwest corner south of building 6 and west of building 5, within the area where grid spacing is 25 meters or less.

ELEVATION DATA

All source base and receptor elevations were calculated from USGS 7.5-degree (30m or less horizontal resolution) DEM data using the Bee-Line BEEST preprocessing system.

METEOROLOGICAL DATA

Five years of National Weather Service data from the Boise airport, from 1987 to 1991, were used. The data was processed into a single file with EPA's PCRAMMET preprocessor.

LAND USE CLASSIFICATION

ISCST3 includes rural and urban algorithm options. These options affect the wind speed profile, dispersion rates, and mixing-height formula used in calculating ground-level pollutant concentrations. A protocol was developed by USEPA to classify an area as either rural or urban for dispersion modeling purposes. The classification is based on average heat flux, land use, or population density within a three-km radius from the plant site. Of these techniques, the USEPA has specified that land use is the most definitive criterion (USEPA, 1987). The urban/rural classification scheme based on land use is as follows:

> *The land use within the total area, A_0, circumscribed by a 3-km circle about the source, is classified using the meteorological land use typing scheme proposed by Auer (1978). The classification scheme requires that more than 50% of the area, A_0, be from the following land use types in order to be considered urban for dispersion modeling purposes: heavy industrial (I1); light-moderate industrial (I2); commercial*

(C1); single-family compact residential (R2); and multi-family compact residential (R3). Otherwise, the use of rural dispersion coefficients is appropriate.

The Woodgrain Millwork facility is located in Fruitland. The area around the facility is suburban and agricultural, with occasional light industry. A three kilometer circle would include open space to the east toward the Snake River, as well as the small town of Fruitland mostly to the south. Site reconnaissance showed that the area A_0 is likely well below the 50% urban land use criteria necessary for use of urban dispersion coefficients. Rural dispersion coefficients were therefore used in the air quality dispersion modeling.

BACKGROUND CONCENTRATIONS

Representative regional background concentrations provided by IDEQ during the Modeling Protocol review were used. The values are shown below in Table 2. The PM-10 values were derived by IDEQ from monitoring and are estimated based upon IDEQ's understanding of statewide trends.

EVALUATION OF COMPLIANCE WITH STANDARDS

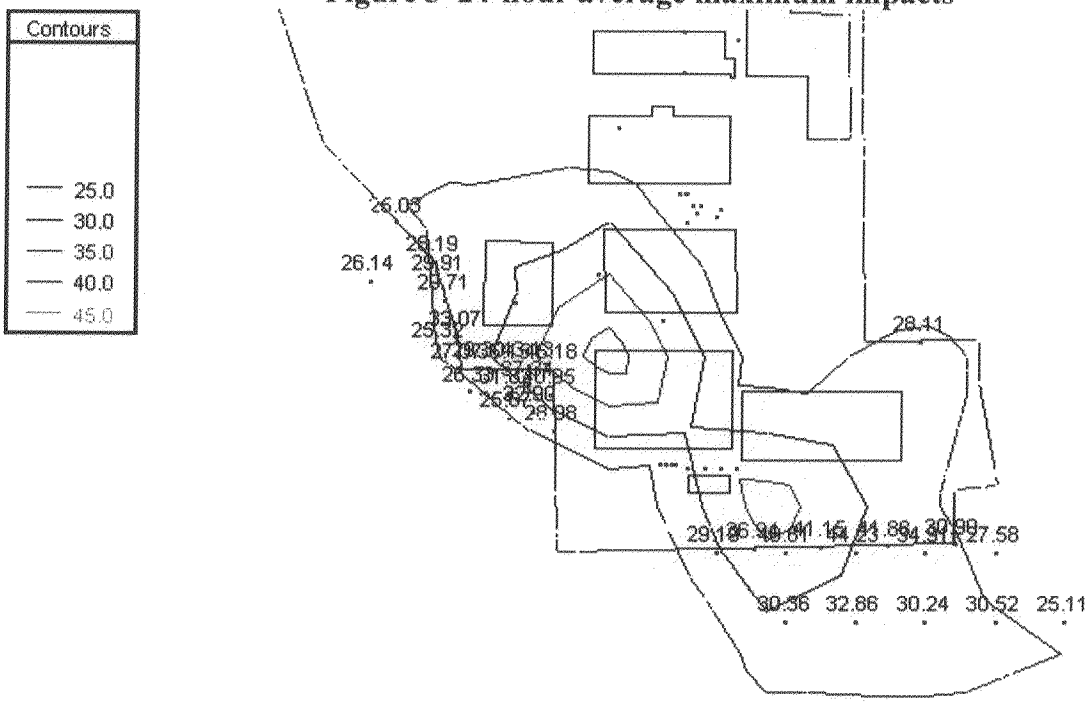
The impact limits applicable to this facility's permit are the National Ambient Air Quality Standards (NAAQS) for PM_{10}. Those limits, the predicted impacts, and the predicted maximum ambient concentrations during facility operation, which includes background concentrations, will be shown in Table 3.

Table 3 Predicted Ambient PM-10 Concentrations and Comparison with NAAQS

Pollutant	Averaging Period	Backgr. Conc. (μg/m³)	Modeled Impact (μg/m³)	Predicted Total Concentration (μg/m³)	Idaho AAQS (μg/m³)	NAAQS (μg/m³)	Location of Max. Predicted Ambient Impact
PM_{10}	24 hour	73	46.2	119.2	150	150	SW prop bndry corner, S of bldg 6, E of bldg 5
	Annual	26	13.4	39.4	50	50	SW prop bndry corner, S of bldg 6, E of bldg 5

Modeled impacts reported in Table 3 represent the first maximum predicted impacts for the annual average period, and the sixth maximum in five years for the 24-hour average period. The model predicted PM_{10} annual and 24 hour average maximum impacts occurred on the SW property boundary. Predicted maximum ambient PM_{10} concentrations while the facility is operating, and their comparisons with Idaho and National ambient air quality standards, are shown in Table 3. All maximum predicted impacts occurred within the inner receptor grid in areas where grid spacing was less than or equal to 25 meters. The receptor grid was refined to ensure at least that receptor density surrounding the predicted maximum impact location. Figure 3 shows the contours of all predicted 24-hour average maximum impacts over 25 μg/m³.

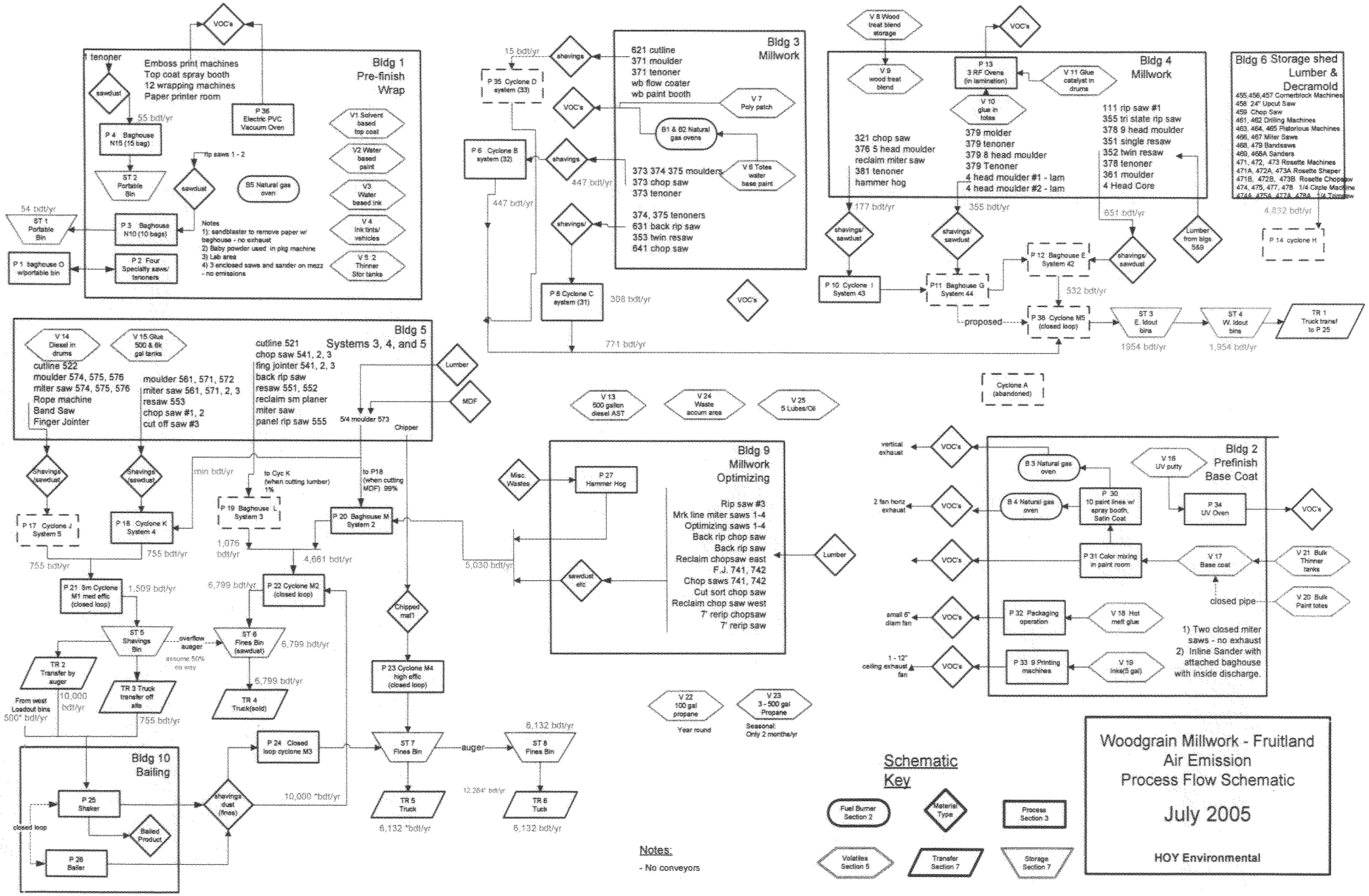
Figure 3 24-hour average maximum impacts



This modeling analysis demonstrates that the Woodgrain Millworks Fruitland facility, when operating as proposed, would not cause or significantly contribute to a violation of ambient impact limits.

ELECTRONIC COPIES OF THE MODELING FILES

Electronic copies of all input, output, and support modeling files necessary to duplicate the model results are provided in the zip file WG0305 AQ modeling files on the accompanying computer disk. The files include the WG0305 ISC-Prime downwash files, the BOI8791.ASC 5-yqer meteorological file, and model files WG0305_87_PM.ext, where ext = .DTAS for the ISCST3 input file, and ext = .LST for the ISCST3 output file. A spreadsheet detailing the volume source horizontal and vertical parameters used in the modeling, WG VOLUME CALCS.XLS, is also included.


Bldg 1
Pre-finish
Wrap
1 tenoner
Emboss print machines
Top coat spray booth
12 wrapping machines
Paper printer room
VOC's
sawdust
55 bdt/yr
P 4 Baghouse N15 (15 bag)
P 36 Electric PVC Vacuum Oven
ST 2 Portable Bin
rip saws 1 - 2
sawdust
B5 Natural gas oven
V1 Solvent based top coat
V2 Water based paint
V3 Water based ink
V 4 Ink tints/ vehicles
V 5 2 Thinner Stor tanks
54 bdt/yr
ST 1 Portable Bin
P 3 Baghouse N10 (10 bags)
P 1 baghouse O w/portable bin
P 2 Four Specialty saws/ tenoners
Notes
1): sandblaster to remove paper w/ baghouse - no exhaust
2) Baby powder used in pkg machine
3) Lab area
4) 3 enclosed saws and sander on mezz - no emissions
Bldg 3
Millwork
15 bdt/yr
shavings
P 35 Cyclone D system (33)
VOC's
621 cutline
371 moulder
371 tenoner
wb flow coater
wb paint booth
V 7 Poly patch
B1 & B2 Natural gas ovens
P 6 Cyclone B system (32)
shavings
447 bdt/yr
373 374 375 moulders
373 chop saw
373 tenoner
V 6 Totes water base paint
447 bdt/yr
shavings/
374, 375 tenoners
631 back rip saw
353 twin resaw
641 chop saw
P 8 Cyclone C system (31)
308 bdt/yr
VOC's
771 bdt/yr
V 8 Wood treat blend storage
VOC's
V 9 wood treat blend
P 13 3 RF Ovens (in lamination)
V 11 Glue catalyst in drums
V 10 glue in totes
Bldg 4
Millwork
321 chop saw
376 5 head moulder
reclaim miter saw
381 tenoner
hammer hog
379 molder
379 tenoner
379 8 head moulder
379 Tenoner
4 head moulder #1 - lam
4 head moulder #2 - lam
111 rip saw #1
355 tri state rip saw
378 9 head moulder
351 single resaw
352 twin resaw
378 tenoner
361 moulder
4 Head Core
177 bdt/yr
355 bdt/yr
651 bdt/yr
shavings/ sawdust
shavings/ sawdust
shavings/ sawdust
Lumber from bldg. 5&9
P 10 Cyclone I System 43
P11 Baghouse G System 44
P 12 Baghouse E System 42
932 bdt/yr
proposed
P 38 Cyclone M5 (closed loop)
ST 3 E. Idout bins
ST 4 W. Idout bins
TR 1 Truck transf to P 25
1954 bdt/yr
1,954 bdt/yr
Bldg 6 Storage shed
Lumber &
Decramold
455,456,457 Cornerblock Machines
458 24" Upcut Saw
459 Chop Saw
461, 462 Drilling Machines
463, 464, 465 Pietorious Machines
466, 467 Miter Saws
468, 479 Bandsaws
469, 468A Sanders
471, 472, 473 Rosette Machines
471A, 472A, 473A Rosette Shaper
471B, 472B, 473B Rosette Chopsaw
474, 475, 477, 478 1/4 Circle Machine
474A, 475A, 477A, 478A 1/4 Trimsaw
4,832 bdt/yr
P 14 cyclone H
Bldg 5
Systems 3, 4, and 5
V 14 Diesel in drums
V 15 Glue 500 & 6k gal tanks
cutline 522
moulder 574, 575, 576
miter saw 574, 575, 576
Rope machine
Band Saw
Finger Jointer
moulder 561, 571, 572
miter saw 561, 571, 2, 3
resaw 553
chop saw #1, 2
cut off saw #3
cutline 521
chop saw 541, 2, 3
fing jointer 541, 2, 3
back rip saw
resaw 551, 552
reclaim sm planer
miter saw
panel rip saw 555
Lumber
MDF
5/4 moulder 573
Chipper
Shavings /sawdust
Shavings /sawdust
min bdt/yr
to Cyc K (when cutting lumber) 1%
to P18 (when cutting MDF) 99%
P 17 Cyclone J System 5
P 18 Cyclone K System 4
P 19 Baghouse L System 3
P 20 Baghouse M System 2
755 bdt/yr
1,076 bdt/yr
4,661 bdt/yr
5,030 bdt/yr
755 bdt/yr
P 21 Sm Cyclone M1 med effic (closed loop)
1,509 bdt/yr
6,799 bdt/yr
P 22 Cyclone M2 (closed loop)
Chipped mat'l
ST 5 Shavings Bin
overflow auager
assume 50% ea way
ST 6 Fines Bin (sawdust)
6,799 bdt/yr
TR 2 Transfer by auger
TR 3 Truck transfer off site
6,799 bdt/yr
TR 4 Truck(sold)
From west Loadout bins
500* bdt/yr
10,000 bdt/yr
755 bdt/yr
P 23 Cyclone M4 high effic (closed loop)
P 24 Closed loop cyclone M3
ST 7 Fines Bin
auger
ST 8 Fines Bin
6,132 bdt/yr
12,264* bdt/yr
TR 5 Truck
TR 6 Tuck
6,132 *bdt/yr
6,132 bdt/yr
Bldg 10
Bailing
P 25 Shaker
closed loop
Bailed Product
P 26 Bailer
shavings dust (fines)
10,000 *bdt/yr
V 13 500 gallon diesel AST
V 24 Waste accum area
V 25 5 Lubes/Oil
Cyclone A (abandoned)
Misc. Wastes
P 27 Hammer Hog
Bldg 9
Millwork
Optimizing
Rip saw #3
Mrk line miter saws 1-4
Optimizing saws 1-4
Back rip chop saw
Back rip saw
Reclaim chopsaw east
F.J. 741, 742
Chop saws 741, 742
Cut sort chop saw
Reclaim chop saw west
7' rerip chopsaw
7' rerip saw
sawdust etc
Lumber
V 22 100 gal propane
Year round
V 23 3 - 500 gal Propane
Seasonal: Only 2 months/yr
vertical exhaust
2 fan horiz exhaust
small 6" diam fan
1 - 12" ceiling exhaust fan
VOC's
B 3 Natural gas oven
B 4 Natural gas oven
V 16 UV putty
Bldg 2
Prefinish
Base Coat
P 30 10 paint lines w/ spray booth, Satin Coat
P 34 UV Oven
P 31 Color mixing in paint room
V 17 Base coat
V 21 Bulk Thinner tanks
closed pipe
V 20 Bulk Paint totes
P 32 Packaging operation
V 18 Hot melt glue
P 33 9 Printing machines
V 19 Inks(5 gal)
1) Two closed miter saws - no exhaust
2) Inline Sander with attached baghouse with inside discharge.
Schematic Key
Fuel Burner Section 2
Material Type
Process Section 3
Volatiles Section 5
Transfer Section 7
Storage Section 7
Notes:
- No conveyors
Woodgrain Millwork - Fruitland
Air Emission
Process Flow Schematic
July 2005
HOY Environmental

GENERAL SITE INFORMATION

Woodgrain Millwork, Inc. (located at 300 NW 16th Street in Fruitland, ID) produces a variety of wood and plastic covered mouldings. This Tier 1 permit application covers the entire facility which includes all pre-finish (includes printing and basecoat), optimizing, window, millwork, animal bedding and storage.

Enclosed are the following supporting documents:

- IDEQ Tier 1 application forms
- Process flow schematic
- Calculation tables
- Photographs of operations including cyclones and baghouses
- Balanced worksheet of all wood byproducts
- Complete fan and vent schedule
- Site location map
- Site map (back binder pocket)
- Individual drawings for each bldg identifying emission points and fans/vents.

GENERAL AREA DESCRIPTION

The irregular shaped 75 acre site is bounded on the north by 16th Street, the east by a mobile home court on the east, on the south and west agricultural property.

GENERAL SITE DESCRIPTION

The topography is flat, with both paved and unpaved areas.

The production buildings are generally slab on grade and steel framed, and with large open areas inside. The ventilation systems for the production buildings are a complicated set of vents and fans.

Building 1
Building 1 is approximately 63,000 square feet. It covers the Pre-finish and (wood and veneer) Wrap operations.

As shown on the process flow schematic, the building contents include:

- Tp coat spraying
- Buckley print machine
- 5 head paper printer
- Paint evaporator
- Rip saws
- Tenoner
- Wrapping machines
- Enclosed baghouses
- Storage for paints and inks
- Vacuum coat oven

And emissions from the building include:

- VOC's
- HAPs
- PM and PM10

Building 2
Building 2 is approximately 34,000 square feet. It covers the Pre-finish and Base Coat and print operations. The bulk storage tanks use an enclosed pipe system to route paints to the mixing room.

As shown on the process flow schematic, the building contents include:

- Paint mixing room
- North oven
- South oven
- Packaging
- Printing machines
- UV Oven
- 10 Paint lines

And emissions from the building include:

- VOC's
- HAPs

Building 3
Building 3 is approximately 60,000 square feet. It covers the Millwork operations.

As shown on the process flow schematic, the building contents include:

- Assorted saws, and tenoners
- A hammer hog which is currently being removed
- Water based paint storage
- 2 Natural gas ovens

And emissions from the building include:

- VOC's
- HAPs
- PM and PM10

Building 4
Building 4 is approximately 62,000 square feet. It also covers Millwork operations.

As shown on the process flow schematic, the building contents include:

- Assorted saws, tenoners, laminator and moulders
- Glue, glue catalyst, and wood treat storage
- 3 Radio frequency ovens

And emissions from the building include:

- VOC's
- HAPs
- PM and PM10

Building 5
Building 5 is approximately 95,000 square feet. It covers the system 2, 4, and 5 operations.

As shown on the process flow schematic, the building contents include:

- Assorted saws, finger jointers and tenoners
- An indoor hammer hog
- Glue storage in totes and tank
- Diesel fuel storage in 55 gal drums

And emissions from the building include:

- PM and PM10

Building 6
Building 6 is approximately 34,000 square feet. It covers Coating operations and storage. As shown on the process flow schematic, the building contents include:

- Glue/coating storage
- Coating machines
- 2 Natural gas ovens

And emissions from the building include:

- VOC's
- HAPs

Building 7
Building 7 is a small 2,000 sq ft wood frame shed. It was historically used as a hog shed and later as a scale house. There are no process, storage, or transport operations within the building which would create air emissions.

Building 8
Building 8 is a 30,000 sq ft open sided metal roofed shed that is used solely for incoming lumber storage. There are no process, storage, or transport operations within the building which would create air emissions.

Building 9
Building 9 is approximately 63,000 square feet. It also covers Millwork as well as optimizing operations.

As shown on the process flow schematic, the building contents include:

- Assorted saws and finger jointers - which
- Indoor hammer hog

The building has no emissions.

Building 10
Building 10 is approximately 33,000 square feet and covers the animal bedding bailing operations.

As shown on the process flow schematic, the building contents include:

- An indoor bailer
- An indoor shaker
- Final product storage

The building has no emissions.

PROCESS FLOW SCHEMATIC

The process flow schematic covers all operations at the facility. Note the schematic key helps identify the type of 'process' listed. For example, fuel burners (which are covered on Section 2 forms) are shown as blue capsules. Process points (which are covered by Section 3 forms) are purple rectangles, etc. The 'material types' and 'emissions types' leaving the buildings are identified by black diamonds.

Quantities are indicated for throughput, but not emissions. (Emission calculations are provided on the calculation pages.) Known 2001 throughput data was used as a base to calculate permit requested throughput. All wood based data is in bone dry tones (BDT).

The supporting mathematical documentation for the throughput is provided in the wood by-product balance sheet.

CYCLONES and OTHER EQUIPMENT

Photographs of each cyclone are provided in the attachments. The photographs help document the assumed efficiency of each cyclone, based on ratio of diameter to cone height. (Same width to height => low efficiency, twice as high as wide => high efficiency.) The majority of the cyclones are medium efficiency.

Photographs of other operations such as ovens and printers are also included in the photographs.

CALCULATIONS

METHODOLOGY

It is appropriate to calculate the emissions on a building by building basis due to:

- The large number of raw material used on site,
- The specific types of operations within separate buildings,
- The large openness of each building, and
- The multitude of fans and vents in each building

VOC's

The first step was to collect all information regarding the raw material usage on the site. It was then subdivided into buildings. All VOC information was further defined for each product and broken down into percentages for each CAS Chemical Abstract System) number.

The next step was adding the amount of each CAS within each building (ie: the amount of toluene used in Building 4.) The calculations were verified by total amounts used with the weighted averages.

The amounts used were conservatively assumed to be 100% emitted within each building. No emission factors were applied, and all emissions were assumed to be equally dispersed with in the building.

Note: It would be possible to assume a certain % emitted during spraying, then a % emitted for the ovens, etc. However, the total emission would still end up being 100%, with no VOC's remaining in the product. And all of those emission would have occurred with in the same building. So no emission factors were used for the VOC operations.

The fan/vent schedule includes a list of all fans and vents within each building. The fan acfm data was collected during May 2002, so the measurements are actual, not empirical. The acfm for the vents were estimated. The air intake of the building should balance, and it is assumed that the doors and windows account for the inflow of air.

PARTICULATE AND PM10

The wood by product balance sheet utilized known 2001 quantities of materials consumed and then shipped and sold as the basis for how much was processed through each piece of equipment. All materials were converted to BDT for consistency. The last section of balance - calculates the throughput amount through each cyclone.

TOTAL EMISSIONS

Total emissions can be reviewed either on in a detailed form on an individual basis or in summary on the Total Emission Calculation page. Hourly data is represented on the Modeling Data table.

5/4 moulder #573

The 5/4 molder #573 is located in Building #5 and discharges to baghouse M. The baghouse was installed and permitted with the Optimizing Building. The 573 moulder was added to the optimizing system in 2000. The 573 moulder has a gate on the dust collection system that puts the shavings in the optimizing system and by changing the gate, the wood shavings go with the system that feeds to Cyclone K (18) system 4.

Baghouse M is estimated to emit 0.003 tpy of PM/PM-10 based on an emission factor of 0.001 lb/BDT and an annual throughput of 5,030 tpy (assumes 1 shift). Assuming 99.95% baghouse efficiency and 8,760 hours per year, the uncontrolled potential to emit for PM and PM-10 would be 25.2 tpy. Uncontrolled emissions would exceed the net significant increase threshold of 25 tpy for PM. Because the source is major, a PTC application should have been submitted. Modeling submitted with the Tier II application indicates compliance with the NAAQS.

Attachment A

Expanded Process Descriptions

(in entirety)

(REPLACES all text pages of Tab 4)

Attachment A Updated 1/2003

Process Descriptions

Additional information is *italicized* and inserted in the original text 12/10/02.

GENERAL SITE INFORMATION

Woodgrain Millwork, Inc. (located at 300 NW 16th Street in Fruitland, ID) produces a variety of wood and plastic covered mouldings. This Tier 2 permit application covers the entire facility which includes all prefinish (includes printing and basecoat), optimizing, window, millwork, animal bedding and storage.

Enclosed are the following supporting documents:

- IDEQ Tier II application forms
- Process flow schematic
- Calculation tables
- Photographs of operations including cyclones and baghouses
- Balanced worksheet of all wood byproducts
- Complete fan and vent schedule
- Site location map
- Site map (back binder pocket)
- Individual drawings for each bldg identifying emission points and fans/vents.

GENERAL AREA DESCRIPTION

The irregular shaped 75 acre site is bounded on the north by 16th Street, the east by a mobile home court on the east, on the south and west agricultural property.

GENERAL SITE DESCRIPTION

The topography is flat, with both paved and unpaved areas.

The production buildings are generally slab on grade and steel framed, and with large open areas inside. The ventilation systems for the production buildings are a complicated set of vents and fans.

Building 1
Building 1 is approximately 63,000 square feet. It covers the Prefinish and (wood and veneer) Wrap operations.

As shown on the process flow schematic, the building contents include:

- Top coat spraying
- Buckley print machine
- 5 head paper printer
- Paint evaporator
- Rip saws
- Tenoner
- Wrapping machines
- Enclosed baghouses
- Storage for paints and inks
- Vacuum coat oven

Warehouse

Unfinished substrates received from suppliers and inventoried. Inventoried unfinished substrates removed from inventory and provided to finishing operations. Laminates received and inventoried. Inventoried laminates removed from inventory and provided to finishing operations.

Wrap

Laminates received by wrap operation, slit to required width, and applied to unfinished substrate using wrap machines. Some products are cut to length using tenoners or miter saws. The product is then packaged and prepared for shipment or sent to building 2 where it is packaged and prepared for shipment.

Paper Printer

Unfinished paper is received from the warehouse and has a finish applied using a paper printer. The finish may be a solid color or have grain patterns. The finished paper is sent to wrap as a laminate.

Emboss, Staining, or Painting

Using emboss machines and a coatings booth, any of the three following process sequences may be done with the emboss line:

- *Grain pattern pressed into wood, a grain pattern is printed on the wood, and/or a clear coat is applied.*
- *Wood is stained and a clear coat may be applied.*
- *Product is painted.*

Rip

Sheet stock is received from warehouse or outside supplier and cut to specified width using either of two ripsaws. The product is then supplied to the wrap operation, to the coatings operation in building 2, or to the millwork operation for milling to profile.

Specialty

Some product is cut to length or end-worked using a tenoner or cut-off saws. Some product has a tenite insert put into a saw kerf cut into the surface of the finished product.

Print Roll Production and Repair

PVC print rolls are manufactured and repaired using chemical mixing and a vacuum oven for curing. Heat is also used to glaze the rolls. The rolls are used to transfer ink to the substrate in the printing operations.

Miscellaneous

A small sander and miter saw are located on the mezzanine. These are occasionally used to repair defective product.
A lab is used to analyze our finishes, to prepare samples and to develop color matches.

- *A radial arm saw is used to cut samples for the lab*

And emissions from the building include:

- VOC's
- HAPs
- PM and PM10

Building 2

Building 2 is approximately 34,000 square feet. It covers the Prefinish and Base Coat and print operations. The bulk storage tanks use an enclosed pipe system to route paints to the mixing room.

As shown on the process flow schematic, the building contents include:

- Paint mixing room
- North oven
- South oven
- Packaging
- Printing machines
- UV Oven
- 10 Paint lines *including one proposed spray booth*

Paint Mixing

Paint is blended to create colors required by customers. Off-color and contaminated paint is distilled and the solvents are used in other paints.

Coatings

Paint is applied to unfinished substrate that is received from the warehouse. Defects in the unfinished substrates are repaired whenever possible. The painted product is either sent to the warehouse, to print or to packaging.

Print

A pattern is applied to partially finished substrates. The substrates come from the coatings lines and are either returned to the coatings line for additional paint coats or are sent to packaging.

Packaging

Finished product is received from other operations and is packaged and prepared for shipment.

UV Patch

A UV curable putty is applied to large wood defects. Defective material is received from coatings lines and is either returned to the coatings lines or sent to the warehouse.

And emissions from the building include:

- VOC's
- HAPs

Building 3

Building 3 is approximately 60,000 square feet. It covers the Millwork operations.

Processes: This building contains work cells that produce moulded window and door parts. The solid and fingerjoint wood used in these processes is developed in buildings 5 and 9. Building 3 also contains two water-base primer lines that apply primer to various moulded products that are produced in buildings 3, 4, and 5. There is a cutline with 13 chopsaws in this building that is used on a very limited basis and we are planning to discontinue using the cutline and remove it from the building; no firm date has been set at this time.

As shown on the process flow schematic, the building contents include:

- Assorted saws, moulders and tenoners
- The number 3 cutline with 13 chopsaws that is being discontinued
- A hammer hog which is currently being removed
- Water based paint storage
- 1 Vacuum coat water-base paint line
- 1 Air assisted spray paint line for water-base paint
- 2 Natural gas ovens

And emissions from the building include:

- VOC's
- HAPs
- PM and PM10

Building 4

Building 4 is approximately 62,000 square feet. It also covers Millwork operations.

Processes: Building 4 contains a ripsaw, which processes the random width lumber into the various rip widths that are processed in buildings 5 and 9. After the lumber goes through the ripsaw it is stored in buildings 8, 11, and 6 until it is ready to move through the cutting and fingerjoint processes. The lamination process in building 4 contains moulders and radio frequency lamination presses. Glue is applied to the sides of the boards that the moulders have prepared, the boards then move into the RF ovens where they are pressed together and cured with the RF frequency until dry. About half or building 4 contains moulders, tenoners and resaws that manufacture window and door parts. Building 4 also contains a wood treat line where some of the window and door parts go through a deluge chamber where the parts are flooded with a fungicide product that helps reduce rot after the windows and doors have been installed in houses.

As shown on the process flow schematic, the building contents include:

- Ripsaw #1
- Assorted moulders, tenoners, and resaws
- Glue, glue catalyst, and wood treat storage
- A deluge wood treat system
- 3 Radio frequency laminator ovens

And emissions from the building include:

- VOC's
- HAPs
- PM and PM10

Building 5

Building 5 is approximately 95,000 square feet.

Processes: Building 5 contains cutlines that process ripstock (lumber that has gone through a ripsaw and been ripped to a specific width, example 2 3/8's inches wide) into products that include solid lineal moulding blanks, 7 and 8 foot solid blanks, cutstock for doors and windows, fingerjoint blocks. Fingerjointers that produce various types of fingerjoint blanks using glue to hold the short pieces of wood together. Moulders and resaws that process both the fingerjoint and solid wood blanks into mouldings.

As shown on the process flow schematic, the building contents include:

- Assorted saws, moulders and fingerjointers
- An indoor hammer hog
- Glue storage in totes and tank
- Diesel fuel storage in 55 gal drums

And emissions from the building include:

- PM and PM10

Building 6

Building 6 is approximately 34,000 square feet.

Processes: After November 1, 2002 this building is used for storage. That storage includes MDF sheet stock, cutstock that is being stored for window and door parts and miscellaneous wood waiting to be processed or shipped.

There are currently no emissions from the building. However, we request the permit be written as requested in the 2002 application.

Building 7

Building 7 is a small 2,000 sq ft wood frame shed. It was historically used as a hog shed and later as a scale house, used now for surplus equipment storage. There are no process, storage, or transport operations within the building, which would create air emissions.

Building 8
Building 8 is a 30,000 sq ft open sided metal roofed shed that is used for incoming lumber storage. There are no process, storage, or transport operations within the building, which would create air emissions.

Building 9
Building 9 is approximately 63,000 square feet. It also covers Millwork as well as optimizing operations.

Processes: Building 9 contains our optimizing operation and includes a ripsaw, marking stations (where markers put marks on the ripstock), scanners and optimizing saws that cut the wood as directed by a computer driven optimizing program. This system produces the same types of material as the cutlines in building 5; solid lineal blanks, 7 and 8 foot solid blanks, solid cutstock for window and door parts, fingerjoint blocks. Fingerjointers that produce various types of fingerjoint blanks using glue to hold the short pieces of wood together.

As shown on the process flow schematic, the building contents include:

- Assorted saws and finger jointers – which either rip the lumber lengthwise, or saws that, crosscut the wood to usable lengths.
- Indoor hammer hog

The building has no emissions, *in that all of saw and hog wastes are filtered through a baghouse.*

Building 10
Building 10 is approximately 3,000 square feet and covers the animal bedding bailing operations.

Processes: The shavings and sawdust that is generated from the cutting and moulding processes in buildings 3, and 4 is trucked to this building and then unloaded with the walking floor the truck has and mixed with the shavings and sawdust from building 5. The shavings and sawdust cross over a shaker, where the fines and dust are separated; the clean fluffy shavings then go to a bailer where they are bailed for animal use. The fines and dust from the shaker go through a closed loop system to the fines bin P24 cyclone M3, and then the fines and dust from the bailer go through a closed loop system to P22 cyclone M2..

As shown on the process flow schematic, the building contents include:

- An indoor bailer
- An indoor shaker
- Final product storage

The building has no emissions.

Building 11
Building 11 is a 33,000 sq ft open sided metal roofed shed that is used for incoming lumber and WIP storage. There are no process, storage, or transport operations within the building, which would create air emissions

PROCESS FLOW SCHEMATIC

The process flow schematic covers all operations at the facility. Note the schematic key helps identify the type of 'process' listed. For example, fuel burners (which are covered on Section 2 forms) are shown as blue capsules. Process points (which are covered by Section 3 forms) are purple rectangles, etc. The 'material types' and 'emissions types' leaving the buildings are identified by black diamonds.

Quantities are indicated for throughput, but not emissions. (Emission calculations are provided on the calculation pages.) Known 2001 throughput data was used as a base to calculate permit requested throughput. All wood based data is in bone dry tones (BDT).

The supporting mathematical documentation for the throughput is provided in the wood by-product balance sheet.

CYCLONES and OTHER EQUIPMENT

Photographs of each cyclone are provided in the attachments. The photographs help document the assumed efficiency of each cyclone, based on ratio of diameter to cone height. (Same width to height => low efficiency, twice as high as wide => high efficiency.) The majority of the cyclones are medium efficiency.

Photographs of other operations such as ovens and printers are also included in the photographs.

Attachment E

Updated Site Wide Equipment List – Past, present and proposed

(to be added to the very front of Tab 4)

ATTACHMENT E updated Jan, 2003

Updated Site Wide Equipment List - Past , Present, and Proposed.

The updated equipment list includes all existing and proposed process equipment for the Fruitland facility. It reflects only a few additions of proposed equipment since the Tier 2 permit application was originally submitted. The updated section is provided in entirety for the permit writer's ease.

List of Existing and Proposed Equipment for Tier 2 Application updated 01/03

Past and Current Equipment

BLDG #	ID #	Equipment Name	Notes
1	P4	Baghouse N 15	No emissions—closed loop
1	ST 2	Portable Storage bin	Indoors—not an emission point
1	P3	Baghouse N10	No emissions—closed loop
1	P2	4 specialty saws/tenoner	Indoors—not an emissions point
1	ST1	Portable bin	Exempt—see discussion below
1	P1	Closed baghouse O	Closed loop—no emissions
1	P5	Wash water evaporator	PTC 075-00001 (Process Unit 5)
1	B5	Natural gas oven	PTC 075-00001 (included in original application)
1		Emboss print machines	PTC 075-00001 (Process Unit 4)
1		Top coat spray booth	PTC 075-00001 (Process Unit 4)
1		12 wrapping machines	PTC required. See the draft Tier I, Table 6.2 analysis
1		1 tenoner	No emissions—discharges to N15, closed loop
1		Ripsaw 1 and 2	Exempt. See the draft Tier I, Table 6.2 analysis
1		Sandblaster with no exhaust	Exempt. See the draft Tier I, Table 6.2 analysis
1		Lab area	Exempt—IDAPA 58.01.01.222.01.a.—see discussion below
1	P36	Electric PVC vacuum oven	Exempt—see discussion below
1		Paper Printer (process in separate room)	PTC 075-00001
1		Sander - Mezzanine	Exempt. Indoors & closed system.
1		3 Miter saws - Mezzanine	Exempt. Indoors & closed system.
1		Bulk even end trim saw	Exempt. See the draft Tier I, Table 6.2 analysis
1		2 in-line end trim saws (N&S)	Exempt. See the draft Tier I, Table 6.2 analysis
2	B3	Natural gas oven	PTC 075-00001 (included in original application)
2	B4	Natural gas oven	PTC 075-00001 (included in original application)
2	P30	10 paint lines with spray booth	PTC 075-00001; spray booth added for clarification of existing equipment.
2	P31	Color mixing in paint room	PTC 075-00001
2	P32	Packaging operation	Exempt—see discussion below
2	P33	9 printing machines	PTC 075-00001
2	P34	UV oven	Exempt—see discussion below
2		Reclaim miter saws (2)	Exempt – indoors, not an emission point
3		621 cutline #3 -10 Chop saws (closing)	Exempt. See the draft Tier I, Table 6.2 analysis.
3		Waterborne vacuum coater	PTC 075-00001 (Process 2)
3		Waterborne paint booth	PTC 075-00001 (Process 2)
3		373, 374, 375 moulders	PTC required for 375; exempt for 373 & 374. See the draft Tier I, Table 6.2 analysis
3		373 chop saw	Exempt—see discussion below

BLDG #	ID #	Equipment Name	Notes
3		373 tenoner	Exempt. See the draft Tier I, Table 6.2 analysis
3		374, 375 tenoners	PTC required for 375; Exempt for 374. See the draft Tier I, Table 6.2 analysis
3		Back rip saw	Exempt. See the draft Tier I, Table 6.2 analysis
3		641 Chop saw (closing)	See the draft Tier I, Table 6.2 analysis
3		353 twin resaw	Exempt. See the draft Tier I, Table 6.2 analysis
3	B1	Natural gas oven	PTC 075-00001 (included in original application)
3	B2	Natural gas oven	PTC 075-00001 (included in original application)
	P35	Cyclone D	Closing. Addressed in PSD applicability analysis
	P6	Cyclone B	Installed in 1970. Addressed in PSD applicability analysis
	P7	Cyclone F	Installed in 1970. Addressed in PSD applicability analysis
	P8	Cyclone C	Installed in 1970. Addressed in PSD applicability analysis
3		Chop saw #1	Exempt. See the draft Tier I, Table 6.2 analysis
4		Woodtreat	PTC required. See the draft Tier I, Table 6.2 analysis and PSD applicability analysis
4	P13	3 Radio Freq ovens	PTC required—see discussion below
4		321 chop saw	Exempt. See the draft Tier I, Table 6.2 analysis
4		376 5 head moulder	Exempt. See the draft Tier I, Table 6.2 analysis
4		Reclaim miter saw	Exempt—see discussion below
4		379 4 head moulder	Exempt. See the draft Tier I, Table 6.2 analysis
4		381 tenoner	Exempt. See the draft Tier I, Table 6.2 analysis
4		Hammer hog – closed	Exempt. See the draft Tier I, Table 6.2 analysis
4		111 rip saw #1	PTC required. See the draft Tier I, Table 6.2 analysis
4		355 tri st rip saw (#314 in Table 6.2)	Exempt. See the draft Tier I, Table 6.2 analysis
4		361 core moulder	Exempt. See the draft Tier I, Table 6.2 analysis
4		351 single resaw	Exempt. See the draft Tier I, Table 6.2 analysis
4		352 twin resaw	Exempt. See the draft Tier I, Table 6.2 analysis
4		378 tenoner	Exempt. See the draft Tier I, Table 6.2 analysis
4		378 9 head moulder	Exempt. See the draft Tier I, Table 6.2 analysis
4		379 8 head moulder	Exempt. See the draft Tier I, Table 6.2 analysis
4		379 tenoner	Exempt. See the draft Tier I, Table 6.2 analysis
4		4- head moulder #1	Exempt. **Inadvertently stated as "removed" in draft Tier I Table 6.2 summary.
4		4- head moulder #2	Exempt. **Inadvertently stated as "removed" in draft Tier I, Table 6.2 summary.
	P10	Cyclone I	Installed in 1972. Addressed in PSD applicability analysis
	P11	Cyclone G	Installed in 1972. Addressed in PSD applicability analysis
	P12	Cyclone E	Installed in 1970. Addressed in PSD applicability analysis
	ST3	East Loadout bins	Exempt—see discussion below

BLDG #	ID #	Equipment Name	Notes
	ST4	West loadout bins	Exempt—see discussion below
5		522 Cutline #2 (7 saws)	PTC required. See the draft Tier I, Table 6.2 analysis
5		Moulder 574, 575, 576	Exempt. See the draft Tier I, Table 6.2 analysis
5		Miter saw 574, 575, 576	Exempt. See the draft Tier I, Table 6.2 analysis
5		Moulder 561, 571, 572	PTC required for 561. Exempt for 571 & 572. See the draft Tier I, Table 6.2 analysis
5		Miter saw 561, 571, 572, 573	Exempt. See the draft Tier I, Table 6.2 analysis
5		Resaw 553	Exempt. See the draft Tier I, Table 6.2 analysis
5		Mezzanine chop saw #1 #2	Exempt. See the draft Tier I, Table 6.2 analysis
5		Cut off saw #3	Exempt—see discussion below
5		521 Cutline #1 (12 saws	PTC required; see the draft Tier I, Table 6.2 analysis. Resaw 551 and panel rip saw 555 are exempt—see discussion below.
5		Chop saw 541, 542, 543	PTC required. See the draft Tier I, Table 6.2 analysis
5		Finger jointer 541, 542, 543	PTC required. See the draft Tier I, Table 6.2 analysis
5		Back rip saw	PTC required. See the draft Tier I, Table 6.2 analysis
5		Resaw 551, 552	PTC required for 552. See the draft Tier I, Table 6.2 analysis. Resaw 551: Exempt—see discussion below
5		Reclaim sm planer	Exempt—see discussion below
5		Miter saw	Exempt—see discussion below
5		Panel rip saw 555 (note—addressed as 5/4 panel rip in draft Tier I, Table 6.2 analysis)	Exempt—see discussion below and discussion for 5/4 panel rip in draft Tier I, Table 6.2 analysis.
5		5/4 moulder 573	PTC required. See the draft Tier I, Table 6.2 analysis
5		Hammer hog (was 5/4 chipper)	Exempt. See the draft Tier I, Table 6.2 analysis
	P17	Cyclone J	Installed in 1983. See the PSD applicability analysis & discussion below.
	P18	Cyclone K	Installed in 1983. See the PSD applicability analysis & discussion below.
	P19	Cyclone L	Installed in 1983. See the PSD applicability analysis & discussion below.
	P20	Baghouse M	PTC 075-00001
	P21	Cyclone M1	Closed loop–no emissions
	P22	Cyclone M2	PTC 075-00001; also, closed loop–no emissions
	ST5	Shavings bin	Exempt–see discussion below.
	ST6	Fines Bin	PTC required—see discussion below
	P23	Cyclone M4	Closed loop–no emissions
6		Mixed glue system	Closed loop–no emissions
6	P15	2 clay coating machines	Exempt—see discussion below
6	B6	Natural gas oven	Exempt—see discussion below
6	B7	Natural gas oven	Exempt—see discussion below
6		Closed system saw	Closed loop – no emissions
	P14	Abandoned cyclone H	No longer in existence (abandoned in place).
9	P27	Hammer hog	PTC 075-00001
9		Rip saw #3	PTC 075-00001
9		Marking line miter saws # 1, 2, 3, 4	PTC 075-00001
9		Optimizing saws # 1, 2, 3, 4	PTC 075-00001

BLDG #	ID #	Equipment Name	Notes
9		Backrip chop saw	PTC 075-00001
9		Backrip saw	PTC 075-00001
9		Reclaim chop saw East	PTC 075-00001
9		Fingerjointer 741, 742	PTC 075-00001
9		Chop saws 741, 742	PTC 075-00001
9		Cutsort chop saw	PTC 075-00001
9		Reclaim chop saw West	PTC 075-00001
9		7'0" rerip chop saw	PTC 075-00001
9		7'0" rerip saw	PTC 075-00001
10	P25	Shaker	PTC 075-00001
10	P26	Bailer	PTC 075-00001
	P24	Cyclone M3 (closed loop)	Closed loop–no emissions
	ST7	Fines bin	PTC required–see discussion below
	ST8	Fines bin	PTC required–see discussion below

Proposed Equipment

BLDG #	ID #	Equipment Name	Notes
3		Satin Coat Line A	To be installed and operated upon issuance of Tier II permit.
3		371 moulder	To be installed and operated upon issuance of Tier II permit.
3		371 tenoner	To be installed and operated upon issuance of Tier II permit.
4	P38	Cyclone M5	Closed loop.
4	P37	Baghouse E	To replace Cyclone E, P12. To be installed December 15, 2002.
4	P41	Baghouse G	To replace Cyclone G, P11. To be installed October 31, 2003.
5	P40	Baghouse J	To replace Cyclone J, P17. To be installed, July 30, 2003.
5	P39	Baghouse L	To replace Cyclone L, P19. To be installed May 15, 2003.
6		Satin Coat Line B	To be installed and operated upon issuance of Tier II permit.

** The 4 head moulders #1 and #2 are located in Building #4 and emit through cyclone G and then cyclone E. These were installed in 1986, after the installation date of 1972 for cyclone G and 1970 for cyclone E. With the emission factor based on exhaust flow only and not throughput, the emissions will not change because the exhaust flow has not changed with the addition of this equipment. There are no VOC or TAP emissions. Compliance with NAAQS is demonstrated through modeling submitted with the Tier II permit application.

Exempted Sources

These sources are exempt because the maximum emissions meet the criteria of IDAPA 58.01.01.220.01. Note that modeling of these sources for demonstrating compliance with the National Ambient Air Quality Standards (NAAQS) has been included as Attachment E in this updated Tier II permit application.

ST1, Portable Bin; ST3, East Loadout Bins & ST4, West Loadout BinsST5, Shavings Bin

These are exempt because the Tier II application shows that controlled PM/PM-10 emissions are less than 10% of significant emission rates and uncontrolled emissions (8,760 hr/yr) are less than the significant rate increase for PM and PM-10. There are no toxic emissions from these wood byproduct bins.

	Em. Point	PM Em. Factor	PM 10 Em. Factor	EFs Units	Throughput (annual)	Units	PM Emissions total (tons/yr)	PM10 Emissions total (tons/yr)	Operate (hrs/yr)	PM Emissions total (lb/hr)	PM10 Emissions total (lb/hr)
Portable Storage Bin	ST 1	1	0.58	Lb/BDT	54	BDT	0.03	0.016	4,992	0.03	0.02
East Loadout Bins	ST 3	1	0.58	Lb/BDT	771	BDT	0.39	0.224	7,448	0.37	0.21
West Loadout Bins	ST 4	1	0.58	Lb/BDT	1,954	BDT	0.98	0.567	7,448	0.94	0.54
Shavings Bin	ST 5	1	0.58	Lb/BDT	1,509	BDT	0.75	0.438	7,448	0.73	0.42

Bldg. #1, Lab Area

The lab is exempt due to the provisions of IDAPA 58.01.01.222.01.a. The lab is estimated to have the potential to consume a very small amount of Building 2 process material. The table below shows that toxic emissions from Building 2 do not exceed the emission limit (EL), so the lab qualifies for a Category I exemption:

Building 2 Toxic Air Pollutants

	Emission	EL
	Lb/hr	[lb/hr]
Eth Benz	0.996	29
Vinyl Acet	0.003	0.013
Meth Iso Ket	2.372	13.7
Isopropyl Ace	15.412	69.3
Toluene	13.198	25
Propyl Acetate	14.050	56
Isobutyl Acet	11.407	46.7
M n-Amyl K	0.368	15.7
Triethylamine	0.000	0.27
N Butyl Ac	0.325	47.3
Xylene	5.876	29
Ethyl Acet	15.022	93.3
Heptane	0.465	109
Ethanol	25.029	125
Methanol	0.017	17.3
IsoProp	19.666	65.3
Acetone	3.441	119
MEK	23.473	39.3

Bldg. #5, Cut Off Saw #3

This is exempt because it does not increase the exhaust flow of cyclone K, so for emission estimates based on a grain loading factor, the emissions from cyclone K will not change. Using a throughput based emission factor of 0.5 lb/BDT, the maximum PM/PM-10 increase is estimated to be 0.19 tpy and 0.094 tpy, respectively, less than 10% of the significant rate increase. Uncontrolled emissions (8,760 hr/yr) are well under the significant rate increases for PM and PM-10. There are no toxic emissions.

Bldg. #2, P32 Packaging Operation

Controlled emission at 4,992 hr/yr are estimated as follows;

			Permit lbs	**Fraction VOC**	**Fraction HAPs**	**108-05-04 Fraction by wt Vinyl Acetate**
258	Pkg Hot melt glue	Packaging	13,000	0.001	0.001	0.001

The controlled VOC and HAPs are each 0.0065 tpy. The uncontrolled emissions are each 0.011 tpy. Controlled VOCs are less than 10% of the significant rate increase, while uncontrolled is less than the significant rate increase. Vinyl acetate emissions uncontrolled are 0.0078 lb/hr, less than the EL of 1.3 E-2 lb/hr. This qualifies for a Category I exemption.

Bldg. #5 Resaw 551, Reclaim Sm Planer, Miter Saw and Panel Rip Saw 555

- These were installed on the following dates:Resaw 551: 1984
- Reclaim sm planer (in cutline 521): 2000
- Miter saw (in cutline 521): 2000
- Panel rip saw 555: 2000

The equipment discharges through cyclones J, K or L, which were installed in 1983. Based on a grain loading emission factor, the sources are exempt because the addition of these source does not increase the cyclone exhaust flow, so emissions do not increase. Using a throughput based emission factor, the emissions for each cyclone are estimated as follows, based on 7,448 hr/yr:

PARTICULATE	Em. Point	Bldg No.	PM Em. Factor	PM 10 Em. Factor	EFs Units	Throughput (annual)	Units	Particulate Emissions total (tons/yr)	PM10 Emissions total (tons/yr)
Cyclone J	P 17	NA	0.5	0.25	lb/BDT	755	BDT	0.19	0.094
Cyclone K	P 18	NA	0.5	0.25	lb/BDT	755	BDT	0.19	0.094
Cyclone L	P 19	NA	0.5	0.25	lb/BDT	1,076	BDT	0.27	0.135

The controlled cyclone emissions, which include the above equipment, are much less than 10% of the significant rate increase. Uncontrolled emissions (8,760 hr/yr) are well under the significant rate increases for PM and PM-10. There are no TAPs. Therefore, the equipment is exempt from PTC requirements.

Bldg. #3, 373 Chop Saw

This was installed in 1985. This discharges through cyclones B and F, which were installed in 1970. Based on a grain loading emission factor, the source is exempt because it does not increase the cyclone exhaust flow, so emissions do not increase. Based on a throughput emission factor, the emissions for cyclone B and F are estimated as follows, based on 7,488 hr/yr:

PARTICULATE	Em. Point	Bldg No.	PM Em. Factor	PM 10 Em. Factor	EFs Units	Throughput (annual)	Units	Particulate Emissions total (tons/yr)	PM10 Emissions total (tons/yr)
Cyclone B	P 6	NA	0.5	0.25	lb/BDT	447	BDT	0.11	0.056
Cyclone F	P 7	NA	0.2	0.15	lb/BDT	756	BDT	0.08	0.057

The controlled cyclone emissions are much less than 10% of the significant rate increase. Uncontrolled emissions (8,760 hr/yr) are well under the significant rate increases for PM and PM-10. There are no TAPs. Therefore, this is exempt from PTC requirements.

Bldg. #4, Reclaim Miter Saw

This saw was installed in 1985. It discharges through cyclones I, G and E. Cyclones I and G were installed in 1972, and cyclone E in 1970. Based on a grain loading emission factor, the source is exempt because it does not increase the cyclone exhaust flow, so emissions do not increase. Based on a throughput emission factor, the emissions for each cyclone B and F are estimated as follows, based on 7,488 hr/yr:

PARTICULATE	Em. Point	Bldg No.	PM Em. Factor	PM 10 Em. Factor	EFs Units	Throughput (annual)	Units	Particulate Emissions total (tons/yr)	PM10 Emissions total (tons/yr)
Cyclone I	P 10	NA	0.5	0.25	lb/BDT	177	BDT	0.04	0.022
Cyclone G	P 11	NA	0.5	0.25	lb/BDT	532	BDT	0.13	0.067
Cyclone E	P 12	NA	0.5	0.25	lb/BDT	1,183	BDT	0.30	0.148

The controlled cyclone emissions are much less than 10% of the significant rate increase. There are no TAPs. Therefore, this is exempt from PTC requirements.

Bldg. #6, Clay Coating Machines, Installed in 2000 and 2001

The clay coating machines were installed in 2000 and 2001 and are prototype processes that will be removed before the end of 2002. VOC and HAPs potential to emit are estimated as follows:

			Permit lbs	Fraction VOC	Fraction HAPs
601	CH-0365 VOC/HAP PRODUCT	Satin Coat	32,000	0.054	0.054
		Total lbs/yr used	32,000		
		Total tons/yr used	16		
		weighted avg VOC content	0.05		
		weighted avg HAP content	0.054		
		total tons HAPs	0.86		
	REQUESTED PERMIT LIMITS:				
		weighted avg VOC content	0.065		
		weighted avg HAP content	0.065		
		total tons HAPs	1.037		
		max VOC lb/hr	0.42		
		max HAP lb/hr	0.42		

At the requested permit hours of operation of 4,992 hr/yr, the VOCs are 1.0 tpy and HAPs are 1.0 tpy. At 8,760 hours per year, the uncontrolled emissions are 1.8 tpy, much less than the significant rate increase.

TAPs are calculated as follows:

108-05-4	67-56-1	50-0-0	75-07-0	123-31-9	75-56-9	124-17-4	-
By wt	by wt	by wt	by wt	by wt	by wt	by wt	by wt
Vinyl Acetate	Meth Alch	Formald	Acetaldehyde	HydroQui	Prop Ox	Ethy Acet	Glycol ethers
6.40E-04	3.40E-03	8.70E-05	3.70E-05	6.00E-06	1.00E-06	3.00E-02	2.00E-02
FOR PERMIT: amount of lbs used/yr							
2.05E+01	1.09E+02	2.78E+00	1.18E+00	1.92E-01	3.20E-02	9.60E+02	6.40E+02
lb/hr emission rate:[23]							
5.1E-3	2.6E-2	6.7E-4	2.8E-4	4.6E-5	7.7E-6	2.3E-1	1.5E-1
EL, lb/hr:							
0.013	17.3	5.1E-4	3.0E-3	0.133	3.2	93.3	None

As shown in the table, formaldehyde barely exceeds the EL, and therefore requires modeling. The Tier II permit application will reveal that the ambient impact from formaldehyde is primarily from Buildings #4 and 5, and the impact from Building #6 uncontrolled formaldehyde is less than the AACC of 7.7E-2 ug/m^3. Toxic emissions qualify for a Category I exemption.

Bldg. #2, P34 UV Oven

VOCs, HAPs, and TAPs are estimated as follows:

			Permit lbs	Fraction VOC	Fraction HAPs	121-44-8 by wt Triethylamine
209	UV CURING COATING	Base Coat	150	0.01	0.01	0.009

At the requested permit hours of operation of 4,992 hr/yr, the VOCs are 0.00075 tpy and HAPs are 0.00075 tpy. At 8,760 hours per year, the uncontrolled emissions are 0.0013 tpy. The TAP (triethylamine) is estimated at 0.0003 lb/hr, less than the EL of 0.27 lb/hr. This qualifies for a Category I exemption.

Bldg. #1, P-36. Electric PVC Vacuum Oven

The requested Tier II permitted emissions at 4,992 hr/yr are estimated as follows:

	Permit lbs	Fraction VOC	Fraction HAPS	117-81-7 by wt Bis (2ethylhexyl) phthalate
Eastman DOP Plasticizer	2,000	1.00	1.00	0.999

Controlled VOCs and HAPs are each 1 tpy. Uncontrolled VOCs and HAPs at 8,760 hr/yr are each 1.8 tpy. The bis (2 ethylhexyl) phthalate emission rate is 0.5 lb/hr while the EL is 2.8E-2 lb/hr. However

[23] Assumes 20% increase over annual average hourly rate.

modeling in the Tier II application will show that the ambient concentration is less than the AACC of 4.2 ug/m^3. This qualifies for a Category I exemption.[24]

Bldg. # 6, B6 & B7, Natural Gas Ovens

The Tier II application demonstrates that controlled criteria emissions are less than 10% of significant emission rates and uncontrolled emissions (8,760 hr/yr) are less than the significant rate increases. Compliance with the combustion toxic air pollutant emission limit (EL) is demonstrated in the table below for combustion emissions. Compliance is also demonstrated with the EL or Acceptable Ambient Concentrations and Acceptable Ambient Concentrations for Carcinogens (AAC/AACC), meeting Category I exemption criteria. Refer to tables below:

Process Name	Em. Point	Bldg No.	Throughput (annual)	EFs Units	PM t/yr	PM 10 t/yr	CO t/yr	NOx t/yr	SO2 t/yr	VOC t/yr
2 nat gas ovens (satin B6&7) 4,992 hr/yr (Controlled)	P 16	6	3.121	lb/10^6 ft^3	0.0119	0.0119	0.1311	0.1560	0.000936	0.008582
2 nat gas ovens (satin B6&7) 8,760 hr/yr (Uncontrolled)	P 16	6	3.121	lb/10^6 ft^3	0.021	0.021	0.23	0.27	0.0016	0.015

B6 and B7 GAS DRYER - NON-CARCINOGENS					
NATURAL GAS					
Pollutant	Emission Factor	Emissions	Emissions	Screening Level	Modeling?
	(lb/1,000,000 scf)	(lb/hr)	(tons/yr)	(lb/hr)	(Y/N)
Antimony	3.3E-02	2.1E-05	9.0E-05	3.3E-02	N
Barium	4.4E-03	2.8E-06	1.2E-05	3.3E-02	N
Chromium	1.4E-03	8.8E-07	3.8E-06	3.3E-02	N
Cobalt	8.4E-05	5.3E-08	2.3E-07	3.3E-03	N
Copper	8.5E-04	5.3E-07	2.3E-06	6.7E-02	N
Ethylbenzene	2.9E+01	1.8E-02	7.9E-02	2.9E+01	N
Fluoride	2.5E+00	1.6E-03	6.8E-03	1.67E-01	N
Hexane	1.8E+00	1.1E-03	4.9E-03	1.2E+01	N
Manganese	3.8E-04	2.4E-07	1.0E-06	3.33E-01	N
Mercury	2.6E-04	1.6E-07	7.1E-07	3.E-03	N
Molybdenum	1.1E-03	6.9E-07	3.0E-06	6.67E-01	N
Naphthalene	6.1E-04	3.8E-07	1.7E-06	3.33E+00	N
Pentane	2.6E+00	1.6E-03	7.1E-03	1.18E+02	N
Phosphorous	6.7E-02	4.2E-05	1.8E-04	7.E-03	N
Selenium	2.4E-05	1.5E-08	6.6E-08	1.3E-02	N
Toluene	3.4E-03	2.1E-06	9.3E-06	2.5E+01	N
o-Xylene	2.9E+01	1.8E-02	7.9E-02	2.9E+01	N
Zinc	2.9E-02	1.8E-05	7.9E-05	6.67E-01	N

[24] Though in this analysis it is assumed all throughput material is emitted, a chemical reaction occurs. The average weight loss is estimated at 19%. It is reasonable to assume that 81% of dioctyl pthalate (DOP) plasticizer is not emitted into the atmosphere.

GAS DRYER - CARCINOGENS					
NATURAL GAS					
Pollutant	Emission Factor	Emissions	Emissions	Screening Level	Modeling?
	(lb/1,000,000 scf)	(lb/hr)	(tons/yr)	(lb/hr)	(Y/N)
Arsenic	2.00E-04	1.3E-07	5.5E-07	1.5E-06	N
Benzene	2.1E-03	1.3E-06	5.8E-06	8.0E-04	N
Beryllium	1.20E-05	7.5E-09	3.3E-08	2.8E-05	N
Cadmium	1.10E-03	6.9E-07	3.0E-06	3.7E-06	N
Chromium VI	0.00E+00	0.0E+00	0.0E+00	5.6E-07	N
Formaldehyde	7.5E-02	4.7E-05	2.1E-04	5.1E-04	N
Nickel	2.1E-03	1.3E-06	5.8E-06	2.7E-05	N
Benzo(a)pyrene	1.2E-06	7.5E-10	3.3E-09	2.0E-06	N
Benz(a)anthracene	1.8E-06	1.1E-09	4.9E-09	NA	N
Benzo(b)fluoranthene	1.8E-06	1.1E-09	4.9E-09	NA	N
Benzo(k)fluoranthene	1.8E-06	1.1E-09	4.9E-09	NA	N
Chrysene	1.8E-06	1.1E-09	4.9E-09	NA	N
Dibenzo(a,h)anthracene	1.2E-06	7.5E-10	3.3E-09	NA	N
Indeno(1,2,3-cd)pyrene	1.8E-06	1.1E-09	4.9E-09	NA	N
Total PAHs	1.1E-05	7.1E-09	3.1E-08	2.0E-06	N
Hourly capacity =	**625.200**	**cu. ft. / hr**			

PTC Required:

The following existing emission sources were determined to require a PTC because they could not meet exemption criteria. Note that this is a complete list of existing equipment requiring a PTC; the list includes those pieces of equipment addressed in the draft Tier I letter. It is our understanding that the Tier II permit application serves as PTC applications for these sources.

ST6, ST7 and ST8 Fines Bins

These bins are included in PTC 075-00001, as the bins are necessary for the operation and are part of the original installation. However, assuming they are not included in the PTC, then controlled emissions exceed 10% of the significant rate increase for both PM and PM-10, as shown below. A PTC would then be required for each storage bin.

Em. Point	PM Em. Factor	PM 10 Em. Factor	EFs Units	Throughput (annual)	Units	PM Emissions total (tons/yr)	PM10 Emissions total (tons/yr)	Operate (hrs/yr)	PM Emissions total (lb/hr)	PM10 Emissions total (lb/hr)
ST 6	1	0.58	lb/BDT	6,799	BDT	3.40	1.972	7,488	0.91	0.53
ST 7	1	0.58	lb/BDT	12,264	BDT	6.13	3.557	7,488	1.64	0.95
ST 8	1	0.58	lb/BDT	6,132	BDT	3.07	1.778	7,488	0.82	0.47

Bldg. #4, P13, 3 Radio Frequency Ovens

VOCs, HAPs, and TAPs are estimated as follows:

ID #	Material	Permit lbs	Fraction VOC Content	Fraction HAPs	108-05-4 by wt Vinyl Acetate	50-00-0 by wt Formaldehyde	Other Propellants (No EL)
477	C-100Y	7,900	0.00	0.00	0.0E+00	0.0E+00	0.0E+00
479	WD-2403	180,000	0.02	0.0002	5.0E-04	5.0E-04	2.0E-02

These were installed in 1986. At the requested permit hours of operation of 7,488 hr/yr, the VOCs are 1.8 tpy and HAPs are 0.018 tpy. At 8,760 hours per year, the uncontrolled emissions for VOCs are 2.1 tpy and HAPS are 0.021. Vinyl acetate is estimated at 0.014 lb/hr, greater than the EL of 0.013 lb/hr. Formaldehyde is also estimated at 0.014 lb/hr, and the EL is 5.1E-4 lb/hr. The ovens could potentially require a PTC and both TAPs have been modeled.

Wrap machines #1 – 4, 11, & 12 (6 machines)

These machines are located in Building #1 and were installed in 1992 (#1 & 2), 1994 (#3), 1995 (#4), and 1996 (#11 & 12). They use hot melt adhesives and emit VOCs, HAPs and toxic air pollutants (TAPs) only; PM and PM-10 are not emitted as the process goes through a closed loop system that does not discharge to the ambient air. The system uses a baghouse containing 15 bags.

The VOC and TAP emissions are shown below, with the VOC and TAPs (vinyl acetate, formaldehyde and methanol) content based on manufacturers information:

- Wrap machines #5 - 10 (6 machines)
  These machines are located in Building #1 and were installed in 1974 (#10), 1977 (#9), 1980 (#6), and 1990 (#s 5, 7 & 8). They use cold, aqueous adhesives and emit VOCs, HAPs and toxic air pollutants (TAPs) only; PM and PM-10 are not emitted as the process goes through a closed loop system that does not discharge to the ambient air. The system uses a baghouse containing 15 bags. The machines exhaust through the baghouse into the building and then vent out of the building through building fans.

  The VOC and TAP emissions are shown below, with the VOC and TAPs (vinyl acetate, formaldehyde, acetaldehyde and methanol) content based on manufacturer's information:

Table 3 – Building #1 Wrap Machine Emissions Analysis

Material	Tier II Permit Request, lb/yr	% VOC	% HAPs	Vinyl Acetate, %	Vinyl Acetate Emission Limit (EL)[25], lb/hr	Formal-dehyde, %	Formal-dehyde EL, lb/hr	Meth-anol, %	Meth-anol, EL lb/hr	Acetal-dehyde, %	Acetal-dehyde EL, lb/hr
Aqueous Adhesive-Cold VAE	135,000	5.5	5.1	0.073	0.013	0.013		0.007		0.005	
BIG ORANGE	924	0.94	0								
Hot Melt EVA Glue	250,000	0.12	0.08	0.08	0.013						
Total Wrap, lb/hr (@ 2,080 hr/yr)		3.72 lb/hr	3.41 lb/hr	0.144 lb/hr	0.013 lb/hr	0.008 lb/hr	5.1e-4 lb/hr	0.005 lb/hr	17.3 lb/hr	0.003 lb/hr	0.003 lb/hr
Total Wrap VOC, tpy		3.87 tpy									

Uncontrolled potential VOCs, tpy (8,760 hr/yr)	16.29 tpy
Uncontrolled TAPs, tpy (8,760 hr/yr):	0.701 tpy
Uncontrolled HAPs, tpy (8,760 hr/yr):	14.94 tpy

[25] See IDAPA 58.01.01.585 and 586 for Emission Limits.

The wrap machines meet the exemption criteria for VOCs and HAPs of IDAPA 58.01.01.220, but they cannot be verified to meet the exemption criteria in accordance with IDAPA 58.01.01.223.02 for formaldehyde and vinyl acetate. These emissions exceed the emission limit (EL), and it cannot be verified at this time that ambient concentrations from uncontrolled emissions will not exceed the Acceptable Ambient Concentration (AAC) and Acceptable Ambient Concentration for a Carcinogen (AACC).[26] It should be noted that for the Tier II application, all TAPs will be controlled so that the AAC and AACC are not exceeded.

Wood treat process

The wood treatment process was submitted to IDEQ for an applicability analysis on March 17, 2000. Woodgrain was classified as a PSD major source at that time, however it was grandfathered from having to comply with PSD regulations prior to any physical change in operations that caused a net significant emissions increase. Woodgrain was a PSD major source by the time the wood treatment process was in place in 1989. The wood treatment process triggered PSD requirements because it had a major modification, i.e., a potential to emit greater than 40 tpy for VOCs. At a minimum this requires a BACT review only for the wood treatment process. Woodgrain is working with IDEQ on PSD issues, which will be addressed in a separate document by Woodgrain.

Tenenor #375

Tenenor #375 is located in Building #3 and emits through cyclone C and then cyclone F. It was installed in 1970, the same date as the cyclones. The PM potential to emit from cyclone C is 18 tpy and for PM-10 is 9 tpy, based on an emission factor of 0.03 gr/scf for PM and 0.015 gr/scf for PM-10. Cyclone F has a discharge of 16.1 tpy PM and 11.8 tpy PM-10, based on an emission factor of 0.015 gr/scf for PM and 0.011 gr/scf for PM-10 for high efficiency cyclones. These are greater than 10% of significant emission rates and cannot be exempted. Because it was installed at the time of the cyclone in 1970, according to IDEQ it does not need to be included as an applicable requirement for Title V purposes; however, it did require a permit to construct pursuant to the Idaho regulations as it was constructed after the grandfathered date of January 24, 1969. There are no VOC or TAP emissions.

Moulder #375

This was installed in 1970 in Building # 3 and discharges through cyclone B and then cyclone F. The PM potential to emit from cyclone B is 10.5 tpy and for PM-10 is 7.7 tpy, based on an emission factor of 0.015 gr/scf for PM and 0.011 gr/scf for PM-10 for high efficiency cyclones. Cyclone F has a discharge of 16.1 tpy PM and 11.8 tpy PM-10, based on an emission factor of 0.015 gr/scf for PM and 0.011 gr/scf for PM-10 for high efficiency cyclones. These are greater than 10% of significant emission rates and can not be exempted. Because it was installed at the time of the cyclone in 1970, according to IDEQ it does not need to be included as an applicable requirement for Title V purposes; however, it did require a permit to construct pursuant to the Idaho regulations as it was constructed after the grandfathered date of January 24, 1969. There are no VOC or TAP emissions.

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[26] Note that diethylene glycol monoethyl ether acetate is a HAP and is reference in the Tier II permit application; but is not a toxic air pollutant listed in IDAPA 58.01.01.585 & 586.

Rip saw #1

Ripsaw #1 (now known as 111 rip saw #1) is located in Building #4 and emits through cyclone G and then cyclone E. It was installed in 1972, the same date as cyclone G (E was installed in 1970). The PM potential to emit from cyclone G is 31.7 tpy and for PM-10 is 15.9 tpy, based on an emission factor of 0.03 gr/scf for PM and 0.015 gr/scf for PM-10. These are greater than 10% of significant emission rates and cannot be exempted. Because it was installed at the time of the cyclone in 1972, according to IDEQ it must be included as an applicable requirement for Title V purposes, where the applicable date is 1972 and later. There are no VOC or TAP emissions.

Cutline #2 (7 chop saws)

Cutline #2 is located in Building #5 and emits through cyclone J. It was installed in 1972, while cyclone J was installed in 1982. The PM potential to emit from cyclone J is 28.8 tpy and for PM-10 is 14.4 tpy, based on an emission factor of 0.03 gr/scf for PM and 0.015 gr/scf for PM-10. These are greater than 10% of significant emission rates and cannot be exempted. Because it was installed in 1972, according to IDEQ it must be included as an applicable requirement for Title V purposes, where the applicable date is 1972 and later. There are no VOC or TAP emissions.

Cutline #1 (6 chop saws on IDEQ's list, but there are actually 12 saws on the cutline)

Cutline #1 is located in Building #5 and emits through cyclone L. It was installed in 1980, prior to the installation date of 1983 for cyclone L. The PM potential to emit from cyclone L is 32.9 tpy and for PM-10 is 16.4 tpy, based on an emission factor of 0.03 gr/scf for PM and 0.015 gr/scf for PM-10. These are greater than 10% of significant emission rates and cannot be exempted. Because it was installed in 1980, it must be included as an applicable requirement for Title V purposes, where the applicable date is 1972 and later. There are no VOC or TAP emissions.

Chop saws #541, 542 and 543; fingerjointers #541, 542 and 543; back rip saw (Bldg. 5); resaw #552/572; twin resaw #551

These are located in Building #5 and emit through cyclone L. These were installed in 1983, at the time of the installation date of cyclone L. The PM potential to emit from cyclone L is 32.9 tpy and for PM-10 is 16.4 tpy, based on an emission factor of 0.03 gr/scf for PM and 0.015 gr/scf for PM-10. These are greater than 10% of significant emission rates and cannot be exempted. Because it was installed in 1983, it must be included as an applicable requirement for Title V purposes, where the applicable date is 1972 and later. There are no VOC or TAP emissions.

5/4 core moulder #561; chop saw #561

These are located in Building #5 and emit through cyclone K. It was installed in 1983, at the time of the installation date of cyclone K. The PM potential to emit from cyclone K is 24.3 tpy and for PM-10 is 12.2 tpy, based on an emission factor of 0.03 gr/scf for PM and 0.015 gr/scf for PM-10. These are greater than 10% of significant emission rates and cannot be exempted. Because it was installed in 1983, it must be included as an applicable requirement for Title V purposes, where the applicable date is 1972 and later. There are no VOC or TAP emissions.

Attachment F
"Permit To Construct Applicability Determination In Response to Draft Tier I Permit"

Revised 1/13/03 to correct the status of two moulders (4-head moulders #1 & #2)

Included as a reference document on equipment history

(add to Tab 4)

woodgrain millwork

Woodgrain Millwork

Permit to Construct Applicability Determination

In Response to Draft Tier I Permit

AIRS Facility No. 075-00001

January 16, 2003

I. Overview

Woodgrain Millwork is submitting a permit to construct applicability analysis for equipment listed in Table 6.2 of draft Tier I operating permit for AIRS facility No. 075-00001, issued July 30, 2002. The applicability analysis addresses requirements in IDAPA 58.01.01.200 – 223. In summary it has been determined that the following equipment required a permit to construct (PTC), yet did not obtain a PTC:

- 5/4 core moulder #561
- 5/4 moulder #573
- back rip saw (Bldg. 5)
- chop saw #541
- chop saw #542
- chop saw #543
- chop saw #561
- cutline #1 (6 chop saws)
- cutline #2 (7 chop saws)
- fingerjointer #541
- fingerjointer #542
- fingerjointer #543
- moulder #375
- resaw #552/572
- rip saw #1
- tenenor #375
- twin resaw #551
- wood treat operation
- wrap machines #1-12

Facility Wide Permit to Construct (PTC) Applicability (per IDAPA 58.01.01.200 – 223)

Table 1 shows which sections are applicable facility-wide to Woodgrain for PTC and exemption determinations. Section III further discusses the applicable IDAPA 58.01.01.200 – 223 sections for each piece of equipment.

Table 1 – Woodgrain Facility Wide Permit to Construct/Exemption Applicability

Citation under IDAPA 58.01.01	Title	Applicable Yes or No	Additional Comments
200	PROCEDURES AND REQUIREMENTS FOR PERMITS TO CONSTRUCT General Applicability	Yes	
201	PERMIT TO CONSTRUCT REQUIRED	Yes	For some equipment—see next section.
202	APPLICATION PROCEDURES	Yes	
203	PERMIT REQUIREMENTS FOR NEW AND MODIFIED STATIONARY SOURCES	Yes	
204	PERMIT REQUIREMENTS FOR NEW MAJOR FACILITIES OR MAJOR MODIFICATIONS IN NONATTAINMENT AREAS	No	Woodgrain Fruitland is not located in a nonattainment area.
205	PERMIT REQUIREMENTS FOR NEW MAJOR FACILITIES OR MAJOR MODIFICATIONS IN ATTAINMENT OR UNCLASSIFIABLE AREAS	Yes	Woodgrain Fruitland is located in an attainment or unclassifiable area.
206 - 208	OPTIONAL OFFSETS FOR PERMITS TO CONSTRUCT; EMISSION REDUCTION CREDIT; NET AIR QUALITY BENEFIT	No	
209	PROCEDURES FOR ISSUING PERMITS	Yes	
210	DEMONSTRATION OF PRECONSTRUCTION COMPLIANCE WITH TOXIC STANDARDS	Yes	
211	CONDITIONS FOR PERMITS TO CONSTRUCT	No	Regulation applies to regulatory authority
212	OBLIGATION TO COMPLY	Yes	
213	PRE-PERMIT CONSTRUCTION	No	For pre-permit construction; not applicable to past PTCs that may have been required
214	DEMONSTRATION OF PRECONSTRUCTION COMPLIANCE FOR NEW AND RECONSTRUCTED SOURCES OF HAZARDOUS AIR POLLUTANTS	No	Woodgrain is addressing MACT applicability separately from this analysis.
220 – 223	EXEMPTIONS FROM PERMIT TO CONSTRUCT REQUIREMENTS	Yes	Ambient impact analysis applies to PM/PM_{10}, TAP and HAP emissions; modeling is not required for VOCs.

Note: Those sections labeled "yes" will be addressed for each piece of equipment.

The following equipment is addressed in this report, taken from TABLE 6.2. SOURCES CONSTRUCTED AND/OR MODIFIED WITHOUT A PTC, in the Draft Tier I permit 075-00001. The table summarizes the PTC and exemption status for each piece of equipment.

Table 2 – Summary of PTC and Exemption Applicability for Woodgrain Equipment

Equipment	Equipt removed, not in service	Equipt covered by an existing PTC	Equipt that does not emit PM or VOCs outside or has no emissions	Equipt exempted from PTC because of low emissions	Equipt that reqd a PTC
(2) off-line tenenors Bldg. 3)	X				
4-head moulder #1				X	
4-head moulder #2				X	
4-head moulder #379				X	
4-head moulder A jamb	X				
4-head moulder B jamb	X				
5/4 chipper system			X		
5/4 core moulder #561					X
5/4 moulder #571				X	
5/4 moulder #572				X	
5/4 moulder #573					X
5/4 moulder #574				X	
5/4 moulder #575				X	
5/4 moulder #576				X	
5/4 open air shaker	X				
5/4 panel rip				X	
5-head moulder #376				X	
6/4 fingerjointer #641	X				
6/4 fingerjointer #642	X				
8-head moulder #379				X	
9-head moulder #378				X	
back rip saw (Bldg. 3)				X	
back rip saw (Bldg. 5)					X
bulk even ending trim saw			X		
chop saw #1			X		
chop saw #4, router and mini-sander				X	
chop saw #541					X
chop saw #542					X
chop saw #543					X
chop saw #561					X
chop saw #571				X	

Equipment	Equipt removed, not in service	Equipt covered by an existing PTC	Equipt that does not emit PM or VOCs outside or has no emissions	Equipt exempted from PTC because of low emissions	Equipt that reqd a PTC
chop saw #572				X	
chop saw #573				X	
chop saw #574				X	
chop saw #575				X	
chop saw #576				X	
chop saw #641	X				
chop saw #642	X				
chop saw (Bldg. 6)	X				
chop saw D321/521[27]				X	
core moulder #361				X	
core moulder (Bldg. 3)	X				
cutline #1 (6 chop saws)[28]					X
cutline #2 (7 chop saws)					X
cutline #3 (10 chop saws)				X	
fingerjointer #541					X
fingerjointer #542					X
fingerjointer #543					X
hammer hog system				X	
in-line end trim machine #6[29]	X				
in-line end trim machine #8[1]	X				
in-line end trim machine N			X		
in-line end trim machine S			X		
in-line tenenor (Bldg. 3)	X				
mezzanine chop saw #1				X	
mezzanine chop saw #2				X	
mezzanine sander			X		
Mini-hog (Bldg. 6)	X				
moulder #373				X	
moulder #374				X	
moulder #375					X
panel rip #1				X	
panel rip #2				X	
paper printer		X			

[27] This should be identified as chop saw 321. See discussion on chop saw 521 below.
[28] There are actually 12 saws with this cutline, not 6 saws as identified by IDEQ.
[29] Out of production.

Equipment	Equipt removed, not in service	Equipt covered by an existing PTC	Equipt that does not emit PM or VOCs outside or has no emissions	Equipt exempted from PTC because of low emissions	Equipt that reqd a PTC
porch post lathe	X				
porch post sander	X				
radial-arm saw			X		
Resaw #552/572					X
Resaw #553				X	
rip saw #1					X
rip saw #2	X				
sand blaster (Bldg. 1)			X		
single resaw #351				X	
specialty end trim machine			X		
tenenor #373				X	
tenenor #374				X	
tenenor #375					X
tenenor #378				X	
tenenor #379				X	
tenenor #381				X	
Tri-state rip saw #314				X	
twin resaw #352				X	
twin resaw #551					X
twin resaw #D353				X	
Wood treat operation					X
Wrap machine #1					X
wrap machine #2					X
wrap machine #3					X
wrap machine #4					X
wrap machine #5					X
wrap machine #6					X
wrap machine #7					X
wrap machine #8					X
wrap machine #9					X
wrap machine #10					X
wrap machine #11					X
wrap machine #12					X

III. Draft Tier I PTC/Exemption Applicability Analysis for Each Equipment Source

This section will be divided into prefinish and millwork, and within each section further divided into:

1. Equipment removed, not in service
2. Equipment covered by an existing PTC
3. Equipment that does not emit PM or VOCs outside or has no emissions
4. Equipment exempted from PTC because of low emissions
5. Equipment that required a PTC

Prefinish

Equipment removed, not in service

The following equipment no longer exist on site:

- in-line end trim machine #8
- in-line end trim machine #6

Equipment covered by an existing PTC

- Paper printer
  The paper printer is covered by PTC # 075-00001, most recently issued June 19, 2002.

Equipment exempted from PTC because of low emissions

- Panel rip saw #1 and #2
  These rip saws were installed in 1994 in Building #1. Only PM and PM-10 are emitted from the sawdust created by the saws. The sawdust passed through baghouse P3 which consists of 10 bags. The baghouse material is collected in a storage bin that is covered. There are no VOC or TAP emissions.

  Emissions are estimated as follows:

PARTICULATE			PM	PM 10				Particulate	PM10
	Em. Point	Bldg No.	Em. Factor	Em. Factor	EFs Units	Throughput (annual)	Units	Emissions total (tons/yr)	Emissions total (tons/yr)
Baghouse N10 (10 bags)	P 3	1	0.001	0.001	lb/BDT	54	BDT	0.00003	0.00003

The baghouse control efficiency is estimated at 99.95%. The uncontrolled emissions, at 8,760 hr/yr, are 0.06 tpy. The rip saws meet the exemption criteria of IDAPA 58.01.01.220 and 223.02.

Equipment that does not emit PM or VOCs outside or has no emissions

- Sand blaster (Bldg. 1)
  The sand blaster was installed in 1993. It removes wrap paper and does not discharge to the ambient atmosphere. All material is collected inside Building #1; the process is closed loop, with the glass beads collected in a cyclone and filter. No VOCs are involved with sand blasting using glass beads.

- In-line trim machines N, and S, and specialty end trim machine.
  These machines are located in Building #1 and were installed in 1977 (specialty end trim), 1980 (North trim saw), and 1997 (South trim saw) and do not emit emissions outside the building. The machines cut off the ends of wood and do not have particulate emissions that vent to the ambient air associated with them. All discharged material is kept inside Building #1. N and S saw dust is collected in the 15-bag baghouse. The specialty end trim machine saw dust is collected in the Murphy Rogers MRM-12.4D dust collector. The MRM-12.4D returns all air into the building.

Equipment that required a PTC

- Wrap machines #1 – 4, 11, & 12 (6 machines)
  These machines are located in Building #1 and were installed in 1992 (#1 & 2), 1994 (#3), 1995 (#4), and 1996 (#11 & 12). They use hot melt adhesives and emit VOCs, HAPs and toxic air pollutants (TAPs) only; PM and PM-10 are not emitted as the process goes through a closed loop system that does not discharge to the ambient air. The system uses a baghouse containing 15 bags.

  The VOC and TAP emissions are shown below, with the VOC and TAPs (vinyl acetate, formaldehyde and methanol) content based on manufacturers information:

- Wrap machines #5 - 10 (6 machines)
  These machines are located in Building #1 and were installed in 1974 (#10), 1977 (#9), 1980 (#6), and 1990 (#s 5, 7 & 8). They use cold, aqueous adhesives and emit VOCs, HAPs and toxic air pollutants (TAPs) only; PM and PM-10 are not emitted as the process goes through a closed loop system that does not discharge to the ambient air. The system uses a baghouse containing 15 bags. The machines exhaust through the baghouse into the building and then vent out of the building through building fans.

  The VOC and TAP emissions are shown below, with the VOC and TAPs (vinyl acetate, formaldehyde, acetaldehyde and methanol) content based on manufacturer's information:

Table 3 – Building #1 Wrap Machine Emissions Analysis

Material	Tier II Permit Request, lb/yr	% VOC	% HAPs	Vinyl Acetate, %	Vinyl Acetate Emission Limit (EL)[30], lb/hr	Formal-dehyde, %	Formal-dehyde EL, lb/hr	Meth-anol, %	Meth-anol, EL lb/hr	Acetal-dehyde, %	Acetal-dehyde EL, lb/hr
Aqueous Adhesive-Cold VAE	135,000	0.055	0.05	0.073	0.013	0.013		0.007		0.005	
BIG ORANGE	924	0.94	0								
Hot Melt EVA Glue	250,000	0.12	0.08	0.08	0.013						
Total Wrap, lb/hr (@ 2,080 hr/yr)		0.184 lb/hr	0.13 lb/hr	0.144 lb/hr	0.013 lb/hr	0.008 lb/hr	5.1e-4 lb/hr	0.005 lb/hr	17.3 lb/hr	0.003 lb/hr	0.003 lb/hr
Total Wrap VOC, tpy		0.191 tpy									

Uncontrolled potential VOCs, tpy (8,760 hr/yr)	0.806 tpy
Uncontrolled TAPs, tpy (8,760 hr/yr):	0.701 tpy
Uncontrolled HAPs, tpy (8,760 hr/yr):	0.57 tpy

[30] See IDAPA 58.01.01.585 and 586 for Emission Limits.

The wrap machines meet the exemption criteria for VOCs and HAPs of IDAPA 58.01.01.220, but they cannot be verified to meet the exemption criteria in accordance with IDAPA 58.01.01.223.02 for formaldehyde and vinyl acetate. These emissions exceed the emission limit (EL), and it cannot be verified at this time that ambient concentrations from uncontrolled emissions will not exceed the Acceptable Ambient Concentration (AAC) and Acceptable Ambient Concentration for a Carcinogen (AACC).[31] It should be noted that for the Tier II application, all TAPs will be controlled so that the AAC and AACC are not exceeded.

Millwork

Equipment removed, not in service

The following equipment no longer exist on site:

- chop saw #642
- chop saw (Bldg. 6)
- chop saw #641
- core moulder (Bldg. 3)
- 6/4 fingerjointer #642
- 6/4 fingerjointer #641
- 4-head moulder A jamb
- 4-head moulder B jamb
- 5/4 open air shaker
- rip saw #2
- mini-hog (Bldg. 6)
- two (2) off-line tenenors (Bldg. #3)
- in-line tenenor (Bldg. 3)
- porch post lathe
- porch post sander

- Chop saw 521
  Note that chop saw D321/521 was inadvertently identified by IDEQ as a specific piece of equipment. Woodgrain believes that this should be identified only as chop saw 321. Woodgrain believes IDEQ may have mistakenly identified this chop saw for cutline 521 in the windows department. However, all chop saws for cutline 521 have been identified, and none of these chop saws are labeled as chop saw #521.

[31] Note that diethylene glycol monoethyl ether acetate is a HAP and is reference in the Tier II permit application; but is not a toxic air pollutant listed in IDAPA 58.01.01.585 & 586.

Equipment covered by an existing PTC

No millwork listed equipment in the draft Tier I permit is currently covered by an existing PTC.

Equipment that does not emit PM or VOCs outside or has no emissions

- Building #1, baghouse P: bulk even ending trim saw; radial-arm saw; chop saw #1
  These were installed in 1990. All material is collected inside Building #1 by closed system baghouse P. No VOCs are involved.

- 5/4 chipper system
  The 5/4 chipper system was installed in the early 1990s replacing a hammer hog system. It exists in Building #5 and discharges to enclosed cyclone M4; there are no emissions. Note that this will be replaced in the very near future with a hammer hog.

- Mezzanine sander
  It is believed this is rotary hand held air sanders in Building 5. There are no emissions; all discharge is completely inside the building.

Equipment exempted from PTC because of low emissions

- 4 Head Moulders #1 and #2
  The 4 head moulders #1 and #2 are located in Building #4 and emit through cyclone G and then cyclone E. These were installed in 1986, after the installation date of 1972 for cyclone G and 1970 for cyclone E. With the emission factor based on exhaust flow only and not throughput, the emissions will not change because the exhaust flow has not changed with the addition of this equipment. There are no VOC or TAP emissions. Compliance with NAAQS is demonstrated through modeling submitted with the Tier II permit application.

- Tenenor #374
  Tenenor #374 is located in Building #3 and emits through cyclone B and then cyclone F. It was installed in 1971, after the date of installation for the cyclones. This equipment is exempt because the potential to emit for cyclones B and F does not change, based on a grain loading emission factor of 0.015 gr/scf for PM and 0.011 gr/scf for PM-10 for high efficiency cyclones. With the emission factor based on exhaust flow only and not throughput, the emissions will not change because the exhaust flow has not changed with the addition of this equipment. There are no VOC or TAP emissions. Compliance with NAAQS is demonstrated through modeling submitted with the Tier II permit application.

- Chop saw 321 (D321/521 in IDEQ table)
  Chop saw 321 s located in Building #3 and emits through cyclone C and then cyclone F. It was installed in 1971, after the installation date for the cyclones. This

equipment is exempt because the potential to emit for cyclones C and F does not change, based on a grain loading emission factor of 0.03 gr/scf for PM and 0.015 gr/scf for medium efficiency and emission factor of 0.015 gr/scf for PM and 0.011 gr/scf for PM-10 for high efficiency cyclones. With the emission factor based on exhaust flow only and not throughput, the emissions will not change because the exhaust flow has not changed with the addition of this equipment. There are no VOC or TAP emissions. Compliance with NAAQS is demonstrated through modeling submitted with the Tier II permit application.

- Moulder #374
  Moulder #374 is located in Building #3 and emits through cyclone C and then cyclone F. It was installed in 1971, after the installation date for the cyclones. This equipment is exempt because the potential to emit for cyclones C and F does not change, based on a grain loading emission factor of 0.03 gr/scf or 0.015 gr/scf for medium efficiency cyclones and emission factor of 0.015 gr/scf for PM and 0.011 gr/scf for PM-10 for high efficiency cyclones. With the emission factor based on exhaust flow only and not throughput, the emissions will not change because the exhaust flow has not changed with the addition of this equipment. There are no VOC or TAP emissions. Compliance with NAAQS is demonstrated through modeling submitted with the Tier II permit application.

- Moulder #373
  Moulder #373 is located in Building #3 and emits through cyclone C and then cyclone F. It was installed in 1972, after the installation date for the cyclones. This equipment is exempt because the potential to emit for cyclones C and F does not change, based on a grain loading emission factor of 0.03 gr/scf or 0.015 gr/scf for medium efficiency cyclones and emission factor of 0.015 gr/scf for PM and 0.011 gr/scf for PM-10 for high efficiency cyclones. With the emission factor based on exhaust flow only and not throughput, the emissions will not change because the exhaust flow has not changed with the addition of this equipment. There are no VOC or TAP emissions. Compliance with NAAQS is demonstrated through modeling submitted with the Tier II.

- Tenenor #373
  Tenenor #373 is located in Building #3 and emits through cyclone B and then cyclone F. It was installed in 1972, after the installation date of 1970 for the cyclones. This equipment is exempt because the potential to emit for cyclones B and F does not change, based on a grain loading emission factor of 0.03 gr/scf for PM and 0.015 gr/scf for PM-10 for medium efficiency cyclones and emission factor of 0.015 gr/scf for PM and 0.011 gr/scf for PM-10 for high efficiency cyclones. With the emission factor based on exhaust flow only and not throughput, the emissions will not change because the exhaust flow has not changed with the addition of this equipment. There are no VOC or TAP emissions. Compliance with NAAQS is demonstrated through modeling submitted with the Tier II permit application.

- Back rip saw (Bldg. 3)
  Back rip saw is located in Building #3 and emits through cyclone C and then cyclone F. It was installed in 1972, after the installation date of 1970 for the cyclones. This equipment is exempt because the potential to emit for cyclones C and F does not change, based on a grain loading emission factor of 0.03 gr/scf for PM and 0.015 gr/scf for PM-10 for medium efficiency cyclones and emission factor of 0.015 gr/scf for PM and 0.011 gr/scf for PM-10 for high efficiency cyclones. With the emission factor based on exhaust flow only and not throughput, the emissions will not change because the exhaust flow has not changed with the addition of this equipment. There are no VOC or TAP emissions. Compliance with NAAQS is demonstrated through modeling submitted with the Tier II permit application.

- Tri-state rip saw #314
  Tri-state rip saw #314 is located in Building #4 and emits through cyclone E. It was installed in 1973, after the installation date of 1970 for cyclone E. This equipment is exempt because the potential to emit for cyclone E does not change, based on a grain loading emission factor of 0.03 gr/scf for PM and 0.015 gr/scf for PM-10. With the emission factor based on exhaust flow only and not throughput, the emissions will not change because the exhaust flow has not changed with the addition of this equipment. There are no VOC or TAP emissions. Compliance with NAAQS is demonstrated through modeling submitted with the Tier II permit application.

- Twin resaw #353 (D353 in IDEQ table)
  Twin resaw #353 is located in Building #3 and emits through cyclone C and then through cyclone F. It was installed in 1973, after the installation date of 1970 for cyclones C and F. This equipment is exempt because the potential to emit does not change, based on a grain loading emission factor of 0.03 gr/scf for PM and 0.015 gr/scf for PM-10 for medium efficiency cyclones and emission factor of 0.015 gr/scf for PM and 0.011 gr/scf for PM-10 for high efficiency cyclones. With the emission factor based on exhaust flow only and not throughput, the emissions will not change because the exhaust flow has not changed with the addition of this equipment. There are no VOC or TAP emissions. Compliance with NAAQS is demonstrated through modeling submitted with the Tier II permit application.

- Core moulder #361
  Core moulder # 361 is located in Building #4 and emits through cyclone G and then cyclone E. It was installed in 1974, after the installation date of 1972 for cyclone G and 1970 for cyclone E. This equipment is exempt because the potential to emit for cyclones G and E does not change, based on a grain loading emission factor of 0.03 gr/scf for PM and 0.015 gr/scf for PM-10. With the emission factor based on exhaust flow only and not throughput, the emissions will not change because the exhaust flow has not changed with the addition of this equipment. There are no VOC or TAP emissions. Compliance with NAAQS is demonstrated through modeling submitted with the Tier II permit application.

- Cutline #3 (10 chop saws)
  Cutline #3 is only used occasionally and will be dismantled and shipped to another location. Cutline #3 is located in Building #3 and emits through cyclone D and then cyclone F. It was installed in 1974, after the installation date of 1970 for cyclone D and 1970 for cyclone F. This equipment is exempt because the potential to emit for cyclones D and F does not change, based on a grain loading emission factor of 0.015 gr/scf for PM and 0.011 gr/scf for PM-10 for high efficiency cyclones. With the emission factor based on exhaust flow only and not throughput, the emissions will not change because the exhaust flow has not changed with the addition of this equipment. There are no VOC or TAP emissions. Because the equipment will be removed for service, it was not necessary to model for the Tier II permit application.

- Hammer hog system
  The hammer hog system is not in use; there is no electrical wiring for its operation and it is to be removed. The hammer hog is located in Building #3 and emits through cyclone F. It was installed in 1975, after the installation date of 1970 for cyclone F. This equipment is exempt because the potential to emit for cyclones F does not change, based on a grain loading emission factor of 0.015 gr/scf for PM and 0.011 gr/scf for PM-10 for high efficiency cyclones. With the emission factor based on exhaust flow only and not throughput, the emissions will not change because the exhaust flow has not changed with the addition of this equipment. There are no VOC or TAP emissions. Because the equipment will be removed, it was not necessary to model for the Tier II permit application.

- Single resaw #351
  The single resaw #351 is located in Building #4 and emits through cyclone G and then cyclone E. It was installed in 1975, after the installation date of 1972 for cyclone G and 1970 for cyclone E. This equipment is exempt because the potential to emit for cyclones E does not change, based on a grain loading emission factor of 0.03 gr/scf for PM and 0.015 gr/scf for PM-10. With the emission factor based on exhaust flow only and not throughput, the emissions will not change because the exhaust flow has not changed with the addition of this equipment. There are no VOC or TAP emissions. Compliance with NAAQS is demonstrated through modeling submitted with the Tier II permit application.

- Twin resaw #352
  Twin resaw #352 is located in Building #4 and emits through cyclone G and then cyclone E. It was installed in 1976, after the installation date of 1972 for cyclone G and 1970 for cyclone E. With the emission factor based on exhaust flow only and not throughput, the emissions will not change because the exhaust flow has not changed with the addition of this equipment. There are no VOC or TAP emissions. Compliance with NAAQS is demonstrated through modeling submitted with the Tier II permit application.

- Tenenor #378
  Tenenor #378 is located in Building #4 and emits through cyclone G and then cyclone E. It was installed in 1978, after the installation date of 1972 for cyclone G and 1970 for cyclone E. With the emission factor based on exhaust flow only and not throughput, the emissions will not change because the exhaust flow has not changed with the addition of this equipment. There are no VOC or TAP emissions. Compliance with NAAQS is demonstrated through modeling submitted with the Tier II permit application.

- 8-head moulder #379
  8-head moulder #379 is located in Building #4 and emits through cyclone G and then cyclone E. It was installed in 1980, after the installation date of 1972 for cyclone G and 1970 for cyclone E. With the emission factor based on exhaust flow only and not throughput, the emissions will not change because the exhaust flow has not changed with the addition of this equipment. There are no VOC or TAP emissions. Compliance with NAAQS is demonstrated through modeling submitted with the Tier II permit application.

- Tenenor #379
  Tenenor #379 is located in Building #4 and emits through cyclone G and then cyclone E. It was installed in 1980, after the installation date of 1972 for cyclone G and 1970 for cyclone E. With the emission factor based on exhaust flow only and not throughput, the emissions will not change because the exhaust flow has not changed with the addition of this equipment. There are no VOC or TAP emissions. Compliance with NAAQS is demonstrated through modeling submitted with the Tier II permit application.

- 9-head moulder #378
  9-head moulder #378 is located in Building #4 and emits through cyclone G and then cyclone E. It was installed in 1982, after the installation date of 1972 for cyclone G and 1970 for cyclone E. With the emission factor based on exhaust flow only and not throughput, the emissions will not change because the exhaust flow has not changed with the addition of this equipment. There are no VOC or TAP emissions. Compliance with NAAQS is demonstrated through modeling submitted with the Tier II permit application.

- 5-head moulder #376
  5-head moulder #376 is located in Building #4 and emits through cyclone I, G and then cyclone E. It was installed in 1983, after the installation date of 1972 for cyclones I and G and 1970 for cyclone E. With the emission factor based on exhaust flow only and not throughput, the emissions will not change because the exhaust flow has not changed with the addition of this equipment. There are no VOC or TAP emissions. Compliance with NAAQS is demonstrated through modeling submitted with the Tier II permit application.

- 4-head moulder #379
  4-head moulder #379 is located in Building #4 and emits through cyclones I, G and E. It was installed in 1984, after the installation date of 1972 for cyclones I and G and1970 for cyclone E. With the emission factor based on exhaust flow only and not throughput, the emissions will not change because the exhaust flow has not changed with the addition of this equipment. There are no VOC or TAP emissions. Compliance with NAAQS is demonstrated through modeling submitted with the Tier II permit application.

- Building #5/Cyclone K: 5/4 moulder #571; chop saw #571; 5/4 moulder #572; chop saw #572; resaw #553; chop saw #573; mezzanine chop saw #1; mezzanine chop saw #2

  These are located in Building #5 and discharge through cyclone K. The installation dates are a follows:
  - the 5/4 moulder #571 and chop saw #571 were installed in 1984;
  - the 5/4 moulder #572 and chop saw # 572 were installed in 1985;
  - the resaw # 553 was installed in 1986;
  - the chop saw #573 in 1987;
  - mezzanine chop saw #1 and mezzanine chop saw #2 in 1988.

  These were all installed after the installation date of 1983 for cyclone K. With the emission factor based on exhaust flow only and not throughput, the emissions will not change because the exhaust flow has not changed with the addition of this equipment. There are no VOC or TAP emissions. Compliance with NAAQS is demonstrated through modeling submitted with the Tier II permit application.

- Tenenor #381
  Tenenor #381 is located in Building #4 and emits through cyclones I, G and E. It was installed in 1985, after the installation date of 1972 for cyclones I and G and1970 for cyclone E. With the emission factor based on exhaust flow only and not throughput, the emissions will not change because the exhaust flow has not changed with the addition of this equipment. There are no VOC or TAP emissions. Compliance with NAAQS is demonstrated through modeling submitted with the Tier II permit application.

- Chop saw #4, router and mini-sander
  These are located in Building #3 and discharge through cyclones D and F. These were installed in 1988, after the installation date of 1970 for cyclones D and F. With the emission factor based on exhaust flow only and not throughput, the emissions will not change because the exhaust flow has not changed with the addition of this equipment. There are no VOC or TAP emissions. Compliance with NAAQS is demonstrated through modeling submitted with the Tier II permit application.

- Building #5/Cyclone J: 5/4 moulder #574; chop saw #575; 5/4 moulder #575; chop saw #575; chop saw #576; 5/4 moulder #576

  These are located in Building #5 and discharge through cyclone J. The installation dates are a follows:
  - the 5/4 moulder #574 and the chop saw #574were installed in 1989;
  - the 5/4 moulder #575 and chop saw #575 in 1990;
  - chop saw #576 and 5/4 moulder #576 in 1991.

  These were all installed after the installation date of 1983 for cyclone J. With the emission factor based on exhaust flow only and not throughput, the emissions will not change because the exhaust flow has not changed with the addition of this equipment. There are no VOC or TAP emissions. Compliance with NAAQS is demonstrated through modeling submitted with the Tier II permit application.

- 5/4 panel rip
  This equipment listed by IDEQ is currently identified by Woodgrain as panel rip saw 555 located in Building #5. It discharges to cyclone L and was installed in May of 2000, well after 1983, the date of the cyclone installation. With the emission factor based on exhaust flow only and not throughput, the emissions will not change because the exhaust flow has not changed with the addition of this equipment. There are no VOC or TAP emissions. Compliance with NAAQS is demonstrated through modeling submitted with the Tier II permit application.

Equipment that required a PTC

- Wood treat process
  The wood treatment process was submitted to IDEQ for an applicability analysis on March 17, 2000. Woodgrain was classified as a PSD major source at that time, however it was grandfathered from having to comply with PSD regulations prior to any physical change in operations that caused a net significant emissions increase. Woodgrain was a PSD major source by the time the wood treatment process was in place in 1989. The wood treatment process triggered PSD requirements because it had a major modification, i.e., a potential to emit greater than 40 tpy for VOCs. At a minimum this requires a BACT review only for the wood treatment process. Woodgrain is working with IDEQ on PSD issues, which will be addressed in a separate document by Woodgrain.

- Tenenor #375
  Tenenor #375 is located in Building #3 and emits through cyclone C and then cyclone F. It was installed in 1970, the same date as the cyclones. The PM potential to emit from cyclone C is 18 tpy and for PM-10 is 9 tpy, based on an emission factor of 0.03 gr/scf for PM and 0.015 gr/scf for PM-10. Cyclone F has a discharge of 16.1 tpy PM and 11.8 tpy PM-10, based on an emission factor of 0.015 gr/scf for PM and 0.011

gr/scf for PM-10 for high efficiency cyclones. These are greater than 10% of significant emission rates and cannot be exempted. Because it was installed at the time of the cyclone in 1970, according to IDEQ it does not need to be included as an applicable requirement for Title V purposes; however, it did require a permit to construct pursuant to the Idaho regulations as it was constructed after the grandfathered date of January 24, 1969. There are no VOC or TAP emissions.

- Moulder #375
  This was installed in 1970 in Building # 3 and discharges through cyclone B and then cyclone F. The PM potential to emit from cyclone B is 10.5 tpy and for PM-10 is 7.7 tpy, based on an emission factor of 0.015 gr/scf for PM and 0.011 gr/scf for PM-10 for high efficiency cyclones. Cyclone F has a discharge of 16.1 tpy PM and 11.8 tpy PM-10, based on an emission factor of 0.015 gr/scf for PM and 0.011 gr/scf for PM-10 for high efficiency cyclones. These are greater than 10% of significant emission rates and can not be exempted. Because it was installed at the time of the cyclone in 1970, according to IDEQ it does not need to be included as an applicable requirement for Title V purposes; however, it did require a permit to construct pursuant to the Idaho regulations as it was constructed after the grandfathered date of January 24, 1969. There are no VOC or TAP emissions.

- Rip saw #1
  Ripsaw #1 (now known as 111 rip saw #1) is located in Building #4 and emits through cyclone G and then cyclone E. It was installed in 1972, the same date as cyclone G (E was installed in 1970). The PM potential to emit from cyclone G is 31.7 tpy and for PM-10 is 15.9 tpy, based on an emission factor of 0.03 gr/scf for PM and 0.015 gr/scf for PM-10. These are greater than 10% of significant emission rates and cannot be exempted. Because it was installed at the time of the cyclone in 1972, according to IDEQ it must be included as an applicable requirement for Title V purposes, where the applicable date is 1972 and later. There are no VOC or TAP emissions.

- Cutline #2 (7 chop saws)
  Cutline #2 is located in Building #5 and emits through cyclone J. It was installed in 1972, while cyclone J was installed in 1982. The PM potential to emit from cyclone J is 28.8 tpy and for PM-10 is 14.4 tpy, based on an emission factor of 0.03 gr/scf for PM and 0.015 gr/scf for PM-10. These are greater than 10% of significant emission rates and cannot be exempted. Because it was installed in 1972, according to IDEQ it must be included as an applicable requirement for Title V purposes, where the applicable date is 1972 and later. There are no VOC or TAP emissions.

- Cutline #1 (6 chop saws on IDEQ's list, but there are actually 12 saws on the cutline)
  Cutline #1 is located in Building #5 and emits through cyclone L. It was installed in 1980, prior to the installation date of 1983 for cyclone L. The PM potential to emit from cyclone L is 32.9 tpy and for PM-10 is 16.4 tpy, based on an emission factor of 0.03 gr/scf for PM and 0.015 gr/scf for PM-10. These are greater than 10% of significant emission rates and cannot be exempted. Because it was installed in 1980,

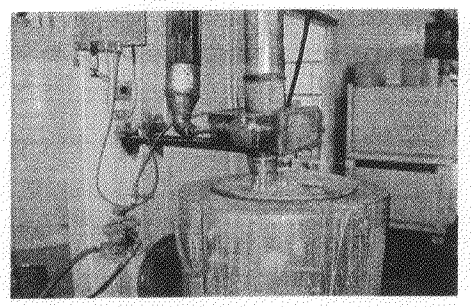
it must be included as an applicable requirement for Title V purposes, where the applicable date is 1972 and later. There are no VOC or TAP emissions.

- (Bldg. 5)Chop saws #541, 542 and 543; fingerjointers#541, 542 and 543; back rip saw; resaw #552/572; twin resaw #551
  These are located in Building #5 and emit through cyclone L. These were installed in 1983, at the time of the installation date of cyclone L. The PM potential to emit from cyclone L is 32.9 tpy and for PM-10 is 16.4 tpy, based on an emission factor of 0.03 gr/scf for PM and 0.015 gr/scf for PM-10. These are greater than 10% of significant emission rates and cannot be exempted. Because it was installed in 1983, it must be included as an applicable requirement for Title V purposes, where the applicable date is 1972 and later. There are no VOC or TAP emissions.

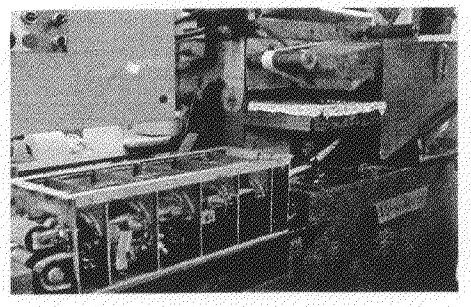
- 5/4 core moulder #561; chop saw #561
  These are located in Building #5 and emit through cyclone K. It was installed in 1983, at the time of the installation date of cyclone K. The PM potential to emit from cyclone K is 24.3 tpy and for PM-10 is 12.2 tpy, based on an emission factor of 0.03 gr/scf for PM and 0.015 gr/scf for PM-10. These are greater than 10% of significant emission rates and cannot be exempted. Because it was installed in 1983, it must be included as an applicable requirement for Title V purposes, where the applicable date is 1972 and later. There are no VOC or TAP emissions.

- 5/4 moulder #573
  The 5/4 molder #573 is located in Building #5 and discharges to baghouse M. The baghouse was installed and permitted with Optimizing Building. The 573 moulder was added to the optimizing system in 2000. The 573 moulder has a gate on the dust collection system that puts the shavings in the optimizing system and by changing the gate, the wood shavings go with the system that feeds to Cyclone K (18) system 4.

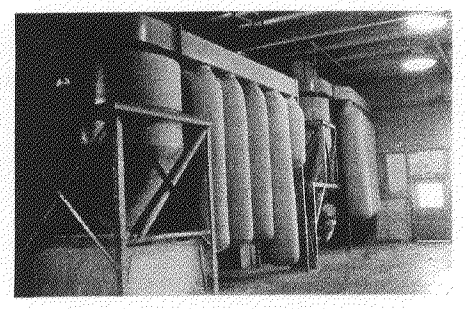
  Baghouse M is estimated to emit 0.003 tpy of PM/PM-10 based on an emission factor of 0.001 lb/BDT and an annual throughput of 5,030 tpy (assumes 1 shift). Assuming 99.95% baghouse efficiency and 8,760 hours per year, the uncontrolled potential to emit for PM and PM-10 would be 25.2 tpy. Uncontrolled emissions would exceed the net significant increase threshold of 25 tpy for PM. Because the source is major, a PTC application should have been submitted. Modeling submitted with the Tier II application indicates compliance with the NAAQS.



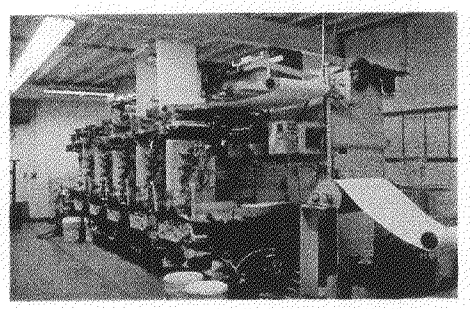
Name: Evaporator
Flow chart: P5
Bldg:1
Material applied: Solvents
Ventilation: FNs 53, 7, 8



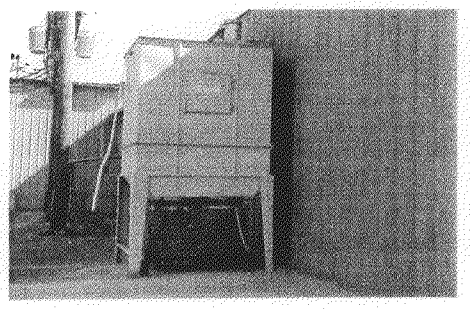
Name: Wrapper
Flow chart: N/A
Bldg: 1
Fuel burned: Electric
Material applied: Glue PA130
Ventilation: FNs 15,16, 17



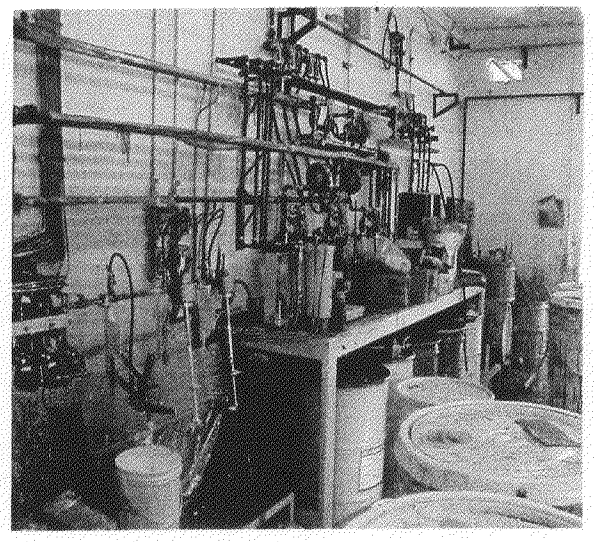
Name: Baghouses
Flow chart #: P3 & P4
Bldg: 1



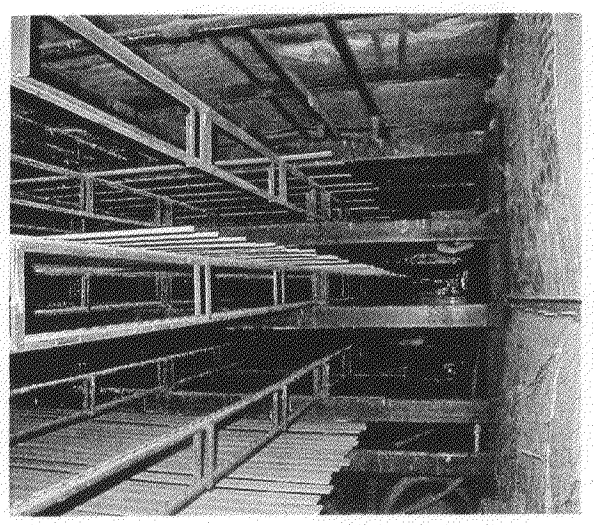
Name: 5-Head Printer
Bldg: 1
Material applied: W/b Paints/Ink
Ventilation: FN 2



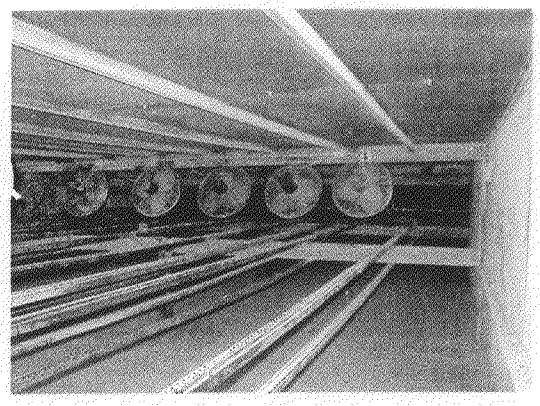
Name: Baghouse
Flow chart: P1
Bldg: 1



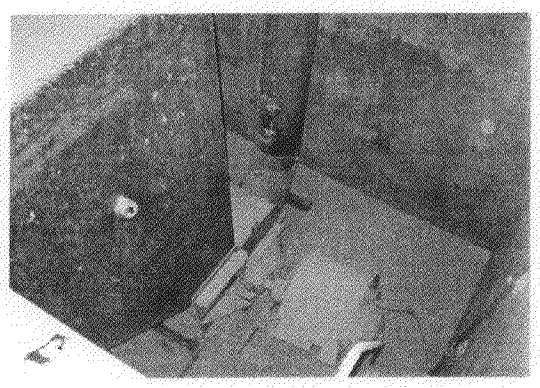
Name: Paint Mixer
Flow chart: P31
Bldg: 2
Material: Paints/solvents
Ventilation: VT 20



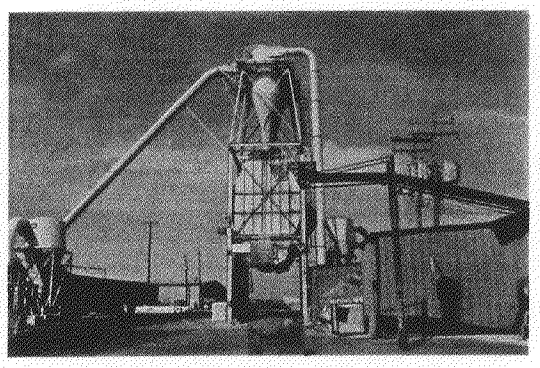
Name: Base coat oven
Flow chart: P28 & P29
Bldg: 2
Fuel burned: Natural gas
Material: Paints/solvents
Ventilation: FNs 21,22 ,58, 23, 24, 28, 29, 30, 56 ,57



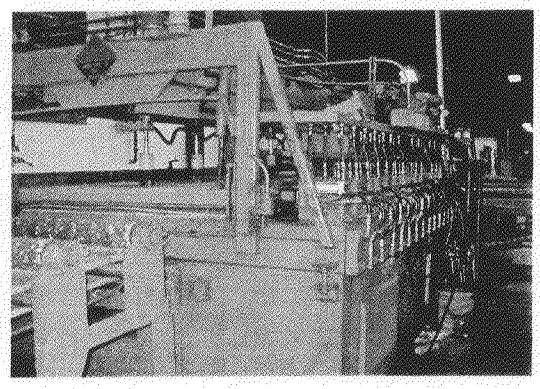
Name: Vacuum Coater Oven
Flow chart: P9
Bldg: 3



Name: Hammer Hog
Flow chart: P27
Bldg: 3

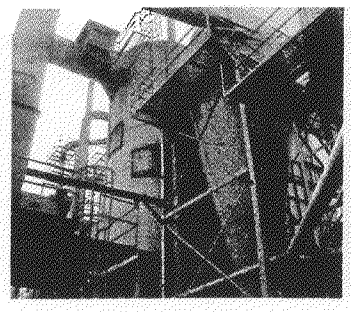


Name: Cyclone M3
Flow chart: P24
Bldg: N/A

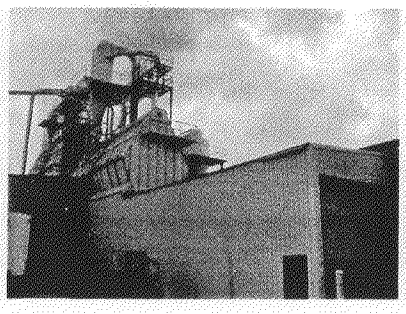


Name: Radio Freq. Ovens
Flow chart: P13
Bldg: 4
Fuel burned: Electric
Ventilation: FNs 48, 49, 50, 61

Woodgrain Millwork-Cyclones/Baghouses

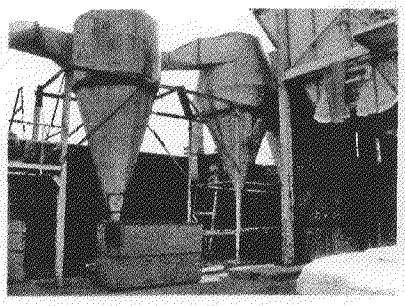


Baghouse (middle)

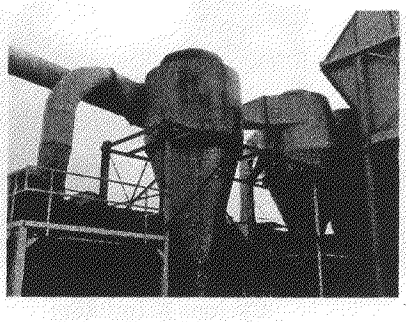


Chipper Cyclone

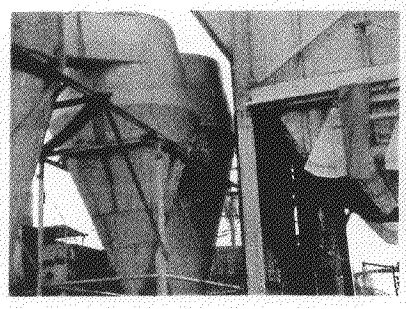
Cyclone A



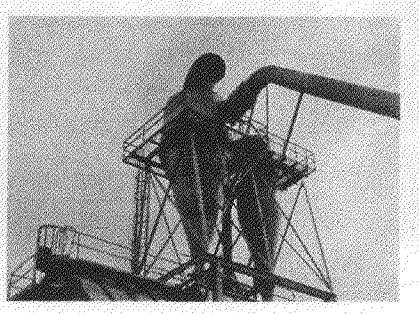
Cyclone B (middle)



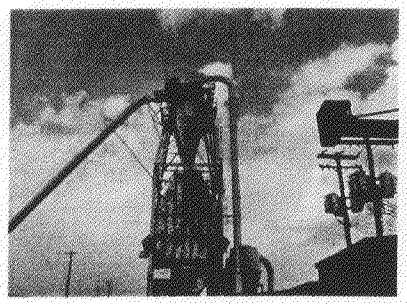
Cyclone C (left)



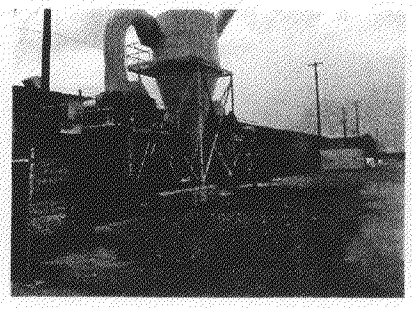
Cyclone D



Cyclone E (left)

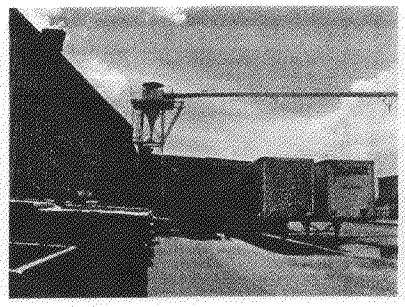


Cyclone F

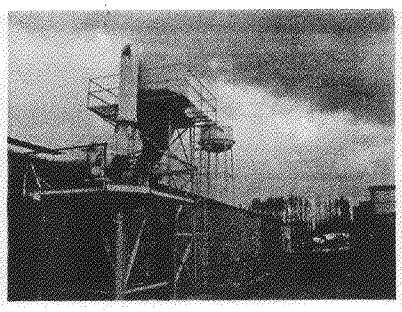


Cyclone G

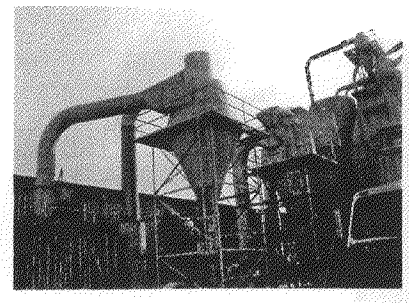
Woodgrain Millwork-Cyclones/Baghouses



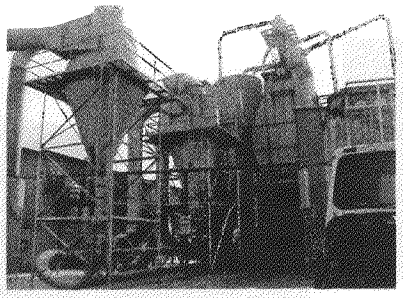
Cyclone H



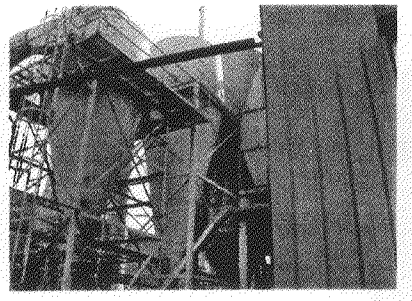
Cyclone I



Cyclone J

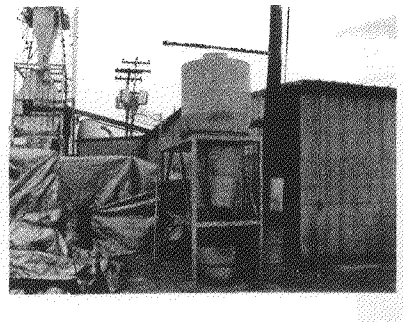


Cyclone K (middle)



Cyclone L (middle)

Cyclone M1, M2, M3, M4



Grinding Room Cyclone

DEQ TRACKING DATA

DEQ USE ONLY

PLANT ID	AQCR	DATE RECEIVED	REVIEWER	SIP	NSPS	PSD APPLICABLE	NON-ATTAINMENT AREA	NESHAPS
- -		/ /						

DEQ USE ONLY

FIRST COMPLETENESS DATE	INCOMPLETENESS RESPONSE	SECOND COMPLETENESS DATE	PERMIT ISSUANCE DATE	CONSTRUCTION START DATE	SOURCE START DATE
/ /	/ /	/ /	/ /	/ /	/ /

DEQ USE ONLY

NOTES:

SECTION 1

GENERAL INFORMATION

COMPANY & DIVISION NAME	Woodgrain Millwork
STREET ADDRESS OR P.O. BOX	300 NW 16th Street
CITY	Fruitland
STATE	ID
ZIP	83619
PERSON TO CONTACT	DAVID LINDSEY
TITLE	V. PRESIDENT
PHONE NUMBER	208-452-3801
EXACT PLANT LOCATION	300 NW 16th Street
GENERAL NATURE OF BUSINESS/PRODUCTS	Wood Mouldings
NUMBER FULL-TIME EMPLOYEES	800
PROPERTY AREA (ACRES)	75
REASON FOR APPLICATION * (SEE BELOW)	6
DISTANCE TO NEAREST STATE BORDER (MILES)	1
PRIMARY SIC	2431
SECONDARY SIC	2491
PLANT LOCATION COUNTY	Payette
ELEVATION (FT)	2110
UTM ZONE	11
UTM X CORRDINATE (KM)	506.2
UTM Y CORRDINATE (KM)	4873.0
NAME OF OTHER FACILITIES **	Door Plant
LOCATION OF OTHER FACILITIES	Nampa
OWNER OR RESPONSIBLE OFFICIAL	Reed Dame
TITLE	President & CEO

Based on information and belief formed after reasonable inquiry, I certify the statements and information in this document are true, accurate, & complete.

SIGNATURE OF OWNER OR RESPONSIBLE OFFICIAL	David E. Lindsey
DATE	05/30/02

* (1) Permit to construct a new facility; (2) Permit to modify an existing source; (3) Permit to construct a new source at an existing facility; (4) Change of Owner or Location; (5) Tier I Permit to Operate; (6) Tier II Permit to Operate.

**** List all facilities within the state that are under your control, or under common control, and have emissions to the air. If none, so state.**

SECTION 2

FUEL BURNING EQUIPMENT

DEQ USE ONLY

DEQ PLANT ID CODE	DEQ PROCESS CODE	DEQ STACK ID CODE	DEQ BUILDING ID CODE
- -			
PRIMARY SCC	**SECONDARY SCC**	**DEQ SEGMENT CODE**	
- - -	- - -		

PART A — GENERAL INFORMATION

PROCESS CODE OR DESCRIPTION	STACK DESCRIPTION	BUILDING DESCRIPTION
VAC COAT OVEN	B-1	BLG #3
MANUFACTURER	**MODEL**	**DATE INSTALLED OR LAST MODIFIED**
WOODGRAIN	6-BURNER	1999

RATED CAPACITY (CHOOSE APPROPRIATE UNITS)

MILLION BTU/HOUR		THOUSAND LBS/HR STEAM		KILOWATTS		HORSEPOWER
.	OR	NA	OR	NA .	OR	.
BURNER TYPE (1)		**PERCENT USED FOR PROCESS**		**PERCENT USED FOR SPACE HEAT**		
		100		0		

(1) BURNER TYPES: 01) SPREADER STOKER; 02) CHAIN OR TRAVELING GRATE; 03) HAND FIRED; 04) CYCLONE FURNACE; 05) WET BOTTOM (PULVERIZED COAL); 06) DRY BOTTOM (PULVERIZED COAL); 07) UNDERFEED STOKER; 08) TANGENTIALLY FIRED; 09) HORIZONTALLY FIRED; 10) AXIALLY FIRED; 11) OTHER (SPECIFY TO THE RIGHT):

FUEL DATA

PARAMETER	PRIMARY FUEL	UNITS	SECONDARY FUEL	UNITS
FUEL CODE (2)	01		NA	
PERCENT SULFUR	MSDS		.	
PERCENT ASH	0		.	
PERCENT NITROGEN	0		.	
PERCENT CARBON	0		.	
PERCENT HYDROGEN	0		.	
PERCENT MOISTURE	NA		.	
HEAT CONTENT (BTU/UNIT)			.	
MAXIMUM HOURLY COMBUSTION RATE (UNITS/HR)	refer to calc sheet		.	
NORMAL ANNUAL COMBUSTION RATE (UNITS/YR)			.	

(2) FUEL CODES: 01) NATURAL GAS; 02) #1 OR #2 FUEL OIL; 03) #4 FUEL OIL; 04) #5 OR #6 FUEL OIL; 05) USED OIL; 06) WOOD CHIPS; 07) WOOD BARK; 08) WOOD SHAVINGS; 09) SANDER DUST; 10) SUBBITUMINOUS COAL; 11) BITUMINOUS COAL; 12) ANTHRACITE COAL; 13) LIGNITE COAL; 14) PROPANE; 15) OTHER (SPECIFY):

PART B **SEC. 2** **OPERATING DATA**

PERCENT FUEL CONSUMPTION PER QUARTER DEC-FEB	MAR-MAY	JUN-AUG	SEP-NOV
25	25	25	25

OPERATING SCHEDULE HOURS / DAY	DAYS / WEEK	WEEKS / YEAR
16	6	52

POLLUTION CONTROL EQUIPMENT

PARAMETER	PRIMARY	SECONDARY
TYPE	NA	NA
TYPE CODE (APP A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (INCHES H_2O)	.	.
WET SCRUBBER FLOW (GPM)	.	.
BAGHOUSE AIR/CLOTH RATIO (FPM)	.	.

VENTILATION AND BUILDING / AREA DATA

ENCLOSED? (Y/N)	HOOD TYPE (APP B)	MINIMUM FLOW (ACFM)	% CAPTURE EFFICIENCY
N	NA	see fan schedule	0

BUILDING HEIGHT (FT)	BUILDING LENGTH (FT)	BUILDING WIDTH (FT)
24	310	100

STACK DATA

GROUND ELEVATION (FT)	UTM X COORDINATE (KM)	UTM Y COORDINATE (KM)	STACK TYPE *
2210	506.2	4873.0	NA

STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	STACK EXIT DIAMETER (FT)	STACK EXIT GAS FLOW RATE (ACFM)	STACK EXIT TEMPERATURE (°F)
see fan schedule	see fan schd	see fan schedule	NA

* 01) DOWNWARD, 02) VERTICAL (UNCOVERED), 03) VERTICAL (COVERED), 04) HORIZONTAL, 05) FUGITIVE

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR **	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (TONS/YR)	REFERENCE
PM		7.6	NA.	refer to calc sheets	.		AP42
PM 10		7.6	NA.		.		AP42
SO2		0.6	NA.		.		AP42
CO		84	NA.		.		AP42
NOX		100	NA.		.		AP42
VOC		5.5	NA.		.		AP42
LEAD		. E-	.	. E-	E-	. E-	
	-	. E-	.	. E-	. E-	. E-	
	-	. E-	.	. E-	. E-	. E-	
	-	. E-	.	. E-	. E-	. E-	
	-	. E-	.	. E-	. E-	. E-	
	-	. E-	.	. E-	. E-	. E-	

SECTION 2

FUEL BURNING EQUIPMENT

DEQ USE ONLY

DEQ PLANT ID CODE	DEQ PROCESS CODE	DEQ STACK ID CODE	DEQ BUILDING ID CODE
- -			
PRIMARY SCC	SECONDARY SCC	DEQ SEGMENT CODE	
- - -	- - -		

PART A — GENERAL INFORMATION

PROCESS CODE OR DESCRIPTION	STACK DESCRIPTION	BUILDING DESCRIPTION
FLOW COAT OVEN	B-2	BLG #3
MANUFACTURER	**MODEL**	**DATE INSTALLED OR LAST MODIFIED**
WOODGRAIN	4-BURNER	1999

RATED CAPACITY (CHOOSE APPROPRIATE UNITS)

MILLION BTU/HOUR		THOUSAND LBS/HR STEAM		KILOWATTS		HORSEPOWER
.	OR	NA	OR	NA .	OR	.

BURNER TYPE (1)	PERCENT USED FOR PROCESS	PERCENT USED FOR SPACE HEAT
	100	0

(1) BURNER TYPES: 01) SPREADER STOKER; 02) CHAIN OR TRAVELING GRATE; 03) HAND FIRED; 04) CYCLONE FURNACE; 05) WET BOTTOM (PULVERIZED COAL); 06) DRY BOTTOM (PULVERIZED COAL); 07) UNDERFEED STOKER; 08) TANGENTIALLY FIRED; 09) HORIZONTALLY FIRED; 10) AXIALLY FIRED; 11) OTHER (SPECIFY TO THE RIGHT):

FUEL DATA

PARAMETER	PRIMARY FUEL	UNITS	SECONDARY FUEL	UNITS
FUEL CODE (2)	01		NA	
PERCENT SULFUR	MSDS		.	
PERCENT ASH	0		.	
PERCENT NITROGEN	0		.	
PERCENT CARBON	0		.	
PERCENT HYDROGEN	0		.	
PERCENT MOISTURE	NA		.	
HEAT CONTENT (BTU/UNIT)			.	
MAXIMUM HOURLY COMBUSTION RATE (UNITS/HR)	refer to	calc sheet	.	
NORMAL ANNUAL COMBUSTION RATE (UNITS/YR)			.	

(2) FUEL CODES: 01) NATURAL GAS; 02) #1 OR #2 FUEL OIL; 03) #4 FUEL OIL; 04) #5 OR #6 FUEL OIL; 05) USED OIL; 06) WOOD CHIPS; 07) WOOD BARK; 08) WOOD SHAVINGS; 09) SANDER DUST; 10) SUBBITUMINOUS COAL; 11) BITUMINOUS COAL; 12) ANTHRACITE COAL; 13) LIGNITE COAL; 14) PROPANE; 15) OTHER (SPECIFY):

PART B **SEC. 2** **OPERATING DATA**

PERCENT FUEL CONSUMPTION PER QUARTER DEC-FEB	MAR-MAY	JUN-AUG	SEP-NOV
25	25	25	25

OPERATING SCHEDULE HOURS / DAY	DAYS / WEEK	WEEKS / YEAR
16	6	52

POLLUTION CONTROL EQUIPMENT

PARAMETER	PRIMARY	SECONDARY
TYPE	NA	NA
TYPE CODE (APP A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (INCHES H_2O)	.	.
WET SCRUBBER FLOW (GPM)	.	.
BAGHOUSE AIR/CLOTH RATIO (FPM)	.	.

VENTILATION AND BUILDING / AREA DATA

ENCLOSED? (Y/N)	HOOD TYPE (APP B)	MINIMUM FLOW (ACFM)	% CAPTURE EFFICIENCY
N	NA	see fan schedule	0

BUILDING HEIGHT (FT)	BUILDING LENGTH (FT)	BUILDING WIDTH (FT)
24	310	100

STACK DATA

GROUND ELEVATION (FT)	UTM X COORDINATE (KM)	UTM Y COORDINATE (KM)	STACK TYPE *
2210	506.2	4873.0	NA

STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	STACK EXIT DIAMETER (FT)	STACK EXIT GAS FLOW RATE (ACFM)	STACK EXIT TEMPERATURE (°F)
see fan schedule	see fan schd	see fan schedule	NA

* 01) DOWNWARD, 02) VERTICAL (UNCOVERED), 03) VERTICAL (COVERED), 04) HORIZONTAL, 05) FUGITIVE

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR **	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (TONS/YR)	REFERENCE
PM		7.6	NA.		.		AP42
PM 10		7.6	NA.	refer	.		AP42
SO2		0.6	NA.	to	.		AP42
CO		84	NA.	calc	.		AP42
NOX		100	NA.	sheets	.		AP42
VOC		5.5	NA.		.		AP42
LEAD		.E-	.	.E-	E-	.E-	
	-	.E-	.	.E-	.E-	.E-	
	-	.E-	.	.E-	.E-	.E-	
	-	.E-	.	.E-	.E-	.E-	
	-	.E-	.	.E-	.E-	.E-	
	-	.E-	.	.E-	.E-	.E-	

SECTION 2

FUEL BURNING EQUIPMENT

DEQ USE ONLY

DEQ PLANT ID CODE: - -

PRIMARY SCC: - - -

DEQ USE ONLY

DEQ PROCESS CODE:

SECONDARY SCC: - - -

DEQ STACK ID CODE:

DEQ SEGMENT CODE:

DEQ BUILDING ID CODE:

PART A — GENERAL INFORMATION

PROCESS CODE OR DESCRIPTION: NORTH OVEN

STACK DESCRIPTION: B-3

BUILDING DESCRIPTION: BLG #2

MANUFACTURER: WOODGRAIN

MODEL: 2-BURNER

DATE INSTALLED OR LAST MODIFIED: 1971

RATED CAPACITY (CHOOSE APPROPRIATE UNITS)

MILLION BTU/HOUR: . OR

THOUSAND LBS/HR STEAM: NA OR

KILOWATTS: NA . OR

HORSEPOWER: .

BURNER TYPE (1):

PERCENT USED FOR PROCESS: 100

PERCENT USED FOR SPACE HEAT: 0

(1) BURNER TYPES: 01) SPREADER STOKER; 02) CHAIN OR TRAVELING GRATE; 03) HAND FIRED; 04) CYCLONE FURNACE; 05) WET BOTTOM (PULVERIZED COAL); 06) DRY BOTTOM (PULVERIZED COAL); 07) UNDERFEED STOKER; 08) TANGENTIALLY FIRED; 09) HORIZONTALLY FIRED; 10) AXIALLY FIRED; 11) OTHER (SPECIFY TO THE RIGHT):

FUEL DATA

PARAMETER	PRIMARY FUEL	UNITS	SECONDARY FUEL	UNITS
FUEL CODE (2)	01		NA	
PERCENT SULFUR	MSDS		.	
PERCENT ASH	0		.	
PERCENT NITROGEN	0		.	
PERCENT CARBON	0		.	
PERCENT HYDROGEN	0		.	
PERCENT MOISTURE	NA		.	
HEAT CONTENT (BTU/UNIT)			.	
MAXIMUM HOURLY COMBUSTION RATE (UNITS/HR)	refer to	calc sheet	.	
NORMAL ANNUAL COMBUSTION RATE (UNITS/YR)			.	

(2) FUEL CODES: 01) NATURAL GAS; 02) #1 OR #2 FUEL OIL; 03) #4 FUEL OIL; 04) #5 OR #6 FUEL OIL; 05) USED OIL; 06) WOOD CHIPS; 07) WOOD BARK; 08) WOOD SHAVINGS; 09) SANDER DUST; 10) SUBBITUMINOUS COAL; 11) BITUMINOUS COAL; 12) ANTHRACITE COAL; 13) LIGNITE COAL; 14) PROPANE; 15) OTHER (SPECIFY):

PART B **SEC. 2** **OPERATING DATA**

PERCENT FUEL CONSUMPTION PER QUARTER			
DEC-FEB	MAR-MAY	JUN-AUG	SEP-NOV
25	25	25	25

OPERATING SCHEDULE		
HOURS / DAY	DAYS / WEEK	WEEKS / YEAR
13	6	52

POLLUTION CONTROL EQUIPMENT

PARAMETER	PRIMARY	SECONDARY
TYPE	NA	NA
TYPE CODE (APP A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (INCHES H_2O)	.	.
WET SCRUBBER FLOW (GPM)	.	.
BAGHOUSE AIR/CLOTH RATIO (FPM)	.	.

VENTILATION AND BUILDING / AREA DATA

ENCLOSED? (Y/N)	HOOD TYPE (APP B)	MINIMUM FLOW (ACFM)	% CAPTURE EFFICIENCY
N	NA	see fan schedule	0

BUILDING HEIGHT (FT)	BUILDING LENGTH (FT)	BUILDING WIDTH (FT)
24	310	100

STACK DATA

GROUND ELEVATION (FT)	UTM X COORDINATE (KM)	UTM Y COORDINATE (KM)	STACK TYPE *
2210	506.2	4873.0	NA

STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	STACK EXIT DIAMETER (FT)	STACK EXIT GAS FLOW RATE (ACFM)	STACK EXIT TEMPERATURE (°F)
see fan schedule	see fan schd	see fan schedule	NA

* 01) DOWNWARD, 02) VERTICAL (UNCOVERED), 03) VERTICAL (COVERED), 04) HORIZONTAL, 05) FUGITIVE

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR **	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (TONS/YR)	REFERENCE
PM		7.6	NA.	refer to calc sheets	.		AP42
PM 10		7.6	NA.		.		AP42
SO2		0.6	NA.		.		AP42
CO		84	NA.		.		AP42
NOX		100	NA.		.		AP42
VOC		5.5	NA.		.		AP42
LEAD		. E-	.	. E-	E-	. E-	
	- -	. E-	.	. E-	. E-	. E-	
	- -	. E-	.	. E-	. E-	. E-	
	- -	. E-	.	. E-	. E-	. E-	
	- -	. E-	.	. E-	. E-	. E-	
	- -	. E-	.	. E-	. E-	. E-	

SECTION 2

FUEL BURNING EQUIPMENT

DEQ USE ONLY

DEQ PLANT ID CODE: - -

PRIMARY SCC: - - -

DEQ USE ONLY

DEQ PROCESS CODE:

SECONDARY SCC: - - -

DEQ STACK ID CODE:

DEQ SEGMENT CODE:

DEQ BUILDING ID CODE:

PART A — GENERAL INFORMATION

PROCESS CODE OR DESCRIPTION: SOUTH OVEN

STACK DESCRIPTION: B-4

BUILDING DESCRIPTION: BLG #2

MANUFACTURER: WOODGRAIN

MODEL: 2-BURNER

DATE INSTALLED OR LAST MODIFIED: 1971

RATED CAPACITY (CHOOSE APPROPRIATE UNITS)

MILLION BTU/HOUR: . OR

THOUSAND LBS/HR STEAM: NA OR

KILOWATTS: NA . OR

HORSEPOWER: .

BURNER TYPE (1):

PERCENT USED FOR PROCESS: 100

PERCENT USED FOR SPACE HEAT: 0

(1) BURNER TYPES: 01) SPREADER STOKER; 02) CHAIN OR TRAVELING GRATE; 03) HAND FIRED; 04) CYCLONE FURNACE; 05) WET BOTTOM (PULVERIZED COAL); 06) DRY BOTTOM (PULVERIZED COAL); 07) UNDERFEED STOKER; 08) TANGENTIALLY FIRED; 09) HORIZONTALLY FIRED; 10) AXIALLY FIRED; 11) OTHER (SPECIFY TO THE RIGHT):

FUEL DATA

PARAMETER	PRIMARY FUEL	UNITS	SECONDARY FUEL	UNITS
FUEL CODE (2)	01		NA	
PERCENT SULFUR	MSDS		.	
PERCENT ASH	0		.	
PERCENT NITROGEN	0		.	
PERCENT CARBON	0		.	
PERCENT HYDROGEN	0		.	
PERCENT MOISTURE	NA		.	
HEAT CONTENT (BTU/UNIT)			.	
MAXIMUM HOURLY COMBUSTION RATE (UNITS/HR)	refer to	calc sheet	.	
NORMAL ANNUAL COMBUSTION RATE (UNITS/YR)			.	

(2) FUEL CODES: 01) NATURAL GAS; 02) #1 OR #2 FUEL OIL; 03) #4 FUEL OIL; 04) #5 OR #6 FUEL OIL; 05) USED OIL; 06) WOOD CHIPS; 07) WOOD BARK; 08) WOOD SHAVINGS; 09) SANDER DUST; 10) SUBBITUMINOUS COAL; 11) BITUMINOUS COAL; 12) ANTHRACITE COAL; 13) LIGNITE COAL; 14) PROPANE; 15) OTHER (SPECIFY):

PART B **SEC. 2** **OPERATING DATA**

PERCENT FUEL CONSUMPTION PER QUARTER DEC-FEB	MAR-MAY	JUN-AUG	SEP-NOV
25	25	25	25

OPERATING SCHEDULE HOURS / DAY	DAYS / WEEK	WEEKS / YEAR
13	6	52

POLLUTION CONTROL EQUIPMENT

PARAMETER	PRIMARY	SECONDARY
TYPE	NA	NA
TYPE CODE (APP A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (INCHES H_2O)	.	.
WET SCRUBBER FLOW (GPM)	.	.
BAGHOUSE AIR/CLOTH RATIO (FPM)	.	.

VENTILATION AND BUILDING / AREA DATA

ENCLOSED? (Y/N)	HOOD TYPE (APP B)	MINIMUM FLOW (ACFM)	% CAPTURE EFFICIENCY
N	NA	see fan schedule	0

BUILDING HEIGHT (FT)	BUILDING LENGTH (FT)	BUILDING WIDTH (FT)
24	310	100

STACK DATA

GROUND ELEVATION (FT)	UTM X COORDINATE (KM)	UTM Y COORDINATE (KM)	STACK TYPE *
2210	506.2	4873.0	NA

STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	STACK EXIT DIAMETER (FT)	STACK EXIT GAS FLOW RATE (ACFM)	STACK EXIT TEMPERATURE (°F)
see fan schedule	see fan schd	see fan schedule	NA

* 01) DOWNWARD, 02) VERTICAL (UNCOVERED), 03) VERTICAL (COVERED), 04) HORIZONTAL, 05) FUGITIVE

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR **	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (TONS/YR)	REFERENCE
PM		7.6	NA.	refer to calc sheets	.		AP42
PM 10		7.6	NA.		.		AP42
SO2		0.6	NA.		.		AP42
CO		84	NA.		.		AP42
NOX		100	NA.		.		AP42
VOC		5.5	NA.		.		AP42
LEAD		. E-	.	. E-	E-	E-	
	- -	. E-	.	. E-	. E-	. E-	
	- -	. E-	.	. E-	. E-	. E-	
	- -	. E-	.	. E-	. E-	. E-	
	- -	. E-	.	. E-	. E-	. E-	
	- -	. E-	.	. E-	. E-	. E-	

SECTION 2

FUEL BURNING EQUIPMENT

DEQ USE ONLY

DEQ PLANT ID CODE	DEQ PROCESS CODE	DEQ STACK ID CODE	DEQ BUILDING ID CODE
- -			
PRIMARY SCC	**SECONDARY SCC**	**DEQ SEGMENT CODE**	
- - -	- - -		

PART A — GENERAL INFORMATION

PROCESS CODE OR DESCRIPTION	STACK DESCRIPTION	BUILDING DESCRIPTION
5-HEAD OVEN	B-5	BLG #1

MANUFACTURER	MODEL	DATE INSTALLED OR LAST MODIFIED
WOODGRAIN	1-BURNER 5-HEAD	1998

RATED CAPACITY (CHOOSE APPROPRIATE UNITS)

MILLION BTU/HOUR		THOUSAND LBS/HR STEAM		KILOWATTS		HORSEPOWER
.	OR	NA	OR	NA .	OR	.

BURNER TYPE (1)	PERCENT USED FOR PROCESS	PERCENT USED FOR SPACE HEAT
11	100	0

(1) BURNER TYPES: 01) SPREADER STOKER; 02) CHAIN OR TRAVELING GRATE; 03) HAND FIRED; 04) CYCLONE FURNACE; 05) WET BOTTOM (PULVERIZED COAL); 06) DRY BOTTOM (PULVERIZED COAL); 07) UNDERFEED STOKER; 08) TANGENTIALLY FIRED; 09) HORIZONTALLY FIRED; 10) AXIALLY FIRED; 11) OTHER (SPECIFY TO THE RIGHT):

FUEL DATA

PARAMETER	PRIMARY FUEL	UNITS	SECONDARY FUEL	UNITS
FUEL CODE (2)	01		NA	
PERCENT SULFUR	MSDS		.	
PERCENT ASH	0		.	
PERCENT NITROGEN	0		.	
PERCENT CARBON	0		.	
PERCENT HYDROGEN	0		.	
PERCENT MOISTURE	NA		.	
HEAT CONTENT (BTU/UNIT)			.	
MAXIMUM HOURLY COMBUSTION RATE (UNITS/HR)	refer to calc sheet		.	
NORMAL ANNUAL COMBUSTION RATE (UNITS/YR)			.	

(2) FUEL CODES: 01) NATURAL GAS; 02) #1 OR #2 FUEL OIL; 03) #4 FUEL OIL; 04) #5 OR #6 FUEL OIL; 05) USED OIL; 06) WOOD CHIPS; 07) WOOD BARK; 08) WOOD SHAVINGS; 09) SANDER DUST; 10) SUBBITUMINOUS COAL; 11) BITUMINOUS COAL; 12) ANTHRACITE COAL; 13) LIGNITE COAL; 14) PROPANE; 15) OTHER (SPECIFY):

PART B SEC. 2 OPERATING DATA

PERCENT FUEL CONSUMPTION PER QUARTER DEC-FEB	MAR-MAY	JUN-AUG	SEP-NOV
25	25	25	25

OPERATING SCHEDULE HOURS / DAY	DAYS / WEEK	WEEKS / YEAR
6	6	52

POLLUTION CONTROL EQUIPMENT

PARAMETER	PRIMARY	SECONDARY
TYPE	NA	NA
TYPE CODE (APP A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (INCHES H_2O)	.	.
WET SCRUBBER FLOW (GPM)	.	.
BAGHOUSE AIR/CLOTH RATIO (FPM)	.	.

VENTILATION AND BUILDING / AREA DATA

ENCLOSED? (Y/N)	HOOD TYPE (APP B)	MINIMUM FLOW (ACFM)	% CAPTURE EFFICIENCY
N	NA	see fan schedule	0

BUILDING HEIGHT (FT)	BUILDING LENGTH (FT)	BUILDING WIDTH (FT)
24	310	100

STACK DATA

GROUND ELEVATION (FT)	UTM X COORDINATE (KM)	UTM Y COORDINATE (KM)	STACK TYPE *
2210	506.2	4873.0	NA

STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	STACK EXIT DIAMETER (FT)	STACK EXIT GAS FLOW RATE (ACFM)	STACK EXIT TEMPERATURE (°F)
see fan schedule	see fan schd	see fan schedule	NA

* 01) DOWNWARD, 02) VERTICAL (UNCOVERED), 03) VERTICAL (COVERED), 04) HORIZONTAL, 05) FUGITIVE

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR **	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (TONS/YR)	REFERENCE
PM		7.6	NA.	refer to calc sheets	.		AP42
PM 10		7.6	NA.		.		AP42
SO2		0.6	NA.		.		AP42
CO		84	NA.		.		AP42
NOX		100	NA.		.		AP42
VOC		5.5	NA.		.		AP42
LEAD		.E-	.	.E-	E-	.E-	
	-	.E-	.	.E-	.E-	.E-	
	-	.E-	.	.E-	.E-	.E-	
	-	.E-	.	.E-	.E-	.E-	
	-	.E-	.	.E-	.E-	.E-	
	-	.E-	.	.E-	.E-	.E-	

SECTION 2

FUEL BURNING EQUIPMENT

DEQ USE ONLY

DEQ PLANT ID CODE: - -

PRIMARY SCC: - - -

DEQ USE ONLY

DEQ PROCESS CODE:

SECONDARY SCC: - - -

DEQ STACK ID CODE:

DEQ SEGMENT CODE:

DEQ BUILDING ID CODE:

PART A — GENERAL INFORMATION

PROCESS CODE OR DESCRIPTION: SATIN OVEN

STACK DESCRIPTION: B-6

BUILDING DESCRIPTION: BLG #6

MANUFACTURER: WOODGRAIN

MODEL: 1-BURNER

DATE INSTALLED OR LAST MODIFIED: 1999

RATED CAPACITY (CHOOSE APPROPRIATE UNITS)

MILLION BTU/HOUR: . OR

THOUSAND LBS/HR STEAM: NA OR

KILOWATTS: NA . OR

HORSEPOWER: .

BURNER TYPE (1): 11

PERCENT USED FOR PROCESS: 100

PERCENT USED FOR SPACE HEAT: 0

(1) BURNER TYPES: 01) SPREADER STOKER; 02) CHAIN OR TRAVELING GRATE; 03) HAND FIRED; 04) CYCLONE FURNACE; 05) WET BOTTOM (PULVERIZED COAL); 06) DRY BOTTOM (PULVERIZED COAL); 07) UNDERFEED STOKER; 08) TANGENTIALLY FIRED; 09) HORIZONTALLY FIRED; 10) AXIALLY FIRED; 11) OTHER (SPECIFY TO THE RIGHT):

FUEL DATA

PARAMETER	PRIMARY FUEL	UNITS	SECONDARY FUEL	UNITS
FUEL CODE (2)	01		NA	
PERCENT SULFUR	MSDS		.	
PERCENT ASH	0		.	
PERCENT NITROGEN	0		.	
PERCENT CARBON	0		.	
PERCENT HYDROGEN	0		.	
PERCENT MOISTURE	NA		.	
HEAT CONTENT (BTU/UNIT)			.	
MAXIMUM HOURLY COMBUSTION RATE (UNITS/HR)	refer to	calc sheet	.	
NORMAL ANNUAL COMBUSTION RATE (UNITS/YR)			.	

(2) FUEL CODES: 01) NATURAL GAS; 02) #1 OR #2 FUEL OIL; 03) #4 FUEL OIL; 04) #5 OR #6 FUEL OIL; 05) USED OIL; 06) WOOD CHIPS; 07) WOOD BARK; 08) WOOD SHAVINGS; 09) SANDER DUST; 10) SUBBITUMINOUS COAL; 11) BITUMINOUS COAL; 12) ANTHRACITE COAL; 13) LIGNITE COAL; 14) PROPANE; 15) OTHER (SPECIFY):

PART B **SEC. 2** **OPERATING DATA**

PERCENT FUEL CONSUMPTION PER QUARTER DEC-FEB	MAR-MAY	JUN-AUG	SEP-NOV
25	25	25	25

OPERATING SCHEDULE HOURS / DAY	DAYS / WEEK	WEEKS / YEAR
16	6	52

POLLUTION CONTROL EQUIPMENT

PARAMETER	PRIMARY	SECONDARY
TYPE	NA	NA
TYPE CODE (APP A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (INCHES H_2O)	.	.
WET SCRUBBER FLOW (GPM)	.	.
BAGHOUSE AIR/CLOTH RATIO (FPM)	.	.

VENTILATION AND BUILDING / AREA DATA

ENCLOSED? (Y/N)	HOOD TYPE (APP B)	MINIMUM FLOW (ACFM)	% CAPTURE EFFICIENCY
N	NA	see fan schedule	0

BUILDING HEIGHT (FT)	BUILDING LENGTH (FT)	BUILDING WIDTH (FT)
24	310	100

STACK DATA

GROUND ELEVATION (FT)	UTM X COORDINATE (KM)	UTM Y COORDINATE (KM)	STACK TYPE *
2210	506.2	4873.0	NA

STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	STACK EXIT DIAMETER (FT)	STACK EXIT GAS FLOW RATE (ACFM)	STACK EXIT TEMPERATURE (°F)
see fan schedule	see fan schd	see fan schedule	NA

* 01) DOWNWARD, 02) VERTICAL (UNCOVERED), 03) VERTICAL (COVERED), 04) HORIZONTAL, 05) FUGITIVE

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR **	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (TONS/YR)	REFERENCE
PM		7.6	NA.	refer to calc sheets	.		AP42
PM 10		7.6	NA.		.		AP42
SO2		0.6	NA.		.		AP42
CO		84	NA.		.		AP42
NOX		100	NA.		.		AP42
VOC		5.5	NA.		.		AP42
LEAD		.E-	.E-	.E-	E-	.E-	
	- -	.E-	.E-	.E-	.E-	.E-	
	- -	.E-	.E-	.E-	.E-	.E-	
	- -	.E-	.E-	.E-	.E-	.E-	
	- -	.E-	.E-	.E-	.E-	.E-	
	- -	.E-	.E-	.E-	.E-	.E-	

SECTION 2

FUEL BURNING EQUIPMENT

DEQ USE ONLY

DEQ PLANT ID CODE: - -

PRIMARY SCC: - - -

DEQ USE ONLY

DEQ PROCESS CODE:

SECONDARY SCC: - - -

DEQ STACK ID CODE:

DEQ SEGMENT CODE:

DEQ BUILDING ID CODE:

PART A — GENERAL INFORMATION

PROCESS CODE OR DESCRIPTION: SATIN OVEN

STACK DESCRIPTION: B-7

BUILDING DESCRIPTION: BLG #6

MANUFACTURER: WOODGRAIN

MODEL: 1-BURNER

DATE INSTALLED OR LAST MODIFIED: 1999

RATED CAPACITY (CHOOSE APPROPRIATE UNITS)

MILLION BTU/HOUR: . OR

THOUSAND LBS/HR STEAM: NA OR

KILOWATTS: NA . OR

HORSEPOWER: .

BURNER TYPE (1): 11

PERCENT USED FOR PROCESS: 100

PERCENT USED FOR SPACE HEAT: 0

(1) BURNER TYPES: 01) SPREADER STOKER; 02) CHAIN OR TRAVELING GRATE; 03) HAND FIRED; 04) CYCLONE FURNACE; 05) WET BOTTOM (PULVERIZED COAL); 06) DRY BOTTOM (PULVERIZED COAL); 07) UNDERFEED STOKER; 08) TANGENTIALLY FIRED; 09) HORIZONTALLY FIRED; 10) AXIALLY FIRED; 11) OTHER (SPECIFY TO THE RIGHT):

FUEL DATA

PARAMETER	PRIMARY FUEL	UNITS	SECONDARY FUEL	UNITS
FUEL CODE (2)	01		NA	
PERCENT SULFUR	MSDS		.	
PERCENT ASH	0		.	
PERCENT NITROGEN	0		.	
PERCENT CARBON	0		.	
PERCENT HYDROGEN	0		.	
PERCENT MOISTURE	NA		.	
HEAT CONTENT (BTU/UNIT)			.	
MAXIMUM HOURLY COMBUSTION RATE (UNITS/HR)	refer to	calc sheet	.	
NORMAL ANNUAL COMBUSTION RATE (UNITS/YR)			.	

(2) FUEL CODES: 01) NATURAL GAS; 02) #1 OR #2 FUEL OIL; 03) #4 FUEL OIL; 04) #5 OR #6 FUEL OIL; 05) USED OIL; 06) WOOD CHIPS; 07) WOOD BARK; 08) WOOD SHAVINGS; 09) SANDER DUST; 10) SUBBITUMINOUS COAL; 11) BITUMINOUS COAL; 12) ANTHRACITE COAL; 13) LIGNITE COAL; 14) PROPANE; 15) OTHER (SPECIFY):

PART B **SEC. 2** **OPERATING DATA**

PERCENT FUEL CONSUMPTION PER QUARTER DEC-FEB	MAR-MAY	JUN-AUG	SEP-NOV
25	25	25	25

OPERATING SCHEDULE HOURS / DAY	DAYS / WEEK	WEEKS / YEAR
16	6	52

POLLUTION CONTROL EQUIPMENT

PARAMETER	PRIMARY	SECONDARY
TYPE	NA	NA
TYPE CODE (APP A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (INCHES H_2O)	.	.
WET SCRUBBER FLOW (GPM)	.	.
BAGHOUSE AIR/CLOTH RATIO (FPM)	.	.

VENTILATION AND BUILDING / AREA DATA

ENCLOSED? (Y/N)	HOOD TYPE (APP B)	MINIMUM FLOW (ACFM)	% CAPTURE EFFICIENCY
N	NA	see fan schedule	0

BUILDING HEIGHT (FT)	BUILDING LENGTH (FT)	BUILDING WIDTH (FT)
24	310	100

STACK DATA

GROUND ELEVATION (FT)	UTM X COORDINATE (KM)	UTM Y COORDINATE (KM)	STACK TYPE *
2210	506.2	4873.0	NA

STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	STACK EXIT DIAMETER (FT)	STACK EXIT GAS FLOW RATE (ACFM)	STACK EXIT TEMPERATURE (°F)
see fan schedule	see fan schd	see fan schedule	NA

* 01) DOWNWARD, 02) VERTICAL (UNCOVERED), 03) VERTICAL (COVERED), 04) HORIZONTAL, 05) FUGITIVE

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR **	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (TONS/YR)	REFERENCE
PM		7.6	NA.		.		AP42
PM 10		7.6	NA.	refer	.		AP42
SO2		0.6	NA.	to	.		AP42
CO		84	NA.	calc	.		AP42
NOX		100	NA.	sheets	.		AP42
VOC		5.5	NA.		.		AP42
LEAD		.E-	.	.E-	E-	.E-	
	- -	.E-	.	.E-	.E-	.E-	
	- -	.E-	.	.E-	.E-	.E-	
	- -	.E-	.	.E-	.E-	.E-	
	- -	.E-	.	.E-	.E-	.E-	
	- -	.E-	.	.E-	.E-	.E-	

SECTION 3

PROCESS AND MANUFACTURING OPERATIONS

DEQ USE ONLY

DEQ PLANT ID CODE: - -

PRIMARY SCC: - - -

DEQ USE ONLY

DEQ PROCESS CODE:

SECONDARY SCC: - - -

DEQ STACK ID CODE:

DEQ SEGMENT CODE:

DEQ BUILDING ID CODE:

PART A — GENERAL INFORMATION

PROCESS CODE OR DESCRIPTION: Building# 1

STACK DESCRIPTION: see fan schedul

BUILDING DESCRIPTION: Prefinish/wrap

MANUFACTURER: NA

MODEL: NA

DATE INSTALLED OR LAST MODIFIED: 00 00/79

PROCESSING DATA

PROCESS STREAM	MATERIAL DESCRIPTION	MAXIMUM HOURLY RATE	ACTUAL HOURLY RATE	ACTUAL ANNUAL RATE	UNITS
INPUT	see calcs				
PRODUCT OUTPUT	see calcs				
WASTE OUTPUT	NA	.	.	.	
RECYCLE	NA	.	.	.	

POTENTIAL HAPS IN PROCESS STREAMS

HAP DESCRIPTION	HAP CAS NUMBER	FRACTION IN INPUT STREAM BY WEIGHT	FRACTION IN PRODUCT STREAM BY WEIGHT	FRACTION IN WASTE STREAM BY WEIGHT	FRACTION IN RECYCLE STREAM BY WEIGHT
refer to calcs	- -	. E -	. E -	. E -	. E -
	- -	. E -	. E -	. E -	. E -
	- -	. E -	. E -	. E -	. E -
	- -	. E -	. E -	. E -	. E -

PART B **SEC. 3** **OPERATING DATA**

PERCENT FUEL CONSUMPTION PER QUARTER DEC-FEB	MAR-MAY	JUN-AUG	SEP-NOV
25	25	25	25

OPERATING SCHEDULE HOURS / DAY	DAYS / WEEK	WEEKS / YEAR
16	6	52

POLLUTION CONTROL EQUIPMENT

PARAMETER	PRIMARY	SECONDARY
TYPE	NA	NA
TYPE CODE (APP A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (INCHES H_2O)	.	
WET SCRUBBER FLOW (GPM)	.	.
BAGHOUSE AIR/CLOTH RATIO (FPM)	.	.

VENTILATION AND BUILDING / AREA DATA

ENCLOSED? (Y/N)	HOOD TYPE (APP B)	MINIMUM FLOW (ACFM)	% CAPTURE EFFICIENCY
N	NA	fans	NA.

BUILDING HEIGHT (FT)	BUILDING LENGTH (FT)	BUILDING WIDTH (FT)
NA	NA	NA

STACK DATA

GROUND ELEVATION (FT)	UTM X COORDINATE (KM)	UTM Y COORDINATE (KM)	STACK TYPE *
2210	506.2	4873.0	vary

STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	STACK EXIT DIAMETER (FT)	STACK EXIT GAS FLOW RATE (ACFM)	STACK EXIT TEMPERATURE (°F)
vary	vary	vary	vary

* 01) DOWNWARD, 02) VERTICAL (UNCOVERED), 03) VERTICAL (COVERED), 04) HORIZONTAL, 05) FUGITIVE

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR **	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (TONS/YR)	REFERENCE
PM		NA.	NA.	NA.	NA.	NA.	NA
PM 10		NA.	NA.	NA.	NA.	NA.	NA
SO2		NA.	NA.	NA.	NA.	NA.	NA
CO		NA.	NA.	NA.	NA.	NA.	NA
NOX		NA.	NA.	NA.	NA.	NA.	NA
VOC		varies		see	calcs		NA
LEAD		.E-	.	.E-	.E-	.E-	
	- -	.E-	.	.E-	.E-	.E-	
	- -	.E-	.	.E-	.E-	.E-	
	- -	.E-	.	.E-	.E-	.E-	
	- -	.E-	.	.E-	.E-	.E-	
	- -	.E-	.	.E-	.E-	.E-	

** In LBS/UNITS. Use same hourly UNITS given in PROCESSING DATA.

SECTION 3

PROCESS AND MANUFACTURING OPERATIONS

DEQ USE ONLY

DEQ PLANT ID CODE: - -

PRIMARY SCC: - - -

DEQ USE ONLY

DEQ PROCESS CODE:

SECONDARY SCC: - - -

DEQ STACK ID CODE:

DEQ SEGMENT CODE:

DEQ BUILDING ID CODE:

PART A — GENERAL INFORMATION

PROCESS CODE OR DESCRIPTION: Building# 2

STACK DESCRIPTION: see fan schedul

BUILDING DESCRIPTION: prefinish bcoat

MANUFACTURER: NA

MODEL: NA

DATE INSTALLED OR LAST MODIFIED: 00 00/70

PROCESSING DATA

PROCESS STREAM	MATERIAL DESCRIPTION	MAXIMUM HOURLY RATE	ACTUAL HOURLY RATE	ACTUAL ANNUAL RATE	UNITS
INPUT	see calcs				
PRODUCT OUTPUT	see calcs				
WASTE OUTPUT	NA	.	.	.	
RECYCLE	NA	.	.	.	

POTENTIAL HAPS IN PROCESS STREAMS

HAP DESCRIPTION	HAP CAS NUMBER	FRACTION IN INPUT STREAM BY WEIGHT	FRACTION IN PRODUCT STREAM BY WEIGHT	FRACTION IN WASTE STREAM BY WEIGHT	FRACTION IN RECYCLE STREAM BY WEIGHT
refer to calcs	- -	. E -	. E -	. E -	. E -
	- -	. E -	. E -	. E -	. E -
	- -	. E -	. E -	. E -	. E -
	- -	. E -	. E -	. E -	. E -

PART B **SEC. 3** **OPERATING DATA**

PERCENT FUEL CONSUMPTION PER QUARTER			
DEC-FEB	MAR-MAY	JUN-AUG	SEP-NOV
25	25	25	25

OPERATING SCHEDULE		
HOURS / DAY	DAYS / WEEK	WEEKS / YEAR
16	6	52

POLLUTION CONTROL EQUIPMENT

PARAMETER	PRIMARY	SECONDARY
TYPE	NA	NA
TYPE CODE (APP A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (INCHES H_2O)	.	.
WET SCRUBBER FLOW (GPM)	.	.
BAGHOUSE AIR/CLOTH RATIO (FPM)	.	.

VENTILATION AND BUILDING / AREA DATA

ENCLOSED? (Y/N)	HOOD TYPE (APP B)	MINIMUM FLOW (ACFM)	% CAPTURE EFFICIENCY
N	NA	fans	NA.

BUILDING HEIGHT (FT)	BUILDING LENGTH (FT)	BUILDING WIDTH (FT)
NA	NA	NA

STACK DATA

GROUND ELEVATION (FT)	UTM X COORDINATE (KM)	UTM Y COORDINATE (KM)	STACK TYPE *
2210	506.2	4873.0	vary

STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	STACK EXIT DIAMETER (FT)	STACK EXIT GAS FLOW RATE (ACFM)	STACK EXIT TEMPERATURE (°F)
vary	vary	vary	vary

* 01) DOWNWARD, 02) VERTICAL (UNCOVERED), 03) VERTICAL (COVERED), 04) HORIZONTAL, 05) FUGITIVE

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR **	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (TONS/YR)	REFERENCE
PM		NA.	NA.	NA.	NA.	NA.	NA
PM 10		NA.	NA.	NA.	NA.	NA.	NA
SO2		NA.	NA.	NA.	NA.	NA.	NA
CO		NA.	NA.	NA.	NA.	NA.	NA
NOX		NA.	NA.	NA.	NA.	NA.	NA
VOC		see	calcs				
LEAD		. E-	.	. E-	. E-	. E-	
	- -	. E-	.	. E-	. E-	. E-	
	- -	. E-	.	. E-	. E-	. E-	
	- -	. E-	.	. E-	. E-	. E-	
	- -	. E-	.	. E-	. E-	. E-	
	- -	. E-	.	. E-	. E-	. E-	
	- -	. E-	.	. E-	. E-	. E-	

** In LBS/UNITS. Use same hourly UNITS given in PROCESSING DATA.

SECTION 3

PROCESS AND MANUFACTURING OPERATIONS

DEQ USE ONLY

DEQ PLANT ID CODE	DEQ PROCESS CODE	DEQ STACK ID CODE	DEQ BUILDING ID CODE
- -			
PRIMARY SCC	SECONDARY SCC	DEQ SEGMENT CODE	
- - -	- - -		

PART A — GENERAL INFORMATION

PROCESS CODE OR DESCRIPTION	STACK DESCRIPTION	BUILDING DESCRIPTION
Building # 3	see fan schedul	
MANUFACTURER	**MODEL**	**DATE INSTALLED OR LAST MODIFIED**
NA	NA	00 00/70

PROCESSING DATA

PROCESS STREAM	MATERIAL DESCRIPTION	MAXIMUM HOURLY RATE	ACTUAL HOURLY RATE	ACTUAL ANNUAL RATE	UNITS
INPUT	see calcs				
PRODUCT OUTPUT	see calcs				
WASTE OUTPUT	NA	.	.	.	
RECYCLE	NA	.	.	.	

POTENTIAL HAPS IN PROCESS STREAMS

HAP DESCRIPTION	HAP CAS NUMBER	FRACTION IN INPUT STREAM BY WEIGHT	FRACTION IN PRODUCT STREAM BY WEIGHT	FRACTION IN WASTE STREAM BY WEIGHT	FRACTION IN RECYCLE STREAM BY WEIGHT
refer to calcs	- -	. E -	. E -	. E -	. E -
	- -	. E -	. E -	. E -	. E -
	- -	. E -	. E -	. E -	. E -
	- -	. E -	. E -	. E -	. E -

PART B SEC. 3 OPERATING DATA

PERCENT FUEL CONSUMPTION PER QUARTER DEC-FEB	MAR-MAY	JUN-AUG	SEP-NOV
25	25	25	25

OPERATING SCHEDULE HOURS / DAY	DAYS / WEEK	WEEKS / YEAR
24	6	52

POLLUTION CONTROL EQUIPMENT

PARAMETER	PRIMARY	SECONDARY
TYPE	NA	NA
TYPE CODE (APP A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (INCHES H_2O)	.	.
WET SCRUBBER FLOW (GPM)	.	.
BAGHOUSE AIR/CLOTH RATIO (FPM)	.	.

VENTILATION AND BUILDING / AREA DATA

ENCLOSED? (Y/N)	HOOD TYPE (APP B)	MINIMUM FLOW (ACFM)	% CAPTURE EFFICIENCY
N	NA	fans	NA.

BUILDING HEIGHT (FT)	BUILDING LENGTH (FT)	BUILDING WIDTH (FT)
NA	NA	NA

STACK DATA

GROUND ELEVATION (FT)	UTM X COORDINATE (KM)	UTM Y COORDINATE (KM)	STACK TYPE *
2210	506.2	4873.0	vary

STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	STACK EXIT DIAMETER (FT)	STACK EXIT GAS FLOW RATE (ACFM)	STACK EXIT TEMPERATURE (°F)
vary	vary	vary	vary

* 01) DOWNWARD, 02) VERTICAL (UNCOVERED), 03) VERTICAL (COVERED), 04) HORIZONTAL, 05) FUGITIVE

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR **	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (TONS/YR)	REFERENCE
PM		NA.	NA.	NA.	NA.	NA.	NA
PM 10		NA.	NA.	NA.	NA.	NA.	NA
SO2		NA.	NA.	NA.	NA.	NA.	NA
CO		NA.	NA.	NA.	NA.	NA.	NA
NOX		NA.	NA.	NA.	NA.	NA.	NA
VOC		see	calcs				
LEAD		.E-	.	.E-	.E-	.E-	
	- -	.E-	.	.E-	.E-	.E-	
	- -	.E-	.	.E-	.E-	.E-	
	- -	.E-	.	.E-	.E-	.E-	
	- -	.E-	.	.E-	.E-	.E-	
	- -	.E-	.	.E-	.E-	.E-	
	- -	.E-	.	.E-	.E-	.E-	

** In LBS/UNITS. Use same hourly UNITS given in PROCESSING DATA.

SECTION 3

PROCESS AND MANUFACTURING OPERATIONS

DEQ USE ONLY

DEQ PLANT ID CODE: - -

PRIMARY SCC: - - -

DEQ USE ONLY

DEQ PROCESS CODE:

SECONDARY SCC: - - -

DEQ STACK ID CODE:

DEQ SEGMENT CODE:

DEQ BUILDING ID CODE:

PART A — GENERAL INFORMATION

PROCESS CODE OR DESCRIPTION: Building# 4

STACK DESCRIPTION: see fan schedul

BUILDING DESCRIPTION: millwork

MANUFACTURER: NA

MODEL: NA

DATE INSTALLED OR LAST MODIFIED: 00 00/77

PROCESSING DATA

PROCESS STREAM	MATERIAL DESCRIPTION	MAXIMUM HOURLY RATE	ACTUAL HOURLY RATE	ACTUAL ANNUAL RATE	UNITS
INPUT	see calcs				
PRODUCT OUTPUT	see calcs				
WASTE OUTPUT	NA				
RECYCLE	NA				

POTENTIAL HAPS IN PROCESS STREAMS

HAP DESCRIPTION	HAP CAS NUMBER	FRACTION IN INPUT STREAM BY WEIGHT	FRACTION IN PRODUCT STREAM BY WEIGHT	FRACTION IN WASTE STREAM BY WEIGHT	FRACTION IN RECYCLE STREAM BY WEIGHT
refer to calcs	- -	. E -	. E -	. E -	. E -
	- -	. E -	. E -	. E -	. E -
	- -	. E -	. E -	. E -	. E -
	- -	. E -	. E -	. E -	. E -

PART B **SEC. 3** **OPERATING DATA**

PERCENT FUEL CONSUMPTION PER QUARTER DEC-FEB	MAR-MAY	JUN-AUG	SEP-NOV
25	25	25	25

OPERATING SCHEDULE HOURS / DAY	DAYS / WEEK	WEEKS / YEAR
24	6	52

POLLUTION CONTROL EQUIPMENT

PARAMETER	PRIMARY	SECONDARY
TYPE	NA	NA
TYPE CODE (APP A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (INCHES H_2O)	.	.
WET SCRUBBER FLOW (GPM)	.	.
BAGHOUSE AIR/CLOTH RATIO (FPM)	.	.

VENTILATION AND BUILDING / AREA DATA

ENCLOSED? (Y/N)	HOOD TYPE (APP B)	MINIMUM FLOW (ACFM)	% CAPTURE EFFICIENCY
N	NA	fans	NA.

BUILDING HEIGHT (FT)	BUILDING LENGTH (FT)	BUILDING WIDTH (FT)
NA	NA	NA

STACK DATA

GROUND ELEVATION (FT)	UTM X COORDINATE (KM)	UTM Y COORDINATE (KM)	STACK TYPE *
2210	506.2	4873.0	vary

STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	STACK EXIT DIAMETER (FT)	STACK EXIT GAS FLOW RATE (ACFM)	STACK EXIT TEMPERATURE (°F)
vary	vary	vary	vary

* 01) DOWNWARD, 02) VERTICAL (UNCOVERED), 03) VERTICAL (COVERED), 04) HORIZONTAL, 05) FUGITIVE

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR **	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (TONS/YR)	REFERENCE
PM		NA.	NA.	NA.	NA.	NA.	NA
PM 10		NA.	NA.	NA.	NA.	NA.	NA
SO2		NA.	NA.	NA.	NA.	NA.	NA
CO		NA.	NA.	NA.	NA.	NA.	NA
NOX		NA.	NA.	NA.	NA.	NA.	NA
VOC		see	calcs				
LEAD		.E-	.	.E-	.E-	.E-	
	- -	.E-	.	.E-	.E-	.E-	
	- -	.E-	.	.E-	.E-	.E-	
	- -	.E-	.	.E-	.E-	.E-	
	- -	.E-	.	.E-	.E-	.E-	
	- -	.E-	.	.E-	.E-	.E-	

** In LBS/UNITS. Use same hourly UNITS given in PROCESSING DATA.

SECTION 3

PROCESS AND MANUFACTURING OPERATIONS

DEQ USE ONLY

DEQ PLANT ID CODE: - -

PRIMARY SCC: - - -

DEQ USE ONLY

DEQ PROCESS CODE:

SECONDARY SCC: - - -

DEQ STACK ID CODE:

DEQ SEGMENT CODE:

DEQ BUILDING ID CODE:

PART A — GENERAL INFORMATION

PROCESS CODE OR DESCRIPTION: Building# 5

STACK DESCRIPTION: see fan schedul

BUILDING DESCRIPTION: system 3, 4, 5

MANUFACTURER: NA

MODEL: NA

DATE INSTALLED OR LAST MODIFIED: 00 00 / 84

PROCESSING DATA

PROCESS STREAM	MATERIAL DESCRIPTION	MAXIMUM HOURLY RATE	ACTUAL HOURLY RATE	ACTUAL ANNUAL RATE	UNITS
INPUT	see calcs				
PRODUCT OUTPUT	see calcs				
WASTE OUTPUT	NA	.	.	.	
RECYCLE	NA	.	.	.	

POTENTIAL HAPS IN PROCESS STREAMS

HAP DESCRIPTION	HAP CAS NUMBER	FRACTION IN INPUT STREAM BY WEIGHT	FRACTION IN PRODUCT STREAM BY WEIGHT	FRACTION IN WASTE STREAM BY WEIGHT	FRACTION IN RECYCLE STREAM BY WEIGHT
refer to calcs	- -	. E -	. E -	. E -	. E -
	- -	. E -	. E -	. E -	. E -
	- -	. E -	. E -	. E -	. E -
	- -	. E -	. E -	. E -	. E -

PART B **SEC. 3** **OPERATING DATA**

PERCENT FUEL CONSUMPTION PER QUARTER			
DEC-FEB	MAR-MAY	JUN-AUG	SEP-NOV
25	25	25	25

OPERATING SCHEDULE		
HOURS / DAY	DAYS / WEEK	WEEKS / YEAR
24	6	52

POLLUTION CONTROL EQUIPMENT

PARAMETER	PRIMARY	SECONDARY
TYPE	NA	NA
TYPE CODE (APP A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (INCHES H_2O)	.	.
WET SCRUBBER FLOW (GPM)	.	.
BAGHOUSE AIR/CLOTH RATIO (FPM)	.	.

VENTILATION AND BUILDING / AREA DATA

ENCLOSED? (Y/N)	HOOD TYPE (APP B)	MINIMUM FLOW (ACFM)	% CAPTURE EFFICIENCY
N	NA	fans	NA.

BUILDING HEIGHT (FT)	BUILDING LENGTH (FT)	BUILDING WIDTH (FT)
NA	NA	NA

STACK DATA

GROUND ELEVATION (FT)	UTM X COORDINATE (KM)	UTM Y COORDINATE (KM)	STACK TYPE *
2210	506.2	4873.0	vary

STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	STACK EXIT DIAMETER (FT)	STACK EXIT GAS FLOW RATE (ACFM)	STACK EXIT TEMPERATURE (°F)
vary	vary	vary	vary

* 01) DOWNWARD, 02) VERTICAL (UNCOVERED), 03) VERTICAL (COVERED), 04) HORIZONTAL, 05) FUGITIVE

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR **	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (TONS/YR)	REFERENCE
PM		NA.	NA.	NA.	NA.	NA.	NA
PM 10		NA.	NA.	NA.	NA.	NA.	NA
SO2		NA.	NA.	NA.	NA.	NA.	NA
CO		NA.	NA.	NA.	NA.	NA.	NA
NOX		NA.	NA.	NA.	NA.	NA.	NA
VOC		see	calcs				
LEAD		.E-	.	.E-	.E-	.E-	
	- -	.E-	.	.E-	.E-	.E-	
	- -	.E-	.	.E-	.E-	.E-	
	- -	.E-	.	.E-	.E-	.E-	
	- -	.E-	.	.E-	.E-	.E-	
	- -	.E-	.	.E-	.E-	.E-	
	- -	.E-	.	.E-	.E-	.E-	

** In LBS/UNITS. Use same hourly UNITS given in PROCESSING DATA.

SECTION 3

PROCESS AND MANUFACTURING OPERATIONS

DEQ USE ONLY

DEQ PLANT ID CODE	DEQ PROCESS CODE	DEQ STACK ID CODE	DEQ BUILDING ID CODE
- -			
PRIMARY SCC	SECONDARY SCC	DEQ SEGMENT CODE	
- - -	- - -		

PART A — GENERAL INFORMATION

PROCESS CODE OR DESCRIPTION	STACK DESCRIPTION	BUILDING DESCRIPTION
Building# 6	see fan schedul	

MANUFACTURER	MODEL	DATE INSTALLED OR LAST MODIFIED
NA	NA	00 00 / 99

PROCESSING DATA

PROCESS STREAM	MATERIAL DESCRIPTION	MAXIMUM HOURLY RATE	ACTUAL HOURLY RATE	ACTUAL ANNUAL RATE	UNITS
INPUT	see calcs				
PRODUCT OUTPUT	see calcs				
WASTE OUTPUT	NA	.	.	.	
RECYCLE	NA	.	.	.	

POTENTIAL HAPS IN PROCESS STREAMS

HAP DESCRIPTION	HAP CAS NUMBER	FRACTION IN INPUT STREAM BY WEIGHT	FRACTION IN PRODUCT STREAM BY WEIGHT	FRACTION IN WASTE STREAM BY WEIGHT	FRACTION IN RECYCLE STREAM BY WEIGHT
refer to calcs	- -	. E -	. E -	. E -	. E -
	- -	. E -	. E -	. E -	. E -
	- -	. E -	. E -	. E -	. E -
	- -	. E -	. E -	. E -	. E -

PART B SEC. 3 OPERATING DATA

PERCENT FUEL CONSUMPTION PER QUARTER DEC-FEB	MAR-MAY	JUN-AUG	SEP-NOV
25	25	25	25

OPERATING SCHEDULE HOURS / DAY	DAYS / WEEK	WEEKS / YEAR
16	6	52

POLLUTION CONTROL EQUIPMENT

PARAMETER	PRIMARY	SECONDARY
TYPE	NA	NA
TYPE CODE (APP A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (INCHES H_2O)	.	.
WET SCRUBBER FLOW (GPM)	.	.
BAGHOUSE AIR/CLOTH RATIO (FPM)	.	.

VENTILATION AND BUILDING / AREA DATA

ENCLOSED? (Y/N)	HOOD TYPE (APP B)	MINIMUM FLOW (ACFM)	% CAPTURE EFFICIENCY
N	NA	fans	NA.

BUILDING HEIGHT (FT)	BUILDING LENGTH (FT)	BUILDING WIDTH (FT)
NA	NA	NA

STACK DATA

GROUND ELEVATION (FT)	UTM X COORDINATE (KM)	UTM Y COORDINATE (KM)	STACK TYPE *
2210	506.2	4873.0	vary

STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	STACK EXIT DIAMETER (FT)	STACK EXIT GAS FLOW RATE (ACFM)	STACK EXIT TEMPERATURE (°F)
vary	vary	vary	vary

* 01) DOWNWARD, 02) VERTICAL (UNCOVERED), 03) VERTICAL (COVERED), 04) HORIZONTAL, 05) FUGITIVE

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR **	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (TONS/YR)	REFERENCE
PM		NA.	NA.	NA.	NA.	NA.	NA
PM 10		NA.	NA.	NA.	NA.	NA.	NA
SO2		NA.	NA.	NA.	NA.	NA.	NA
CO		NA.	NA.	NA.	NA.	NA.	NA
NOX		NA.	NA.	NA.	NA.	NA.	NA
VOC		see	calcs				
LEAD		.E-	.	.E-	.E-	.E-	
	- -	.E-	.	.E-	.E-	.E-	
	- -	.E-	.	.E-	.E-	.E-	
	- -	.E-	.	.E-	.E-	.E-	
	- -	.E-	.	.E-	.E-	.E-	
	- -	.E-	.	.E-	.E-	.E-	

** In LBS/UNITS. Use same hourly UNITS given in PROCESSING DATA.

SECTION 3

PROCESS AND MANUFACTURING OPERATIONS

DEQ USE ONLY

DEQ PLANT ID CODE: - -

PRIMARY SCC: - - -

DEQ USE ONLY

DEQ PROCESS CODE:

SECONDARY SCC: - - -

DEQ STACK ID CODE:

DEQ SEGMENT CODE:

DEQ BUILDING ID CODE:

PART A — GENERAL INFORMATION

PROCESS CODE OR DESCRIPTION: Building# 9

STACK DESCRIPTION: see fan schedul

BUILDING DESCRIPTION:

MANUFACTURER: NA

MODEL: NA

DATE INSTALLED OR LAST MODIFIED: 00 00/92

PROCESSING DATA

PROCESS STREAM	MATERIAL DESCRIPTION	MAXIMUM HOURLY RATE	ACTUAL HOURLY RATE	ACTUAL ANNUAL RATE	UNITS
INPUT	see calcs				
PRODUCT OUTPUT	see calcs				
WASTE OUTPUT	NA	.	.	.	
RECYCLE	NA	.	.	.	

POTENTIAL HAPS IN PROCESS STREAMS

HAP DESCRIPTION	HAP CAS NUMBER	FRACTION IN INPUT STREAM BY WEIGHT	FRACTION IN PRODUCT STREAM BY WEIGHT	FRACTION IN WASTE STREAM BY WEIGHT	FRACTION IN RECYCLE STREAM BY WEIGHT
refer to calcs	- -	. E -	. E -	. E -	. E -
	- -	. E -	. E -	. E -	. E -
	- -	. E -	. E -	. E -	. E -
	- -	. E -	. E -	. E -	. E -

PART B **SEC. 3** **OPERATING DATA**

PERCENT FUEL CONSUMPTION PER QUARTER DEC-FEB	MAR-MAY	JUN-AUG	SEP-NOV
25	25	25	25

OPERATING SCHEDULE HOURS / DAY	DAYS / WEEK	WEEKS / YEAR
24	6	52

POLLUTION CONTROL EQUIPMENT

PARAMETER	PRIMARY	SECONDARY
TYPE	NA	NA
TYPE CODE (APP A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (INCHES H_2O)	.	.
WET SCRUBBER FLOW (GPM)	.	.
BAGHOUSE AIR/CLOTH RATIO (FPM)	.	.

VENTILATION AND BUILDING / AREA DATA

ENCLOSED? (Y/N)	HOOD TYPE (APP B)	MINIMUM FLOW (ACFM)	% CAPTURE EFFICIENCY
N	NA	fans	NA.

BUILDING HEIGHT (FT)	BUILDING LENGTH (FT)	BUILDING WIDTH (FT)
NA	NA	NA

STACK DATA

GROUND ELEVATION (FT)	UTM X COORDINATE (KM)	UTM Y COORDINATE (KM)	STACK TYPE *
2210	506.2	4873.0	vary

STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	STACK EXIT DIAMETER (FT)	STACK EXIT GAS FLOW RATE (ACFM)	STACK EXIT TEMPERATURE (°F)
vary	vary	vary	vary

* 01) DOWNWARD, 02) VERTICAL (UNCOVERED), 03) VERTICAL (COVERED), 04) HORIZONTAL, 05) FUGITIVE

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR **	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (TONS/YR)	REFERENCE
PM		NA.	NA.	NA.	NA.	NA.	NA
PM 10		NA.	NA.	NA.	NA.	NA.	NA
SO2		NA.	NA.	NA.	NA.	NA.	NA
CO		NA.	NA.	NA.	NA.	NA.	NA
NOX		NA.	NA.	NA.	NA.	NA.	NA
VOC		see	calcs				
LEAD		.E-	.	.E-	.E-	.E-	
	- -	.E-	.	.E-	.E-	.E-	
	- -	.E-	.	.E-	.E-	.E-	
	- -	.E-	.	.E-	.E-	.E-	
	- -	.E-	.	.E-	.E-	.E-	
	- -	.E-	.	.E-	.E-	.E-	

** In LBS/UNITS. Use same hourly UNITS given in PROCESSING DATA.

SECTION 3

PROCESS AND MANUFACTURING OPERATIONS

DEQ USE ONLY

DEQ PLANT ID CODE	DEQ PROCESS CODE	DEQ STACK ID CODE	DEQ BUILDING ID CODE
- -			
PRIMARY SCC	**SECONDARY SCC**	**DEQ SEGMENT CODE**	
- - -	- - -		

PART A — GENERAL INFORMATION

PROCESS CODE OR DESCRIPTION	STACK DESCRIPTION	BUILDING DESCRIPTION
P-6	CYCLONE B	NA
MANUFACTURER	**MODEL**	**DATE INSTALLED OR LAST MODIFIED**
NA	NA	00 00 70

PROCESSING DATA

PROCESS STREAM	MATERIAL DESCRIPTION	MAXIMUM HOURLY RATE	ACTUAL HOURLY RATE	ACTUAL ANNUAL RATE	UNITS
INPUT	shv&sawdst	see calcs			
PRODUCT OUTPUT					
WASTE OUTPUT		.	.	.	
RECYCLE	NA	.	.	.	

POTENTIAL HAPS IN PROCESS STREAMS

HAP DESCRIPTION	HAP CAS NUMBER	FRACTION IN INPUT STREAM BY WEIGHT	FRACTION IN PRODUCT STREAM BY WEIGHT	FRACTION IN WASTE STREAM BY WEIGHT	FRACTION IN RECYCLE STREAM BY WEIGHT
NA	NA	. E -	. E -	. E -	. E -
	- -	. E -	. E -	. E -	. E -
	- -	. E -	. E -	. E -	. E -
	- -	. E -	. E -	. E -	. E -

PART B **SEC. 3** **OPERATING DATA**

PERCENT FUEL CONSUMPTION PER QUARTER			
DEC-FEB	MAR-MAY	JUN-AUG	SEP-NOV
25	25	25	25

OPERATING SCHEDULE		
HOURS / DAY	DAYS / WEEK	WEEKS / YEAR
24	6	52

POLLUTION CONTROL EQUIPMENT

PARAMETER	PRIMARY	SECONDARY
TYPE	NA	NA
TYPE CODE (APP A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (INCHES H_2O)	.	.
WET SCRUBBER FLOW (GPM)	.	.
BAGHOUSE AIR/CLOTH RATIO (FPM)	.	.

VENTILATION AND BUILDING / AREA DATA

ENCLOSED? (Y/N)	HOOD TYPE (APP B)	MINIMUM FLOW (ACFM)	% CAPTURE EFFICIENCY
N	NA	Unkwn	NA.

BUILDING HEIGHT (FT)	BUILDING LENGTH (FT)	BUILDING WIDTH (FT)
NA	NA	NA

STACK DATA

GROUND ELEVATION (FT)	UTM X COORDINATE (KM)	UTM Y COORDINATE (KM)	STACK TYPE *
2210	506.2	4873.0	02

STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	STACK EXIT DIAMETER (FT)	STACK EXIT GAS FLOW RATE (ACFM)	STACK EXIT TEMPERATURE (°F)
29	NA	unknown	ambt

* 01) DOWNWARD, 02) VERTICAL (UNCOVERED), 03) VERTICAL (COVERED), 04) HORIZONTAL, 05) FUGITIVE

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR **	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (TONS/YR)	REFERENCE
PM		.5	NA.	see	calcs		IDEQ
PM 10		.25	NA.	see	calcs		IDEQ
SO2		NA.	NA.	NA.	NA.	NA.	NA
CO		NA.	NA.	NA.	NA.	NA.	NA
NOX		NA.	NA.	NA.	NA.	NA.	NA
VOC		NA.	NA.	NA.	NA.	NA.	NA
LEAD		.E-	.	.E-	.E-	.E-	
	-	.E-	.	.E-	.E-	.E-	
	-	.E-	.	.E-	.E-	.E-	
	-	.E-	.	.E-	.E-	.E-	
	-	.E-	.	.E-	.E-	.E-	

SECTION 3

PROCESS AND MANUFACTURING OPERATIONS

DEQ USE ONLY

DEQ PLANT ID CODE: - -

PRIMARY SCC: - - -

DEQ USE ONLY

DEQ PROCESS CODE:

SECONDARY SCC: - - -

DEQ STACK ID CODE:

DEQ SEGMENT CODE:

DEQ BUILDING ID CODE:

PART A — GENERAL INFORMATION

PROCESS CODE OR DESCRIPTION: P-07

STACK DESCRIPTION: CYCLONE F

BUILDING DESCRIPTION: NA

MANUFACTURER:

MODEL: NA

DATE INSTALLED OR LAST MODIFIED: 00 00/70

PROCESSING DATA

PROCESS STREAM	MATERIAL DESCRIPTION	MAXIMUM HOURLY RATE	ACTUAL HOURLY RATE	ACTUAL ANNUAL RATE	UNITS
INPUT	shv&sawdst				
PRODUCT OUTPUT					
WASTE OUTPUT		.	.	.	
RECYCLE	NA	.	.	.	

POTENTIAL HAPS IN PROCESS STREAMS

HAP DESCRIPTION	HAP CAS NUMBER	FRACTION IN INPUT STREAM BY WEIGHT	FRACTION IN PRODUCT STREAM BY WEIGHT	FRACTION IN WASTE STREAM BY WEIGHT	FRACTION IN RECYCLE STREAM BY WEIGHT
NA	NA	. E -	. E -	. E -	. E -
	- -	. E -	. E -	. E -	. E -
	- -	. E -	. E -	. E -	. E -
	- -	. E -	. E -	. E -	. E -

PART B **SEC. 3** **OPERATING DATA**

PERCENT FUEL CONSUMPTION PER QUARTER				OPERATING SCHEDULE		
DEC-FEB	MAR-MAY	JUN-AUG	SEP-NOV	HOURS / DAY	DAYS / WEEK	WEEKS / YEAR
25	25	25	25	24	6	52

POLLUTION CONTROL EQUIPMENT

PARAMETER	PRIMARY	SECONDARY
TYPE	NA	NA
TYPE CODE (APP A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (INCHES H_2O)	.	.
WET SCRUBBER FLOW (GPM)	.	.
BAGHOUSE AIR/CLOTH RATIO (FPM)	.	.

VENTILATION AND BUILDING / AREA DATA

ENCLOSED? (Y/N)	HOOD TYPE (APP B)	MINIMUM FLOW (ACFM)	% CAPTURE EFFICIENCY
N	NA	Unkwn	NA.

BUILDING HEIGHT (FT)	BUILDING LENGTH (FT)	BUILDING WIDTH (FT)
NA	NA	NA

STACK DATA

GROUND ELEVATION (FT)	UTM X COORDINATE (KM)	UTM Y COORDINATE (KM)	STACK TYPE *
2210	506.2	4873.0	02

STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	STACK EXIT DIAMETER (FT)	STACK EXIT GAS FLOW RATE (ACFM)	STACK EXIT TEMPERATURE (°F)
74		unknown	ambt

* 01) DOWNWARD, 02) VERTICAL (UNCOVERED), 03) VERTICAL (COVERED), 04) HORIZONTAL, 05) FUGITIVE

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR **	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (TONS/YR)	REFERENCE
PM		.2	NA.	see	calcs		IDEQ
PM 10		.15	NA.	see	calc		IDEQ
SO2		NA.	NA.	NA.	NA.	NA.	NA
CO		NA.	NA.	NA.	NA.	NA.	NA
NOX		NA.	NA.	NA.	NA.	NA.	NA
VOC		NA.	NA.	NA.	NA.	NA.	NA
LEAD		E-	.	. E-	. E-	. E-	
	-	E-	.	. E-	. E-	. E-	
	-	E-	.	. E-	. E-	. E-	
	-	E-	.	. E-	. E-	. E-	
	-	E-	.	. E-	. E-	. E-	
	-	E-	.	. E-	. E-	. E-	
	-	E-	.	. E-	. E-	. E-	

** In LBS/UNITS. Use same hourly UNITS given in PROCESSING DATA.

SECTION 3

PROCESS AND MANUFACTURING OPERATIONS

DEQ USE ONLY

DEQ PLANT ID CODE	DEQ PROCESS CODE	DEQ STACK ID CODE	DEQ BUILDING ID CODE
- -			
PRIMARY SCC	**SECONDARY SCC**	**DEQ SEGMENT CODE**	
- - -	- - -		

PART A — GENERAL INFORMATION

PROCESS CODE OR DESCRIPTION	STACK DESCRIPTION	BUILDING DESCRIPTION
P-08	CYCLONE C	NA
MANUFACTURER	**MODEL**	**DATE INSTALLED OR LAST MODIFIED**
	NA	00 00/70

PROCESSING DATA

PROCESS STREAM	MATERIAL DESCRIPTION	MAXIMUM HOURLY RATE	ACTUAL HOURLY RATE	ACTUAL ANNUAL RATE	UNITS
INPUT	shvg&sawds	see calcs			
PRODUCT OUTPUT		see calcs			
WASTE OUTPUT		.	.	.	
RECYCLE	NA	.	.	.	

POTENTIAL HAPS IN PROCESS STREAMS

HAP DESCRIPTION	HAP CAS NUMBER	FRACTION IN INPUT STREAM BY WEIGHT	FRACTION IN PRODUCT STREAM BY WEIGHT	FRACTION IN WASTE STREAM BY WEIGHT	FRACTION IN RECYCLE STREAM BY WEIGHT
NA	NA	. E-	. E-	. E-	. E-
	- -	. E-	. E-	. E-	. E-
	- -	. E-	. E-	. E-	. E-
	- -	. E-	. E-	. E-	. E-

PART B **SEC. 3** **OPERATING DATA**

PERCENT FUEL CONSUMPTION PER QUARTER			
DEC-FEB	MAR-MAY	JUN-AUG	SEP-NOV
25	25	25	25

OPERATING SCHEDULE		
HOURS / DAY	DAYS / WEEK	WEEKS / YEAR
24	6	52

POLLUTION CONTROL EQUIPMENT

PARAMETER	PRIMARY	SECONDARY
TYPE	NA	NA
TYPE CODE (APP A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (INCHES H_2O)	.	.
WET SCRUBBER FLOW (GPM)	.	.
BAGHOUSE AIR/CLOTH RATIO (FPM)	.	.

VENTILATION AND BUILDING / AREA DATA

ENCLOSED? (Y/N)	HOOD TYPE (APP B)	MINIMUM FLOW (ACFM)	% CAPTURE EFFICIENCY
N	NA	Unkwn	NA.

BUILDING HEIGHT (FT)	BUILDING LENGTH (FT)	BUILDING WIDTH (FT)
NA	NA	NA

STACK DATA

GROUND ELEVATION (FT)	UTM X COORDINATE (KM)	UTM Y COORDINATE (KM)	STACK TYPE *
2210	506.2	4873.0	02

STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	STACK EXIT DIAMETER (FT)	STACK EXIT GAS FLOW RATE (ACFM)	STACK EXIT TEMPERATURE (°F)
26		unknown	ambt

* 01) DOWNWARD, 02) VERTICAL (UNCOVERED), 03) VERTICAL (COVERED), 04) HORIZONTAL, 05) FUGITIVE

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR **	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (TONS/YR)	REFERENCE
PM		.5	NA.	see	calcs		IDEQ
PM 10		.25	NA.	see	calcs		IDEQ
SO2		NA.	NA.	NA.	NA.	NA.	NA
CO		NA.	NA.	NA.	NA.	NA.	NA
NOX		NA.	NA.	NA.	NA.	NA.	NA
VOC		NA.	NA.	NA.	NA.	NA.	NA
LEAD		.E-	.	.E-	.E-	.E-	
	- -	.E-	.	.E-	.E-	.E-	
	- -	.E-	.	.E-	.E-	.E-	
	- -	.E-	.	.E-	.E-	.E-	
	- -	.E-	.	.E-	.E-	.E-	
	- -	.E-	.	.E-	.E-	.E-	
	- -	.E-	.	.E-	.E-	.E-	

** In LBS/UNITS. Use same hourly UNITS given in PROCESSING DATA.

SECTION 3 — PROCESS AND MANUFACTURING OPERATIONS

DEQ USE ONLY

DEQ PLANT ID CODE: - -

PRIMARY SCC: - - -

DEQ USE ONLY

DEQ PROCESS CODE:

SECONDARY SCC: - - -

DEQ STACK ID CODE:

DEQ SEGMENT CODE:

DEQ BUILDING ID CODE:

PART A — GENERAL INFORMATION

PROCESS CODE OR DESCRIPTION: P-10

STACK DESCRIPTION: CYCLONE I

BUILDING DESCRIPTION: NA

MANUFACTURER:

MODEL: NA

DATE INSTALLED OR LAST MODIFIED: 00 00/79

PROCESSING DATA

PROCESS STREAM	MATERIAL DESCRIPTION	MAXIMUM HOURLY RATE	ACTUAL HOURLY RATE	ACTUAL ANNUAL RATE	UNITS
INPUT	shv&sawdst				
PRODUCT OUTPUT	shv&sawdst				
WASTE OUTPUT					
RECYCLE	NA				

POTENTIAL HAPS IN PROCESS STREAMS

HAP DESCRIPTION	HAP CAS NUMBER	FRACTION IN INPUT STREAM BY WEIGHT	FRACTION IN PRODUCT STREAM BY WEIGHT	FRACTION IN WASTE STREAM BY WEIGHT	FRACTION IN RECYCLE STREAM BY WEIGHT
NA	NA				

PART B SEC. 3 OPERATING DATA

PERCENT FUEL CONSUMPTION PER QUARTER DEC-FEB	MAR-MAY	JUN-AUG	SEP-NOV
25	25	25	25

OPERATING SCHEDULE HOURS / DAY	DAYS / WEEK	WEEKS / YEAR
24	6	52

POLLUTION CONTROL EQUIPMENT

PARAMETER	PRIMARY	SECONDARY
TYPE	NA	NA
TYPE CODE (APP A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (INCHES H_2O)	.	.
WET SCRUBBER FLOW (GPM)	.	.
BAGHOUSE AIR/CLOTH RATIO (FPM)	.	.

VENTILATION AND BUILDING / AREA DATA

ENCLOSED? (Y/N)	HOOD TYPE (APP B)	MINIMUM FLOW (ACFM)	% CAPTURE EFFICIENCY
N	NA	Unkwn	NA.

BUILDING HEIGHT (FT)	BUILDING LENGTH (FT)	BUILDING WIDTH (FT)
NA	NA	NA

STACK DATA

GROUND ELEVATION (FT)	UTM X COORDINATE (KM)	UTM Y COORDINATE (KM)	STACK TYPE *
2210	506.2	4873.0	02

STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	STACK EXIT DIAMETER (FT)	STACK EXIT GAS FLOW RATE (ACFM)	STACK EXIT TEMPERATURE (°F)
30		unknown	ambt

* 01) DOWNWARD, 02) VERTICAL (UNCOVERED), 03) VERTICAL (COVERED), 04) HORIZONTAL, 05) FUGITIVE

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR **	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (TONS/YR)	REFERENCE
PM		.5	see	calcs	.		IDEQ
PM 10		.25	see	calcs			IDEQ
SO2		NA.	NA.	NA.	NA.	NA.	NA
CO		NA.	NA.	NA.	NA.	NA.	NA
NOX		NA.	NA.	NA.	NA.	NA.	NA
VOC		NA.	NA.	NA.	NA.	NA.	NA
LEAD		.E-	.	.E-	.E-	.E-	
	- -	.E-	.	.E-	.E-	.E-	
	- -	.E-	.	.E-	.E-	.E-	
	- -	.E-	.	.E-	.E-	.E-	
	- -	.E-	.	.E-	.E-	.E-	
	- -	.E-	.	.E-	.E-	.E-	

** In LBS/UNITS. Use same hourly UNITS given in PROCESSING DATA.

SECTION 3

PROCESS AND MANUFACTURING OPERATIONS

DEQ USE ONLY

DEQ PLANT ID CODE	DEQ PROCESS CODE	DEQ STACK ID CODE	DEQ BUILDING ID CODE
- -			
PRIMARY SCC	SECONDARY SCC	DEQ SEGMENT CODE	
- - -	- - -		

PART A — GENERAL INFORMATION

PROCESS CODE OR DESCRIPTION	STACK DESCRIPTION	BUILDING DESCRIPTION
P-11	CYCLONE G	NA
MANUFACTURER	MODEL	DATE INSTALLED OR LAST MODIFIED
	NA	00 00/77

PROCESSING DATA

PROCESS STREAM	MATERIAL DESCRIPTION	MAXIMUM HOURLY RATE	ACTUAL HOURLY RATE	ACTUAL ANNUAL RATE	UNITS
INPUT	shv&sawdst				
PRODUCT OUTPUT	shv&sawdst				
WASTE OUTPUT		.	.	.	
RECYCLE	NA	.	.	.	

POTENTIAL HAPS IN PROCESS STREAMS

HAP DESCRIPTION	HAP CAS NUMBER	FRACTION IN INPUT STREAM BY WEIGHT	FRACTION IN PRODUCT STREAM BY WEIGHT	FRACTION IN WASTE STREAM BY WEIGHT	FRACTION IN RECYCLE STREAM BY WEIGHT
NA	NA - -	. E -	. E -	. E -	. E -
	- -	. E -	. E -	. E -	. E -
	- -	. E -	. E -	. E -	. E -
	- -	. E -	. E -	. E -	. E -

PART B **SEC. 3** **OPERATING DATA**

PERCENT FUEL CONSUMPTION PER QUARTER DEC-FEB	MAR-MAY	JUN-AUG	SEP-NOV
25	25	25	25

OPERATING SCHEDULE HOURS / DAY	DAYS / WEEK	WEEKS / YEAR
24	6	52

POLLUTION CONTROL EQUIPMENT

PARAMETER	PRIMARY	SECONDARY
TYPE	NA	NA
TYPE CODE (APP A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (INCHES H_2O)	.	.
WET SCRUBBER FLOW (GPM)	.	.
BAGHOUSE AIR/CLOTH RATIO (FPM)	.	.

VENTILATION AND BUILDING / AREA DATA

ENCLOSED? (Y/N)	HOOD TYPE (APP B)	MINIMUM FLOW (ACFM)	% CAPTURE EFFICIENCY
N	NA	Unkwn	NA.

BUILDING HEIGHT (FT)	BUILDING LENGTH (FT)	BUILDING WIDTH (FT)
NA	NA	NA

STACK DATA

GROUND ELEVATION (FT)	UTM X COORDINATE (KM)	UTM Y COORDINATE (KM)	STACK TYPE *
2210	506.2	4873.0	

STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	STACK EXIT DIAMETER (FT)	STACK EXIT GAS FLOW RATE (ACFM)	STACK EXIT TEMPERATURE (°F)
29.5		unknown	ambt

* 01) DOWNWARD, 02) VERTICAL (UNCOVERED), 03) VERTICAL (COVERED), 04) HORIZONTAL, 05) FUGITIVE

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR **	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (TONS/YR)	REFERENCE
PM		.5	NA.	see	calcs		IDEQ
PM 10		.25	NA.	see	calcs		IDEQ
SO2		NA.	NA.	NA.	NA.	NA.	NA
CO		NA.	NA.	NA.	NA.	NA.	NA
NOX		NA.	NA.	NA.	NA.	NA.	NA
VOC		NA.	NA.	NA.	NA.	NA.	NA
LEAD		.E-	.	.E-	.E-	.E-	
	-	.E-	.	.E-	.E-	.E-	
	-	.E-	.	.E-	.E-	.E-	
	-	.E-	.	.E-	.E-	.E-	
	-	.E-	.	.E-	.E-	.E-	

SECTION 3

PROCESS AND MANUFACTURING OPERATIONS

DEQ USE ONLY

DEQ PLANT ID CODE	DEQ PROCESS CODE	DEQ STACK ID CODE	DEQ BUILDING ID CODE
- - -			
PRIMARY SCC	**SECONDARY SCC**	**DEQ SEGMENT CODE**	
- - -	- - -		

PART A — GENERAL INFORMATION

PROCESS CODE OR DESCRIPTION	STACK DESCRIPTION	BUILDING DESCRIPTION
P-12	CYCLONE E	NA
MANUFACTURER	**MODEL**	**DATE INSTALLED OR LAST MODIFIED**
WOODGRAIN	NA	00 00 / 77

PROCESSING DATA

PROCESS STREAM	MATERIAL DESCRIPTION	MAXIMUM HOURLY RATE	ACTUAL HOURLY RATE	ACTUAL ANNUAL RATE	UNITS
INPUT	shg&sawdst	see calcs			
PRODUCT OUTPUT	shg&sawdst	see calcs			
WASTE OUTPUT		.	.	.	
RECYCLE	NA	.			

POTENTIAL HAPS IN PROCESS STREAMS

HAP DESCRIPTION	HAP CAS NUMBER	FRACTION IN INPUT STREAM BY WEIGHT	FRACTION IN PRODUCT STREAM BY WEIGHT	FRACTION IN WASTE STREAM BY WEIGHT	FRACTION IN RECYCLE STREAM BY WEIGHT
NA	NA - -	. E -	. E -	. E -	. E -
	- -	. E -	. E -	. E -	. E -
	- -	. E -	. E -	. E -	. E -
	- -	. E -	. E -	. E -	. E -

PART B **SEC. 3** **OPERATING DATA**

PERCENT FUEL CONSUMPTION PER QUARTER DEC-FEB	MAR-MAY	JUN-AUG	SEP-NOV
25	25	25	25

OPERATING SCHEDULE HOURS / DAY	DAYS / WEEK	WEEKS / YEAR
24	6	52

POLLUTION CONTROL EQUIPMENT

PARAMETER	PRIMARY	SECONDARY
TYPE	NA	NA
TYPE CODE (APP A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (INCHES H_2O)	.	.
WET SCRUBBER FLOW (GPM)	.	.
BAGHOUSE AIR/CLOTH RATIO (FPM)	.	.

VENTILATION AND BUILDING / AREA DATA

ENCLOSED? (Y/N)	HOOD TYPE (APP B)	MINIMUM FLOW (ACFM)	% CAPTURE EFFICIENCY
N	NA	Unkwn	NA.

BUILDING HEIGHT (FT)	BUILDING LENGTH (FT)	BUILDING WIDTH (FT)
NA	NA	NA

STACK DATA

GROUND ELEVATION (FT)	UTM X COORDINATE (KM)	UTM Y COORDINATE (KM)	STACK TYPE *
2210	506.2	4873.0	02

STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	STACK EXIT DIAMETER (FT)	STACK EXIT GAS FLOW RATE (ACFM)	STACK EXIT TEMPERATURE (°F)
79		unknown	ambt

* 01) DOWNWARD, 02) VERTICAL (UNCOVERED), 03) VERTICAL (COVERED), 04) HORIZONTAL, 05) FUGITIVE

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR **	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (TONS/YR)	REFERENCE
PM		.5	see	calcs	.		IDEQ
PM 10		.25	see	calcs			IDEQ
SO2		NA.	NA.	NA.	NA.	NA.	NA
CO		NA.	NA.	NA.	NA.	NA.	NA
NOX		NA.	NA.	NA.	NA.	NA.	NA
VOC		NA.	NA.	NA.	NA.	NA.	NA
LEAD		E-	.	E-	E-	E-	
	- -	E-	.	E-	E-	E-	
	- -	E-	.	E-	E-	E-	
	- -	E-	.	E-	E-	E-	
	- -	E-	.	E-	E-	E-	
	- -	E-	.	E-	E-	E-	

** In LBS/UNITS. Use same hourly UNITS given in PROCESSING DATA.

SECTION 3

PROCESS AND MANUFACTURING OPERATIONS

DEQ USE ONLY

DEQ PLANT ID CODE	DEQ PROCESS CODE	DEQ STACK ID CODE	DEQ BUILDING ID CODE
- -			
PRIMARY SCC	**SECONDARY SCC**	**DEQ SEGMENT CODE**	
- - -	- - -		

PART A — GENERAL INFORMATION

PROCESS CODE OR DESCRIPTION	STACK DESCRIPTION	BUILDING DESCRIPTION
P-17	CYCLONE J	NA
MANUFACTURER	**MODEL**	**DATE INSTALLED OR LAST MODIFIED**
WOODGRAIN	NA	00 00/84

PROCESSING DATA

PROCESS STREAM	MATERIAL DESCRIPTION	MAXIMUM HOURLY RATE	ACTUAL HOURLY RATE	ACTUAL ANNUAL RATE	UNITS
INPUT	shvg&sawds	see calc			
PRODUCT OUTPUT	shvg&sawds	see calc			
WASTE OUTPUT					
RECYCLE	NA				

POTENTIAL HAPS IN PROCESS STREAMS

HAP DESCRIPTION	HAP CAS NUMBER	FRACTION IN INPUT STREAM BY WEIGHT	FRACTION IN PRODUCT STREAM BY WEIGHT	FRACTION IN WASTE STREAM BY WEIGHT	FRACTION IN RECYCLE STREAM BY WEIGHT
NA	NA				

PART B SEC. 3 OPERATING DATA

PERCENT FUEL CONSUMPTION PER QUARTER			
DEC-FEB	MAR-MAY	JUN-AUG	SEP-NOV
25	25	25	25

OPERATING SCHEDULE		
HOURS / DAY	DAYS / WEEK	WEEKS / YEAR
24	6	52

POLLUTION CONTROL EQUIPMENT

PARAMETER	PRIMARY	SECONDARY
TYPE	NA	NA
TYPE CODE (APP A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (INCHES H_2O)	.	.
WET SCRUBBER FLOW (GPM)	.	.
BAGHOUSE AIR/CLOTH RATIO (FPM)	.	.

VENTILATION AND BUILDING / AREA DATA

ENCLOSED? (Y/N)	HOOD TYPE (APP B)	MINIMUM FLOW (ACFM)	% CAPTURE EFFICIENCY
N	NA	Unkwn	NA.

BUILDING HEIGHT (FT)	BUILDING LENGTH (FT)	BUILDING WIDTH (FT)
NA	NA	NA

STACK DATA

GROUND ELEVATION (FT)	UTM X COORDINATE (KM)	UTM Y COORDINATE (KM)	STACK TYPE *
2210	506.2	4873.0	02

STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	STACK EXIT DIAMETER (FT)	STACK EXIT GAS FLOW RATE (ACFM)	STACK EXIT TEMPERATURE (°F)
36		unknown	ambt

* 01) DOWNWARD, 02) VERTICAL (UNCOVERED), 03) VERTICAL (COVERED), 04) HORIZONTAL, 05) FUGITIVE

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR **	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (TONS/YR)	REFERENCE
PM		.5	NA.	see	calcs		IDEQ
PM 10		.25	NA.	see	calcs		IDEQ
SO2		NA.	NA.	NA.	NA.	NA.	NA
CO		NA.	NA.	NA.	NA.	NA.	NA
NOX		NA.	NA.	NA.	NA.	NA.	NA
VOC		NA.	NA.	NA.	NA.	NA.	NA
LEAD		.E-	.	.E-	.E-	.E-	
	-	.E-	.	.E-	.E-	.E-	
	-	.E-	.	.E-	.E-	.E-	
	-	.E-	.	.E-	.E-	.E-	
	-	.E-	.	.E-	.E-	.E-	
	-	.E-	.	.E-	.E-	.E-	

** In LBS/UNITS. Use same hourly UNITS given in PROCESSING DATA.

SECTION 3

PROCESS AND MANUFACTURING OPERATIONS

DEQ USE ONLY

DEQ PLANT ID CODE	PRIMARY SCC
- -	- - -

DEQ USE ONLY

DEQ PROCESS CODE	SECONDARY SCC	DEQ STACK ID CODE	DEQ SEGMENT CODE	DEQ BUILDING ID CODE
	- - -			

PART A — GENERAL INFORMATION

PROCESS CODE OR DESCRIPTION	STACK DESCRIPTION	BUILDING DESCRIPTION
P-18	CYCLONE K	NA

MANUFACTURER	MODEL	DATE INSTALLED OR LAST MODIFIED
WOODGRAIN	NA	00 00 / 84

PROCESSING DATA

PROCESS STREAM	MATERIAL DESCRIPTION	MAXIMUM HOURLY RATE	ACTUAL HOURLY RATE	ACTUAL ANNUAL RATE	UNITS
INPUT	shvg&sawds	see calcs			
PRODUCT OUTPUT	shvg&sawds	see calcs			
WASTE OUTPUT					
RECYCLE	NA				

POTENTIAL HAPS IN PROCESS STREAMS

HAP DESCRIPTION	HAP CAS NUMBER	FRACTION IN INPUT STREAM BY WEIGHT	FRACTION IN PRODUCT STREAM BY WEIGHT	FRACTION IN WASTE STREAM BY WEIGHT	FRACTION IN RECYCLE STREAM BY WEIGHT
NA	NA				

PART B SEC. 3 OPERATING DATA

PERCENT FUEL CONSUMPTION PER QUARTER			
DEC-FEB	MAR-MAY	JUN-AUG	SEP-NOV
25	25	25	25

OPERATING SCHEDULE		
HOURS / DAY	DAYS / WEEK	WEEKS / YEAR
24	6	52

POLLUTION CONTROL EQUIPMENT

PARAMETER	PRIMARY	SECONDARY
TYPE	NA	NA
TYPE CODE (APP A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (INCHES H_2O)	.	.
WET SCRUBBER FLOW (GPM)	.	.
BAGHOUSE AIR/CLOTH RATIO (FPM)	.	.

VENTILATION AND BUILDING / AREA DATA

ENCLOSED? (Y/N)	HOOD TYPE (APP B)	MINIMUM FLOW (ACFM)	% CAPTURE EFFICIENCY
N	NA	Unkwn	NA.

BUILDING HEIGHT (FT)	BUILDING LENGTH (FT)	BUILDING WIDTH (FT)
NA	NA	NA

STACK DATA

GROUND ELEVATION (FT)	UTM X COORDINATE (KM)	UTM Y COORDINATE (KM)	STACK TYPE *
2210	506.2	4873.0	02

STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	STACK EXIT DIAMETER (FT)	STACK EXIT GAS FLOW RATE (ACFM)	STACK EXIT TEMPERATURE (°F)
35		unknown	ambt

* 01) DOWNWARD, 02) VERTICAL (UNCOVERED), 03) VERTICAL (COVERED), 04) HORIZONTAL, 05) FUGITIVE

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR **	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (TONS/YR)	REFERENCE
PM		.5	NA.	see	calcs		IDEQ
PM 10		.25	NA.	see	calcs		IDEQ
SO2		NA.	NA.	NA.	NA.	NA.	NA
CO		NA.	NA.	NA.	NA.	NA.	NA
NOX		NA.	NA.	NA.	NA.	NA.	NA
VOC		NA.	NA.	NA.	NA.	NA.	NA
LEAD		.E-	.	.E-	.E-	.E-	
	- -	.E-	.	.E-	.E-	.E-	
	- -	.E-	.	.E-	.E-	.E-	
	- -	.E-	.	.E-	.E-	.E-	
	- -	.E-	.	.E-	.E-	.E-	
	- -	.E-	.	.E-	.E-	.E-	
	- -	.E-	.	.E-	.E-	.E-	

** in LBS/UNITS. Use same hourly UNITS given in PROCESSING DATA.

SECTION 3

PROCESS AND MANUFACTURING OPERATIONS

DEQ USE ONLY

DEQ PLANT ID CODE	DEQ PROCESS CODE	DEQ STACK ID CODE	DEQ BUILDING ID CODE
- -			

PRIMARY SCC	SECONDARY SCC	DEQ SEGMENT CODE
- - -	- - -	

PART A — GENERAL INFORMATION

PROCESS CODE OR DESCRIPTION	STACK DESCRIPTION	BUILDING DESCRIPTION
P-19	CYCLONE L	NA

MANUFACTURER	MODEL	DATE INSTALLED OR LAST MODIFIED
WOODGRAIN	NA	00 00 / 84

PROCESSING DATA

PROCESS STREAM	MATERIAL DESCRIPTION	MAXIMUM HOURLY RATE	ACTUAL HOURLY RATE	ACTUAL ANNUAL RATE	UNITS
INPUT	shv&sawdst	see calcs			
PRODUCT OUTPUT	shv&sawdst	see calc			
WASTE OUTPUT		.	.	.	
RECYCLE	NA	.	.	.	

POTENTIAL HAPS IN PROCESS STREAMS

HAP DESCRIPTION	HAP CAS NUMBER	FRACTION IN INPUT STREAM BY WEIGHT	FRACTION IN PRODUCT STREAM BY WEIGHT	FRACTION IN WASTE STREAM BY WEIGHT	FRACTION IN RECYCLE STREAM BY WEIGHT
NA	NA	. E-	. E-	. E-	. E-
	- -	. E-	. E-	. E-	. E-
	- -	. E-	. E-	. E-	. E-
	- -	. E-	. E-	. E-	. E-

PART B **SEC. 3** **OPERATING DATA**

PERCENT FUEL CONSUMPTION PER QUARTER DEC-FEB	MAR-MAY	JUN-AUG	SEP-NOV
25	25	25	25

OPERATING SCHEDULE HOURS / DAY	DAYS / WEEK	WEEKS / YEAR
52	6	52

POLLUTION CONTROL EQUIPMENT

PARAMETER	PRIMARY	SECONDARY
TYPE	NA	NA
TYPE CODE (APP A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (INCHES H_2O)	.	.
WET SCRUBBER FLOW (GPM)	.	.
BAGHOUSE AIR/CLOTH RATIO (FPM)	.	.

VENTILATION AND BUILDING / AREA DATA

ENCLOSED? (Y/N)	HOOD TYPE (APP B)	MINIMUM FLOW (ACFM)	% CAPTURE EFFICIENCY
N	NA	Unkwn	NA.

BUILDING HEIGHT (FT)	BUILDING LENGTH (FT)	BUILDING WIDTH (FT)
NA	NA	NA

STACK DATA

GROUND ELEVATION (FT)	UTM X COORDINATE (KM)	UTM Y COORDINATE (KM)	STACK TYPE *
2210	506.2	4873.0	02

STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	STACK EXIT DIAMETER (FT)	STACK EXIT GAS FLOW RATE (ACFM)	STACK EXIT TEMPERATURE (°F)
43.5		unknown	ambt

* 01) DOWNWARD, 02) VERTICAL (UNCOVERED), 03) VERTICAL (COVERED), 04) HORIZONTAL, 05) FUGITIVE

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR **	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (TONS/YR)	REFERENCE
PM		.5	NA.	see	calcs		IDEQ
PM 10		.25	NA.	see	calcs		IDEQ
SO2		NA.	NA.	NA.	NA.	NA.	NA
CO		NA.	NA.	NA.	NA.	NA.	NA
NOX		NA.	NA.	NA.	NA.	NA.	NA
VOC		NA.	NA.	NA.	NA.	NA.	NA
LEAD		.E-	.	.E-	.E-	.E-	
	-	.E-	.	.E-	.E-	.E-	
	-	.E-	.	.E-	.E-	.E-	
	-	.E-	.	.E-	.E-	.E-	
	-	.E-	.	.E-	.E-	.E-	
	-	.E-	.	.E-	.E-	.E-	

** In LBS/UNITS. Use same hourly UNITS given in PROCESSING DATA.

SECTION 3 — PROCESS AND MANUFACTURING OPERATIONS

DEQ USE ONLY

DEQ PLANT ID CODE	DEQ PROCESS CODE	DEQ STACK ID CODE	DEQ BUILDING ID CODE
- -			
PRIMARY SCC	**SECONDARY SCC**	**DEQ SEGMENT CODE**	
- - -	- - -		

PART A — GENERAL INFORMATION

PROCESS CODE OR DESCRIPTION	STACK DESCRIPTION	BUILDING DESCRIPTION
P-20	BAGHOUSE M	NA
MANUFACTURER	**MODEL**	**DATE INSTALLED OR LAST MODIFIED**
WOODGRAIN	NA	00 00/92

PROCESSING DATA

PROCESS STREAM	MATERIAL DESCRIPTION	MAXIMUM HOURLY RATE	ACTUAL HOURLY RATE	ACTUAL ANNUAL RATE	UNITS
INPUT	shgs&sawdt	see calcs			
PRODUCT OUTPUT	shgs&sawdt	see calcs			
WASTE OUTPUT		.	.	.	
RECYCLE	NA	.	.	.	

POTENTIAL HAPS IN PROCESS STREAMS

HAP DESCRIPTION	HAP CAS NUMBER	FRACTION IN INPUT STREAM BY WEIGHT	FRACTION IN PRODUCT STREAM BY WEIGHT	FRACTION IN WASTE STREAM BY WEIGHT	FRACTION IN RECYCLE STREAM BY WEIGHT
NA	NA	. E-	. E-	. E-	. E-
	- -	. E-	. E-	. E-	. E-
	- -	. E-	. E-	. E-	. E-
	- -	. E-	. E-	. E-	. E-

PART B **SEC. 3** **OPERATING DATA**

PERCENT FUEL CONSUMPTION PER QUARTER DEC-FEB	MAR-MAY	JUN-AUG	SEP-NOV
25	25	25	25

OPERATING SCHEDULE HOURS / DAY	DAYS / WEEK	WEEKS / YEAR
24	6	52

POLLUTION CONTROL EQUIPMENT

PARAMETER	PRIMARY	SECONDARY
TYPE	NA	NA
TYPE CODE (APP A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (INCHES H_2O)	.	.
WET SCRUBBER FLOW (GPM)	.	.
BAGHOUSE AIR/CLOTH RATIO (FPM)	.	.

VENTILATION AND BUILDING / AREA DATA

ENCLOSED? (Y/N)	HOOD TYPE (APP B)	MINIMUM FLOW (ACFM)	% CAPTURE EFFICIENCY
N	NA	Unkwn	NA.

BUILDING HEIGHT (FT)	BUILDING LENGTH (FT)	BUILDING WIDTH (FT)
NA	NA	NA

STACK DATA

GROUND ELEVATION (FT)	UTM X COORDINATE (KM)	UTM Y COORDINATE (KM)	STACK TYPE *
2210	506.2	4873.0	02

STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	STACK EXIT DIAMETER (FT)	STACK EXIT GAS FLOW RATE (ACFM)	STACK EXIT TEMPERATURE (°F)
36		unknown	ambt

* 01) DOWNWARD, 02) VERTICAL (UNCOVERED), 03) VERTICAL (COVERED), 04) HORIZONTAL, 05) FUGITIVE

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR **	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (TONS/YR)	REFERENCE
PM		.001	NA.	see	calcs		IDEQ
PM 10		.001	NA.	see	calcs		IDEQ
SO2		NA.	NA.	NA.	NA.	NA.	NA
CO		NA.	NA.	NA.	NA.	NA.	NA
NOX		NA.	NA.	NA.	NA.	NA.	NA
VOC		NA.	NA.	NA.	NA.	NA.	NA
LEAD		E-	.	E-	E-	E-	
	- -	E-	.	E-	E-	E-	
	- -	E-	.	E-	E-	E-	
	- -	E-	.	E-	E-	E-	
	- -	E-	.	E-	E-	E-	
	- -	E-	.	E-	E-	E-	
	- -	E-	.	E-	E-	E-	

** In LBS/UNITS. Use same hourly UNITS given in PROCESSING DATA.

SECTION 4 — WASTE INCINERATION

DEQ USE ONLY

DEQ PLANT ID CODE	DEQ PROCESS CODE	DEQ STACK ID CODE	DEQ BUILDING ID CODE
- -			
PRIMARY SCC	SECONDARY SCC	DEQ SEGMENT CODE	
- - -	- - -		

PART A — GENERAL INFORMATION

PROCESS CODE OR DESCRIPTION	STACK DESCRIPTION	BUILDING DESCRIPTION
NA		
MANUFACTURER	MODEL	DATE INSTALLED OR LAST MODIFIED
		/ /
INCINERATOR TYPE (1)	RATED HEATING CAPACITY (MILLION BTU/HOUR)	
	.	

(1) INCINERATOR TYPES: 01) SINGLE CHAMBER; 02) MULTIPLE HEARTH; 03) ROTARY KILN; 04) FLUIDIZED BED; 05) OTHER (SPECIFY TO RIGHT):

PRIMARY COMBUSTION CHAMBER DATA

WASTE RETENTION TIME (MINUTES)	MINIMUM TEMPERATURE (oF)	COMBUSTION AIR FEED RATE (ACFM)	PERCENT OVERFIRE AIR	PERCENT UNDERFIRE AIR	GAUGE PRESSURE (INCHES H2O)	BURNER TYPE (2)
.	.	.	.	.	.	

(2) BURNER TYPES: 01) AXIAL FIRING; 02) RADIAL FIRING; 03) TANGENTIAL FIRING; 04) OTHER (SPECIFY TO RIGHT):

PRIMARY CHAMBER FUEL DATA

PARAMETER	PRIMARY FUEL	UNITS	SECONDARY FUEL	UNITS
FUEL CODE (3)	NA			
PERCENT SULFUR	.		.	
PERCENT ASH	.		.	
PERCENT NITROGEN	.		.	
PERCENT CARBON	.		.	
PERCENT HYDROGEN	.		.	
PERCENT MOISTURE	.		.	
HEAT CONTENT (BTU/UNIT)	.		.	
MAXIMUM HOURLY COMBUSTION RATE (UNITS/HR)	.		.	
NORMAL ANNUAL COMBUSTION RATE (UNITS/YR)	.		.	

(3) FUEL CODES: 01) NATURAL GAS; 02) #1 OR #2 FUEL OIL; 03) #4 FUEL OIL; 04) #5 OR #6 FUEL OIL; 05) PROPANE; 06) OTHER (SPECIFY TO RIGHT):

PART A SEC. 4 SECONDARY COMBUSTION CHAMBER DATA

COMBUSTION CHAMBER VOLUME (CUBIC FEET)	MINIMUM TEMPERATURE (°F)	COMBUSTION AIR FEED RATE (SCFM)	GAUGE PRESSURE (INCHES H_2O)	BURNER TYPE (4)
.	.	.	.	

(4) BURNER TYPES: 01) AXIAL FIRING; 02) RADIAL FIRING; 03) TANGENTIAL FIRING; 04) OTHER (SPECIFY TO RIGHT):

SECONDARY CHAMBER FUEL DATA

PARAMETER	PRIMARY FUEL	UNITS	SECONDARY FUEL	UNITS
FUEL CODE (5)				
PERCENT SULFUR	.		.	
PERCENT ASH	.		.	
PERCENT NITROGEN	.		.	
PERCENT CARBON	.		.	
PERCENT HYDROGEN	.		.	
PERCENT MOISTURE	.		.	
HEAT CONTENT (BTU/UNIT)	.		.	
MAXIMUM HOURLY COMBUSTION RATE (UNITS/HR)	.		.	
NORMAL ANNUAL COMBUSTION RATE (UNITS/YR)	.		.	

(5) FUEL CODES: 01) NATURAL GAS; 02) #1 OR #2 FUEL OIL; 03) #4 FUEL OIL; 04) #5 OR #6 FUEL OIL; 05) PROPANE; 06) OTHER (SPECIFY TO RIGHT):

PRIMARY CHAMBER MONITORING AND COMBUSTION CONTROLS

SECONDARY CHAMBER MONITORING AND COMBUSTION CONTROLS

PART A SEC. 4 WASTE CHARACTERIZATION AND COMBUSTION RATES

PARAMETER	WASTE 1	UNITS	WASTE 2	UNITS
WASTE DESCRIPTION				
PERCENT SULFUR	.		.	
PERCENT ASH	.		.	
PERCENT NITROGEN	.		.	
PERCENT CARBON	.		.	
PERCENT HYDROGEN	.		.	
PERCENT OXYGEN	.		.	
PERCENT CHLORINE	.		.	
PERCENT MOISTURE	.		.	
HEAT CONTENT (BTU/UNIT)	.		.	
MAXIMUM HOURLY COMBUSTION RATE (UNITS/HR)	.		.	
MAXIMUM DAILY COMBUSTION RATE (UNITS/DAY)	.		.	
NORMAL ANNUAL COMBUSTION RATE (UNITS/YR)	.		.	

METHOD OF ASH DISPOSAL:

POTENTIAL HAPS IN WASTES

HAP DESCRIPTION	HAP CAS NUMBER	FRACTION IN WASTE FEED	FRACTION IN BOTTOM ASH	FRACTION IN FLY ASH
	- -	. E -	. E -	. E -
	- -	. E -	. E -	. E -
	- -	. E -	. E -	. E -
	- -	. E -	. E -	. E -
	- -	. E -	. E -	. E -
	- -	. E -	. E -	. E -

PART B SEC. 4 **OPERATING DATA**

PERCENT FUEL CONSUMPTION PER QUARTER			
DEC-FEB	MAR-MAY	JUN-AUG	SEP-NOV

OPERATING SCHEDULE		
HOURS / DAY	DAYS / WEEK	WEEKS / YEAR
.	.	.

POLLUTION CONTROL EQUIPMENT

PARAMETER	PRIMARY	SECONDARY
TYPE		
TYPE CODE (APP A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (INCHES H2O)	.	.
WET SCRUBBER FLOW (GPM)	.	.
BAGHOUSE AIR/CLOTH RATIO (FPM)	.	.

VENTILATION AND BUILDING / AREA DATA

ENCLOSED? (Y/N)	HOOD TYPE (APP B)	MINIMUM FLOW (ACFM)	% CAPTURE EFFICIENCY
			.

BUILDING HEIGHT (FT)	BUILDING LENGTH (FT)	BUILDING WIDTH (FT)

STACK DATA

GROUND ELEVATION (FT)	UTM X COORDINATE (KM)	UTM Y COORDINATE (KM)	STACK TYPE *
	.	.	

STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	STACK EXIT DIAMETER (FT)	STACK EXIT GAS FLOW RATE (ACFM)	STACK EXIT TEMPERATURE (°F)
.	.	.	

* 01) DOWNWARD, 02) VERTICAL (UNCOVERED), 03) VERTICAL (COVERED), 04) HORIZONTAL, 05) FUGITIVE

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR **	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (TONS/YR)	REFERENCE
PM		.	.	.	.	.	
PM 10		.	.	.	.	.	

| | | |

SECTION 5 STORAGE AND HANDLING OF LIQUID SOLVENTS & OTHER VOLATILE COMPOUNDS

DEQ USE ONLY

DEQ PLANT ID CODE: - -

PRIMARY SCC: - - -

DEQ PROCESS CODE

SECONDARY SCC: - - -

DEQ USE ONLY

DEQ STACK ID CODE

DEQ BUILDING ID CODE

DEQ SEGMENT CODE

PART A GENERAL

Note: all other storage emissions accounted for within 100% emission of raw materials used under process.

PROCESS DESCRIPTION: V22,23

STACK DESCRIPTION: FUGITIVE

BUILDING DESCRIPTION: NA

DATE INSTALLED OR LAST MODIFIED:

GENERAL TANK AND MATERIAL HANDLING DATA

MATERIAL DESCRIPTION: PROPANE

TANK TYPE (1): 04

SOURCE (2): 03

TANK CAPACITY (GALLONS): TOGETHER 1600

ANNUAL THROUGHPUT (GALLONS):

(1) TANK TYPE: 01) FIXED ROOF; 02) FLOATING ROOF (OR INTERNAL COVER); 03) VARIABLE VAPOR SPACE; 04) PRESSURE TANK; 05) UNDERGROUND - SPLASH LOADING: 06) OTHER (SPECIFY BELOW): ABOVE GROUND

(2) SOURCE OF TANK CONTENTS: 01) PIPELINE, 02) RAIL CAR, 03) TANK TRUCK, 04) SHIP/BARGE, 05) OTHER (SPECIFY TO RIGHT):

ADDITIONAL VAPOR PHASE DEGREASING DATA

MANUFACTURER OF DEGREASING AGENT: NA

TANK SURFACE AREA (FT^2): NA.

TEMP OF DEGREASING AGENT IN TANK (°F): NA.

METHOD OF VAPOR RECOVERY:

(3) VAPOR RECOVERY METHODS: 01) INCINERATION; 02) REFRIGERATED LIQUID SCRUBBER; 03) REFIGERATED CONDENSER; 04) CARBON ADSORPTION; 05) VAPOR RETURN SYSTEM; 6) NO RECOVERY SYSTEM; 07) OTHER (SPECIFY TO RIGHT):

ADDITIONAL MATERIAL HANDLING DATA

PHYSICAL STATE (4)	NUMBER OF PUMP SEALS	NUMBER OF COMPRESSOR SEALS	NUMBER OF IN-LINE VALVES	NUMBER OF SAFETY RELIEF VALVES	NUMBER OF FLANGES	NUMBER OF OPEN-ENDED LINES	NUMBER OF SAMPLING CONNECTIONS
	0	0	0	1	0	1	0

(4) PHYSICAL STATE: V) VAPOR; L) LIGHT LIQUID; H) HEAVY LIQUID

MATERIAL DATA

HAP DESCRIPTION	HAP CAS NUMBER	HAP FRACTION IN MATERIAL BY WEIGHT
PROPANE	74-98-6	100.
	- -	. E -
	- -	. E -
	- -	. E -

PART B **SEC. 5** **OPERATING DATA**

PERCENT FUEL CONSUMPTION PER QUARTER DEC-FEB	MAR-MAY	JUN-AUG	SEP-NOV
30	20	20	30

OPERATING SCHEDULE HOURS / DAY	DAYS / WEEK	WEEKS / YEAR
NA	NA	NA

POLLUTION CONTROL EQUIPMENT

PARAMETER	PRIMARY	SECONDARY
TYPE	NA	NA
TYPE CODE (APP A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (INCHES H_2O)	.	.
WET SCRUBBER FLOW (GPM)	.	.
BAGHOUSE AIR/CLOTH RATIO (FPM)	.	.

VENTILATION AND BUILDING / AREA DATA

ENCLOSED? (Y/N)	HOOD TYPE (APP B)	MINIMUM FLOW (ACFM)	% CAPTURE EFFICIENCY
N	NA	NA	NA

BUILDING HEIGHT (FT)	BUILDING LENGTH (FT)	BUILDING WIDTH (FT)
NA	NA	NA

STACK DATA

GROUND ELEVATION (FT)	UTM X COORDINATE (KM)	UTM Y COORDINATE (KM)	STACK TYPE *
	506.2	4873.0	05

STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	STACK EXIT DIAMETER (FT)	STACK EXIT GAS FLOW RATE (ACFM)	STACK EXIT TEMPERATURE (°F)
NA	NA	DRIFT	AMBT

* 01) DOWNWARD, 02) VERTICAL (UNCOVERED), 03) VERTICAL (COVERED), 04) HORIZONTAL, 05) FUGITIVE

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR **	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (TONS/YR)	REFERENCE
PM		NA.	NA.	NA.	NA.	NA.	NA
PM 10		NA.	NA.	NA.	NA.	NA.	NA
SO2		NA.	NA.	NA.	NA.	NA.	NA
CO		NA.	NA.	NA.	NA.	NA.	NA
NOX		NA.	NA.	NA.	NA.	NA.	NA
VOC		NA.	NA.	NA.	NA.	NA.	NA
LEAD		NA.	NA.	NA.	NA.	NA.	NA
Propane	74-98-6	.E-	.		.E-		negl
	- -	.E-	.	.E-	.E-	.E-	
	- -	.E-	.	.E-	.E-	.E-	
	- -	.E-	.	.E-	.E-	.E-	
	- -	.E-	.	.E-	.E-	.E-	

** In LBS/UNITS. For Vapors use UNITS of millions of standard cubic feet, for LIQUIDS use UNITS of thousands of gallons which stored or handled.

SECTION 6

LOADING RACKS

DEQ USE ONLY

DEQ PLANT ID CODE

PRIMARY SCC

DEQ USE ONLY

DEQ PROCESS CODE

SECONDARY SCC

DEQ USE ONLY

DEQ STACK ID CODE

DEQ BUILDING ID CODE

DEQ SEGMENT CODE

PART A — LOADING RACK DATA

PROCESS DESCRIPTION: NA

STACK DESCRIPTION

BUILDING DESCRIPTION

DATE INSTALLED OR LAST MODIFIED

TYPE OF LOADING (1)

LOADING ARM VAPOR CLOSURE (2)

(1) TYPE OF LOADING CODES: 01) OVERHEAD LOADING - SPLASH FILL, NORMAL SERVICE; 02) OVERHEAD LOADING - SPLASH FILL, BALANCED SERVICED; 03) OVERHEAD LOADING - SUBMERGED FILL, NORMAL SERVICE; 04) OVERHEAD LOADING - SUBMERGED FILL, BALANCED SERVICE; 05) BOTTOM LOADING - NORMAL SERVICE; 06) BOTTOM LOADING - BALANCED SERVICE

(2) TYPE OF HATCH VAPOR CLOSURE: 01) INCINERATION; 02) GREENWOOD; 03) SOCO; 04) CHIKSAN; 05) NONE - OPEN TO AIR; 06) OTHER (SPECIFY):

MATERIAL LOADED

ANNUAL THROUGHPUT (GALLONS)

REID VAPOR PRESSURE (PSI)

MAXIMUM MATERIAL TEMP (°F)

AVERAGE MATERIAL TEMP (°F)

PART B SEC. 6 OPERATING DATA

PERCENT FUEL CONSUMPTION PER QUARTER DEC-FEB	MAR-MAY	JUN-AUG	SEP-NOV
NA			

OPERATING SCHEDULE HOURS / DAY	DAYS / WEEK	WEEKS / YEAR
.	.	.

POLLUTION CONTROL EQUIPMENT

PARAMETER	PRIMARY	SECONDARY
TYPE	NA	
TYPE CODE (APP A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (INCHES H_2O)	.	
WET SCRUBBER FLOW (GPM)	.	.
BAGHOUSE AIR/CLOTH RATIO (FPM)	.	.

VENTILATION AND BUILDING / AREA DATA

ENCLOSED? (Y/N)	HOOD TYPE (APP B)	MINIMUM FLOW (ACFM)	% CAPTURE EFFICIENCY
			.

BUILDING HEIGHT (FT)	BUILDING LENGTH (FT)	BUILDING WIDTH (FT)

STACK DATA

GROUND ELEVATION (FT)	UTM X COORDINATE (KM)	UTM Y COORDINATE (KM)	STACK TYPE *
	.	.	

STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	STACK EXIT DIAMETER (FT)	STACK EXIT GAS FLOW RATE (ACFM)	STACK EXIT TEMPERATURE (°F)
.	.	.	

* 01) DOWNWARD, 02) VERTICAL (UNCOVERED), 03) VERTICAL (COVERED), 04) HORIZONTAL, 05) FUGITIVE

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR **	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (TONS/YR)	REFERENCE
PM		.	.	.	.	.	
PM 10		.	.	.	.	.	
SO2		.	.	.	.	.	
CO		.	.	.	.	.	
NOX		.	.	.	.	.	
VOC		.	.	.	.	.	
LEAD		.	.	.	.	.	
	- -	. E -	.	. E -	. E -	. E -	
	- -	. E -	.	. E -	. E -	. E -	
	- -	. E -	.	. E -	. E -	. E -	
	- -	. E -	.	. E -	. E -	. E -	
	- -	. E -	.	. E -	. E -	. E -	
	- -	. E -	.	. E -	. E -	. E -	

** In LBS/UNITS. Use UNITS of thousands of gallons which are handled.

SECTION 7 — SOLID MATERIAL TRANSPORT, HANDLING, AND STORAGE

DEQ USE ONLY

DEQ PLANT ID CODE	DEQ PROCESS CODE	DEQ STACK ID CODE	DEQ BUILDING ID CODE
- -			
PRIMARY SCC	**SECONDARY SCC**	**DEQ SEGMENT CODE**	
- - -	- - -		

DEQ USE ONLY

PART A — GENERAL INFORMATION

PROCESS CODE OR DESCRIPTION	STACK DESCRIPTION	BUILDING DESCRIPTION
ST-1	BIN INSIDE	NA
DATE INSTALLED OR LAST MODIFIED	**MATERIAL DESCRIPTION**	
1995		

MATERIAL TRANSFER RATES

MAXIMUM HOURLY TRANSFER RATE (UNITS/HOUR)	NORMAL HOURLY TRANSFER RATE (UNITS/HOUR)	NORMAL ANNUAL TRANSFER RATE (UNITS/YEAR)	UNITS
see	calcs		BDT

BELT CONVEYOR/VEHICLE TRANSFER

NUMBER OF TRANSFERS	MOISTURE CONTENT (WEIGHT PERCENT)	MAXIMUM HOURLY WIND SPEED (MPH)	AVERAGE HOURLY WIND SPEED (MPH)	CONVEYORS ENCLOSED? (Y/N)	IN BUILDING? (Y/N)	TRANSFERS ENCLOSED? (Y/N)	IN BUILDING? (Y/N)
	.						

PNEUMATIC CONVEYOR TRANSFERS

MOISTURE CONTENT WEIGHT PERCENT	PRIMARY SEPARATOR TYPE	PRIMARY SEPARATOR PERCENT EFFICIENCY	SECONDARY SEPARATOR TYPE	SECONDARY SEPARATOR PERCENT EFFICIENCY
NA .		.		.

MATERIAL STORAGE DATA

PILE? (Y/N)	SILO? (Y/N)	OTHER STORAGE TYPE DESCRIPTION	STORAGE CAPACITY	STORAGE CAPACITY UNITS	PILE LENGTH (FEET)	PILE WIDTH (FEET)	PILE HEIGHT (FEET)
N	Y	STORAGE BIN	0.25	CY	NA	NA	NA

MATERIAL DATA

HAP DESCRIPTION	HAP CAS NUMBER	HAP FRACTION IN MATERIAL BY WEIGHT
NA	NA - -	. E -
	- -	. E -
	- -	. E -
	- -	. E -
	- -	. E -
	- -	. E -

PART B **SEC. 7** **OPERATING DATA**

PERCENT FUEL CONSUMPTION PER QUARTER DEC-FEB	MAR-MAY	JUN-AUG	SEP-NOV
25	25	25	25

OPERATING SCHEDULE HOURS / DAY	DAYS / WEEK	WEEKS / YEAR
24	6	52

POLLUTION CONTROL EQUIPMENT

PARAMETER	Primary	SECONDARY
TYPE	NA	NA
TYPE CODE (APP A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (INCHES H_2O)	.	.
WET SCRUBBER FLOW (GPM)	.	.
BAGHOUSE AIR/CLOTH RATIO (FPM)	.	.

VENTILATION AND BUILDING / AREA DATA

ENCLOSED? (Y/N)	HOOD TYPE (APP B)	MINIMUM FLOW (ACFM)	% CAPTURE EFFICIENCY
N	NA	NA	NA

BUILDING HEIGHT (FT)	BUILDING LENGTH (FT)	BUILDING WIDTH (FT)
NA	NA	NA

STACK DATA

GROUND ELEVATION (FT)	UTM X COORDINATE (KM)	UTM Y COORDINATE (KM)	STACK TYPE *
2210	506.2	4873.0	05

STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	STACK EXIT DIAMETER (FT)	STACK EXIT GAS FLOW RATE (ACFM)	STACK EXIT TEMPERATURE (°F)
NA	NA	AMBT	AMBT

* 01) DOWNWARD, 02) VERTICAL (UNCOVERED), 03) VERTICAL (COVERED), 04) HORIZONTAL, 05) FUGITIVE

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR **	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (TONS/YR)	REFERENCE
PM		1.0	NA	see	calcs		IDEQ
PM 10		.58	NA	see	calcs	.	IDEQ
SO2		NA.	NA	NA.	NA.	NA.	NA
CO		NA.	NA	NA.	NA.	NA.	NA
NOX		NA.	NA	NA.	NA.	NA.	NA
VOC		NA.	NA	NA.	NA.	NA.	NA
LEAD		.E-	NA	.E-	.E-	.E-	NA
	-	.E-	NA	.E-	.E-	.E-	NA
	-	.E-	NA	.E-	.E-	.E-	NA
	-	.E-	NA	.E-	.E-	.E-	NA
	-	.E-	NA	.E-	.E-	.E-	NA
	-	.E-	NA	.E-	.E-	.E-	NA

** In LBS/UNITS. Use same UNITS given in material TRANSFER RATES.

SECTION 7 — SOLID MATERIAL TRANSPORT, HANDLING, AND STORAGE

DEQ USE ONLY

DEQ PLANT ID CODE	DEQ PROCESS CODE	DEQ STACK ID CODE	DEQ BUILDING ID CODE
- -			
PRIMARY SCC	**SECONDARY SCC**	**DEQ SEGMENT CODE**	
- - -	- - -		

DEQ USE ONLY

PART A — GENERAL INFORMATION

PROCESS CODE OR DESCRIPTION	STACK DESCRIPTION	BUILDING DESCRIPTION
ST-2	BIN OUTSIDE	NA
DATE INSTALLED OR LAST MODIFIED	**MATERIAL DESCRIPTION**	
1992	shvg&sawd	

MATERIAL TRANSFER RATES

MAXIMUM HOURLY TRANSFER RATE (UNITS/HOUR)	NORMAL HOURLY TRANSFER RATE (UNITS/HOUR)	NORMAL ANNUAL TRANSFER RATE (UNITS/YEAR)	UNITS
see	calcs		BDT

BELT CONVEYOR/VEHICLE TRANSFER

NUMBER OF TRANSFERS	MOISTURE CONTENT (WEIGHT PERCENT)	MAXIMUM HOURLY WIND SPEED (MPH)	AVERAGE HOURLY WIND SPEED (MPH)	CONVEYORS ENCLOSED? (Y/N)	IN BUILDING? (Y/N)	TRANSFERS ENCLOSED? (Y/N)	IN BUILDING? (Y/N)
	.						

PNEUMATIC CONVEYOR TRANSFERS

MOISTURE CONTENT WEIGHT PERCENT	PRIMARY SEPARATOR TYPE	PRIMARY SEPARATOR PERCENT EFFICIENCY	SECONDARY SEPARATOR TYPE	SECONDARY SEPARATOR PERCENT EFFICIENCY
NA .		.		.

MATERIAL STORAGE DATA

PILE? (Y/N)	SILO? (Y/N)	OTHER STORAGE TYPE DESCRIPTION	STORAGE CAPACITY	STORAGE CAPACITY UNITS	PILE LENGTH (FEET)	PILE WIDTH (FEET)	PILE HEIGHT (FEET)
N	Y	STORAGE BIN	6	CY	NA	NA	NA

MATERIAL DATA

HAP DESCRIPTION	HAP CAS NUMBER	HAP FRACTION IN MATERIAL BY WEIGHT
NA	NA - -	. E -
	- -	. E -
	- -	. E -
	- -	. E -
	- -	. E -
	- -	. E -

PART B **SEC. 7** **OPERATING DATA**

PERCENT FUEL CONSUMPTION PER QUARTER DEC-FEB	MAR-MAY	JUN-AUG	SEP-NOV
25	25	25	25

OPERATING SCHEDULE HOURS / DAY	DAYS / WEEK	WEEKS / YEAR
24	6	52

POLLUTION CONTROL EQUIPMENT

PARAMETER	Primary	SECONDARY
TYPE	NA	NA
TYPE CODE (APP A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (INCHES H_2O)	.	.
WET SCRUBBER FLOW (GPM)	.	.
BAGHOUSE AIR/CLOTH RATIO (FPM)	.	.

VENTILATION AND BUILDING / AREA DATA

ENCLOSED? (Y/N)	HOOD TYPE (APP B)	MINIMUM FLOW (ACFM)	% CAPTURE EFFICIENCY
N	NA	NA	NA

BUILDING HEIGHT (FT)	BUILDING LENGTH (FT)	BUILDING WIDTH (FT)
NA	NA	NA

STACK DATA

GROUND ELEVATION (FT)	UTM X COORDINATE (KM)	UTM Y COORDINATE (KM)	STACK TYPE *
2210	506.2	4873.0	05

STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	STACK EXIT DIAMETER (FT)	STACK EXIT GAS FLOW RATE (ACFM)	STACK EXIT TEMPERATURE (°F)
NA	NA	AMBT	AMBT

* 01) DOWNWARD, 02) VERTICAL (UNCOVERED), 03) VERTICAL (COVERED), 04) HORIZONTAL, 05) FUGITIVE

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR **	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (TONS/YR)	REFERENCE
PM		1.0	.NA	see	calcs		IDEQ
PM 10		.58	.NA	see	calcs		IDEQ
SO2		NA.	.NA	NA.	NA.	NA.	NA
CO		NA.	.NA	NA.	NA.	NA.	NA
NOX		NA.	.NA	NA.	NA.	NA.	NA
VOC		NA.	.NA	NA.	NA.	NA.	NA
LEAD		.E-	.NA	.E-	.E-	.E-	NA
	- -	.E-	.NA	.E-	.E-	.E-	NA
	- -	.E-	.NA	.E-	.E-	.E-	NA
	- -	.E-	.NA	.E-	.E-	.E-	NA
	- -	.E-	.NA	.E-	.E-	.E-	NA
	- -	.E-	.NA	.E-	.E-	.E-	NA
	- -	.E-	.NA	.E-	.E-	.E-	NA

** In LBS/UNITS. Use same UNITS given in material TRANSFER RATES.

SECTION 7 — SOLID MATERIAL TRANSPORT, HANDLING, AND STORAGE

DEQ USE ONLY

DEQ PLANT ID CODE: - -

PRIMARY SCC: - - -

DEQ PROCESS CODE:

SECONDARY SCC: - - -

DEQ USE ONLY

DEQ STACK ID CODE:

DEQ SEGMENT CODE:

DEQ BUILDING ID CODE:

PART A — GENERAL INFORMATION

PROCESS CODE OR DESCRIPTION: ST-3

STACK DESCRIPTION: CHIP BIN OUTSIDE

BUILDING DESCRIPTION: NA

DATE INSTALLED OR LAST MODIFIED: 1970

MATERIAL DESCRIPTION: shvgs&sawdust

MATERIAL TRANSFER RATES

MAXIMUM HOURLY TRANSFER RATE (UNITS/HOUR)	NORMAL HOURLY TRANSFER RATE (UNITS/HOUR)	NORMAL ANNUAL TRANSFER RATE (UNITS/YEAR)	UNITS
see	calcs		BDT

BELT CONVEYOR/VEHICLE TRANSFER

NUMBER OF TRANSFERS	MOISTURE CONTENT (WEIGHT PERCENT)	MAXIMUM HOURLY WIND SPEED (MPH)	AVERAGE HOURLY WIND SPEED (MPH)	CONVEYORS ENCLOSED? (Y/N)	IN BUILDING? (Y/N)	TRANSFERS ENCLOSED? (Y/N)	IN BUILDING? (Y/N)
	.						

PNEUMATIC CONVEYOR TRANSFERS

MOISTURE CONTENT WEIGHT PERCENT	PRIMARY SEPARATOR TYPE	PRIMARY SEPARATOR PERCENT EFFICIENCY	SECONDARY SEPARATOR TYPE	SECONDARY SEPARATOR PERCENT EFFICIENCY
NA .		.		.

MATERIAL STORAGE DATA

PILE? (Y/N)	SILO? (Y/N)	OTHER STORAGE TYPE DESCRIPTION	STORAGE CAPACITY	STORAGE CAPACITY UNITS	PILE LENGTH (FEET)	PILE WIDTH (FEET)	PILE HEIGHT (FEET)
N	Y	STORAGE BIN	30	UNITS	NA	NA	NA

MATERIAL DATA

HAP DESCRIPTION	HAP CAS NUMBER	HAP FRACTION IN MATERIAL BY WEIGHT
NA	NA - -	. E -
	- -	. E -
	- -	. E -
	- -	. E -
	- -	. E -
	- -	. E -

PART B **SEC. 7** **OPERATING DATA**

PERCENT FUEL CONSUMPTION PER QUARTER DEC-FEB	MAR-MAY	JUN-AUG	SEP-NOV
25	25	25	25

OPERATING SCHEDULE HOURS / DAY	DAYS / WEEK	WEEKS / YEAR
24	6	52

POLLUTION CONTROL EQUIPMENT

PARAMETER	Primary	SECONDARY
TYPE	NA	NA
TYPE CODE (APP A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (INCHES H_2O)	.	.
WET SCRUBBER FLOW (GPM)	.	.
BAGHOUSE AIR/CLOTH RATIO (FPM)	.	.

VENTILATION AND BUILDING / AREA DATA

ENCLOSED? (Y/N)	HOOD TYPE (APP B)	MINIMUM FLOW (ACFM)	% CAPTURE EFFICIENCY
N	NA	NA	NA

BUILDING HEIGHT (FT)	BUILDING LENGTH (FT)	BUILDING WIDTH (FT)
NA	NA	NA

STACK DATA

GROUND ELEVATION (FT)	UTM X COORDINATE (KM)	UTM Y COORDINATE (KM)	STACK TYPE *
2210	506.2	4873.0	05

STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	STACK EXIT DIAMETER (FT)	STACK EXIT GAS FLOW RATE (ACFM)	STACK EXIT TEMPERATURE (°F)
NA	NA	AMBT	AMBT

* 01) DOWNWARD, 02) VERTICAL (UNCOVERED), 03) VERTICAL (COVERED), 04) HORIZONTAL, 05) FUGITIVE

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR **	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (TONS/YR)	REFERENCE
PM		1.0	NA	see	calcs	NA.	IDEQ
PM 10		.58	NA	see	calcs	NA.	IDEQ
SO2		NA.	NA	NA.	NA.	NA.	NA
CO		NA.	NA	NA.	NA.	NA.	NA
NOX		NA.	NA	NA.	NA.	NA.	NA
VOC		NA.	NA	NA.	NA.	NA.	NA
LEAD		.E-	NA	.E-	.E-	.E-	NA
	- -	.E-	NA	.E-	.E-	.E-	NA
	- -	.E-	NA	.E-	.E-	.E-	NA
	- -	.E-	NA	.E-	.E-	.E-	NA
	- -	.E-	NA	.E-	.E-	.E-	NA
	- -	.E-	NA	.E-	.E-	.E-	NA

** In LBS/UNITS. Use same UNITS given in material TRANSFER RATES.

SECTION 7 — SOLID MATERIAL TRANSPORT, HANDLING, AND STORAGE

DEQ USE ONLY

DEQ PLANT ID CODE: - -

PRIMARY SCC: - - -

DEQ PROCESS CODE:

SECONDARY SCC: - - -

DEQ USE ONLY

DEQ STACK ID CODE:

DEQ SEGMENT CODE:

DEQ BUILDING ID CODE:

PART A — GENERAL INFORMATION

PROCESS CODE OR DESCRIPTION: ST-4

STACK DESCRIPTION: CHIP BIN OUTSIDE

BUILDING DESCRIPTION: NA

DATE INSTALLED OR LAST MODIFIED: 1970

MATERIAL DESCRIPTION: shvgs&sawdust

MATERIAL TRANSFER RATES

MAXIMUM HOURLY TRANSFER RATE (UNITS/HOUR): see

NORMAL HOURLY TRANSFER RATE (UNITS/HOUR): calcs

NORMAL ANNUAL TRANSFER RATE (UNITS/YEAR):

UNITS: BDT

BELT CONVEYOR/VEHICLE TRANSFER

NUMBER OF TRANSFERS:

MOISTURE CONTENT (WEIGHT PERCENT): .

MAXIMUM HOURLY WIND SPEED (MPH):

AVERAGE HOURLY WIND SPEED (MPH):

CONVEYORS ENCLOSED? (Y/N):

IN BUILDING? (Y/N):

TRANSFERS ENCLOSED? (Y/N):

IN BUILDING? (Y/N):

PNEUMATIC CONVEYOR TRANSFERS

MOISTURE CONTENT WEIGHT PERCENT: NA .

PRIMARY SEPARATOR TYPE:

PRIMARY SEPARATOR PERCENT EFFICIENCY: .

SECONDARY SEPARATOR TYPE:

SECONDARY SEPARATOR PERCENT EFFICIENCY: .

MATERIAL STORAGE DATA

PILE? (Y/N)	SILO? (Y/N)	OTHER STORAGE TYPE DESCRIPTION	STORAGE CAPACITY	STORAGE CAPACITY UNITS	PILE LENGTH (FEET)	PILE WIDTH (FEET)	PILE HEIGHT (FEET)
N	Y	STORAGE BIN	30	UNITS	NA	NA	NA

MATERIAL DATA

HAP DESCRIPTION	HAP CAS NUMBER	HAP FRACTION IN MATERIAL BY WEIGHT
NA	NA - -	. E -
	- -	. E -
	- -	. E -
	- -	. E -
	- -	. E -
	- -	. E -

PART B **SEC. 7** **OPERATING DATA**

PERCENT FUEL CONSUMPTION PER QUARTER DEC-FEB	MAR-MAY	JUN-AUG	SEP-NOV
25	25	25	25

OPERATING SCHEDULE HOURS / DAY	DAYS / WEEK	WEEKS / YEAR
24	6	52

POLLUTION CONTROL EQUIPMENT

PARAMETER	Primary	SECONDARY
TYPE	NA	NA
TYPE CODE (APP A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (INCHES H_2O)	.	.
WET SCRUBBER FLOW (GPM)	.	.
BAGHOUSE AIR/CLOTH RATIO (FPM)	.	.

VENTILATION AND BUILDING / AREA DATA

ENCLOSED? (Y/N)	HOOD TYPE (APP B)	MINIMUM FLOW (ACFM)	% CAPTURE EFFICIENCY
N	NA	NA	NA

BUILDING HEIGHT (FT)	BUILDING LENGTH (FT)	BUILDING WIDTH (FT)
NA	NA	NA

STACK DATA

GROUND ELEVATION (FT)	UTM X COORDINATE (KM)	UTM Y COORDINATE (KM)	STACK TYPE *
2210	506.2	4873.0	05

STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	STACK EXIT DIAMETER (FT)	STACK EXIT GAS FLOW RATE (ACFM)	STACK EXIT TEMPERATURE (°F)
NA	NA	AMBT	AMBT

* 01) DOWNWARD, 02) VERTICAL (UNCOVERED), 03) VERTICAL (COVERED), 04) HORIZONTAL, 05) FUGITIVE

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR **	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (TONS/YR)	REFERENCE
PM		1.0	NA	see	calcs	NA.	IDEQ
PM 10		.58	NA	see	calcs	NA.	IDEQ
SO2		NA.	NA	NA.	NA.	NA.	NA
CO		NA.	NA	NA.	NA.	NA.	NA
NOX		NA.	NA	NA.	NA.	NA.	NA
VOC		NA.	NA	NA.	NA.	NA.	NA
LEAD		.E-	NA	.E-	.E-	.E-	NA
	- -	.E-	NA	.E-	.E-	.E-	NA
	- -	.E-	NA	.E-	.E-	.E-	NA
	- -	.E-	NA	.E-	.E-	.E-	NA
	- -	.E-	NA	.E-	.E-	.E-	NA
	- -	.E-	NA	.E-	.E-	.E-	NA
	- -	.E-	NA	.E-	.E-	.E-	NA

** In LBS/UNITS. Use same UNITS given in material TRANSFER RATES.

SECTION 7 — SOLID MATERIAL TRANSPORT, HANDLING, AND STORAGE

DEQ USE ONLY

DEQ PLANT ID CODE: - -

PRIMARY SCC: - - -

DEQ PROCESS CODE:

SECONDARY SCC: - - -

DEQ USE ONLY

DEQ STACK ID CODE:

DEQ BUILDING ID CODE:

DEQ SEGMENT CODE:

PART A — GENERAL INFORMATION

PROCESS CODE OR DESCRIPTION: ST-5

STACK DESCRIPTION: BIN OUTSIDE

BUILDING DESCRIPTION: NA

DATE INSTALLED OR LAST MODIFIED: 1992

MATERIAL DESCRIPTION: shavings

MATERIAL TRANSFER RATES

MAXIMUM HOURLY TRANSFER RATE (UNITS/HOUR): see calc

NORMAL HOURLY TRANSFER RATE (UNITS/HOUR):

NORMAL ANNUAL TRANSFER RATE (UNITS/YEAR):

UNITS: BDT

BELT CONVEYOR/VEHICLE TRANSFER

NUMBER OF TRANSFERS:

MOISTURE CONTENT (WEIGHT PERCENT): .

MAXIMUM HOURLY WIND SPEED (MPH):

AVERAGE HOURLY WIND SPEED (MPH):

CONVEYORS ENCLOSED? (Y/N):

IN BUILDING? (Y/N):

TRANSFERS ENCLOSED? (Y/N):

IN BUILDING? (Y/N):

PNEUMATIC CONVEYOR TRANSFERS

MOISTURE CONTENT WEIGHT PERCENT: NA .

PRIMARY SEPARATOR TYPE:

PRIMARY SEPARATOR PERCENT EFFICIENCY: .

SECONDARY SEPARATOR TYPE:

SECONDARY SEPARATOR PERCENT EFFICIENCY: .

MATERIAL STORAGE DATA

PILE? (Y/N): N

SILO? (Y/N): Y

OTHER STORAGE TYPE DESCRIPTION: STORAGE BIN

STORAGE CAPACITY: 30

STORAGE CAPACITY UNITS: UNITS

PILE LENGTH (FEET): NA

PILE WIDTH (FEET): NA

PILE HEIGHT (FEET): NA

MATERIAL DATA

HAP DESCRIPTION	HAP CAS NUMBER	HAP FRACTION IN MATERIAL BY WEIGHT
NA	- -	. E -
	- -	. E -
	- -	. E -
	- -	. E -
	- -	. E -
	- -	. E -

PART B **SEC. 7** **OPERATING DATA**

PERCENT FUEL CONSUMPTION PER QUARTER DEC-FEB	MAR-MAY	JUN-AUG	SEP-NOV
25	25	25	25

OPERATING SCHEDULE HOURS / DAY	DAYS / WEEK	WEEKS / YEAR
24	6	52

POLLUTION CONTROL EQUIPMENT

PARAMETER	Primary	SECONDARY
TYPE	NA	NA
TYPE CODE (APP A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (INCHES H_2O)	.	.
WET SCRUBBER FLOW (GPM)	.	.
BAGHOUSE AIR/CLOTH RATIO (FPM)	.	.

VENTILATION AND BUILDING / AREA DATA

ENCLOSED? (Y/N)	HOOD TYPE (APP B)	MINIMUM FLOW (ACFM)	% CAPTURE EFFICIENCY
N	NA	NA	NA

BUILDING HEIGHT (FT)	BUILDING LENGTH (FT)	BUILDING WIDTH (FT)
NA	NA	NA

STACK DATA

GROUND ELEVATION (FT)	UTM X COORDINATE (KM)	UTM Y COORDINATE (KM)	STACK TYPE *
2210	506.2	4873.0	05

STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	STACK EXIT DIAMETER (FT)	STACK EXIT GAS FLOW RATE (ACFM)	STACK EXIT TEMPERATURE (°F)
NA	NA	AMBT	AMBT

* 01) DOWNWARD, 02) VERTICAL (UNCOVERED), 03) VERTICAL (COVERED), 04) HORIZONTAL, 05) FUGITIVE

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR **	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (TONS/YR)	REFERENCE
PM		1.0	.NA	see	calcs		IDEQ
PM 10		.58	.NA	see	calcs		IDEQ
SO2		NA.	.NA	NA.	NA.	NA.	NA
CO		NA.	.NA	NA.	NA.	NA.	NA
NOX		NA.	.NA	NA.	NA.	NA.	NA
VOC		NA.	.NA	NA.	NA.	NA.	NA
LEAD		E-	.NA	E-	E-	E-	NA
	- -	E-	.NA	E-	E-	E-	NA
	- -	E-	.NA	E-	E-	E-	NA
	- -	E-	.NA	E-	E-	E-	NA
	- -	E-	.NA	E-	E-	E-	NA
	- -	E-	.NA	E-	E-	E-	NA
	- -	E-	.NA	E-	E-	E-	NA

** In LBS/UNITS. Use same UNITS given in material TRANSFER RATES.

SECTION 7 — SOLID MATERIAL TRANSPORT, HANDLING, AND STORAGE

DEQ USE ONLY

DEQ PLANT ID CODE: - -

PRIMARY SCC: - - -

DEQ PROCESS CODE:

SECONDARY SCC: - - -

DEQ USE ONLY

DEQ STACK ID CODE:

DEQ BUILDING ID CODE:

DEQ SEGMENT CODE:

PART A — GENERAL INFORMATION

PROCESS CODE OR DESCRIPTION: ST-6

STACK DESCRIPTION: FINES BIN OUTSIDE

BUILDING DESCRIPTION: NA

DATE INSTALLED OR LAST MODIFIED: 1984

MATERIAL DESCRIPTION: shavgs&sawdust

MATERIAL TRANSFER RATES

MAXIMUM HOURLY TRANSFER RATE (UNITS/HOUR): see

NORMAL HOURLY TRANSFER RATE (UNITS/HOUR): calcs

NORMAL ANNUAL TRANSFER RATE (UNITS/YEAR):

UNITS: BDT

BELT CONVEYOR/VEHICLE TRANSFER

NUMBER OF TRANSFERS:

MOISTURE CONTENT (WEIGHT PERCENT): .

MAXIMUM HOURLY WIND SPEED (MPH):

AVERAGE HOURLY WIND SPEED (MPH):

CONVEYORS ENCLOSED? (Y/N):

IN BUILDING? (Y/N): N

TRANSFERS ENCLOSED? (Y/N):

IN BUILDING? (Y/N):

PNEUMATIC CONVEYOR TRANSFERS

MOISTURE CONTENT WEIGHT PERCENT: NA .

PRIMARY SEPARATOR TYPE:

PRIMARY SEPARATOR PERCENT EFFICIENCY: .

SECONDARY SEPARATOR TYPE:

SECONDARY SEPARATOR PERCENT EFFICIENCY: .

MATERIAL STORAGE DATA

PILE? (Y/N): N

SILO? (Y/N): Y

OTHER STORAGE TYPE DESCRIPTION: STORAGE BIN

STORAGE CAPACITY: 30

STORAGE CAPACITY UNITS: UNITS

PILE LENGTH (FEET): NA

PILE WIDTH (FEET): NA

PILE HEIGHT (FEET): NA

MATERIAL DATA

HAP DESCRIPTION	HAP CAS NUMBER	HAP FRACTION IN MATERIAL BY WEIGHT
NA	- -	. E -
	- -	. E -
	- -	. E -
	- -	. E -
	- -	. E -
	- -	. E -

PART B **SEC. 7** **OPERATING DATA**

PERCENT FUEL CONSUMPTION PER QUARTER DEC-FEB	MAR-MAY	JUN-AUG	SEP-NOV
25	25	25	25

OPERATING SCHEDULE HOURS / DAY	DAYS / WEEK	WEEKS / YEAR
24	6	52

POLLUTION CONTROL EQUIPMENT

PARAMETER	Primary	SECONDARY
TYPE	NA	NA
TYPE CODE (APP A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (INCHES H_2O)	.	.
WET SCRUBBER FLOW (GPM)	.	.
BAGHOUSE AIR/CLOTH RATIO (FPM)	.	.

VENTILATION AND BUILDING / AREA DATA

ENCLOSED? (Y/N)	HOOD TYPE (APP B)	MINIMUM FLOW (ACFM)	% CAPTURE EFFICIENCY
N	NA	NA	NA

BUILDING HEIGHT (FT)	BUILDING LENGTH (FT)	BUILDING WIDTH (FT)
NA	NA	NA

STACK DATA

GROUND ELEVATION (FT)	UTM X COORDINATE (KM)	UTM Y COORDINATE (KM)	STACK TYPE *
2210	506.2	4873.0	05

STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	STACK EXIT DIAMETER (FT)	STACK EXIT GAS FLOW RATE (ACFM)	STACK EXIT TEMPERATURE (°F)
NA	NA	AMBT	AMBT

* 01) DOWNWARD, 02) VERTICAL (UNCOVERED), 03) VERTICAL (COVERED), 04) HORIZONTAL, 05) FUGITIVE

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR **	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (TONS/YR)	REFERENCE
PM		1.0	.NA	see	calcs	NA.	IDEQ
PM 10		.58	.NA	see	calcs	NA.	IDEQ
SO2		NA.	.NA	NA.	NA.	NA.	NA
CO		NA.	.NA	NA.	NA.	NA.	NA
NOX		NA.	.NA	NA.	NA.	NA.	NA
VOC		NA.	.NA	NA.	NA.	NA.	NA
LEAD		.E-	.NA	.E-	.E-	.E-	NA
	- -	.E-	.NA	.E-	.E-	.E-	NA
	- -	.E-	.NA	.E-	.E-	.E-	NA
	- -	.E-	.NA	.E-	.E-	.E-	NA
	- -	.E-	.NA	.E-	.E-	.E-	NA
	- -	.E-	.NA	.E-	.E-	.E-	NA
	- -	.E-	.NA	.E-	.E-	.E-	NA

** In LBS/UNITS. Use same UNITS given in material TRANSFER RATES.

SECTION 7 — SOLID MATERIAL TRANSPORT, HANDLING, AND STORAGE

DEQ USE ONLY

DEQ PLANT ID CODE: - -

PRIMARY SCC: - - -

DEQ PROCESS CODE:

SECONDARY SCC: - - -

DEQ USE ONLY

DEQ STACK ID CODE:

DEQ SEGMENT CODE:

DEQ BUILDING ID CODE:

PART A — GENERAL INFORMATION

PROCESS CODE OR DESCRIPTION: ST-7

STACK DESCRIPTION: CHIP BIN OUTSIDE

BUILDING DESCRIPTION: NA

DATE INSTALLED OR LAST MODIFIED: 1984

MATERIAL DESCRIPTION:

MATERIAL TRANSFER RATES

MAXIMUM HOURLY TRANSFER RATE (UNITS/HOUR)	NORMAL HOURLY TRANSFER RATE (UNITS/HOUR)	NORMAL ANNUAL TRANSFER RATE (UNITS/YEAR)	UNITS
see	calcs		BDT

BELT CONVEYOR/VEHICLE TRANSFER

NUMBER OF TRANSFERS	MOISTURE CONTENT (WEIGHT PERCENT)	MAXIMUM HOURLY WIND SPEED (MPH)	AVERAGE HOURLY WIND SPEED (MPH)	CONVEYORS ENCLOSED? (Y/N)	IN BUILDING? (Y/N)	TRANSFERS ENCLOSED? (Y/N)	IN BUILDING? (Y/N)
1	9.				N		

PNEUMATIC CONVEYOR TRANSFERS

MOISTURE CONTENT WEIGHT PERCENT	PRIMARY SEPARATOR TYPE	PRIMARY SEPARATOR PERCENT EFFICIENCY	SECONDARY SEPARATOR TYPE	SECONDARY SEPARATOR PERCENT EFFICIENCY
NA.		.		.

MATERIAL STORAGE DATA

PILE? (Y/N)	SILO? (Y/N)	OTHER STORAGE TYPE DESCRIPTION	STORAGE CAPACITY	STORAGE CAPACITY UNITS	PILE LENGTH (FEET)	PILE WIDTH (FEET)	PILE HEIGHT (FEET)
N	Y	STORAGE BIN	24	UNITS	NA	NA	NA

MATERIAL DATA

HAP DESCRIPTION	HAP CAS NUMBER	HAP FRACTION IN MATERIAL BY WEIGHT
NA	NA - -	. E -
	- -	. E -
	- -	. E -
	- -	. E -
	- -	. E -
	- -	. E -

PART B **SEC. 7** **OPERATING DATA**

PERCENT FUEL CONSUMPTION PER QUARTER				OPERATING SCHEDULE		
DEC-FEB	MAR-MAY	JUN-AUG	SEP-NOV	HOURS / DAY	DAYS / WEEK	WEEKS / YEAR
25	25	25	25	24	6	52

POLLUTION CONTROL EQUIPMENT

PARAMETER	Primary	SECONDARY
TYPE	NA	NA
TYPE CODE (APP A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (INCHES H_2O)	.	.
WET SCRUBBER FLOW (GPM)	.	.
BAGHOUSE AIR/CLOTH RATIO (FPM)	.	.

VENTILATION AND BUILDING / AREA DATA

ENCLOSED? (Y/N)	HOOD TYPE (APP B)	MINIMUM FLOW (ACFM)	% CAPTURE EFFICIENCY
N	NA	NA	NA

BUILDING HEIGHT (FT)	BUILDING LENGTH (FT)	BUILDING WIDTH (FT)
NA	NA	NA

STACK DATA

GROUND ELEVATION (FT)	UTM X COORDINATE (KM)	UTM Y COORDINATE (KM)	STACK TYPE *
2210	506.2	4873.0	05

STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	STACK EXIT DIAMETER (FT)	STACK EXIT GAS FLOW RATE (ACFM)	STACK EXIT TEMPERATURE (°F)
NA	NA	AMBT	AMBT

* 01) DOWNWARD, 02) VERTICAL (UNCOVERED), 03) VERTICAL (COVERED), 04) HORIZONTAL, 05) FUGITIVE

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR **	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (TONS/YR)	REFERENCE
PM		1.0	NA	see	calcs	NA.	IDEQ
PM 10		.58	NA	see	calcs	NA.	IDEQ
SO2		NA.	NA	NA.	NA.	NA.	NA
CO		NA.	NA	NA.	NA.	NA.	NA
NOX		NA.	NA	NA.	NA.	NA.	NA
VOC		NA.	NA	NA.	NA.	NA.	NA
LEAD		.E-	NA	.E-	.E-	.E-	NA
	- -	.E-	NA	.E-	.E-	.E-	NA
	- -	.E-	NA	.E-	.E-	.E-	NA
	- -	.E-	NA	.E-	.E-	.E-	NA
	- -	.E-	NA	.E-	.E-	.E-	NA
	- -	.E-	NA	.E-	.E-	.E-	NA

** In LBS/UNITS. Use same UNITS given in material TRANSFER RATES.

SECTION 7 — SOLID MATERIAL TRANSPORT, HANDLING, AND STORAGE

DEQ USE ONLY

DEQ PLANT ID CODE: - -

PRIMARY SCC: - - -

DEQ PROCESS CODE:

SECONDARY SCC: - - -

DEQ USE ONLY

DEQ STACK ID CODE:

DEQ SEGMENT CODE:

DEQ BUILDING ID CODE:

PART A — GENERAL INFORMATION

PROCESS CODE OR DESCRIPTION: ST-8

STACK DESCRIPTION: CHIPS BIN OUTSIDE

BUILDING DESCRIPTION: NA

DATE INSTALLED OR LAST MODIFIED: 1984

MATERIAL DESCRIPTION: shav&sawdust

MATERIAL TRANSFER RATES

MAXIMUM HOURLY TRANSFER RATE (UNITS/HOUR): see

NORMAL HOURLY TRANSFER RATE (UNITS/HOUR): calcs

NORMAL ANNUAL TRANSFER RATE (UNITS/YEAR):

UNITS: BDT

BELT CONVEYOR/VEHICLE TRANSFER

NUMBER OF TRANSFERS:

MOISTURE CONTENT (WEIGHT PERCENT): .

MAXIMUM HOURLY WIND SPEED (MPH):

AVERAGE HOURLY WIND SPEED (MPH):

CONVEYORS ENCLOSED? (Y/N):

IN BUILDING? (Y/N): N

TRANSFERS ENCLOSED? (Y/N):

IN BUILDING? (Y/N):

PNEUMATIC CONVEYOR TRANSFERS

MOISTURE CONTENT WEIGHT PERCENT: NA .

PRIMARY SEPARATOR TYPE:

PRIMARY SEPARATOR PERCENT EFFICIENCY: .

SECONDARY SEPARATOR TYPE:

SECONDARY SEPARATOR PERCENT EFFICIENCY: .

MATERIAL STORAGE DATA

PILE? (Y/N): N

SILO? (Y/N): Y

OTHER STORAGE TYPE DESCRIPTION: STORAGE BIN

STORAGE CAPACITY: 24

STORAGE CAPACITY UNITS: UNITS

PILE LENGTH (FEET): NA

PILE WIDTH (FEET): NA

PILE HEIGHT (FEET): NA

MATERIAL DATA

HAP DESCRIPTION	HAP CAS NUMBER	HAP FRACTION IN MATERIAL BY WEIGHT
NA	- -	. E -
	- -	. E -
	- -	. E -
	- -	. E -
	- -	. E -
	- -	. E -

PART B **SEC. 7** **OPERATING DATA**

PERCENT FUEL CONSUMPTION PER QUARTER				OPERATING SCHEDULE		
DEC-FEB	MAR-MAY	JUN-AUG	SEP-NOV	HOURS / DAY	DAYS / WEEK	WEEKS / YEAR
25	25	25	25	24	6	52

POLLUTION CONTROL EQUIPMENT

PARAMETER	Primary	SECONDARY
TYPE	NA	NA
TYPE CODE (APP A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (INCHES H_2O)	.	.
WET SCRUBBER FLOW (GPM)	.	.
BAGHOUSE AIR/CLOTH RATIO (FPM)	.	.

VENTILATION AND BUILDING / AREA DATA

ENCLOSED? (Y/N)	HOOD TYPE (APP B)	MINIMUM FLOW (ACFM)	% CAPTURE EFFICIENCY
N	NA	NA	NA

BUILDING HEIGHT (FT)	BUILDING LENGTH (FT)	BUILDING WIDTH (FT)
NA	NA	NA

STACK DATA

GROUND ELEVATION (FT)	UTM X COORDINATE (KM)	UTM Y COORDINATE (KM)	STACK TYPE *
2210	506.2	4873.0	05

STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	STACK EXIT DIAMETER (FT)	STACK EXIT GAS FLOW RATE (ACFM)	STACK EXIT TEMPERATURE (°F)
NA	NA	AMBT	AMBT

* 01) DOWNWARD, 02) VERTICAL (UNCOVERED), 03) VERTICAL (COVERED), 04) HORIZONTAL, 05) FUGITIVE

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR **	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (TONS/YR)	REFERENCE
PM		1.0	.NA	see	calcs	NA.	IDEQ
PM 10		.58	.NA	see	calcs	NA.	IDEQ
SO2		NA.	.NA	NA.	NA.	NA.	NA
CO		NA.	.NA	NA.	NA.	NA.	NA
NOX		NA.	.NA	NA.	NA.	NA.	NA
VOC		NA.	.NA	NA.	NA.	NA.	NA
LEAD		.E-	.NA	.E-	.E-	.E-	NA
	- -	.E-	.NA	.E-	.E-	.E-	NA
	- -	.E-	.NA	.E-	.E-	.E-	NA
	- -	.E-	.NA	.E-	.E-	.E-	NA
	- -	.E-	.NA	.E-	.E-	.E-	NA
	- -	.E-	.NA	.E-	.E-	.E-	NA
	- -	.E-	.NA	.E-	.E-	.E-	NA

** In LBS/UNITS. Use same UNITS given in material TRANSFER RATES.

SECTION 7 — SOLID MATERIAL TRANSPORT, HANDLING, AND STORAGE

DEQ USE ONLY

DEQ PLANT ID CODE	DEQ PROCESS CODE	DEQ STACK ID CODE	DEQ BUILDING ID CODE
- -			
PRIMARY SCC	SECONDARY SCC	DEQ SEGMENT CODE	
- - -	- - -		

PART A — GENERAL INFORMATION

PROCESS CODE OR DESCRIPTION	STACK DESCRIPTION	BUILDING DESCRIPTION
TR-1	TRANSFER TO TRUCK	NA
DATE INSTALLED OR LAST MODIFIED	MATERIAL DESCRIPTION	
1970	SHAVINGS/SAWDST	

MATERIAL TRANSFER RATES

MAXIMUM HOURLY TRANSFER RATE (UNITS/HOUR)	NORMAL HOURLY TRANSFER RATE (UNITS/HOUR)	NORMAL ANNUAL TRANSFER RATE (UNITS/YEAR)	UNITS
see	calcs		BDT

BELT CONVEYOR/VEHICLE TRANSFER

NUMBER OF TRANSFERS	MOISTURE CONTENT (WEIGHT PERCENT)	MAXIMUM HOURLY WIND SPEED (MPH)	AVERAGE HOURLY WIND SPEED (MPH)	CONVEYORS ENCLOSED? (Y/N)	IN BUILDING? (Y/N)	TRANSFERS ENCLOSED? (Y/N)	IN BUILDING? (Y/N)
	.				N		

PNEUMATIC CONVEYOR TRANSFERS

MOISTURE CONTENT WEIGHT PERCENT	PRIMARY SEPARATOR TYPE	PRIMARY SEPARATOR PERCENT EFFICIENCY	SECONDARY SEPARATOR TYPE	SECONDARY SEPARATOR PERCENT EFFICIENCY
NA.		.		.

MATERIAL STORAGE DATA

PILE? (Y/N)	SILO? (Y/N)	OTHER STORAGE TYPE DESCRIPTION	STORAGE CAPACITY	STORAGE CAPACITY UNITS	PILE LENGTH (FEET)	PILE WIDTH (FEET)	PILE HEIGHT (FEET)
		NA			NA	NA	NA

MATERIAL DATA

HAP DESCRIPTION	HAP CAS NUMBER	HAP FRACTION IN MATERIAL BY WEIGHT
NA	NA - -	. E -
	- -	. E -
	- -	. E -
	- -	. E -
	- -	. E -
	- -	. E -

PART B **SEC. 7** **OPERATING DATA**

PERCENT FUEL CONSUMPTION PER QUARTER DEC-FEB	MAR-MAY	JUN-AUG	SEP-NOV
25	25	25	25

OPERATING SCHEDULE HOURS / DAY	DAYS / WEEK	WEEKS / YEAR
16	6	52

POLLUTION CONTROL EQUIPMENT

PARAMETER	Primary	SECONDARY
TYPE	NA	NA
TYPE CODE (APP A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (INCHES H_2O)	.	.
WET SCRUBBER FLOW (GPM)	.	.
BAGHOUSE AIR/CLOTH RATIO (FPM)	.	.

VENTILATION AND BUILDING / AREA DATA

ENCLOSED? (Y/N)	HOOD TYPE (APP B)	MINIMUM FLOW (ACFM)	% CAPTURE EFFICIENCY
N	NA	NA	NA

BUILDING HEIGHT (FT)	BUILDING LENGTH (FT)	BUILDING WIDTH (FT)
NA	NA	NA

STACK DATA

GROUND ELEVATION (FT)	UTM X COORDINATE (KM)	UTM Y COORDINATE (KM)	STACK TYPE *
2210	506.2	4873.0	05

STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	STACK EXIT DIAMETER (FT)	STACK EXIT GAS FLOW RATE (ACFM)	STACK EXIT TEMPERATURE (°F)
NA	NA	AMBT	AMBT

* 01) DOWNWARD, 02) VERTICAL (UNCOVERED), 03) VERTICAL (COVERED), 04) HORIZONTAL, 05) FUGITIVE

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR **	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (TONS/YR)	REFERENCE
PM		2.0	see	calcs			IDEQ
PM 10		1.2	see	calcs			IDEQ
SO2		NA.	.NA	NA.	NA.	NA.	NA
CO		NA.	.NA	NA.	NA.	NA.	NA
NOX		NA.	.NA	NA.	NA.	NA.	NA
VOC		NA.	.NA	NA.	NA.	NA.	NA
LEAD		.E-	.NA	.E-	.E-	.E-	NA
	- -	.E-	.NA	.E-	.E-	.E-	NA
	- -	.E-	.NA	.E-	.E-	.E-	NA
	- -	.E-	.NA	.E-	.E-	.E-	NA
	- -	.E-	.NA	.E-	.E-	.E-	NA
	- -	.E-	.NA	.E-	.E-	.E-	NA

** In LBS/UNITS. Use same UNITS given in material TRANSFER RATES.

SECTION 7 — SOLID MATERIAL TRANSPORT, HANDLING, AND STORAGE

DEQ USE ONLY

DEQ PLANT ID CODE	DEQ PROCESS CODE	DEQ STACK ID CODE	DEQ BUILDING ID CODE
- -			

PRIMARY SCC	SECONDARY SCC	DEQ SEGMENT CODE
- - -	- - -	

PART A — GENERAL INFORMATION

PROCESS CODE OR DESCRIPTION	STACK DESCRIPTION	BUILDING DESCRIPTION
TR-4	TRANSFER FROM TRUCK	NA

DATE INSTALLED OR LAST MODIFIED	MATERIAL DESCRIPTION
1996	shvs&sawdust

MATERIAL TRANSFER RATES

MAXIMUM HOURLY TRANSFER RATE (UNITS/HOUR)	NORMAL HOURLY TRANSFER RATE (UNITS/HOUR)	NORMAL ANNUAL TRANSFER RATE (UNITS/YEAR)	UNITS
see	calcs		BDT

BELT CONVEYOR/VEHICLE TRANSFER

NUMBER OF TRANSFERS	MOISTURE CONTENT (WEIGHT PERCENT)	MAXIMUM HOURLY WIND SPEED (MPH)	AVERAGE HOURLY WIND SPEED (MPH)	CONVEYORS ENCLOSED? (Y/N)	IN BUILDING? (Y/N)	TRANSFERS ENCLOSED? (Y/N)	IN BUILDING? (Y/N)
	.				N		

PNEUMATIC CONVEYOR TRANSFERS

MOISTURE CONTENT WEIGHT PERCENT	PRIMARY SEPARATOR TYPE	PRIMARY SEPARATOR PERCENT EFFICIENCY	SECONDARY SEPARATOR TYPE	SECONDARY SEPARATOR PERCENT EFFICIENCY
NA.		.		.

MATERIAL STORAGE DATA

PILE? (Y/N)	SILO? (Y/N)	OTHER STORAGE TYPE DESCRIPTION	STORAGE CAPACITY	STORAGE CAPACITY UNITS	PILE LENGTH (FEET)	PILE WIDTH (FEET)	PILE HEIGHT (FEET)
		NA			NA	NA	NA

MATERIAL DATA

HAP DESCRIPTION	HAP CAS NUMBER	HAP FRACTION IN MATERIAL BY WEIGHT
NA	NA - -	. E -
	- -	. E -
	- -	. E -
	- -	. E -
	- -	. E -
	- -	. E -

PART B **SEC. 7** **OPERATING DATA**

PERCENT FUEL CONSUMPTION PER QUARTER DEC-FEB	MAR-MAY	JUN-AUG	SEP-NOV
25	25	25	25

OPERATING SCHEDULE HOURS / DAY	DAYS / WEEK	WEEKS / YEAR
16	6	52

POLLUTION CONTROL EQUIPMENT

PARAMETER	Primary	SECONDARY
TYPE	NA	NA
TYPE CODE (APP A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (INCHES H_2O)	.	.
WET SCRUBBER FLOW (GPM)	.	.
BAGHOUSE AIR/CLOTH RATIO (FPM)	.	.

VENTILATION AND BUILDING / AREA DATA

ENCLOSED? (Y/N)	HOOD TYPE (APP B)	MINIMUM FLOW (ACFM)	% CAPTURE EFFICIENCY
N	NA	NA	NA

BUILDING HEIGHT (FT)	BUILDING LENGTH (FT)	BUILDING WIDTH (FT)
NA	NA	NA

STACK DATA

GROUND ELEVATION (FT)	UTM X COORDINATE (KM)	UTM Y COORDINATE (KM)	STACK TYPE *
2210	506.2	4873.0	05

STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	STACK EXIT DIAMETER (FT)	STACK EXIT GAS FLOW RATE (ACFM)	STACK EXIT TEMPERATURE (°F)
NA	NA	AMBT	AMBT

* 01) DOWNWARD, 02) VERTICAL (UNCOVERED), 03) VERTICAL (COVERED), 04) HORIZONTAL, 05) FUGITIVE

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR **	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (TONS/YR)	REFERENCE
PM		2.0	see	calcs			IDEQ
PM 10		1.2	see	calcs			IDEQ
SO2		NA.	.NA	NA.	NA.	NA.	NA
CO		NA.	.NA	NA.	NA.	NA.	NA
NOX		NA.	.NA	NA.	NA.	NA.	NA
VOC		NA.	.NA	NA.	NA.	NA.	NA
LEAD		.E-	.NA	.E-	.E-	.E-	NA
	- -	.E-	.NA	.E-	.E-	.E-	NA
	- -	.E-	.NA	.E-	.E-	.E-	NA
	- -	.E-	.NA	.E-	.E-	.E-	NA
	- -	.E-	.NA	.E-	.E-	.E-	NA
	- -	.E-	.NA	.E-	.E-	.E-	NA

** In LBS/UNITS. Use same UNITS given in material TRANSFER RATES.

SECTION 7 — SOLID MATERIAL TRANSPORT, HANDLING, AND STORAGE

DEQ USE ONLY

DEQ PLANT ID CODE	DEQ PROCESS CODE	DEQ STACK ID CODE	DEQ BUILDING ID CODE
- -			
PRIMARY SCC	SECONDARY SCC	DEQ SEGMENT CODE	
- - -	- - -		

PART A — GENERAL INFORMATION

PROCESS CODE OR DESCRIPTION	STACK DESCRIPTION	BUILDING DESCRIPTION
TR-5	bin to truck trnsfer	NA

DATE INSTALLED OR LAST MODIFIED	MATERIAL DESCRIPTION
1992	shav&sawdust

MATERIAL TRANSFER RATES

MAXIMUM HOURLY TRANSFER RATE (UNITS/HOUR)	NORMAL HOURLY TRANSFER RATE (UNITS/HOUR)	NORMAL ANNUAL TRANSFER RATE (UNITS/YEAR)	UNITS
see	calcs		BDT

BELT CONVEYOR/VEHICLE TRANSFER

NUMBER OF TRANSFERS	MOISTURE CONTENT (WEIGHT PERCENT)	MAXIMUM HOURLY WIND SPEED (MPH)	AVERAGE HOURLY WIND SPEED (MPH)	CONVEYORS ENCLOSED? (Y/N)	IN BUILDING? (Y/N)	TRANSFERS ENCLOSED? (Y/N)	IN BUILDING? (Y/N)
	.				N		

PNEUMATIC CONVEYOR TRANSFERS

MOISTURE CONTENT WEIGHT PERCENT	PRIMARY SEPARATOR TYPE	PRIMARY SEPARATOR PERCENT EFFICIENCY	SECONDARY SEPARATOR TYPE	SECONDARY SEPARATOR PERCENT EFFICIENCY
NA .		.		.

MATERIAL STORAGE DATA

PILE? (Y/N)	SILO? (Y/N)	OTHER STORAGE TYPE DESCRIPTION	STORAGE CAPACITY	STORAGE CAPACITY UNITS	PILE LENGTH (FEET)	PILE WIDTH (FEET)	PILE HEIGHT (FEET)

MATERIAL DATA

HAP DESCRIPTION	HAP CAS NUMBER	HAP FRACTION IN MATERIAL BY WEIGHT
NA	NA	. E-
	- -	. E-
	- -	. E-
	- -	. E-
	- -	. E-
	- -	. E-

PART B **SEC. 7** **OPERATING DATA**

PERCENT FUEL CONSUMPTION PER QUARTER DEC-FEB	MAR-MAY	JUN-AUG	SEP-NOV
25	25	25	25

OPERATING SCHEDULE HOURS / DAY	DAYS / WEEK	WEEKS / YEAR
24	6	52

POLLUTION CONTROL EQUIPMENT

PARAMETER	Primary	SECONDARY
TYPE	NA	NA
TYPE CODE (APP A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (INCHES H_2O)	.	.
WET SCRUBBER FLOW (GPM)	.	.
BAGHOUSE AIR/CLOTH RATIO (FPM)	.	.

VENTILATION AND BUILDING / AREA DATA

ENCLOSED? (Y/N)	HOOD TYPE (APP B)	MINIMUM FLOW (ACFM)	% CAPTURE EFFICIENCY
N	NA	NA	NA

BUILDING HEIGHT (FT)	BUILDING LENGTH (FT)	BUILDING WIDTH (FT)
NA	NA	NA

STACK DATA

GROUND ELEVATION (FT)	UTM X COORDINATE (KM)	UTM Y COORDINATE (KM)	STACK TYPE *
2210	506.2	4873.0	05

STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	STACK EXIT DIAMETER (FT)	STACK EXIT GAS FLOW RATE (ACFM)	STACK EXIT TEMPERATURE (°F)
NA	NA	AMBT	AMBT

* 01) DOWNWARD, 02) VERTICAL (UNCOVERED), 03) VERTICAL (COVERED), 04) HORIZONTAL, 05) FUGITIVE

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR **	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (TONS/YR)	REFERENCE
PM		1.0	NA	see	calcs	NA.	IDEQ
PM 10		.58	NA	see	calcs	NA.	IDEQ
SO2		NA.	NA	NA.	NA.	NA.	NA
CO		NA.	NA	NA.	NA.	NA.	NA
NOX		NA.	NA	NA.	NA.	NA.	NA
VOC		NA.	NA	NA.	NA.	NA.	NA
LEAD		.E-	NA	.E-	.E-	.E-	NA
	- -	.E-	NA	.E-	.E-	.E-	NA
	- -	.E-	NA	.E-	.E-	.E-	NA
	- -	.E-	NA	.E-	.E-	.E-	NA
	- -	.E-	NA	.E-	.E-	.E-	NA
	- -	.E-	NA	.E-	.E-	.E-	NA

** In LBS/UNITS. Use same UNITS given in material TRANSFER RATES.

SECTION 7 — SOLID MATERIAL TRANSPORT, HANDLING, AND STORAGE

DEQ USE ONLY

DEQ PLANT ID CODE: - -

PRIMARY SCC: - - -

DEQ PROCESS CODE:

SECONDARY SCC: - - -

DEQ USE ONLY

DEQ STACK ID CODE:

DEQ SEGMENT CODE:

DEQ BUILDING ID CODE:

PART A — GENERAL INFORMATION

PROCESS CODE OR DESCRIPTION: TR-6

STACK DESCRIPTION: TRANS CHIPS TO TRUCK

BUILDING DESCRIPTION: NA

DATE INSTALLED OR LAST MODIFIED: 1984

MATERIAL DESCRIPTION:

MATERIAL TRANSFER RATES

MAXIMUM HOURLY TRANSFER RATE (UNITS/HOUR): see

NORMAL HOURLY TRANSFER RATE (UNITS/HOUR): calcs

NORMAL ANNUAL TRANSFER RATE (UNITS/YEAR):

UNITS: BDT

BELT CONVEYOR/VEHICLE TRANSFER

NUMBER OF TRANSFERS:

MOISTURE CONTENT (WEIGHT PERCENT): .

MAXIMUM HOURLY WIND SPEED (MPH):

AVERAGE HOURLY WIND SPEED (MPH):

CONVEYORS ENCLOSED? (Y/N):

IN BUILDING? (Y/N): N

TRANSFERS ENCLOSED? (Y/N):

IN BUILDING? (Y/N):

PNEUMATIC CONVEYOR TRANSFERS

MOISTURE CONTENT WEIGHT PERCENT: .

PRIMARY SEPARATOR TYPE:

PRIMARY SEPARATOR PERCENT EFFICIENCY: .

SECONDARY SEPARATOR TYPE:

SECONDARY SEPARATOR PERCENT EFFICIENCY: .

MATERIAL STORAGE DATA

PILE? (Y/N):

SILO? (Y/N):

OTHER STORAGE TYPE DESCRIPTION: NA

STORAGE CAPACITY:

STORAGE CAPACITY UNITS:

PILE LENGTH (FEET): NA

PILE WIDTH (FEET): NA

PILE HEIGHT (FEET): NA

MATERIAL DATA

HAP DESCRIPTION	HAP CAS NUMBER	HAP FRACTION IN MATERIAL BY WEIGHT
NA	NA	. E-
	- -	. E-
	- -	. E-
	- -	. E-
	- -	. E-
	- -	. E-
	- -	. E-

PART B **SEC. 7** **OPERATING DATA**

PERCENT FUEL CONSUMPTION PER QUARTER				OPERATING SCHEDULE		
DEC-FEB	MAR-MAY	JUN-AUG	SEP-NOV	HOURS / DAY	DAYS / WEEK	WEEKS / YEAR
25	25	25	25	16	6	52

POLLUTION CONTROL EQUIPMENT

PARAMETER	Primary	SECONDARY
TYPE	NA	NA
TYPE CODE (APP A)		
MANUFACTURER		
MODEL NUMBER		
PRESSURE DROP (INCHES H_2O)	.	.
WET SCRUBBER FLOW (GPM)	.	.
BAGHOUSE AIR/CLOTH RATIO (FPM)	.	.

VENTILATION AND BUILDING / AREA DATA

ENCLOSED? (Y/N)	HOOD TYPE (APP B)	MINIMUM FLOW (ACFM)	% CAPTURE EFFICIENCY
N	NA	NA	NA

BUILDING HEIGHT (FT)	BUILDING LENGTH (FT)	BUILDING WIDTH (FT)
NA	NA	NA

STACK DATA

GROUND ELEVATION (FT)	UTM X COORDINATE (KM)	UTM Y COORDINATE (KM)	STACK TYPE *
2210	506.2	4873.0	05

STACK EXIT HEIGHT FROM GROUND LEVEL (FT)	STACK EXIT DIAMETER (FT)	STACK EXIT GAS FLOW RATE (ACFM)	STACK EXIT TEMPERATURE (°F)
NA	NA	AMBT	AMBT

* 01) DOWNWARD, 02) VERTICAL (UNCOVERED), 03) VERTICAL (COVERED), 04) HORIZONTAL, 05) FUGITIVE

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR **	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (TONS/YR)	REFERENCE
PM		2.0	see	calcs			IDEQ
PM 10		1.2	see	calcs			IDEQ
SO2		NA.	.NA	NA.	NA.	NA.	NA
CO		NA.	.NA	NA.	NA.	NA.	NA
NOX		NA.	.NA	NA.	NA.	NA.	NA
VOC		NA.	.NA	NA.	NA.	NA.	NA
LEAD		.E-	.NA	.E-	.E-	.E-	NA
	- -	.E-	.NA	.E-	.E-	.E-	NA
	- -	.E-	.NA	.E-	.E-	.E-	NA
	- -	.E-	.NA	.E-	.E-	.E-	NA
	- -	.E-	.NA	.E-	.E-	.E-	NA
	- -	.E-	.NA	.E-	.E-	.E-	NA

** In LBS/UNITS. Use same UNITS given in material TRANSFER RATES.

SECTION 8 — FUGITIVE ROAD DUST SOURCES

DEQ USE ONLY

DEQ PLANT ID CODE	DEQ PROCESS CODE	DEQ STACK ID CODE	DEQ BUILDING ID CODE
- -			

PRIMARY SCC	SECONDARY SCC	DEQ SEGMENT CODE
- - -	- - -	

PART A — ROAD IDENTIFICATION AND LOCATION

ROAD DESCRIPTION	BEGINNING COORDINATES UTM-X (KM)	BEGINNING COORDINATES UTM-Y (KM)	END COORDINATES UTM-X (KM)	END COORDINATES UTM-Y (KM)
VEHICHLE TRAVEL	.	.	.	.

LENGTH (FEET)	WIDTH (FEET)	PAVED? (Y/N)
.	.	SEE MAP - BOTH

DATA FOR ALL ROADS - PAVED AND UNPAVED

VEHICLE DESCRIPTION	NUMBER OF ROUNDTRIPS PER DAY	OR	VEHICLE MILES TRAVELLED PER DAY	NUMBER OF DAYS PER YEAR USED	AVERAGE VEHICLE SPEED (MPH)	SURFACE SILT CONTENT (% WEIGHT)
EMPLOYEE PARKING			.			
DELIVERY TRUCKS	30.		.			
	.		.			
	.		.			

DATA FOR ALL ROADS - PAVED AND UNPAVED

VEHICLE DESCRIPTION	VEHICLE EMPTY WEIGHT (TONS)	VEHICLE FULL WEIGHT (TONS)
	.	.
	.	.
	.	.
	.	.

DATA: UNPAVED ROADS

NUMBER OF WHEELS PER VEHICLE	NUMBER OF DAYS > 0.01 INCHES PRECIPITATION

DATA: PAVED ROADS

NUMBER OF LANES	INDUSTRIAL AUGMENTATION FACTOR	DUST LOADING (LB/MI)
	.	.

ROAD DUST CHEMICALS

HAP DESCRIPTION	HAP CAS NUMBER	HAP FRACTION IN ROAD DUST BY WEIGHT
NA	- -	. E -
	- -	. E -
	- -	. E -
	- -	. E -
	- -	. E -

PART B SEC. 8

OPERATING DATA

OPERATIONS PER QUARTER DEC-FEB	MAR-MAY	JUN-AUG	SEP-NOV
25	25	25	25

OPERATING SCHEDULE HOURS/DAY	DAYS/WEEK	WEEKS/YEAR
13.	5.	52.

FUGITIVE DUST CONTROL DATA

PARAMETER	PRIMARY
CONTROL DESCRIPTION	Oil sealer
CONTROL CODE (APPENDIX A)	
MINIMUM DAILY APPLICATIONS OF CONTROL	
MAXIMUM DAILY APPLICATIONS OF CONTROL	
AVERAGE ANNUAL APPLICATIONS OF CONTROL	2
AMOUNT APPLIED (UNITS/APPLICATION)	.
UNITS FOR APPLICATION AMOUNT	

AIR POLLUTANT EMISSIONS

POLLUTANT	CAS NUMBER	EMISSION FACTOR **	PERCENT CONTROL EFFICIENCY	ESTIMATED OR MEASURED EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (LBS/HR)	ALLOWABLE EMISSIONS (TONS/YR)	REFERENCE
PM		ESTM.	.	.	.	2.	ESTM
PM 10		ESTM.	.	.	.	2.	ESTM
LEAD		0.0E-	0.0	0.0E-	0.0E-	0.0E-	NA
	-	E-	.	E-	E-	E-	
	-	E-	.	E-	E-	E-	
	-	E-	.	E-	E-	E-	
	-	E-	.	E-	E-	E-	
	-	E-	.	E-	E-	E-	
	-	E-	.	E-	E-	E-	

** In LBS/UNITS. Use UNITS of Vehicle Miles Travelled (VMT)

Woodgrain Millwork
Balancing Act

RED-> basic assumptions that can change.. and this is the cell to do it.

LUMBER THROUGHPUT

2001	Blocks	10,125	mbf
	Lumber	38,000	mbf (25->bldg 5, 13->bldg 9)
Permit	Blocks	11,000	mbf
	Lumber	42,000	mbf

CONVERSION FACTORS

GT= BDT/(1-mc)
BDT = GT x (1-mc)

0.09 Assume 9% mc

33 g lb/cft woc (radiata is heavier than ponderosa)

1.25 BDT/1,000 mbf

Bailing operation

	362,175	bails
	42	lb/bail
	15,211,350	lbs shipped
	2,000	lb/ton
	7,606	g tons shipped
	0.91	conversion to BDT
(3)	**6,921**	**TOTAL animal bedding shipped**

In the future:

There will be all fines/sawdust, and no chips.
25% of waste will be bailed, remaining 75% (fines) sold.

KNOWN DATA

In 2001:

	14,975.61	G tons	sawdust sold to BCC
	(1,062.60)	G tons	double counted because of changes in rptg
	13,913.01	G tons	sawdust sold
	13,913.01	G tons	sawdust sold (from line above)
	5,782.35	G tons	fines produced (from rpt)
	19,695.36	G tons	TOTAL fines and sawdust produced
	19,695.36	G tons	(from the line above)
	0.91	mc conversion	
(1)	**17,922.78**	**BDT**	**TOTAL fines and sawdust sold**
	6,375.60	G tons	TOTAL Chips sold
	0.91	mc conversion	
(2)	**5,802**	**BDT**	**TOTAL Chips sold**

10,125 mbf of blocks into the mill

	3,038	mbf	30% of mbf are core	
			213	7% becomes jointer waste
			1.25	conversion factor to BDT
(A)			**266**	**BDT jointer waste**
	7,088	bd ft	70% of mbf are clear	
			496	7% becomes jointer waste
			1.25	conversion factor to BDT
(B)			**621**	**BDT jointer waste**
			1,276	18% becomes moulder waste including rejects and shavings
			1.25	conversion factor to BDT
(C)			**1,596**	**BDT moulder waste**

38,000 mbf of lumber into the mill

	10,640	mbf	28% ends up as fines (rip and cutline waste)
	1.25	conversion factor to BDT	
(D)	**13,313**	**BDT**	**of fines**
	6,635	mbf	**Material that is cut and moulded**
	1,194		18% becomes moulder waste including rejects and shavings
	1.25	conversion factor to BDT	
	1,494	**BDT**	**moulder waste**

25,500	mbf	**Material that is cut, moulded and Fingerjointed**
4,590		18% becomes moulder waste including rejects and shavings
1,785		7% becomes jointer waste
1.25	conversion factor to BDT	
7,977	**BDT**	**moulder and FJ waste**
2,660		7% becomes jointer waste
1.25	conversion factor to BDT	
3,328	**BDT**	**jointer waste**

1,400 mbf of purchases from White City

70% of mbf are moulded updated 12/12/02

980	mbf	**Material that is moulded**
176		18% becomes moulder waste including rejects and shavings
1.25	conversion factor to BDT	
221	**BDT**	**moulder waste**

3,800 mbf of compsite material (MDF)

85% of mbf are moulded updated 12/12/02

3,230	mbf	**Material that is moulded**
581		18% becomes moulder waste including rejects and shavings
1.25	conversion factor to BDT	
727	**BDT**	**moulder waste**

The Balancing Act:

Scene One **Try to get assumed amount produced to match actual amount shipped.**

shipped (1)	17,923	BDT	TOTAL fines and sawdust sold
shipped (2)	5,802	BDT	TOTAL Chips sold
shipped (3)	6,921	BDT	TOTAL animal bedding shipped
	30,646	BDT	**Wastes Shipped off site.**

produced (A)	266	BDT	jointer waste
produced (B)	621	BDT	jointer waste
produced (C)	1,596	BDT	moulder waste
produced (D)	13,313	BDT	of fines
	1,494	BDT	moulder waste
	7,977	BDT	moulder and FJ waste
	3,328	BDT	jointer waste
	221	BDT	moulder waste
	727	BDT	moulder waste
	29,544	BDT	**Waste products produced.**
	204	BDT	**Nampa material to be hogged**
	1,052	BDT	**Purchased shavings and fines**
	30,800	BDT	**Total waste products produced and purchased**

30,800 BDT Waste products produced.

SHOULD BE CLOSE TO

30,646 BDT Wastes Shipped off site.

AND THEN MOVING ON TO SCENCE 2

Scene Two **How much of that material comes out of each building.**

Assume

BLDG 5		BLDG 9		OUTDSIDE PURCHASES	
60%	of total blocks	40%	of total blocks	1,400 mbf	from white city
11,000	mbf blocks into site	11,000	mbf blocks into site	3,600 mbf	composite material
6,600	mbf blocks into bldg	4,400	mbf blocks into bldg	5,000 mbf	
28600.0	mbf lumber into bldg	13400.0	mbf lumber into bldg	1.25	conversion factor
35,200	total stock	17,800	total stock	6,256 BDT	
1.25	conversion factor	1.25	conversion factor		
44,044	BDT of stock	22,272	BDT of stock		
10,736	Rip & Cutline Waste	5,030	Rip & Cutline Waste		
33,308	BDT After Rip and Cut	17,242	BDT After Rip and Cut		
66.0%	Stays in bldg 5	66.0%	Goes to bldg 5	72.0%	Goes to bldg 5
6.0%	Goes to bldg 3	6.0%	Goes to bldg 3	20.0%	Goes to bldg 3
13.0%	Goes to Bldg 4	13.0%	Goes to Bldg 4	8.0%	Goes to Bldg 4
15.0%	Goes to Nampa	15.0%	Goes to Nampa	0.0%	Goes to Nampa
100.0%		100.0%		100.0%	

in BDT terms:

21,983	Stays in bldg 5 @ 28% waste	11,380	Goes to bldg 5@28% waste	4,505	Goes to bldg 5@28% waste
1,998	Goes to bldg 3 @18% waste	1,035	Goes to bldg 3 @18% waste	1,251	Goes to bldg 3 @18% waste
4,330	Goes to Bldg 4 @18% waste	2,241	Goes to Bldg 4 @18% waste	501	Goes to Bldg 4 @%0 waste
4,996	Goes to Nampa @0% waste	2,586	Goes to Nampa @0% waste	0	Goes to Nampa @0% waste
33,308	BDT stock accounted for	17,242	BDT stock accounted for	6,256	BDT stock accounted for

by indiv bldgs:

BLDG 5		BLDG 3		Bldg 4	
6,155	BDT waste	360	BDT	779	BDT
3,186	BDT waste	186	BDT waste	403	BDT
1,261	BDT waste	225	BDT waste	0	BDT
10,603	BDT waste	771	BDT	1,183	BDT

5,030	BDT waste from bldg 9
21,339	BDT waste from bldg 5
771	BDT waste from bldg 3
1,183	BDT waste from bldg 4
28,323	**BDT waste generated from site total**
204	**BDT Nampa material to be hogged**
1,052	**BDT Purchased shavings and fines**

29,579 BDT waste generated from site total

SHOULD BE CLOSE TO EARLIER CALCS OF

30,800 Waste products produced.

Woodgrain Millwork
Balancing Act

RED-> basic assumptions that can change.. and this is the cell to do it.

LUMBER THROUGHPUT

2001	Blocks	10,125	mbf
	Lumber	38,000	mbf (25->bldg 5, 13->bldg 9)
Permit	Blocks	11,000	mbf
	Lumber	42,000	mbf

CONVERSION FACTORS

GT= BDT/(1-mc)
BDT = GT x (1-mc)

0.09 Assume 9% mc

33 g lb/cft woc (radiata is heavier than ponderosa)

1.25 BDT/1,000 mbf

Bailing operation

	362,175	bails
	42	lb/bail
	15,211,350	lbs shipped
	2,000	lb/ton
	7,606	g tons shipped
	0.91	conversion to BDT
(3)	**6,921**	**TOTAL animal bedding shipped**

In the future:

There will be all fines/sawdust, and no chips.
25% of waste will be bailed, remaining 75% (fines) sold.

KNOWN DATA

In 2001:

	14,975.61	G tons	sawdust sold to BCC
	(1,062.60)	G tons	double counted because of changes in rptg
	13,913.01	G tons	sawdust sold
	13,913.01	G tons	sawdust sold (from line above)
	5,782.35	G tons	fines produced (from rpt)
	19,695.36	G tons	TOTAL fines and sawdust produced
	19,695.36	G tons	(from the line above)
	0.91	mc conversion	
(1)	**17,922.78**	**BDT**	**TOTAL fines and sawdust sold**
	6,375.60	G tons	TOTAL Chips sold
	0.91	mc conversion	
(2)	**5,802**	**BDT**	**TOTAL Chips sold**

10,125 mbf of blocks into the mill

	3,038	mbf	30% of mbf are core	
			213	7% becomes jointer waste
			1.25	conversion factor to BDT
(A)			**266**	**BDT** **jointer waste**
	7,088	bd ft	70% of mbf are clear	
			496	7% becomes jointer waste
			1.25	conversion factor to BDT
(B)			**621**	**BDT** **jointer waste**
			1,276	18% becomes moulder waste including rejects and shavings
			1.25	conversion factor to BDT
(C)			**1,596**	**BDT** **moulder waste**

38,000 mbf of lumber into the mill

	10,640	mbf	28% ends up as fines (rip and cutline waste)
	1.25	conversion factor to BDT	
(D)	**13,313**	**BDT**	**of fines**
	6,635	mbf	Material that is cut and moulded
	1,194		18% becomes moulder waste including rejects and shavings
	1.25	conversion factor to BDT	
	1,494	**BDT**	**moulder waste**

25,500	mbf	**Material that is cut, moulded and Fingerjointed**
4,590		18% becomes moulder waste including rejects and shavings
1,785		7% becomes jointer waste
1.25	conversion factor to BDT	
7,977	**BDT**	**moulder and FJ waste**
2,660		7% becomes jointer waste
1.25	conversion factor to BDT	
3,328	**BDT**	**jointer waste**

1,400 mbf of purchases from White City

70% of mbf are moulded updated 12/12/02

980	mbf	**Material that is moulded**
176		18% becomes moulder waste including rejects and shavings
1.25	conversion factor to BDT	
221	**BDT**	**moulder waste**

3,800 mbf of compsite material (MDF)

85% of mbf are moulded updated 12/12/02

3,230	mbf	**Material that is moulded**
581		18% becomes moulder waste including rejects and shavings
1.25	conversion factor to BDT	
727	**BDT**	**moulder waste**

The Balancing Act:

Scene One **Try to get assumed amount produced to match actual amount shipped.**

shipped (1)	17,923	BDT	TOTAL fines and sawdust sold
shipped (2)	5,802	BDT	TOTAL Chips sold
shipped (3)	6,921	BDT	TOTAL animal bedding shipped
	30,646	BDT	**Wastes Shipped off site.**

produced (A)	266	BDT	jointer waste
produced (B)	621	BDT	jointer waste
produced (C)	1,596	BDT	moulder waste
produced (D)	13,313	BDT	of fines
	1,494	BDT	moulder waste
	7,977	BDT	moulder and FJ waste
	3,328	BDT	jointer waste
	221	BDT	moulder waste
	727	BDT	moulder waste
	29,544	BDT	**Waste products produced.**
	204	BDT	**Nampa material to be hogged**
	1,052	BDT	**Purchased shavings and fines**
	30,800	BDT	**Total waste products produced and purchased**

30,800 BDT Waste products produced.

SHOULD BE CLOSE TO

30,646 BDT Wastes Shipped off site.

AND THEN MOVING ON TO SCENCE 2

Scene Two **How much of that material comes out of each building.**

	BLDG 5		BLDG 9		OUTDSIDE PURCHASES	
Assume	60%	of total blocks	40%	of total blocks	1,400 mbf	from white city
	11,000	mbf blocks into site	11,000	mbf blocks into site	3,600 mbf	composite material
	6,600	mbf blocks into bldg	4,400	mbf blocks into bldg	5,000 mbf	
	28600.0	mbf lumber into bldg	13400.0	mbf lumber into bldg	1.25	conversion factor
	35,200	total stock	17,800	total stock	6,256 BDT	
	1.25	conversion factor	1.25	conversion factor		
	44,044	BDT of stock	22,272	BDT of stock		
	10,736	Rip & Cutline Waste	5,030	Rip & Cutline Waste		
	33,308	BDT After Rip and Cut	17,242	BDT After Rip and Cut		
	66.0%	Stays in bldg 5	66.0%	Goes to bldg 5	72.0%	Goes to bldg 5
	6.0%	Goes to bldg 3	6.0%	Goes to bldg 3	20.0%	Goes to bldg 3
	13.0%	Goes to Bldg 4	13.0%	Goes to Bldg 4	8.0%	Goes to Bldg 4
	15.0%	Goes to Nampa	15.0%	Goes to Nampa	0.0%	Goes to Nampa
	100.0%		100.0%		100.0%	
in BDT terms:	21,983	Stays in bldg 5 @ 28% waste	11,380	Goes to bldg 5@28% waste	4,505	Goes to bldg 5@28% waste
	1,998	Goes to bldg 3 @18% waste	1,035	Goes to bldg 3 @18% waste	1,251	Goes to bldg 3 @18% waste
	4,330	Goes to Bldg 4 @18% waste	2,241	Goes to Bldg 4 @18% waste	501	Goes to Bldg 4 @%0 waste
	4,996	Goes to Nampa @0% waste	2,586	Goes to Nampa @0% waste	0	Goes to Nampa @0% waste
	33,308	BDT stock accounted for	17,242	BDT stock accounted for	6,256	BDT stock accounted for

	BLDG 5		BLDG 3		Bldg 4	
	6,155	BDT waste	360	BDT	779	BDT
	3,186	BDT waste	186	BDT waste	403	BDT
	1,261	BDT waste	225	BDT waste	0	BDT
by indiv bldgs:	10,603	BDT waste	771	BDT	1,183	BDT

5,030	BDT waste from bldg 9
21,339	BDT waste from bldg 5
771	BDT waste from bldg 3
1,183	BDT waste from bldg 4
28,323	**BDT waste generated from site total**
204	**BDT Nampa material to be hogged**
1,052	**BDT Purchased shavings and fines**

29,579 BDT waste generated from site total

SHOULD BE CLOSE TO EARLIER CALCS OF

30,800 Waste products produced.

Scene Three How much material goes through the cyclones?

Given from Scene two:

5,030	BDT waste from bldg 9
21,339	BDT waste from bldg 5
771	BDT waste from bldg 3
1,183	BDT waste from bldg 4
28,323	**BDT waste generated from site total**
204	**BDT Nampa material to be hogged**
1,052	**BDT Purchased shavings and fines**

BLDG 9		**5,030**	BDT Total
	100%	5,030	Goes to P20 Baghouse M (System 2)
BDLG 5		**21,339**	BDT Total
	15%	755	Goes to P17 Cyclone J (System 5)
	15%	755	Goes to P18 Cyclone k (System 4)
	21%	1,076	Goes to P19 Cyclone L (System 3)
	4%	181	Goes to P20 Baghouse M (System 2)
	45%	2,264	Goes to P23 Cyclone M4 (System 5) directly from the hog
	100%		
BDLG 3		**771**	BDT Total
	2%	15	Goes to P34 Cyclone D, then closed loop
	58%	447	Goes to P6 Cyclone B , then closed loop
	40%	308	Goes to P8 Cyclone C , then closed loop
	100%		

green is updated 12/12/02

BLDG 4		**1,183**	BDT Total
	15%	177	Goes to P10 Cyclone I , then to P41 Baghouse G, then a closed loop system
	30%	355	Goes to P37 Baghouse E then into closed loop system
	55%	651	Goes to P12 Cyclone E (Everything in Bldg 4 goes to Cyclone E)
	100%		55% of the material going into cyclone P 12 does not go through the other two cyclones.
BLDG 10		**6,921**	BDT Total Bagged
	90%	6,229	Goes to P24 Cyclone M3 (closed loop)
	10%	692	Goes to P22 Cyclone M2 (closed loop)
	100%		

Fan and Vent Schedule

13 T/yr | 8760 hr/yr | 2.91 lb/hr

Fans/Vent ID No.	Bldg	Elevation from ground	ACFM	Estimated Dimensions	Exit Area sq ft	Direction air flow	
FN 1	1	2' from roof	275	3'X4'	12	EAST	
FN 2	1	8' from floor	3,417	18"x18"	2	EAST	
FN 3	1	2' from floor	2,448	3'x3'	9	EAST	
FN 4	1	2' from floor	9,384	3'x3'	9	NORTH	
FN 5	1	2' from floor	18,360	3'x3'	9	NORTH	
FN 6	1	2' from floor	3,876	3'x3'	9	NORTH	
FN 7	1	2' from roof	5,916	3'x3'	9	NORTH	
FN 8	1	2' from roof	2,142	4'x4'	16	NORTH	
FN 9	1	2' from roof	1,632	4'x4'	16	NORTH	
FN 10	1	2' from roof	5,100	4'x4'	16	NORTH	
FN 11	1	2' from roof	2,040	4'x4'	16	NORTH	
FN 12	1	roof	1,632	3'x3'	9	UP	
FN 13	1	roof	1,632	3'x3'	9	UP	
FN 14	1	roof	1,632	3'x3'	9	UP	
FN 15	1	roof	1,428	3'x3'	9	UP	
FN 16	1	roof	1,734	3'x3'	9	UP	
FN 17	1	roof	1,734	3'x3'	9	UP	
FN 18	1	2' from roof	1,836	4'x4'	16	SOUTH	
FN 19	1	2' from roof	4,692	4'x4'	16	WEST	
FN 20	1	2' from roof	4,692	4'x4'	16	WEST	
FN 54	1	1' from roof	24,480	4'x4'	16	INTAKE	
FN 55	1	10' from ground	2,754	18"x18"	2	NORTH	
FN 64	1	roof	2,200	12" dia	1	up	
FN 66	1	roof	2,610	18" dia. Av.	2	up	roll manuf only
VT 1	1	ground	15	4'x4'	16	East	
VT 2	1	ground	15	4'x4'	16	East	
VT 3	1	ground	15	4'x4'	16	East	
VT 6	1	roof	15	18" dia. Av.	2	up	
VT 9	1	roof	15	18" dia. Av.	2	up	
VT 10	1	roof	15	18" dia. Av.	2	up	
VT 11	1	roof	15	18" dia. Av.	2	up	
VT 12	1	roof	15	18" dia. Av.	2	up	
VT 13	1	roof	15	18" dia. Av.	2	up	
VT 14	1	roof	15	18" dia. Av.	2	up	
		TOTAL	107,796			TOTAL	

422.7 T/yr | 8760 hr/yr | 96.52 lb/hr

Fans/Vent ID No.	Bldg	Elevation from ground	ACFM	Estimated Dimensions	Exit Area sq ft	Direction air flow	
FN 21	2	2' from ground	4,896	3'x3'	9	SOUTH	
FN 22	2	2' from ground	8,160	4'x4'	16	SOUTH	
FN 23	2	at ground	3,468	1'x1'	1	SOUTH	
FN 24	2	at ground	4,896	1'x1'	1	SOUTH	
FN 25	2	at ground	3,060	3'x3'	9	SOUTH	
FN 26	2	roof	5,202	3'x3'	9	UP	
FN 27	2	roof	4,284	3'x3'	9	UP	
FN 28	2	6" from ground	7,344	5'x5'	25	NORTH	
FN 29	2	1' from ground	4,794	3'x3'	9	NORTH	
FN 30	2	2' from ground	3,468	3'x3'	9	NORTH	
FN 31	2	8' from ground	6,324	3'x3'	9	NORTH	
FN 32	2	1' from ground	9,792	3'x3'	9	NORTH	
FN 33	2	1' from ground	2,958	6"x6"	0.3	NORTH	
FN 34	2	1' from ground	540	1.5'x1.5'	2	NORTH	
FN 35	2	8' from ground	4,896	6"x6"	0.3	NORTH	
FN 56	2	8' from ground	14,484	5'x5'	25	NORTH	
FN 57	2	1' from ground	4,895	3'x3'	9	NORTH	
FN 58	2	1' from ground	9,792	4'x4'	16	SOUTH	
FN 66	2	10' from ground	2,754	18"x18"	2	EAST	PROPOSED
VT 4	2	roof	*15*	6"x6"	0.3	South	
VT 5	2	roof	*15*	1'x1'	1	up	
VT 7	2	roof	*15*	18" dia. Av.	2	up	
VT 8	2	roof	*15*	18" dia. Av.	2	up	
VT 15	2	roof	*15*	18" dia. Av.	2	up	
VT 16	2	roof	*15*	18" dia. Av.	2	up	
VT 17	2	roof	*15*	18" dia. Av.	2	up	
			106,112				
HTR 1	2	near the roof	23,114	2' x 7'	14	inside	
HTR 2	2	near the roof	26,306	2' x 7'	14	inside	

Fans/Vent ID No.	Bldg	Elevation from ground	ACFM	Estimated Dimensions	Exit Area sq ft	Direction air flow
FN 36	3	12' from ground	1,938	2'x2'	4	NORTH
FN 37	3	12' from ground	4,080	3'x3'	9	NORTH
FN 38	3	5' from ground	8,772	4'x4'	16	EAST
FN 39	3	5' from ground	13,872	4'x4'	16	EAST
FN 40	3	1' from ground	3,876	4'x4'	16	NORTH
FN 41	3	1' from ground	4,488	4'x4'	16	NORTH
FN 42	3	1' from ground	3,672	4'x4'	16	NORTH
FN 43	3	18' from ground		4'x4' 2244 acfm	16	INTO BLDG
FN 44	3	6' from ground	510	18"x18"	2	SOUTH
FN 45	3	roof	3,060	12"x12"	1	UP
FN 59	3	1' from roof	250	1'x1'	1	EAST
FN 60	3	10' from ground	250	1'x1'	1	EAST
VT 18	3	roof	*15*	18" dia. Av.	2	up
			44,783			
FN 48	4	6' from ground	1,632	4'x4'	16	NORTH
FN 49	4	6' from ground	1,632	4'x4'	16	NORTH
FN 50	4	6' from ground	1,632	3'x3'	9	NORTH
FN 51	4	4' from roof	1,836	3'x3'	9	EAST
FN 61	4	10' from ground	350	1'x1'	1	NORTH
FN 62	4	5' from ground	867	2'x2'	4	SOUTH
FN 63	4	12' from floor	6,120	3'x3'	9	up
VT 19	4	roof	*15*	18" dia. Av.	2	up
VT 20	4	roof	*15*	18" dia. Av.	2	up
VT 21	4	roof	*15*	18" dia. Av.	2	up
VT 22	4	roof	*15*	18" dia. Av.	2	up
			14,129			
FN 52	5	4' from ground	2,448	3'x3'	9	NORTH
FN 53	5	1' from ground	4,998	3'x3'	9	NORTH
FN 65	5	cut line	4,998	3'x3'	9	NORTH
FN 66 (prop)	5	11' ft from ground	4,500	3'x3'	9	NORTH
VT 23	5	roof	*15*	18" dia. Av.	2	up
VT 24	5	roof	*15*	18" dia. Av.	2	up
VT 25	5	roof	*15*	18" dia. Av.	2	up
			16,989			
FN 46	6	roof	7,752	4'x4'	16	SOUTH
FN 47	6	roof	7,956	4'x4'	16	SOUTH
			15,708			

Notes:
All vents assumed to be 15 acfm out.
Vents could actually blow in or out depending on conditions.
Only 5 fans have charcoal filters.
Italicized indicate estimates.
Realistic estimate that all VOC emissions are equally dispersed, except at FN locations FN67, 66, 65, 48, 49, 50, and 52.
FN 66 is going to have a hood and seperate vent for roll manufacturing operation.

PRODUCT DESCRIPTION							EM SOURCE		PERMIT REQUEST	BASE INFO						INFO FOR PERMIT		
No.	Supplier	Woodgrain Item #	Supplier Item #	Manufacturer	Man Item #	Description/Trade Name	Use Area	Bdlg No.	Total lb/yr	SP Grav	lb/gal	% 585	% 586	% HAPs	% VOC	lb HAP	lb VOC	Comments
100	USED																	
101	USED																	
102	USED																	
103	Pioneer Coatings	UCD1106E	DE11060	ROHM AND HAAS CO.	DE11060	TITANIUM WHITE INK	5 Hd Printer	1	48	1.9	15.9	0.00	0.00	0.00	0.03	0.0	1.4	
104	Pioneer Coatings	WG1973	WG-1973	PIONEER COATINGS, INC.	WG-1973	W/B B/C BLACK	5 Hd Printer	1	100	1.0	8.6	0.06	0.00	0.00	0.06	0.0	6.0	
105	Goldschmidt	DF8	TECO FOAMEX 1488	PIONEER COATINGS, INC.		Defoamer	5 Hd Printer	1	58	1.0	8.3	0.0003	0.00	0.00	0.00	0.0	0.0	
106	Pioneer Coatings	BK2	BK-2	PIONEER COATINGS, INC.	BK-2 FLOW ADDITIVE	FLOW ADDITIVE	5 Hd Printer	1	150	0.9	9.0	0.00	0.00	0.00	1.00	0.0	150	
107	Pioneer Coatings	WBITD872	WBITD872	PIONEER COATINGS, INC.	WBI-TD872 (RED)	Red Waterbase Basecoat	5 Hd Printer	1	250	1.2	9.8	0.09	0.00	0.00	0.07	0.0	17	
108	USED																	
109	Pioneer Coatings	WBITD871	WBITD871	PIONEER COATINGS, INC.	WBI-TD871 (YELLOW)	Yellow W/B Basecoat	5 Hd Printer	1	700	1.2	9.8	0.09	0.00	0.09	0.07	63	50	
110	Pioneer Coatings	WBITD870	WBI-TD870	PIONEER COATINGS, INC.	WBI-TD870 (WHITE)	W/B B/C WHITE	5 Hd Printer	1	6,000	1.3	10.7	0.09	0.00	0.09	0.04	540	228	
111	Reichhold	PA130	PA130	REICHHOLD, INC.	SWIFT ® PA130	Aqueous Adhesive-Cold VAE	Wrap	1	135,000	1.0	8.6	0.050	0.0001	0.05	0.055	6,883	7,425	
112	Rodda	AS766000	AS766000	Rodda	NA	Titanium White	5 Hd Printer	1	18	2.2	18.3	0.02	0.00	0.02	1.00	0.4	18	
113	ChemCentral	X-MINERALSPIRITS	2024	EXXONMOBIL CHEMICAL	VARSOL 1 FLUID - MINERAL	Mineral Spirits 66/3	Roll manuf	1	363	0.8	6.6	1.00	0.000	1.00	1.00	363	363	
114	Rodda	GC6015	GC6015	Rodda	NA	Light Red Oxide	5 Hd Printer	1	17	2.1	17.4	0.15	0.00	0.15	0.20	3	3	
115	OPEN																	
116	ChemCentral	X-DOP	Dioctyl Phthalate	EASTMAN CHEMICAL CO.	SPC 14906	Eastman DOP Plasticizer	Roll Manuf	1	2,000	1.0	8.2	0.00	0.999	1.00	1.00	2,000	2,000	
117	NAPA/ZEP	CHE-BIGORANGE	0415 INDUSTRIAL SOL	ZEP MANUFACTURING	ZEP BIG ORANGE PRODUCT	BIG ORANGE	Wrap	1	924	0.9	7.1	0.00	0.00	0.00	0.94	0.0	869	
118	Reichhold	Swift 2H634	2H634	Swift 2H634	Swift 2H634	EVA glue 2H634	Wrap	1	0	1.0	8.6	0.0008	0.00	0.0008	0.0011	0.0	0.0	
119	Reichhold	Swift 2H850	2H850	Swift 2H850	Swift 2H850	EVA glue 2H850	Wrap	1	250,000	1.0	8.6	0.0008	0.00	0.0008	0.0012	200	300	
120	MOTION	CHE-WD40	WD 40 Bulk liquid	WD 40 Bulk liquid	WD 40 Bulk liquid	WD 40 Bulk liquid	Wrap	1	130	0.8	6.7	0.00	0.00	0.00	0.70	0.0	91	same as 463
121	UNISOURCE	U17732 Liberate/NSS	U17732 Liberate/NSS	U17732 Liberate/NSS	U17732 Liberate/NSS	U17732 Liberate/NSS	Wrap	1	35	1.1	8.9	0.11	0.00	0.11	0.16	3.9	5.6	same as 412
122	Henkel	80-8572	80-8572	80-8572	Henkel	80-8572	Wrap	1	40	1.0	8.6	0.001	0.00	0.001	0.0010	0.04	0.04	
123	Reichhold	2H733	2H733	Swift 2H733	Swift 2H733	EVA glue	Wrap	1	0	1.0	8.6	0.0008	0.00	0.0008	0.0012	0.00	0.00	
124																		
228	Jones Blair	91T38	C91-T-38	JONES BLAIR	C91-T-38	10 SHEEN CAB T/C	Base Coat	2	1,816	0.9	7.4	0.73	0.00	0.70	0.73	1,271	1,326	90% shown in bldg 2
230	Jones Blair	91T36	C91-T-36			25 SHEEN CAB T/C	Base Coat	2	2,300	0.9	7.4	0.73	0.00	0.70	0.74	1,610	1,702	95% shown in bldg 2
225	ChemCentral	Acetone	Acetone			Acetone	Base Coat	2	3,084	0.8	6.6	1.00	0.00	0.00	1.00	0.00	3,084	75% shown in bldg 2
213	Jones Blair	91T39	C91-T-39	JONES BLAIR	C91-T-39	HAPS FREE CAB TOPCOAT 25 S	Print	2	256	0.9	7.5	0.70	0.00	0.00	0.74	0.00	190	92% shown in Bldg 2
237	SHERWIN WILLIAMS	T82B2751	T82XXB2751-2715	SHERWIN WILLIAMS	T82XXB2751-2715 OPEX CUS	BLACK INK	Print	2	562	0.9	7.8	0.68	0.00	0.00	0.74	0.00	416	92% shown in Bldg 2
238	SHERWIN WILLIAMS	T82R2754	T82XXR2754-2715	SHERWIN WILLIAMS	T82XXR2754-2715 OPEX CU	RED OXIDE INK, BRIGHT	Print	2	187	1.1	9.4	0.55	0.00	0.001	0.45	0.19	84	92% shown in Bldg 2
239	SHERWIN WILLIAMS	T82W2756	T82XXW2756-2715	SHERWIN WILLIAMS	T82XXW2756-2715 OPEX CU	WHITE INK	Print	2	113	1.4	11.6	0.37	0.00	0.00	0.41	0.00	46	92% shown in Bldg 2
240	SHERWIN WILLIAMS	T82Y2755	T82XXY2755-2715	SHERWIN WILLIAMS	T82XXY2755-2715 OPEX CUS	YELLOW OXIDE INK	Print	2	126	1.0	8.6	0.62	0.00	0.00	0.67	0.00	84	92% shown in Bldg 2
249	ChemCentral	DOWANOLETHER	Dowanol PNP	DOW		Propylene Glycol n-Propyl Ether	Print	2	7,000	0.9	7.4	0.00	0.00	0.00	1.00	0.00	7,000	
														BLDG 1	lbs	12,937	25,466	
															tons	6.5	12.7	

purchase

PRODUCT DESCRIPTION							EM SOURCE		PERMIT REQUEST	BASE INFO						INFO FOR PERMIT		
No.	Supplier	Woodgrain Item #	Supplier Item #	Manufacturer	Man Item #	Description/Trade Name	Use Area	Bdlg No.	Total lb/yr	SP Grav	lb/gal	% 585	% 586	% HAPs	% VOC	lb HAP	lb VOC	Comments
BLDG 2																		
200	Jones Blair	1080000000	C108-D-7	JONES BLAIR	C108-D-7	STAIN BLOCK BROWN PRIMER	Base Coat	2	13,720	1.2	9.8	0.51	0.00	0.36	0.51	4,939	6,997	
201	USED																	
202	Jones Blair	23W53	23-W-53	JONES BLAIR	23-W-53 ACRYLIC COATING	WHITE B/C ACRYLIS	Base Coat	2	7,820	1.1	9.1	0.57	0.00	0.43	0.56	3,363	4,379	
203	USED																	TEST
204	SHERWIN WILLIAMS	P65RH31	P65RH31	SHERWIN WILLIAMS	P65RH31	UNIVERSAL BASECOAT, RED OX	Base Coat	2	13,334	1.0	8.4	0.46	0.00	0.31	0.62	4,134	8,200	TEST
205	SHERWIN WILLIAMS	P65RH34	P65RH34	SHERWIN WILLIAMS	P65RH34	UNIVERSAL BASECOAT, BRITE R	Base Coat	2	3,600	0.9	7.8	0.50	0.00	0.26	0.69	936	2,475	
206	SHERWIN WILLIAMS	P65WH70	P65WH70	SHERWIN WILLIAMS	P65WH70	UNIVERSAL BASECOAT, WHITE	Base Coat	2	148,800	1.0	8.6	0.43	0.00	0.32	0.56	47,616	83,328	TEST
207	USED																	TEST
208	SHERWIN WILLIAMS	P65YH33	P65YH33	SHERWIN WILLIAMS	P65YH33	UNIVERSAL BASECOAT, YELLOW	Base Coat	2	105,160	1.1	8.8	0.44	0.00	0.32	0.53	33,651	56,202	TEST
209	Pioneer Coatings	X-UVFILLER#5	UV FILLER #5	PIONEER COATINGS, INC.	UV FILLER #5	UV CURING COATING	Base Coat	2	150	1.4	11.5	0.01	0.00	0.01	0.010	1.5	1.5	
210	USED																	
211	USED																	
212	USED																	
213	Jones Blair	91T39	C91-T-39	JONES BLAIR	C91-T-39	HAPS FREE CAB TOPCOAT 25 SH	Print	2	2,624	0.9	7.5	0.70	0.00	0.00	0.74	0.0	1,946	18% goes in bldg 1
214	USED																	switch to WG bend #3 6/2001
215	USED																	
216	USED																	
217	USED																	
218	USED																	
219	Jones Blair	108R6	108-R-6	Jones Blair		Bright Red	Base Coat	2	0	0.9	7.7	0.41	0.00	0.30	0.74	0.0	0.0	
220	USED																	
221	Jones Blair	108Y14	C108-Y-14	JONES BLAIR	C108-Y-14	CAB BRIGHT YELLOW BASECOA	Base Coat	2	5,036	0.9	7.5	0.60	0.00	0.30	0.63	1,511	3,173	Switching to SW later
222	VOPAK	ALCOHOLVANZOL	VANZOL A-1	VAN WATERS & ROGERS INC	VANZOL A-1 PRODUCT NO. 62	ALCOHOL VANZOL	Base Coat	2	2,000	0.8	6.6	1.00	0.00	0.05	1.00	100	2,000	
223	Jones Blair	96T36	96-T-36	JONES BLAIR	96-T-36 VINYL COATING LOW	VINYL COATING	Base Coat	2	6,000	0.9	7.2	0.80	0.00	0.00	0.77	0.0	4,620	switching to SW later
224	Jones Blair	91T35	C91-T-35	JONES BLAIR	C91-T-35 CAB COATING	60 SHEEN CAB T/C	Base Coat	2	9,000	0.9	7.3	0.63	0.00	0.60	0.72	5,400	6,480	switching to SW later
225	ChemCentral	Acetone	Acetone			Acetone	Base Coat	2	9,252	0.8	6.6	1.00	0.00	0.00	1.00	0.0	9,252	.25% goes to bldg 1
226	Jones Blair	110825A	C110-825A	JONES BLAIR	C110-825A	NUTRACOAT BASE	Base Coat	2	12,604	1.0	8.4	0.48	0.00	0.36	0.58	4,537	7,310	switching to SW later
227	Jones Blair	108B2	108-B-2	JONES BLAIR	108-B-2	Black Ink	Base Coat	2	0	0.9	7.8	0.62	0.00	0.32	0.67	0.0	0.0	
228	Jones Blair	91T38	C91-T-38	JONES BLAIR	C91-T-38	10 SHEEN CAB T/C	Base Coat	2	16,348	0.9	7.4	0.73	0.00	0.70	0.73	11,443	11,934	switching to SW later, 10% in bldg 1
229	Jones Blair	18R8	108-R-8	JONES BLAIR	108-R-8	Hi-Hide Red Paint	Base Coat/print	2	0	1.0	8.2	0.66	0.00	0.40	0.72	0.0	0.0	
230	Jones Blair	91T36	C91-T-36			25 SHEEN CAB T/C	Base Coat	2	43,700	0.9	7.4	0.73	0.00	0.70	0.74	30,590	32,338	switching to SW later.
231	Pioneer Coatings	WG1700	WG-1700	RODDA PAINT COMPANY	33078 WG1700	WATERBOURNE PRIMER 853	Base Coat	2	30,000	1.4	11.8	0.03	0.00	0.00	0.03	0.0	900	1999 bd 2 4865 gal, wind 9,850 gal
232	USED																	mixed own primer starting in 2001
233	Jones Blair	108Y18	108-Y-18	JONES BLAIR	108-Y-18	Neutral Coat	Base Coat	2	0	1.2	9.8	0.48	0.00	0.36	0.51	0.0	0.0	
234	Jones Blair	108Y19	108-Y-19	JONES BLAIR	108-Y-19	Yellow Oxide Paint	Base Coat	2	0	1.0	8.2	0.62	0.00	0.43	0.56	0.0	0.0	
235	Jones Blair	108W28	108-W-28	JONES BLAIR	108-W-28	White Paint	Base Coat	2	0	1.1	9.0	0.52	0.00	0.33	0.52	0.0	0.0	
236	SHERWIN WILLIAMS	P63YH13	P63YH13	SHERWIN WILLIAMS	P63YH13 NUTRACOAT VINYL	NUTRACOAT CAB	Basecoat	2	135,088	1.1	9.0	0.60	0.00	0.31	0.61	41,871	81,791	
237	SHERWIN WILLIAMS	T82B2751	T82XXB2751-2715	SHERWIN WILLIAMS	T82XXB2751-2715 OPEX CUS	BLACK INK	Print	2	2,561	0.9	7.8	0.68	0.00	0.00	0.74	0.0	1,894	18 % shown in Bldg 1
238	SHERWIN WILLIAMS	T82R2754	T82XXR2754-2715	SHERWIN WILLIAMS	T82XXR2754-2715 OPEX CUS	RED OXIDE INK, BRIGHT	Print	2	853	1.1	9.4	0.55	0.00	0.001	0.62	0.9	525	18 % shown in Bldg 1
239	SHERWIN WILLIAMS	T82W2756	T82XXW2756-2715	SHERWIN WILLIAMS	T82XXW2756-2715 OPEX CUS	WHITE INK	Print	2	513	1.4	11.6	0.37	0.00	0.00	0.41	0.0	210	18 % shown in Bldg 1
240	SHERWIN WILLIAMS	T82Y2755	T82XXY2755-2715	SHERWIN WILLIAMS	T82XXY2755-2715 OPEX CUS	YELLOW OXIDE INK	Print	2	574	1.0	8.6	0.62	0.00	0.00	0.62	0.0	356	18 % shown in Bldg 1
241	SHERWIN WILLIAMS	P65LH18	P65LH18	SHERWIN WILLIAMS	P65LH18 SHER-WOOD UNIVE	PHTHALO BLUE BASECOAT	Basecoat	2	1,204	0.9	7.9	0.27	0.00	0.27	0.64	325	773	
242	SHERWIN WILLIAMS	T82L2753	T82XXL2753-2715	SHERWIN WILLIAMS	T82XXL2753-2715 OPEX CUS	BLUE INK	Basecoat	2	60	1.0	8.0	0.60	0.00	0.00	0.66	0.0	40	
243	USED																	
244	Jones Blair	108W33	108W33	Jones Blair	108W33	Haps free White Ink	Print	2	0	1.1	9.1	0.60	0.00	0.00	0.60	0.0	0.0	
245	Jones Blair	108B3	108B3	Jones Blair	108B3	Haps free Black Ink	Print	2	0	0.9	7.9	0.60	0.00	0.00	0.60	0.0	0.0	
246	USED																	
247	Jones Blair	108Y21	108Y21	Jones Blair	108Y21	Haps free Yellow Ink	Print	2	0	0.9	7.8	0.60	0.00	0.00	0.60	0.0	0.0	
248	Jones Blair	108R9	108R9	Jones Blair	108R9	Haps free Red Ink	Print	2	0	1.0	8.1	0.60	0.00	0.00	0.60	0.0	0.0	
249	ChemCentral	DOWANOLETHER	Dowanol PNP	DOW		Propylene Glycol n-Propyl Ether	Print	2	28,000	0.9	7.4	0.00	0.00	0.00	1.00	0.0	28,000	20 % shown in Bldg 1
250	USED																	
251	USED																	
252	USED																	
253	USED																	
254	USED																	
255	USED																	
256	ChemCentral	WG0502-1	WG0502-1	CHEMCENTRAL		New Blend (2)	Base Coat	2	350,000	0.9	7.1	1.00	1.00	0.00	1.00	0.0	350,000	
257	ChemCentral	Woodgrain Blend 3	Woodgrain Blend 3	CHEMCENTRAL		Woodgrain Blend 3	Base Coat	2	0	0.8	6.9	0.97	0.00	0.00	1.00	0.0	0.0	
258	Henkel	80-8572	80-8572	Henkel		Pkg Hot melt glue	Packaging	2	13,000	1.0	8.6	0.001	0.00	0.001	0.001	13	13	
259	SHERWIN WILLIAMS	Mixed	Mixed	SHERWIN WILLIAMS	Multiple	Stains	Base Coat	2	182,000	1.0	8.4	0.040	0.00	0.0393	0.7712	7,153	140,358	Proposed as of 12/0
														BLDG 2	lbs	187,584	845,499	
															tons	93.8	422.7	

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PRODUCT DESCRIPTION							EM SOURCE		PERMIT REQUEST	BASE INFO						INFO FOR PERMIT		
No.	Supplier	Woodgrain Item #	Supplier Item #	Manufacturer	Man Item #	Description/Trade Name	Use Area	Bdlg No.	Total lb/yr	SP Grav	lb/gal	% 585	% 586	% HAPs	% VOC	lb HAP	lb VOC	Comments
BDLG 3																		
300	OPEN																	
301	USED																	
302	WILLAMETTE VALLEY CO.	X-CHEMSTRIP	CHEMSTRIP	CHEMSEARCH	PROD. CODE 0007	CHEMSTRIP	Windows	3	18	1.2	10.4	yes	yes	0.89	0.94	16	17	
303	U-C COATINGS CORPORAT	X-GLUE RELEASE	BOOTHCOATING/ GLUE			ETHYLENE GLYCOL	Wrap	3	275	0.9	7.8	5.00	0.00	0.05	1.00	14	275	
304	USED																	
305	USED																	
306	USED																	
307	USED																	
308	USED																	
309	COLUMBIA PAINT	X-05210PP	05-210-PP	COLUMBIA PAINT & COATIN	FAST DRY MOLDING PRIMEF	MOLDING PRIMER, FAST DRY	Windows	3	320,000	1.5	12.4	0.00	0.00	0.00	0.01	0.0	4,387	
310	Pioneer Coatings	X-WG300	WG-300	RODDA PAINT	33077 WG300	WATER BASE PRIMER	Windows	3	9,100	1.4	11.6	0.06	0.00	0.01	0.52	91	4,687	Test product
311	USED																	
312	Pioneer Coatings	WG1700	WG-1700	RODDA PAINT COMPANY	33078 WG1700	WATERBOURNE PRIMER 853	Base Coat	3	30,000	1.4	11.8	0.03	0.00	0.00	0.03	0.0	900	
313	WILLAMETTE - new	SP1200	SP1200	Willamette	SP1200	SP1200	Windows	3	20,000	1.52	12.7	0.02	0.00	0.02	0.020	400	400	
314	WILLAMETTE - new	VC210015	VC210015	Willamette	VC210015	VC210015	Windows	3	0	1.54	12.9	0.0044	######	0.0049	0.014	0.0	0.0	
601	HB FULLER	X-CH-365	CH-0365	H. B. FULLER COMPANY	CH-0365	CH-0365 VOC/HAP PRODUCT	Satin Coat	6	44,000	1.1	9.0	0.034	0.0001	0.054	0.054	2,376.0	2,383.6	Proposed
														BLDG 3	lbs	2,897	13,049	
															tons	1.4	6.5	

PRODUCT DESCRIPTION							EM SOURCE		PERMIT REQUEST	BASE INFO						INFO FOR PERMIT		
No.	Supplier	Woodgrain Item #	Supplier Item #	Manufacturer	Man Item #	Description/Trade Name	Use Area	Bdlg No.	Total lb/yr	SP Grav	lb/gal	% 585	% 586	% HAPs	% VOC	lb HAP	lb VOC	Comments
BLDG 4																		
400	OPEN							4										
401	APPLIED RESEARCH	X-1250120	1250120			SUPER BRUTE	Maintenance	4	645	1.0	8.4	0.10	0.00	0.00	0.10	0.0	65	
402	APPLIED RESEARCH	X-2200210/18	2200210/18			D-AQUA LUBE	Maintenance	4	24	1.2	9.9	0.73	0.00	0.73	0.73	18	18	
403	USED																	
404	APPLIED RESEARCH	X-2200578/13	2200578/13	APPLIED RESEARCH, INC.	220578/13 END SPAT	END SPAT	Maintenance	4	52	1.0	8.4	0.00	0.00	0.00	0.15	0.0	8	
405	APPLIED RESEARCH	X-2200596/14	2200596/14			PORTA KLEAN	Maintenance	4	24	0.9	7.5	0.00	0.00	0.00	0.30	0.0	7	
406	APPLIED RESEARCH	X-2200804/12	2200804/12			HI-P SUPER	Maintenance	4	24	1.2	10.2	0.00	0.00	0.00	0.93	0.0	22	
407	APPLIED RESEARCH	X-2200875/12	2200875/12			TAP EASE A	Maintenance	4	120	0.9	7.2	0.50	0.00	0.00	1.00	0.0	120	
408	APPLIED RESEARCH	X-2200980/11	2200980/11			AR GREASE GUN IN A CAN KWI	Maintenance	4	24	0.7	6.1	0.00	0.00	0.00	1.00	0.0	24	
409	APPLIED RESEARCH	X-8800125	8800125			ENZ AWAY "Q"	Maintenance	4	156	1.0	8.4	0.10	0.00	0.00	0.10	0.0	15	
410	KAMAN	CHE-UTR20	UT-R20 HARDENER	REMA TIP TOP	UT-R20 HARDENER	HARDENER UT-R20	Maintenance	4	5	1.3	11.0	0.02	0.71	0.73	1.00	3.7	5	
411	ROBERTSONS SUPPLY	RECTORSEAL NO.5	RECTORSEAL NO.5			PIPE THREAD SEALING COMPC	Maintenance	4	25	1.4	11.4	0.23	0.00	0.00	0.23	0.0	6	
412	UNISOURCE	U17732 LIBERATE/NS	U17732 LIBERATE/NSS			U17732 LIBERATE/ NSS 4X1 GA	Maintenance	4	10	1.1	8.9	0.11	0.00	0.11	0.11	1.1	1	
413	WILLAMETTE VALLEY CO.	X-E-800-B	E-800-B EPOXY HARDE	WILLAMETTE VALLEY CO.	PROD. CODE 101520810	E-800-B EPOXY HARDENER (MI	Windows	4	5	1.1	8.8	0.24	0.00	0.00	0.31	0.0	2	
414	WILLAMETTE VALLEY CO.	X-PINE	PUTTY SOLV FACE-PIN	WILLAMETTE VALLEY CO.	PROD. CODE 103630072	PUTTY SOLV FACE-PINE	Windows	4	60	1.2	10.0	0.33	0.00	0.00	0.36	0.0	22	
415	WILLAMETTE VALLEY CO.	X-WHITE SPACKLE	SPACKLE COMPOUND	WILLIAMETTE VALLEY	103400701 SPACKLE COMP	SPACKLE COMPOUND- WHITES	Windows	4	21	0.5	4.2	0.00	0.01	0.01	0.01	0.2	0	
416	SPECIALTY POLYMERS	X-2540A	WD-2540A	SPECIALTY POLYMERS, INC	WD-2540A	EXTERIOR GLUE	Lamination	4	0	1.1	9.1	0.0010	0.0008	0.0018	0.0018	0.0	0	
417	USED																	
418	ChemCentral	X-MINERALSPIRITS	2024	EXXONMOBIL CHEMICAL	VARSOL 1 FLUID - MINERAL	Mineral Spirits 66/3	Windows	4	0	0.8	6.7				1.00	0.0	0	
419	APPLIED RESEARCH	X-DEGREASE-IT	2200431/17			DEGREASE IT ORANGE AND VA	Maintenance	4	12	0.9	7.9	0.15	0.00	0.00	0.38	0.0	5	
420	APPLIED RESEARCH	X-SAFEKLEEN	2200512/18			SAFE KLEAN	Maintenance	4	48	1.4	11.8	0.93	0.00	0.90	0.96	43	46	
421	NAPA/ZEP	CHE-0239	0239 AERSOL ANTI-SEI	ZEP MANUFACTURING	ZEP GROOVY PRODUCT NO	ZEP GROOVY	PARTS	4	5	1.4	11.6	0.00	0.00	0.00	0.67	0.0	3	
422	APPLIED RESEARCH	X-EL70	1250670			EL70/EPOXY PATCH PART A	Maintenance	4	39	1.1	9.3	0.17	0.00	0.00	1.00	0.0	39	
423	REECE CO.	PAI-2163	V2163 838	RUST-OLEUM CORP.	SAFETY RED 9703268	SAFETY RED PAINT	PARTS	4	6	1.0	8.0	0.60	0.00	0.50	0.60	3.0	4	
424	REECE CO.	PAI-2187	V2187 838	RUST-OLEUM CORP.	DARK MACHINE GRAY 97041	DARK MACHINE GRAY PAINT	PARTS	4	6	1.0	8.3	0.55	0.00	0.55	0.55	3.3	3	
425	NAPA/ZEP	CHE-83570	0311 ZEP ERASE			ZEP ERASE	PARTS	4	15	1.0	8.4	0.45	0.45	0.75	0.90	11	14	
426	KAMAN	CHE-54531	HYDRAULIC/ PNEUMAT			HYDRAULIC/PNEUMATIC SEAL	Maintenance	4	15	1.1	9.0	0.00	0.00	0.00	0.04	0.0	0.6	
427	REECE CO.	PAI-2125	V2125 838	RUST-OLEUM CORP.	DEEP BLUE 9703259	DEEP BLUE PAINT	PARTS	4	12	0.9	7.5	0.55	0.00	0.55	0.85	7	10	
428	REECE CO.	PAI-2155	V2155 838	RUST-OLEUM CORP.	SAFETY ORANGE 9703266	SAFETY ORANGE PAINT	PARTS	4	12	1.0	7.9	0.65	0.00	0.65	0.95	8	11	
429	REECE CO.	PAI-2178	V2178 838	RUST-OLEUM CORP.	FLAT BLACK 9703274	LOW VOC HH FLAT BLACK	PARTS	4	12	0.9	7.9	0.55	0.00	0.55	0.80	7	10	
430	REECE CO.	PAI-2190	V2190 838	RUST-OLEUM CORP.	FLAT WHITE 9703281	FLAT WHITE PAINT	PARTS	4	12	1.0	8.0	0.45	0.00	0.45	0.75	5	9	
431	OEC CORP	CHE-9291	A-6069 PENETRATING	OEC CORP	A-6069 NO. 9291	PENETRATING GEL LUBRICANT	Maintenance	4	36	0.7	5.8	0.45	0.00	0.45	0.79	16	28	
432	OEC CORP	CHE-9766	TM3806 OPEN GEAR LU			TM3806 OPEN GEAR LUBE	Maintenance	4	14	0.7	5.8	0.25	0.00	0.25	0.60	4	8	
433	OEC CORP	CHE-9249	TM3582 TRIM ADHESIV			TM3582 TRIM ADHESIVE WIHTC	Maintenance	4	18	0.7	5.8	0.50	0.00	0.35	0.75	6	14	
434	REECE CO.	CHE-732	732	GE SILICONES	GE612 ACETOXY SANITARY	SILICONE RUBBER SEALANT	PARTS	4	26	1.1	8.8	0.00	0.00	0.00	0.04	0.0	1.0	
435	OEC CORP	CHE-9103	9103 ULTRALUBE			9103 ULTRALUBE	Maintenance	4	21	1.2	9.9	0.10	0.55	0.60	0.90	13	19	
436	REECE CO.	PAI-2192	V2192 838	RUST-OLEUM CORP.	GLOSS WHITE	LOW VOC HH GLOSS WHITE PA	PARTS	4	24	1.0	8.0	0.50	0.00	0.45	0.50	11	12	
437	REECE CO.	PAI-2169	V2169 838	RUST-OLEUM CORP.	RED PRIMER 9703240	RED PRIMER	PARTS	4	30	1.2	10.0	0.40	0.00	0.40	0.70	12	21	
438	NAPA/GRANT	X-ANTIFREEZE	FULL FORCE ANTIFREE			FULL FORCE ANTIFREEZE AND	Maintenance	4	1,870	1.1	9.4	0.93	0.00	0.93	0.93	1,739	1,739	
439	REECE CO.	PAI-A22	A22	SHERWIN WILLIAMS	10000 COLORTOUCH SPRA	INEXPENSIVE PAINT WHITE	PARTS	4	40	0.7	6.0	0.41	0.00	0.18	0.64	7	26	
440	REECE CO.	PAI-2179	V2179 838	RUST-OLEUM CORP.	BLACK 9704176	LOW VOC HH GLOSS BLACK PA	PARTS	4	36	1.0	8.0	0.60	0.00	0.50	0.90	18	32	

PRODUCT DESCRIPTION							EM SOURCE		PERMIT REQUEST	BASE INFO						INFO FOR PERMIT		
No.	Supplier	Woodgrain Item #	Supplier Item #	Manufacturer	Man Item #	Description/Trade Name	Use Area	Bdlg No.	Total lb/yr	SP Grav	lb/gal	% 585	% 586	% HAPs	% VOC	lb HAP	lb VOC	Comments
441	REECE CO.	PAI-2148	V2148 838	RUST-OLEUM CORP.	EQUIPMENT YELLOW 97032	LOW VOC HH EQUIP YELLOW	PARTS	4	55	1.0	8.3	0.55	0.00	0.55	0.85	30	47	
442	REECE CO.	PAI-2348	2348 838	RUST-OLEUM CORP.	YELLOW STRIPING 9704182	YELLOW STRIPING	PARTS	4	47	1.2	10.3	0.40	0.00	0.40	0.65	19	31	
443	APPLIED RESEARCH	X-HT	1250412			HT LIQUID DEGREASER	Maintenance	4	800	0.8	6.6	0.00	0.00	0.00	1.00	0.0	800	
444	REECE CO.	PAI-2143	V2143 838	RUST-OLEUM CORP.	SAFETY YELLOW 9703263	SAFETY YELLOW PAINT	PARTS	4	84	1.1	8.8	0.60	0.00	0.60	1.00	50	84	
445	REECE CO.	PAI-FL10	FL10	KRYLON	3102	INEXPENSIVE PAINT FLOQUEE	PARTS	4	84	0.9	7.2	0.44	0.00	0.14	0.56	12	47	
446	REECE CO.	PAI-E12	E12	SHERWIN WILLIAMS/RED D	RDGP0114 INT/EXT HIGH GL	INEXPENSIVE PAINT SHAMROC	PARTS	4	105	0.7	6.1	0.42	0.00	0.18	0.59	19	62	
447	REECE CO.	PAI-FL08	FL08	KRYLON	3105	INEXPENSIVE PAINT FLOURES	PARTS	4	105	0.9	7.2	0.36	0.00	0.12	0.53	13	56	
448	REECE CO.	PAI-FL09	FL09	KRYLON	3101	INEXPENSIVE PAINT FLOURES	PARTS	4	110	0.9	7.2	0.46	0.00	0.12	0.53	13	58	
449	REECE CO.	PAI-FL07	FL07	KRYLON	3106	INEXPENSIVE PAINT FLOURES	PARTS	4	110	0.9	7.2	0.46	0.00	0.12	0.53	13	58	
450	NAPA/ZEP	CHE-ZEPAID	0104 AERSOL LUBRICA	ZEP MANUFACTURING	ZEP AID NC 0104	ZEP AID NC SILICONE SPRAY	PARTS	4	144	0.7	5.7	0.95	0.00	0.95	0.95	137	137	
451	REECE CO.	PAI-A24	A24	SHERWIN WILLIAMS	EAREE024	INEXPENSIVE PAINT ALPINE GF	PARTS	4	162	0.7	6.2	0.57	0.00	0.25	0.87	41	141	
452	OEC CORP	CHE-9105	A-6086 CHAIN AND SPF			A-6086 CHAIN AND SPROCKET	Maintenance		165	0.9	7.3	0.00	0.00	0.00	0.60	0.0	99	
453	REECE CO.	PAI-E09	E09	SHERWIN WILLIAMS	10003 COLORTOUCH SPRA	INEXPENSIVE PAINT YELLOW	PARTS	4	158	0.7	6.0	0.41	0.00	0.17	0.85	27	134	
454	REECE CO.	PROD-0541	541	RED DEVIL, INC.	ONETIME LIGHTWEIGHT SP	ONETIME SPACKLING COMPOU	PARTS	4	159	1.0	8.4	0.02	0.00	0.02	0.02	3.2	3.2	
455	REECE CO.	PAI-E36	E36	SHERWIN WILLIAMS/ KRYL	2507	INEXPENSIVE PAINT BROWN	PARTS	4	163	0.8	6.4	0.66	0.00	0.19	0.86	31	140	
456	REECE CO.	PAI-A85	A85	RED DEVIL/ SHERWIN WILL	RDGP0112	INEXPENSIVE PAINT CHEVROL	PARTS	4	204	0.7	6.1	0.44	0.00	0.18	0.81	37	165	
457	USED																	
458	NAPA/ZEP	CLE-GRIP	0912 ABRASIVE HAND CLAENER			ZEP GRIP	PARTS	4	237	0.9	7.9	0.00	0.00	0.00	0.25	0.0	59	
459	REECE CO.	PAI-E35	E35	SHERWIN WILLIAMS	10001 COLORTOUCH SPRA	INEXPENSIVE PAINT ASTRO BL	PARTS	4	288	0.7	5.8	0.42	0.00	0.18	0.65	52	187	
460	UNISOURCE	CLE-9121110	LOTION HAND SOAP	SANI-FRESH INTERNATION	SANI TUFF LOTION HAND SC	HAND SOAP	PARTS	4	348	1.0	8.5	0.03	0.00	0.00	0.00	0.0	0.0	
461	REECE CO.	PAI-E18	E18	KRYLON/SHERWIN WILLIAM	1318	INEXPENSIVE PAINT GRAY PRIM	PARTS	4	330	0.8	6.9	0.61	0.00	0.27	0.78	89	257	
462	REECE CO.	PAI-E01	E01	SHERWIN WILLIAMS	10008 COLORTOUCHSPRA	INEXPENSIVE PAINT BLACK	PARTS	4	360	0.7	5.8	0.44	0.00	0.16	0.64	58	229	
463	MOTION	CHE-WD40	WD-40 BULK LIQUID		CHE-WD40	WD-40 BULK LIQUID	Maintenance	4	1,069	0.8	6.7	0.00	0.00	0.00	0.70	0.0	748	
464	USED																	
465	Buckman	X-Busan1127	Busan 1127	BUCKMAN LABORATORIES	BUSAN 1127	Wood Treat Concentrate	Windows	4	100,000	0.9	7.6	0.02	0.0002	0.020	0.78	2,000	78,000	using 2002 MSD info
466	USED																	
467	NAPA	IGN-7651461	7651461	LOCTITE CORPORATION	7651461	PERMATEX ULTRA BLUE NO LE	Maintenance	4	3	1.3	10.9	0.33	0.00	0.00	0.05	0.0	0.2	
468	KELLY-MOORE	PAI-P8999	PROGUARD GLOSS MA	SHERWIN WILLIAMS	PAI-P8999	OMNI-PAK ENAMEL BLEND	PARTS	4	338	1.1	9.0	0.16	0.00	0.16	0.41	54	138	
469	SHERWIN WILLIAMS	1314	1314 ALL PURPOSE PL	KRYLON	1314 ALL PURPOSE PLATINU	PRIMER - PLATINUM	PARTS	4	5	0.8	6.9	0.57	0.00	0.23	0.74	1.2	4	
470	SHERWIN WILLIAMS	1315	1315 ALL PURPOSE WH	KRYLON	1315 ALL PURPOSE WHITE	PRIMER - WHITE	PARTS	4	34	0.8	6.8	0.57	0.00	0.23	0.74	8	25	
471	SHERWIN WILLIAMS	1316	1316 ALL PURPOSE BL	KRYLON	1316 ALL PURPOSE BLACK	PRIMER - BLACK	PARTS	4	53	0.8	6.8	0.59	0.00	0.25	0.76	13	40	
472	SHERWIN WILLIAMS	1317	1317 RUDDY BROWN	KRYLON	1317 RUDDY BROWN	PRIMER - RUDDY BROWN	PARTS	4	18	0.8	6.8	0.61	0.00	0.27	0.78	5	14	
473	KAMAN	CHE-C320	C320	REMA TIP TOP	C320 CEMENT	CEMENT	Parts	4	5	1.5	12.1	0.40	0.00	0.80	0.80	4.0	4.0	
474	ARNOLD MCH		NO. 1345809	VALSPAR	PART NO. 1345809	HYSTER YELLOW AEROSOL	Parts	4	5	1.0	8.0	0.03	0.00	0.05	0.67	0.3	3.4	
475	KANO LAB	X-Silikroil (aerosol)	X-Silikroil (aerosol)	Kano Lab	X-Silikroil (aerosol)	Silikroil lubricant	Parts	4	9	0.9	7.3	0.05	0.00	0.05	0.60	0.5	5.4	
476	KANO LAB	X-AeroKoil	X-AeroKoil	Kano Lab	X-AeroKoil	LUBRICANT	Parts	4	10	0.9	7.3	0.05	0.00	0.06	0.60	0.6	6.0	
477	Specialty Polymers	C-100Y	C-100Y	Specialty Polymers	C-100Y	C-100Y	lamination	4	7,900	1.3	10.6	0.00	0.00	0.00	0.00	0.0	0.0	
478	Exxon Mobile	Exxol D40 Fluid	Exxol D40 Fluid	Exxon	Exxol D40 Fluid	Exxol D40 Fluid	windows	4	500,000	1.1	9.1	0.02	0.00	0.0002	1.00	100	500,000	replaces Varsol 418 in 2002
479	Specialty Polymers	WD-2403	WD-2403	Specialty Polymers	WD-2403	WD-2403	Lamination	4	180,000	1.1	9.1	0.0005	0.0005	0.0002	0.02	36	3,600	replaces 416 WD240A in 2002
														BLDG 4	lbs	[illegible]	[illegible]	
															tons	[illegible]	[illegible]	

PRODUCT DESCRIPTION							EM SOURCE		PERMIT REQUEST	BASE INFO						INFO FOR PERMIT		
No.	Supplier	Woodgrain Item #	Supplier Item #	Manufacturer	Man Item #	Description/Trade Name	Use Area	Bdlg No.	Total lb/yr	SP Grav	lb/gal	% 585	% 586	% HAPs	% VOC	lb HAP	lb VOC	Comments
BLDG 5																		
500	OPEN																	
501	REECE CO.	X-DEICER	PRESTONE DE-ICER	PRESTON PRODUCTS COF	AS242 FORMULA 13309-29B	DE ICER	5/4 & 6/4	5	35	**0.9**	7.2	0.80	0.00	0.82	**1.00**	29	35	
502	REECE CO.	PAI-E6	E6	SHERWIN WILLIAMS	10005 COLORTOUCH SPRA	INEXPENSIVE PAINT SWIFT RE	5/4 & 6/4	5	500	0.7	**5.9**	0.38	0.00	0.13	**0.86**	65	430	
503	SPECIALTY POLYMERS	X-C-237	C-237	SPECIALTY POLYMERS, INC	C-237	C-237	6 /4 & 5/4	5	0	1.3	**10.6**	0.00	0.00	0.00	**0.38**	0.0	0.0	
504	USED																	
505	SPECIALTY POLYMERS	WD2540A	WD2540A	Specialty Polymers	WD2540A	WD2540A	5/4 & optim	5	0	1.1	**9.1**	0.00	0.0008	0.00	**0.0018**	0.0	0.0	
506	SPECIALTY POLYMERS	WD2523 D	WD2523 D	Specialty Polymers	WD2523 D	WD2523 D	5/4 & optim	5	0	1.1	**9.1**	0.001	0.0008	0.02	**0.02**	0.0	0.0	replaced by 512
507	USED																	
508	SPECIALTY POLYMERS	WD1350A	WD1350A	Specialty Polymers	WD1350A	WD1350A	5/4 & optim	5	3,000	1.1	**9.1**	0.001	0.0008	0.03	**0.03**	84	83	
509	USED																	
510	Specialty Polymers	C-100Y	C-100Y	Specialty Polymers	C-100Y	C-100Y	5/4 & optim	5	5,500	1.3	**10.6**	0.00	0.00	0.00	**0.00**	0.0	0.0	
511	USED																	
512	Specialty Polymers	WD-2403	WD-2403	Specialty Polymers	WD-2403	WD-2403	5/4 & optim	5	400,000	1.1	**9.1**	0.001	0.001	0.0002	**0.02**	80.00	8,000	replaces 506
														BLDG 5	**lbs**	258	8,548	
															tons	0.13	4.27	
BLDG 6																		
601	HB FULLER	X-CH-365	CH-0365	H. B. FULLER COMPANY	CH-0365	CH-0365 VOC/HAP PRODUCT	Satin Coat	6	44,000	1.1	**9.0**	0.034	0.0001	0.054	**0.054**	2,376	2,384	proposed
														BLDG 6	**lbs**	2,376	2,384	
															tons	1.19	1.19	
														TOTAL SITE LBS		220,852	1,482,690	
														TOTAL SITE TONS		110	741	
	FUEL																	
FUEL-1	Grants Petro/Sinclair		Amoco Diesel	SINCLAIR			Maintenance	4	232,994	**0.9**	7.3				**1.00**		232,994	
FUEL-2	Amerigas	.	Propane - for process po	AP PROPANE, INC. - AMERIGAS		Liquified Petroleum Gas	Forklifts	4	340,680	**0.5**	4.3				**1.00**		340,680	
	Amerigas	.	Propane - for process po	AP PROPANE, INC. - AMERIGAS		Liquified Petroleum Gas	Heat	4	17,034	**0.5**	4.3				**1.00**		17,034	

NOTES:
1) Under the SP gravity and lb/gal columns: the BOLD numbers indicate the PROVIDED numbers. The alternate number has been calculated.

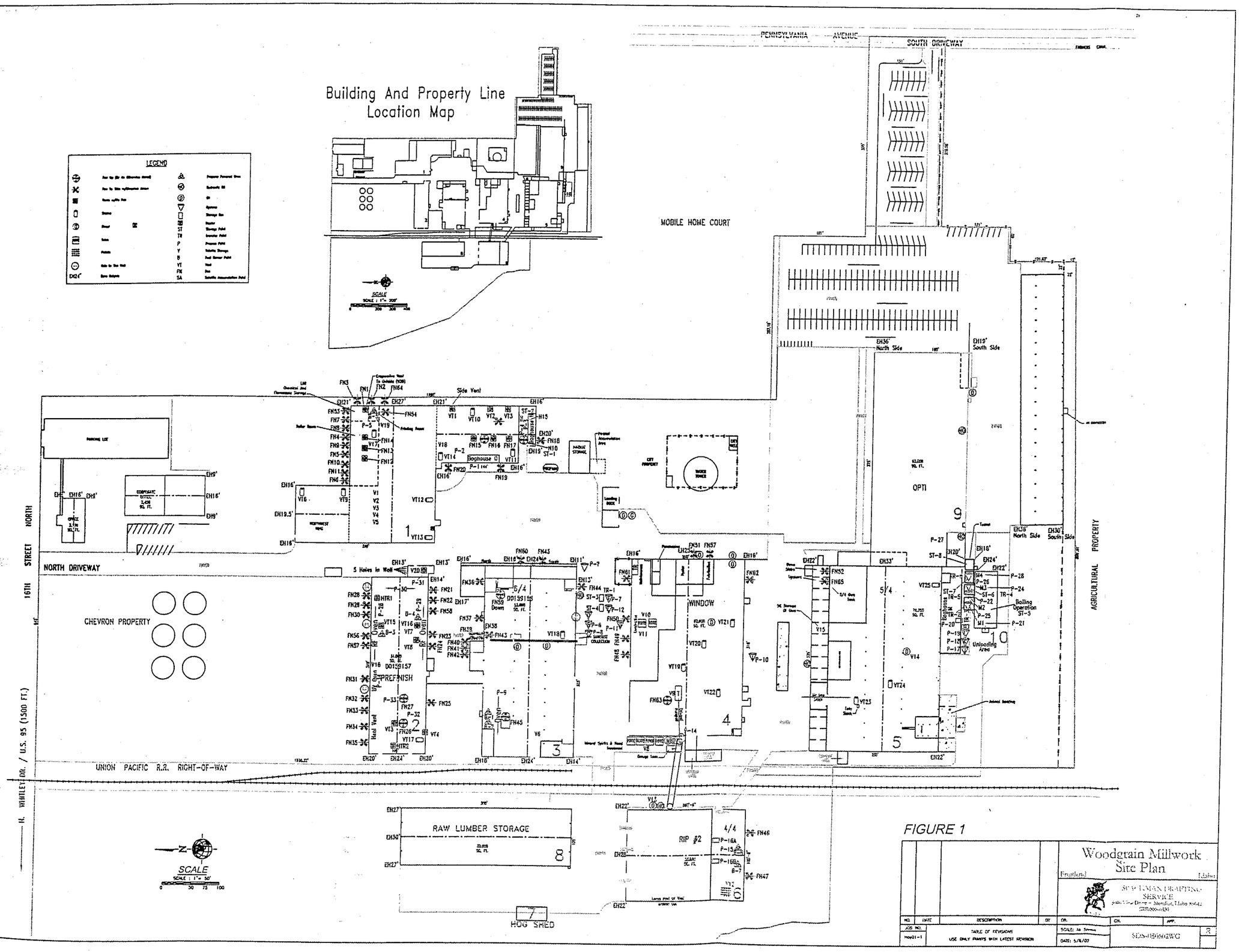


FIGURE 1

Woodgrain Millwork
Site Plan
Fruitland Idaho

SWEENEY DRAFTING SERVICE

NO.	DATE	DESCRIPTION	BY	DR.	CK.	APP.
JOB NO. HOW01-1		TABLE OF REVISIONS USE ONLY PRINTS WITH LATEST REVISION		SCALE: As Shown DATE: 5/6/07	SD3-45060WG	3

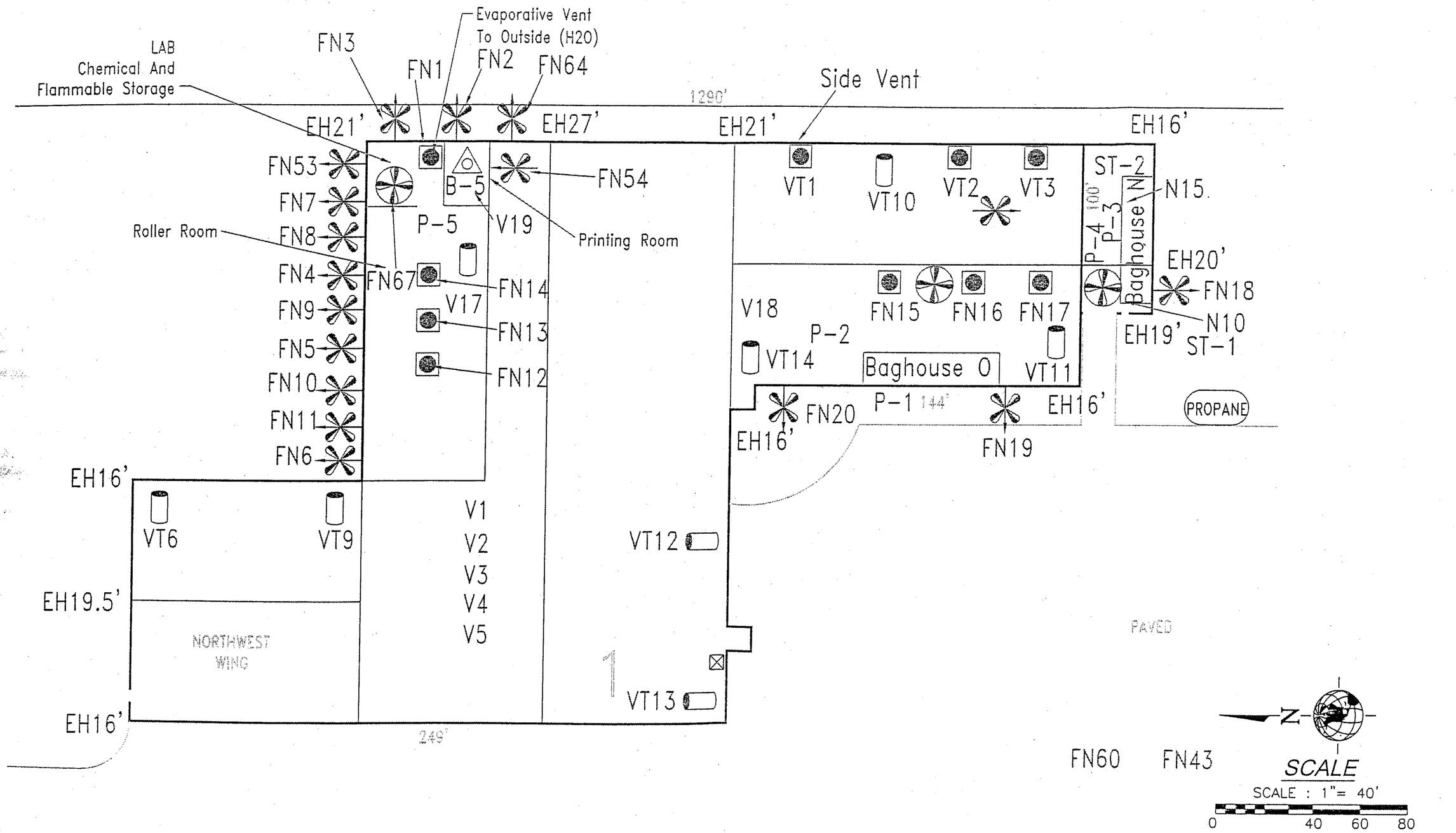

LAB
Chemical And
Flammable Storage
FN3
FN1
Evaporative Vent
To Outside (H20)
FN2
FN64
Side Vent
1290'
EH21'
EH27'
EH21'
EH16'
FN53
FN7
FN8
FN4
FN9
FN5
FN10
FN11
FN6
B-5
FN54
V19
Printing Room
Roller Room
P-5
FN67
FN14
V17
FN13
FN12
VT1
VT10
VT2
VT3
ST-2
N15
P-4 100'
P-3
Baghouse N
EH20'
FN18
N10
EH19'
ST-1
V18
FN15
FN16
FN17
P-2
VT14
Baghouse O
VT11
FN20
P-1 144'
EH16'
EH16'
FN19
PROPANE
EH16'
VT6
VT9
V1
V2
V3
V4
V5
VT12
EH19.5'
NORTHWEST
WING
VT13
EH16'
249'
PAVED
FN60
FN43
SCALE
SCALE : 1"= 40'
0
40
60
80

FIGURE 2

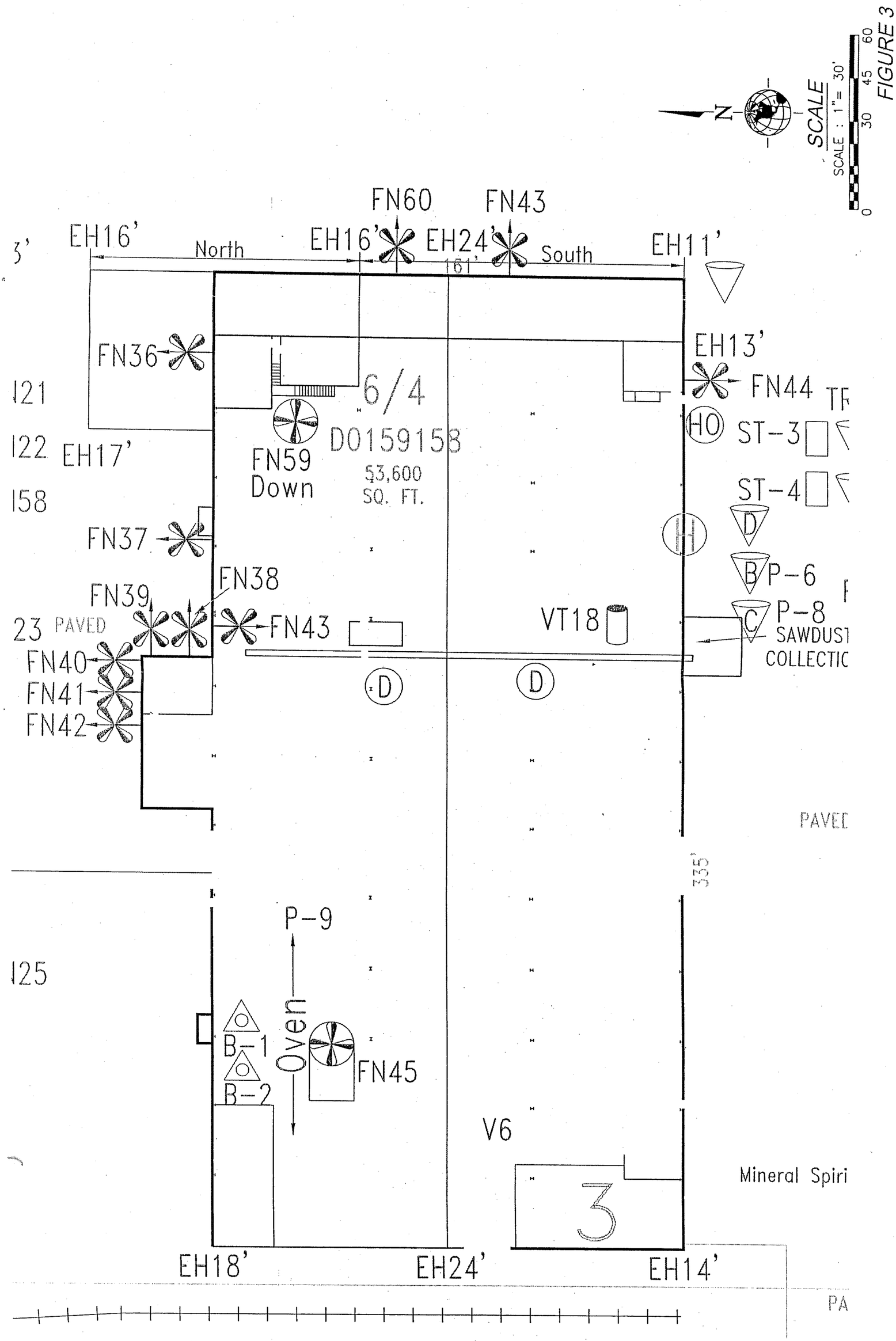


FIGURE 3
SCALE : 1"= 30'
0 30 45 60
N
FN60
FN43
EH16'
North
EH16'
EH24'
South
EH11'
161'
3'
FN36
EH13'
FN44
121
6/4
D0159158
53,600
SQ. FT.
122
EH17'
FN59
Down
HO
ST-3
158
ST-4
FN37
D
H
B
P-6
FN39
FN38
C
P-8
23
PAVED
FN43
VT18
SAWDUST
COLLECTIC
FN40
FN41
FN42
D
D
PAVED
335'
P-9
125
Oven
B-1
B-2
FN45
V6
Mineral Spiri
3
EH18'
EH24'
EH14'
PA

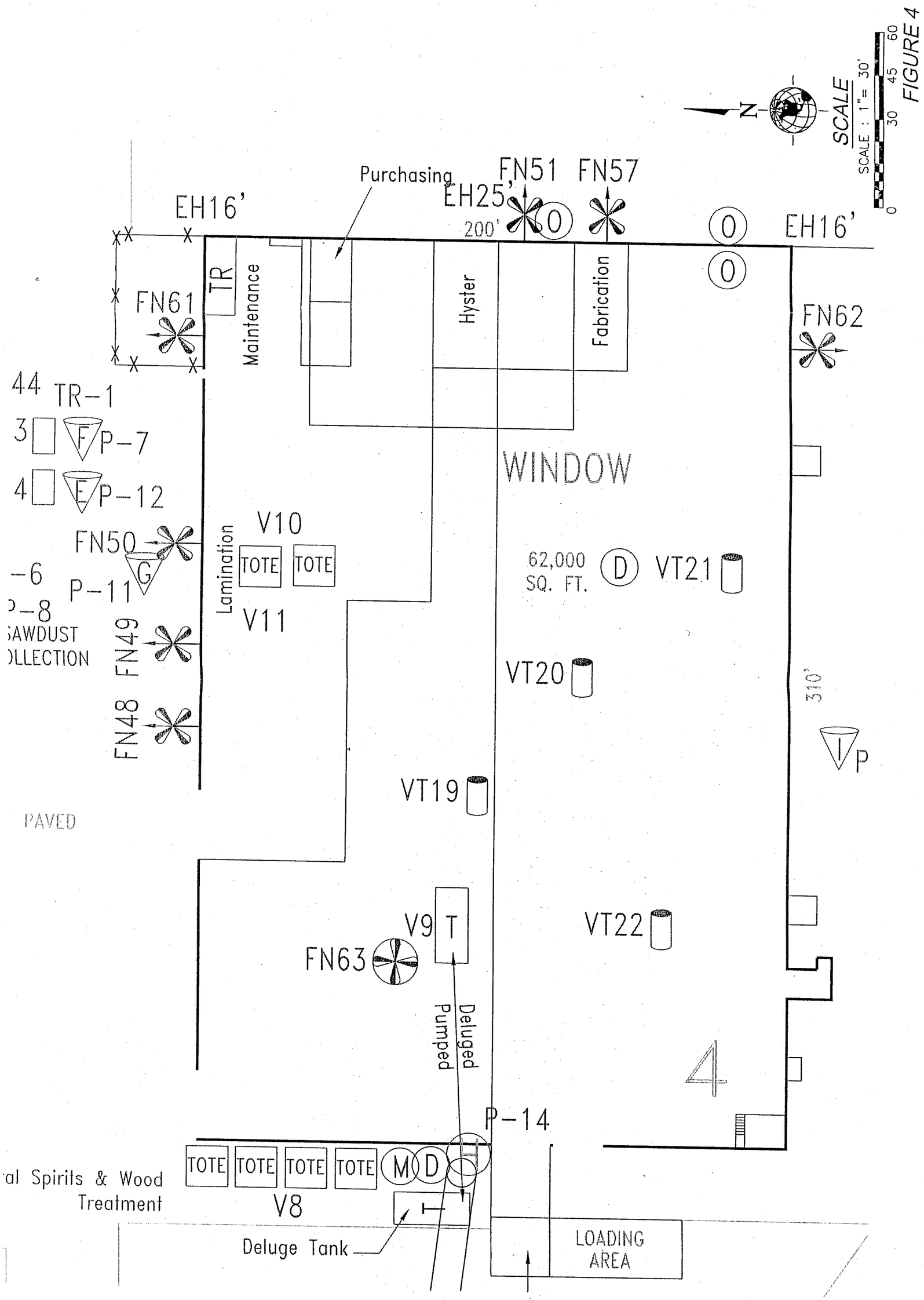
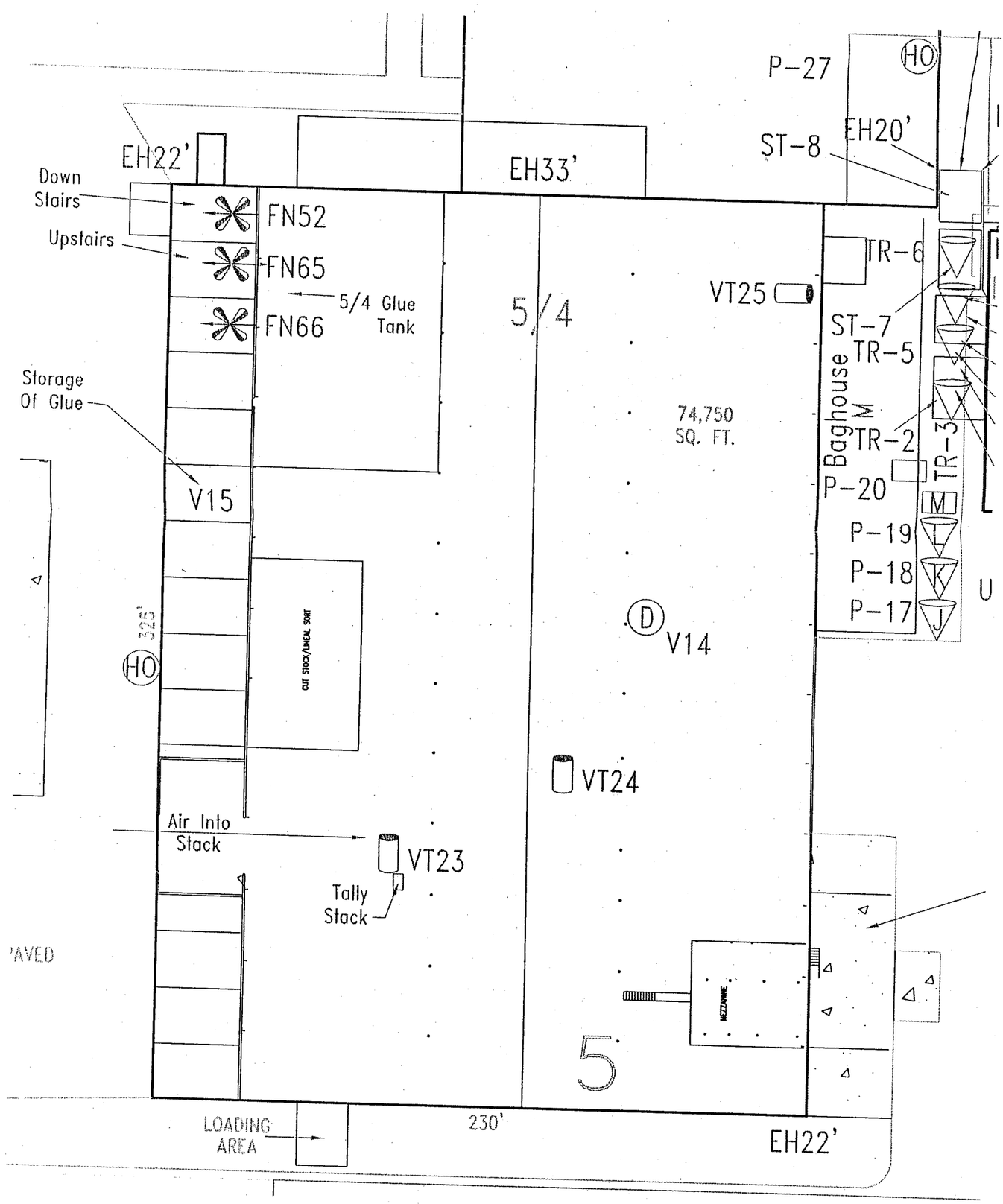


FIGURE 4
SCALE : 1"= 30'
0 30 45 60
N
Purchasing
FN51
FN57
EH25'
EH16'
200'
EH16'
TR
Maintenance
Hyster
Fabrication
FN61
FN62
44
TR-1
3
P-7
4
P-12
WINDOW
FN50
V10
Lamination
TOTE
TOTE
V11
-6
P-11
-8
SAWDUST
COLLECTION
FN49
FN48
62,000
SQ. FT.
D
VT21
VT20
310'
P
VT19
PAVED
V9
T
VT22
FN63
Deluged
Pumped
4
P-14
TOTE
TOTE
TOTE
TOTE
M
D
V8
al Spirits & Wood
Treatment
Deluge Tank
LOADING
AREA

FIGURE 5


N
SCALE
SCALE : 1" = 40'
0
40
60
80
P-27
HO
EH20'
ST-8
EH22'
EH33'
Down Stairs
Upstairs
FN52
FN65
FN66
5/4 Glue Tank
5/4
VT25
TR-6
ST-7
TR-5
Baghouse M
TR-2
TR-3
P-20
M
P-19
L
P-18
K
P-17
J
U
74,750 SQ. FT.
Storage Of Glue
V15
325'
HO
CUT STOCK/LINEAL SORT
D
V14
VT24
Air Into Stack
VT23
Tally Stack
PAVED
MEZZANINE
5
LOADING AREA
230'
EH22'

BURNER and OVEN EMISSIONS
PM, PM 10, SOX, CO, NOX

Process Name	Em. Point	Bldg No.	Throughput (annual)	EFs Units	PM t/yr	PM 10 t/yr	CO t/yr	NOx t/yr	SO2 t/yr	VOC t/yr
2 N.G. ovens (prime B1&2)	P 9	3	5.7537	lb/10^6 ft^3	0.0219	0.0219	0.2417	0.2877	0.001726	0.015823
2 natural gas ovens (satin B6&7)	P 16	6	3.121	lb/10^6 ft^3	0.0119	0.0119	0.1311	0.1560	0.000936	0.008582
North RF oven (B3)	P 28	2	3.869	lb/10^6 ft^3	0.0147	0.0147	0.1625	0.1935	0.001161	0.010641
South RF oven (B4)	P 29	2	1.593	lb/10^6 ft^3	0.0061	0.0061	0.0669	0.0797	0.000478	0.004381
Buckley 5 hd printer (B5)	P 36	1	0.341	lb/10^6 ft^3	0.00130	0.00130	0.0143	0.0171	0.000102	0.000939
				Totals	**0.05578**	**0.05578**	**0.61649**	**0.73392**	**0.00440**	**0.04037**

Process Name	Em. Point	Bldg No.	Operating hrs/yr	EFs Units	PM lb/hr	PM 10 lb/hr	CO lb/hr	NOx lb/hr	SO2 lb/hr	VOC lb/hr
2 N.G. ovens (prime B1&2)	P 9	3	**6,240**	lb/10^6 ft^3	0.00701	0.00701	0.07745	0.09221	0.00055	0.00507
2 natural gas ovens (satin B6&7)	P 16	6	**4,992**	lb/10^6 ft^3	0.00475	0.00475	0.05251	0.06251	0.00038	0.00344
North RF oven (B3)	P 28	2	**4,000**	lb/10^6 ft^3	0.00735	0.00735	0.08126	0.09673	0.00058	0.00532
South RF oven (B4)	P 29	2	**4,000**	lb/10^6 ft^3	0.00303	0.00303	0.03346	0.03983	0.00024	0.00219
Buckley 5 hd printer (B5)	P 36	1	**2,000**	lb/10^6 ft^3	0.00130	0.00130	0.01434	0.01707	0.00010	0.00094
				Totals	**0.02344**	**0.02344**	**0.25902**	**0.30836**	**0.00185**	**0.01696**

Pollutant	Emission Factor	EF Units	Reference
PM	7.6	lb/10^6 cft	AP 42 Table 1.4-2 Condensable plus filterable
PM 10	7.6	lb/10^6 cft	AP 42 Table 1.4-2 Condensable plus filterable
CO	84	lb/10^6 cft	AP 42 Table 1.4-1, small and uncontrolled
NOx	100	lb/10^6 cft	AP 42 Table 1.4-1, small and uncontrolled
SO2	0.6	lb/10^6 cft	AP 42 Table 1.4-2
VOC	5.5	lb/10^6 cft	AP 42 Table 1.4-2

OVENS	Bldg	# of ea. Oven	Use Area	c. ft.	Total 10^6 cft
B5	1	1	5 HEAD	341,417	0.341
B3	2	2	NORTH	1,934,679	3.869
B4	2	2	SOUTH	796,634	1.593
B1	3	6	PRIME	940,805	5.645
B2	3	4	PRIME	27,213	0.109
B6	6	1	SATIN	1,560,350	1.560
B7	6	1	SATIN	1,560,350	1.560

PROCESS EMISSIONS

PARTICULATE

	Em. Point	Bldg No.	PM Em. Factor	PM 10 Em. Factor	EFs Units	Throughput (annual)	Units	Particulate Emissions total (tons/yr)	PM10 Emissions total (tons/yr)	
Closed Baghouse O	P 1	1	0	0	lb/BDT	NA	NA	0.00	0.000	
3 Specialty saws (indoors)	P 2	1	0	0	NA	NA	NA	0.00	0.000	
Baghouse N10 (10 bags)	P 3	1	0.000	0.000	lb/BDT	54	BDT	0.000	0.000	
Baghouse N 15 (15 bags)	P 4	1	0	0	lb/BDT	55	BDT	0.000	0.000	
Cyclone B (low-med)	P 6	NA	0.5	0.25	lb/BDT	447	BDT	0.11	0.056	Will become closed loop
Cyclone F (high)	P 7	NA	0.2	0.15	lb/BDT	0	BDT	0.00	0.000	Will become closed loop
Cyclone C (med)	P 8	NA	0.5	0.25	lb/BDT	308	BDT	0.08	0.039	Will become closed loop
Cyclone I (low)	P 10	NA	0.5	0.25	lb/BDT	177	BDT	0.04	0.022	
Cyclone G (med)	P 11	NA	0.5	0.25	lb/BDT	532	BDT	0.13	0.067	being replaced by baghouse
Cyclone E (med)	P 12	NA	0.5	0.25	lb/BDT	1,183	BDT	0.30	0.148	being replaced by baghouse
Cyclone H - abandoned	P 14	NA	0	0	lb/BDT	0	BDT	0.00	0.000	
Cyclone J (low)	P 17	NA	0.5	0.25	lb/BDT	755	BDT	0.19	0.094	being replaced by baghouse
Cyclone K (med)	P 18	NA	0.5	0.25	lb/BDT	755	BDT	0.19	0.094	
Cyclone L (med)	P 19	NA	0.5	0.25	lb/BDT	1,076	BDT	0.27	0.135	being replaced by baghouse
Baghouse M	P 20	NA	0.001	0.001	lb/BDT	5,030	BDT	0.00	0.003	
Cyclone M1 (closed)	P 21	NA	0	0	lb/BDT	1,509	BDT	0.00	0.000	
Cyclone M2 (closed)	P 22	NA	0	0	lb/BDT	6,799	BDT	0.00	0.000	
Cyclone M4 (high-closed)	P 23	NA	0	0	lb/BDT	NA	BDT	0.00	0.000	
Cyclone M3 (closed)	P 24	NA	0	0	lb/BDT	NA	BDT	0.00	0.000	
Shaker (indoors)	P 25	11	0	0	NA	NA	NA	0.00	0.000	
Bailer (indoors)	P 26	11	0	0	NA	NA	NA	0.00	0.000	
Hammer Hog (indoors)	P 27	9	0	0	NA	NA	NA	0.00	0.000	
UV oven	P 34	2	0	0	NA	0	NA	0.00	0.000	
Cyclone D (temporary?)	P 35	NA	0.5	0.25	lb/BDT	15	BDT	**0.00**	**0.002**	
Electric PVC Vac Oven	P 36	1	0	0	lb/BDT	NA	BDT	0.000	0.000	
Proposed Baghouse E	P 37	NA	0.001	0.001	lb/BDT	1,183	BDT	0.001	0.0006	to replace cyclone E
Proposed Baghouse M5	P 38	NA	0	0	lb/BDT	1,183	BDT	0.000	0.0000	closed loop
Proposed Baghouse L	P 39	NA	0.001	0.001	lb/BDT	1,076	BDT	0.001	0.0005	to replace cyclone L
Proposed Baghouse J	P 40	NA	0.001	0.001	lb/BDT	755	BDT	0.0004	0.0004	to replace cyclone J
Proposed Baghouse G	P 41	NA	0.001	0.001	lb/BDT	532	BDT	0.0003	0.0003	to replace cyclone G
								1.3	**0.7**	

Note: Red lettering indicates additional equipment since June permit application.

Transfer Emission Sources

	Em. Point	PM Em. Factor	PM 10 Em. Factor	% Control Effic	EFs Units	Throughput (annual)	Units	PM Emissions total (tons/yr)	PM10 Emissions total (tons/yr)	Operate (hrs/yr)	PM Emissions total (lb/hr)	PM10 Emissions total (lb/hr)
Truck transfer to P25	TR 1	2	1.2	0.75	lb/BDT	1,954	BDT	1.47	0.879	7,488	0.39	0.23
Transfer by auger	TR 2	0	0		lb/BDT	NA	BDT			7,488	0.00	0.00
Truck transfer to off site	TR 3	2	1.2	0.75	lb/BDT	755	BDT	0.57	0.340	7,488	0.15	0.09
Trucked (sold)	TR 4*	2	1.2	0.9	lb/BDT	2,799	BDT	2.52	1.511	7,488	0.67	0.40
Truck transfer from ST 7	TR 5	2	1.2	0.9	lb/BDT	6,132	BDT	5.52	3.311	7,488	1.47	0.88
Truck transfer from ST 8	TR 6	2	1.2	0.9	lb/BDT	6,132	BDT	5.52	3.311	7,488	1.47	0.88
								15.6	**9.4**		**4.2**	**2.5**

* Assume the other 4,000 BDT now handled through P24

Storage Emission Sources

	Em. Point	PM Em. Factor	PM 10 Em. Factor	EFs Units	Throughput (annual)	Units	PM Emissions total (tons/yr)	PM10 Emissions total (tons/yr)	Operate Hrs. (hrs/yr)	PM Emissions total (lb/hr)	PM10 Emissions total (lb/hr)
Portable Storage Bin	ST 1	1	0.58	lb/BDT	54	BDT	0.03	0.016	4,992	0.01	0.01
Portable Storage Bin (indoor)	ST 2	0	0	lb/BDT	N/A	NA	NA	NA	NA	NA	NA
East Loadout Bins	ST 3	1	0.58	lb/BDT	1,954	BDT	0.98	0.567	7,488	0.26	0.15
West Loadout Bins	ST 4	1	0.58	lb/BDT	1,954	BDT	0.98	0.567	7,488	0.26	0.15
Shavings Bin	ST 5	1	0.58	lb/BDT	1,509	BDT	0.75	0.438	7,488	0.20	0.12
Fines Bin (sawdust)	ST 6	1	0.58	lb/BDT	6,799	BDT	3.40	1.972	7,488	0.91	0.53
Fines Bin	ST 7	1	0.58	lb/BDT	12,264	BDT	6.13	3.557	7,488	1.64	0.95
Fines Bin	ST 8	1	0.58	lb/BDT	6,132	BDT	3.07	1.778	7,488	0.82	0.47
							15.3	**8.9**		**4.1**	**2.4**

TOTAL EMISSIONS

Process Sources	Bldg Number	Non Fug PM (tons/yr)	Non fug PM10 (tons/yr)	Fugitive PM (tons/yr)	Fugitive PM10 (tons/yr)	Total VOC's (tons/yr) *	HAPS (tons/yr) *	SO 2 (tons/yr) *	CO (tons/yr) *	NOx (tons/yr) *
Bldg 1	1	0.00	0.00	NA	NA	14.0	7.1	NA	NA	NA
Bldg 2	2	0.00	0.00	NA	NA	465.0	109.7	NA	NA	NA
Bldg 3	3	0.00	0.00	NA	NA	5.6	0.07	NA	NA	NA
Bldg 4	4	0.00	0.00	NA	NA	323.3	2.6	NA	NA	NA
Bldg 5	5	0.00	0.00	NA	NA	4.3	0.14	NA	NA	NA
Bldg 6	6	0.00	0.00	NA	NA	1.31	1.31	NA	NA	NA
Bldg 9	9	0.00	0.00	NA	NA	0.0	0.0	NA	NA	NA
Bldg 11	11	0.00	0.00	NA	NA	0.0	0.0	NA	NA	NA
Cyclone B	P6	0.11	0.06	NA	NA	NA	NA	NA	NA	NA
Cyclone F	P7	0.00	0.00	NA	NA	NA	NA	NA	NA	NA
Cyclone C	P8	0.08	0.04	NA	NA	NA	NA	NA	NA	NA
Cyclone I	P10	0.04	0.02	NA	NA	NA	NA	NA	NA	NA
Cyclone G	P11	0.13	0.07	NA	NA	NA	NA	NA	NA	NA
Cyclone E	P12	0.30	0.15	NA	NA	NA	NA	NA	NA	NA
Cyclone J	P17	0.19	0.09	NA	NA	NA	NA	NA	NA	NA
Cyclone K	P18	0.19	0.09	NA	NA	NA	NA	NA	NA	NA
Cyclone L	P19	0.27	0.13	NA	NA	NA	NA	NA	NA	NA
Baghouse M	P20	0.003	0.003	NA	NA	NA	NA	NA	NA	NA
Cyclone D	P35	0.004	0.002	NA	NA	NA	NA	NA	NA	NA
Electric PVC Vac Oven	P 36	0.000	0.000	NA	NA	*	*	NA	NA	NA
Proposed Baghouse E	P 37	0.001	0.001	0.000	0.000	NA	NA	NA	NA	NA
Proposed Baghouse M5	P 38	0.000	0.00	0.000	0.000	NA	NA	NA	NA	NA
Proposed Baghouse L	P 39	0.001	0.001	0.000	0.000	NA	NA	NA	NA	NA
Proposed Baghouse J	P 40	0.000	0.0004	0.000	0.000	NA	NA	NA	NA	NA
Proposed Baghouse G	P 41	0.000	0.0003	0.000	0.000	NA	NA	NA	NA	NA
	TOTALS	**1.3**	**0.7**	**0.0**	**0.0**	**813.5**	**121.0**	**0.0**	**0.0**	**0.0**

* emissions mt'd in Bldg 1

* does not include burners for fuel burning, based on 10% increase over projected.

Source	Bldg Number	Non Fug PM (tons/yr)	Non fug PM10 (tons/yr)	Fugitive PM (tons/yr)	Fugitive PM10 (tons/yr)	Total VOC's (tons/yr)	HAPS (tons/yr) *	SO 2 (tons/yr)	CO (tons/yr)	NOx (tons/yr)
Emboss Print machines	1	0.00130	0.00130	NA	NA	0.00094	0.0	0.000102	0.0143	0.0171
N&S RF ovens	2	0.0208	0.0208	NA	NA	0.0150	0.0	0.00164	0.229	0.273
Burner/Ovens	3	0.0219	0.0219	NA	NA	0.0158	0.0	0.00173	0.242	0.288
Burner/Ovens	6	0.0147	0.0147	NA	NA	0.00858	0.0	0.000936	0.1311	0.1560
	TOTALS	**0.0573**	**0.0573**	**0.0**	**0.0**	**0.0394**	**0.0**	**0.00430**	**0.602**	**0.717**

minor amounts in fuel burning

Storage Sources	ID Number	Non Fug PM (tons/yr)	Non fug PM10 (tons/yr)	Fugitive PM (tons/yr)	Fugitive PM10 (tons/yr)	Total VOC's (tons/yr)	HAPS (tons/yr) *	SO 2 (tons/yr)	CO (tons/yr)	NOx (tons/yr)
Portable Storage Bin	ST 1	NA	NA	0.03	0.02	NA	NA	NA	NA	NA
East Loadout Bins	ST 3	NA	NA	1.0	0.6	NA	NA	NA	NA	NA
West Loadout Bins	ST 4	NA	NA	1.0	0.6	NA	NA	NA	NA	NA
Shavings Bin	ST 5	NA	NA	0.8	0.4	NA	NA	NA	NA	NA
Fines Bin (sawdust)	ST 6	NA	NA	3.4	2.0	NA	NA	NA	NA	NA
Fines Bin	ST 7	NA	NA	6.1	3.6	NA	NA	NA	NA	NA
Fines Bin	ST 8	NA	NA	3.1	1.8	NA	NA	NA	NA	NA
	TOTALS	**0.0**	**0.0**	**15.3**	**8.9**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Transfer Sources	ID Number	Non Fug PM (tons/yr)	Non fug PM10 (tons/yr)	Fugitive PM (tons/yr)	Fugitive PM10 (tons/yr)	Total VOC's (tons/yr)	HAPS (tons/yr) *	SO 2 (tons/yr)	CO (tons/yr)	NOx (tons/yr)
Truck transfer to P25	TR 1	NA	NA	1.47	0.88	NA	NA	NA	NA	NA
Transfer by auger	TR 2	NA	NA	0.00	0.00	NA	NA	NA	NA	NA
Truck transfer to off site	TR 3	NA	NA	0.57	0.34	NA	NA	NA	NA	NA
Trucked (sold)	TR 4*	NA	NA	2.52	1.51	NA	NA	NA	NA	NA
Truck transfer from ST 7	TR 5	NA	NA	5.52	3.31	NA	NA	NA	NA	NA
Truck Transfer from ST8	TR 6	NA	NA	5.52	3.31	NA	NA	NA	NA	NA
	TOTALS	**0.0**	**0.0**	**15.6**	**9.4**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

* Other 4,000 bdt now handled by P24

* Assume the other 4,000 BDT tons now handled through P24

Vehicle travel*	NA	NA	NA	2.0	2.0	NA	NA	NA	NA	NA
	TOTALS	**0.00**	**0.00**	**2.00**	**2.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.00

* estimated from similar facilities

Total	1.37	0.72	32.92	20.25	813.56	120.99	0.00	0.60	0.72	**991**
Fee Applicable	1.37				813.6		0.0043		0.72	**816**

VOC

Process Point 585 and 586 chemicals (all point sources)

		1	2	3	4	5	6	9	10
Glycol ethers	---	NA	1.46E+00	5.61E+00	1.18E-01	NA	1.76E-01	NA	NA
Eth Benz	100-41-4	NA	NA	8.30E-01	NA	5.68E-03	NA	NA	NA
Styrene	100-42-5	NA	NA	NA	NA	6.68E-05	NA	NA	NA
Alkyl Glycidyl Ether	106-92-3	NA	NA	NA	NA	8.85E-04	NA	NA	NA
Ethylene glycol	107-21-1	NA	1.05E-03	NA	1.91E-03	2.31E-01	3.27E-04	NA	NA
Propylene Glycol Monomethyl Ether	107-98-2	NA	NA	NA	NA	3.63E-03	NA	NA	NA
Vinyl Acet	108-05-4	NA	5.98E-02	2.60E-03	3.76E-03	1.20E-02	2.87E-03	5.64E-03	NA
Meth Iso Ket	108-10-1	NA	NA	1.98E+00	NA	8.71E-04	NA	NA	NA
Isopropyl Ace	108-21-4	NA	2.56E-02	1.28E+01	NA	NA	NA	NA	NA
1-methoxy-2-propanol acetate	108-65-6	NA	NA	NA	NA	1.52E-03	NA	NA	NA
Toluene	108-88-3	NA	2.38E-01	1.25E+01	NA	5.29E-02	8.68E-03	NA	NA
Monochlorobenzene	108-90-7	NA	NA	NA	NA	1.34E-05	NA	NA	NA
Phenol	108-95-2	NA	NA	NA	NA	NA	2.00E-04	NA	NA
Propyl Acetate	109-60-4	NA	NA	1.17E+01	NA	NA	NA	NA	NA
Isobutyl Acet	110-19-0	NA	NA	9.51E+00	NA	NA	NA	NA	NA
M n-Amyl K	110-43-0	NA	6.36E-02	3.07E-01	NA	NA	NA	NA	NA
n-Hexane	110-54-3	NA	NA	NA	NA	2.86E-02	NA	NA	NA
Diethylene Triamine	111-40-0	NA	NA	NA	NA	1.60E-04	NA	NA	NA
Ethylene glycol monobutyl ether	111-76-2	NA	7.10E-02	NA	2.82E-02	6.68E+00	NA	NA	NA
Ethyl glycol monobutyl ether acetate	112-07-2	NA	NA	NA	NA	NA	NA	NA	NA
Diethylene glycol monoethyl ether acete	112-15-2	NA	1.35E-02	NA	NA	NA	1.04E-02	NA	NA
Diethylene glycol monobutyl ether	112-34-5	NA	NA	NA	9.48E-03	NA	0.00E+00	NA	NA
Di(2-ethyl)phthalate	117-81-7	NA	4.00E-01	NA	NA	NA	NA	NA	NA
Triethylamine	121-44-8	NA	NA	2.82E-04	NA	NA	NA	NA	NA
HydroQui	123-31-9	NA	NA	NA	3.53E-05	NA	NA	5.29E-05	NA
Diacetone Alcohol	123-42-2	NA	NA	NA	NA	NA	NA	NA	NA
N Butyl Ac	123-86-4	NA	1.19E-02	2.71E-01	NA	NA	NA	NA	NA
1,4-Dioxane	123-91-1	NA	NA	NA	0.00E+00	NA	NA	NA	NA
Ethy Acet	124-17-4	NA	NA	NA	1.76E-01	NA	NA	2.64E-01	NA
Tetrachloroethylene	127-18-4	NA	NA	NA	NA	2.16E-03	NA	NA	NA
Xylene	1330-20-7	NA	NA	4.80E+00	NA	2.34E-02	NA	NA	NA
Ethyl Acet	141-78-6	NA	2.31E-02	1.25E+01	NA	NA	NA	NA	NA
Heptane	142-82-5	NA	NA	3.87E-01	NA	NA	NA	NA	NA
2-(thiocyanmethylthio)benzothiazole	21564-17-	NA	NA	NA	NA	6.68E-01	NA	NA	NA
Trimethylbenzene	25551-13-	NA	NA	NA	NA	1.65E-03	6.68E-04	NA	NA
Dipropylene Glycol Methyl Ether	34590-94-	NA	NA	NA	NA	8.80E-03	NA	NA	NA
Formaldehyde	50-0-0	NA	3.52E-03	NA	5.11E-04	1.20E-02	2.70E-02	7.67E-04	NA
Trimethyl-pentane	540-84-1	NA	NA	NA	NA	NA	NA	NA	NA
Ethanol	64-17-5	NA	4.99E-02	2.09E+01	1.20E-01	NA	NA	NA	NA
Aromatic solvent	64742-94-	NA	NA	NA	NA	8.68E+00	NA	NA	NA
Methanol	67-56-1	NA	1.97E-03	1.38E-02	4.68E-02	NA	3.51E-03	3.00E-02	NA
IsoProp	67-63-0	NA	NA	1.64E+01	1.25E-04	1.10E-02	NA	NA	NA
Acetone	67-64-1	NA	6.23E-01	2.87E+00	NA	8.26E-02	1.60E-02	NA	NA
Benzene	71-43-2	NA	NA	NA	NA	2.67E-05	NA	NA	NA
1,1,1, Trichloroethane	71-55-6	NA	NA	NA	NA	2.24E-03	NA	NA	NA
Acetaldehyde	75-07-0	NA	1.35E-01	NA	2.17E-04	NA	NA	3.26E-04	NA
Methylene Chloride	75-09-2	NA	NA	NA	2.04E-03	4.74E-04	NA	NA	NA
Ethylene Oxide	75-21-8	NA	NA	NA	0.00E+00	NA	NA	NA	NA
Prop Ox	75-56-9	NA	NA	NA	5.88E-06	NA	NA	8.81E-06	NA
MEK	78-93-3	NA	4.16E-01	1.98E+01	NA	9.71E-04	NA	NA	NA
Trichloroethylene	79-01-6	NA	NA	NA	NA	6.30E-03	NA	NA	NA
Stoddard Solvent	8052-41-3	NA	NA	NA	0.00E+00	NA	NA	NA	NA
Naphthalene	91-20-3	NA	NA	NA	NA	9.35E-01	NA	NA	NA
Orthodichlorobenzene	95-50-1	NA	NA	NA	NA	2.10E-04	NA	NA	NA
1,2,4 Trimethylbenzene	95-63-6	NA	NA	NA	NA	1.00E+03	NA	NA	NA
Cumene	98-82-8	NA	NA	NA	NA	8.92E-08	NA	NA	NA
	hrly totals	0.0	3.8	133.0	0.5	1,017.5	0.1	0.5	0.0	0.0
	max hrly totals	0.00	4.31	159.80	0.61	1220.94	0.08	0.57	0.00	0.00

plant wide Max hrly limits	plant wide Average TOTALS(1)	OEL/URF mlg/m^3	EL [lb/hr]	AAC/AACC mg/m3(585), ug/m3 (586)		Compare /Model?	1/100,000 for T-RACT
8.10E+00	7.36E+00	19.00	1.27		limits from 2-Ethoxyethanol		
9.19E-01	8.35E-01	435.00	29.00			NA	
7.35E-05	6.68E-05	---	6.67			NA	
9.74E-04	8.85E-04	22.00	1.47			NA	
2.58E-01	2.35E-01	127.00	0.846			NA	
3.99E-03	3.63E-03	360.00	24.00			NA	
9.54E-02	8.67E-02	0.20	-	-			
2.18E+00	1.98E+00	205.00	13.70			NA	
1.42E+01	1.29E+01	1040.00	69.30			NA	
1.68E-03	1.52E-03	n/a	24.00			NA	
1.40E+01	1.28E+01	375.00	25.00			NA	
1.47E-05	1.34E-05	350.00	23.30			NA	
2.20E-04	2.00E-04	19.00	1.27			NA	
1.29E+01	1.17E+01	840.00	56.00			NA	
1.05E+01	9.51E+00	700.00	46.70			NA	
4.08E-01	3.71E-01	235.00	15.70			NA	
3.15E-02	2.86E-02	180.00	12.00			NA	
1.76E-04	1.60E-04	4.00	0.27			NA	
7.46E+00	6.78E+00	120.00	8.00	6.00		NA	
0.00E+00	0.00E+00	120.00	8.00		limits from EGBG	NA	
2.63E-02	2.39E-02	120.00	8.00		limits from EGBG	NA	
1.04E-02	9.48E-03	120.00	8.00		limits from EGBG	NA	
4.40E-01	4.00E-01	2.4E-07	2.8E-02		from roll manufact c	0.440	1.40E-06
3.10E-04	2.82E-04	4.10	0.27			NA	
9.70E-05	8.81E-05	2.00	0.13			NA	
0.00E+00	0.00E+00	240.00	16.00			NA	
3.11E-01	2.83E-01	710.00	47.30			NA	
0.00E+00	0.00E+00	1.40E-06	4.80E-03	7.10E-01		NA	1.40E-07
4.85E-01	4.41E-01	120.00	8.00		limits from EGBG	NA	
2.38E-03	2.16E-03	4.8E-07	1.3E-02			NA	
5.41E+00	4.92E+00	435.00	29.00			NA	
1.38E+01	1.25E+01	1400.00	93.30			NA	
4.26E-01	3.87E-01	1640.00	109.00			NA	
7.35E-01	6.68E-01	-	-	-			
2.55E-03	2.32E-03	123.00	8.20			NA	
7.48E-03	6.80E-03	600.00	40.00			NA	
4.83E-02	4.39E-02	1.30E-05	5.1E-04	7.7E-02		0.048	1.06E-06
0.00E+00	0.00E+00	350.00	23.30			NA	
2.31E+01	2.10E+01	1880.00	125.00			NA	
9.55E+00	8.68E+00	-	-	-			
1.06E-01	9.60E-02	260.00	17.30			NA	
1.80E+01	1.64E+01	980.00	65.30			NA	
3.95E+00	3.59E+00	1780.00	119.00			NA	
2.94E-05	2.67E-05	8.3E-06	8.0E-04			NA	
2.47E-03	2.24E-03	-	-	-	1,1,2 tri chlor is 586		
1.49E-01	1.36E-01	2.2E-06	3.0E-03		B#1 - from coldVAE	0.149	1.06E-07
2.77E-03	2.52E-03	4.1E-06	1.6E-03			0.003	1.06E-07
0.00E+00	0.00E+00	1.4E-04	6.7E-05	1.0E-02		NA	
1.62E-05	1.47E-05	48.00	3.20			NA	
2.20E+01	2.00E+01	590.00	39.30			NA	
6.93E-03	6.30E-03	269.00	17.93			NA	
0.00E+00	0.00E+00	525.00	35.00	26.25		NA	
1.03E+00	9.35E-01	50.00	3.33			NA	
2.31E-04	2.10E-04	300.00	20.00			NA	
1.10E+03	1.00E+03	-	-	-			
9.81E-08	8.92E-08	245.00	16.30			NA	

Notes:
Green: a 585 chemical
Orange: a 586 chemical
Red: new chemical on list this version
If emissions are above EL - then ambient impacts need to be compared to AAC (or AACC for 586's)
1) Totals are BEFORE emission controls.

585/586 Modeling data

Data is in lb/hr

		No "Bldg"	BLDG 1	BLDG 2	BLDG 3	BLDG 4	BLDG 5	BLDG 6	BLDG 9	BLDG 10
	HR/YR	7,488	4,992	4,992	7,488	7,488	7,488	4,992	7,488	5,250
PM10 FROM PROCESS POINT SOURCES (includes only non-fugitive, no fugitives associated with these points)										
Bldg 1		NA	0.00E+00	NA	NA	NA	NA	NA	NA	NA
Bldg 2		NA	NA	0.00E+00	NA	NA	NA	NA	NA	NA
Bldg 3		NA	NA	NA	0.00E+00	NA	NA	NA	NA	NA
Bldg 4		NA	NA	NA	NA	0.00E+00	NA	NA	NA	NA
Bldg 5		NA	NA	NA	NA	NA	0.00E+00	NA	NA	NA
Bldg 6		NA	NA	NA	NA	NA	NA	0.00E+00	NA	NA
Bldg 9		NA	NA	NA	NA	NA	NA	NA	0.00E+00	NA
Bldg 11		NA	NA	NA	NA	NA	NA	NA	NA	0.00E+00
Cyclone B	7,488	1.49E-02	NA	NA	NA	NA	NA	NA	NA	NA
Cyclone F	7,488	0.00E+00	NA	NA	NA	NA	NA	NA	NA	NA
Cyclone C	7,488	1.03E-02	NA	NA	NA	NA	NA	NA	NA	NA
Cyclone I	7,488	5.92E-03	NA	NA	NA	NA	NA	NA	NA	NA
Cyclone G	7,488	1.78E-02	NA	NA	NA	NA	NA	NA	NA	NA
Cyclone E	7,488	3.95E-02	NA	NA	NA	NA	NA	NA	NA	NA
Cyclone J	7,488	2.52E-02	NA	NA	NA	NA	NA	NA	NA	NA
Cyclone K	7,488	2.52E-02	NA	NA	NA	NA	NA	NA	NA	NA
Cyclone L	7,488	3.59E-02	NA	NA	NA	NA	NA	NA	NA	NA
Cyclone D (temporary?)	7,488	5.01E-04	NA	NA	NA	NA	NA	NA	NA	NA
Electric PVC Vac Oven	7,488	0.00E+00	NA	NA	NA	NA	NA	NA	NA	NA
Proposed Baghouse E	7,488	1.58E-04	NA	NA	NA	NA	NA	NA	NA	NA
Proposed Baghouse M5	7,488	0.00E+00	NA	NA	NA	NA	NA	NA	NA	NA
Proposed Baghouse L	7,488	1.44E-04	NA	NA	NA	NA	NA	NA	NA	NA
Proposed Baghouse J	7,488	1.01E-04	NA	NA	NA	NA	NA	NA	NA	NA
Proposed Baghouse G	7,488	7.11E-05	NA	NA	NA	NA	NA	NA	NA	NA
Baghouse M	7,488	6.72E-04	NA	NA	NA	NA	NA	NA	NA	NA
BURNERS/OVEN SOURCES - PM10										
NG Oven B5	2,000	NA	1.30E-03	NA	NA	NA	NA	NA	NA	NA
N&S RF ovens	4,000	NA	NA	1.04E-02	NA	NA	NA	NA	NA	NA
Burner/Ovens	6,240	NA	NA	NA	7.01E-03	NA	NA	NA	NA	NA
Burner/Ovens	4,992	NA	NA	NA	NA	NA	NA	5.89E-03	NA	NA
BURNERS/OVEN SOURCES - Total VOC's										
NG Oven B5	2,000	NA	9.39E-04	NA	NA	NA	NA	NA	NA	NA
N&S RF ovens	4,000	NA	NA	7.51E-03	NA	NA	NA	NA	NA	NA
Burner/Ovens	6,240	NA	NA	NA	5.07E-03	NA	NA	NA	NA	NA
Burner/Ovens	4,992	NA	NA	NA	NA	NA	NA	3.44E-03	NA	NA
BURNERS/OVEN SOURCES - SO2										
NG Oven B5	2,000	NA	1.02E-04	NA	NA	NA	NA	NA	NA	NA
N&S RF ovens	4,000	NA	NA	8.19E-04	NA	NA	NA	NA	NA	NA
Burner/Ovens	6,240	NA	NA	NA	5.53E-04	NA	NA	NA	NA	NA
Burner/Ovens	4,992	NA	NA	NA	NA	NA	NA	3.75E-04	NA	NA
BURNERS/OVEN SOURCES - CO										
NG Oven B5	2,000	NA	1.43E-02	NA	NA	NA	NA	NA	NA	NA
N&S RF ovens	4,000	NA	NA	1.15E-01	NA	NA	NA	NA	NA	NA
Burner/Ovens	6,240	NA	NA	NA	7.75E-02	NA	NA	NA	NA	NA
Burner/Ovens	4,992	NA	NA	NA	NA	NA	NA	5.25E-02	NA	NA
BURNERS/OVEN SOURCES - NOx										
NG Oven B5	2,000	NA	1.71E-02	NA	NA	NA	NA	NA	NA	NA
N&S RF ovens	4,000	NA	NA	1.37E-01	NA	NA	NA	NA	NA	NA
Burner/Ovens	6,240	NA	NA	NA	9.22E-02	NA	NA	NA	NA	NA
Burner/Ovens	4,992	NA	NA	NA	NA	NA	NA	6.25E-02	NA	NA
STORAGE PM 10 (all fugitive)										
ST 1 Portable Storage Bin	4,992	0.01	NA	NA	NA	NA	NA	NA	NA	NA
ST 3 East Loadout Bins	7,488	0.15	NA	NA	NA	NA	NA	NA	NA	NA
ST 4 West Loadout Bins	7,488	0.15	NA	NA	NA	NA	NA	NA	NA	NA
ST 5 Shavings Bin	7,488	0.12	NA	NA	NA	NA	NA	NA	NA	NA
ST 6 Fines Bin (sawdust)	7,488	0.53	NA	NA	NA	NA	NA	NA	NA	NA
ST 7 Fines Bin	7,488	0.95	NA	NA	NA	NA	NA	NA	NA	NA
ST 8 Fines Bin	7,488	0.47	NA	NA	NA	NA	NA	NA	NA	NA
Transfer PM 10 (all fugitive)										
TR 1 Truck transfer to P25		0.23	NA	NA	NA	NA	NA	NA	NA	NA
TR 3 Truck transfer to off site		0.09	NA	NA	NA	NA	NA	NA	NA	NA
TR 4* Trucked (sold)		0.40	NA	NA	NA	NA	NA	NA	NA	NA
TR 5 Truck transfer from ST 7		0.88	NA	NA	NA	NA	NA	NA	NA	NA
TR 6 Truck Transfer from ST8		0.88	NA	NA	NA	NA	NA	NA	NA	NA

Tier II Air Permit
Air Quality Modeling Analysis
Woodgrain Millwork

Analysis and Report by URS Corporation

(Previously submitted)

(Tab 11 in Permit Application)

AIR QUALITY MODELING REPORT

PURPOSE

This air quality modeling analysis updates the June 19, 2002 "Air Quality Modeling Analysis" provided in support of Woodgrain Millwork's Tier II air permit application. This report describes the complete set of air quality modeling analyses for the Woodgrain Millwork Fruitland facility. Updates to the June 19 report, prepared according to the Idaho Department of Environmental Quality (IDEQ) approved modeling protocol, were driven by a revised facility emission inventory. Changes include the remodeling of PM-10 and formaldehyde, and the addition of analyses for two more Toxic Air Pollutants (TAPs). Two TAP analyses remain unchanged from the original report, since the emission inventory for those two pollutants were unaffected by the emission inventory update.

MODEL DESCRIPTION / JUSTIFICATION

The model chosen was ISCST3, the US EPA approved Industrial Source Complex model. This model, probably the most used regulatory model in the US and designed for the type of application here, is the most appropriate of the models recommended for regulatory use for this application. It was applied as recommended in EPA's *Guideline on Air Quality Models* (2001), utilizing that document's regulatory default options, consistent with the Modeling Protocol approved by IDEQ and conditions IDEQ placed upon that approval.

EMISSION AND SOURCE DATA

As approved in the Modeling Protocol, the only criteria pollutant modeled was PM_{10}. The facility's emission inventory indicates no other criteria pollutant is emitted at more than 2 tons per year. All PM_{10} emissions identified in the facility's emission inventory except the 2 tons per year of vehicular traffic emissions were included in the modeling. Almost all emission rates match those provided with the revised permit application and in the Tier I permit application. The few exceptions are described in detail in this report section.

Point sources parameters were verified by Woodgrain Millwork facility staff for this analysis. Area source parameterizations were based on measurements and information verified onsite by Woodgrain Millwork personnel. Storage emissions for the chip bins were from the top of the storage vessels during transfer of materials in or out. Measured dimensions of that area were used. Transfer point emissions were based on the dimensions of the openings at the base of the storage bins and the short distance to trucks underneath. Three oven processes, each with emissions well below 1 ton per year, had multiple or indirect venting. They were very conservatively modeled as area sources with no loft. Two other oven processes (P28 and P29), each also with emissions well below 1 ton per year, were vented directly outside. They were conservatively modeled as area sources with source parameters representative of the actual vents and no loft.

Emission rates for the transfer points were reduced from the uncontrolled estimates provided in the Modeling Protocol, consistent with the revised permit application. All the transfer

sources represent short drops from overhead storage bins into truck beds. TR-4, TR-5, and TR-6 were given 90% control efficiencies. Those drops occur inside a tunnel approximately 80 feet long. The tunnel has hard walls on both sides and above. Once the trucks enter, a rolldown door closes the end they entered in. The only opening is at the far end of the tunnel, at least 40 feet from each of those drop points. Truck beds are tarped before the trucks leave the tunnel. TR-1 and TR-3 emissions were corrected to a 75% control efficiency. The TR-3 drop occurs in the same tunnel, but approximately 15 feet from the open end. The TR-1 drop occurs in a similar process in the center of a separate tunnel approximately 40 feet long. That tunnel has the same design as the first tunnel except that there is no roll down door at the entry end. No adjustments were made to storage emissions despite the fact that calculations assume 100% open operations and the actual processes are actually nearly completely enclosed. Electronic versions of pictures documenting those parameters are included on the disk with the modeling files. To be overly conservative for both the 24 hour and annual averaging period, all PM_{10} sources were modeled as continuously emitting despite the fact that higher hourly emission rates were calculated from annual throughput assuming limited operations for every source.

Tables 1a and 1b provide the model source parameters for PM_{10} point and area sources included in the modeling analysis.

TABLE 1a
PM_{10} Point Source Model Parameters

Description	Source ID	Easting (X) (m)	Northing (Y) (m)	Base Elevation (m)	Stack Height (ft)	Temperature (°F)	Exit Velocity (ft/s)	Stack Diameter (ft)	PM (lb/hr)
Cyclone B	P6	506698.6	4874105	673.9	29	68	27.98474	4	0.01490
Cyclone F	P7	506712.4	4874091	674	74	68	40.97575	4	0.01510
Cyclone C	P8	506693.8	4874105	673.9	26	68	16.3331	5	0.01030
Baghouse I	P10	506682.1	4874012	673.9	29.5	68	9	4	0.00592
Cyclone G	P11	506699	4874085	673.9	29.5	68	25.80006	5	0.01780
Baghouse E	P12	506706.8	4874091	674	29.5	68	9	4	0.03950
Baghouse J	P17	506680.5	4873906	673.7	29.5	68	9	4	0.02520
Cyclone K	P18	506684.7	4873906	673.8	35	68	19.96949	5	0.02520
Baghouse L	P19	506689.4	4873906	673.8	29.5	68	9	4	0.03590
Baghouse M	P20	506692.7	4873906	673.8	29.5	68	9	4	0.00067

TABLE 1b
PM_{10} Area Source Model Parameters

Description	Source ID	Easting (X) (m)	Northing (Y) (m)	Base Elevation (m)	Release Height (ft)	Easterly Length (ft)	Northerly Length (ft)	Angle from North (°)	Vertical Dim. (ft)	PM (lb/hr)
sm storage bin	ST1	506785.4	4874125	674.2	5.7999	7.5	22	0	1.25	0.01
chip storage bin	ST3	506708	4874096	674	43.5	6	6	0	3	0.06
chip storage bin	ST4	506702.6	4874096	673.9	43.5	5.5	5.5	0	3	0.15
chip storage bin	ST5	506700.4	4873903	673.9	47.6001	5.2	5.2001	0	3	0.12
chip storage bin	ST6	506712.8	4873903	674	47.6001	5.2	5.2001	0	3	0.53
chip storage bin	ST7	506724	4873903	674.1	42	5.5	5.5	0	3	0.95
chip storage bin	ST8	506735.3	4873903	674.2	42	5.5	5.5	0	3	0.47
chip bin to truck	TR1	506718	4874086	674.1	15	16	12	0	1	0.078
chip bin to truck	TR3	506696.9	4873903	673.9	14	25	4	0	1.5	0.030
chip bin to truck	TR4	506709.4	4873903	674	14	25	4	0	1.5	0.045
chip bin to truck	TR5	506720.7	4873903	674.1	14	25	4	0	1.5	0.098
chip bin to truck	TR6	506732.2	4873903	674.2	14	25	4	0	1.5	0.098
2 NG ovens (priming)	P9	506649.5	4874153	673.7	2.5	2.99	2.9856	0	3	0.00701
2 NG ovens (satin)	P16	506576.4	4874024	673.3	24.5	4	4.0026	0	4	0.00475
North RF oven	P28	506695.5	4874193	673.6	2	4	4.0026	0	4	0.00735
South RF oven	P29	506695.5	4874224	673.6	8	4	4.0026	0	4	0.00303
Buckley 5hd printer	P36	506733.7	4874218	673.6	7	3.51	3.5105	0	4	0.00130

IDEQ conditions on approval of the Modeling Protocol required a Toxic Air Pollutant (TAP) analysis be performed for all processes installed after 1995, unless such an analysis was previously performed. This report conservatively includes a TAP analysis for all processes and TAP emissions. TAP emission calculations are overly conservative, assuming 100% of every TAP chemical onsite is emitted into the air, while in actuality a significant percentage remain in compounds or products. Table 2 shows all TAPs emitted by the Woodgrain Millwork facility, and compares their emissions against applicable IDAPA 585 or 586 defined Emission Limits (ELs). Four TAPs, (Bis (2 ethylhexyl) phthalate, formaldehyde, acetaldehyde, and Methylene Chloride, CAS numbers 117-81-7, 50-00-0, 75-07-0, and 75-09-2 respectively) are emitted above IDAPA 586 Emission Levels, one (CAS Number 111-76-2) above IDAPA 585 Emission Levels. Air quality modeling was performed to determine maximum annual average impacts for the four 586 TAPs and the 24 hour average for the 585 TAP, for comparison against IDAPA 586 defined Acceptable Ambient Concentrations for Carcinogens (AACCs) and the IDAPA 585 defined Acceptable Ambient Concentrations (AACs) respectively.

TABLE 2
Process 585 and 586 Chemicals Used, by Building

Process Point 585 and 586 chemicals (all point sources) emissions (in lbs/hr) by building

		No "Bldg"	BLDG 1	BLDG 2	BLDG 3	BLDG 4	BLDG 5	BLDG 6	BLDG 9	BLDG 11	TOTALS	IDAPA 585 or 586 limits			
												OEL	EL	AAC©	
HR/YR		7,488	4,992	4,992	7,488	7,488	7,488	4,992	7,488	5,250	per HAP	[mg/m3]	[lb/hr]	[mg/m3]	
Glycol ethers	—	NA	0.055689	NA	NA	NA	NA	0.176282	NA	NA	0.231971	19	1.27	0.95	HAPS - limits from 2 - Ethoxyethanol
Eth Benz	100-41-4	NA	NA	0.829655	NA	0.005363	NA	NA	NA	NA	0.835019	435	29	21.75	
Styrene	100-42-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	0	–	6.67	1	
Alkyl Glycidyl Ether	106-92-3	NA	NA	NA	NA	0.000885	NA	NA	NA	NA	0.000885	22	1.47	1.1	
Ethylene glycol	107-21-1	NA	0.001052	NA	0.00191	0.231428	0.000327	NA	NA	NA	0.234716	127	0.846	6.35	
Proylene Glycol Monomethyl Ether	107-98-2	NA	NA	NA	NA	0.002584	NA	NA	NA	NA	0.002584	360	24	18	
Vinyl Acet	108-05-4	NA	0.462281	NA	NA	0.011685	0.000801	0.005641	NA	NA	0.480408	0.2			
Meth Iso Ket	108-10-1	NA	NA	1.976434	NA	0.000871	NA	NA	NA	NA	1.977305	205	13.7	10.25	
Isopropyl Ace	108-21-4	NA	NA	19.66881	NA	NA	NA	NA	NA	NA	19.66881	1040	69.3	52	
1-methoxy-2-propanol acetate	108-65-6	NA	NA	NA	NA	0.001524	NA	NA	NA	NA	0.001524	n/a	24	3.6	
Toluene	108-88-3	NA	0.072716	11.16317	NA	0.052696	0.008681	NA	NA	NA	11.29727	375	25	18.75	
Monochlorobenzene	108-90-7	NA	NA	NA	NA	1.34E-05	NA	NA	NA	NA	1.34E-05	350	23.3	17.5	
Phenol	108-95-2	NA	NA	NA	NA	0.011685	0.000801	NA	NA	NA	0.012487	19	1.27	0.95	
Propyl Acetate	109-60-4	NA	NA	18.60016	NA	NA	NA	NA	NA	NA	18.60016	840	56	42	
Isobutyl Acet	110-19-0	NA	NA	11.19771	NA	NA	NA	NA	NA	NA	11.19771	700	46.7	35	
M n-Amyl K	110-43-0	NA	NA	0.37405	NA	NA	NA	NA	NA	NA	0.37405	235	15.7	11.75	
n-Hexane	110-54-3	NA	NA	NA	NA	0.028214	NA	NA	NA	NA	0.028214	180	12	9	
Diethylene Triamine	111-40-0	NA	NA	NA	NA	0.00016	NA	NA	NA	NA	0.00016	4	0.267	0.2	
Ethylene glycol monobutyl ether	111-76-2	NA	0.070212	NA	0.001519	0.004493	NA	NA	NA	NA	0.076224	120	8	6	
Ethyl glycol monobutyl ether acetate	112-07-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	0	120	8	6	HAPS - limits from EGBG
Diethylene glycol monoethyl ether acetate	112-15-2	NA	2.180018	NA	NA	NA	0.039481	NA	NA	NA	2.219499	120	8	6	HAPS - limits from EGBG

TABLE 2
Process 585 and 586 Chemicals Used, by Building

Process Point 585 and 586 chemicals (all point sources) emissions (in lbs/hr) by building

		No "Bldg"	BLDG 1	BLDG 2	BLDG 3	BLDG 4	BLDG 5	BLDG 6	BLDG 9	BLDG 11	TOTALS	IDAPA 585 or 586 limits			
												OEL	EL	AAC©	
HR/YR		7,488	4,992	4,992	7,488	7,488	7,488	4,992	7,488	5,250	per HAP	[mg/m3]	[lb/hr]	[mg/m3]	
Diethylene glycol monobutyl ether	112-34-5	NA	NA	NA	0.009479	NA	0.001286	NA	NA	NA	0.010765	120	8	6	HAPS - limits from EGBG
Bis(2-ethylhexyl) phthalate	117-81-7	NA	0.40024	NA	NA	NA	NA	NA	NA	NA	0.40024	2.4E-07	0.028	4.2	
Triethylamine	121-44-8	NA	NA	0.000282	NA	NA	NA	NA	NA	NA	0.000282	4.1	0.27	0.2	
HydroQui	123-31-9	NA	NA	NA	NA	NA	NA	5.29E-05	NA	NA	5.29E-05	2	0.133	0.1	
Diacetone Alcohol	123-42-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	0	240	16	12	
N Butyl Ac	123-86-4	NA	NA	0.283131	NA	NA	NA	NA	NA	NA	0.283131	710	47.3	35.5	
Ethy Acet	124-17-4	NA	NA	NA	NA	NA	NA	0.264423	NA	NA	0.264423	120	8	6	HAPS - limits from EGBG
Tetrachloroethylene	127-18-4	NA	NA	NA	NA	0.001262	NA	NA	NA	NA	0.001262	4.8E-07	0.013	2.1	
Xylene	1330-20-7	NA	NA	4.896687	NA	1.234198	NA	NA	NA	NA	6.130885	435	29	21.75	
Ethyl Acet	141-78-6	NA	NA	19.84563	NA	NA	NA	NA	NA	NA	19.84563	1400	93.3	70	
Heptane	142-82-5	NA	NA	0.387444	NA	NA	NA	NA	NA	NA	0.387444	1640	109	82	
Trimethylbenzene	25551-13-7	NA	NA	NA	NA	0.121842	0.000668	NA	NA	NA	0.122509	123	8.2	6.15	
Dipropylene Glycol Methyl Ether	34590-94-8	NA	NA	NA	NA	0.006798	NA	NA	NA	NA	0.006798	600	40	30	
Formald	50-0-0	NA	NA	NA	NA	0.01926	0.00431	0.000767	NA	NA	0.00701	0.000013	0.00051	0.077	
Trimethyl-pentane	540-84-1	NA	NA	NA	NA	0.00024	NA	NA	NA	NA	0.00024	350	23.3	17.5	
Ethanol	64-17-5	NA	0.000889	29.99187	0.120192	NA	NA	NA	NA	NA	30.11295	1880	125	94	
Methanol	67-56-1	NA	NA	0.013782	9.13E-05	NA	0.003506	0.029986	NA	NA	0.047365	260	17.3	13	
IsoProp	67-63-0	NA	NA	25.92107	0.000125	0.010728	NA	NA	NA	NA	25.93193	980	65.3	49	
Acetone	67-64-1	NA	NA	NA	NA	0.082616	0.016026	NA	NA	NA	0.098642	1780	119	89	
Benzene	71-43-2	NA	NA	NA	NA	0.00024	NA	NA	NA	NA	0.00024	8.3E-06	0.0008	0.12	586
1,1,1, Trichloroethane	71-55-6	NA	NA	NA	NA	0.002244	NA	NA	NA	NA	0.002244				HAPS - no 585/586 limits
Acetalhyde	75-07-0	NA	NA	NA	NA	NA	NA	0.000326	NA	NA	0.000326	2.2E-06	0.003	0.45	

TABLE 2
Process 585 and 586 Chemicals Used, by Building

Process Point 585 and 586 chemicals (all point sources) emissions (in lbs/hr) by building

		No "Bldg"	BLDG 1	BLDG 2	BLDG 3	BLDG 4	BLDG 5	BLDG 6	BLDG 9	BLDG 11	TOTALS	IDAPA 585 or 586 limits		
												OEL	EL	AAC©
HR/YR		7,488	4,992	4,992	7,488	7,488	7,488	4,992	7,488	5,250	per HAP	[mg/m3]	[lb/hr]	[mg/m3]
Methylene Chloride	75-09-2	NA	NA	NA	0.002043	0.000474	NA	NA	NA	NA	0.002517	4.1E-06	0.0016	0.24
Prop Ox	75-56-9	NA	NA	NA	NA	NA	NA	8.81E-06	NA	NA	8.81E-06	48	3.2	2.4
MEK	78-93-3	NA	NA	19.97301	NA	0.000871	NA	NA	NA	NA	19.97388	590	39.3	29.5
Trichloroethylene	79-01-6	NA	NA	NA	NA	0.006303	NA	NA	NA	NA	0.006303	269	17.93	13.45
Naphthalene	91-20-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	0	50	3.33	2.5
Orthodichlorobenzene	95-50-1	NA	NA	NA	NA	0.00021	NA	NA	NA	NA	0.00021	300	20	15
Cumene	98-82-8	NA	NA	NA	NA	0.002404	NA	NA	NA	NA	0.002404	245	16.3	12.25
TOTALS	per bldg	0	3.243098	165.1229	0.13536	1.840757	0.072858	0.477486	0	0				

All five TAPs are generally released inside buildings, and exhausted outside through a series of fans and vents. All of the processes which generate the emissions occurred generally in buildings 1, 3, 4, 5, and/or 6. Emissions from those buildings were modeled as area sources at the actual or representative locations of the fans or vents, with source dimensions driven by the shape of the fan or vent and emission rates proportioned according to flow volume (flow data was available for all fans and vents). The Methylene Chloride emissions, which occurred throughout buildings 3 and 4, were modeled from all fans and vents in both buildings. The 117-81-7 emissions, which occurred in a single room in building 1, were exhausted by a single fan (F8). As a result of this review, Woodgrain Millwork has agreed to replace side wall mounted fan 8 in building 1 with a roof mounted fan 67, which will feature a hood inside. That option should improve indoor air quality. Ambient air quality impacts will be lower than those with fan 8, which were already below IDAPA 586 AACC limits. Formaldehyde and acetaldehyde emissions were vented from the south side of building 1 where glues are used and generally from building 6. Formaldehyde emissions from buildings 4 and 5 were vented from areas of those buildings where glues are used. 111-76-2 comes primarily from building 4, the facility maintenance building. Emissions

All emissions were modeled as area sources whose location and shape were taken from measured fan dimensions and location. To be conservative, emissions from all buildings were modeled as operating 24 hours per day, six days per week, the highest operating rate for any building.

Emission rates for the five TAPs were reviewed in preparing the updated modeling analyses. The updated emission inventory did not change emission rates for 117-81-7 and 75-09-2. Those pollutants were not remodeled. However, the emission rates for formaldehyde changed as a result of the emission inventory, and two TAPs were identified as having maximum hourly emissions also exceeding Idaho 585 or 586 Emission Limits (ELs). As a result, formaldehyde was remodeled, and modeling was performed for acetaldehyde and 111-76-2 as well. Results of all five TAP modeling analyses will be reported in the Evaluation of Compliance with Standards section.

Like 117-81-7, formaldehyde was modeled with emissions concentrated in a subset of the buildings fans and vents because the processes where formaldehyde is used were localized and the venting system designed to eliminate and control those emissions.

The only source groupings used in any Woodgrain Millwork modeling was the combination of fans or vents in Building 4, where the Methylene Chloride analysis combined a few small fans representing less than 9% of the total exhaust flow into a single representative fan (the one of the group with the most flow) and the 111-76-2 emissions from this building were emitted in the model from four representative fans.

Table 3 provides the model source parameters for all TAP sources included in the modeling analysis. All TAP emissions were modeled as area sources.

Almost all emission rates were calculated on the basis of throughput rates rather than hourly activity, as documented in the Modeling Protocol, emissions spreadsheets, and the Woodgrain Millwork Tier I permit application. As described above, all model particulate sources were assumed to operate continuously, and building fan and vent emissions were modeled assuming 24 hour a day emissions six days per week. These emission parameterizations are very conservative since for all averaging periods they assume continuous emissions while using emission rates calculated assuming limited operating hours.

Figure 1 provides a plot plan showing facility location, buildings, emission points, and property boundary. Figures 2, 3, 4, and 5 provide detailed diagrams of buildings 1, 3, 4, and 5 respectively. Those figures show building height and horizontal dimensions, as well as fans, vents, processes, and emission points.

TABLE 3
TAP Source Model Parameters

Source ID	Easting (X) (m)	Northing (Y) (m)	Base Elevation (m)	Release Height (ft)	Easterly Length (ft)	Northerly Length (ft)	Angle from North (°)	Vertical Dim. (ft)	50-00-0 (lb/hr)	75-09-2 (lb/hr)	117-81-7 (lb/hr)
B5F52	506731.1	4873980	674.2	5.5	3	3	0	3	1.519E-03		
B5F66	506706.7	4873980	674.1	11.75	3	3	0	3	2.791E-03		
B6F46	506590	4874008	673.4	24.5	4	4	0	2	3.79E-04		
B6F47	506566.8	4874009	673.2	24.5	4	4	0	2	3.89E-04		
B4F48	506682.4	4874078	673.9	8	4	4	0	4	6.38E-04	5.48E-05	
B4F49	506691.1	4874078	673.9	8	4	4	0	4	6.38E-04	5.48E-05	
B4F50	506701.8	4874079	673.9	7.5	3	3	0	3	6.38E-04	5.48E-05	
B4F51	506731.9	4874046	674.2	5.5	3	3	0	3		6.16E-05	
B4F61	506723.5	4874079	674.2	10.5	1	1	0	1		1.17E-05	
B4F62	506723.3	4874018	674.1	6	2	2	0	2		2.91E-05	
B4F63	506658.6	4874058	673.8	13.5	3	3	0	3		2.05E-04	
B4V19	506676	4874050	673.9	20	1.5	1.5	0	1.5		5.00E-07	
B4V10	506693.6	4874075	673.9	20	1.5	1.5	0	1.5	6.00E-06	5.00E-07	
B4V11	506703.9	4874073	673.9	20	1.5	1.5	0	1.5	6.00E-06	5.00E-07	
B4V22	506662.7	4874031	673.9	20	1.5	1.5	0	1.5		5.00E-07	
B3F36	506712.8	4874161	673.9	13	2	2	0	2		8.83E-05	
B3F37	506701.1	4874161	673.9	13.5	3	3	0	3		1.86E-04	
B3F38	506688.7	4874163	673.9	7	4	4	0	4		4.00E-04	
B3F39	506688.7	4874168	673.9	7	4	4	0	4		6.32E-04	
B3F40	506688.3	4874169	673.9	3	4	4	0	4		1.77E-04	
B3F41	506684.8	4874169	673.9	3	4	4	0	4		2.04E-04	
B3F42	506681.3	4874169	673.9	20	1.5	1.5	0	1.5		1.67E-04	
B3F45	506648.6	4874153	673.7	20	1.5	1.5	0	1.5		1.86E-04	
B1F67	506676.0	4874229	673.8	26	3	3	0	3			0.40024
BxFnn		x is the building number, nn is the fan or vent number						Sum (per TAP)	0.00701	0.00251	0.40024

ATTACHMENT E

Updated modeling report results

AIR QUALITY MODELING REPORT

PURPOSE

This air quality modeling analysis updates the June 19, 2002 "Air Quality Modeling Analysis" provided in support of Woodgrain Millwork's Tier II air permit application. This report describes the complete set of air quality modeling analyses for the Woodgrain Millwork Fruitland facility. Updates to the June 19 report, prepared according to the Idaho Department of Environmental Quality (IDEQ) approved modeling protocol, were driven by a revised facility emission inventory. Major features include a change in raw materials and the addition of four baghouses. No new sources or emissions have been added. Therefore, this modeling update consists of remodeling for PM-10 and formaldehyde, and the addition of analyses for two more Toxic Air Pollutants (TAPs). Two TAP analyses remain unchanged from the original report, since the emission inventory for those two pollutants were unaffected by the emission inventory update.

MODEL DESCRIPTION / JUSTIFICATION

The model chosen was ISCST3, the US EPA approved Industrial Source Complex model. This model, probably the most used regulatory model in the US and designed for the type of application here, is the most appropriate of the models recommended for regulatory use for this application. It was applied as recommended in EPA's *Guideline on Air Quality Models* (2001), utilizing that document's regulatory default options, consistent with the Modeling Protocol approved by IDEQ and conditions IDEQ placed upon that approval.

EMISSION AND SOURCE DATA

As approved in the Modeling Protocol, the only criteria pollutant modeled was PM_{10}. The facility's emission inventory indicates no other criteria pollutant is emitted at more than 2 tons per year. All PM_{10} emissions identified in the facility's emission inventory except the 2 tons per year of vehicular traffic emissions were included in the modeling. All emission rates match those provided with this revised permit application and in the Tier I permit application.

Point sources parameters were verified by Woodgrain Millwork facility staff for this analysis. Area source parameterizations were based on measurements and information verified onsite by Woodgrain Millwork personnel. Storage emissions for the chip bins were from the top of the storage vessels during transfer of materials in or out. Measured dimensions of that area were used. Transfer point emissions were based on the dimensions of the openings at the base of the storage bins and the short distance to trucks underneath. Three oven processes, each with emissions well below 1 ton per year, had multiple or indirect venting. They were very conservatively modeled as area sources with no loft. Two other oven processes (P28 and P29), each also with emissions well below 1 ton per year, were vented directly outside. They were conservatively modeled as area sources with source parameters representative of the actual vents and no loft.

Emission rates for the transfer points were reduced from the uncontrolled estimates provided in the Modeling Protocol, consistent with the revised permit application. All the transfer sources represent short drops from overhead storage bins into truck beds. TR-4, TR-5, and TR-6 were given 90% control efficiencies. Those drops occur inside a tunnel approximately 80 feet long. The tunnel has hard walls on both sides and above. Once the trucks enter, a rolldown door closes the end they entered in. The only opening is at the far end of the tunnel, at least 40 feet from each of those drop points. Truck beds are tarped before the trucks leave the tunnel. TR-1 and TR-3 emissions were corrected to a 75% control efficiency. The TR-3 drop occurs in the same tunnel, but approximately 15 feet from the open end. The TR-1 drop occurs in a similar process in the center of a separate tunnel approximately 40 feet long. That tunnel has the same design as the first tunnel except that there is no roll down door at the entry end. No adjustments were made to storage emissions despite the fact that calculations assume 100% open operations and the actual processes are actually nearly completely enclosed. Electronic versions of pictures documenting those parameters are included on the disk with the modeling files. To be overly conservative for both the 24 hour and annual averaging period, all PM_{10} sources were modeled as continuously emitting despite the fact that higher hourly emission rates were calculated from annual throughput assuming limited operations for every source.

Tables 1a and 1b provide the model source parameters for PM_{10} point and area sources included in the modeling analysis.

TABLE 1a
PM_{10} Point Source Model Parameters

Description	Source ID	Easting (X) (m)	Northing (Y) (m)	Base Elevation (m)	Stack Height (ft)	Temperature (°F)	Exit Velocity (ft/s)	Stack Diameter (ft)	PM (lb/hr)
Cyclone B	P6	506698.6	4874105	673.9	29	68	27.98474	4	0.01490
Cyclone F	P7	506712.4	4874091	674	74	68	40.97575	4	0.01510
Cyclone C	P8	506693.8	4874105	673.9	26	68	16.3331	5	0.01030
Baghouse I	P10	506682.1	4874012	673.9	29.5	68	9	4	0.00592
Cyclone G	P11	506699	4874085	673.9	29.5	68	25.80006	5	0.01780
Baghouse E	P12	506706.8	4874091	674	29.5	68	9	4	0.03950
Baghouse J	P17	506680.5	4873906	673.7	29.5	68	9	4	0.02520
Cyclone K	P18	506684.7	4873906	673.8	35	68	19.96949	5	0.02520
Baghouse L	P19	506689.4	4873906	673.8	29.5	68	9	4	0.03590
Baghouse M	P20	506692.7	4873906	673.8	29.5	68	9	4	0.00067

TABLE 1b
PM_{10} Area Source Model Parameters

Description	Source ID	Easting (X) (m)	Northing (Y) (m)	Base Elevation (m)	Release Height (ft)	Easterly Length (ft)	Northerly Length (ft)	Angle from North (°)	Vertical Dim. (ft)	PM (lb/hr)
sm storage bin	ST1	506785.4	4874125	674.2	5.7999	7.5	22	0	1.25	0.01
chip storage bin	ST3	506708	4874096	674	43.5	6	6	0	3	0.06
chip storage bin	ST4	506702.6	4874096	673.9	43.5	5.5	5.5	0	3	0.15
chip storage bin	ST5	506700.4	4873903	673.9	47.6001	5.2	5.2001	0	3	0.12
chip storage bin	ST6	506712.8	4873903	674	47.6001	5.2	5.2001	0	3	0.53
chip storage bin	ST7	506724	4873903	674.1	42	5.5	5.5	0	3	0.95
chip storage bin	ST8	506735.3	4873903	674.2	42	5.5	5.5	0	3	0.47
chip bin to truck	TR1	506718	4874086	674.1	15	16	12	0	1	0.078
chip bin to truck	TR3	506696.9	4873903	673.9	14	25	4	0	1.5	0.030
chip bin to truck	TR4	506709.4	4873903	674	14	25	4	0	1.5	0.045
chip bin to truck	TR5	506720.7	4873903	674.1	14	25	4	0	1.5	0.098
chip bin to truck	TR6	506732.2	4873903	674.2	14	25	4	0	1.5	0.098
2 NG ovens (priming)	P9	506649.5	4874153	673.7	2.5	2.99	2.9856	0	3	0.00701
2 NG ovens (satin)	P16	506576.4	4874024	673.3	24.5	4	4.0026	0	4	0.00475
North RF oven	P28	506695.5	4874193	673.6	2	4	4.0026	0	4	0.00735
South RF oven	P29	506695.5	4874224	673.6	8	4	4.0026	0	4	0.00303
Electric PVC oven	P36	506733.7	4874218	673.6	7	3.51	3.5105	0	4	0.00130

IDEQ conditions on approval of the Modeling Protocol required a Toxic Air Pollutant (TAP) analysis be performed for all processes installed after 1995, unless such an analysis was previously performed. This report conservatively includes a TAP analysis for all processes and TAP emissions. TAP emission calculations are overly conservative, assuming 100% of every TAP chemical onsite is emitted into the air, while in actuality some percentage remains in compounds or products. Table 2 shows all TAPs emitted by the Woodgrain Millwork facility, and compares their emissions against applicable IDAPA 585 or 586 defined Emission Limits (ELs). Please note that, while this modeling report often includes TAP names, primary tracking of actual and potential TAPs in the facility emission inventory was by CAS number, to avoid confusion. Four TAPs, (Bis (2 ethylhexyl) phthalate, formaldehyde, acetaldehyde, and Methylene Chloride, CAS numbers 117-81-7, 50-00-0, 75-07-0, and 75-09-2 respectively) are emitted above IDAPA 586 Emission Levels, one (CAS Number 111-76-2) above IDAPA 585 Emission Levels. Air quality modeling was performed to determine maximum annual average impacts for the four 586 TAPs and the 24 hour average for the 585 TAP, for comparison against IDAPA 586 defined Acceptable Ambient Concentrations for Carcinogens (AACCs) and the IDAPA 585 defined Acceptable Ambient Concentrations (AACs) respectively.

TABLE 2
Process 585 and 586 Chemicals Used, by Building

Process Point 585 and 586 chemicals (all point sources) emissions (in lbs/hr) by building

	HR/YR	No "Bldg" 7,488	BLDG 1 4,992	BLDG 2 4,992	BLDG 3 7,488	BLDG 4 7,488	BLDG 5 7,488	BLDG 6 4,992	BLDG 9 7,488	BLDG 11 5,250	Max hrly limits	Average TOTALS(1)	OEL/URF mg/m^3	EL [lb/hr]	AAC/AACC mg/m3(585), ug/m3 (586)		Compare vs IDEQ ELs
Eth Benz	100-41-4	NA	NA	8.30E-01	NA	5.68E-03	NA	NA	NA	NA	1.00E+00	8.35E-01	435.00	29.00			NA
Styrene	100-42-5	NA	NA	NA	NA	6.68E-05	NA	NA	NA	NA	8.01E-05	6.68E-05	--	6.67			NA
Alkyl Glycidyl Ether	106-92-3	NA	NA	NA	NA	8.85E-04	NA	NA	NA	NA	1.06E-03	8.85E-04	22.00	1.47			NA
Ethylene glycol	107-21-1	NA	1.05E-03	NA	1.91E-03	2.31E-01	3.27E-04	NA	NA	NA	2.82E-01	2.35E-01	127.00	0.846			NA
Proylene Glycol Monomethyl Ether	107-98-2	NA	NA	NA	NA	3.63E-03	NA	NA	NA	NA	4.35E-03	3.63E-03	360.00	24.00			NA
Vinyl Acet	108-05-4	NA	5.98E-02	2.60E-03	NA	1.20E-02	2.87E-03	4.10E-03	NA	NA	9.77E-02	8.14E-02	0.20	-	-		
Meth Iso Ket	108-10-1	NA	NA	1.98E+00	NA	8.71E-04	NA	NA	NA	NA	2.37E+00	1.98E+00	205.00	13.70			NA
Isopropyl Ace	108-21-4	NA	2.56E-02	1.28E+01	NA	NA	NA	NA	NA	NA	1.54E+01	1.29E+01	1040.00	69.30			NA
1-methoxy-2-propanol acetate	108-65-6	NA	NA	NA	NA	1.52E-03	NA	NA	NA	NA	1.83E-03	1.52E-03	n/a	24.00			NA
Toluene	108-88-3	NA	2.38E-01	1.10E+01	NA	5.29E-02	8.68E-03	NA	NA	NA	1.36E+01	1.13E+01	375.00	25.00			NA
Monochlorobenzene	108-90-7	NA	NA	NA	NA	1.34E-05	NA	NA	NA	NA	1.60E-05	1.34E-05	350.00	23.30			NA
Phenol	108-95-2	NA	NA	NA	NA	0.00E+00	2.00E-04	NA	NA	NA	2.40E-04	2.00E-04	19.00	1.27			NA
Propyl Acetate	109-60-4	NA	NA	1.17E+01	NA	NA	NA	NA	NA	NA	1.41E+01	1.17E+01	840.00	56.00			NA
Isobutyl Acet	110-19-0	NA	NA	9.51E+00	NA	NA	NA	NA	NA	NA	1.14E+01	9.51E+00	700.00	46.70			NA
M n-Amyl K	110-43-0	NA	6.36E-02	3.07E-01	NA	NA	NA	NA	NA	NA	4.45E-01	3.71E-01	235.00	15.70			NA
n-Hexane	110-54-3	NA	NA	NA	NA	2.86E-02	NA	NA	NA	NA	3.44E-02	2.86E-02	180.00	12.00			NA
Diethylene Triamine	111-40-0	NA	NA	NA	NA	1.60E-04	NA	NA	NA	NA	1.92E-04	1.60E-04	4.00	0.27			NA
Ethylene glycol monobutyl ether	111-76-2	NA	7.10E-02	NA	2.82E-02	6.68E+00	NA	NA	NA	NA	8.14E+00	6.78E+00	120.00	8.00	6.00		8.137
Ethyl glycol monobutyl ether acetate	112-07-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.00E+00	0.00E+00	120.00	8.00		limits from EGBG	NA
Diethylene glycol monoethyl ether acetate	112-15-2	NA	1.35E-02	NA	NA	NA	1.04E-02	NA	NA	NA	2.87E-02	2.39E-02	120.00	8.00		limits from EGBG	NA
Diethylene glycol monobutyl ether	112-34-5	NA	NA	NA	9.48E-03	NA	0.00E+00	NA	NA	NA	1.14E-02	9.48E-03	120.00	8.00		limits from EGBG	NA
Di(2-ethyl)phthalate	117-81-7	NA	4.00E-01	NA	NA	NA	NA	NA	NA	NA	4.80E-01	4.00E-01	2.4E-07	2.8E-02		from roll manufact only	0.480
Triethylamine	121-44-8	NA	NA	2.82E-04	NA	NA	NA	NA	NA	NA	3.38E-04	2.82E-04	4.10	0.27			NA

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	HR/YR	No "Bldg" 7,488	BLDG 1 4,992	BLDG 2 4,992	BLDG 3 7,488	BLDG 4 7,488	BLDG 5 7,488	BLDG 6 4,992	BLDG 9 7,488	BLDG 11 5,250	Max hrly limits	Average TOTALS(1)	OEL/URF mg/m^3	EL [lb/hr]	AAC/AACC mg/m3(585), ug/m3 (586)		Compare vs IDEQ ELs
HydroQui	123-31-9	NA	NA	NA	NA	NA	NA	3.85E-05	NA	NA	4.62E-05	3.85E-05	2.00	0.13			NA
Diacetone Alcohol	123-42-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.00E+00	0.00E+00	240.00	16.00			NA
N Butyl Ac	123-86-4	NA	1.19E-02	2.71E-01	NA	NA	NA	NA	NA	NA	3.40E-01	2.83E-01	710.00	47.30			NA
1,4-Dioxane	123-91-1	NA	NA	NA	0.00E+00	NA	NA	NA	NA	NA	0.00E+00	0.00E+00	1.40E-06	4.80E-03	7.10E-01		NA
Ethy Acet	124-17-4	NA	NA	NA	NA	NA	NA	1.92E-01	NA	NA	2.31E-01	1.92E-01	120.00	8.00		limits from EGBG	NA
Tetrachloroethylene	127-18-4	NA	NA	NA	NA	2.16E-03	NA	NA	NA	NA	2.60E-03	2.16E-03	4.8E-07	1.3E-02			NA
Xylene	1330-20-7	NA	NA	4.90E+00	NA	2.34E-02	NA	NA	NA	NA	5.90E+00	4.92E+00	435.00	29.00			NA
Ethyl Acet	141-78-6	NA	2.31E-02	1.25E+01	NA	NA	NA	NA	NA	NA	1.50E+01	1.25E+01	1400.00	93.30			NA
Heptane	142-82-5	NA	NA	3.87E-01	NA	NA	NA	NA	NA	NA	4.65E-01	3.87E-01	1640.00	109.00			NA
2-(thiocyanmethylthio) benzothiazole	21564-17-0	NA	NA	NA	NA	6.68E-01	NA	NA	NA	NA	8.01E-01	6.68E-01	-	-	-		
Trimethylbenzene	25551-13-7	NA	NA	NA	NA	1.65E-03	6.68E-04	NA	NA	NA	2.78E-03	2.32E-03	123.00	8.20			NA
Dipropylene Glycol Methyl Ether	34590-94-8	NA	NA	NA	NA	6.80E-03	NA	NA	NA	NA	8.16E-03	6.80E-03	600.00	40.00			NA
Formaldehyde	50-0-0	NA	3.52E-03	NA	0.00E+00	1.20E-02	2.70E-02	5.58E-04	NA	NA	5.18E-02	4.32E-02	1.30E-05	5.1E-04	7.7E-02		0.052
Trimethyl-pentane	540-84-1	NA	NA	NA	NA	0.00E+00	NA	NA	NA	NA	0.00E+00	0.00E+00	350.00	23.30			NA
Ethanol	64-17-5	NA	4.99E-02	2.09E+01	1.20E-01	NA	NA	NA	NA	NA	2.52E+01	2.10E+01	1880.00	125.00			NA
Aromatic solvent	64742-94-5	NA	NA	NA	NA	8.68E+00	NA	NA	NA	NA	1.04E+01	8.68E+00	-	-	-		
Methanol	67-56-1	NA	1.97E-03	1.38E-02	2.68E-02	NA	3.51E-03	2.18E-02	NA	NA	8.14E-02	6.79E-02	260.00	17.30			NA
IsoProp	67-63-0	NA	NA	1.64E+01	1.25E-04	1.10E-02	NA	NA	NA	NA	1.97E+01	1.64E+01	980.00	65.30			NA
Acetone	67-64-1	NA	6.23E-01	2.87E+00		8.26E-02	1.60E-02	NA	NA	NA	4.31E+00	3.59E+00	1780.00	119.00			NA
Benzene	71-43-2	NA	NA	NA	NA	2.67E-05	NA	NA	NA	NA	3.21E-05	2.67E-05	8.3E-06	8.0E-04			NA
1,1,1, Trichloroethane	71-55-6	NA	NA	NA	NA	2.24E-03	NA	NA	NA	NA	2.69E-03	2.24E-03	-	-	-	1,1,2 tri chlor is 586	
Acetaldehyde	75-07-0	NA	1.35E-01	NA	NA	NA	NA	2.37E-04	NA	NA	1.63E-01	1.35E-01	2.2E-06	3.0E-03		B#1 - from coldVAE wrap only	0.163
Methylene Chloride	75-09-2	NA	NA	NA	2.04E-03	4.74E-04	NA	NA	NA	NA	3.02E-03	2.52E-03	4.1E-06	1.6E-03			0.003

TABLE 2
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Process Point 585 and 586 chemicals (all point sources) emissions (in lbs/hr) by building

	HR/YR	No "Bldg" 7,488	BLDG 1 4,992	BLDG 2 4,992	BLDG 3 7,488	BLDG 4 7,488	BLDG 5 7,488	BLDG 6 4,992	BLDG 9 7,488	BLDG 11 5,250	Max hrly limits	Average TOTALS(1)	OEL/URF mg/m^3	EL {lb/hr}	AAC/AACC mg/m3(585), ug/m3 (586)		Compare vs IDEQ ELs
Ethylene Oxide	75-21-8	NA	NA	NA	0.00E+00	NA	NA	NA	NA	NA	0.00E+00	0.00E+00	1.4E-04	6.7E-05	1.0E-02		NA
Prop Ox	75-56-9	NA	NA	NA	NA	NA	NA	6.41E-06	NA	NA	7.69E-06	6.41E-06	48.00	3.20			NA
MEK	78-93-3	NA	4.16E-01	1.96E+01	NA	9.71E-04	NA	NA	NA	NA	2.40E+01	2.00E+01	590.00	39.30			NA
Trichloroethylene	79-01-6	NA	NA	NA	NA	6.30E-03	NA	NA	NA	NA	7.56E-03	6.30E-03	269.00	17.93			NA
Stoddard Solvent	8052-41-3	NA	NA	NA	0.00E+00	NA	NA	NA	NA	NA	0.00E+00	0.00E+00	525.00	35.00	26.25		NA
Naphthalene	91-20-3	NA	NA	NA	NA	9.35E-01	NA	NA	NA	NA	1.12E+00	9.35E-01	50.00	3.33			NA
Orthodichlorobenzene	95-50-1	NA	NA	NA	NA	2.10E-04	NA	NA	NA	NA	2.52E-04	2.10E-04	300.00	20.00			NA
1,2,4 Trimethyibenzene	95-63-6	NA	NA	NA	NA	1.00E+03	NA	NA	NA	NA	1.20E+03	1.00E+03	-	-	-		
Cumene	98-82-8	NA	NA	NA	NA	8.92E-08	NA	NA	NA	NA	1.07E-07	8.92E-08	245.00	16.30			NA
	hrly totals	0.0	3.6	131.5	0.2	1,017.5	0.1	0.3	0.0	0.0							
	max hrly totals	**0.00**	**4.31**	**157.85**	**0.23**	**1220.94**	**0.08**	**0.42**	**0.00**	**0.00**							

All five TAPs are generally released inside buildings, and exhausted outside through a series of fans and vents. All of the processes which generate the emissions occurred generally in buildings 1, 3, 4, 5, and/or 6. Emissions from those buildings were modeled as area sources at the actual or representative locations of the fans or vents, with source dimensions driven by the shape of the fan or vent and emission rates proportioned according to flow volume (flow data was available for all fans and vents). The Methylene Chloride emissions, which occurred throughout buildings 3 and 4, were modeled from all fans and vents in both buildings. The 117-81-7 emissions, which occurred in a single room in building 1, were exhausted by a single fan (F8). As a result of this review, Woodgrain Millwork has agreed to replace side wall mounted fan 8 in building 1 with a roof mounted fan 67, which will feature a hood inside. That option should improve indoor air quality. Ambient air quality impacts will be lower than those with fan 8, which were already below IDAPA 586 AACC limits. Formaldehyde and acetaldehyde emissions were vented from the south side of building 1 where glues are used and generally from building 6. Formaldehyde emissions from buildings 4 and 5 were vented from areas of those buildings where glues are used. 111-76-2 comes primarily from building 4, the facility maintenance building.

Emissions

All emissions were modeled as area sources whose location and shape were taken from measured fan dimensions and location. Emissions from all buildings were modeled as operating 24 hours per day, six days per week, the highest operating rate for any building. This is very conservative, since hourly emission rates were calculated based on actual hours of operation, as shown in Table 2, then applied in the for more hours per week.

Emission rates for the five TAPs were reviewed in preparing the updated modeling analyses. The updated emission inventory did not change emission rates for 117-81-7 and 75-09-2. Those pollutants were not remodeled. However, the emission rates for formaldehyde changed as a result of the emission inventory, and two TAPs were identified as having maximum hourly emissions also exceeding Idaho 585 or 586 Emission Limits (ELs). As a result, formaldehyde was remodeled, and modeling was performed for acetaldehyde and 111-76-2 as well. Results of all five TAP modeling analyses will be reported in the Evaluation of Compliance with Standards section.

Like 117-81-7, formaldehyde was modeled with emissions concentrated in a subset of the buildings fans and vents because the processes where formaldehyde is used were localized and the venting system designed to eliminate and control those emissions.

The only source groupings used in any Woodgrain Millwork modeling was the combination of fans or vents in Building 4, where the Methylene Chloride analysis combined a few small fans representing less than 9% of the total exhaust flow into a single representative fan (the one of the group with the most flow) and the 111-76-2 emissions from this building were emitted in the model from four representative fans.

Table 3 provides the model source parameters for all TAP sources included in the modeling analysis. All TAP emissions were modeled as area sources.

Almost all emission rates were calculated on the basis of throughput rates rather than hourly activity, as documented in the Modeling Protocol, emissions spreadsheets, and the Woodgrain Millwork Tier I permit application. As described above, all model particulate sources were assumed to operate continuously, and building fan and vent emissions were modeled assuming 24 hour a day emissions six days per week. These emission parameterizations are very conservative since for all averaging periods they assume continuous emissions while using emission rates calculated assuming limited operating hours.

Figure 1 provides a plot plan showing facility location, buildings, emission points, and property boundary. Figures 2, 3, 4, and 5 provide detailed diagrams of buildings 1, 3, 4, and 5 respectively. Those figures show building height and horizontal dimensions, as well as fans, vents, processes, and emission points.

TABLE 3
TAP Source Model Parameters

Source ID	Easting (X) (m)	Northing (Y) (m)	Base Elevation (m)	Release Height (ft)	Easterly Length (ft)	Northerly Length (ft)	Angle from North (°)	Vertical Dimension (ft)	50-00-0 (lb/hr)	75-09-2 (lb/hr)	117-81-7 (lb/hr)	75-07-0 (lb/hr)	111-76-2 (lb/hr)
B5F52	506731.1	4873980	674.2	5.5	3	3	0	3	9.52E-03				
B5F66	506706.7	4873980	674.1	11.75	3	3	0	3	1.75E-02				
B6F46	506590	4874008	673.4	24.5	4	4	0	2	2.75E-04			1.17E-04	
B6F47	506566.8	4874009	673.2	24.5	4	4	0	2	2.83E-04			1.20E-04	
B4F48	506682.4	4874078	673.9	8	4	4	0	4	3.99E-03	5.48E-05			
B4F49	506691.1	4874078	673.9	8	4	4	0	4	3.99E-03	5.48E-05			2.52
B4F50	506701.8	4874079	673.9	7.5	3	3	0	3	3.95E-03	5.48E-05			
B4F51	506731.9	4874046	674.2	5.5	3	3	0	3		6.16E-05			1.89
B4F61	506723.5	4874079	674.2	10.5	1	1	0	1		1.17E-05			
B4F62	506723.3	4874018	674.1	6	2	2	0	2		2.91E-05			0.45
B4F63	506658.6	4874058	673.8	13.5	3	3	0	3		2.05E-04			3.15
B4V19	506676	4874050	673.9	20	1.5	1.5	0	1.5		5.00E-07			
B4V10	506693.6	4874075	673.9	20	1.5	1.5	0	1.5	3.79E-05	5.00E-07			
B4V11	506703.9	4874073	673.9	20	1.5	1.5	0	1.5	3.79E-05	5.00E-07			
B4V22	506662.7	4874031	673.9	20	1.5	1.5	0	1.5		5.00E-07			
B3F36	506712.8	4874161	673.9	13	2	2	0	2		8.83E-05			
B3F37	506701.1	4874161	673.9	13.5	3	3	0	3		1.86E-04			
B3F38	506688.7	4874163	673.9	7	4	4	0	4		4.00E-04			
B3F39	506688.7	4874168	673.9	7	4	4	0	4		6.32E-04			
B3F40	506688.3	4874169	673.9	3	4	4	0	4		1.77E-04			
B3F41	506684.8	4874169	673.9	3	4	4	0	4		2.04E-04			
B3F42	506681.3	4874169	673.9	20	1.5	1.5	0	1.5		1.67E-04			
B3F45	506648.6	4874153	673.7	20	1.5	1.5	0	1.5		1.86E-04			4.76E-02
B1F67	506676.0	4874229	673.8	26	3	3	0	3			.40024		
B1F15	506798.1	4874170	674.0	20	3	3	0	3	3.12E-04			1.20E-02	7.55E-03
B1F16	506798.1	4874159	674.0	20	3	3	0	3	3.79E-04			1.45E-02	9.17E-03
B1F17	506798.1	4874150	674.0	20	3	3	0	3	3.79E-04			1.45E-02	9.17E-03
B1F18	506797.1	4874136	674.0	18	4	4	0	4	4.01E-04			1.54E-02	9.71E-03
B1F19	506784.2	4874155	674.0	18	4	4	0	4	1.02E-03			3.93E-02	2.48E-02
B1F20	506784.0	4874185	674.0	18	4	4	0	4	1.02E-03			3.93E-02	2.48E-02

TABLE 3
TAP Source Model Parameters

Source ID	Easting (X) (m)	Northing (Y) (m)	Base Elevation (m)	Release Height (ft)	Easterly Length (ft)	Northerly Length (ft)	Angle from North (°)	Vertical Dimension (ft)	50-00-0 (lb/hr)	75-09-2 (lb/hr)	117-81-7 (lb/hr)	75-07-0 (lb/hr)	111-76-2 (lb/hr)
BxFnn	x is the building number, nn is the fan or vent number							Sum (per TAP)	0.052	0.00251	0.40024	.135	8.137

Maximum hourly emissions used for 585 TAP 111-76-2 to predict 24 hour average impacts, Average hourly emissions used for 586 TAPs to predict annual average impact

Bldg 1

HAPS

			Permit lbs	%VOC	%HAPS	108-88-3 % by wt Toluene	111-76-2 % by wt Ethylene gly	108-05-4 % by wt Vinyl Acetat	112-15-2 % by wt Diethylene g	107-21-1 % by wt Ethylene gly	75-07-0 % by wt Acetelhyde	50-00-0 % by wt Formaldehy	67-56-1 % by wt Methanol	117-81-7 % by wt Bis (2ethylh	78-93-3 % by wt MEK
103	TITANIUM WHITE INK	5 Hd Printer	48	0.03	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
104	W/B B/C BLACK	5 Hd Printer	100	0.06	0.00	0.000	0.030	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
105	Defoamer	5 Hd Printer	58	0.00	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
106	FLOW ADDITIVE	5 Hd Printer	150	1.00	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
107	Red Waterbase Basecoat	5 Hd Printer	250	0.07	0.00	0.000	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
108															
109	Yellow W/B Basecoat	5 Hd Printer	700	0.07	0.09	0.000	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
110	W/B B/C WHITE	5 Hd Printer	6,000	0.04	0.09	0.000	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
111	Aqueous Adhesive-Cold VAE	Wrap	135,000	0.06	0.05	0.000	0.000	0.00073	0.00050	0.000	0.005	0.00013	0.000073	0.000	0.000
112	Titanium White	5 Hd Printer	18	1.00	0.02	0.000	0.000	0.000	0.000	0.150	0.000	0.000	0.000	0.000	0.000
113	Mineral Spirits 66/3	Roll manuf	363	1.00	1.00	*1.000*	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
114	Light Red Oxide	5 Hd Printer	17	0.20	0.15	0.000	0.000	0.000	0.000	0.150	0.000	0.000	0.000	0.000	0.000
115															
116	Eastman DOP Plasticizer	Roll Manuf	2,000	1.00	1.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.999	0.000
117	BIG ORANGE	Wrap	924	0.94	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
118	EVA glue 2H634	Wrap	0	0.0011	0.00	0.000	0.000	0.0008	0.000	0.000	0.000	0.000	0.000	0.000	0.000
119	EVA glue 2H850	Wrap	250,000	0.0012	0.00	0.000	0.000	0.0008	0.000	0.000	0.000	0.000	0.000	0.000	0.000
120	WD 40 Bulk liquid	Wrap	130	0.70	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
121	U17732 Liberate/NSS	Wrap	35	0.16	0.11	0.000	0.110	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
122	80-8572	Wrap	40	0.0010	0.001	0.000	0.000	0.0010	0.000	0.000	0.000	0.000	0.000	0.000	0.000
123	EVA glue	Wrap	0	0.0012	0.001	0.000	0.000	0.0008	0.000	0.000	0.000	0.000	0.000	0.000	0.000
124															
228	10 SHEEN CAB T/C	Base Coat	1,816	0.73	0.700	0.200	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500
230	25 SHEEN CAB T/C	Base Coat	2,300	0.74	0.700	0.200	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500
225	Acetone	Base Coat	3,084	1.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
213	HAPS FREE CAB TOPCOAT 25 S	Print	256	0.74	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
237	BLACK INK	Print	562	0.74	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
238	RED OXIDE INK, BRIGHT	Print	187	0.45	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
239	WHITE INK	Print	113	0.41	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.150
240	YELLOW OXIDE INK	Print	126	0.67	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
249	Propylene Glycol n-Propyl Ether	Print	7,000	1.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
						1.19E+03	3.54E+02	2.99E+02	6.75E+01	5.25E+00	6.75E+02	1.76E+01	9.86E+00	2.00E-03	2.03E+03

NON-HAPS

	64-17-5 % by wt Ethanol	--- % by wt Glycol ether	108-21-4 % by wt Isopro Acet	67-64-1 % by wt Acetone	141-78-6 % by wt Ethyl Acet	123-86-4 % by wt N Butyl Ac	110-43-0 % by wt M n-Amyl K
103	*0.030*	0.000	0.000	0.000	0.000	0.000	0.000
104	0.030	0.000	0.000	0.000	0.000	0.000	0.000
105	0.000	0.000	0.000	0.000	0.000	0.000	0.000
106	0.000	0.000	0.000	0.000	0.000	0.000	0.000
107	0.000	0.040	0.000	0.000	0.000	0.000	0.000
108							
109	0.000	0.040	0.000	0.000	0.000	0.000	0.000
110	0.000	0.040	0.000	0.000	0.000	0.000	0.000
111	0.000	0.000	0.000	0.000	0.000	0.000	0.000
112	0.000	0.000	0.000	0.000	0.000	0.000	0.000
113	0.000	0.000	0.000	0.000	0.000	0.000	0.000
114	0.000	0.000	0.000	0.000	0.000	0.000	0.000
115							
116	0.000	0.000	0.000	0.000	0.000	0.000	0.000
117	0.000	0.000	0.000	0.000	0.000	0.000	0.000
118	0.000	0.000	0.000	0.000	0.000	0.000	0.000
119	0.000	0.000	0.000	0.000	0.000	0.000	0.000
120	0.000	0.000	0.000	0.000	0.000	0.000	0.000
121	0.000	0.000	0.000	0.000	0.000	0.000	0.000
122	0.000	0.000	0.000	0.000	0.000	0.000	0.000
123	0.000	0.000	0.000	0.000	0.000	0.000	0.000
124							
228	0.030	0.000	0.000	0.000	0.000	0.000	0.000
230	0.030	0.000	0.000	0.000	0.000	0.000	0.000
225	0.000	0.000	0.000	1.000	0.000	0.000	0.000
213	0.100	0.000	0.500	0.10	0.000	0.000	0.000
237	0.100	0.000	0.00	0.00	0.120	0.090	0.370
238	0.090	0.000	0.00	0.00	0.110	0.000	0.350
239	0.100	0.000	0.00	0.00	0.120	0.000	0.000
240	0.090	0.000	0.00	0.00	0.110	0.070	0.350
249	0.000	1.000	0.00	0.00	0.000	0.000	0.000
	2.49E+02	7.23E+03	1.28E+02	3.11E+03	1.15E+02	5.94E+01	3.18E+02

Total lbs/yr used	411,277
Total tons/yr used	206
weighted avg VOC % content	**0.062**
weighted avg %HAP content	**0.031**
total tons VOC's	**12.7**
total tons HAPs	**6.5**

FOR PERMIT: amount of lbs used/yr

REQUESTED PERMIT LIMITS

weighted avg VOC % content	0.07	Bldg 1
weighted avg %HAP content	0.03	
total tons VOCs	14.0	
total tons HAPs	7.1	
max VOC lb/hr	5.6	
max HAP lb/hr	2.9	

BLDG 2

Bldg 2

			Permit lbs	%VOC	%HAPs	78-93-3 MEK	108-10-1 Meth Iso Ket	67-56-1 Methanol	100-41-4 Eth Benz	108-88-3 Toluene	121-44-8 Triethylamine	108-05-04 Vinyl Acetate	1330-20-7 Xylene	142-82-5 Heptane	64-17-5 Ethanol	123-86-4 N Butyl Ac	110-19-0 Isobutyl Acet	108-21-4 Isopropyl Ace	110-43-0 M n-Amyl K	67-63-0 IsoProp	141-78-6 Ethyl Acet	67-64-1 Acetone	109-60-4 Propyl Acetate	1569-01-3 Prop Glycol Eth	Mixed Other solvent
						HAPS								NON-HAPS											
						% by wt	% by wt	% by wt	% by wt	% by wt	% by wt	% by wt	% by wt	% by wt	% by wt	% by wt	% by wt	% by wt	% by wt	% by wt	% by wt	% by wt	% by wt	% by wt	% by wt
200	STAIN BLOCK BROWN PRIMEI	Base Coat	13,720	0.51	0.36	0.100	0.030	0.000	0.030	0.100	0.000	0.000	0.100	0.040	0.040	0.040	0.030	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
202	WHITE B/C ACRYLIS	Base Coat	7,820	0.56	0.43	0.220	0.000	0.000	0.000	0.210	0.000	0.000	0.000	0.000	0.000	0.020	0.020	0.000	0.000	0.100	0.000	0.000	0.000	0.000	0.000
204	UNIVERSAL BASECOAT, RED (	Base Coat	13,334	0.62	0.31	0.200	0.000	0.000	0.002	0.100	0.000	0.000	0.010	0.000	0.080	0.000	0.070	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
205	UNIVERSAL BASECOAT, BRITE	Base Coat	3,600	0.69	0.26	0.150	0.000	0.000	0.002	0.100	0.000	0.000	0.010	0.000	0.090	0.000	0.150	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
206	UNIVERSAL BASECOAT, WHIT	Base Coat	148,800	0.56	0.32	0.220	0.000	0.000	0.002	0.090	0.000	0.000	0.010	0.000	0.070	0.000	0.040	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
208	UNIVERSAL BASECOAT, YELL(	Base Coat	105,160	0.53	0.32	0.210	0.000	0.000	0.003	0.090	0.000	0.000	0.020	0.000	0.080	0.000	0.040	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
209	UV CURING COATING	Base Coat	150	0.01	0.01	0.000	0.000	0.000	0.000	0.000	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
213	HAPS FREE CAB TOPCOAT 25	Print	2,624	0.74	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.100	0.000	0.000	0.500	0.000	0.000	0.000	0.100	0.000	0.000	0.000
219	Bright Red	Base Coat	0	0.74	0.30	0.100				0.200		0.000													
221	CAB BRIGHT YELLOW BASEC(	Base Coat	5,036	0.63	0.30	0.100	0.000	0.000	0.000	0.200	0.000	0.000	0.000	0.200	0.100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
222	ALCOHOL VANZOL	Base Coat	2,000	1.00	1.00	0.018	0.000	0.034	0.000	0.000	0.000	0.000	0.000	0.000	0.860	0.000	0.000	0.000	0.000	0.090	0.000	0.000	0.000	0.000	0.000
223	VINYL COATING	Base Coat	6,000	0.77	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.800	0.000	0.000	0.000
224	60 SHEEN CAB T/C	Base Coat	9,000	0.72	0.60	0.500	0.000	0.000	0.000	0.100	0.000	0.000	0.000	0.000	0.030	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
225	Acetone	Base Coat	9,252	1.00	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.000	0.000	0.000	0.000
226	NUTRACOAT BASE	Base Coat	12,604	0.58	0.36	0.100	0.000	0.000	0.030	0.200	0.000	0.000	0.030	0.030	0.030	0.030	0.030	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
227	Black Ink	Base Coat	0	0.67	0.32																				
228	10 SHEEN CAB T/C	Base Coat	16,348	0.73	0.70	0.500	0.000	0.000	0.000	0.200	0.000	0.000	0.000	0.000	0.030	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
229	Hi-Hide Red Paint	Base Coat/print	0	0.72	0.40																				
230	25 SHEEN CAB T/C	Base Coat	43,700	0.74	0.70	0.500	0.000	0.000	0.000	0.200	0.000	0.000	0.000	0.000	0.030	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
231	WATERBOURNE PRIMER 853	Base Coat	30,000	0.03	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.030	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
233	Neutral Coat	Base Coat	0	0.51	0.36																				
234	Yellow Oxide Paint	Base Coat	0	0.56	0.43																				
235	White Paint	Base Coat	0	0.52	0.33																				
236	NUTRACOAT CAB	Basecoat	135,068	0.61	0.31	0.000	0.070	0.000	0.020	0.080	0.000	0.000	0.140	0.000	0.000	0.000	0.150	0.040	0.000	0.000	0.000	0.000	0.000	0.000	0.000
237	BLACK INK	Print	2,561	0.74	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.100	0.090	0.000	0.000	0.370	0.000	0.120	0.000	0.000	0.000	0.000
238	RED OXIDE INK, BRIGHT	Print	853	0.62	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.090	0.000	0.000	0.000	0.350	0.000	0.110	0.000	0.000	0.000	0.000
239	WHITE INK	Print	513	0.41	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.100	0.000	0.000	0.000	0.150	0.000	0.120	0.000	0.000	0.000	0.000
240	YELLOW OXIDE INK	Print	574	0.62	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.090	0.070	0.000	0.000	0.350	0.000	0.110	0.000	0.000	0.000	0.000
241	PHTHALO BLUE BASECOAT	Basecoat	1,204	0.64	0.27	0.170	0.000	0.000	0.003	0.080	0.000	0.000	0.020	0.000	0.060	0.000	0.220	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
242	BLUE INK	Basecoat	60	0.66	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.180	0.000	0.000	0.000	0.150	0.000	0.270	0.000	0.000	0.000	0.000
244	Haps free White Ink	Print	0	0.60	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
245	Haps free Black Ink	Print	0	0.60	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0
247	Haps free Yellow Ink	Print	0	0.60	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0
248	Haps free Red Ink	Print	0	0.60	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.000	0.000
249	Propylene Glycol n-Propyl Ether	Print	28,000	1.00	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.220	0.000	0.041	0.164	0.000	0.231	0.177	0.000	0.167	0.000	0.000
256	New Blend (2)	Base Coat	350,000	1.00	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.220	0.000	0.041	0.164	0.000	0.231	0.177	0.000	0.167	0.000	0.000
257	Woodgrain Blend 3	Base Coat	0	1.00	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
258	Pkg Hot melt glue	Packaging	13,000	0.00	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000												0.73
259	Stains	Base Coat	182,000	0.77	0.04					0.040			0.000		0.000										
						3.09E+00	1.00E-01	3.44E-02	9.20E-02	1.99E+00	9.37E-03	1.00E-03	3.40E-01	2.70E-01	2.63E+00	2.50E-01	8.32E-01	8.68E-01	1.37E+00	6.52E-01	1.08E+00	1.90E+00	3.34E-01	1.00E+00	7.30E-01

Total lbs/yr used	1,142,980
Total tons/yr used	571
weighted avg VOC % content	0.74
weighted avg %HAP content	0.17
total tons VOCs	422.7
total tons HAPs	99.7

FOR PERMIT: amount of lbs used/yr

9.76E+04	9.87E+03	6.88E+01	4.14E+03	6.22E+04	1.41E+00	1.30E+01	2.44E+04	1.93E+03	1.04E+05	1.35E+03	4.75E+04	6.41E+04	1.53E+03	8.18E+04	6.25E+04	1.43E+04	5.85E+04	2.80E+04	1.33E+05

REQUESTED PERMIT LIMITS:

weighted avg VOC % content	0.8	Bldg 2
weighted avg %HAP content	0.2	
total tonsVOCs	465.0	
total tons HAPs	109.7	
max VOC lb/hr	186.3	
max HAP lb/hr	44.0	

Bldg 3

						HAPS											NON-HAPS							
						585	585	586	586	586	586						NA	585	585	585	NA	NA		585
						111-76-2	107-21-1	50-0-0	123-91-1	75-21-8	75-09-2	124-17-4	75-56-9	123-31-9	75-07-0	108-05-4	112-34-5	64-17-5	67-56-1	67-63-0	25165-71-8	57-55-6	-	8052-41-3
						% by wt	% by wt	% by wt	% by wt	% by wt	% by wt	% by wt	% by wt	% by wt	% by wt	% by wt	% by wt	% by wt	% by wt	% by wt	% by wt	% by wt	% by wt	% by wt
			Permit lbs	%VOC	%HAPs	Ethylene glyc	Ethylene glyco	Formaldehyde	1.4 Dioxane	Ethylene Oxic	Meth Chlor	Ethy Acet	Prop Ox	Hydro Qui	Acetaldehyde	Vinyl Acet	Diethylene G.	Ethanol	Methanol	Is Pro A	Dipropylene G	Propylene G	Glycol Eth	Stoddard
302	CHEMSTI	Windows	18	0.940	0.8900	0.000	0.000	0.000	0.000	0.000	0.850	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.038	0.052	0.000	0.000	0.000	0.000
303	ETHYLEN	Wrap	275	1.000	0.0500	0.000	0.052	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
309	MOLDING	Windows	320,000	0.014	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
310	WATER B	Windows	9,100	0.515	0.0100	0.0013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000
312	WATERB	Base Coa	30,000	0.030	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.030	0.000	0.000	0.000	0.000	0.000	0.000
313	SP1200	Windows	20,000	0.020	0.0200	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.010	0.000	0.000	0.000	0.000	0.000
314	SP1200	Windows	0	0.014	0.0049	0.0043	0.000	0.000075	0.000555	0.000003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00004	0.0092	0.000	0.00013
601	VC210015	Windows	44,000	0.054	0.0540	0.000	0.000	**8.70E-05**	0.000	0.000	0.000	**3.00E-02**	**1.00E-06**	**6.00E-06**	**3.70E-05**	**0.00064**	0.000	0.000	**3.40E-03**	0.000	0.000	0.000	**2.00E-02**	0.000
						1.56E-02	5.20E-02	**1.62E-04**	5.55E-04	3.00E-06	8.50E-01	**3.00E-02**	**1.00E-06**	**6.00E-06**	**3.70E-05**	**6.40E-04**	7.80E-03	3.00E-02	**5.14E-02**	5.20E-02	4.00E-05	9.20E-03	**2.00E-02**	1.30E-04
						FOR PERMIT: amount of lbs used/yr																		
						2.11E+02	1.43E+01	3.83E+00	0.00E+00	0.00E+00	1.53E+01	1.32E+03	4.40E-02	2.64E-01	1.63E+00	2.82E+01	7.10E+01	9.00E+02	3.50E+02	9.36E-01	0.00E+00	0.00E+00	8.80E+02	0.00E+00

Total lbs/yr used	423,393
Total tons/yr used	212
weighted avg VOC % content	**0.024**
weighted avg %HAP content	**0.0003**
total tons VOC's	**5.1**
total tons HAPs	**0.06**

REQUESTED PERMIT LIMITS:

weighted avg VOC % content	0.03	**Bldg 3**
weighted avg %HAP content	0.0003	
total tons VOC's	5.6	
total tons HAPs	0.1	
max VOC lb/hr	1.5	
max HAP lb/hr	3.8	

Bldg 4

BLDG 4

			Permit lbs	% VOC	% HAPs	71-4-32 % by wt Benzene	98-8--28 % by wt Cumene	78-93-3 % by wt MEK	108-10-1 % by wt Meth Iso Ket	100-41-4 % by wt Eth Benz	108-88-3 % by wt Toluene	1330-20-7 % by wt Xylene	111-76-2 % by wt Ethylene glyc	108-05-4 % by wt Vinyl Acetate	107-21-1 % by wt Ethylene glyc	110-54-3 % by wt n-Hexane	71-55-6 % by wt 1,1,1, Trichlc	75-09-2 % by wt Methylene C	108-90-7 % by wt Monochlorobe	50-00-0 % by wt Formaldehyc	79-01-6 % by wt Trichloroethy	91-20-3 % by wt Napthalene	100-42-5 % by wt Styrene	540-84-1 % by wt 2,2,4 Tri	127-18-4 % by wt Tetrachloroet	67-63-0 % by wt ^ isoProp	67-64-1 % by wt Acetone	106-65-6 % by wt 1-methoxy-2	34590-94-8 % by wt Dipropylene (	107-98-2 % by wt Proylene Gly	111-40-0 % by wt Diethylene T	106-92-3 % by wt Allyl Glycidy	95-50-1 % by wt Orthodichlor	25551-13-7 % by wt Trimethylben	21564-17-0 % by wt 2-(thiocyano	95-63-6 % by wt 1,2,4 trim	64742-94-5 % by wt Aromatic solv	Asst % by wt propellants
						HAPS																				NON-HAPS											
401	SUPER BRUTE	Maintenance	645	0.10	0.00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	7.0E-02	3.0E-02	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	
402	D-AQUA LUBE	Maintenance	24	0.73	0.73	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	3.0E-02	0.0E+00	0.0E+00	0.0E+00	7.0E-01	0.0E+00	0.0E+00	8.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-01	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	
404	END SPAT	Maintenance	52	0.15	0.00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	3.0E-01
405	PORTA KLEAN	Maintenance	24	0.30	0.00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	9.3E-01
406	H-P SUPER	Maintenance	24	0.93	0.00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	5.0E-01	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	5.0E-01
407	TAP EASE A	Maintenance	120	1.00	0.00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.0E+00
408	AR GREASE GUN IN A CAN N	Maintenance	24	1.00	0.00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	9.9E-02	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	
409	ENZ AWAY "Q"	Maintenance	156	0.10	0.00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.7E-01
410	HARDENER UT-R20	Maintenance	5	1.00	0.73	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	7.1E-01	2.0E-02	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.3E-01	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	
411	PIPE THREAD SEALING CON	Maintenance	25	0.23	0.00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	
412	U17732 LIBERATE/ NSS 4X1	Maintenance	10	0.11	0.11	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.1E-01	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.4E-01	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	7.0E-02
413	E-800-B EPOXY HARDENER	Windows	5	0.31	0.00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	3.0E-02	3.3E-01	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	
414	PUTTY SOLV FACE-PINE	Windows	60	0.36	0.00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	
415	SPACKLE COMPOUND- WHI	Windows	21	0.01	0.01	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.0E-02	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	
416	EXTERIOR GLUE	Lamination	0	0.00	0.00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	5.0E-04	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	8.0E-04	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	4.0E-02	0.0E+00	0.0E+00	0.0E+00	9.4E-01
418	Mineral Spirits 66/3	Windows	0	1.00	0.00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.0E-02	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.3E-01
419	DEGREASE IT ORANGE AND	Maintenance	12	0.38	0.00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-01	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	3.0E-02
420	SAFE KLEAN	Maintenance	48	0.96	0.90	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	9.0E-01	0.0E+00	0.0E+00	0.0E+00	0.0E+00	3.0E-02	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	6.7E-01
421	ZEP GROOVY	PARTS	5	0.67	0.00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.7E-01	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	8.3E-01
422	EL70/EPOXY PATCH PART A	Maintenance	38	1.00	0.00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	
423	SAFETY RED PAINT	PARTS	8	0.60	0.50	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.0E-01	1.5E-01	2.5E-01	1.0E-01	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	
424	DARK MACHINE GRAY PAINT	PARTS	8	0.95	0.55	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.0E-01	2.0E-01	2.0E-01	5.0E-02	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	
425	ZEP ERASE	PARTS	15	0.90	0.75	0.0E+00	0.0E+00	5.0E-02	0.0E+00	0.0E+00	2.5E-01	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-01	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	
426	HYDRAULIC/PNEUMATIC SE	Maintenance	15	0.04	0.00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	4.5E-01	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	4.0E-02
427	DEEP BLUE PAINT	PARTS	12	0.85	0.55	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.0E-01	2.0E-01	2.0E-01	5.0E-02	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	3.0E-01
428	SAFETY ORANGE PAINT	PARTS	12	0.85	0.65	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.0E-01	2.0E-01	2.5E-01	1.0E-01	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.5E-01
429	LOW VOC HH FLAT BLACK	PARTS	12	0.80	0.55	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.0E-01	2.0E-01	2.5E-01	1.0E-01	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	3.0E-01
430	FLAT WHITE PAINT	PARTS	12	0.75	0.45	0.0E+00	0.0E+00	0.0E+00	0.0E+00	5.0E-02	2.0E-01	2.0E-01	5.0E-02	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	3.4E-01
431	PENETRATING GEL LUBRIC/	Maintenance	36	0.79	0.45	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	4.9E-01	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	3.5E-01
432	TM3806 OPEN GEAR LUBE	Maintenance	14	0.60	0.25	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.5E-01	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.5E-01
433	TM3842 TRIM ADHESIVE WI	Maintenance	18	0.75	0.35	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	3.5E-01	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.5E-01	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	4.0E+00
434	SILICONE RUBBER SEALANT	PARTS	26	0.04	0.00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	3.7E-01
435	9103 ULTRALUBE	Maintenance	21	0.90	0.60	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	4.5E-01	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	
436	LOW VOC HH GLOSS WHITE	PARTS	24	0.50	0.45	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.0E-01	1.5E-01	2.0E-01	5.0E-02	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	3.0E-01
437	RED PRIMER	PARTS	30	0.70	0.40	0.0E+00	0.0E+00	0.0E+00	0.0E+00	5.0E-02	2.0E-01	1.5E-01	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	
438	FULL FORCE ANTIFREEZE A	Maintenance	1,870	0.93	0.93	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	9.3E-01	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	
439	INEXPENSIVE PAINT WHITE	PARTS	40	0.84	0.18	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.8E-01	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.3E-01	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.3E-01
440	LOW VOC HH GLOSS BLACK	PARTS	36	0.90	0.50	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.0E-01	2.0E-01	2.5E-01	5.0E-02	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	3.0E-01
441	LOW VOC HH EQUIP YELLO	PARTS	55	0.85	0.55	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.0E-01	2.0E-01	2.0E-01	5.0E-02	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.5E-01
442	YELLOW STRIPING	PARTS	47	0.85	0.40	0.0E+00	0.0E+00	0.0E+00	0.0E+00	5.0E-02	2.5E-01	1.0E-01	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.0E+00
443	HT LIQUID DEGREASER	Maintenance	800	1.00	0.00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	4.0E-01
444	SAFETY YELLOW PAINT	PARTS	84	1.00	0.60	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.0E-01	2.0E-01	2.0E-01	1.0E-01	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	3.3E-01
445	INEXPENSIVE PAINT FLOOU	PARTS	84	0.56	0.14	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.0E-02	0.0E+00	0.0E+00	0.0E+00	1.3E-01	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	9.0E-02	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.0E-02	0.0E+00	0.0E+00	1.7E-01
446	INEXPENSIVE PAINT SHAMR	PARTS	105	0.59	0.18	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.6E-01	0.0E+00	2.0E-02	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.3E-01	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.9E-01
447	INEXPENSIVE PAINT FLOUR	PARTS	106	0.53	0.12	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.0E-02	0.0E+00	0.0E+00	0.0E+00	1.1E-01	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.2E-01	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.9E-01
448	INEXPENSIVE PAINT FLOUR	PARTS	110	0.53	0.12	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.0E-02	0.0E+00	0.0E+00	0.0E+00	1.1E-01	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.2E-01	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

Bldg 5

			Permit lbs	% VOC	% HAPs	67-56-1 % by wt Methanol	108-88-3 % by wt Toluene	108-05-4 % by wt Vinyl Acetat	112-15-2 % by wt Diethylene g	107-21-1 % by wt Ethylene gly	50-00-0 % by wt Formaldehy	108-95-2 % by wt Phenol	112-34-5 % by wt Diethylene g .	67-64-1 % by wt Acetone	25551-13-7 % by wt Trimethylbenzene
						HAPS								Non HAPS	
501	DE ICER	5/4 & 6/4	35	1.00	0.82	7.50E-01	0.00E+00	0.00E+00	0.00E+00	7.00E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
502	INEXPENSIVE PAINT	5/4 & 6/4	500	0.86	0.13	0.00E+00	1.30E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	1.00E-02
503	C-237	6 /4 & 5/4	0	0.38	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
505	WD2540A	5/4 & optim	0	0.00	0.00	0.00E+00	0.00E+00	5.00E-04	0.00E+00	0.00E+00	8.00E-04	5.00E-04	0.00E+00	0.00E+00	0.00E+00
506	WD2523 D	5/4 & optim	0	0.02	0.02	0.00E+00	0.00E+00	5.00E-04	9.63E-03	0.00E+00	8.00E-04	5.00E-04	9.63E-03	0.00E+00	0.00E+00
508	WD1350A	5/4 & optim	3,000	0.03	0.03	0.00E+00	0.00E+00	5.00E-04	2.60E-02	0.00E+00	8.00E-04	5.00E-04	0.00E+00	0.00E+00	0.00E+00
510	C-100Y	5/4 & optim	5,500	0.00	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
512	WD-2403	5/4 & optim	400,000	0.02	0.00	0.00E+00	0.00E+00	5.00E-05	0.00E+00	0.00E+00	5.00E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Total lbs/yr used		409,035			7.50E-01	1.30E-01	1.55E-03	3.56E-02	7.00E-02	2.90E-03	1.50E-03	9.63E-03	2.40E-01	1.00E-02
	Total tons/yr used		205			FOR PERMIT: amount of lbs used/yr									
	weighted avg VOC % content		**0.021**			2.63E+01	6.50E+01	2.15E+01	7.80E+01	2.45E+00	2.02E+02	1.50E+00	0.00E+00	1.20E+02	5.00E+00
	weighted avg %HAP content		**0.0006**												
	total tons VOC's		**4.27**												
	total tons HAPs		**0.13**												

REQUESTED PERMIT LIMITS:

weighted avg VOC % content	**0.02**	**Bldg 5**
weighted avg %HAP content	**0.001**	
total tons VOCs	**4.7**	
total tons HAPs	**0.14**	
max VOC lb/hr	**1.3**	
max HAP lb/hr	**0.04**	

flow coat line
B

Bldg 6

			Permit lbs	%VOC	%HAPs	HAPS 108-05-4 % by wt Vinyl Acet	67-56-1 % by wt Meth Alch	50-0-0 % by wt Formald	75-07-0 % by wt Acetaldehy	123-31-9 % by wt HydroQui	75-56-9 % by wt Prop Ox	124-17-4 % by wt Ethy Acet	- % by wt Glycol ethers
601	CH-0365 VOC/HAP PROD	Satin Coat	44,000	0.054	0.054	6.40E-04	3.40E-03	8.70E-05	3.70E-05	6.00E-06	1.00E-06	3.00E-02	2.00E-02
		Total lbs/yr used	44,000			5.40E-02	6.40E-04	3.40E-03	8.70E-05	3.70E-05	6.00E-06	1.00E-06	3.00E-02
		Total tons/yr used	22			FOR PERMIT: amount of lbs used/yr							
		weighted avg VOC % content	0.05			2.[illegible]	[illegible]+02	3.83E+00	1.63E+00	2.64E-01	4.40E-02	1.32E+03	8.80E+02
		weighted avg %HAP content	0.054			2.82E-1	1.6E						
		total tons VOCs	1.19										
		total tons HAPs	1.19										

REQUESTED PERMIT LIMITS:

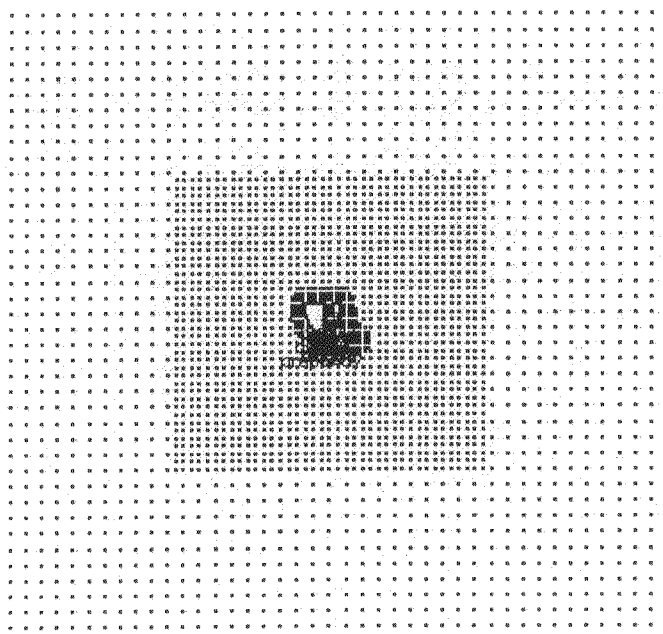
weighted avg VOC % content	0.06	Bldg 6
weighted avg %HAP content	0.06	
total tons VOCs	1.3	
total tons HAPs	1.3	
max VOC lb/hr	0.5	
max HAP lb/hr	0.52	

RECEPTOR NETWORK

Receptors were place at and beyond the facility property boundary. A large scale view of the receptor network is provided in Figure 6.

The property boundary is generally close to many facility buildings and emission points, as shown in Figures 7 and 8. As far as public access, the east side of the facility has a cinder block fence along the entire property boundary. The south side has an intermittent fence. All emission points near the south side have a building between them and the property boundary. The west side is bordered by a drain canal, an obstacle to human passage. The north side has intermittent fencing, including a fence between the facility and Chevron property (which is fully surrounded by fencing). These access limitations support the use of the property boundary as the start of ambient air.

FIGURE 6
Outer Receptor Network



Receptors were placed at 50-meter intervals around the property boundary. Three or four more rows of receptors were placed at the same spacing to yield a 50 meter grid network extending 200 meters from the property boundary. From there, moving away, the network included receptors 100 meters apart out to 1.5 kilometers from the facility, then at 200-meter intervals to 3.5 kilometers. All maximum impacts were found to occur in the immediate vicinity of the property boundary, within the 50 meter grid spacing.

In the follow-up modeling for PM-10, formaldehyde, acetaldehyde, and 111-76-2, outer receptors were eliminated beyond 1.5 kilometers if all impacts at that distance were more than an order of magnitude below the overall maximum impact, which typically occurred on or very near the property boundary.

FIGURE 7
Inner Receptor Network, with PM_{10} Sources

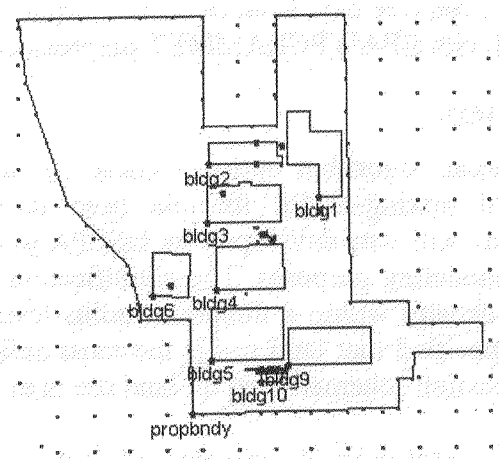
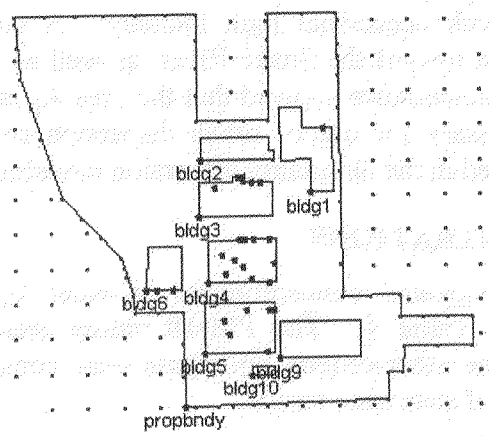


FIGURE 8
Inner Receptor Network, with TAP Sources



ELEVATION DATA

All source base and receptor elevations were calculated from USGS 7.5-degree (30m or less horizontal resolution) DEM data using the Bee-Line BEEST preprocessing system.

METEOROLOGICAL DATA

Five years of National Weather Service data from the Boise airport, from 1987 to 1991, were used. The data was processed with EPA's PCRAMMET preprocessor.

LAND USE CLASSIFICATION

ISCST3 includes rural and urban algorithm options. These options affect the wind speed profile, dispersion rates, and mixing-height formula used in calculating ground-level pollutant concentrations. A protocol was developed by USEPA to classify an area as either rural or urban for dispersion modeling purposes. The classification is based on average heat flux, land use, or population density within a three-km radius from the plant site. Of these techniques, the USEPA has specified that land use is the most definitive criterion (USEPA, 1987). The urban/rural classification scheme based on land use is as follows:

> *The land use within the total area, A_0, circumscribed by a 3-km circle about the source, is classified using the meteorological land use typing scheme proposed by Auer (1978). The classification scheme requires that more than 50% of the area, A_0, be from the following land use types in order to be considered urban for dispersion modeling purposes: heavy industrial (I1); light-moderate industrial (I2); commercial (C1); single-family compact residential (R2); and multi-family compact residential (R3). Otherwise, the use of rural dispersion coefficients is appropriate.*

The Woodgrain Millwork facility is located in Fruitland. The area around the facility is suburban and agricultural, with occasional light industry. A three kilometer circle would include open space to the east toward the Snake River, as well as the small town of Fruitland mostly to the south. Site reconnaissance showed that the area A_0 is likely well below the 50% urban land use criteria necessary for use of urban dispersion coefficients. Rural dispersion coefficients were therefore used in the air quality dispersion modeling.

BACKGROUND CONCENTRATIONS

Representative regional background concentrations provided by IDEQ were used. The values are shown below in Table 4. The PM-10 values were derived by IDEQ from monitoring, while those of the other criteria pollutants were conservatively estimated based upon IDEQ's understanding of statewide trends.

EVALUATION OF COMPLIANCE WITH STANDARDS

The impact limits applicable to this facility's permit are the National Ambient Air Quality Standards (NAAQS) for PM_{10}, and the IDAPA 585 and 586 Ambient Air Concentration limits for Carcinogens or non carcinogens (AACCs or AACs) for TAPs. For formaldehyde and acetaldehyde, the applicable impact limit is the 1 in 100,000 risk level, since the facility meets T-RACT requirements in the IDAPA Rules. Those limits, and the predicted impacts (and for criteria pollutant PM_{10} the predicted maximum ambient concentrations during facility operation, which includes background concentrations), are shown in Table 4.

TABLE 4
Background Concentrations, Ambient Impact Limits and Method of Comparison with Ambient Air Quality Standards

Pollutant	Averaging Period	Backgr, Conc. (µg/m³)	Modeled Impact (µg/m³)	Predicted Total Concentration (µg/m³)	Idaho AAQS or AACC (µg/m³)	NAAQS (µg/m³)	1/100000 Risk Level (µg/m³)
117-81-7	Annual		1.55	-	4.2	-	
50-00-0	Annual		.231	-	.077	-	0.77
75-09-2	Annual		.028	-	.24	-	
75-07-0	Annual		.838	-	.45	-	4.5
111-76-2	24 hour		323.	-	6000	-	
PM_{10}	24 hour	86	31.2	119.2	150	150	
	Annual	32.6	6.46	39.1	50	50	

Modeled impact represents the first maximum predicted impacts for all pollutants and averaging periods. The PM_{10} annual and 24 hour average maximum impacts occurred on the property boundary to the southwest and south respectively. Predicted maximum ambient PM_{10} concentrations while the facility is operating, shown in Table 4, are well below Idaho and National Ambient Air Quality Standards. The maximum annual average impact for Bis (2 ethylhexyl) phthalate (117-81-7) occurred just beyond the western property boundary in the vicinity of building 1, where its release occurred. Maximum annual average impacts for acetaldehyde, whose primary releases are also from building 1, were on the eastern property boundary alongside building 1. For formaldehyde (50-00-0), the maximum predicted annual average impact occurred on the western property boundary, across from buildings 4 and 5, where the primary sources of emissions occur. The northern property boundary, at the Chevron property line, is where the maximum annual average impact was predicted for Methylene Chloride (75-09-2) (directly north of the most significant release location). All maximum impacts occurred within the inner receptor grid, where grid spacing was less than or equal to 50 meters. For 111-76-2, maximum 24 hour average impacts occurred on the eastern boundary near building 4, where the majority of its emissions emanated.

Despite very conservative emission rate assumptions, Table 4 shows that the predicted maximum impacts for each TAP is below the IDEQ 585 AAC or 586 AACC, except for

formaldehyde and acetaldehyde. A T-RACT demonstration has provided for those two TAPs. Therefore, the applicable impact limit for formaldehyde and acetaldehyde is the 1 in 100,000 risk level. Table 4 shows the facility's compliance with those 1 in 100, 000 risk level formaldehyde and acetaldehyde impact limits.

ELECTRONIC COPIES OF THE MODELING FILES

Electronic copies of all input, output, and support modeling files necessary to duplicate the model results are provided on the accompanying computer disk. Also included are emissions information, and electronic copies of photos of the storage and transfer processes.

Attachment C

PSD Applicability and Lookback

(in entirety)

(to be added in new Tab 13)

ATTACHMENT C Updated Jan, 2003

PSD Look back and Applicability for PM10 and VOC's

Background

Our Woodgrain Millwork Fruitland facility is required to perform a Prevention of Significant Deterioration (PSD) applicability analysis due to a draft consent order by the Idaho Department of Environmental Quality (IDEQ) dated July 10, 2002. Previously, PSD applicability was raised by IDEQ during review of the Title V permit application, because of emissions for the wood treat process were included in the application.

Summary of PSD Sources

PSD was found to be applicable for the following emission sources, with the PSD applicability date, as shown in Table 1:[1]

Table 1 PSD Applicability Summary

Emission Unit	Date PSD Applicable	Emission Source	Emissions Requiring PSD Review
Wood Treat Facility	1989	Building #4	VOCs
Cyclone J	1983	Cyclone J, shavings bin, and shaker/bailer	PM
Cyclone L	1983	Cyclone L and fines bin	PM and PM-10

PSD Major Source Applicability

Woodgrain's Fruitland facility is classified as a PSD major source as the potential to emit for VOCs is greater than 250 tons per year (tpy). It is grandfathered as a PSD major source, because it began operations before the August 7, 1977 PSD regulations (40 CFR 52.21). Particulate emissions were less than 250 tpy prior to the particulate baseline date of 1975. Because the facility is grandfathered as PSD major, the next time we experience an emission source that involves a physical change or change in operation, we must evaluate the net emission increase.

[1] As discussed in this document, for particulate emissions PSD applies when using a grain loading emission factor of 0.03 gr/scf. Otherwise, based on a throughput emission factor of 0.5 lb/BDT, PSD was not triggered for particulate emissions.

We calculated the net emission increase by summing the increase in actual emissions from a particular physical change or change in method of operation. Actual emissions generally refer to the average rate, in tons per year, that an emissions unit actually emitted a pollutant during a two year period preceding a particular date and which represents normal operation. For a new emissions unit, or a modified emissions unit that has not begun normal operation, actual emissions are the potential to emit of the unit. For new or modified sources, the net emissions increase were based on the requested permitted emission rate or the potential to emit, less the two-year actual emissions average (potential to emit minus 2-year actual emissions).

The regulatory significant rate increase is 40 tpy for VOCs, 25 tpy for PM, and 15 tpy for PM-10. If the net emission increase is greater than the significant rate, PSD is applied to each new emission unit which has an increase in those pollutants.[2] It is understood that for major modifications, Best Available Control Technology (BACT) evaluation only applies to existing emission units that have a net emission increase as a result of a physical or operational change to that unit.

Review of VOC Emissions for PSD Applicability

VOC emissions from a single process are not associated with a particular stack, vent or emission point. In large open working areas, the VOC emissions mix and then exit from stacks and vents. The buildings, rather than each stack or vent, are treated as a single emission source. These emissions are not fugitive and have been counted towards PSD applicability.

Currently, in the 2002 Tier II permit application, the potential to emit was requested to be 813.5 tpy. This assumes no emission control for VOCs and that all solvents were assumed to be 100% emitted. Since the facility began operations only the wood treatment facility and the millwork coating (prefinish) process have created operational changes that increased the potential to emit of VOCs. The wood treatment operation began in 1989; it is not permitted and the potential to emit is estimated to be 236 tpy. The millwork coating (prefinish) process was issued a modified permit in 1999 with an enforceable potential to emit increase of 39.8 tpy. Assuming no increase of potential to emit with the current Tier II application, the potential to emit since the existence of the plant, calculated by the current potential to emit less the wood treatment and millwork coating processes, is 502.2 tpy.[3] This is close to a previous estimate of 522 tpy of actual plant-wide emissions prior to the wood treatment process.[4]

There is sufficient information to make the following conclusion for VOC emissions:

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[2] Other creditable increases and decreases in actual emissions at the major source that are contemporaneous with the proposed change would normally be calculated too, but Woodgrain did not have federally enforceable creditable emissions.

[3] Changes in operation that increased VOC emissions is not known to have occurred from the beginning of the plant operation until 1989, the earliest date emission estimates were available; however, there is no documentation of this. Also, without federally enforceable limits, the potential to emit may be higher, but for purposes of this analysis, the source is considered grandfathered PSD major source, even at a lower potential to emit calculation.

[4] Calculated by Jim Jaderholm.

- Woodgrain Fruitland was classified as PSD major; however it was grandfathered from having to comply with PSD regulations prior to any physical change in operations that caused a net significant emissions increase.

- Woodgrain Fruitland was a PSD major source by the time the wood treatment process was in place in 1989.

- The wood treatment process triggered PSD requirements because it had a major modification, i.e., a potential to emit greater than 40 tpy for VOCs. At a minimum this requires a BACT review only for the wood treatment process.

- The current Tier II application will cause a net emissions increase greater than 40 tpy. The requested potential to emit for VOC emissions in the current Tier II permit application is 813.5 tpy. Actual emissions representing normal operations occurred during 1998 and 1999, where actual VOC emissions were 612 tpy and 700 tpy, respectively.[5] The average annual emissions were 656 tpy, so the net emissions increase is 157.5 tpy. This is greater than the significant rate of 40 tons per year for VOC emissions, so Prevention of Significant Deterioration (PSD) is triggered. Note that the current potential to emit has not increased, but the increase resulted because the actual emissions were lower with the depressed sales in some markets. As discussed in the BACT analysis (BACT #2), a BACT analysis is required for Building 4.

- Processes upstream and downstream of the wood treat process did not cause an increase in potential to emit. Products from the wood treat process are either shipped as final product or drip dried for final painting; however, operation of the wood treat process has not increased painting capacity downstream. The potential to emit based on production capacity upstream of the wood treat process does not change either. The wood treat process allowed for more window material to be processed, but this displaced other types of moulding so that overall moulding has not changed. Furthermore, cyclone emissions upstream of the wood treat process would not change if emissions are based on airflow and the wood treat process did not increase exhaust volumes of the cyclones. Therefore, no other processes at the Woodgrain Fruitland facility is subject to PSD applicability for VOCs.

In conclusion for VOC emissions, PSD review must be applied for the wood treatment facility for the past (lookback) and for Building #4 for the current Tier II permit application. No other modification occurred that requires PSD review.

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[5] See Appendix A for the explanation of the representative two years.

Review of Particulate Matter (PM) and PM-10 Emissions for PSD Applicability

The twelve cyclones are the primary source of PM and PM-10 emissions. As shown in Table 2, the cyclones were installed in 1970, 1972, 1983 and 1992. The cyclones installed in 1983 and later are of concern in this analysis, because they were installed after PSD regulations went into effect. As discussed above, Woodgrain was PSD major in 1983. Therefore, the net emission increase of PM and PM-10 must be examined for 1983 and 1992. Other than cyclone installation, no other events occurred that would have required a PSD review.

PSD applicability depends on the use of the selected emission factor. In this analysis, PSD applicability was reviewed using both a PM emission factor of 0.5 lb/BDT (pound per bone dry ton) based on process throughput (0.2 lb/BDT high efficiency), and a PM emission factor of 0.03 grain/scf (grain per standard cubic feet) based on grain loading (0.015 grain/scf high efficiency). PM-10 emission factors are 0.25 lb/BDT and 0.15 lb/BDT for medium and high efficiency respectively, based on throughput, and 0.015 gr/scf and 0.011 gr/scf based on grain loading.

We still believe process throughput emission factor is most appropriate. A discussion of the appropriateness of the emission factor is included in Appendix B. This emission factor is currently under discussion with IDEQ technical staff.

This analysis includes cyclones A, D, and H which are currently abandoned but operational at the dates of PSD applicability. Throughputs for cyclones A and D are based on actual data while throughput for abandoned cyclone H is based on a conservative theoretical maximum.

Table 2 shows the efficiency rating for the cyclones. High efficiency was calculated for cyclones B, D, H, and F, as shown in Table 2, for dimensional ratio analysis of the cyclone diameter.[6]

Process Throughput Emission Factor (0.5 lb/BDT for PM Medium Efficiency)

Table 3 shows that for PM and PM-10 potential to emit emissions, the significant rate is never exceeded, and PSD does not apply. In fact, total PM and PM-10 emissions plantwide do not exceed the PSD significant rate.

[6] Reference: Fundamental of Engineering Supplied Reference Handbook, 5th Edition, National Council of Examiners for Engineering and Surveying, p. 127.

Grain Loading Emission Factor (0.03 grain/scf for Medium Efficiency Cyclones)

Table 4 shows the PM and PM-10 potential to emit for the cyclones based on the grain loading emission factor. For cyclones installed in 1983, cyclones J would require PSD review for PM, and cyclone L for PM and PM-10. Included with the cyclones for PSD review are the following emission sources: shavings bin, shaker/bailer and fines bin.

These cyclones were installed at the time that Building #5 was constructed. Cyclones were included with the Building #5 as integral to the process for collection of sawdust material. Processes upstream did not experience an increase in potential to emit. Raw material to Building #5 came from an outside source at the time Building #5 was constructed. Production processes after Building #5 involved Buildings #3 and #4 moulding and window part production. Within Building #5, the mix of windows/moulding changed, but the actual production capacity (BDT/hr) decreased with window production capability in Buildings #3 and 4. Therefore, production capacity upstream and downstream did not increase and the potential to emit did not increase. Please note that with a grain loading emission factor, the potential to emit for cyclones in Building #3 and 4 would not increase regardless of any change in production, as exhaust flow does not change.

Potential to Emit and PM/PM-10 Emissions

The Tier II permit application reveals a potential to emit of 34.3 tpy for PM and 21 tpy PM-10 (of this, 32.9 tpy PM and 20.2 tpy PM-10 are fugitive emissions) based on a throughput emission factor. Based on 1998 and 1999 representative production data, the 2-year average actual emissions would be 42.4 tpy PM and 27.1 tpy PM-10, based on throughput emission factors. The differences in emissions are a decrease of 8.1 tpy for PM and 6 tpy for PM-10. Therefore PSD is not triggered due to the requested PM and PM-10 emission limits for the Tier II permit.

Based on a cyclone grain loading emission factor, the difference in emissions (potential to emit minus 2-year actual) is less than the significant emission rates. This is because the cyclone exhaust flow remains constant for the requested permit limits and for the past 2 year actual emissions. Therefore, without even accounting for the new baghouses, the difference in cyclone emissions is "0", and the only difference would be in fugitive emissions and Baghouse M, which emits a very small amount of PM/PM-10 (much less than 0.1 tpy maximum). The differences (potential – actual) in fugitive emissions are –7.8 tpy for PM and –4.8 tpy for PM-10. Again, PSD is not triggered.

Conclusion

PSD applicability was reviewed for VOC and PM/PM-10 emissions at our Fruitland facility. For VOCs, PSD review is required for the wood treatment process and Building #4. For PM/PM-10, PSD applies to two cyclones using the grain loading emission factor, but does not apply assuming that the standard throughput emission factor continues to be accepted by IDEQ. BACT analyses are currently underway for the wood treatment process (lookback), Building #4 (Tier II permit application), and the cyclone emission points.

Table 2

Cyclone Dates of Installation and Efficiency Estimates

EMISSION POINT ID#	Date Installed	MANUFACTURER'S SPECIFICATIONS UNITS IN FEET						Ratio H/D	High Efficiency H/D> 0.44	Ratio B/D	High Efficiency B/D>0.21	Ratio L/D	High Efficiency L/D>1.4	Ratio Z/D	High Efficiency Z/D>2.5
		BODY LENGTH (L)	CONE LENGTH (Z)	TOTAL LENGTH (L+Z)	BODY DIAMETER (D)	IN LET HEIGHT (H)	INLET WIDTH (B)								
A	1970	9	24	33	12.5	4	2	0.32	No	0.16	No	0.72	No	0.16	No
B	1970	6	20	26	8	4	1.5	0.5	Yes	0.1875	No	0.75	No	0.1875	No
C	1970	6	16	22	11	4	2	0.363636	No	0.181818	No	0.545455	No	0.181818	No
D	1970	6	20	26	10	5	1.5	0.5	Yes	0.15	No	0.6	No	0.15	No
E	1970	8	24	32	11	3.3	2	0.3	No	0.181818	No	0.727273	No	0.181818	No
F	1970	14	16	30	7	3	1.5	0.428571	No	0.214286	Yes	2	Yes	0.214286	No
G	1972	8	16	24	11	4.4	1.5	0.4	No	0.136364	No	0.727273	No	0.136364	No
H	1977	3	6	9	5.5	1.3	2.5	0.236364	No	0.454545	Yes	0.545455	No	0.454545	No
I	1972	5	9	14	8.5	3	1.3	0.352941	No	0.152941	No	0.588235	No	0.152941	No
J	1983	8	12	20	11.5	4	2	0.347826	No	0.173913	No	0.695652	No	0.173913	No
K	1983	8	15	23	11	4	1.5	0.363636	No	0.136364	No	0.727273	No	0.136364	No
L	1983	9	22	31	12	3.5	1.5	0.291667	No	0.125	No	0.75	No	0.125	No
M	1992														

Table 3
Particulate Estimates Using Process Throughput Emission Factor

PARTICULATE

	Em. Point	Bldg No.	PM Em. Factor	PM 10 Em. Factor	EFs Units	Units	Actual Hours Per Year	Throughput with no control (lb/hr)	Particulate PTE tpy (based on 8,760 hr/yr)	PM-10 PTE tpy (based on 8,760 hr/yr)
Cyclone A (med, abandoned)			0.5	0.25			7488.00	225.43	0.25	0.12
Cyclone B (high)	P 6	NA	0.2	0.15	lb/BDT	BDT	7488.00	123.40	0.05	0.04
Cyclone F (high)	P 7	NA	0.2	0.15	lb/BDT	BDT	7488.00	205.93	0.09	0.07
Cyclone C (med)	P 8	NA	0.5	0.25	lb/BDT	BDT	7488.00	82.26	0.09	0.05
Cyclone D (high, abandoned)	P 35	NA	0.2	0.15	lb/BDT	BDT		414.00	0.18	0.14
Cyclone I (low)	P 10	NA	0.5	0.25	lb/BDT	BDT	7488.00	47.28	0.05	0.03
Cyclone G (med)	P 11	NA	0.5	0.25	lb/BDT	BDT	7488.00	142.09	0.16	0.08
Cyclone E (med)	P 12	NA	0.5	0.25	lb/BDT	BDT	7488.00	315.97	0.35	0.17
Cyclone H (high, abandoned)	P 14	NA	0.2	0.15	lb/BDT	BDT		414.00	0.18	0.14
Cyclone J (med)	P 17	NA	0.5	0.25	lb/BDT	BDT	7488.00	201.66	0.22	0.11
Cyclone K (med)	P 18	NA	0.5	0.25	lb/BDT	BDT	7488.00	201.66	0.22	0.11
Cyclone L (med)	P 19	NA	0.5	0.25	lb/BDT	BDT	7488.00	287.39	0.31	0.16
Baghouse M	P 20	NA	0.001	0.001	lb/BDT	BDT	7488.00	1244.93	0.00	0.00
Total									2.15	1.22

Table 4
Emissions Based on Grain Loading

EMISSION POINT ID#	Date Installed	ACFM	SCFM	PM Emission Factor Gr/scf	PM Emission Rate tpy	PM-10 Emission Factor gr/scf	PM-10 Emission Rate tpy
A	1970	31,360	29,054	0.03	32.7	0.015	16.4
B	1970	20,183	18,699	0.015	10.5	0.011	7.7
C	1970	17,211	15,946	0.03	18.0	0.015	9.0
D	1970	12,167	11,272	0.015	6.3	0.011	4.7
E	1970	19,792	18,337	0.03	20.7	0.015	10.3
F	1970	30,895	28,623	0.015	16.1	0.011	11.8
G	1972	30,395	28,160	0.03	31.7	0.015	15.9
H	1977	11,133	10,314	0.015	5.8	0.011	4.3
I	1972	19,792	18,337	0.03	20.7	0.015	10.3
J	1983	27,567	25,540	0.03	28.8	0.015	14.4
K	1983	23,326	21,611	0.03	24.3	0.015	12.2
L	1983	31,503	29,187	0.03	32.9	0.015	16.4
M	1992			M	0.1	M	0.1
				TOTAL	249.6	TOTAL	134.4

Appendix A

Explanation of Two Year Representative Production

Woodgrain Prefinish has experienced a significant downturn in sales to the manufacturing housing industry (MHI) in the years 2000 and 2001. In 1998 and 1999, MHI sales consisted of 350,000 units (or homes) per year. This level of sales was consistent for several years prior to 1998, too. After 1999, the number of units produced by Woodgrain dropped off sharply due to the overall downturn in the MHI. In 2000 and 2001, the number of units sold was approximately 175,000 units/year, nearly a 50% decrease from the annual sales experienced in most of the 1990's. Therefore it is reasonable for purposes of determining a net significant increase to use the years 1998 and 1999 as the 2 years most representative of production. Woodgrain forecasts that production will improve in future years which hence explains the requested permit production levels in the Tier II permit application. Upon request, Woodgrain can supply more information on sales and production figures for past years.

Appendix B

Appropriate Cyclone Emission Factor for the Wood Products Industry

AP-42 Emission Factors

The origin of the grain loading emission factor of 0.03 grain/scf is from EPA's AP-42, Table 10.4.1 Particulate Emission Factors for Large Diameter Cyclones in Woodworking Waste Collection Systems: The table is included in the 4th Edition of AP-42, and is dated February, 1980. This table and emission factors are not included in the 5th or current edition of AP-42. Based on discussions with environmental professionals, we are not aware of the use of outdated AP-42 emission factors for estimating emissions for permitting and compliance purposes.

Furthermore we noted that Table 10.4.1 of the 4th Edition of AP-42 references a range of 0.001-0.16 grain/scf for flow rates of 2,000 to 26,000 scfm. The rating is D, which is defined as follows in the current AP-42:

D = Tests are based on a generally unacceptable method, but the method may provide an order-of-magnitude value for the source.

It is further explained in AP-42 that a D rating is below average, and is developed from A-, B- and/or C-rated test data from a small number of facilities, and there may be reason to suspect that these facilities do not represent a random sample of the industry. There also may be evidence of variability within the source population.

For estimating emissions for PSD applicability, with potentially costly ramifications to industry, a 'D' rating is unacceptable. Also, as stated above, there is a wide range of grain loading measurements used to arrive at the 0.03 grain/scf emission factor. In fact, we believe it is very likely that given high flow rates and low cyclone loadings for Woodgrain Millwork, the grain loading could be at the lower end of the range given in AP-42 Table 10.4.1. We attempted to obtain the AP-42 reference source test supplied by Robert Harris (Oregon DEQ, Portland, OR, September 1975) to examine the correlation between grain loading and exhaust flow, but Oregon DEQ could not successfully help us obtain the 27 year-old document.

Discussions with a cyclone manufacturer indicated that the grain loading factor of 0.03 grain/scf could be high. For sanderdust operations, which typically emit more than Idaho's millwork operations, a grain loading of less than 0.03 grain/scf was demonstrated.

Current Oregon DEQ Emission Factor

Our discussions with Oregon DEQ revealed that only 0.5 lb/BDT is used as an emission factor. This emission factor is for 'Cyclone- Dry and Green Chips, Shavings, Hogged Fuel/Bark, Green Sawdust' and is included in the most recent emission factor list, as revised 4/25/00, for calculating emissions for Air Contaminant Discharge Permit Applications. This emission factor

makes much more sense from a process standpoint too. Whereas the grain loading emission factor only considers exhaust discharge without accounting for material entering the cyclone, the 0.5 lb/BDT emission factor takes into account the amount of material processed. This makes sense as emissions should be related to material throughput, and not solely exhaust volume.

Finally, Woodgrain's Lakeview and White City Oregon plants have air quality permits issued where emission estimates were based on the 0.5 lb/BDT emission factor. These processes are nearly identical to Woodgrain's Fruitland facility. The Oregon facilities' rip, cut and mould wood just like Fruitland's. The plants use the same wood supplier.

Attachment D

BACT Analyses

(in entirety)

(to be added in new Tab 13)

ATTACHMENT D BACT updated 1/2003

(BACT #1)

Lookback BACT Analysis for
Woodgrain Fruitland Woodtreat and Cyclone Emissions

I. Introduction

Woodgrain Millwork, Inc. (Woodgrain) performed a Prevention of Significant Deterioration (PSD) analysis and determined that PSD was applicable for VOCs for the Woodtreat process and for PM/PM_{10} for two cyclones. Because PSD was applicable, Woodgrain is performing a Best Available Control Technology (BACT) analysis for control of VOCs and PM/PM_{10}. A summary of the PSD applicability analysis, completed and submitted to IDEQ on September 24, 2002, is shown in Table 1 as follows:

Table 1 – PSD Applicability Summary

Emission Unit	**Date PSD Applicable**	**Emission Source**	**Emissions**
Woodtreat Facility	1989	Building #4	VOCs
Cyclone J	1983	Cyclone J, shavings bin, and shaker/bailer	PM
Cyclone L	1983	Cyclone L and fines bin	PM and PM_{10}

PSD was triggered for these sources due to significant net emission increases at the time they were installed or started operation. The potential to emit is shown for these sources in the table below based on 8,760 hours of operation per 12-month period.

Table 2 – Potential to Emit for Applicable PSD Sources

Source	Total Potential Emissions, ton/yr		
	VOC	PM	PM_{10}
Wood Treat Facility	236 tpy	NA	NA
Cyclone J	NA	28.8 tpy	
Cyclone L	NA	32.9 tpy	16.4 tpy

This BACT analysis will follow EPA's Top-Down approach consisting of the following steps for VOC, PM_{10}, and PM:[7]

- Discussion of technically feasible options.
- Ranking by control effectiveness.
- Evaluation of most effective controls and documentation of results, with consideration of cost, energy and environmental analyses.
- Selection of BACT.

II. VOC

A. Technically Feasible Options

Woodgrain's VOC emissions result in low concentrations in high total volume exhaust flow discharges, so it is appropriate in this document to evaluate available control technologies suitable for application to low organic concentration gas streams. Add-on control will be evaluated, and the feasibility of VOC reduction in raw material will be discussed too.

Add-on control is commonly applied to controlling organic vapor emissions from stationary sources. If add-on control is necessary, several different air pollution control technologies can be applied once exhaust streams are covered, enclosed, or vented and routed to recover or destroy the pollutants. In general, application of a particular technology depends more on the emission exhaust stream under consideration than on the particular source type. Selection of applicable control techniques is typically made on the basis of stream-specific characteristics and the desired control efficiency. A key stream characteristic that affects the applicability of a particular control technology is the concentration of organics in the gas stream.

Utilizing raw materials with lower VOC content is a preferred method for controlling VOCs for many reasons. It is preferred to add-on control because it can be much less expensive, and does not involve operation and maintenance of emission control that has the risk of breaking down at any time. However it is an option being pursued for the Prefinish Basecoat and not for the Woodtreat operation. See the discussion below on material substitution.

The discussion will start with the technology with the highest degree of control. Three categories of VOC control options were identified for this study: catalytic control with collection, regenerative thermal oxidizer (RTO) system with collection, and adsorption with carbon filters and a collection system. The EPA RBLC[8] and California Air Resource Board (CARB) BACT clearinghouse databases, EPA publications, and discussions with emission control vendors were sources of information for identifying these control technologies.

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[7] "New Source Review Workshop Manual, Prevention of Significant Deterioration and Nonattainment Area Permitting," EPA, DRAFT October 1990.

[8] RBLC is the RACT/BACT/LAER Clearinghouse or the Reasonably Available Control Technology (RACT), Best Available Control Technology (BACT), and Lowest Achievable Emission Rate (LAER) Clearinghouse.

RACT/BACT/LAER Clearinghouse

A search was performed on BACT determinations from the EPA RBLC and the CARB clearinghouse. The search was made based on selected industries and processes that are somewhat similar to that of this site. Table 3 below displays the results from a search of selected VOC control from these databases. Most processes selected were those involving paint spraying, coating or gluing of wood products. It should be noted that no processes entered in the databases included window manufacturing, which is the process taking place here in the Woodtreat process. The processes in Table 3 are believed to be the most representative for purposes of reviewing the RBLC and CARB databases for assistance with determining BACT.

Table 3 – EPA RBLC and CARB BACT Clearinghouse for VOC Control for Selected Processes

Company Name	Process Description	BACT for VOC
Arrow Cast Mold Coating	Mold release agent and mold coating application	No control with compounds containing no more than 60% VOC by weight.
Arbek Manufacturing Inc.	Spray booth	Super low coatings with reduction equivalent to an air pollution control system.
Steelcase Wood Furniture	Surface coating, tiecoat & sealers	No coating to exceed 5.9 lb/gal as applied. High transfer application of AAA-HVLP (high volume, low pressure) on high volume and low volume flat lines. Application by automatic electrostatic and manual HVLP on hangline. RTO destruction = 95%.
	Surface coating roll line	Coating for flat pieces, cures to 100% solids – near zero VOC.
	Surface coating stains, water based	HVLP applications on "high volume" line and "low volume" line.
	Surface coating stains, solvent based	Company is committed to phasing out solvent based stains. High transfer efficiency HVLP applicators.
	Surface coating, washcoats	Applied by high transfer AAA-HVLP, air assisted airless HVLP. Capture 80-85%. 95% or greater destruction in RTO regenerative thermal oxidizer.
	Surface coating, wipe stain	Water-based automatic reciprocator spray HVLP on high volume line. Manual spray or automatic reciprocator HVLP on low volume line.
Crystal Cabinet Works, Inc.	Surface coating, spray finishing, sealer	1) High transfer efficiency spray 2) Solvent replacement/coatings reformulation.
Stanley Furniture	Manufacturing furniture, paint spray booth	HVLP and air assisted airless spray guns. Water curtains.
Bemis Manufacturing	Flow coating line process [9]	Material usage and VOC content.

[9]Molded and sanded toilet seats and covers are hung on an automated coating line which first passes into the sealer tunnel. A continuous flow of sealer is pumped over the parts and residual sealer drained back into the sealer

Company Name	Process Description	BACT for VOC
Company		VOC input to coating line < 0.011 lb/piece, based on a daily average.
Batesville Casket Company	Wood finishing, line No. 2	The use of low VOC/HAP coatings, solvents and glues. In addition, No. 2 lines' HAPs are limited to 9.9 tpy (one HAP) and 24.9 tpy (combined). Alternative emissions are 4.1 lb/gal VOC by weight less water.
Bruce Hardwood Flooring L.P.	Surface coating, wood products	The use of roll coat applicators for application of sealers and stains, and the use of UV curable sealers and topcoats.
Omega Cabinets	Spray line wood furniture	High transfer efficiency.
Enviroplex	Metal frames, exterior coating of wooden panels	Primers, VOC content 1.8 lb/gal, metal frames coating and pigmented topcoats, VOC content 1.1 lb/gal.
Guy Chaddock & Company	Coating equipment application	HVLP spray equipment.
Sandberg Furniture Mfg. CO. Inc.	Coating and drying system	A super clean material containing no more than 5% by weight VOC is used as sealers and topcoats. Emission limit is facility total.
	Coating wood furniture	Roller coaters and UV cure section installed ahead of spray booth.
American Door Manufacturing	Wood products coating operation	HVLP or equivalent application equipment and coatings with VCO content 0.68 lb/gal for water based pigmented primers and 1.62 lb/gal for topcoats.
Creations In Wood, Inc.	Wooden cabinet and furniture coating booth	Coatings with VOC content of 4.6 lb/gal for clear topcoats, 3.2 lb/gal for high solid coatings, 4.6 lb/gal for sanding sealers. HVLP spray equipment.
Vaughn Furniture Company	15 spray booths	Minimized by airless spray nozzles.
	Gluing equipment	Use of low VOC or water base adhesives.
Wellborn Cabinet, Inc.	Wood cabinet manufacturing	VOC coating limits (1 mo average) in lb VOC/gal coating: Stains & toners: 7.2 max, 6.8 average; sealers 7.2 max, 5.7 average.; top coats 7.2 max, 5.0 avg.
Custom Woodcraft	Wood coating operation in two downdraft booths	Low VOC waterborne wood coatings, clear topcoats limited to 275 g/l less water and exempt compounds. Stains, sealers, pigmented coatings limited to

reservoir. Coated parts pass through the direct fired gas sealer oven to increase cure rate and then to a cool room where they are brought back down to room temperature. The cooled parts are then conveyed to the intermediate and top coat lines.

Company Name	Process Description	BACT for VOC
		240 g/l.
Thornwood Furniture Mfg. Inc.	Coating wood furniture	High transfer efficiency low VOC coatings.
Dutailier Virginia, Inc.	Coating, production booth	HVLP spray guns.
Reubens Furniture Inc.	Coating, surface	Paint booth, low VOC coating
Eureka Manufacturing Co Inc.	Spray operation, paint, wood and metal coating	Low VOC coatings.
Schrock Handcrafted Cabinetry	Coating (wood cabinets)	Selection of coating.
Carpenter Company (CARB database)	Adhesive application	Uncontrolled. Low VOC adhesives.

From the table above, most of the selected BACT options were low VOC content in raw material and high volume, low pressure (HVLP) spraying. RTOs were used in only two applications. Catalytic control and/or carbon filtration are not listed for any processes.

It should be noted that HVLP spray guns are not applicable to Woodgrain's Woodtreat process at this time, though at some time in the future it may be possible for Woodgrain to implement it. Woodtreat involves a deluge system where the wood parts move through a large contained structure; the wood is flooded with treat concentrate mixed with mineral spirits (Exxol D40 Fluid), much like a car wash. After the wood is deluged with the treat, the treat drips off of the wood into a collecting area where it is re-circulated back into a holding tank and applied to the next wood that needs to be treated—an ongoing process. The remainder of this document will investigate low material VOC concentrations and RTOs, control strategies selected as BACT for VOC control in the RBLC or CARB databases. In addition other add-on control options will be discussed: catalytic control and adsorption using carbon filtration.

Catalytic Control

With catalytic control, the VOC containing exhaust air at low concentrations is heated by supplemental fuel, usually in an open flame burner, to the reaction temperature. The gas then passes over the catalyst, where VOCs are oxidized. The operating temperature to achieve a particular destruction efficiency depends on the concentration and composition of the VOC in the emission stream and the type of catalyst used. Commercial catalysts usually consist of noble metals such as platinum and palladium, or metal oxides. Catalysts can be expensive and have limited lifetimes.

A collection system for the VOCs will be required in order to collect VOCs for the catalytic system and all other control systems—see discussion below for RTOs on the collection system.

Regenerative Thermal Oxidation (RTO)

In regenerative thermal incineration, the contaminated air enters the system through a heated (ceramic) packed bed which preheats the gas to near its final oxidation temperature. They are flexible in adapting to process changes and operate at very high temperatures – up to 2000°F, if necessary. The preheated air then enters a combustion chamber where it is further heated to oxidize the VOCs. The hot clean flue gas exiting this chamber passes through a second ceramic packed bed cooled in an earlier cycle. This bed absorbs most of the heat, thus cooling the exhaust air before it is discharged to the atmosphere. A third ceramic packed bed may simultaneously be purged of any exhaust still contaminated with inlet VOC emissions. This heat exchange cycle is repeated, alternating between the three ceramic beds for heating, cooling, and purging operation.

Based on experience with our Georgia facility, VOCs must be captured in order to be controlled. After the material in the Woodtreat is deluged, removed, and drip-dried, the treated wood must stay stored for enough time for the majority of VOCs to evaporate. This requires a covered area, and could require an expansion of building space for the Woodtreat process. It is estimated an additional 30,000 square feet of building is needed for this collection of VOCs; note that we are restricted at the Fruitland facility due to the railroad tracks at the facility. Additional heating would be required to drive off the VOCs. It is not known exactly how much of the VOCs will be driven off, but it is estimated that at most 80% of VOCs can be captured.

Obviously, this adds considerable cost to RTO control and the other control options. A collection system also increases the work in process inventory by at least two days, another capital expense that Woodgrain will incur.

Adsorption

Carbon filters act as solvent recovery systems to employ carbon media that adsorb VOCs from the emission stream. Carbon filtration can achieve 80 – 95 percent removal efficiency; in this analysis a conservative control efficiency of 80% will be used. These systems need a relatively clean process exhaust stream and are most effective within the low ambient temperature range of about 70°F to 100°F (21°C to 38°C). Too much moisture in the gas stream can diminish performance. Straight activated carbon does not have much capacity for some reactive gases. In some cases where the gas is chemically reactive, appropriate impregnated activated carbon are recommended.

Filters must be changed periodically or "breakthrough" will occur. Disposal of spent carbon must be done in an environmentally acceptable manner. Operating costs of carbon filtration include changeout and replacement of carbon media, but labor costs due to constant monitoring are a concern too. Additional fans must be installed proper exhaust flow. As discussed above, a collection system must be added for capturing the VOCs prior to the adsorption system.

Material Substitution

Woodgrain continues to evaluate the VOC content with suppliers. For example, Woodgrain is already examining replacement of solvent-based coatings in the Prefinish Basecoat operation to waterborne coatings. The majority of this control will take place for materials used in Building #2 for prefinish operations, where the potential to emit for VOCs is estimated to be reduced by 183 tpy. Although this substitution is at a different building than the Woodtreat process, Woodgrain is committed to VOC reduction facility wide.

At the moment reduction of VOC in the material at the Woodtreat process is not practical. Two major problems are experienced when water based materials (instead of the current mineral spirits based) are used: the grain on the wood is raised, and the wood is not protected sufficiently and rot is experienced. With improvements in waterborne products, it may be an option for consideration in the longer-term future. Woodgrain can learn from the paint processes at other locations at the Fruitland facility on which co-solvents to use in Woodtreat, but at the moment substitution in Woodtreat is unacceptable. It should be noted again that although material substitution will not be implemented for the Woodtreat process, Woodgrain will concentrate on VOC substitution in Building #2. Also, process changes, such as a spray booth with HVLPs, may be possible in the future and Woodgrain will continue to evaluate this type of process.

B. Ranking of Control Technologies by Control Effectiveness and Discussion of Other Factors

1. Catalytic Control

a. Control Effectiveness

Control for the catalyst system ranges from 95 – 99% reduction of VOCs based on discussions with vendors and a research of literature. A control effectiveness of 97% will be used in this study for the catalysts. This will control an estimated 80% of VOCs that can be captured, so total overall control is 78%.

b. Expected Emission Rate

A 78% reduction would reduce the VOC potential to emit to 51.9 tons/year.

c. Expected Emission Reduction

Based on the potential to emit calculations without control, the reduction would be 184.1 tons/year of VOC using a 78% control efficiency.

d. Energy Impact

Energy is required to achieve the temperature necessary for catalyst operation. Total annual energy needed is approximately 1.15 MMBTU/hr x 8,760 hours = 10,074 MMBTU/year. Natural gas consumption would be approximately 9.88 million cubic feet per year.

Energy is also required for heating the building necessary for driving off VOCs in the collection area. This is estimated at 2 MMBTU/hr for 8,760 hours per year, or approximately 17.2 million cubic feet per year.

e. Environmental Impact

Combustion criteria and toxic emissions will increase due to the natural gas supply needed to operate the catalyst system. There is additional management and an additional disposal costs for safe disposal of spent catalysts. Catalyst changeout is expected approximately every three years.

f. Economic Impact

A catalyst system involves significant capital and operating costs. The estimated costs are discussed below.

Capital Costs

Capital costs involve the catalyst system with a collection unit in Building #4. The catalyst system itself is approximately $400,000. The collection system building expansion is estimated at $750,000 (30,000 sq. ft. @ $25/sq. ft.). . Ductwork is estimated to add another $150,000. Work in process inventory is estimated at $100,000. Total capital costs are approximately $1,400,000.

Annualized Capital Cost

Based on an EPA document,[10] the economic life of a catalyst system is approximately 10 years. Using a current real rate of return of 3.65%, and an economic life of 10 years, the capital recovery factor is currently 0.12. The average annualized capital cost is $168,000/year.

Operating Costs

- Labor costs for operation of the system are estimated are estimated at approximately $10,500, based on 300 hours/year at $35/hour.
- Energy: At 9.88 MMCF/year for natural gas consumption for the catalyst itself, and 17.2 MMCF/year for the collection drying area, the annual cost is $111,028/year using a natural gas price of $4.10 /mcf.
- Maintenance: Annual maintenance is estimated at $13,000/year.
- Indirect costs: At approximately 60% of labor and maintenance, indirect costs are estimated at $14,100.
- Administrative, property taxes and insurance (4% of capital costs): $56,000.
- Annualized catalyst changeout (catalyst is changed every three years): $10,000.

Total annualized costs (operating and capital): $382,628.00 / year

2. Regenerative Thermal Oxidation

a. Control Effectiveness

RTO control is estimated at 95% reduction of VOCs based on discussions with vendors and a research of literature. This will control an estimated 80% of VOCs captured, so overall control is estimated at 76%.

[10] EPA-456/R-95-003, Survey of Control Technologies for Low Concentration Organic, Vapor Gas Streams, Control Technology Center, May, 1995.

b. Expected Emission Rate

A 76% reduction would reduce the VOC potential to emit to 56.6 tons/year.

c. Expected Emission Reduction

Based on the potential to emit calculations without control, the reduction would be 179.4 tons/year of VOC using a 76% control efficiency.

d. Energy Impact

Energy is required to achieve the temperature necessary for RTO operation. Total annual electrical power need is approximately 1 MMBTU/hr x 8,760 hours = 8,760 MMBTU/year. Natural gas consumption would be approximately 8.59 million cubic feet per year.

Energy is also required for heating the building necessary for driving off VOCs in the collection area. This is estimated at 2 MMBTU/hr for 8,760 hours per year, or approximately 17.2 million cubic feet per year.

e. Environmental Impact

Combustion criteria and toxic emissions will increase due to the natural gas power supply needed to operate the RTO system.

f. Economic Impact

An RTO system involves significant capital and operating costs. The estimated costs are discussed below.

Capital Costs

Capital costs involve the RTO system with a collection unit. The RTO itself is approximately $350,000. The collection system building expansion is estimated at $750,000 (35,000 sq. ft. @ $25/sq. ft.). Ductwork is estimated to add another $150,000. Work in process inventory is estimated at $100,000. Total capital costs are approximately $1,250,000.

Annualized Capital Cost

Based on an EPA document,[11] the economic life of an RTO system is approximately 10 years. Using a current real rate of return of 3.65%, and an economic life of 10 years, the capital recovery factor is currently 0.12. The average annualized capital cost is $150,000/year.

Operating Costs

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[11] EPA-456/R-95-003, Survey of Control Technologies for Low Concentration Organic, Vapor Gas Streams, Control Technology Center, May, 1995.

- Labor costs for operation of the system are estimated at approximately $10,500, based on 300 hours/year at $35/hour.

- Energy: At 8.59 MMCF/year + 17.2 MMCF/year for natural gas consumption, and using a natural gas price of $4.10 /mcf, the annual cost is $105,739/year.

- Maintenance: Annual maintenance is estimated at $13,000/year.

- Indirect costs: At approximately 60% of labor and maintenance, indirect costs are estimated at $14,100.

- Administrative, property taxes and insurance (4% of capital costs): $50,000.

- Total annualized costs (operating and capital): $343,339.00 / year

3. Carbon Adsorption

a. Control Effectiveness

Adsorption control is estimated conservatively at 80% - 95% reduction of VOCs based on discussions with vendors and a research of literature. In this analysis a conservative value of 80% will be used. This will control an estimated 80% of VOCs captured, so overall control is estimated at 64%.

b. Expected Emission Rate

A 64% reduction would reduce the VOC potential to emit to 85.0 tons/year.

c. Expected Emission Reduction

Based on the potential to emit calculations without control, the reduction would be 151.0 tons/year of VOC using a 64% control efficiency.

d. Energy Impact

It is estimated that the electrical requirement for powering the fan is 25 HP. Energy is also required for heating the building necessary for driving off VOCs in the collection area. This is estimated at 2 MMBTU/hr for 8,760 hours per year, or approximately 17.2 million cubic feet per year.

e. Environmental Impact

There is additional management and an additional disposal cost for safe disposal of spent carbon. Carbon changeout is expected several times a year.

f. Economic Impact

Carbon regeneration is the most significant cost. The estimated costs are discussed below.

Capital Costs

Capital costs involve the adsorption system with a collection unit. The filtration system itself is approximately $130,000. The collection system building expansion is estimated at $750,000 (30,000 sq. ft. @ $25/sq. ft.). Ductwork is estimated to add another $150,000. Work in process inventory is estimated at $100,000. Total capital costs are approximately $1,130,000.

Annualized Capital Cost

Based on an EPA document,[12] the economic life of an adsorption system is approximately 10 years. Using a current real rate of return of 3.65%, and an economic life of 10 years, the capital recovery factor is currently 0.12. The average annualized capital cost is $135,600/year.

Operating Costs

- Labor costs for operation of the system are estimated at approximately $10,500, based on 300 hours/year at $35/hour.
- Energy: For the fan, at 25 HP x 8,760 hours = 219,000 HP-hr/year, or 163,404 kW-hr. ($0.07/kW-hr)(163,404 kW-hr) = $11,400/yr. The collection area heating is estimated at approximately 17.2 million cubic feet per year, or $70,520/year at $4.1/mcf. Total energy costs are estimated at $81,920.
- Maintenance: Annual maintenance is estimated at $13,000/year.
- Indirect costs: At approximately 60% of labor and maintenance, indirect costs are estimated at $14,100.
- Administrative, property taxes and insurance (4% of capital costs): $45,200.
- Carbon replacement: $300,000/year.
- Spent carbon disposal: $30,000/year.
- Total annualized costs (operating and capital): $630,320.00 / year

C. Cost Effectiveness

[12] EPA-456/R-95-003, Survey of Control Technologies for Low Concentration Organic, Vapor Gas Streams, Control Technology Center, May, 1995.

Cost effectiveness is shown in Table 4 below. The annualized cost includes all operating expenses and the annualized capital cost. The baseline assumes that Woodgrain uses material at the same or lower VOC content, as is currently used.

Table 4 – VOC Cost Effectiveness Analysis

Control Alternative	Emissions, ton/year	Emissions Reduction, tons/year	Average Annualized Cost Increase Over Baseline	Average Cost Effectiveness, $/ton	Incremental Cost Effectiveness, $/ton
Catalyst	51.9 tpy	184.1 tpy	$382,628.00	$2,078.00	$8,359.00
RTO	56.6 tpy	179.4 tpy	$343,339.00	$1,914.00	($10,105.00)
Adsorption	85.0 tpy	151.0 tpy	$630,320.00	$4,174.00	$4,174.00
Baseline	236.0 tpy	0 tpy	$0	$0	$0

D. Evaluation of Most Effective Controls (with Documentation) for VOC

This step presents a comparison of the environmental, energy, and economic impacts associated with the three control technology options considered in this analysis. Each area of consideration is case-specific to Building #4 at Woodgrain's Fruitland facility.

1. Environmental Impacts

The environmental impacts of the three technologies considered in this analysis; i.e., catalysts, RTO, and adsorption are compared in the table below on a media basis.

In summary, the potential environmental impacts associated with the three control options are primarily due to energy needs from burning natural gas for RTO and catalyst systems. The main environmental impact associated with adsorption is management of spent carbon disposal. Disposal of spent catalyst is a potential solid waste impact.

Table 5 – Environmental Impacts

	CATALYST SYSTEM	RTO	ADSORPTION
AIR QUALITY	Combustion and toxic emissions will increase due to natural gas power supply needed to operate catalyst system.	Combustion and toxic emissions will increase due to natural gas power supply needed to operate RTO.	No additional air quality impact is anticipated.
WATER QUALITY	None.	None.	None.
SOLID WASTE	There is additional management and an additional disposal cost for safe disposal of spent catalysts. Catalyst change out expected approximately every three years.	No adverse environmental impact anticipated.	There is additional management and an additional disposal cost for safe disposal of spent carbon. Carbon changeout expected several times a year.
ENVIRON-MENTAL RISK MANAGEMENT	No foreseeable additional risk involved with the installation and operation of this technology.	No foreseeable additional risk involved with the installation and operation of this technology.	No foreseeable additional risk involved with the installation and operation of this technology.

2. Energy Impacts

An annual electrical and fuel energy consumption analysis (including energy costs) is presented in the following table.

Table 6 – Energy Considerations

	CATALYST SYSTEM	RTO	ADSORPTION
POWER DEMAND	1.15 MMBTU/hr (catalyst operation) 2 MMBTU/hr (collection area)	1 MMBTU/hr (RTO operation) 2 MMBTU/hr (collection area)	Electrical power need for fan: approx. 25 HP. 2 MMBTU/hr (collection area)
ANNUAL HOURS OF OPERATION	8,760	8,760	8,760
TOTAL ANNUAL POWER DEMAND	Natural gas combustion: 3.15 MMBTU/hr x 8,760 hours/year x $4.1/mcf / 1,000 cf/mcf / 1,020 BTU/scf = $111,000/yr.	Natural gas combustion: 3 MMBTU/hr x 8,760 hours/year x $4.1/mcf / 1,000 cf/mcf / 1,020 BTU/scf = $106,000/yr.	Fan: 25 HP x 8,760 hours = 219,000 HP-hr/year, or 163,404 kW-hr. ($0.07/kW-hr)(163,404 kW-hr) = $11,400/yr. Collection building: 2 MMBTU/hr -→ $70,424/yr

The annual energy consumption analysis shows that the catalyst or RTO systems will consume a considerable amount of energy. It should be noted that energy costs used in this analysis were on the low end of the range of natural gas costs experienced in the last few years. It is possible that the energy costs could increase significantly if natural gas prices spike, as was experienced in late 2000.

3. Economic Impacts

Refer to the discussion on costs above for each control option. Comparison of the three control options shows that all capital costs are very high and average/incremental cost effectiveness values are very high too. None of theses options are economically acceptable. Woodgrain believes funds are better spent at other locations in the facility for VOC reduction, or that funds be applied to research and development for waterborne material that would be acceptable at a future date. Also, process changes, such as a spray booth with HPLVs, may be more practical in the future.

E. Conclusion for VOC Control

This analysis reviewed the following technically feasible control options in order of control efficiency: a catalyst system, an RTO, and adsorption with carbon filtration.

The catalyst and RTO systems have high control efficiencies of 95% or better, and adsorption through carbon filtration has 80% - 95% control, but at best only 80% of VOCs are captured, so overall control efficiency is greatly reduced. We believe none of the control options should be considered BACT for the Woodgrain Woodtreat process. All capital costs and annualized costs are unacceptably high. Furthermore, there is no known substitution at the moment that would allow Woodgrain to reduce VOC content in the Woodtreat process to produce a final product that would meet industry standards. However, Woodgrain will continue to evaluate the material used in Woodtreat for VOC reduction.

According to the New Source Review Workshop Manual on page B.9, "in the event that the top candidate is shown to be inappropriate due to energy, environmental, or economic impact, the rationale for this finding should be documented for the public record. Then the next most stringent alternative in the listing becomes the new control candidate……." This is important in this case because given considerations of capital and operating costs, environmental impacts and energy impacts, then it makes more sense to not implement control for the Woodtreat operation at this time.

We believe no further control should be BACT for the following reasons:

- All three control options have significant additional energy requirements.
- There are environmental impacts associated with the three control options.
- The incremental cost effectiveness values are unreasonable for control options.
- Woodgrain's Georgia's plant attempted RTO control and was unsuccessful in operating the system for VOC reduction. This is because the VOCs evaporated in numerous areas other than paint booths and ovens, where collection of the majority of VOCs was not feasible. We estimate only 20% of VOCs were collected, and for a higher percentage of collection, evaporation would take at unacceptable labor and inventory costs.

- VOC reduction in raw material is a preferred option than add on control, but at the moment substitution cannot be implemented for production of a final product to meet industry specifications.

- The RBLC lists only two sources that use add-on control; each of these two sources have installed RTOs. But all other of the many RBLC BACT selections are VOC reduction in material, changes in spray techniques, or no change at all.

- In the foreseeable future, facility wide production (but not at window manufacturing at the moment) at the plant will be much less than that experienced throughout most of the 1990's when the Woodtreat began operation. The reduction in production will lower the VOC emissions facility wide.

Woodgrain believes that it is taking appropriate steps facility wide for VOC reduction and it would be too burdensome to reduce VOCs at the Woodtreat process at the moment. Consequently, it is reasonable to select no change at the Woodtreat process at this time for BACT.

III PM/PM_{10}

A. Technically Feasible Options

Control of PM and PM_{10} emissions will be from Cyclones J and L. The shavings bin, shaker/bailer, and fines bin do not emit nearly the quantity of PM/PM_{10} as do the cyclones. Furthermore, the cyclone emissions are much easier to control than those for the bins and shaker/bailer.

The EPA RBLC and California Air Resource Board (CARB) BACT clearinghouse databases were reviewed. Note that scrubbers were not found for similar woodworking operations, and we are unaware of any scrubber application for this or a similar process. Scrubbers do not control PM/PM_{10} to the degree of baghouses and ESPs, so scrubbers will not be considered further in this analysis.

RACT/BACT/LAER Clearinghouse

A search was performed on BACT determinations from the EPA RBLC and the CARB clearinghouse. Wood products industry section 30.000 in the EPA RBLC was searched. In the CARB database, the miscellaneous category was searched.

Table 7 – EPA RBLC for PM/PM-10 Control for Selected Processes

Company Name	Process Description	BACT for PM/PM_{10}
Wellborn Cabinet, Inc.	Wood cabinet manufacturing	ESP or baghouse to become synthetic minor. ESP or baghouse on wood waste boilers and handling system.
Champion International Corporation	Planer mill	Local exhaust ventilation system for planner mill ducted to cyclone and baghouse.
Weyerhaeuser Company	Planer mill	Pneumatic dust transport system equipped with a cyclone for dust

Company Name	Process Description	BACT for PM/PM_{10}
		control – the cyclone is not for control but for conveyance.
Elegant Entry Door Manufacturing	Wood processing equipment	Baghouse
Thornwood Furniture Mfg. Inc.	Woodworking	Baghouses, high efficiency cyclones
Weyerhaeuser Company	Trim saw	Pneumatic dust transport system (enclosed) and good housekeeping, the dust collection system has a cyclone for conveyance only.
Gulf States Paper Corp.	Mill, planer	Cyclone and baghouse
Stora-Enso North America – WI Rapids Pulp Mill	Bark/wood waste processing and handling system	Roofed, 3-sided bark storage enclosure, total enclosure of the new bark/woodwaste hogging/screening operation, covering of all conveyors located outside of building enclosures and belt cleaners. No emission rate limits.
Louisiana Pacific Corp.	Saws	Bag filters
Louisiana Pacific Corp.	Dryer, wafer	Wet ESP
Elegant Entry Door Manufacturing (CARB)	Wood processing	Quinones Manufacturing and Erectors Dura-Q 15 baghouse
Bohemia, Inc. (CARB)	Planner mill	Cyclone and baghouse

From the table above, baghouses are BACT in eight processes. ESP is BACT in two processes, although one of these two processes has either baghouse or ESP as BACT. The information in this table strongly supports baghouses as BACT for processes involving woodworking.

Discussion of Control Options

Aftertreatment control is discussed for control options as cyclones already exist onsite and Woodgrain has determined for the PSD applicable cyclones J and L, aftertreatment control is feasible. The remainder of this section will discuss ESPs and baghouses as aftertreatment control under consideration for BACT.

Baghouse

Typical new equipment design efficiencies have been documented to be between 99 and 99.9%. This is based on an average collection efficiency for fabric filters, because as particles are captured, the efficiency increases until the next cleaning cycle.

Typical inlet concentrations to baghouses are typically 0.5 to 10 grains per cubic foot (gr/ft^3), but they have been applied to inlet conditions varying from 0.05 to more than 100 gr/ft^3. In this case at Woodgrain Fruitland, the exhaust loading is no higher than 0.03 gr/ft^3, but vendors have assured us that baghouses will operate for effective control with this low of a grain loading.

In the pulse jet type of baghouse, the bags are supported on metal wire cages that are suspended from the top of the unit. Particulate-laden air flows around the outside of the bags, and a dust cake accumulates on the exterior surfaces. When cleaning is needed, a very-short-duration pulse of compressed air is injected

at the top inside part of each bag in the row of bags being cleaned. The compressed air pulse generates a pressure wave that moves down each bag and, in the process, dislodges some of the dust cake from the bag.

Pulse-jet cleaning of fabric filters is relatively new compared to other types of fabric filters, since they have only been used for the past 30 years. This cleaning mechanism has consistently grown in popularity because it can treat high dust loadings, operate at constant pressure drop, and occupy less space than other types of fabric filters.

There are several unique attributes of pulse-jet cleaning. Because the cleaning pulse is very brief, the flow of dusty air does not have to be stopped during cleaning. The other bags continue to filter, taking on extra duty because of the bags being cleaned. In general, there is no change in fabric filter pressure drop or performance as a result of pulse-jet cleaning. This enables the pulse-jet fabric filters to operate on a continuous basis with solenoid valves as the only significant moving parts.

Advantages of baghouse control include the following:

- Fabric filters in general provide high collection efficiencies on both coarse and fine (submicron) particulates.
- They are relatively insensitive to fluctuations in gas stream conditions.
- Efficiency and pressure drop are relatively unaffected by large changes in inlet dust loadings for continuously cleaned filters.
- Filter outlet air is very clean and may be recirculated within the plant in many cases (for energy conservation).
- Collected material is collected dry for subsequent processing or disposal.
- Corrosion and rusting of components are usually not problems.
- Operation is relatively simple. Unlike electrostatic precipitators, fabric filter systems do not require the use of high voltage, therefore, maintenance is simplified and flammable dust may be collected with proper care.
- The use of selected fibrous or granular filter aids (precoating) permits the high-efficiency collection of submicron smokes and gaseous contaminants. Filter collectors are available in a large number of configurations, resulting in a range of dimensions and inlet and outlet flange locations to suit installation requirements.

Disadvantages include:

- Concentrations of some dusts in the collector, approximately 22 gr/ft^3, may represent a fire or explosion hazard if a spark or flame is accidentally admitted. Fabrics can burn if readily oxidizable dust is being collected. Woodgrain does not expect an upset condition where the concentration would reach a level of 22 gr/ft^3, and in addition Woodgrain has implemented fire prevention control mechanisms.
- Fabric filters have relatively high maintenance requirements (e.g., periodic bag replacement).

- Respiratory protection for maintenance personnel may be required when replacing fabric. Medium pressure drop is required, typically in the range of 100 to 250 mm of water column (4 to 10 inches of water column).

- A specific disadvantage of pulsejet units that use very high air velocities is that the dust from the cleaned bags can be drawn immediately to the other bags. If this occurs, little of the dust falls into the hopper and the dust layer on the bags becomes too thick. To prevent this, pulse-jet fabric filters can be designed with separate compartments that can be isolated for cleaning.

Fabric filters are useful for collecting particles with resistivities either too low or too high for collection with electrostatic precipitators. Fabric filters therefore may be good candidates for collecting fly ash from low-sulfur coals or fly ash containing high unburned carbon levels, which respectively have high and low resistivities, and thus are relatively difficult to collect with electrostatic precipitators.

ESP

Approximately 80% of all ESPs in the U.S. are used in the electric utility industry. ESPs are also used in pulp and paper (7%), cement and other minerals (3%), and nonferrous metals industries (1%). In the EPA RBLC database for wood working, an ESP was designated for a wafer dryer. Waferboard processing is not represented at Woodgrain Fruitland. Waferboard processes belong to the subset of reconstituted wood panel products called flakeboards. They are structural panels made from wood wafers specially produced from logs at a plant.

Dry ESPs, as opposed to wet ESPs, are perhaps more applicable for possible consideration here. Wet ESPs are used in situations for which dry ESPs are not suited, such as when the material to be collected is wet, sticky, flammable, explosive, or has a high resistivity. Woodgrain's millwork particulate emissions do not exhibit these properties (potential flammability of particulate is already being controlled by methods to reduce friction fires in the dust collection system). However, it should be noted that wet wire-pipe ESPs are used much more frequently than dry wire-pipe ESPs, which are used only in cases in which wet cleaning is undesirable, such as high temperature streams or wastewater restrictions.

Dry wire pipe ESPs are occasionally used by the wood products, metallurgical, and sulfuric acid manufacturing industries, though other ESP types are also employed. Wire *plates* are used for very high flows, higher than that for Woodgrain. Wire-*pipe* type applies to lower flow rates, approximately 1,000 to 100,000 standard cubic feet per minute (scfm).

For pollutant loading considerations, typical inlet concentrations to a wire-pipe ESP are 0.5 to 5 grains per cubic feet (gr/ft^3). This is important for consideration of ESPs to the Millwork operations at Woodgrain, as the cyclones under BACT consideration have a grain loading of 0.03 gr/scf maximum.

An ESP is a particulate control device that uses electrical forces to move particles entrained within an exhaust stream onto collection surfaces. The entrained particles are given an electrical charge when they pass through a corona, a region where gaseous ions flow. Electrodes in the center of the flow lane are maintained at high voltage and generate the electrical field that forces the particles to the collector walls.

In a wire-pipe ESP, also called a tubular ESP, the exhaust gas flows vertically through conductive tubes, generally with many tubes operating in parallel. The tubes may be formed as a circular, square, or hexagonal honeycomb. Square and hexagonal pipes can be packed closer together than cylindrical pipes, reducing wasted space. Pipes are generally 7 to 30 cm (3 to 12 inches (in.)) in diameter and 1 to 4 m (3 to