	DEQ AIR QUALITY PROGRAM 1410 N. Hilton, Boise, ID 83706 For assistance, call the **Air Permit Hotline - 1-877-5PERMIT**	**PERMIT TO CONSTRUCT APPLICATION** Revision 3 4/5/2007

Please see instructions on page 2 before filling out the form.

Company Name:	Salmon Asphalt and Paving
Facility Name:	Salmon Asphalt and Paving
Facility ID No.:	
Brief Project Description:	PTC for parallel flow hot mix asphalt plant

BUILDING AND STRUCTURE INFORMATION

1.	2.	3.	4.	5.	6.	7.
Building ID Number	**Length (ft)**	**Width (ft)**	**Base Elevation (m)**	**Building Height (m)**	**Number of Tiers**	**Description/Comments**
CONTROL	24.00	8.00	1,268	2.44	1	Control House
HMA PLANT	77.00	8.00	1,268	9.15	1	Silo, conveyors, dryer, screen, and bins
TANK-1	16.00	8.00	1,268	2.44	1	5,000 gallon diesel AST
TANK-2	41.00	8.00	1,268	2.44	1	12,000 gallon asphalt cement AST
DRYBH	8.00	8.00	1,268	5.49	1	Dryer Baghouse

DEQ AIR QUALITY PROGRAM
1410 N. Hilton, Boise, ID 83706
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PERMIT TO CONSTRUCT APPLICATION

Revision 3
03/26/07

Please see instructions on page 2 before filling out the form.

IDENTIFICATION

Company Name:	Facility Name:	Facility ID No:
Salmon Asphalt and Paving	Salmon Asphalt and Paving	

Brief Project Description: PTC for parallel flow hot mix asphalt plant

APPLICABILITY DETERMINATION

1. Will this project be subject to 1990 CAA Section 112(g)? (Case-by-Case MACT)	☒ NO	☐ YES* * If YES, applicant must submit an application for a case-by-case MACT determination [IAC 567 22-1(3)"b" (8)]
2. Will this project be subject to a New Source Performance Standard? (40 CFR part 60)	☐ NO	☒ YES* *If YES, please identify sub-part: I (60.90)
3. Will this project be subject to a MACT (Maximum Achievable Control Technology) regulation? (40 CFR part 63) THIS ONLY APPLIES IF THE PROJECT EMITS A HAZARDOUS AIR POLLUTANT	☒ NO	☐ YES* *If YES, please identify sub-part: _____
4. Will this project be subject to a NESHAP (National Emission Standards for Hazardous Air Pollutants) regulation? (40 CFR part 61)	☒ NO	☐ YES* *If YES, please identify sub-part: _____
5. Will this project be subject to PSD (Prevention of Significant Deterioration)? (40 CFR section 52.21)	☒ NO	☐ YES
6. Was netting done for this project to avoid PSD?	☒ NO	☐ YES* *If YES, please attach netting calculations

IF YOU ARE UNSURE HOW TO ANSWER ANY OF THESE QUESTIONS, CALL THE AIR PERMIT HOTLINE AT 1-877-5PERMIT

Appendix 2

Emission Estimates

CURRENT PTC APPLICATION ESTIMATES

DEQ Verification Worksheets: Hot Mix Asphalt (HMA) Drum Mix Facility Data

Facility ID/AIRS No.	TBD by DEQ	Spreadsheet Date	7/25/2008 12:55
Permit No.	TBD by DEQ	HMA Type: Drum Mix or Batch ?	Drum Mix
		Include Silo Fill & Loadout Emissions´	Y
Facility Owner/Company Name:	SALMON ASPHALT		
Address:	76 Aldous Drive		
City, State, Zip:	Salmon, ID 83467		FACWIDE ESTIMATES
Facility Contact:	Chuck Mualen		
Contact Number/ e-mail:	208.756.7939		
Is this HMA facility subject to NSPS? Yes=1,No=0	**1**	Commenced Operations in:	**ASAP**
Use Short Term Source Factor on 586 ELs? Y or N	N	**Use T-RACT on 586 AACC? Y/N**	N

Hot Mix Plant (AP-42 Section 11.1)	**Input (Bold Color) or Calculated Value (Black)**	**Fuel Type(s)**	**Fuel Type Toggle ("0" or "1")**
Drum Dryer Make/Model	**Hauck burner model SJ260**	#2 Fuel Oil	**1**
Rated heat input capacity, MMBtu/hr	**49.3**	Used Oil or RFO4 Oil	**0**
Drum Dryer Hourly Throughput, Tons/hr	**125**	Natural Gas	**0**
Hours of operation per day	**12**	LPG or Propane	**0**
Hours of operation per year (=Throughput: Annual/Hourly)	40	Exit Gas Volume (acfm)	**26,000**
Max Fuel Usage (gal/hr) DIESEL	**359.8**	Exit Gas Temperature (^oF)	**300**
Max Throughput (Proposed Limit), T/yr	**5,000**	Stack Pressure (in Hg)	
Used Oil max sulfur content (Default is 0.5%)	**0.50%**	Stack Moisture Content, %	

Asphalt Tank Heater AP-42, Section 11.1 (oil or natural gas fuel), or Section 1.4 (natural gas fuel)

		Fuel Type(s)	**Fuel Toggle**
Rated heat input capacity (MMBtu)	**0.000**	#2 Fuel Oil	**0**
Hours of operation per day	**0**	Used Oil	0
Operation, days per year	0.00	Natural Gas	**0**
Max Hours of operation per year (Proposed limit)	**0**	Indirect Heat or Power? Y or N	**N**
Exit Flow (acfm) or Velocity (fps)			
Exhaust exit gas temperature (^oF)			

Tank Heater Fuel Consumption	**#2 Fuel Oil**	**Natural Gas**
Heat Input Rating (MMBtu/hr)	0.000	0.000
Fuel Heating Value, Btu/gal (oil) or Btu/scf (gas)	137,030	**1,050**
Heating Value Correction for Natural Gas EFs, see Note	n/a	1.029
Theoretical Max Fuel Use Rate gal/hr [oil] or scf/hr [gas]	0.00	0
Max Operational Hours per Year (Proposed Limit)	0	0

Note: AP-42 EFs for natural gas combustion (Tables 1.4-xx) are based on heat value of 1,020 Btu/scf.
EFs for other fuel heating values must be multiplied by the ratio of the specified heating value to 1,020.

CAUTION: WORKSHEET PRESUMES ONLY ONE SMALL OR ONE LARGE GENERATOR. WILL NOT INCLUDE EMISSIONS FOR TWO GENSETS

Electrical Generator < 600 hp (447 kW) AP-42 Section 3.3 (diesel fueled)

		Fuel Type(s)	**Fuel Toggle**
Generator Make/Model	**Detroit Diesel**	#2 Fuel Oil (Diesel)	**0**
Generator Rated Capacity (kW)	**0**		
EF OPTIONS:	**0**	**Use EFs in lb/MMBtu fuel input**	
1 hp = 0.7456999 kW	0.7457	Calculated Max Fuel Use Rate, gal/hr	0.00
Generator Rated Capacity (hp)	0.00	Fuel Heating Value, Btu/gal	137,030
Avg brake-specific fuel consumption (BSFC) = 7000 Btu/hp-hr	7000	Calculated MMBtu/hr	0.00
	0	Max Operational Hours/Day	**0**
	0	Max Operational Hours/Year	**0**

Electrical Generator > 600 hp (447 kW) AP-42 Section 3.4 (diesel or dual fuel)

		Fuel Type(s)	**Fuel Toggle**
Generator Make/Model		#2 Fuel Oil (Diesel)	**0**
Generator Rated Capacity (kW)			
FUEL OPTIONS: #2 Fuel Oil (Diesel)			
Max Sulfur weight percent (w/o)		1 hp = 0.7456999 kW	0.7457
Calculated Max Fuel Use Rate, gal/hr		Avg BSFC = 7000 Btu/hp-hr	7000
Fuel Heating Value, Btu/gal			
Calculated MMBtu/hr			
Max Operational Hours per Day			
Max Operational Hours per Year			

Note: AP-42 Tables 3.3-x,3.4-x: avg diesel heating value is based on 19,300 Btu/lb with density equal 7.1 lb/gal=> Btu/gal = 137,030

Facility: SALMON ASPHALT

7/25/2008 12:55 **Permit/Facility ID:** TBD by DEQ TBD by DEQ

EMISSION INVENTORY

POUNDS PER HOUR

Maximum Controlled Emissions of Any Pollutant from Drum Mix HMA Plant with Fabric Filter, Tank Heater, Generator, Load-out/Silo/Asphalt Storage

A. Drum Mix Plant: 125 Tons/hour 40 Hours/year 5,000 Tons/year HMA throughput 12 hrs/day

Maximum emission for each pollutant from any fuel-burning options selected on "Facility Data" worksheet. Fuels Selected = #2 Fuel Oil

B. Tank Heater: 0.0000 MMBtu Rat 0 Hours/year 0 hrs/day

Maximum emission for each pollutant for heater burning any fuel selected on "Facility Data" worksheet. Fuels Selected =

C. Generator: 0 gal/hour 0 Hours/year Generator>600h No Generator #2 Fuel Oil 0 hrs/day

Pollutant	A Drum Mix Max Emission Rate for Pollutant (lb/hr)	B Asphalt Tank Heater Max Emission Rate for Pollutant (lb/hr)	C Generator Max Emission Rate for Pollutant (lb/hr)	D Load-out & Silo Filling Emission Rate for Pollutant (lb/hr)	E TOTAL of Max Emission Rates from A, B, C & D (lb/hr)
PM (total)	4.13	0.00E+00	0.00E+00	1.38E-01	4.26
PM-10 (total)	2.88	0.00E+00	0.00E+00	1.38E-01	3.01
P.M.-2.5	0.00	0.00E+00	0.00E+00	0.00E+00	0.00
CO	16.25	0.00E+00	0.00E+00	3.16E-01	16.57
NOx	6.88	0.00E+00	0.00E+00		6.88
SO_2	1.38	0.00E+00	0.00E+00		1.38
VOC	4.00	0.00E+00	0.00E+00	5.04E-01	4.50
Lead	1.88E-03	0.00E+00	0.00E+00		1.88E-03
HCl [e]	0.00E+00	0.00E+00	0.00E+00		0.00E+00
Dioxins[e]					
2,3,7,8-TCDD	1.20E-13	0.00E+00	0.00E+00		1.20E-13
Total TCDD	5.31E-13	0.00E+00	0.00E+00		5.31E-13
1,2,3,7,8-PeCDD	1.77E-13	0.00E+00	0.00E+00		1.77E-13
Total PeCDD	1.26E-11	0.00E+00	0.00E+00		1.26E-11
1,2,3,4,7,8-HxCDD	2.40E-13	0.00E+00	0.00E+00		2.40E-13
1,2,3,6,7,8-HxCDD	7.42E-13	0.00E+00	0.00E+00		7.42E-13
1,2,3,7,8,9-HxCDD	5.59E-13	0.00E+00	0.00E+00		5.59E-13
Total HxCDD	6.85E-12	0.00E+00	0.00E+00		6.85E-12
1,2,3,4,6,7,8-Hp-CDD	2.74E-12	0.00E+00	0.00E+00		2.74E-12
Total HpCDD	1.08E-11	0.00E+00	0.00E+00		1.08E-11
Octa CDD	1.43E-11	0.00E+00	0.00E+00		1.43E-11
Total PCDD[h]	4.51E-11	0.00E+00	0.00E+00		4.51E-11
Furans[e]					
2,3,7,8-TCDF	5.54E-13	0.00E+00	0.00E+00		5.54E-13
Total TCDF	2.11E-12	0.00E+00	0.00E+00		2.11E-12
1,2,3,7,8-PeCDF	2.45E-12	0.00E+00	0.00E+00		2.45E-12
2,3,4,7,8-PeCDF	4.79E-13	0.00E+00	0.00E+00		4.79E-13
Total PeCDF	4.79E-11	0.00E+00	0.00E+00		4.79E-11
1,2,3,4,7,8-HxCDF	2.28E-12	0.00E+00	0.00E+00		2.28E-12
1,2,3,6,7,8-HxCDF	6.85E-13	0.00E+00	0.00E+00		6.85E-13
2,3,4,6,7,8-HxCDF	1.08E-12	0.00E+00	0.00E+00		1.08E-12
1,2,3,7,8,9-HxCDF	4.79E-12	0.00E+00	0.00E+00		4.79E-12
Total HxCDF	7.42E-12	0.00E+00	0.00E+00		7.42E-12
1,2,3,4,6,7,8-HpCDF	3.71E-12	0.00E+00	0.00E+00		3.71E-12
1,2,3,4,7,8,9-HpCDF	1.54E-12	0.00E+00	0.00E+00		1.54E-12
Total HpCDF	5.71E-12	0.00E+00	0.00E+00		5.71E-12
Octa CDF	2.74E-12	0.00E+00	0.00E+00		2.74E-12
Total PCDF[h]	2.28E-11	0.00E+00	0.00E+00		2.28E-11
Total PCDD/PCDF[h]	6.85E-11	0.00E+00	0.00E+00		6.85E-11
Non-PAH HAPs					
Acetaldehyde[e]	0.00E+00	0.00E+00	0.00E+00		0.00E+00
Acrolein[e]	0.00E+00	0.00E+00	0.00E+00		0.00E+00
Benzene[e]	2.23E-04	0.00E+00	0.00E+00	3.46E-06	2.26E-04
1,3-Butadiene[e]	0.00E+00	0.00E+00	0.00E+00		0.00E+00
Ethylbenzene[e]	3.00E-02	0.00E+00	0.00E+00	2.03E-03	3.20E-02
Formaldehyde[e]	1.77E-03	0.00E+00	0.00E+00	5.01E-05	1.82E-03
Hexane[e]	1.15E-01	0.00E+00	0.00E+00	2.30E-03	1.17E-01
Isooctane	5.00E-03	0.00E+00	0.00E+00	1.41E-05	5.01E-03
Methyl Ethyl Ketone[e]	0.00E+00	0.00E+00	0.00E+00	8.49E-04	8.49E-04
Pentane[e]	0.00E+00	0.00E+00	0.00E+00		0.00E+00
Propionaldehyde[e]	0.00E+00	0.00E+00	0.00E+00		0.00E+00
Quinone[e]	0.00E+00	0.00E+00	0.00E+00		0.00E+00
Methyl chloroform[e]	6.00E-03	0.00E+00	0.00E+00		6.00E-03
Toluene[e]	3.63E-01	0.00E+00	0.00E+00	2.04E-03	3.65E-01
Xylene[e]	2.50E-02	0.00E+00	0.00E+00	1.02E-02	3.52E-02

Pollutant	A Drum Mix Max Emission Rate for Pollutant (lb/hr)	B Asphalt Tank Heater Max Emission Rate for Pollutant (lb/hr)	C Generator Max Emission Rate for Pollutant (lb/hr)	D Load-out & Silo Filling Emission Rate for Pollutant (lb/hr)	E TOTAL of Max Emission Rates from A, B, C & D (lb/hr)
PAH HAPs					
2-Methylnaphthalene	9.70E-05	0.00E+00	0.00E+00	1.23E-05	1.09E-04
3-Methylchloranthrene[e]	0.00E+00	0.00E+00	0.00E+00		0.00E+00
Acenaphthene	7.99E-07	0.00E+00	0.00E+00	1.19E-06	1.99E-06
Acenaphthylene	1.26E-05	0.00E+00	0.00E+00	7.48E-08	1.26E-05
Anthracene	1.77E-06	0.00E+00	0.00E+00	3.25E-07	2.09E-06
Benzo(a)anthracene[e]	1.20E-07	0.00E+00	0.00E+00	1.18E-07	2.38E-07
Benzo(a)pyrene[e]	5.59E-09	0.00E+00	0.00E+00	4.48E-09	1.01E-08
Benzo(b)fluoranthene[e]	5.71E-08	0.00E+00	0.00E+00	1.48E-08	7.19E-08
Benzo(e)pyrene	6.28E-08	0.00E+00	0.00E+00	2.89E-08	9.17E-08
Benzo(g,h,I)perylene	2.28E-08	0.00E+00	0.00E+00	3.70E-09	2.65E-08
Benzo(k)fluoranthene[e]	2.34E-08	0.00E+00	0.00E+00	4.28E-09	2.77E-08
Chrysene[e]	1.03E-07	0.00E+00	0.00E+00	5.05E-07	6.07E-07
Dibenzo(a,h)anthracene[e]	0.00E+00	0.00E+00	0.00E+00	7.20E-10	7.20E-10
Dichlorobenzene	0.00E+00	0.00E+00	0.00E+00		0.00E+00
Fluoranthene	3.48E-07	0.00E+00	0.00E+00	3.15E-07	6.63E-07
Fluorene	6.28E-06	0.00E+00	0.00E+00	2.96E-06	9.24E-06
Indeno(1,2,3-cd)pyrene[e]	4.00E-09	0.00E+00	0.00E+00	9.15E-10	4.91E-09
Naphthalene[e]	3.71E-04	0.00E+00	0.00E+00	5.07E-06	3.76E-04
Perylene	5.02E-09	0.00E+00	0.00E+00	8.63E-08	9.13E-08
Phenanthrene	1.31E-05	0.00E+00	0.00E+00	4.18E-06	1.73E-05
Pyrene	1.71E-06	0.00E+00	0.00E+00	9.30E-07	2.64E-06
Non-HAP Organic Compounds					
Acetone[e]	0.00E+00	0.00E+00	0.00E+00	1.08E-03	1.08E-03
Benzaldehyde	0.00E+00	0.00E+00	0.00E+00		0.00E+00
Butane	8.38E-02	0.00E+00	0.00E+00		8.38E-02
Butyraldehyde	0.00E+00	0.00E+00	0.00E+00		0.00E+00
Crotonaldehyde[e]	0.00E+00	0.00E+00	0.00E+00		0.00E+00
Ethylene	8.75E-01	0.00E+00	0.00E+00	2.04E-02	8.95E-01
Heptane	1.18E+00	0.00E+00	0.00E+00		1.18E+00
Hexanal	0.00E+00	0.00E+00	0.00E+00		0.00E+00
Isovaleraldehyde	0.00E+00	0.00E+00	0.00E+00		0.00E+00
2-Methyl-1-pentene	5.00E-01	0.00E+00	0.00E+00		5.00E-01
2-Methyl-2-butene	7.25E-02	0.00E+00	0.00E+00		7.25E-02
3-Methylpentane	2.38E-02	0.00E+00	0.00E+00		2.38E-02
1-Pentene	2.75E-01	0.00E+00	0.00E+00		2.75E-01
n-Pentane	2.63E-02	0.00E+00	0.00E+00		2.63E-02
Valeraldehyde[e]	0.00E+00	0.00E+00	0.00E+00		0.00E+00
Metals					
Antimony[e]	2.25E-05	0.00E+00	0.00E+00		2.25E-05
Arsenic[e]	3.20E-07	0.00E+00	0.00E+00		3.20E-07
Barium[e]	7.25E-04	0.00E+00	0.00E+00		7.25E-04
Beryllium[e]	0.00E+00	0.00E+00	0.00E+00		0.00E+00
Cadmium[e]	2.34E-07	0.00E+00	0.00E+00		2.34E-07
Chromium[e]	6.88E-04	0.00E+00	0.00E+00		6.88E-04
Cobalt[e]	3.25E-06	0.00E+00	0.00E+00		3.25E-06
Copper[e]	3.88E-04	0.00E+00	0.00E+00		3.88E-04
Hexavalent Chromium[e]	2.57E-07	0.00E+00	0.00E+00		2.57E-07
Manganese[e]	9.63E-04	0.00E+00	0.00E+00		9.63E-04
Mercury[e]	3.25E-04	0.00E+00	0.00E+00		3.25E-04
Molybdenum[e]	0.00E+00	0.00E+00	0.00E+00		0.00E+00
Nickel[e]	3.60E-05	0.00E+00	0.00E+00		3.60E-05
Phosphorus[e]	3.50E-03	0.00E+00	0.00E+00		3.50E-03
Silver[e]	6.00E-05	0.00E+00	0.00E+00		6.00E-05
Selenium[e]	4.38E-05	0.00E+00	0.00E+00		4.38E-05
Thallium[e]	5.13E-07	0.00E+00	0.00E+00		5.13E-07
Vanadium[e]	0.00E+00	0.00E+00	0.00E+00		0.00E+00
Zinc[e]	7.63E-03	0.00E+00	0.00E+00		7.63E-03

e) IDAPA Toxic Air Pollutant

Pollutants shown in bold text are carcinogens subject to an annual standard. Lb/hr values shown are annual averages.

Pollutants shown in blue text are emitted only when burning Used Oil, but not when burning #2 Fuel Oil or Natural Gas

Facility: SALMON ASPHALT

7/25/2008 12:55 **Permit/Facility ID:** TBD by DEI TBD by DEQ

EMISSION INVENTORY

POUNDS PER HOUR

Max Emissions of Any Pollutant from Drum Mix HMA Plant: Fabric Filter, Tank Heater, Generator, Load-out/Silo/Asphalt Storage

A. Drum Mix Plant: **125** Tons/hour **40** Hours/year **5,000** Tons/year HMA throughput **12** hrs/day

Maximum emission for each pollutant from any fuel-burning option selected. Fuels Selected = #2 Fuel Oil

B. Tank Heater: **0.0000** MMBtu Rated **0** Hours/year **0** hrs/day

Maximum emission for each pollutant from any fuel-burning option selected. Fuels Selected =

C. Generator: **0** gal/hour **0** Hours/year No Generator #2 Fuel Oil Generator>600hp **0** hrs/day

Pollutant	A Drum Mix Max Emission Rate for Pollutant (lb/hr)	B Asphalt Tank Heater Max Emission Rate for Pollutant (lb/hr)	C Generator Max Emission Rate for Pollutant (lb/hr)	D Load-out & Silo Filling Emission Rate for Pollutant (lb/hr)	E TOTAL of Max Emission Rates from A, B, C & D (lb/hr)
non-PAH HAPs[g]					
Bromomethane[e]				1.25E-04	1.25E-04
2-Butanone (see Methyl Ethyl Ketone)				0.00E+00	0.00E+00
Carbon disulfide[e]				3.11E-04	3.11E-04
Chloroethane (Ethyl chloride[e])				6.20E-05	6.20E-05
Chloromethane (Methyl chloride[e])				4.28E-04	4.28E-04
Cumene				5.72E-04	5.72E-04
n-Hexane				0.00E+00	0.00E+00
Methylene chloride (Dichloromethane[e])				4.11E-06	4.11E-06
MTBE				0.00E+00	0.00E+00
Styrene[e]				1.20E-04	1.20E-04
Tetrachloroethene (Tetrachloroethylene[e])				4.00E-05	4.00E-05
1,1,1-Trichloroethane (Methyl chloroform[e])				0.00E+00	0.00E+00
Trichloroethene (Trichloroethylene[e])				0.00E+00	0.00E+00
Trichlorofluoromethane				6.76E-06	6.76E-06
m-/p-Xylene[e]				5.18E-03	5.18E-03
o-Xylene[e]				5.03E-03	5.03E-03
Phenol[e,f]				5.03E-04	5.03E-04
Non-HAP Organic Compounds					
Methane				4.30E-01	4.30E-01

e) IDAPA Toxic Air Pollutant

Facility: SALMON ASPHALT

7/25/2008 12:55 **Permit/Facility ID:** TBD by DEQ TBD by DEQ

EMISSION INVENTORY

TONS PER YEAR

Maximum Controlled Emissions of Any Pollutant from Drum Mix HMA Plant with Fabric Filter, Tank Heater, Generator, Load-out/Silo/Asphalt Stora

A. Drum Mix Plant: **125** Tons/hour **40** Hours/year **5,000** Tons/year HMA throughput **12** hrs/day

Maximum emission for each pollutant from any fuel-burning options selected on "Facility Data" worksheet. Fuels Selected = #2 Fuel Oil

B. Tank Heater: **0.0000** MMBtu Rat **0** Hours/year **0** hrs/day

Maximum emission for each pollutant for heater burning any fuel selected on "Facility Data" worksheet. Fuels Selected =

C. Generator: **0** gal/hour **0** Hours/year Generator>600h **No Generator** #2 Fuel Oil **0** hrs/day

Pollutant	A Drum Mix Max Emission Rate for Pollutant (T/yr)	B Asphalt Tank Heater Max Emission Rate for Pollutant (T/yr)	C Generator Max Emission Rate for Pollutant (T/yr)	D Load-out, Silo Filling, & Tank Storage Emission Rate for Pollutant (T/yr)	E TOTAL of Max Emission Rates from A, B, & C (T/yr) Exclude Fugitives from D
PM (total)	0.08	0.00E+00	0.00E+00	2.77E-03	0.08
PM-10 (total)	0.06	0.00E+00	0.00E+00	2.77E-03	0.06
P.M.-2.5					
CO	0.33	0.00E+00	0.00E+00	6.32E-03	0.33
NOx	0.14	0.00E+00	0.00E+00		0.14
SO_2	0.03	0.00E+00	0.00E+00		0.03
VOC	0.08	0.00E+00	0.00E+00	1.01E-02	0.08
Lead	3.75E-05	0.00E+00	0.00E+00		3.75E-05
HCl [e]	0.00E+00	0.00E+00	0.00E+00		0.00E+00
Dioxins[e]					
2,3,7,8-TCDD	5.25E-13	0.00E+00	0.00E+00		5.25E-13
Total TCDD	2.33E-12	0.00E+00	0.00E+00		2.33E-12
1,2,3,7,8-PeCDD	7.75E-13	0.00E+00	0.00E+00		7.75E-13
Total PeCDD	5.50E-11	0.00E+00	0.00E+00		5.50E-11
1,2,3,4,7,8-HxCDD	1.05E-12	0.00E+00	0.00E+00		1.05E-12
1,2,3,6,7,8-HxCDD	3.25E-12	0.00E+00	0.00E+00		3.25E-12
1,2,3,7,8,9-HxCDD	2.45E-12	0.00E+00	0.00E+00		2.45E-12
Total HxCDD	3.00E-11	0.00E+00	0.00E+00		3.00E-11
1,2,3,4,6,7,8-Hp-CDD	1.20E-11	0.00E+00	0.00E+00		1.20E-11
Total HpCDD	4.75E-11	0.00E+00	0.00E+00		4.75E-11
Octa CDD	6.25E-11	0.00E+00	0.00E+00		6.25E-11
Total PCDD[h]	1.98E-10	0.00E+00	0.00E+00		1.98E-10
Furans[e]					
2,3,7,8-TCDF	2.43E-12	0.00E+00	0.00E+00		2.43E-12
Total TCDF	9.25E-12	0.00E+00	0.00E+00		9.25E-12
1,2,3,7,8-PeCDF	1.08E-11	0.00E+00	0.00E+00		1.08E-11
2,3,4,7,8-PeCDF	2.10E-12	0.00E+00	0.00E+00		2.10E-12
Total PeCDF	2.10E-10	0.00E+00	0.00E+00		2.10E-10
1,2,3,4,7,8-HxCDF	1.00E-11	0.00E+00	0.00E+00		1.00E-11
1,2,3,6,7,8-HxCDF	3.00E-12	0.00E+00	0.00E+00		3.00E-12
2,3,4,6,7,8-HxCDF	4.75E-12	0.00E+00	0.00E+00		4.75E-12
1,2,3,7,8,9-HxCDF	2.10E-11	0.00E+00	0.00E+00		2.10E-11
Total HxCDF	3.25E-11	0.00E+00	0.00E+00		3.25E-11
1,2,3,4,6,7,8-HpCDF	1.63E-11	0.00E+00	0.00E+00		1.63E-11
1,2,3,4,7,8,9-HpCDF	6.75E-12	0.00E+00	0.00E+00		6.75E-12
Total HpCDF	2.50E-11	0.00E+00	0.00E+00		2.50E-11
Octa CDF	1.20E-11	0.00E+00	0.00E+00		1.20E-11
Total PCDF[h]	1.00E-10	0.00E+00	0.00E+00		1.00E-10
Total PCDD/PCDF[h]	3.00E-10	0.00E+00	0.00E+00		3.00E-10
Non-PAH HAPs					
Acetaldehyde[e]	0.00E+00	0.00E+00	0.00E+00		0.00E+00
Acrolein[e]	0.00E+00	0.00E+00	0.00E+00		0.00E+00
Benzene[e]	9.75E-04	0.00E+00	0.00E+00	1.52E-05	9.75E-04
1,3-Butadiene[e]	0.00E+00	0.00E+00	0.00E+00		0.00E+00
Ethylbenzene[e]	6.00E-04	0.00E+00	0.00E+00	4.07E-05	6.00E-04
Formaldehyde[e]	7.75E-03	0.00E+00	0.00E+00	2.19E-04	7.75E-03
Hexane[e]	2.30E-03	0.00E+00	0.00E+00	4.61E-05	2.30E-03
Isooctane	1.00E-04	0.00E+00	0.00E+00	2.82E-07	1.00E-04
Methyl Ethyl Ketone[e]	0.00E+00	0.00E+00	0.00E+00	1.70E-05	0.00E+00
Pentane[e]	0.00E+00	0.00E+00	0.00E+00		0.00E+00
Propionaldehyde[e]	0.00E+00	0.00E+00	0.00E+00		0.00E+00
Quinone[e]	0.00E+00	0.00E+00	0.00E+00		0.00E+00
Methyl chloroform[e]	1.20E-04	0.00E+00	0.00E+00		1.20E-04
Toluene[e]	7.25E-03	0.00E+00	0.00E+00	4.07E-05	7.25E-03
Xylene[e]	5.00E-04	0.00E+00	0.00E+00	2.04E-04	5.00E-04
TOTAL Federal HAPs (T/yr)=					**2.23E-02**

Pollutant	A Drum Mix Max Emission Rate for Pollutant (T/yr)	B Asphalt Tank Heater Max Emission Rate for Pollutant (T/yr)	C Generator Max Emission Rate for Pollutant (T/yr)	D Load-out, Silo Filling, & Tank Storage Emission Rate for Pollutant (T/yr)	E TOTAL of Max Emission Rates from A, B, & C (T/yr) Exclude Fugitives from D
PAH HAPs					
2-Methylnaphthalene	4.25E-04	0.00E+00	0.00E+00	5.37E-05	4.25E-04
3-Methylchloranthrene[e]	0.00E+00	0.00E+00	0.00E+00		0.00E+00
Acenaphthene	3.50E-06	0.00E+00	0.00E+00	5.20E-06	3.50E-06
Acenaphthylene	5.50E-05	0.00E+00	0.00E+00	3.28E-07	5.50E-05
Anthracene	7.75E-06	0.00E+00	0.00E+00	1.42E-06	7.75E-06
Benzo(a)anthracene[e]	5.25E-07	0.00E+00	0.00E+00	5.17E-07	5.25E-07
Benzo(a)pyrene[e]	2.45E-08	0.00E+00	0.00E+00	1.96E-08	2.45E-08
Benzo(b)fluoranthene[e]	2.50E-07	0.00E+00	0.00E+00	6.48E-08	2.50E-07
Benzo(e)pyrene	2.75E-07	0.00E+00	0.00E+00	1.27E-07	2.75E-07
Benzo(g,h,I)perylene	1.00E-07	0.00E+00	0.00E+00	1.62E-08	1.00E-07
Benzo(k)fluoranthene[e]	1.03E-07	0.00E+00	0.00E+00	1.88E-08	1.03E-07
Chrysene[e]	4.50E-07	0.00E+00	0.00E+00	2.21E-06	4.50E-07
Dibenzo(a,h)anthracene	0.00E+00	0.00E+00	0.00E+00	3.15E-09	0.00E+00
Dichlorobenzene	0.00E+00	0.00E+00	0.00E+00		0.00E+00
Fluoranthene	1.53E-06	0.00E+00	0.00E+00	1.38E-06	1.53E-06
Fluorene	2.75E-05	0.00E+00	0.00E+00	1.30E-05	2.75E-05
Indeno(1,2,3-cd)pyrene[e]	1.75E-08	0.00E+00	0.00E+00	4.01E-09	1.75E-08
Naphthalene[e]	1.63E-03	0.00E+00	0.00E+00	2.22E-05	1.63E-03
Perylene	2.20E-08	0.00E+00	0.00E+00	3.78E-07	2.20E-08
Phenanthrene	5.75E-05	0.00E+00	0.00E+00	1.83E-05	5.75E-05
Pyrene	7.50E-06	0.00E+00	0.00E+00	4.07E-06	7.50E-06
Non-HAP Organic Compounds					
Acetone[e]	0.00E+00	0.00E+00	0.00E+00	2.16E-05	0.00E+00
Benzaldehyde	0.00E+00	0.00E+00	0.00E+00		0.00E+00
Butane	1.68E-03	0.00E+00	0.00E+00		1.68E-03
Butyraldehyde	0.00E+00	0.00E+00	0.00E+00		0.00E+00
Crotonaldehyde[e]	0.00E+00	0.00E+00	0.00E+00		0.00E+00
Ethylene	1.75E-02	0.00E+00	0.00E+00	4.09E-04	1.75E-02
Heptane	2.35E-02	0.00E+00	0.00E+00		2.35E-02
Hexanal	0.00E+00	0.00E+00	0.00E+00		0.00E+00
Isovaleraldehyde	0.00E+00	0.00E+00	0.00E+00		0.00E+00
2-Methyl-1-pentene	1.00E-02	0.00E+00	0.00E+00		1.00E-02
2-Methyl-2-butene	1.45E-03	0.00E+00	0.00E+00		1.45E-03
3-Methylpentane	4.75E-04	0.00E+00	0.00E+00		4.75E-04
1-Pentene	5.50E-03	0.00E+00	0.00E+00		5.50E-03
n-Pentane[e]	5.25E-04	0.00E+00	0.00E+00		5.25E-04
Valeraldehyde[e]	0.00E+00	0.00E+00	0.00E+00		0.00E+00
Metals					
Antimony[e]	4.50E-07	0.00E+00	0.00E+00		4.50E-07
Arsenic[e]	1.40E-06	0.00E+00	0.00E+00		1.40E-06
Barium[e]	1.45E-05	0.00E+00	0.00E+00		1.45E-05
Beryllium[e]	0.00E+00	0.00E+00	0.00E+00		0.00E+00
Cadmium[e]	1.03E-06	0.00E+00	0.00E+00		1.03E-06
Chromium[e]	1.38E-05	0.00E+00	0.00E+00		1.38E-05
Cobalt[e]	6.50E-08	0.00E+00	0.00E+00		6.50E-08
Copper[e]	7.75E-06	0.00E+00	0.00E+00		7.75E-06
Hexavalent Chromium[e]	1.13E-06	0.00E+00	0.00E+00		1.13E-06
Manganese[e]	1.93E-05	0.00E+00	0.00E+00		1.93E-05
Mercury[e]	6.50E-06	0.00E+00	0.00E+00		6.50E-06
Molybdenum[e]	0.00E+00	0.00E+00	0.00E+00		0.00E+00
Nickel[e]	1.58E-04	0.00E+00	0.00E+00		1.58E-04
Phosphorus[e]	7.00E-05	0.00E+00	0.00E+00		7.00E-05
Silver[e]	1.20E-06	0.00E+00	0.00E+00		1.20E-06
Selenium[e]	8.75E-07	0.00E+00	0.00E+00		8.75E-07
Thallium[e]	1.03E-08	0.00E+00	0.00E+00		1.03E-08
Vanadium[e]	0.00E+00	0.00E+00	0.00E+00		0.00E+00
Zinc[e]	1.53E-04	0.00E+00	0.00E+00		1.53E-04

e) IDAPA Toxic Air Pollutant

Facility: SALMON ASPHALT

7/25/2008 12:55 **Permit/Facility ID:** TBD by DE(TBD by DEQ

EMISSION INVENTORY

TONS PER YEAR

'age Max Emissions of Any Pollutant from Drum Mix HMA Plant: Fabric Filter, Tank Heater, Generator, Load-out/Silo/Asphalt Storage

A. Drum Mix Plant: **125** Tons/hour **40** Hours/year **5,000** Tons/year HMA throughput **12** hrs/day

Maximum emission for each pollutant from any fuel-burning option selected. Fuels Selected = #2 Fuel Oil

B. Tank Heater: **0.0000** MMBtu Rated **0** Hours/year **0** hrs/day

Maximum emission for each pollutant from any fuel-burning option selected. Fuels Selected =

C. Generator: **0** gal/hour **0** Hours/year No Generator #2 Fuel Oil Generator>600hp **0** hrs/day

Pollutant	A Drum Mix Max Emission Rate for Pollutant (T/yr)	B Asphalt Tank Heater Max Emission Rate for Pollutant (T/yr)	C Generator Max Emission Rate for Pollutant (T/yr)	D Load-out, Silo Filling, & Tank Storage Emission Rate for Pollutant (T/yr)	E TOTAL of Max Emission Rates from A, B, & C (T/yr) Exclude Fugitives from D
non-PAH HAPs[a]					
Bromomethane[e]				2.49E-06	0.00E+00
2-Butanone (see Methyl Ethyl Ketone)					0.00E+00
Carbon disulfide[e]				6.23E-06	0.00E+00
Chloroethane (Ethyl chloride[e])				1.24E-06	0.00E+00
Chloromethane (Methyl chloride[e])				8.57E-06	0.00E+00
Cumene				1.14E-05	0.00E+00
n-Hexane				0.00E+00	0.00E+00
Methylene chloride (Dichloromethane[e])				8.23E-08	0.00E+00
MTBE					0.00E+00
Styrene[e]				2.40E-06	0.00E+00
Tetrachloroethene (Tetrachloroethylene[e])				8.01E-07	0.00E+00
1,1,1-Trichloroethane (Methyl chloroform[e])				0.00E+00	0.00E+00
Trichloroethene (Trichloroethylene[e])				0.00E+00	0.00E+00
Trichlorofluoromethane				1.35E-07	0.00E+00
m-/p-Xylene[e]				1.04E-04	0.00E+00
o-Xylene[e]				1.01E-04	0.00E+00
Phenol[e,f]				1.01E-05	0.00E+00
Non-HAP Organic Compounds					
Methane				8.60E-03	0.00E+00

e) IDAPA Toxic Air Pollutant

Facility: SALMON ASPHALT

7/25/2008 12:55 **Permit/Facility ID:** TBD by DE TBD by DEQ

TAPs EL Screen - ALL SOURCES

586 pollutants are shown in bold/red

Max Emissions of Any Pollutant from Drum Mix HMA Plant with Fabric Filter, Tank Heater, Generator, Load-out/Silo/Asphalt Storage

A. Drum Mix Plant: **125** Tons/hour **40** Hours/year **5,000** Tons/year HMA throughput

Maximum emission for each pollutant from any fuel-burning option selected on "Facility Data" worksheet

B. Tank Heater: **0.0000** MMBtu Rated **0** Hours/year **D. Include all emissions from Load-out/Silo Filling?** **Yes**

Maximum emission for each pollutant for heater burning any fuel selected on "Facility Data" worksheet **Short Term Source Factor 586 ELs?** **1**

C. Generator: **0** gal/hour **0** Hours/year Small or Large Generator using Diesel Fuel

Pollutant	TOTAL of Max Emission Rates from A, B, C & D (lb/hr)	TAPs Screening Emission Limit (EL) Increment[b] (lb/hr)	TAPs Emissions Exceed EL Increment?	Modeled? Meets AAC or AACC?
HCl[a]	0.000	0.05	No	
Dioxins[e]		**Toxic Equivalency Factor[c]**	**Adjusted Emission Rate (lb/hr)**	
2,3,7,8-TCDD	1.20E-13	1.0	1.20E-13	
Total TCDD	5.31E-13	n/a		
1,2,3,7,8-PeCDD	1.77E-13	0.5	8.85E-14	
Total PeCDD	1.26E-11	n/a		
1,2,3,4,7,8-HxCDD	2.40E-13	0.1	2.40E-14	
1,2,3,6,7,8-HxCDD	7.42E-13	0.1	7.42E-14	
1,2,3,7,8,9-HxCDD	5.59E-13	0.1	5.59E-14	
Total HxCDD	6.85E-12	n/a		
1,2,3,4,6,7,8-Hp-CDD	2.74E-12	0.01	2.74E-14	
Total HpCDD	1.08E-11	n/a		
Octa CDD	1.43E-11	0.0001	1.43E-15	
Total PCDD[h]	4.51E-11	n/a		
Furans[e]				
2,3,7,8-TCDF	5.54E-13	0.1	5.54E-14	
Total TCDF	2.11E-12	n/a		
1,2,3,7,8-PeCDF	2.45E-12	0.05	1.23E-13	
2,3,4,7,8-PeCDF	4.79E-13	0.5	2.40E-13	
Total PeCDF	4.79E-11	n/a		
1,2,3,4,7,8-HxCDF	2.28E-12	0.1	2.28E-13	
1,2,3,6,7,8-HxCDF	6.85E-13	0.1	6.85E-14	
2,3,4,6,7,8-HxCDF	1.08E-12	0.1	1.08E-13	
1,2,3,7,8,9-HxCDF	4.79E-12	0.1	4.79E-13	
Total HxCDF	7.42E-12	n/a		
1,2,3,4,6,7,8-HpCDF	3.71E-12	0.01	3.71E-14	
1,2,3,4,7,8,9-HpCDF	1.54E-12	0.01	1.54E-14	
Total HpCDF	5.71E-12	n/a		
Octa CDF	2.74E-12	0.0001	2.74E-16	
Total PCDF[h]	2.28E-11	n/a		
Total PCDD/PCDF[h]	6.85E-11	n/a		
TOTAL Dioxin/Furans[c]	Adjusted lb/hr 1.75E-12	TAPs EL for 2,3,7,8 TCDD 1.50E-10	**Exceeds TAPs EL?** No	**Modeled?**
Non-PAH HAPs				
Acetaldehyde[e]	0.00E+00	3.00E-03	No	
Acrolein[e]	0.00E+00	0.017	No	
Benzene[e]	2.26E-04	8.00E-04	No	
1,3-Butadiene[e]	0.00E+00			
Ethylbenzene[e]	3.20E-02	29	No	
Formaldehyde[e]	1.82E-03	5.10E-04	Exceeds	
Hexane[e]	1.17E-01	12	No	
Isooctane	5.01E-03			
Methyl Ethyl Ketone[e]	8.49E-04	39.3	No	
Pentane[e]	0.00E+00	118	No	
Propionaldehyde[e]	0.00E+00	0.0287	No	
Quinone[e]	0.00E+00	0.027	No	
Methyl chloroform[e]	6.00E-03	127	No	
Toluene[e]	3.65E-01	25	No	
Xylene[e]	3.52E-02	29	No	
TOTAL PAH HAPs (lb/hr) =	5.33E-04	9.10E-05	Exceeds	

Pollutant	TOTAL of Max Emission Rates from A, B, C & D (lb/hr)	TAPs Screening Emission Limit (EL) Increment[b] (lb/hr)	TAPs Emissions Exceed EL Increment?	Modeled? Meets AAC or AACC?
PAH HAPs				
2-Methylnaphthalene	1.09E-04			
3-Methylchloranthrene[e]	0.00E+00	2.50E-06	No	
Acenaphthene	1.99E-06			
Acenaphthylene	1.26E-05			
Anthracene	2.09E-06			
Benzo(a)anthracene	2.38E-07			see POM
Benzo(a)pyrene[e]	1.01E-08	2.00E-06	No	see POM
Benzo(b)fluoranthene	7.19E-08			see POM
Benzo(e)pyrene	9.17E-08			
Benzo(g,h,i)perylene	2.65E-08			
Benzo(k)fluoranthene	2.77E-08			see POM
Chrysene	6.07E-07			see POM
Dibenzo(a,h)anthracene	7.20E-10			see POM
Dichlorobenzene	0.00E+00			
Fluoranthene	6.63E-07			
Fluorene	9.24E-06			
Indeno(1,2,3-cd)pyrene	4.91E-09			see POM
Naphthalene[e]	3.76E-04	3.33	No	
Perylene	9.13E-08			
Phenanthrene	1.73E-05			
Pyrene	2.64E-06			
PolycyclicOrganicMatter[d,e]	9.61E-07	2.00E-06	No	
Non-HAP Organic Compounds				
Acetone[e]	1.08E-03	119	No	
Benzaldehyde	0.00E+00			
Butane	8.38E-02			
Butyraldehyde	0.00E+00			
Crotonaldehyde[e]	0.00E+00	0.38	No	
Ethylene	8.95E-01			
Heptane	1.18E+00	109	No	
Hexanal	0.00E+00			
Isovaleraldehyde	0.00E+00			
2-Methyl-1-pentene	5.00E-01			
2-Methyl-2-butene	7.25E-02			
3-Methylpentane	2.38E-02			
1-Pentene	2.75E-01			
n-Pentane[e]	2.63E-02	118	No	
Valeraldehyde (n-Valeraldehyde[e])	0.00E+00	11.7	No	
Metals				
Antimony[e]	2.25E-05	0.033	No	
Arsenic[e]	3.20E-07	1.50E-06	No	
Barium[e]	7.25E-04	0.033	No	
Beryllium[e]	0.00E+00	2.80E-05	No	
Cadmium[e]	2.34E-07	3.70E-06	No	
Chromium[e]	6.88E-04	0.033	No	
Cobalt[e]	3.25E-06	0.0033	No	
Copper[e]	3.88E-04	0.013	No	
Hexavalent Chromium[e]	2.57E-07	5.60E-07	No	
Manganese[e]	9.63E-04	0.067	No	
Mercury[e]	3.25E-04	0.003	No	
Molybdenum[e]	0.00E+00	0.333	No	
Nickel[e]	3.60E-05	2.70E-05	Exceeds	
Phosphorus[e]	3.50E-03	0.007	No	
Silver[e]	6.00E-05	0.007	No	
Selenium[e]	4.38E-05	0.013	No	
Thallium[e]	5.13E-07	0.007	No	
Vanadium[e]	0.00E+00	0.003	No	
Zinc[e]	7.63E-03	0.667	No	

a) Reserved.
b) Toxic Air Pollutants, IDAPA 58.01.01.585 and .586, levels in effect as of January 27, 2006
c) Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-*p*-dioxins and Dibenzofurans (CDDs and CDFs, 1989 update, EPA/625/3-89/016, March 1989 (Source: Mike Dubois, IDEQ State Office, April 2005)
Plus 1,2,3,7,8 PeCDD,OCDD & OCDF TEFs, Van den Berg, et al, 1998, Environmental Health Perspectives 106, 775. accessed at www.dioxinfacts.org/dioxin_health/dioxin_tissues/dioxin_t
n/a = not available. IDAPA 58.01.01.586, TAPs Carcinogenic Increments: Total of adjusted emission rates are treated as a single TAP (2,3,7,8 TCDD)
d) IDAPA 58.01.01.586, Polycyclic Organic Matter: Emissions of PAHs shown in bold shall be considered together as one TAP equivalent in potency to benzo(a)pyrene.
e) IDAPA Toxic Air Pollutant, 58.01.01.585 or .586

Pollutants shown in bold text are carcinogens subject to an annual standard. These lb/hr values are annual averages.
Pollutants shown in blue text are emitted only when burning Used Oil, but not when burning #2 Fuel Oil or Natural Gas

Facility: SALMON ASPHALT

7/25/2008 12:55 **Permit/Facility ID:** TBD by DE TBD by DEQ

TAPs EL Screen - ALL SOURCES

Maximum Emissions of Any Pollutant from Drum Mix HMA Plant with Fabric Filter, Tank Heater, Generator, Load-out/Silo/Asphalt Storage

A. Drum Mix Plant: **125** Tons/hour **40** Hours/year **5,000** Tons/year HMA throughput

Maximum emission for each pollutant from any fuel-burning option selected in "Facility Data" worksheet.

B. Tank Heater: **0.0000** MMBtu Rated **0** Hours/year **D. Include all emissions from Load-out/Silo/Storage? Yes**

Maximum emission for each pollutant for heater burning any fuel selected in "Facility Data" worksheet.

C. Generator: 0 gal/hour 0 Hours/year Small or Large Generator using Diesel Fuel

Pollutant	TOTAL of Max Emission Rates from A, B, C & D (lb/hr)	TAPs Screening Emission Limit (EL) Increment[b] (lb/hr)	TAPs Emissions Exceed EL Increment?	Modeled?
non-PAH HAPs[a]				
Bromomethane (Methyl bromide[e])	1.25E-04	1.27	No	
2-Butanone (see Methyl Ethyl Ketone)				
Carbon disulfide[e]	3.11E-04	2	No	
Chloroethane (Ethyl chloride[e])	6.20E-05	176	No	
Chloromethane (Methyl chloride[e])	4.28E-04	6.867	No	
Cumene[e]	5.72E-04	16.3	No	
n-Hexane[e] (see Hexane[e])				
Methylene chloride (Dichloromethane[e])	4.11E-06	1.60E-03	No	
MTBE	0.00E+00			
Styrene[e]	1.20E-04	6.67	No	
Tetrachloroethene (Tetrachloroethylene[e])	4.00E-05	1.30E-02	No	
1,1,1-Trichloroethane (see Methyl chloroform[e])				
Trichloroethene (Trichloroethylene[e])	0.00E+00	17.93	No	
Trichlorofluoromethane	6.76E-06			
m-/p-Xylene[e] (added into Xylene[e])				
o-Xylene[e] (added into Xylene[e])				
Phenol[e,f]	5.03E-04	1.27	No	
Non-HAP Organic Compounds				
Methane	4.30E-01			

a) For HMA facilities subject to NSPS (40 CFR 60, Subpart I), PTE includes fugitive emissions of PM from load-out, silo filling & storage tank operations.

e) IDAPA Toxic Air Pollutant, 58.01.01.585 or .586

toxicity.html

Facility: SALMON ASPHALT
7/25/2008 12:55 **Permit/Facility ID: TBD by DEQ TBD by DEQ**

#2 Fuel Oil Fired Drum Mix Asphalt Plant With Fabric Filter AP-42 Section 11.1

Fuel Type Toggle = 1
Hourly Throughput 125 T/hr
Annual Hours Operating 40 hrs/yr
Max Annual Throughput 5,000 Tons/yr (Proposed HMA Throughput Limit)

Pollutant	Emission Factor[a] (lb/ton)	Emissions (lb/hr)	Emissions (T/yr)	Emissions (lb/hr) Annual Average
PM (total)[b]	0.033	4.125	0.0825	0.02
PM-10 (total)[b]	0.023	2.875	0.0575	0.01
P.M.-2.5 [b1]	*0.0029*			
CO[c]	0.13	16.25	0.325	
NOx[c]	0.055	6.875	0.1375	
SO_2[c]	0.011	1.375	0.0275	
VOC[d]	0.032	4	0.08	
Lead	1.50E-05	1.88E-03	3.75E-05	
HCl[d,e]	No Data			
Dioxins[e]				
2,3,7,8-TCDD	2.10E-13	2.625E-11	5.25E-13	1.20E-13
Total TCDD	9.30E-13	1.163E-10	2.33E-12	5.31E-13
1,2,3,7,8-PeCDD	3.10E-13	3.875E-11	7.75E-13	1.77E-13
Total PeCDD	2.20E-11	2.75E-09	5.50E-11	1.26E-11
1,2,3,4,7,8-HxCDD	4.20E-13	5.25E-11	1.05E-12	2.40E-13
1,2,3,6,7,8-HxCDD	1.30E-12	1.625E-10	3.25E-12	7.42E-13
1,2,3,7,8,9-HxCDD	9.80E-13	1.225E-10	2.45E-12	5.59E-13
Total HxCDD	1.20E-11	1.5E-09	3.00E-11	6.85E-12
1,2,3,4,6,7,8-Hp-CDD	4.80E-12	6E-10	1.20E-11	2.74E-12
Total HpCDD	1.90E-11	2.375E-09	4.75E-11	1.08E-11
Octa CDD	2.50E-11	3.125E-09	6.25E-11	1.43E-11
Total PCDD[h]	7.90E-11	9.875E-09	1.98E-10	4.51E-11
Furans[e]				
2,3,7,8-TCDF	9.70E-13	1.213E-10	2.43E-12	5.54E-13
Total TCDF	3.70E-12	4.625E-10	9.25E-12	2.11E-12
1,2,3,7,8-PeCDF	4.30E-12	5.375E-10	1.08E-11	2.45E-12
2,3,4,7,8-PeCDF	8.40E-13	1.05E-10	2.10E-12	4.79E-13
Total PeCDF	8.40E-11	1.05E-08	2.10E-10	4.79E-11
1,2,3,4,7,8-HxCDF	4.00E-12	5E-10	1.00E-11	2.28E-12
1,2,3,6,7,8-HxCDF	1.20E-12	1.5E-10	3.00E-12	6.85E-13
2,3,4,6,7,8-HxCDF	1.90E-12	2.375E-10	4.75E-12	1.08E-12
1,2,3,7,8,9-HxCDF	8.40E-12	1.05E-09	2.10E-11	4.79E-12
Total HxCDF	1.30E-11	1.625E-09	3.25E-11	7.42E-12
1,2,3,4,6,7,8-HpCDF	6.50E-12	8.125E-10	1.63E-11	3.71E-12
1,2,3,4,7,8,9-HpCDF	2.70E-12	3.375E-10	6.75E-12	1.54E-12
Total HpCDF	1.00E-11	1.25E-09	2.50E-11	5.71E-12
Octa CDF	4.80E-12	6E-10	1.20E-11	2.74E-12
Total PCDF[h]	4.00E-11	5E-09	1.00E-10	2.28E-11
Total PCDD/PCDF[h]	1.20E-10	1.5E-08	3.00E-10	6.85E-11
Non-PAH HAPs[f]				
Acetaldehyde[e]				
Acrolein[e]				
Benzene[e]	3.90E-04	4.88E-02	9.75E-04	2.23E-04
1,3-Butadiene[e]				
Ethylbenzene[e]	2.40E-04	3.00E-02	6.00E-04	
Formaldehyde[e]	3.10E-03	3.88E-01	7.75E-03	1.77E-03
Hexane[e]	9.20E-04	1.15E-01	2.30E-03	
Isooctane	4.00E-05	5.00E-03	1.00E-04	
Methyl Ethyl Ketone[e]				
Pentane[e]				
Propionaldehyde[e]				
Quinone[e]				
Methyl chloroform[e]	4.80E-05	6.00E-03	1.20E-04	
Toluene[e]	2.90E-03	3.63E-01	7.25E-03	
Xylene[e]	2.00E-04	2.50E-02	5.00E-04	

Pollutant	Emission Factor[a] (lb/ton)	Emissions (lb/hr)	Emissions (T/yr)	Emissions (lb/hr) Annual Average
PAH HAPs[f]				
2-Methylnaphthalene	0.00017	2.13E-02	4.25E-04	9.70E-05
3-Methylchloranthrene[e]				
Acenaphthene	1.40E-06	1.75E-04	3.50E-06	7.99E-07
Acenaphthylene	2.20E-05	2.75E-03	5.50E-05	1.26E-05
Anthracene	3.10E-06	3.88E-04	7.75E-06	1.77E-06
Benzo(a)anthracene	2.10E-07	2.63E-05	5.25E-07	1.20E-07
Benzo(a)pyrene[e]	9.80E-09	1.23E-06	2.45E-08	5.59E-09
Benzo(b)fluoranthene	1.00E-07	1.25E-05	2.50E-07	5.71E-08
Benzo(e)pyrene	1.10E-07	1.38E-05	2.75E-07	6.28E-08
Benzo(g,h,I)perylene	4.00E-08	5.00E-06	1.00E-07	2.28E-08
Benzo(k)fluoranthene	4.10E-08	5.13E-06	1.03E-07	2.34E-08
Chrysene	1.80E-07	2.25E-05	4.50E-07	1.03E-07
Dibenzo(a,h)anthracene				
Dichlorobenzene				
Fluoranthene	6.10E-07	7.63E-05	1.53E-06	3.48E-07
Fluorene	1.10E-05	1.38E-03	2.75E-05	6.28E-06
Indeno(1,2,3-cd)pyrene	7.00E-09	8.75E-07	1.75E-08	4.00E-09
Naphthalene[e]	0.00065	8.13E-02	1.63E-03	3.71E-04
Perylene	8.80E-09	1.10E-06	2.20E-08	5.02E-09
Phenanthrene	2.30E-05	2.88E-03	5.75E-05	1.31E-05
Pyrene	3.00E-06	3.75E-04	7.50E-06	1.71E-06
Non-HAP Organic Compounds[f]				
Acetone[e]				
Benzaldehyde				
Butane	6.70E-04	8.38E-02	1.68E-03	
Butyraldehyde				
Crotonaldehyde[e]				
Ethylene	7.00E-03	8.75E-01	1.75E-02	
Heptane	9.40E-03	1.18E+00	2.35E-02	
Hexanal				
Isovaleraldehyde				
2-Methyl-1-pentene	4.00E-03	5.00E-01	1.00E-02	
2-Methyl-2-butene	5.80E-04	7.25E-02	1.45E-03	
3-Methylpentane	1.90E-04	2.38E-02	4.75E-04	
1-Pentene	2.20E-03	2.75E-01	5.50E-03	
n-Pentane	2.10E-04	2.63E-02	5.25E-04	
Valeraldehyde				
Metals[g]				
Antimony[e]	1.80E-07	2.25E-05	4.50E-07	
Arsenic[e]	5.60E-07	7.00E-05	1.40E-06	3.20E-07
Barium[e]	5.80E-06	7.25E-04	1.45E-05	
Beryllium[e]				
Cadmium[e]	4.10E-07	5.13E-05	1.03E-06	2.34E-07
Chromium[e]	5.50E-06	6.88E-04	1.38E-05	
Cobalt[e]	2.60E-08	3.25E-06	6.50E-08	
Copper[e]	3.10E-06	3.88E-04	7.75E-06	
Hexavalent Chromium[e]	4.50E-07	5.63E-05	1.13E-06	2.57E-07
Manganese[e]	7.70E-06	9.63E-04	1.93E-05	
Mercury[e]	2.60E-06	3.25E-04	6.50E-06	
Molybdenum[e]				
Nickel[e]	6.30E-05	7.88E-03	1.58E-04	3.60E-05
Phosphorus[e]	2.80E-05	3.50E-03	7.00E-05	
Silver[e]	4.80E-07	6.00E-05	1.20E-06	
Selenium[e]	3.50E-07	4.38E-05	8.75E-07	
Thallium[e]	4.10E-09	5.13E-07	1.03E-08	
Vanadium[e]				
Zinc[e]	6.10E-05	7.63E-03	1.53E-04	

a) Emission factors are from AP-42 11.1, Hot Mix Asphalt Plants, 3/04
b) AP-42, Table 11.1-3, Particulate Matter Emission Factors for Drum Mix Hot Asphalt Plants, 3/04
b1) AP-42, Table 11.1-4, Summary of Particle Size Distribution for Drum Mix Dryers **(Emission Rating Factor E - "Poor")**
c) AP-42, Table 11.1-7, Emission Factors for CO. CO2, NOx, and SO2 from Drum Mix Hot Asphalt Plants, 3/04
d) AP-42, Table 11.1-8, Emission Factors for TOC, Methane, VOC, and HCl from Drum Mix Hot Asphalt Plants, 3/04
e) IDAPA Toxic Air Pollutant
f) AP-42, Table 11.1-10, Emission Factors for Organic Pollutant Emissions from Drum Mix Hot Asphalt Plants, 3/04
g) AP-42, Table 11.1-12, Emission Factors for Metal Emissions from Drum Mix Hot Mix Asphalt Plants, 3/04
h) Compound is classified as polycyclic organic matter, as defined in the 1990 CAAA. Total PCDD is the sum of the total tetra through octa dioxins; total PCDF is sum of the total tetra through octa furans; and total PCDD/PCDF is the sum of total PCDD and total PCDF.

Facility: SALMON ASPHALT
7/25/2008 12:55 **Permit/Facility ID: TBD by DE TBD by DEQ**

Load-out Operations AP-42 Section 11.1

Emissions Toggle =	1	
Hourly Throughput	125	T/hr
Annual Hours Operating	40	hrs/yr
Max Annual Throughput	5,000	Tons/yr (Proposed HMA Throughput Limit)

Pollutant	Emission Factor[a] Loadout (lb/ton)	Emissions (lb/hr) 1-hr Average	Emissions (T/yr)	Emissions (lb/hr) Annual Average
PM (total)[b]	5.22E-04	0.065	0.00	0.0003
PM-10 (total)[b]	5.22E-04	0.065	0.00	0.0003
P.M.-2.5[b]				
CO[b]	1.35E-03	0.169	0.00	
NOx				
SO_2				
VOC[d,g]	3.91E-03	0.489	0.01	
Lead				
HCl[d,e]	No Data			
Dioxins[e]				
2,3,7,8-TCDD				
Total TCDD				
1,2,3,7,8-PeCDD				
Total PeCDD				
1,2,3,4,7,8-HxCDD				
1,2,3,6,7,8-HxCDD				
1,2,3,7,8,9-HxCDD				
Total HxCDD				
1,2,3,4,6,7,8-Hp-CDD				
Total HpCDD				
Octa CDD				
Total PCDD[h]				
Furans[e]				
2,3,7,8-TCDF				
Total TCDF				
1,2,3,7,8-PeCDF				
2,3,4,7,8-PeCDF				
Total PeCDF				
1,2,3,4,7,8-HxCDF				
1,2,3,6,7,8-HxCDF				
2,3,4,6,7,8-HxCDF				
1,2,3,7,8,9-HxCDF				
Total HxCDF				
1,2,3,4,6,7,8-HpCDF				
1,2,3,4,7,8,9-HpCDF				
Total HpCDF				
Octa CDF				
Total PCDF[h]				
Total PCDD/PCDF[h]				
Non-PAH HAPs				
Acetaldehyde[e]				
Acrolein[e]				
Benzene[e]	2.16E-06	2.70E-04	5.41E-06	1.23E-06
1,3-Butadiene[e]				
Ethylbenzene[e]	1.16E-05	1.46E-03	2.91E-05	
Formaldehyde[e]	3.66E-06	4.57E-04	9.15E-06	2.09E-06
Hexane[e]	6.24E-06	7.80E-04	1.56E-05	
Isooctane	7.49E-08	9.36E-06	1.87E-07	
Methyl Ethyl Ketone[e]	2.04E-06	2.55E-04	5.09E-06	
Pentane[e]				
Propionaldehyde[e]				
Quinone[e]				
Methyl chloroform[e]		0.00E+00	0.00E+00	
Toluene[e]	8.73E-06	1.09E-03	2.18E-05	
Xylene[e]	5.03E-05	6.29E-03	1.26E-04	
POM (7-PAH Group)				2.63E-07

Pollutant	Emission Factor[a] Loadout (lb/ton)	Emissions (lb/hr) 1-hr Average	Emissions (T/yr)	Emissions (lb/hr) Annual Average
PAH HAPs[f]				
2-Methylnaphthalene	8.11E-06	1.01E-03	2.03E-05	4.63E-06
3-Methylchloranthrene[e]				
Acenaphthene	8.86E-07	1.11E-04	2.22E-06	5.06E-07
Acenaphthylene	9.55E-08	1.19E-05	2.39E-07	5.45E-08
Anthracene	2.39E-07	2.98E-05	5.97E-07	1.36E-07
Benzo(a)anthracene	6.48E-08	8.10E-06	1.62E-07	3.70E-08
Benzo(a)pyrene[e]	7.84E-09	9.80E-07	1.96E-08	4.48E-09
Benzo(b)fluoranthene	2.59E-08	3.24E-06	6.48E-08	1.48E-08
Benzo(e)pyrene	2.66E-08	3.32E-06	6.65E-08	1.52E-08
Benzo(g,h,l)perylene	6.48E-09	8.10E-07	1.62E-08	3.70E-09
Benzo(k)fluoranthene	7.50E-09	9.38E-07	1.88E-08	4.28E-09
Chrysene	3.51E-07	4.39E-05	8.78E-07	2.00E-07
Dibenzo(a,h)anthracene	1.26E-09	1.58E-07	3.15E-09	7.20E-10
Dichlorobenzene				
Fluoranthene	1.70E-07	2.13E-05	4.26E-07	9.73E-08
Fluorene	2.63E-06	3.28E-04	6.56E-06	1.50E-06
Indeno(1,2,3-cd)pyrene	1.60E-09	2.00E-07	4.01E-09	9.15E-10
Naphthalene[e]	4.26E-06	5.33E-04	1.07E-05	2.43E-06
Perylene	7.50E-08	9.38E-06	1.88E-07	4.28E-08
Phenanthrene	2.76E-06	3.45E-04	6.90E-06	1.58E-06
Pyrene	5.11E-07	6.39E-05	1.28E-06	2.92E-07
Non-HAP Organic Compounds				
Acetone[e]	1.95E-06	2.43E-04	4.87E-06	
Benzaldehyde				
Butane				
Butyraldehyde				
Crotonaldehyde[e]				
Ethylene	2.95E-05	3.69E-03	7.38E-05	
Heptane				
Hexanal				
Isovaleraldehyde				
2-Methyl-1-pentene				
2-Methyl-2-butene				
3-Methylpentane				
1-Pentene				
n-Pentane				
Valeraldehyde				
Metals				
Antimony[e]				
Arsenic[e]				
Barium[e]				
Beryllium[e]				
Cadmium[e]				
Chromium[e]				
Cobalt[e]				
Copper[e]				
Hexavalent Chromium[e]				
Manganese[e]				
Mercury[e]				
Molybdenum[e]				
Nickel[e]				
Phosphorus[e]				
Silver[e]				
Selenium[e]				
Thallium[e]				
Vanadium[e]				
Zinc[e]				

a) Emission factors are from AP-42 11.1, Hot Mix Asphalt Plants, 3/04
b) AP-42, Table 11.1-14, Predictive Emission Factor Equations for Load-Out and Silo Filling Operations, 3/04 Defaults: (-V) = 0.5 T (°F) = 325

		LOADOUT	SILO FILL	
Total PM EF = $0.000181+0.00141(-V)e^{((0.0251)(T+460)-20.43)} + 0.000332+ 0.00105(-V)e^{((0.0251)(T+}$	=	5.219E-04	5.859E-04	(split addends)
Organic PM EF = $0.00141(-V)e^{((0.0251)(T+460)-20.43)} + 0.00105(-V)e^{((0.0251)(T+460)-20.43)}$	=	3.409E-04	2.539E-04	(split addends)
TOC PM EF = $0.0172(-V)e^{((0.0251)(T+460)-20.43)} + 0.0504(-V)e^{((0.0251)(T+460)-20.43)}$	=	4.159E-03	1.219E-02	(split addends)
CO PM EF = $0.00558(-V)e^{((0.0251)(T+460)-20.43)} + 0.00488(-V)e^{((0.0251)(T+460)-20.43)}$	=	1.349E-03	1.180E-03	(split addends)

e) IDAPA Toxic Air Pollutant
f) AP-42, Table 11.1-15, Speciation Profiles for Load-out, Silo Filling, & Asphalt Storage--Organic Particulate-Based Compounds, 3/04 (EF=Spec% * Organic PM EF)
g) AP-42, Table 11.1-16, Speciation Profiles for Load-out, Silo Filling, &Asphalt Storage--Organic Volatile-Based Compounds, 3/04, (EF=Spec% * TOC PM EF)

Pollutants shown in bold text are carcinogens subject to an annual standard.

Pollutants shown in blue text are organic volatile-based compounds, EF = Spec% x TOC PM EF.

Facility: **SALMON ASPHALT**
7/25/2008 12:55 **Permit/Facility ID: TBD by DEC TBD by DEQ**

Load-out Operations AP-42 Section 11.1, Page 2

Fuel Type Toggle =	1	
Hourly Throughput	125	T/hr
Annual Hours Operating	40	hrs/yr
Max Annual Throughput	5,000	Tons/yr (Proposed HMA Throughput Limit)

Pollutant	Emission Factor[a] Loadout (lb/ton)	Emissions (lb/hr) 1-hr Average	Emissions (T/yr)	Emissions (lb/hr) Annual Average
non-PAH HAPs[a]				
Bromomethane[e]	3.99E-07	4.99E-05	9.98E-07	
2-Butanone (see Methyl Ethyl Ketone)				
Carbon disulfide[e]	5.41E-07	6.76E-05	1.35E-06	
Chloroethane (Ethyl chloride[e])	8.73E-09	1.09E-06	2.18E-08	
Chloromethane (Methyl chloride[e])	6.24E-07	7.80E-05	1.56E-06	
Cumene[e]	4.57E-06	5.72E-04	1.14E-05	
n-Hexane (see Hexane[e])				
Methylene chloride (Dichloromethane[e])	0.00E+00	0.00E+00	0.00E+00	
MTBE	0.00E+00	0.00E+00	0.00E+00	
Styrene[e]	3.04E-07	3.80E-05	7.59E-07	
Tetrachloroethene (Tetrachloroethylene[e])	3.20E-07	4.00E-05	8.01E-07	
1,1,1-Trichloroethane (Methyl chloroform[e])	0.00E+00	0.00E+00	0.00E+00	
Trichloroethene (Trichloroethylene[e])	0.00E+00	0.00E+00	0.00E+00	
Trichlorofluoromethane	5.41E-08	6.76E-06	1.35E-07	
m-/p-Xylene[e] (added into Xylene[e])	1.71E-05	2.13E-03	4.26E-05	
o-Xylene[e] (added into Xylene[e])	3.33E-05	4.16E-03	8.32E-05	
Phenol[e,f]	4.02E-06	5.03E-04	1.01E-05	
Non-HAP Organic Compounds				
Methane	2.70E-04	3.38E-02	6.76E-04	

Pollutants shown in blue text are organic volatile-based compounds, EF = Spec% x TOC PM EF.

Facility: **SALMON ASPHALT**
7/25/2008 12:55 **Permit/Facility ID: TBD by DE TBD by DEQ**

Silo Filling Operations AP-42 Section 11.1

Emissions Toggle = 1
Hourly Throughput 125 T/hr
Annual Hours Operating 40 hrs/yr
Max Annual Throughput 5,000 Tons/yr (Proposed HMA Throughput Limit)

Pollutant	Emission Factor[a] Silo Fill (lb/ton)	Emissions (lb/hr) 1-hr Average	Emissions (T/yr)	Emissions (lb/hr) Annual Average
PM (total)[b]	5.86E-04	0.0732	0.0015	0.0003
PM-10 (total)[b]	5.86E-04	0.0732	0.0015	0.0003
P.M.-2.5[b]				
CO[b]	1.18E-03	0.1475	0.0029	
NOx				
SO_2				
VOC[d,g]	1.22E-04	1.52E-02	0.0003	
Lead				
HCl[d,e]	No Data			
Dioxins[e]				
2,3,7,8-TCDD				
Total TCDD				
1,2,3,7,8-PeCDD				
Total PeCDD				
1,2,3,4,7,8-HxCDD				
1,2,3,6,7,8-HxCDD				
1,2,3,7,8,9-HxCDD				
Total HxCDD				
1,2,3,4,6,7,8-Hp-CDD				
Total HpCDD				
Octa CDD				
Total PCDD[h]				
Furans[e]				
2,3,7,8-TCDF				
Total TCDF				
1,2,3,7,8-PeCDF				
2,3,4,7,8-PeCDF				
Total PeCDF				
1,2,3,4,7,8-HxCDF				
1,2,3,6,7,8-HxCDF				
2,3,4,6,7,8-HxCDF				
1,2,3,7,8,9-HxCDF				
Total HxCDF				
1,2,3,4,6,7,8-HpCDF				
1,2,3,4,7,8,9-HpCDF				
Total HpCDF				
Octa CDF				
Total PCDF[h]				
Total PCDD/PCDF[h]				
Non-PAH HAPs				
Acetaldehyde[e]				
Acrolein[e]				
Benzene[e]	3.90E-06	4.87E-04	0.0000	0.0000
1,3-Butadiene[e]				
Ethylbenzene[e]	4.63E-06	5.79E-04	0.0000	
Formaldehyde[e]	8.41E-05	1.05E-02	0.0002	0.0000
Hexane[e]	1.22E-05	1.52E-03	0.0000	
Isooctane	3.78E-08	4.72E-06	0.0000	
Methyl Ethyl Ketone[e]	4.75E-06	5.94E-04	0.0000	
Pentane[e]				
Propionaldehyde[e]				
Quinone[e]				
Methyl chloroform[e]		0.00E+00	0.0000	
Toluene[e]	7.56E-06	9.44E-04	0.0000	
Xylene[e]	3.13E-05	3.91E-03	0.0001	
POM (7-PAH Group)				3.85E-07

Pollutant	Emission Factor[a] Silo Fill (lb/ton)	Emissions (lb/hr) 1-hr Average	Emissions (T/yr)	Emissions (lb/hr) Annual Average
PAH HAPs[f]				
2-Methylnaphthalene	1.34E-05	1.67E-03	3.34E-05	7.64E-06
3-Methylchloranthrene[e]				
Acenaphthene	1.19E-06	1.49E-04	2.98E-06	6.81E-07
Acenaphthylene	3.55E-08	4.44E-06	8.89E-08	2.03E-08
Anthracene	3.30E-07	4.13E-05	8.25E-07	1.88E-07
Benzo(a)anthracene	1.42E-07	1.78E-05	3.55E-07	8.12E-08
Benzo(a)pyrene[e]	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Benzo(b)fluoranthene	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Benzo(e)pyrene	2.41E-08	3.01E-06	6.03E-08	1.38E-08
Benzo(g,h,I)perylene	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Benzo(k)fluoranthene	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chrysene	5.33E-07	6.66E-05	1.33E-06	3.04E-07
Dibenzo(a,h)anthracene	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Dichlorobenzene				
Fluoranthene	3.81E-07	4.76E-05	9.52E-07	2.17E-07
Fluorene	2.56E-06	3.21E-04	6.41E-06	1.46E-06
Indeno(1,2,3-cd)pyrene	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Naphthalene[e]	4.62E-06	5.78E-04	1.16E-05	2.64E-06
Perylene	7.62E-08	9.52E-06	1.90E-07	4.35E-08
Phenanthrene	4.57E-06	5.71E-04	1.14E-05	2.61E-06
Pyrene	1.12E-06	1.40E-04	2.79E-06	6.38E-07
Non-HAP Organic Compounds				
Acetone[e]	6.70E-06	8.38E-04	0.0000	
Benzaldehyde				
Butane				
Butyraldehyde				
Crotonaldehyde[e]				
Ethylene	1.34E-04	1.68E-02	0.0003	
Heptane				
Hexanal				
Isovaleraldehyde				
2-Methyl-1-pentene				
2-Methyl-2-butene				
3-Methylpentane				
1-Pentene				
n-Pentane				
Valeraldehyde				
Metals				
Antimony[e]				
Arsenic[e]				
Barium[e]				
Beryllium[e]				
Cadmium[e]				
Chromium[e]				
Cobalt[e]				
Copper[e]				
Hexavalent Chromium[e]				
Manganese[e]				
Mercury[e]				
Molybdenum[e]				
Nickel[e]				
Phosphorus[e]				
Silver[e]				
Selenium[e]				
Thallium[e]				
Vanadium[e]				
Zinc[e]				

a) Emission factors are from AP-42 11.1, Hot Mix Asphalt Plants, 3/04
b) AP-42, Table 11.1-14, Predictive Emission Factor Equations for Load-Out and Silo Filling Operations, 3/04 Defaults: (-V) = 0.5 T (°F) = 325

		LOADOUT	SILO FILL	
Total PM EF = $0.000181+0.00141(-V)e^{((0.0251)(T+460)-20.43)} + 0.000332+0.00105(-V)e^{((0.0251)(T+}$	=	5.219E-04	5.859E-04	(split addends)
Organic PM EF = $0.00141(-V)e^{((0.0251)(T+460)-20.43)} + 0.00105(-V)e^{((0.0251)(T+460)-20.43)}$	=	3.409E-04	2.539E-04	(split addends)
TOC PM EF = $0.0172(-V)e^{((0.0251)(T+460)-20.43)} + 0.0504(-V)e^{((0.0251)(T+460)-20.43)}$	=	4.159E-03	1.219E-02	(split addends)
CO PM EF = $0.00558(-V)e^{((0.0251)(T+460)-20.43)} + 0.00488(-V)e^{((0.0251)(T+460)-20.43)}$	=	1.349E-03	1.180E-03	(split addends)

e) IDAPA Toxic Air Pollutant
f) AP-42, Table 11.1-15, Speciation Profiles for Load-out, Silo Filling, & Asphalt Storage--Organic Particulate-Based Compounds, 3/04 (EF=Spec% * Organic PM EF)
g) AP-42, Table 11.1-16, Speciation Profiles for Load-out, Silo Filling, &Asphalt Storage--Organic Volatile-Based Compounds, 3/04, (EF=Spec% * TOC PM EF)

Pollutants shown in bold text are carcinogens subject to an annual standard. These lb/hr values are annual averages.

Pollutants shown in blue text are organic volatile-based compounds, EF = Spec% x TOC PM EF.

Facility: **SALMON ASPHALT**
7/25/2008 12:55 **Permit/Facility ID: TBD by DEC TBD by DEQ**

Silo Filling Operations AP-42 Section 11.1, Page 2

Fuel Type Toggle =	1	
Hourly Throughput	125	T/hr
Annual Hours Operating	40	hrs/yr
Max Annual Throughput	360	Tons/yr Theoretical Max HMA at Max Hours
Max Annual Throughput	5,000	Tons/yr (Proposed HMA Throughput Limit)

Pollutant	Emission Factor[a] Silo Fill (lb/ton)	Emissions (lb/hr) 1-hr Average	Emissions (T/yr)	Emissions (lb/hr) Annual Average
non-PAH HAPs[g]				
Bromomethane[e]	5.97E-07	7.46E-05	0.0000	
2-Butanone (see Methyl Ethyl Ketone)				
Carbon disulfide[e]	1.95E-06	2.44E-04	0.0000	
Chloroethane (Ethyl chloride[e])	4.87E-07	6.09E-05	0.0000	
Chloromethane (Methyl chloride[e])	2.80E-06	3.50E-04	0.0000	
Cumene[e]	0.00E+00	0.00E+00	0.0000	
n-Hexane (see Hexane[e])				
Methylene chloride (Dichloromethane[e])	3.29E-08	4.11E-06	0.0000	
MTBE	0.00E+00	0.00E+00	0.0000	
Styrene[e]	6.58E-07	8.23E-05	0.0000	
Tetrachloroethene (Tetrachloroethylene[e])	0.00E+00	0.00E+00	0.0000	
1,1,1-Trichloroethane (Methyl chloroform[e])	0.00E+00	0.00E+00	0.0000	
Trichloroethene (Trichloroethylene[e])	0.00E+00	0.00E+00	0.0000	
Trichlorofluoromethane	0.00E+00	0.00E+00	0.0000	
m-/p-Xylene[e] (added into Xylene[e])	2.44E-05	3.05E-03	0.0001	
o-Xylene[e] (added into Xylene[e])	6.95E-06	8.68E-04	0.0000	
Phenol[e,f]	0.00E+00	0.00E+00	0.0000	
Non-HAP Organic Compounds				
Methane	3.17E-03	3.96E-01	0.0079	

Pollutants shown in blue text are organic volatile-based compounds, EF = Spec% x TOC PM EF.

Facility: **SALMON ASPHALT**
7/25/2008 12:55 **Permit/Facility ID:** **TBD by DEQ TBD by DEQ**

Hourly Throughput 125 T/hr
Annual Hours Operating 40 hrs/yr
Max Annual Throughput 5,000 Tons/yr (Proposed HMA Throughput Limit)
PRESUME 24-HR/DAY OPERATIONS

RAP Scalping Screen (Recycle Scalping Screen), AP-42 11.19 (8/04)

At 0% RAP use rate, flow across scalping screen is **0** T/hr

Pollutant	Emission Factor[a] RAP Scalping Screen Table 11.19.2-2 SCREENING UNCONTROLLED (lb/ton)	Emissions (lb/hr) 1-hr Average	Emissions (T/yr)	Emissions (lb/hr) Annual Average
PM (total)[b]	0.025	0.0000	0.00	0.000
PM-10 (total)[b]	0.0087	0.0000	0.00	0.000
P.M.-2.5[b]	ND			

Aggregate Scalping Screen, AP-42 11.19 (8/04)

No information provided in application regarding this screen.
Presume same flow rate as for RAP scalping screen

At 0% RAP use rate, flow across scalping screen is 125 T/hr

Pollutant	Emission Factor[a] RAP Scalping Screen Table 11.19.2-2 SCREENING UNCONTROLLED (lb/ton)	Emissions (lb/hr) 1-hr Average	Emissions (T/yr)	Emissions (lb/hr) Annual Average
PM (total)[b]	0.025	3.1250	0.06	0.014
PM-10 (total)[b]	0.0087	1.0875	0.02	0.005
P.M.-2.5[b]	ND			

Conveyor Transfer Points, AP-42 11.19 (8/04)

Weigh Conveyor 125 T/hr

Pollutant	Emission Factor[a] RAP Scalping Screen Table 11.19.2-2 CONVEYOR TRANSFER PT UNCONTROLLED (lb/ton)	Emissions (lb/hr) 1-hr Average	Emissions (T/yr)	Emissions (lb/hr) Annual Average	
PM (total)[b]	0.003	0.3750	0.01	0.002	
PM-10 (total)[b]	0.0011	0.1375	0.00	0.001	x 2 POINTS
P.M.-2.5[b]	ND				

RAP Weigh Conveyor 0 T/hr

Pollutant	Emission Factor[a] RAP Scalping Screen Table 11.19.2-2 CONVEYOR TRANSFER PT UNCONTROLLED (lb/ton)	Emissions (lb/hr) 1-hr Average	Emissions (T/yr)	Emissions (lb/hr) Annual Average	
PM (total)[b]	0.003	0.0000	0.00	0.000	
PM-10 (total)[b]	0.0011	0.0000	0.00	0.000	x 2 POINTS
P.M.-2.5[b]	ND				

Drag Slat Conveyor 250 T/hr

Pollutant	Emission Factor[a] RAP Scalping Screen Table 11.19.2-2 CONVEYOR TRANSFER PT UNCONTROLLED (lb/ton)	Emissions (lb/hr) 1-hr Average	Emissions (T/yr)	Emissions (lb/hr) Annual Average	
PM (total)[b]	0.003	0.0000	0.00	0.000	
PM-10 (total)[b]	0.0011	0.0000	0.00	0.000	x 2 POINTS
P.M.-2.5[b]	ND				

Miscellaneous Calculations

HMA Dryer Baghouse Air to Cloth Ratio

Air to cloth ratio = Exit gas volume ÷ total cloth area

Air to cloth ratio =	0.037	$m^3/(s*m^2)$

Exit Gas Volume (acfm)	26,000
Exit Gas Volume (m^3/s)	12
Total Cloth Area (ft^2)	3,592
Total Cloth Area (m^2)	333.8

1 cubic meter = 35.314 666 721 cubic foot
1 square meter = 10.763 910 417 square foot

Tank Emissions

Tank-1 Emissions, lb/yr	0.89	Diesel tank, from TANKS program
Tank-1 Emissions, T/yr	0.00	
Tank-2 Emissions, lb/yr	0.00	Asphalt cement tank, from TANKS program
Tank-2 Emissions, T/yr	0.00	
Hours per year =	40	
Tank-1 Emissions, lb/hr	0.02	Annual Emissions/Hours per Year
Tank-2 Emissions, lb/hr	0.00	Annual Emissions/Hours per Year

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	Tank-1
City:	Salmon
State:	Idaho
Company:	Salmon Asphalt and Paving
Type of Tank:	Horizontal Tank
Description:	Diesel Tank

Tank Dimensions

Shell Length (ft):		16.00
Diameter (ft):		8.00
Volume (gallons):		5,000.00
Turnovers:		1.52
Net Throughput(gal/yr):		7,615.00
Is Tank Heated (y/n):	N	
Is Tank Underground (y/n):	N	

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition	Good

Breather Vent Settings

Vacuum Settings (psig):	-0.03
Pressure Settings (psig)	-0.03

Meterological Data used in Emissions Calculations: Missoula, Montana (Avg Atmospheric Pressure = 13.12 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Tank-1 - Horizontal Tank
Salmon, Idaho

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Distillate fuel oil no. 2	All	45.90	40.17	51.64	44.32	0.0039	0.0031	0.0048	130.0000			188.00	Option 1: VP40 = .0031 VP50 = .0045

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

Tank-1 - Horizontal Tank
Salmon, Idaho

Annual Emission Calcaulations

Standing Losses (lb):	0.7993
Vapor Space Volume (cu ft):	512.2597
Vapor Density (lb/cu ft):	0.0001
Vapor Space Expansion Factor:	0.0455
Vented Vapor Saturation Factor:	0.9992
Tank Vapor Space Volume:	
Vapor Space Volume (cu ft):	512.2597
Tank Diameter (ft):	8.0000
Effective Diameter (ft):	12.7694
Vapor Space Outage (ft):	4.0000
Tank Shell Length (ft):	16.0000
Vapor Density	
Vapor Density (lb/cu ft):	0.0001
Vapor Molecular Weight (lb/lb-mole):	130.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0039
Daily Avg. Liquid Surface Temp. (deg. R):	505.5746
Daily Average Ambient Temp. (deg. F):	44.2958
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731
Liquid Bulk Temperature (deg. R):	503.9858
Tank Paint Solar Absorptance (Shell):	0.1700
Daily Total Solar Insulation Factor (Btu/sqft day):	1,189.5774
Vapor Space Expansion Factor	
Vapor Space Expansion Factor:	0.0455
Daily Vapor Temperature Range (deg. R):	22.9244
Daily Vapor Pressure Range (psia):	0.0017
Breather Vent Press. Setting Range(psia):	0.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0039
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	0.0031
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	0.0048
Daily Avg. Liquid Surface Temp. (deg R):	505.5746
Daily Min. Liquid Surface Temp. (deg R):	499.8435
Daily Max. Liquid Surface Temp. (deg R):	511.3057
Daily Ambient Temp. Range (deg. R):	23.9750
Vented Vapor Saturation Factor	
Vented Vapor Saturation Factor:	0.9992
Vapor Pressure at Daily Average Liquid: Surface Temperature (psia):	0.0039
Vapor Space Outage (ft):	4.0000
Working Losses (lb):	0.0926
Vapor Molecular Weight (lb/lb-mole):	130.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0039
Annual Net Throughput (gal/yr.):	7,615.0000
Annual Turnovers:	1.5230
Turnover Factor:	1.0000
Tank Diameter (ft):	8.0000
Working Loss Product Factor:	1.0000
Total Losses (lb):	0.8919

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

Tank-1 - Horizontal Tank
Salmon, Idaho

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Distillate fuel oil no. 2	0.09	0.80	0.89

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	Tank-2
City:	Salmon
State:	Idaho
Company:	Salmon Asphalt and Paving
Type of Tank:	Horizontal Tank
Description:	Asphalt Cement Tank

Tank Dimensions

Shell Length (ft):		42.00
Diameter (ft):		8.00
Volume (gallons):		12,000.00
Turnovers:		1.00
Net Throughput(gal/yr):		12,000.00
Is Tank Heated (y/n):	Y	
Is Tank Underground (y/n):	N	

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition	Good

Breather Vent Settings

Vacuum Settings (psig):	0.00
Pressure Settings (psig)	0.00

Meterological Data used in Emissions Calculations: Missoula, Montana (Avg Atmospheric Pressure = 13.12 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Tank-2 - Horizontal Tank
Salmon, Idaho

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Residual oil no. 6	All	0.00	0.00	0.00	0.00	0.0000	0.0000	0.0000	190.0000			387.00	Option 1: VP40 = .00002

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

Tank-2 - Horizontal Tank
Salmon, Idaho

Annual Emission Calcaulations

Standing Losses (lb):	0.0000
Vapor Space Volume (cu ft):	1,344.6817
Vapor Density (lb/cu ft):	0.0000
Vapor Space Expansion Factor:	0.0000
Vented Vapor Saturation Factor:	1.0000
Tank Vapor Space Volume:	
Vapor Space Volume (cu ft):	1,344.6817
Tank Diameter (ft):	8.0000
Effective Diameter (ft):	20.6888
Vapor Space Outage (ft):	4.0000
Tank Shell Length (ft):	42.0000
Vapor Density	
Vapor Density (lb/cu ft):	0.0000
Vapor Molecular Weight (lb/lb-mole):	190.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0000
Daily Avg. Liquid Surface Temp. (deg. R):	459.6700
Daily Average Ambient Temp. (deg. F):	44.2958
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731
Liquid Bulk Temperature (deg. R):	459.6700
Tank Paint Solar Absorptance (Shell):	0.1700
Daily Total Solar Insulation Factor (Btu/sqft day):	1,189.5774
Vapor Space Expansion Factor	
Vapor Space Expansion Factor:	0.0000
Daily Vapor Temperature Range (deg. R):	0.0000
Daily Vapor Pressure Range (psia):	0.0000
Breather Vent Press. Setting Range(psia):	0.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0000
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	0.0000
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	0.0000
Daily Avg. Liquid Surface Temp. (deg R):	459.6700
Daily Min. Liquid Surface Temp. (deg R):	459.6700
Daily Max. Liquid Surface Temp. (deg R):	459.6700
Daily Ambient Temp. Range (deg. R):	23.9750
Vented Vapor Saturation Factor	
Vented Vapor Saturation Factor:	1.0000
Vapor Pressure at Daily Average Liquid: Surface Temperature (psia):	0.0000
Vapor Space Outage (ft):	4.0000
Working Losses (lb):	0.0011
Vapor Molecular Weight (lb/lb-mole):	190.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0000
Annual Net Throughput (gal/yr.):	12,000.0000
Annual Turnovers:	1.0000
Turnover Factor:	1.0000
Tank Diameter (ft):	8.0000
Working Loss Product Factor:	1.0000
Total Losses (lb):	0.0011

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

Tank-2 - Horizontal Tank
Salmon, Idaho

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Residual oil no. 6	0.00	0.00	0.00

Total PM Emissions from Unpaved Roadways at the Facility [a]

Product Transported	Travel Distance [b] (ft)	Tons/ truck	Trucks/ year [c]	Distance/ year (mile/yr)	k [d] (lb/mile)	a	b	Silt Content (s) [e] (%)	Vehicle Weight [f] (tons)	Dry Moisture Content [g] (%)	p [h] (days)	Average Vehicle Speed (S) (mph)	PM Emissions (total) [i] (lb/mile)	PM Emissions (total) [i] (lb)
HMA	630	14	357	43	4.9	0.7	0.45	4.8	19.0	0.2	120	5	4.0	169
Raw Materials	630	14	357	43	4.9	0.7	0.45	4.8	19.0	0.2	120	5	4.0	169
													Total PM (lbs):	339
													Total PM (lbs/hr)[j]	8.47
													Total PM (tons/year):	0.17

PM10 Emissions from Unpaved Roadways at the Facility [a]

Product Transported	Travel Distance [b] (ft)	Tons/ truck	Trucks/ year [c]	Distance/ year (mile/yr)	k [d] (lb/mile)	a	b	Silt Content (s) [e] (%)	Vehicle Weight [f] (tons)	Dry Moisture Content [g] (%)	p [h] (days)	Average Vehicle Speed (S) (mph)	PM10 Emissions (lb/mile)	PM10 Emissions (lb)
HMA	630	14	357	43	1.5	0.9	0.45	4.8	19.0	0.2	120	5	1.0	43
Raw Materials	630	14	357	43	1.5	0.9	0.45	4.8	19.0	0.2	120	5	1.0	43
													Total PM10 (lbs):	86
													Total PM10 (lbs/hr)[j]	2.16
													Total PM10(tons/year):	0.04

Notes:

a.) PM10 emissions from unpaved roads at the facility were estimated using equations 1a and 2 of AP-42 Ch. 13.2.2. ($E=(k(s/12)^a(W/3)^b$ and $E_{ext}=E[(365-p)/365]$)

b.) Travel distance is average of typical travel routes (round trip).

c.) Calculated by dividing total product throughput by truck capacity of 14 tons and assuming 100% of trucks require return trips.

d.) The empirical constants k, a, b, and c were from Table 13.2.2-2 of AP-42.

e.) Typical silt content of unpaved road surfaces at the facility from Table 13.2.2-1 of AP-42, mean value for a plant road at a sand and gravel processing facility.

f.) Average weight of full and empty 10 wheeler dump trucks.

g.) Moisture content of surface material under dry uncontrolled conditions (conservatively assumed equal to 0.2%).

h.) Number of days with 0.01 inch or more of precipitation (p) from Figure 13.2.2.1 of AP-42.

i.) Total PM emissions based on PM30 emission factors.

j) Hourly rate based on 40 hours of operation per year.

Appendix 3

Ambient Impact Analysis Input/Output

07/23/08
10:28:42

```
 ***  SCREEN3 MODEL RUN  ***
 *** VERSION DATED 96043 ***

 ·\Screen\Salmon.scr

SIMPLE TERRAIN INPUTS:
   SOURCE TYPE              =        POINT
   EMISSION RATE (G/S)      =      1.00000
   STACK HEIGHT (M)         =       5.4864
   STK INSIDE DIAM (M)      =        .6900
   STK EXIT VELOCITY (M/S)=        32.8155
   STK GAS EXIT TEMP (K)    =     422.0389
   AMBIENT AIR TEMP (K)     =     293.0000
   RECEPTOR HEIGHT (M)      =        .0000
   URBAN/RURAL OPTION       =        RURAL
   BUILDING HEIGHT (M)      =       9.1500
   MIN HORIZ BLDG DIM (M) =         2.4384
   MAX HORIZ BLDG DIM (M) =        23.4696

THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

   STACK EXIT VELOCITY WAS CALCULATED FROM
   VOLUME FLOW RATE =   12.270620      (M**3/S)

BUOY. FLUX =   11.711 M**4/S**3;  MOM. FLUX =   88.984 M**4/S**2.

*** FULL METEOROLOGY ***

**********************************
*** SCREEN AUTOMATED DISTANCES ***
**********************************

 * TERRAIN HEIGHT OF    0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

  DIST     CONC              U10M   USTK  MIX HT   PLUME   SIGMA   SIGMA
   (M)   (UG/M**3)   STAB   (M/S)  (M/S)    (M)    HT (M)   Y (M)   Z (M)  DWASH
 -------  ----------  ----  -----  -----  ------  ------  ------  ------  -----
     3.    .0000       1     1.0    1.0   320.0   141.12    5.36    5.26    NO
   100.    386.2       5     5.0    5.0 10000.0    12.23    6.12    7.75    SS
   200.    140.4       4     8.0    8.0  2560.0    10.63   15.56   13.11    SS
   300.    83.54       4     8.0    8.0  2560.0    11.72   22.61   16.24    SS
   400.    58.36       4     8.0    8.0  2560.0    11.72   29.45   19.22    SS
   500.    46.08       4     5.0    5.0  1600.0    22.89   36.15   20.52    SS
   600.    39.48       4     5.0    5.0  1600.0    22.89   42.72   23.37    SS
   700.    33.75       4     5.0    5.0  1600.0    22.89   49.19   26.13    SS

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND     3. M:
    28.    1550.       4     8.0    8.0  2560.0     6.16    2.60    5.64    SS

 DWASH=   MEANS NO CALC MADE (CONC = 0.0)
 DWASH=NO MEANS NO BUILDING DOWNWASH USED
 DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
 DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
 DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

*********************************
*** SCREEN DISCRETE DISTANCES ***
*********************************

*** TERRAIN HEIGHT OF    0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

  DIST     CONC              U10M   USTK  MIX HT   PLUME   SIGMA   SIGMA
   (M)   (UG/M**3)   STAB   (M/S)  (M/S)    (M)    HT (M)   Y (M)   Z (M)  DWASH
 -------  ----------  ----  -----  -----  ------  ------  ------  ------  -----
   122.    290.3       4     8.0    8.0  2560.0     7.81    9.85   10.60    SS

 DWASH=   MEANS NO CALC MADE (CONC = 0.0)
 DWASH=NO MEANS NO BUILDING DOWNWASH USED
```

```
 DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
 DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
 DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

****************************************
     *** REGULATORY (Default) ***
    PERFORMING CAVITY CALCULATIONS
  WITH ORIGINAL SCREEN CAVITY MODEL
          (BRODE, 1988)
****************************************


 *** CAVITY CALCULATION - 1 ***        *** CAVITY CALCULATION - 2 ***
  CONC (UG/M**3)      =    1981.         CONC (UG/M**3)      =    5065.
  CRIT WS @10M (M/S)  =     3.13         CRIT WS @10M (M/S)  =    11.80
  CRIT WS @ HS (M/S)  =     3.13         CRIT WS @ HS (M/S)  =    11.80
  DILUTION WS (M/S)   =     1.57         DILUTION WS (M/S)   =     5.90
  CAVITY HT (M)       =    19.50         CAVITY HT (M)       =     9.67
  CAVITY LENGTH (M)   =    48.06         CAVITY LENGTH (M)   =     4.00
  ALONGWIND DIM (M)   =     2.44         ALONGWIND DIM (M)   =    23.47

****************************************
      END OF CAVITY CALCULATIONS
****************************************


     ****************************************
     *** SUMMARY OF SCREEN MODEL RESULTS ***
     ****************************************

 CALCULATION         MAX CONC    DIST TO   TERRAIN
  PROCEDURE         (UG/M**3)    MAX (M)    HT (M)
--------------     -----------   -------   -------
SIMPLE TERRAIN       1550.          28.        0.

 LDG. CAVITY-1       1981.          48.       --   (DIST = CAVITY LENGTH)

BLDG. CAVITY-2       5065.           4.       --   (DIST = CAVITY LENGTH)


**************************************************
** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **
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Salmon Asphalt and Paving
Air Modeling Analysis Summary

		PM10 (24-hr)	PM10 (annual)	SOx (3-hr)	SOx (24-hr)	SOx (annual)	CO (1-hr)	CO (8-hr)	Formaldehyde	Nickel	PAHs
Emission Rate (lb/hr)		2.88	0.01	1.38	1.38	0.01	16.25	16.25	1.77E-03	3.60E-05	5.05E-04
Emission Rate (g/s)		0.36	0.00	0.17	0.17	0.00	2.05	2.05	2.23E-04	4.53E-06	6.36E-05
Averaging Period	**Persistance Factors**	**Ambient Concentration (ug/m^3)**									
1-hr	1						594.39				
3-hr	0.9			45.27							
8-hr	0.7							416.07			
24-hr	0.4	42.06			20.12						
quarterly	0.13										
Annual (criteria)	0.08		0.04			0.02					
Annual (586)	0.125								8.09E-03	1.64E-04	2.31E-03
Background (ug/m^3)		73	26	34	26	8	3600	2300			
Modeled + Background (ug/m^3)		115.06	26.04	79.27	46.12	8.02	4194.39	2716.07			
Limit (ug/m^3)		150	50	1,300	365	80	40,000	10,000	7.70E-02	4.20E-03	1.40E-02
% of Limit Consumed		76.71%	52.08%	6.10%	12.64%	10.02%	10.49%	27.16%	10.51%	3.91%	16.49%

1.) Assumed persistence factors for simple terrain.
2.) Ambient concentration calculated by multiplying conc from modeling using unit factor by the pollutant emission rate then by the persistence factor.
3.) Stack characteristics based on asphalt plant baghouse discharge. Assumed other souce concentrations were additive with similar characteristics to baghouse.

Max Ambient Conc at or Beyond Property Boundary (for unit concentration of 1 ug/m^3):	290.3 ug/m^3 (1 hour average)