



**Chemical Waste Management of the Northwest**

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February 10, 2023

Air Quality Division  
Eastern Region – Bend Office  
Oregon Department of Environmental Quality  
475 NE Bellevue, Suite 110  
Bend, Oregon 97701

**RE: Chemical Waste Management of the Northwest Inc.  
Air Contaminant Discharge Permit (ACDP) 11-0002-SI-01 (Permit)  
Submittal of 2022 Annual Report**

Dear Sir/Madame:

In accordance with Section 6.2 of the Chemical Waste Management of the Northwest, Inc.'s (CWMN) Air Contaminant Discharge Permit (ACDP) No. 11-0002-SI-01 (issued February 7, 2014 and modified April 25, 2016), CWMN is submitting the following information:

**6.2.a Operating Parameters**

6.2.a.i. Amount of propane burned in the thermal oxidizer each month in 2022.

<b>Month</b>	<b>Propane Burned (MMft<sup>3</sup>)</b>
January	2.64
February	8.96
March	8.40
April	8.52
May	7.32
June	12.72
July	12.96
August	9.40
September	11.88
October	19.80
November	18.91
December	17.30
<b>Total</b>	<b>138.81</b>

6.2.a.ii. Amount of propane and landfill gas burned in the ORU each month.  
The ORU did not burn any landfill gas in 2022. Propane use is presented below.

<b>Month</b>	<b>Propane Combusted (1000 gallons)</b>
January	3.86
February	13.24
March	12.40
April	12.58
May	10.78
June	18.88
July	19.24
August	12.00
September	17.62
October	13.90
November	4.69
December	11.40
<b>Total</b>	<b>150.59</b>

6.2.a.iii. Amount of material processed through the stabilization, solidification, micro-encapsulation, macro-encapsulation, and bioremediation units each month in 2022. There was no material processed through the bioremediation unit.

<b>Month</b>	<b>Stabilization (tons)</b>	<b>Solidification (tons)</b>	<b>Micro-Encapsulation (tons)</b>	<b>Macro-Encapsulation (tons)</b>
January	207.59	864.28	0.00	59.32
February	315.30	684.25	0.00	77.35
March	393.84	825.88	0.00	143.86
April	251.15	1,152.32	0.00	49.56
May	321.26	1,335.35	0.00	75.08
June	443.29	1,270.11	0.00	55.39
July	554.54	715.76	0.00	36.66
August	1,495.19	819.15	0.00	212.70
September	1,778.76	754.55	0.00	62.15
October	1,963.27	1,169.27	0.00	70.85
November	991.24	893.64	0.00	188.08
December	481.32	778.06	0.00	127.18
<b>Total</b>	<b>9,196.72</b>	<b>11,262.63</b>	<b>0.00</b>	<b>1,158.18</b>

6.2.a.iv. Estimated amount of vehicle miles traveled on unpaved roads each month in 2022.

<b>Month</b>	<b>Vehicle Miles Traveled (VMT)</b>
January	1,324.4
February	1,104.4
March	869.0
April	737.0
May	818.4
June	1,086.8
July	737.0
August	1,548.8
September	1,445.4
October	2,334.2
November	1,557.6
December	1,511.4
<b>Total</b>	<b>15,074.40</b>

**6.2.b. A summary of annual pollutant emissions determined each month in accordance with permit Condition 4.0.**

See Attachment A – 2022 PSEL Summary

**6.2.c. Record of all planned and unplanned excess events.**

See Attachment B – 2022 Excess Emission Events.

**6.2.d. Summary of complaints relating to air quality received by permittee during the year.**

No air quality complaints were received in 2022.

**6.2.e. List of permanent changes made in plant process, production levels, and pollution control equipment which affected air contaminant emissions.**

No permanent changes to processes, production levels or pollution control equipment were made in 2022.

**6.2.f. Major maintenance performed on pollution control equipment.**

Major maintenance performed on pollution control equipment is listed in the following table:

<b>Date</b>	<b>Description</b>
9/14/22	Changed spark arrestor

Should you have any questions or concerns, please feel free to contact Jim Denson by phone at (602) 757-3352 or by email at [jdenson@wm.com](mailto:jdenson@wm.com).

Sincerely,

A handwritten signature in blue ink, appearing to read "Robert Mulholland". The signature is fluid and cursive, with a large initial "R" and a long, sweeping underline.

Robert Mulholland  
District Manager

**ATTACHMENT A**  
**PSEL CALCULATIONS**

**Chemical Waste Management of the Northwest, Inc., Arlington, Oregon**  
**Simple Air Contaminant Discharge Permit No. 11-0002-SI-01**

In accordance with Condition 3.1 of the Simple Air Contaminant Discharge Permit, compliance with the Plant Site Emission Limits (PSEL) must be determined with the following procedures, methods, and frequencies:

EMISSION UNIT	PROCESS PARAMETER	UNITS	FREQUENCY
Elevated Enclosed Flare (EEF)	Gas Combusted	MMft <sup>3</sup>	Monthly
Organics Recovery Unit (ORU)	Propane Combusted	gallons	Monthly
Stabilization	Material Processed	tons	Monthly
Solidification	Material Processed	tons	Monthly
Micro-encapsulation	Material Processed	tons	Monthly
Macro-encapsulation	Material Processed	tons	Monthly
Unpaved Roads	Vehicle Miles Traveled	VMT	Monthly
Cover Soil	Amount Moved	tons	Monthly
Concrete Crusher Engine	Power of Engine x Operation Hours	hp-hr	Monthly

\* Emission calculations must be performed each month for the preceding 12 consecutive calendar months.

Emission Factors established in Condition 10 are as follows:

EMISSION UNIT	POLLUTANT	EMISSION FACTOR	UNIT
Thermal Oxidizer	PM	0.7	lb/1000 gal
	PM <sub>10</sub>	0.7	lb/1000 gal
	PM <sub>2.5</sub>	0.7	lb/1000 gal
	SO <sub>2</sub>	11.22	lb/1000 gal
	NOx	13.0	lb/1000 gal
	CO	7.5	lb/1000 gal
	VOC	1.0	lb/1000 gal
	GHG	12,664	lb/1000 gal
Organics Recovery Unit (ORU) Propane	PM	0.7	lb/1000 gal
	PM <sub>10</sub>	0.7	lb/1000 gal
	PM <sub>2.5</sub>	0.7	lb/1000 gal
	SO <sub>2</sub>	11.22	lb/1000 gal
	NOx	13	lb/1000 gal
	CO	7.5	lb/1000 gal
	VOC	0.8	lb/1000 gal
Organics Recovery Unit (ORU) Landfill Gas	PM	9.35	lb/MMft <sup>3</sup>
	PM <sub>10</sub>	9.35	lb/MMft <sup>3</sup>
	PM <sub>2.5</sub>	9.35	lb/MMft <sup>3</sup>
	SO <sub>2</sub>	49.90	lb/MMft <sup>3</sup>
	NOx	37.4	lb/MMft <sup>3</sup>
	CO	170.5	lb/MMft <sup>3</sup>
	VOC	77.0	lb/MMft <sup>3</sup>
ORU Boiler (ME-1902)	PM	0.7	lb/1000 gal
	PM <sub>10</sub>	0.7	lb/1000 gal
	PM <sub>2.5</sub>	0.7	lb/1000 gal
	SO <sub>2</sub>	11.22	lb/1000 gal
	NOx	13	lb/1000 gal
	CO	7.5	lb/1000 gal
	VOC	1.0	lb/1000 gal
	GHG	12,664	lb/1000 gal

EMISSION UNIT	POLLUTANT	EMISSION FACTOR	UNIT
Concrete Crusher Engine*	PM	2.20E-03	lb/hp-hr
	PM <sub>10</sub>	2.20E-03	lb/hp-hr
	PM <sub>2.5</sub>	2.20E-03	lb/hp-hr
	SO <sub>2</sub>	2.05E-03	lb/hp-hr
	NOx	3.10E-02	lb/hp-hr
	CO	6.68E-03	lb/hp-hr
	VOC	2.47E-03	lb/hp-hr
	GHG <sup>pre 5/2016</sup>	1.15	lb/hp-hr
	GHG	0.41	lb/hp-hr
Waste Oil Heater*	PM	3.30	lb/1000 gal
	PM <sub>10</sub>	2.85	lb/1000 gal
	SO <sub>2</sub>	214	lb/1000 gal
	NOx	16	lb/1000 gal
	CO	2.1	lb/1000 gal
	VOC	1.0	lb/1000 gal
Stabilization	PM	1.36E-04	lb/ton
	PM <sub>10</sub>	6.45E-05	lb/ton
	PM <sub>2.5</sub>	9.77E-06	lb/ton
Solidification	PM	0.12	lb/ton
	PM <sub>10</sub>	0.04	lb/ton
	PM <sub>2.5</sub>	1.29E-05	lb/ton
Micro-encapsulation	PM	0.143	lb/ton
	PM <sub>10</sub>	0.045	lb/ton
	PM <sub>2.5</sub>	0.00001	lb/ton
Macro-encapsulation	PM	0.13	lb/ton
	PM <sub>10</sub>	0.0587	lb/ton
	PM <sub>2.5</sub>	0.00001	lb/ton
Unpaved Roads	PM	1.31	lb/VMT
	PM <sub>10</sub>	0.35	lb/VMT
	PM <sub>2.5</sub>	0.04	lb/VMT
Cover Soil	PM	0.118	lb/ton
	PM <sub>10</sub>	0.095	lb/ton
	PM <sub>2.5</sub>	0.034	lb/ton

\*The waste oil heater and concrete crushing engine did not operate during the calendar year.

Chemical Waste Management of the Northwest, Inc., Arlington, Oregon  
Simple Air Contaminant Discharge Permit No. 11-0002-SI-01

Date	PM	PM	PM <sub>10</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	SO <sub>2</sub>	NO <sub>x</sub>	NO <sub>x</sub>	CO	CO	VOC	VOC	GHG	GHG
	Emissions Tons	Running Total in Tons	Emissions Tons	Running Total in Tons	Emissions Tons	Running Total in Tons	Emissions Tons	Running Total in Tons	Emissions Tons	Running Total in Tons	Emissions Tons	Running Total in Tons	Emissions Tons	Running Total in Tons	Emissions Tons CO2e	Running Total in Tons CO2e
<b>PSEL Limit</b>		<b>24 tpy</b>		<b>14 tpy</b>		<b>9 tpy</b>		<b>39 tpy</b>		<b>39 tpy</b>		<b>99 tpy</b>		<b>39 tpy</b>		<b>74,000 tpy</b>
Jan-22	1.02	9.83	0.33	3.05	0.06	0.51	0.04	1.57	0.04	1.82	0.02	1.05	2.91E-03	0.12	42	1,775
Feb-22	0.81	9.95	0.25	3.08	0.04	0.51	0.13	1.53	0.15	1.77	0.08	1.02	9.88E-03	0.12	142	1,725
Mar-22	0.67	9.72	0.21	2.98	0.03	0.49	0.12	1.50	0.14	1.74	0.08	1.00	9.26E-03	0.12	133	1,696
Apr-22	0.63	9.70	0.22	2.99	0.04	0.50	0.12	1.51	0.14	1.75	0.08	1.01	9.39E-03	0.12	135	1,704
May-22	0.71	9.77	0.24	3.04	0.05	0.51	0.10	1.44	0.12	1.67	0.07	0.97	8.07E-03	0.11	116	1,630
Jun-22	0.81	9.94	0.24	3.07	0.04	0.51	0.18	1.52	0.21	1.76	0.12	1.02	1.40E-02	0.12	201	1,716
Jul-22	0.55	9.72	0.17	3.01	0.03	0.50	0.18	1.53	0.21	1.77	0.12	1.02	1.43E-02	0.12	205	1,729
Aug-22	1.11	10.11	0.32	3.09	0.05	0.50	0.12	1.40	0.14	1.63	0.08	0.94	9.60E-03	0.11	137	1,584
Sep-22	1.07	10.53	0.33	3.23	0.06	0.53	0.17	1.45	0.19	1.68	0.11	0.97	1.31E-02	0.11	188	1,637
Oct-22	1.64	11.22	0.47	3.41	0.07	0.55	0.19	1.48	0.22	1.72	0.13	0.99	1.56E-02	0.12	215	1,673
Nov-22	1.14	11.31	0.34	3.44	0.05	0.55	0.13	1.47	0.15	1.71	0.09	0.99	1.14E-02	0.12	150	1,663
Dec-22	1.15	11.33	0.37	3.48	0.07	0.58	0.16	1.64	0.19	1.89	0.11	1.09	1.33E-02	0.13	182	1,846
<b>PSEL Limit</b>		<b>24 tpy</b>		<b>14 tpy</b>		<b>9 tpy</b>		<b>39 tpy</b>		<b>39 tpy</b>		<b>99 tpy</b>		<b>39 tpy</b>		<b>74,000 tpy</b>
<b>% of PSEL</b>		<b>47.2%</b>		<b>24.9%</b>		<b>6.4%</b>		<b>4.2%</b>		<b>4.9%</b>		<b>1.1%</b>		<b>0.3%</b>		<b>2.5%</b>

**Chemical Waste Management of the Northwest, Inc., Arlington, Oregon**  
**Simple Air Contaminant Discharge Permit No. 11-0002-SI-01**

OBJECTIVE: Calculate the emissions from the ORGANICS RECOVERY UNIT (ORU) using the monthly quantity of propane combusted.

Month	Propane Combusted (1000 gallons)	LFG Combusted (MMscf)	PM (tons)	PM <sub>10</sub> (tons)	PM <sub>2.5</sub> (tons)	SO <sub>2</sub> (tons)	NO <sub>x</sub> (tons)	CO (tons)	VOC (tons)	GHG (tons CO <sub>2e</sub> )
Jan-22	3.86	0.00	1.35E-03	1.35E-03	1.35E-03	2.17E-02	2.51E-02	1.45E-02	1.54E-03	24
Feb-22	13.24	0.00	4.63E-03	4.63E-03	4.63E-03	7.43E-02	8.61E-02	4.97E-02	5.30E-03	84
Mar-22	12.40	0.00	4.34E-03	4.34E-03	4.34E-03	6.96E-02	8.06E-02	4.65E-02	4.96E-03	79
Apr-22	12.58	0.00	4.40E-03	4.40E-03	4.40E-03	7.06E-02	8.18E-02	4.72E-02	5.03E-03	80
May-22	10.78	0.00	3.77E-03	3.77E-03	3.77E-03	6.05E-02	7.01E-02	4.04E-02	4.31E-03	68
Jun-22	18.88	0.00	6.61E-03	6.61E-03	6.61E-03	1.06E-01	1.23E-01	7.08E-02	7.55E-03	120
Jul-22	19.24	0.00	6.73E-03	6.73E-03	6.73E-03	1.08E-01	1.25E-01	7.22E-02	7.70E-03	122
Aug-22	12.00	0.00	4.20E-03	4.20E-03	4.20E-03	6.73E-02	7.80E-02	4.50E-02	4.80E-03	76
Sep-22	17.62	0.00	6.17E-03	6.17E-03	6.17E-03	9.88E-02	1.15E-01	6.61E-02	7.05E-03	112
Oct-22	13.90	0.00	4.87E-03	4.87E-03	4.87E-03	7.80E-02	9.04E-02	5.21E-02	5.56E-03	88
Nov-22	4.69	0.00	1.64E-03	1.64E-03	1.64E-03	2.63E-02	3.05E-02	1.76E-02	1.88E-03	30
Dec-22	11.40	0.00	3.99E-03	3.99E-03	3.99E-03	6.40E-02	7.41E-02	4.28E-02	4.56E-03	72
<b>Total</b>	<b>150.59</b>	<b>0.00</b>	<b>0.05</b>	<b>0.05</b>	<b>0.05</b>	<b>0.84</b>	<b>0.98</b>	<b>0.56</b>	<b>0.06</b>	<b>954</b>



**Chemical Waste Management of the Northwest, Inc., Arlington, Oregon**  
**Simple Air Contaminant Discharge Permit No. 11-0002-SI-01**

OBJECTIVE: Calculate the emissions from the THERMAL OXIDIZER using the monthly quantity of gas combusted.

Month	Propane Combusted (Mgal)	PM (tons)	PM <sub>10</sub> (tons)	PM <sub>2.5</sub> (tons)	SO <sub>2</sub> (tons)	NO <sub>x</sub> (tons)	CO (tons)	VOC (tons)	GHG (tons CO <sub>2</sub> e)
Jan-22	2.64	9.24E-04	9.24E-04	9.24E-04	1.48E-02	1.72E-02	9.90E-03	1.32E-03	17
Feb-22	8.96	3.14E-03	3.14E-03	3.14E-03	5.03E-02	5.82E-02	3.36E-02	4.48E-03	57
Mar-22	8.40	2.94E-03	2.94E-03	2.94E-03	4.71E-02	5.46E-02	3.15E-02	4.20E-03	53
Apr-22	8.52	2.98E-03	2.98E-03	2.98E-03	4.78E-02	5.54E-02	3.20E-02	4.26E-03	54
May-22	7.32	2.56E-03	2.56E-03	2.56E-03	4.11E-02	4.76E-02	2.75E-02	3.66E-03	46
Jun-22	12.72	4.45E-03	4.45E-03	4.45E-03	7.14E-02	8.27E-02	4.77E-02	6.36E-03	81
Jul-22	12.96	4.54E-03	4.54E-03	4.54E-03	7.27E-02	8.42E-02	4.86E-02	6.48E-03	82
Aug-22	9.40	3.29E-03	3.29E-03	3.29E-03	5.27E-02	6.11E-02	3.53E-02	4.70E-03	60
Sep-22	11.88	4.16E-03	4.16E-03	4.16E-03	6.66E-02	7.72E-02	4.46E-02	5.94E-03	75
Oct-22	19.80	6.93E-03	6.93E-03	6.93E-03	1.11E-01	1.29E-01	7.43E-02	9.90E-03	125
Nov-22	18.91	6.62E-03	6.62E-03	6.62E-03	1.06E-01	1.23E-01	7.09E-02	9.46E-03	120
Dec-22	17.30	6.06E-03	6.06E-03	6.06E-03	9.71E-02	1.12E-01	6.49E-02	8.65E-03	110
<b>Total</b>	<b>138.81</b>	<b>0.05</b>	<b>0.05</b>	<b>0.05</b>	<b>0.78</b>	<b>0.90</b>	<b>0.52</b>	<b>0.07</b>	<b>879</b>

**Chemical Waste Management of the Northwest, Inc., Arlington, Oregon**  
**Simple Air Contaminant Discharge Permit No. 11-0002-SI-01**

OBJECTIVE: Calculate the emissions from the ORU Boiler using the monthly quantity of gas combusted.

Month	Propane Combusted (Mgal)	PM (tons)	PM <sub>10</sub> (tons)	PM <sub>2.5</sub> (tons)	SO <sub>2</sub> (tons)	NO <sub>x</sub> (tons)	CO (tons)	VOC (tons)	GHG (tons CO <sub>2</sub> e)
Jan-22	0.10	3.50E-05	3.50E-05	3.50E-05	5.61E-04	6.50E-04	3.75E-04	5.00E-05	1
Feb-22	0.20	7.00E-05	7.00E-05	7.00E-05	1.12E-03	1.30E-03	7.50E-04	1.00E-04	1
Mar-22	0.20	7.00E-05	7.00E-05	7.00E-05	1.12E-03	1.30E-03	7.50E-04	1.00E-04	1
Apr-22	0.20	7.00E-05	7.00E-05	7.00E-05	1.12E-03	1.30E-03	7.50E-04	1.00E-04	1
May-22	0.20	7.00E-05	7.00E-05	7.00E-05	1.12E-03	1.30E-03	7.50E-04	1.00E-04	1
Jun-22	0.20	7.00E-05	7.00E-05	7.00E-05	1.12E-03	1.30E-03	7.50E-04	1.00E-04	1
Jul-22	0.20	7.00E-05	7.00E-05	7.00E-05	1.12E-03	1.30E-03	7.50E-04	1.00E-04	1
Aug-22	0.20	7.00E-05	7.00E-05	7.00E-05	1.12E-03	1.30E-03	7.50E-04	1.00E-04	1
Sep-22	0.20	7.00E-05	7.00E-05	7.00E-05	1.12E-03	1.30E-03	7.50E-04	1.00E-04	1
Oct-22	0.20	7.00E-05	7.00E-05	7.00E-05	1.12E-03	1.30E-03	7.50E-04	1.00E-04	1
Nov-22	0.10	3.50E-05	3.50E-05	3.50E-05	5.61E-04	6.50E-04	3.75E-04	5.00E-05	1
Dec-22	0.10	3.50E-05	3.50E-05	3.50E-05	5.61E-04	6.50E-04	3.75E-04	5.00E-05	1
<b>Total</b>	<b>2.10</b>	<b>7.35E-04</b>	<b>7.35E-04</b>	<b>7.35E-04</b>	<b>1.18E-02</b>	<b>1.37E-02</b>	<b>7.88E-03</b>	<b>1.05E-03</b>	<b>13</b>

**Chemical Waste Management of the Northwest, Inc., Arlington, Oregon**  
**Simple Air Contaminant Discharge Permit No. 11-0002-SI-01**

OBJECTIVE: Calculate the emissions from the STABILIZATION using the monthly quantity of material processed.

<b>Month</b>	<b>Material Processed (tons)</b>	<b>PM (tons)</b>	<b>PM<sub>10</sub> (tons)</b>	<b>PM<sub>2.5</sub> (tons)</b>
Jan-22	207.59	1.41E-05	6.69E-06	1.01E-06
Feb-22	315.30	2.14E-05	1.02E-05	1.54E-06
Mar-22	393.84	2.68E-05	1.27E-05	1.92E-06
Apr-22	251.15	1.71E-05	8.10E-06	1.23E-06
May-22	321.26	2.18E-05	1.04E-05	1.57E-06
Jun-22	443.29	3.01E-05	1.43E-05	2.17E-06
Jul-22	554.54	3.77E-05	1.79E-05	2.71E-06
Aug-22	1,495.19	1.02E-04	4.82E-05	7.30E-06
Sep-22	1,778.76	1.21E-04	5.74E-05	8.69E-06
Oct-22	1,963.27	1.34E-04	6.33E-05	9.59E-06
Nov-22	991.24	6.74E-05	3.20E-05	4.84E-06
Dec-22	481.32	3.27E-05	1.55E-05	2.35E-06
<b>Total</b>	<b>9,196.72</b>	<b>6.25E-04</b>	<b>2.97E-04</b>	<b>4.49E-05</b>

**Chemical Waste Management of the Northwest, Inc., Arlington, Oregon**  
**Simple Air Contaminant Discharge Permit No. 11-0002-SI-01**

OBJECTIVE: Calculate the emissions from the SOLIDIFICATION using the monthly quantity of material processed.

<b>Month</b>	<b>Material Processed (tons)</b>	<b>PM (tons)</b>	<b>PM<sub>10</sub> (tons)</b>	<b>PM<sub>2.5</sub> (tons)</b>
Jan-22	864.28	5.19E-02	1.73E-02	5.57E-06
Feb-22	684.25	4.11E-02	1.37E-02	4.41E-06
Mar-22	825.88	4.96E-02	1.65E-02	5.33E-06
Apr-22	1,152.32	6.91E-02	2.30E-02	7.43E-06
May-22	1,335.35	8.01E-02	2.67E-02	8.61E-06
Jun-22	1,270.11	7.62E-02	2.54E-02	8.19E-06
Jul-22	715.76	4.29E-02	1.43E-02	4.62E-06
Aug-22	819.15	4.91E-02	1.64E-02	5.28E-06
Sep-22	754.55	4.53E-02	1.51E-02	4.87E-06
Oct-22	1,169.27	7.02E-02	2.34E-02	7.54E-06
Nov-22	893.64	5.36E-02	1.79E-02	5.76E-06
Dec-22	778.06	4.67E-02	1.56E-02	5.02E-06
<b>Total</b>	<b>11,262.63</b>	<b>0.68</b>	<b>0.23</b>	<b>7.26E-05</b>

**Chemical Waste Management of the Northwest, Inc., Arlington, Oregon**  
**Simple Air Contaminant Discharge Permit No. 11-0002-SI-01**

OBJECTIVE: Calculate the emissions from the MICRO-ENCAPSULATION using the monthly quantity of material processed.

<b>Month</b>	<b>Material Processed (tons)</b>	<b>PM (tons)</b>	<b>PM<sub>10</sub> (tons)</b>	<b>PM<sub>2.5</sub> (tons)</b>
Jan-22	0.00	0.00E+00	0.00E+00	0.00E+00
Feb-22	0.00	0.00E+00	0.00E+00	0.00E+00
Mar-22	0.00	0.00E+00	0.00E+00	0.00E+00
Apr-22	0.00	0.00E+00	0.00E+00	0.00E+00
May-22	0.00	0.00E+00	0.00E+00	0.00E+00
Jun-22	0.00	0.00E+00	0.00E+00	0.00E+00
Jul-22	0.00	0.00E+00	0.00E+00	0.00E+00
Aug-22	0.00	0.00E+00	0.00E+00	0.00E+00
Sep-22	0.00	0.00E+00	0.00E+00	0.00E+00
Oct-22	0.00	0.00E+00	0.00E+00	0.00E+00
Nov-22	0.00	0.00E+00	0.00E+00	0.00E+00
Dec-22	0.00	0.00E+00	0.00E+00	0.00E+00
<b>Total</b>	<b>0.00</b>	<b>0.00E+00</b>	<b>0.00E+00</b>	<b>0.00E+00</b>

**Chemical Waste Management of the Northwest, Inc., Arlington, Oregon**  
**Simple Air Contaminant Discharge Permit No. 11-0002-SI-01**

OBJECTIVE: Calculate the emissions from the MACRO-ENCAPSULATION using the monthly quantity of material processed.

<b>Month</b>	<b>Material Processed (tons)</b>	<b>PM (tons)</b>	<b>PM<sub>10</sub> (tons)</b>	<b>PM<sub>2.5</sub> (tons)</b>
Jan-22	59.32	3.86E-03	1.74E-03	2.97E-07
Feb-22	77.35	5.03E-03	2.27E-03	3.87E-07
Mar-22	143.86	9.35E-03	4.22E-03	7.19E-07
Apr-22	49.56	3.22E-03	1.45E-03	2.48E-07
May-22	75.08	4.88E-03	2.20E-03	3.75E-07
Jun-22	55.39	3.60E-03	1.63E-03	2.77E-07
Jul-22	36.66	2.38E-03	1.08E-03	1.83E-07
Aug-22	212.70	1.38E-02	6.24E-03	1.06E-06
Sep-22	62.15	4.04E-03	1.82E-03	3.11E-07
Oct-22	70.85	4.61E-03	2.08E-03	3.54E-07
Nov-22	188.08	1.22E-02	5.52E-03	9.40E-07
Dec-22	127.18	8.27E-03	3.73E-03	6.36E-07
<b>Total</b>	<b>1,158.18</b>	<b>7.53E-02</b>	<b>3.40E-02</b>	<b>5.79E-06</b>

**Chemical Waste Management of the Northwest, Inc., Arlington, Oregon**  
**Simple Air Contaminant Discharge Permit No. 11-0002-SI-01**

OBJECTIVE: Calculate emissions from the UNPAVED ROADS using the monthly vehicle miles traveled (VMT).

(VMT) per round trip = 2.2 total length of unpaved roads

Month	No. of Vehicle Trips	VMT	PM (tons)	PM <sub>10</sub> (tons)	PM <sub>2.5</sub> (tons)
Jan-22	602	1,324.4	0.87	0.23	0.03
Feb-22	502	1,104.4	0.72	0.19	0.02
Mar-22	395	869.0	0.57	0.15	0.02
Apr-22	335	737.0	0.48	0.13	0.01
May-22	372	818.4	0.54	0.14	0.02
Jun-22	494	1,086.8	0.71	0.19	0.02
Jul-22	335	737.0	0.48	0.13	0.01
Aug-22	704	1,548.8	1.01	0.27	0.03
Sep-22	657	1,445.4	0.95	0.25	0.03
Oct-22	1,061	2,334.2	1.53	0.41	0.05
Nov-22	708	1,557.6	1.02	0.27	0.03
Dec-22	687	1,511.4	0.99	0.26	0.03
<b>Total</b>	<b>6,852.00</b>	<b>15,074.40</b>	<b>9.87</b>	<b>2.64</b>	<b>0.30</b>

One Vehicle Count = One Round Trip

**Chemical Waste Management of the Northwest, Inc., Arlington, Oregon**  
**Simple Air Contaminant Discharge Permit No. 11-0002-SI-01**

OBJECTIVE: Calculate the emissions from the COVER SOIL using the monthly amount moved.

<b>Month</b>	<b>Soil Moved (tons)</b>	<b>PM (tons)</b>	<b>PM<sub>10</sub> (tons)</b>	<b>PM<sub>2.5</sub> (tons)</b>
Jan-22	1,680	0.0991	0.0798	0.0286
Feb-22	592	0.0349	0.0281	0.0101
Mar-22	601	0.0355	0.0285	0.0102
Apr-22	1,212	0.0715	0.0576	0.0206
May-22	1,330	0.0785	0.0632	0.0226
Jun-22	180	0.0106	0.0086	0.0031
Jul-22	252	0.0149	0.0120	0.0043
Aug-22	444	0.0262	0.0211	0.0075
Sep-22	1,092	0.0644	0.0519	0.0186
Oct-22	480	0.0283	0.0228	0.0082
Nov-22	717	0.0423	0.0341	0.0122
Dec-22	1,591	0.0939	0.0756	0.0270
<b>Total</b>	<b>10,171</b>	<b>0.60</b>	<b>0.48</b>	<b>0.17</b>







**ATTACHMENT B**  
**EXCESS EMISSION EVENTS**

**Chemical Waste Management of the Northwest, Inc.**

**Excess Emissions Event Log**

**2022 Calendar Year**

Event Number	Event Start Time	Event End Time	Duration (hrs)	DEQ Notification <sup>2</sup>	Event Description	Event Type	Affected Equipment	Steps Taken to Mitigate Emissions and Corrective Actions Taken	Quantity of Excess Emissions (lb) <sup>3</sup>	Final Event Resolution and Cause
1	1/26/22 13:53	1/26/22 14:03	0.17	Not Required	Damper failure	Malfunction	TOU	Reset/Restart	1.64	TOU back online
2	1/29/22 7:39	1/29/22 8:02	0.38	Not Required	Minor repair to air system	Scheduled Maintenance	TOU	Reset/Restart	3.77	TOU back online
3	2/2/22 6:50	2/2/22 7:25	0.58	Not Required	High TOU stack temp	Malfunction	TOU	Reset/Restart	5.73	TOU back online
4	2/2/22 9:53	2/2/22 10:15	0.37	Not Required	Lost TOU	Malfunction	TOU/ATDU	Reset/Restart	3.60	TOU back online
5	3/15/22 8:22	3/15/22 8:55	0.55	Not Required	Lost TOU	Malfunction	TOU	Reset/Restart	5.41	TOU back online
6	3/30/22 14:05	3/30/22 14:26	0.35	Not Required	TOU Stack over temp.	Malfunction	TOU	Reset/Restart	3.44	TOU back online
7	4/13/22 17:30	4/13/22 17:37	0.12	Not Required	High TOU stack temp	Malfunction	TOU	Reset/Restart	1.15	TOU back online
8	4/13/22 17:50	4/13/22 17:57	0.12	Not Required	Malfunction	Malfunction	TOU	Reset/Restart	1.15	TOU back online
9	4/13/22 22:00	4/13/22 22:22	0.37	Not Required	High TOU stack temp	Malfunction	TOU	Reset/Restart	3.60	TOU back online
10	4/13/22 23:08	4/13/22 23:35	0.45	Not Required	High TOU stack temp	Malfunction	TOU	Reset/Restart	4.42	TOU back online
11	4/14/22 20:02	4/14/22 20:05	0.05	Not Required	Lost fan	Malfunction	TOU/ATDU	Open and start backup fan, Reset/Restart	0.49	TOU back online
12	5/26/22 9:11	5/26/22 9:21	0.17	Not Required	High TOU stack temp	Malfunction	TOU	Reset/Restart	1.64	TOU back online
13	5/26/22 18:37	5/26/22 18:50	0.22	Not Required	High TOU stack temp	Malfunction	TOU	Reset/Restart	2.13	TOU back online
14	6/2/22 16:30	6/2/22 16:37	0.12	Not Required	High TOU stack temp	Malfunction	TOU	Reset/Restart	1.15	TOU back online
15	7/12/22 17:53	7/12/22 18:02	0.15	Not Required	Lost propane pressure	Malfunction	TOU/ATDU	Reset/Restart	1.47	TOU back online
16	7/12/22 18:39	7/12/22 18:58	0.32	Not Required	Lost propane pressure	Malfunction	TOU/ATDU	Reset/Restart	3.11	TOU back online
17	7/12/22 19:35	7/12/22 20:07	0.53	Not Required	Lost propane pressure	Malfunction	TOU/ATDU	Reset/Restart	5.24	TOU back online
18	7/19/22 11:57	7/19/22 12:22	0.42	Not Required	Power bump	Malfunction	Entire plant	Reset/Restart	4.10	TOU back online
19	8/3/22 5:40	8/3/22 5:46	0.10	Not Required	Lost TOU	Malfunction	TOU	Reset/Restart	0.98	TOU back online
20	9/7/22 10:51	9/7/22 11:02	0.18	Not Required	Lost comm's & plant shutdown	Malfunction	Plant	Reset/Restart	1.80	TOU back online
21	9/7/22 11:53	9/7/22 11:58	0.08	Not Required	Lost comm's & plant shutdown	Malfunction	Plant	Reset/Restart	0.82	TOU back online
22	9/14/22 5:40	9/14/22 6:07	0.45	Not Required	Switched spark arrestors	Scheduled Maintenance	TOU/ATDU	Reset/Restart	4.42	TOU back online
23	9/15/22 5:14	9/15/22 5:23	0.15	Not Required	Switched spark arrestors	Scheduled Maintenance	TOU/ATDU	Reset/Restart	1.47	TOU back online
24	9/21/22 4:14	9/21/22 4:23	0.15	Not Required	Switched spark arrestors	Scheduled Maintenance	TOU/ATDU	Reset/Restart	1.47	TOU back online
25	9/22/22 15:53	9/22/22 16:06	0.22	Not Required	High TOU stack temp	Malfunction	TOU	Reset/Restart	2.13	TOU back online
26	11/16/22 23:45	11/16/22 23:59	0.23	Not Required	Positive pressure spike	Malfunction	ATDU/TOU	Reset/Restart	2.29	TOU back online
27	12/20/22 9:00	12/20/22 11:15	2.25	Not Required	Power Outage	Malfunction	Entire plant	Reset/Restart	22.12	TOU back online
<b>Total Excess Emission Hours</b>			<b>9.23</b>		<b>Total Quantity of Excess Emissions</b>				<b>90.76</b>	<b>lbs</b>
									<b>0.05</b>	<b>tons</b>

1 A separate Excess Emissions Event Log Entry is required for each calendar day of an excess emissions event. [OAR 340-214-0340(1)]

2 If the excess emissions event is of a nature that could endanger public health, DEQ must be notified as soon as possible but never more than one hour after discovery.

3 Excess emissions calculated using data presented in Table B-1 of the 2016 ACDP Modification Application.

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