Lane Regional Air Protection Agency
Standard Air Contaminant Discharge Permit (Standard-ACDP)

REVIEW REPORT

Wildish Building Material Co.
Wildish Sand & Gravel
3600 Wildish Lane
Eugene, Oregon 97408
https://www.wildish.com/

Permit No. 208871

Source Information:

SIC	2951
NAICS	324121

Source Categories	
LRAPA Title 37, Table 1	Part B: 7. Asphaltic concrete paving plants, both stationary and portable Part C: 3. Source electing to maintain the source's netting basis Part C: 4. Source that requests a PSEL equal to or greater than the SER for a regulated pollutant
Public Notice	III

Compliance and Emissions Monitoring Requirements:

Unassigned emissions	N
Emissions credits	N
Compliance schedule	N
Source test	Y

COMS	N
CEMS	N
Ambient monitoring	N

Reporting Requirements

Annual report (due date)	Feb 15
Emission fee report (due date)	N
SACC (due date)	N
Quarterly report (due date)	N

Monthly report (due dates)	N
Excess emissions report	Y
Greenhouse gas report	As applicable
Other report	N

Air Programs

NSPS (list subparts)	N
NESHAP (list subparts)	CCCCCC
CAM	N
Regional Haze (RH)	N
Synthetic Minor (SM)	N
Part 68 Risk Management	N
Title V	N
ACDP (SIP)	N

Major HAP Source	N
Federal Major Source	N
New Source Review (NSR)	N
Prevention of Significant Deterioration (PSD)	N
Acid Rain	N
Clean Air Mercury Rule (CAMR)	N
TACT	N

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Permitting

Permittee Identification

1. Wildish Building Materials Co. – Wildish Sand & Gravel ("Wildish")
   3600 Wildish Lane
   Eugene, Oregon 97408

Permitting Action

2. The proposed permit is a renewal of an existing Standard Air Contaminant Discharge Permit (ACDP) that was issued on June 12, 2013 and was originally scheduled to expire on June 12, 2018. Wildish operates under a Standard ACDP because the facility has requested emission limits that exceed the significant emission rate for particulate matter (PM, PM_{10} and $PM_{2.5}$) and chosen to maintain the netting basis. The existing ACDP remains in effect until final action has been taken on the renewal application because the permittee submitted a timely and complete application for renewal.

Other Permits

3. Wildish has two other air quality permits for this location. They have an LRAPA permit to operate a stationary rock, concrete or asphalt, crushing plant (Crushing Plant) and a stationary concrete manufacturing including redimix and CTB plant (Concrete Plant) at this location.

Attainment Status

4. The hot mix asphalt plant (HMA Plant) is located in an attainment area for PM, $PM_{2.5}$, NO_X, SO_2, and ozone (VOC) and in a maintenance area for PM_{10} and CO.

5. The source is not located within 10 kilometers of any Class I areas.

Source Description

Overview

6. Wildish operates a stationary HMA Plant, a Crushing Plant and a Concrete Plant at this location. The HMA Plant has a maximum production rate of 550 tons per hour. The HMA Plant utilizes a natural gas-fired batch and drum (double barrel) hot mix asphalt plant for production. Both the batch and drum mixing are controlled with a cyclone and Venturi Scrubber. The batch and drum mixing cannot run simultaneously. The HMA plant is allowed to operate 8,760 hours per year up to a maximum rated capacity of 550 tons/hour but with a maximum limitation of 1,000,000 tons of throughput per year. In the last ten (10) years, the facility has demonstrated through records that the HMA Plant has not operated more than 1,050 hours per year and the highest yearly total throughput was just under 300,000 tons. The maximum throughput in the last ten (10) years was 400 tons/hour and the average operating rate is approximately 260 tons/hour.

7. No changes have been made to the facility since the last permit renewal.

Process and Control Devices

8. The existing air contaminant sources at the facility consist of the following:

EU ID	EU Description	Type of Plant	Installation Date	PCD Description	Installation Date
HMA Plant	Stationary natural gas-fired Asphaltic Concrete Paving Plant – 550 tons/hour maximum rate	Batch	1965	Cyclone & Venturi Scrubber	1997
		Drum	1997		
IEU	Insignificant Emission Unit – Gasoline Dispensing Facility (GDF)	NA	2000	NA	NA

Compliance History

9. The facility was last inspected on April 11, 2011 and was found to be in compliance with permit conditions.

10. The facility performed burner tune-ups on: July 21, 2014, May 29, 2015, June 23, 2016, July 5, 2017, June 7, 2018 and July 11, 2019.

11. No enforcement actions have been taken against this source.

12. The facility is required to perform source testing to verify that the HMA Plant meets the required grain loading standard and a cyclone and Venturi Scrubber removal efficiency of at least 80% of the potential PM emissions. The source test must be performed no later than 180 days from the date of issuance of this permit and every five (5) years from previous source test.

Special Conditions

Gasoline Dispensing Facility

13. Wildish must comply with applicable regulations in LRAPA 44-170 through 44-290 and any applicable regulations in 40 CFR 63, Subpart CCCCCC.

Emissions

14. Proposed PSEL information:

Pollutant	Baseline Emissions Rate (tpy)	Netting Basis		Plant Site Emission Limits (PSEL)		
		Previous (tpy)	Proposed (tpy)	Previous PSEL (tpy)	Proposed PSEL (tpy)	PSEL Increase (tpy)
PM	14.0	14.0	14.0	38	38	0
PM_{10}	3.4	3.4	3.4	17	17	0
$PM_{2.5}$	NA	2.1	2.1	11	11	0
NO_X	2.5	2.5	2.5	39	39	0
CO	40.0	40.0	40.0	99	99	0
SO_2	0.8	0.8	0.8	39	39	0
VOC	0.5	0.5	0.5	39	39	0

Pollutant	Baseline Emissions Rate (tpy)	Netting Basis		Plant Site Emission Limits (PSEL)		
		Previous (tpy)	Proposed (tpy)	Previous PSEL (tpy)	Proposed PSEL (tpy)	PSEL Increase (tpy)
GHG (CO_2e)	4,608	NA	NA	74,000	74,000	0

14.a. The source's baseline emission rates (BERs) for PM, PM_{10}, NO_X, CO, SO_2 and VOC were based on 1978 production rates. The CO BER was revised during the 2013 renewal ACDP to reflect a more accurate emission factor for a source not performing routine burner tuning per LRAPA Title 12. A baseline was not established for $PM_{2.5}$ in accordance with LRAPA 42-0048(3).

14.b. The netting basis for PM, PM_{10}, NO_X, CO, SO_2 and VOC are the same as the BERs. The netting basis for $PM_{2.5}$ was based on a ratio of the PM_{10} PSEL to the $PM_{2.5}$ PSEL (0.52) multiplied by the PM_{10} netting basis.

14.c. PM, PM_{10} and $PM_{2.5}$ PSELs are set per LRAPA 42-0041(2): with the potential to emit greater than or equal to the SER, the source specific PSEL will be set equal to the source's potential to emit, netting basis or a level requested by the applicant, whichever is less.

14.d. GHG BER was based on the 2010 Annual Report information. The GHG BER only needs to include anthropogenic emissions because the source utilizes natural gas therefore, there are no biogenic GHG emissions.

14.e. The "previous" PSELs are PSELs in the 2013 renewal permit.

Federal Hazardous Air Pollutants (FHAPs)/Toxic Air Contaminants (TACs)

15. Under the Cleaner Air Oregon (CAO) program, only existing sources that have been notified by LRAPA are required to perform risk assessments. This source has not been notified by LRAPA and is therefore, not yet required to perform a risk assessment or report annual emission of toxic air contaminants.

LRAPA required reporting of approximately 600 toxic air contaminants in 2016 and regulates approximately 260 toxic air contaminants that have Risk Based concentrations established in rule. All FHAPs are on the list of approximately 600 toxic air contaminants. The FHAPs and toxic air contaminants listed below are based upon source testing and standard emission factors for the types of emission units at this facility. After the source is notified by LRAPA, they must update their inventory and preform a risk assessment to see if they must reduce risk from their toxic air contaminant emissions. Until then, sources will be required to report toxic air contaminant emissions triennially.

16. The facility's federal hazardous air pollutants (FHAPs) are below the de minimis levels and therefore, are not included in the PSELs.

17. The following are the facility's actual FHAP and TAC emissions for the 2016 calendar year.

FHAP/TAC	Potential to Emit (pounds/year)
Metals	
Antimony	4.85E-02
Arsenic	1.52E-01

FHAP/TAC	Potential to Emit (pounds/year)
Barium (TAC only)	1.57
Beryllium	4.51E-04
Cadmium	1.12E-01
Chromium VI (TAC only)	1.44E-04
Cobalt	7.00E-03
Copper and compounds (TAC only)	8.43E-01
Lead	1.70E-01
Manganese	2.09
Mercury	6.59E-02
Nickel	16.97
Selenium	9.57E-02
Silver (TAC only)	1.29E-01
Thallium (TAC only)	1.10E-03
Zinc (TAC only)	16.45
Inorganics	
Phosphorus	7.54
Organics	
Acenaphthene** (TAC only)	3.80E-01
Acenaphthylene**	2.32
Acetaldehyde	9.60E-01
Anthracene** (TAC only)	5.99E-02
Benz[a]anthracene** (TAC only)	5.66E-02
Benzene	105.84
Benzo[b]fluoranthene** (TAC only)	2.69E-02
Benzo[j]fluoranthene** (TAC only)	5.40E-05
Benzo[k]fluoranthene** (TAC only)	1.10E-02
Benzo[a]pyrene** (TAC only)	2.64E-03
Benzo[e]pyrene** (TAC only)	2.96E-02
Benzo[g,h,i]perylene** (TAC only)	1.08E-02
Chrysene** (TAC only)	4.85E-02
Crotonaldehyde (TAC only)	8.70E-02
Dibenz[a,h]anthracene** (TAC only)	3.42E-07
Dichlorobenzenes (mixed isomers) (TAC only)	5.72E-05
7,12-Dimethylbenz[a]anthracene** (TAC only)	7.63E-07
Elthyl benzene	71.22
Ethylene (TAC only)	1,884.65
Fluoranthene** (TAC only)	1.65E-01

FHAP/TAC	Potential to Emit (pounds/year)
Fluorene** (TAC only)	1.02
Formaldehyde	836.85
Hexane	247.78
Indeno[1,2,3-cd]pyrene** (TAC only)	1.89E-03
Methyl chloroform	12.92
3-Methylcholanthrene** (TAC only)	8.58E-08
2-Methyl naphthalene** (TAC only)	20.14
Naphthalene**	24.34
Perylene** (TAC only)	2.37E-03
Phenanthrene** (TAC only)	2.05
Pyrene** (TAC only)	1.45E-01
Quinone	8.10E-01
Toluene	43.39
2,2,4-Trimethylpentane	10.77
Xylenes (mixed)	61.95
Total	**3,374.27**

**PAH - polycyclic aromatic hydrocarbon.

National Emission Standards for Hazardous Air Pollutants (NESHAPs)

18. The GDF is considered an insignificant emission unit (IEU) because the emissions are below de minimis levels for VOC and HAPs. The GDF was installed prior to the 2008 applicability date for GDFs and is considered an existing source. The above-ground storage tank is 10,000 gallons and makes the facility subject to LRAPA 44-230(1)(a) through 44-230(1)(e) and LRAPA 44-190(5).

19. The facility is subject to National Emission Standards for Hazardous Air Pollutants (NESHAP): Gasoline Dispensing Facilities, 40 CFR 63, Subpart CCCCCC but this subpart has not been adopted by LRAPA. Under LRAPA 37-0066(3)(a), Standard ACDPs exclude federal requirements not adopted by the LRAPA Board of Directors.

40 CFR 63 Subpart 6C Citation	Description	Applicable to Source (Yes/No)	Comments	Permit Condition
63.11110	Purpose	Yes	None	--
63.11111	Applicability	Yes	The facility is a GDF and has a monthly throughput of less than 10,000 gallons per month.	--
63.11112	Emission sources covered	Yes	Gasoline storage tanks and associated equipment are applicable	--
63.11113	Compliance dates	Yes	The compliance date for an existing source is no later than January 10, 2008.	--
63.11115	General duties	Yes	None	--

40 CFR 63 Subpart 6C Citation	Description	Applicable to Source (Yes/No)	Comments	Permit Condition
63.11116	Requirements: <10,000 gallons per month	Yes	None	--
63.11117	Requirements: ≥ 10,000 gallons per month	No	None	--
63.11118	Requirements: ≥ 100,000 gallons per month	No	None	--
63.11120	Testing and monitoring	No	None	--
63.11124	Notifications	Yes	None	--
63.11125	Recordkeeping	Yes	Keep records of malfunctions as listed under 40 CFR 63.11125(d)	--
63.11126	Reporting	Yes	Report any malfunctions.	--
63.11130	General provisions	Yes	None	--
63.11131	Implementation and enforcement	Yes	None	--
63.11132	Definitions	Yes	None	--

New Source Performance Standards (NSPSs)

20. The HMA Plant is not subject to 40 CFR 60, Subpart I: Standards of Performance for Hot Mix Asphalt Facilities, because the source has not commenced construction, modification or reconstruction of the HMA Plant after the applicability date of June 11, 1973 per the definitions of "construct, modification, reconstruction, and commence" in 40 CFR 60, Subpart A – General Provisions.

Typically Achievable Control Technology (TACT)

21. LRAPA 32-008 requires an existing unit to meet TACT if the emission unit meets the following criteria: The emission unit is not already subject to emission standards for the regulated pollutant under Title 30, Title 32, Title 33, Title 38, Title 39, or Title 26 at the time TACT is required; the source is required to have a permit; the emission unit has emissions of criteria pollutants equal to or greater than five (5) tons per year of particulate or ten (10) tons per year of any gaseous pollutant; and LRAPA determines that air pollution control devices and emission reduction processes in use for the emission do not represent TACT and that further emission control is necessary to address documented nuisance conditions, address an increase in emissions, ensure that the source is in compliance with other applicable requirements, or to protect public health or welfare or the environment.

    - The batch and drum mixing exhaust to a cyclone and Venturi Scrubber to control particulate matter and are considered TACT for the HMA plant because the HMA plant is subject to LRAPA 33-075.

Greenhouse Gas Reporting Applicability

22. The source is currently subject to greenhouse gas reporting under OAR 340 division 215 because actual greenhouse gas emissions have been over the 2,500 metric tons (2,756 short tons) of CO_2 equivalents per year.

Source Testing

23. The Astec Drum Mixer (1997) was tested for particulate matter in June 1998. The permitted allowable emissions were 28.6 pounds per hour and 0.2 grains per dry standard cubic foot. The test results demonstrated 19.6 pounds per hour of PM and 0.088 grains per dry standard cubic foot. The source is required to test for PM within ***180 days from the date of issuance this renewal and then every five (5) years of the previous source test***. The source tests are required to determine compliance with the applicable grain loading standards (gr/dscf) and the cyclone and Venturi Scrubber remove at least 80% of the PM emissions.

24. The results of the most recent burner tune-up tests are listed below.

Burner Tune-up Results*

Year	Pollutant	Before Adjustment	After Adjustment
2013	CO	200 ppm (19.41lbs/hr)	25 ppm (2.15 lbs/hr)
2014	CO	326.1 ppm (41.36 lbs/hr)	136.7 ppm (17.51 lbs/hr)
	NO_X	15.3 ppm (3.19 lbs/hr)	19.3 ppm (19.3 lb/hr)
2015	CO	434 ppm (49.7 lbs/hr)	93.6 ppm (10.93 lbs/hr)
	NO_X	39.2 ppm (7.37 lbs/hr)	37.9 ppm (7.27 lbs/hr)
2016	CO	450.9 ppm (36.30 lbs/hr)	104.1 ppm (7.95 lbs/hr)
	NO_X	44.8 ppm (5.93 lbs/hr)	54.8 ppm (6.88 lbs/hr)
2017	CO	794.0 ppm (60.88 lbs/hr)	100.2 ppm (7.18 lbs/hr)
	NO_X	38.7 ppm (4.87 lbs/hr)	48.8 ppm (5.74 lbs/hr)
2018	CO	635.5 ppm (62.10 lbs/hr)	177.9 ppm (17.05 lbs/hr)
	NO_X	30.6 ppm (4.91 lbs/hr)	36.6 ppm (5.76 lbs/hr)
2019	CO	588.0 ppm (81.86 lbs/hr)	172.7 ppm (23.81 lbs/hr)
	NO_X	17.5 ppm (4.0 lbs/hr)	21.8 ppm (4.94 lbs/hr)

*See Calculations in Attachment A at the end of the Review Report

Public Notice

25. The draft permit was on public notice from May 18, 2020 to June 22, 2020. No written comments were submitted during the 35-day comment period.

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BAE/CMW
6/23/2020

Attachment A – Detail Sheets

Hot Mix Asphalt Production per Year								
Pollutant	Maximum Throughput	Maximum Yearly Throughput	Approximate Yearly Throughput	Emission Factors*	Potential Emissions	Current PSELs	Increase from 2013 permit	SER
	ton/hour	tons/year	tons/year		tons/year	tons/year	tons/year	tons/year
PM	550	1,430,000	1,000,000	0.0500	25.00	38	0	25
PM_{10}	550	1,430,000	1,000,000	0.0340	17.00	17	0	15
$PM_{2.5}$	550	1,430,000	1,000,000	0.0210	10.50	11	0	10
CO	550	1,430,000	1,000,000	0.1000	50.00	99	0	100
NO_X	550	1,430,000	1,000,000	0.0260	13.00	39	0	40
SO_2	550	1,430,000	1,000,000	0.0046	2.30	39	0	40
VOC	550	1,430,000	1,000,000	0.0320	22.88	39	0	40

1) Max Hourly Design Rate as reported in the facility's renewal application for the Standard ACDP

2) Operating Schedule of the HMA is 8,760 hours per year

3) The Batch Plant and Drum Mix Plant cannot physically be operated simultaneously

4) The HMA plant utilizes a cyclone and Venturi Scrubber as the control device.

5) All emission factors are from DEQ Emission Factors for Asphalt and Aggregate Industries Revised 08/01/11, **EXCEPT** for PM which is from the June 1998 source test.

6) PM_{10}, CO, and SO_2 emission factors are based for Batch Mix Plant - Natural-Gas Fired with a Venturi Scrubber. $PM_{2.5}$, NO_X, and VOC emission factors are based Drum Mix Plant - Natural-Gas Fired with a Venturi Scrubber. CO emisson factor is based on the facility's required annual burner tune up.

7) Total Annual Emisisons: Max hours per year of 2,600 x Emisson Factor, but the request amount of throughput for a year is 1,000,000 tons.

PM Emission Factor Calculated using 1998 Source Test Data				
1998 Drum Source Test				
	Run 1	**Run 3**	**Run 4**	**Average**
Throughput (tons/hour)	372 (tons/hour)	398 (tons/hour)	370 (tons/hour)	**380 (tons/hour)**
Mass Emissions (lbs/hour)	34.5 (lbs/hour)	15.0 (lbs/hour)	9.4 (lbs/hour)	**19.63 (lbs/hour)**
Emission factor (lbs/ton)				**0.05 (lbs/ton)**

Baseline Emission Rate and Netting Basis					
Pollutant	Baseline Emission Rate (tons/yr)	Netting Basis		Plant Site Emission Limits (PSEL)	
		Previous (tpy)	Proposed (tpy)	Previous PSEL (tpy)	Proposed PSEL (tpy) (3)
PM	14	14	14	38	39
PM_{10}	3.4	3.4	3.4	17	17
$PM_{2.5}$	NA	NA	2.1	11	11
CO (1)	40	40	40	99	99
NO_X	2.5	2.5	2.5	39	39
SO_2	0.8	0.8	0.8	39	39
VOC	0.5	0.5	0.5	39	39
GHG (CO_2e) (2)	4,608	NA	NA	74,000	74,000

1. Per 42-0048(6)(c): The Baseline rate was changed in 2013 because a more accurate emission factor was available and the Netting was changed per 42-0046(3)(e).

2. GHG: utilizied 2010 Annual GHG reporting data

3. 42-0041(2): For sources w/ PTE greater than or equal to the SER, the source specific PSEL will be set equal to the source's PTE, netting basis or a level requested by the applicant, whichever is less, except as provided in subsection (3) or (4)

Burner Tuning CO and NOx (as NO2) Calculations			
Equation: lb/hr = [(ppm/10^6)(lb/mol of pollutant)(dscfm of test)(60 minutes/hr)]/385.32 dscfm/lb*mol			
Molecular Weight of Pollutants			
CO	28		
NO2	46		
Air	385.32	dscfm/lb*mol	
2013			
PPM info			
	Pre-tuning	Post-tuning	
CO ppm	200	25	
Flow	Pre-tuning	Post-tuning	
dscfm	22259	19726	
	Pre-tuning	Post-tuning	
	Results	Results	
CO	19.41	2.15	lb/hr
2014			
PPM info			
	Pre-tuning	Post-tuning	
CO ppm	326.1	136.7	
NO2 ppm	15.3	19.3	
Flow	Pre-tuning	Post-tuning	
dscfm	29091	29385	
	Pre-tuning	Post-tuning	
	Results	Results	
CO	41.36	17.51	lb/hr
NO2	3.19	4.06	lb/hr
2015			
PPM info			
	Pre-tuning	Post-tuning	
CO ppm	434.00	93.60	
NO2 ppm	39.20	37.90	
Flow	Pre-tuning	Post-tuning	
dscfm	26265	26782	
	Pre-tuning	Post-tuning	
	Results	Results	
CO	49.70	10.93	lb/hr
NO2	7.37	7.27	lb/hr
2016			
PPM info			
	Pre-tuning	Post-tuning	
CO ppm	450.90	104.10	
NO2 ppm	44.80	54.80	
Flow	Pre-tuning	Post-tuning	
dscfm	18466	17521	
	Pre-tuning	Post-tuning	
	Results	Results	
CO	36.30	7.95	lb/hr
NO2	5.93	6.88	lb/hr