

Lane Regional Air Protection Agency  
 Standard Air Contaminant Discharge Permit

**REVIEW REPORT**

**Delta Sand and Gravel Co.**

999 Division Avenue  
 Eugene, Oregon 97404  
 Website: <http://www.deltasg.com>

**Permit No. 202119**

**Source Information:**

|       |  |
|-------|--|
| SIC   | 1442 - Stationary Rock Crushing              |
| NAICS | 212321 - Construction Sand and Gravel Mining |

|   |  |
|---|--|
| Source Categories (LRAPA Title 37, Table 1) | B. 61 - Rock, Concrete or Asphalt Crushing both portable and stationary 25,000 or more tons/year crushed<br><br>C. 3 - Source electing to maintain the netting basis |
| Public Notice Category                      | II   |

**Compliance and Emissions Monitoring Requirements:**

|                      |   |
|----------------------|---|
| Unassigned emissions | n |
| Emission credits     | n |
| Special Conditions   | y |
| Compliance schedule  | n |

|                       |   |
|-----------------------|---|
| Source test [date(s)] | n |
| COMS                  | n |
| CEMS                  | n |
| Ambient monitoring    | n |

**Reporting Requirements:**

|                            |        |
|----------------------------|--------|
| Annual report (due date)   | Feb 15 |
| NSPS Report (due date)     | n      |
| Monthly report (due dates) | n      |

|                         |   |
|-------------------------|---|
| Excess emissions report | y |
| Other reports           | n |

**Air Programs:**

|   |                          |
|---|--------------------------|
| NSPS (list subparts)                          | IIII (4I)                |
| NESHAP (list subparts)                        | CCCCC (6C),<br>ZZZZ (4Z) |
| CAM   | n                        |
| Regional Haze (RH)                            | n                        |
| Synthetic Minor (SM)                          | n                        |
| Part 68 Risk Management                       | n                        |
| Title V                                       | n                        |
| ACDP (SIP)                                    | n                        |
| New Source Review (NSR)                       | n                        |
| Prevention of Significant Deterioration (PSD) | n                        |
| Acid Rain                                     | n                        |
| Clean Air Mercury Rule (CAMR)                 | n                        |
| TACT  | y                        |

### Permitting Action

1. The permit is a renewal for an existing Air Contaminant Discharge Permit (ACDP) which was issued on October 26, 2012 and was originally scheduled to expire on October 26, 2017. The existing permit remains valid until the proposed permit is issued because the facility submitted a timely and complete application for renewal.

The facility indicated in their 2017 renewal application that no changes have been made to the facility since the last renewal.

### Other Permits

2. Delta Sand and Gravel has a GDF (Gasoline Dispensing Facility) registration with LRAPA due to a gasoline throughput of less than 10,000 gallons per month.

### Attainment Status

3. The facility is located in a maintenance area for CO and PM<sub>10</sub>. The area is in attainment for all other criteria pollutants.
4. The facility is not located within 100 km of a Class I area.

### General Background Information

5. Delta Sand and Gravel operates a stationary rock crushing facility.

The facility operates six (6) rock crushers with ancillary equipment which are regulated by this permit. The types of rock crushers are two cone crushers, one roll crusher, two impact crushers, and a jaw crusher. The 350 ton/hour impact crusher was installed in 1995. The impact crushers are equipped with water sprayers to reduce emissions. The impact crushers are also outfitted with an air recirculation system designed to entrain dust in the processed material until water can be applied.

A jaw crusher was installed in 2016. The jaw crusher is powered by a constant-speed diesel engine that came as part of the crusher. The diesel engine was manufactured in 2008 by Caterpillar and is rated at 440 hp (328 kW). There is no diesel particulate filter and the engine was installed according the manufacturer's emission-related instructions.

The ancillary equipment for processing the crushed materials consists of screens, conveyors, and storage piles. The screens and conveyors are outfitted with water sprayers/sprinklers to reduce fugitive emissions.

Fugitive emissions arise from material handling and material hauling. Fugitive emissions from the haul road are reduced through watering of the roads and a wheel washing station.

With the exception of the power provided by the one (1) diesel engine to the 2016 jaw crusher, electrical power for the facility is from transmissions lines.

The emission units regulated by the permit are the following:

| Emission Unit (EU)  | Pollution Controls                          |
|---|---|
| Five (6) Rock Crushers with Ancillary Equipment – 500 tons/hour max.    | Water spray and trackout reduction measures |
| Stationary CI Engine – attached to Jaw Crusher                          |   |
| Aggregate Insignificant Activities – Gasoline Dispensing Facility (GDF) | Submerged filling and work practices        |

- In 2006, the facility requested a 72 acre expansion to provide a new source of aggregate adequate for cement. The request was opposed by the “Concerned Santa Clara Residents” and was denied by the City of Eugene. Modeling was done by LRAPA in November 2006 to determine the effects of a change in the haul road location. The modeling data suggested a decrease in emissions from the current route. The existing haul road produced the highest emissions. The proposed road is partially built. A copy of the modeling report is included in the facility file.

Reasons for Permit Issuance

- The facility is listed in LRAPA Title 37, Table 1, Part B and therefore is required to have an ACDP. This is an existing facility applying for a renewal of it’s ACDP. Lane Regional Air Protection Agency (LRAPA) has determined that the facility must obtain a Standard ACDP for the following reasons: The facility’s requested PSEL is greater than the SER (Significant Emission Rate) for one or more regulated pollutants; and to maintain the facility’s netting basis (LRAPA 37-0025(6)(a)(A)).

Compliance History

- The facility was inspected on the following dates:

| Date Inspected | Results  |
|----------------|--|
| 09/23/1993     | In Compliance  |
| 11/18/1994     | In Compliance  |
| 09/22/1995     | In Compliance  |
| 10/02/1996     | In Compliance  |
| 10/15/1997     | In Compliance  |
| 09/30/1999     | In Compliance  |
| 05/12/2000     | Issued NON 1906  |
| 09/13/2005     | In Compliance  |
| 07/14/2016     | Not in Compliance – Fugitive Emissions: The facility modified procedures to minimize fugitive emissions. |

- During the prior permit period there were five (5), complaints recorded for this facility. The majority of the complaints were about fugitive dust. The source of the dust complaints were from gravel crushing, loading/hauling operations, and from track-out becoming airborne. No enforcement actions have been taken since the last permit renewal.

10. The following enforcement actions have been taken against this facility:

On May 15, 2000 LRAPA issued **NON 1906** for failure to take reasonable precautions to prevent particulate matter from becoming airborne and failure to promptly remove from paved streets, earth, or other material which does or may become airborne. No Notice of Violation (NOV) issued, matter resolved through permit conditions.

On August 3, 2000 LRAPA issued **NON 1938** for failure to cover moving, open bodied trucks transporting materials likely to become airborne.  
**NCP 00-1938** (NON 1938) was issued on September 20, 2000 in the amount of \$600. The full amount was received October 18, 2000.

On October 1, 2003 LRAPA issued **NON 2603** for failure to take reasonable precautions to prevent particulate matter from becoming airborne and failure to promptly remove from paved streets, earth, or other material which does or may become airborne.  
**NCP 03-2603** (NON 2603) was issued on November 3, 2003 in the amount of \$1,200. There was a request to reduce the penalty amount which was approved, and the penalty was reduced to \$500. The full amount of \$500 was received January 12, 2004.

On February 7, 2005 LRAPA issued **NON 2753** for permit term violations. On January 11, 2005 and January 13, 2005 an LRAPA investigator documented a failure to take reasonable precautions to prevent particulate matter from becoming airborne and failure to promptly remove from paved streets, earth, or other material which does or may become airborne.  
**NCP 05-2753** (NON 2753) was issued on March 17, 2005 in the amount of \$1,200. There was a request to reduce the penalty amount, which was approved. Delta Sand and Gravel installed a wheel wash system to prevent PM trackout and the NCP penalty amount was reduced to \$0.  
**SFO 05-2753** was issued on March 29, 2006. A signed SFO was received April 3, 2006 with no further action taken.

Aggregate Insignificant Activity – Gasoline Dispensing Facility (GDF)

11. The facility has one above-ground gasoline storage tank with a 6,000 gallon capacity. The monthly throughput is less than 10,000 gallons. This emission unit is subject to the applicable requirements of LRAPA's emission standards for Gasoline Dispensing Facilities [LRAPA 44-170 through 44-280] and is also subject to the applicable federal requirements of 40 CFR 63 Subpart CCCCC (6C).

Because this storage tank has a capacity of more than 250 gallons, the facility must comply with the work practices requirements and the submerged fill requirements in LRAPA 44-230. The facility is not subject to the vapor balancing requirements in LRAPA 44-240 because the throughput is below the thresholds in LRAPA 44-190(4).

Plant Site Emission Limits (PSELs) Information

12.

**Annual Plant Site Emission Limits (PSELs)**  
 (tons per year)

| Pollutant         | Baseline Emission Rate | Netting Basis     |                   | Plant Site Emission Limit (PSEL) |                          |                 | Increase over Netting Basis | SER      |
|-------------------|------------------------|-------------------|-------------------|----------------------------------|--------------------------|-----------------|-----------------------------|----------|
|                   | (ton/yr)               | Previous (ton/yr) | Proposed (ton/yr) | Previous (ton/yr)                | <b>Proposed (ton/yr)</b> | Change (ton/yr) | (ton/yr)                    | (ton/yr) |
| PM                | 15.9                   | 15.9              | 16                | 40                               | <b>40</b>                | 0               | 24                          | 25       |
| PM <sub>10</sub>  | 7.9                    | 7.9               | 7.9               | 22                               | <b>22</b>                | 0               | 14.1                        | 15       |
| PM <sub>2.5</sub> | NA                     | 0.5               | 0.5               | 9.5                              | <b>9</b>                 | -0.5            | 9                           | 10       |

- a. The proposed PSELs are derived by adding the generic PSEL level to the netting basis except for PM<sub>2.5</sub>. The Potential to Emit (PTE) for PM<sub>2.5</sub> is less than the 10 ton/yr SER so the PSEL for PM<sub>2.5</sub> was lowered to the Generic PSEL level. A math error was discovered in the previous PM PSEL listed in the previous review report. The PM PSEL was adjusted downwards in the review report to correct the error and to match the value listed in the permit. The PM netting basis was rounded to the nearest whole ton since its value is over 10 tons/year.
- b. PSELs for CO, NO<sub>x</sub>, SO<sub>2</sub>, VOCs, HAPs, and GHGs are not included in this permit since emissions of these pollutants are less than the respective de minimis emission rates.
- c. The PM<sub>2.5</sub> PSEL and netting basis was established as part of the previous permit renewal.
- d. Detailed emission calculations are attached to this review report.
- e. The PSEL is a federally enforceable limit on the potential to emit.
- f. Recordkeeping of the parameters listed in Condition 21 of the permit will be used to ensure compliance with the PSELs.

Significant Emission Rate (SER)

13. Additional permit requirements may be triggered if the PSEL increase over the Netting Basis is greater than the SER. The proposed PSEL minus the Netting Basis is less than the SER for each pollutant, thus no further air quality analysis is required.

Criteria Pollutants

14. A major source is a facility that has the potential to emit more than 100 tons per year of any criteria pollutant. This facility is not a major source of criteria pollutant emissions.

Hazardous Air Pollutants (HAPs)/Toxic Air Contaminants

15. Under the Cleaner Air Oregon program, only existing sources that have been notified by LRAPA and new sources 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 emissions 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 187 hazardous air pollutants are on the list of approximately 600 toxic air contaminants. The hazardous air pollutants and toxic air contaminants listed below were reported by the source in 2016 and verified by LRAPA. After the source is notified by LRAPA, they must update their inventory and perform 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. A major source for hazardous air pollutants (HAPs) is a facility that has the potential to emit 10 or more tons per year of any single HAP or 25 or more tons per year of combined HAPs. This facility is not a major source of hazardous air pollutants. Provided below is a summary of the HAP and toxic air contaminant emissions:

| Hazardous Air Pollutant/Toxic Air Contaminants | Potential to Emit (pounds/year) |
|--|---------------------------------|
| *Silica, crystalline (respirable)              | 1800                            |
| *Aluminum                                      | 270                             |
| Manganese                                      | 9.54                            |
| *Barium  | 4.1                             |
| *Zinc  | 1.78                            |
| Lead   | 0.9                             |
| *Copper and copper compounds                   | 0.67                            |
| Chromium trioxide                              | 0.5                             |
| Nickel   | 0.5                             |
| Arsenic  | 0.4                             |
| Cobalt   | 0.2                             |
| Beryllium                                      | 0.02                            |
| Cadmium  | 0.02                            |
| Selenium                                       | 0.02                            |
| Total  | 2,089                           |

\*Indicates toxic air contaminants reported that are not hazardous air pollutants.

NESHAPS Applicability

17. The facility is subject to 40 CFR 63 Subpart CCCCC (6C) because the facility is an area source of HAPs and is registered as a GDF (Gasoline Dispensing Facility) with a monthly throughput of less than 10,000 gallons of gasoline.

The facility is required to keep records of the gasoline throughput and report gallons used annually.

The facility is an area source of HAPs since it does not have the potential to emit above the major source thresholds for HAPs.

18. The facility is subject to 40 CFR 63 Subpart ZZZZ (4Z) because the facility operates a stationary RICE (Reciprocating Internal Combustion Engine). However, the conditions of 40 CFR 63 Subpart ZZZZ are met by meeting the requirements of 40 CFR 60 Subpart IIII, and the facility is

subject to the NSPS, 40 CFR 60 Subpart IIII. Therefore, no further requirements apply to the facility under 40 CFR 63 Subpart ZZZZ.

#### NSPS Applicability

19. The standards, monitoring, and testing requirements of 40 CFR Part 60, Subpart OOO are not applicable to the facility because the facility is not a major source. LRAPA adopted the Nonmetallic Mineral Processing Plant NSPS (Subpart OOO) by reference for major sources only (LRAPA Title 46-535-(3)-qqq).
20. 40 CFR Part 60, Subpart UUU is not applicable to the facility because there are no operations of any of the affected equipment at the plant site (e.g. dryers or calciners).
21. The facility is subject 40 CFR 60 Subpart IIII (4I) because it operates a stationary compression ignition (CI) engine. The CI engine is a continuous speed engine that came as part of the jaw crusher and is not equipped with a diesel particulate filter.

#### TACT Applicability

22. The facility is required to meet Typically Available Control Technology since emissions of PM are greater than five (5) tons per year. While a formal TACT determination has not been completed, LRAPA has determined the facility is likely meeting TACT by conducting the following activities: [LRAPA 32-008]
  - a. Emissions of PM from this facility will be controlled by the use of water sprayers/sprinklers. This type of control equipment is considered TACT for this industry; and
  - b. Preventive maintenance will be required for the control equipment as a means to assure effective performance; and
  - c. A fugitive dust control program is required for the yard and haul roads.

#### Process Weight Limit

23. LRAPA's process weight rule limits non-fugitive emissions of particulate matter for specific processes as a function of the amount of material processed. All off the emissions from this facility are fugitive emissions and are not subject to the process weight rule. [LRAPA 32-045, and LRAPA 32-8010]

#### Source Testing

24. There have been no source tests required, nor performed at this facility. The use of emission factors is allowed because there is no established reference method to test for fugitive particulate emissions

#### Record Keeping and Reporting

25. A record of the following data must be maintained for a period of **five (5) years** at the plant site and must be available for inspection by authorized representatives of LRAPA:

| <b>Parameter or Activity</b>  | <b>Recording Frequency</b> |
|---|----------------------------|
| Total crushed rock production (tons)  | Monthly                    |
| Log of the fugitive dust control measures that are implemented                  | Daily                      |
| A description of inspections and maintenance to air contaminant control systems | Upon occurrence            |
| Water sprayer/sprinkler system inspection                                       | Monthly                    |
| Gasoline storage tank throughput (gallons)                                      | Monthly                    |

26. The facility is required to submit an annual report by **February 15<sup>th</sup>** each year to include the information identified in Condition 22 of the permit.

Additional Limitations

27. The permit includes the visible emissions standards in LRAPA 32-010(3), the particulate grain-loading standard in LRAPA 32-015(2)(b)(B), the fugitive dust emission requirements in LRAPA 48-015, and the highest and best requirement of LRAPA 32-005. Following the Fugitive Dust Control Program, and the O&M Plan should assure compliance with the grain-loading, visible emissions, and fugitive dust limits and requirements.

Public Notice

28. The draft permit was on public notice from November 22, 2019 to December 26, 2019. No written comments were submitted during the 35-day comment period.

Cnc/cmw  
01/03/20



**Delta Sand and Gravel Emission Details**

| <b>Rock Crushers with Ancillary Equipment</b> |                                    |                              |                             |                         |
|---|------------------------------------|------------------------------|-----------------------------|-------------------------|
| Pollutant                                     | Projected Max. Throughput (ton/yr) | Emission Factor (lbs PM/ton) | Conversion Factor (tons/lb) | Annual Emissions (tons) |
| PM  | 2,000,000                          | 0.04                         | 0.0005                      | 40                      |
| PM <sub>10</sub>                              | 2,000,000                          | 0.02                         | 0.0005                      | 20                      |
| PM <sub>2.5</sub>                             | 2,000,000                          | 0.0012                       | 0.0005                      | 1.2                     |

PM Emission Factors were obtained from DEQ AQ-EF06 for rock crushing operations controlled by water spray  
 Projected Annual Emissions = Projected Maximum Throughput x Emission Factor x Conversion Factor.

| <b>1978 Baseline and Netting Basis</b> |                                    |                              |                             |                         |
|--|------------------------------------|------------------------------|-----------------------------|-------------------------|
| Pollutant                              | Projected Max. Throughput (ton/yr) | Emission Factor (lbs PM/ton) | Conversion Factor (tons/lb) | Annual Emissions (tons) |
| PM                                     | 792,795                            | 0.04                         | 0.0005                      | 15.9                    |
| PM <sub>10</sub>                       | 792,795                            | 0.02                         | 0.0005                      | 7.9                     |

PM Emission Factors were obtained from DEQ AQ-EF06 for rock crushing operations controlled by water spray

| <b>PM<sub>2.5</sub> Netting Basis</b>  |      |
|--|------|
| PM <sub>10</sub> Revised Netting Basis | 7.9  |
| PM <sub>2.5</sub> Fraction             | 0.06 |
| PM <sub>2.5</sub> Netting Basis        | 0.5  |
| PM <sub>2.5</sub> PSEL                 | 9.0  |

PM<sub>2.5</sub> Fraction = (EF/EF)

PM<sub>2.5</sub> Netting Basis = Netting Basis x Fraction

PM<sub>2.5</sub> PTE is less than the 10 ton/yr SER so the Generic PSEL is used for PM<sub>2.5</sub>.