

**LANE REGIONAL AIR PROTECTION AGENCY
OREGON TITLE V OPERATING PERMIT
REVIEW REPORT**

1010 Main Street
Springfield, OR 97477

Source Information:

SIC	3531
NAICS	333120

Source Categories (Part and code)	B - 68
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Compliance and Emissions Monitoring Requirements:

Unassigned emissions	NA
Emission credits	NA
Compliance schedule	NA
Source test [date(s)]	NA

COMS	NA
CEMS	NA
Ambient monitoring	NA

Reporting Requirements

Annual report (due date)	February 15
Emission fee report (due date)	February 15
SACC (due date)	July 30
Quarterly report (due dates)	NA

Monthly report (due dates)	NA
Excess emissions report	Immediately
Other reports	Semi-annual

Air Programs

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

Major HAP source	X
Federal major source	NA
New Source Review (NSR)	NA
Prevention of Significant Deterioration (PSD)	NA
Acid Rain	NA
Clean Air Mercury Rule (CAMR)	NA

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LIST OF ABBREVIATIONS USED IN THIS REVIEW REPORT

AQMA	Air Quality Management Area	Mlb	1000 pounds
ASTM	American Society of Testing and Materials	MM	million
BDT	bone dry ton	NA	not applicable
CAM	Compliance Assurance Monitoring	NESHAP	National Emission Standard for Hazardous Air Pollutants
CEMS	continuous emissions monitoring system	NO _x	oxides of nitrogen
CFR	Code of Federal Regulations	NSPS	New Source Performance Standard
CMS	continuous monitoring system	NSR	New Source Review
CO	carbon monoxide	O ₂	Oxygen
COMS	continuous opacity monitoring system	OAR	Oregon Administrative Rules
DEQ	Oregon Department of Environmental Quality	ORS	Oregon Revised Statutes
dscf	dry standard cubic feet	O&M	operation and maintenance
EF	emission factor	Pb	lead
EPA	United States Environmental Protection Agency	PCD	pollution control device
EU	emissions unit	PM	particulate matter
FCAA	Federal Clean Air Act	PM ₁₀	particulate matter less than 10 microns in size
gr/dscf	grains per dry standard cubic feet	PSD	Prevention of Significant Deterioration
HAP	hazardous air pollutant	PSEL	Plant Site Emission Limit
ID	identification code	SACC	Semi Annual Compliance Certification
I&M	inspection and maintenance	SO ₂	sulfur dioxide
LRAPA	Lane Regional Air Protection Agency	ST	source test
MB	material balance	VE	visible emissions
		VMT	vehicle mile traveled
		VOC	volatile organic compound

INTRODUCTION

1. This is a new Title V permit for this facility. The facility had previously been operating under a Construction ACDP.
2. In accordance with OAR 340-218-0120(1)(f), this review report is intended to provide the legal and factual basis for the draft permit conditions. In most cases, the legal basis for a permit condition is included in the permit by citing the applicable regulation. In addition, the factual basis for the requirement may be the same as the legal basis. However, when the regulation is not specific and only provides general requirements, this review report is used to provide a more thorough explanation of the factual basis for the draft permit conditions.

PERMITTEE IDENTIFICATION

3. Johnson Crushers International, Inc. (JCI) operates a heavy equipment manufacturing facility at 86470 Franklin Blvd in Eugene, Oregon. The operation comprises the manufacture of truck-mounted rock crushers and associated rock screening equipment. JCI uses five (5) spray booths for painting manufactured equipment and three (3) baghouses to control emissions from metal cutting, machining and welding.

FACILITY DESCRIPTION

4. The facility manufactures mobile aggregate (rock) crushing and handling equipment. Raw metal and finished parts and components used in the manufacturing process at the facility are received by truck. From these components and raw materials, the facility manufactures its products. The manufacturing process consists of three emission units: Paint Operations (PBO), Exhaust (Exh) and Welding Processes (WP). An additional emission unit is paved roads (PR).
5. Metal is cut and formed in the Bays 1, 2, 3 & 4. The wet burn table is located in Bay 2 and the Messer burn table and the Whitney Burn/Punch are located in Bays 3 & 4 respectively. The Messer burn table and Whitney Burn/Punch are generators of particulate material processed through their respective bag house. JCI employ's two general ventilation systems adding fresh and removing "shop air". Bays 1 & 2 comprise one system and Bays 3 & 4 the other.
6. Welding is performed in areas where boomed exhaust systems collect the welding emissions and vent them to atmosphere.
7. Painting (Booths 190, 290, 390, 490, and 491) includes cleaning, primer, base coat and final coat although not all steps are performed on all components. Solvent based coatings are used. This process is subject to the Metal Parts Coating NESHAP (40 CFR 63 Subpart M).

EMISSIONS UNIT AND POLLUTION CONTROL DEVICE IDENTIFICATION

8. The emissions units at this facility are the following:
- 8.a. Paint Booth Operations (EU-PBO): This emission unit consists of five (5) paint booths each equipped with a paint booth filter or filters. Manufactured items are delivered to one (1) of five (5) paint booths within the facility. Some items receive a solvent wipe down and then the application of a Low HAP primer and final coat painting. Particulates and overspray are collected through intake filters. Makeup air is balanced throughout the facility to compensate for the discharge suction drawn by these intakes. The facility has a slight positive air makeup to counter discharge air leaving the booths. Once dry, components are delivered to selected work stations for final assembly. Finished product, when dry, is moved to finish goods storage for operation test and shipping. Paint booth 290 is unique in that it employs a down draft principle and hence is open at the top of the booth. All other paint booths are totally enclosed.
 - 8.b. Particulate Collection Systems (EU-Exh): Plate steel when cut, punched or burned releases particulate matter all assumed to be less than 10 microns in diameter (PM10). Particulates from this process are drawn into baghouse, passed through filters and then discharged to atmosphere. Filters are designed to remove approx. 98% of particulate mass. Particulates collected by the filters are collected at the base of the bag house in 55 gallon drums for disposal.
 - 8.c. Welding Activities: (EU-WD): Various welding processes occur in each production bay. The majority of welding is done on A-36 steel plate, bar stock or structural steel. Occasionally, welding is conducted on Bronze/Brass alloys. A process known as scarfing is also performed. Scarfing prepares casted metals for additional weld fill. All welding fumes are discharged either through weld air suckers to a common manifold and vented outdoors or to the open atmosphere or areas in which weld air suckers are not installed. Various MSDS for all welding materials have been provided.
 - 8.d. Paved Roads (EU-PR): This emission unit accounts for PM/PM10 emissions generated by commercial truck road dust on paved surfaces and roads at the facility. These emissions are designated Aggregate Insignificant and are based upon AP-42 emission factors using 10 inbound and 10 outbound trucks per day.
9. Categorically insignificant activities include the following:
- Constituents of a chemical mixture present at less than 1% by weight of any chemical or compound regulated under OAR Chapter 340, Divisions 200 through 268, excluding Divisions 248 and 262, or less than 0.1% by weight of any carcinogen listed in the U.S. Department of Health and Human Service's Annual Report on Carcinogens when usage of the chemical mixture is less than 100,000 pounds/year
 - Evaporative and tail pipe emissions from on-site motor vehicle operation
 - Distillate oil, kerosene, and gasoline fuel burning equipment rated at less than or equal to 0.4 million Btu/hr
 - Natural gas and propane burning equipment rated at less than or equal to 2.0 million Btu/hr
 - Office activities
 - Food service activities
 - Janitorial activities
 - Personal care activities
 - Groundskeeping activities including, but not limited to building painting and road and parking lot maintenance
 - On-site recreation facilities
 - Instrument calibration
 - Maintenance and repair shop
 - Automotive repair shops or storage garages
 - Air cooling or ventilating equipment not designed to remove air contaminants generated by or released from associated equipment

- Refrigeration systems with less than 50 pounds of charge of ozone depleting substances regulated under Title VI, including pressure tanks used in refrigeration systems but excluding any combustion equipment associated with such systems
- Bench scale laboratory equipment and laboratory equipment used exclusively for chemical and physical analysis, including associated vacuum producing devices but excluding research and development facilities
- Temporary construction activities
- Warehouse activities
- Accidental fires
- Air vents from air compressors
- Air purification systems
- Continuous emissions monitoring vent lines
- Demineralized water tanks
- Pre-treatment of municipal water, including use of deionized water purification systems
- Electrical charging stations
- Fire brigade training
- Instrument air dryers and distribution
- Process raw water filtration systems
- Fire suppression
- Blueprint making
- Routine maintenance, repair, and replacement such as anticipated activities most often associated with and performed during regularly scheduled equipment outages to maintain a plant and its equipment in good operating condition, including but not limited to steam cleaning, abrasive use, and woodworking
- Electric motors
- Storage tanks, reservoirs, transfer and lubricating equipment used for ASTM grade distillate or residual fuels, lubricants, and hydraulic fluids
- On-site storage tanks not subject to any New Source Performance Standards (NSPS), including underground storage tanks (UST), storing gasoline or diesel used exclusively for fueling of the facility's fleet of vehicles
- Natural gas, propane, and liquefied petroleum gas (LPG) storage tanks and transfer equipment
- Pressurized tanks containing gaseous compounds
- Fire suppression and training
- Hazardous air pollutant emissions of fugitive dust from paved and unpaved roads except for those sources that have processes or activities that contribute to the deposition and entrainment of hazardous air pollutants from surface soils
- Health, safety, and emergency response activities
- Emergency generators and pumps used only during loss of primary equipment or utility service due to circumstances beyond the reasonable control of the owner or operator, or to address a power emergency as determined by LRAPA
- Oil/water separators in effluent treatment systems

EMISSION LIMITS AND STANDARDS, TESTING, MONITORING, AND RECORDKEEPING

10. ACDP Conditions: There are no changes to any conditions that existed in the ACDP.
11. Facility-wide Requirements:
 - 11.a. Condition 4 of the permit establishes 'reasonable precautions' for the minimization of fugitive, visible particulate matter for this facility. Monitoring and recordkeeping for this requirement includes periodic visible emission surveys and corrective action if a source of visible emissions is identified.
 - 11.b. Conditions 6 and 7 of the permit states two (2) of LRAPA's limits for emissions that can create nuisance problems: odors and large-size fallout particulate matter. Monitoring for this condition is the maintenance of a complaint log and timely resolution.
12. Federal Requirements:
 - 12.a. Accidental Release Prevention (Part 68): Condition 9 of the permit is a standard Title V permit condition related to the Federal Risk Management Planning program (40 CFR Part 68). The condition requires that Title V sources comply with 40 CFR 68 if changes at the facility make it subject.
 - 12.b. NESHAP: Emission Unit Paint Booth Operations (EU-PBO) is subject to the requirements of the Miscellaneous Metal Parts NESHAP (Misc. Metal Parts NESHAP or Subpart M MMM). Because the facility had actual single HAP emissions greater than the 10 ton/year major source threshold and did not have federally enforceable permit HAP limits in place at the time of the compliance date for existing sources under the Misc Metal Parts NESHAP, the facility is subject to Subpart M MMM.
13. LRAPA Requirements:
 - 13.a. I&M Plan: The facility is required to maintain and follow an LRAPA-approved Inspection and Maintenance (I&M) Plan to ensure control equipment is operated at their utmost efficiency and that emissions are minimized. Emission Unit Exhaust Systems (EU-Exh) is the primary emission unit subject to this requirement.
 - 13.b. 0.1 gr/dscf and 20% Opacity Requirements: Particulate and visible emissions requirements applicable to all sources are included in the permit. Emission Unit Exhaust Systems (EU-Exh), Emission Unit Paint Booth Operations (EU-PBO) and Emission Unit Welding (EU-WD) are all subject to this requirement.
14. Insignificant activities:
 - 14.a. Emission Unit Paved Roads (EU-PR) is the emission unit for paved road traffic at the facility and these emissions are designated Aggregate Insignificant activities.
15. As identified earlier in this Review Report, this facility has insignificant emissions units (IEUs) that include categorically insignificant activities and aggregate insignificant emissions, as defined in LRAPA Title 12. For the most part, the standards that apply to IEUs are for opacity (20% limit) and particulate matter (0.1 gr/dscf limit). LRAPA does not consider it likely that IEUs could exceed an applicable emissions limit or standard because IEUs are generally equipment or activities that do not have any emission controls (e.g., small natural gas fired space heaters) and do not typically have visible emissions. Since there are no controls, no visible emissions, and the emissions are less than one ton per year, LRAPA does not believe that monitoring, recordkeeping, or reporting is necessary for assuring compliance with the standards.

PLANT SITE EMISSION LIMITS

16. Provided below is a summary of the baseline emissions rate, netting basis, plant site emission limits, and emissions capacity.

Pollutant	Baseline Emission Rate (tons/yr)	Netting Basis		Plant Site Emission Limit (PSEL)		
		Previous (tons/yr)	Proposed (tons/yr)	Previous PSEL (tons/yr)	Proposed PSEL (tons/yr)	PSEL Increase (tons/yr)
PM	0	0	0	2	24	22
PM ₁₀	0	0	0	2	14	12
CO	0	0	0	NA	NA	NA
NO _x	0	0	0	NA	NA	NA
SO ₂	0	0	0	NA	NA	NA
VOC	0	0	0	39	39	0

- 16.a. The PM and PM10 PSELs are being set at the Generic PSEL level in accordance with LRAPA Title 42.

SIGNIFICANT EMISSION RATE

17. The proposed PSEL is/is not greater than the previous netting basis as shown below.

Pollutant	SER	Requested increase over previous netting basis	Increase due to utilizing capacity that existed in the baseline period	Increase due to physical changes or changes in the method of operation
PM	25	24	0	0
PM ₁₀	15	14	0	0
CO	100	NA	0	0
NO _x	40	NA	0	0
SO ₂	40	NA	0	0
VOC	40	39	0	0

HAZARDOUS AIR POLLUTANTS

18. The actual HAP emissions from the facility estimated to have been emitted in 2008 are shown in the table below. These emissions are calculated on the basis of proposed operation parameters and must be recalculated by the facility if production increases.

All values are in tons/year unless otherwise noted.

Hazardous Air Pollutants	Potential Emissions (tons/yr)
Xylene	1.25
Ethylbenzene	0.3
Toluene	0.4
Glycol Ethers	1.0
Cobalt Compounds	<0.1
Styrene	<0.1

Hazardous Air Pollutants	Potential Emissions (tons/yr)
Methanol	<0.1
Chromium	8.52 lbs/yr
Cobalt	2.13 lbs/yr
Manganese	0.9
Nickel	10.65 lbs/yr
Total HAPs	4.2 tons/yr

Even though current HAP emissions are below major source thresholds, the facility is subject to the Metal Parts National Emission Standard for Hazardous Air Pollutants (40 CFR 63 Subpart M) because the facility had actual emissions greater than the 10 ton/year single HAP major source threshold after the compliance date for existing sources under Subpart M.

GENERAL BACKGROUND INFORMATION

19. The facility is located outside the Eugene Springfield Air Quality Management Area and in an area that has been designated as attainment for PM₁₀, ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, and lead.
20. The facility has been in operation at the current location since 1996, and was discovered as an un-permitted source in 2007 as a result of 2006 Toxic Release Inventory (TRI) information. The emissions from the facility for each year during 1999-2002 were presumed, because of incomplete records, to be above the 10 ton per year major source threshold for a single Hazardous Air Pollutant (HAP). The emissions for each year during 2003-2006 were documented to be above the 10 ton-per-year major source threshold for a single HAP. Xylene was the single HAP compound that exceeded 10 tons per year for the aforementioned periods. In 2007 the facility switched to predominantly low-HAP containing solvents and coatings and has reduced emissions below the major source thresholds.
21. As a major source of HAPs, the facility is subject to the requirements of the Miscellaneous Metal Parts National Emission Standards for Hazardous Air Pollutants (Misc. Metal Parts NESHAP or Subpart M). JCI did not have federally enforceable permit HAP limits in place at the time of the compliance date for existing sources under the Misc. Metal Parts NESHAP and is, therefore, subject to the rule. The compliance date for existing sources was January 2, 2007.
22. Because the facility is subject to the Misc. Metal Parts NESHAP, the facility was required to obtain a Construction ACDP and then apply for a Title V Operating Permit within 12-months of startup as required by LRAPA and ODEQ regulations. [LRAPA 34-110(2)(B) and OAR 340-218-0020(1)(c)]

The facility is presently required to obtain this Title V Operating Permit by ODEQ rule, even though HAPs are projected to remain below major source levels, because the Misc. Metal Parts NESHAP does not contain an exemption for applicable sources from obtaining a Title V permit (EPA "Once In Always In Policy").
23. At the time of this permit modification, the facility is subject to the 40 CFR Part 60 Subpart A requirements only. There are no other Part 60 Regulations (NSPS) for which the facility is subject.
24. At the time of this permit modification, the facility has been determined to be an applicable source under 40 CFR Part 63 Subparts A, and M. There are no other Part 63 Regulations for which the facility is subject.

COMPLIANCE HISTORY

25. The facility was issued Notice of Non-Compliance (NON No. 2937) on May 18, 2007, for the following violations:
- failure to obtain an Air Contaminant Discharge Permit, Synthetic Minor Air Contaminant Discharge Permit or Title V Operating Permit;
 - failure to perform required monitoring and reporting; failure to pay emission fees; and
 - failure to comply with the requirements of NESHAPs Subpart M (see Items 20, 21, and 22 of this report for more information).

The facility was issued Notice of Non-Compliance (NON No. 2992) on April 21, 2008 for conducting metal parts coating operations for the twelve month periods ending January 31, 2008 and February 29, 2008 such that the emission rate for Hazardous Air Pollutants exceeded 2.6 lb HAP/gallon of coating solids (3.48 lb HAP/gallon coating solids ending January 31, 2008; 2.84 lb HAP/gal coating solids ending February 29, 2008).

At the time of permit issuance NON 2937 and NON 2992 status is "unresolved".

PUBLIC NOTICE

26. This permit was on public notice from February 18, 2009 to March 19, 2009. No comments were submitted in writing during the comment period. No public hearing was requested by 10 or more individuals or one person representing a group of 10 or more individuals. After the comment period, LRAPA will review and modify the permit as may be appropriate. A proposed permit will then be sent to EPA for a 45 day review period. LRAPA may request and EPA may agree to an expedited review of 5 days if there were no substantive or adverse comments during the comment period.

If the EPA does not object in writing, any person may petition the EPA within 60 days after the expiration of EPA's 45-day review period to make such objection. Any such petition must be based only on objections to the permit that were raised with reasonable specificity during the public comment period provided for in OAR 340-218-0210, unless the petitioner demonstrates that it was impracticable to raise such objections within such period, or unless the grounds for such objection arose after such period.

27. The proposed draft of Title V Operating Permit was sent to EPA on March 20, 2009, for a 45-day review period. Because there were no substantive changes to the permit after the public comment period, LRAPA requested and EPA may agree to an expedited review of five (5) days. In any event, the public will have 105 days (45-day EPA review period plus 60 days) from the date the proposed permit was sent to EPA to appeal the permit with EPA.

EMISSIONS DETAIL SHEETS ATTACHED

Max/cmw
03/20/09

**Johnson Crushers International
 COMMERCIAL TRUCK
 PAVED ROAD DUST
 PM/PM10 Emissions Analysis**

Inbound trucks per day:	10
Outbound trucks per day:	10
Number of Days of operation:	250
Mean haul distance Inbound (mi):	0.1
Mean haul distance outbound (mi):	0.1
Average weight inbound (tons), W:	15
Average weight outbound (tons), W:	55
Silt Loading	9.7 g/m2 (AP-42 ave for steel mills)
Number of days/year with rainfall > 0.01inch	150 AP 42
Road cleaning/watering efficiency (%):	50% Sweeping--engineering estimate

AP-42 Parameters (12/03 version)

$$E, \text{ lb/VMT} = k(sL/2)^a(W/3)^b$$

	PM	PM10
k	0.082	0.016 lb/VMT
a	0.65	0.65
b	1.5	1.5
sL	road surface silt loading (g/m2)	
W	Average vehicle weight (tons)	

Inbound, lbs/VMT (uncontrolled)	2.5586	0.49924
Outbound - unloaded, lbs/VMT (uncontrolled)	17.9642	3.50521
Uncontrolled Annual Emissions, tons Inbound	0.320	0.062
Uncontrolled Annual Emissions, Unloaded Outbound	2.246	0.438
Corrected Annual Emissions, tons	0.8	0.1

2.5586	0.49924
17.9642	3.50521
0.320	0.062
2.246	0.438
0.8	0.1

Aggregate Insignificant Emissions

Permit No. 204215
 Attachment to Review Report
 Expiration Date: April 6, 2014
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Facility:

Johnson Crushers International

Operating Scenario

NA

Permit Number:

204215

Activity Summary:

Activity	Annual Production/Process Rate		Pollutant	Emissions Factor		Reference	Emissions (tons/yr)
	Rate	Units		Rate	Units		
Road Dust	0.8 tons	Per 12 Months	PM	.06 tons per month	lbs per lbs	EPA Doc AP-42	.8 tons/yr
Road Dust	.1 tons	Per 12 Months	PM10	.008 tons per month	lbs per lbs	EPA Doc AP-42	.1 tons/yr

Pollutant Summary:

Pollutant	Annual Emissions (tons/year)
PM	.8 tons/year
PM10	.1 tons/year