



**Lane Regional Air Protection Agency
Simple Air Contaminant Discharge Permit**

Review Report

Grain Millers, Inc.
Meadowview Road
Junction City, Oregon 97448
Website: <https://www.grainmillers.com>

Permit No. 203155

Source Information:

Primary SIC	2043 – Cereal Breakfast Foods
Secondary SIC	--
Primary NAICS	311230 – Breakfast Cereal Manufacturing
Secondary NAICS	--

Source Categories (LRAPA title 37, Table 1)	Part B: 17: Cereal preparations and associated grain elevators 10,000 or more tons/year throughput
Public Notice Category	III

Compliance and Emissions Monitoring Requirements:

Unassigned Emissions	N
Emission Credits	N
Special Conditions	N
Compliance Schedule	N

Source Test [date(s)]	N
COMS	N
CEMS	N
Ambient monitoring	N

Reporting Requirements

Annual Report (due date)	February 15
SACC (due date)	N
GHG Report (due date)	N
Quarterly Report (due date)	N

Monthly Report (due dates)	N
Excess Emissions Report	Y
Other Reports (due date)	N

Air Programs

NSPS (list subparts)	N
NESHAP (list subparts)	N
CAM	N
Regional Haze (RH)	N
Synthetic Minor (SM)	Y
SM-80	N
Title V	N
Part 68 Risk Management	N
ACDP (SIP)	N
Major FHAP Source	N
Federal Major Source	N
NA New Source Review (NSR)	N
Prevention of Significant Deterioration (PSD)	N
Acid Rain	N
Clean Air Mercury Rule (CAMR)	N
TACT	N
>20 Megawatts	N

Cleaner Air Oregon	N
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Permittee Identification

1. Grain Millers, Inc. ('the facility' or 'Grain Millers') proposes to construct a cereal processing facility on Meadowview Road in Junction City, Oregon.

General Background

2. The significant emission units proposed for installation at this facility include a number of grain receiving and processing activities that are controlled by up to 32 baghouses and one (1) cyclone that exhaust to the atmosphere. The facility also proposes to install two (2) identical natural gas-fired boilers with a maximum heat input rating of 7.876 MMBtu per hour each.

Reasons for Permit Action and Fee Basis

3. This permit action is a renewal for an existing Simple Air Contaminant Discharge Permit (Simple ACDP) which was issued on June 23, 2015 and expired on June 23, 2020. As the facility submitted a timely renewal application on December 13, 2019, the current permit will remain in effect until final action has been taken on the renewal application. Because the facility has not begun operation, this permit action is considered a Simple "high" ACDP renewal under LRAPA 37-0064(2)(a). Under OAR 340-216-0064(5)(a) that was effective on March 1, 2023, this permit action will be considered Category III for public participation. OAR 340-216-0064(5)(a) is considered more restrictive than the equivalent rule under LRAPA 37-0064(4)(a).

Attainment Status

4. The facility is located in an area that has been designated as attainment or unclassified for all criteria pollutants.

Permitting History

5. LRAPA has reviewed and issued the following permitting actions to this facility:

Date(s) Approved/Valid	Permit Action Type	Description
06/23/2015 – 06/23/2020	Simple ACDP	Initial air permit
Upon Issuance	Simple ACDP	Renewal

Compliance History

6. Because this facility has not begun operation, there is no compliance history for this facility.

Source Testing

7. The facility is not required to conduct source testing at this time.

Emission Unit Description

8. The emission units regulated by this permit include the following:

Emission Unit	Description	Pollution Control Device	Year Installed
F1	Filter #1	Baghouse	TBD
F1A	Filter #1A	Baghouse	TBD
F1B	Filter #1B	Baghouse	TBD
F1C	Filter #1C	Baghouse	TBD
F2	Filter #2	Baghouse	TBD
F3	Filter #3	Baghouse	TBD
F4	Filter #4	Baghouse	TBD
F5	Filter #5	Baghouse	TBD

Emission Unit	Description	Pollution Control Device	Year Installed
F6	Filter #6	Baghouse	TBD
F7	Filter #7	Baghouse	TBD
F8	Filter #8	Baghouse	TBD
F9	Filter #9	Baghouse	TBD
F10	Filter #10	Baghouse	TBD
F11	Filter #11	Baghouse	TBD
F12	Filter #12	Baghouse	TBD
F13	Filter #13	Baghouse	TBD
F14	Filter #14	Baghouse	TBD
F15	Filter #15	Baghouse	TBD
F16	Filter #16	Baghouse	TBD
F17	Filter #17	Baghouse	TBD
F18	Filter #18	Baghouse	TBD
F19	Filter #19	Baghouse	TBD
F20	Filter #20	Baghouse	TBD
F21	Filter #21	Baghouse	TBD
F22	Filter #22	Baghouse	TBD
F23	Filter #23	Baghouse	TBD
F24	Filter #24	Baghouse	TBD
F25	Filter #25	Baghouse	TBD
F26	Filter #26	Baghouse	TBD
F27	Filter #27	Baghouse	TBD
F28	Filter #28	Baghouse	TBD
F29	Filter #29	Baghouse	TBD
C1	Cyclone #1	Cyclone	TBD
B1	Boiler #1: Natural Gas-Fired Boiler (7.876 MMBtu/hr)	None	TBD
B2	Boiler #2: Natural Gas-Fired Boiler (7.876 MMBtu/hr)	None	TBD

Emission Limitations

9. The facility is subject to the general requirements for fugitive emissions under LRAPA 48-015. The facility must not have visible emissions that leave the property of a source for a period or periods totaling more than 18 seconds in a six (6) minute period. The facility must follow, but is not limited to, the list of reasonable precautions under LRAPA 48-015(1)(a)-(g). Compliance will be demonstrated through a survey of facility fugitive emissions conducted at least once a month. When fugitive particulate emissions escape from an air contaminant source, LRAPA may order the facility to abate the emissions. If requested by LRAPA, the facility must develop a fugitive emission control plan.

10. The facility is subject to the visible emission limitations under LRAPA 32-010(3). For sources, other than wood-fired boilers, no person may emit or allow to be emitted any visible emissions that equal or exceed an average of 20 percent opacity for a period or periods aggregating more

- than three (3) minutes in any one (1) hour. Compliance will be demonstrated through the use of an Operation and Maintenance Plan.
11. For sources installed, constructed or modified after April 16, 2015, other than fuel burning equipment, refuse burning equipment and fugitive emissions, the particulate matter emissions limit is 0.10 grains per dry standard cubic foot under LRAPA 32-015(2)(c). This limitation applies to the EU: F1-F29 and EU: C1. Compliance will be demonstrated through the use of an Operation and Maintenance Plan.
 12. EU: F1-F29 and EU: C1 are subject to the process weight rate emission limitations under LRAPA 32-045(1). No person may cause, suffer, allow, or permit the emissions of particulate matter in any one (1) hour from any process in excess of the amount shown in LRAPA 32-8010, for the process weight rate allocated to such process. Process weight is the total weight of all materials introduced into a piece of process equipment. Liquid and gaseous fuels and combustion air are not included in the total weight of all materials. Compliance will be demonstrated through the use of an Operation and Maintenance Plan.
 13. For fuel burning equipment sources installed, constructed, or modified after April 16, 2015, the permittee must not cause, suffer, allow, or permit particulate emissions from any fuel burning equipment in excess of 0.10 grains per dry standard cubic foot under LRAPA 32-030(2). This limitation applies to EU: B1 and B2. Compliance will be demonstrated through the use of an Operation and Maintenance Plan.
 14. All plant process equipment and all air contaminant collection and disposal facilities, including any baghouses and cyclones, must be operated and maintained at the highest and best practicable treatment and control of air contaminant emissions so as to maintain overall air quality at the highest possible levels, and to maintain contaminant concentrations, visibility reduction, odors, soiling, and other deleterious factors at the lowest possible levels under LRAPA 32-005(1). Compliance will be demonstrated through the use of an Operation and Maintenance Plan.
 15. Under LRAPA 32-007, the facility must prepare an Operation and Maintenance Plan (O&M Plan) for the particulate matter control devices and the boilers. If the O&M Plan is updated, the facility must submit the updated copy to LRAPA for review. If LRAPA determines the plan is deficient, LRAPA may require the facility to amend the plan. At minimum, the O&M Plan must include inspection schedules for each particulate matter control device and each boiler. The O&M Plan must identify procedures for recording the date and time of any inspections, identification of the equipment inspected, the results of the inspection, and the actions taken if repairs or maintenance are necessary.
 16. The permittee must not cause or allow air contaminants from any source to cause a nuisance. Nuisance conditions will be verified by LRAPA personnel. The permittee must maintain a log of each nuisance complaint received by the permittee during the operation of the facility. A plant representative must immediately investigate the condition following the receipt of the nuisance complaint and provide a response to the complainant within 24 hours, if possible. [LRAPA 49-020].

Typically Achievable Control Technology (TACT)

17. LRAPA 32-008(2) requires new or modified emission units to meet TACT if the emission unit meets the following criteria: The emission unit is not subject to Major NSR or Type A State NSR in LRAPA title 38, and applicable NSPS in LRAPA title 46, or any other standard applicable to only new or modified sources in LRAPA title 32, title 33, or title 39 for the regulated pollutant; the source is required to have a permit; if new, the emission unit has emissions of any criteria pollutant equal to or greater than one (1) ton per year of any criteria pollutant; if modified, the emission unit would have an increase in emissions of any criteria pollutant equal to or greater

than one (1) ton per year of any criteria pollutant; and LRAPA determines that the proposed air pollution control devices and emission reduction processes do not represent TACT.

- 17a. For the grain handling and receiving operations (EU: F1 through F29 and EU: C1) the facility uses baghouses and a cyclone to control particulate matter emissions. While a formal TACT determination has not been conducted, LRAPA has determined that the use of these particulate matter control devices likely meets the TACT requirements for this facility.
- 17b. For the two (2) natural gas-fired boilers rated at 7.876 MMBtu/hr (EU: B1 and EU: B2), only CO emissions would potentially exceed one (1) ton per year. While a formal TACT determination has not been conducted, LRAPA has determined that the purchase of boilers with a manufacturer's guarantee for CO emissions of 100 ppm or less would likely meet the TACT requirements for this facility.

Plant Site Emission Limits (PSELS)

18. Provided below is a summary of the baseline emissions rate, netting basis, and PSELS for this facility.

Pollutant	Baseline Emission Rate (TPY)	Netting Basis		Plant Site Emission Limit (PSEL)		PSEL Increase Over Netting Basis (TPY)	Significant Emission Rate (TPY)
		Previous (TPY)	Proposed (TPY)	Previous PSEL (TPY)	Proposed PSEL (TPY)		
PM	NA	0	0	24	12	12	25
PM ₁₀	NA	0	0	14	3.3	3.3	15
PM _{2.5}	NA	0	0	9	3.3	3.3	10
CO	NA	0	0	99	5.1	5.1	100
NO _x	NA	0	0	39	1.7	1.7	40
SO ₂	NA	0	0	NA	NA	NA	40
VOC	NA	0	0	NA	NA	NA	40
GHG (CO _{2e})	NA	0	0	74,000	8,079	8,079	75,000
Individual HAP	NA	NA	NA	NA	NA	NA	NA
Aggregate HAPs	NA	NA	NA	NA	NA	NA	NA

- 18a. The facility does not have a baseline emission rate for pollutants other than PM_{2.5} and GHGs because the facility was not in operation during either the 1977 or 1978 baseline year. A baseline emission rate is not established for PM_{2.5} in accordance with LRAPA 42-0048(3). The facility has no baseline for GHGs because the facility was not in operation during the 2000-2010 baseline period.
- 18b. The netting basis for all pollutants is 0 (zero) in accordance with LRAPA 42-0046(4) and 42-0040(2)&(3).
- 18c. In accordance with OAR 340-222-0041(2), the PSELS for criteria pollutants greater than de minimis have been set equal to the source's potential-to-emit (PTE) as calculated in the permit application materials for the 2015 ACDP. The previous PSELS for this facility was set at the Generic PSEL levels that are no longer allowed as of March 1, 2023 due to a DEQ rule change.
- 18d. No PSELS were set for SO₂ and VOC in accordance with LRAPA 42-0020(3)(a) because these pollutants are emitted below the de minimis as defined in LRAPA title 12.

18e. The baseline year, netting basis, and SER are not applicable for limiting federal HAPs. As this facility is a minor source of federal HAPs, no PSELs have been established for federal HAPs.

Federal Hazardous Air Pollutants/Toxic Air Contaminants

19. The facility does not have a potential-to-emit for federal HAPs that will exceed the major source thresholds for individual federal HAPs and aggregate federal HAPs of 10 TPY and 25 TPY, respectively. Therefore, the facility is considered a minor or area source of federal HAPs.
20. 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 the rule. All federal HAPs are on the list of approximately 600 toxic air contaminants. 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.
21. Provided below is a summary of the federal HAP and CAO TAC emission estimates based on the potential emissions as calculated in the emission detail sheets. The highest potential emission for an individual HAP is toluene at 1.8E-03 TPY. The potential emissions in aggregate of all federal HAPs is 7.9E-03 TPY.

Pollutant	CAS Number	Potential Emissions (TPY)	Federal HAP	CAO Air Toxic
Organics				
Acetaldehyde	75-07-0	2.1E-04	Yes	Yes
Acrolein	107-02-8	1.8E-04	Yes	Yes
Benzene	71-43-2	3.9E-04	Yes	Yes
Benzo[a]pyrene	50-32-8	8.1E-08	Yes	Yes
Ethyl Benzene	100-41-4	4.6E-04	Yes	Yes
Formaldehyde	50-00-0	8.3E-04	Yes	Yes
Hexane	110-54-3	3.1E-04	Yes	Yes
Naphthalene	91-20-3	2.0E-05	Yes	Yes
POM (including PAHs)	--	2.7E-05	Yes	Yes
Toluene	108-88-3	1.8E-03	Yes	Yes
Xylenes	1330-20-7	1.3E-03	Yes	Yes
Inorganic Gases				
Ammonia	7664-41-7	2.2E-01	No	Yes
Metals				
Arsenic	7440-38-2	1.3E-05	Yes	Yes
Barium	7440-39-3	3.0E-04	No	Yes
Beryllium	7440-41-7	8.1E-07	Yes	Yes
Cadmium	7440-43-9	7.4E-05	Yes	Yes
Chromium, Hexavalent	18540-29-9	9.4E-05	Yes	Yes
Cobalt	7440-48-4	5.6E-06	Yes	Yes
Copper	7440-50-8	5.7E-05	No	Yes
Lead	7439-92-1	3.4E-05	Yes	Yes

Pollutant	CAS Number	Potential Emissions (TPY)	Federal HAP	CAO Air Toxic
Manganese	7439-96-5	2.6E-05	Yes	Yes
Mercury	7439-97-6	1.7E-05	Yes	Yes
Molybdenum Trioxide	1313-27-5	1.1E-04	No	Yes
Nickel	7440-02-0	1.4E-04	Yes	Yes
Selenium	7782-49-2	1.6E-06	Yes	Yes
Vanadium	7740-62-2	1.5E-04	No	Yes
Zinc	7440-66-6	2.0E-03	No	Yes

Toxics Release Inventory

22. The Toxics Release Inventory (TRI) is a federal program that tracks the management of certain toxic chemicals that may pose a threat to human health and the environment, over which LRAPA has no regulatory authority. It is a resource for learning about toxic chemical releases and pollution prevention activities reported by certain industrial facilities. Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA) created the TRI program. In general, chemicals covered by the TRI program are those that cause:
- Cancer or other chronic human health effects;
 - Significant adverse acute human health effects; or
 - Significant adverse environmental effects.

There are currently over 650 chemicals covered by the TRI program. Facilities that manufacture, process or otherwise use these chemicals in amounts above established levels must submit annual TRI reports on each chemical. NOTE: The TRI program is a federal program over which LRAPA has no regulatory authority. LRAPA does not guarantee the accuracy of any information copied from EPA's TRI website.

Because this facility has not begun operation, it is not required to report any emissions to the TRI program.

New Source Performance Standards (NSPSs)

23. There are no emission units at this facility for which NSPS have been promulgated or are applicable.
- 23a. 40 CFR 60 subpart DD – Standards of Performance for Grain Elevators is not applicable to this facility because the facility does not meet the definition of a “grain terminal elevator” or “grain storage elevator” under 40 CFR 60.301. The definition of a grain terminal elevator does not include cereal manufacturers. The definition of grain storage elevator only applies to wheat flour, corn, rice or soybeans.

National Emission Standards for Hazardous Air Pollutants (NESHAPs)

24. There are no emission units at this facility for which NESHAPs have been promulgated or are applicable.

Recordkeeping Requirements

25. The facility is required to keep and maintain a record of the following information for a period of at least five (5) years from the date of entry of the following information:

Activity	Units	Minimum Recording Frequency
Emission Unit Recordkeeping		

Activity	Units	Minimum Recording Frequency
Throughput for each grain-handling and receiving emission unit in Condition Error! Reference source not found. of the permit	Tons	Monthly
Total natural gas combusted	MMCF	Monthly
PSEL pollutant emissions as calculated according to Conditions Error! Reference source not found. and Error! Reference source not found. of the permit, including the supporting process information	Tons	Monthly
Monitor and record pressure readings of each baghouse and filter associated with each emission unit in Condition Error! Reference source not found. of the permit (excluding bin vents)	Inches of water column	Weekly
Fugitive emission survey logs	NA	Monthly
Operation and Maintenance Plan	NA	Maintain the current version on-site
Documentation of each inspection of each particulate matter emission control device and boiler	NA	As Performed
General Recordkeeping		
Log of each nuisance complaint and the resolution	NA	Upon receipt
Upset log of all planned and unplanned excess emissions	See Condition G15 of the permit	Per occurrence

Reporting Requirements

26. The facility must submit to LRAPA the following reports by no later than the dates indicated in the table below:

Report	Reporting Period	Due Date
PSEL pollutant emissions as calculated according to Conditions Error! Reference source not found. and Error! Reference source not found. of the permit, including the supporting process information	Annual	February 15
A summary of maintenance and repairs performed on any pollution control device or boiler at the facility	Annual	February 15
A summary of nuisance complaints from the public and the resolution, as applicable	Annual	February 15
The upset log information required by Condition Error! Reference source not found. of the permit, if required by Condition Error! Reference source not found.	Annual	February 15
GHG Report, if required by Condition Error! Reference source not found. of the permit	Annual	March 31

27. The permittee is not subject to greenhouse gas reporting under OAR 340 division 215 because actual greenhouse gas emissions are less than 2,500 metric tons (2,756 short tons) of CO₂

equivalents per year. If the source ever emits more than this amount, they will be required to report greenhouse gas emissions.

Public Notice

28. Pursuant to OAR 340-216-0064(5)(a), which became effective on March 1, 2023, issuance of a renewed Simple Air Contaminant Discharge Permit requires public notice in accordance with OAR 340-209-0030(3)(c) [aka LRAPA 31-0030(3)(c)], which requires LRAPA to provide notice of the proposed permit action and a minimum of 35 days for interested persons to submit written comments.

The draft permit will be on public notice April 14, 2023 to May 18, 2023. Written comments may be submitted during the 35-day comment period. If requested by ten (10) or more individuals or an individual representing a group of more than ten (10) individuals, there will be a public hearing following the comment period.

After the comment period and hearing (if requested), LRAPA will respond to comments received and then take final action to issue or deny the permit within 45 days of the close of the public comment period or hearing period.

JJW/rr
03/10/2023

DRAFT

LIST OF ABBREVIATIONS THAT MAY BE USED IN THIS PERMIT

ACDP	Air Contaminant Discharge Permit	MMBtu	Million British thermal units
AQMA	Air Quality Management Area	MMCF	Million cubic feet
ACS	Applied coating solids	NA	Not applicable
Act	Federal Clean Air Act	NESHAP	National Emission Standards for Hazardous Air Pollutants
ASTM	American Society of Testing and Materials	NO _x	Nitrogen oxides
BDT	Bone dry ton	NSPS	New Source Performance Standards
Btu	British thermal unit	NSR	New Source Review
CAM	Compliance Assurance Monitoring	O ₂	Oxygen
CAO	Cleaner Air Oregon	OAR	Oregon Administrative Rules
CD ID	Control device identifier	ODEQ	Oregon Department of Environmental Quality
CEMS	Continuous Emissions Monitoring System	ORS	Oregon Revised Statutes
CFR	Code of Federal Regulations	O&M	Operation and maintenance
CI	Compression Ignition	SB	Lead
CMS	Continuous Monitoring System	PCD	Pollution Control Device
CO	Carbon Monoxide	PM	Particulate matter
CO ₂	Carbon dioxide	PM _{2.5}	Particulate matter less than 2.5 microns in size
CO _{2e}	Carbon dioxide equivalent	PM ₁₀	Particulate matter less than 10 microns in size
COMS	Continuous Opacity Monitoring System	ppm	Parts per million
CPDS	Certified Product Data Sheet	PSEL	Plant Site Emission Limit
CPMS	Continuous parameter monitoring system	psia	pounds per square inch, actual
DEQ	Department of Environmental Quality	PTE	Potential to Emit
dscf	Dry standard cubic feet	QIP	Quality Improvement Plan
EF	Emission factor	RICE	Reciprocating Internal Combustion Engine
EPA	US Environmental Protection Agency	SACC	Semi-Annual Compliance Certification
EU	Emissions Unit	SCEMP	Surrogate Compliance Emissions Monitoring Parameter
EU ID	Emission unit identifier	Scf	Standard cubic foot
FCAA	Federal Clean Air Act	SDS	Safety data sheet
ft ²	Square foot	SER	Significant emission rate
FSA	Fuel sampling and analysis	SERP	Source emissions reduction plan
gal	Gallon	SI	Spark Ignition
GHG	Greenhouse Gas	SIC	Standard Industrial Code
gr/dscf	Grain per dry standard cubic feet (1 pound = 7000 grains)	SIP	State Implementation Plan
HAP	Hazardous Air Pollutants as defined by LRAPA title 12	SO ₂	Sulfur dioxide
HCFC	Halogenated Chlorofluorocarbons	ST	Source test
Hr	Hour	TAC	Toxic air contaminant
ID	Identification number or label	TACT	Typically Achievable Control Technology
I&M	Inspection and maintenance	TBD	To Be Determined
Lb	Pound	TEU	Toxic Emission Unit
LRAPA	Lane Regional Air Protection Agency	TPY	Tons per year
MACT	Maximum Achievable Control Technology	VE	Visible emissions
MBF	Thousand board feet	VMT	Vehicle miles traveled
MERV	Minimum efficiency reporting values	VOC	Volatile organic compounds
MM	Million	Year	A period consisting of any 12-consecutive calendar months

Emission Detail Sheets

Grain Millers 203155					
Emission Detail Sheets					
Boilers					
Boiler Specifications					
Max Heat Input	15,752	MMBtu/hr			
Heat Value - Natural Gas	1026	MMBtu/MMCF			
Max Hrs Operation	8,760	hr/yr			
Criteria Pollutants					
Pollutant	NG Emission Factor (lb/MMCF)	NG Emission Factor Units	Potential Hourly Emissions (lbs/hr)	Potential Annual Emissions (TPY)	
PM/PM ₁₀ /PM _{2.5}	7.6	lbs/MMCF	0.12	0.51	
Carbon Monoxide	76	lbs/MMCF	1.17	5.11	
Nitrogen Oxides	25	lbs/MMCF	0.38	1.68	
Sulfur Dioxide	1.7	lbs/MMCF	0.03	0.11	
VOCs	5.5	lbs/MMCF	0.08	0.37	
GHGs (CO ₂ equiv.)	120,143	lbs/MMCF	1,845	8,079	
HAP Emissions					
Pollutant	NG Emission Factor (lb/MMCF)	Potential Hourly Emissions (lbs/hr)	Potential Annual Emissions (TPY)	Federal HAP	CAO Air Toxic
Organics					
Acetaldehyde	4.30E-03	6.6E-05	2.9E-04	Yes	Yes
Acrolein	2.70E-03	4.1E-05	1.8E-04	Yes	Yes
Benzene	8.00E-03	1.2E-04	5.4E-04	Yes	Yes
Benzo[a]pyrene	1.20E-06	1.8E-08	8.1E-08	Yes	Yes
Ethyl Benzene	9.50E-03	1.5E-04	6.4E-04	Yes	Yes
Formaldehyde	1.70E-02	2.6E-04	1.1E-03	Yes	Yes
Hexane	6.30E-03	9.7E-05	4.2E-04	Yes	Yes
Naphthalene	3.00E-04	4.6E-06	2.0E-05	Yes	Yes
Total PAHs (exc. Nap.)	1.00E-04	1.5E-06	6.7E-06	Yes	Yes
Toluene	3.66E-02	5.6E-04	2.5E-03	Yes	Yes
Xylenes	2.72E-02	4.2E-04	1.8E-03	Yes	Yes
Inorganic Gases					
Ammonia	3.2	4.9E-02	2.2E-01	No	Yes
Metals					
Arsenic	2.0E-04	3.1E-06	1.3E-05	Yes	Yes
Barium	4.4E-03	6.8E-05	3.0E-04	No	Yes
Beryllium	1.2E-05	1.8E-07	8.1E-07	Yes	Yes
Cadmium	1.1E-03	1.7E-05	7.4E-05	Yes	Yes
Chromium, Hexavalent	1.4E-03	2.1E-05	9.4E-05	Yes	Yes
Cobalt	8.4E-05	1.3E-06	5.6E-06	Yes	Yes
Copper	8.5E-04	1.3E-05	5.7E-05	No	Yes
Lead	5.0E-04	7.7E-06	3.4E-05	Yes	Yes
Manganese	3.8E-04	5.8E-06	2.6E-05	Yes	Yes
Mercury	2.6E-04	4.0E-06	1.7E-05	Yes	Yes
Molybdenum Trioxide	1.7E-03	2.5E-05	1.1E-04	No	Yes
Nickel	2.1E-03	3.2E-05	1.4E-04	Yes	Yes
Selenium	2.4E-05	3.7E-07	1.6E-06	Yes	Yes
Vanadium	2.3E-03	3.5E-05	1.5E-04	No	Yes
Zinc	2.9E-02	4.5E-04	2.0E-03	No	Yes
		Total (TPY) =	2.3E-01	7.9E-03	2.3E-01
GHG-Related Emission Factors					
Pollutant	Natural Gas (kg/MMBtu)	GWP			
Carbon Dioxide (CO ₂)	53.06	1			
Methane (CH ₄)	1.0E-03	25			
Nitrous Oxide (N ₂ O)	1.0E-04	298			
Notes:					
PM emissions are based on US EPA AP-42 Section 1.4					
SO ₂ emissions are based on DEQ Emission Factors Gas Fired Boilers, AQ-EF05 (08/01/2011)					
NO _x and CO emissions are based on boiler manufacturer's guarantee for these pollutants					
GHG emissions are based on 40 CFR 98, Tables C-1 and C-2					
Non-metal toxic emission factors based on SCAQMD AB 2588 - Default Emission Factors for Fuel Combustion, Table B-1					
Metal toxic emission factors are based on US EPA WebFIRE/AP-42 Section 1.4					
Chromium assumed to be hexavalent form					
Molybdenum assumed to be present as a trioxide compound					
Lead is lead compounds other than elemental lead					

Emission			Grain Process Emissions			Maximum System		control efficiency	fraction PM-10 of PM	PM emissions (tons/year)	PM-10 emissions (tons/year)	PM2.5 = PM10 emissions (tons/year)
Point EP#	Filter #	Equipment ID#	Equipment	Air Volume m3	Air Volume CFM	Annual throughput (tons)	Emission Factor					
1	F1	J11-21-01	Filter #1	445	15,713	1320	0.01	0.9999	0.25	0.1320	0.0330	0.0330
2	F1A	J11-21-02	Filter 1A	62	2,189	1073	0.01	0.9999	0.25	0.1072	0.0268	0.0268
3	F1B	J11-21-03	Filter #1B	62	2,189	1073	0.01	0.9999	0.25	0.1072	0.0268	0.0268
4	F1C	J11-21-04	Filter #1C	10	353	700	0.01	0.9999	0.25	0.0700	0.0175	0.0175
5	F2	J13-21-01	Filter #2	445	15,713	4,117	0.02	0.9995	0.25	2.0586	0.5146	0.5146
6	F3	J14-21-01	Filter #3	445	15,713	1,927	0.02	0.9995	0.25	0.9636	0.2409	0.2409
7	F4	J14-21-02	Filter #4	300	10,593	1,927	0.02	0.9995	0.25	0.9636	0.2409	0.2409
8	C1	J16-34-02	Cyclone #1	150	5,297	1.2	0.00001	0.999	0.25	0.0012	0.0003	0.0003
9	F5	J18-21-01	Filter #5	445	15,713	1,226	0.01	0.9995	0.25	0.6132	0.1533	0.1533
10	F6	J18-21-02	Filter #6	445	15,713	1,465	0.01	0.9995	0.25	0.7326	0.1832	0.1832
11	F7	J17-21-01	Filter #7	445	15,713	613	0.01	0.9995	0.25	0.3066	0.0766	0.0766
12	F8	J38-21-01	Filter #8	445	15,713	613	0.01	0.9995	0.25	0.3066	0.0766	0.0766
13	F9	J24-21-01	Filter 9	140	4,943	1,200	0.05	0.9999	0.25	0.1200	0.0300	0.0300
14	F10	J24-21-02	Filter 10	75	2,648	720	0.06	0.9999	0.25	0.0720	0.0180	0.0180
15	F11	J22-21-01	Filter 11	75	2,648	720	0.06	0.9999	0.25	0.0720	0.0180	0.0180
16	F12	J19-21-01	Filter #12	100	3,531	2,628	0.06	0.9999	0.25	0.2628	0.0657	0.0657
17	F13	J19-21-02	Filter 13	100	3,531	2,628	0.06	0.9999	0.25	0.2628	0.0657	0.0657
18	F14	J19-21-03	Filter #14	250	8,828	2,102	0.02	0.9999	0.25	0.2102	0.0526	0.0526
19	F15	J32-21-01	Filter #15	25	883	1,577	0.01	0.9999	0.25	0.1577	0.0394	0.0394
20	F16	J19-21-04	Filter #16	15.00	530	1,051	0.01	0.9999	0.25	0.1051	0.0263	0.0263
21	F17	J49-21-01	Filter #17	23.00	812	1,125	0.06	0.9999	0.25	0.1125	0.0281	0.0281
22	F18	J29-21-01	Filter #18	285.00	10,000	515	0.02	0.9999	0.25	0.0515	0.0129	0.0129
23	F19	J29-21-02	Filter #19	170.00	6,000	3,252	0.25	0.9999	0.25	0.3252	0.0813	0.0813
24	F20	J29-21-03	Filter #20	170.00	6,000	3,252	0.25	0.9999	0.25	0.3252	0.0813	0.0813
25	F21	J29-21-04	Filter #21	170.00	6,000	3,252	0.25	0.9999	0.25	0.3252	0.0813	0.0813
26	F22	J29-21-05	Filter #22	170.00	6,000	3,252	0.25	0.9999	0.25	0.3252	0.0813	0.0813
27	F23	J29-21-06	Filter #23	170.00	6,000	3,252	0.25	0.9999	0.25	0.3252	0.0813	0.0813
28	F24	J29-21-07	Filter #24	170.00	6,000	3,285	0.25	0.9999	0.25	0.3285	0.0821	0.0821
29	F25	J29-21-08	Filter #25	170.00	6,000	3,285	0.25	0.9999	0.25	0.3285	0.0821	0.0821
30	F26	J29-21-09	Filter #26	170.00	6,000	3,285	0.25	0.9999	0.25	0.3285	0.0821	0.0821
31	F27	J29-21-10	Filter #27	170.00	6,000	3,285	0.25	0.9999	0.25	0.3285	0.0821	0.0821
32	F28	J29-21-11	Filter #28	170.00	6,000	3,285	0.25	0.9999	0.25	0.3285	0.0821	0.0821
33	F29	J29-21-12	Filter #29	170.00	6,000	3,285	0.25	0.9999	0.25	0.3285	0.0821	0.0821
34	B1	J03-01-01	Boiler #1									
35	B2	J03-01-02	Boiler #2									
									PM	PM-10	PM2.5 = PM10	
Total for Initial Phase I									5.9	1.5	1.5	
Total for Phase I & Future Phase II									11.4	2.8	2.8	

EP	Filter #		Equipment & Process	Est Loss %	Maximum Annual			Product Rates & Operational Data			Pollutant
					Input Tons (Annually)	Output tons (Annually)	Output Tons By-Product	System Capacity Tons Per hour	Operation Hrs/day	Operation Days/yr	
1	F1	J11-21-01	Filter #1	0.0250	220000	214500	5500	200.0	12	250	Grain Dust
5	F2	J13-21-01	Filter #2	0.0500	205860	195567	10293	23.5	24	365	Grain Dust
6	F3	J14-21-01	Filter #3	0.3000	96360	67452	28908	11.0	24	365	Grain Dust
7	F4	J14-21-02	Filter #4	0.3000	96360	67452	28908	11.0	24	365	Grain Dust
8	C1	J16-34-02	Cyclone #1	0.0010	122640	122517	123	14.0	24	365	Steam & Dust
9	F5	J18-21-01	Filter #5	0.0075	122640	121720	920	14.0	24	365	Grain Dust
10	F6	J18-21-02	Filter #6	0.0050	61320	61013	307	7.0	24	365	Grain Dust
" "	" "	" "	Filter #6	0.0050	85204	84778	426	12.0	24	365	Grain Dust
11	F7	J17-21-01	Filter #7	0.0050	61320	61013	307	7.0	24	365	Grain Dust
12	F8	J38-21-01	Filter #8	0.0050	61320	61013	307	7.0	24	365	Grain Dust
13	F9	J24-21-01	Filter #9	0.0050	24000	23880	120	4.0	24	250	Grain Dust
14	F10	J24-21-02	Filter #10	0.0050	12000	11940	60	2.0	24	250	Grain Dust
15	F11	J22-21-01	Filter #11	0.0050	12000	11940	60	2.0	24	250	Grain Dust
16	F12	J19-21-01	Filter #12	0.0050	43800	43581	219	5.0	24	365	Grain Dust
17	F13	J19-21-02	Filter #13	0.0050	43800	43581	219	5.0	24	365	Grain Dust
18	F14	J19-21-03	Filter #14	0.0050	105120	104594	526	12.0	24	365	Grain Dust
19	F15	J32-21-01	Filter #15	0.0050	157680	156892	788	18.0	24	365	Grain Dust
20	F16	J19-21-04	Filter #16	0.0000	105120	105120	0	12.0	24	365	Grain Dust
21	F17	J49-21-01	Filter #17	0.0000	18750	18750	0	25.0	3	250	Grain Dust
22	F18	J29-21-01	Filter #18	0.0200	26280	25754	526	3.0	24	365	Grain Dust
23	F19	J29-21-02	Filter #19	0.0100	13140	13009	131	1.5	24	365	Grain Dust
24	F20	J29-21-03	Filter # 20	0.0100	13140	13009	131	1.5	24	365	Grain Dust
25	F21	J29-21-04	Filter #21	0.0100	13140	13009	131	1.5	24	365	Grain Dust
26	F22	J29-21-05	Filter #22	0.0100	13140	13009	131	1.5	24	365	Grain Dust
27	F23	J29-21-06	Filter #23	0.0100	13140	13009	131	1.5	24	365	Grain Dust
28	F24	J29-21-07	Filter #24	0.0000	13140	13140	0	1.5	24	365	Grain Dust
29	F25	J29-21-08	Filter #25	0.0000	13140	13140	0	1.5	24	365	Grain Dust
30	F26	J29-21-09	Filter #26	0.0000	13140	13140	0	1.5	24	365	Grain Dust
31	F27	J29-21-10	Filter #27	0.0000	13140	13140	0	1.5	24	365	Grain Dust
32	F28	J29-21-11	Filter #28	0.0000	13140	13140	0	1.5	24	365	Grain Dust
33	F29	J29-21-12	Filter #29	0.0000	13140	13140	0	1.5	24	365	Grain Dust
34	B1	J03-01-01	Boiler #1						24	365	Nox, CO, CO,
35	B2	J03-01-02	Boiler #2						24	365	CO2, SO2, PM