

Technical and Regulatory Review of Minor Air Permit Greenfield Louisiana, LLC Grain Terminal Emissions

The following Technical and Regulatory Review report was prepared for the Tulane Environmental Law Clinic by Kathy J. Martin of Martin Environmental Services with emphasis on the air quality permit issued by the Louisiana Department of Environmental Quality (LDEQ) for construction and operation of Greenfield Louisiana, LLC Grain Terminal near Wallace, Louisiana. Documents that were reviewed include the LDEQ minor air permit 2580-00068-00; air permit application materials; state and federal air regulations; air pollution control equipment; published (USEPA) emission factors for grain terminal operations, and published literature as applicable.

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Summary of Issues

According to LAC 33:III.529 (Reopenings for Cause), “any permit issued under this Chapter may be reopened and revised by the permitting authority prior to the expiration of the permit if sufficient cause exists”, such as a ‘material mistake’ or ‘inaccurate statements made in establishing the terms or conditions of the permit’”. This report identifies numerous examples of inaccuracies and incompleteness of critical facts that could fall under these reopener criteria.

If LDEQ had identified these deficiencies during permit review, the agency would be obligated by regulation to require that Greenfield Louisiana air permit application be amended to include all necessary correct and complete information. Until all necessary information is received, the permit application is not a ‘complete application’.

Only when a complete application, as defined in 40 CFR 70.5(a)(2), has been submitted to the agency could LDEQ determine whether the facility is a major source under Title V of the Clean Air Act. Under the Clean Air Act, a permit application is complete when there is sufficient information for the permit writer to determine applicable federal requirements.

LDEQ must properly identify the proposed facility as a synthetic minor SM-80 source that utilizes operational controls and a Scaling Factor to reduce the PM10 emissions at 80% of major source thresholds for a Part 70 permit. The LDEQ must follow public notice appropriate for synthetic minor permits and include meaningful public participation and transparency as required by state and federal law.

With respect to LAC 33:III.529, examples of sufficient cause to reopen the permit include, but are not limited to the following:

1. The permit was not properly identified as a synthetic minor permit that is within 80% of major source thresholds (EPA designation of SM-80 permit).
2. State and federal public notice for a SM-80 synthetic minor permit did not occur.
3. Potential to emit calculations for major source threshold evaluation included operational controls (reduced hours and Scaling Factor for dust filters; reduced hours and grain throughput for Grain Dryer) and thus underestimated the facility-wide uncontrolled PTE emissions test for applicable federal standards.
4. The discrepancy between 260 dust filters, 177 Emission Inventory Questionnaire forms (EIQ), and 171 equipment (EQT) numbers must be addressed and satisfactorily explained by the applicant and LDEQ.

5. The applicant used 24,250,842 tons/yr to determine Fugitive Emissions for Ship Loading which is **485,017** tons/yr less than total grain throughput of 24,735,859 tons/yr.
6. The applicant did not provide a computer printout or other proof of calculation to defend the value of 1,616,200 cfm total filter flow when calculating annual PM10 emissions for the Dust Filter Category.
7. The permit application did not contain a map, flow diagram, engineering drawings, or other mechanism by which LDEQ and the public would understand where each air pollution source is located within the proposed facility boundary.
8. The monitoring and recordkeeping requirements are not sufficient to guarantee that the facility will not exceed major source thresholds and are not specific enough to ensure that LDEQ can enforce the provisions of the permit.
9. The permit does not mention the 53% Scaling Factor used to synthetically lower the potential to emit for the dust filters and the subsequent total PM10 tons per year emissions after operational controls.
10. The Emission Rates for Criteria Pollutants and CO2e table in the permit does not include the name of the emissions source, just the EQT number for 177 sources making the table incomprehensible to the public without flipping back and forth to other tables in the permit that include both the EQT number and the emission source description.

A. BASIC INFORMATION ABOUT THE FACILITY

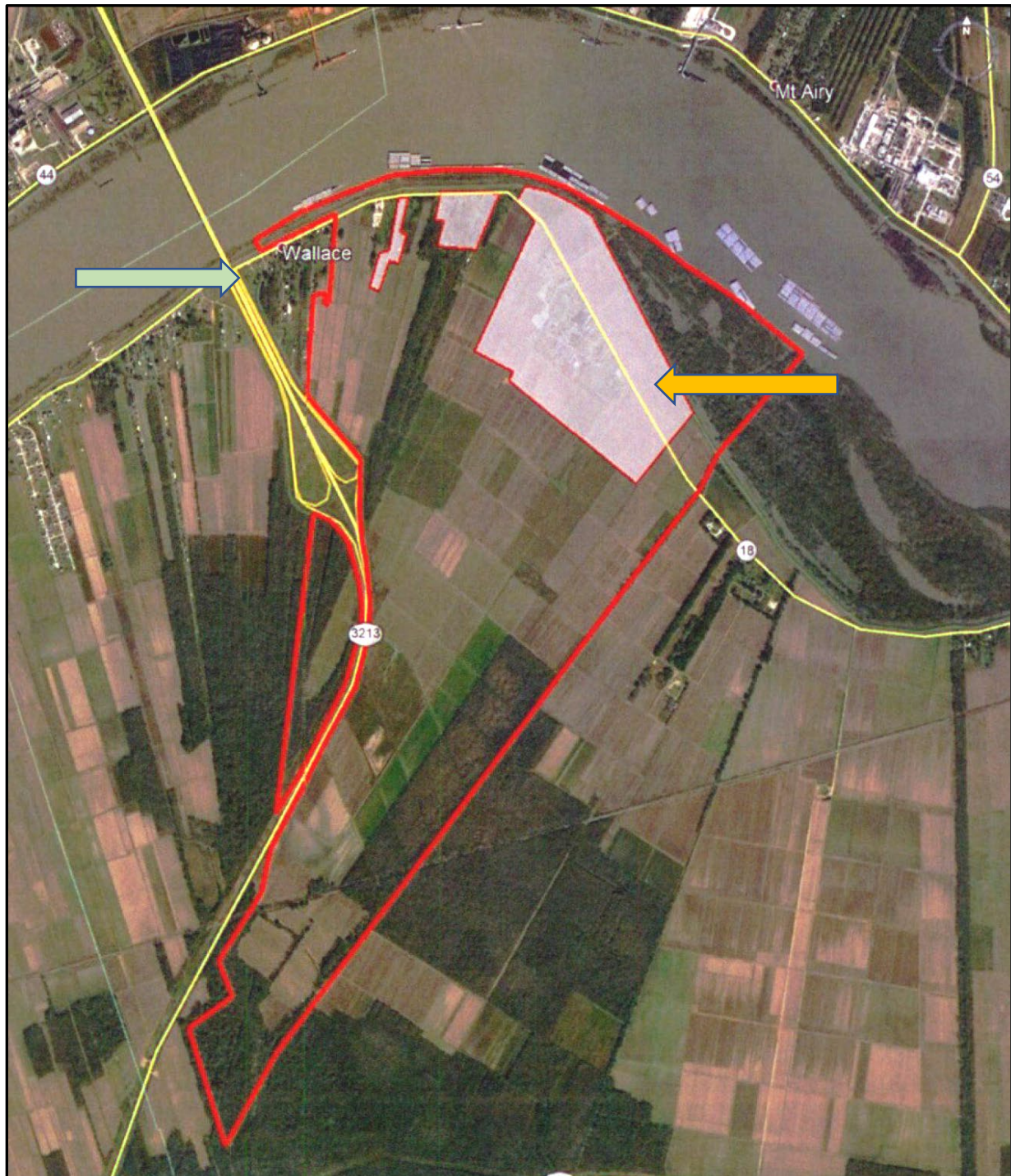


Figure 1 – Snapshot of property boundary (in red) for proposed grain terminal showing community of Wallace west of the red property line at the river (light green arrow) and the Whitney Plantation located under the largest 'light pink' area to the right within the larger property boundary (golden arrow). (see page 12 of 299 air permit application).

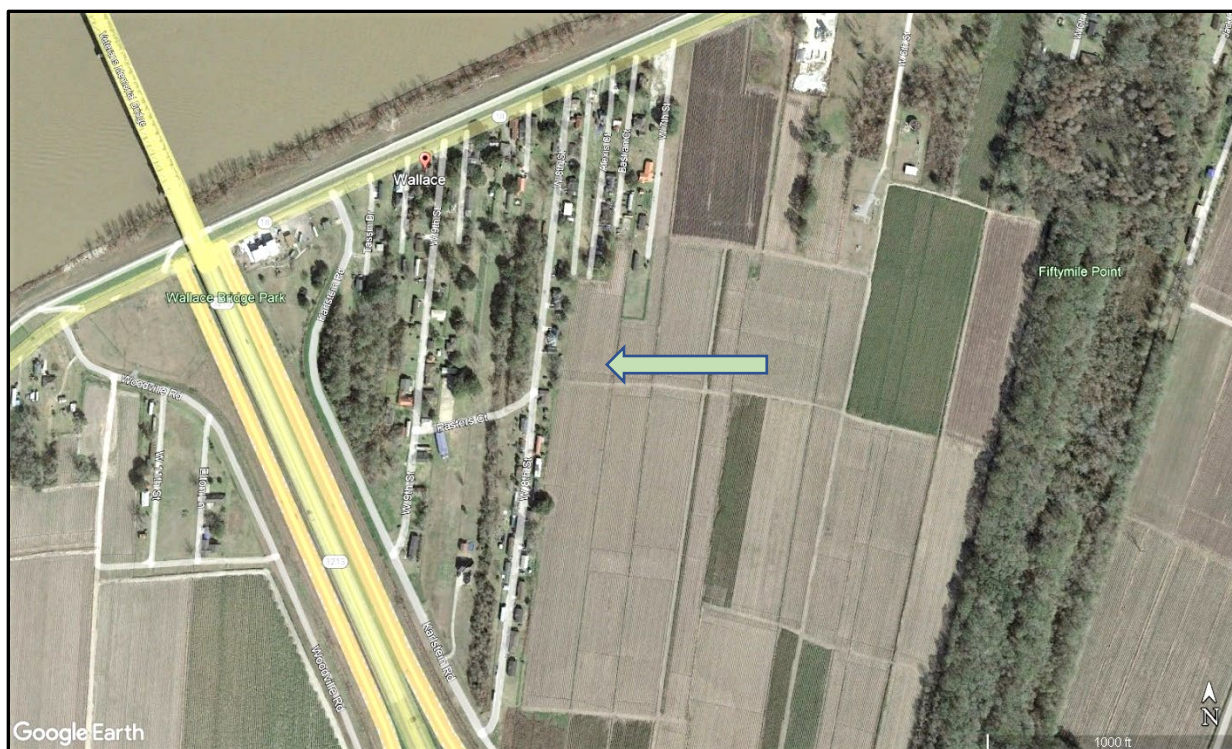


Figure 2 – Google Earth Image showing community of Wallace on east of Highway 3213 due west of the proposed facility (light green arrow).



Figure 3 – Google Earth Image showing Whitney Plantation due east of the proposed facility (golden arrow).



Figure 4 – Google Earth image showing 17 of the 171 emission points (blue pins) using UTM coordinates provided in the Emission Inventory Questionnaire pages 74-251 of 299 of the permit application.



Figure 5 – Google Earth image – Hwy 3213 (North/South), Hwy 61 north of Mississippi River connects to I-10 (East/West), and Hwy 3127 to the south (East/West)

A1. LDEQ Air Permit Documents and Timeline

Facility Name: Greenfield Louisiana Terminal
Company Name: Greenfield Louisiana, LLC
Location: Wallace, St. John the Baptist Parish, Louisiana

Agency Interest No. 222696
Minor Air Permit No. 2580-00068-00

Minor Source Air Permit Application (299 pages):
<https://edms.deq.louisiana.gov/app/doc/view?doc=12175299>

LDEQ administrative completeness letter:
<https://edms.deq.louisiana.gov/app/doc/view?doc=12175297>

LDEQ minor air permit (54 pages):
<https://edms.deq.louisiana.gov/app/doc/view?doc=12298166>

Permit Timeline: (from the cover sheet and the air permit narrative)

Application Submitted:	May 11, 2020
Additional Information Received:	June 3, 2020
Permit Writer Technical Review:	June 12, 2020
Additional Information Received:	July 7, 2020
Air Modeling:	July 20, 2020
Final Approval (Manager)	July 30, 2020
Final Approval (Administration)	August 3, 2020
Final Approval (Assistant Secretary)	August 3, 2020
Permit Approved (Elliott Vega):	August 3, 2020

Agency Determinations: NSPS applies; PSD/NSSR does not; NESHAP applies
Minor Air Permit: No Public Notice Expedited Permit

The LDEQ Electronic Document Management System (EDMS) for Agency Interest No. 222696 contains 16 uploaded documents (as of 01-22-23) related to the Greenfield Louisiana Terminal air permit but does not include documents reflective of LDEQ staff air modeling (July 20, 2020) or the additional information referred to by LDEQ in the air permit narrative as having been received on June 3, 2020 and July 7, 2020.

A2 - Facility Description

In the permit application (page 10 of 299), Greenfield Louisiana, LLC describes the proposed grain terminal facility as follows:

“Greenfield Louisiana, LLC (Greenfield) proposes to develop a greenfield site located along the Mississippi River in St. John the Baptist Parish, Louisiana for the purposes of operating the Greenfield Louisiana Terminal (the Terminal). The Terminal will have the capability to receive and export corn, wheat, and soybeans (hereafter referred to collectively as "grain") and will include barge, rail, and truck receiving systems, a grain cleaning and grain drying system, storage bins, and a ship loading system.

The Terminal operations will include grain and grain byproducts receiving by barge, railcar and truck. Grain will be transferred by belt conveyors, weighed, and routed for cleaning, screening, drying, and/or storage in bins. Grain will be transferred from the bins to be loaded to ships for transport from the Terminal or can be routed directly to ship loading from the unloading station. Barge, truck and rail receiving operations will all be aspirated to dust filter control systems. Belt conveyors, scales, and grain cleaning operations will also be equipped with dust filter control systems. The storage bins and ship loading operations also will be equipped with dust filter controls. Controlled particulate emissions are accounted for under the Dust Filter Cap.

The Terminal will utilize a Grain Dryer with a maximum design rate of 35.02 MMBtu/hr that will be fueled by natural gas. Grain that requires drying will be routed to and from the dryer from storage bins via enclosed drag conveyors and a bucket elevator. The storage area will be divided into six (6) Storage Units, each comprised of 18 storage bins with a capacity of 80,000 bushels per bin.

Fugitive emission sources at the Terminal include emissions from unloading and loading not captured by the dust filter system and emissions from paved roads. Additional equipment to support facility operations include: a Standby Diesel Fire Pump Engine; three (3) Emergency Diesel Generator Engines; six (6) Standby Gasoline Engines for Shiploading; an Above Ground Gasoline Storage Tank; an Above Ground Diesel Tank; and, insignificant activity storage tanks.”

The LDEQ air permit issued for the construction and operation of the grain terminal limits the grain throughput to **24,735,859 tons/yr** (page 53 of 54) in any twelve consecutive month period. The permit application EIQ forms use **24,250,842 tons/yr** to determine Fugitive Emissions for Ship Loading (pages 248 and 277 of 299). That is a difference of **485,017 tons/yr** grain throughput.

A3. Proposed estimates of emissions for facility

A summary of the proposed facility-wide emissions for the proposed grain terminal was provided by the applicant in Table 1-1 of the permit application (page 11 of 299) as follows:

List the total emissions following the proposed project for this facility or process unit (for process unit-specific permits). Speciate all criteria pollutants, TAP, and HAP for the proposed project.	
Pollutant	Proposed Emission Rate (tons/yr)
CARBON MONOXIDE	10.71
NITROGEN OXIDES	7.07
PM10	81.86
PM2.5	37.31
SULFUR DIOXIDE	0.14
TOTAL VOC (INCL. LISTED)	0.71
BENZENE	< 0.01
FORMALDEHYDE	< 0.01
HEXANE (-N)	0.12
TOLUENE	< 0.01
XYLENE (MIXED ISOMERS)	< 0.01

Figure 6 – Snapshot of Greenfield Louisiana permit application page 32 of 299

The permit for Greenfield Louisiana grain terminal contains a similar summary of criteria air pollutants with slight changes to PM10, PM2.5, SO2, CO, and VOCs as follows:

Criteria Pollutants	
Pollutant	Emissions
PM ₁₀	81.91
PM _{2.5}	37.39
SO ₂	0.20
NO _x	7.07
CO	10.70
VOC	0.70

Figure 7 - Snapshot of Table on page 3 of 54 of the Greenfield Louisiana air permit

The emissions limitations included in the Greenfield Louisiana air permit can be found on the following pages:

Emission rates for PM-10 and PM 2.5 - Air permit pdf pages 22 to 34 of 54

Emission rates for fuel burning sources – Air permit pdf page 34 to 37 of 54

Emission rates for TAPs/HAPs – Air permit pdf page 38 of 54

Specific Requirements – Air permit pdf page 39 to 54 of 54

EPN	Source Description	NO _x (tpy)	CO (tpy)	PM ₁₀ (tpy)	PM _{2.5} (tpy)
DUST COLLECTORS					
DFCAP	Dust Filter CAP			61.67	30.84
OTHER SOURCES:					
SHIPLOAD	Ship Loading - Fugitive Emissions			7.28	1.33
BARGEUNL	Barge Unloading - Fugitive Emissions			7.67	2.00
TRUCKLOAD	Screen Loadout (Truck) - Fugitive Emissions			0.70	0.12
TRUCKUNL	Truck Unloading - Fugitive Emissions			0.19	0.03
RAILUNL	Railcar Unloading - Fugitive Emissions			1.25	0.21
PAVEDRDS	Paved Roads - Fugitive Emissions			0.40	0.10
DRYER	Grain Dryer	6.70	5.626	2.66	2.66
DSL ENGINE	Standby Diesel Fire Pump	0.20	0.170	0.01	0.01
GEN-1	Emergency Diesel Generator No. 1	0.02	0.020	0.002	0.002
GEN-2	Emergency Diesel Generator No. 2	0.07	0.060	0.003	0.003
GEN-3	Emergency Diesel Generator No. 3	0.02	0.020	0.002	0.002
GAS ENG-1	Standby Gasoline Engine No. 1	0.01	0.802	0.001	0.001
GAS ENG-2	Standby Gasoline Engine No. 2	0.01	0.802	0.001	0.001
GAS ENG-3	Standby Gasoline Engine No. 3	0.01	0.802	0.001	0.001
GAS ENG-4	Standby Gasoline Engine No. 4	0.01	0.802	0.001	0.001
GAS ENG-5	Standby Gasoline Engine No. 5	0.01	0.802	0.001	0.001
GAS ENG-6	Standby Gasoline Engine No. 6	0.01	0.802	0.001	0.001
AST GAS-1	Gasoline Storage Tank				
AST DSL-1	Diesel Storage Tank				
IA DSL-2	Diesel Storage Tank				
IA DSL-3	Diesel Storage Tank				
IA DSL-4	Diesel Storage Tank				
FACILITY-WIDE TOTALS		7.07	10.71	81.86	37.31

Figure 8 – Snapshot of Facility Wide Emissions table from page 253 of 299 of the permit application (image lightened for ease of reading).

From the table, facility-wide PM₁₀ emissions are estimated at **81.86 tons/year** and PM_{2.5} emissions at **37.31 tons per year**. The total for PM₁₀ adds to 81.84 using the values provided in the table. It is not clear why the air permit lists PM₁₀ emissions slightly higher at **81.91 tons per year**.

Regardless, according to the permit application, the largest sources of PM₁₀ emissions are:

- the category Dust Filter CAP 61.67 tons per year
- cumulative Fugitive Emissions 17.49 tons per year
- the Grain Dryer 7.66 tons per year

The difference between a minor and major source for this facility is the accuracy of the emissions estimate for criteria air pollutant PM₁₀ is:

$$100 \text{ tpy major source threshold} - 81.91 \text{ tpy estimated emissions} = \mathbf{18.09 \text{ tpy}}$$

It will be shown later in this report that there are serious problems with the manner in which the applicant and LDEQ evaluated facility-wide potential to emit calculations.

A4. Regulatory Citations of Interest

From LAC 33:III.502 definitions (pages 45 and 46 of 357)

“Major Stationary Source

- a. any stationary source (including all emission points and units of such source located within a contiguous area and under common control) of air pollutants which emits, or has the potential to emit, any regulated pollutant at or above the threshold values defined in **Subsection L, Table 1** of this Section; or
- b. any physical change that would occur at a stationary source not qualifying under Subparagraph a of this definition as a major stationary source, if the change would constitute a major stationary source by itself;
- c. a major stationary source that is major for VOC or NO_x shall be considered major for ozone. VOC and NO_x emissions shall not be aggregated for the purpose of determining major stationary source status;
- d. a stationary source shall not be a major stationary source due to fugitive emissions, to the extent that they are quantifiable, unless the source belongs to:
 - i. any category in Table A in LAC 33:III.509; or
 - ii. any other stationary source category which, as of August 7, 1980, is being regulated under section 111 or 112 of the Clean Air Act;
- e. a stationary source shall not be a major stationary source due to secondary emissions.”

“Potential to Emit - the **maximum capacity of a stationary source to emit any air pollutant under its physical and operational design**. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if:

- a. **the limitation is enforceable** by the administrator, when the potential to emit is being considered with regard to federally applicable requirements; or
- b. the limitation is enforceable by the department when the potential to emit is being considered with regard to state applicable requirements.”

“Fugitive Emissions—those emissions which do not reasonably pass through a stack, chimney, vent, or other functionally equivalent opening.”

Clean Air Act - Definitions - 40 CFR Chapter 1 Subpart C Part 70.2¹

“40 CFR 70.2 “Major source” means any stationary source (or any group of stationary sources that are located on one or more continuous or adjacent properties, and are under common control of the same person (or persons under common control)) belonging to a single major industrial grouping and that are described in paragraph (1), (2), or (3) of this definition. For the purposes of defining “major source,” a stationary source or group of stationary sources shall be considered part of a single industrial grouping if all of the pollutant emitting activities at such source or group of sources on contiguous or adjacent properties belong to the same Major Group (i.e., all have the same two-digit code) as described in the Standard Industrial Classification Manual, 1987.”

“(2) A major stationary source of air pollutants, as defined in section 302 of the Act, that directly emits, or has the potential to emit, 100 tpy or more of any air pollutant subject to regulation (including any major source of fugitive emissions of any such pollutant, as determined by rule by the Administrator). The fugitive emissions of a stationary source shall not be considered in determining whether it is a major stationary source for the purposes of section 302(j) of the Act, unless the source belongs to one of the following categories of stationary source:”

“40 CFR 70.2 “Potential to emit” means the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation is enforceable by the Administrator. This term does not alter or affect the use of this term for any other purposes under the Act, or the term “capacity factor” as used in title IV of the Act or the regulations promulgated thereunder.”

“40 CFR 70.2 “Fugitive emissions” are those emissions which could not reasonably pass through a stack, chimney, vent, or other functionally-equivalent opening.”

¹ See: <https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-70/section-70.2>

Clean Air Act – Permit Applications - 40 CFR Chapter 1 Subpart C Part 70.5²

“40 CFR 70.5(a)(2) Complete application. The program shall provide criteria and procedures for determining in a timely fashion when applications are complete. To be deemed complete, an application must provide all information required pursuant to paragraph (c) of this section, except that applications for permit revision need supply such information only if it is related to the proposed change. **Information required under paragraph (c) of this section must be sufficient to evaluate the subject source and its application and to determine all applicable requirements.** The program shall require that a responsible official certify the submitted information consistent with paragraph (d) of this section. Unless the permitting authority determines that an application is not complete within 60 days of receipt of the application, such application shall be deemed to be complete, except as otherwise provided in § 70.7(a)(4) of this part. If, while processing an application that has been determined or deemed to be complete, the permitting authority determines that additional information is necessary to evaluate or take final action on that application, it may request such information in writing and set a reasonable deadline for a response. The source's ability to operate without a permit, as set forth in § 70.7(b) of this part, shall be in effect from the date the application is determined or deemed to be complete until the final permit is issued, provided that the applicant submits any requested additional information by the deadline specified by the permitting authority.”

40 CFR 70.5(c)(3)The following emission-related information:

(i) All emissions of pollutants for which the source is major, and all emissions of regulated air pollutants. A permit application shall **describe all emissions of regulated air pollutants emitted from any emissions unit**, except where such units are exempted under this paragraph (c) of this section. The permitting authority shall require additional information related to the emissions of air pollutants sufficient to verify which requirements are applicable to the source, and other information necessary to collect any permit fees owed under the fee schedule approved pursuant to § 70.9(b) of this part.

(ii) **Identification and description of all points of emissions** described in paragraph (c)(3)(i) of this section in sufficient detail to establish the basis for fees and applicability of requirements of the Act.

(iii) Emissions rate in tpy and in such terms as are necessary to establish compliance consistent with the applicable standard reference test method. For emissions units **subject to an annual emissions cap**, tpy can be reported as part of the aggregate emissions associated with the cap, **except where more specific**

² See: <https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-70/section-70.5>

information is needed, including where necessary to determine and/or assure compliance with an applicable requirement.

(iv) The following information to the extent it is needed to determine or regulate emissions: Fuels, fuel use, raw materials, production rates, and operating schedules.

(v) Identification and description of air pollution control equipment and compliance monitoring devices or activities.

(vi) Limitations on source operation affecting emissions or any work practice standards, where applicable, for all regulated pollutants at the part 70 source.

(vii) Other information required by any applicable requirement (including information related to stack height limitations developed pursuant to section 123 of the Act).

(viii) Calculations on which the information in paragraphs (c)(3) (i) through (vii) of this section is based.”

From USEPA website:³

“**True minor source**” means a source that emits, or has the potential to emit, regulated New Source Review (NSR) pollutants in amounts that are less than the major source thresholds under either the Prevention of Significant Deterioration (PSD) program at 40 CFR 52.21, or the Major NSR program for Nonattainment Areas in Indian Country at 40 CFR 49.166 through 49.173, but equal to or greater than the minor NSR thresholds in § 49.153, without the need to take an enforceable restriction to reduce its Potential to Emit (PTE) to such levels. The PTE includes fugitive emissions, to the extent that they are quantifiable, only if the source belongs to one of the 28 source categories listed in part 51, Appendix S, paragraph II.A.4(iii) or § 52.21(b)(1)(iii) of 40 CFR, as applicable.

Synthetic minor source means a source that otherwise has the potential to emit regulated NSR pollutants in amounts that are at or above the thresholds for major sources in 40 CFR 49.167, 40 CFR 52.21 or 40 CFR 71.2, as applicable, but has taken a restriction so that its PTE is less than such amounts for major sources. Such restrictions must be enforceable as a practical matter (as defined in 40 CFR 49.152).

³ See: <https://www.epa.gov/tribal-air/true-minor-source-and-synthetic-minor-source-permits>

LAC 33:III.529. Reopenings for Cause – pdf page 104 of 357

A. Any permit issued under this Chapter may be reopened and revised by the permitting authority prior to the expiration of the permit if sufficient cause exists to warrant the reopening.

1. Sufficient cause shall include, but is not limited to:

a. a demonstration by any person, to the satisfaction of the permitting authority, that the permit contains a material mistake, that inaccurate statements were made in establishing the terms or conditions of the permit, or that the permit must be revised to assure compliance with any federally applicable requirement or any applicable provision of LAC 33:III, Air Quality Regulations; or

b. a demonstration by the owner or operator, to the satisfaction of the permitting authority, that reopening and reissuance of the permit will result in a benefit to the owner or operator and will not place an undue burden on the permitting authority.

2. Proceedings to reopen, revise, and reissue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists. When cause to reopen a permit is determined, the reopening shall be initiated and final action taken as expeditiously as practicable.

B. ISSUES WITH EMISSION ESTIMATES

B1. Emissions estimates for Dust Filter Category

On page 254 of 299 of the permit application, the total emissions for the category Dust CAPs are described as follows:

“The facility utilizes an aspirated dust filter system serving the following process equipment categories: Grain & Grain Products Unloading/Loading (Ship, Barge, Rail and Truck), Cleaning, Weighing, Drying, Sampling, In House Transferring and Dust Motivator Receivers.

The dust filters are proposed to be permitted under an emissions CAP for operational flexibility and to reflect operation as a system. There are **260 dust filters** located at the facility that will each operate whenever product is routed to/through the section of the system controlled by that filter.”

The first problem with this statement is that the permit application contains only **177** Emission Inventory Questionnaire forms, so if there are 260 dust filters they are not represented fully. There is a total of **171 EQT** numbers listed in the air permit that purports to include all the dust filters, the grain dryer, and all combustion engines and emergency generators. This discrepancy between 260 dust filters, 177 EIQs, and 171 equipment (EQT) numbers must be addressed and satisfactorily explained by the applicant and LDEQ.

The second problem related to the multi-source emission cap is the applicant did not provide a computer printout or other proof of calculation to defend the value of **1,616,200 cfm** total filter flow used to calculate annual PM10 emissions. There are pages of hourly emission rates, but no *annual emissions* per filter in tons per year.

Instead, on page 254 of 299 of the permit application, a ‘sample calculation’ for the multi-source emission cap for dust filters was provided as follows:

$$\text{Annual PM10 Emissions} = 1,616,200 \text{ cfm} \times 0.002 \text{ gr/cf} \times (1 \text{ lb}/7,000 \text{ gr}) \times (60 \text{ min/hr}) \\ \times (1 \text{ ton}/2,000 \text{ lb}) \times (8,400 \text{ hr/yr}) \times 53\% \text{ (Scaling Factor)} = 61.67 \text{ tons PM/yr}$$

The above equation can also be written to emphasize that the total PM10 emissions from the Dust Filter Category before the scaling factor *exceeds the major source threshold* and would trigger a Part 70 major source air permit.

$$\text{Annual PM10 Emissions} = \mathbf{116.36 \text{ PM10 tpy}} \times 0.53 \text{ scaling factor} = \mathbf{61.67 \text{ PM10 tpy}}$$

The third problem with the multi-source emission cap estimate is that the applicant did not provide crucial information to justify an emission rate of 0.002 gr/cf for all dust filters but rather stated as a notation that the value was provided ‘by the vendor’. The application does not identify the vendor(s) for each dust filter, nor does it include a vendor guarantee for the emission rate.

The applicant does not provide an explanation of which conditions the filters perform at that emission rate. The permit application does not include information about the filter vendor(s), model number(s), dimensions, and flow condition restrictions.

Conditions that may impact filter performance include particle size distribution, moisture content of the grain, climatological factors (wind, humidity, and temperature), loading rate, maintenance/age of filters, and flow parameters. None of these issues were discussed in the narrative portion of the permit application with respect to the reliability of the facility-wide and/or equipment-specific emissions estimates.

B2. Emission reductions using both reduced time and 53% Scaling Factor

The applicant did not provide estimates of the potential to emit PM10 properly because the calculations included operational controls (reduced hours) and a 53% Scaling Factor prior to determining if the facility triggers federal major source thresholds.

On page 254 of 299 of the permit application, the total emissions from the category Dust CAPs are described as follows:

Individual filters operate at different times depending on the various processes in operation at any given time and **no filters operate continuously**. Some systems are only operated during harvest season. Furthermore, due to transfer operation sequencing and routing of grain across the [the] system, all activities and all conveyors are not in operation at all times; therefore, the associated filters do not operate continuously.

For these reasons, an operational scaling factor is used to account for the varying operating times for the dust filters. The **scaling factor (53%)** accounts for the configuration of the facility and dust filter system and is a conservatively high estimate of the maximum anticipated level of operation of the system as a whole (i.e., total air flow through the filters or total hours of operation per filter) ratioed to the total operation if each individual filter were operated continuously for the entire annual operating time of the facility.”

The applicant states all the dust filters will operate 8400 hours per year or 350 days per year—this is called an ‘operational control’. It is assumed that during those 15 days per year, no grain would be moving in the facility to generate dust. The applicant did not

specify in the permit application which hours or days of the year the facility would be 'shut down' in any twelve month period.

The applicant states that on those hours when the facility *is in operation* not all the equipment is operating at one time and thus a scaling factor of 53% should be applied across the board to all dust filters when calculating the potential to emit PM10 and PM2.5. Again, this is called 'operational control' and should only be applied *after* a major source threshold has been determined.

The rationale for using a scaling factor to reflect downtime for various filters was briefly explained by the applicant above, but no mathematical rationale was provided for choosing the value of 53% to reflect the behavior at Greenfield Louisiana Terminal.

The Dust Filter Category is the largest source of particulate emissions at the proposed Grain Terminal and even a slight change in the Scaling Factor could be the difference between a minor and major source threshold (even after asserting operational controls to qualify as a synthetic minor permit) when combined with the remaining PM10 emissions at the facility (100 tpy - 81.91 tpy = **18.09 tpy**).

The permit application does not include the laborious calculations for all the dust filters in the Dust Filter Category (152 filters in the permit and/or the 260 filters mentioned in the permit application narrative) that would be used to determine the cumulative flow rate (1,616,200 cfm) that is used to calculate PM10 emissions from the Dust Filter Category. It is assumed that the value was determined by summing up the individual flow rates for each piece of equipment as follows:

$$\text{Total Flow} = \Sigma (\text{flowrate} \times \text{operating time}) \text{ for 152 dust filters}$$

The applicant should have used 8760 hours per year (365 days per year x 24 hours per day) to calculate the uncontrolled potential to emit for Dust Filter Category PM10 emissions to yield 121.35 PM10 tons per year as follows:

$$\text{Annual PM10 Emissions} = \mathbf{116.36 \text{ PM10 tpy}} \times (8760 \text{ hrs}/8400 \text{ hrs}) = \mathbf{121.35 \text{ PM10 tpy}}$$

$$\text{Dust Filter Emissions} = 121.35 \text{ PM10 tpy} \times 0.53\% = \mathbf{64.3 \text{ PM10 tons per year}}$$

$$(64.3 - 61.67) \text{ PM10 tons per year} = \mathbf{2.63 \text{ PM10 tons per year difference}}$$

At this point, it is important to understand that both the applicant and LDEQ should have used 121.35 PM10 tons per year plus the uncontrolled potential to emit PM10 emissions from all other sources to determine the facility-wide uncontrolled PM10 emissions. That value is then compared to important major source thresholds: 100 tpy for Part 70 permits and 250 tpy for Prevention of Significant Deterioration (PSD).

Once a determination is made using facility-wide uncontrolled emissions, then operational restrictions can be applied to reduce the facility-wide emissions to below 100 tpy major source permit otherwise called a synthetic minor permit. This concept will be discussed further in this report when examining the facility-wide emissions.

If we apply alternative Scaling Factors to the applicant's emission value of **116.36** PM10 tons per year, it becomes clear that at some point even with a Scaling Factor to reduce this category of emissions, the entire facility could still exceed the major source threshold of 100 PM10 tons per year.

Dust Filter Category emissions using various scaling factors as follows:

Annual PM10 Emissions = 116.36 PM10 tpy x **0.53** scaling factor = 61.67 PM10 tpy

Annual PM10 Emissions = 116.36 PM10 tpy x **0.60** scaling factor = 69.82 PM10 tpy
(8.15 additional tpy < 18.09 tpy)

Annual PM10 Emissions = 116.36 PM10 tpy x **0.65** scaling factor = 75.63 PM10 tpy
(13.96 additional tpy < 18.09 tpy)

Annual PM10 Emissions = 116.36 PM10 tpy x **0.68** scaling factor = 79.12 PM10 tpy
(17.45 additional tpy < 18.09 tpy)

Annual PM10 Emissions = 116.36 PM10 tpy x **0.70** scaling factor = 81.45 PM10 tpy
(19.78 additional tpy > 18.09 tpy)

In summary, the emissions estimate for the largest category of PM10 emissions is suspect and requires detailed explanation by the applicant and LDEQ for:

1. Difference between 260 filters and 171 EQT values
2. Use of 8400 hours rather than 8640 hours for all dust filters without adequate explanation of which dust generating sources would not be operating
3. Detailed explanation why 53% accurately describes the downtime of all the dust filters included in the Dust Filter Category.
4. LDEQ should provide specific reasons for *any method* of reducing the PM10 potential to emit (116.35 PM tpy vs 61.67 tpy) in their determination of whether this facility triggers the major threshold of 100 tpy for PM10.

B3. Discrepancies with amount and use of total grain throughput

The Greenfield Louisiana Terminal air permit has a grain throughput limitation of **24,735,859 tons/yr** presumably based on the applicant's request for that specific amount. The specificity of the number begs the question as to how many tons extra would cause the facility to trigger major source thresholds. The applicant did not provide a facility schematic or flow diagram to justify or explain the annual grain throughput.

Annual grain throughput and ship loading fugitive emissions

As stated earlier in this report, the applicant used **24,250,842 tons/yr** to determine Fugitive Emissions for Ship Loading (pages 248 and 277 of 299). **That is a difference of 485,017 tons/yr** grain throughput without explanation by the applicant.

Operating Parameters (include units)	
	Parameter
Normal Operating Rate/Throughput	24,250,842 tons/yr
Maximum Operating Rate/Throughput	

Figure 9 – Snapshot of EQT for Ship Loading Fugitive Emissions

From page 277 of 299 of the permit application:

“Fugitive emissions from ship loaders #1 to #6 (SP-01, SP-02, SP-03, SP-04, SP-05, SP-06) are estimated to account for particulate dust not captured by the aspirators and routed to the dust filters. A single emissions source is used to account for fugitives from all six ship loading systems.”

The applicant estimated Ship Loading Fugitive Emissions using the following equation:

$$\text{Emission Factor (lb/ton)} \times \text{Annual Throughput ton/yr} \times 1 \text{ ton}/2000 \text{ lb}$$

Pollutant	Emission Factor ¹ (lb/ton)	Capture Efficiency (%)	Average Hourly Emissions (lb/hr)	Annual Emissions (ton/yr)
PM ₁₀	0.012	95	1.73	7.28
PM _{2.5}	0.0022	95	0.32	1.33

Figure 10 – Snapshot of Ramboll estimates for Ship Loading Fugitive emissions

It is understood that grain received by rail, truck or barge could be stored in the Grain Storage Bins or transferred directly to the Ship Loading dock. The permit application does not provide another pathway for grain received by the facility to leave the facility

except by ship. Therefore, the Ship Loading Fugitive Emissions should be based on the maximum grain throughput of 24,735,859 tons/yr as follows:

$$7.29 \text{ PM}_{10} \text{ tons per year } (24,735,859 / 24,250,842) = \mathbf{7.43 \text{ PM}_{10} \text{ tons per year}}$$

Annual Grain Throughput and Grain Dryer emissions

From page 10 of 299 of the permit application:

“The Terminal will utilize a Grain Dryer with a maximum design rate of 35.02 MMBtu/hr that will be fueled by natural gas. Grain that requires drying will be routed to and from the dryer from storage bins via enclosed drag conveyors and a bucket elevator. The storage area will be divided into six (6) Storage Units, each comprised of 18 storage bins with a capacity of 80,000 bushels per bin.”

On pdf page 275 of 299 of the permit application, the Grain Dryer emissions were estimated to be 7.66 tons per year using an Annual Grain Throughput of **1,445,400 tons/yr**, which is only 5.84% of the annual grain throughput authorized by the permit.

$$(1,445,400 \text{ tpy}) / (24,735,859 \text{ tpy}) \times 100\% = 5.84\%$$

Fugitive Particulate Emissions from Dryer:	
Average Hourly Emissions (lb/hr) =	EF (lb/ton) x Avg Hourly Throughput (ton/hr)
Maximum Hourly Emissions (lb/hr) =	Avg Hourly Emissions (lb/hr) x (hr/yr) x 20% Contingency
Annual Emissions (ton/yr) =	Avg Hourly Emissions (lb/hr) x (hr/yr) x (1 ton/2,000 lb)

Annual Grain Throughput 1,445,400 tons/yr

Fugitive Grain - Emission Calculations				
Emission Factor from Manufacturer for Similar Dryer				
Pollutant	Emission Factor (lb/ton)	Average Hourly Emissions (lb/hr)	Maximum Hourly Emissions (lb/hr) ¹	Annual Emissions (ton/yr)
PM ₁₀ /PM _{2.5} ²	0.00298	0.98	1.18	2.15

¹ Maximum hourly emissions calculated as 1.2 times the hourly average rate, to account for process variability.

² All PM assumed to be PM₁₀/PM_{2.5}.

Figure 11 – Snapshot of Ramboll estimate of fugitive emissions for the Grain Dryer

The applicant did not explain in the permit application how they determined that only 5.84% of the total grain received by the facility would need to be dried on-site using the Grain Dryer. Clearly, if more grain is dried then there would be PM₁₀ emissions greater than those used to draft the air permit.

C. ISSUES WITH PERMIT LANGUAGE AND TYPE OF PERMIT DETERMINATION

C1. Major, synthetic minor, or natural minor source

In July 2021, the USEPA Inspector General issued Report No. 21-P-0175 "EPA Should Conduct More Oversight of Synthetic Minor-Source Permitting to Assure Permits Adhere to EPA Guidance" that included concerns about how states determine whether a source is a synthetic minor or a major source.⁴

"We recommend that the EPA (1) develop and implement an oversight plan for synthetic-minor-source permitting; (2) **update its practical enforceability guidance**; (3) assess EPA studies and other relevant information on enclosed combustion devices during its next review of applicable regulations to determine whether revisions to monitoring, record-keeping, and reporting requirements are needed; (4) develop and issue new guidance that includes key EPA expectations for synthetic-minor-source permitting; and (5) **take steps to assure that all states adhere to public participation requirements for synthetic-minor permits**. All recommendations are resolved with corrective actions pending."

SM-80 synthetic minor permits represent facilities with potential to emit beyond major source thresholds that have reduced those emissions to 80% of the threshold. In this instance, the Greenfield Louisiana proposed facility would be a SM-80 synthetic permit if the reduced emissions are greater than 80 tons per year but below 100 tons per year.

Both the applicant and LDEQ agree that the proposed facility has a potential to emit PM10 emissions greater than 100 tons per year before operational controls (reduced hours, Scaling Factor). The permit issued restricts the facility to annual PM10 emissions of 81.91 tons per year (greater than 80 tons per year) and thus the Greenfield Louisiana synthetic minor permit is classified by the USEPA as a **SM-80 permit**.

From LDEQ website:⁵

"Synthetic Minor Sources - A synthetic minor source is a facility which can operate as a major source, but for which the applicant is voluntarily requesting a federally enforceable limit on one or more parameters (e.g., throughput, operating time, etc.) such that the potential to emit of the facility remains below major source thresholds. Consult with the Air Permits Division if you are unsure whether or not your facility is a synthetic minor source. **Synthetic minor sources are subject to public notice under LAC 33:III.531.A.1.**"

⁴ See: https://www.epa.gov/system/files/documents/2021-07/epaig_20210708-21-p-0175.pdf

⁵ See: <https://www.deq.louisiana.gov/page/state-minor-source-permits>

C3. List of EQTs not complete or contain dissimilar source

On pages 39 to 42 of 54 of the Greenfield Louisiana air permit, the table for Special Requirements includes the following items that are all sources of PM10/PM2.5:

CRG 0001 BCSF - Belt Conveyor Spot Filter Requirements - EQT 170, 18-19, 26-27, 30, 34-35, 38, 44-45, 48, 50-52, 57-78, 82-135, 79, 139, 141-143, 7, 14, and 22.

CRG 0002 BESF - Bucket Elevator Spot Filter Requirements - EQT 4, 11, 17, 25, and 33

CRG 0003 BWSF - Bulk Weighers Spot Filter Requirements - EQT 4-5, 12-13, 20-21, 29, 28, 36-37, 47

CRG 0004 FBUS - Barge Unloading System Requirements - EQT 3 and 10

CRG 0005 FCS - Filter for Cleaning Systems No.1 - No.4 Requirements - EQT 32, 9, 16, and 24

CRG 0006 FRDTS - Filter/Receiver for Dust Transfer System Requirements - EQT 1 and 2

CRG 0007 SBSF - Storage Bin Spot Filter Requirements - EQT 151-156

CRG 0008 SCREENSF - Screening Bin Spot Filters Requirements - EQT 54-56, 136-138, 140, 144-150, and 171

CRG 0009 SLSF - Ship Loading Spout Requirements - EQT 8, 15, 23, 31, 39, and 49

CRG 0010 TRSF - Truck Receiving Pit Spot Filters Requirements - EQT 41, 40, 42, and 43

The list of EQT values for some of these CRG categories includes one EQT that is not like the rest and leaves out one EQT that should be on the list as follows:

CRG 0003 BWSF - Bulk Weighers Spot Filter Requirements (note EQT 4-5 should be 5-6 and should include **EQT0046** EQT 4-5, 12-13, 20-21, 29, 28, 36-37, and 47)

EQT 0004 FA-0120 - BE-01 Spot Filter	320 ft ³ /min	0.01	0.003
EQT 0005 FA-0150 - BW-01 Spot Filter	6600 ft ³ /min	0.11	0.06
EQT 0006 FA-0160 - BW-01 Spot Filter	6600 ft ³ /min	0.11	0.06
EQT 0012 FA-0250 - BW 02 Spot Filter	6600 ft ³ /min	0.11	0.06
EQT 0013 FA-0260 - BW 02 Spot Filter	6600 ft ³ /min	0.11	0.06
EQT 0020 FA-0350 - BW-03 Spot Filter	6600 ft ³ /min	0.11	0.06
EQT 0021 FA-0360 - BW-03 Spot Filter	6600 ft ³ /min	0.11	0.06
EQT 0028 FA-0450 - BW-04 Spot Filter	6600 ft ³ /min	0.11	0.06
EQT 0029 FA-0460 - BW-04 Spot Filter	6600 ft ³ /min	0.11	0.06
EQT 0036 FA-0550 - BW-05 Spot Filter	6600 ft ³ /min	0.11	0.06
EQT 0037 FA-0560 - BW-05 Spot Filter	6600 ft ³ /min	0.11	0.06
EQT 0046 FA-0650 - BW-06 Spot Filter	6600 ft ³ /min	0.11	0.06
EQT 0047 FA-0660 - BW-06 Spot Filter	6600 ft ³ /min	0.11	0.06

It is not clear in the air permit why only one BE Spot Filter (BE = Belt Elevator) would be included with the BW = Belt Weighers and why EQT 0046 was left off the list.

The following is an example where the permit contains EQT sources that appear to be similar in nature but have significantly different flowrates and emission rates for PM10 and PM2.5 as follows:

EQT 0124 FA-5940 - BC-59 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0125 FA-5945 - BC-59 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0126 FA-6030 - BC-60 (Inlet) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0127 FA-6130 - BC-61 (Inlet) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0128 FA-6440 - BC-64 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0129 FA-6540 - BC-65 (Discharge) Spot Filter	7500 ft ³ /min	0.11	0.06
EQT 0130 FA-6630 - BC-66 (Inlet) Spot Filter	7500 ft ³ /min	0.13	0.06
EQT 0131 FA-6640 - BC-66 (Discharge) Spot Filter	7500 ft ³ /min	0.13	0.06
EQT 0132 FA-6730 - BC-67 (Inlet) Spot Filter	7500 ft ³ /min	0.13	0.06
EQT 0133 FA-6740 - BC-67 (Discharge) Spot Filter	7500 ft ³ /min	0.13	0.06
EQT 0134 FA-6840 - BC-68 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0135 FA-6940 - BC-69 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04

The flowrate for thirty-eight (38) BC-xx (Discharge) Spot Filters is 5000 ft³/min
The flowrate for sixteen (16) BC-xx (Discharge) Spot Filters is 7500 ft³/min

The BC-xx (Discharge) Spot Filters with a flowrate of 7500 ft³/min has emissions rates that are **22 to 44 percent higher** than for the similarly named filters at 5000 ft³/min.

Without a facility flow diagram, it is impossible to determine how much of the total grain throughput would travel through either type of filter or what purpose each filter performs. The following is a generic Process Flow Diagram for a Grain Elevator from AP-42 9.9.1⁶

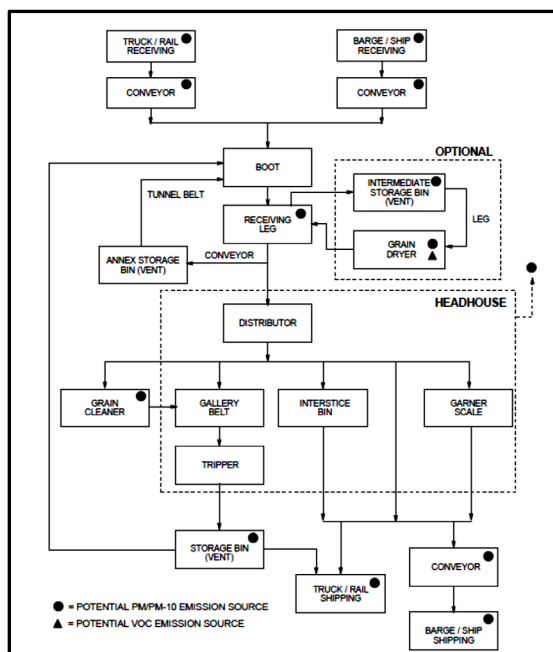


Figure 12 – Snapshot of Figure 9.9.1-1. Major process operations at a grain elevator.

⁶ See: <https://www3.epa.gov/ttnchie1/ap42/ch09/final/c9s0909-1.pdf>

C4. No explanation on how elevated emission sources will be monitored

The monitoring of emission sources is a critical part of the air permit because it *should* provide data to assess whether the facility is operating according to the assertions in the permit application and whether the facility is in compliance with the air permit. The permit must be crafted so that there are enforceable conditions that are clear and understandable to the public and the permittee.

LAC 33:III.301.G (pdf page 28 of 357)

“G. Regulatory permits shall, as appropriate, prescribe such emission limitations, necessary control requirements, and other **enforceable conditions**, and associated **monitoring**, recordkeeping, and reporting provisions, as are necessary for the **protection of public health and the environment**.”

In 2016, the EPA instituted the Clean Air Act Stationary Source Compliance Monitoring Strategy, known as the CAA CMS, that includes compliance monitoring guidance to state agencies that issue synthetic minor air permits, especially those categorized as SM-80 (emissions are equal to or greater than 80% of the major source threshold).⁷

From page 13 of 26 of the 2016 guidance:

“Where appropriate and feasible, **the utilization of advanced monitoring technologies to detect and document emissions and record ambient conditions**. The use of advanced emissions/pollutant detection technology is valuable as a screening tool to identify pollution problems and better focus field activities on the pollutant, process, and equipment of concern. It also may be useful to identify and measure noncompliance. Examples of such technologies include infrared cameras, fenceline monitors, sensor network-based leak detection systems, mobile methane monitors, and photoionization detectors. The use of advanced emissions and pollutant detection technology that, for example, find pollution that was previously “invisible” can assist states/locals/tribes/territories and Regions to more effectively target and monitor compliance **and protect communities**.”

In line with the 2016 guidance, EPA initiated the Next Generation Compliance strategy to modernize *how permits are drafted* to include advanced monitoring technologies and provide useful information to the public as follows:⁸

“Next Generation Compliance consists of five interconnected components, each designed to improve the effectiveness of our compliance program:

⁷ See: <https://www.epa.gov/sites/default/files/2013-09/documents/cmsspolicy.pdf>

⁸ See: <https://www.epa.gov/compliance/next-generation-compliance>

-Design regulations and permits that are easier to implement, with a goal of improved compliance and environmental outcomes.

-Use and promote advanced emissions/pollutant detection technology so that regulated entities, the government, and the public can more easily see pollutant discharges, environmental conditions, and noncompliance.

-Expand transparency by making information more accessible to the public.

-Develop and use innovative enforcement approaches (e.g., data analytics and targeting) to achieve more widespread compliance.

-Shift toward electronic reporting to help make environmental reporting more accurate, complete, and efficient while helping EPA and co-regulators better manage information, improve effectiveness and transparency.”

LDEQ should adhere to these monitoring principles when drafting synthetic minor air permits, especially when proposed facilities are in close proximity to environmental justice communities and in areas already inundated with significant air pollution from nearby industry.

Instead, the air permit drafted (expedited process) by LDEQ pays nominal attention to the monitoring section of the permit as shown with the following examples.

On pdf page 53 of 54 – Filter Vents

“Filter vents: Visible emissions monitored by visual inspection/determination daily and for one minute following the installation of new bags or reinstallation of existing bags after removal and cleaning. If visible emissions are observed, return the filter to proper operation as expeditiously as practicable, but at a maximum within three working days, in accordance with good air pollution control practices for minimizing emissions. LAC 33:III.501.C.6

Which Months: All Year Statistical Basis: None specified

Many of the stack heights associated with emission sources listed in the Emissions Inventory Questionnaire (pages 74 to 251 of 299 in the permit application) are located at considerable height. A list of EQTs and their stack heights is included in the Attachment to this report. A summary of the stack heights includes:

54 stacks with height greater than 200 feet
48 stacks with height between 100 and 199 feet
65 stacks with height less than 100 feet

The air permit is silent with respect to how the permittee will satisfy the monitoring requirements for opacity, pollution control equipment efficacy, and adherence to PM10 emission limitations for stack heights of 20 feet to greater than 200 feet.

On pdf page 53 of 54 – Monitoring grain throughput

“Facility-wide Grain Throughput \leq 24,735,859 tons/yr.

Noncompliance with this limitation is a reportable violation of the permit. Notify the Office of Environmental Compliance, if facility grain throughput exceeds the maximum listed in this specific condition for any twelve consecutive month period. LAC 33:III.501.C.6

Facility-wide Grain Throughput monitored by technically sound method monthly.
Which Months: All Year Statistical Basis: None specified

“Facility-wide Grain Throughput recordkeeping by electronic or hard copy monthly. Keep records of the total grain throughput each month, as well as the total grain throughput for the last twelve months. Make records available for inspection by DEQ personnel.”

The air permit is silent with respect to how the permittee will satisfy the monitoring and recordkeeping of grain throughput in such a manner as to have the accuracy of 24,735,859 tons.

D. ISSUES RELATED TO THE READABILITY OF THE PERMIT

D1 - Air Permit is a scanned version not clean digital copy

The LDEQ did not upload a clean digital copy of the Greenfield Louisiana air permit to the public document online database. The version that is available to the public via the LDEQ's Electronic Document Management System (EDMS) is a scanned version that has crooked pages, uses a green font type, and most pages are slightly tinted/blurred.⁹

General Information				
AI ID: 222696 Greenfield Louisiana LLC - Greenfield Louisiana Terminal				
Activity Number: PER20200001				
Permit Number: 2580-00068-00				
Air - Minor Source/Small Source Initial				
Also Known As:	ID	Name	User Group	Start Date
	2580-00068	CDS #	CDS Number	05-13-2020
Physical Location:	Along the MS River near Wallace, LA Wallace, LA 70049			Main Phone: 4022379641
Mailing Address:	PO Box 37 Edgard, LA 70049			
Location of Front Gate:	30.045556 latitude, -90.661389 longitude, Coordinate Method: Lat\Long - DMS, Coordinate Datum: NAD83			
Related People:	Name	Mailing Address	Phone (Type)	Relationship
	Adam Johnson	PO Box 37 Edgard, LA 70049	adam@gfh.ag (EM)	Air Permit Contact For
	Adam Johnson	PO Box 37 Edgard, LA 70049	adam@gfh.ag (EM)	Responsible Official for
Related Organizations:	Name	Address	Phone (Type)	Relationship
	Greenfield Louisiana LLC	PO Box 37 Edgard, LA 70049	4022379641 (WP)	Air Billing Party for
	Greenfield Louisiana LLC	PO Box 37 Edgard, LA 70049	4022379641 (WP)	Operates

Note: This report entitled "General Information" contains a summary of facility-level information contained in LDEQ's TEMPO database for this facility and is not considered a part of the permit. Please review the information contained in this document for accuracy and completeness. If any changes are required or if you have questions regarding this document, you may email your changes to facupdate@la.gov.

Figure 13 – Snapshot of air permit showing crooked nature of the scanned document

⁹ See LDEQ EDMS: <https://www.deq.louisiana.gov/page/edms>

D2 - Air Permit does not include map/drawing mechanisms to indicate where each of the emission sources will be located at the proposed facility.

According to page 99 of 357 of LAC Title 33 Part III Subpart 517, the permit application should contain locations of each point of emissions as follows:

517. Permit Applications and Submittal of Information

(D) Contents of Application. Applications for permits shall be submitted in accordance with forms and guidance provided by the permitting authority. In addition, forms can be obtained through the department's website. At a minimum, each permit application submitted under this Chapter shall contain the following:

3. information regarding emissions from the source of all regulated air pollutants, including:
 - a. the identity and location of each point of emissions;

The permit application does not contain engineering drawings, facility plan drawings, flow diagrams, schematics, or any other visual aid to assist the agency and the public to identify where each of the 171 EQT emission sources will be located at the facility. The only 'map' provided was an aerial image with the property boundary outlined in red.

The permit application does provide UMT coordinates for each source listed in the 177 pages of Emission Inventory Questionnaire forms, but there was no attempt to show pictorially where those emissions are with respect to each other. The air permit itself only provides one latitude/longitude value and that is for the 'front gate'.

Nearest town (in the same parish as the facility):		Parish(es) where facility is located:			
Wallace		St. John the Baptist			
Distance to (mi):	182 Texas	206 Arkansas	62 Mississippi	135	Alabama
Latitude of Facility Front Gate:	30 Deg	2 Min	44 Sec	18	Hundredths
Longitude of Facility Front Gate:	90 Deg	39 Min	41 Sec	14	Hundredths

Figure 14 – Snapshot of page 27 of 299 Greenfield Louisiana permit application

Considering the air permit application does not include engineering drawings of the proposed facility, it is unclear how the LDEQ could understand where all the emission sources would be located prior to issuing a permit. It would be impossible for LDEQ to adequately conduct compliance/enforcement inspections on hundreds of sources without a clear understanding of where they are located, such as could be determined with a comprehensive facility map and engineering drawings.

More importantly, without this type and detail of information the public is denied full meaningful participation and transparency during this permit action by LDEQ.

The applicant has provided some information to other regulatory agencies and thus is fully capable of supplying it to LDEQ as well. For example, in the February 22, 2022 public notice documents, the applicant submitted a Facility Site Plan to the New Orleans District of the U.S. Army Corps of Engineers.¹⁰

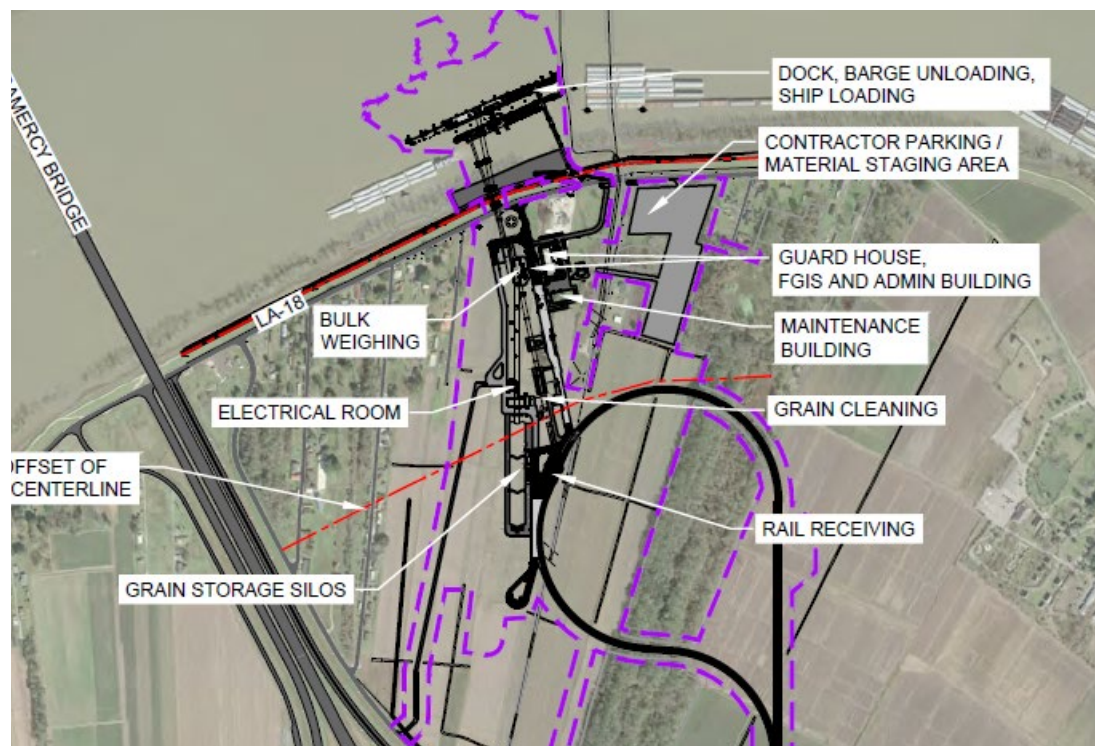


Figure 15 – Snapshot of Facility Site Plan as submitted to US Army Corps.

D3 - Air Permit is difficult to read due to the use of multiple-paged tables.

The air permit was written in such a manner as to make the comprehension of the emission sources and their legally enforceable emission limitations unnecessarily difficult and clearly not suitable for the public or even the permittee to understand. The sources are listed in numerical order in an attempt to group like items together, yet it appears that two PM emission sources were tagged on at the end of the list (EQT 0170 and 0171) after the emergency generators and other non-particulate emitting devices.

For example, the **Subject Item Inventory** table takes up 4 1/2 pages (pages 7 to 11 of 54 page permit) just to list the 171 point sources and 6 fugitive emission sources (EQT 0001 to EQT 0171 and FUG 0001 to FUG 0006). This first table provides the normal operating rate and operating time for the 158 particulate (PM10 and PM2.5) emission sources (EQT 0001 to EQT 0156 plus EQT 0170 and EQT 0171), the 6 fugitive

¹⁰ See: <https://www.mvn.usace.army.mil/Missions/Regulatory/Public-Notices/Article/2854307/mvn-2014-01518-2-emm/>

emission sources, and additional information for the emergency generators, standby engines, fire pump, grain dryer, and fuel storage (EQT 0157 to EQT 0169).

INVENTORIES						
AI ID: 222696 - Greenfield Louisiana LLC - Greenfield Louisiana Terminal						
Activity Number: PER20200001						
Permit Number: 2580-00068-00						
Air - Minor Source/Small Source Initial						
Subject Item Inventory:						
ID	Description	Tank Volume	Max. Operating Rate	Normal Operating Rate	Comments	Operating Time
EQT 0001	F-320 - Filter/Receiver for Dust Transfer System			1000 ft ³ /min		8400 hr/yr
EQT 0002	F-620 - Filter/Receiver for Dust Transfer System			1000 ft ³ /min		8400 hr/yr
EQT 0003	FA-0110 - Filter for Barge Unloading System			68000 ft ³ /min		8400 hr/yr
EQT 0004	FA-0120 - BE-01 Spot Filter			320 ft ³ /min		8400 hr/yr
EQT 0005	FA-0150 - BW-01 Spot Filter			6600 ft ³ /min		8400 hr/yr
EQT 0006	FA-0160 - BW-01 Spot Filter			6600 ft ³ /min		8400 hr/yr
EQT 0007	FA-0180 - Spot Filter on Ship Loader Belt Conveyor			5000 ft ³ /min		8400 hr/yr
EQT 0008	FA-0190 - Ship Loading Spout SP-01 Filter			10000 ft ³ /min		8400 hr/yr
EQT 0009	FA-0210 - Filter for Cleaning System # 1			45000 ft ³ /min		8400 hr/yr
EQT 0010	FA-0211 - Filter for Barge Unloading System			68000 ft ³ /min		8400 hr/yr
EQT 0011	FA-0220 - BE-02 Spot Filter			320 ft ³ /min		8400 hr/yr
EQT 0012	FA-0250 - BW-02 Spot Filter			6600 ft ³ /min		8400 hr/yr
EQT 0013	FA-0260 - BW-02 Spot Filter			6600 ft ³ /min		8400 hr/yr
EQT 0014	FA-0280 - Spot Filter on Ship Loader Belt Conveyor			5000 ft ³ /min		8400 hr/yr
EQT 0015	FA-0290 - Ship Loading Spout SP-02 Filter			10000 ft ³ /min		8400 hr/yr
EQT 0016	FA-0310 - Filter for Cleaning System # 2			45000 ft ³ /min		8400 hr/yr
EQT 0017	FA-0320 - BE-03 Spot Filter			1250 ft ³ /min		8400 hr/yr
EQT 0018	FA-0330 - BC-03 (Inlet) Spot Filter			7500 ft ³ /min		8400 hr/yr
EQT 0019	FA-0340 - BC-03 (Discharge) Spot Filter			7500 ft ³ /min		8400 hr/yr
EQT 0020	FA-0350 - BW-03 Spot Filter			6600 ft ³ /min		8400 hr/yr
EQT 0021	FA-0360 - BW-03 Spot Filter			6600 ft ³ /min		8400 hr/yr
EQT 0022	FA-0380 - Spot Filter on Ship Loader Belt Conveyor			5000 ft ³ /min		8400 hr/yr
EQT 0023	FA-0390 - Ship Loading Spout SP-03 Filter			10000 ft ³ /min		8400 hr/yr
EQT 0024	FA-0410 - Filter for Cleaning System # 3			45000 ft ³ /min		8400 hr/yr
EQT 0025	FA-0420 - BE-04 Spot Filter			625 ft ³ /min		8400 hr/yr
EQT 0026	FA-0430 - BC-04 (Inlet) Spot Filter			7500 ft ³ /min		8400 hr/yr
EQT 0027	FA-0440 - BC-04 (Discharge) Spot Filter			7500 ft ³ /min		8400 hr/yr
EQT 0028	FA-0450 - BW-04 Spot Filter			6600 ft ³ /min		8400 hr/yr
EQT 0029	FA-0460 - BW-04 Spot Filter			6600 ft ³ /min		8400 hr/yr
EQT 0030	FA-0480 - Spot Filter on Ship Loader Belt Conveyor			5000 ft ³ /min		8400 hr/yr
EQT 0031	FA-0490 - Ship Loading Spout SP-04 Filter			10000 ft ³ /min		8400 hr/yr
EQT 0032	FA-0510 - Filter for Cleaning System # 4			45000 ft ³ /min		8400 hr/yr
EQT 0033	FA-0520 - BE-05 Spot Filter			625 ft ³ /min		8400 hr/yr
EQT 0034	FA-0530 - BC-05 (Inlet) Spot Filter			7500 ft ³ /min		8400 hr/yr
EQT 0035	FA-0540 - BC-05 (Discharge) Spot Filter			7500 ft ³ /min		8400 hr/yr
EQT 0036	FA-0550 - BW-05 Spot Filter			6600 ft ³ /min		8400 hr/yr
EQT 0037	FA-0560 - BW-05 Spot Filter			6600 ft ³ /min		8400 hr/yr
EQT 0038	FA-0580 - Spot Filter on Ship Loader Belt Conveyor			5000 ft ³ /min		8400 hr/yr
EQT 0039	FA-0590 - Ship Loading Spout SP-05 Filter			10000 ft ³ /min		8400 hr/yr

Figure 16 – Snapshot of the first page of the Subject Item Inventory table (page 7 of 54 of the air permit)

The permit repeats this tabulation of 171 emissions sources, using just over 7 pages of the document (pages 11 to 17 of 54), in the **Stack Information** table which includes information about the stack velocity, flow rate, diameter, and height.

INVENTORIES						
AI ID: 222696 - Greenfield Louisiana LLC - Greenfield Louisiana Terminal						
Activity Number: PER20200001						
Permit Number: 2580-00068-00						
Air - Minor Source/Small Source Initial						
Subject Item Inventory:						
ID	Description	Tank Volume	Max. Operating Rate	Normal Operating Rate	Comments	Operating Time
EQT 0157	GAS ENG-1 - Standby Gasoline Engine No. 1		16 horsepower	16 horsepower		100 hr/yr
EQT 0158	GAS ENG-2 - Standby Gasoline Engine No. 2		16 horsepower	16 horsepower		100 hr/yr
EQT 0159	GAS ENG-3 - Standby Gasoline Engine No. 3		16 horsepower	16 horsepower		100 hr/yr
EQT 0160	GAS ENG-4 - Standby Gasoline Engine No. 4		16 horsepower	16 horsepower		100 hr/yr
EQT 0161	GAS ENG-5 - Standby Gasoline Engine No. 5		16 horsepower	16 horsepower		100 hr/yr
EQT 0162	GAS ENG-6 - Standby Gasoline Engine No. 6		16 horsepower	16 horsepower		100 hr/yr
EQT 0163	GEN-1 - Emergency Diesel Generator No. 1		55 horsepower	55 horsepower		100 hr/yr
EQT 0164	GEN-2 - Emergency Diesel Generator No. 2		200 horsepower	200 horsepower		100 hr/yr
EQT 0165	GEN-3 - Emergency Diesel Generator No. 3		55 horsepower	55 horsepower		100 hr/yr
EQT 0166	DSL ENGINE - Standby Diesel Fire Pump		600 horsepower	600 horsepower		100 hr/yr
EQT 0167	DRYER - Grain Dryer		35.02 MM BTU/hr	31.2 MM BTU/hr	Natural gas fired	4380 hr/yr
EQT 0168	AST DSL-1 - Diesel Storage Tank	90000 gallons		180000 gallons/yr		8760 hr/yr
EQT 0169	AST GAS-1 - Gasoline Storage Tank	991 gallons		5000 gallons/yr		8760 hr/yr
EQT 0170	FA-2245 - BC-22B (Discharge) Spot Filter			5000 ft ³ /min		8400 hr/yr
EQT 0171	FA-90450 - BIN 904 Spot Filter			210 ft ³ /min		8400 hr/yr
FUG 0001	PAVED RDS - Paved Roads		29159 vehicle miles traveled/yr	14579 vehicle miles traveled/yr		8760 hr/yr
FUG 0002	RAILUNL - Railcar Unloading Fugitive Emissions			3215662 tons/yr		8400 hr/yr
FUG 0003	SHIPLOAD - Ship Loading Fugitive Emissions			24250842 tons/yr		8400 hr/yr
FUG 0004	TRUCKLOAD - Screening Loadout Fugitive Emissions			485017 tons/yr		8400 hr/yr
FUG 0005	TRUCKUNL - Truck Unloading Fugitive Emissions			494717 tons/yr		8400 hr/yr
FUG 0006	BARGEUNL - Barge Unloading Fugitive Emissions			21025480 tons/yr		8400 hr/yr
Stack Information:						
ID	Description	Velocity (ft/sec)	Flow Rate (cubic ft/min-actual)	Diameter (feet)	Discharge Area (square feet)	Height (feet)
EQT 0001	F-320 - Filter/Receiver for Dust Transfer System	62.37	1000	.58		110
EQT 0002	F-620 - Filter/Receiver for Dust Transfer System	62.37	1000	.58		110
EQT 0003	FA-0110 - Filter for Barge Unloading System	66.27	68000	4.67		57
EQT 0004	FA-0120 - BE-01 Spot Filter	61.12	320	.33		22
EQT 0005	FA-0150 - BW-01 Spot Filter	70.03	6600	2		195
EQT 0006	FA-0160 - BW-01 Spot Filter	70.03	6600	2		195
EQT 0007	FA-0180 - Spot Filter on Ship Loader Belt Conveyor		5000	1.25		163
EQT 0008	FA-0190 - Ship Loading Spout SP-01 Filter		10000	2.25		40
EQT 0009	FA-0210 - Filter for Cleaning System # 1	67.9	45000	3.75		30
EQT 0010	FA-0211 - Filter for Barge Unloading System	66.27	68000	4.67		57

Figure 17 – Snapshot of Stack Information table (page 11 of 54) showing the inclusion of EQT 170 and EQT 171 (yellow arrow) after other sources.

The permit repeats the tabulation *again* on 5 pages of the document (pages 17 to 21 of 54) to identify the **Group Membership** of each EQT. The Group Membership numbers have a 13 character designation (example - CRG00000000001) so the important part of the number, 1 through 14, and CRG/GRP are drowned out by all the zeros.

Group Membership:		
ID	Description	Member of Groups
EQT 0001	F-320 - Filter/Receiver for Dust Transfer System	CRG00000000006, GRP00000000001
EQT 0002	F-620 - Filter/Receiver for Dust Transfer System	CRG00000000006, GRP00000000001
EQT 0003	FA-0110 - Filter for Barge Unloading System	CRG00000000004, GRP00000000001
EQT 0004	FA-0120 - BE-01 Spot Filter	CRG00000000002, GRP00000000001
EQT 0005	FA-0150 - BW-01 Spot Filter	CRG00000000003, GRP00000000001
EQT 0006	FA-0160 - BW-01 Spot Filter	CRG00000000003, GRP00000000001
EQT 0007	FA-0180 - Spot Filter on Ship Loader Belt Conveyor	CRG00000000001, GRP00000000001
EQT 0008	FA-0190 - Ship Loading Spout SP-01 Filter	CRG00000000009, GRP00000000001
EQT 0009	FA-0210 - Filter for Cleaning System # 1	CRG00000000005, GRP00000000001
EQT 0010	FA-0211 - Filter for Barge Unloading System	CRG00000000004, GRP00000000001
EQT 0011	FA-0220 - BE-02 Spot Filter	CRG00000000002, GRP00000000001
EQT 0012	FA-0250 - BW-02 Spot Filter	CRG00000000003, GRP00000000001
EQT 0013	FA-0260 - BW-02 Spot Filter	CRG00000000003, GRP00000000001
EQT 0014	FA-0280 - Spot Filter on Ship Loader Belt Conveyor	CRG00000000001, GRP00000000001

Figure 18 – Snapshot of Group Membership table (page 17 of 54)

Member of Groups	
CRG0000000006, GRP0000000001	
CRG0000000006, GRP0000000001	
CRG0000000004, GRP0000000001	
CRG0000000002, GRP0000000001	
CRG0000000003, GRP0000000001	
CRG0000000003, GRP0000000001	
CRG0000000001, GRP0000000001	

Figure 19 – Closeup of Group Membership table showing 13 character numbers.

On pages 22 to 37, the air permit includes the *fourth* repetition of the EQT tabulation, which takes 17 pages to accomplish, in the **Emission Rates for Criteria Pollutants and CO2e** table. In this table, only the EQT number is provided (does not include the description of the source as was done in previous tables). That means there are 171 emission rates provided without context to the name of the equipment that is the source of those emissions.

Not only does the reader of the Emissions Rate table not know the name of the equipment/source each EQT value represents, but the reader also has no context to understand how much of the total emissions is generated by each EQT source. It is unclear why LDEQ did not provide the emission data according to Group Membership so that the reader/public/permittee could more easily understand the contribution of each type of equipment to the total emissions for each pollutant of concern.

EMISSION RATES FOR CRITERIA POLLUTANTS AND CO2e AI ID: 222696 - Greenfield Louisiana LLC - Greenfield Louisiana Terminal Activity Number: PER20200001 Permit Number: 2580-00068-00 Air - Minor Source/Small Source Initial									
Subject Item	PM10			PM2.5			SO2		
	Avg lb/hr	Max lb/hr	Tons/Year	Avg lb/hr	Max lb/hr	Tons/Year	Avg lb/hr	Max lb/hr	Tons/Year
EQT 0001 F-320		0.02			0.01				
EQT 0002 F-620		0.02			0.01				
EQT 0003 FA-0110		1.17			0.58				
EQT 0004 FA-0120		0.01			0.003				
EQT 0005 FA-0150		0.11			0.06				
EQT 0006 FA-0160		0.11			0.06				
EQT 0007 FA-0180		0.09			0.04				
EQT 0008 FA-0190		0.17			0.09				
EQT 0009 FA-0210		0.77			0.39				
EQT 0010 FA-0211		1.17			0.58				
EQT 0011 FA-0220		0.01			0.003				
EQT 0012									

Figure 20 – Snapshot of the Emission Rates table (page 22 of 54)

The air permit does finally use the Group Membership designation in the section titled Specific Requirements (Figures 8 and 9 above). However, the presentation is unnecessarily confusing when the EQT values are *not* presented in numerical order.

For example, the Group “CRG 0001 BCSF - Belt Conveyor Spot Filter Requirements” includes the following order of EQT values:

EQT 170, 18-19, 26-27, 30, 34-35, 38, 44-45, 48, 50-52, 57-78, 82-135, 79, 139, 141-143, 7, 14, and 22.

SPECIFIC REQUIREMENTS	
AI ID: 222696 - Greenfield Louisiana LLC - Greenfield Louisiana Terminal	
Activity Number: PER20200001	
Permit Number: 2580-00068-00	
Air - Minor Source/Small Source Initial	
CRG 0001 BCSF - Belt Conveyor Spot Filter Requirements	
Group Members: EQT 0170 EQT 0018 EQT 0019 EQT 0026 EQT 0027 EQT 0030 EQT 0034 EQT 0035 EQT 0038 EQT 0044 EQT 0045 EQT 0048 EQT 0050 EQT 0051 EQT 0052 EQT 0057 EQT 0058 EQT 0059 EQT 0060 EQT 0061 EQT 0062 EQT 0063 EQT 0064 EQT 0065 EQT 0066 EQT 0067 EQT 0068 EQT 0069 EQT 0070 EQT 0071 EQT 0072 EQT 0073 EQT 0074 EQT 0075 EQT 0076 EQT 0077 EQT 0078 EQT 0081 EQT 0082 EQT 0083 EQT 0084 EQT 0085 EQT 0086 EQT 0087 EQT 0088 EQT 0089 EQT 0090 EQT 0091 EQT 0092 EQT 0093 EQT 0094 EQT 0095 EQT 0096 EQT 0097 EQT 0098 EQT 0099 EQT 0100 EQT 0101 EQT 0102 EQT 0103 EQT 0104 EQT 0105 EQT 0106 EQT 0107 EQT 0108 EQT 0109 EQT 0110 EQT 0111 EQT 0112 EQT 0113 EQT 0114 EQT 0115 EQT 0116 EQT 0117 EQT 0118 EQT 0119 EQT 0120 EQT 0121 EQT 0122 EQT 0123 EQT 0124 EQT 0125 EQT 0126 EQT 0127 EQT 0128 EQT 0129 EQT 0130 EQT 0131 EQT 0132 EQT 0133 EQT 0134 EQT 0135 EQT 0079 EQT 0139 EQT 0141 EQT 0142 EQT 0143 EQT 0007 EQT 0014 EQT 0022	
1 [40 CFR 60.302(b)(1)]	Particulate matter (10 microns or less) <= 0.01 gr/dscf (0.023 g/dscm). Subpart DD. [40 CFR 60.302(b)(1)]
2 [40 CFR 60.302(b)(2)]	Which Months: All Year Statistical Basis: None specified
3 [40 CFR 60.303(a)]	Opacity <= 0 percent. Subpart DD. [40 CFR 60.302(b)(2)]
4 [40 CFR 60.303(b)]	Which Months: All Year Statistical Basis: None specified
	Use as reference methods and procedures the test methods in 40 CFR 60 Appendix A or other methods and procedures as specified in 40 CFR 60.303, except as provided in 40 CFR 60.8(b), in conducting the performance tests required by 40 CFR 60.8. Subpart DD. [40 CFR 60.303(a)]
	Determine compliance with the particulate matter and opacity standards in 40 CFR 60.302 using the test methods and procedures specified 40 CFR 60.303(b) and (c). Subpart DD. [40 CFR 60.303(b)]
CRG 0002 BESF - Bucket Elevator Spot Filter Requirements	
Group Members: EQT 0004 EQT 0011 EQT 0017 EQT 0025 EQT 0033	
5 [40 CFR 60.302(b)(1)]	Particulate matter (10 microns or less) <= 0.01 gr/dscf (0.023 g/dscm). Subpart DD. [40 CFR 60.302(b)(1)]
6 [40 CFR 60.302(b)(2)]	Which Months: All Year Statistical Basis: None specified
7 [40 CFR 60.303(a)]	Opacity <= 0 percent. Subpart DD. [40 CFR 60.302(b)(2)]
8 [40 CFR 60.303(b)]	Which Months: All Year Statistical Basis: None specified
	Use as reference methods and procedures the test methods in 40 CFR 60 Appendix A or other methods and procedures as specified in 40 CFR 60.303, except as provided in 40 CFR 60.8(b), in conducting the performance tests required by 40 CFR 60.8. Subpart DD. [40 CFR 60.303(a)]
	Determine compliance with the particulate matter and opacity standards in 40 CFR 60.302 using the test methods and procedures specified 40 CFR 60.303(b) and (c). Subpart DD. [40 CFR 60.303(b)]
CRG 0003 BWSF - Bulk Weighers Spot Filter Requirements	
Group Members: EQT 0005 EQT 0006 EQT 0012 EQT 0013 EQT 0020 EQT 0021 EQT 0029 EQT 0028 EQT 0036 EQT 0037 EQT 0046 EQT 0047	
9 [40 CFR 60.302(b)(1)]	Particulate matter (10 microns or less) <= 0.01 gr/dscf (0.023 g/dscm). Subpart DD. [40 CFR 60.302(b)(1)]
10 [40 CFR 60.302(b)(2)]	Which Months: All Year Statistical Basis: None specified
	Opacity <= 0 percent. Subpart DD. [40 CFR 60.302(b)(2)]
	Which Months: All Year Statistical Basis: None specified

Figure 21 – Snapshot of Specific Requirements table (page 39 of 54)

CRG 0001 BCSF - Belt Conveyor Spot Filter Requirements	
Group Members: EQT 0170 EQT 0018 EQT 0019 EQT 0026 EQT 0027 EQT 0030 EQT 0034 EQT 0060 EQT 0061 EQT 0062 EQT 0063 EQT 0064 EQT 0065 EQT 0066 EQT 0067 EQT 0082 EQT 0083 EQT 0084 EQT 0085 EQT 0086 EQT 0087 EQT 0088 EQT 0089 EQT 0102 EQT 0103 EQT 0104 EQT 0105 EQT 0106 EQT 0107 EQT 0108 EQT 0109 EQT 0112 EQT 0123 EQT 0124 EQT 0125 EQT 0126 EQT 0127 EQT 0128 EQT 0129 EQT 0141 EQT 0142 EQT 0143 EQT 0007 EQT 0014 EQT 0022	

Figure 22 – Closeup snapshot of Specific Requirements showing list of EQT values

The following is a summary of the EQT values provided in Specific Requirements table in the order they appear in the air permit (not all are in numerical sequence):

CRG 0001 BCSF - Belt Conveyor Spot Filter Requirements

EQT 170, 18-19, 26-27, 30, 34-35, 38, 44-45, 48, 50-52, 57-78, 82-135, 79, 139, 141-143, 7, 14, and 22.

CRG 0002 BESF - Bucket Elevator Spot Filter Requirements

EQT 4, 11, 17, 25, and 33

CRG 0003 BWSF - Bulk Weighers Spot Filter Requirements

EQT 4-5, 12-13, 20-21, 29, 28, 36-37, and 47

CRG 0004 FBUS - Barge Unloading System Requirements

EQT 3 and 10

CRG 0005 FCS - Filter for Cleaning Systems No. 1 - No. 4 Requirements

EQT 32, 9, 16, and 24

CRG 0006 FRDTS - Filter/Receiver for Dust Transfer System Requirements

EQT 1 and 2

CRG 0007 SBSF - Storage Bin Spot Filter Requirements

EQT 151-156

CRG 0008 SCREENSF - Screening Bin Spot Filters Requirements

EQT 54-56, 136-138, 140, 144-150, and 171

CRG 0009 SLSF - Ship Loading Spout Requirements

EQT 8, 15, 23, 31, 39, and 49

CRG 0010 TRSF - Truck Receiving Pit Spot Filters Requirements

EQT 41, 40, 42, and 43

CRG 0012 ENG - Standby Gasoline Engine Requirements

EQT 157-162

By not listing the EQTs in numerical order and in abbreviated format, the LDEQ unnecessarily created a permit that is confusing to read. The air permit should be cleaned up so that both the public and the permittee are clear as to which pieces of equipment fall under each Specific Requirement.

D4. LDEQ did not request air dispersion modeling

From pdf page 35 of 299 of the Greenfield Louisiana permit application:

15. Air Quality Dispersion Modeling [LAC 33:III.517.D.15]
Was Air Quality Dispersion Modeling as required by LAC 33:III performed in support of this permit application? (Air Quality Dispersion Modeling is only required when requested by LDEQ.)
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Has Air Quality Dispersion Modeling completed in accordance with LAC 33:III ever been performed for this facility in support of a air permit application previously submitted for this facility or as required by other regulations AND approved by
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

On the cover sheet to the Greenfield Louisiana permit (pdf page 1 of 54), it appears that LDEQ staff performed air modeling on July 20, 2020:

1. Technical Review		Approved	Date rec'd	Date FW
Permit Writer	MBL			6/12/20
Air Quality / Modeling		yme		7/20/20
Toxics				
PSD/NNSR				
Technical Advisor				
Supervisor				
Other				

Figure 23 – Snapshot of cover sheet to Greenfield Louisiana Terminal air permit

If LDEQ did in fact perform air modeling, then that information should have been uploaded to the agency cloud so that the public would have access to the modeling results and assumptions made to run the model.

LDEQ should have requested that the applicant perform air modeling to determine potential adverse impacts to public health and the environment, especially when the location is in such close proximity to Wallace and the Whitney Plantation, among other residences, churches, and businesses.

Emission Sources and Emission Limits

EQT No.	Description	Rate	PM10 (lbs/hr)	PM2.5 (lbs/hr)
EQT 0001	F-320 - Filter/Receiver for Dust Transfer System	1000 ft ³ /min	0.02	0.01
EQT 0002	F-620 - Filter/Receiver for Dust Transfer System	1000 ft ³ /min	0.02	0.01
EQT 0003	FA-0110 - Filter for Barge Unloading System	68,000 ft ³ /min	1.17	0.58
EQT 0010	FA-0211 - Filter for Barge Unloading System	68,000 ft ³ /min	1.17	0.58
EQT 0009	FA-0210 - Filter for Cleaning System # 1	45,000 ft ³ /min	0.77	0.39
EQT 0016	FA-0310 - Filter for Cleaning System # 2	45,000 ft ³ /min	0.77	0.39
EQT 0024	FA-0410 - Filter for Cleaning System # 3	45,000 ft ³ /min	0.77	0.39
EQT 0032	FA-0510 - Filter for Cleaning System # 4	45,000 ft ³ /min	0.77	0.39
EQT 0008	FA-0190 - Ship Loading Spout SP-01 Filter	10,000 ft ³ /min	0.17	0.09
EQT 0015	FA-0290 - Ship Loading Spout SP-02 Filter	10,000 ft ³ /min	0.17	0.09
EQT 0023	FA-0390 - Ship Loading Spout SP-03 Filter	10,000 ft ³ /min	0.17	0.09
EQT 0031	FA-0490 - Ship Loading Spout SP-04 Filter	10,000 ft ³ /min	0.17	0.09
EQT 0039	FA-0590 - Ship Loading Spout SP-05 Filter	10,000 ft ³ /min	0.17	0.09
EQT 0049	FA-0690 - Ship Loading Spout SP-06 Filter	10,000 ft ³ /min	0.17	0.09
EQT 0007	FA-0180 - Spot Filter on Ship Loader Belt Conveyor	5,000 ft ³ /min	0.09	0.04
EQT 0014	FA-0280 - Spot Filter on Ship Loader Belt Conveyor	5,000 ft ³ /min	0.09	0.04
EQT 0022	FA-0380 - Spot Filter on Ship Loader Belt Conveyor	5,000 ft ³ /min	0.09	0.04
EQT 0030	FA-0480 - Spot Filter on Ship Loader Belt Conveyor	5,000 ft ³ /min	0.09	0.04
EQT 0038	FA-0580 - Spot Filter on Ship Loader Belt Conveyor	5,000 ft ³ /min	0.09	0.04
EQT 0048	FA-0680 - Spot Filter on Ship Loader Belt Conveyor	5,000 ft ³ /min	0.09	0.04
EQT 0080	FA-2810 - Filter for Rail Receiving	34,700 ft ³ /min	0.59	0.30
EQT 0053	FA-100150 - BIN 1001 Spot Filter	210 ft ³ /min	0.004	0.002
EQT 0054	FA-100250 - BIN 1002 Spot Filter	210 ft ³ /min	0.004	0.002
EQT 0055	FA-100350 - BIN 1003 Spot Filter	210 ft ³ /min	0.004	0.002
EQT 0056	FA-100450 - BIN 1004 Spot Filter	210 ft ³ /min	0.004	0.002
EQT 0136	FA-70150 - BIN 701 Spot Filter	210 ft ³ /min	0.004	0.002
EQT 0137	FA-70250 - BIN 702 Spot Filter	210 ft ³ /min	0.004	0.002
EQT 0138	FA-70350 - BIN 703 Spot Filter	210 ft ³ /min	0.004	0.002
EQT 0140	FA-70450 - BIN 704 Spot Filter	210 ft ³ /min	0.004	0.002
EQT 0004	FA-0120 - BE-01 Spot Filter	320 ft ³ /min	0.01	0.003
EQT 0011	FA-0220 - BE-02 Spot Filter	320 ft ³ /min	0.01	0.003
EQT 0017	FA-0320 - BE 03 Spot Filter	1250 ft ³ /min	0.02	0.01
EQT 0025	FA-0420 - BE-04 Spot Filter	625 ft ³ /min	0.01	0.01
EQT 0033	FA-0520 - BE-05 Spot Filter	625 ft ³ /min	0.01	0.01
EQT 0040	FA-0610 - Truck Receiving Hopper H-06 Spot Filter	3,200 ft ³ /min	0.05	0.03
EQT 0041	FA-0611 - Truck Receiving Hopper H-06 Spot Filter	3,200 ft ³ /min	0.05	0.03
EQT 0042	FA-0612 - Truck Receiving Hopper H-06 Spot Filter	3,200 ft ³ /min	0.05	0.03
EQT 0043	FA-0613 - Truck Receiving Hopper H-06 Spot Filter	3,200 ft ³ /min	0.05	0.03
EQT 0050	FA-0740 - BC-07 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0051	FA-0840 - BC-08 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0052	FA-0940 - BC-09 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0057	FA-1040 - BC-10 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04

EQT 0058 FA-1140 - BC-11 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0059 FA-1240 - BC-12 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0060 FA-1340 - BC-13 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0061 FA-1440 - BC-14 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0062 FA-1540 - BC-15 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0063 FA-1640 - BC-16 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0064 FA-1740 - BC-17 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0065 FA-1840 - BC-18 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0066 FA-1940 - BC-19 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0067 FA-2020 - BC-20 (Inlet) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0068 FA-2030 - BC-20 (Inlet) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0069 FA-2040 - BC-20 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0070 FA-2045 - BC-20B (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0071 FA-2120 - BC-21 (Inlet) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0072 FA-2130 - BC-21 (Inlet) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0073 FA-2140 - BC-21 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0074 FA-2145 - BC-21 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0075 FA-2220 - BC-22 (Inlet) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0076 FA-2230 - BC-22 (Inlet) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0077 FA-2240 - BC-22 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0078 FA-2330 - BC-23 (Inlet) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0079 FA-2430 - BC-24 (Inlet) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0081 FA-2840 - BC-28 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0087 FA-3240 - BC-32 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0088 FA-3340 - BC-33 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0089 FA-3440 - BC-34 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0090 FA-3540 - BC-35 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0091 FA-3640 - BC-36 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0092 FA-3740 - BC-37 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0005 FA-0150 - BW-01 Spot Filter	6600 ft ³ /min	0.11	0.06
EQT 0006 FA-0160 - BW-01 Spot Filter	6600 ft ³ /min	0.11	0.06
EQT 0012 FA-0250 - BW 02 Spot Filter	6600 ft ³ /min	0.11	0.06
EQT 0013 FA-0260 - BW 02 Spot Filter	6600 ft ³ /min	0.11	0.06
EQT 0020 FA-0350 - BW-03 Spot Filter	6600 ft ³ /min	0.11	0.06
EQT 0021 FA-0360 - BW-03 Spot Filter	6600 ft ³ /min	0.11	0.06
EQT 0028 FA-0450 - BW-04 Spot Filter	6600 ft ³ /min	0.11	0.06
EQT 0029 FA-0460 - BW-04 Spot Filter	6600 ft ³ /min	0.11	0.06
EQT 0036 FA-0550 - BW-05 Spot Filter	6600 ft ³ /min	0.11	0.06
EQT 0037 FA-0560 - BW-05 Spot Filter	6600 ft ³ /min	0.11	0.06
EQT 0046 FA-0650 - BW-06 Spot Filter	6600 ft ³ /min	0.11	0.06
EQT 0047 FA-0660 - BW-06 Spot Filter	6600 ft ³ /min	0.11	0.06
EQT 0018 FA-0330 - BC-03 (Inlet) Spot Filter	7500 ft ³ /min	0.13	0.06
EQT 0019 FA-0340 - BC-03 (Discharge) Spot Filter	7500 ft ³ /min	0.13	0.06
EQT 0026 FA-0430 - BC-04 (Inlet) Spot Filter	7500 ft ³ /min	0.13	0.06
EQT 0027 FA-0440 - BC-04 (Discharge) Spot Filter	7500 ft ³ /min	0.13	0.06
EQT 0034 FA-0530 - BC-05 (Inlet) Spot Filter	7500 ft ³ /min	0.13	0.06
EQT 0035 FA-0540 - BC-05 (Discharge) Spot Filter	7500 ft ³ /min	0.13	0.06
EQT 0044 FA-0630 - BC-06 (Inlet) Spot Filter	7500 ft ³ /min	0.13	0.06
EQT 0045 FA-0640 - BC-06 (Discharge) Spot Filter	7500 ft ³ /min	0.13	0.06
EQT 0082 FA-2940 - BC-29 (Discharge) Spot Filter	7500 ft ³ /min	0.13	0.06
EQT 0083 FA-3030 - BC-30 (Inlet) Spot Filter	7500 ft ³ /min	0.13	0.06
EQT 0084 FA-3040 - BC-30 (Discharge) Spot Filter	7500 ft ³ /min	0.13	0.06
EQT 0085 FA-3130 - BC-31 (Inlet) Spot Filter	7500 ft ³ /min	0.13	0.06
EQT 0086 FA-3140 - BC-31 (Discharge) Spot Filter	7500 ft ³ /min	0.13	0.06
EQT 0093 FA-4030 - BC-40 (Inlet) Spot Filter	7500 ft ³ /min	0.13	0.06

EQT 0094 FA-4040 - BC-40 (Discharge) Spot Filter	7500 ft ³ /min	0.13	0.06
EQT 0095 FA-4130 - BC-41 (Inlet) Spot Filter	7500 ft ³ /min	0.13	0.06
EQT 0096 FA-4140 - BC-41 (Discharge) Spot Filter	7500 ft ³ /min	0.13	0.06
EQT 0097 FA-4230 - BC-42 (Inlet) Spot Filter	7500 ft ³ /min	0.13	0.06
EQT 0098 FA-4240 - BC-42 (Discharge) Spot Filter	7500 ft ³ /min	0.13	0.06
EQT 0099 FA-4330 - BC-43 (Inlet) Spot Filter	7500 ft ³ /min	0.13	0.06
EQT 0100 FA-4340 - BC-43 (Discharge) Spot Filter	7500 ft ³ /min	0.13	0.06
EQT 0101 FA-4440 - BC-44 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0102 FA-4540 - BC-45 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0103 FA-4640 - BC-46 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0104 FA-4740 - BC-47 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0105 FA-4840 - BC-48 (Discharge) Spot Filler	5000 ft ³ /min	0.09	0.04
EQT 0106 FA-4940 - BC-49 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0107 FA-5040 - BC-50 (Discharge) Spot Filler	5000 ft ³ /min	0.09	0.04
EQT 0108 FA-5140 - BC-51 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0109 FA-5240 - BC-52 (Discharge) Spot Filler	5000 ft ³ /min	0.09	0.04
EQT 0110 FA-5340 - BC-53 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0111 FA-5440 - BC-54 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0112 FA-5540 - BC-55 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0113 FA-5640 - BC-56 (Discharge) Spot Filler	5000 ft ³ /min	0.09	0.04
EQT 0114 FA-5720 - BC-57 (Inlet) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0115 FA-5730 - BC-57 (Inlet) Spot Filler	5000 ft ³ /min	0.09	0.04
EQT 0116 FA-5740 - BC-57 (Discharge) Spot Filler	5000 ft ³ /min	0.09	0.04
EQT 0117 FA-5745 - BC-58 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0118 FA-5820 - BC-58 (Inlet) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0119 FA-5830 - BC-58 (Inlet) Spot Filler	5000 ft ³ /min	0.09	0.04
EQT 0120 FA-5840 - BC-58 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0121 FA-5845 - BC-58 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0122 FA-5920 - BC-59 (Inlet) Spot Filler	5000 ft ³ /min	0.09	0.04
EQT 0123 FA-5930 - BC-59 (Inlet) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0124 FA-5940 - BC-59 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0125 FA-5945 - BC-59 (Discharge) Spot Filler	5000 ft ³ /min	0.09	0.04
EQT 0126 FA-6030 - BC-60 (Inlet) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0127 FA-6130 - BC-61 (Inlet) Spot Filler	5000 ft ³ /min	0.09	0.04
EQT 0128 FA-6440 - BC-64 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0129 FA-6540 - BC-65 (Discharge) Spot Filter	7500 ft ³ /min	0.11	0.06
EQT 0130 FA-6630 - BC-66 (Inlet) Spot Filter	7500 ft ³ /min	0.13	0.06
EQT 0131 FA-6640 - BC-66 (Discharge) Spot Filler	7500 ft ³ /min	0.13	0.06
EQT 0132 FA-6730 - BC-67 (Inlet) Spot Filter	7500 ft ³ /min	0.13	0.06
EQT 0133 FA-6740 - BC-67 (Discharge) Spot Filler	7500 ft ³ /min	0.13	0.06
EQT 0134 FA-6840 - BC-68 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0135 FA-6940 - BC-69 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0139 FA-7040 - BC-70 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0141 FA-7140 - BC-71 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0142 FA-7240 - BC-72 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0143 FA-7340 - BC-73 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0144 FA-80150 - BIN 801 Spot Filter	210 ft ³ /min	0.004	0.002
EQT 0145 FA-80250 - BIN 802 Spot Filter	5000 ft ³ /min	0.004	0.002
EQT 0146 FA-80350 - BIN 803 Spot Filter	210 ft ³ /min	0.004	0.002
EQT 0147 FA-80450 - BIN 804 Spot Filter	210 ft ³ /min	0.004	0.002
EQT 0148 FA-90150 - BIN 901 Spot Filter	210 ft ³ /min	0.004	0.002
EQT 0149 FA-90250 - BIN 902 Spot Filter	210 ft ³ /min	0.004	0.002
EQT 0150 FA-90350 - BIN 903 Spot Filter	210 ft ³ /min	0.004	0.002
EQT 0170 FA-2245 - BC-22B (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0171 FA- 90450 - BIN 904 Spot Filter	210 ft ³ /min	0.004	0.002

EQT 0151 STORA - Storage Unit A	10,000 ft ³ /min	0.17	0.09
EQT 0152 STORB - Storage Unit B	10,000 ft ³ /min	0.17	0.09
EQT 0153 STORC - Storage Unit C	10,000 ft ³ /min	0.17	0.09
EQT 0154 STORD - Storage Unit D	10,000 ft ³ /min	0.17	0.09
EQT 0155 STORE - Storage Unit E	10,000 ft ³ /min	0.17	0.09
EQT 0156 STORF - Storage Unit F	10,000 ft ³ /min	0.17	0.09

EQT 0157 GAS ENG-1 - Standby Gasoline Engine No. 1	16 hp	100 hr/yr
EQT 0158 GAS ENG-2 - Standby Gasoline Engine No. 2	16 hp	100 hr/yr
EQT 0159 GAS ENG-3 - Standby Gasoline Engine No. 3	16 hp	100 hr/yr
EQT 0160 GAS ENG-4 - Standby Gasoline Engine No. 4	16 hp	100 hr/yr
EQT 0161 GAS ENG-5 - Standby Gasoline Engine No. 5	16 hp	100 hr/yr
EQT 0162 GAS ENG-6 - Standby Gasoline Engine No. 6	16 hp	100 hr/yr

EQT 0163 GEN-1 Emergency Diesel Generator No. 1	55 hp	100 hr/yr
EQT 0164 GEN-2 Emergency Diesel Generator No. 2	200 hp	100 hr/yr
EQT 0165 GEN-3 Emergency Diesel Generator No. 3	200 hp	100 hr/yr
EQT 0166 DSL ENGINE. Standby Diesel Fire Pump	600 hp	100 hr/yr

EQT 0167 GRAIN DRYER	4,380 hr/yr
Max Oper: 35.02 MM BTU/hr	Normal Oper: 31.2 MM BTU/hr

EQT 0168 AST DSL-1 Diesel Storage Tank	8,760 hr/yr
90,000 gal tank	180,000 gal/yr

EQT 0169 AST GAS-1 Gasoline Storage Tank	8,760 hr/yr
991 gal tank	5,000 gal/yr

FUG 0001 PAVED RDS- Paved Roads	8,760 hr/yr
Max Oper: 29,159 VMT/yr	Normal Oper: 14,579 VMT/yr

FUG 0002 RAILUNL - Railcar Unloading Fugitive Emissions	8,400 hr/yr
Normal Oper: 3,215,662 tons/yr	

FUG 0003 SHIPLOAD - Ship Loading Fugitive Emissions	8,400 hr/yr
Normal Oper: 24,250,842 tons/yr	

FUG 0004 TRUCKLOAD - Screening Loadout Fugitive Emissions	8,400 hr/yr
Normal Oper: 485,017 tons/yr	

FUG 0005 TRUCKUNL - Truck Unloading Fugitive Emissions	8,400 hr/yr
Normal Oper: 494,717 tons/yr	

FUG 0006 BARGEUNL - Barge Unloading Fugitive Emissions	8,400 hr/yr
Normal Oper: 21,025,480 tons/yr	

Emission Categories as Listed in Permit Special Requirements Section

EQT No.	Description	Rate	PM10 (lbs/hr)	PM2.5 (lbs/hr)
CRG 0001 BCSF - Belt Conveyor Spot Filter Requirements				
EQT 170, 18-19, 26-27, 30, 34-35, 38, 44-45, 48, 50-52, 57-78, 82-135, 79, 139, 141-143, 7, 14, and 22.				
EQT 0007	FA-0180 - Spot Filter on Ship Loader Belt Conveyor	5,000 ft ³ /min	0.09	0.04
EQT 0014	FA-0280 - Spot Fitter on Ship Loader Belt Conveyor	5,000 ft ³ /min	0.09	0.04
EQT 0038	FA-0580 - Spot Filter on Ship Loader Belt Conveyor	5,000 ft ³ /min	0.09	0.04
EQT 0048	FA-0680 - Spot Filter on Ship Loader Belt Conveyor	5,000 ft ³ /min	0.09	0.04
EQT 0022	FA-0380 - Spot Filter on Ship Loader Belt Conveyor	5,000 ft ³ /min	0.09	0.04
EQT 0018	FA-0330 - BC-03 (Inlet) Spot Filter	7500 ft ³ /min	0.13	0.06
EQT 0019	FA-0340 - BC-03 (Discharge) Spot Filter	7500 ft ³ /min	0.13	0.06
EQT 0026	FA-0430 - BC-04 (Inlet) Spot Filter	7500 ft ³ /min	0.13	0.06
EQT 0027	FA-0440 - BC-04 (Discharge) Spot Filter	7500 ft ³ /min	0.13	0.06
EQT 0034	FA-0530 - BC-05 (Inlet) Spot Filter	7500 ft ³ /min	0.13	0.06
EQT 0035	FA-0540 - BC-05 (Discharge) Spot Filter	7500 ft ³ /min	0.13	0.06
EQT 0044	FA-0630 - BC-06 (Inlet) Spot Filter	7500 ft ³ /min	0.13	0.06
EQT 0045	FA-0640 - BC-06 (Discharge) Spot Filter	7500 ft ³ /min	0.13	0.06
EQT 0050	FA-0740 - BC-07 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0051	FA-0840 - BC-08 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0052	FA-0940 - BC-09 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0057	FA-1040 - BC-10 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0058	FA-1140 - BC-11 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0059	FA-1240 - BC-12 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0060	FA-1340 - BC-13 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0061	FA-1440 - BC-14 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0062	FA-1540 - BC-15 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0063	FA-1640 - BC-16 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0064	FA-1740 - BC-17 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0065	FA-1840 - BC-18 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0066	FA-1940 - BC-19 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0067	FA-2020 - BC-20 (Inlet) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0068	FA-2030 - BC-20 (Inlet) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0069	FA-2040 - BC-20 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0070	FA-2045 - BC-20B (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0071	FA-2120 - BC-21 (Inlet) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0072	FA-2130 - BC-21 (Inlet) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0073	FA-2140 - BC-21 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0074	FA-2145 - BC-21 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0075	FA-2220 - BC-22 (Inlet) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0076	FA-2230 - BC-22 (Inlet) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0077	FA-2240 - BC-22 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0078	FA-2330 - BC-23 (Inlet) Spot Filler	5000 ft ³ /min	0.09	0.04
EQT 0082	FA-2940 - BC-29 (Discharge) Spot Filter	7500 ft ³ /min	0.13	0.06
EQT 0083	FA-3030 - BC-30 (Inlet) Spot Filter	7500 ft ³ /min	0.13	0.06
EQT 0084	FA-3040 - BC-30 (Discharge) Spot Filter	7500 ft ³ /min	0.13	0.06
EQT 0085	FA-3130 - BC-31 (Inlet) Spot Filter	7500 ft ³ /min	0.13	0.06

EQT 0086 FA-3140 • BC-31 (Discharge) Spot Filter	7500 ft ³ /min	0.13	0.06
EQT 0093 FA-4030 - BC-40 (Inlet) Spot Filter	7500 ft ³ /min	0.13	0.06
EQT 0094 FA-4040 - BC-40 (Discharge) Spot Filter	7500 ft ³ /min	0.13	0.06
EQT 0095 FA-4130 - BC-41 (Inlet) Spot Filter	7500 ft ³ /min	0.13	0.06
EQT 0096 FA-4140 - BC-41 (Discharge) Spot Filter	7500 ft ³ /min	0.13	0.06
EQT 0097 FA-4230 - BC-42 (Inlet) Spot Filter	7500 ft ³ /min	0.13	0.06
EQT 0098 FA-4240 - BC-42 (Discharge) Spot Filter	7500 ft ³ /min	0.13	0.06
EQT 0099 FA-4330 - BC-43 (Inlet) Spot Filter	7500 ft ³ /min	0.13	0.06
EQT 0100 FA-4340 - BC-43 (Discharge) Spot Filter	7500 ft ³ /min	0.13	0.06
EQT 0101 FA-4440 - BC-44 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0102 FA-4540 - BC-45 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0103 FA-4640 - BC-46 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0104 FA-4740 - BC-47 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0105 FA-4840 - BC-48 (Discharge) Spot Filler	5000 ft ³ /min	0.09	0.04
EQT 0106 FA-4940 - BC-49 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0107 FA-5040 - BC-50 (Discharge) Spot Filler	5000 ft ³ /min	0.09	0.04
EQT 0108 FA-5140 - BC-51 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0109 FA-5240 - BC-52 (Discharge) Spot Filler	5000 ft ³ /min	0.09	0.04
EQT 0110 FA-5340 - BC-53 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0111 FA-5440 - BC-54 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0112 FA-5540 - BC-55 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0113 FA-5640 - BC-56 (Discharge) Spot Filler	5000 ft ³ /min	0.09	0.04
EQT 0114 FA-5720 - BC-57 (Inlet) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0115 FA-5730 - BC-57 (Inlet) Spot Filler	5000 ft ³ /min	0.09	0.04
EQT 0116 FA-5740 - BC-57 (Discharge) Spot Filler	5000 ft ³ /min	0.09	0.04
EQT 0117 FA-5745 - BC-58 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0118 FA-5820 - BC-58 (Inlet) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0119 FA-5830 - BC-58 (Inlet) Spot Filler	5000 ft ³ /min	0.09	0.04
EQT 0120 FA-5840 - BC-58 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0121 FA-5845 - BC-58 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0122 FA-5920 - BC-59 (Inlet) Spot Filler	5000 ft ³ /min	0.09	0.04
EQT 0123 FA-5930 - BC-59 (Inlet) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0124 FA-5940 - BC-59 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0125 FA-5945 - BC-59 (Discharge) Spot Filler	5000 ft ³ /min	0.09	0.04
EQT 0126 FA-6030 - BC-60 (Inlet) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0127 FA-6130 - BC-61 (Inlet) Spot Filler	5000 ft ³ /min	0.09	0.04
EQT 0128 FA-6440 - BC-64 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0129 FA-6540 - BC-65 (Discharge) Spot Filter	7500 ft ³ /min	0.11	0.06
EQT 0130 FA-6630 - BC-66 (Inlet) Spot Filter	7500 ft ³ /min	0.13	0.06
EQT 0131 FA-6640 - BC-66 (Discharge) Spot Filler	7500 ft ³ /min	0.13	0.06
EQT 0132 FA-6730 - BC-67 (Inlet) Spot Filter	7500 ft ³ /min	0.13	0.06
EQT 0133 FA-6740 - BC-67 (Discharge) Spot Filler	7500 ft ³ /min	0.13	0.06
EQT 0134 FA-6840 - BC-68 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0135 FA-6940 - BC-69 (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04
EQT 0170 FA-2245 - BC-22B (Discharge) Spot Filter	5000 ft ³ /min	0.09	0.04

CRG 0002 BESF - Bucket Elevator Spot Filter Requirements
EQT 4, 11, 17, 25, and 33

EQT 0004 FA-0120 - BE-01 Spot Filter	320 ft ³ /min	0.01	0.003
EQT 0011 FA-0220 - BE-02 Spot Filler	320 ft ³ /min	0.01	0.003
EQT 0017 FA-0320 - BE 03 Spot Filter	1250 ft ³ /min	0.02	0.01
EQT 0025 FA-0420 - BE-04 Spot Filter	625 ft ³ /min	0.01	0.01
EQT 0033 FA-0520 - BE-05 Spot Filter	625 ft ³ /min	0.01	0.01

CRG 0003 BWSF - Bulk Weighers Spot Filter Requirements(note EQT 4-5 should be 5-6 and should include **EQT0046** EQT 4-5, 12-13, 20-21, 29, 28, 36-37, and 47

EQT 0004 FA-0120 - BE-01 Spot Filter	320 ft ³ /min	0.01	0.003
EQT 0005 FA-0150 - BW-01 Spot Filter	6600 ft ³ /min	0.11	0.06
EQT 0006 FA-0160 - BW-01 Spot Filter	6600 ft ³ /min	0.11	0.06
EQT 0012 FA-0250 - BW 02 Spot Filter	6600 ft ³ /min	0.11	0.06
EQT 0013 FA-0260 - BW 02 Spot Filter	6600 ft ³ /min	0.11	0.06
EQT 0020 FA-0350 - BW-03 Spot Filter	6600 ft ³ /min	0.11	0.06
EQT 0021 FA-0360 - BW-03 Spot Filter	6600 ft ³ /min	0.11	0.06
EQT 0028 FA-0450 - BW-04 Spot Filter	6600 ft ³ /min	0.11	0.06
EQT 0029 FA-0460 - BW-04 Spot Filter	6600 ft ³ /min	0.11	0.06
EQT 0036 FA-0550 - BW-05 Spot Filter	6600 ft ³ /min	0.11	0.06
EQT 0037 FA-0560 - BW-05 Spot Filter	6600 ft ³ /min	0.11	0.06
EQT 0046 FA-0650 - BW-06 Spot Filter	6600 ft ³ /min	0.11	0.06
EQT 0047 FA-0660 - BW-06 Spot Filter	6600 ft ³ /min	0.11	0.06

CRG 0004 FBUS - Barge Unloading System Requirements**EQT 3 and 10**

EQT 0003 FA-0110 - Filter for Barge Unloading System	68,000 ft ³ /min	1.17	0.58
EQT 0010 FA-0211 - Filter for Barge Unloading System	68,000 ft ³ /min	1.17	0.58

CRG 0005 FCS - Filter for Cleaning Systems No. 1 - No. 4 Requirements**EQT 32, 9, 16, and 24**

EQT 0009 FA-0210 - Filter for Cleaning System # 1	45,000 ft ³ /min	0.77	0.39
EQT 0016 FA-0310 - Filter for Cleaning System # 2	45,000 ft ³ /min	0.77	0.39
EQT 0024 FA-0410 - Filter for Cleaning System # 3	45,000 ft ³ /min	0.77	0.39
EQT 0032 FA-0510 - Filter for Cleaning System # 4	45,000 ft ³ /min	0.77	0.39

CRG 0006 FRDTS - Filter/Receiver for Dust Transfer System Requirements**EQT 1 and 2**

EQT 0001 F-320 - Filter/Receiver for Dust Transfer System	1000 ft ³ /min	0.02	0.01
EQT 0002 F-620 - Filter/Receiver for Dust Transfer System	1000 ft ³ /min	0.02	0.01

CRG 0007 SBSF - Storage Bin Spot Filter Requirements**EQT 151-156**

EQT 0151 STORA - Storage Unit A	10,000 ft ³ /min	0.17	0.09
EQT 0152 STORB - Storage Unit B	10,000 ft ³ /min	0.17	0.09
EQT 0153 STORC - Storage Unit C	10,000 ft ³ /min	0.17	0.09
EQT 0154 STORD - Storage Unit D	10,000 ft ³ /min	0.17	0.09
EQT 0155 STORE - Storage Unit E	10,000 ft ³ /min	0.17	0.09
EQT 0156 STORF - Storage Unit F	10,000 ft ³ /min	0.17	0.09

CRG 0008 SCREENSF - Screening Bin Spot Filters Requirements**EQT 54-56, 136-138, 140, 144-150, and 171**

EQT 0054 FA-100250 - BIN 1002 Spot Filter	210 ft ³ /min	0.004	0.002
EQT 0055 FA-100350 - BIN 1003 Spot Filter	210 ft ³ /min	0.004	0.002
EQT 0056 FA-100450 - BIN 1004 Spot Filter	210 ft ³ /min	0.004	0.002
EQT 0136 FA-70150 - BIN 701 Spot Filter	210 ft ³ /min	0.004	0.002
EQT 0137 FA-70250 - BIN 702 Spot Filter	210 ft ³ /min	0.004	0.002
EQT 0138 FA-70350 - BIN 703 Spot Filter	210 ft ³ /min	0.004	0.002
EQT 0140 FA-70450 - BIN 704 Spot Filter	210 ft ³ /min	0.004	0.002
EQT 0144 FA-80150 - BIN 801 Spot Filter	210 ft ³ /min	0.004	0.002

EQT 0145 FA-80250 . BIN 802 Spot Filter	5000 ft ³ /min	0.004	0.002
EQT 0146 FA-80350 - BIN 803 Spot Filter	210 ft ³ /min	0.004	0.002
EQT 0147 FA-80450 - BIN 804 Spot Filter	210 ft ³ /min	0.004	0.002
EQT 0148 FA-90150 - BIN 901 Spot Filter	210 ft ³ /min	0.004	0.002
EQT 0149 FA-90250 - BIN 902 Spot Filter	210 ft ³ /min	0.004	0.002
EQT 0150 FA-90350 - BIN 903 Spot Filter	210 ft ³ /min	0.004	0.002
EQT 0171 FA-90450 - BIN 904 Spot Filter	210 ft ³ /min	0.004	0.002

CRG 0009 SLSF - Ship Loading Spout Requirements

EQT 8, 15, 23, 31, 39, and 49

EQT 0008 FA-0190 - Ship Loading Spout SP-01 Filter	10,000 ft ³ /min	0.17	0.09
EQT 0015 FA-0290 - Ship Loading Spout SP-02 Filter	10,000 ft ³ /min	0.17	0.09
EQT 0023 FA-0390 - Ship Loading Spout SP-03 Filter	10,000 ft ³ /min	0.17	0.09
EQT 0031 FA-0490 - Ship Loading Spout SP-04 Filter	10,000 ft ³ /min	0.17	0.09
EQT 0039 FA-0590 - Ship Loading Spout SP-05 Filter	10,000 ft ³ /min	0.17	0.09
EQT 0049 FA-0690 - Ship Loading Spout SP-06 Filter	10,000 ft ³ /min	0.17	0.09

CRG 0010 TRSF - Truck Receiving Pit Spot Filters Requirements

EQT 41, 40, 42, and 43

EQT 0040 FA-0610 - Truck Receiving Hopper H-06 Spot Filter	3,200 ft ³ /min	0.05	0.03
EQT 0041 FA-0611 - Truck Receiving Hopper H-06 Spot Filter	3,200 ft ³ /min	0.05	0.03
EQT 0042 FA-0612 - Truck Receiving Hopper H-06 Spot Filter	3,200 ft ³ /min	0.05	0.03
EQT 0043 FA-0613 - Truck Receiving Hopper H-06 Spot Filter	3,200 ft ³ /min	0.05	0.03

CRG 0012 ENG - Standby Gasoline Engine Requirements

EQT 157-162

EQT 0157 GAS ENG-1 - Standby Gasoline Engine No. 1	16 hp	100 hr/yr
EQT 0158 GAS ENG-2 - Standby Gasoline Engine No. 2	16 hp	100 hr/yr
EQT 0159 GAS ENG-3 - Standby Gasoline Engine No. 3	16 hp	100 hr/yr
EQT 0160 GAS ENG-4 - Standby Gasoline Engine No. 4	16 hp	100 hr/yr
EQT 0161 GAS ENG-5 - Standby Gasoline Engine No. 5	16 hp	100 hr/yr
EQT 0162 GAS ENG-6 - Standby Gasoline Engine No. 6	16 hp	100 hr/yr

List of emission sources from Emissions Inventory Questionnaire

From pages 74 to 251 of the permit application – Height = stack height when available

Page No.	Emission Source	Point ID	Height
74	Dust Filter Cap	DFCAP	
75	Filter/Receiver for Dust Transfer System	F-0320	110
76	Filter/Receiver for Dust Transfer System	F-0620	110
77	Filter for Barge Unloading System	FA-0110	57
78	BE-01 Spot Filter	FA-0120	22
79	BW-01 Spot Filter	FA-0150	195
80	BW-01 Spot Filter	FA-0160	195
81	Spot Filter on Ship Loader Belt Conveyor	FA-0180	163
82	Ship Loading Spout Spot Filter	FA-0190	40
83	Filter for Cleaning System # 1	FA-0210	30
84	Filter for Barge Unloading System	FA-0211	57
85	BE-02 Spot Filter	FA-0220	22
86	BW-02 Spot Filter	FA-0250	195
87	BW-02 Spot Filter	FA-0260	195
88	Spot Filter on Ship Loader Belt Conveyor	FA-0280	163
89	Ship Loading Spout SP-02 Filter	FA-0290	30
90	Filter for Cleaning System #2	FA-0310	40
91	BE-03 Spot Filter	FA-0320	20
92	BE-03 (Inlet) Spot Filter	FA-0330	90
93	BC-03 (Discharge) Spot Filter	FA-0340	232
94	BW-03 Spot Filter	FA-0350	195
95	BW-03 Spot Filter	FA-0360	195
96	Spot Filter on Ship Loader Belt Conveyor	FA-0380	163
97	Ship Loading Spout Spot Filter	FA-0390	40
98	Filter for Cleaning System #3	FA-0410	30
99	BE-04 Spot Filter	FA-0420	20
100	BC-01 (Inlet) Spot Filter	FA-0430	97
101	BC-04 (Discharge) Spot Filter	FA-0440	260
102	BW-04 Spot Filter	FA-0450	195
103	BW-04 Spot Filter	FA-0460	195
104	Spot Filter on Ship Loader Belt Conveyor	FA-0480	163
105	Ship Loading Spout Spot Filter	FA-0490	40
106	Filter for Cleaning System #4	FA-0510	30
107	BE-05 Spot Filter	FA-0520	20
108	BC-05 (Inlet) Spot Filter	FA-0530	97
109	BC-05 (Discharge) Spot Filter	FA-0540	260
110	BW-05 Spot Filter	FA-0550	195
111	BW-05 Spot Filter	FA-0560	195
112	Spot Filter on Ship Loader Belt Conveyor	FA-0580	163
113	Ship Loading Spout SP-05 Filter	FA-0590	40
114	Truck Receiving Hopper H-06 Spot Filter	FA-0610	

115	Truck Receiving Hopper H-06 Spot Filter	FA-0611	
116	Truck Receiving Hopper H-06 Spot Filter	FA-0612	
117	Truck Receiving Hopper H-06 Spot Filter	FA-0613	
118	BC-06 (Inlet) Spot Filter	FA-0630	97
119	BC-06 (Discharge) Spot Filter	FA-0640	260
120	BW-06 Spot Filter	FA-0650	195
121	BW-06 Spot Filter	FA-0660	195
122	Spot Filter on Ship Loader Belt Conveyor	FA-0680	163
123	Ship Loading Spout SP-05 Filter	FA-0690	40
124	BC-07 (Discharge) Spot Filter	FA-0640	240
125	BC-08 (Discharge) Spot Filter	FA-0840	240
126	BC-09 (Discharge) Spot Filter	FA-0940	240
127	BIN 1001 Spot Filter	FA-100150	110
128	BIN 1002 Spot Filter	FA-100250	110
129	BIN 1003 Spot Filter	FA-100350	110
130	BIN 1004 Spot Filter	FA-100450	110
131	BC-10 (Discharge) Spot Filter	FA-1040	220
132	BC-11 (Discharge) Spot Filter	FA-1140	220
133	BC-12 (Discharge) Spot Filter	FA-1240	220
134	BC-13 (Discharge) Spot Filter	FA-1340	220
135	BC-14 (Discharge) Spot Filter	FA-1440	220
136	BC-15 (Discharge) Spot Filter	FA-1540	220
137	BC-16 (Discharge) Spot Filter	FA-1640	220
138	BC-17 (Discharge) Spot Filter	FA-1740	220
139	BC-18 (Discharge) Spot Filter	FA-1840	220
140	BC-19 (Discharge) Spot Filter	FA-1940	220
141	BC-20 (Inlet) Spot Filter	FA-2020	20
142	BC-20 (Inlet) Spot Filter	FA-2030	20
143	BC-20 (Discharge) Spot Filter	FA-2040	96
144	BC-20B (Discharge) Spot Filter	FA-2045	81
145	BC-21 (Inlet) Spot Filter	FA-2120	20
146	BC-21 (Inlet) Spot Filter	FA-2130	20
147	BC-21 (Discharge) Spot Filter	FA-2140	96
148	BC-21B (Discharge) Spot Filter	FA-2145	81
149	BC-21 (Inlet) Spot Filter	FA-2220	20
150	BC-22 (Inlet) Spot Filter	FA-2230	20
151	BC-22 (Discharge) Spot Filter	FA-2240	96
152	BC-22B (Discharge) Spot Filter	FA-2245	81
153	BC-23 (Inlet) Spot Filter	FA-2330	26
154	BC-24 (Inlet) Spot Filter	FA-2430	26
155	Filter for Rail Receiving	FA-2810	30
156	BC-28 (Discharge) Spot Filter	FA-2840	232
157	BC-29 (Discharge) Spot Filter	FA-2940	232
158	BC-30 (Inlet) Spot Filter	FA-3030	27
159	BC-30 (Discharge) Spot Filter	FA-3040	244
160	BC-31 (Inlet) Spot Filter	FA-3130	27
161	BC-31 (Discharge) Spot Filter	FA-3140	244
162	BC-32 (Discharge) Spot Filter	FA-3240	220

163	BC-33 (Discharge) Spot Filter	FA-3340	220
164	BC-34 (Discharge) Spot Filter	FA-3440	220
165	BC-35 (Discharge) Spot Filter	FA-3540	220
166	BC-36 (Discharge) Spot Filter	FA-3640	220
167	BC-37 (Discharge) Spot Filter	FA-3740	220
168	BC-40 (Inlet) Spot Filter	FA-4030	90
169	BC-40 (Discharge) Spot Filter	FA-4040	232
170	BC-41 (Inlet) Spot Filter	FA-4130	97
171	BC-41 (Discharge) Spot Filter	FA-4140	260
172	BC-42 (Inlet) Spot Filter	FA-4230	97
173	BC-42 (Discharge) Spot Filter	FA-4240	260
174	BC-43 (Inlet) Spot Filter	FA-4330	97
175	BC-43 (Discharge) Spot Filter	FA-4340	260
176	BC-44 (Discharge) Spot Filter	FA-4440	240
177	BC-45 (Discharge) Spot Filter	FA-4540	240
178	BC-46 (Discharge) Spot Filter	FA-4640	240
179	BC-47 (Discharge) Spot Filter	FA-4740	220
180	BC-48 (Discharge) Spot Filter	FA-4840	220
181	BC-49 (Discharge) Spot Filter	FA-4940	220
182	BC-50 (Discharge) Spot Filter	FA-5040	220
183	BC-51 (Discharge) Spot Filter	FA-5140	220
184	BC-52 (Discharge) Spot Filter	FA-5240	220
185	BC-53 (Discharge) Spot Filter	FA-5340	220
186	BC-54 (Discharge) Spot Filter	FA-5440	220
187	BC-55 (Discharge) Spot Filter	FA-5540	220
188	BC-56 (Discharge) Spot Filter	FA-5640	220
189	BC-57 (Inlet) Spot Filter	FA-5720	20
190	BC-57 (Inlet) Spot Filter	FA-5730	20
191	BC-57 (Discharge) Spot Filter	FA-5740	96
192	BC-57B (Discharge) Spot Filter	FA-5745	81
193	BC-58 (Inlet) Spot Filter	FA-5820	20
194	BC-58 (Inlet) Spot Filter	FA-5830	20
195	BC-58 (Discharge) Spot Filter	FA-5840	96
196	BC-58B (Discharge) Spot Filter	FA-5845	81
197	BC-59 (Inlet) Spot Filter	FA-5920	20
198	BC-59 (Inlet) Spot Filter	FA-5930	20
199	BC-59 (Discharge) Spot Filter	FA-5940	96
200	BC-59B (Discharge) Spot Filter	FA-5945	81
201	BC-60 (Inlet) Spot Filter	FA-6030	26
202	BC-61 (Inlet) Spot Filter	FA-6130	26
203	BC-64 (Discharge) Spot Filter	FA-6440	232
204	BC-65 (Discharge) Spot Filter	FA-6540	232
205	BC-66 (Inlet) Spot Filter	FA-6630	27
206	BC-66 (Discharge) Spot Filter	FA-6640	244
207	BC-76 (Inlet) Spot Filter	FA-6730	27
208	BC-67 (Discharge) Spot Filter	FA-6740	244
209	BC-68 (Discharge) Spot Filter	FA-6840	220
210	BC-69 (Discharge) Spot Filter	FA-6940	220

211	BIN 701 Spot Filter	FA-70150	110
212	BIN 702 Spot Filter	FA-70250	110
213	BIN 703 Spot Filter	FA-70350	110
214	BC-70 (Discharge) Spot Filter	FA-7040	220
215	BIN 704 Spot Filter	FA-70450	110
216	BC-71 (Discharge) Spot Filter	FA-7140	220
217	BC-72 (Discharge) Spot Filter	FA-7240	220
218	BC-73 (Discharge) Spot Filter	FA-7340	220
219	BIN 801 Spot Filter	FA-80150	110
220	BIN 802 Spot Filter	FA-80250	110
221	BIN 803 Spot Filter	FA-80350	110
222	BIN 804 Spot Filter	FA-80450	110
223	BIN 901 Spot Filter	FA-90150	110
224	BIN 902 Spot Filter	FA-90250	110
225	BIN 903 Spot Filter	FA-90350	110
226	BIN 904 Spot Filter	FA-90450	110
227	Storage Unit A	STORA	145
228	Storage Unit B	STORB	145
229	Storage Unit C	STORC	145
230	Storage Unit D	STORD	145
231	Storage Unit E	STORE	145
232	Storage Unit F	STORF	145
233	Standby Gasoline Engine No. 1	GASENG1	100
234	Standby Gasoline Engine No. 2	GASENG2	100
234	Standby Gasoline Engine No. 3	GASENG3	100
236	Standby Gasoline Engine No. 4	GASENG4	100
237	Standby Gasoline Engine No. 5	GASENG5	100
238	Standby Gasoline Engine No. 6	GASENG6	100
239	Emergency Diesel Generator No. 1	GEN-1	10
240	Emergency Diesel Generator No. 2	GEN-2	12
241	Emergency Diesel Generator No. 3	GEN-3	10
242	Standby Diesel Fire Pump	DSL ENGINE	15
243	Diesel Storage Tank	AST DSL-1	25
244	Gasoline Storage Tank	AST GAS-1	4
245	Grain Dryer	DRYER	76
246	Paved Roads	PAVED RDS	
247	Railcar Unloading Fugitive Emissions	RAILUNL	
248	Ship Loading Fugitive Emissions	SHIPLOAD	
249	Screening Loadout Fugitive Emissions	TRUCKLOAD	
250	Truck Unloading Fugitive Emissions	TRUCKUNL	
251	Barge Unloading Fugitive Emissions	BARGEUNL	

54 stacks with height greater than 200 feet

48 stacks with height between 100 and 199 feet

65 stacks with height less than 100 feet