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ENGINEERING EVALUATION / FACT SHEET

BACKGROUND INFORMATION

Application No.:	R13-3236
Plant ID No.:	033-00255
Applicant:	O-Tex Pumping, L.L.C.
Facility Name:	Clarksburg Facility
Location:	Clarksburg, WV
NAICS Code:	213112
Application Type:	Construction
Received Date:	February 10, 2015
Engineer Assigned:	Steven R. Pursley, PE
Fee Amount:	$2,000.00
Date Received:	February 20, 2015
Complete Date:	April 30, 2015
Due Date:	July 29, 2015
Applicant Ad Date:	March 25, 2015
Newspaper:	*The Exponent Telegram*
UTM's:	Easting: 553.51 km Northing: 4,345.97 km Zone: 17
Description:	Construction of a bulk cement blending plant.

DESCRIPTION OF PROCESS

The proposed facility will store bulk cement, blend materials and bulk load equipment to be used at gas well sites.

The silos are filled pneumatically from pump transport trucks. Product will then be moved from the silos to the scale tank. The dust collector vents to the waste tank. Product is then blended with other required materials in the scale tank then pneumatically transferred to the blend tank.

The blend materials are stored in 50 and 100 pound sacks inside a storage building. They are added to the blend tank by dumping into an additive hopper while pulling a vacuum on the blend tank. The blend tank will have air drawn into it by the vent fan on the

dust collector system. After blending, the product is pneumatically transferred to the transport truck.

MSDS sheets were provided in the application for all additives and blend agents.

Bulk transport trucks are vented through the same system during loading and unloading. The air compressor used to pressurize the blend and scale tanks will have a dryer system installed. The compressor and vacuum pump will be run by a diesel engine. Additionally, a diesel fired backup generator will be installed.

The whole system will not be open at the same time. Only one material storage silo or the blend tank will be open to the system with a bulk truck. When the blend tank is pressurized, the system is closed, meaning that no products are unloaded or loaded without going through the emissions control device. When the material is moved between the scale and blend tanks, or to a transport truck, the system is vented through the vent/reclaim tank and dust collector. A pneumatic shaker will be installed for shaking dust from the filter bags.

SITE INSPECTION

A site inspection of the proposed site was performed by Brian Tephabock of DAQs North Central Regional Office on March 24, 2015. In an email that day Mr. Tephabock states "There is only a metal building on the site which is being used as their office. No process equipment is in place at this site. Decimal Lat/Lon = 39.2610457°, -80.3793505°." When the writer asked Mr. Tephabock if there was anything unusual about the site that would give him any concerns, Mr. Tephabock stated "No concerns at all. I've found out that a similar operation was previously located there and we never had any complaints."

The facility will be located in a rural/residential area just outside of Clarksburg city limits. To get to the facility from Charleston take I-79 north to exit 110. Turn left on County Route 270 and go approximately 5 miles. When CR 270 ends at US Route 19 turn right and go approximately 5.5 miles. The facility is on the right.

ESTIMATE OF EMISSIONS BY REVIEWING ENGINEER

Transfer point emissions were based on AP-42 Section 11.12. Where transfer points are controlled by a baghouse (all transfer points except for the additive hopper) a 98.88% efficiency was taken. All emissions are based on a 3 hour loading/1 hour unloading cycle.

Haulroad emissions were based on AP-42 Section 13.2.2. A conservative 50% control efficiency was taken for haulroad watering.

Engine emission factors for NO_x, CO and PM were based on the applicable Subpart IIII limits (for the Kubota back up generator engine NO_x was conservatively assumed to equal NMHC + NO_x). Emissions of all other pollutants were based on AP-42 Section 3.3.

Source	VOC		NO_x		CO		SO_2		PM		PM_{10}	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
Haulroad	--	--	--	--	--	--	--	--	0.44	1.30	0.20	0.59
Engines	0.56	1.94	1.73	5.15	1.86	6.36	0.45	1.58	0.11	0.38	0.11	0.38
Trans. Pts.	--	--	--	--	--	--	--	--	1.32	1.75	0.63	0.67
Total	**0.56**	**1.94**	**1.73**	**5.15**	**1.86**	**6.36**	**0.45**	**1.58**	**1.87**	**3.43**	**0.94**	**1.64**

Additionally, total HAP emissions are 0.01 pounds per hour and 0.02 tons per year. No individual HAP exceeds 0.01 pound per hour or 0.01 tons per year.

REGULATORY APPLICABILITY

The following state and federal rules apply to the facility:

STATE RULES

45CSR7 To Prevent and Control Particulate Matter Air Pollution From Manufacturing Processes and Associated Operations

The main requirement of 45CSR7 is the process weight rate based PM stack emission rate in section 4 of the rule. The facility (and each individual emission unit) is capable of processing 28.2 tons per hour (as judged by the blend tanks output). In Table 45-7A, (for a type 'a' source) this equates to a PM emission limit of 31.25 pounds per hour. Total PM emissions from the entire facility (including non stack emissions) will be only 3.43 pounds per hour.

The facility is also subject to a twenty (20) percent opacity limit on all process source operations and must have a plan to minimize fugitive emissions. O-Tex proposes to meet these requirements mainly through the use of baghouses and the use of a water truck on haul roads.

The facility is also subject to the fugitive particulate matter control systems requirement of section 5.1 of 45CSR7.

45CSR13 Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permits, and Procedures for Evaluation).

The construction of the O-Tex facility has a potential to emit Particulate Matter in excess of six (6) lbs/hour and ten (10) TPYand, therefore, pursuant to §45-13-2.24, the construction is defined as a "stationary source" under 45CSR13. Pursuant to §45-13-5.1, "[n]o person shall cause, suffer, allow or permit the construction . . . and operation of any stationary source to be commenced without . . . obtaining a permit to construct." Therefore, O-Tex is required to obtain a permit under 45CSR13 for the construction and operation of the facility.

As required under §45-13-8.3 ("Notice Level A"), O-Tex placed a Class I legal advertisement in a "newspaper of general circulation in the area where the source is . . . located." The ad ran on February 18, 2015 in *The Exponent Telegram* and the affidavit of publication for this legal advertisement was submitted on February 27, 2015.

45CSR22 Air Quality Management Fee Program

The facility is defined as a minor source under 45CSR30. Additionally, the facility is not subject to any NSPS or NESHAP that requires it to obtain either a permit or deferral from Title V. Therefore the facility is not subject to 45CSR30 and will pay its annual fees through the Rule 22 program.

FEDERAL RULES

40 CFR 60, Subpart IIII: Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

Subpart IIII of 40 CFR 60 is the NSPS for stationary compression ignition internal combustion engines (diesel fired engines). Section §60.4200 states that "provisions of [Subpart IIII] are applicable to manufacturers, owners, and operators of stationary compression ignition (CI) internal combustion engines (ICE)." Specifically, §60.4200(a)(2) states that Subpart IIII applies to "[o]wners and operators of stationary CI ICE that commence construction after July 11, 2005, where the stationary CI ICE are:

(i) Manufactured after April 1, 2006, and are not fire pump engines

O-Tex has proposed the construction of two (2) new CI ICEs (manufactured in 2014) that are subject to Subpart IIII. Based on the standards for owner/operators of a CI ICE

under §60.4204 and §60.4205, the following table details the emission standards for the engines:

Duty	Size (kw)	Displace-ment (L/cyl)	Source	Emission Standards (g/kw-hr)				
				NMHC + NO_x	NMHC	NO_x	CO	PM
Emergency	35.9	<10	Subpart IIII Table 2	7.5	--	--	5.5	0.3
Non Emergency	129.4	<10	§1039.102 Table 5	--	0.19	0.4	5.0	0.02

The Emergency Kubota V2203-M-E3B engine is an Interim Tier 4 engine certified to meet these standards.

The Caterpillar C4.4 ACERT engine is an Interim Tier 4 engine certified to meet these standards.

40 CFR 63, Subpart ZZZZ: National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

On June 1, 2013 the DAQ took delegation of the area source provisions of 40 CFR 63, Subpart ZZZZ. As the facility is defined as an areas source of HAPs, the facility is subject to applicable requirements of Subpart ZZZZ. O-Tex only needs to comply with 40 CFR 60 Subpart IIII to comply with 40 CFR 63 Subpart ZZZZ.

Nonapplicability Determinations

45CSR17 To Prevent and Control Particulate Matter Air Pollution From Materials Handling, Preparation, Storage and Other Sources of Fugitive Particulate Matter.

Section 6.1 of 45CSR17 exempts sources which are subject to 45CSR7. Since this is a manufacturing source (additives are mixed into the cement) it is subject to 45CSR7.

TOXICITY OF NON-CRITERIA REGULATED POLLUTANTS

The only non-criteria regulated pollutants that will be emitted from the facility will be the small amounts normally associated with the combustion of diesel fuel. No individual HAP will exceed 0.01 pounds per hour or 0.01 tons per year.

AIR QUALITY IMPACT ANALYSIS

Since this application involves the construction of a source that is not major, as defined in 45CSR14, no modeling was performed.

MONITORING OF OPERATIONS

The permittee shall maintain the following records:

* Records of monthly EPA Method 22 opacity testing and any corrective actions taken.
* Monthly throughput of cementious and bulk material.
* Monthly inspection of all baghouse bags.
* Records of hours of operation of the emergency generator on a monthly basis
* Records of quantity and type of fuel burned in each engine.
* Records of the maximum sulfur content on a per-shipment basis for fuel oil burned in each engine

RECOMMENDATION TO DIRECTOR

Information supplied in the application indicates that compliance with all applicable regulations will be achieved. Therefore it is the recommendation of the writer that permit R13-3236 for the construction of a bulk cement blending and storage facility near Clarksburg, Harrison County, be granted to O-Tex Pumping, L.L.C.

Steven R. Pursley, PE
Engineer

June 17, 2015