

DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION  
ACTIVITY REPORT: Scheduled Inspection

A022437776

FACILITY: LaFarge USA - Essexville Plant		SRN / ID: A0224
LOCATION: 1601 Saline St, ESSEXVILLE		DISTRICT: Saginaw Bay
CITY: ESSEXVILLE		COUNTY: BAY
CONTACT: Scott Anderson , Terminal Supervisor		ACTIVITY DATE: 12/01/2016
STAFF: Sharon LeBlanc	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: FCE scheduled site inspection of Lafarge Essexville location. Note that the facility is presently only operating the product storage and truck loadout portion of the facility.		
RESOLVED COMPLAINTS:		

On Thursday, December 1, 2016, AQD District Staff arrived onsite to conduct a scheduled site inspection for LaFarge USA – Essexville Plant (Formerly Essroc Italcementi Group and Essroc Cement Corporation) (A0224). The facility is a permitted Portland cement grinding, storage and material handling facility. The facility is subject to conditions outlined in Renewable Operating Permit (ROP) No. MI-ROP-A0224-2012 issued to Essroc Italcementi Group for the facility on November 9, 2012. LaFarge North America purchased the facility on December 20, 2012. At the time of the inspection the facility had submitted the ROP Renewal Application for the referenced document, and is under the permit shield.

Site inspection was conducted with the intent of confirming operational status as well as compliance with the referenced permit. The facility was open, truck loading was operational at one station, and boat offloading/delivery of finished cement product was ongoing at the time of the inspection. District Staff met with Scott Anderson regarding facility operations. The last inspection was conducted on May 21, 2015.

### FACILITY DESCRIPTION

Formerly known as Essroc Cement Corporation (AKA Essroc), the LaFarge USA facility has historically been operated/permitted as a portland cement grinding facility located in Essexville, Michigan. The primary contaminant associated with the facility is particulate matter from various activities onsite, including:

- Material handling and bulk loadout,
- Fugitive emissions,
- Clinker grinding/processing, and (last raw materials were received & processed in 2010)
- Finish Mill operations (operations ended in July 2010).

The facility also has historically received finished cement delivered by ship and railcar which is unloaded into storage silos for later bulk loadout for transport via truck and rail.

It is important to note that as was the case at the time of the May 21, 2015, site inspection the facility is only operated as a bulk loadout/storage facility. Under the present operations, finished product comes in by ship, and is transported out via truck. Raw material storage is no longer conducted onsite. At the time of the previous inspection some discussions were ongoing as to permanently decommissioning equipment onsite. However, the company at this time has decided not to decommission any of the inactive equipment to allow them more flexibility business-wise.

In addition, the facility does not have a railcar unloader onsite. The railcar unloader was retained by the previous owner. However, the MAERS reporting system identifies one railcar unloader EU onsite. LaFarge representatives indicated that they may bring a railcar unloader onsite sometime in the future, and would operate it under the Rule 290 exemption.

Activities and onsite staff at the site are presently located at the southern entrance on Main Street, rather than the northern entrance at Saline St where the offices were previously located. Both the Main Street and Saline Street address on file are for the facility. At the time of the most recent inspection, Saline Street was reported to have been converted from a paved road to a dirt road by the City of Essexville.

The business is located in an older industrial area located on the south side of the Saginaw River and is bounded by small commercial/industrial facilities located on the north side of Woodside Ave and Saline Street, as well as with small commercial and residential properties located adjacent along Pine Street.

No distressed vegetation, emissions or odors were noted during the site visit. No obvious staining to soils was noted.

### PERMIT HISTORY

A review of the Emission Unit table in the ROP (page 13 of 38) identified installation dates for EUs associated with the facility as far back as 1923. Based on installation and modification dates it appears that many of the EUs onsite were grandfathered, with respect to the AQD permitting program.

Records indicate that nine PTIs from 1971 through 1985 were rolled into the ROP for the facility, and that two permit applications (1973 and 2010) were voided. One permit for a mobile bag-type dust collector associated with the transfer by/from ship of clinker materials (488-77) is reported to be active.

A review of files appears to indicate that permitting activities were predominantly the result of upgrades or changes in pollution controls for existing emission units. The following tables summarize PTI information. The following Permits associated with the inactive portion of the facility include:

Permit No.	Associated Equipment	Future Use	Comments
242-71	Installed 3 dust collectors for clinker handling facilities.	No	No Copy of permit in files
138-72	Truck loadout dust collector for silos 11 & 12	No	Facility reports that silos 11 & 12 are not in use.
86-73	5 Dust collectors	No	Conditions reference clinker handling and storage
488-77	Mobile bag dust collector	No	Pulseaire filter located at the ship bucket elevator and boom conveyor. Company reported that loadout was for clinker and was scrapped sometime around 2003.
27-81	Clinker grinding dust collectors	No	Conditions reference cement grinding operations. Dust collector installed Feb. & March 1980
28-81	Clinker processing	No	Conditions reference cement grinding operations – Dust Collector installed in 1979
29-81	3 dust collectors	No	Clinker grinding dust collectors – installed in 1977 & 78.
178-85	Clinker hopper dust collector	No	

Permits associated with the active portion of the facility include the following:

Permit No.	Associated Equipment	Future Use	Comments
171-72	Bag collectors	yes	Silos 21, 22, 23 & 24. As well as another one for Silos 17, 18, 19 & 20
87-73	Silo vents silos 1-4 and 5-12	yes	

## EQUIPMENT

The ROP for the facility identifies a total of 73 Emission Units (EUs) most of which are identified as being part of the following Flexible groups

### FG-MaterialHandling – (Inactive)

This flexible group is the largest consisting of a total of 24 EUs and 16 associated baghouses (DV-101 -104, 201-208, 213, 215 and 217). Equipment consists of clinker, gypsum and storage domes, unloading hoppers, weigh feeders, material transfer belts, crusher circuit, mill hoppers #1-8 and separator circuits #4-6. Clinker historically was unloaded from ships into the north and south clinker storage domes, and occasionally to a covered clinker storage pile. Gypsum and limestone were delivered to covered storage piles. (Note that the clinker storage domes were determined to be exempt from permitting in 1997 under Rule 336.1284(k) for non-carcinogenic solid storage containers that only emit particulates).

The clinker loadout from the boats and the associated mobile dust collector for the ship bucket elevator was reported to have been scrapped.

The referenced raw materials would be loaded into their respective hoppers then to weigh feeders, and carried by raw material transfer belts to the long inclined transfer belt and transferred to the crusher circuit. From the crusher circuit the materials were transferred to the mill hoppers for further production activities.

The July 30, 2013, site inspection report indicated that the last raw material was received and processed at the facility in 2010.

- Unloading Hoppers
  - ■ EU-104, 105 & 106 for Clinker, Gypsum and Stone, respectively
- Weigh Feeders
  - EU-107, 108 & 109 for Clinker, Gypsum and Stone, respectively
- Transfer Belts
  - EU- 110, 111, 112, 113 & 114
- Clinker Storage Domes
  - EU-115 & 116
- Mill Hoppers
  - EU-201 – 208 for Mill hoppers #1-8 which feed finish mills #1- 8
- Separator Circuits
  - EU – 220 -222 for separator circuits #6-8

### FG-FinishMills – (Inactive)

This flexible group is reported to consist of 11 EUs and six associated baghouses (DV-209 – 212, DV-214 and DV-216). Mill hoppers feed clinker, gypsum and stone that has been mixed and crushed to the finish mill circuits for further reduction in size by grinding with steel balls in the rotating mills. Finish mill circuits include feed belts and feed screws and empty into separator circuits which classify the mill discharge and return any rejected product back to the finish mills for further processing. The finished cementitious product is sent to the various cement storage silos.

- **Finish Mills**
  - EU-209 –213, 214, 215, 216 for finish mills #1 - 8
- **Separator Circuits**
  - EU-217 – 219 for Separator Circuits #1-3

### **FG-Packing&Storing – (Partially Active)**

This flexible group consists of 24 EUs and seven associated baghouses. Equipment within this flexible group consists of cement storage silos for the various types of cementitious product produced. Product is transferred from the silos to packing machines and/or bulk loadout. The July 30, 2013, site inspection report indicated that packing operations at the facility have ceased. This was confirmed with staff during the site inspection. The only active portions of this FG are a portion of the cement storage silos associated with the truck loadouts which belong to FG-LoadOut.

- **Cement Silo Storage**
  - EU-301, 302, 303 – 304, 305-306 and 307 -314 for silos #1-25 (only silos # 13-25 are active per MAERs).
- **Portable Dump Box**
  - EU-331
- **Pit Reclaim System**
  - EU-332
- **Packing Machine Systems**
  - EU-333-335
- **Screen Screw Discharge**
  - EU-336

Note that page 24 of 38 of the ROP also lists the following EUs as part of this flexible group: EU 315-317 and EU-338.

### **FG-LoadOut – (Active)**

This flexible group consists of 12 EUs and 12 associated baghouses which empty cementitious product to bulk truck and/or rail car loadouts. At the time of the December 1, 2016 site inspection rail car loadouts were reported not to be occurring at this facility.

Loadout by ship is conducted using the boats dust collector. It should be noted that at the time of the December 1, 2016, site inspection that a boat was unloading, and there were no VEs associated with the activities observed by the inspector.

- **Cement Truck Loadouts**
  - EU 319 -322 for bulk loadouts #13-16
  - EU-326, 327 & 328 -330 for bulk loadouts #22 – 24.

- **Cement Truck/Rail Loadouts**
  - EU-323 – 327 for loadouts #17-21 & 25.

#### **FG-Rule290 – (Inactive)**

This flexible group consists of EUs that are exempt from the requirements of Rule 201 pursuant to Rules 278 and 290. Both of the referenced units were reported in the July 30, 2013 site inspection report to have been retained by Essroc and removed from site. The company as yet has not replaced them at this facility. The most recent MAERS submittal for the facility lists the rail car EU-339 as onsite, but unused for 2014.

- **Mobile Rail Car loadouts**
  - EU-339 & 340

#### **FG-ESSROC-CAM-UNITS –**

This flexible group is not identified in Emission Unit Summary Table Page 13 of 38 in the ROP, however, it is identified in the Flexible Group Summary Table on Page 17 of 38 in the ROP. EUs in this flexible group have been identified as being subject to Compliance Assurance Monitoring (CAM) requirements. These eight EUs (EU-209 -216) and six associated baghouses are also part of the FG-FinishMills, and in the 2013 site inspection report were reported as not having been operated since July 2010. Lafarge NA staff report that the doors to the finish mills with the exception of one that has to be accessed for other purposes, have been welded shut. The CAM Plan for the units was approved on September 11, 2012.

#### **UN-GROUPED EUs –**

EUs not included in any of the above referenced ROP Flexible Groups include:

- EU-101 (Clinker Storage Pile)
- EU-102 (Gypsum Storage Pile)
- EU-103 (Stone Storage Pile)
- EU-401 (Haul Roads)

These EUs would be subject to source wide conditions in the ROP.

In addition to the above EUs MAERS identifies the following emission units for the site which are not included in the ROP and will be corrected during the ongoing ROP Renewal Process:

- EU-223 (Dry End Pit Reclaim)
- EU-318 (Mortar Bulk Truck Loadout)

For the purposes of reporting annual emissions, the facility reports emissions from individual EUs as well as “Reporting Groups” rather than ROP Flexible Groups. The facility does not operate a kiln.

#### **REGULATORY SUMMARY**

The facility is at present listed as a major source based on the potential to admit of particulate matter which exceeds 100 tons/year. At the time of the ROP Renewal (2012) the facility was

determined to have the potential to emit less than 100 tons per year of CO<sub>2</sub>E, and is considered a minor for Greenhouse Gases.

At the time of report preparation, the facility is in the process of renewing its ROP. Historically, there does not appear to have been a determination made as to HAPs emissions onsite. A review of prior Staff and site inspection reports does not address the question. The consultant that prepared the ROP Renewal Application package has been asked to further address the topic.

With respect to applicability of Federal Regulations, the site has been historically considered not subject to 40 CFR Part 63, Subpart LLL (Portland Cement MACT) as it was not a major source of HAPs and the source did not have a kiln, in-line kiln/raw mill or material dryer. However, further evaluation of the referenced regulations indicates that the regulations are applicable to both major and minor sources of HAPs, and though most of the regulations are for the kiln, in-line kiln/raw mill or material driers onsite, the existing facility does house some affected EUs under the subpart (conveyors, finish mills, etc.) Based on the question of HAPs emissions for the site, a determination by the appropriate consultant/facility is being awaited.

Requirements of 40 CFR Part 60 Subpart F (Standards of Performance for Portland Cement Plants) are based on commencement of construction or modification after August 17, 1971. As the majority of the EUS associated with the facility were installed well below this date, applicable EUs appear to be limited to the following:

- o EU-115 & 116 (enclosed clinker storage) (constructed 4/1/1997)
- o EU-223 (dry end reclaim pit) (constructed 1/1/1980)
- o EU-339 (Railcar unloading system) (6/18/2010)

EUs at the source are not subject to PSD because the process equipment was constructed/installed prior to the June 19, 1978 promulgation date for PSD Regulations. In addition, Over 70 emission units were reported to be installed prior to August 15, 1967, and are considered grandfathered and not subject to New Source Review (NSR) permitting requirements.

### COMPLIANCE HISTORY

No complaints are of record nor have any violation notices been issued for the facility since the last inspection on May 21, 2015.

ROP required submittals include semi-annual and annual certifications of compliance as well as annual emissions reporting (AKA MAERS). Some late submittals are of record since the transfer to the present owner. But are not anticipated to be a future compliance issue.

### COMPLIANCE EVALUATION

For the purposes of the compliance determination, District staff evaluated the EUs associated with FG-PACKAGING&STORAGE, FG-LOADOUT and Source Wide Requirements. FGMATERIALHANDLING, FG-ESSROC-CAM-UNITS and FG-FINISHMILLS will not be evaluated due to their non-operating status.

It should be noted that the full 5 years of back records were not available for review during the May 21, 2015, site inspection. LaFarge Staff reported that staff under the prior owner destroyed much of the records before they could be stopped. However, this issue should be resolved before the next Full Compliance Inspection. Records for 2015 and 2016 were reviewed as part of this compliance evaluation.

**Source Wide Conditions** - For the facility source wide conditions are limited to requirements to meet applicable provisions of 1994 PA 451, Section 324.5524 (Fugitive Dust Sources or Emissions) (Special Condition IX.1). The referenced section of the ACT requires a 0.03 gr/dscf limit for particulate collection equipment and 5% opacity limit for fugitive dust from roadways, lots or storage piles, including any material handling activities at storage piles.

The facility is presently operating under their fugitive dust plan, approved by the District on September 11, 2012. At the time of the inspection no storage piles were present, roadways were properly swept (log book kept in sweeper), and speed limits were being followed. No fugitive dust was noted from either the roadways or from the silo loading area at the time of the inspection.

In addition, the facility is required to report deviations as required in general conditions 21 and 22 of Part A of the ROP (SC VII.1) as well as semiannual and annual reporting of monitoring and deviations pursuant to General Condition 23 of Part A of the ROP (SC VII.2 & 3).

**FG-PACKING&STORAGE** – As previously indicated, equipment within this flexible group consists of cement storage silos for the various types of cementitious product produced. Product is transferred from the silos to packing machines and/or bulk loadout. Applicable conditions with reference to this FG include the above referenced emission limits for particulate collection equipment (SC I.1) as well as the reporting requirements (SC VII.1, 2 & 3) referenced in the source wide conditions.

PM10 emission limits of 0.005 grains/dscf exist for bag houses DV-301 through DV-305, DV-318 and DV-319. Testing of the referenced equipment at the owners/operators expense may be required by the department (SC VI.2). A review of district files indicate that testing was conducted on December 16 & 17, 2010, for silo loading operations for DV-304 (Silos #14 and #15, AKA EU304 and EU305) and packing system emissions from EU333. The January 25, 2011, Test Report for the activities reported emission factors below permit emission limits confirming compliance. District files indicate that supplemental testing had been deferred in 2011 for EUs in FG-PACKAGING&STORAGE until packaging operations have been resumed.

**FG-LOADOUT-** This flexible group consists of 12 EUs and 12 associated baghouses which empty cementitious product to bulk truck and/or rail car loadouts. Restrictions associated with this flexible group include PM and PM10 emissions of 0.03 grains/dscf for all baghouses and 0.01 grains/dscf for baghouses associated with EU-319 thru 330, respectively. Testing to determine compliance may be requested (SC VI.2), however a review of files did not identify any requests for testing.

The facility maintained differential pressure records for baghouses associated with operating loadout EUs. Records were kept on a daily basis, with consistent differential pressures reported.

Conditions for the flexible group also include limits on the operation of any cement load out related operation to 12 hours per emission unit per 24-hour time period (III.1). A review of available records for the facility appear to indicate that the facility is operating in compliance with the condition.

## **SUMMARY**

On Thursday, May 21, 2015, AQD District Staff arrived onsite to conduct a scheduled site inspection for LaFarge USA – Essexville Plant (Formerly Essroc Italcementi Group and Essroc Cement Corporation) (A0224). The facility is a permitted Portland cement grinding, storage and material handling facility. The facility is subject to conditions outlined in Renewable Operating

Permit (ROP) No. MI-ROP-A0224-2012 issued to Essroc Italcementi Group for the facility on November 9, 2012. LaFarge North America purchased the facility on December 20, 2012.

Site inspection was conducted with the intent of confirming operational status as well as compliance with the referenced permit. The facility was open, only one truck loading station was operational at the time of the inspection. District Staff met Scott Anderson regarding facility operations. The last inspection was conducted on May 21, 2015.

Formerly known as Essroc Cement Corporation (AKA Essroc), the LaFarge USA facility has historically been operated/permitted as a Portland cement grinding facility located in Essexville, Michigan. The primary contaminant associated with the facility is particulate matter from various activities onsite, including:

- o Material handling and bulk loadout,
- o Clinker grinding/processing, (last raw materials were received & processed in 2010)
- o Finish Mill operations (operations ended in July 2010), and
- o Fugitive emissions.

The facility also has historically received finished cement delivered by ship and railcar which is unloaded into storage silos for later bulk loadout for transport via truck and rail.

It is important to note that at the present time the facility is only operated as a bulk loadout/storage facility. Under the present operations, finished product comes in by ship, and is transported out via truck. Raw material storage is no longer conducted onsite.

ROP required submittals include semi-annual and annual certifications of compliance as well as annual emissions reporting (AKA MAERS).

For the purposes of the compliance determination, District staff evaluated the EUs associated with FG-PACKAGING&STORAGE, FG-LOADOUT and Source Wide Requirements. FGMATERIALHANDLING, FG-ESSROC-CAM-UNITS and FG-FINISHMILLS were not evaluated due to their non-operating status. No compliance issues were noted for the referenced FGs, and the facility was determined to be in compliance with permit conditions. sgl

NAME Sharon G. Ullmer

DATE 12/5/16

SUPERVISOR C. Hall