

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

B155926878

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|---|--------------------------------------|
| FACILITY: St. Marys Cement, Inc. (U.S.) | SRN / ID: B1559 |
| LOCATION: 16000 BELLS BAY RD, CHARLEVOIX | DISTRICT: Cadillac |
| CITY: CHARLEVOIX | COUNTY: CHARLEVOIX |
| CONTACT: Cortney K. Schmidt , Environmental Engineer | ACTIVITY DATE: 09/10/2014 |
| STAFF: Kurt Childs | COMPLIANCE STATUS: Compliance |
| SUBJECT: 2014 Full Compliance Evaluation including site inspection and records and reporting review. | |
| RESOLVED COMPLAINTS: | |

St. Marys Cement 2014 Full Compliance Evaluation

On September 10, 2014 I conducted a compliance inspection of St. Marys Cement (SMC) including a records review. Prior to the inspection I reviewed the reporting submitted for the previous year. The most recent ROP renewal was issued to SMC on 8/20/14 so to a large degree this inspection focused on each of the requirements of the new ROP and how compliance will be demonstrated going forward. During the inspection I met with Mr. Cortney Schmidt. Dirk Cox, the plant manager had recently left SMC and the plant manager position is currently open. At the time of the inspection the weather was poor with rain and temperatures around 50 degrees F. Mr. Schmidt and I sat down and went through each requirement of the ROP we also made observations outside the plant of the various emission points and confirmed locations where visible emission readings are to occur. These activities were documented as follows:

MI-ROP-B1559-2014

Source Wide Requirements

I. NA

II. NA

III.1. Malfunction Abatement Plan (MAP) implemented. *The MAP has been implemented and was updated 8/14.*

III.2. Fugitive Dust Plan (FDP) implemented. *The FDP has been implemented is on file.*

V. NA

VI.1. MAP Records. *SMC maintains all required MAP records. PM activities are documented on work orders maintained electronically on "Maximo" system, soon to be replaced by "SAP".*

VI.2. FDP Records. *SMC maintains all required FDP records including dust suppressant application.*

VII. Deviation/Semiannual/annual reporting. *All ROP reporting has been received on a timely basis and was certified. Reports are reviewed as they are received.*

VIII. NA

IX. Comply with MAP/FDP/CJ. *General requirements to comply with the plans and the Federal Consent Judgment.*

EUPORTABLECRUSH

Note: *The portable crusher has not been on site for over 12 mos. Notification required prior to return.*

I. Visible Emissions:

Crusher 15%

Conveyors 10%

Vehicles 5%

Other 10%

II.1. Material use maximum = 876,000 tons per year.

IV.1. Equipped with dust suppression or enclosed in building.

VI.1. Daily and annual material use records.

VI.2. No asbestos.

VI.3. Daily Method 22 readings, Method 9 if visible emissions observed.

XI.1. Portable crusher removed and returned to site. *Notification required prior to return.*

FGQUARRY

I. Visible Emissions:

EUHAMMER 15%

EUQUARRYFUGITIVE 5%

EUSECONDARYCRUSH 20%

II. NA

III. NA

IV. NA

V. NA

VI.1. Daily Method 22 readings, Method 9 if visible emissions observed.

VI.2. Records of VE observations. *SMC maintains a monthly visible emissions source inspection list (attached) that includes the quarry. No Method 9 readings were required.*

FGKILNRAWMILLS

I. Emission Limits

PM limits are verified annually through stack testing. SO2 and NOx emission limit compliance is verified by CEMS. Emissions as recorded by CEMS (attached) are reported annually.

II. Material Use

| Material | Limit |
|--------------------------------------|--|
| Petroleum Coke | 69 ng of mercury/gram of petroleum coke |
| Asphalt Flake and Recyclable Plastic | 8.0 tons per hour |
| Asphalt Flake and Recyclable Plastic | 121 ppbw of mercury in the Asphalt Flake or Recycled Plastic |

Pet Coke Mercury content has been demonstrated to be well below the limit and testing is no longer required. ROP Material Limit table lists SC V.5 as the monitoring method, this is incorrect. The numerical reference was not corrected after the mercury testing requirement was removed from the Draft ROP. Needs administrative correction.

Alt fuels use limit measured by feed belt scale tracked electronically, no exceedances.

Alt Fuels mercury content verified by analysis of each batch (5,000 tons) most recent analysis attached.

III.1. Daily clinker production limit 4,840 tons. *Daily production report indicates compliance with limit (varies by day but no exceedances observed). Clinker production is reported quarterly.*

- III.2. Pet coke fired only at entrance of kiln. *The plant is not configured to fire pet coke anywhere but the entrance of the kiln.*
- III.3. Clear, Brown and Green Glass only. No chromium, uranium or leaded green glass. SMC has not begun to receive any glass at this time.
- III.4. No Aluminum Refractory from hazardous waste combustion. *All of SMC's aluminum refractory comes from Alcoa pot furnace maintenance.*
- III.5. Asphalt/plastic fired only at calciner. *A separate feed system for alt fuels is in place to feed these fuels to the calciner.*
- III.6. *The SVBYPASS baghouse is maintained and operated in a satisfactory manner as evidenced by COMS, MAP, and parametric monitoring (broken bag detector).*
- III.7. SVBYPASS baghouse equipped with broken bag detector and audible alarm. *The bypass baghouse is equipped with broken bag detectors and an alarm on the main control room screen.*
- III.8. SVMAIN baghouse Diff. Pressure gauge. *This is a large baghouse equipped with sensors for differential pressure that send a signal to and are monitored in the control room.*
- VI.1 and 2. CEMS and COMS operating parameters. *Evaluated during RATA.*
- V.1. Annual PM testing required since 2007. *2013 test, no record. 2012 test, no record. 2011 2/1/11. PM testing was on a 30 mos. cycle to coincide with PCMACT testing. This is now an annual requirement and the 2014 test has been conducted and is under review.*
- V.2. Nickle emissions with 100% pet coke. 1/5yrs. 1/7/08 – 8/20/14, No record in files. *Copy of test from 2/2010 received following inspection. Test was not with 100% pet coke. This is prohibited due to SC III.2. ROP needs revision to correct this discrepancy. Nickel emission limit is 0.36 lb/hr. when burning 100% pet coke. Test emission rates were 0.0215 lb./hr.*
- V.3. Asphalt/plastic fuel verification each shipment (Appendix 5). *Each batch (5,000 tons) is analyzed by the supplier; the batch is identified for each shipment. SMC is just beginning to fire the second batch of plastic fuel. Asphalt fuel is not being used at this time.*
- V.4-6. CEMS/COMS QA and RATA. *Scheduled for 9/18/14, 9/25/13, 9/26/12. Past RATAs and audits have been conducted successfully and submitted in a timely manner.*
- VI.1. Monitor and record ton per hour kiln feed rate using the 557 scale. *The 557 scale is used to monitor and record feed rate.*
- VI.2. Daily calculation and records of hourly and daily clinker production. *Records of clinker production are maintained and submitted quarterly.*
- VI.3. Quarterly determination and records of 557 scale accuracy. *The scale is inspected regularly for proper function; accuracy is determined by correlation to other monitored kiln parameters.*
- VI.6. Equip SVMAIN and SVBYPASS with COMS. *COMS are installed and operating properly.*
- VI.7. SO₂ emission records; lb/hr, tons per month, 12-month rolling. *SO₂ emissions are continuously monitored and recorded records are available instantaneously for the past 335 days older records are archived but still available.*
- VI.8. NO_x emission records; lb/ton clinker. *NO_x emissions are continuously monitored and recorded records are available instantaneously for the past 335 days older records are archived but still available.*
- VI.9. Monitor and record SVMAIN baghouse diff. pressure. *Baghouse differential pressure is continuously monitored and recorded records are available instantaneously for the past 335 days older records are archived but still available.*
- VI.10. Record the amount and type of glass and refractory used. *Tracked through storeroom on "Production Summary" report, 761 tons refractory used in 2013.*

VI.11. Records of supplier certificates of quality, analysis, manifests for each delivery of asphalt/plastic fuel. *On file, not reviewed during this inspection.*

VI.12. Continuously monitor and record in tons per hour (daily average) the asphalt/plastic feed rate using in-line belt scale. *Feed rates are monitored with existing belt scale.*

VI.13. Records of asphalt/plastic fuel analysis. *Records of analysis are on file and demonstrate compliance with Mercury content limits.*

VI.14. CAM requirement to use COMS.

VI.15 CAM excursion = 2 consecutive 1 hour block average opacity greater than 15%. *New Requirement, no records yet.*

VI.16. Properly maintain COMS.

VI.17. CAM requirement to conduct all monitoring in continuous operation. *The COMS does this.*

VI.18. CAM requirement to restore operation of the kiln in accordance with good air pollution practices. *This is consistent with the MAP requirements which are followed.*

VI.19. Verify no asbestos tailings or waste processed. *Applies to asphalt flake fuel, verification provided by supplier. Asphalt flake fuel not currently in use.*

VI.20. Records of SSM. *New requirement for COMS, no events. Start-up and COM operation occurs when airflow in main stack reaches 100,000 CFM.*

VII.1-3 Deviation/Semiannual/annual reporting. *All ROP reporting has been received on a timely basis and was certified. Reports are reviewed as they are received.*

VII.4 Quarterly NOx QA (data assessment report Part 60, Appendix F). *Same as VII.6. ROP requires correction, delete this condition and add UAR to VII.6.*

VII.5. Ozone Control Period NOx emissions report. *Last separate report 2011, subsequent reports are included in the cover letter to the 3rd quarter EER. These have been submitted and are up to date.*

VII.6. NOx EER. *Quarterly reporting up to date.*

VII.7. COMS EER. *Quarterly reporting up to date.*

VII.8. SO2 EER. *Quarterly reporting up to date.*

VII.9-12. Consent Judgment. Annual reports submitted 2/18/14. 3/6/13. *Requirements have been fulfilled.*

VII.13-18. Testing requirements. *Evaluated at time of test protocol and results submittal. Review by Technical Programs Unit.*

VII.19. Quarterly Clinker production report. *Provided along with Quarterly EERs, up to date.*

VI.21. Quarterly SO2 QA (data assessment report Part 60, Appendix F). *Same as VII.8. ROP requires correction, delete this condition and add UAR to VII.8.*

VI.22. Notification of new asphalt/plastic fuel supplier. *12/19/13 Notification of new supplier of plastic Joule Tech. 6/27/2014 Notification of new supplier of plastic American Waste.*

VI.23 and 24. CAM reporting requirements. *New requirements no reports yet.*

IX.1. CISWI informational condition.

IX.2 and 3. Comply with CAM.

FGFINISHMILLS

I.1. VE 10%. *No VE at time of the inspection.*

II. NA

III.1. OMP. *OMP on file and approved 9/24/09.*

III.2. SSM. *SSM on file and approved 2/28/08.*

VI.NA

V.1. Annual Method 9 test. *New PCMACT requirement.*

VI.1. Daily Method 22 test. *Daily readings are conducted, all employees conducting readings have been Method 9 certified at one time.*

VI.2. Implement OMP if visible emissions are observed. *Not evaluated at this time.*

VI.3. VE records. *Responsible employee logs readings on Method 22 VE form (example attached).*

VI.4. OMP records. *VE readings, maintained in accordance with VI.3.*

VII.1-3 Deviation/Semiannual/annual reporting. *All ROP reporting has been received on a timely basis and was certified. Reports are reviewed as they are received.*

VIII. NA

IX.1-3. Comply with Subpart LLL, OMP, MAP.

FGNONKILNFACILITY

I.1. VE 10%. *No VE's were observed from processes reviewed during the inspection. However, it was overcast and raining.*

I.2. EURAWMATHANDSTOR PM 0.15 lb/100lb exhaust gas limit. *Monitored by Method 22 readings.*

II. NA

III.1. Maintain total enclosure on any conveying system transfer points that are not monitored by Method 22. *Covered conveyors are used in the few locations not monitored by Method 22 (fly ash silos).*

III.2. OMP. *OMP is implemented and maintained.*

III.3. SSM. *SSM is implemented and maintained.*

IV.1. Refractory conveyor covered or located in enclosed structure. *Refractory is stored in the fly ash silos which utilize a covered conveyor.*

V. NA

VI.1. Monthly Method 22 (10-min.). *FGNONKILNFACILITY emission points are included in the monthly VE inspection form.*

VI.2. Partially enclosed or unenclosed transfer points in a building. *SMC only has one of these which is the 40 to 315 belt transfer. The 40 belt is the main feed belt from the A frame building. This point is included on the monthly VE inspection form and will be read individually as opposed to reading the outside of the building.*

VI.3. Building VE requirements. *NA, SMC has opted to read the transfer point as indicated above.*

VI.4. VE Records. *Records are maintained using the VE inspection form.*

VI.5. OMP Records. *VE readings, maintained in accordance with VI.4.*

VII.1-3 Deviation/Semiannual/annual reporting. *All ROP reporting has been received on a timely basis and was*

certified. Reports are reviewed as they are received.

VIII. NA

IX.1-3. Comply with Subpart LLL, OMP, MAP.

FGALTSAND/SOIL

I.NA

II.1 and 2. No more than 1573 pounds of lead or cadmium from Alt/sand soil (landfill) per 12-mos rolling each month. *Verified by monthly records (attached).*

III.1. *The material screening plan is on file and has been implemented and maintained.*

III.2. Material fed to kiln must be analyzed. *See V.1. below.*

IV. NA

V.1. Lead and Cadmium test method. *All of the material has been stored in the pit in two piles; one pile has been tested and is in use. The other pile remains to be tested as it is needed. Mr. Schmidt anticipates it will take decades to consume this material given production rates and the lead content of the material.*

VI.1. Records of Alt sand/soil extracted each week and amount sent off-site for disposal. *All of the material has been extracted from the old dump site and placed in two piles. The only material sent off-site for disposal was iron that was collected and sent to salvage.*

VI.2. Records of analysis of Alt sand/soil. *Records are on file.*

VI.3 and 4. Records of monthly and 12-mos rolling lead and cadmium consumption from Alt sand/soil. *Copy attached.*

VII.1-3 Deviation/Semiannual/annual reporting. *All ROP reporting has been received on a timely basis and was certified. Reports are reviewed as they are received.*

VIII.NA

IX.1. Material screening plan. Received 12/10/10, PTI 129-09.

FGMACTZZZEMERGENCY

I. NA

II. NA

III.1. Emergency and non-emergency use limits. *Not evaluated at this time.*

III.2. Operate in accordance with OMP or facility maintenance plan. *Facility has maintenance and work order schedule for the proper operation and maintenance of this equipment.*

III.3. MACT operating requirements:

- a. Oil change 500 hrs. or annually.
- b. Air cleaner inspect 1000 hrs. or annually.
- c. Hoses and belts inspect 500 hrs. or annually.
- d. Minimize start-up operation, limit 30 minutes.

Neither engine operates more than 500 hours. EUKILNDONKEY has a standing work order to do the required maintenance every 2 months. EUEMERGENCYGEN is done annually.

III.4. *There are no emission limits associated with this equipment.*

IV.1. Engines equipped with non-resettable hours meter. Yes.

V. NA

VI.1. Records:

- a. Notifications and reports.
- b. Malfunctions.
- c. Maintenance of monitoring equip.
- d. Emissions.
- e. Maintenance of engines.
- F. Hours of operation, emergency/non-emergency.

Not reviewed at this time.

VI.2. Oil analysis program. *Not necessary, oil is changed within required time frames.*

VII.1-3 Deviation/Semiannual/annual reporting. *All ROP reporting has been received on a timely basis and was certified. Reports are reviewed as they are received.*

VII.4 Semiannual compliance report (compliance with operating limits). *New requirement no reports yet.*

VIII. NA

IX. Comply with Subpart ZZZZ.

As a result of the pre-inspection reporting review, on-site inspection and records review it appears that SMC is currently in compliance with all requirements of the recently issued renewal ROP and has programs and recordkeeping in place to maintain compliance.

NAME  DATE 9-25-14 SUPERVISOR 