

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

B184635647

FACILITY: Occidental Chemical Corporation		SRN / ID: B1846
LOCATION: 1600 S. Madison St., LUDINGTON		DISTRICT: Cadillac
CITY: LUDINGTON		COUNTY: MASON
CONTACT:		ACTIVITY DATE: 07/14/2016
STAFF: Shane Nixon	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: on site inspection and records review		
RESOLVED COMPLAINTS:		

AQD staff visited the Occidental Chemical facility to perform an inspection. The purpose of the inspection was to determine the facility's compliance with Renewable Operating Permit (ROP) No. MI-ROP-B1846-2014. Ms. Lisa Rokosky and Ms. Kathryn Nixon accompanied staff during the inspection. The Occidental Chemical facility produces calcium chloride in the form of brine, pellets, flake, and briquettes from brine piped to the facility from Martin Marietta in Manistee.

SOURCEWIDE CONDITIONS

Emission Limits – There are no sourcewide emission limits associated with this facility; therefore, this section is not applicable.

Material Limits – There are no sourcewide material limits associated with this facility; therefore, this section is not applicable.

Process/Operational Restrictions – There are no sourcewide process or operational Restrictions associated with this facility; therefore, this section is not applicable.

Design/Equipment Parameters – There are no sourcewide design or equipment parameters; therefore, this section is not applicable.

Testing/Sampling – There are no sourcewide testing or sampling requirements associated with this facility; therefore, this section is not applicable.

Monitoring/Recordkeeping – Sourcewide monitoring requirements consist of conditions which detail the minimum data requirements for “continuously” monitoring and recording.

Reporting – Annual certifications of compliance and semiannual deviation reports were previously reviewed and documented.

Stack/Vent Restrictions – There are no sourcewide stack or vent restrictions associated with this facility; therefore, this section is not applicable.

Other Requirements – There are no other sourcewide requirements associated with this facility; therefore, this section is not applicable.

EUDGDCCFIBC – Dry calcium chloride process, super sack tote and drum packaging controlled by Spray Tower Scrubber S-300.

Emission Limits – Particulate matter emissions from the process are limited to 2.3 pounds per hour and 0.10 pounds per 1,000 pounds of exhaust gases. Stack testing and continuously monitoring and recording the scrubbing liquid flow rate are the methods used to demonstrate compliance with the particulate matter limits. Stack testing, which was performed in 2015, indicates particulate matter emissions are 0.25 pounds per hour and 0.03 pounds per 1,000 pounds of exhaust gases while the scrubber was operating at an average flow rate of 85.3 gallons per minute.

Material Limits – There are no material limits associated with this emission unit; therefore, this section is not applicable.

Process/Operational Restrictions – The emission unit is not allowed to operate unless the scrubber is installed and operating properly. Proper operation consists of having a minimum scrubbing liquid flow

rate of 80 gallons per minute. During the inspection, AQD staff observed a liquid flow rate of 137 gallons per minute.

Design/Equipment Parameters – Pursuant to the requirements of the ROP, the scrubber was equipped with a continuous liquid flow rate monitor.

Testing/Sampling – As mentioned in the emission limit section, stack testing was performed in 2015.

Monitoring/Recordkeeping – The scrubbing liquid flow rate is required to be continuously monitored and recorded. Records of the scrubbing liquid flow rate were made available to AQD staff for review (attached). AQD review of the records indicates the control device operated above the minimum flow rate listed in the ROP.

Reporting - Annual certifications of compliance and semiannual deviation reports were previously reviewed and documented.

Stack/Vent Restrictions – The stack appeared to be constructed in accordance with the parameters listed in the ROP.

Other Requirements – There are no other requirements associated with this emission unit; therefore, this section is not applicable.

EUPELLETCBULK – Dry calcium chloride process C Bulk rail car and truck loading controlled by venturi scrubbing system (S-1307/S-1308)

Emission Limits – Particulate matter emissions are limited to 0.016 pounds per 1,000 pounds of exhaust gases. Stack testing and continuously monitoring and recording the scrubbing liquid flow rate and differential pressure when the emission unit is operating are the methods used to demonstrate compliance with the emission limit. Stack testing performed in 2016 indicates the particulate emissions from the emission unit are 0.001 pounds per 1,000 gallons of exhaust gases while the scrubber is operating at an average flow rate of 30 gallons per minute and an average differential pressure of 3.6 inches of water.

Material Limits – There are no material limits associated with this emission unit; therefore, this section is not applicable.

Process/Operational Restrictions - The emission unit is not allowed to operate unless the scrubber is installed and operating properly. Proper operation consists of having a minimum scrubbing liquid flow rate of 25 gallons per minute and a minimum differential pressure of 3 inches of water. During the inspection, AQD staff observed a liquid flow rate of 53 gallons per minute and a differential pressure of 7 inches of water.

Design/Equipment Parameters – Pursuant to the requirements of the ROP, the scrubber was equipped with a continuous liquid flow rate monitor and a continuous differential pressure monitor.

Testing/Sampling – As mentioned in the emission limit section, stack testing was performed in 2016.

Monitoring/Recordkeeping – The scrubbing liquid flow rate and differential pressure are required to be continuously monitored and recorded. Records of the scrubbing liquid flow rate and differential pressure were made available to AQD staff for review (attached). AQD review of the records indicates the control device operated above the minimum flow rate and differential pressure listed in the ROP.

Reporting - Annual certifications of compliance and semiannual deviation reports were previously reviewed and documented.

Stack/Vent Restrictions – The stack appeared to be constructed in accordance with the parameters listed in the ROP.

Other Requirements – There are no other requirements associated with this emission unit; therefore, this section is not applicable.

EUPELLETHNDL – Dry calcium chloride process pellet material handling controlled by a venturi scrubber (S-1302).

Emission Limits – Particulate matter emissions are limited to 0.03 pounds per 1,000 pounds of exhaust gases. Stack testing and continuously monitoring and recording the scrubbing liquid flow rate and differential pressure when the emission unit is operating are the methods used to demonstrate compliance with the emission limit. Stack testing performed in 2015 indicates the particulate emissions from the emission unit are 0.02 pounds per 1,000 gallons of exhaust gases while the scrubber was operating at an average flow rate of 120 gallons per minute and an average differential pressure of 18.0 inches of water.

Material Limits – There are no material limits associated with this emission unit; therefore, this section is not applicable.

Process/Operational Restrictions - The emission unit is not allowed to operate unless the scrubber is installed and operating properly. Proper operation consists of having a minimum scrubbing liquid flow rate of 150 gallons per minute and a minimum differential pressure of 14 inches of water, or other values established during stack testing. During the inspection, AQD staff observed a liquid flow rate of 175 gallons per minute and a differential pressure of 19 inches of water.

In July 2015, particulate matter stack testing was performed while operating at a scrubbing liquid flow rate of 120 gallons per minute. AQD staff were aware during the testing that the scrubber was operating at a lower flow rate so the company could establish a lower value as allowed by the ROP. Upon completion of the stack testing and submittal of results, the facility requested the minimum liquid flow rate to be 120 gallons per minute and the request was approved by AQD.

Design/Equipment Parameters – Pursuant to the requirements of the ROP, the scrubber was equipped with a continuous liquid flow rate monitor and a continuous differential pressure monitor.

Testing/Sampling – As mentioned in the emission limit section, stack testing was performed in 2015.

Monitoring/Recordkeeping – The scrubbing liquid flow rate and differential pressure are required to be continuously monitored and recorded. Records of the scrubbing liquid flow rate and differential pressure were made available to AQD staff for review (attached). AQD review of the records indicates the control device operated above the minimum flow rate and differential pressure listed in the ROP with one exception. On July 8, 2015, the scrubbing liquid flow rate was 128.2 gallons per minute as a result of stack testing while operating at the lower flow rate.

Reporting - Annual certifications of compliance and semiannual deviation reports were previously reviewed and documented.

Stack/Vent Restrictions – The stack appeared to be constructed in accordance with the parameters listed in the ROP.

Other Requirements – There are no other requirements associated with this emission unit; therefore, this section is not applicable.

EUPELLETC DRY – Dry calcium chloride process pellet C dryer controlled by a venturi scrubber and spray tower (S-501\S-701).

Emission Limits – Particulate matter emissions are limited to 0.03 pounds per 1,000 pounds of exhaust gases. Stack testing and continuously monitoring and recording the scrubbing liquid flow rate and differential pressure when the emission unit is operating are the methods used to demonstrate compliance with the emission limit. Stack testing performed in 2014 indicates the particulate emissions from the emission unit are 0.02 pounds per 1,000 gallons of exhaust gases while the scrubber was operating at an average flow rate of 1,550 gallons per minute and an average differential pressure of 23.3 inches of water.

Material Limits – There are no material limits associated with this emission unit; therefore, this section is not applicable.

Process/Operational Restrictions - The emission unit is not allowed to operate unless the scrubber is installed and operating properly. Proper operation consists of having a minimum scrubbing liquid flow rate of 1,200 gallons per minute and a minimum differential pressure of 20 inches of water. During the inspection, AQD staff observed a liquid flow rate of 1,749 gallons per minute and a differential pressure

of 24 inches of water.

Design/Equipment Parameters – Pursuant to the requirements of the ROP, the scrubber was equipped with a continuous liquid flow rate monitor and a continuous differential pressure monitor.

Testing/Sampling – As mentioned in the emission limit section, stack testing was performed in 2015.

Monitoring/Recordkeeping – The scrubbing liquid flow rate and differential pressure are required to be continuously monitored and recorded. Records of the scrubbing liquid flow rate and differential pressure were made available to AQD staff for review (attached). AQD review of the records indicates the control device operated above the minimum flow rate and differential pressure listed in the ROP.

Reporting - Annual certifications of compliance and semiannual deviation reports were previously reviewed and documented.

Stack/Vent Restrictions – The stack appeared to be constructed in accordance with the parameters listed in the ROP.

Other Requirements – There are no other requirements associated with this emission unit; therefore, this section is not applicable.

EUFLAKEDBULK – D bulk loading, dry calcium chloride material handling and truck and car railloading process with pneumatic conveyor. The emission unit is controlled by a venturi scrubber (S-50).

Emission Limits – Particulate matter emissions are limited to 0.1 pounds per 1,000 pounds of exhaust gases. Stack testing and continuously monitoring and recording the scrubbing liquid flow rate and differential pressure when the emission unit is operating are the methods used to demonstrate compliance with the emission limit. Stack testing performed in 2013 indicates the particulate emissions from the emission unit are 0.001 pounds per 1,000 gallons of exhaust gases while the scrubber was operating at an average flow rate of 70 gallons per minute and an average differential pressure of 10.5 inches of water.

Material Limits – There are no material limits associated with this emission unit; therefore, this section is not applicable.

Process/Operational Restrictions - The emission unit is not allowed to operate unless the scrubber is installed and operating properly. Proper operation consists of having a minimum scrubbing liquid flow rate of 50 gallons per minute and a minimum differential pressure of 10 inches of water. During the inspection, AQD staff observed a liquid flow rate of 92 gallons per minute and a differential pressure of 11 inches of water.

Design/Equipment Parameters – Pursuant to the requirements of the ROP, the scrubber was equipped with a continuous liquid flow rate monitor and a continuous differential pressure monitor.

Testing/Sampling – As mentioned in the emission limit section, stack testing was performed in 2013.

Monitoring/Recordkeeping – The scrubbing liquid flow rate and differential pressure are required to be continuously monitored and recorded. Records of the scrubbing liquid flow rate and differential pressure were made available to AQD staff for review (attached). AQD review of the records indicates the control device operated above the minimum flow rate and differential pressure listed in the ROP.

Reporting - Annual certifications of compliance and semiannual deviation reports were previously reviewed and documented.

Stack/Vent Restrictions – The stack appeared to be constructed in accordance with the parameters listed in the ROP.

Other Requirements – There are no other requirements associated with this emission unit; therefore, this section is not applicable.

EUFLAKEDDRY – The dry calcium chloride process that consists of a 30MMBtu furnace, flaker drums, D-Dryer, cooler, crusher, and a screen. All process equipment except the flaker drums are controlled by S405 venturi scrubber.

Emission Limits – Particulate matter emissions from the flaker drum and flake D-Dryer are limited to 0.05 pounds per 1,000 pounds of exhaust gases and 0.03 pounds per 1,000 pounds of exhaust gases, respectively. Stack testing and continuously monitoring and recording the scrubbing liquid flow rate and differential pressure when the emission unit is operating are the methods used to demonstrate compliance with the flake D-Dryer emission limit. Stack testing performed in 2013 indicates the particulate emissions from the dryer are 0.01 pounds per 1,000 gallons of exhaust gases while the scrubber was operating at an average flow rate of 651 gallons per minute and an average differential pressure of 12.5 inches of water. Stack testing of the flaker drum was performed in 2013 and the results indicate particulate matter emissions are 0.005 pounds per 1,000 pounds of exhaust gases.

Material Limits – There are no material limits associated with this emission unit; therefore, this section is not applicable.

Process/Operational Restrictions - The emission unit is not allowed to operate unless the scrubber is installed and operating properly. Proper operation consists of having a minimum scrubbing liquid flow rate of 550 gallons per minute and a minimum differential pressure of 12 inches of water. During the inspection, AQD staff observed a liquid flow rate of 755 gallons per minute and a differential pressure of 13 inches of water.

Design/Equipment Parameters – Pursuant to the requirements of the ROP, the scrubber was equipped with a continuous liquid flow rate monitor and a continuous differential pressure monitor.

Testing/Sampling – As mentioned in the emission limit section, stack testing was performed in 2015.

Monitoring/Recordkeeping – The scrubbing liquid flow rate and differential pressure are required to be continuously monitored and recorded. Records of the scrubbing liquid flow rate and differential pressure were made available to AQD staff for review (attached). AQD review of the records indicates the control device operated above the minimum flow rate and differential pressure listed in the ROP.

Reporting - Annual certifications of compliance and semiannual deviation reports were previously reviewed and documented.

Stack/Vent Restrictions – The stack appeared to be constructed in accordance with the parameters listed in the ROP.

Other Requirements – There are no other requirements associated with this emission unit; therefore, this section is not applicable.

EUGARAGE – The service garage which includes the site vehicle refueling station, one 5,000 gallon gasoline storage tank and one 5,000 gallon diesel fuel storage tank.

Emission Limits – There are no emission limits associated with this emission unit; therefore, this section is not applicable.

Material Limits – There are no material limits associated with this emission unit; therefore, this section is not applicable.

Process/Operational Restrictions – There are no process or operational restrictions associated with this emission unit; therefore this section is not applicable.

Design/Equipment Parameters – As per the requirements of the ROP, the gasoline tank is equipped with a submerged fill pipe and constructed in a manner to allow the vessel to be retrofitted in accordance with Rule 703.

Testing/Sampling – There are no testing or sampling requirements associated with this emission unit; therefore, this section is not applicable.

Monitoring/Recordkeeping – There are no monitoring or recordkeeping requirements associated with this emission unit; therefore, this section is not applicable.

Reporting - Annual certifications of compliance and semiannual deviation reports were previously reviewed and documented.

Stack/Vent Restrictions – There are no stack or vent restrictions associated with this emission unit; therefore, this section is not applicable.

Other Requirements – There are no other requirements associated with this emission unit; therefore; this section is not applicable.

FGCAM – Emission units that are subject to 40 CFR Part 64, Compliance Assurance Monitoring (CAM). The emission units contained in this flexible group are: EUDGDCCFIBC, EUPELLETHNDL, EUPELLETCDRY, EUFLAKEDBULK.

Emission Limits – There are no emission limits associated with this flexible group; therefore, this section is not applicable.

Material Limits – There are no material limits associated with this flexible group; therefore, this section is not applicable.

Process/Operational Restrictions – There are no specific restrictions associated with this flexible group. The only special condition contained in this section is one that defines an excursion consistent with the CAM regulation.

Design/Operational Parameters – There are no design or equipment parameters associated with this flexible group; therefore, this section is not applicable.

Testing/Sampling – There are no testing or sampling requirements associated with this flexible group; therefore, this section is not applicable.

Monitoring/Recordkeeping – The differential pressure and liquid flow rate of the scrubbers are monitored and recorded per the requirements of the ROP. One CAM excursion was noted in July 2015 for EUPELLETHNDL in which the liquid flow rate (128 gallons per minute) was below the minimum level (150 gallons per minute) listed in the ROP. Corrective action was unnecessary as stack testing has demonstrated compliance with the emission limit when operating at liquid flow rate of 120 gallons per minute.

Reporting – In addition to annual certifications of compliance and semiannual deviation reports, CAM excursion/exceedance reports and CAM monitor downtime reports were previously reviewed and documented.

Stack/Vent Restrictions – There are no stack or vent restrictions associated with this flexible group; therefore, this section is not applicable.

Other Requirements – There were no periods in which the facility failed to comply with the monitoring requirement associated with CAM and the facility did not need to modify the existing monitoring .

FGMACTEMERGENCY – Two spark ignition emergency generators and one compression ignition emergency water pump. The three engines are subject to 40 CFR 63, Subpart ZZZZ as area sources of hazardous air pollutants. AQD has not been delegated authority to enforce the regulation and compliance with the federal regulation was not determined.

FGRULE287(c) – Two maintenance paint booths.

Emission Limits – There are no emission limits associated with this flexible group; therefore, this section is not applicable.

Material Limits – Coatings used in each emission unit are limited to 200 gallons per month, minus water. Records maintained by the facility indicate coating usage is well below the 200 gallon limit. In fact, the highest usage in the previous 12 months was 8 gallons.

Process/Operational Restrictions - There are no process or operational restrictions associated with this flexible group; therefore, this section is not applicable.

Design/Equipment Parameters – A properly installed and operating particulate control system is required for each paint booth. At the time of the inspection, AQD staff observed the paint booths as well as the control system which consisted of fabric panels. All panels were installed with no visible gaps

between panels.

Testing/Sampling – There are no testing or sampling requirements associated with this flexible group; therefore, this section is not applicable.

Monitoring/Recordkeeping – Records of coating usage were available upon request (attached). AQD staff has determined the records complete based upon their review.

Reporting - Annual certifications of compliance and semiannual deviation reports were previously reviewed and documented.

Stack/Vent Restrictions – There are no stack or vent restrictions associated with this flexible group; therefore, this section is not applicable.

Other Requirements – There are no other requirements associated with this flexible group; therefore, this section is not applicable.

FGCOLDCLEANERS – Any cold cleaner that is grandfathered or exempt from Rule 336.1201 pursuant to Rule 336.1278 and Rule 336.1281(h) or Rule 336.1285(r)(iv).

Emission Limits – There are no emission limits associated with this flexible group; therefore, this section is not applicable.

Material Limits – The cleaning solvent used in the emission units is limited to containing no more than five percent of halogenated solvents. The attached material safety data sheet indicates there are no halogenated compounds in the cleaning solvent.

Process/Operational Restrictions – Cleaned parts are to be drained no less than 15 seconds. Cold cleaners were not in operation at the time of the inspection and AQD staff were unable to determine compliance with the requirement.

Design/Equipment Parameters – The air/vapor interface of each cold cleaner is less than ten square feet and emissions generated are released to the general in-plant environment.

The cover of each cold cleaner was closed at the time as there were no parts being cleaned at the time of the inspection. Mechanically assisted covers are not necessary since the Reid vapor pressure of the solvent is less than 0.3 psia.

Testing/Sampling – There are no testing or sampling requirements associated with this flexible group; therefore, this section is not applicable.

Monitoring/Recordkeeping – The solvent contained in each cold cleaner is not heated so the temperature of the solvent does not need to be monitored or recorded. Written operating instructions were posted near each cold cleaner as required by the ROP.

Reporting - Annual certifications of compliance and semiannual deviation reports were previously reviewed and documented.

Stack/Vent Restrictions – There are no stack or vent restrictions associated with this flexible group; therefore, this section is not applicable.

Other Requirements – There are no other requirements associated with this flexible group; therefore, this section is not applicable.

FGRULE290 – Any existing or future emission units that emit air contaminants which are exempt from the requirements of R 336.1201 pursuant to R 336.1290. There are no existing emission units subject to the requirements contained in this flexible group; therefore, this section is not applicable at this time.

Conclusion – Based upon the on-site inspection and records review, AQD staff considers the facility to be in compliance with ROP No. MI-ROP-B1846-2014.

NAME Shane Nixon

DATE 8/29/16

SUPERVISOR 