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

A056339119

FACILITY: Kellogg USA Inc.		**SRN / ID:** A0563
LOCATION: 425 Porter Street, BATTLE CREEK		**DISTRICT:** Kalamazoo
CITY: BATTLE CREEK		**COUNTY:** CALHOUN
CONTACT: Jennifer Hawks , EHS Specialist		**ACTIVITY DATE:** 03/22/2017
STAFF: Monica Brothers	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** SM OPT OUT
SUBJECT: Unannounced scheduled inspection		
RESOLVED COMPLAINTS:		

This was an unannounced, scheduled inspection. Kellogg is a cereal production company that makes a variety of cereals, like Rice Krispies, Raisin Bran, and various extruder-shaped cereals. The last air quality inspection was on 12/13/11, and they are currently operating under PTI# 9-08J.

Staff (Monica Brothers) arrived at the facility at about 9:45am. I introduced myself to the security guards and let them know that I was there to do an air quality inspection for the State of Michigan. They had me fill out some forms related to safety requirements and confidential information and then instructed me to watch a brief safety video.

They do not allow jewelry in the production areas, and they require hearing protection that can be found by a metal detector, which they provided. They also require steel toed safety shoes, safety vest, and a hairnet. Before walking into a production area, the bottoms of boots are sprayed, and entrants are required to use hand sanitizer.

For the last inspection in 2011, Chris DeYoung was the contact and EHS manager, but there have been some recent role-shifts, and now Jennifer Hawks is the new EHS specialist that met with me for the inspection. She led me to a nearby conference room where I gave her my business card and briefly explained the inspection process and the types of records I would want to see after the plant tour. I then asked Jennifer some initial questions about the facility. She said that production has been steady but that they are only currently operating one of the two shred lines (the North line) because of lack of demand. The plant operates 24 hours per day and 7 days per week with around 500 employees.

For the facility tour, Jennifer asked Chris DeYoung, now the Facilities Manager, and Brad Milleson, the EHS Manager, to join us.

EU-102N (North Shred Line): Two cereal manufacturing lines

This line was not operating at the time of inspection because the entire floor, which includes these lines and the DX line for extruder products, was being cleaned. Jennifer said that they clean each production floor about every 28 days.

- **I.1-14: No particulate testing has been requested to date.**
- **IV.1-2: Chris showed me the no flow alarm and liquid flow rate instrumentation on one of the wet scrubbers that was operating at the time of inspection. The facility is in compliance with this condition**
- **V.1: No particulate testing has been requested to date.**
- **Jennifer showed me a spreadsheet where they record the monthly liquid flow rate for each scrubber.**
- **VI.2: Jennifer showed me a log book of their monthly visible emissions checks. During the inspection, no visible emissions, besides steam, were seen from any of the stacks. The roof was being replaced during the inspection, so there was some debris on the roof associated with the construction, but nothing that looked like evidence of particulate emissions from the stacks.**
- **VI.3: The facility keeps all preventative maintenance schedules, plans, and records in a program called SAP. Rotoclones are on a 6-month maintenance schedule and motors are on a 12-month schedule. This program also keeps a list of the maintenance requirements for each piece of equipment.**
- **VIII.1-11: stacks looked to be the correct dimensions and are discharged horizontally through "penthouses" on top of the production building roof.**

EU-BULKSTORE: storage silos and handling process (a fines handling system, a vacuum cleaning

system, and two railcar unloading receivers).

- **I.1-8: Particulate testing was conducted on EU-Fines-48 in 2014 and the results were in compliance with the PM limits. No other particulate testing has been requested to date.**
- **I.9: The facility is performing monthly visible emission checks and recording the results.**
- **V.1: Particulate testing was conducted on EU-Fines-48 in 2014 and the results were in compliance with the PM limits. No other particulate testing has been requested to date.**
- **VI.1: The facility is performing monthly visible emission checks and recording the results.**
- **VI.2: The facility keeps all preventative maintenance schedules, plans, and records in a program called SAP.**

EU-SUGARSHACK: Bulk storage silos and handling processes

- **I.1-4: Testing on the rice line dryer (Stack Oven Z1/2-800-6), the rotary line cooler (Stack Cooler 800-8) and the sugar reclaim (Stack SugRec-45) was conducted on 1/13/09. No other particulate testing has been requested to date.**
- **I.5: The facility is performing monthly visible emission checks and recording the results.**
- **V.1: Testing on the rice line dryer (Stack Oven Z1/2-800-6), the rotary line cooler (Stack Cooler 800-8) and the sugar reclaim (Stack SugRec-45) was conducted on 1/13/09. No other particulate testing has been requested to date.**
- **VI.1: The facility is performing monthly visible emission checks and recording the results.**
- **VI.2: The facility keeps all preventative maintenance schedules, plans, and records in a program called SAP.**
- **VIII.1-7: stacks looked to be the correct dimensions and are discharged unobstructed downwards to the ambient air.**

EU-101S: Bran Line (Cereal Line No. 3)

- **I.1-29: No particulate testing has been requested to date.**
- **I.30: The facility is performing monthly visible emission checks and recording the results.**
- **IV.1-2: Chris showed me the no flow alarm and liquid flow rate instrumentation on one of the wet scrubbers that was operating at the time of inspection. The facility is in compliance with this condition.**
- **V.1: No particulate testing has been requested to date.**
- **VI.1: Jennifer showed me a spreadsheet where they record the monthly liquid flow rate for each scrubber.**
- **VI.2: The facility is performing monthly visible emission checks and recording the results.**
- **VI.3: The facility keeps all preventative maintenance schedules, plans, and records in a program called SAP.**
- **VI.4: Records were available and up to date.**
- **VI.5: Jennifer showed me the online database where they keep all of the SDSs for each of their flavorings.**
- **VIII.1-14: stacks looked to be the correct dimensions and are discharged unobstructed horizontally to the ambient air.**

EU-COATER: Bran and Rice Cereal Coater and Dryer

- **I.1-9: No particulate testing has been requested to date.**
- **I.10: Jennifer showed me a VOC 12 month rolling calculations table in a spreadsheet for this emission unit. The facility appears to be consistently under their 12.0 tpy permit limit and in compliance with this condition.**
- **I.11: The facility is under the 655.2 lbs/day limit and in compliance with this condition.**
- **I.12: The facility is performing monthly visible emission checks and recording the results.**
- **IV.1-2: Chris showed me the no flow alarm and liquid flow rate instrumentation on one of the wet scrubbers that was operating at the time of inspection. The facility is in compliance with this condition.**
- **V.1: No particulate testing has been requested to date.**
- **V.2: No VOC testing has been requested to date.**
- **VI.1: Jennifer showed me a spreadsheet where they record the monthly liquid flow rate for each scrubber.**
- **VI.2: The facility is performing monthly visible emission checks and recording the results.**

- VI.3: The facility keeps all preventative maintenance schedules, plans, and records in a program called SAP.
- VI.4: Records were available and up to date.
- VI.5: Jennifer showed me the online database where they keep all of the SDSs for each of their flavorings.
- VI.6.a-e: Jennifer showed me spreadsheets that show that they are keeping all of these records and calculations.
- VIII.1-3: stacks looked to be the correct dimensions and are discharged unobstructed horizontally to the ambient air.

EU-101N: Rice Line (Cereal Line No.4)

- I.1-20: No particulate testing has been requested to date.
- I.21-23: The facility is performing monthly visible emission checks and recording the results.
- IV.1-2: Chris showed me the no flow alarm and liquid flow rate instrumentation on one of the wet scrubbers that was operating at the time of inspection. The facility is in compliance with this condition.
- V.1: No particulate testing has been requested to date.
- VI.1: Jennifer showed me a spreadsheet where they record the monthly liquid flow rate for each scrubber.
- VI.2: The facility is performing monthly visible emission checks and recording the results.
- VI.3: The facility keeps all preventative maintenance schedules, plans, and records in a program called SAP.
- VIII.1-15: stacks looked to be the correct dimensions and are discharged unobstructed horizontally to the ambient air.

EU-DXCOATDRY: Dx Cereal manufacturing line and coating dryer (Cereal Line No.5)

- I.1-15: Particulate testing was conducted on CoaterConveyor-900-13 in 2013 and the results were in compliance with the PM limits. No other particulate testing has been requested to date.
- I.16: Jennifer showed me a VOC 12 month rolling calculations table in a spreadsheet for this emission unit. The facility appears to be consistently under their 24.0 tpy permit limit and in compliance with this condition.
- I.17: The facility is under the 1,073 lbs/day VOC limit and in compliance with this condition.
- I.18: The facility is performing monthly visible emission checks and recording the results.
- IV.1-2: Chris showed me the no flow alarm and liquid flow rate instrumentation on one of the wet scrubbers that was operating at the time of inspection. The facility is in compliance with this condition.
- V.1: Particulate testing was conducted on CoaterConveyor-900-13 in 2013 and the results were in compliance with the PM limits. No other particulate testing has been requested to date.
- V.2: No VOC testing has been requested to date.
- VI.1: Jennifer showed me a spreadsheet where they record the monthly liquid flow rate for each scrubber.
- VI.2: The facility is performing monthly visible emission checks and recording the results.
- VI.3: The facility keeps all preventative maintenance schedules, plans, and records in a program called SAP.
- VI.4: Records were available and up to date.
- VI.5: Jennifer showed me the online database where they keep all of the SDSs for each of their flavorings.
- VI.6.a-e: Jennifer showed me spreadsheets that show that they are keeping all of these records and calculations.
- VIII.1-8: stacks looked to be the correct dimensions and are discharged unobstructed horizontally to the ambient air.

EU-PORTERPLDGEN: 1,500 kW output (15.2 MMBtu/hr) diesel-fired emergency electrical generator, pre NSPS

- This generator has been permanently removed

FG-BOILERS: Powerhouse boilers (EU-BOILER1 and EU-BOILER2)

- There are no longer any oil storage tanks for the boilers because they are no longer using fuel

oil.

- EU-BOILER1
  - K10016401
  - State ID No. M354193M
  - Zurn Keystone
  - 131,000 lbs steam/hour
  - Built in 1988
- EU-BOILER2
  - K10016400
  - State ID No. M354194M
  - Zurn Keystone
  - 131,000 lbs steam/hour
  - Built in 1988
- I.1-2: No testing has been requested since the boiler testing in August of 2007.
- I.3: The facility is not burning fuel oil.
- II.1: The facility is not burning fuel oil.
- III.1: The facility is not burning fuel oil. The facility is keeping 12 month rolling calculations for their natural gas usage and is in compliance with the 700 million cubic feet per 12 month rolling limit.
- III.2: The facility is no burning fuel oil. The facility is burning only pipeline natural gas.
- V.1: No NOx testing has been requested since the boiler testing in August of 2007.
- VI.1-2: Records of natural gas usage are being kept and are up to date.
- VI.3: The boilers are no longer capable of burning fuel oil.
- VI.4: The facility has removed fuel oil tanks for the boilers, which are now burning only natural gas.
- VIII.1-3: stacks looked to be the correct dimensions and are discharged unobstructed vertically upwards to the ambient air.

FG-SANITATION: Cleaning and sanitizing chemical usage for non-janitorial activities

- EU-CLEANERS and EU-SANITIZERS
- I.1: The facility is keeping 12-month rolling VOC records and is below their limit of 36.1 tpy.
- II.1: The facility is keeping material usage records for all of their sanitizing products and separating them between these VOC-content dependent usage limits. Their records show that they are under the PTI limits for each category.
- III.1: I did not see any open containers during the inspection. The facility appears to be capturing waste materials as required by this condition.
- III.2: The facility appears to be minimizing fugitive emissions and is keeping containers closed when not in use.
- V.1: No testing of the VOC content of any cleaning or sanitizing material has been requested to date.
- VI.1: Records are being kept and are up to date.
- VI.2.a-d: Jennifer showed me spreadsheets that show that they are keeping all of these records and calculations.
- VI.3: Jennifer showed me the online database where they keep all of the SDSs for each of their sanitizing materials.
- VI.4: The facility is keeping these records and in an acceptable format.

FG-RICE MACT:

- The facility no longer has the emergency generator EU-PORTERPLDGEN
- The two fire pumps, Fire Pump No.2 and Fire Pump No.4 are subject to the RICE MACT
- Fire Pump No. 2
  - Caterpillar diesel generator
  - Serial # 03Z04636
  - Install date was back in the 1980s
  - 196 hp
  - Non-resettable hour meter reading: 855.0
  - Tested for 30 minutes every Saturday
- Fire Pump No. 4
  - Caterpillar diesel generator

- Serial # 90N67190
- Install date was back in the 1980s
- 121 hp
- Non-resettable hour meter reading: 1089.0
- Tested for 30 minutes every Saturday

- III.1-7: Jennifer showed me maintenance records for the fire pumps. They inspect the fire pumps annually or sooner if needed. The facility seems to be operating these units in a manner consistent with safety and good air pollution control practices for minimizing emissions. The facility is under the 50 hour limit for non-emergency situations, as required by this condition.
- IV.1: The fire pumps have a non-resettable hour meter and the facility records the reading during every 30-minute test on Saturdays.
- V.1: N/A
- VI.1-5: Records were available and kept appropriately.
- IX.1: It appears that the facility is complying with this condition.

FG-FACILITY:

- I.1-7: Jennifer showed me all of the spreadsheets that show these 12-month rolling calculations for CO, SO2, NOx, VOC, PM, PM2.5, and PM10. They all seemed to be calculated correctly and were consistently under the 89.9 tpy limits for each pollutant. For their PM2.5 calculation, they are just assuming that since their total PM is under their permit limit for PM2.5, that their PM2.5 numbers would also be under this limit.
- I.8: The facility is keeping these records and is under the 9.0 tpy limit (12-month rolling) for each individual HAP
- I.9: The facility is keeping these records and is under the 22.5 tpy limit (12-month rolling) for aggregate HAPs.
- I.10: The facility is keeping these records and is under the 89,900 tpy limit (12-month rolling) for carbon dioxide equivalent.
- I.11: The facility is keeping these records and is under the 1.0 tpy limit (12-month rolling) for furfural.
- II.1.a-c: I viewed their fuel and natural gas usage records during the inspection and they appear to be under the 12-month rolling limits, as stated in this condition.
- VI.1: Records were available and up to date.
- VI.2: The facility is keeping these records
- VI.3.a-b: Jennifer showed me the spreadsheet with these records and calculations for individual and aggregate HAPs. They are keeping monthly and 12-month rolling records appropriately.
- VI.4: The facility is keeping these natural gas and fuel oil usage records and is under the usage limits.
- VI.5: The facility is keeping 12-month rolling records for CO2 equivalent.
- VI.6.a-e: Jennifer showed me a spreadsheet that shows that the facility is keeping monthly records of Furfural-containing material usage, Furfural content in % by weight, and Furfural emissions per month and 12-month rolling. They are under their permit limits for 12-month rolling Furfural emissions.

I also reviewed Rule 290 records for the code dating equipment. They seem to be complying with the exemption limits.

The facility seemed to be in compliance at the time of the inspection.

NAME [signature] DATE 4/4/17 SUPERVISOR MD 4/4/2017