

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

B497732091

FACILITY: Pinnacle Foods Group LLC		SRN / ID: B4977
LOCATION: 415 S. Blacks Corner Rd., IMLAY CITY		DISTRICT: Lansing
CITY: IMLAY CITY		COUNTY: LAPEER
CONTACT: Raju Markose , Environmental Manager		ACTIVITY DATE: 11/09/2015
STAFF: Daniel McGeen	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: Scheduled inspection of facility, and discussion of Potential to Emit (PTE).		
RESOLVED COMPLAINTS:		

On 11/9/2015, the Department of Environmental Quality (DEQ), Air Quality Division (AQD) conducted a scheduled inspection of Pinnacle Foods Group, LLC, which was last inspected by AQD in 2011.

Environmental contact:

Raju Markose, Environmental Manager; 810-542-0664; raju.markose@pinnaclefoods.com

Facility description:

This plant prepares and packages pickles for consumer and retail trade. The facility has three boilers, and a total of ten coating lines. Five of the coating lines are for ink, and the rest are for adhesive.

Emission units:

Emission unit	Permit to Install, or exemption rule	Installation date	Federal regulation, if any	Operating status
North boiler; 600 hp	230-97	10/8/1997	40 CFR Part 60, Subpart Dc	Compliance
South boiler; 600 hp	282(b)(i)	4/1/1988	NA	Compliance
South boiler; 400 hp	282(b)(i)	4/1/1989	NA	Compliance
Metal working processes	285(l)(vi)(B)	Unknown	NA	Compliance
5 ink coating lines	287(c)	1/1/1979	NA	Compliance
5 adhesive coating lines	287(c)	1/1/1979	NA	Compliance
Hot melt adhesive	287(i)	1/1/1979	NA	Compliance
320 hp diesel-fueled emergency generator, 2.1 mmBtu/hr	282(b)(ii)	1996 or 1997	40 CFR Part 63, Subpart ZZZZ; potentially 40 CFR Part 60, Subpart IIII	Did not observe

Regulatory background:

This facility has historically been classified as a minor source for criteria pollutants. Criteria air pollutants are those for which a National Ambient Air Quality Standard exists, and include carbon monoxide, nitrogen oxides, sulfur dioxide, volatile organic compounds (VOCs), lead, particulate matter smaller than 10 microns, and particulate matter smaller than 2.5 microns. A major source has the potential to emit (PTE) 100 tons per year (TPY) or more of a single criteria pollutant. This facility has been historically considered a minor, or area source, for Hazardous Air Pollutants (HAPs). A major HAPs source has a PTE of 10 TPY or more of a single HAP, or 25 TPY or more of aggregate HAPs.

It should be noted that a PTE demonstration has never been done for this entire facility, which includes ten Rule 287(c) exempt coating lines. A Rule 287(c) exempt coating line in Michigan is generally considered to have a PTE of 6 TPY VOC and 6 TPY HAPs. Because Pinnacle Foods has ten such lines, PTE for HAPs could potentially exceed major source levels.

The facility has Permit to Install (PTI) No. 230-97 for a 600 horsepower (hp), 25,000,000 Btu/hr boiler that is fired by natural gas, but would be allowed to burn fuel oil, if the company so chose. This boiler is subject to 40 CFR Part 60, Subpart Dc, Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units. There are two other boilers onsite, a 400 hp unit and a 600 hp unit, which were installed prior to 6/10/1989, and so are not subject to Subpart Dc. These two units are exempt from Michigan Air Pollution Control Rule 201, per Rule 282(b)(i), being less than 50,000,000

Btu/hr. If the facility is an area source, the three boilers at the site would be exempt from 40 CFR Part 63, Subpart JJJJJJ, the area source boiler Generally Available Control Technology (GACT) standard, because they are gas-fired. If the facility is a major source, then 40 CFR Part 63, Subpart DDDDD, the major source boiler Maximum Achievable Control Technology (MACT) standard, would potentially apply.

The emergency generator, installed in either 1996 or 1997, may be subject to 40 CFR Part 63, Subpart ZZZZ, the National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Reciprocating Internal Combustion Engines (RICE), also known as the RICE MACT. It may also be subject to 40 CFR Part 60, Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines. Applicable requirements under these regulations will depend on whether this facility is a major source or an area source for HAPs. Completion of a PTE demonstration for this facility will be necessary, in order to determine major source status.

Fee status:

The facility is classified as a Category II fee-subject source, because of one boiler being subject to 40 CFR Part 60, Subpart Dc, the New Source Performance Standard (NSPS) for boilers.

Location:

This facility is located on the western edge of Imlay City. To the immediate west is undeveloped land, and to the immediate southwest is a park with athletic fields, followed by farmland. The nearest residences are located roughly 200 feet to the north. To the immediate east are athletic fields, and, at a distance of about 200 feet, the Imlay City Middle School. The nearest residences to the east are roughly 350 feet east of the plant.

History:

This facility was most recently inspected by AQD on 7/20/2011. The last time AQD received a complaint about this facility was in 1994, for odors reportedly related to wastewater treatment lagoons. AQD complaint procedures are that complaints of odors associated with waste water treatment be referred to the Water Resources Division, as they have primary regulatory authority for that kind of source.

Odor evaluation:

Prior to arrival, I conducted an odor evaluation in the area surrounding the facility; please see attached odor evaluation form, map, and weather data. Weather conditions were sunny, clear, and 50 degrees F, with winds out of the south southwest, at 10-15 miles per hour.

- A level 2 scent of pickles was detected several hundred feet to the northeast of the plant, on W. 4th Street.
- A brief level 2 odor was detected in the plant parking lot, about 150 feet to the west of the northern half of the plant.

These odors were determined to be insufficient to constitute a violation of Rule 901(b), which prohibits unreasonable interference with the comfortable enjoyment of life and property.

AQD odor scale

Level	Description
0	Non-detect
1	Just barely detectable
2	Distinct and definite
3	Distinct and definite objectionable odor
4	Odor strong enough to cause a person to attempt to avoid it completely
5	Odor so strong as to be overpowering and intolerable for any length of time

Arrival:

Upon arrival, I met with Mr. Mr. Raju Markose, Environmental Manager, as well as Ms. Julie A. Kopka, Project Engineer, and Mr. Kenneth L. Keelin, Engineering Manager. I provided a copy of the DEQ brochure *Environmental Inspections: Rights and Responsibilities*, and a copy of the boiler NESHAP card, per AQD procedure. The date and time for today's inspection had been arranged in advance, as during a previous, unannounced visit to the site (12/22/2014), I had been informed by security staff at the gate that a contact person was not available.

Potential to Emit discussion:

During the inspection, I discussed PTE for the ten Rule 287(c) exempt coating lines with Mr. Markose. I explained that the PTE for their 10 coating booths is currently unknown to AQD, and they could potentially be a major source, for VOCs and/or HAPs. Therefore, I requested that they submit to AQD a PTE demonstration. Mr. Markose felt that the company's annual MAERS submittal is virtually a PTE demonstration, because they run 24 hours per day, 7 days per week, almost every day per year. Therefore, he explained that if AQD projected their operations from the current 348 days/year operating schedule to a 365 days/year schedule, we would have their PTE. I indicated that I would look into the possibility of extrapolating a PTE demonstration from their most recent MAERS submittal. Additionally, Mr. Markose informed me that all ten of their Rule 287(c) exempt coating lines use less than 200 gallons per year combined. They believe Pinnacle Foods is a minor or area source, I was informed.

Because the company processes much more product in some months of the year (June through August), a MAERS submittal of ordinary year long operations does not completely account for their potential, though. In order for a PTE demonstration to be valid, all processes in a facility must be assumed to be running at maximum capacity every single month of the year. Therefore, a PTE demonstration is needed. This is being followed up on, as a separate Partial Compliance Evaluation activity.

Inspection:

All three boilers were running, during the inspection. I was informed that these are process boilers. Only steam was observed from the boiler exhaust stacks.

Following the inspection, AQD was e-mailed a spreadsheet for the boiler data for 2014. Please see Attachment A. Boiler emissions were calculated for 2014 for each boiler, and for the combined total. Also provided were calculations based on the design capacity of each boiler, which appears to be equivalent to a PTE calculation for the three boilers.

Note: there is a separate hot water heater for the plant, I was told. Hot water heaters at an area source are exempt from 40 CFR Part 63, Subpart JJJJJJ, under Section 63.11195(f), but to meet the definition of a hot water heater in this subpart, the unit must be no more than 120 gallons in capacity.

North boiler (600 hp); PTI No. 230-97:

This boiler was running, at the time of the inspection. It is not capable of burning fuel oil, because there has never been an oil line to it, Mr. Markose explained. During my previous inspection here, in 2011, I was told that a 2008 inspection report mistakenly described a propane line as a fuel oil line. The propane tank has been removed, I was told, and I was shown the disconnected propane line. If Pinnacle Foods is an area source, it appears that this boiler meets the definition of a gas-fired boiler in Subpart JJJJJJ, as do the other two natural gas-fired boilers at the site. These boilers are exempt from Subpart JJJJJJ, under Section 63.11195(e). AQD has not been delegated authority to enforce this area source Generally Achievable Control Technology (GACT) standard.

I was informed that Direct Digital Control is used as a built in management system for the boilers, and that it monitors boiler efficiency, as well as O2 and CO2 levels.

I met their boiler contractor, Duffy, of Goyette Mechanical Services Division. I was informed that this

company performs weekly maintenance checks on the boiler, and that Pinnacle Foods personnel perform daily maintenance checks. I was told that during the annual shutdown of the plant, the boilers are opened up, and all boiler tubes are inspected.

Duffy provided me with examples of weekly boiler maintenance check forms, and a yearly CSD-1 form, which are used for these boilers (please see Attachment B).

South boiler; 600 hp:

This boiler was running. It is my understanding that it has no fuel oil capability, and meets the definition of a gas-fired boiler in 40 CFR Part 63, Subpart JJJJJJ. It is not subject to 40 CFR Part 60, Subpart Dc, having been installed prior to 6/10/1989.

South boiler; 400 hp:

This boiler was also running. It is my understanding that this unit also has no fuel oil capability, and meets the definition of a gas-fired boiler in 40 CFR Part 63, Subpart JJJJJJ. Additionally, this unit is not subject to 40 CFR Part 60, Subpart Dc, having been installed prior to 6/10/1989.

Boiler operating data, collected during the inspection:

Parameter	North boiler, 600 hp PTI No. 230-97	South boiler; 600 hp Rule 282(b)(i)	South boiler; 400 hp Rule 282(b)(i)
Actual PSI	95	100	93
Setpoint PSI	100	100	100
Flame intensity	31	30	26
Flue gas O2%	3.8	7.7	4.1
Flue temperature deg. F	285	300	284
Ambient temperature deg. F	77	75	77
Boiler water temperature deg. F	336	337	337
Modulation rate %	42	1	64
Efficiency %	82.8	79.1	83.3
Flue gas CO2%	9.5	7.3	9.5
O2 trim applied %	-2	13	5

I was informed that modulation rate for each of the three boilers is about 90%, when they are running hard.

Metal working processes; Rule 285(l)(vi)(B):

They have a metal shop, and we observed a number of metal working machines which exhaust indoors. These emission units appeared to satisfy the Rule 285(l)(vi)(B) exemption criteria for metal working processes which exhaust into the general, in-plant environment.

Five ink coating lines; Rule 287(c):

The ink coating lines are used to print information on metal and plastic container caps, and cardboard boxes. I observed one of the lines, an ink jet printer in operation. I did not observe any visible emissions from the ink coating processes. The Rule 287(c) exemption limits each coating line to no more than 200 gallons per month of coatings, as applied, minus water.

During the inspection, a copy of their 2014 MAERS report was provided. Please see Attachment C. It indicates that 530 gallons were used for the five ink coating lines combined, that year. VOC emissions from the ink were reported as 3,460 lbs, or 1.73 tons. VOC content of the ink is identified as 95.79%, by weight, and density is 6.913 lb/gal. I was also provided with a copy of a spreadsheet for the ink and adhesive coating lines. Please see Attachment D. I was informed that each line used much less than 200 gallons of coatings per month.

Five adhesive coating lines; Rule 287(c):

They use a liquid adhesive manufactured by Henkel, Aquence GL 7016 MM, I was informed. I did not observe any visible emissions from the liquid adhesive coating lines.

According to their 2014 MAERS report, 3,964 gallons were used for the five adhesive lines. This averages out to 66.1 gallons per month for each adhesive line. VOC emissions from the five adhesive lines combined in 2014 were reported as 32.1 lbs, or 0.02 tons. VOC content of the adhesive is identified as 0.11% by weight, and density is 8.69 lb/gal. I was informed that each line used much less than 200 gallons or more of coatings per month.

Hot melt adhesive; Rule 287(i):

A hot melt adhesive is used for labels for boxes, and for gluing boxes together. Hot melt adhesive use is exempted from needing a permit to install by Rule 287(i). I did not observe any visible emissions from the hot melt adhesive.

320 horsepower diesel-fired emergency generator; Rule 282(b)(ii):

Some time after the inspection, I located in the AQD Lansing District files a 10/30/1996 letter from the owner of the plant at that time, Campbell Soup Company. The letter indicated to AQD that a diesel-fired emergency generator was to be installed, and was being considered exempt under Rule 282(b)(ii). The generator was said to be 320 horsepower (Hp), and 2.1 million Btu/hr, heat input capacity. I did not observe it, during the inspection.

I subsequently called Mr. Markose, to discuss the generator. I explained that the unit may be subject to requirements under 40 CFR Part 63, Subpart ZZZZ, the RICE MACT, and 40 CFR Part 60, Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines. Applicable requirements may depend, in part, on whether the plant is a major source or an area source of HAPs. I e-mailed a link to the DEQ RICE webpage, which contains links to self-navigating tools for the RICE MACT, and Subpart IIII. This will allow the company to determine for themselves which requirements apply to the generator.

2014 MAERS report:

Portions of the MAERS report for the 2014 operating year have been discussed earlier in this report, regarding ink and adhesive coating lines. The source wide estimated pollutants for 2014 were below major source thresholds for criteria pollutants, as shown in the table below.

2014 actual estimated emissions reported to MAERS:

Criteria pollutant	2014 actual estimated emissions, in TPY	Major source threshold, in TPY
CO	8.33	100
NOx	9.92	100
SO2	0.06	100
VOC	2.29	100
Lead	0.00	100
PM-10, primary	0.75	100
PM2.5, primary	0.75	100

Conclusion:

No instances of noncompliance were found. AQD is following up on the issue of PTE, to determine if the facility is a major or minor source, regarding HAPs. The company believes they are a minor source. Minor or area sources of HAPs are subject to different federal requirements than major sources.

NAME 

DATE 9/20/2016

SUPERVISOR 

