

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

FY 2014 Insp

N133625949

FACILITY: BASF CORPORATION		SRN / ID: N1336
LOCATION: 26701 Telegraph Road, SOUTHFIELD		DISTRICT: Southeast Michigan
CITY: SOUTHFIELD		COUNTY: OAKLAND
CONTACT:		ACTIVITY DATE: 05/07/2014
STAFF: Iranna Konanahalli	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: FY 2014 level-2 scheduled annual inspection of BASF Corporation ("BASF")		
RESOLVED COMPLAINTS:		

E-file: N1336-SAR-2014 05 07

**BASF Corporation (N1336)
 26701 Telegraph Road
 Southfield, Michigan 48034-2442**

ROP No.: MI-ROP-N1336-2010 dated August 18, 2010

Subject to: New Source Performance Standards (NSPS), 40 CFR, Part 60, Subparts Dc and A.

Subject to (initial notification only): 40 CFR Part 63, Subpart DDDDD, National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters (Federal Register / Vol. 69, No. 176 / Monday, September 13, 2004 / Page 55218 / Rules and Regulations). Federal Appeals Court has vacated this rule resulting in 112(j) MACT. See reconsideration NESHAP / MACT 5D Rule of January 31, 2013.

Subject to: Major Source Boiler NESHAP / MACT 5D, 40 CFR Part 63, Subpart DDDDD, National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters, Page 7138, Federal Register / Vol. 78, No. 21 / Thursday, January 31, 2013 / Rules and Regulations / Final rule; notice of final action on reconsideration. The December 23, 2011 proposed rule addressed specific issues and provisions the EPA identified for reconsideration. This summary of the final rule reflects the changes to 40 CFR, Part 63, subpart DDDDD (March 21, 2011 final rule) in regards to those provisions identified for reconsideration and on other discrete matters identified in response to comments or data received during the comment period.

Subject to: Major Source NESHAP / RICE MACT 4Z, 40 CFR Parts 60 and 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines; New Source Performance Standards for Stationary Internal Combustion Engines (ICE);, Page 6674 Federal Register / Vol. 78, No. 20 / Wednesday, January 30, 2013 / Rules and Regulations / Final Rule. This final rule is effective on April 1, 2013. BASF's Emergency CI (Diesel) RICE is not subject to NSPS 4I.

On November 05, 2013, February 13 & May 07 (with Sam Liveson) 2014, I conducted a level-2 scheduled annual inspection of BASF Corporation ("BASF"), an OEM automotive paint and paint application research center, located at 26701 Telegraph Road, Southfield, Michigan 48034-2442. The inspection was conducted to determine compliance with federal Clean Air Act (CAA); Article II, Part 55, Air Pollution Control, of the Natural Resources and

Environmental Protection Act, 1994 (PA 451); Michigan Department of Environmental Quality, Air Quality Division (MDEQ-AQD) administrative rules; and the RO permit No. MI-ROP-N1336-2010 conditions.

During the inspection, Ms. Karen Kellam (Ph: 248-948-2023; Fax: 248-948-2091; Mobile: 734-365-1455; E-mail: Karen.Kellam@basf.com), ENSCS, and Mr. Kelvin Manni (Ph: 248-948-2408), Site Engineering Manager, and Mr. Howard D. Stephan (Ph: 248—948-2437; Fax: 248-948-2092; Mobile: 248-943-2470; E-mail: Howard.Stephan@basf.com), Shipping and Material Services, assisted me.

Mr. David W. Sheaves (Ph: 734—324-6836; Mobile: 734-476-7608; E-mail: david.sheaves@basf.com), Environmental Health and Safety Team Leader, separated from the company and he is replaced by Mr. Bryan Hughes.

In CY 2011, Ms. Kellam replaced Mr. Jason M. Therrien (Ph: 248-948-2023; Fax: 248-948-2091; Mobile: 734-624-9817; E-mail: Jason.therrien@basf.com), Environmental Health and Safety Compliance Specialist, who moved to a BASF facility at Erie, Pennsylvania. About 2008, Mr. Jason Therrien (248-948-2023) replaced Tom Ozimek as the site EHS contact. Ozimek transferred to Wyndotte facilities. Mr. Charlie Anderson (734-324-5131), Environmental Health and Safety Team Leader, separated from the company in CY 2009.

The company's Southfield facility is a research and development facility. At this facility, R&D work for automotive body e-coat, basecoat and topcoat is conducted. There is also an application research center (ARC) where paint application problems of an automotive assembly plant are studied. ARC building was mostly idle since 2011. Other business units are moving into the Southfield buildings. At ARC, all booths and equipment will be removed and labs for EDN (Inks and resins, etc.) will be installed. Catalyst business will also be moved to Southfield. Application research can now be performed using small scale pilot paint facilities.

At the site, there is no manufacturing activity.

Custom software for spray logs is used for tracking paint & solvent usage and VOC emissions. Although exempt from Part 6 and 7 Rules, VOC emissions from R&D coating operations are reported via MAERS.

EG-PAINTLINE (Removed from ROP: R&D EU) - Idled

According to Ms. Karen Kellam, Application Research Center is idled since July 2011; ARC will be closed. Many long-term R & D positions are outsourced to Mangalore, India. Indian workers already obtained necessary training in CY 2011 at Southfield facility. Other business units of BASF such as EDN and Catalysts are moving into this building.

EU-PIGMENT

The pigment staging and storage room houses various pigments (powders) in five-gallon pails prior to their use in paint formulations. Particulate emissions are controlled using a HEPA filter particulate control system. The process was not operating during the inspection; this is an intermittent operation; a couple of hours per month. Production and emission records are kept. The emissions from this source are about one-tenth of a pound of particulate matter per year due to HEPA control. Photohelic pressure drop readings are taken and recorded to ensure proper operation of HEPA filter system. SAP software keeps track of maintenance. A

notice has been posted on the pigment room to advise employees to log pressure drop readings each time; ROP requires at least once per week.

Filter pressure drop logs are kept each time pigment transfer occurs. Based upon pressure drop, filters are cleaned using pulse air. The pigment transfer rates have come down due to bad economy. During the inspection (FY 2014: May 07, 2014 with Sam Liveson), I asked Mr. Howard to start the fan and I checked the air flow being drawn and the suction; I confirmed that there was sufficient suction.

It has been decided (CY 2012) to keep HEPA filter system on site operational since occasional pigment transfer may occur after most work is transferred to India. Most recent pigment baghouse operation entry was made on August 20, 2012.

EG-SOLVSTORE (Removed from ROP: R&D EU)

The solvent storage room houses the solvents, the paint resins in 55-gallon drums and 5-gallon pails. The equipment consists of drum valves for raw material transfer and a fugitive exhaust system for room ventilation. The material withdrawal was not done during the inspection. This is a small source and the ventilation is for industrial hygiene.

EG-WASTEHANDL (Removed from ROP: R&D EU)

The waste handling room temporarily houses paint related wastes in storage totes, drums and 5-gallon pails. The waste collection system is present in the room. The drum crusher (aka compactor) is located in this room. The drum crusher is located in the waste room, which is equipped with water spray system for fire and explosion safety. The materials are stored and labeled as hazardous waste.

US EPA and MDEQ-HWMD conducted a joint Resource Conservation and Recover Act (RCRA) inspection in March 2007.

FG-R&DPAINTBOOTH (Removed from ROP: R&D EU)

There were approximately 43 R & D paint spray booths at the facility; few booths of 43 were removed recently during a consolidation. The booths are intermittently used to paint small test panels on a nonproduction basis for R & D purposes. The panels are cured in natural gas fired curing / bake ovens. Electrodeposition (E-coat) dip coating processes do not require a particulate control system and E-coat VOC emissions are not controlled.

Each spray booth has a spray log. I asked Ms. Kellam to install filters snug and tight.

Per Rule 336.1601(a), the process is not subject to Rule 336.1621.

FG-BOILERS.

Two identical natural gas fired (fired tube: flame inside tubes) boilers (Cleaver Brooks CB Package Boilers, Model CS-700-600) of design capacity 25 million BTU per hour (5.8 MW) each. The boilers are installed in CY 1990 (after June 9, 1989). Therefore, the boilers are subject to New Source Performance Standards (NSPS), 40 CFR, Part 60, Subparts Dc and A. The boilers supply hot water and heat to the buildings. Natural gas usage, hours of operation, records are available. During CY 2013, 34.78 million scf of natural gas was used in CRC building. Fuel oil capability does not exist and, therefore, has not been used. Natural gas usage records are kept based upon hours of operation. Steam production metering

device (Venturi meter) is present but not working. A data acquisition system (DAS) has steam temperature and pressure. The boiler produces 70 psi (high pressure) saturated steam. The steam pressure is reduced to 13 psi and delivered.

72 percent of the building total natural gas usage is expected to go through the boiler. 72% may be an antiquated fudge factor or boiler utilization factor used by BASF; it is based upon a historical data using boiler steam production. Kitchen and roof-top natural gas heaters account for the rest of natural gas usage. Hours of on/off are tracked and natural gas is prorated. This is not an accurate method but may be accepted at this time. Although the ESSD,s NSPS Dc Boiler Guidance is published, steam proration calculation method are not included.

Natural gas is used in several buildings: Coating Research Center (CRC: 34.78 MM SCF); Application Research Center (ARC: NA MM SCF); Coating Marketing Center (CMC: NA MM SCF); and North American Lacquer Refinish (NLR: NA MM SCF).

NSPS Dc Revisions:

1. 72 FR 32759 = Page 32759 Federal Register / Vol. 72, No. 113 / Wednesday, June 13, 2007 / Rules and Regulations / Final Rule – to add compliance alternatives and to revise certain recordkeeping and reporting requirements.
2. 74 FR 5091 = Page 5091 Federal Register / Vol. 74, No. 17 / Wednesday, January 28, 2009 / Rules and Regulations / Final Rule - to correct technical and editorial errors.

The NSPS revisions simplified the natural gas usage recordkeeping. RO permit renewal MI-ROP-N1336-2010 incorporates these changes. In addition, the ROP removes diesel / fuel oil requirements.

BOILER MACT 5D

BASF was subject to 40 CFR Part 63, Subpart DDDDD, National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters (Federal Register / Vol. 69, No. 176 / Monday, September 13, 2004 / Page 55218 / Rules and Regulations). However, on June 8, 2007, US Court of Appeals had mandated that EPA vacate the Boiler MACT Rule in its entirety; in the interim period, 112(j) MACT permit was required. US EPA re-promulgated the Area Source Boiler MACT as NESHAP / MACT 6J

01/09/12 - The U.S. District Court for the DC Circuit vacated the EPA's May 18, 2011, notice that delayed the effective dates of the Major Source Boiler MACT rule. The effective dates of the final rules published in the Federal Register on March 21, 2011 (76 FR 15608 and 76 FR 15704), are delayed until such time as judicial review is no longer pending or until the EPA completes its reconsideration of the rules, whichever is earlier.

12/23/11 - The EPA published the Major Source Boiler MACT reconsideration proposal (40 CFR 63, subpart DDDDD, National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters, Page 80598 Federal Register / Vol. 76, No. 247 / Friday, December 23, 2011 / Proposed Rules). The EPA will accept comment on the reconsideration proposal until February 21, 2012.

The boilers are subject to: Major Source Boiler NESHAP / MACT 5D, 40 CFR Part 63, Subpart DDDDD, National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters, Page 7138, Federal Register / Vol. 78, No. 21 / Thursday, January 31, 2013 / Rules and Regulations / Final rule; notice of final action on reconsideration. The December 23, 2011, proposed rule addressed specific issues and provisions the EPA identified for reconsideration. This summary of the final rule reflects the changes to 40 CFR, Part 63, subpart DDDDD (March 21, 2011 final rule) in regards to those provisions identified for reconsideration and on other discrete matters identified in response to comments or data received during the comment period.

The boilers (2) are **existing units** as they commenced construction before **June 4, 2010** (installed in 1990). The boilers do NOT burn any fuel other than pipeline quality sweet natural gas (NG); they do not burn solid fossil fuel, biomass, liquid fuel, etc. There is no emission limit for Gas1 that includes natural gas. For boilers over 10 million BTU per hour heat input, annual tune-up is required (no more than 13 months between tune-ups). Initial tune-up is due by January 31, 2016. Only boilers with emission limits are required to conduct performance tests (within 180 days of compliance date (January 31, 2016), July 29, 2016. BASF's boilers are not subject to emission limits as they fire only NG.

Boiler MACT Initial Notification is due by May 31, 2013. AQD received on May 31, 2013, Major Source Boiler MACT Initial Notification dated May 29, 2013. The notification is signed by Mr. David Sheaves (734-324-6836), Michigan-Canada EHS Hub Environmental Team Leader. The notification covers two boilers. BASF mailed a copy of the notification to Mr. George Czerniak (AE-17J), US EPA Region V, 77 W. Jackson Blvd., Chicago, IL 60604-3507.

The MACT 5D boilers are:

Two identical natural gas fired (fired tube: flame inside tubes) boilers (Cleaver Brooks CB Package Boilers, Model CS-700-600) of design capacity 25 million BTU per hour (5.8 MW) each.

BASF must submit an Initial Compliance Status Report on or before January 31, 2016 (§ 63.9 (h))

In addition, BASF mailed the initial notification letter dated March 2, 2005 to both US EPA and DEQ-AQD. The **Boiler NESHAP / MACT initial notification** was due March 12, 2005. The boilers were not subject to emission limits. However, on June 8, 2007, US Court of Appeals has mandated that EPA vacate the Boiler MACT Rule in its entirety. MDEQ-AQD never decided what to about possible 112(j) case-by-case MACT determination.

FG-COLDCLEANERS (13)

BASF has 13 cold-cleaners using organic solvents; none use halogenated solvents. Therefore, the cold cleaners are **not subject** to NESHAP for Halogenated Solvent Cleaning (40 CFR, Part 63, Subpart T; Federal Register / Vol. 59, No. 231 / Friday, December 2, 1994).

Two (one dirty for first stage and other relatively clean for second stage cleaning) 5-gallon buckets are placed in a closed container with a lid. Each 5-gallon container has a lid as well. In addition, there is one Safety-Kleen cold-cleaner with a lid, which is pneumatically powered, to keep it closed when not in operation (it was closed during FY 2012 inspection). Operating instructions are posted. Safety Kleen does not service the unit. BASF

uses its own proprietary degreasing solvents and manages waste according to applicable hazardous waste laws and regulations. I observed the machine while the lid was operating.

A cold-cleaner is exempt from Rule 336.1201 pursuant to Rule 281(h) or Rule 285(r) (iv). Existing cold cleaners were placed into operation prior to July 1, 1979. New cold cleaners were placed into operation on or after July 1, 1979. I asked BASF officials to ensure that a cold-cleaner is kept closed at all times when idled. I gave to Mr. Ozimek copies of DEQ's "cold-cleaner operating procedures". During FY 2010 inspection, the procedures were posted.

Power assisted lid cold-cleaner is located in Red Label Solvent Storage Room. Only BASF proprietary solvents are used.

Emergency Generator

One 275-kilowatt emergency diesel generator (Onan 275 Genset Model No. 275 DFM L33477N Onan Serial No. C890214181) is present.

1,000 kW (1 MW) generator is equivalent to 8.2 million BTU per hour heat input based upon 60 gallons per hour fuel (diesel) consumption at peak load and 137,000 BTU per gallon of diesel. Therefore, the generator (<10 million BTU per hour heat input internal combustion engines) is exempt from Rule 336.1201 (Permit-to-Install) pursuant to Rule 285(g).

NESHAP / RICE MACT 4Z, 40 CFR Parts 60 and 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines; New Source Performance Standards for Stationary Internal Combustion Engines (ICE);, Page 6674 Federal Register / Vol. 78, No. 20 / Wednesday, January 30, 2013 / Rules and Regulations / Final Rule. This final rule is effective on April 1, 2013. BASF's Emergency CI (Diesel) RICE is not subject to NSPS 4I.

Diesel Emergency Generator - Existing RICE engines at major MACT sources

Change oil/filter & inspect hoses/belts every 500 hours or annually; inspect air cleaner (CI) or spark plugs (SI) every 1,000 hours or annually. No emission standards

Conclusion:

I did not find any compliance problem with permit conditions at the time of the inspection. This is a small source of VOC and HAP. The **Boiler NESHAP / MACT initial notification** was due March 12, 2005; BASF mailed the initial notification letter dated March 2, 2005 to both US EPA and DEQ-AQD. Per revised Boiler MACT, Initial Notification is due by May 31, 2013. AQD received on May 31, 2013, Major Source Boiler MACT Initial Notification dated May 29, 2013. Major Source RICE (CI Diesel) MACT emergency generator is present.

NAME

B. L. Hannahall

DATE

07/15/2014

SUPERVISOR

CJE

SOUTHFIELD CRC BOILER LOG

CY2013 CRC (Boilers) bldg NG usage
 One boiler operator and the other on stand-by

DAY	Jan-13				Feb-13				Mar-13				Apr-13			
	B #1 ON HOURS	B #2 ON HOURS	NOTES	CALC. GAS USE	B #1 ON HOURS	B #2 ON HOURS	NOTES	CALC. GAS USE	B #1 ON HOURS	B #2 ON HOURS	NOTES	CALC. GAS USE	B #1 ON HOURS	B #2 ON HOURS	NOTES	CALC. GAS USE
1	0	24			0	24			24	0			0	24		
2	0	24			0	24			24	0			24	0		
3	24	0			24	0			0	24			24	0		
4	24	0			24	0			0	24			24	0		
5	24	0			24	0			0	24			0	24		
6	0	24			0	24			24	0			0	24		
7	0	24			0	24			24	0			0	24		
8	0	24			0	24			24	0			24	0		
9	24	0			24	0			0	24			24	0		
10	24	0			24	0			0	24			24	0		
11	24	0			24	0			0	24			0	24		
12	24	0			0	24			24	0			0	24		
13	0	24			0	24			24	0			0	24		
14	0	24			0	24			24	0			24	0		
15	0	24			24	0			24	0			24	0		
16	24	0			24	0			0	24			24	0		
17	24	0			24	0			0	24			24	0		
18	24	0			0	24			24	0			24	0		
19	0	24			0	24			0	24			0	24		
20	0	24			0	24			0	24			0	24		
21	0	24			24	0			24	0			0	24		
22	0	24			24	0			24	0			24	0		
23	0	24			24	0			24	0			24	0		
24	24	0			0	24			0	24			24	0		
25	24	0			0	24			0	24			0	24		
26	24	0			0	24			0	24			0	24		
27	24	0			24	0			24	0			0	24		
28	24	0			24	0			24	0			24	0		
29	24	0			-	-			24	0			24	0		
30	24	0			-	-			0	24			24	0		
31	0	24			-	-			0	24			24	0		
TOTALS	408	336	0	0.0	336	336	0	0.0	384	360	0	0.0	408	312	0	0.0
				2686				5127				5090				3886
				MMBTU												

Total
 Jan-Apr.: 16789
 MMBTU

CY2013 usage in CRC building → = 34.78 MM SCF/yr

SOUTHFIELD CRC BLDG. BOILER LOG

DAY	May-13				Jun-13				Jul-13				Aug-13				
	B #1 ON HOURS	B #2 ON HOURS	NOTES	CALC. GAS USE	B #1 ON HOURS	B #2 ON HOURS	NOTES	CALC. GAS USE	B #1 ON HOURS	B #2 ON HOURS	NOTES	CALC. GAS USE	B #1 ON HOURS	B #2 ON HOURS	NOTES	CALC. GAS USE	
1	0	24			0	24			24				0	24			
2	0	24			24	0			24				24	0			
3	0	24			24	0			24				24	0			
4	24	0			24	0			24				24	0			
5	24	0			0	24			0	24			0	24			
6	24	0			0	24			0	24			0	24			
7	24	0			0	24			0	24			0	24			
8	0	24			24	0			0	24			24	0			
9	0	24			24	0			24	0			24	0			
10	0	24			24	0			24	0			24	0			
11	24	0			0	24			24	0			0	24	Boiler 1 Inspection		
12	24	0			0	24			24	0			0	24	Boiler 1 Inspection		
13	24	0			0	24			0	24			0	24	Boiler 1 Inspection		
14	24	0			24	0			0	24			0	24	Boiler 1 Inspection		
15	24	0			24	0			0	24			0	24	Boiler 1 Inspection		
16	24	0			24	0			24	0			0	24	Boiler 1 Inspection		
17	24	0			0	24			24	0			0	24	Boiler 1 Inspection		
18	0	24			0	24			24	0			0	24	Boiler 1 Inspection		
19	0	24			0	24			0	24			0	24	Boiler 1 Inspection		
20	0	24			24	0			0	24			0	24	Boiler 1 Inspection		
21	0	24			24	0			0	24			0	24	Boiler 1 Inspection		
22	24	0			24	0			24	0			0	24	Boiler 1 Inspection		
23	24	0			0	24			24	0			0	24	Boiler 1 Inspection		
24	0	24			0	24			24	0			0	24	Boiler 1 Inspection		
25	0	24			0	24			0	24			0	24	Boiler 1 Inspection		
26	0	24			24	0			24	0			0	24	Boiler 1 Inspection		
27	24	0			24	0			0	24			0	24	Boiler 1 Inspection		
28	24	0			0	24			24	0			0	24	Boiler 1 Inspection		
29	24	0			0	24			24	0			0	24	Boiler 1 Inspection		
30	0	24			0	24			24	0			0	24	Boiler 1 Inspection		
31	0	24							0	24			0	24	Boiler 1 Inspection		Total
TOTALS	384	360	0	0	336	384	0	0.0	432	312	0	0.0	144	600	0	0.0	May-Aug.: 7213.0
				2148.0				1748				1706				1611	MMBTU
				MMBTU				MMBTU				MMBTU				MMBTU	MMBTU

