

M3754
ManilaDEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: On-site Inspection

M375473348

FACILITY: Winoa USA Inc.		SRN / ID: M3754
LOCATION: 18900 RIALTO, MELVINDALE		DISTRICT: Detroit
CITY: MELVINDALE		COUNTY: WAYNE
CONTACT: Jacob Baith , Maintenance Manager		ACTIVITY DATE: 08/23/2024
STAFF: Samuel Liveson	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: Scheduled inspection.		
RESOLVED COMPLAINTS:		

Introduction

On Friday August 23, 2024, I (AQD staff Sam Liveson) conducted an unannounced, scheduled inspection of Winoa USA Inc. (Winoa), located at 18900 Rialto Street in Melvindale, Michigan. The purpose of this inspection was to determine the facility's compliance with the federal Clean Air Act; Part 55, Air Pollution Control, of the Michigan Natural Resources and Environmental Protection Act, 1994 PA 451, as amended; the Michigan Air Pollution Control Rules (Rules); and Permit to Install (PTI) No. 34-19A.

The inspection was unannounced. I arrived at the facility at about 10:30 AM. Weather was clear. At the facility, I met with Greg Johnson, Plant Supervisor. I provided my state-issued identification and stated the purpose of my visit. Following the inspection, Jacob Baith, Maintenance Manager, provided records via email.

Facility Description

Winoa USA Inc. purchased Peerless Metal Powders and Abrasives. The facility receives busheling and turnings made of iron and steel. The company recycles the material into grit and shot used in blast cleaning operations. All materials received are recycled. Grit and shot are distinguished by their shape; grit is angular, and shot is round. Generally, any indirect heating by natural gas is vented to atmosphere, while any direct firing that touches product is vented to a baghouse. The north side of the facility houses foundry operations (melting and drying), while the south side of the facility houses forging operations (crushing and milling), with the warehouse in-between.

Compliance Evaluation: North Side of the Facility**EU-HRDNG/HTTREAT (PTI No. 34-19A)**

I observed the tempering furnace. It was not operating. Greg explained it hasn't been used in a year and a half.

Below is a summary of each special condition from EU-HRDNG/HTTREAT, and an explanation of the facility's compliance status.

SC I.1-7: Hourly emissions limits for NO_x, CO, SO₂, PM, PM₁₀, PM_{2.5}, and VOCs.

NOT EVALUATED. Hourly emissions are based on emission factors for maximum natural gas fuel consumption. Emissions appear to exhaust to the in-plant environment. Testing is not required.

SC III.1: Combust only natural gas.

COMPLIANCE. Greg explained only natural gas is combusted in hardening and heat treat furnaces. There is no diesel backup.

FG-MELT (PTI 34-19A)

I observed the two large induction melt furnaces located at the far north of the facility. They were not operating. I observed that the west furnace was undergoing maintenance.

Below is a summary of each special condition from FG-MELT, and an explanation of the facility's compliance status.

SC I.1-4, V.1: Emission limits for PM, PM₁₀, and PM_{2.5}. Stack test within 180 days of written notification from the AQD.

NOT EVALUATED. Compliance with these emission limits would be determined by a stack test per S.C. V.1. AQD has not requested a stack test.

SC I.5, VI.1: 5% opacity limit. Evaluate and record opacity on a daily basis for 90 days. If no opacity is observed, reduce readings to weekly.

COMPLIANCE. I requested and received visible emissions readings for the past month. Records provided for August 2024 indicate visible emissions readings are conducted weekly on both baghouses, and no visible emissions were detected.

SC III.1: Submit, implement, and maintain a Malfunction Abatement Plan (MAP).

COMPLIANCE. Jacob provided an updated MAP dated September 2024. The plan identifies a PM program with supervisory personnel; variables to be monitored (pressure loss); and procedures for corrective action.

SC IV.1, 2: Install and operate baghouses satisfactorily, including operating and maintaining each control device in accordance with the MAP, and with a pressure gauge and alarm if pressure drops below 0.25 inches water or exceeds 7 inches water.

COMPLIANCE. I observed the baghouse panels for furnace baghouse #1 and #2. Alarms were located above the baghouse panels. One of the baghouses was on, although equipment was not operating.

We walked outside and I observed the east and west furnace baghouses. Bins were located below the baghouses to collect particulate, and generally baghouses appeared to be in good condition.

Regarding bag replacement at the facility baghouses, Jacob provided this information:

So far, we haven't seen failures on any bags that have shown the need to replace. This is in part because we are not operating at anything near full capacity. The manufacturer estimates 5-7 years before replacement with significantly higher production rates. Beginning next year, however, we are performing a complete bag replacement in 3 of the collectors each year. This will start a 5 year preventative replacement cycle for all collectors.

SC VIII.1, 2: Stack parameters.

COMPLIANCE. I observed that stacks exhaust vertically unobstructed. Dimensions appeared similar to permit requirements.

FG-PLANTBH (PTI 34-19A)

Emission units EU-CRUSHINGLINE, EU-FINISHINGLINE, EU-ASPDYSEG1, and EU-ASPDYSEG2 all exhaust to a main header and exhaust through three fabric filter (baghouse) collectors known as the plant baghouse system (FG-PLANTBH). I observed the ventilation. EU-CRUSHINGLINE has not run in a year and a half, per Greg. I visited EU-FINISHINGLINE, which was operating. Shot appeared to be screening.

EU-ASPDYSEG1 and EU-ASPDYSEG2 respectively appear to be the east and west melting furnace related operations of aspiration, drying, and segmenting. EU-ASPDYSEG2 was operating screening; EU-ASPDYSEG1 was not operating.

Below is a summary of each special condition from FG-PLANTBH, and an explanation of the facility's compliance status.

SC I.1-6, V.1: Emission limits for NOx, CO, PM, PM10, PM2.5, and VOCs. Stack test within 180 days of written notification from the AQD.

NOT EVALUATED. Compliance with these emission limits would be determined by a stack test per S.C. V.1. AQD has not requested a stack test.

SC I.7, VI.1: 5% opacity limit. Evaluate and record opacity on a daily basis for 90 days. If no opacity is observed, reduce readings to weekly.

COMPLIANCE. I requested and received visible emissions readings for the past month. Records provided for August 2024 indicate visible emissions readings are conducted weekly on all three foundry

plant baghouses. Baghouse 2 is down due to the rotary feeder. This is consistent with what I observed on site. Records indicate no visible emissions were detected.

SC III.1: Submit, implement, and maintain a Malfunction Abatement Plan (MAP).

COMPLIANCE. Jacob provided an updated MAP dated September 2024. The plan identifies a PM program with supervisory personnel; variables to be monitored (pressure loss); and procedures for corrective action.

SC IV.1, 2: Install and operate baghouses satisfactorily, including operating and maintaining each control device in accordance with the MAP, and with a pressure gauge and alarm if pressure drops below 0.25 inches water or exceeds 7 inches water.

FURTHER EVALUATION NEEDED. I visited the plant baghouse indoor control panels, which are labeled 5A, 5B, and 5C. Alarms were located above each panel. 5A and 5C were operating. 5B was down. Greg explained that the third baghouse is backup. In PTI 34-19A and the malfunction abatement plan, it is not clear that only two baghouses are needed to operate. The condition IV.1 language reads,

The permittee shall not operate EU-CRUSHINGLINE, EU-FINISHINGLINE, EU-ASPDYSEG1, and EU-ASPDYSEG2 unless the three baghouses are installed and operating in a satisfactory manner. Satisfactory manner includes operating and maintaining each control device in accordance with an approved PM/MAP as required in SC III.1.

AQD requested the facility submit a PTI application to clarify the language in FG-PLANTBH condition IV.1 that only two out of the three baghouses at FG-PLANTBH need operate, and the third is a backup; and to clarify this language in their MAP.

I observed the following pressure drops:

Baghouse	Pressure Drop	Time
5A	2.67 inches water	11:05 AM
5B	--	--
5C	2.50 inches water	11:04 AM

Greg and I walked outside to observe the baghouses. I observed that there were bins located above the two operating baghouses. Stacks exhausted unobstructed vertically. No opacity was observed.

SC VIII.1, 2, 3: Stack parameters.

COMPLIANCE. I observed that stacks exhaust vertically unobstructed. Dimensions appeared similar to permit requirements.

Compliance Evaluation: South Side of the Facility

EU-DRUMHEATER (PTI 34-19A)

The drum heater are natural gas fired heaters used for indirect heating of the chip dryer retort. I did not visit the drum heaters during the inspection.

Below is a summary of each special condition from EU-DRUMHEATER, and an explanation of the facility's compliance status.

SC I.1-7: Hourly emissions limits for NO_x, CO, SO₂, PM, PM₁₀, PM_{2.5}, and VOCs.

NOT EVALUATED. Hourly emissions are based on emission factors for maximum natural gas fuel consumption. Emissions appear to exhaust to the in-plant environment. Testing is not required.

SC III.1: Combust only natural gas.

COMPLIANCE. Jacob confirmed the only fuel is natural gas and there is no backup fuel.

SC VIII.1: Stack parameters.

NOT EVALUATED. I did not observe the drum heater stack during the inspection.

FG-DRYERCRUSHER (PTI 34-19A)

The dryer crusher flexible group includes the ring crusher and mill chip dryer (MCD) furnace. Chips are loaded outside and crushed inside. The crusher is called a ring crusher due to it being in the shape of a ring. Regarding the chip dryer, the chips the facility receives have oil. The chip dryer burns off the oil. Exhaust from the oil burning is then burned in an afterburner with a setpoint of 1400 °F before going to a mechanical separator and then to the chip dryer baghouse.

I visited the ring crusher and MCD furnace. They did not appear to be operating.

Below is a summary of each special condition from FG-DRYERCRUSHER, and an explanation of the facility's compliance status.

SC I.1-6, V.1: Hourly emission limits for NO_x, CO, PM, PM₁₀, PM_{2.5}, and VOCs. Stack test within 180 days of written notification from the AQD.

NOT EVALUATED. Compliance with these emission limits would be determined by a stack test per S.C. V.1. AQD has not requested a stack test.

SC I.7, VI.1: 5% opacity limit. Evaluate and record opacity on a daily basis for 90 days. If no opacity is observed, reduce readings to weekly.

COMPLIANCE. I requested and received visible emissions readings for the past month. Records provided for August 2024 indicate visible emissions readings are conducted weekly on the chip dryer baghouse. Records indicate no visible emissions were detected.

SC II.1: Combust only natural gas.

COMPLIANCE. Greg explained only natural gas is combusted in the MCD furnace. There is no diesel backup.

SC III.1: Submit, implement, and maintain a Malfunction Abatement Plan (MAP) for the baghouse.

COMPLIANCE. Jacob provided an updated MAP dated September 2024. The plan identifies a PM program with supervisory personnel; variables to be monitored (pressure loss, pulse jet timing, and dust collection rate); and procedures for corrective action.

SC IV.1, 2: Install and operate the baghouse satisfactorily, including operating and maintaining the baghouse in accordance with the MAP, and with a pressure gauge and alarm if pressure drops below 2 inches gauge or exceeds 12 inches water gauge.

COMPLIANCE. I observed the baghouse panel for the dryer crusher. An alarm was located above the baghouse panel. The baghouse was not operating during the inspection.

We walked outside and I observed the baghouse. A bin was located below the baghouse to collect particulate, and generally the baghouse was in good condition.

SC IV.3, VI.2: For the afterburner, maintain a minimum temperature of 1400 degrees F, and a minimum retention time of 0.5 seconds. Monitor and record the temperature at intervals not to exceed 15 minutes.

COMPLIANCE. I observed the afterburner panel. The afterburner was not currently operating because the MCD furnace was not operating. The panel indicated that the temperature set point is 1400 degrees F. There also appears to be a high temperature limit of 1800 degrees F.

I requested and received MCD furnace afterburner temperature readings for the last week of operation. The facility monitored and recorded the afterburner operating temperature by hand every 15 minutes on 8/19/24 and 8/21/24. Records indicate the afterburner temperature ranged from 1410 degrees F to 1455 degrees F.

SC VIII.1: Stack parameters.

COMPLIANCE. I observed that stack exhausts vertically unobstructed. Dimensions appeared similar to permit requirements.

FG-MILLS (PTI 34-19A)

I observed the two mills. These are identified as SP Mills at the facility. Mills #1 and #2 are both installed. Neither mill was operating during the inspection.

Below is a summary of each special condition from FG-MILLS, and an explanation of the facility's compliance status.

SC I.1-3, V.1: Hourly emission limits for PM, PM10, and PM2.5. Stack test within 180 days of written notification from the AQD.

NOT EVALUATED. Compliance with these emission limits would be determined by a stack test per S.C. V.1. AQD has not requested a stack test.

SC I.4, VI.1: 5% opacity limit. Evaluate and record opacity on a daily basis for 90 days. If no opacity is observed, reduce readings to weekly.

COMPLIANCE. I requested and received visible emissions readings for the past month. Records provided for August 2024 indicate visible emissions readings are conducted weekly on the SP Mills baghouse, and no visible emissions were detected.

SC III.1: Submit, implement, and maintain a Malfunction Abatement Plan (MAP).

COMPLIANCE. Jacob provided an updated MAP dated September 2024. The plan identifies a PM program with supervisory personnel; variables to be monitored (pressure loss); and procedures for corrective action.

SC IV.1, 2: Install and operate the baghouse satisfactorily, including operating and maintaining the baghouse in accordance with the MAP, and with a pressure gauge and alarm if pressure drops below 0.25 inches water or exceeds 7 inches water.

COMPLIANCE. I visited the SP Mill baghouse indoor control panel, which is labeled as Dust Collector #1. An alarm was located above the panel. The baghouse was not operating during the inspection.

We walked outside and I observed the baghouse. A bin was located below the baghouse to collect particulate, and generally the baghouse was in good condition.

SC VIII.1: Stack parameters.

COMPLIANCE. I observed that the stack exhausts vertically unobstructed. Dimensions appeared similar to permit requirements.

FG-IRONLINE (PTI 34-19A)

FG-IRONLINE includes miscellaneous iron and steel operations. I visited the magnetic separator (EU-MAGSEPARATOR). It is currently disassembled. Greg explained it is not used at this time. I visited EU-REPUBLICLINE, EU-IRONSCREENE, and EU-BLUELINE. These lines were not operating during the inspection. FG-IRONLINE operations vent to the Iron Line Baghouse.

Below is a summary of each special condition from FG-IRONLINE, and an explanation of the facility's compliance status.

SC I.1-3, V.1: Hourly emission limits for PM, PM10, and PM2.5. Stack test within 180 days of written notification from the AQD.

NOT EVALUATED. Compliance with these emission limits would be determined by a stack test per S.C. V.1. AQD has not requested a stack test.

SC I.4, VI.1: 5% opacity limit. Evaluate and record opacity on a daily basis for 90 days. If no opacity is observed, reduce readings to weekly.

COMPLIANCE. I requested and received visible emissions readings for the past month. Records provided for August 2024 indicate visible emissions readings are conducted weekly on the cold forge baghouse, and no visible emissions were detected.

SC III.1: Submit, implement, and maintain a Malfunction Abatement Plan (MAP).

COMPLIANCE. Jacob provided an updated MAP dated September 2024. The plan identifies a PM program with supervisory personnel; variables to be monitored (pressure loss); and procedures for corrective action.

SC IV.1, 2: Install and operate the baghouse satisfactorily, including operating and maintaining the baghouse in accordance with the MAP, and with a pressure gauge and alarm if pressure drops below 0.25 inches water or exceeds 7 inches water.

COMPLIANCE. I visited the baghouse indoor control panel, which is labeled as Dust Collector #3. An alarm was located above the panel. The baghouse was not operating during the inspection.

We walked outside and I observed the baghouse. A bin was located below the baghouse to collect particulate, and generally the baghouse was in good condition.

SC VIII.1: Stack parameters.

COMPLIANCE. I observed that the stack exhausts vertically unobstructed. Dimensions appeared similar to permit requirements.

Compliance Evaluation: Site-Wide

FGFACILITY (PTI 34-19A)

FGFACILITY includes all process equipment. It contains source-wide emissions limits, natural gas combustion limits, requirements for a fugitive dust control plan, and recordkeeping requirements for facility equipment.

Below is a summary of each special condition from FGFACILITY, and an explanation of the facility's compliance status.

SC I.1-8; VI.1(a)-(i), VI.1(k)-(l): 12-month rolling emission limits. Calculate material usage and emissions.

COMPLIANCE. Winoa provided monthly usage records and emissions calculations for January 2022 through July 2024. Records indicate the facility did not exceed any of their limits. The limit and maximum 12-month rolling value are provided below.

Pollutant	Limit	Max 12-mo rolling	Month-yr of max
NOx	7.51 tpy	6.4 tpy	Nov 2023
CO	9.02 tpy	7.7 tpy	Sept 2023
PM	24.8 tpy	4.7 tpy	Feb 2024
PM10	10.15 tpy	2.2 tpy	Dec 2023
PM2.5	8.21 tpy	1.9 tpy	Dec 2023
VOC	4.97 tpy	0.8 tpy	Jan 2024
Individual HAP	0.02 tpy	0.00995 tpy	Mar 2024
Aggregate HAP	0.05 tpy	0.00995 tpy	Mar 2024

SC II.1, VI.1(j): Material limit of 214.71 MMSCF natural gas per 12-month rolling time period. Record natural gas usage.

COMPLIANCE. Winoa provided monthly natural gas usage records for January 2022 through July 2024. The maximum 12-month rolling usage was 182 MMSCF in September 2023, below the limit of 214.71 MMSCF.

SC III.1: Submit an approved fugitive dust control program to the AQD.

COMPLIANCE. The version of the fugitive dust control plan I was provided following the inspection is dated November 2019. Because it appears to be comprehensive and I did not observe fugitive dust issues at the facility, I accepted this version of the fugitive dust control plan. Regarding fugitive dust, most of the driveway surrounding the facility is paved, with the exception of the south end, where I observed the driveway was damp. I did not see any fugitive dust concerns during the inspection.

MACES- Activity Report

There are two raw material storage areas. On the south side, I observed the outdoor covered area for iron and steel chip storage was empty. On the north side, I observed the indoor storage area for scrap busheling. Bay doors surrounding this storage area were open during the inspection. Greg explained these doors are closed every night.

SC VI.1(m): Record visible emissions readings.
COMPLIANCE. Visible emissions readings records were provided for FG-MELT, FG-DRYERCRUSHER, FG-MILLS, FG-PLANTBH, and EU-REPUBLIC.

Emergency Engine (40 CFR Part 63 Subpart ZZZZ)

The facility has one natural gas fired emergency engine. Its engine heat input capacity is 100 kVa (134 HP). It was installed at Winoa in September of 2020, and appears to have been manufactured in 1990 based on its model number and the manufacture date of a similar model. Jacob provided that its non-resettable hours meter reads 75 hours; 57 minutes; 2 seconds.

The engine appears to be subject to 40 CFR Part 63 Subpart ZZZZ: National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines. AQD is not delegated authority from EPA to enforce this subpart for area sources.

The engine does not appear to be subject to 40 CFR Part 60 Subpart JJJJ: Standards of Performance for Stationary Spark Ignition Internal Combustion Engines per 40 CFR 60.4230(a)(4)(iv), which reads, in part:

60.4230: Am I subject to this subpart?

(a) The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary spark ignition (SI) internal combustion engines (ICE) as specified in paragraphs (a)(1) through (6) of this section. For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator.

...
(4) Owners and operators of stationary SI ICE that commence construction after June 12, 2006, where the stationary SI ICE are manufactured:

...
(iv) on or after January 1, 2009, for emergency engines with a maximum engine power greater than 19 KW (25 HP).

Winoa's emergency engine was manufactured prior to January 1, 2009.

The engine appears to be exempt from obtaining a PTI per Rule 285(2)(g) for internal combustion engines that have a maximum heat input less than 10 million British thermal units per hour.


Conclusion

Based on the AQD inspection and records review, Winoa appears to be in compliance with the federal Clean Air Act, Michigan NREPA, the Michigan Air Pollution Control Rules, and facility PTI No. 34-19A. AQD requested the facility clarify the language in FG-PLANTBH condition IV.1 that only two out of the three baghouses at FG-PLANTBH need operate, and the third is a backup, and to clarify this in the facility MAP.

NAME



DATE



SUPERVISOR

