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PrAm? - N742

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

N774240373

FACILITY: PITA METALS INC		SRN / ID: N7742
LOCATION: 411 SOUTH FORT ST, DETROIT		DISTRICT: Detroit
CITY: DETROIT		COUNTY: WAYNE
CONTACT: Janet Godfrey , Owner		ACTIVITY DATE: 06/22/2017
STAFF: Katherine Koster	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: MINOR
SUBJECT: Targeted FY 2017 Scheduled Inspection		
RESOLVED COMPLAINTS:		

REASON FOR INSPECTION: Targeted Inspection

INSPECTED BY: Katie Koster, AQD

PERSONNEL PRESENT: Cheyanne Pistole, AMP Recycling; Janet Godfrey and Mac Carvahlo, owners

FACILITY DESCRIPTION

AMP Recycling Inc., N7742, is located in the City of Detroit in Wayne County. Even though the permit is issued to Pita Metals, AMP Recycling operates the furnace. Other entities operating at this site are Pita Metals and Engine Parts Plus (EPP). Pita buys and sells engines and transmissions and sells the parts to AMP Recycling. All businesses are under the same ownership. AMP Recycling processes scrap aluminum through a gas-fired sweat furnace from which aluminum sows are poured and sold. The sweat furnace is currently operated about two weeks on and three weeks off. The sweat furnace is equipped with an afterburner.

REGULATORY OVERVIEW

The facility is categorized as an area source and the sweat furnace is permitted under PTI 373-06. The permit to install was issued on March 14, 2007 and the furnace started operation in January 2008. The permit was revised in 2009 for a typographical error.

The facility is subject to the area source requirements of 40 CFR 63 Subpart RRR, Secondary Aluminum Production NESHAP. The one sweat furnace is currently the only affected sources under the NESHAP.

For a sweat furnace that uses no fluxing material, the main pollutant of concern is PM/PM10. PTE calculations were presented in the permit application and are attached. PTE for PM10 was calculated at 87.38 tpy using an emissions factor on 13.3 lb/ton of metal of PM10 and a maximum charge rate of 1.5 tons/hour and 8760 hours of operation.

COMPLAINT/COMPLIANCE HISTORY

No complaints have been received about this facility. The facility has been determined to be in non-compliance for the last two inspections in 2012 and 2015; mostly related to the Secondary Aluminum MACT (Subpart RRR) reporting and notification requirements.

INSPECTION NARRATIVE

AQD inspector, Katie Koster, arrived at AMP Recycling on June 22, 2017. I met with Ms. Janet Godfrey, Mr. Mac Carvahlo, and Ms. Cheyanne Pistole. Ms. Godfrey and Mr. Carvahlo are the owners. Ms. Pistole accompanied me about the facility. I was informed that my prior contact, Mr. Luke Wojewuczki, quit working there at the beginning of the year.

The sweat furnace operates about two weeks on and three weeks off. It was operating at the time of my inspection. Mr. Carvahlo joined us at the furnace. Only aluminum is added to the furnace; no flux is in use. Since the aluminum comes from discarded engines and transmissions, there is also some steel mixed in. The steel is removed from the furnace during smelting and resold. When the facility is ready to start processing, it takes about 1-2 days to heat up the furnace and another 1.5 days to cool it down. About 800-900 pounds of scrap is charged to the furnace at a time which happens about once every 45 minutes. Sows are tapped from the furnace and sold to a company in Indiana (Riobe) and the steel is sold to Gerdau in Monroe. An afterburner is in operation during processing. The target afterburner

temperature is set at a minimum of 1650F.

I viewed the charge material that was going into the furnace. It was virgin off spec parts from the automotive OEMS's and/or dismantled engines and transmissions. Each batch is weighed on a scale and recorded before being charged in the furnace. I did not see any evidence of a fluxing material in use. The facility is only producing cast aluminum 380 alloy. It takes about 45 minutes before another load can be added to the furnace. I recorded an afterburner temperature of 1651F and primary chamber temperature of 1380F. Ms. Pistole and I viewed the stack. No visible emissions were observed. I only noted the presence of heat waves. Maintenance is performed after the furnace has cooled down from each furnace cycle.

We went to the office where Ms. Pistole presented afterburner temperature records and throughput records. I briefly discussed MACT Subpart RRR and the required semi-annual reporting.

Note, AQD conducted an inspection in 2012 and met with facility owner, Ms. Janet Godfrey. AQD inspector, Mr. Eric Grinstern, informed her of the MACT Subpart RRR requirements and in the subsequent 2015 inspection, I informed the facility again.

APPLICABLE RULES/PERMIT CONDITIONS EVALUATED

Below is an evaluation of the compliance requirements for the sweat furnace.

Permit to Install No. 373-06

EUFURNACE – Gas-fired sweat furnace

The sweat furnace has a hearth and holding chamber with a capacity of 4,000 pounds. Exhaust is controlled by an afterburner. The facility stated that no flux is used in the furnace. The facility stated that the afterburner is interlocked so that the charge door will not open unless the afterburner is at or above 1650 degrees F. Aluminum scrap is purchased directly from outside brokers or comes from transmissions, etc. that are disassembled by Pita Metals. The furnace was in operation during the inspection.

Emission Limits

EUFURNACE restricts the emission of PM-10 and dioxin/furans (D/F). The facility conducted testing on September 18, 2008 to evaluate the emission of PM-10 emissions. The test results showed compliance with the permitted limit; PM-10 limit: 4.0 pph; Test result: 0.13 pph

The dioxin/furan emission limit is the NESHAP established limit. The NESHAP allows for the operation of an afterburner with a minimum temperature of 1600 degrees and a residence time of 0.8 seconds as an alternative to conducting compliance testing to demonstrate compliance with the NESHAP limit. The afterburner manufacturer provided calculations at the time of permitting documenting a residence time of 1.56 seconds. Review of recent temperature records over the last year while on site showed the afterburner is operating above the 1,600 degree F minimum at each 15 minute reading and 3 hour block average. See attached examples of records.

Status: IN COMPLIANCE

EUFURNACE limits opacity to a six-minute average of 10%. I observed the stack during the inspection since the furnace was operating and I did not observe any visible emissions.

Status: IN COMPLIANCE

Material Limits/Records

EUFURNACE requires that no flux be used in the furnace. The facility stated that they do not use any flux, and I did not observe the presence of any flux onsite. Charge to the furnace is restricted to 3,000 pounds per hour. Based on information provided by Ms. Pistole, and a spot check of records over the last year while on site indicates charge rates are below 2,000 pounds per hour. See attached examples of records.

Status: IN COMPLIANCE

Process/Operational Limits

EUFURNACE requires the afterburner used to control emissions from the sweat furnace to have a minimum temperature of 1,600 degrees F and a retention time of 0.8 second.

The afterburner manufacturer provided calculations at the time of permitting document a residence time of 1.56 seconds. Review of recent temperature records showed the afterburner is operating above the 1,600 degree F minimum. The set point is programmed at 1650F.

The facility is required to implement a MAP and O&M Plan for the control equipment. A MAP and O&M Plan were submitted as part of the permit application.

Review of facility maintenance records showed that they were implementing the requirements of the plans.

Status: IN COMPLIANCE

Equipment

The facility is required to install and operate an afterburner. The facility has installed and is operating the afterburner. Based on the records presented during the inspection, the facility is in compliance.

Status: IN COMPLIANCE

Testing

EUFURNANCE required testing for PM10 emissions within 180 days of commencement of initial startup. Based upon startup in January 2008, testing should have been conducted in July 2008. Testing was conducted in September 2008. Testing demonstrated compliance with the PM10 emission limit.

Monitoring/Recordkeeping

The permit requires the facility to install and maintain a device to monitor and record the temperature of the afterburner on a continuous basis.

The afterburner temperature is monitored and recorded on a continuous basis by a "data logger". Additionally, staff manually records the temperature throughout the processing as a back up source of information. The residence time of the afterburner is based upon the design and certification by the manufacturer. I am not aware of a residence time monitor and consider this part of the condition to be an error.

Status: IN COMPLIANCE

Recordkeeping

Facility is required to maintain monthly and annual records of aluminum throughput for EGFURNACE. I reviewed facility records while on site and noted that this information is being maintained. See attached examples of records.

Status: IN COMPLIANCE

Stack/Vent Restrictions

Requires the furnace to have a stack with a maximum diameter of 24 inches and a minimum height of 40 feet. Visual observation of the stack showed that it appeared to comply with the dimensions.

Status: IN COMPLIANCE

40 CFR PART 63 SUBPART RRR

The facility is subject to Subpart RRR as an area source, with the affected emission unit being the aluminum sweat furnace. As an area source the furnace is subject to the dioxin/furan limit as well as the associated monitoring/reporting requirements.

Compliance Evaluation

**Subpart RRR
Notification and Reporting Requirements**

Requirement	Citation 40 CFR	Notification Submitted		Comments
		Yes	No	
Initial Notification (Existing – July 21, 2000) (New – July 21, 2000 or no later than 120 days after startup)	63.9(b)(2)		X	Notification not submitted on time but was submitted in response to a VN from the prior inspection in 2015. IN COMPLIANCE
Notification of Compliance Status (Existing-May 23, 2003) (New – 90 days after performance test or 90 days after startup if not conducting a performance test.)	63.1515(b)		X	Notification not submitted on time but was submitted in response to a VN from the prior inspection in 2015. IN COMPLIANCE
OM&M Plan (Existing-March 24, 2003) (New – 90 days after performance test or 90 days after startup if not conducting a performance test.)	63.1510(b)	X		Submitted with permit application. IN COMPLIANCE
Excess Emissions/Summary Reports (Semi-annually – 60 days after calendar half – 3/1 & 8/30) <u>Must submit even if no excess emissions occurred</u>	63.1516(b)		X	Since the prior inspection, reports have not been submitted for January – June 2016, July – December 2016, and January – June 2017. NON COMPLIANCE
Annual Compliance Certification (With one of the semi-annual reports)	63.1516(c)			Not required for minor sources. NOT APPLICABLE
SSM Reports (30 days after calendar half when a SSM occurred – 1/30 & 7/30) <u>Must submit if a SSM occurred</u>	63.10(d)(5)(i)			No SSM notifications have been received. NOT APPLICABLE
Report of actions inconsistent with	63.6(e)(3)(iv) 63.10(d)(5)(ii)			No SSM notifications have been received.

SSM Plan (2 working days after event –phone report, 7 working days after event – letter report)				NOT APPLICABLE
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D/F Limit

Emissions limited to 0.80 nanogram D/F TEQ per dscm. §63.1505(f)(2)

Sweat furnaces are not required to conduct performance testing to demonstrate compliance with the D/F limit if they are equipped with an operate an afterburner with a minimum temperature of 1600 degrees and a residence time of 0.8 seconds. The facility is using the afterburner alternative as a compliance option and has documented that the system is meeting the minimum residence time.

Status: IN COMPLIANCE

Capture/Collection System 63.1506(c)

Status:

The MACT is was amended in September 18, 2015 and the capture/collection requirements for sweat furnaces were modified. Now, sweat furnaces have an alternative to installing capture and collection systems meeting ACGIH guideline. Per 63.1506 (c): *Capture/collection systems*. For each affected source or emission unit equipped with an add-on air pollution control device, the owner or operator must: (1) Design and install a system for the capture and collection of emissions to meet the engineering standards for minimum exhaust rates or facial inlet velocities as contained in the ACGIH Guidelines (incorporated by reference, see §63.14); (2) Vent captured emissions through a closed system, except that dilution air may be added to emission streams for the purpose of controlling temperature at the inlet to a fabric filter; and (3) Operate each capture/collection system according to the procedures and requirements in the OM&M plan. (4) *In lieu of paragraph (c)(1) of this section, the owner or operator of a sweat furnace may design, install and operate each sweat furnace in accordance with paragraphs (c)(4) (i) through (iii) of this section.*

(i) As demonstrated by an annual negative air flow test conducted in accordance with §63.1510(d) (3), air flow must be into the sweat furnace or towards the plane of the sweat furnace opening.(ii) The owner or operator must maintain and operate the sweat furnace in a manner consistent with the good practices requirements for minimizing emissions, including unmeasured emissions, in paragraph (a)(5) of this section. Procedures that will minimize unmeasured emissions may include, but are not limited to the following: (A) Increasing the exhaust rate from the furnace with draft fans, so as to capture emissions that might otherwise escape from the sweat furnace opening;(B) Minimizing the time the sweat furnace doors are open;(C) Keeping building doors and other openings closed to the greatest extent possible to minimize drafts that would divert emissions from being drawn into the sweat furnace; (D) Maintaining burners on low-fire or pilot operation while the doors are open; (E) Conducting periodic inspections and maintenance of sweat furnace components to ensure their proper operation and performance including but not limited to, door assemblies, seals, combustion chamber refractory material, afterburner and stack refractory, blowers, fans, dampers, burner tubes, door raise cables, pilot light assemblies, baffles, sweat furnace and afterburner shells and other internal structures. (iii) The owner or operator must document in their operation, maintenance, and monitoring (OM&M) plan the procedures to be used to minimize emissions, including unmeasured emissions, in addition to the procedures to ensure the proper operation and maintenance of the sweat furnace.

The facility is choosing to use the air flow test. Records of the 2016 and 2017 test are attached. Other items required in c(ii) and (iii) are listed in the OM&M plan and are documented in the monthly inspection records.

IN COMPLIANCE

MAERS REVIEW

This is a Category III facility because it is an area source subject to NESHAP RRR. As such, there is no

MAERS reporting required, only the payment on the annual fee.

COMPLIANCE DETERMINATION

Based on the information and observations made during this inspection, the facility is in compliance in compliance with the requirements of PTI No. 373-06.

However, the facility does not appear to be in compliance with the requirement to submit semi-annual Excess Emission/Summary Reports and has been informed of this deficiency over the last two inspections.

A violation notice will be issued.

NAME Kate Rose

DATE 7/19/17

SUPERVISOR W.M.