Missouri Department of NATURAL RESOURCES
dnr.mo.gov
Michael L. Parson, Governor
Carol S. Comer, Director

DEC 3 1 2018

Ms. Maggie Crocker
Buick Resources Recycling Facility, LLC
HC 1 Box 1395
Boss, MO 65440

Re: Buick Resources Recycling Facility, LLC (093-0009)
Permit Number: OP2018-116

Dear Ms. Crocker:

Enclosed with this letter is your Part 70 operating permit. Please review this document carefully. Operation of your installation in accordance with the rules and regulations cited in this document is necessary for continued compliance. It is very important that you read and understand the requirements contained in your permit.

This permit may include requirements with which you may not be familiar. If you would like the department to meet with you to discuss how to understand and satisfy the requirements contained in this permit, an appointment referred to as a Compliance Assistance Visit (CAV) can be set up with you. To request a CAV, please contact your local regional office or fill out an online request. The regional office contact information can be found at http://dnr.mo.gov/regions/. The online CAV request can be found at http://dnr.mo.gov/cav/compliance.htm.

You may appeal this permit to the Administrative Hearing Commission (AHC), P.O. Box 1557, Jefferson City, MO 65102, as provided in RSMo 643.078.16 and 621.250.3. If you choose to appeal, you must file a petition with the AHC within 30 days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed. If it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the AHC.

If you have any questions or need additional information regarding this permit, please contact the Air Pollution Control Program (APCP) at (573) 751-4817, or you may write to the Department of Natural Resources, Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Michael J. Stansfield, P.E.
Operating Permit Unit Chief

MJS:ahj

Enclosures

c: PAMS File: 093-0009-027

MISSOURI
DEPARTMENT OF
NATURAL RESOURCES
Air Pollution Control Program

PART 70
PERMIT TO OPERATE

Under the authority of RSMo 643 and the Federal Clean Air Act the applicant is authorized to operate the air contaminant source(s) described below, in accordance with the laws, rules, and conditions set forth herein.

Operating Permit Number: OP2018-116
Expiration Date: DEC 3 1 2023
Installation ID: 093-0009
Project Number: 093-0009-027

Installation Name and Address
Buick Resources Recycling Facility, LLC
HC 1 Box 1395
Boss, MO 65440
Iron County

Parent Company's Name and Address
The Doe Run Company
1801 Park 270, Suite 300
St. Louis, MO 63146

Installation Description:
The Buick Resource Recycling Facility, LLC is a secondary lead recycling plant owned and operated by The Doe Run Resources Corporation d/b/a The Doe Run Company. The installation is a major source of SO_x, NO_x, CO, PM_{10}, and lead compounds (HAP).

DEC 3 1 2018
Effective Date

Director or Designee
Department of Natural Resources

Table of Contents

I. Installation Equipment Listing

EMISSION SOURCES WITH LIMITATIONS

The following list provides a description of the equipment at this installation that emits air pollutants and that are identified as having source-specific emission limitations. These emission sources are also subject to the plant wide emission limitations.

Emission Source	Description	Total Enclosure	Control Equipment	Emission Point	Applicable Requirements
EU-8	Blast Furnace: 100 MMBtu/hr metallurgical coke, 2 MMBtu/hr propane, 29.9 tph feed	TE-4 Hot Metals Building	CD-38 Process Baghouse with BLDS, 370,000 acfm (or CD-9 Main Baghouse with BLDS, 450,000 acfm)	EP-8 with SO_2 and CO CEMS	Construction Permits 062011-004, 062011-004A, 012005-008A, 012005-008B, 012005-008C, and 012005-008D; 2013 Consent Judgement; NSPS L; MACT X
EU-10	Blast Furnace Process: settler, transfer pot, conveyor 3110				
EU-73	Sweat Furnace Fugitives, Copper Cable Compactor, Mold Pouring				
EU-81	Refinery Kettles (R3 & R7-R10) Process Emissions; Refinery: dross hopper, screw, and bunker				Construction Permits 062011-004, 012005-008A, 012005-008B, 012005-008C, and 012005-008D; 2013 Consent Judgement; NSPS L; MACT X
EU-9A	Reverberatory Furnace: 42 MMBtu/hr propane, 34 tph feed		CD-25 Oxy-Fuel Firing System; CD-34 Afterburner; CD-35 Lead Baghouse with BLDS, 75,000 acfm; & CD-37 Dry Lime Scrubber & Baghouse with BLDS, 70,000 acfm (or feed desulfurization via reagent added to feed, CD-25 Oxy-Fuel Firing System, CD-34 Afterburner, & CD-38 Process Baghouse with BLDS, 370,000 acfm)		Construction Permits 062011-004, 062011-004A, 012005-008A, 012005-008B, 012005-008C, and 012005-008D; 2013 Consent Judgement; NSPS L; MACT X

Emission Source	Description	Total Enclosure	Control Equipment	Emission Point	Applicable Requirements
EU-9B	Reverberatory Feed Storage Building Ventilation: hopper/pan feeder, belt conveyor, slag bunker	TE-3 Reverberatory Furnace Feed Building	CD-9 Main Baghouse with BLDS, 450,000 acfm	EP-8 with SO_2 and CO CEMS	Construction Permits 062011-004, 012005-008A, 012005-008B, 012005-008C, and 012005-008D; MACT X
EU-11	Dross Kettles and Fugitives: (5) dross kettles (D1-D5), 15 tph, dross bunker, dross screw, dross hopper, FS-3300 and FS-3301 recycle kettles, Cable & Scrap Lead Storage for the sweat furnaces, blast furnace crane aisle area, reverberatory furnace feed screw conveyors, dust chute, reverberatory furnace lead tap	TE-4 Hot Metals Building			Construction Permits 062011-004, 012005-008A, 012005-008B, 012005-008C, and 012005-008D; 2013 Consent Judgement; NSPS L; MACT X, voluntary condition
EU-22-23	(5) Dross Kettles Combustion: 18.0 MMBtu/hr propane				Construction Permits 062011-004, 012005-008A, 012005-008B, 012005-008C, and 012005-008D; 2013 Consent Judgement; NSPS L; MACT X
EU-39	Sweat Furnace #1: 7.5 MMBtu/hr propane, 0.5 tph feed		CD-16 Afterburner & CD-38 Process Baghouse with BLDS, 370,000 acfm (or CD-16 Afterburner & CD-9 Main Baghouse with BLDS, 450,000 acfm)		Construction Permits 062011-004, 062011-004A, 012005-008A, 012005-008B, 012005-008C, and 012005-008D; 2013 Consent Judgement; NSPS L; MACT X
EU-64	Sweat Furnace #2: 7.5 MMBtu/hr propane, 0.5 tph feed		CD-22 Afterburner & CD-38 Process Baghouse with BLDS, 370,000 acfm (or CD-22 Afterburner & CD-9 Main Baghouse with BLDS, 450,000 acfm)		

Emission Source	Description	Total Enclosure	Control Equipment	Emission Point	Applicable Requirements
EU-16A	BSN Process: V103 6,600 gallon acid clarifier tank, V104 2,904 gallon acid clarifier tank, industrial battery cutting station, hammer mill, paste vibrator, 17,000 gallon 202 Paste Tank, 9,000 gallon 301A paste tank, 9,000 gallon 301B paste tank, paste filter press, 9,730 gallon 311C acid containment tank, 9,730 gallon 311F acid containment tank, hydrodynamic separator, santa maria/paste settler, first trommel, hydrostatic separator, second trommel, 2,640 gallon poly wash tank, post & grids conveyor, separator screw conveyor, and separator storage	None	All equipment is enclosed and vents to CD-10 BSN Wet Scrubber	EP-16	Construction Permits 012005-008A and 012005-008D, MACT X, 10 CSR 10-6.220
EU-16B	BSN Process: Truck unloading, industrial battery storage, industrial battery dump, tilters, vibrating pan, and palletized storage area	TE-5 BSN Building	CD-101 Receiving Dock Baghouse with BLDS, 80,000 acfm	EP-103	MACT X, 10 CSR 10-6.220
EU-16C	BSN Process: drum shredder steel conveyor, battery shredder, acid vibrator, H103 conveyor, 8210 conveyor, 3,960 gallon V102 tank, diversion chute, vibrating hopper, and acid filter press		CD-103 BSN Baghouse with BLDS, 100,000 acfm		
EU-28	Refinery Kettles R9 & R10 Combustion: 8.4 MMBtu/hr propane	TE-4 Hot Metals Building	CD-40 ERP Baghouse with BLDS, 60,000 dscfm	EP-105	Construction Permits 012005-008A, 012005-008D, and 092014-006, NSPS L, MACT X, 2013 Consent Judgement
EU-105A	ERP Kettles R11 & R12: (2) 225 ton refining kettles - process emissions				Construction Permit 092014-006, MACT X, NSPS L, 2013 Consent Judgement
EU-105B	ERP Kettles R11 & R12 Combustion: 12 MMBtu/hr propane				Construction Permit 092014-006, MACT X, NSPS L, 2013 Consent Judgement
EU-26B	Refinery Kettles R5 & R6 - (2) 225 ton refining kettles - process emissions				Construction Permit 012005-008A, NSPS L, MACT X, 2013 Consent Judgement

Emission Source	Description	Total Enclosure	Control Equipment	Emission Point	Applicable Requirements
EU-31B	Drum Shredder Room	TE-5 BSN Building	CD-31B Drum Shredder Hygiene Baghouse with BLDS, 40,000 dscfm	EP-31B	Construction Permit 052017-004, MACT X, 10 CSR 10-6.220
EU-31C	Drum Shredder, Saturn Model No. 60-44HT with (2) 300 HP electric motors and 22.25 inch cutter diameter, 25 tph, 2017, magnet, and LBM conveyor		CD-31C Drum Shredder Process Baghouse with BLDS, 15,000 dscfm	EP-31C	Construction Permit 052017-004, MACT X, 10 CSR 10-6.220, 2013 Consent Judgement
EU-71	Reverberatory Furnace Process Fugitives: Slag Tap	TE-4 Hot Metals Building	CD-27 Reverberatory Furnace Building Baghouse with BLDS, 60,000 acfm	EP-71	Construction Permits 012005-008A, 012005-008C and 012005-008D; 2013 Consent Judgement; NSPS L; MACT X
EU-72	North Refinery Kettles (R1, R2, and R4)		CD-28 North Refinery Baghouse with BLDS, 20,000 acfm	EP-72	Construction Permits 012005-008A, 012005-008C and 012005-008D; 2013 Consent Judgement; NSPS L; MACT X
EU-74	Paved Haul Road - Coke Delivery Route	None	CD-74 Sweeping & Water Flushing	Fugitive	Construction Permit 012005-008A[1]
EU-75	Paved Haul Road - Battery Delivery Route	None	CD-75 Sweeping & Water Flushing	Fugitive	
EU-76	Paved Haul Road - Paste Transfer Route	None	CD-76 Sweeping & Water Flushing	Fugitive	
EU-77	Paved Haul Road - Feed Transfer Route No. 1: Refinery to Covered Materials Storage Building	None	CD-77 Sweeping & Water Flushing	Fugitive	
EU-78	Paved Haul Road - Feed Transfer Route No. 2: Coke Storage to the Blast Furnace Feed Building	None	CD-78 Sweeping & Water Flushing	Fugitive	
EU-79	Paved Haul Road - Feed Transfer Route No. 3: Outdoor Storage to the Blast Furnace Feed Building	None	CD-79 Sweeping & Water Flushing	Fugitive	

[1] These haul roads are also subject to MACT X requirements in Permit Condition PW005.

Emission Source	Description	Total Enclosure	Control Equipment	Emission Point	Applicable Requirements
EU-12	Refinery fugitive emissions, Casting Machines: 0.608 MMBtu/hr propane, Refinery Dock Loading/Unloading: loading of product, trans loading of batteries, unloading of reagents, alloy materials, and lead bearing materials	TE-4 Hot Metals Building	CD-81 Baghouse with BLDS, 60,000 acfm	EP-81	Construction Permits 012005-008A and 012005-008D; 2013 Consent Judgement; NSPS L; MACT X
EU-86	Lime Transfer from Truck to Storage Bin, 25 tph	None	None	EP-86	10 CSR 10-6.220, 10 CSR 10-6.400
EU-87	Hydrator	None	None	EP-87	10 CSR 10-6.220
EU-94	Blast Furnace Feed Conveyor (3095), Charge Hopper, BF Feed Storage Building	TE-2 Blast Feed Furnace Building	CD-94 Baghouse with BLDS, 40,000 acfm	EP-94	MACT X, 10 CSR 10-6.220
EU-95	Pallet Grinder, 22.5 tph	None	None	EP-95	Construction Permit 102011-005, 10 CSR 10-6.220, 10 CSR 10-6.400
EU-96	Pallet Grinder Material Handling, 22.5 tph	None	None	EP-96	10 CSR 10-6.220, 10 CSR 10-6.400
EU-97	Pallet Grinder Diesel Engine, 400 HP, 2011	None	None	EP-97	Construction Permit 102011-005, NSPS IIII, 10 CSR 10-6.260
EU-98	Pallet Paved Haul Roads, 3.25 VMT/hr pallets and 2.031 VMT/hr ground wood	None	CD-98 Watering or Surfactant Spray	Fugitive	Construction Permit 102011-005[1]
EU-101	Paste Bunker	TE-5 BSN Building	CD-103 BSN Baghouse with BLDS, 100,000 acfm	EP-103	MACT X, 10 CSR 10-6.220
EU-102	Covered Material Storage Bins Building contains lead bearing materials including but not limited to: hazardous waste, furnace feed materials, and nonhazardous waste	TE-1 CMSB Building	CD-102 CMSB Baghouse with BLDS, 80,000 acfm	EP-102	
EU-104	Steel Processing: (5) acetylene (1470 Btu/hr) or propylene (2400 Btu/hr) torches	TE-6 Steel Processing Building	CD-104 Steel Baghouse with BLDS, 20,000 acfm	EP-104	
EU-106	ACD Engine, 66 HP, diesel, 2007	None	None	Fugitive	Construction Permit 072015-017, NSPS IIII, 10 CSR 10-6.260

Emission Source	Description	Total Enclosure	Control Equipment	Emission Point	Applicable Requirements
EU-110	Air Curtain Destructor (ACD), 30 tpd, 2008	None	None	Fugitive	Construction Permit 072015-017, 10 CSR 10-6.161, NSPS DDDD, 10 CSR 10-6.260
EU-112A	ACD Paved Haul Road, 0.68 miles	None	Best Management Practices (BMPs)	Fugitive	Construction Permit 072015-017
EU-112B	ACD Unpaved Haul Road, 0.99 miles	None		Fugitive	
EU-114	Emergency Backup Diesel Pump, 115 HP, 2010, John Deere 4045HF285	None	None	EP-114	NSPS IIII, 10 CSR 10-6.260
EU-60	Convey Slag Material, 41 tph	None	None	EP-60	10 CSR 10-6.220, 10 CSR 10-6.400
EU-61	Load out of Slag, 41 tph	None	None	EP-61	
EU-32	Laboratory Activities (Sample Crusher)	None	CD-32 Baghouse	EP-32	Construction Permit 012005-008A, 10 CSR 10-6.220
EU-24	Refinery Kettles R1 & R2 Combustion: 11.5 MMBtu/hr propane	None		EP-24	Construction Permits 012005-008A and 012005-008D, NSPS L, voluntary condition
EU-25	Refinery Kettles R3 & R4 Combustion: 11.5 MMBtu/hr propane			EP-25	
EU-26A	Refinery Kettles R5 & R6 Combustion: 11.5 MMBtu/hr propane			EP-26	
EU-27	Refinery Kettles R7 & R8 Combustion: 13.5 MMBtu/hr propane			EP-27	
EU-13	Open Storage Fugitives of Iron, Coke, Limestone, and Silica	Partial Enclosure	CD-13 Wet Suppression	Fugitive	Construction Permit 012005-008A
EU-33	Change house Boiler: 2.93 MMBtu/hr propane	None	None	EP-33	MACT DDDDD

EMISSION SOURCES WITHOUT SPECIFIC LIMITATIONS

The following list provides a description of the equipment that does not have source-specific limitations at the time of permit issuance. These emission sources are subject to the plant wide emission limitations.

Emission Source	Description
EU-15A	Gasoline Storage Tank: 1,950 gallons
EU-15B	Diesel Storage Tanks: 1,950 gallons
EU-85	Paved Haul Road - Lime and Gypsum from Entrance to Scrubber[2]
EU-99	Ground Pallet Storage Pile, 22.5 tph, 0.36 acres
EU-111	ACD Ash Loading, 30 tpd
EU-113	ACD Ash Unloading, 30 tpd
	East Awning & Parking Lot: roofed area east of BSN receiving dock where hazardous waste and closed lead bearing material is stored
	Steel Case Storage: area south of BSN receiving dock where steel cases from industrial batteries are stored prior to being shipped offsite
	Pinta Tank: 10,000 gallon acid tank in Acid basement that collects liquid from Paste Bunker and Battery Bunker Floor
	Poly Blower: blower that blows poly battery casing chips to trailer
	Poly Vibrator: small vibrating screen that dries poly battery casing chips
	Electrolyte Tanks: (1) 75,000 gallon & (1) 68,000 gallon weak sulfuric acid storage tanks
	Acid Neutralization Tank 311D: 9,730 gallon tank where neutralizing agents are added to acid for neutralization
	Acid Neutralization Tank 311E: 9,730 gallon tank where neutralizing agents are added to acid for neutralization
	Blast Furnace Wet Slag Conveyance: trough carrying water and granulated slag from furnace to gator pumps
	Copper Storage: storage in totally enclosed Hot Metals building for Compacted cable
	Lead Product Storage: storage of finished lead product in totally enclosed Hot Metals Building
	Cooling Towers: Blast Furnace cooler 1, blast furnace cooler 2, Reverb cooler, Refinery cooler
	Slag Gator Box: Water and granulated slag pumping
	Slag Sand Screw: Open screw conveyor with water and granulated slag
	South Collection Sump: open concrete impoundment with water and granulated slag inside, recycled to the sand screw
	North Collection Sump: open concrete impoundment with water and granulated slag inside
	Slag Screw Conveyors: Open screw conveyor with water and granulated slag
	Slag Roll-off Storage: Roll off containers slag is dropped into from screw conveyors, then closed for storage
	Onsite Landfill: slag, gypsum, excavated materials
	Propane Tanks: (6) storage tanks

[2] CD-85 Sweeping & Water Flushing required by Permit Condition PW005.

II. Plant Wide Emission Limitations

The installation shall comply with each of the following emission limitations. Consult the appropriate sections in the CFR and CSR for the full text of the applicable requirements. All citations, unless otherwise noted, are to the regulations in effect as of the date that this permit is issued. The plant wide conditions apply to all emission sources at this installation. All emission sources are listed in Section I under Emission Sources with Limitations and Emission Sources without Limitations.

PERMIT CONDITION PW001

10 CSR 10-6.120 Restriction of Emissions of Lead From Specific Lead Smelter-Refinery Installations[3]

Operational Limitation:

This installation shall limit total lead production to 175,000 tons per calendar year. [10 CSR 10-6.120(3)(B)2]

General Provisions:

1. The permittee shall maintain a file, which identifies the date and time of any significant malfunction of plant process operations or of emission control equipment, which results in increased lead emissions. The file also shall contain a description of any corrective action taken, including the date and time. 10 CSR 10-6.050 *Start-Up, Shutdown, and Malfunction Conditions* shall apply. [10 CSR 10-6.120(3)(A)1]
2. All of these files relating to operational malfunction shall be retained for a minimum of five years and, upon request, shall be made available to the Director. [10 CSR 10-6.120(3)(A)2 & §70.6(a)(3)(ii)]
3. The permittee shall control fugitive emissions of lead from all process and area sources at the installation by measures described in a work practice manual identified in 10 CSR 10-6.120(3)(C)2. It shall be a violation of 10 CSR 10-6.120 to fail to adhere to the requirements of these work practices. [10 CSR 10-6.120(3)(C)1]
4. The permittee shall prepare, submit for approval, and then implement a process and area-specific work practice manual that will apply to locations of fugitive lead emissions at the installation. [10 CSR 10-6.120(3)(C)2.A]
5. The manual shall be the method of determining compliance with the provisions 10 CSR 10-6.120(3)(C). Failure to adhere to the work practices in the manual shall be a violation of 10 CSR 10-6.120. [10 CSR 10-6.120(3)(C)2.B]
6. Any change to the manual proposed by the permittee following the initial approval shall be requested in writing to the Director. Any proposed change shall demonstrate that the change in the work practice will not lessen the effectiveness of the fugitive emission reductions for the work practice involved. Written approval by the Director is required before any change becomes effective in the manual. [10 CSR 10-6.120(3)(C)2.C]
7. If the Director determines a change in the work practice manual is necessary, the Director will notify the permittee. The permittee shall revise the manual to reflect these changes and submit the revised manual within 30 days of receipt of notification. These changes shall become effective following written approval of the revised manual by the Director. [10 CSR 10-6.120(3)(C)2.D]

[3] As amended effective September 30, 2009.

Reporting and Record Keeping:

1. The permittee shall keep records and files generated by the work practice manual's implementation. [10 CSR 10-6.120(4)(A)]
2. The work practice manual shall contain the requirement that records of inspections made by the operator of fugitive emissions control equipment such as hoods, air ducts, and exhaust fans be maintained by the operator. [10 CSR 10-6.120(4)(B)]
3. The permittee shall maintain records of monthly and calendar year total lead production.
4. Records shall be kept for a minimum of five years at the installation and shall be made available upon request of the Director for purposes of determining compliance. [10 CSR 10-6.120(4)(D) & §70.6(a)(3)(ii)]
5. The permittee shall report to the Air Pollution Control Program's Compliance/Enforcement Section at P.O. Box 176, Jefferson City, MO 65102 or AirComplianceReporting@dnr.mo.gov, no later than 10 days after the end of the month during which records indicate an exceedance of the lead production limit. [§70.6(a)(3)(iii)]
6. The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit. [§70.6(a)(3)(iii)]

PERMIT CONDITION PW002

10 CSR 10-6.080 Emission Standards for Hazardous Air Pollutants
40 CFR Part 61, Subpart M – National Emission Standard for Asbestos[4]

Standard for Demolition and Renovation:

1. Applicability. To determine which requirements of §61.145(a), (b), and (c) apply, prior to the commencement of the demolition or renovation, the permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation operation will occur for the presence of asbestos, including Category I and Category II nonfriable asbestos containing material (ACM). The requirements of §61.145(b) and (c) apply to each demolition or renovation activity, including the removal of regulated asbestos-containing material (RACM) as follows: [§61.145(a)]
   a) In a facility being demolished, all the requirements of §61.145(b) and (c) apply, except as provided in §61.145(a)(3), if the combined amount of RACM is [§61.145(a)(1)]
      i) At least 80 linear meters (260 linear feet) on pipes or at least 15 square meters (160 square feet) on other facility components, or [§61.145(a)(1)(i)]
      ii) At least 1 cubic meter (35 cubic feet) off facility components where the length or area could not be measured previously. [§61.145(a)(1)(ii)]
   b) In a facility being demolished, only the notification requirements of §61.145(b)(1), (2), (3)(i) and (iv), and (4)(i) through (vii) and (4)(ix) and (xvi) apply, if the combined amount of RACM is [§61.145(a)(2)]
      i) Less than 80 linear meters (260 linear feet) on pipes and less than 15 square meters (160 square feet) on other facility components, and [§61.145(a)(2)(i)]
      ii) Less than one cubic meter (35 cubic feet) off facility components, where the length or area could not be measured previously or there is no asbestos. [§61.145(a)(2)(ii)]
   c) If the facility is being demolished under an order of the State of Missouri or local government agency, issued because the facility is structurally unsound and in danger of imminent collapse, only the requirements of §61.145(b)(1), (b)(2), (b)(3)(iii), (b)(4) (except (b)(4)(viii)), (b)(5), and (c)(4) through (c)(9) apply. [§61.145(a)(3)]
   d) In a facility being renovated, including any individual nonscheduled renovation operation, all the requirements of §61.145(b) and (c) apply if the combined amount of RACM to be stripped, removed, dislodged, cut, drilled, or similarly disturbed is [§61.145(a)(4)]
      i) At least 80 linear meters (260 linear feet) on pipes or at least 15 square meters (160 square feet) on other facility components, or [§61.145(a)(4)(i)]
      ii) At least 1 cubic meter (35 cubic feet) off facility components where the length or area could not be measured previously. [§61.145(a)(4)(ii)]
      iii) To determine whether §61.145(a)(4) applies to planned renovation operations involving individual nonscheduled operations, predict the combined additive amount of RACM to be removed or stripped during a calendar year of January 1 through December 31. [§61.145(a)(4)(iii)]
      iv) To determine whether §61.145(a)(4) applies to emergency renovation operations, estimate the combined amount of RACM to be removed or stripped as a result of the sudden, unexpected event that necessitated the renovation. [§61.145(a)(4)(iv)]
   e) Demolition and renovation operations are exempt from the requirements of §§61.05(a), 61.07, and 61.09. [§61.145(a)(5)]

[4] SOURCE: 55 FR 48419, Nov. 20, 1990; 56 FR 1669, Jan. 16, 1991

2. Notification requirements. For each demolition or renovation activity subject to §61.145, the permittee shall: [§61.145(b)]
   a) Provide the Director with written notice of intention to demolish or renovate. Delivery of the notice by U.S. Postal Service, commercial delivery service, or hand delivery is acceptable. [§61.145(b)(1)]
   b) Update notice, as necessary, including when the amount of asbestos affected changes by at least 20 percent. [§61.145(b)(2)]
   c) Postmark or deliver the notice as follows: [§61.145(b)(3)]
      i) At least 10 working days before asbestos stripping or removal work or any other activity begins (such as site preparation that would break up, dislodge or similarly disturb asbestos material), if the operation is described in §61.145(a)(1) and (4) (except (a)(4)(iii) and (a)(4)(iv)). If the operation is as described in §61.145(a)(2), notification is required 10 working days before demolition begins. [§61.145(b)(3)(i)]
      ii) At least 10 working days before the end of the calendar year preceding the year for which notice is being given for renovations described in §61.145(a)(4)(iii). [§61.145(b)(3)(ii)]
      iii) As early as possible before, but not later than, the following working day if the operation is a demolition ordered according to §61.145(a)(3) or, if the operation is a renovation described in §61.145(a)(4)(iv). [§61.145(b)(3)(iii)]
      iv) For asbestos stripping or removal work in a demolition or renovation operation, described in §61.145(a)(1) and (4) (except (a)(4)(iii) and (a)(4)(iv)), and for a demolition described in §61.145(a)(2), that will begin on a date other than the one contained in the original notice, notice of the new start date shall be provided to the Director as follows: [§61.145(b)(3)(iv)]
         (1) When the asbestos stripping or removal operation or demolition operation covered by this paragraph will begin after the date contained in the notice, [§61.145(b)(3)(iv)(A)]
            (a) Notify the Director of the new start date by telephone as soon as possible before the original start date, and [§61.145(b)(3)(iv)(A)(1)]
            (b) Provide the Director with a written notice of the new start date as soon as possible before, and no later than, the original start date. Delivery of the updated notice by the U.S. Postal Service, commercial delivery service, or hand delivery is acceptable. [§61.145(b)(3)(iv)(A)(2)]
         (2) When the asbestos stripping or removal operation or demolition operation covered by this paragraph will begin on a date earlier than the original start date, [§61.145(b)(3)(iv)(B)]
            (a) Provide the Director with a written notice of the new start date at least 10 working days before asbestos stripping or removal work begins. [§61.145(b)(3)(iv)(B)(1)]
            (b) For demolitions covered by §61.145(a)(2), provide the Director written notice of a new start date at least 10 working days before commencement of demolition. Delivery of updated notice by U.S. Postal Service, commercial delivery service, or hand delivery is acceptable. [§61.145(b)(3)(iv)(B)(2)]
         (3) In no event shall an operation covered by this paragraph begin on a date other than the date contained in the written notice of the new start date. [§61.145(b)(3)(iv)(C)]
   d) Include the following in the notice: [§61.145(b)(4)]
      i) An indication of whether the notice is the original or a revised notification. [§61.145(b)(4)(i)]
      ii) Name, address, and telephone number of both the facility owner and operator and the asbestos removal contractor owner or operator. [§61.145(b)(4)(ii)]
      iii) Type of operation: demolition or renovation. [§61.145(b)(4)(iii)]

iv) Description of the facility or affected part of the facility including the size (square meters [square feet] and number of floors), age, and present and prior use of the facility. [§61.145(b)(4)(iv)]
v) Procedure, including analytical methods, employed to detect the presence of RACM and Category I and Category II nonfriable ACM. [§61.145(b)(4)(v)]
vi) Estimate of the approximate amount of RACM to be removed from the facility in terms of length of pipe in linear meters (linear feet), surface area in square meters (square feet) on other facility components, or volume in cubic meters (cubic feet) if off the facility components. Also, estimate the approximate amount of Category I and Category II nonfriable ACM in the affected part of the facility that will not be removed before demolition. [§61.145(b)(4)(vi)]
vii) Location and street address (including building number or name and floor or room number, if appropriate), city, county, and state, of the facility being demolished or renovated. [§61.145(b)(4)(vii)]
viii) Scheduled starting and completion dates of asbestos removal work (or any other activity, such as site preparation that would break up, dislodge, or similarly disturb asbestos material) in a demolition or renovation; planned renovation operations involving individual nonscheduled operations shall only include the beginning and ending dates of the report period as described in §61.145(a)(4)(iii). [§61.145(b)(4)(viii)]
ix) Scheduled starting and completion dates of demolition or renovation. [§61.145(b)(4)(ix)]
x) Description of planned demolition or renovation work to be performed and method(s) to be employed, including demolition or renovation techniques to be used and description of affected facility components. [§61.145(b)(4)(x)]
xi) Description of work practices and engineering controls to be used to comply with the requirements of NESHAP M, including asbestos removal and waste-handling emission control procedures. [§61.145(b)(4)(xi)]
xii) Name and location of the waste disposal site where the asbestos-containing waste material will be deposited. [§61.145(b)(4)(xii)]
xiii) A certification that at least one person trained as required by §61.145(c)(8) will supervise the stripping and removal described by this notification. [§61.145(b)(4)(xiii)]
xiv) For facilities described in §61.145(a)(3), the name, title, and authority of the State of Missouri or local government representative who has ordered the demolition, the date that the order was issued, and the date on which the demolition was ordered to begin. A copy of the order shall be attached to the notification. [§61.145(b)(4)(xiv)]
xv) For emergency renovations described in §61.145(a)(4)(iv), the date and hour that the emergency occurred, a description of the sudden, unexpected event, and an explanation of how the event caused an unsafe condition, or would cause equipment damage or an unreasonable financial burden. [§61.145(b)(4)(xv)]
xvi) Description of procedures to be followed in the event that unexpected RACM is found or Category II nonfriable ACM becomes crumbled, pulverized, or reduced to powder. [§61.145(b)(4)(xvi)]
xvii) Name, address, and telephone number of the waste transporter. [§61.145(b)(4)(xvii)]

e) The information required in §61.145(b)(4) shall be reported using a form similar to that shown in Figure 3 of NESHAP M. [§61.145(b)(5)]

3. Procedures for asbestos emission control. For each demolition or renovation activity subject to §61.145(c), according to §61.145(a), the permittee shall comply with the following procedures: [§61.145(c)]

a) Remove all RACM from a facility being demolished or renovated before any activity begins that would break up, dislodge, or similarly disturb the material or preclude access to the material for subsequent removal. RACM need not be removed before demolition if: [§61.145(c)(1)]
   i) It is Category I nonfriable ACM that is not in poor condition and is not friable. [§61.145(c)(1)(i)]
   ii) It is on a facility component that is encased in concrete or other similarly hard material and is adequately wet whenever exposed during demolition; or [§61.145(c)(1)(ii)]
   iii) It was not accessible for testing and was, therefore, not discovered until after demolition began and, because of the demolition, the material cannot be safely removed. If not removed for safety reasons, the exposed RACM and any asbestos-contaminated debris shall be treated as asbestos-containing waste material and adequately wet at all times until disposed of. [§61.145(c)(1)(iii)]
   iv) They are Category II nonfriable ACM and the probability is low that the materials will become crumbled, pulverized, or reduced to powder during demolition. [§61.145(c)(1)(iv)]
b) When a facility component that contains, is covered with, or is coated with RACM is being taken out of the facility as a unit or in sections: [§61.145(c)(2)]
   i) Adequately wet all RACM exposed during cutting or disjoining operations; and [§61.145(c)(2)(i)]
   ii) Carefully lower each unit or section to the floor and to ground level, not dropping, throwing, sliding, or otherwise damaging or disturbing the RACM. [§61.145(c)(2)(ii)]
c) When RACM is stripped from a facility component while it remains in place in the facility, adequately wet the RACM during the stripping operation. [§61.145(c)(3)]
   i) In renovation operations, wetting is not required if: [§61.145(c)(3)(i)]
      (1) The permittee has obtained prior written approval from the Director based on a written application that wetting to comply with this paragraph would unavoidably damage equipment or present a safety hazard; and [§61.145(c)(3)(i)(A)]
      (2) The permittee uses of the following emission control methods: [§61.145(c)(3)(i)(B)]
         (a) A local exhaust ventilation and collection system designed and operated to capture the particulate asbestos material produced by the stripping and removal of the asbestos materials. The system must exhibit no visible emissions to the outside air or be designed and operated in accordance with the requirements in §61.152. [§61.145(c)(3)(i)(B)(1)]
         (b) A glove-bag system designed and operated to contain the particulate asbestos material produced by the stripping of the asbestos materials. [§61.145(c)(3)(i)(B)(2)]
         (c) Leak-tight wrapping to contain all RACM prior to dismantlement. [§61.145(c)(3)(i)(B)(3)]
   ii) In renovation operations where wetting would result in equipment damage or a safety hazard, and the methods allowed in §61.145(c)(3)(i) cannot be used, another method may be used after obtaining written approval from the Director based upon a determination that it is equivalent to wetting in controlling emissions or to the methods allowed in §61.145(c)(3)(i). [§61.145(c)(3)(ii)]
   iii) A copy of the Director's written approval shall be kept at the worksite and made available for inspection. [§61.145(c)(3)(iii)]
d) After a facility component covered with, coated with, or containing RACM has been taken out of the facility as a unit or in sections pursuant to §61.145(c)(2), it shall be stripped or contained in leak-tight wrapping, except as described in §61.145(c)(5). If stripped, either: [§61.145(c)(4)]
   i) Adequately wet the RACM during stripping; or [§61.145(c)(4)(i)]

ii) Use a local exhaust ventilation and collection system designed and operated to capture the particulate asbestos material produced by the stripping. The system shall exhibit no visible emissions to the outside air or be designed and operated in accordance with the requirements in §61.152. [§61.145(c)(4)(ii)]

e) For large facility components such as reactor vessels, large tanks, and steam generators, but not beams (which must be handled in accordance with §61.145(c)(2), (3), and (4)), the RACM is not required to be stripped if the following requirements are met: [§61.145(c)(5)]
   i) The component is removed, transported, stored, disposed of, or reused without disturbing or damaging the RACM. [§61.145(c)(5)(i)]
   ii) The component is encased in a leak-tight wrapping. [§61.145(c)(5)(ii)]
   iii) The leak-tight wrapping is labeled according to §61.149(d)(1)(i), (ii), and (iii) during all loading and unloading operations and during storage. [§61.145(c)(5)(iii)]

f) For all RACM, including material that has been removed or stripped: [§61.145(c)(6)]
   i) Adequately wet the material and ensure that it remains wet until collected and contained or treated in preparation for disposal in accordance with §61.150; and [§61.145(c)(6)(i)]
   ii) Carefully lower the material to the ground and floor, not dropping, throwing, sliding, or otherwise damaging or disturbing the material. [§61.145(c)(6)(ii)]
   iii) Transport the material to the ground via leak-tight chutes or containers if it has been removed or stripped more than 50 feet above ground level and was not removed as units or in sections. [§61.145(c)(6)(iii)]
   iv) RACM contained in leak-tight wrapping that has been removed in accordance with §61.145(c)(4) and (c)(3)(i)(B)(3) need not be wetted. [§61.145(c)(6)(iv)]

g) When the temperature at the point of wetting is below 0 °C (32 °F): [§61.145(c)(7)]
   i) The permittee need not comply with §61.145(c)(2)(i) and the wetting provisions of §61.145(c)(3). [§61.145(c)(7)(i)]
   ii) The permittee shall remove facility components containing, coated with, or covered with RACM as units or in sections to the maximum extent possible. [§61.145(c)(7)(ii)]
   iii) During periods when wetting operations are suspended due to freezing temperatures, the permittee shall record the temperature in the area containing the facility components at the beginning, middle, and end of each workday and keep daily temperature records available for inspection by the Director during normal business hours at the demolition or renovation site. The permittee shall retain the temperature records for at least five years. [§61.145(c)(7)(iii) and §70.6(a)(3)(ii)]

h) No RACM shall be stripped, removed, or otherwise handled or disturbed at a facility regulated by §61.145 unless at least one on-site representative, such as a foreman or management-level person or other authorized representative, trained in the provisions of this regulation and the means of complying with them, is present. Every two years, the trained on-site individual shall receive refresher training in the provisions of NESHAP M. The required training shall include as a minimum: applicability; notifications; material identification; control procedures for removals including, at least, wetting, local exhaust ventilation, negative pressure enclosures, glove-bag procedures, and high efficiency particulate air (HEPA) filters; waste disposal work practices; reporting and recordkeeping; and asbestos hazards and worker protection. Evidence that the required training has been completed shall be posted and made available for inspection by the Director at the demolition or renovation site. [§61.145(c)(8)]

i) For facilities described in §61.145(a)(3), adequately wet the portion of the facility that contains RACM during the wrecking operation. [§61.145(c)(9)]

j) If a facility is demolished by intentional burning, all RACM including Category I and Category II nonfriable ACM shall be removed in accordance with NESHAP M before burning. [§61.145(c)(10)]

Reporting:

The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit. [§70.6(a)(3)(iii)]

PERMIT CONDITION PW003

10 CSR 10-6.060 Construction Permits Required
PSD Permit 012005-008D, Issued September 25, 2017

Operational Limitations:

The permittee shall preclude all public access to the permittee's declared property boundary. The permittee shall submit documentation to demonstrate preclusion to the Air Pollution Control Program's Permit Section for review and approval. [Special Condition 11]

Notifications:

1. The permittee shall notify the Air Pollution Control Program's Permits Section before initial startup of any modifications to the facility design that could impact the release parameters or primary PM_{10} emission rates as specified in the Memorandums from the Modeling Unit titled, "Class I AAQIA for the Doe Run Company Buick Resource Recycling Facility PSD Modeling – Main Stack PM_{10} Emission Limit Amendment Request " (October 2014) and "Class II AAQIA for the Doe Run Company Buick Resource Recycling Facility PSD Modeling – Main Stack PM_{10} Emission Limit Amendment Request" (October 2014). In the event the Air Pollution Control Program determines that the changes are significant, the permittee shall submit an updated AAQIA to the Air Pollution Control Program that continues to demonstrate compliance with the NAAQS and PSD increment. [Special Condition 9]
2. The permittee shall notify the Air Pollution Control Program's Permits Section before initial startup of any modifications to the facility design that could impact the release parameters, NO_x emission rates, or SO_2 emission rates as specified in the Memorandum from the Modeling Unit titled, "AAQIA for the Doe Run Company Resource Recycling Division – Amendment to Permit #012005-008" (October 2007). In the event the Air Pollution Control Program determines that the changes are significant, the permittee shall submit an updated AAQIA to the Air Pollution Control Program that continues to demonstrate compliance with the NAAQS and PSD increment. [Special Condition 10]

PERMIT CONDITION PW004

2013 Consent Judgement, Case No. 13IR-CC00016
2013 Lead NAAQS Attainment Demonstration SIP
2008 National Ambient Air Quality Standard for Lead

This is a State Only permit requirement.

Consent Judgement Requirements:

1. Missouri has a lead monitoring site network, the 2011 Missouri Ambient Air Quality Monitoring Network Plan, which was approved by EPA on December 12, 2011. MoDNR will monitor consistent with the Monitoring Plan and any amendments thereto. Data from any MoDNR, Buick Resources Recycling Facility, LLC, or Doe Run monitor that is not located within ambient air shall be used solely for informational purposes and not for determining attainment with the 2008 Lead NAAQS. [Paragraph 9.A]
2. The permittee has two non-ambient monitors at the sites known as the North and South BRRF monitoring sites. The permittee shall continue data collection from these monitors until data collected from the ambient air network for 36 three-month rolling averages shows continuous attainment with the 2008 Lead NAAQS, until Buick Resources Recycling Facility, LLC or Doe Run no longer owns or operates the property where the monitors are located, or upon approval by MoDNR that continued monitoring is not necessary. [Paragraph 9.B]
3. The permittee has a meteorological station and shall continue to monitor meteorological data to support future dispersion modeling or other episode analysis. Meteorological data collection shall include 10-meter wind speed, 10-meter wind direction, 10-meter ambient temperature, ambient barometric pressure, 10-meter sigma theta, 10-meter delta temperature, relative humidity, and precipitation. Meteorological data will also include 2 meter ambient and delta temperature and incoming solar radiation. The permittee shall continue data collection from these monitors until data collected from the ambient air network for 36 three-month rolling averages shows continuous attainment with the 2008 Lead NAAQS, until the permittee or Doe Run no longer owns or operates the property, or upon approval by MoDNR that the continued monitoring is not necessary. [Paragraph 9.C]
4. Meteorological monitoring shall be conducted pursuant to a MoDNR-approved Quality Assurance Project Plan (QAPP). [Paragraph 9.D]
5. The permittee shall provide to MoDNR the air monitoring data analysis within 30 days after the end of each calendar month. [Paragraph 9.E]
6. The permittee shall provide to MoDNR the meteorological monitoring data and quality assurance summaries in a quarterly report within 45 days after the end of each calendar quarter electronically in the format identified in the QAPP. [Paragraph 9.F]
7. If the permittee or Doe Run purchases property where the MoDNR Buick North East monitor is located, the permittee or Doe Run shall allow MoDNR access to the property for the purposes of continuing the 2008 Lead NAAQS monitoring. [Paragraph 9.G]
8. The permittee and Doe Run shall notify MoDNR of any real property acquired or released from its possession in the Buick/Viburnum trend nonattainment area where a MoDNR monitor is located or within where a Buick Resources Recycling Facility, LLC fence line to preclude public access is located within 30 days of the transaction being filed with the local Recorder of Deeds. This notification shall include a copy of the Warranty Deed and legal description of the property. [Paragraph 9.H]

Recordkeeping and Reporting:

1. The permittee shall maintain all records required by this permit for not less than five years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request. [§70.6(a)(3)(ii)]
2. The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit. [§70.6(a)(3)(iii)]

PERMIT CONDITION PW005
Fugitive Dust Source Standards

40 CFR Part 63, Subpart X – National Emission Standards for Hazardous Air Pollutants From Secondary Lead Smelting[24]

Fugitive Dust Standards:

1. The permittee shall prepare, and at all times operate according to, a standard operating procedures manual that describes in detail the measures that will be put in place and implemented to control the fugitive dust emissions from the sources listed in §63.545(a)(1) through (7). [§63.545(a)]
   a) Plant roadways. [§63.545(a)(1)]
   b) Plant buildings. [§63.545(a)(2)]
   c) Accidental releases. [§63.545(a)(3)]
   d) Battery storage area. [§63.545(a)(4)]
   e) Equipment maintenance. [§63.545(a)(5)]
   f) Material storage areas. [§63.545(a)(6)]
   g) Material handling areas. [§63.545(a)(7)]
2. The permittee shall submit the standard operating procedures manual to the Director for review and approval when initially developed and any time changes are made. [§63.545(b)]
3. The controls specified in the standard operating procedures manual shall at a minimum include the requirements specified in §63.545(c)(1) through (7): [§63.545(c)]
   a) Cleaning. Where a cleaning practice is specified, the permittee shall clean by wet wash or a vacuum equipped with a filter rated by the manufacturer to achieve 99.97 percent capture efficiency for 0.3-micron particles in a manner that does not generate fugitive lead dust. [§63.545(c)(1)]
   b) Plant roadways and paved areas. The permittee shall pave all areas subject to vehicle traffic and the permittee shall clean the pavement twice per day, except on days when natural precipitation makes cleaning unnecessary or when sand or a similar material has been spread on plant roadways to provide traction on ice or snow. Limited access and limited use roadways such as unpaved roads to remote locations on the property may be exempt from this requirement if they are used infrequently (no more than one round trip per day). [§63.545(c)(2)]
   c) Accidental releases. The permittee shall initiate cleaning of all affected areas within one hour after detection of any accidental release of lead dust that exceeds 10 pounds (the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) reportable quantity for lead at 40 CFR 302.4). [§63.545(c)(3)]
   d) Battery storage areas. The permittee shall inspect any batteries that are not stored in a total enclosure once each week and move any broken batteries to an enclosure within 72 hours of identification. The permittee shall clean residue from broken batteries within 72 hours of identification. [§63.545(c)(4)]
   e) Materials storage and handling areas. The permittee shall wash each vehicle at each exit of the material storage and handling areas. The vehicle wash shall include washing of tires, undercarriage and exterior surface of the vehicle followed by vehicle inspection. [§63.545(c)(5)]
   f) Equipment maintenance. The permittee shall perform all maintenance activities that could generate lead dust in a manner that minimizes emissions of fugitive dust. This shall include one or more of the following: [§63.545(c)(6)]
      i) Performing maintenance inside a total permanent enclosure maintained at negative pressure. [§63.545(c)(6)(i)]

ii) Performing maintenance inside a temporary enclosure and use a vacuum system either equipped with a filter rated by the manufacturer to achieve a capture efficiency of 99.97 percent for 0.3-micron particles or routed to an existing control device permitted for this activity. [§63.545(c)(6)(ii)]
iii) Performing maintenance inside a partial enclosure and use of wet suppression sufficient to prevent dust formation. [§63.545(c)(6)(iii)]
iv) Decontamination of equipment prior to removal from an enclosure. [§63.545(c)(6)(iv)]
v) Immediate repair of ductwork or structure leaks without an enclosure if the time to construct a temporary enclosure would exceed the time to make a temporary or permanent repair, or if construction of an enclosure would cause a higher level of emissions than if an enclosure were not constructed. [§63.545(c)(6)(v)]
vi) Activities required for inspection of fabric filters and maintenance of filters that are in need of removal and replacement are not required to be conducted inside of total enclosures. Used fabric filters shall be placed in sealed plastic bags or containers prior to removal from a baghouse. [§63.545(c)(6)(vi)]

g) Material transport. The permittee shall collect and transport all lead bearing dust (i.e. lead bearing material that is a dust) within closed conveyor systems or in sealed, leak-proof containers unless the collection and transport activities are contained within a total enclosure. All other lead bearing material shall be contained and covered for transport outside of a total enclosure in a manner that prevents spillage or dust formation. Intact batteries and lead ingot product are exempt from the requirement to be covered for transport. [§63.545(c)(7)]

4. The standard operating procedures manual shall specify that records be maintained of all vehicle-washing activities performed to control fugitive dust emissions. [§63.545(d)]
5. The permittee shall pave all grounds on the facility or plant groundcover sufficient to prevent wind-blown dust. The permittee may use dust suppressants on unpaved areas that will not support a groundcover (e.g., roadway shoulders, steep slopes, limited access and limited use roadways). [§63.545(e)]
6. As provided in §63.6(g), as an alternative to the requirements specified in §63.545, the permittee may demonstrate to the Administrator that an alternative measure(s) is equivalent or better than a practice(s) described in §63.545. [§63.545(f)]
7. At all times, the permittee shall operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Director that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [§63.543(k)]
8. The emissions standards in MACT X apply at all times. [§63.541(d)]

Notification Requirements:

1. The permittee shall comply with all of the notification requirements of §63.9. Electronic notifications are encouraged if suitable for the specific case (e.g., by electronic media such as Excel spreadsheet, on CD or hard copy), and when required by MACT X. [§63.549(a)]
2. The permittee shall submit the fugitive dust control standard operating procedures manual required under §63.545(a) to the Director along with a notification that the permittee is seeking review and approval of these plans and procedures. For sources that commenced construction or reconstruction after January 5, 2012, the permittee shall submit this notification no later than 180 days before startup of the constructed or reconstructed source. [§63.549(b)]

General Provisions:

The permittee shall comply with the applicable provisions of 40 CFR Part 63, Subpart A as indicated in Table 1 to MACT X. [§63.0541(b)]

Recordkeeping and Reporting Requirements:

1. The permittee shall comply with all of the recordkeeping and reporting requirements specified in §63.10 that are referenced in Table 1 to MACT X. [§63.550(a)]
   a) Records shall be maintained in a form suitable and readily available for expeditious review, according to §63.10(b)(1). However, electronic recordkeeping and reporting if suitable for the specific case (e.g., by electronic media such as Excel spreadsheet, on CD or hard copy), and when required by MACT X. [§63.550(a)(1)]
   b) Records shall be kept on site for at least two years after the date of occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1). [§63.550(a)(2)]
2. The standard operating procedures manuals required in §63.545(a) shall be submitted to the Director in electronic format for review and approval of the initial submittal and whenever an update is made to the procedure. [§63.550(b)]
3. The permittee shall maintain for a period of five years, records of the information listed in §63.550(c)(1) through (13). [§63.550(c)]
   a) Records of all cleaning and inspections required as part of the practices described in the standard operating procedures manual required under §63.545(a) for the control of fugitive dust emissions. [§63.550(c)(9)]
   b) Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control equipment and monitoring equipment. [§63.550(c)(11)]
   c) Records of actions taken during periods of malfunction to minimize emissions in accordance with §63.543(k), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. [§63.550(c)(12)]
4. The permittee shall comply with all of the reporting requirements specified in §63.10 of the General Provisions that are referenced in Table 1 to MACT X. [§63.550(d)]
   a) The permittee shall submit reports no less frequent than specified under §63.10(e)(3) of the General Provisions. [§63.550(d)(1)]
   b) Once a source reports a violation of the standard or excess emissions, the permittee shall follow the reporting format required under §63.10(e)(3) until a request to reduce reporting frequency is approved by the Director. [§63.550(d)(2)]
5. In addition to the information required under the applicable sections of §63.10, the permittee shall include in the reports required under §63.550(d) the information specified in §63.550(e)(1) through (14). [§63.550(e)]
   a) If a malfunction occurred during the reporting period, the report must include the number, duration, and a brief description for each type of malfunction that occurred during the reporting period and caused or may have caused any applicable emissions limitation to be exceeded. The report must also include a description of actions taken during a malfunction of an affected source to minimize emissions in accordance with §63.543(k), including actions taken to correct a malfunction. [§63.550(e)(11)]
   b) A summary of the fugitive dust control measures performed during the required reporting period, including an explanation of the periods when the procedures outlined in the standard operating procedures manual pursuant to §63.545(a) were not followed and the corrective actions taken. The reports shall not contain copies of the daily records required to demonstrate compliance with

the requirements of the standard operating procedures manuals required under §63.545(a). [§63.550(e)(12)]

c) The permittee shall submit records pursuant to §63.550(e)(14)(i) through (iii). [§63.550(e)(14)]
   i) All reports required by MACT X not subject to the requirements in §63.550(e)(14)(i) and (ii) shall be sent to the Administrator at the appropriate address listed in §63.13 and to the Air Pollution Control Program's Compliance/Enforcement Section, P.O. Box 176, Jefferson City, MO 65102. The Director may request a report in any form suitable for the specific case (e.g., by electronic media such as Excel spreadsheet, on CD or hard copy). The Director retains the right to require submittal of reports subject to §63.550(e)(14)(i) and (ii) in paper format. [§63.550(e)(14)(iii)]

6. The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit. [§70.6(a)(3)(iii)]

III. Emission Unit Specific Emission Limitations

The installation shall comply with each of the following emission limitations. Consult the appropriate sections in the CFR and CSR for the full text of the applicable requirements. All citations, unless otherwise noted, are to the regulations in effect as of the date that this permit is issued.

PERMIT CONDITION 001 10 CSR 10-6.060 Construction Permits Required Construction Permit 052017-004, Issued May 15, 2017				
Emission Source	**Description**	**Total Enclosure**	**Control Equipment**	**Emission Point**
EU-31B	Drum Shredder Room	TE-5 BSN Building	CD-31B Drum Shredder Hygiene Baghouse with BLDS, 40,000 acfm	EP-31B
EU-31C	Drum Shredder, Saturn Model No. 60-44HT with (2) 300 HP electric motors and 22.25 inch cutter diameter, 25 tph, 2017, magnet, and LBM conveyor		CD-31C Drum Shredder Process Baghouse with BLDS, 15,000 acfm	EP-31C

Emission Limitations:

The permittee shall not emit PM_{10} in excess of the following rates: [Special Condition 1.A]

Emission Point	Description	PM_{10} Emission Rate Limit
EP-31B	Drum Shredder Hygiene Baghouse	0.09 lb/hr
EP-31C	Drum Shredder Process Baghouse	0.0223 lb/hr

Operational Limitations:

1. The permittee shall capture lead and particulate emissions from EU-31B Drum Shredder Room and control the captured emissions using CD-31B Drum Shredder Hygiene Baghouse. The permittee shall capture lead and particulate emissions from EU-31C Drum Shredder and control the captured emissions using CD-31C Drum Shredder Process Baghouse. [Special Condition 2.A]
2. CD-31B Drum Shredder Hygiene Baghouse and CD-31C Drum Shredder Process Baghouse shall be operated and maintained in accordance with the baghouse manufacturer's specifications. CD-31B Drum Shredder Hygiene Baghouse and CD-31C Drum Shredder Process Baghouse shall be equipped with gauges or meters, which indicate the pressure drop across each control device. These gauges or meters shall be located such that Department of Natural Resources' employees may easily observe them. [Special Condition 2.B]
3. Replacement filters for CD-31B Drum Shredder Hygiene Baghouse and CD-31C Drum Shredder Process Baghouse shall be kept on hand at all times. The replacement filters shall be made of fibers appropriate for operating conditions expected to occur (i.e. temperature limits, acidic and alkali resistance, and abrasion resistance). The fractional efficiency of each replacement filter shall be greater than or equal to that of the filter it is replacing. [Special Condition 2.C]

Performance Testing:

1. In order to demonstrate ongoing compliance with the PM_{10} emission rate limits in Special Condition 1.A, the permittee shall conduct subsequent stack testing: [Special Condition 4.B]

a) No later than two years after the most recent stack test if the results of the most recent stack test are greater than 75% of the PM_{10} emission rate limit.
b) No later than five years after the most recent stack test if the results of the most recent stack test are less than or equal to 75% of the PM_{10} emission rate limit.

2. Performance testing shall be conducted at a shredding rate of greater than or equal to 22.5 tons per hour. If the most recent stack test was conducted at a shredding rate below 22.5 tons per hour, the maximum shredding rate shall be limited to 110% of the average shredding rate during the most recent stack test. [Special Condition 4.C]
3. A complete Proposed Test Plan Form shall be submitted to the Air Pollution Control Program 30 days prior to the proposed test date so that the Air Pollution Control Program may arrange a pretest meeting, if necessary, and assure that the test date is acceptable for an observer to be present. The complete Proposed Test Plan Form shall be submitted electronically to stacktesting@dnr.mo.gov. The Proposed Test Plan may serve the purpose of notification and shall be approved by the Director prior to the permittee conducting the required performance testing. [Special Condition 4.D]
4. One electronic copy of a written report of the performance test results shall be submitted to stacktesting@dnr.mo.gov within 60 days of completion of any required performance testing. The report shall include legible copies of the raw data sheets, analytical instrument laboratory data, and complete sample calculations from the required U.S. EPA Method for at least one sample run. [Special Condition 4.E]
5. The performance test report shall fully account for all operational and emission parameters applicable to EU-31B Drum Shredder Room, EU-31C Drum Shredder, EP-31B Drum Shredder Hygiene Baghouse, and EP-31C Drum Shredder Process Baghouse, specifically: [Special Condition 4.F]
   a) The shredding rate (tons) of EU-31C Drum Shredder during each performance test run
   b) The pressure drop across EP-31B Drum Shredder Hygiene Baghouse and EP-31C Drum Shredder Process Baghouse during each performance test run
   c) The fraction efficiency of the filters used by EP-31B Drum Shredder Hygiene Baghouse and EP-31C Drum Shredder Process Baghouse during each performance test run
   d) The type of material being shredded by EU-31C Drum Shredder during each performance test run (i.e. manufacturing plant scrap, post-consumer lead bearing materials, batteries without free liquid, remediation materials, etc.)

Monitoring/Recordkeeping:

1. The permittee shall maintain a copy onsite of documentation from the baghouse manufacturer indicating the normal operating pressure drop range. [Special Condition 2.E]
2. The permittee shall maintain an operating and maintenance log for CD-31B Drum Shredder Hygiene Baghouse and CD-31C Drum Shredder Process Baghouse which shall include the following: [Special Condition 2.F]
   a) For each malfunction:
      i) The excess emissions (tons) of lead, PM, PM_{10}, and $PM_{2.5}$ emissions due to the malfunction
      ii) Duration of the malfunction event (hours)
      iii) Probable cause of the malfunction event
      iv) Detailed explanation of corrective actions taken to restore the control device to proper working order
   b) Detailed explanation of all maintenance activities including:
      i) The date and time of all repair actions and filter replacements.

ii) The type of maintenance activity (i.e. which components were repaired, which filters were replaced, etc.)

c) Regular inspection schedule. At a minimum, CD-31B Drum Shredder Hygiene Baghouse and CD-31C Drum Shredder Process Baghouse shall be inspected each time the operating pressure drop is out of compliance with Special Condition 2.D.

3. The permittee shall maintain all records required by this permit for not less than five years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request. [Special Condition 3]

Reporting:

The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit. [§70.6(a)(3)(iii)]

PERMIT CONDITION 002 10 CSR 10-6.060 Construction Permits Required Construction Permit 072015-017, Issued July 28, 2015			
Emission Source	**Description**	**Control Equipment**	**Emission Point**
EU-106	ACD Engine, 66 HP, diesel, 2007	None	Fugitive
EU-110	Air Curtain Destructor (ACD), 30 tpd, 2008	None	Fugitive
EU-112A	ACD Paved Haul Road, 0.68 miles	BMPs	Fugitive
EU-112B	ACD Unpaved Haul Road, 0.99 miles	BMPs	Fugitive

Operational Limitations:

1. The permittee shall have a representative/employee present at the facility during all burning to ensure compliance with this permit. [Special Condition 1]
2. The permittee shall burn only untreated wood waste generated at the site and other company divisions. [Special Condition 2]
3. The permittee shall not combust any lead-bearing material as defined at §63.542 in EU-110 Air Curtain Destructor.
4. The permittee shall dust/wipe off the clean pallets to remove any residual lead-bearing dust prior to combusting the pallets in the ACD.
5. The distance from the burn site (ACD) to the non-Doe Run nearest occupied structure (residence or business) shall be greater than 200 yards unless the owner or operator of the non-Doe Run occupied structure provides written waivers of this requirement. Any waiver shall accompany this permit. [Special Condition 3]
6. Burning will be allowed continuously 24 hours per day unless complaints are received. If complaints are received and the investigation by the Department of Natural Resources' personnel authenticates the complaint is associated with the operation of EU-110 Air Curtain Destructor then operation of EU-110 Air Curtain Destructor will only be allowed to operate between 7:00 a.m. and 5:00 pm. [Special Condition 4]
7. The permittee shall immediately correct any problems that would arise from the burning, such as a public health hazard, nuisance, or a hazard to vehicular or air traffic. [Special Condition 5]
8. Under no circumstances shall the permittee use tires or other rubber products, plastics, heavy oils, asphalt base or impregnated materials to start or maintain the operation of EU-110 Air Curtain Destructor. [Special Condition 7.A]
9. Burning shall not be conducted during unfavorable meteorological conditions or days when the U.S. Forest Service has issued a high risk of fire according to the local U.S. Forest Service or when an open burning ban has been officially declared by either appropriate state or local officials. [Special Condition 7.B]
10. The permittee shall control fugitive emissions from all of the haul roads and vehicular activity associated with the operation of EU-110 Air Curtain Destructor by applying one of the BMPs as defined in Attachment E. [Special Condition 8]
11. The permittee shall burn exclusively ultra-low sulfur diesel in EU-106 ACD Engine with a sulfur content less than or equal to 15 ppm. [Special Condition 9.A]

Monitoring/Recordkeeping:

1. The permittee shall demonstrate compliance with Special Condition 9.A by obtaining records of the fuel's sulfur content from the vendor for each shipment of fuel received or by testing each shipment of fuel for the sulfur content in accordance with the method described in 10 CSR 10-6.040 Reference

Methods. Alternately, a current fuel supplier contract specifying VLSD (<15 ppm S) to be delivered to the facility will also be acceptable documentation. [Special Condition 9.B]

2. All records shall be maintained for five years and shall be made available for inspection to the Department of Natural Resources upon request. [§70.6(a)(3)(ii)]

Reporting:

1. Special Condition 10.B: The permittee shall report to the Air Pollution Control Program's Compliance/Enforcement Section at P.O. Box 176, Jefferson City, MO 65102 or AirComplianceReporting@dnr.mo.gov, no later than 10 days after an exceedance of any of the operational limitations.
2. The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit. [§70.6(a)(3)(iii)]

PERMIT CONDITION 003 10 CSR 10-6.060 Construction Permits Required Construction Permit 092014-006, Issued September 23, 2014				
Emission Source	**Description**	**Total Enclosure**	**Control Equipment**	**Emission Point**
EU-105A	ERP Kettles R11 & R12: (2) 225 ton refining kettles - process emissions	TE-4 Hot Metals Building	CD-40 ERP Baghouse with BLDS, 60,000 dscfm	EP-105
EU-105B	ERP Kettles R11 & R12 Combustion: 12 MMBtu/hr propane			
EU-28	Refinery Kettles R9 & R10 Combustion: 8.4 MMBtu/hr propane			
EU-26B	Refinery Kettles R5 & R6 - (2) 225 ton refining kettles - process emissions			

Operational Limitations:

1. The airflow rate to EP-105 shall be less than or equal to 60,000 dscfm. [Special Condition 1.B]
2. The permittee shall vent emissions from EU-105A and EU-105B to CD-40 ERP Baghouse [Special Condition 4.A]

Performance Testing:

The permittee shall demonstrate compliance with Special Condition 1.B by measuring the airflow rate during each MACT X lead emissions test on EP-105. EPA Method 2 at NSPS Appendix A-1; EPA Method 5D at NSPS Appendix A-3, Section 8.3 for positive pressure fabric filters; or other methods approved by the Air Pollution Control Program's Stack Testing Unit shall be used to measure the volumetric airflow rate. See Permit Condition 021 for MACT X lead emissions performance testing requirements.

Monitoring:

The permittee shall ensure proper operation of CD-40 ERP Baghouse by complying with the baghouse monitoring requirements in MACT X. See Permit Condition 021 for MACT X baghouse monitoring requirements.

Recordkeeping and Reporting Requirements:

1. The permittee shall maintain all records required by this permit for not less than five years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request. [Special Condition 5.B]
2. The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit. [§70.6(a)(3)(iii)]

PERMIT CONDITION 004 10 CSR 10-6.060 Construction Permits Required Construction Permit 102011-005, Issued October 6, 2011			
Emission Source	**Description**	**Control Equipment**	**Emission Point**
EU-95	Pallet Grinder, 22.5 tph	None	EP-95
EU-97	Pallet Grinder Diesel Engine, 400 HP	None	EP-97
EU-98	Pallet Grinding Paved Haul Roads, 0.19 miles	CD-98 Watering or Surfactant Spray	Fugitive

Emission Limitation:

Special Condition 1.A: The permittee shall emit less than 40 tons of NO_x from EU-097 Pallet Grinder Diesel Engine in any consecutive 12-month period. [Special Condition 1.A]

Operational Limitations:

1. The permittee shall control dust from EU-98 Pallet Grinding Paved Haul Roads using water or surfactant spray consistently and correctly at all times to prevent visible fugitive emissions from entering the ambient air beyond the property boundary. The following conditions apply to haul road watering: [Special Condition 2.A]
   a) Water application shall be consistent with the requirements as contained in the approved 2000 Lead SIP[5].
   b) Water application may be suspended when the temperature is below 35°F or application of water results in the formation of safety concerns due to ice formation. Suspension of water application due to icing conditions will be documented in the equipment-operating log.
2. The permittee shall only use EU-95 Pallet Grinder to grind "clean" pallets. The unacceptable materials for wood grinding include, but are not limited to: [Special Condition 3]
   a) Demolition waste, unless the wood is untreated/unstained/unpainted clean wood
   b) Treated wood [chromated copper arsenate (CCA), pentachlorophenol (PCP), painted and stained]
   c) Contaminated feedstock[6]
   d) Contaminated agricultural grains[6]
   e) Wood waste generated offsite
   f) Tire derived material, tires
   g) Non-agricultural industrial process wastes
3. The permittee shall not use EU-95 Pallet Grinder to grind any lead-bearing material as defined at §63.542.

[5] Water truck and sweeper truck will wet and sweep these roads on a daily basis. Truck watering may be suspended during any period when the temperature is less than 35°F, or whenever the application of water results in the formation of ice which could result in injury to plant personnel. The permittee shall record the date and the shift during which the watering and sweeping occurred. Sweeping and application of water may also be suspended during those periods necessary to perform maintenance and repairs of the roads. Any maintenance and repair work shall be complete as soon as possible, and upon completion, the watering and sweeping shall be immediately resumed. In the event that pallet grinding operations are suspended or shutdown for more than seven days, sweeping and watering applications may be suspended until pallet grinding operations resume. The permittee shall note any suspension of watering/sweeping (i.e. ambient temperature < 35°F, re-paving haul road, no pallet grinding in the previous seven days) in the records.

[6] Contaminated implies no longer fit for its intended use due to contact with chemicals.

4. The permittee shall apply water to the clean pallets prior to grinding to reduce the emission of any residual lead bearing dust.

Monitoring/Recordkeeping:

1. The permittee shall maintain records of monthly and 12-month rolling total NO_x emissions from EU-097 Pallet Grinder Diesel Engine using Attachment F or an equivalent form. [Special Condition 1.B]
2. The permittee shall keep the following records on file and available for inspection: [Special Condition 2.B]
   a) Recordkeeping shall be in accordance with the approved recordkeeping requirements as outlined in the 2000 Lead SIP[5]
3. The permittee shall maintain all records required by this permit for not less than five years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request. These records shall include SDS for all surfactant materials if used. [Special Condition 4.A]

Reporting:

1. The permittee shall report to the Air Pollution Control Program's Compliance/Enforcement Section at P.O. Box 176, Jefferson City, MO 65102 or AirComplianceReporting@dnr.mo.gov, no later than ten days after the end of the month during records indicate an exceedance of the NO_x limit. [Special Condition 4.B]
2. The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit. [§70.6(a)(3)(iii)]

PERMIT CONDITION 005
NOx Requirements

10 CSR 10-6.060 Construction Permits Required
Construction Permit 062011-004A, Issued May 21, 2015
PSD Permit 012005-008A, Issued November 26, 2007

Emission Source	Description	Total Enclosure	Control Equipment	Emission Point
EU-8	Blast Furnace: 100 MMBtu/hr metallurgical coke, 2 MMBtu/hr propane, 32.9 tph feed	TE-4 Hot Metals	CD-38 Process Baghouse with BLDS, 370,000 acfm (or CD-9 Main Baghouse with BLDS, 450,000 acfm)	EP-8 with SO_2 & CO CEMS
EU-10	Blast Furnace Process: settler, transfer pot, conveyor 3110			
EU-73	Sweat Furnace Fugitives, Copper Cable Compactor, Mold Pouring			
EU-9A	Reverberatory Furnace: 42 MMBtu/hr propane, 34 tph feed		CD-25 Oxy-Fuel Firing System; CD-34 Afterburner; CD-35 Lead Baghouse with BLDS, 75,000 acfm; & CD-37 Dry Lime Scrubber & Baghouse with BLDS, 70,000 acfm (or feed desulfurization via reagent added to feed, CD-25 Oxy-Fuel Firing System; CD-34 Afterburner; & CD-38 Process Baghouse with BLDS, 370,000 acfm)	
EU-39	Sweat Furnace #1: 7.5 MMBtu/hr propane, 0.5 tph feed		CD-16 Afterburner & CD-38 Process Baghouse with BLDS, 370,000 acfm (or CD-16 Afterburner & CD-9 Main Baghouse with BLDS, 450,000 acfm)	
EU-64	Sweat Furnace #2: 7.5 MMBtu/hr propane, 0.5 tph feed		CD-22 Afterburner & CD-38 Process Baghouse with BLDS, 370,000 acfm (or CD-22 Afterburner & CD-9 Main Baghouse with BLDS, 450,000 acfm)	
EU-24	Refinery Kettles R1 & R2 Combustion: 11.5 MMBtu/hr propane	None	None	EP-24
EU-25	Refinery Kettles R3 & R4 Combustion: 11.5 MMBtu/hr propane	None	None	EP-25
EU-26A	Refinery Kettles R5 & R6 Combustion: 11.5 MMBtu/hr propane	None	None	EP-26
EU-27	Refinery Kettles R7 & R8 Combustion: 13.5 MMBtu/hr propane	None	None	EP-27

EU-28	Refinery Kettles R9 & R10 Combustion: 8.4 MMBtu/hr propane	TE-4 Hot Metals Building	CD-40 ERP Baghouse with BLDS, 60,000 dscfm	EP-105

Emission Limitations:

1. The permittee shall emit less than 3.09 lb/hr of NO_x from EU-8 Blast Furnace, EU-39 Sweat Furnace #1, and EU-64 Sweat Furnace #2 combined. The permittee shall obtain the combined NO_x emission rate of EU-8 Blast Furnace, EU-39 Sweat Furnace #1, and EU-64 Sweat Furnace #2 by conducting performance testing after CD-38 Process Baghouse, but prior to the introduction of air from CD-37 Dry Lime Scrubber and CD-9 Main Baghouse. [Special Condition 2 of Permit 062011-004A]
2. The permittee shall emit less than 9.95 lb/hr of NO_x from EU-9 Reverberatory Furnace and CD-34 Afterburner. The permittee shall obtain the NO_x emission rate of EU-9 Reverberatory Furnace and CD-34 Afterburner by conducting performance testing after CD-37 Dry Lime Scrubber, but prior to the introduction of air from CD-38 Process Baghouse and CD-9 Main Baghouse. [Special Condition 3 of Permit 062011-004A]

Operational Limitation:

1. The permittee shall apply BACT on the following emission sources to control NO_x emissions: [Special Condition 14 of PSD Permit 012005-008A]

Emission Source	BACT
Blast Furnace	Good combustion practices
Reverberatory Furnace	Oxy-fuel firing
Sweat Furnaces	Good combustion practices
Refinery Kettles R1-R10	Good combustion practices

2. The permittee shall install, operate, and maintain an oxygen-fired combustion technology to reduce NO_x emissions from the reverberatory furnace. [Special Condition 23 of PSD Permit 012005-008A]
3. The oxygen-fired combustion technology shall be operated and maintained in accordance with the manufacturer's specifications.

Performance Testing:

1. The permittee shall demonstrate compliance with Special Condition 2 of Permit 062011-004A by conducting performance testing once every two years[7] on CD-38 Process Baghouse. The applicable test methods and procedures shall be in accordance with promulgated EPA test methods. Selected test methods shall be proposed and submitted to stacktesting@dnr.mo.gov for review and approval by the Air Pollution Control Program. These performance tests shall consist of a minimum of three one-hour test runs. The permittee shall not operate the Process Baghouse Bypass during performance testing. To demonstrate that the Process Baghouse Bypass is not operating during testing, the permittee shall take photos documenting that the bypass damper is closed. [Special Condition 4.A of Permit 062011-004A]
2. The permittee shall demonstrate compliance with Special Condition 3 of Permit 062011-004A by conducting performance testing once every two years[8] on CD-37 Dry Lime Scrubber. The applicable test methods and procedures shall be in accordance with promulgated EPA test methods. Selected

[7] The most recent compliant testing occurred in June 2017; therefore, the next performance test is required in June 2019.

[8] The most recent compliant testing occurred in April 2017; therefore, the next performance test is required in April 2019.

test methods shall be proposed and submitted to stacktesting@dnr.mo.gov for review and approval by the Air Pollution Control Program. These performance tests shall consist of a minimum of three eight-hour test runs. The permittee shall not operate the Scrubber Bypass during performance testing. To demonstrate that the Scrubber Bypass is not operating, the permittee document that the PLC on the bypass line guillotine duct indicates that the duct is closed. [Special Condition 4.B of Permit 062011-004A]

3. The dates on which performance tests are conducted shall be pre-arranged with the Air Pollution Control Program a minimum of 30 days prior to the proposed test dates so that the Air Pollution Control Program may arrange a pre-test meeting, if necessary, and assure that the test dates are acceptable for an observer to be present. A complete Proposed Test Plan form may serve the purpose of notification and shall be approved by the Air Pollution Control Program prior to conducting the required performance testing. [Special Condition 4.C of Permit 062011-004A]
4. One electronic copy of a written report of the performance test results shall be submitted to stacktesting@dnr.mo.gov within 60 days of completion of any required performance testing. The report shall include legible copies of the raw data sheets, analytical instrument laboratory data, and complete sample calculations from the required U.S. EPA Method for at least one sample run. [Special Condition 4.D of Permit 062011-004A]
5. The performance test report shall fully account for all operational and emission parameters specifically:
   a) When testing CD-37 Dry Lime Scrubber:
      i) The reverberatory furnace fuel combustion rate (MMBtu/hr)
      ii) The oxygen addition rate (scfm)
   b) When testing CD-38 Process Baghouse:
      i) The blast furnace metallurgical coke combustion rate (tons per hour)
      ii) The feed rate of each sweat furnace (tons per hour)
      iii) The production rate of the casting machines (tons per hour)

Monitoring/Recordkeeping:

1. The permittee shall maintain a copy of the manufacturer's specifications for the oxygen-fired combustion technology onsite.
2. The permittee shall maintain an operating and maintenance log for the oxygen-fired combustion technology using Attachment D or an equivalent form, which shall include the following:
   a) Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions; and
   b) Maintenance activities, with inspection schedule, repair actions, and replacements, etc.
3. The permittee shall maintain all records required by this permit for not less than five years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request. [Special Condition 5.A of Permit 062011-004A and §70.6(a)(3)(ii)]

Reporting:

1. The permittee shall contact the Air Pollution Control Program's Compliance/Enforcement Section and Permits Section at P.O. Box 176, Jefferson City, MO 65102 or AirComplianceReporting@dnr.mo.gov no later than ten days after submittal of a performance test with results that fail to achieve compliance with Special Conditions 2 or 3 of Permit 062011-004A to discuss the necessary permitting actions and possible enforcement action. [Special Condition 5.B of Permit 062011-004A]

2. The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit. [§70.6(a)(3)(iii)]

PERMIT CONDITION 006

10 CSR 10-6.070 New Source Performance Regulations
40 CFR Part 60, Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines[9]

Emission Source	Description	Control Equipment	Emission Point
EU-106	ACD Engine, 66 HP, diesel, 2007	None	EP-106

Emission Standards:

1. For 2007 model year and later non-emergency stationary CI ICE with a displacement of less than 30 liters per cylinder, the permittee shall comply with the emission standards for new CI engines in §60.4201 for their 2007 model year and later stationary CI ICE. [§60.4204(b)]
   a) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later non-emergency stationary CI ICE with a maximum engine power less than or equal to 3,000 HP and a displacement of less than 10 liters per cylinder to the certification emission standards for new nonroad CI engines in 40 CFR 89.112, 40 CFR 89.113, 40 CFR 1039.101, 40 CFR 1039.102, 40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, and 40 CFR 1039.115, as applicable, for all pollutants, for the same model year and maximum engine power. [§60.4201(a)]

Fuel Requirements:

The permittee shall purchase diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel. [§60.4207(b)]

Monitoring Requirements:

If the stationary CI internal combustion engine is equipped with a diesel particulate filter to comply with the emission standards in §60.4204, the diesel particulate filter shall be installed with a backpressure monitor that notifies the permittee when the high backpressure limit of the engine is approached. [§60.4209(b)]

Compliance Requirements:

1. The permittee shall operate and maintain stationary CI ICE that achieve the emission standards as required in §60.4204 over the entire life of the engine. [§60.4206]
2. The permittee shall do all of the following, except as permitted under §60.4211(g): [§60.4211(a)]
   a) Operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions; [§60.4211(a)(1)]
   b) Change only those emission-related settings that are permitted by the manufacturer; and[§60.4211(a)(2)]
   c) Meet the requirements of 40 CFR Parts 89, 94 and/or 1068, as they apply. [§60.4211(a)(3)]
3. The permittee shall comply by purchasing an engine certified to the emission standards in §60.4204(b) for the same model year and maximum engine power. The engine shall be installed and configured according to the manufacturer's emission-related specifications, except as permitted in §60.4211(g). [§60.4211(c)]

[9] Source: 71 FR 39172, July 11, 2006, as amended at 76 FR 37967, June 28, 2011; 78 FR 6695, Jan. 30, 2013; 79 FR 11251, Feb. 27, 2014; 81 FR 44219, July 7, 2016 and EPA's Memo *Guidance on Vacatur of RICE NESHAP and NSPS Provisions for Emergency Engines* (April 2016).

4. If the permittee does not install, configure, operate, and maintain the engine and control device according to the manufacturer's emission-related written instructions, or the permittee changes emission-related settings in a way that is not permitted by the manufacturer, the permittee shall demonstrate compliance as follows: [§60.4211(g)]
   a) The permittee shall keep a maintenance plan and records of conducted maintenance to demonstrate compliance and shall, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, if the permittee does not install and configure the engine and control device according to the manufacturer's emission-related written instructions, or the permittee changes the emission-related settings in a way that is not permitted by the manufacturer, the permittee shall conduct an initial performance test in accordance with §60.4212 to demonstrate compliance with the applicable emission standards within one year of such action. [§60.4211(g)(1)]

Recordkeeping:

1. If the stationary CI internal combustion engine is equipped with a diesel particulate filter, the permittee shall keep records of any corrective action taken after the backpressure monitor has notified the permittee that the high backpressure limit of the engine is approached. [§60.4214(c)]
2. All records shall be maintained for five years and shall be made available for inspection to the Department of Natural Resources upon request. [§70.6(a)(3)(ii)]

Testing Requirements:

The permittee shall comply with the test methods and procedures in §60.4212.

General Provisions:

The permittee shall comply with applicable 40 CFR Part 60, Subpart A general provisions as indicated in Table 8 to NSPS IIII.

Reporting:

The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit. [§70.6(a)(3)(iii)]

PERMIT CONDITION 007

10 CSR 10-6.070 New Source Performance Regulations
40 CFR Part 60, Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines[9]

Emission Source	Description	Control Equipment	Emission Point
EU-97	Pallet Grinder Diesel Engine, 400 HP, 2011	None	EP-97

Emission Standards:

1. For 2007 model year and later non-emergency stationary CI ICE with a displacement of less than 30 liters per cylinder, the permittee shall comply with the emission standards for new CI engines in §60.4201 for their 2007 model year and later stationary CI ICE. [§60.4204(b)]
   a) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later non-emergency stationary CI ICE with a maximum engine power less than or equal to 3,000 HP and a displacement of less than 10 liters per cylinder to the certification emission standards for new nonroad CI engines in 40 CFR 89.112, 40 CFR 89.113, 40 CFR 1039.101, 40 CFR 1039.102, 40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, and 40 CFR 1039.115, as applicable, for all pollutants, for the same model year and maximum engine power. [§60.4201(a)]

Fuel Requirements:

The permittee shall purchase diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel. [§60.4207(b)]

Monitoring Requirements:

If the stationary CI internal combustion engine is equipped with a diesel particulate filter to comply with the emission standards in § 60.4204, the diesel particulate filter shall be installed with a backpressure monitor that notifies the permittee when the high backpressure limit of the engine is approached. [§60.4209(b)]

Compliance Requirements:

1. The permittee shall operate and maintain stationary CI ICE that achieve the emission standards as required in §60.4204 over the entire life of the engine. [§60.4206]
2. The permittee shall do all of the following, except as permitted under §60.4211(g): [§60.4211(a)]
   a) Operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions; [§60.4211(a)(1)]
   b) Change only those emission-related settings that are permitted by the manufacturer; and[§60.4211(a)(2)]
   c) Meet the requirements of 40 CFR Parts 89, 94 and/or 1068, as they apply. [§60.4211(a)(3)]
3. The permittee shall comply by purchasing an engine certified to the emission standards in §60.4204(b) for the same model year and maximum engine power. The engine shall be installed and configured according to the manufacturer's emission-related specifications, except as permitted in §60.4211(g). [§60.4211(c)]
4. If the permittee does not install, configure, operate, and maintain the engine and control device according to the manufacturer's emission-related written instructions, or the permittee changes emission-related settings in a way that is not permitted by the manufacturer, the permittee shall demonstrate compliance as follows: [§60.4211(g)]

a) The permittee shall keep a maintenance plan and records of conducted maintenance and shall, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, the permittee shall conduct an initial performance test to demonstrate compliance with the applicable emission standards within one year of startup, or within one year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within one year after the permittee changes emission-related settings in a way that is not permitted by the manufacturer. [§60.4211(g)(2)]

Recordkeeping:

1. If the stationary CI internal combustion engine is equipped with a diesel particulate filter, the permittee shall keep records of any corrective action taken after the backpressure monitor has notified the permittee that the high backpressure limit of the engine is approached. [§60.4214(c)]
2. All records shall be maintained for five years and shall be made available for inspection to the Department of Natural Resources upon request. [§70.6(a)(3)(ii)]

Testing Requirements:

The permittee shall comply with the test methods and procedures in §60.4212.

General Provisions:

The permittee shall comply with applicable 40 CFR Part 60, Subpart A general provisions as indicated in Table 8 to NSPS IIII.

Reporting:

The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit. [§70.6(a)(3)(iii)]

PERMIT CONDITION 008 10 CSR 10-6.060 Construction Permits Required Construction Permit 062011-004, Issued June 8, 2011				
Emission Source	**Description**	**Total Enclosure**	**Control Equipment**	**Emission Point**
EU-9A	Reverberatory Furnace: 42 MMBtu/hr propane, 34 tph feed	TE-4 Hot Metals Building	CD-25 Oxy-Fuel Firing System; CD-34 Afterburner; CD-35 Lead Baghouse with BLDS, 75,000 acfm & CD-37 Dry Lime Scrubber & Baghouse with BLDS, 70,000 acfm (or feed desulfurization via reagent added to feed, CD-25 Oxy-Fuel Firing System, CD-34 Afterburner, & CD-38 Process Baghouse with BLDS, 370,000 acfm)	EP-8 with SO_2 & CO CEMS

Emission Limitation:

1. The permittee shall emit less than 7.0 tons of sulfuric acid mist in any consecutive 12-month period from CD-37 Dry Lime Scrubber and Baghouse. [Special Condition 2.A]
2. The permittee shall emit less than 13.68 tons of condensable and filterable $PM_{2.5}$ in any consecutive 12-month period from CD-37 Dry Lime Scrubber and Baghouse. [Special Condition 2.B]

Monitoring and Recordkeeping:

1. The permittee shall monitor and record monthly and 12-month rolling total sulfuric acid mist and condensable and filterable $PM_{2.5}$ emissions using Attachments G and H or equivalent forms. All records shall be kept onsite for at least five years. [Special Condition 2.C]
2. The permittee shall maintain all records required by this permit for not less than five years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request. [§70.6(a)(3)(ii)]

Performance Testing:

1. The permittee shall conduct stack tests in order to develop sulfuric acid mist and condensable and filterable $PM_{2.5}$ emissions factors for EU-9 Reverberatory Furnace while CD-37 Dry Lime Scrubber and Baghouse is in operation. Stack tests shall be conducted once every five years on CD-37 Dry Lime Scrubber and Baghouse[10]. The applicable test methods and procedures for sulfuric acid mist and condensable and filterable $PM_{2.5}$ shall be those specified in Special Conditions 3.B, 3.D, 3.E, 3.F. An alternate method(s) of quantifying the emissions rates of sulfuric acid mist and condensable and filterable $PM_{2.5}$ may be used in place of the testing requirement, if requested by the permittee and approved by the Director. An alternate testing method can also be used if approved by the Compliance Unit of the Air Pollution Control Program. [Special Condition 3.A]

[10] The most recent sulfuric acid mist and $PM_{2.5}$ testing was conducted in September 2012; therefore, subsequent sulfuric acid mist and $PM_{2.5}$ testing is required in September 2017. The installation believes the September 2017 stack test results are invalid and has scheduled a retest for December 2018.

2. The permittee shall not operate the Scrubber Bypass (i.e. the permittee shall not vent emissions from EU-9 Reverberatory Furnace to CD-38 Process Baghouse) during the performance testing required by Special Condition 3.A. To demonstrate that the Scrubber Bypass is not operating, the permittee shall operate a programmable logic controller (PLC) which shall indicate the status (i.e. open or shut) of the guillotine duct on the bypass line at least once per hour. The permittee shall visually inspect the PLC and guillotine duct at least once per month to ensure that the PLC is accurately reflecting the status of the guillotine duct.
3. The test methods and procedures outlined at 40 CFR Part 51, Appendix M, Methods 201, 201A, and 202 shall be adhered to by the permittee in testing for $PM_{2.5}$. Condensable and filterable fractions of $PM_{2.5}$ shall be tested. [Special Condition 3.B]
4. The test methods and procedures outlined at NSPS Appendix A, Method 8 or Method 8A shall be adhered to by the permittee in testing for sulfuric acid mist. [Special Condition 3.D]
5. The test procedures shall have at least three test runs and each run shall consist of a minimum test time of one-hour. [Special Condition 3.E]
6. Sulfuric acid mist and total[11] $PM_{2.5}$ emission factors shall be developed for CD-37 Dry Lime Scrubber and Baghouse in terms of pounds of pollutant per ton of EU-9 Reverberatory Furnace feed. [Special Condition 3.F]
7. A complete Proposed Test Plan Form shall be submitted to the Air Pollution Control Program 30 days prior to the proposed test date so that the Air Pollution Control Program may arrange a pretest meeting, if necessary, and assure that the test date is acceptable for an observer to be present. The complete Proposed Test Plan Form shall be submitted electronically to stacktesting@dnr.mo.gov. The Proposed Test Plan may serve the purpose of notification and shall be approved by the Director prior to the permittee conducting the required performance testing. [Special Condition 3.G]
8. One electronic copy of a written report of the performance test results shall be submitted to stacktesting@dnr.mo.gov within 60 days of completion of any required performance testing. The report shall include legible copies of the raw data sheets, analytical instrument laboratory data, and complete sample calculations from the required U.S. EPA Method for at least one sample run. [Special Condition 3.H]
9. The performance test report shall fully account for all operational and emission parameters specifically:
   a) The reverberatory furnace feed rate (tph)
   b) The reverberatory furnace castable lead production (tph)
   c) The lime injection rate of CD-37 Dry Lime Scrubber (lb/hr)
   d) The temperature of the afterburner (°F)
   e) The oxygen addition rate (scfm)
   f) Whether the guillotine duct (Scrubber Bypass) was open or closed

Reporting:

1. The permittee shall report to the Air Pollution Control Program's Compliance/Enforcement Section at P.O. Box 176, Jefferson City, MO 65102 or AirComplianceReporting@dnr.mo.gov no later than ten days after the end of the month during which records indicate an exceedance of either of the emission limitations.
2. The permittee shall submit a PSD permit application to the Air Pollution Control Program's Permits Section at P.O. Box 176, Jefferson City, MO 65102 no later than 90 days after the end of the month during which records indicate an exceedance of either of the emission limitations.

[11] Filterables plus condensables.

3. The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit. [§70.6(a)(3)(iii)]

PERMIT CONDITION 009
SO_2 Requirements

10 CSR 10-6.060 Construction Permits Required
Construction Permit 062011-004, Issued June 8, 2011
PSD Permit 012005-008A, Issued November 26, 2007
PSD Permit 012005-008C, Issued December 16, 2013
PSD Permit 012005-008D, Issued September 25, 2017

Emission Source	Description	Total Enclosure	Control Equipment	Emission Point
EU-8	Blast Furnace: 100 MMBtu/hr metallurgical coke, 2 MMBtu/hr propane, 29.9 tph feed	TE-4 Hot Metals Building	CD-38 Process Baghouse with BLDS, 370,000 acfm (or CD-9 Main Baghouse with BLDS, 450,000 acfm)	EP-8 with SO_2 & CO CEMS
EU-10	Blast Furnace Process: settler, transfer pot, conveyor 3110			
EU-81	Refinery Kettles (R3 & R7-R10) Process Emissions; Refinery: dross hopper, screw, and bunker			
EU-73	Sweat Furnace Fugitives, Copper Cable Compactor, Mold Pouring			
EU-9A	Reverberatory Furnace: 42 MMBtu/hr propane, 34 tph feed		CD-25 Oxy-Fuel Firing System; CD-34 Afterburner; CD-35 Lead Baghouse with BLDS, 75,000 acfm; & CD-37 Dry Lime Scrubber & Baghouse with BLDS, 70,000 acfm (or feed desulfurization via reagent added to feed, CD-25 Oxy-Fuel Firing System, CD-34 Afterburner, & CD-38 Process Baghouse with BLDS, 370,000 acfm)	
EU-9B	Reverberatory Feed Storage Building Ventilation: hopper/pan feeder, belt conveyor, slag bunker	TE-3 Reverberatory Furnace Feed Building	CD-9 Main Baghouse with BLDS, 450,000 acfm	
EU-11	Dross Kettles and Fugitives: (5) dross kettles (D1-D5), 15 tph, dross bunker, dross screw, dross hopper, FS-3300 and FS-3301 recycle kettles, Cable & Scrap Lead Storage for the sweat furnaces, blast furnace crane aisle area, reverberatory furnace feed screw conveyors, dust chute, reverberatory furnace lead tap	TE-4 Hot Metals Building		
EU-22-23	(5) Dross Kettles Combustion: 18.0 MMBtu/hr propane			

EU-39	Sweat Furnace #1: 7.5 MMBtu/hr propane, 0.5 tph feed	TE-4 Hot Metals Building	CD-16 Afterburner & CD-38 Process Baghouse with BLDS, 370,000 acfm (or CD-16 Afterburner & CD-9 Main Baghouse with BLDS, 450,000 acfm)	EP-8 with SO_2 & CO CEMS
EU-64	Sweat Furnace #2: 7.5 MMBtu/hr propane, 0.5 tph feed		CD-22 Afterburner & CD-38 Process Baghouse with BLDS, 370,000 acfm (or CD-22 Afterburner & CD-9 Main Baghouse with BLDS, 450,000 acfm)	

Emission Limitations:

1. The permittee shall emit less than 3,118.42 tons of SO_2 from EP-8 in any 12-month period. The permittee shall use a certified CEMS to demonstrate compliance. [Special Condition 2.D of Construction Permit 062011-004]
2. The permittee shall not have emission rates greater than those listed in Table 1: Maximum Allowable Emission Rate. These limits are the BACT limits and apply to the sources listed in Table 1. Compliance with these limits will be considered compliance with the BACT requirements. These limits also apply to the NAAQS and the increment analysis. [Special Condition 2 of PSD Permit 012005-008C and Special Condition 3.B of PSD Permit 012005-008D]

Table 1: Maximum Allowable Emission Rate

Emission Point	Description	SO_2 Emission Rate Limit
EP-8	Furnaces and related burners and emission sources that exhaust to the Main Stack	1,688.43 lb/hr

Operational Limitations:

1. The permittee shall apply BACT on the following emission sources to control SO_2 emissions: [Special Condition 14 of PSD Permit 012005-008A]

Emission Source	SO_2 BACT
Blast Furnace	Improvements to battery paste desulfurization system and continued use of low sulfur coke and coal
Refinery Kettles	Low sulfur fuel - propane

2. The sulfur content of the coke combusted in EU-8 Blast Furnace shall not exceed 1.5 weight percent as received on a 12-month rolling average using Attachment N. The permittee shall maintain monthly records from the coke supplier documenting the sulfur content of each coke shipment received or analytical testing documenting the sulfur content of each coke shipment received. [Special Condition 22 of PSD Permit 012005-008A]
3. CD-37 Dry Lime Scrubber shall be equipped with a gauge or meter which accurately monitors and records the lime injection rate. The lime injection rate shall be sufficient to reduce the SO_2 concentration (as observed by the SO_2 CEMS on EP-8) to: [Special Condition 5.C.4 of PSD Permit 012005-008D]
   a) Prior to the stack test required by Special Condition 6 of PSD Permit 012005-008D: 150 ppm SO_2 [Special Condition 5.C.4.a of PSD Permit 012005-008D]

b) After the stack test required by Special Condition 6 of PSD Permit 012005-008D: The average SO_2 concentration observed by the SO_2 CEMS during the most recent stack test compliant with Special Condition 3.A of PSD Permit 012005-008D. [Special Condition 5.C.4.b of PSD Permit 012005-008D]

4. During periods of time that the SO_2 CEMS on EP-8 is down or out of control (as defined by §63.8(c)(7)), the permittee shall inject lime at a minimum rate equal to the average lime injection rate during the most recent seven days of operation, excluding lime injection rates and hours during which any of the following occurred: [Special Condition 5.C.5 of PSD Permit 012005-008D]
   a) The SO_2 emission rate observed by the SO_2 CEMS exceeded 1,688.43 pounds per hour. [Special Condition 5.C.5.a of PSD Permit 012005-008D]
   b) The lime injection rate was not recorded. [Special Condition 5.C.5.b of PSD Permit 012005-008D]
   c) EU-9A operated in Scrubber Bypass Mode. [Special Condition 5.C.5.c of PSD Permit 012005-008D]
   d) EU-9A was not in operation. [Special Condition 5.C.5.d of PSD Permit 012005-008D]
5. The permittee shall control inorganic condensable emissions from EU-9A by adding soda ash to the reverberatory furnace feed during Scrubber Bypass Operating Mode. [Special Condition 5.D.1 of PSD Permit 012005-008D]
6. The permittee shall monitor and record the amount of soda ash added to each charge of the reverberatory furnace's feed auger and the number of reverberatory furnace feed auger charges per day. The soda ash addition rate shall be sufficient to achieve compliance with the SO_2 emission rate limit on EP-8 in Special Condition 3.B of PSD Permit 012005-008D. [Special Condition 5.D.2 of PSD Permit 012005-008D]
7. During periods of time that the SO_2 CEMS on EP-8 is down or out of control (as defined in §63.8(c)(7)), the permittee shall add at least 10,100 pounds of soda ash to each charge of the reverberatory furnace's feed auger. [Special Condition 5.D.3 of PSD Permit 012005-008D]

Monitoring/Recordkeeping:

1. The permittee shall keep track of monthly and 12-month rolling total SO_2 emissions from EP-8. All records shall be kept onsite for at least five years. [Special Condition 2.H of Construction Permit 062011-004]
2. The permittee shall install, calibrate, maintain, and operate a CEMS, and record the output of the system, for measuring SO_2 emissions discharged into the atmosphere from EP-8 whenever secondary lead furnaces are in operation. The CEMS shall be placed in an appropriate location such that accurate readings are possible. The permittee shall also monitor flow to measure amount of SO_2 emitted in tons. [Special Condition 12 of PSD Permit 012005-008A]
3. The permittee shall certify, operate, and maintain the SO_2 CEMS, in accordance with Performance Specification 2 of NSPS Appendix B and §60.13, and the flow monitoring system, in accordance with Performance Specification 6 of NSPS Appendix B and §60.13. The systems shall comply with the quality assurance procedures in NSPS Appendix F. [Special Condition 13.A of PSD Permit 012005-008D]
4. The SO_2 CEMS and flow monitoring system shall be located in EP-8 after all gas streams from EU-8 Blast Furnace, EU-39 Sweat Furnace #1, EU-64 Sweat Furnace #2, and EU-9A Reverberatory Furnace are combined and shall be equipped with an automated data acquisition and handling system for measuring and recording SO_2 concentration (ppm), volumetric gas flow (in scfh), and SO_2 mass emissions (lb/hr) discharged into the atmosphere. [Special Condition 13.B of PSD Permit 012005-008D]

5. The SO_2 CEMS and flow monitoring system shall be used to demonstrate compliance with Special Condition 3.B of PSD Permit 012005-008D and to determine the dry lime injection rate for Special Condition 5.C.4 of PSD Permit 012005-008D during Normal Operating Mode and the soda ash addition rate for Special Condition 5.D.2 of PSD Permit 012005-008D during Scrubber Bypass Operating Mode. [Special Condition 13.C of PSD Permit 012005-008D]
6. The SO_2 CEMS shall be capable of completing a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-min interval. The permittee shall reduce all SO_2 concentrations, volumetric flow, and SO_2 mass emissions data collected by the monitors to hourly averages. The permittee shall use all valid measurements or data points collected during an hour to calculate the hourly averages. All data points collected during an hour shall be, to the extent practicable, evenly spaced over the hour. [Special Condition 13.D of PSD Permit 012005-008D]
7. One-hour average shall be computed as follows: [Special Condition 13.E of PSD Permit 012005-008D]
   a) Except as provided under Special Condition 13.E.3 of PSD Permit 012005-008D, for a full operating hour (any clock hour within 60 minutes of unit operation), at least four valid data points are required to calculate the hourly average, i.e., one data point in each of the 15-minute quadrants of the hour. [Special Condition 13.E.1 of PSD Permit 012005-008D]
   b) Except as provided under Special Condition 13.E.3 of PSD Permit 012005-008D, for a partial operating hour (any clock hour with less than 60 minutes of unit operation), at least one valid data point in each 15-minute quadrant of the hour in which the unit operates is required to calculate the hourly average. [Special Condition 13.E.2 of PSD Permit 012005-008D]
   c) For any operating hour in which required maintenance or quality-assurance activities are performed: [Special Condition 13.E.3 of PSD Permit 012005-008D]
      i) If the unit operates in two or more quadrants of the hour, a minimum of two valid data points, separated by at least 15 minutes, is required to calculate the hourly average; or [Special Condition 13.E.3.a of PSD Permit 012005-008D]
      ii) If the unit operating in only one quadrant of the hour, at least one valid data point is required to calculate the hourly average. [Special Condition 13.E.3.b of PSD Permit 012005-008D]
   d) If a daily calibration error check is failed during any operating hour, all data for that hour shall be invalidated, unless a subsequent calibration error test is passed in the same hour and the requirements of Special Condition 13.E.3 of PSD Permit 012005-008D are met, based solely on valid data recorded after the successful calibration. [Special Condition 13.E.4 of PSD Permit 012005-008D]
   e) For each full or partial operating hour, all valid data points shall be used to calculate the hourly average. [Special Condition 13.E.5 of PSD Permit 012005-008D]
   f) Data recorded during periods of continuous monitoring system breakdown, repair, calibration checks, and zero and span adjustments shall not be included in the data averages computed under Special Condition 13.E of PSD Permit 012005-008D. [Special Condition 13.E.6 of PSD Permit 012005-008D]
   g) Either arithmetic or integrated averaging of all data shall be used to calculate the hourly averages. [Special Condition 13.E.7 of PSD Permit 012005-008D]
8. All excess emissions shall be converted to units of lb/hr. After conversion into lb/hr, the data shall be rounded to the same number of significant digits used in Special Condition 3.B of PSD Permit 012005-008D. [Special Condition 13.F of PSD Permit 012005-008D]
9. For any time period during which emissions were venting to EP-8, but the SO_2 CEMS was down, the permittee is required to calculate the substitute SO_2 emission rate by:
   a) Determining the length of time the CEMS was down.

b) Obtaining the highest valid SO_2 CEMS data for an equivalent length of time during the most recent 30-day period.[12]

10. If total SO_2 CEMS downtime or total flow monitoring system downtime is five percent or greater of the total operating time during any calendar quarter, the permittee shall submit an excess emissions and continuous monitoring system performance report no later than 30 days after the end of the calendar quarter. The continuous monitoring performance report shall contain the following information: [Special Condition 13.G of PSD Permit 012005-008D]
    a) The date and time identifying each period during which the monitoring system was inoperative except for zero (low-level) and high-level checks; [Special Condition 13.G.1 of PSD Permit 012005-008D]
    b) The date and time identifying each period during which the monitoring system was out of control, as defined in §63.8(c)(7); [Special Condition 13.G.2 of PSD Permit 012005-008D]
    c) The specific identification (i.e., the date and time of commencement and completion) of each period of excess emissions, that occurs during startups, shutdowns, and malfunctions; [Special Condition 13.G.3 of PSD Permit 012005-008D]
    d) The specific identification (i.e., the date and time of commencement and completion) of each time period of excess emissions that occurs during periods other than startups, shutdowns, and malfunctions; [Special Condition 13.G.4 of PSD Permit 012005-008D]
    e) The nature and cause of any malfunction (if known); [Special Condition 13.G.5 of PSD Permit 012005-008D]
    f) The corrective action taken or preventive measures adopted; [Special Condition 13.G.6 of PSD Permit 012005-008D]
    g) The nature of the repairs or adjustments to the continuous monitoring system that was inoperative or out of control; [Special Condition 13.G.7 of PSD Permit 012005-008D]
    h) The total process operating time during the calendar quarter. [Special Condition 13.G.8 of PSD Permit 012005-008D]
11. The permittee shall maintain all records required by this permit for not less than five years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request. [§70.6(a)(3)(ii)]

Performance Testing:

1. The permittee shall demonstrate compliance with the emission limitations in Special Condition 2 of PSD Permit 012005-008C as follows: [Special Condition 9 of PSD Permit 012005-008A]
    a) CEMS shall be used to demonstrate compliance with the SO_2 emission limits applicable to EP-8.

Reporting:

1. The permittee shall report to the Air Pollution Control Program's Compliance/Enforcement Section at P.O. Box 176, Jefferson City, MO 65102 or AirComplianceReporting@dnr.mo.gov no later than ten days after an exceedance of the hourly SO_2 emission limit on EP-8.
2. The permittee shall report to the Air Pollution Control Program's Compliance/Enforcement Section at P.O. Box 176, Jefferson City, MO 65102 or AirComplianceReporting@dnr.mo.gov no later than ten days after the end of the month during which records indicate an exceedance of the 12-month rolling SO_2 emission limit on EP-8.

[12] I.e. if the CEMS is down one hour, the substitute SO_2 emission rate is the highest hourly SO_2 emission rate during the most recent 30-day period. If the CEM is down for eight hours, the substitute SO_2 emission rate is the highest consecutive eight hour SO_2 emission rate during the most recent 30-day period.

3. The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit. [§70.6(a)(3)(iii)]

PERMIT CONDITION 010
CO Requirements

10 CSR 10-6.060 Construction Permits Required
PSD Permit 012005-008A, Issued November 26, 2007
PSD Permit 012005-008B, Issued November 8, 2011
PSD Permit 012005-008C, Issued December 16, 2013

Emission Source	Description	Total Enclosure	Control Equipment	Emission Point
EU-8	Blast Furnace: 100 MMBtu/hr metallurgical coke, 2 MMBtu/hr propane, 29.9 tph feed	TE-4 Hot Metals Building	CD-38 Process Baghouse with BLDS, 370,000 acfm (or CD-9 Main Baghouse with BLDS, 450,000 acfm)	EP-8 with SO_2 & CO CEMS
EU-10	Blast Furnace Process: settler, transfer pot, conveyor 3110			
EU-81	Refinery Kettles (R3 & R7-R10) Process Emissions; Refinery: dross hopper, screw, and bunker			
EU-73	Sweat Furnace Fugitives, Copper Cable Compactor, Mold Pouring			
EU-9A	Reverberatory Furnace: 42 MMBtu/hr propane, 34 tph feed		CD-25 Oxy-Fuel Firing System; CD-34 Afterburner; CD-35 Lead Baghouse with BLDS, 75,000 acfm & CD-37 Dry Lime Scrubber & Baghouse with BLDS, 70,000 acfm (or feed desulfurization via reagent added to feed, CD-25 Oxy-Fuel Firing System, CD-34 Afterburner, & CD-38 Process Baghouse with BLDS, 370,000 acfm)	
EU-9B	Reverberatory Feed Storage Building Ventilation: hopper/pan feeder, belt conveyor, slag bunker	TE-3 Reverberatory Furnace Feed Building	CD-9 Main Baghouse with BLDS, 450,000 acfm	
EU-11	Dross Kettles and Fugitives: (5) dross kettles (D1-D5), 15 tph, dross bunker, dross screw, dross hopper, FS-3300 and FS-3301 recycle kettles, Cable & Scrap Lead Storage for the sweat furnaces, blast furnace crane aisle area, reverberatory furnace feed screw conveyors, dust chute, reverberatory furnace lead tap	TE-4 Hot Metals Building		
EU-22-23	(5) Dross Kettles Combustion: 18.0 MMBtu/hr propane			

EU-39	Sweat Furnace #1: 7.5 MMBtu/hr propane, 0.5 tph feed	TE-4 Hot Metals Building	CD-16 Afterburner & CD-38 Process Baghouse with BLDS, 370,000 acfm (or CD-16 Afterburner & CD-9 Main Baghouse with BLDS, 450,000 acfm)	EP-8 with SO2 & CO CEMS
EU-64	Sweat Furnace #2: 7.5 MMBtu/hr propane, 0.5 tph feed		CD-22 Afterburner & CD-38 Process Baghouse with BLDS, 370,000 acfm (or CD-22 Afterburner & CD-9 Main Baghouse with BLDS, 450,000 acfm)	

Emission Limitations:

1. The permittee shall emit less than 364 pounds of CO per ton of blast furnace feed based on a 30-day rolling average, emitted from EP-8. Days in which the blast furnace is not operating shall not be included in the 30-day average. The permittee shall use a certified CO CEMS and daily production records to comply with this emission limit. Production and emission data will correspond to the production day defined as 5:00 a.m. to 5:00 a.m. [Special Condition 2 of PSD Permit 012005-008B]
2. The permittee shall emit less than 38.5 pounds of CO per ton of reverberatory furnace feed, emitted from EP-8, on days when the blast furnace is down and the reverberatory furnace is running. This is based on a 30 day rolling average. The permittee shall use a certified CO CEMS and daily production records to comply with this emission limit. Production and emission data will correspond to the production day defined as 5:00 a.m. to 5:00 a.m. [Special Condition 3 of PSD Permit 012005-008B]
3. The permittee shall emit less than 79,078 tons of CO from EP-8 in any consecutive 12-month rolling period. [Special Condition 5 of PSD Permit 012005-008B]
4. In any consecutive 12-month rolling period when the blast furnace is down, not operating, the permittee shall emit less than 6,121 tons of CO from EP-8 in any consecutive 12-month rolling period. [Special Condition 6 of PSD Permit 012005-008B]
5. The permittee shall not have CO emission rates greater than 18,054 lb/hr from EP-8. This limit is a BACT limit. Compliance with this limit will be considered compliance with the BACT requirements. This limit also applies to the NAAQS and the increment analysis. [Special Condition 2 of PSD Permit 012005-008C]

Operational Limitations:

1. The permittee shall apply BACT on the following emission sources to control CO emissions: [Special Condition 14 of PSD Permit 012005-008A]

Emission Source	CO BACT
Blast Furnace	Good combustion practices
Reverberatory Furnace	Good combustion practices
Sweat Furnaces	Afterburner

Monitoring/Recordkeeping:

1. When the CO CEMS is down and blast furnace is down but the reverberatory furnace is running, the CO CEMS value shall be the daily value of the last full day that the reverberatory furnace and the CO CEMS was operating and the blast furnace was completely down. That daily value shall be used until the CO CEMS is operational. [Special Condition 4 of PSD Permit 012005-008B]

2. Attachments J, K, L, and M or equivalent forms, such as electronic forms, shall be used to demonstrate compliance with Special Conditions 2 – 6. [Special Condition 7 of PSD Permit 012005-008B]
3. The permittee shall install, calibrate, maintain, and operate the CO CEMS on EP-8 and record the output of the system. The CEMS shall be placed in an appropriate location such that accurate readings are possible. The permittee shall also monitor flow to measure amount of CO emitted in tons. The system shall be designed to meet NSPS Appendix B, Performance Specifications 4 and 6 requirements. The specifications of NSPS Appendix F shall apply. NSPS Appendix F requirements shall be supplemented with a quarterly notice to the department with the dates of the quarterly cylinder gas audits and annual relative accuracy test audit. [Special Condition 10 of PSD Permit 012005-008B and Special Condition 13 of PSD Permit 012005-008A]
4. When the CO CEMS is down and the blast furnace is running, the permittee is required to calculate the substitute CO emission rate by:
   a) Determining the length of time the CEMS was down.
   b) Obtaining the highest valid CO CEMS data for an equivalent length of time during the most recent 30-day period.[13]
5. The permittee shall maintain all records required by this permit for not less than five years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request. [§70.6(a)(3)(ii)]

Reporting:

1. The permittee shall report to the Air Pollution Control Program's Compliance/Enforcement Section at P.O. Box 176, Jefferson City, MO 65102 or AirComplianceReporting@dnr.mo.gov no later than ten days after the end of the month during which records indicate an exceedance of Special Conditions 5 or 6 of PSD Permit 012005-008B.
2. The permittee shall report to the Air Pollution Control Program's Compliance/Enforcement Section at P.O. Box 176, Jefferson City, MO 65102 or AirComplianceReporting@dnr.mo.gov no later than ten days after the end of the 30-day period during which records indicate an exceedance of Special Conditions 2 or 3 of PSD Permit 012005-008B.
3. The permittee shall report to the Air Pollution Control Program's Compliance/Enforcement Section at P.O. Box 176, Jefferson City, MO 65102 or AirComplianceReporting@dnr.mo.gov no later than ten days after an exceedance of Special Condition 2 of PSD Permit 012005-008C.
4. If total CO CEMS downtime or total flow monitoring system downtime is five percent or greater of the total operating time during any calendar quarter, the permittee shall submit an excess emissions and continuous monitoring system performance report no later than 30 days after the end of the calendar quarter. The continuous monitoring performance report shall contain the following information:
   a) The date and time identifying each period during which the monitoring system was inoperative except for zero (low-level) and high-level checks;
   b) The date and time identifying each period during which the monitoring system was out of control, as defined in §63.8(c)(7);
   c) The specific identification (i.e., the date and time of commencement and completion) of each period of excess emissions, that occurs during startups, shutdowns, and malfunctions;

[13] I.e. if the CEMS is down one hour, the substitute CO emission rate is the highest hourly CO emission rate during the most recent 30-day period. If the CEM is down for eight hours, the substitute CO emission rate is the highest consecutive eight hour CO emission rate during the most recent 30-day period.

d) The specific identification (i.e., the date and time of commencement and completion) of each time period of excess emissions that occurs during periods other than startups, shutdowns, and malfunctions;
e) The nature and cause of any malfunction (if known);
f) The corrective action taken or preventive measures adopted;
g) The nature of the repairs or adjustments to the continuous monitoring system that was inoperative or out of control;
h) The total process operating time during the calendar quarter.

5. The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit. [§70.6(a)(3)(iii)]

PERMIT CONDITION 011
Lead Requirements

10 CSR 10-6.060 Construction Permits Required
Construction Permit 062011-004, Issued June 8, 2011

Emission Source	Description	Total Enclosure	Control Equipment	Emission Point
EU-8	Blast Furnace: 100 MMBtu/hr metallurgical coke, 2 MMBtu/hr propane, 32.9 tph feed	TE-4 Hot Metals Building	CD-38 Process Baghouse with BLDS, 370,000 acfm (or CD-9 Main Baghouse with BLDS, 450,000 acfm)	EP-8 with SO_2 & CO CEMS
EU-10	Blast Furnace Process: settler, transfer pot, conveyor 3110			
EU-81	Refinery Kettles (R3 & R7-R10) Process Emissions; Refinery: dross hopper, screw, and bunker			
EU-73	Sweat Furnace Fugitives, Copper Cable Compactor, Mold Pouring			
EU-9A	Reverberatory Furnace: 42 MMBtu/hr propane, 34 tph feed		CD-25 Oxy-Fuel Firing System; CD-34 Afterburner; CD-35 Lead Baghouse with BLDS, 75,000 acfm & CD-37 Dry Lime Scrubber & Baghouse with BLDS, 70,000 acfm (or feed desulfurization via reagent added to feed, CD-25 Oxy-Fuel Firing System, CD-34 Afterburner, & CD-38 Process Baghouse with BLDS, 370,000 acfm)	
EU-9B	Reverberatory Feed Storage Building Ventilation: hopper/pan feeder, belt conveyor, slag bunker	TE-3 Reverberatory Furnace Feed Building	CD-9 Main Baghouse with BLDS, 450,000 acfm	
EU-11	Dross Kettles and Fugitives: (5) dross kettles (D1-D5), 15 tph, dross bunker, dross screw, dross hopper, FS-3300 and FS-3301 recycle kettles, Cable & Scrap Lead Storage for the sweat furnaces, blast furnace crane aisle area, reverberatory furnace feed screw conveyors, dust chute, reverberatory furnace lead tap	TE-4 Hot Metals Building		
EU-22-23	(5) Dross Kettles Combustion: 18.0 MMBtu/hr propane			

EU-39	Sweat Furnace #1: 7.5 MMBtu/hr propane, 0.5 tph feed	TE-4 Hot Metals Building	CD-16 Afterburner & CD-38 Process Baghouse with BLDS, 370,000 acfm (or CD-16 Afterburner & CD-9 Main Baghouse with BLDS, 450,000 acfm)	EP-8 with SO2 & CO CEMS
EU-64	Sweat Furnace #2: 7.5 MMBtu/hr propane, 0.5 tph feed		CD-22 Afterburner & CD-38 Process Baghouse with BLDS, 370,000 acfm (or CD-22 Afterburner & CD-9 Main Baghouse with BLDS, 450,000 acfm)	

Emission Limitations:

The permittee shall emit less than 4.9 tons of lead from EP-8 in any consecutive 12-month period. [Special Condition 2.G]

Monitoring/Recordkeeping:

1. The permittee shall keep track of monthly and 12-month rolling total lead emissions from EP-8 using Attachment I or an equivalent form. [Special Condition 2.H]
2. The permittee shall maintain all records required by this permit for not less than five years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request. [§70.6(a)(3)(ii)]

Performance Testing:

1. The permittee shall conduct stack tests in order to develop a lead emission factors for EP-8 during each MACT X required performance test of EP-8. The applicable test methods and procedures for lead shall be those specified in Special Conditions 3.C, 3.G, and 3.H. An alternate method(s) of quantifying the emission rates of lead may be used in place of the testing requirement, if requested by the permittee and approved by the Director. An alternate testing method can also be used if approved by the Compliance Unit of the Air Pollution Control Program. [Special Condition 3.A]
2. The test methods and procedures outlined at NSPS Appendix A, Method 12 shall be adhered to by the permittee in testing for lead. [Special Condition 3.C]
3. A complete Proposed Test Plan Form shall be submitted to the Air Pollution Control Program 30 days prior to the proposed test date so that the Air Pollution Control Program may arrange a pretest meeting, if necessary, and assure that the test date is acceptable for an observer to be present. The complete Proposed Test Plan Form shall be submitted electronically to stacktesting@dnr.mo.gov. The Proposed Test Plan may serve the purpose of notification and shall be approved by the Director prior to the permittee conducting the required performance testing. [Special Condition 3.G]
4. One electronic copy of a written report of the performance test results shall be submitted to stacktesting@dnr.mo.gov within 60 days of completion of any required performance testing. The report shall include legible copies of the raw data sheets, analytical instrument laboratory data, and complete sample calculations from the required U.S. EPA Method for at least one sample run. [Special Condition 3.H]
5. The performance test report shall fully account for all operational and emission parameters specifically:
   a) The blast furnace feed rate (tph)
   b) The reverberatory furnace feed rate (tph)

c) The pressure drop across CD-35 Lead Baghouse (in H_2O)
d) The pressure drop across CD-38 Process Baghouse (in H_2O)
e) The pressure drop across CD-9 Main Baghouse (in H_2O)

Reporting:

1. The permittee shall report to the Air Pollution Control Program's Compliance/Enforcement Section at P.O. Box 176, Jefferson City, MO 65102 or AirComplianceReporting@dnr.mo.gov no later than ten days after the end of the month during which records indicate an exceedance of the lead emission limit.
2. The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit. [§70.6(a)(3)(iii)]

PERMIT CONDITION 012 PM CON Requirements 10 CSR 10-6.060 Construction Permits Required PSD Permit 012005-008D, Issued September 25, 2017				
Emission Source	**Description**	**Total Enclosure**	**Control Equipment**	**Emission Point**
EU-8	Blast Furnace: 100 MMBtu/hr metallurgical coke, 2 MMBtu/hr propane, 32.9 tph feed	TE-4 Hot Metals	CD-38 Process Baghouse with BLDS, 370,000 acfm (or CD-9 Main Baghouse with BLDS, 450,000 acfm)	EP-8 with SO_2 & CO CEMS
EU-10	Blast Furnace Process: settler, transfer pot, conveyor 3110			
EU-81	Refinery Kettles (R3 & R7-R10) Process Emissions; Refinery: dross hopper, screw, and bunker			
EU-73	Sweat Furnace Fugitives, Copper Cable Compactor, Mold Pouring			
EU-9A	Reverberatory Furnace: 42 MMBtu/hr propane, 34 tph feed		CD-25 Oxy-Fuel Firing System; CD-34 Afterburner; CD-35 Lead Baghouse with BLDS, 75,000 acfm; & CD-37 Dry Lime Scrubber & Baghouse with BLDS, 70,000 acfm (or feed desulfurization via reagent added to feed, CD-25 Oxy-Fuel Firing System, CD-34 Afterburner, & CD-38 Process Baghouse with BLDS, 370,000 acfm)	
EU-39	Sweat Furnace #1: 7.5 MMBtu/hr propane, 0.5 tph feed		CD-16 Afterburner & CD-38 Process Baghouse with BLDS, 370,000 acfm (or CD-16 Afterburner & CD-9 Main Baghouse with BLDS, 450,000 acfm)	
EU-64	Sweat Furnace #2: 7.5 MMBtu/hr propane, 0.5 tph feed		CD-22 Afterburner & CD-38 Process Baghouse with BLDS, 370,000 acfm (or CD-22 Afterburner & CD-9 Main Baghouse with BLDS, 450,000 acfm)	

Temporary BACT Limitations:

1. EU-9A Reverberatory Furnace Temporary BACT Limitations: [Special Condition 3]
   a) Normal Operating Mode (i.e. while CD-37 Dry Lime Scrubber is in operation): [Special Condition 3.A]
      i) The permittee shall emit less than 0.094 pounds of primary PM_{10} per ton of reverberatory furnace feed. The permittee shall obtain the controlled primary PM_{10} emission rate after CD-

37 Dry Lime Scrubber, but prior to the introduction of air from CD-38 Process Baghouse and CD-9 Main Baghouse. [Special Condition 3.A.1]

ii) The permittee shall not operate the Scrubber Bypass during testing of CD-37 Dry Lime Scrubber. To demonstrate that the Scrubber Bypass is not operating, the permittee shall operate a programmable logic controller (PLC) which shall indicate the status (i.e. open or shut) of the guillotine duct on the bypass line at least once per hour. The permittee shall visually inspect the PLC and guillotine duct at least once per month to ensure that the PLC is accurately reflecting the status of the guillotine duct. [Special Condition 3.A.2]

2. EU-8, EU-39, and EU-64 Blast and Sweat Furnaces Temporary BACT Limitation: [Special Condition 4]
   a) The permittee shall emit less than 0.75 pounds of primary PM_{10} per ton of blast furnace feed. The permittee shall obtain the primary PM_{10} emission rate of the blast and sweat furnaces by conducting stack testing after CD-38 Process Baghouse, but prior to the introduction of air from CD-37 Dry Lime Scrubber and CD-9 Main Baghouse. [Special Condition 4.A]
   b) The permittee shall not operate the Process Baghouse Bypass during testing of CD-38 Process Baghouse. To demonstrate that the Process Baghouse Bypass is not operating during testing, the permittee shall take photos documenting that the bypass damper is closed. [Special Condition 4.B]

Operational Limitations:

1. The permittee shall not operate in Scrubber Bypass Operating Mode unless one of the following situations exist: [Special Condition 3.C]
   a) A fan associated with CD-37 Dry Lime Scrubber malfunctions. The permittee shall maintain a maintenance log for the fan indicating the date and time of all malfunctions and repairs. [Special Condition 3.C.1]
   b) The temperature of the CD-35 Lead Baghouse exceeds 500°F. The permittee shall maintain a temperature measurement device on CD-35 Lead Baghouse and shall record the measurement at least once per hour. [Special Condition 3.C.2]
   c) CD-35 Lead Baghouse malfunctions. The permittee shall indicate the date and time of all CD-35 Lead Baghouse malfunctions in the maintenance log required by Special Condition 5.A.7. [Special Condition 3.C.3]
   d) CD-35 Lead Baghouse is undergoing maintenance. The permittee shall indicate the date and time of all CD-35 Lead Baghouse maintenance in the maintenance log required by Special Condition 5.A.7. [Special Condition 3.C.4]
   e) CD-37 Dry Lime Scrubber malfunctions. The permittee shall indicate the date and time of all CD-37 Dry Lime Scrubber malfunctions in the maintenance log required by Special Condition 5.C.6. [Special Condition 3.C.5]
   f) CD-37 Dry Lime Scrubber is undergoing maintenance. The permittee shall indicate the date and time of all CD-37 Dry Lime Scrubber maintenance in the maintenance log required by Special Condition 5.C.6. [Special Condition 3.C.6]
   g) A loss of electricity. The permittee shall indicate the reason for the loss of electricity (such as storm damage, vandalism, or vehicular accident) in the maintenance log required by Special Condition 5.C.6. [Special Condition 3.C.7]
2. The permittee shall not operate in Scrubber Bypass Mode for more than 720 hours in any consecutive 12-month period. [Special Condition 3.D]
3. The permittee shall control organic condensable particulate matter emissions from EU-9A Reverberatory Furnace at all times using CD-34 Afterburner. [Special Condition 5.B.1]

4. The permittee shall control organic condensable particulate matter emissions from EU-39 Sweat Furnace #1 at all times using CD-16 Afterburner. [Special Condition 5.B.2]
5. The permittee shall control organic condensable particulate matter emissions from EU-64 Sweat Furnace #2 at all times using CD-22 Afterburner. [Special Condition 5.B.3]
6. The permittee shall continuously monitor and record the temperature of the gases exiting CD-34 Afterburner. The permittee shall maintain the temperature of the gases at greater than or equal to the higher of: [Special Condition 5.B.4]
   a) The average temperature of observed during the most recent approved primary PM_{10} stack test on CD-37 Dry Lime Scrubber. [Special Condition 5.B.4.a]
   b) 50°F below the average temperature observed during the most recent THC and D/F compliance test required by §63.548(j). [Special Condition 5.B.4.b]
7. The permittee shall continuously monitor and record the temperature of the gases exiting Afterburner (CD-16) and Afterburner (CD-22). The permittee shall maintain the temperature of the gases at greater than or equal to the average temperature observed during the most recent approved Primary PM_{10} stack test. [Special Condition 5.B.5]
8. The permittee shall control inorganic condensable particulate matter emissions from EU-9A using CD-37 Dry Lime Scrubber during Normal Operating Mode. [Special Condition 5.C.1]

Monitoring/Recordkeeping:

1. The permittee shall maintain the following records for each instance of Scrubber Bypass Operating Mode operation: [Special Condition 3.E]
   a) The time at which Scrubber Bypass Operating Mode operating began. [Special Condition 3.E.1]
   b) Which of the seven situations indicated in Special Condition 3.C required the Scrubber Bypass Operating Mode operation. [Special Condition 3.E.2]
   c) The time at which Scrubber Bypass Operating Mode operation ended. [Special Condition 3.E.3]
2. The permittee shall maintain records of monthly and 12-month rolling total hours of Scrubber Bypass Operating Mode operation using Attachment O or an equivalent form. [Special Condition 3.F]
3. The permittee shall maintain operating and maintenance logs for CD-16 Afterburner, CD-22 Afterburner, and CD-34 Afterburner which shall include the following: [Special Condition 5.B.6]
   a) Incidents of malfunction, with impact on emissions (tons), duration of event, probable cause, and corrective actions; [Special Condition 5.B.6.a]
   b) Maintenance activities, with inspection schedule, repair actions, and replacements, etc.; and [Special Condition 5.B.6.b]
   c) A written record of regular inspection schedule, the date and results of all inspections including any actions or maintenance activities that result from that inspection. [Special Condition 5.B.6.c]
4. The permittee shall monitor and record the operating pressure drop across CD-37 Dry Lime Scrubber at least once every 24 hours of operation. The scrubber shall be equipped with a gauge or meter that indicates the pressure drop across the scrubber. The operating pressure drop shall be maintained within the range specified by the manufacturer's specifications. [Special Condition 5.C.2]
5. The permittee shall maintain a copy of the manufacturer's specifications for CD-37 Dry Lime Scrubber onsite. [Special Condition 5.C.3]
6. The permittee shall maintain an operating and maintenance log for CD-37 Dry Lime Scrubber which shall include the following: [Special Condition 5.C.6]
   a) Incidents of malfunction, with impact on emissions (tons), duration of event, probable cause, and corrective actions; [Special Condition 5.C.6.a]

b) Maintenance activities, with inspection schedule, repair actions, and replacements, etc.; and [Special Condition 5.C.6.b]
c) A written record of regular inspection schedule, the date and results of all inspections including any actions or maintenance activities that result from that inspection. [Special Condition 5.C.6.c]

7. Process Variability Study:
   a) The permittee shall collect the following information: [Special Condition 7.A]
      i) Analyses of 108 samples of the material fed to EU-9A Reverberatory Furnace. Samples shall be collected on separate calendar days. The analyses shall indicate the levels of: [Special Condition 7.A.1]
         (1) Sulfur, [Special Condition 7.A.1.a]
         (2) Metals, and [Special Condition 7.A.1.b]
         (3) Other components. [Special Condition 7.A.1.c]
      ii) Analyses of 108 samples of the material fed to EU-8 Blast Furnace. Samples shall be collected on separate calendar days. The analyses shall indicate the levels of: [Special Condition 7.A.2]
         (1) Sulfur, [Special Condition 7.A.2.a]
         (2) Metals, and [Special Condition 7.A.2.b]
         (3) Other components. [Special Condition 7.A.2.c]
      iii) For each sample of EU-8 Blast Furnace and EU-9A Reverberatory Furnace feed, an indication of the type of material (i.e. SLI batteries, industrial batteries, reverberatory furnace slag, lead shielding, ballistic sand, lead-lined TV screens, lead paint chips, other lead scrap). [Special Condition 7.A.3]
      iv) An indication of the type of material (i.e. SLI batteries, industrial batteries, reverberatory furnace slag, lead shielding, ballistic sand, lead-lined TV screens, lead paint chips, other lead scrap) processed by EU-39 Sweat Furnace #1 and EU-64 Sweat Furnace #2 for a period of 180 days. [Special Condition 7.A.4]
      v) The type of fuel combusted by EU-8 Blast Furnace and EU-9A Reverberatory Furnace each day for a period of 365 days. [Special Condition 7.A.5]
      vi) The amount of fuel combusted in EU-8 Blast Furnace and EU-9A Reverberatory Furnace each day for a period of 365 days. [Special Condition 7.A.6]
      vii) The sulfur content of each delivery of metallurgical coke over a period of 365 days. [Special Condition 7.A.7]
      viii) For a minimum of 100 hours of CD-37 Dry Lime Scrubber Bypass Operating Mode: [Special Condition 7.A.8]
         (1) The soda ash addition rate in tons per charge of feed added to EU-9A Reverberatory Furnace's feed auger. [Special Condition 7.A.8.a]
         (2) The time of each charge of EU-9A Reverberatory Furnace's feed auger. [Special Condition 7.A.8.b]
         (3) Hourly EP-8 SO_2 CEMS data. [Special Condition 7.A.8.c]
   b) The permittee shall include all data collected during the Process Variability Study required by Special Condition 7 as part of the PM CON PSD Stack Testing Protocol application required by Special Condition 6.B. [Special Condition 7.B]

Performance Testing:

1. In order to show compliance with the temporary BACT limits in Special Conditions 3 and 4 and to obtain data to establish permanent BACT limit, the permittee shall submit a PM CON PSD Stack Testing Protocol application to the Air Pollution Control Program's Permits Section and to

stacktesting@dnr.mo.gov by no later than October 25, 2018. The PM CON PSD Stack Testing Protocol shall include: [Special Condition 6.B]

a) All data collected during the Process Variability Study required by Special Condition 7. [Special Condition 6.B.1]
b) The permittee shall indicate which worst-case materials are believed to result in the highest emissions of filterable PM_{10}, inorganic condensables, and organic condensables and why each material is believed to be the worst-case material for each specific type of emissions. [Special Condition 6.B.2]
c) A completed Proposed Test Plan form including a minimum of: [Special Condition 6.B.3]
   i) Three two-hour test runs for each worst-case material. [Special Condition 6.B.3.a]
   ii) Proposed minimum CD-37 Dry Lime Scrubber injection rate during testing. [Special Condition 6.B.3.b]
   iii) Proposed minimum CD-34 Afterburner exhaust gas temperature during testing. [Special Condition 6.B.3.c]
   iv) Proposed minimum CD-35 Lead Baghouse pressure drop during testing. [Special Condition 6.B.3.d]
   v) Proposed minimum CD-37 Dry Lime Scrubber pressure drop during testing. [Special Condition 6.B.3.e]
   vi) The MERV rating or fractional efficiency of filters to be used in CD-35 Lead Baghouse and CD-38 Process Baghouse during testing. [Special Condition 6.B.3.f]
   vii) Proposed minimum CD-38 Process Baghouse pressure drop during testing. [Special Condition 6.B.3.g]
   viii) Proposed EU-8 Blast Furnace feed rate during testing. [Special Condition 6.B.3.h]
   ix) Proposed EU-9A Reverberatory Furnace feed rate during testing. [Special Condition 6.B.3.i]
   x) Proposed EU-39 Sweat Furnace #1 and EU-64 Sweat Furnace #2 feed rates during testing. [Special Condition 6.B.3.j]
   xi) Proposed minimum CD-16 Afterburner exhaust gas temperature during testing. [Special Condition 6.B.3.k]
   xii) Proposed minimum CD-22 Afterburner exhaust gas temperature during testing. [Special Condition 6.B.3.l]

2. The permittee shall conduct stack tests no later than March 25, 2019. During each stack test run, the permittee shall accurately document the following information: [Special Condition 6.C]
   a) During EU-9A Reverberatory Furnace Normal Operating Mode testing of CD-37 Dry Lime Scrubber: [Special Condition 6.C.1]
      i) EU-9A Reverberatory Furnace feed rate. [Special Condition 6.C.1.a]
      ii) CD-37 Dry Lime Scrubber lime injection rate. [Special Condition 6.C.1.b]
      iii) CD-34 Afterburner exhaust gas temperature. [Special Condition 6.C.1.c]
      iv) EP-8 SO_2 emission rate as observed by EP-8's SO_2 CEMS [Special Condition 6.C.1.d]
      v) Type(s) and quantity of fuel combusted by EU-9A Reverberatory Furnace. [Special Condition 6.C.1.e]
      vi) The sulfur content of the fuel(s) combusted, excluding propane. [Special Condition 6.C.1.f]
      vii) CD-35 Lead Baghouse pressure drop. [Special Condition 6.C.1.g]
      viii) CD-37 Dry Lime Scrubber pressure drop. [Special Condition 6.C.1.h]
      ix) The MERV rating or fractional efficiency of CD-35 Lead Baghouse. [Special Condition 6.C.1.i]
      x) Type(s) of material processed by EU-9A Reverberatory Furnace.

b) During EU-8 Blast Furnace, EU-39 Sweat Furnace #1, and EU-64 Sweat Furnace #2 (i.e. testing of CD-38 Process Baghouse): [Special Condition 6.C.2]
   i) EU-8 Blast Furnace feed rate. [Special Condition 6.C.2.a]
   ii) Type and quantity of fuel combusted by EU-8 Blast Furnace. [Special Condition 6.C.2.b]
   iii) EU-39 Sweat Furnace #1 feed rate and EU-64 Sweat Furnace #2 feed rate. [Special Condition 6.C.2.c]
   iv) The sulfur content of the fuel(s) combusted, excluding propane. [Special Condition 6.C.2.d]
   v) CD-38 Process Baghouse pressure drop. [Special Condition 6.C.2.e]
   vi) The MERV rating or fractional efficiency of CD-38 Process Baghouse. [Special Condition 6.C.2.f]
   vii) CD-16 Afterburner exhaust gas temperature. [Special Condition 6.C.2.g]
   viii) CD-22 Afterburner exhaust gas temperature [Special Condition 6.C.2.h]
   ix) Type(s) of material processed by EU-8 Blast Furnace, EU-39 Sweat Furnace #1, and EU-64 Sweat Furnace #2. [Special Condition 6.C.2.i]

3. The applicable test methods and procedures for the permitted pollutants shall be in accordance with promulgated State and U.S. EPA Test Methods. Selected Test Methods shall be proposed and submitted to the Air Pollution Control Program's Compliance/Enforcement Section for review and approval. [Special Condition 6.D]
4. The date(s) on which stack tests are conducted shall be pre-arranged with the Air Pollution Control Program a minimum of 30 days prior to the proposed test date so that this Program may arrange a pretest meeting, if necessary, and assure that the test date is acceptable for an observer to be present. A completed Proposed Test Plan form may serve the purpose of notification and shall be approved by the Air Pollution Control Program prior to conducting the required emission testing. [Special Condition 6.E]
5. One electronic report of the stack test results shall be submitted to stacktesting@dnr.mo.gov within 60 days of completion of any required testing. The report shall include legible copies of the raw data sheets, analytical instrument laboratory data, and complete sample calculations from the required EPA Method for at least one sample run. [Special Condition 6.F]

Reporting:

1. The permittee shall report to the Air Pollution Control Program's Compliance/Enforcement Section no later than 10 days after the end of the month during which records indicate and exceedance of Special Condition 3.D. [Special Condition 3.G]
2. The permittee shall submit a PSD amendment application no later than December 25, 2019. The application shall include: [Special Condition 12.A]
   a) A proposed permanent EU-9A Reverberatory Furnace Normal Operating Mode BACT limit on CD-37 Dry Lime Scrubber in pounds of primary PM_{10} per ton of EU-9A Reverberatory Furnace feed. [Special Condition 12.A.1]
   b) A proposed permanent Scrubber Bypass Operating Mode BACT limit on EP-8 in pounds of SO_2 per ton of EU-9A Reverberatory Furnace feed. [Special Condition 12.A.2]
   c) A proposed permanent Blast and Sweat Furnaces BACT limit on CD-38 Process Baghouse in pounds of primary PM_{10} per ton of EU-8 Blast Furnace feed. [Special Condition 12.A.3]
   d) An updated cost analysis for EU-8 Blast Furnace, EU-39 Sweat Furnace #1, and EU-64 Sweat Furnace #2 for each of the control technologies identified in Table 5 of PSD Permit 012005-008D. [Special Condition 12.A.4]

PERMIT CONDITION 013
PM CON Requirements
10 CSR 10-6.060 Construction Permits Required
PSD Permit 012005-008D, Issued September 25, 2017

Emission Source	Description	Total Enclosure	Control Equipment	Emission Point
EU-22-23	(5) Dross Kettles Combustion: 18.0 MMBtu/hr propane	TE-4 Hot Metals Building	CD-9 Main Baghouse with BLDS, 450,000 acfm	EP-8
EU-24	Refinery Kettles R1 & R2 Combustion: 11.5 MMBtu/hr propane	None	None	EP-24
EU-25	Refinery Kettles R3 & R4 Combustion: 11.5 MMBtu/hr propane	None	None	EP-25
EU-26A	Refinery Kettles R5 & R6 Combustion: 11.5 MMBtu/hr propane	None	None	EP-26
EU-27	Refinery Kettles R7 & R8 Combustion: 13.5 MMBtu/hr propane	None	None	EP-27
EU-28	Refinery Kettles R9 & R10 Combustion: 8.4 MMBtu/hr propane	TE-4 Hot Metals Building	CD-40 ERP Baghouse with BLDS, 60,000 dscfm	EP-105

Operational Limitations:

1. The permittee shall conduct tune-ups of the propane burners on EU-22 and EU-23 Dross Kettles and EU-24, EU-25, EU-26A, EU-27, and EU-28 Refinery Kettles at least once every 24 months. [Special Condition 8.A]
2. During each tune-up, the permittee shall: [Special Condition 8.B]
   a) Inspect the burner, and clean or replace any components of the burner as necessary. [Special Condition 8.B.1]
   b) Inspect the flame pattern and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available. [Special Condition 8.B.2]
   c) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly. [Special Condition 8.B.3]
   d) Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available. [Special Condition 8.B.4]

Monitoring/Recordkeeping:

1. The permittee shall maintain the following records: [Special Condition 8.C]
   a) The date of each propane burner tune-up. [Special Condition 8.C.1]
   b) Maintenance activities, repair actions, and replacements, etc. [Special Condition 8.C.2]
2. The permittee shall maintain all records required by this permit for not less than five years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request. [§70.6(a)(3)(ii)]

Reporting:

The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit. [§70.6(a)(3)(iii)]

PERMIT CONDITION 014
SO_2 Requirements

10 CSR 10-6.060 Construction Permits Required
Construction Permit 012005-008A, Issued November 26, 2007
Construction Permit 012005-008C, Issued December 16, 2013
Construction Permit 012005-008D, Issued September 25, 2017

Emission Source	Description	Total Enclosure	Control Equipment	Emission Point
EU-16A	BSN Process: V103 6,600 gallon acid clarifier tank, V104 2,904 gallon acid clarifier tank, industrial battery cutting station, hammer mill, paste vibrator, 17,000 gallon 202 Paste Tank, 9,000 gallon 301A paste tank, 9,000 gallon 301B paste tank, paste filter press, 9,730 gallon 311C acid containment tank, 9,730 gallon 311F acid containment tank, hydrodynamic separator, santa maria/paste settler, first trommel, hydrostatic separator, second trommel, 2,640 gallon poly wash tank, post & grids conveyor, separator screw conveyor, and separator storage	None	All equipment is enclosed and vents to CD-10 BSN Wet Scrubber	EP-16
EU-71	Reverberatory Furnace Process Fugitives: Slag Tap	TE-4 Hot Metals Building	CD-27 Reverberatory Furnace Building Baghouse with BLDS, 60,000 acfm	EP-71
EU-72	North Refinery Kettles (R1, R2, and R4)		CD-28 North Refinery Baghouse with BLDS, 20,000 acfm	EP-72
EU-24	Refinery Kettles R1 & R2 Combustion: 11.5 MMBtu/hr propane	None	None	EP-24
EU-25	Refinery Kettles R3 & R4 Combustion: 11.5 MMBtu/hr propane	None	None	EP-25
EU-26A	Refinery Kettles R5 & R6 Combustion: 11.5 MMBtu/hr propane	None	None	EP-26
EU-27	Refinery Kettles R7 & R8 Combustion: 13.5 MMBtu/hr propane	None	None	EP-27
EU-28	Refinery Kettles R9 & R10 Combustion: 8.4 MMBtu/hr propane	TE-4 Hot Metals Building	CD-40 ERP Baghouse with BLDS, 60,000 dscfm	EP-105

Emission Limitations:

1. The permittee shall not have emission rates greater than those listed in Table 1: Maximum Allowable Emission Rate. These limits are the BACT limits and apply to the sources listed in Table 1. Compliance with these limits will be considered compliance with the BACT requirements. These limits also apply to the NAAQS and the increment analysis. [Special Condition 2 of PSD Permit 012005-008C and Special Condition 3.B of PSD Permit 012005-008D]

Table 1: *Maximum Allowable Emission Rate*

Emission Point	Description	SO_2 Emission Rate Limit
EP-71	Reverberatory Furnace Process Captured Fugitives	2.25 lb/hr
EP-72	North Refinery Kettles (R1, R2, and R4)	4.404 lb/hr

Operational Limitations:

1. The permittee shall apply BACT on the following emission sources to control SO_2 emissions: [Special Condition 14 of PSD Permit 012005-008A]

Emission Source	SO_2 BACT
BSN Process	Scrubber
Refinery Kettles	Low sulfur fuel - propane

2. CD-10 BSN Wet Scrubber shall be operated and maintained in accordance with manufacturer's specifications.

Monitoring/Recordkeeping:

1. The permittee shall monitor CD-10 Wet Scrubber according to the requirements of MACT X. See Permit Condition 021.
2. The pressure drop and liquid flow rate gauges or meters shall be located such that Department of Natural Resources' employees may easily observe them.
3. The permittee shall maintain an operating and maintenance log for CD-10 BSN Wet Scrubber which shall include the following: [Special Condition 21 of PSD Permit 012005-008A]
   a) Incidents of malfunction, with impact on emissions (tons), duration of event, probable cause, and corrective actions;
   b) Maintenance activities, with inspection schedule, repair actions, and replacements, etc.; and
   c) A written record of regular inspection schedule, the date and results of all inspections including any actions or maintenance activities that result from that inspection.
4. The permittee shall maintain all records required by this permit for not less than five years and shall make them available immediately to Missouri Department of Natural Resources' personnel upon request. [§70.6(a)(3)(ii)]

Performance Testing:

1. The permittee shall demonstrate compliance with the emission limitations in Special Condition 2 of PSD Permit 012005-008C as follows: [Special Condition 9 of PSD Permit 012005-008A]
   a) Stack testing to determine SO_2 emissions from EP-71 and EP-72 shall be conducted within 180 days of issuance of this operating permit.
   b) The applicable test methods and procedures for the permitted pollutants will be in accordance with promulgated State and U.S. EPA Test Methods. Selected test methods shall be proposed and submitted to the Air Pollution Control Program in a complete Proposed Test Plan Form.
2. A complete Proposed Test Plan Form shall be submitted to the Air Pollution Control Program 30 days prior to the proposed test date so that the Air Pollution Control Program may arrange a pretest meeting, if necessary, and assure that the test date is acceptable for an observer to be present. The complete Proposed Test Plan Form shall be submitted electronically to stacktesting@dnr.mo.gov. The Proposed Test Plan may serve the purpose of notification and shall be approved by the Director prior to the permittee conducting the required performance testing. [Special Condition 10 of PSD Permit 012005-008A]
3. One electronic copy of a written report of the performance test results shall be submitted to stacktesting@dnr.mo.gov within 60 days of completion of any required performance testing. The

report shall include legible copies of the raw data sheets, analytical instrument laboratory data, and complete sample calculations from the required U.S. EPA Method for at least one sample run. [Special Condition 11 of PSD Permit 012005-008A]

4. The performance test report shall fully account for all operational and emission parameters applicable to each emission point specifically:
   a) EP-71:
      i) The reverberatory furnace feed rate (tph)
      ii) If CD-37 Dry Lime Scrubber was in operation or in bypass
      iii) The soda ash addition rate during CD-37 Dry Lime Scrubber bypass
      iv) The reverberatory furnace castable lead production rate (tph)
   b) EP-72
      i) The kettle feed rate (tph)
      ii) The kettle castable lead production rate (tph)

Reporting:

The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit. [§70.6(a)(3)(iii)]

PERMIT CONDITION 015
PM_{10} & Baghouse Requirements

10 CSR 10-6.060 Construction Permits Required
PSD Permit 012005-008A, Issued November 26, 2007
PSD Permit 012005-008D, Issued September 25, 2017

Emission Source	Description	Total Enclosure	Control Equipment	Emission Point
EU-8	Blast Furnace: 100 MMBtu/hr metallurgical coke, 2 MMBtu/hr propane, 32.9 tph feed	TE-4 Hot Metals Building	CD-38 Process Baghouse with BLDS, 370,000 acfm (or CD-9 Main Baghouse with BLDS, 450,000 acfm)	EP-8 with SO_2 & CO CEMS
EU-10	Blast Furnace Process: settler, transfer pot, conveyor 3110			
EU-81	Refinery Kettles (R3 & R7-R10) Process Emissions, refinery dross hopper, screw and bunker			
EU-73	Sweat Furnace Fugitives, Copper Cable Compactor, Mold Pouring			
EU-9A	Reverberatory Furnace: 42 MMBtu/hr propane, 34 tph feed		CD-25 Oxy-Fuel Firing System; CD-34 Afterburner; CD-35 Lead Baghouse with BLDS, 75,000 acfm; & CD-37 Dry Lime Scrubber & Baghouse with BLDS, 70,000 acfm (or feed desulfurization via reagent added to feed, CD-25 Oxy-Fuel Firing System, CD-34 Afterburner, & CD-38 Process Baghouse with BLDS, 370,000 acfm)	
EU-9B	Reverberatory Feed Storage Building Ventilation: hopper/pan feeder, belt conveyor, slag bunker	TE-3 Reverberatory Furnace Feed Building	CD-9 Main Baghouse with BLDS, 450,000 acfm	
EU-11	Dross Kettles and Fugitives: (5) dross kettles (D1-D5), 15 tph, dross bunker, dross screw, dross hopper, FS-3300 and FS-3301 recycle kettles, Cable & Scrap Lead Storage for the sweat furnaces, blast furnace crane aisle area, reverberatory furnace feed screw conveyors, dust chute, reverberatory furnace lead tap	TE-4 Hot Metals Building		
EU-22-23	(5) Dross Kettles Combustion: 18.0 MMBtu/hr propane			

EU-39	Sweat Furnace #1: 7.5 MMBtu/hr propane, 0.5 tph feed	TE-4 Hot Metals Building	CD-16 Afterburner & CD-38 Process Baghouse with BLDS, 370,000 acfm (or CD-16 Afterburner & CD-9 Main Baghouse with BLDS, 450,000 acfm)	EP-8 with SO2 & CO CEMS
EU-64	Sweat Furnace #2: 7.5 MMBtu/hr propane, 0.5 tph feed		CD-22 Afterburner & CD-38 Process Baghouse with BLDS, 370,000 acfm (or CD-22 Afterburner & CD-9 Main Baghouse with BLDS, 450,000 acfm)	
EU-13	Open Storage Fugitives of Iron, Coke, Limestone, and Silica	Partial enclosure	CD-13 Wet Suppression	Fugitive
EU-32	Laboratory Activities (Sample Crusher)	None	CD-32 Baghouse	EP-32
EU-74	Paved Haul Road - Coke Delivery Route	None	CD-74 Sweeping & Water Flushing	Fugitive
EU-75	Paved Haul Road - Battery Delivery Route	None	CD-75 Sweeping & Water Flushing	Fugitive
EU-76	Paved Haul Road - Paste Transfer Route	None	CD-76 Sweeping & Water Flushing	Fugitive
EU-77	Paved Haul Road - Feed Transfer Route No. 1: Refinery to Covered Materials Storage Building	None	CD-77 Sweeping & Water Flushing	Fugitive
EU-78	Paved Haul Road - Feed Transfer Route No. 2: Coke Storage to the Blast Furnace Feed Building	None	CD-78 Sweeping & Water Flushing	Fugitive
EU-79	Paved Haul Road - Feed Transfer Route No. 3: Outdoor Storage to the Blast Furnace Feed Building	None	CD-79 Sweeping & Water Flushing	Fugitive
EU-16A	BSN Process: V103 6,600 gallon acid clarifier tank, V104 2,904 gallon acid clarifier tank, industrial battery cutting station, hammer mill, paste vibrator, 17,000 gallon 202 Paste Tank, 9,000 gallon 301A paste tank, 9,000 gallon 301B paste tank, paste filter press, 9,730 gallon 311C acid containment tank, 9,730 gallon 311F acid containment tank, hydrodynamic separator, santa maria/paste settler, first trommel, hydrostatic separator, second trommel, 2,640 gallon poly wash tank, post & grids conveyor, separator screw conveyor, and separator storage	None	All equipment is enclosed and vents to CD-10 BSN Wet Scrubber	EP-16
EU-71	Reverberatory Furnace Process Fugitives: Slag Tap	TE-4 Hot Metals Building	CD-27 Reverberatory Furnace Building Baghouse with BLDS, 60,000 acfm	EP-71

EU-12	Refinery fugitive emissions, Casting Machines: 0.608 MMBtu/hr propane, Refinery Dock Loading/Unloading: loading of product, trans loading of batteries, unloading of reagents, alloy materials, and lead bearing materials	TE-4 Hot Metals Building	CD-81 Baghouse with BLDS, 60,000 acfm	EP-81
EU-26B	Refinery Kettles R5 & R6 - (2) 225 ton refining kettles - process emissions		CD-40 ERP Baghouse with BLDS, 60,000 dscfm	EP-105
EU-72	North Refinery Kettles (R1, R2, and R4)		CD-28 North Refinery Baghouse with BLDS, 20,000 acfm	EP-72

Emission Limitations:

1. The permittee shall not have emissions greater than those listed in Table 1. These limits are BACT limits and apply to the sources listed in Table 1. Compliance with these limits will be considered compliance with the BACT requirements. These limits also apply to the NAAQS and the increment analysis. [Special Condition 2 of PSD Permit 012005-008D]

Table 1 of PSD Permit 012005-008D: *Maximum Allowable Emission Rates*

Emission Point	Description	Pollutant	Best Available Control Technology	Maximum Allowable Emission Rate
EP-16	BSN Process	Fil. PM_{10}	Wet Scrubber	0.283 lb/hr
EP-71	Reverberatory Furnace Process Fugitives Slag Tap	Fil. PM_{10}	Baghouse	0.16 lb/hr

Operational Limitations:

1. The permittee shall apply BACT on the following emission sources to control air pollutant emissions: [Special Condition 14 of PSD Permit 012005-008A]

Emission Source	Pollutant(s)	BACT
EU-8 Blast Furnace	Lead	High efficiency baghouse using coated bags
EU-10 Blast Furnace Fugitives	Lead & PM_{10}	Operational change to blast furnace charging system
EU-9A Reverberatory Furnace	Lead	High efficiency baghouse
EU-12, EU-26B, EU-72, & EU-81 Refinery Kettles Fugitives	Lead & PM_{10}	Negative ventilation to baghouse
EU-11 Dross Plant Fugitives	Lead & PM_{10}	Negative ventilation to baghouse
EU-13 Open Storage	Lead & PM	Enclosures, wet suppression, and good operating practices
EU-32 Lab Baghouse	Lead & PM_{10}	Baghouse
EU-74, EU-75, EU-76, EU-77, EU-78, & EU-79 Resuspension (Haul Roads)	Lead & PM_{10}	Paving, sweeping/flushing, operating practices
EU-39 & EU-64 Sweat Furnaces	Lead & PM_{10}	High efficiency baghouse
EU-73 Sweat Furnaces Fugitives	Lead & PM_{10}	Baghouse

2. The permittee shall control filterable PM_{10} emissions from EU-8, EU-10, EU-11, EU-12, EU-39, EU-64, and EU-73 using CD-38 Process Baghouse. During bypass of CD-38 Process Baghouse, the permittee shall control filterable PM_{10} emissions from these emission sources using CD-9 Main

Baghouse. Both CD-38 Process Baghouse and CD-9 Main Baghouse shall be equipped with high efficiency PTFE-coated bags. [Special Condition 5.A.1 of PSD Permit 012005-008D]

3. The permittee shall control filterable PM_{10} emissions from EU-9A using CD-35 Lead Baghouse during Normal Operating Mode. [Special Condition 5.A.2 of PSD Permit 012005-008D]
4. The permittee shall control filterable PM_{10} emissions from EU-9A using CD-38 Process Baghouse during Scrubber Bypass Operating Mode. [Special Condition 5.A.3 of PSD Permit 012005-008D]
5. The baghouses shall be operated and maintained in accordance with the manufacturer's specifications. All baghouses subject to MACT X shall be equipped with a continuous particulate monitor such as Triboflow, or equivalent, to monitor gases exiting the baghouse. These devices shall be located such that Department of Natural Resources' employees may easily observe them. These monitors shall be designed to alert operators when particulate matter levels in the gases exiting the baghouses are above those seen during normal bag cleaning cycles. The set point of the continuous particulate matter monitors shall be set and recalibrated as necessary as part of the quarterly ventilation system inspections as required under the agreements of the SIP. The monitors shall be operated such that they are out of service for no more than 48 hours each calendar quarter. The permittee shall maintain all necessary spare parts to assure that an extended outage does not occur. The permittee shall provide the department a quarterly report within 30 days after the end of each calendar quarter summarizing monitor set points, alarm incidents, and any corrective actions taken. This report shall be included with the current SIP reporting. Replacement filters for the baghouses shall be kept on hand at all times. The filters shall be made of fibers appropriate for operating conditions expected to occur (i.e. temperature limits, acidic and alkali resistance, and abrasion resistance). [Special Condition 15 of PSD Permit 012005-008A and Special Condition 5.A.4 of PSD Permit 012005-008D]
6. The scrubbing system associated with EU-16A shall be used to control PM_{10} and lead emissions and shall be utilized at all times that EU-16A is in use. [Special Condition 18 of PSD Permit 012005-008A]
7. The permittee shall control particulate matter and lead emissions from the haul road(s) and vehicular activity area(s) by paving with asphalt (or with other paving materials approved by the Air Pollution Control Program) and maintaining these areas. [Special Condition 24 of PSD Permit 012005-008A]
8. The permittee shall clean the paved haul road(s) twice per day by applying water flushing followed by vacuum sweeping, except on day when natural precipitation makes cleaning unnecessary, when minimum temperature conditions prevent safe and effective cleaning and/or when sand or a similar material has been spread on plant haul road(s) to provide traction on ice or snow. [Special Condition 25 of PSD Permit 012005-008A]

Monitoring/Recordkeeping:

1. The permittee shall monitor and record the operating pressure drop across all baghouses at least once a day. The operating pressure drop shall be maintained within the design conditions specified by the manufacturer. A copy of the baghouse manufacturer's specifications shall be retained onsite. [Special Condition 16 of PSD Permit 012005-008A and Special Conditions 5.A.5 and 5.A.6 of PSD Permit 012005-008D]
2. The permittee shall maintain an operating and maintenance log for the baghouses, which shall include the following: [Special Condition 17 of PSD Permit 012005-008A and Special Condition 5.A.7 of PSD Permit 012005-008D]
   a) Incidents of malfunction, with impact on emissions (tons), duration of event, probable cause, and corrective actions;
   b) Maintenance activities, with inspection schedule, repair actions, and replacements, etc.; and

c) A written record of regular inspection schedule, the date and results of all inspections including any actions or maintenance activities that result from that inspection.

3. The permittee shall maintain records of haul road watering noting:
   a) Daily water truck logs indicating: the date, time, and volume of water applied.
   b) If watering was suspended due to natural precipitation making cleaning unnecessary: the date, time, and inches of precipitation received.
   c) If watering was suspended due to ambient temperatures below freezing: the date, time, and ambient temperature (°F).
4. The permittee shall maintain all records required by this permit for not less than five years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request. [§70.6(a)(3)(ii)]

Performance Testing:

1. In order to show continued compliance with the filterable PM_{10} BACT limits in Table 1 of PSD Permit 012005-008D, the permittee shall conduct periodic stack testing according to the following requirements:
   a) If the results of the most recent stack test are greater than 75% of the BACT limit in Table 1 of PSD Permit 012005-008D, the next stack test shall occur no later than two years after the most recent stack test[14]. [Special Condition 6.A.1.a of PSD Permit 012005-008D]
   b) If the results of the most recent stack test are less than or equal to 75% of the BACT limit in Table 1 of PSD Permit 012005-008D, the next stack test shall occur no later than five years after the most recent stack test. [Special Condition 6.A.1.b of PSD Permit 012005-008D]
2. A complete Proposed Test Plan Form shall be submitted to the Air Pollution Control Program 30 days prior to the proposed test date so that the Air Pollution Control Program may arrange a pretest meeting, if necessary, and assure that the test date is acceptable for an observer to be present. The complete Proposed Test Plan Form shall be submitted electronically to stacktesting@dnr.mo.gov. The Proposed Test Plan may serve the purpose of notification and shall be approved by the Director prior to the permittee conducting the required performance testing.
3. One electronic copy of a written report of the performance test results shall be submitted to stacktesting@dnr.mo.gov within 60 days of completion of any required performance testing. The report shall include legible copies of the raw data sheets, analytical instrument laboratory data, and complete sample calculations from the required U.S. EPA Method for at least one sample run.
4. The performance test report shall fully account for all operational and emission parameters specifically:
   a) During each performance test run of EP-16:
      i) The number and tonnage of batteries processed
      ii) The liquid flow rate through CD-10 BSN Wet Scrubber
      iii) The pressure drop across CD-10 BSN Wet Scrubber
   b) During each performance test run of EP-71:
      i) The reverberatory furnace feed rate (tph)
      ii) The reverberatory furnace castable lead production rate (tph)

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[14] On March 20, 2018 stack testing was conducted on EP-71 with a reported emission rate of 0.14 lb/hr PM_{10}. As this emission rate is greater than 75% of 0.16 lb/hr, the next periodic PM_{10} testing of EP-71 shall occur by no later than March 20, 2020.
On May 8, 2018 stack testing was conducted on EP-16 with a reported emission rate of 0.249 lb/hr PM_{10}. As this emission rate is greater than 75% of 0.283 lb/hr, the next periodic PM_{10} testing of EP-16 shall occur by no later than May 8, 2020.

iii) The pressure drop across CD-27 Reverberatory Furnace Baghouse (in H_2O)
iv) The slag production rate (tph)

Reporting:

The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit. [§70.6(a)(3)(iii)]

PERMIT CONDITION 016

2013 Consent Judgement, Case No. 13IR-CC00016
2013 Lead NAAQS Attainment Demonstration SIP
2008 National Ambient Air Quality Standard for Lead

Emission Source	Description	Total Enclosure	Control Equipment	Emission Point
EU-8	Blast Furnace: 100 MMBtu/hr metallurgical coke, 2 MMBtu/hr propane, 32.9 tph feed	TE-4 Hot Metals Building	CD-38 Process Baghouse with BLDS, 370,000 acfm (or CD-9 Main Baghouse with BLDS, 450,000 acfm)	EP-8 with SO_2 & CO CEMS
EU-10	Blast Furnace Process: settler, transfer pot, conveyor 3110			
EU-81	Refinery Kettles (R3 & R7-R10) Process Emissions; Refinery: dross hopper, screw, and bunker			
EU-73	Sweat Furnace Fugitives, Copper Cable Compactor, Mold Pouring			
EU-9A	Reverberatory Furnace: 42 MMBtu/hr propane, 34 tph feed		CD-25 Oxy-Fuel Firing System; CD-34 Afterburner; CD-35 Lead Baghouse with BLDS, 75,000 acfm & CD-37 Dry Lime Scrubber & Baghouse with BLDS, 70,000 acfm; (or feed desulfurization via reagent added to feed, CD-25 Oxy-Fuel Firing System, CD-34 Afterburner, & CD-38 Process Baghouse with BLDS, 370,000 acfm)	
EU-11	Dross Kettles and Fugitives: (5) dross kettles (D1-D5), 15 tph, dross bunker, dross screw, dross hopper, FS-3300 and FS-3301 recycle kettles, Cable & Scrap Lead Storage for the sweat furnaces, blast furnace crane aisle area, reverberatory furnace feed screw conveyors, dust chute, reverberatory furnace lead tap		CD-9 Main Baghouse with BLDS, 450,000 acfm	
EU-22-23	(5) Dross Kettles Combustion: 18.0 MMBtu/hr propane			
EU-39	Sweat Furnace #1: 7.5 MMBtu/hr propane, 0.5 tph feed		CD-16 Afterburner & CD-38 Process Baghouse with BLDS, 370,000 acfm (or CD-16 Afterburner & CD-9 Main Baghouse with BLDS, 450,000 acfm)	

EU-64	Sweat Furnace #2: 7.5 MMBtu/hr propane, 0.5 tph feed	TE-4 Hot Metals Building	CD-22 Afterburner & CD-38 Process Baghouse with BLDS, 370,000 acfm (or CD-22 Afterburner & CD-9 Main Baghouse with BLDS, 450,000 acfm)	EP-8 with SO2 & CO CEMS
EU-72	North Refinery Kettles (R1, R2,and R4)		CD-28 North Refinery Baghouse with BLDS, 20,000 acfm	EP-72
EU-12	Refinery fugitive emissions, Casting Machines: 0.608 MMBtu/hr propane, Refinery Dock Loading/Unloading: loading of product, trans loading of batteries, unloading of reagents, alloy materials, and lead bearing materials		CD-81 Baghouse with BLDS, 60,000 acfm	EP-81
EU-71	Reverberatory Furnace Process Fugitives: Slag Tap		CD-27 Reverberatory Furnace Building Baghouse with BLDS, 60,000 acfm	EP-71
EU-105A	ERP Kettles R11 & R12: (2) 225 ton refining kettles - process emissions		CD-40 ERP Baghouse with BLDS, 60,000 dscfm	EP-105
EU-105B	ERP Kettles R11 & R12 Combustion: 12 MMBtu/hr propane			
EU-26B	Refinery Kettles R5 & R6 - (2) 225 ton refining kettles - process emissions			
EU-28	Refinery Kettles R9 & R10 Combustion: 8.4 MMBtu/hr propane			
EU-31C	Drum Shredder, Saturn Model No. 60-44HT with (2) 300 HP electric motors and 22.25 inch cutter diameter, 25 tph, 2017, magnet, and LBM conveyor	TE-5 BSN Building	CD-31C Drum Shredder Process Baghouse with BLDS, 15,000 dscfm	EP-31C

This is a State Only permit requirement.

Required Practices and Procedures:

1. New baghouses, not otherwise subject to the MACT X or Paragraph 10 of the 2013 Consent Judgement, shall be subject to the MoDNR-approved Baghouse Standard Operating Procedures (SOP) revision dated January 5, 2012. [Paragraph 8.A]
2. The permittee may cease the operation of any ventilation system units used to achieve the appropriate amounts of negative pressure required for TE-4 Hot Metals Building to perform maintenance on the ventilation system or if all of the lead processing units within TE-4 Hot Metals Building have been shutdown for a minimum of twenty-four consecutive hours. [Paragraph 8.B]
3. The permittee shall operate local exhaust ventilation (LEVs) at the following emission units, when the units are operating: [Paragraph 8.C]
   a) EU-9A Reverberatory Furnace
   b) EU-11 FS-3300 and FS-3301 Recycle Kettles
   c) EU-81 Refinery Dross Screw and Refinery Kettles (R3 & R7-R10)
   d) EU-26B Refinery Kettles (R5 & R6)
   e) EU-72 North Refinery Kettles (R1, R2, & R4)
   f) EU-8 Blast Furnace

g) EU-39 Sweat Furnace #1
h) EU-64 Sweat Furnace #2

4. The permittee shall preclude public access at a minimum distance from the facility as indicated in Appendix I of the 2013 Lead NAAQS Attainment Demonstration SIP. The permittee shall notify MoDNR of its intent to modify the location of any fence lines used to demonstrate compliance with this paragraph 90 days prior to commencement of construction. [Paragraph 8.D]
5. Recordkeeping and reporting under this Consent Judgement are addressed by the recordkeeping and reporting requirements applicable to the installation pursuant to MACT X. [Paragraph 8.F]
6. The permittee shall limit lead emissions to the atmosphere from certain stacks as set forth in the following table:

Stack Name	Stack ID	Emission Limitation
Main Stack	EP-8	0.7 lb/hr
Drum Shredder Baghouse	EP-31C	0.025 lb/hr
Reverberatory Furnace Slag Tap Ventilation Baghouse	EP-71	0.08 lb/hr
North Refinery Baghouse	EP-72	0.006 lb/hr

Compliance shall be determined via stack testing requirements and on a schedule that is consistent with MACT X, except as follows: If any test does not show compliance with the limit herein, the installation shall re-test that stack and provide the stack test report and results within 120 days after the date of the failed test. If this subsequent re-test shows compliance, the prior exceedance shall not be considered a violation of this Consent Judgement and compliance testing will return to a schedule consistent with MACT X. [Paragraph 8.G]

7. The permittee shall maintain all records required by this permit for not less than five years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request. [§70.6(a)(3)(ii)]
8. The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit. [§70.6(a)(3)(iii)]

PERMIT CONDITION 017

10 CSR 10-6.070 New Source Performance Regulations
40 CFR Part 60, Subpart L – Standards of Performance for Secondary Lead Smelters[15]
40 CFR Part 64 – Compliance Assurance Monitoring[16]

Emission Source	Description	Total Enclosure	Control Equipment	Emission Point
EU-8	Blast Furnace: 100 MMBtu/hr metallurgical coke, 2 MMBtu/hr propane, 32.9 tph feed	TE-4 Hot Metals Building	CD-38 Process Baghouse with BLDS, 370,000 acfm (or CD-9 Main Baghouse with BLDS, 450,000 acfm)	EP-8 with SO_2 & CO CEMS
EU-10	Blast Furnace Process: settler, transfer pot, conveyor 3110			
EU-73	Sweat Furnace Fugitives, Copper Cable Compactor, Mold Pouring			
EU-81	Refinery Kettles (R3 & R7-R10) Process Emissions, refinery dross hopper, screw and bunker			
EU-9A	Reverberatory Furnace: 42 MMBtu/hr propane, 34 tph feed		CD-25 Oxy-Fuel Firing System; CD-34 Afterburner; CD-35 Lead Baghouse with BLDS, 75,000 acfm; & CD-37 Dry Lime Scrubber & Baghouse with BLDS, 70,000 acfm (or feed desulfurization via reagent added to feed, CD-25 Oxy-Fuel Firing System, CD-34 Afterburner, & CD-38 Process Baghouse with BLDS, 370,000 acfm)	
EU-11	Dross Kettles and Fugitives: (5) dross kettles (D1-D5), 15 tph, dross bunker, dross screw, dross hopper, FS-3300 and FS-3301 recycle kettles, Cable & Scrap Lead Storage for the sweat furnaces, blast furnace crane aisle area, reverberatory furnace feed screw conveyors, dust chute, reverberatory furnace lead tap		CD-9 Main Baghouse with BLDS, 450,000 acfm	
EU-22-23	(5) Dross Kettles Combustion: 18.0 MMBtu/hr propane			
EU-39	Sweat Furnace #1: 7.5 MMBtu/hr propane, 0.5 tph feed		CD-16 Afterburner & CD-38 Process Baghouse with BLDS, 370,000 acfm (or CD-16 Afterburner & CD-9 Main Baghouse with BLDS, 450,000 acfm)	

[15] SOURCE: 39 FR 9317, Mar. 8, 1974, as amended at 40 FR 46259, Oct. 6, 1975; 42 FR 37937, July 25, 1977; 54 FR 6667, Feb. 14, 1989
[16] SOURCE: 62 FR 54940, Oct. 22, 1997

EU-64	Sweat Furnace #2: 7.5 MMBtu/hr propane, 0.5 tph feed	TE-4 Hot Metals Building	CD-22 Afterburner & CD-38 Process Baghouse with BLDS, 370,000 acfm (or CD-22 Afterburner & CD-9 Main Baghouse with BLDS, 450,000 acfm)	EP-8 with SO_2 & CO CEMS
EU-72	North Refinery Kettles (R1, R2,and R4)		CD-28 North Refinery Baghouse with BLDS, 20,000 acfm	EP-72
EU-12	Refinery fugitive emissions, Casting Machines: 0.608 MMBtu/hr propane, Refinery Dock Loading/Unloading: loading of product, trans loading of batteries, unloading of reagents, alloy materials, and lead bearing materials		CD-81 Baghouse with BLDS, 60,000 acfm	EP-81
EU-71	Reverberatory Furnace Process Fugitives: Slag Tap		CD-27 Reverberatory Furnace Building Baghouse with BLDS, 60,000 acfm	EP-71
EU-24	Refinery Kettles R1 & R2 Combustion: 11.5 MMBtu/hr propane	None	None	EP-24
EU-25	Refinery Kettles R3 & R4 Combustion: 11.5 MMBtu/hr propane	None	None	EP-25
EU-26A	Refinery Kettles R5 & R6 Combustion: 11.5 MMBtu/hr propane	None	None	EP-26
EU-27	Refinery Kettles R7 & R8 Combustion: 13.5 MMBtu/hr propane	None	None	EP-27
EU-105A	ERP Kettles R5, R6, R11, & R12: (4) 225 ton refining kettles - process emissions	TE-4 Hot Metals Building	CD-40 ERP Baghouse with BLDS, 60,000 dscfm	EP-105
EU-105B	ERP Kettles R11 & R12 Combustion: 12 MMBtu/hr propane			
EU-28	Refinery Kettles R9 & R10 Combustion: 8.4 MMBtu/hr propane			
EU-26B	Refinery Kettles R5 & R6 - (2) 225 ton refining kettles - process emissions			

Standard for Particulate Matter:

1. EP-8 (scrubber side plenum) and EP-71: The permittee shall not discharge or cause the discharge into the atmosphere from a blast (cupola) or reverberatory furnace any gases which: [§60.122(a)]
   a) Contain particulate matter in excess of 50 mg/dscm (0.022 gr/dscf). [§60.122(a)(1)]

2. The permittee shall not discharge or cause the discharge into the atmosphere from EP-8 any gases which exhibit 10 percent opacity or greater. [§60.122(a)(2) and §60.122(b)[17]]
3. EP-24, EP-25, EP-26, EP-27, EP-72, EP-81, and EP-105: The permittee shall not discharge or cause the discharge into the atmosphere from any pot furnace any gases which exhibit 10 percent opacity or greater. [§60.122(b)]

Operational Limitation:

The permittee shall control particulate matter emissions from EU-8 Blast Furnace and EU-9A Reverberatory Furnace using baghouses as specified in Permit Condition 020.

Monitoring:

1. The permittee shall continuously operate BLDSs on CD-38 Process Baghouse, CD-9 Main Baghouse, CD-35 Lead Baghouse, and CD-37 Dry Lime Scrubber & Baghouse as required by Permit Condition 020.

Buick Resources Recycling Facility, LLC - CAM Monitoring Approach for EP-8	
Particulate Matter (PM) Compliance Indicator	
Indicator	PM Concentration
Measurement Approach	BLDS
Indicator Range	The Triboguard III BLDS is certified by the manufacturer to detect PM concentrations greater than or equal to 0.005 mg/m^3. An excursion is defined as an alarm. Excursions trigger an inspection, corrective action, and a reporting requirement. An exceedance is defined as an alarm that is not corrected within 60 minutes. Corrective actions shall include, but are not limited to, those listed in §63.548(f)(2)(i) through (vi).
Performance Criteria	
Data Representativeness	EU-8 Blast Furnace emissions normally route to CD-38 Process Baghouse, during bypass emissions route to CD-9 Main Baghouse. Both CD-38 and CD-9 vent to EP-8. EU-9A Reverberatory Furnace emissions normally route to CD-35 Lead Baghouse, during bypass emissions route to CD-38 Process Baghouse or CD-9 Main Baghouse. CD-35, CD-38, and CD-9 vent to EP-8.
Verification of Operational Status	Not applicable since the selected monitoring approach utilizes existing BLDS.
QA/QC Practices and Criteria	Consistent with the guidance provided in "Office of Air quality Planning and Standards (OAQPS) Fabric Filter Bag Leak Detection Guidance" EPA-454/R-98-015, September 1997
Monitoring Frequency	As post-control emissions from EP-08 (which includes both EU-8 and EU-9A emissions) are less than 100 tpy PM, monitoring must occur at least once each 24-hour period per §64.3(b)(4)(iii).
Data Collection Procedure	
Averaging Period	None.

[17] The blast furnace and reverberatory furnace are technically subject to an opacity limit of 20% per §60.122(a)(2); however, as emissions from these furnaces are combined with emissions from pot furnaces prior to venting to EP-8, EP-8 is subject to the more stringent opacity limit of 10% which is applicable to the pot furnaces per §60.122(b). This determination was made based on EPA Applicability Determination Index documents control numbers 9600073 and M050027.

Reporting	Summary information on the number, duration, and cause for any excursions, exceedances, and BLDS downtime will be reported on a semi-annual basis.

2. At all times, the permittee shall maintain the monitoring, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment. [§64.7(b)]
3. Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the permittee shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of this part, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The permittee shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions. [§64.7(c)]
4. Response to excursions or exceedances. [§64.7(d)]
   a) Upon detecting an excursion or exceedance, the permittee shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable. [§64.7(d)(1)]
   b) Determination of whether the permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include but is not limited to, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process. [§64.7(d)(2)]
5. Documentation of need for improved monitoring. After approval of monitoring under 40 CFR Part 64, if the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions[18], the permittee shall promptly[19] notify the Air Pollution Control Program and, if necessary, submit[20] a proposed modification to this operating permit to address the necessary monitoring changes. Such a modification may include, but

[18] If future testing indicates that the post-control emissions rates of EU-8 or EU-9A are greater than 100 tons per year of PM (22.83 lb/hr), the permittee shall submit a Part 70 significant modification application including a revised CAM plan with a minimum monitoring frequency of four data values equally spaced over each hour as required by §64.3(b)(4)(ii).
[19] Within 10 days.
[20] Within 90 days.

is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. [§64.7(e)]

Quality improvement plan (QIP) Requirements:

1. The permittee shall develop and submit a QIP no later than 90 days after the end of a reporting during which any of the following occurred: [§64.8(a)]
   a) Two or more exceedances occurred.
   b) 20 or more excursions occurred.
   c) BLDS downtime exceeded five percent of the total operating permit during the reporting period.
2. Elements of a QIP: [§64.8(b)]
   a) The permittee shall maintain a written QIP, if required, and have it available for inspection. [§64.8(b)(1)]
   b) The plan initially shall include procedures for evaluating the control performance problems and, based on the results of the evaluation procedures, the permittee shall modify the plan to include procedures for conducting one or more of the following actions, as appropriate: [§64.8(b)(2)]
      i) Improved preventive maintenance practices. [§64.8(b)(2)(i)]
      ii) Process operation changes. [§64.8(b)(2)(ii)]
      iii) Appropriate improvements to control methods. [§64.8(b)(2)(iii)]
      iv) Other steps appropriate to correct control performance. [§64.8(b)(2)(iv)]
      v) More frequent or improved monitoring (only in conjunction with one or more steps under §64.8(b)(2)(i) through (iv)). [§64.8(b)(2)(v)]
3. If a QIP is required, the permittee shall develop and implement a QIP as expeditiously as practicable and shall notify the permitting authority if the period for completing the improvements contained in the QIP exceeds 180 days from the date on which the need to implement the QIP was determined. [§64.8(c)]
4. Following implementation of a QIP, upon any subsequent determination pursuant to §64.7(d)(2) the Air Pollution Control Program may require that the permittee make reasonable changes to the QIP if the QIP is found to have: [§64.8(d)]
   a) Failed to address the cause of the control device performance problems; or[§64.8(d)(1)]
   b) Failed to provide adequate procedures for correcting control device performance problems as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. [§64.8(d)(2)]
5. Implementation of a QIP shall not excuse the permittee from compliance with any existing emission limitation or standard, or any existing monitoring, testing, reporting or recordkeeping requirement that may apply under federal, state, or local law, or any other applicable requirements under the Act. [§64.8(e)]

Test Methods and Procedures:

1. The permittee shall use as reference methods and procedures the test methods in NSPS Appendix A or other methods and procedures as specified in §60.123, except as provided in §60.8(b). [§60.123(a)]
2. The permittee shall determine compliance with the particulate matter standards in §60.122 as follows: [§60.123(b)]
   a) Method 5 shall be used to determine the particulate matter concentration during representative periods of furnace operation, including charging and tapping. The sampling time and sample volume for each run shall be at least 60 minutes and 31.8 dscf. [§60.123(b)(1)]
   b) Method 9 and the procedures in §60.11 shall be used to determine opacity. [§60.123(b)(2)]

3. Subsequent testing:
   a) The permittee shall demonstrate compliance with the particulate matter standards applicable to EU-8 Blast Furnace and EU-9A Reverberatory Furnace by conducting a Method 5 during the performance testing required by Permit Condition 012.
      i) Testing of EU-8 Blast Furnace shall occur after CD-38 Process Baghouse, but prior to the introduction of air from CD-37 Dry Lime Scrubber and CD-9 Main Baghouse. The permittee shall not operate the Process Baghouse Bypass during testing of CD-38 Process Baghouse. To demonstrate that the Process Baghouse Bypass is not operating during testing, the permittee shall take photos documenting that the bypass damper is closed.
      ii) Testing of EU-9A Reverberatory Furnace shall occur after CD-37 Dry Lime Scrubber, but prior to the introduction of air from CD-38 Process Baghouse and CD-9 Main Baghouse. The permittee shall not operate the Scrubber Bypass during testing of CD-37 Dry Lime Scrubber. To demonstrate that the Scrubber Bypass is not operating, the permittee shall operate a programmable logic controller (PLC) which shall indicate the status (i.e. open or shut) of the guillotine duct on the bypass line at least once per hour. The permittee shall visually inspect the PLC and guillotine duct at least once per month to ensure that the PLC is accurately reflecting the status of the guillotine duct.
      iii) A complete Proposed Test Plan Form shall be submitted to the Air Pollution Control Program 30 days prior to the proposed test date so that the Air Pollution Control Program may arrange a pretest meeting, if necessary, and assure that the test date is acceptable for an observer to be present. The complete Proposed Test Plan Form shall be submitted electronically to stacktesting@dnr.mo.gov. The Proposed Test Plan may serve the purpose of notification and shall be approved by the Director prior to the permittee conducting the required performance testing.
      iv) One electronic copy of a written report of the performance test results shall be submitted to stacktesting@dnr.mo.gov within 60 days of completion of any required performance testing. The report shall include legible copies of the raw data sheets, analytical instrument laboratory data, and complete sample calculations from the required U.S. EPA Method for at least one sample run.
      v) The performance test report shall fully account for all operational and emission parameters specifically:
         (1) For EU-9A Reverberatory Furnace testing:
            (a) EU-9A Reverberatory Furnace feed rate.
            (b) CD-37 Dry Lime Scrubber lime injection rate.
            (c) CD-35 Lead Baghouse pressure drop.
            (d) CD-37 Dry Lime Scrubber pressure drop.
            (e) The MERV rating or fractional efficiency of CD-35 Lead Baghouse.
            (f) Type(s) of material processed by EU-9A Reverberatory Furnace.
            (g) BLDS relative particulate matter loadings, sensitivity (range), averaging period, alarm set points, and alarm delay time.
         (2) For EU-8 Blast Furnace testing:
            (a) EU-8 Blast Furnace feed rate.
            (b) Type and quantity of fuel combusted by EU-8 Blast Furnace.
            (c) CD-38 Process Baghouse pressure drop.
            (d) The MERV rating or fractional efficiency of CD-38 Process Baghouse.
            (e) Type(s) of material processed by EU-8 Blast Furnace.

(f) BLDS relative particulate matter loadings, sensitivity (range), averaging period, alarm set points, and alarm delay time.

b) The permittee shall demonstrate compliance with the opacity standards applicable to EP-8 by conducting Method 9 opacity observations. Each Method 9 opacity observation shall be conducted for a minimum of 30-minutes. Readings are only required when the emission units are operating and when the weather conditions allow. Method 9 opacity observations of stack EP-8 shall be made according to the following schedule:
   i) Weekly observations shall be conducted for a minimum of eight consecutive weeks after permit issuance. Should no violation of this regulation be observed during this period then -
      (1) Observations shall be made once every two weeks for a period of eight weeks. If a violation is noted, monitoring reverts to weekly. Should no violation of this regulation be observed during this period then -
         (a) Observations shall be made once per month. If a violation is noted, monitoring reverts to weekly.

Recordkeeping:

1. The permittee shall maintain records of all Method 9 observation results (using Attachment C or an equivalent form).
2. The permittee shall maintain records of all Method 5 performance test results.
3. The permittee shall maintain all records required by this permit for not less than five years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request. [§70.6(a)(3)(ii)]
4. The permittee shall comply with the recordkeeping requirements specified in §70.6(a)(3)(ii). The permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to §64.8 and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under this part (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions). [§64.9(b)(1)]
5. Instead of paper records, the permittee may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements. [§64.9(b)(2)]

Reporting:

1. The permittee shall report to the Air Pollution Control Program's Compliance and Enforcement Section at P.O. Box 176, Jefferson City, MO 65102 or AirComplianceReporting@dnr.mo.gov, no later than ten days after an exceedance of either of the standards.
2. The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit. [§70.6(a)(3)(iii) and §64.9(a)(1)]
3. The semi-annual monitoring report shall include, at a minimum, the information required under §70.6(a)(3)(iii) and the following information, as applicable: [§64.9(a)(2)]
   a) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken; [§64.9(a)(2)(i)]

b) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and [§64.9(a)(2)(ii)]
c) A description of the actions taken to implement a QIP during the reporting period as specified in §64.8. Upon completion of a QIP, the permittee shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring. [§64.9(a)(2)(iii)]

PERMIT CONDITION 018

10 CSR 10-6.070 New Source Performance Regulations
40 CFR Part 60, Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines[9]

Emission Source	Description	Control Equipment	Emission Point
EU-114	Emergency Backup Diesel Pump, 115 HP, 2010, John Deere 4045HF285	None	EP-114

Emission Standards:
Fire pump engines with a displacement of less than 30 liters per cylinder shall comply with the emission standards in Table 4 to NSPS IIII, for all pollutants. [§60.4205(c)]

Table 4 to NSPS IIII – *Emission Standards for Stationary Fire Pump Engines in g/kW-hr (g/HP-hr)*

Maximum engine power	Model year(s)	NMHC + NO_x	CO	PM
75≤kW<130 (100≤HP<175)	2009 and earlier	10.5 (7.8)	5.0 (3.7)	0.80 (0.60)
	2010 +[21]	4.0 (3.0)		0.30 (0.22)

Fuel Requirements:
The permittee shall purchase diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel. [§60.4207(b)]

Monitoring Requirements:
The permittee shall install a non-resettable hour meter prior to startup of the engine. [§60.4209(a)]

Compliance Requirements:
1. The permittee shall operate and maintain stationary CI ICE that achieve the emission standards as required in §60.4205 over the entire life of the engine. [§60.4206]
2. The permittee shall do all of the following, except as permitted under §60.4211(g): [§60.4211(a)]
   a) Operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions; [§60.4211(a)(1)]
   b) Change only those emission-related settings that are permitted by the manufacturer; and [§60.4211(a)(2)]
   c) Meet the requirements of 40 CFR Parts 89, 94 and/or 1068, as applicable. [§60.4211(a)(3)]
3. The permittee shall comply by purchasing an engine certified to the emission standards in §60.4205(c) for the same model year and maximum (or in the case of fire pumps, NFPA nameplate) engine power. The engine shall be installed and configured according to the manufacturer's emission-related specifications, except as permitted in §60.4211(g). [§60.4211(c)]
4. The permittee shall operate the emergency stationary ICE according to the requirements in §60.4211(f)(1) through (3). In order for the engine to be considered an emergency stationary ICE under NSPS IIII, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in §60.4211(f)(1) through (3), is prohibited. If the permittee does not operate the engine according to the requirements in §60.4211(f)(1) through (3), the engine will not be considered an emergency engine under NSPS IIII and shall meet all requirements for non-emergency engines. [§60.4211(f)]

[21] For model years 2010-2012, for fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 rpm, the permittee may comply with the emission limitations for 2009 model year engines.

a) There is no time limit on the use of emergency stationary ICE in emergencies. [§60.4211(f)(1)]
b) The permittee may operate the emergency stationary ICE for any combination of the purposes specified in §60.4211(f)(2)(i) for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by §60.4211(f)(3) counts as part of the 100 hours per calendar year allowed by this paragraph. [§60.4211(f)(2)]
    i) Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The permittee may petition the Director for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the permittee maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year. [§60.4211(f)(2)(i)]
c) Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in §60.4211(f)(2). Except as provided in §60.4211(f)(3)(i), the 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity. [§60.4211(f)(3)]
    i) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met: [§60.4211(f)(3)(i)]
        (1) The engine is dispatched by the local balancing authority or local transmission and distribution system operator; [§60.4211(f)(3)(i)(A)]
        (2) The dispatch is intended to mitigate local transmission and/or distribution limitations to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region. [§60.4211(f)(3)(i)(B)]
        (3) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines. [§60.4211(f)(3)(i)(C)]
        (4) The power is provided only to the facility itself or to support the local transmission and distribution system. [§60.4211(f)(3)(i)(D)]
        (5) The permittee identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the permittee. [§60.4211(f)(3)(i)(E)]

5. If the permittee does not install, configure, operate, and maintain the engine and control device according to the manufacturer's emission-related written instructions, or the permittee changes emission-related settings in a way that is not permitted by the manufacturer, the permittee shall demonstrate compliance as follows: [§60.4211(g)]
    a) The permittee shall keep a maintenance plan and records of conducted maintenance and shall, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, the permittee shall conduct an initial performance test to demonstrate compliance with the applicable emission standards within one year of startup, or within one year after an engine and control device is no longer installed,

configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within one year after the permittee changes emission-related settings in a way that is not permitted by the manufacturer. [§60.4211(g)(2)]

Testing Requirements:
The permittee shall comply with the test methods and procedures in §60.4212.

General Provisions:
The permittee shall comply with applicable 40 CFR Part 60, Subpart A general provisions as indicated in Table 8 to NSPS IIII.

Reporting Requirements:
1. The permittee is not required to submit an initial notification. [§60.4214(b)]
2. If the emergency stationary CI ICE operates for the purposes specified in §60.4211(f)(3)(i), the permittee shall submit an annual report according to the requirements in §60.4214(d)(1) through (3). [§60.4214(d)]
   a) The report shall contain the following information: [§60.4214(d)(1)]
      i) Company name and address where the engine is located. [§60.4214(d)(1)(i)]
      ii) Date of the report and beginning and ending dates of the reporting period. [§60.4214(d)(1)(ii)]
      iii) Engine site rating and model year. [§60.4214(d)(1)(iii)]
      iv) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place. [§60.4214(d)(1)(iv)]
      v) Hours spent for operation for the purposes specified in §60.4211(f)(3)(i), including the date, start time, and end time for engine operation for the purposes specified in §60.4211(f)(3)(i). The report shall also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine. [§60.4214(d)(1)(vii)]
      vi) Annual reports for each calendar year shall be submitted no later than March 31 of the following calendar year. [§60.4214(d)(2)]
      vii) The annual report shall be submitted electronically using the NSPS IIII specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form specific to NSPS IIII is not available in CEDRI at the time that the report is due, the written report shall be submitted to the Administrator at the appropriate address listed in §60.4. [§60.4214(d)(3)]
3. The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit. [§70.6(a)(3)(iii)]

PERMIT CONDITION 019

10 CSR 10-6.161 Commercial and Industrial Solid Waste Incinerators[22]
40 CFR Part 60, Subpart DDDD – Emissions Guidelines and Compliance Times for Commercial and Industrial Solid Waste Incineration Units[23]

Emission Source	Description	Emission Point
EU-110	Air Curtain Destructor, 30 tpd, 2008	Fugitive

What is an air curtain incinerator?

1. An air curtain incinerator operates by forcefully projecting a curtain of air across an open chamber or open pit in which combustion occurs. Incinerators of this type can be constructed above or below ground and with or without refractory walls and floor. (Air curtain incinerators are not to be confused with conventional combustion devices with enclosed fireboxes and controlled air technology such as mass burn, modular, and fluidized bed combustors.) [§60.2810(a)]
2. Air curtain incinerators that burn only the materials listed in §60.2810(b)(1) through (3) are only required to meet the requirements under §60.2805 and under "Air Curtain Incinerators" (§§60.2810 through 60.2870): [§60.2810(b)]
   a) 100 percent wood waste; [§60.2810(b)(1)]
   b) 100 percent clean lumber; and [§60.2810(b)(2)]
   c) 100 percent mixture of only wood waste, clean lumber, and/or yard waste. [§60.2810(b)(3)]

Definitions:

1. *Clean lumber* means wood or wood products that have been cut or shaped and include wet, air-dried, and kiln-dried wood products. Clean lumber does not include wood products that have been painted, pigment-stained, or pressure-treated by compounds such as chromate copper arsenate, pentachlorophenol, and creosote. [§60.2875]
2. *Wood waste* means untreated wood and untreated wood products, including tree stumps (whole or chipped), trees, tree limbs (whole or chipped), bark, sawdust, chips, scraps, slabs, millings, and shavings. Wood waste does not include: [§60.2875]
   a) Grass, grass clippings, bushes, shrubs, and clippings from bushes and shrubs from residential, commercial/retail, institutional, or industrial sources as part of maintaining yards or other private or public lands;
   b) Construction, renovation, or demolition wastes; and
   c) Clean lumber.
3. *Yard waste* is grass, grass clippings, bushes, shrubs, and clippings from bushes and shrubs. They come from residential, commercial/retail, institutional, or industrial sources as part of maintaining yards or other private or public lands. Yard waste does not include two items: [§62.15370]
   a) Construction, renovation, and demolition wastes that are exempt from the definition of "municipal solid waste" in §62.15410.
   b) Clean wood that is exempt from the definition of "municipal solid waste" in §62.15410 of this subpart.

Increment 2 Compliance Requirements:

For the final compliance increment of progress, the permittee shall complete all process changes and retrofit construction of control devices, as specified in the final control plan, so that, if the affected

[22] As effective March 30, 2014
[23] SOURCE: 81 FR 41001, June 23, 2016

incinerator is brought online, all necessary process changes and air pollution control devices would operate as designed. [§60.2845]

Emission Limitation

1. The permittee shall meet the two limitations specified in §60.2860(a) and (b): [§60.2860]
   a) Maintain opacity to less than or equal to 10 percent opacity (as determined by the average of three one-hour blocks consisting of 10 six-minute average opacity values), except as described in §60.2860(b); and [§60.2860(a)]
   b) Maintain opacity to less than or equal to 35 percent opacity (as determined by the average of three one-hour blocks consisting of ten six-minute average opacity values) during the startup period that is within the first 30 minutes of operation. [§60.2860(b)]

Monitoring:

1. Use Method 9 of NSPS Appendix A to determine compliance with the opacity limitation. [§60.2865(a)]
2. Conduct annual tests no more than 12 calendar months following the date of the previous test. [§60.2865(c)]

Recordkeeping and Reporting:

1. Keep records of results of all initial and annual opacity tests onsite in either paper copy or electronic format, unless the Director approves another format, for at least five years. [§60.2870(a)]
2. Make all records available for submittal to the Director or for an inspector's onsite review. [§60.2870(b)]
3. Submit annual opacity test results within 12 months following the previous report. [§60.2870(d)]
4. Submit initial and annual opacity test reports as electronic or paper copy on or before the applicable submittal date and keep a copy onsite for a period of five years. [§60.2870(e)]
5. The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit. [§70.6(a)(3)(iii)]

PERMIT CONDITION 020
Existing Process Vent Lead Standards

10 CSR 10-6.075 Maximum Achievable Control Technology Regulations
40 CFR Part 63, Subpart X – National Emission Standards For Hazardous Air Pollutants From Secondary Lead Smelting[24]

Emission Source	Description	Total Enclosure	Control Equipment	Emission Point
EU-8	Blast Furnace: 100 MMBtu/hr metallurgical coke, 2 MMBtu/hr propane, 29.9 tph feed	TE-4 Hot Metals Building	CD-38 Process Baghouse with BLDS, 370,000 acfm (or CD-9 Main Baghouse with BLDS, 450,000 acfm)	EP-8 with SO_2 & CO CEMS
EU-10	Blast Furnace Process: settler, transfer pot, conveyor 3110			
EU-81	Refinery Kettles (R3 & R7-R10) Process Emissions; Refinery: dross hopper, screw, and bunker			
EU-73	Sweat Furnace Fugitives, Copper Cable Compactor, Mold Pouring			
EU-9A	Reverberatory Furnace: 42 MMBtu/hr propane, 34 tph feed		CD-25 Oxy-Fuel Firing System; CD-34 Afterburner; CD-35 Lead Baghouse with BLDS, 75,000 acfm; & CD-37 Dry Lime Scrubber & Baghouse with BLDS, 70,000 acfm (or feed desulfurization via reagent added to feed, CD-25 Oxy-Fuel Firing System, CD-34 Afterburner, & CD-38 Process Baghouse with BLDS, 370,000 acfm)	
EU-9B	Reverberatory Feed Storage Building Ventilation: hopper/pan feeder, belt conveyor, slag bunker	TE-3 Reverberatory Furnace Feed Building	CD-9 Main Baghouse with BLDS, 450,000 acfm	
EU-11	Dross Kettles and Fugitives: (5) dross kettles (D1-D5), 15 tph, dross bunker, dross screw, dross hopper, FS-3300 and FS-3301 recycle kettles, Cable & Scrap Lead Storage for the sweat furnaces, blast furnace crane aisle area, reverberatory furnace feed screw conveyors, dust chute, reverberatory furnace lead tap	TE-4 Hot Metals Building		
EU-22-23	(5) Dross Kettles Combustion: 18.0 MMBtu/hr propane			

EU-39	Sweat Furnace #1: 7.5 MMBtu/hr propane, 0.5 tph feed	TE-4 Hot Metals Building	CD-16 Afterburner & CD-38 Process Baghouse with BLDS, 370,000 acfm (or CD-16 Afterburner & CD-9 Main Baghouse with BLDS, 450,000 acfm)	EP-8 with SO_2 & CO CEMS
EU-64	Sweat Furnace #2: 7.5 MMBtu/hr propane, 0.5 tph feed		CD-22 Afterburner & CD-38 Process Baghouse with BLDS, 370,000 acfm (or CD-22 Afterburner & CD-9 Main Baghouse with BLDS, 450,000 acfm)	
EU-71	Reverberatory Furnace Process Fugitives: Slag Tap		CD-27 Reverberatory Furnace Building Baghouse with BLDS, 60,000 acfm	EP-71
EU-72	North Refinery Kettles (R1, R2, and R4)		CD-28 North Refinery Baghouse with BLDS, 20,000 acfm	EP-72
EU-12	Refinery fugitive emissions, Casting Machines: 0.608 MMBtu/hr propane, Refinery Dock Loading/Unloading: loading of product, trans loading of batteries, unloading of reagents, alloy materials, and lead bearing materials		CD-81 Baghouse with BLDS, 60,000 acfm	EP-81
EU-94	Blast Furnace Feed Conveyor (3095), Charge Hopper, BF Feed Storage Building	TE-2 Blast Feed Furnace Building	CD-94 Baghouse with BLDS, 40,000 acfm	EP-94
EU-102	Covered Material Storage Bins Building contains lead bearing materials including but not limited to: hazardous waste, furnace feed materials, and nonhazardous waste	TE-1 CMSB Building	CD-102 CMSB Baghouse with BLDS, 80,000 acfm	EP-102
EU-104	Steel Processing: (5) acetylene (1470 Btu/hr) or propylene (2400 Btu/hr) torches	TE-6 Steel Processing Building	CD-104 Steel Baghouse with BLDS, 20,000 acfm	EP-104

Lead Compounds Emission Standard:

1. For existing sources, the permittee shall maintain the concentration of lead compounds in any process vent gas at or below 1.0 milligrams of lead per dry standard cubic meter (0.00043 grains of lead per dry standard cubic foot). The permittee shall maintain the flow-weighted average concentration of lead compounds in vent gases from a secondary lead smelting facility at or below 0.20 milligrams of lead per dry standard cubic meter (0.000087 grains of lead per dry standard cubic foot). [§63.543(a)]
   a) The permittee shall demonstrate compliance with the flow weighted average emissions limit on a 12-month rolling average basis, calculated monthly using the most recent test data available. [§63.543(a)(1)]

b) The permittee shall use Equation 1 of §63.543 to calculate the flow-weighted average concentration of lead compounds from process vents:

$$C_{FWA} = \frac{\sum_{i=1}^{n} F_i \times C_i}{\sum_{i}^{n} F_i} \quad \text{Equation 1}$$

Where:
C_{FWA} = Flow-weighted average concentration of all process vents.
n = Number of process vents.
F_i = Flow rate from process vent i in dry standard cubic feet per minute, as measured during the most recent compliance test.
C_i = Concentration of lead in process vent i, as measured during the most recent compliance test. [§63.543(a)(3)]

c) Each month, the permittee shall use the concentration of lead and flow rate obtained during the most recent compliance test performed prior to or during that month to perform the calculation using Equation 1 of §63.543. [§63.543(a)(4)]

2. The permittee shall conduct performance tests according to the schedule in §63.543(g)(1) or (2). [§63.543(g)]
   a) Conduct an annual performance test for lead compounds from each process vent (no later than 12 calendar months following the previous compliance test), unless the permittee installs and operates a CEMS meeting the requirements of §63.8. [§63.543(g)(1)]
   b) If an annual compliance test demonstrates that a process vent emitted lead compounds at 0.10 milligram of lead per dry standard cubic meter or less during the time of the annual compliance test, the permittee may submit a written request to the Director applying for an extension of up to 24 calendar months from the previous compliance test to conduct the next compliance test for lead compounds. [§63.543(g)(2)]
3. The permittee shall conduct the performance tests specified in §63.543(g) under maximum representative operating conditions for the process. During the performance test, the permittee may operate the control device at maximum or minimum representative operating conditions for monitored control device parameters, whichever results in lower emission reduction. Upon request, the permittee shall make available to the Director such records as may be necessary to determine the conditions of performance tests. [§63.543(j)]
4. At all times, the permittee shall operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Director that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [§63.543(k)]
5. The emissions standards in MACT X apply at all times. [§63.541(d)]

Test Methods and Procedures:

The permittee shall use the test methods from NSPS Appendix A as listed in §63.547(a)(1) through (5) to determine compliance with the emissions standards for lead compounds specified in §63.543(a).

Monitoring:

1. The permittee shall prepare, and at all times operate according to, a standard operating procedures manual that describes in detail procedures for inspection, maintenance, and bag leak detection and corrective action plans for all baghouses (fabric filters or cartridge filters) that are used to control

process vents from any source subject to the lead emissions standards in §63.543, including those used to control emissions from building ventilation. [§63.548(a)]

2. The permittee shall submit the standard operating procedures manual for baghouses required by §63.548(a) to the Director for review and approval. [§63.548(b)]
3. The procedures that the permittee specifies in the standard operating procedures manual for inspections and routine maintenance must, at a minimum, include the requirements of §63.548(c)(1) through (9). [§63.548(c)]
   a) Daily monitoring of pressure drop across each baghouse cell. [§63.548(c)(1)]
   b) Weekly confirmation that dust is being removed from hoppers through visual inspection, or equivalent means of ensuring the proper functioning of removal mechanisms. [§63.548(c)(2)]
   c) Daily check of compressed air supply for pulse-jet baghouses. [§63.548(c)(3)]
   d) An appropriate methodology for monitoring cleaning cycles to ensure proper operation. [§63.548(c)(4)]
   e) Monthly check of bag cleaning mechanisms for proper functioning through visual inspection or equivalent means. [§63.548(c)(5)]
   f) Quarterly confirmation of the physical integrity of the baghouse through visual inspection of the baghouse interior for air leaks. [§63.548(c)(7)]
   g) Quarterly inspection of fans for wear, material buildup, and corrosion through visual inspection, vibration detectors, or equivalent means. [§63.548(c)(8)]
   h) Continuous operation of a BLDS. [§63.548(c)(9)]
4. The procedures the permittee specifies in the standard operating procedures manual for baghouse maintenance must include, at a minimum, a preventative maintenance schedule that is consistent with the baghouse manufacturer's instructions for routine and long-term maintenance. [§63.548(d)]
5. The BLDS required by §63.548(c)(9), must meet the specification and requirements of §63.548(e)(1) through (8). [§63.548(e)]
   a) The BLDS must be certified by the manufacturer to be capable of detecting particulate matter emissions at concentrations of 1.0 milligram per actual cubic meter (0.00044 grains per actual cubic foot) or less. [§63.548(e)(1)]
   b) The BLDS sensor must provide output of relative particulate matter loadings. [§63.548(e)(2)]
   c) The BLDS must be equipped with an alarm system that will alarm when an increase in relative particulate loadings is detected over a preset level. [§63.548(e)(3)]
   d) The permittee shall install and operate the BLDS in a manner consistent with the guidance provided in "Office of Air quality Planning and Standards (OAQPS) Fabric Filter Bag Leak Detection Guidance" EPA-454/R-98-015, September 1997 (incorporated by reference, see §63.14) and the manufacturer's written specifications and recommendations for installation, operation, and adjustment of the system. [§63.548(e)(4)]
   e) The initial adjustment of the system must, at a minimum, consist of establishing the baseline output by adjusting the sensitivity (range) and the averaging period of the device, and establishing the alarm set points and the alarm delay time. [§63.548(e)(5)]
   f) Following initial adjustment, the permittee shall not adjust the sensitivity or range, averaging period, alarm set points, or alarm delay time, except as detailed in the approved standard operating procedures manual required under §63.548(a). The permittee cannot increase the sensitivity by more than 100 percent or decrease the sensitivity by more than 50 percent over a 365-day period unless such adjustment follows a complete baghouse inspection that demonstrates that the baghouse is in good operating condition. [§63.548(e)(6)]

g) For negative pressure and positive pressure baghouses that are discharged to the atmosphere through a stack, the permittee shall install the bag leak detector downstream of the baghouse. [§63.548(e)(7)]
h) Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors. [§63.548(e)(8)]

6. The permittee shall include in the standard operating procedures manual required by §63.548(a) a corrective action plan that specifies the procedures to be followed in the case of a BLDS alarm. The corrective action plan shall include, at a minimum, the procedures that the permittee will use to determine and record the time and cause of the alarm as well as the corrective actions taken to minimize emissions as specified in §63.548(f)(1) and (f)(2). [§63.548(f)]
   a) The procedures used to determine the cause of the alarm must be initiated within 30 minutes of the alarm. [§63.548(f)(1)]
   b) The cause of the alarm must be alleviated by taking the necessary corrective action(s) that may include, but not be limited to, those listed in §63.548(f)(2)(i) through (vi). [§63.548(f)(2)]
      i) Inspecting the baghouse for air leaks, torn or broken filter elements, or any other malfunction that may cause an increase in emissions. [§63.548(f)(2)(i)]
      ii) Sealing off defective bags or filter media. [§63.548(f)(2)(ii)]
      iii) Replacing defective bags or filter media, or otherwise repairing the control device. [§63.548(f)(2)(iii)]
      iv) Sealing off a defective baghouse compartment. [§63.548(f)(2)(iv)]
      v) Cleaning the BLDS probe, or otherwise repairing the BLDS. [§63.548(f)(2)(v)]
      vi) Shutting down the process producing the particulate emissions. [§63.548(f)(2)(vi)]

General Provisions:

The permittee shall comply with the applicable provisions of 40 CFR Part 63, Subpart A as indicated in Table 1 to MACT X. [§63.0541(b)]

Notification Requirements:

The permittee shall comply with all of the notification requirements of §63.9. Electronic notifications are encouraged if suitable for the specific case (e.g., by electronic media such as Excel spreadsheet, on CD or hard copy), and when required by MACT X. [§63.549(a)]

Recordkeeping and Reporting:

1. The permittee shall comply with all of the recordkeeping and reporting requirements specified in §63.10 that are referenced in Table 1 to MACT X. [§63.550(a)]
   a) Records shall be maintained in a form suitable and readily available for expeditious review, according to §63.10(b)(1). However, electronic recordkeeping and reporting if suitable for the specific case (e.g., by electronic media such as Excel spreadsheet, on CD or hard copy), and when required by MACT X. [§63.550(a)(1)]
   b) Records must be kept on site for at least two years after the date of occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1). [§63.550(a)(2)]
2. The standard operating procedures manual required in §63.548(a) must be submitted to the Director in electronic format for review and approval of the initial submittal and whenever an update is made to the procedure. [§63.550(b)]
3. The permittee shall maintain for a period of five years, records of the information listed in §63.550(c)(1) through (13). [§63.550(c)]
   a) Electronic records of the BLDS output. [§63.550(c)(1)]

b) An identification of the date and time of all BLDS alarms, the time that procedures to determine the cause of the alarm were initiated, the cause of the alarm, an explanation of the corrective actions taken, and the date and time the cause of the alarm was corrected. [§63.550(c)(2)]
c) All records of inspections and maintenance activities required under §63.548(c) as part of the practices described in the standard operating procedures manual for baghouses required under §63.548(a). [§63.550(c)(3)]
d) Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control equipment and monitoring equipment. [§63.550(c)(11)]
e) Records of actions taken during periods of malfunction to minimize emissions in accordance with §63.543(k), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. [§63.550(c)(12)]

4. The permittee shall comply with all of the reporting requirements specified in §63.10 of the General Provisions that are referenced in Table 1 to MACT X. [§63.550(d)]
   a) The permittee shall submit reports no less frequent than specified under §63.10(e)(3) of the General Provisions. [§63.550(d)(1)]
   b) Once a source reports a violation of the standard or excess emissions, the permittee shall follow the reporting format required under §63.10(e)(3) until a request to reduce reporting frequency is approved by the Director. [§63.550(d)(2)]
5. In addition to the information required under the applicable sections of §63.10, the permittee shall include in the reports required under §63.550(d) the information specified in §63.550(e)(1) through (14). [§63.550(e)]
   a) Records of the concentration of lead in each process vent, and records of the rolling 12-month flow-weighted average concentration of lead compounds in vent gases calculated monthly as required in §63.543(a), except during the first year when the concentration is calculated using the method described in §63.543(a)(2). [§63.550(e)(1)]
   b) Records of all alarms from the BLDS specified in §63.548. [§63.550(e)(4)]
   c) A description of the procedures taken following each BLDS alarm pursuant to §63.548(f)(1) and (2). [§63.550(e)(5)]
   d) A summary of the records maintained as part of the practices described in the standard operating procedures manual for baghouses required under §63.548(a), including an explanation of the periods when the procedures were not followed and the corrective actions taken. [§63.550(e)(6)]
   e) If a malfunction occurred during the reporting period, the report must include the number, duration, and a brief description for each type of malfunction that occurred during the reporting period and caused or may have caused any applicable emissions limitation to be exceeded. The report must also include a description of actions taken during a malfunction of an affected source to minimize emissions in accordance with §63.543(k), including actions taken to correct a malfunction. [§63.550(e)(11)]
   f) The permittee shall submit records pursuant to §63.550(e)(14)(i) through (iii). [§63.550(e)(14)]
      i) Within 60 days after the date of completing each performance test, as defined in §63.2 and as required in MACT X, the permittee shall submit performance test data, except opacity data, electronically to EPA's Central Data Exchange by using the Electronic Reporting Tool (see http://www.epa.gov/ttn/chief/ert/ert_tool.html/). Only data collected using test methods compatible with the Electronic Reporting Tool are subject to this requirement to be submitted electronically into EPA's WebFIRE database. [§63.550(e)(14)(i)]
      ii) Within 60 days after the date of completing each CEMS performance evaluation test, as defined in §63.2 and required by MACT X, the permittee shall submit the relative accuracy test audit data electronically into EPA's Central Data Exchange by using the Electronic

Reporting Tool as mentioned in §63.550(e)(14)(i). Only data collected using test methods compatible with the Electronic Reporting Tool are subject to this requirement to be submitted electronically into EPA's WebFIRE database. [§63.550(e)(14)(ii)]

iii) All reports required by MACT X not subject to the requirements in §63.550(e)(14)(i) and (ii) shall be sent to the Administrator at the appropriate address listed in §63.13. The Administrator or the Director may request a report in any form suitable for the specific case (e.g., by electronic media such as Excel spreadsheet, on CD or hard copy). The Administrator retains the right to require submittal of reports subject to §63.550(e)(14)(i) and (ii) in paper format. [§63.550(e)(14)(iii)]

6. The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit. [§70.6(a)(3)(iii)]

PERMIT CONDITION 021
New Process Vent Lead Standards

10 CSR 10-6.075 Maximum Achievable Control Technology Regulations
40 CFR Part 63, Subpart X – National Emission Standards For Hazardous Air Pollutants From Secondary Lead Smelting[24]

Emission Source	Description	Total Enclosure	Control Equipment	Emission Point
EU-16A	BSN Process: V103 6,600 gallon acid clarifier tank, V104 2,904 gallon acid clarifier tank, industrial battery cutting station, hammer mill, paste vibrator, 17,000 gallon 202 Paste Tank, 9,000 gallon 301A paste tank, 9,000 gallon 301B paste tank, paste filter press, 9,730 gallon 311C acid containment tank, 9,730 gallon 311F acid containment tank, hydrodynamic separator, santa maria/paste settler, first trommel, hydrostatic separator, second trommel, 2,640 gallon poly wash tank, post & grids conveyor, separator screw conveyor, and separator storage	None	All equipment is enclosed and vents to CD-10 BSN Wet Scrubber	EP-16
EU-16B	BSN Process: Truck unloading, industrial battery storage, industrial battery dump, tilters, vibrating pan, and palletized storage area	TE-5 BSN Building	CD-101 Receiving Dock Baghouse with BLDS, 80,000 acfm	EP-103
EU-16C	BSN Process: drum shredder steel conveyor, battery shredder, acid vibrator, H103 conveyor, 8210 conveyor, 3,960 gallon V102 tank, diversion chute, vibrating hopper, and acid filter press		CD-103 BSN Baghouse with BLDS, 100,000 acfm	
EU-105A	ERP Kettles R5, R6, R11, & R12: (4) 225 ton refining kettles - process emissions	TE-4 Hot Metals Building	CD-40 ERP Baghouse with BLDS, 60,000 dscfm	EP-105
EU-105B	ERP Kettles R11 & R12 Combustion: 12 MMBtu/hr propane			
EU-28	Refinery Kettles R9 & R10 Combustion: 8.4 MMBtu/hr propane			
EU-26B	Refinery Kettles R5 & R6 - (2) 225 ton refining kettles - process emissions			
EU-31B	Drum Shredder Room	TE-5 BSN Building	CD-31B Drum Shredder Hygiene Baghouse with BLDS, 40,000 acfm	EP-31B
EU-31C	Drum Shredder, Saturn Model No. 60-44HT with (2) 300 HP electric motors and 22.25 inch cutter diameter, 25 tph, 2017, magnet, and LBM conveyor		CD-31C Drum Shredder Process Baghouse with BLDS, 15,000 acfm	EP-31C

EU-101	Paste Bunker		CD-103 BSN Baghouse with BLDS, 100,000 acfm	EP-103

Emission Standards:

1. For new sources that began construction or reconstruction after May 19, 2011, the permittee shall maintain the concentration of lead compounds in any process vent gas at or below 0.20 milligrams of lead per dry standard cubic meter (0.000087 grains of lead per dry standard cubic foot). [§63.543(b)]
2. The permittee shall conduct performance tests according to the schedule in §63.543(g)(1) or (2). [§63.543(g)]
   a) Conduct an annual performance test for lead compounds from each process vent (no later than 12 calendar months following the previous compliance test), unless the permittee installs and operates a CEMS meeting the requirements of §63.8. [§63.543(g)(1)]
   b) If an annual compliance test demonstrates that a process vent emitted lead compounds at 0.10 milligram of lead per dry standard cubic meter or less during the time of the annual compliance test, the permittee may submit a written request to the Director applying for an extension of up to 24 calendar months from the previous compliance test to conduct the next compliance test for lead compounds. [§63.543(g)(2)]
3. The permittee shall conduct the performance tests specified in §63.543(g) under maximum representative operating conditions for the process. During the performance test, the permittee may operate the control device at maximum or minimum representative operating conditions for monitored control device parameters, whichever results in lower emission reduction. Upon request, the permittee shall make available to the Director such records as may be necessary to determine the conditions of performance tests. [§63.543(j)]
4. At all times, the permittee shall operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Director that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [§63.543(k)]
5. The emissions standards in MACT X apply at all times. [§63.541(d)]

Test Methods and Procedures:

The permittee shall use the test methods from NSPS Appendix A as listed in §63.547(a)(1) through (5) to determine compliance with the emissions standards for lead compounds specified in §63.543(b).

Monitoring:

1. The permittee shall prepare, and at all times operate according to, a standard operating procedures manual that describes in detail procedures for inspection, maintenance, and bag leak detection and corrective action plans for all baghouses (fabric filters or cartridge filters) that are used to control process vents from any source subject to the lead emissions standards in §63.543, including those used to control emissions from building ventilation. [§63.548(a)]
2. The permittee shall submit the standard operating procedures manual for baghouses required by §63.548(a) to the Director for review and approval. [§63.548(b)]

3. The procedures that the permittee specifies in the standard operating procedures manual for inspections and routine maintenance must, at a minimum, include the requirements of §63.548(c)(1) through (9). [§63.548(c)]
   a) Daily monitoring of pressure drop across each baghouse cell. [§63.548(c)(1)]
   b) Weekly confirmation that dust is being removed from hoppers through visual inspection, or equivalent means of ensuring the proper functioning of removal mechanisms. [§63.548(c)(2)]
   c) Daily check of compressed air supply for pulse-jet baghouses. [§63.548(c)(3)]
   d) An appropriate methodology for monitoring cleaning cycles to ensure proper operation. [§63.548(c)(4)]
   e) Monthly check of bag cleaning mechanisms for proper functioning through visual inspection or equivalent means. [§63.548(c)(5)]
   f) Quarterly confirmation of the physical integrity of the baghouse through visual inspection of the baghouse interior for air leaks. [§63.548(c)(7)]
   g) Quarterly inspection of fans for wear, material buildup, and corrosion through visual inspection, vibration detectors, or equivalent means. [§63.548(c)(8)]
   h) Continuous operation of a BLDS, unless a system meeting the requirements of §63.548(m) for a continuous emissions monitoring system is installed for monitoring the concentration of lead. [§63.548(c)(9)]
4. The procedures the permittee specifies in the standard operating procedures manual for baghouse maintenance must include, at a minimum, a preventative maintenance schedule that is consistent with the baghouse manufacturer's instructions for routine and long-term maintenance. [§63.548(d)]
5. The BLDS required by §63.548(c)(9), must meet the specification and requirements of §63.548(e)(1) through (8). [§63.548(e)]
   a) The BLDS must be certified by the manufacturer to be capable of detecting particulate matter emissions at concentrations of 1.0 milligram per actual cubic meter (0.00044 grains per actual cubic foot) or less. [§63.548(e)(1)]
   b) The BLDS sensor must provide output of relative particulate matter loadings. [§63.548(e)(2)]
   c) The BLDS must be equipped with an alarm system that will alarm when an increase in relative particulate loadings is detected over a preset level. [§63.548(e)(3)]
   d) The permittee shall install and operate the BLDS in a manner consistent with the guidance provided in "Office of Air quality Planning and Standards (OAQPS) Fabric Filter Bag Leak Detection Guidance" EPA-454/R-98-015, September 1997 (incorporated by reference, see §63.14) and the manufacturer's written specifications and recommendations for installation, operation, and adjustment of the system. [§63.548(e)(4)]
   e) The initial adjustment of the system must, at a minimum, consist of establishing the baseline output by adjusting the sensitivity (range) and the averaging period of the device, and establishing the alarm set points and the alarm delay time. [§63.548(e)(5)]
   f) Following initial adjustment, the permittee shall not adjust the sensitivity or range, averaging period, alarm set points, or alarm delay time, except as detailed in the approved standard operating procedures manual required under §63.548(a). The permittee cannot increase the sensitivity by more than 100 percent or decrease the sensitivity by more than 50 percent over a 365-day period unless such adjustment follows a complete baghouse inspection that demonstrates that the baghouse is in good operating condition. [§63.548(e)(6)]
   g) For negative pressure, induced air baghouses, and positive pressure baghouses that are discharged to the atmosphere through a stack, the permittee shall install the bag leak detector downstream of the baghouse. [§63.548(e)(7)]

h) Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors. [§63.548(e)(8)]

6. The permittee shall include in the standard operating procedures manual required by §63.548(a) a corrective action plan that specifies the procedures to be followed in the case of a BLDS alarm. The corrective action plan shall include, at a minimum, the procedures that the permittee will use to determine and record the time and cause of the alarm as well as the corrective actions taken to minimize emissions as specified in §63.548(f)(1) and (f)(2). [§63.548(f)]
   a) The procedures used to determine the cause of the alarm must be initiated within 30 minutes of the alarm. [§63.548(f)(1)]
   b) The cause of the alarm must be alleviated by taking the necessary corrective action(s) that may include, but not be limited to, those listed in §63.548(f)(2)(i) through (vi). [§63.548(f)(2)]
      i) Inspecting the baghouse for air leaks, torn or broken filter elements, or any other malfunction that may cause an increase in emissions. [§63.548(f)(2)(i)]
      ii) Sealing off defective bags or filter media. [§63.548(f)(2)(ii)]
      iii) Replacing defective bags or filter media, or otherwise repairing the control device. [§63.548(f)(2)(iii)]
      iv) Sealing off a defective baghouse compartment. [§63.548(f)(2)(iv)]
      v) Cleaning the BLDS probe, or otherwise repairing the BLDS. [§63.548(f)(2)(v)]
      vi) Shutting down the process producing the particulate emissions. [§63.548(f)(2)(vi)]
7. If using a wet scrubber to control particulate matter and metal hazardous air pollutant emissions from a process vent to demonstrate continuous compliance with the emissions standards, the permittee shall monitor and record the pressure drop and water flow rate of the wet scrubber during the initial performance or compliance test conducted to demonstrate compliance with the lead emissions limit under §63.543(b). Thereafter, the permittee shall monitor and record the pressure drop and water flow rate values at least once every hour and the permittee shall maintain the pressure drop and water flow rate at levels no lower than 30 percent below the pressure drop and water flow rate measured during the initial performance or compliance test. [§63.548(i)]
8. Except as provided in §63.548(l)(2) or (3), all new or reconstructed sources subject to the requirements under §63.543 must install, calibrate, maintain, and operate a CEMS for measuring lead emissions. In addition to the General Provisions requirements for CEMS in §63.8(c) that are referenced in Table 1 to MACT X, the permittee shall comply with the requirements for CEMS specified in §63.548(m). [§63.548(l)]
   a) Sources subject to the emissions limits for lead compounds under §63.543(b) shall install a CEMS for measuring lead emissions within 180 days of promulgation by the EPA of performance specifications for lead CEMS. [§63.548(l)(1)]
   b) Prior to 180 days after the EPA promulgates performance specifications for CEMS used to measure lead concentrations, the permittee shall use the procedure described in §63.543(g)(1) to determine compliance. [§63.548(l)(2)]
   c) Vents from control devices that serve only to control emissions from buildings containing lead bearing materials are exempt from the requirement to install a CEMS for measuring lead emissions. [§63.548(l)(3)]
9. If a CEMS is used to measure lead emissions, the permittee shall install a continuous emissions monitoring system with a sensor in a location that provides representative measurement of the exhaust gas flow rate at the sampling location of the CEMS used to measure lead emissions, taking into account the manufacturer's recommendations. The flow rate sensor is that portion of the system that senses the volumetric flow rate and generates an output proportional to that flow rate. [§63.548(m)]

a) The continuous emissions monitoring system must be designed to measure the exhaust gas flow rate over a range that extends from a value of at least 20 percent less than the lowest expected exhaust flow rate to a value of at least 20 percent greater than the highest expected exhaust gas flow rate. [§63.548(m)(1)]
b) The continuous emissions monitoring system must be equipped with a data acquisition and recording system that is capable of recording values over the entire range specified in §63.548(m)(1). [§63.548(m)(2)]
c) The permittee shall perform an initial relative accuracy test of the continuous emissions monitoring system in accordance with the applicable Performance Specification in NSPS Appendix B. [§63.548(m)(3)]
d) The permittee shall operate the continuous emissions monitoring system and record data during all periods of operation of the affected facility including periods of startup, shutdown, and malfunction, except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities including, as applicable, calibration checks and required zero and span adjustments. [§63.548(m)(4)]
e) If the permittee has a CEMS to measure lead emissions, the permittee shall calculate the average lead concentration and flow rate monthly to determine compliance with §63.543(a). [§63.548(m)(5)]
f) When the continuous emissions monitoring system is unable to provide quality assured data, the following apply: [§63.548(m)(6)]
    i) When data are not available for periods of up to 48 hours, the highest recorded hourly emissions rate from the previous 24 hours must be used. [§63.548(m)(6)(i)]
    ii) When data are not available for 48 or more hours, the maximum daily emissions rate based on the previous 30 days must be used. [§63.548(m)(6)(ii)]

General Provisions:

The permittee shall comply with the applicable provisions of 40 CFR Part 63, Subpart A as indicated in Table 1 to MACT X. [§63.0541(b)]

Notification Requirements:

1. The permittee shall comply with all of the notification requirements of §63.9. Electronic notifications are encouraged if suitable for the specific case (e.g., by electronic media such as Excel spreadsheet, on CD or hard copy), and when required by MACT X. [§63.549(a)]
2. The permittee shall submit the standard operating procedures manual for baghouses required under §63.548(a) to the Director along with a notification that the smelter is seeking review and approval of these plans and procedures. For sources that commenced construction or reconstruction after January 5, 2012, the permittee shall submit this notification no later than 180 days before startup of the constructed or reconstructed source. [§63.549(b)]

Recordkeeping and Reporting:

1. The permittee shall comply with all of the recordkeeping and reporting requirements specified in §63.10 that are referenced in Table 1 to MACT X. [§63.550(a)]
    a) Records shall be maintained in a form suitable and readily available for expeditious review, according to §63.10(b)(1). However, electronic recordkeeping and reporting if suitable for the specific case (e.g., by electronic media such as Excel spreadsheet, on CD or hard copy), and when required by MACT X. [§63.550(a)(1)]

b) Records must be kept on site for at least two years after the date of occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1). [§63.550(a)(2)]

2. The standard operating procedures manual required in §63.548(a) must be submitted to the Director in electronic format for review and approval of the initial submittal and whenever an update is made to the procedure. [§63.550(b)]
3. The permittee shall maintain for a period of five years, records of the information listed in §63.550(c)(1) through (13). [§63.550(c)]
   a) Electronic records of the BLDS output. [§63.550(c)(1)]
   b) An identification of the date and time of all BLDS alarms, the time that procedures to determine the cause of the alarm were initiated, the cause of the alarm, an explanation of the corrective actions taken, and the date and time the cause of the alarm was corrected. [§63.550(c)(2)]
   c) All records of inspections and maintenance activities required under §63.548(c) as part of the practices described in the standard operating procedures manual for baghouses required under §63.548(a). [§63.550(c)(3)]
   d) Electronic records of the pressure drop and water flow rate values for wet scrubbers used to control metal hazardous air pollutant emissions from process fugitive sources as required in §63.548(i). [§63.550(c)(4)]
   e) Electronic records of the output of any CEMS installed to monitor lead emissions meeting the requirements of §63.548(m). [§63.550(c)(10)]
   f) Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control equipment and monitoring equipment. [§63.550(c)(11)]
   g) Records of actions taken during periods of malfunction to minimize emissions in accordance with §63.543(k), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. [§63.550(c)(12)]
4. The permittee shall comply with all of the reporting requirements specified in §63.10 of the General Provisions that are referenced in Table 1 to MACT X. [§63.550(d)]
   a) The permittee shall submit reports no less frequent than specified under §63.10(e)(3) of the General Provisions. [§63.550(d)(1)]
   b) Once a source reports a violation of the standard or excess emissions, the permittee shall follow the reporting format required under §63.10(e)(3) until a request to reduce reporting frequency is approved by the Director. [§63.550(d)(2)]
5. In addition to the information required under the applicable sections of §63.10, the permittee shall include in the reports required under §63.550(d) the information specified in §63.550(e)(1) through (14). [§63.550(e)]
   a) Records of all periods when monitoring using a CEMS for lead did not comply with applicable limits. [§63.550(e)(3)]
   b) Records of all alarms from the BLDS specified in §63.548. [§63.550(e)(4)]
   c) A description of the procedures taken following each BLDS alarm pursuant to §63.548(f)(1) and (2). [§63.550(e)(5)]
   d) A summary of the records maintained as part of the practices described in the standard operating procedures manual for baghouses required under §63.548(a), including an explanation of the periods when the procedures were not followed and the corrective actions taken. [§63.550(e)(6)]
   e) An identification of the periods when the pressure drop and water flow rate of wet scrubbers used to control process fugitive sources dropped below the levels established in §63.548(i), and an explanation of the corrective actions taken. [§63.550(e)(7)]
   f) If a malfunction occurred during the reporting period, the report must include the number, duration, and a brief description for each type of malfunction that occurred during the reporting

period and caused or may have caused any applicable emissions limitation to be exceeded. The report must also include a description of actions taken during a malfunction of an affected source to minimize emissions in accordance with §63.543(k), including actions taken to correct a malfunction. [§63.550(e)(11)]

g) The permittee shall submit records pursuant to §63.550(e)(14)(i) through (iii). [§63.550(e)(14)]
   i) Within 60 days after the date of completing each performance test, as defined in §63.2 and as required in MACT X, the permittee shall submit performance test data, except opacity data, electronically to EPA's Central Data Exchange by using the Electronic Reporting Tool (see http://www.epa.gov/ttn/chief/ert/ert_tool.html/). Only data collected using test methods compatible with the Electronic Reporting Tool are subject to this requirement to be submitted electronically into EPA's WebFIRE database. [§63.550(e)(14)(i)]
   ii) Within 60 days after the date of completing each CEMS performance evaluation test, as defined in §63.2 and required by MACT X, the permittee shall submit the relative accuracy test audit data electronically into EPA's Central Data Exchange by using the Electronic Reporting Tool as mentioned in §63.550(e)(14)(i). Only data collected using test methods compatible with the Electronic Reporting Tool are subject to this requirement to be submitted electronically into EPA's WebFIRE database. [§63.550(e)(14)(ii)]
   iii) All reports required by MACT X not subject to the requirements in §63.550(e)(14)(i) and (ii) shall be sent to the Administrator at the appropriate address listed in §63.13. The Administrator or the Director may request a report in any form suitable for the specific case (e.g., by electronic media such as Excel spreadsheet, on CD or hard copy). The Administrator retains the right to require submittal of reports subject to §63.550(e)(14)(i) and (ii) in paper format. [§63.550(e)(14)(iii)]

6. The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit. [§70.6(a)(3)(iii)]

PERMIT CONDITION 022
D/F & THC Standards

10 CSR 10-6.075 Maximum Achievable Control Technology Regulations
40 CFR Part 63, Subpart X – National Emission Standards For Hazardous Air Pollutants From Secondary Lead Smelting[24]

Emission Source	Description	Total Enclosure	Control Equipment	Emission Point
EU-8	Blast Furnace: 100 MMBtu/hr metallurgical coke, 2 MMBtu/hr propane, 29.9 tph feed	TE-4 Hot Metals Building	CD-38 Process Baghouse with BLDS (or CD-9 Main Baghouse with BLDS)	EP-8 with SO_2 & CO CEMS
EU-10	Blast Furnace Process: settler, transfer pot, conveyor 3110			
EU-9A	Reverberatory Furnace: 42 MMBtu/hr propane, 34 tph feed		CD-25 Oxy-Fuel Firing System, CD-34 Afterburner, CD-35 Lead Baghouse with BLDS , & CD-37 Dry Lime Scrubber (or feed desulfurization via reagent added to feed, CD-25 Oxy-Fuel Firing System, CD-34 Afterburner, & CD-38 Process Baghouse with BLDS)	
EU-11	Dross Kettles and Fugitives: (5) dross kettles (D1-D5), 15 tph, dross bunker, dross screw, dross hopper, FS-3300 and FS-3301 recycle kettles, Cable & Scrap Lead Storage for the sweat furnaces, blast furnace crane aisle area, reverberatory furnace feed screw conveyors, dust chute, reverberatory furnace lead tap		CD-9 Main Baghouse with BLDS, 450,000 acfm	

Emission Standards:

1. The permittee shall meet the applicable emissions limits for total hydrocarbons and dioxins and furans from furnace sources specified in Table 2 of MACT X. There are no standards for dioxins and furans during periods of startup and shutdown. [§63.543(c)]
2. When combining furnace emissions from multiple types of furnaces that do not meet the definition of collocated blast and reverberatory furnaces, the permittee shall calculate the emissions limit for the combined furnace stream using Equation 2 of §63.543.

$$C_{EL} = \frac{\sum_{i=1}^{n} F_i \times C_{ELi}}{\sum_{i}^{n} F_i} \quad \text{Equation 2}$$

Where:
C_{EL} = Flow-weighted average emissions limit (concentration) of combined furnace vents.
n = Number of furnace vents.

[24] Source: 77 FR 580, Jan. 5, 2012, as amended at 79 FR 371, Jan. 3, 2014

F_i = Flow rate from furnace vent i in dry standard cubic feet per minute.
C_{ELi} = Emissions limit (concentration) of pollutant in furnace vent i as specified in Table 2 of MACT X. [§63.543(d)]

3. For sources that combine furnace emissions (EU-9A) with the furnace charging process fugitive emissions (EU-11) and discharge them to the atmosphere through a common emissions point, the permittee shall demonstrate compliance with the applicable total hydrocarbons concentration limit specified in §63.543(c) at a location downstream from the point at which the two emissions streams are combined. [§63.543(e)]
4. Following the initial performance or compliance test to demonstrate compliance with the total hydrocarbons emissions limits in §63.543(c), the permittee shall conduct an annual performance test for total hydrocarbons emissions from each process vent that has established limits for total hydrocarbons (no later than 12 calendar months following the previous compliance test), unless the permittee installs and operates a CEMS meeting the requirements of §63.8. If an annual compliance test demonstrates that a process vent emitted total hydrocarbons at less than 50 percent of the allowable limit during the time of the annual compliance test, the permittee may submit a written request to the Director applying for an extension of up to 24 calendar months from the previous compliance test to conduct the next compliance test for total hydrocarbons. [§63.543(h)]
5. Following the initial performance or compliance test to demonstrate compliance with the dioxins and furans emissions limits specified in §63.543(c), the permittee shall conduct a performance test for dioxins and furans emissions from each process vent that has established limits for dioxins and furans at least once every six years following the previous compliance test. [§63.543(i)]
6. The permittee shall conduct the performance tests specified in §63.543(h) and (i) under maximum representative operating conditions for the process. During the performance test, the permittee may operate the control device at maximum or minimum representative operating conditions for monitored control device parameters, whichever results in lower emission reduction. Upon request, the permittee shall make available to the Director such records as may be necessary to determine the conditions of performance tests. [§63.543(j)]
7. At all times, the permittee shall operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Director that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [§63.543(k)]
8. For furnaces subject to the emission limits in Table 2 of MACT, the permittee shall minimize the furnace's startup and shutdown periods following the manufacturer's recommended procedures, if available. The permittee shall develop and follow standard operating procedures designed to minimize emissions of total hydrocarbon for each startup or shutdown scenario anticipated. The permittee shall submit a signed statement in the Notification of Compliance Status report that indicates that the permittee conducted startups and shutdowns according to the manufacturer's recommended procedures, if available, and the standard operating procedures designed to minimize emissions of total hydrocarbons. [§63.543(l)]
9. In addition to complying with the applicable emissions limits for dioxins and furans listed in Table 2 to MACT X, the permittee shall operate a process to separate plastic battery casing materials from all automotive batteries prior to introducing feed into a furnace. [§63.543(m)]
10. The emissions standards in MACT X apply at all times. [§63.541(d)]

Table 2 to MACT X – *Emission Limits for Secondary Lead Smelting Furnaces*

For vents from these processes...	The permittee shall meet the following emission limits...[25]	
	Total hydrocarbon expressed as propane corrected to 4 percent carbon dioxide	**Dioxin and furan (dioxins and furans) expressed as TEQ corrected to 7 percent O_2**
Blast furnaces that commence construction or reconstruction before June 9, 1994	360 ppmv	170 ng/dscm
Reverberatory furnaces that commence construction or reconstruction before May 19, 2011	12 ppmv	0.20 ng/dscm

Test Methods and Procedures:

1. The permittee shall use the test methods in NSPS Appendix A listed in §63.547(b)(1) through (4), as specified, to determine compliance with the emissions standards for total hydrocarbons specified in §63.543(c) through (e).
2. The permittee shall correct the measured total hydrocarbons concentrations to 4 percent carbon dioxide as specified in §63.547(c)(1) through (3).
3. The permittee shall use the test methods in NSPS Appendix A listed in §63.547(d)(1) through (5), as specified, to determine compliance with the emissions standards for dioxins and furans specified in §63.543(c).
4. The permittee shall determine the dioxins and furans toxic equivalency by following the procedures in §63.547(e)(1) through (3).
5. Testing of THC and D/F for EU-8, EU-10, and EU-9A shall occur in the scrubber side plenum of EP-8 after the combination of exhaust gases from CD-38 and CD-37. The permittee shall not operate CD-38 Process Baghouse Bypass during testing (i.e. emissions from EU-8 and EU-10 shall not be routed to CD-9 Main Baghouse during THC and D/F testing). To demonstrate that CD-38 Process Baghouse Bypass is not operating during THC and D/F testing, the permittee shall take photos documenting that the bypass damper is closed.
6. Flow rate testing for EU-8 shall occur just below the furnace apex before the cooling chamber where exhaust gases from other emission sources combine with blast furnace exhaust gases.
7. Flow rate testing for EU-9A shall occur in the scrubber ductwork before the exhaust gases mix with exhaust gases from CD-38.

Monitoring:

1. The permittee shall comply with the requirements specified in §63.548(j)(1) through (4) to demonstrate continuous compliance with the total hydrocarbons and dioxins and furans emissions standards. During periods of startup and shutdown, the requirements of §63.548(j)(4) do not apply. Instead, the permittee shall demonstrate compliance with the standard for total hydrocarbon by meeting the requirements of §63.543(l). [§63.548(j)]

[25] There are no standards for dioxins and furans during periods of startup and shutdown. §63.542 defines *startup* as the period when no led bearing materials have been fed to the furnace and smelting operations have not yet commenced during which the furnace is heated from ambient temperature to steady-state operating temperature. §63.542 defines *shutdown* as the period when no lead bearing materials are being fed to the furnace and smelting operations have ceased during which the furnace is cooled from steady-state operating temperature to ambient temperature.

a) Continuous temperature monitoring. The permittee shall install, calibrate, maintain, and continuously operate a device to monitor and record the temperature of the afterburner or furnace exhaust streams consistent with the requirements for continuous monitoring systems in §63.8. [§63.548(j)(1)]
b) Prior to or in conjunction with the initial performance or compliance test to determine compliance with §63.543(c), the permittee shall conduct a performance evaluation for the temperature monitoring device according to §63.8(e). The definitions, installation specifications, test procedures, and data reduction procedures for determining calibration drift, relative accuracy, and reporting described in Performance Specification 2, NSPS Appendix B, sections 2, 3, 5, 7, 8, 9, and 10 must be used to conduct the evaluation. The temperature monitoring device must meet the following performance and equipment specifications: [§63.548(j)(2)]
   i) The recorder response range must include zero and 1.5 times the average temperature identified in §63.548(j)(3). [§63.548(j)(2)(i)]
   ii) The monitoring system calibration drift must not exceed 2 percent of 1.5 times the average temperature identified in §63.548(j)(3). [§63.548(j)(2)(ii)]
   iii) The monitoring system relative accuracy must not exceed 20 percent. [§63.548(j)(2)(ii)]
   iv) The reference method must be a National Institute of Standards and Technology calibrated reference thermocouple-potentiometer system or an alternate reference, subject to the approval of the Administrator. [§63.548(j)(2)(iv)]
c) The permittee shall monitor and record the temperature of the afterburner or the furnace exhaust streams every 15 minutes during the initial performance or compliance test for total hydrocarbons and dioxins and furans and determine an arithmetic average for the recorded temperature measurements. [§63.548(j)(3)]
d) To demonstrate continuous compliance with the standards for total hydrocarbons and dioxins and furans, the permittee shall maintain an afterburner or exhaust temperature such that the average temperature in any 3-hour period does not fall more than 28 °Celsius (50 °Fahrenheit) below the average established in §63.548(j)(3). [§63.548(j)(4)]

General Provisions:
The permittee shall comply with the applicable provisions of 40 CFR Part 63, Subpart A as indicated in Table 1 to MACT X. [§63.0541(b)]

Notification Requirements:
The permittee shall comply with all of the notification requirements of §63.9. Electronic notifications are encouraged if suitable for the specific case (e.g., by electronic media such as Excel spreadsheet, on CD or hard copy), and when required by MACT X. [§63.549(a)]

Recordkeeping and Reporting:
1. The permittee shall comply with all of the recordkeeping and reporting requirements specified in §63.10 that are referenced in Table 1 to MACT X. [§63.550(a)]
   a) Records shall be maintained in a form suitable and readily available for expeditious review, according to §63.10(b)(1). However, electronic recordkeeping and reporting if suitable for the specific case (e.g., by electronic media such as Excel spreadsheet, on CD or hard copy), and when required by MACT X. [§63.550(a)(1)]
   b) Records must be kept on site for at least two years after the date of occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1). [§63.550(a)(2)]

2. The permittee shall maintain for a period of five years, records of the information listed in §63.550(c)(1) through (13). [§63.550(c)]
   a) Electronic records of the output from the continuous temperature monitor required in §63.548(j)(1), and an identification of periods when the 3-hour average temperature fell below the minimum established under §63.548(j)(4), and an explanation of the corrective actions taken. [§63.550(c)(5)]
   b) Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control equipment and monitoring equipment. [§63.550(c)(11)]
   c) Records of actions taken during periods of malfunction to minimize emissions in accordance with §63.543(k), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. [§63.550(c)(12)]
   d) Records of any periods of startup or shutdown of a furnace and actions taken to minimize emissions during that period in accordance with §63.543(l). [§63.550(c)(13)]
3. The permittee shall comply with all of the reporting requirements specified in §63.10 of the General Provisions that are referenced in Table 1 to MACT X. [§63.550(d)]
   a) The permittee shall submit reports no less frequent than specified under §63.10(e)(3) of the General Provisions. [§63.550(d)(1)]
   b) Once a source reports a violation of the standard or excess emissions, the permittee shall follow the reporting format required under §63.10(e)(3) until a request to reduce reporting frequency is approved by the Director. [§63.550(d)(2)]
4. In addition to the information required under the applicable sections of §63.10, the permittee shall include in the reports required under §63.550(d) the information specified in §63.550(e)(1) through (14). [§63.550(e)]
   a) Records of the concentration of total hydrocarbon and dioxins and furans in each process vent that has established limits for total hydrocarbon and dioxins and furans as required in §63.543(c). [§63.550(e)(2)]
   b) Records of all periods when monitoring using a CEMS for total hydrocarbon did not comply with applicable limits. [§63.550(e)(3)]
   c) Records of the temperature monitor output, in 3-hour block averages, for those periods when the temperature monitored pursuant to §63.548(j) fell below the level established in §63.548(j)(4). [§63.550(e)(8)]
   d) Certification that the plastic separation process for battery breakers required in §63.543(m) was operated at all times the battery breaker was in service. [§63.550(e)(9)]
   e) If a malfunction occurred during the reporting period, the report must include the number, duration, and a brief description for each type of malfunction that occurred during the reporting period and caused or may have caused any applicable emissions limitation to be exceeded. The report must also include a description of actions taken during a malfunction of an affected source to minimize emissions in accordance with §63.543(k), including actions taken to correct a malfunction. [§63.550(e)(11)]
   f) Records of any periods of startup or shutdown of a furnace including an explanation of the periods when the procedures required in §63.543(l) were not followed and the corrective actions taken. [§63.550(e)(13)]
   g) The permittee shall submit records pursuant to §63.550(e)(14)(i) through (iii). [§63.550(e)(14)]
      i) Within 60 days after the date of completing each performance test, as defined in §63.2 and as required in MACT X, the permittee shall submit performance test data, except opacity data, electronically to EPA's Central Data Exchange by using the Electronic Reporting Tool (see http://www.epa.gov/ttn/chief/ert/ert_tool.html/). Only data collected using test methods

compatible with the Electronic Reporting Tool are subject to this requirement to be submitted electronically into EPA's WebFIRE database. [§63.550(e)(14)(i)]

ii) Within 60 days after the date of completing each CEMS performance evaluation test, as defined in §63.2 and required by MACT X, the permittee shall submit the relative accuracy test audit data electronically into EPA's Central Data Exchange by using the Electronic Reporting Tool as mentioned in §63.550(e)(14)(i). Only data collected using test methods compatible with the Electronic Reporting Tool are subject to this requirement to be submitted electronically into EPA's WebFIRE database. [§63.550(e)(14)(ii)]

iii) All reports required by MACT X not subject to the requirements in §63.550(e)(14)(i) and (ii) shall be sent to the Administrator at the appropriate address listed in §63.13. The Administrator or the Director may request a report in any form suitable for the specific case (e.g., by electronic media such as Excel spreadsheet, on CD or hard copy). The Administrator retains the right to require submittal of reports subject to §63.550(e)(14)(i) and (ii) in paper format. [§63.550(e)(14)(iii)]

5. The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit. [§70.6(a)(3)(iii)]

PERMIT CONDITION 023
Total Enclosure Standards

10 CSR 10-6.075 Maximum Achievable Control Technology Regulations
40 CFR Part 63, Subpart X – National Emission Standards For Hazardous Air Pollutants From Secondary Lead Smelting[24]

Emission Source	Description	Total Enclosure	Control Equipment	Emission Point
EU-8	Blast Furnace: 100 MMBtu/hr metallurgical coke, 2 MMBtu/hr propane, 29.9 tph feed	TE-4 Hot Metals Building	CD-38 Process Baghouse with BLDS (or CD-9 Main Baghouse with BLDS)	EP-8 with SO_2 & CO CEMS
EU-10	Blast Furnace Process: settler, transfer pot, conveyor 3110			
EU-81	Refinery Kettles (R3 & R7-R10) Process Emissions; Refinery: dross hopper, screw, and bunker			
EU-73	Sweat Furnace Fugitives, Copper Cable Compactor, Mold Pouring			
EU-9A	Reverberatory Furnace: 42 MMBtu/hr propane, 34 tph feed		CD-25 Oxy-Fuel Firing System, CD-34 Afterburner, CD-35 Lead Baghouse with BLDS , & CD-37 Dry Lime Scrubber (or feed desulfurization via reagent added to feed, CD-25 Oxy-Fuel Firing System, CD-34 Afterburner, & CD-38 Process Baghouse with BLDS)	
EU-9B	Reverberatory Feed Storage Building Ventilation: hopper/pan feeder, belt conveyor, slag bunker	TE-3 Reverberatory Furnace Feed Building	CD-9 Main Baghouse with BLDS	
EU-11	Dross Kettles and Fugitives: (5) dross kettles (D1-D5), 15 tph, dross bunker, dross screw, dross hopper, FS-3300 and FS-3301 recycle kettles, Cable & Scrap Lead Storage for the sweat furnaces, blast furnace crane aisle area, reverberatory furnace feed screw conveyors, dust chute, reverberatory furnace lead tap	TE-4 Hot Metals Building		
EU-22-23	(5) Dross Kettles Combustion: 18.0 MMBtu/hr propane			

EU-39	Sweat Furnace #1: 7.5 MMBtu/hr propane, 0.5 tph feed	TE-4 Hot Metals Building	CD-16 Afterburner & CD-38 Process Baghouse with BLDS, 370,000 acfm (or CD-16 Afterburner & CD-9 Main Baghouse with BLDS, 450,000 acfm)	EP-8 with SO_2 & CO CEMS
EU-64	Sweat Furnace #2: 7.5 MMBtu/hr propane, 0.5 tph feed		CD-22 Afterburner & CD-38 Process Baghouse with BLDS, 370,000 acfm (or CD-22 Afterburner & CD-9 Main Baghouse with BLDS, 450,000 acfm)	
EU-71	Reverberatory Furnace Process Fugitives: Slag Tap		CD-27 Reverberatory Furnace Building Baghouse with BLDS, 60,000 acfm	EP-71
EU-72	North Refinery Kettles (R1, R2, and R4)		CD-28 North Refinery Baghouse with BLDS, 20,000 acfm	EP-72
EU-12	Refinery fugitive emissions, Casting Machines: 0.608 MMBtu/hr propane, Refinery Dock Loading/Unloading: loading of product, trans loading of batteries, unloading of reagents, alloy materials, and lead bearing materials		CD-81 Baghouse with BLDS, 60,000 acfm	EP-81
EU-94	Blast Furnace Feed Conveyor (3095), Charge Hopper, BF Feed Storage Building	TE-2 Blast Feed Furnace Building	CD-94 Baghouse with BLDS, 40,000 acfm	EP-94
EU-102	Covered Material Storage Bins Building contains lead bearing materials including but not limited to: hazardous waste, furnace feed materials, and nonhazardous waste	TE-1 CMSB Building	CD-102 CMSB Baghouse with BLDS, 80,000 acfm	EP-102
EU-104	Steel Processing: (5) acetylene (1470 Btu/hr) or propylene (2400 Btu/hr) torches	TE-6 Steel Processing Building	CD-104 Steel Baghouse with BLDS, 20,000 acfm	EP-104
EU-16B	BSN Process: Truck unloading, industrial battery storage, industrial battery dump, tilters, vibrating pan, and palletized storage area	TE-5 BSN Building	CD-101 Receiving Dock Baghouse with BLDS	EP-103
EU-16C	BSN Process: drum shredder steel conveyor, battery shredder, acid vibrator, H103 conveyor, 8210 conveyor, 3,960 gallon V102 tank, diversion chute, vibrating hopper, and acid filter press		CD-103 BSN Baghouse with BLDS	EP-103
EU-24	Refinery Kettles R1 & R2 Combustion: 11.5 MMBtu/hr propane	None	None	EP-24

EU-25	Refinery Kettles R3 & R4 Combustion: 11.5 MMBtu/hr propane	None	None	EP-25
EU-26A	Refinery Kettles R5 & R6 Combustion: 11.5 MMBtu/hr propane	None	None	EP-26
EU-27	Refinery Kettles R7 & R8 Combustion: 13.5 MMBtu/hr propane	None	None	EP-27
EU-105A	ERP Kettles R5, R6, R11, & R12: (4) 225 ton refining kettles - process emissions	TE-4 Hot Metals Building	CD-40 ERP Baghouse with BLDS, 60,000 dscfm	EP-105
EU-105B	ERP Kettles R11 & R12 Combustion: 12 MMBtu/hr propane			
EU-28	Refinery Kettles R9 & R10 Combustion: 8.4 MMBtu/hr propane			
EU-26B	Refinery Kettles R5 & R6 - (2) 225 ton refining kettles - process emissions			
EU-31B	Drum Shredder Room	TE-5 BSN Building	CD-31B Drum Shredder Hygiene Baghouse with BLDS, 40,000 dscfm	EP-31B
EU-31C	Drum Shredder, Saturn Model No. 60-44HT with (2) 300 HP electric motors and 22.25 inch cutter diameter, 25 tph, 2017, magnet, and LBM conveyor		CD-31C Drum Shredder Process Baghouse with BLDS, 15,000 dscfm	EP-31C
EU-101	Paste Bunker		CD-103 BSN Baghouse with BLDS	EP-103

Total Enclosure Standards:

1. The permittee shall operate the process fugitive emissions sources and fugitive dust sources listed in §63.544(a)(1) through (9) in a total enclosure that is maintained at negative pressure at all times and vented to a control device designed to capture lead particulate. The total enclosure shall meet the requirements specified in §63.544(c). [§63.544(a)]
   a) Smelting furnaces. [§63.544(a)(1)]
   b) Smelting furnace-charging areas. [§63.544(a)(2)]
   c) Lead taps, slag taps, and molds during tapping. [§63.544(a)(3)]
   d) Battery breakers. [§63.544(a)(4)]
   e) Refining kettles, casting areas. [§63.544(a)(5)]
   f) Dryers. [§63.544(a)(6)]
   g) Agglomerating furnaces and agglomerating furnace product taps. [§63.544(a)(7)]
   h) Material handling areas for any lead bearing materials except those listed in §63.544(b). [§63.544(a)(8)]
   i) Areas where dust from fabric filters, sweepings or used fabric filters are processed. [§63.544(a)(9)]
2. Total enclosures are not required in the following areas: lead ingot product handling areas, storm water and wastewater treatment areas, intact battery storage areas, areas where lead-bearing material is stored in closed containers or enclosed mechanical conveyors, and areas where clean battery casing material is handled. [§63.544(b)]
3. The permittee shall construct and operate total enclosures for the sources listed in §63.544(a) as specified in §63.544(c)(1) through (3). The total enclosure must be free of significant cracks, gaps, corrosion or other deterioration that could cause lead bearing material to be released from the

primary barrier. Measures must be in place to prevent the tracking of lead bearing material out of the unit by personnel or by equipment used in handling the material. An area must be designated to decontaminate equipment and any rinsate must be collected and properly managed. [§63.544(c)]

a) The permittee shall ventilate the total enclosure continuously to ensure negative pressure values of at least 0.013 mm of mercury (0.007 inches of water). [§63.544(c)(1)]
b) The permittee shall maintain an inward flow of air through all natural draft openings. [§63.544(c)(2)]
c) If areas that contain one or more sources listed in §63.544(a)(1) through (9) are enclosed within a larger building that also meets the definition of a total enclosure under §63.542, the requirements of §63.544(c)(1) and (2) shall be monitored pursuant to §63.548(k) at only one leeward, one windward and one additional wall of the outermost portion of the larger totally enclosed building rather than each individual area within the building. [§63.544(c)(3)]
d) The permittee shall inspect enclosures and facility structures that contain any lead-bearing materials at least once per month. The permittee shall repair any gaps, breaks, separations, leak points or other possible routes for emissions of lead to the atmosphere within one week of identification unless the permittee obtains approval for an extension from the Director before the repair period is exceeded. [§63.544(d)]

4. At all times, the permittee shall operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Director that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [§63.543(k)]
5. The emissions standards in MACT X apply at all times. [§63.541(d)]

Monitoring:

1. The permittee shall install, operate, and maintain a digital differential pressure monitoring system to continuously monitor each total enclosure as described in §63.548(k)(1) through (5). [§63.548(k)]
   a) The permittee shall install and maintain a minimum of one building digital differential pressure monitoring system at each of the following three walls in each total enclosure that has a total ground surface area of 10,000 square feet or more: [§63.548(k)(1)]
      i) The leeward wall. [§63.548(k)(1)(i)]
      ii) The windward wall. [§63.548(k)(1)(ii)]
      iii) An exterior wall that connects the leeward and windward wall at a location defined by the intersection of a perpendicular line between a point on the connecting wall and a point on its furthest opposite exterior wall, and intersecting within plus or minus 10 meters of the midpoint of a straight line between the two other monitors specified. The midpoint monitor must not be located on the same wall as either of the other two monitors. If approved by the Director, this third monitor may be placed in an alternative location on the midpoint wall or an exterior wall that is not the windward wall, leeward wall or midpoint wall. [§63.548(k)(1)(iii)]
   b) The permittee shall install and maintain a minimum of one building digital differential pressure monitoring system at the leeward wall of each total enclosure that has a total ground surface area of less than 10,000 square feet. [§63.548(k)(2)]
   c) The digital differential pressure monitoring systems must be certified by the manufacturer to be capable of measuring and displaying negative pressure containing values in the range of 0.01 to

0.2 millimeters mercury (0.005 to 0.11 inches of water) and capable of recording data in increments of 0.002 millimeters of mercury (0.001 inches of water). [§63.548(k)(3)]

d) The permittee shall equip each digital differential pressure monitoring system with a continuous recorder. To demonstrate compliance with the standard for differential pressure, the permittee shall maintain the pressure in total enclosures such that the average pressure in any 15-minute period does not fall below the level specified in §63.544(c)(1). The 15-minute averages must include at least one reading per minute. [§63.548(k)(4)]

e) The permittee shall calibrate each digital differential pressure monitoring system in accordance with manufacturer's specifications. [§63.548(k)(5)]

General Provisions:

The permittee shall comply with the applicable provisions of 40 CFR Part 63, Subpart A as indicated in Table 1 to MACT X. [§63.541(b)]

Notification Requirements:

The permittee shall comply with all of the notification requirements of §63.9. Electronic notifications are encouraged if suitable for the specific case (e.g., by electronic media such as Excel spreadsheet, on CD or hard copy), and when required by MACT X. [§63.549(a)]

Recordkeeping and Reporting:

1. The permittee shall comply with all of the recordkeeping and reporting requirements specified in §63.10 that are referenced in Table 1 to MACT X. [§63.550(a)]
   a) Records shall be maintained in a form suitable and readily available for expeditious review, according to §63.10(b)(1). However, electronic recordkeeping and reporting if suitable for the specific case (e.g., by electronic media such as Excel spreadsheet, on CD or hard copy), and when required by MACT X. [§63.550(a)(1)]
   b) Records must be kept on site for at least two years after the date of occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1). [§63.550(a)(2)]
2. The permittee shall maintain for a period of five years, records of the information listed in §63.550(c)(1) through (13). [§63.550(c)]
   a) Electronic records of the continuous pressure monitors for total enclosures required in §63.548(k), and an identification of periods when the pressure was not maintained as required in §63.544(c)(1). [§63.550(c)(6)]
   b) Records of any time periods power was lost to the continuous pressure monitors for total enclosures required in §63.548(k) and records of loss of power to the air handling system maintaining negative pressure on total enclosures. [§63.550(c)(7)]
   c) Records of the inspections of facility enclosures required in §63.544(d). [§63.550(c)(8)]
   d) Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control equipment and monitoring equipment. [§63.550(c)(11)]
   e) Records of actions taken during periods of malfunction to minimize emissions in accordance with §63.543(k), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. [§63.550(c)(12)]
3. The permittee shall comply with all of the reporting requirements specified in §63.10 of the General Provisions that are referenced in Table 1 to MACT X. [§63.550(d)]
   a) The permittee shall submit reports no less frequent than specified under §63.10(e)(3) of the General Provisions. [§63.550(d)(1)]

b) Once a source reports a violation of the standard or excess emissions, the permittee shall follow the reporting format required under §63.10(e)(3) until a request to reduce reporting frequency is approved by the Director. [§63.550(d)(2)]

4. In addition to the information required under the applicable sections of §63.10, the permittee shall include in the reports required under §63.550(d) the information specified in §63.550(e)(1) through (14). [§63.550(e)]
   a) Records of 15-minute periods when the pressure was not maintained as required in §63.544(c) or power was lost to the continuous pressure monitoring system as required in §63.548(k). Records of which wall is chosen as the windward wall must be included in the records required by §63.10(c) if a total enclosure located within a larger structure is not impacted by ambient wind. [§63.550(e)(10)]
   b) If a malfunction occurred during the reporting period, the report must include the number, duration, and a brief description for each type of malfunction that occurred during the reporting period and caused or may have caused any applicable emissions limitation to be exceeded. The report must also include a description of actions taken during a malfunction of an affected source to minimize emissions in accordance with §63.543(k), including actions taken to correct a malfunction. [§63.550(e)(11)]
   c) The permittee shall submit records pursuant to §63.550(e)(14)(i) through (iii). [§63.550(e)(14)]
      i) All reports required by MACT X not subject to the requirements in §63.550(e)(14)(i) and (ii) shall be sent to the Administrator at the appropriate address listed in §63.13. The Administrator or the Director may request a report in any form suitable for the specific case (e.g., by electronic media such as Excel spreadsheet, on CD or hard copy). The Administrator retains the right to require submittal of reports subject to §63.550(e)(14)(i) and (ii) in paper format. [§63.550(e)(14)(iii)]
5. The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit. [§70.6(a)(3)(iii)]

PERMIT CONDITION 024

10 CSR 10-6.075 Maximum Achievable Control Technology Regulations
40 CFR Part 63, Subpart DDDDD – National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters[26]

Emission Source	Description	Total Enclosure	Control Equipment	Emission Point
EU-33	Change house Boiler: 2.93 MMBtu/hr propane	None	None	EP-33

Work Practice Standards:

1. The permittee shall meet the requirements in §63.7500(a)(1) through (3), except as provided in §63.7500(b), through (e). The permittee shall meet these requirements at all times the affected unit is operating, except as provided in §63.7500(f). [§63.7500(a) and §63.7505(a)]
   a) The permittee shall meet each work practice standard in Table 3 to MACT DDDDD that applies to the boiler, except as provided under §63.7522. [§63.7500(a)(1)]
   b) At all times, the permittee shall operate and maintain any affected source (as defined in §63.7490), including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Director that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [§63.7500(a)(3)]
2. As provided in §63.6(g), EPA may approve use of an alternative to the work practice standards in Table 3 to MACT DDDDD. [§63.7500(b)]
3. Boilers and process heaters in the units designed to burn gas 1 fuels subcategory with a heat input capacity of less than or equal to 5 million Btu per hour must complete a tune-up every five years as specified in §63.7540. Boilers and process heaters in the units designed to burn gas 1 fuels subcategory are not subject to the emission limits in Tables 1 and 2 or 11 through 13 to MACT DDDDD, or the operating limits in Table 4 to MACT DDDDD. [§63.7500(e)]

Table 3 to MACT DDDDD – *Work Practice Standards*

For...	The permittee shall meet the following...
1. A new or existing boiler with a heat input capacity of less than or equal to 5 million Btu per hour in any of the following subcategories: unit designed to burn gas 1; unit designed to burn gas 2 (other); or unit designed to burn light liquid, or a limited use boiler or process heater	Conduct a tune-up of the boiler every five years as specified in §63.7540.

Continuous Compliance Requirements:

1. The permittee shall demonstrate continuous compliance with the work practice standards in Table 3 to MACT DDDDD that apply according to the methods specified in §63.7540(a)(1) through (19). [§63.7540(a)]
   a) The permittee shall conduct a tune-up of the boiler or process heater every five years[27] as specified in §63.7540(a)(10)(i) through (vi) to demonstrate continuous compliance. The

[26] SOURCE: 76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7163, Jan. 31, 2013; 80 FR 72807, Nov. 20, 2015
[27] The most recent tune-up occurred in November 2016; therefore, the next tune-up is required by no later than November 2021.

permittee may delay the burner inspection specified in §63.7540(a)(10)(i) until the next scheduled or unscheduled unit shutdown, but the permittee shall inspect each burner at least once every 72 months. [§63.7540(a)(12)]

i) As applicable, inspect the burner, and clean or replace any components of the burner as necessary (the permittee may perform the burner inspection any time prior to the tune-up or delay the burner inspection until the next scheduled unit shutdown). At units where entry into a piece of process equipment or into a storage vessel is required to complete the tune-up inspections, inspections are required only during planned entries into the storage vessel or process equipment; [§63.7540(a)(10)(i)]

ii) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available; [§63.7540(a)(10)(ii)]

iii) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (the permittee may delay the inspection until the next scheduled unit shutdown); [§63.7540(a)(10)(iii)]

iv) Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any NO_x requirement to which the unit is subject; [§63.7540(a)(10)(iv)]

v) Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer; and [§63.7540(a)(10)(v)]

vi) Maintain on-site and submit, if requested by the Director, a report containing the information in §63.7540(a)(10)(vi)(A) through (C), [§63.7540(a)(10)(vi)]

(1) The concentrations of CO in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater; [§63.7540(a)(10)(vi)(A)]

(2) A description of any corrective actions taken as a part of the tune-up; and [§63.7540(a)(10)(vi)(B)]

b) If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup. [§63.7540(a)(13)]

Notifications, Recordkeeping, and Reporting:

1. The permittee shall submit to the Director all of the notifications in §§63.7(b) and (c), 63.8(e), (f)(4) and (6), and 63.9(b) through (h) that apply by the dates specified. [§63.7545(a)]
2. The permittee shall submit each report in Table 9 to MACT DDDDD that applies. [§63.7550(a)]
3. Unless the Director has approved a different schedule for submission of reports under §63.10(a), the permittee shall submit each report, according to §63.7550(h), by the date in Table 9 to MACT DDDDD and according to the requirements in §63.7550(b)(1) through (4). For units that are subject only to a requirement to conduct subsequent five-year tune-up according to §63.7540(a)(12) and not subject to emission limits or Table 4 to MACT DDDDD operating limits, the permittee may submit only a five-year compliance report, as applicable, as specified in §63.7550(b)(1) through (4), instead of a semi-annual compliance report. [§63.7550(b)]

a) The first compliance report must cover the period beginning on the compliance date that is specified for the boiler in §63.7495 and ending on December 31 within five years after the compliance date that is specified for the source in §63.7495. [§63.7550(b)(1)]

b) The first five-year compliance report shall be postmarked or submitted no later than January 31. [§63.7550(b)(2)]
c) Each subsequent 5-year compliance report must cover the five-year period from January 1 to December 31. [§63.7550(b)(3)]
d) Each subsequent five-year compliance report must be postmarked or submitted no later than January 31. [§63.7550(b)(4)]
e) For each affected source that is subject to permitting regulations pursuant to 40 CFR Part 70, and if the permitting authority has established dates for submitting semiannual reports pursuant to §70.6(a)(3)(iii)(A), the permittee may submit the first and subsequent compliance reports according to the dates the permitting authority has established in the permit instead of according to the dates in §63.7550(b)(1) through (4). [§63.7550(b)(5)]

4. A compliance report must contain the following information depending on how the facility chooses to comply with the limits set in this rule. [§63.7550(c)]
   a) If the facility is subject to the requirements of a tune up the permittee shall submit a compliance report with the information in §63.7550(c)(5)(i) through (iii), (xiv), and (xvii). [§63.7550(c)(1)]
      i) Company and Facility name and address. [§63.7550(c)(5)(i)]
      ii) Process unit information, emissions limitations, and operating parameter limitations. [§63.7550(c)(5)(ii)]
      iii) Date of report and beginning and ending dates of the reporting period. [§63.7550(c)(5)(iii)]
      iv) Include the date of the most recent tune-up for each unit subject to only the requirement to conduct a five-year tune-up according to §63.7540(a)(12). Include the date of the most recent burner inspection if it was not done on a 5-year period and was delayed until the next scheduled or unscheduled unit shutdown. [§63.7550(c)(5)(xiv)]
      v) Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report. [§63.7550(c)(5)(xvii)]
5. The permittee shall submit the reports according to the procedures specified in §63.7550(h)(1) through (3). [§63.7550(h)]
   a) The permittee shall submit all reports required by Table 9 of MACT DDDDD electronically to the EPA via the CEDRI. (CEDRI can be accessed through the EPA's CDX.) The permittee shall use the appropriate electronic report in CEDRI for MACT DDDDD. Instead of using the electronic report in CEDRI for MACT DDDDD, the permittee may submit an alternate electronic file consistent with the XML schema listed on the CEDRI Web site (*http://www.epa.gov/ttn/chief/cedri/index.html*), once the XML schema is available. If the reporting form specific to MACT DDDDD is not available in CEDRI at the time that the report is due, the permittee shall submit the report to the Director at the appropriate address listed in §63.13. The permittee shall begin submitting reports via CEDRI no later than 90 days after the form becomes available in CEDRI. [§63.7550(h)(3)]
6. The permittee shall keep records according to §63.7555(a)(1) and (2). [§63.7555(a)]
   a) A copy of each notification and report that the permittee submitted to comply with MACT DDDDD, including all documentation supporting any Notification of Compliance Status that the permittee submitted, according to the requirements in §63.10(b)(2)(xiv). [§63.7555(a)(1)]
7. Records must be in a form suitable and readily available for expeditious review, according to §63.10(b)(1). [§63.7560(a)]
8. As specified in §63.10(b)(1), the permittee shall keep each record for five years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. [§63.7560(b)]
9. The permittee shall keep each record on site, or they must be accessible from on site (for example, through a computer network), for at least two years after the date of each occurrence, measurement,

maintenance, corrective action, report, or record, according to §63.10(b)(1). The permittee may keep the records off site for the remaining three years. [§63.7560(c)]

10. The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit. [§70.6(a)(3)(iii)]

Table 9 to MACT DDDDD – *Reporting Requirements*

The permittee shall submit a...	**The report shall contain...**	**The permittee shall submit the report...**
1. Compliance report	a. Information required in §63.7550(c)(1) through (5)	Every five years according to the requirements in §63.7550(b).

PERMIT CONDITION 025 10 CSR 10-6.220 Restriction of Emission of Visible Air Contaminants[28]				
Emission Point	**Emission Unit**	**Description**	**Total Enclosure**	**Control Equipment**
EP-16	EU-16A	BSN Process: V103 6,600 gallon acid clarifier tank, V104 2,904 gallon acid clarifier tank, industrial battery cutting station, hammer mill, paste vibrator, 17,000 gallon 202 Paste Tank, 9,000 gallon 301A paste tank, 9,000 gallon 301B paste tank, paste filter press, 9,730 gallon 311C acid containment tank, 9,730 gallon 311F acid containment tank, hydrodynamic separator, santa maria/paste settler, first trommel, hydrostatic separator, second trommel, 2,640 gallon poly wash tank, post & grids conveyor, separator screw conveyor, and separator storage	None	All equipment is enclosed and vents to CD-10 BSN Wet Scrubber
EP-103	EU-16B	BSN Process: Truck unloading, industrial battery storage, industrial battery dump, tilters, vibrating pan, and palletized storage area	TE-5 BSN Building	CD-101 Receiving Dock Baghouse with BLDS, 80,000 acfm
	EU-16C	BSN Process: drum shredder steel conveyor, battery shredder, acid vibrator, H103 conveyor, 8210 conveyor, 3,960 gallon V102 tank, diversion chute, vibrating hopper, and acid filter press		CD-103 BSN Baghouse with BLDS, 100,000 acfm
	EU-101	Paste Bunker		
EP-31B	EU-31B	Drum Shredder Room		CD-31B Drum Shredder Hygiene Baghouse with BLDS, 40,000 dscfm
EP-31C	EU-31C	Drum Shredder, Saturn Model No. 60-44HT with (2) 300 HP electric motors and 22.25 inch cutter diameter, 25 tph, 2017, magnet, and LBM conveyor		CD-31C Drum Shredder Process Baghouse with BLDS, 15,000 dscfm
EP-32	EU-32	Laboratory Activities (Sample Crusher)	None	CD-32 Baghouse
EP-60	EU-60	Convey Slag Material, 41 tph	None	None
EP-61	EU-61	Loadout of Slag, 41 tph	None	None
EP-87	EU-87	Hydrator	None	None
EP-94	EU-94	Blast Furnace Feed Conveyor (3095), Charge Hopper, BF Feed Storage Building	TE-2 Blast Feed Furnace Building	CD-94 Baghouse with BLDS, 40,000
EP-95	EU-95	Pallet Grinder, 22.5 tph	None	None
EP-96	EU-96	Pallet Grinder Material Handling, 22.5 tph	None	None

[28] As effective December 30, 2016.

EP-102	EU-102	Covered Material Storage Bins Building contains lead bearing materials including but not limited to: hazardous waste, furnace feed materials, and nonhazardous waste	TE-1 CMSB Building	CD-102 CMSB Baghouse with BLDS, 80,000 acfm
EP-104	EU-104	Steel Processing: (5) acetylene (1470 Btu/hr) or propylene (2400 Btu/hr) torches	TE-6 Steel Processing Building	CD-104 Steel Baghouse with BLDS, 20,000 acfm
EP-86	EU-86	Lime Transfer from Truck to Storage Bin, 25 tph	None	None

Emission Limitation:

1. The permittee shall not cause or permit to be discharged into the atmosphere from these emission units any visible emissions with an opacity greater than 20 percent for any continuous six-minute period. [10 CSR 10-6.220(3)(A)1]
2. Exception: The permittee may discharge into the atmosphere from any emission unit visible emissions with an opacity up to 60 percent for one continuous six-minute period in any 60 minutes. [10 CSR 10-6.220(3)(A)2]
3. Failure to demonstrate compliance with 10 CSR 10-6.220(3)(A) solely because of the presences of uncombined water shall not be a violation. [10 CSR 10-6.220(3)(B)]

Monitoring:

1. Monitoring schedule:
   a) The permittee shall conduct weekly observations for a minimum of eight consecutive weeks after permit issuance. Should no violation of this regulation be observed during this period then:
      i) The permittee shall conduct observations once every two weeks for a period of eight weeks. If a violation is noted, the permittee shall revert to weekly monitoring. Should no violation of this regulation be observed during this period then:
         (1) The permittee shall conduct observations once per month. If a violation is noted, the permittee shall revert to weekly monitoring.
2. If the permittee reverts to weekly monitoring at any time, the monitoring schedule shall progress in an identical manner from the initial monitoring schedule.
3. Issuance of a new, amended, or modified operating permit does not restart the monitoring schedule.
4. The permittee shall conduct visible emissions observation on these emission units using the procedures contained in U.S. EPA Test Method 22. Each Method 22 observation shall be conducted for a minimum of six-minutes. Readings are only required when the emission units are operating and when the weather conditions allow. If no visible emissions are observed from the emission unit using Method 22, then no Method 9 is required for the emission unit.
5. For emission units with visible emissions, the permittee shall have a certified Method 9 observer conduct a U.S. EPA Test Method 9 opacity observation. The permittee may choose to forego Method 22 observations and instead begin with a Method 9 opacity observation. The certified Method 9 observer shall conduct each Method 9 opacity observation for a minimum of 30-minutes.

Record Keeping:

1. The permittee shall maintain records of all observation results for each emission unit using Attachments B and C or equivalent forms.
2. The permittee shall make these records available immediately for inspection to the Department of Natural Resources' personnel upon request.
3. The permittee shall retain all records for five years. [§70.6(a)(3)(ii)]

Reporting:

1. The permittee shall report to the Air Pollution Control Program's Compliance/Enforcement Section at P.O. Box 176, Jefferson City, MO 65102 or AirComplianceReporting@dnr.mo.gov, no later than ten days after an exceedance of the emission limitation.
2. The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit. [§70.6(a)(3)(iii)]

PERMIT CONDITION 026 10 CSR 10-6.260 Restriction of Emission of Sulfur Compounds[29]			
Emission Source	**Description**	**Control Equipment**	**Emission Point**
EU-106	ACD Engine, 66 HP, diesel, 2007	None	EP-106
EU-97	Pallet Grinder Diesel Engine, 400 HP, 2011	None	EP-97
EU-114	Emergency Backup Diesel Fire Pump, 115 HP, 2010	None	EP-114

Emission Limitation:

The permittee shall not cause or permit the emission into the atmosphere any gases containing more than 500 ppmv of SO_2 or more than 35 mg/m^3 of sulfuric acid or sulfur trioxide or any combination of those gases averaged on any consecutive three-hour time period. [10 CSR 10-6.260(3)(A)2]

Compliance Demonstration:

These engines are limited to a sulfur content of 15 ppm by §60.4207(b). Sulfur emissions from an engine are highly dependent on the sulfur content of the fuel combusted; however, the emission factor for engines of less than 600 hp in AP-42 Table 3.3-1 (October 1996) is not sulfur dependent; therefore, SO_2 emissions from these engines were evaluated using a mass balance. Diesel has a density of 7.05 lb/gal per AP-42 Appendix A, a heating value of 137 MMBtu/Mgal per AP-42 Appendix A. Using an F factor of 10,320 wscf/MMBtu from NSPS Appendix A Method 19 Table 19-2, a conversion factor of 1.660E-7 lb/scf per ppmv from NSPS Appendix A Method 19 Table 19-1, and the sulfur content limit of 15 ppm, the engines emit 0.9 ppmv SO_2. The permittee complies with the emission limitation.

[29] This regulation was rescinded by the State of Missouri on November 30, 2015. The regulation remains in this operating permit as it is contained in Missouri's SIP and remains an applicable federal requirement. This is a federal only requirement. This permit condition will no longer be applicable when EPA takes final action to incorporate 10 CSR 10-6.261 in Missouri's SIP in place of 10 CSR 10-6.260. No action is required on the part of the permittee to remove this permit condition from this operating permit upon incorporation of 10 CSR 10-6.261 into Missouri's SIP.

PERMIT CONDITION 027 10 CSR 10-6.260 Restriction of Emission of Sulfur Compounds[30]			
Emission Source	**Description**	**Control Equipment**	**Emission Point**
EU-110	Air Curtain Destructor (ACD), 30 tpd, 2008	None	Fugitive

Emission Limitation:

The permittee shall not cause or permit the emission into the atmosphere any gases containing more than 500 ppmv of SO_2 or more than 35 mg/m^3 of sulfuric acid or sulfur trioxide or any combination of those gases averaged on any consecutive three-hour time period. [10 CSR 10-6.260(3)(A)2]

Compliance Demonstration:

The ACD is only allowed to burn untreated wood waste by Permit Condition 002. According to "Information on the Sulfur Content of Bark and its Contribution to SO_2 Emissions when Burned as a Fuel"[31] if all of the sulfur contained within bark and wood residues is stoichiometric ally converted to SO_2, the flue gas SO_2 concentration will be about 130 ppm which is less than the SO_2 emission limitation of 500 ppmv.

[30] This regulation was rescinded by the State of Missouri on November 30, 2015. The regulation remains in this operating permit as it is contained in Missouri's SIP and remains an applicable federal requirement. This is a federal only requirement. This permit condition will no longer be applicable when EPA takes final action to incorporate 10 CSR 10-6.261 in Missouri's SIP in place of 10 CSR 10-6.260. No action is required on the part of the permittee to remove this permit condition from this operating permit upon incorporation of 10 CSR 10-6.261 into Missouri's SIP.

[31] H. Oglesby and R. Blosser, *Journal Of The Air Pollution Control Agency*, 30(7):769-772, July 1980

PERMIT CONDITION 028 10 CSR 10-6.400 Restriction of Emission of Particulate Matter From Industrial Processes[32]			
Emission Source	**Description**	**Control Equipment**	**Emission Point**
EU-60	Convey Slag Material, 41 tph	None	EP-60
EU-61	Loadout of Slag, 41 tph	None	EP-61
EU-86	Lime Transfer from Truck to Storage Bin, 25 tph	None	EP-86
EU-95	Pallet Grinder, 22.5 tph	None	EP-95
EU-96	Pallet Grinder Material Handling, 22.5 tph	None	EP-96

Emission Limitation:

The permittee shall not emit PM in excess of the limits given in the following table:

Emission Source	Description	PM Emission Limit (lb/hr)
EU-60	Convey Slag Material, 41 tph	42.75
EU-61	Loadout of Slag, 41 tph	42.75
EU-86	Lime Transfer from Truck to Storage Bin, 25 tph	34.53
EU-95	Pallet Grinder, 22.5 tph	33.02
EU-96	Pallet Grinder Material Handling, 22.5 tph	33.02

Compliance Demonstration:

The following table demonstrates that the emission sources comply with the regulation:

Emission Source	MHDR (tph)	Uncontrolled PM Emission Factor (lb/ton)	Emission Factor Source	Potential Uncontrolled PM Emission Rate (lb/hr)	PM Emission Limit (lb/hr)
EU-60	41	0.47	WebFIRE for Process SCC 30301021	19.27	42.75
EU-61	41	0.47		19.27	42.75
EU-86	25	0.61	AP-42 Table 11.17-4	15.25	34.53
EU-95	22.5	1.3	WebFIRE 30500361	29.25	33.02
EU-96	22.5	1.3		29.25	33.02

Monitoring/Recordkeeping/Reporting:

The compliance demonstration shows that the emission sources comply with this regulation without the aid of a control device; therefore, no additional monitoring, recordkeeping, or reporting is required for these sources at this time.

[32] As effective October 30, 2013.

PERMIT CONDITION 029 10 CSR 10-6.065(6)(C)2.A Voluntary Condition(s)			
Emission Source	**Description**	**Control Equipment**	**Emission Point**
EU-24	Refinery Kettles R1 & R2 Combustion: 11.5 MMBtu/hr propane	None	EP-24
EU-25	Refinery Kettles R3 & R4 Combustion: 11.5 MMBtu/hr propane	None	EP-25
EU-26A	Refinery Kettles R5 & R6 Combustion: 11.5 MMBtu/hr propane	None	EP-26
EU-27	Refinery Kettles R7 & R8 Combustion: 13.5 MMBtu/hr propane	None	EP-27

Operational Limitation:

The permittee shall obtain the combustion gases for refinery kettles R1 through R8 from the ambient air outside of their buildings/MACT X total enclosures. Failure to comply with this requirement will result in these emission sources being subject to the MACT X existing process vent standards in Permit Condition 020.

Monitoring/Recordkeeping:

1. The permittee shall submit an updated ventilation diagram to the Air Pollution Control Program within 180 days of permit issuance. The updated ventilation diagram shall clearly depict where the combustion gases for refinery kettles R1 through R8 originates.
2. If during any future stack-testing event or inspection the Air Pollution Control Program determines that the combustion gases are not being obtained from the ambient air outside of the buildings/MACT X total enclosures, the permittee shall comply with Permit Condition 020 no later than 180 days after the Air Pollution Control Program issues a violation.
3. The permittee shall make these records available immediately for inspection to the Department of Natural Resources' personnel upon request.
4. The permittee shall retain all records for five years. [§70.6(a)(3)(ii)]

Reporting:

The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit. [§70.6(a)(3)(iii)]

PERMIT CONDITION 030 10 CSR 10-6.065(6)(C)2.A Voluntary Condition(s)				
Emission Source	**Description**	**Total Enclosure**	**Control Equipment**	**Emission Point**
EU-11	Dross Kettles and Fugitives: (5) dross kettles (D1-D5), 15 tph, dross bunker, dross screw, dross hopper, FS-3300 and FS-3301 recycle kettles, Cable & Scrap Lead Storage for the sweat furnaces, blast furnace crane aisle area, reverberatory furnace feed screw conveyors, dust chute, reverberatory furnace lead tap	TE-4 Hot Metals Building	CD-9 Main Baghouse with BLDS, 450,000 acfm	EP-8 with SO_2 and CO CEMS

Operational Limitation:

No later than 180 days after the issuance of this permit, the permittee shall fully enclose the dross screw such that it complies with the MACT X total enclosure requirements in Permit Condition 023.

Monitoring/Recordkeeping:

1. The permittee shall submit photos of the dross screw and its total enclosure to the Air Pollution Control Program no later than 195 days after the issuance of this permit.
2. The permittee shall comply with the requirements of Permit Condition 023.
3. The permittee shall make these records available immediately for inspection to the Department of Natural Resources' personnel upon request.
4. The permittee shall retain all records for five years. [§70.6(a)(3)(ii)]

Reporting:

The permittee shall report any deviations from the requirements of this permit condition in the semi-annual monitoring report and annual compliance certification required by Section V of this permit. [§70.6(a)(3)(iii)]

IV. Core Permit Requirements

The installation shall comply with each of the following regulations or codes. Consult the appropriate sections in the CFR, the CSR, and local ordinances for the full text of the applicable requirements. All citations, unless otherwise noted, are to the regulations in effect as of the date that this permit is issued. The following are only excerpts from the regulation or code, and are provided for summary purposes only.

10 CSR 10-6.045 Open Burning Requirements

1. General Provisions. The open burning of tires, petroleum-based products, asbestos containing materials, and trade waste is prohibited, except as allowed below. Nothing in this rule may be construed as to allow open burning which causes or constitutes a public health hazard, nuisance, a hazard to vehicular or air traffic, nor which violates any other rule or statute.
2. Certain types of materials may be open burned provided an open burning permit is obtained from the Director. The permit will specify the conditions and provisions of all open burning. The permit may be revoked if the permittee fails to comply with the conditions or any provisions of the permit.

10 CSR 10-6.050 Start-up, Shutdown and Malfunction Conditions

1. In the event of a malfunction, which results in excess emissions that exceed one hour, the permittee shall submit to the Director within two business days, in writing, the following information:
   a) Name and location of installation;
   b) Name and telephone number of person responsible for the installation;
   c) Name of the person who first discovered the malfunction and precise time and date that the malfunction was discovered.
   d) Identity of the equipment causing the excess emissions;
   e) Time and duration of the period of excess emissions;
   f) Cause of the excess emissions;
   g) Air pollutants involved;
   h) Estimate of the magnitude of the excess emissions expressed in the units of the applicable requirement and the operating data and calculations used in estimating the magnitude;
   i) Measures taken to mitigate the extent and duration of the excess emissions; and
   j) Measures taken to remedy the situation that caused the excess emissions and the measures taken or planned to prevent the recurrence of these situations.
2. The permittee shall submit the paragraph 1 information to the Director in writing at least 10 days prior to any maintenance, start-up or shutdown activity which is expected to cause an excessive release of emissions that exceed one hour. If notice of the event cannot be given 10 days prior to the planned occurrence, notice shall be given as soon as practicable prior to the activity.
3. Upon receipt of a notice of excess emissions issued by an agency holding a certificate of authority under §643.140, RSMo, the permittee may provide information showing that the excess emissions were the consequence of a malfunction, start-up or shutdown. The information, at a minimum, should be the paragraph 1 list and shall be submitted not later than 15 days after receipt of the notice of excess emissions. Based upon information submitted by the permittee or any other pertinent information available, the Director or the commission shall make a determination whether the excess emissions constitute a malfunction, start-up or shutdown and whether the nature, extent and duration of the excess emissions warrant enforcement action under §§643.080 or 643.151, RSMo.

4. Nothing in this rule shall be construed to limit the authority of the Director or commission to take appropriate action, under §§643.080, 643.090 and 643.151, RSMo to enforce the provisions of the Air Conservation Law and the corresponding rule.
5. Compliance with this rule does not automatically absolve the permittee of liability for the excess emissions reported.

10 CSR 10-6.060 Construction Permits Required

The permittee shall not commence construction, modification, or major modification of any installation subject to this rule, begin operation after that construction, modification, or major modification, or begin operation of any installation which has been shut down longer than five years without first obtaining a permit from the permitting authority.

10 CSR 10-6.065 Operating Permits

The permittee shall file a complete application for renewal of this operating permit at least six months before the date of permit expiration. In no event shall this time be greater than 18 months. The permittee shall retain the most current operating permit issued to this installation on-site. The permittee shall immediately make such permit available to any Missouri Department of Natural Resources' personnel upon request.

10 CSR 10-6.110 Reporting of Emission Data, Emission Fees and Process Information

1. The permittee shall submit a Full Emissions Report either electronically via MoEIS, which requires Form 1.0 signed by an authorized company representative, or on Emission Inventory Questionnaire (EIQ) paper forms on the frequency specified in this rule and in accordance with the requirements outlined in this rule. Alternate methods of reporting the emissions, such as spreadsheet file, can be submitted for approval by the Director.
2. Public Availability of Emission Data and Process Information. Any information obtained pursuant to the rule(s) of the Missouri Air Conservation Commission that would not be entitled to confidential treatment under 10 CSR 10-6.210 shall be made available to any member of the public upon request.
3. The permittee shall pay an annual emission fee per ton of regulated air pollutant emitted according to the schedule in the rule. This fee is an emission fee assessed under authority of RSMo. §643.079.

10 CSR 10-6.130 Controlling Emissions During Episodes of High Air Pollution Potential

This rule specifies the conditions that establish an air pollution alert (yellow/orange/red/purple), or emergency (maroon) and the associated procedures and emission reduction objectives for dealing with each. The permittee shall submit an appropriate emergency plan if required by the Director.

10 CSR 10-6.150 Circumvention

The permittee shall not cause or permit the installation or use of any device or any other means which, without resulting in reduction in the total amount of air contaminant emitted, conceals or dilutes an emission or air contaminant which violates a rule of the Missouri Air Conservation Commission.

10 CSR 10-6.165 Restriction of Emission of Odors

This is a State Only permit requirement.

No person may cause, permit or allow the emission of odorous matter in concentrations and frequencies or for durations that odor can be perceived when one volume of odorous air is diluted with seven volumes of odor-free air for two separate trials not less than 15 minutes apart within the period of one hour. This odor evaluation shall be taken at a location outside of the installation's property boundary.

10 CSR 10-6.170 Restriction of PM to the Ambient Air Beyond the Premises of Origin

Emission Limitation:

1. The permittee shall not cause or allow to occur any handling, transporting or storing of any material; construction, repair, cleaning or demolition of a building or its appurtenances; construction or use of a road, driveway or open area; or operation of a commercial or industrial installation without applying reasonable measures as may be required to prevent, or in a manner which allows or may allow, fugitive PM emissions to go beyond the premises of origin in quantities that the PM may be found on surfaces beyond the property line of origin. The nature or origin of the PM shall be determined to a reasonable degree of certainty by a technique proven to be accurate and approved by the Director.
2. The permittee shall not cause nor allow to occur any fugitive PM emissions to remain visible in the ambient air beyond the property line of origin.
3. Should it be determined that noncompliance has occurred, the Director may require reasonable control measures as may be necessary. These measures may include, but are not limited to, the following:
   a) Revision of procedures involving construction, repair, cleaning and demolition of buildings and their appurtenances that produce particulate matter emissions;
   b) Paving or frequent cleaning of roads, driveways and parking lots;
   c) Application of dust-free surfaces;
   d) Application of water; and
   e) Planting and maintenance of vegetative ground cover.

Monitoring:

1. The permittee shall conduct inspections of its facilities sufficient to determine compliance with this regulation. If the permittee discovers a violation, the permittee shall undertake corrective action to eliminate the violation.
2. The permittee shall maintain the following monitoring schedule:
   a) The permittee shall conduct weekly observations for a minimum of eight consecutive weeks after permit issuance.
   b) Should no violation of this regulation be observed during this period then-
      i) The permittee may observe once every two weeks for a period of eight weeks.
      ii) If a violation is noted, monitoring reverts to weekly.
      iii) Should no violation of this regulation be observed during this period then-
         (1) The permittee may observe once per month.
         (2) If a violation is noted, monitoring reverts to weekly.
   c) If the permittee reverts to weekly monitoring at any time, monitoring frequency will progress in an identical manner to the initial monitoring frequency.

Recordkeeping:

1. The permittee shall document all readings on Attachment A, or its equivalent, noting the following:
   a) Whether air emissions (except water vapor) remain visible in the ambient air beyond the property line of origin.
   b) Whether equipment malfunctions contributed to an exceedance.
   c) Any violations and any corrective actions undertaken to correct the violation.

10 CSR 10-6.180 Measurement of Emissions of Air Contaminants

1. The Director may require any person responsible for the source of emission of air contaminants to make or have made tests to determine the quantity or nature, or both, of emission of air contaminants from the source. The Director may specify testing methods to be used in accordance with good professional practice. The Director may observe the testing. All tests shall be performed by qualified personnel.
2. The Director may conduct tests of emissions of air contaminants from any source. Upon request of the Director, the person responsible for the source to be tested shall provide necessary ports in stacks or ducts and other safe and proper sampling and testing facilities, exclusive of instruments and sensing devices as may be necessary for proper determination of the emission of air contaminants.
3. The Director shall be given a copy of the test results in writing and signed by the person responsible for the tests.

10 CSR 10-6.250 Asbestos Abatement Projects – Certification, Accreditation, and Business Exemption Requirements

This is a State Only permit requirement.

The permittee shall conduct all asbestos abatement projects within the procedures established for certification and accreditation by 10 CSR 10-6.250. This rule requires individuals who work in asbestos abatement projects to be certified by the Missouri Department of Natural Resources Air Pollution Control Program. This rule requires training providers who offer training for asbestos abatement occupations to be accredited by the Missouri Department of Natural Resources Air Pollution Control Program. This rule requires persons who hold exemption status from certain requirements of this rule to allow the department to monitor training provided to employees.

10 CSR 10-6.280 Compliance Monitoring Usage

1. The permittee is not prohibited from using the following in addition to any specified compliance methods for the purpose of submission of compliance certificates:
   a) Monitoring methods outlined in 40 CFR Part 64;
   b) Monitoring method(s) approved for the permittee pursuant to 10 CSR 10-6.065, "Operating Permits", and incorporated into an operating permit; and
   c) Any other monitoring methods approved by the Director.
2. Any credible evidence may be used for the purpose of establishing whether a permittee has violated or is in violation of any such plan or other applicable requirement. Information from the use of the following methods is presumptively credible evidence of whether a violation has occurred at an installation:
   a) Monitoring methods outlined in 40 CFR Part 64;
   b) A monitoring method approved for the permittee pursuant to 10 CSR 10-6.065, "Operating Permits", and incorporated into an operating permit; and
   c) Compliance test methods specified in the rule cited as the authority for the emission limitations.
3. The following testing, monitoring or information gathering methods are presumptively credible testing, monitoring, or information gathering methods:
   a) Applicable monitoring or testing methods, cited in:
      i) 10 CSR 10-6.030, "Sampling Methods for Air Pollution Sources";
      ii) 10 CSR 10-6.040, "Reference Methods";
      iii) 10 CSR 10-6.070, "New Source Performance Standards";
      iv) 10 CSR 10-6.080, "Emission Standards for Hazardous Air Pollutants"; or

b) Other testing, monitoring, or information gathering methods, if approved by the Director, that produce information comparable to that produced by any method listed above.

40 CFR Part 82 Protection of Stratospheric Ozone (Title VI)

This is a Federal Only permit requirement.

1. The permittee shall comply with the standards for labeling of products using ozone-depleting substances pursuant to 40 CFR Part 82, Subpart E:
   a) All containers in which a class I or class II substance is stored or transported, all products containing a class I substance, and all products directly manufactured with a class I substance must bear the required warning statement if it is being introduced into interstate commerce pursuant to §82.106.
   b) The placement of the required warning statement must comply with the requirements of §82.108.
   c) The form of the label bearing the required warning statement must comply with the requirements of §82.110.
   d) No person may modify, remove, or interfere with the required warning statement except as described in §82.112.
2. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, except as provided for motor vehicle air conditioners (MVACs) in Subpart B of 40 CFR Part 82:
   a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices described in §82.156.
   b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment described in §82.158.
   c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to §82.161.
   d) Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with the record keeping requirements of §82.166. ("MVAC-like" appliance as defined at §82.152).
   e) Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to §82.156.
   f) Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to §82.166.
3. If the permittee manufactures, transforms, imports, or exports a class I or class II substance, the permittee is subject to all the requirements as specified in 40 CFR Part 82, Subpart A - Production and Consumption Controls.
4. If the permittee performs a service on motor (fleet) vehicles when this service involves ozone-depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements contained in 40 CFR Part 82, Subpart B - Servicing of Motor Vehicle Air Conditioners. The term "motor vehicle" as used in 40 CFR Part 82, Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in 40 CFR Part 82, Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo, or system used on passenger buses using HCFC-22 refrigerant.
5. The permittee shall be allowed to switch from any ozone-depleting substance to any alternative that is listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR Part 82, Subpart G, Significant New Alternatives Policy Program.

V. General Permit Requirements

The installation shall comply with each of the following requirements. Consult the appropriate sections in the CFR and CSR for the full text of the applicable requirements. All citations, unless otherwise noted, are to the regulations in effect as of the date that this permit is issued,

10 CSR 10-6.065(6)(C)1.B Permit Duration
10 CSR 10-6.065(6)(E)3.C Extension of Expired Permits

This permit is issued for a term of five years, commencing on the date of issuance. This permit will expire at the end of this period unless renewed. If a timely and complete application for a permit renewal is submitted, but the Air Pollution Control Program fails to take final action to issue or deny the renewal permit before the end of the term of this permit, this permit shall not expire until the renewal permit is issued or denied.

10 CSR 10-6.065(6)(C)1.C General Record Keeping and Reporting Requirements

1. Record Keeping
   a) All required monitoring data and support information shall be retained for a period of at least five years from the date of the monitoring sample, measurement, report or application.
   b) Copies of all current operating and construction permits issued to this installation shall be kept on-site for as long as the permits are in effect. Copies of these permits shall be made immediately available to any Missouri Department of Natural Resources' personnel upon request.
2. Reporting
   a) All reports shall be submitted to the Air Pollution Control Program's Compliance and Enforcement Section at P. O. Box 176, Jefferson City, MO 65102 or AirComplianceReporting@dnr.mo.gov.
   b) The permittee shall submit a report of all required monitoring by:
      i) October 1st for monitoring which covers the January through June time period, and
      ii) April 1st for monitoring which covers the July through December time period.
   c) Each report shall identify any deviations from emission limitations, monitoring, record keeping, reporting, or any other requirements of the permit, this includes deviations or 40 CFR Part 64 exceedances.
   d) Submit supplemental reports as required or as needed. All reports of deviations shall identify the cause or probable cause of the deviations and any corrective actions or preventative measures taken.
      i) Notice of any deviation resulting from an emergency (or upset) condition as defined in 10 CSR 10-6.065(6)(C)7.A (Emergency Provisions) shall be submitted to the permitting authority either verbally or in writing within two working days after the date on which the emission limitation is exceeded due to the emergency, if the permittee wishes to assert an affirmative defense. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that indicate an emergency occurred and the permittee can identify the cause(s) of the emergency. The permitted installation must show that it was operated properly at the time and that during the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or requirements in the permit. The notice must contain a description of the emergency, the steps taken to mitigate emissions, and the corrective actions taken.

ii) Any deviation that poses an imminent and substantial danger to public health, safety or the environment shall be reported as soon as practicable.
iii) Any other deviations identified in the permit as requiring more frequent reporting than the permittee's semiannual report shall be reported on the schedule specified in this permit.

e) Every report submitted shall be certified by the responsible official, except that, if a report of a deviation must be submitted within 10 days after the deviation, the report may be submitted without a certification if the report is resubmitted with an appropriate certification within 10 days after that, together with any corrected or supplemental information required concerning the deviation.
f) The permittee may request confidential treatment of information submitted in any report of deviation.

10 CSR 10-6.065(6)(C)1.D Risk Management Plan Under §112(r)

If the installation is required to develop and register a risk management plan pursuant to §112(r) of the Act, the permittee will verify that it has complied with the requirement to register the plan.

10 CSR 10-6.065(6)(C)1.F Severability Clause

In the event of a successful challenge to any part of this permit, all uncontested permit conditions shall continue to be in force. All terms and conditions of this permit remain in effect pending any administrative or judicial challenge to any portion of the permit. If any provision of this permit is invalidated, the permittee shall comply with all other provisions of the permit.

10 CSR 10-6.065(6)(C)1.G General Requirements

1. The permittee must comply with all of the terms and conditions of this permit. Any noncompliance with a permit condition constitutes a violation and is grounds for enforcement action, permit termination, permit revocation and re-issuance, permit modification or denial of a permit renewal application.
2. The permittee may not use as a defense in an enforcement action that it would have been necessary for the permittee to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit
3. The permit may be modified, revoked, reopened, reissued or terminated for cause. Except as provided for minor permit modifications, the filing of an application or request for a permit modification, revocation and reissuance, or termination, or the filing of a notification of planned changes or anticipated noncompliance, does not stay any permit condition.
4. This permit does not convey any property rights of any sort, nor grant any exclusive privilege.
5. The permittee shall furnish to the Air Pollution Control Program, upon receipt of a written request and within a reasonable time, any information that the Air Pollution Control Program reasonably may require to determine whether cause exists for modifying, reopening, reissuing or revoking the permit or to determine compliance with the permit. Upon request, the permittee also shall furnish to the Air Pollution Control Program copies of records required to be kept by the permittee. The permittee may make a claim of confidentiality for any information or records submitted pursuant to 10 CSR 10-6.065(6)(C)1.

10 CSR 10-6.065(6)(C)1.H Incentive Programs Not Requiring Permit Revisions

No permit revision will be required for any installation changes made under any approved economic incentive, marketable permit, emissions trading, or other similar programs or processes provided for in this permit.

10 CSR 10-6.065(6)(C)1.I Reasonably Anticipated Operating Scenarios

None.

10 CSR 10-6.065(6)(C)3 Compliance Requirements

1. Any document (including reports) required to be submitted under this permit shall contain a certification signed by the responsible official.
2. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow authorized officials of the Missouri Department of Natural Resources, or their authorized agents, to perform the following (subject to the installation's right to seek confidential treatment of information submitted to, or obtained by, the Air Pollution Control Program):
   a) Enter upon the premises where a permitted installation is located or an emissions-related activity is conducted, or where records must be kept under the conditions of this permit;
   b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
   c) Inspect, at reasonable times and using reasonable safety practices, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and
   d) As authorized by the Missouri Air Conservation Law, Chapter 643, RSMo or the Act, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the terms of this permit, and all applicable requirements as outlined in this permit.
3. All progress reports required under an applicable schedule of compliance shall be submitted semiannually (or more frequently if specified in the applicable requirement). These progress reports shall contain the following:
   a) Dates for achieving the activities, milestones or compliance required in the schedule of compliance, and dates when these activities, milestones or compliance were achieved, and
   b) An explanation of why any dates in the schedule of compliance were not or will not be met, and any preventative or corrective measures adopted.
4. The permittee shall submit an annual certification that it is in compliance with all of the federally enforceable terms and conditions contained in this permit, including emissions limitations, standards, or work practices. These certifications shall be submitted annually by April 1st, unless the applicable requirement specifies more frequent submission. These certifications shall be submitted to EPA Region VII, 11201 Renner Blvd., Lenexa, KS 66219, as well as the Air Pollution Control Program's Compliance and Enforcement Section at P.O. Box 176, Jefferson City, MO 65102 or AirComplianceReporting@dnr.mo.gov. All deviations and 40 CFR Part 64 exceedances and excursions must be included in the compliance certifications. The compliance certification shall include the following:
   a) The identification of each term or condition of the permit that is the basis of the certification;
   b) The current compliance status, as shown by monitoring data and other information reasonably available to the installation;
   c) Whether compliance was continuous or intermittent;
   d) The method(s) used for determining the compliance status of the installation, both currently and over the reporting period; and
   e) Such other facts as the Air Pollution Control Program will require in order to determine the compliance status of this installation.

10 CSR 10-6.065(6)(C)6 Permit Shield

1. Compliance with the conditions of this permit shall be deemed compliance with all applicable requirements as of the date that this permit is issued, provided that:
   a) The applicable requirements are included and specifically identified in this permit, or
   b) The permitting authority, in acting on the permit revision or permit application, determines in writing that other requirements, as specifically identified in the permit, are not applicable to the installation, and this permit expressly includes that determination or a concise summary of it.
2. Be aware that there are exceptions to this permit protection. The permit shield does not affect the following:
   a) The provisions of §303 of the Act or §643.090, RSMo concerning emergency orders,
   b) Liability for any violation of an applicable requirement which occurred prior to, or was existing at, the time of permit issuance,
   c) The applicable requirements of the acid rain program,
   d) The authority of EPA and the Air Pollution Control Program of the Missouri Department of Natural Resources to obtain information, or
   e) Any other permit or extra-permit provisions, terms or conditions expressly excluded from the permit shield provisions.

10 CSR 10-6.065(6)(C)7 Emergency Provisions

1. An emergency or upset as defined in 10 CSR 10-6.065(6)(C)7.A shall constitute an affirmative defense to an enforcement action brought for noncompliance with technology-based emissions limitations. To establish an emergency- or upset-based defense, the permittee must demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence, the following:
   a) That an emergency or upset occurred and that the permittee can identify the source of the emergency or upset,
   b) That the installation was being operated properly,
   c) That the permittee took all reasonable steps to minimize emissions that exceeded technology-based emissions limitations or requirements in this permit, and
   d) That the permittee submitted notice of the emergency to the Air Pollution Control Program within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and any corrective actions taken.
2. Be aware that an emergency or upset shall not include noncompliance caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

10 CSR 10-6.065(6)(C)8 Operational Flexibility

1. An installation that has been issued a Part 70 operating permit is not required to apply for or obtain a permit revision in order to make any of the changes to the permitted installation described below if the changes are not Title I modifications, the changes do not cause emissions to exceed emissions allowable under the permit, and the changes do not result in the emission of any air contaminant not previously emitted. The permittee shall notify the Air Pollution Control Program's Compliance and Enforcement Section at P.O. Box 176, Jefferson City, MO 65102 or AirComplianceReporting@dnr.mo.gov, as well as EPA Region VII, 11201 Renner Blvd., Lenexa, KS 66219, at least seven days in advance of these changes, except as allowed for emergency or upset conditions. Emissions allowable under the permit means a federally enforceable permit term or condition determined at issuance to be required by an applicable requirement that establishes an

emissions limit (including a work practice standard) or a federally enforceable emissions cap that the source has assumed to avoid an applicable requirement to which the source would otherwise be subject.

a) §502(b)(10) changes. Changes that, under §502(b)(10) of the Act, contravene an express permit term may be made without a permit revision, except for changes that would violate applicable requirements of the Act or contravene federally enforceable monitoring (including test methods), record keeping, reporting or compliance requirements of the permit.
b) Before making a change under this provision, the permittee shall provide advance written notice to the Air Pollution Control Program's Compliance and Enforcement Section at P.O. Box 176, Jefferson City, MO 65102 or AirComplianceReporting@dnr.mo.gov, as well as EPA Region VII, 11201 Renner Blvd., Lenexa, KS 66219, describing the changes to be made, the date on which the change will occur, and any changes in emission and any permit terms and conditions that are affected. The permittee shall maintain a copy of the notice with the permit, and the Air Pollution Control Program shall place a copy with the permit in the public file. Written notice shall be provided to the EPA and the Air Pollution Control Program as above at least seven days before the change is to be made. If less than seven days notice is provided because of a need to respond more quickly to these unanticipated conditions, the permittee shall provide notice to the EPA and the Air Pollution Control Program as soon as possible after learning of the need to make the change.
c) The permit shield shall not apply to these changes.

10 CSR 10-6.065(6)(C)9 Off-Permit Changes

1. Except as noted below, the permittee may make any change in its permitted operations, activities or emissions that is not addressed in, constrained by or prohibited by this permit without obtaining a permit revision. Insignificant activities listed in the permit, but not otherwise addressed in or prohibited by this permit, shall not be considered to be constrained by this permit for purposes of the off-permit provisions of this section. Off-permit changes shall be subject to the following requirements and restrictions:
   a) The change must meet all applicable requirements of the Act and may not violate any existing permit term or condition; the permittee may not change a permitted installation without a permit revision if this change is subject to any requirements under Title IV of the Act or is a Title I modification;
   b) The permittee must provide contemporaneous written notice of the change to the Air Pollution Control Program's Compliance and Enforcement Section at P.O. Box 176, Jefferson City, MO 65102 or AirComplianceReporting@dnr.mo.gov, as well as EPA Region VII, 11201 Renner Blvd., Lenexa, KS 66219. This notice shall not be required for changes that are insignificant activities under 10 CSR 10-6.065(6)(B)3. This written notice shall describe each change, including the date, any change in emissions, pollutants emitted and any applicable requirement that would apply as a result of the change.
   c) The permittee shall keep a record describing all changes made at the installation that result in emissions of a regulated air pollutant subject to an applicable requirement and the emissions resulting from these changes; and
   d) The permit shield shall not apply to these changes.

10 CSR 10-6.020(2)(R)34 Responsible Official

The application utilized in the preparation of this permit was signed by Mark R. Yingling, VP Environmental Health + Safety. If this person terminates employment, or is reassigned different duties

such that a different person becomes the responsible person to represent and bind the installation in environmental permitting affairs, the permittee shall notify the Director of the Air Pollution Control Program of the change. Said notification shall be in writing and shall be submitted within 30 days of the change. The notification shall include the name and title of the new person assigned by the permittee to represent and bind the installation in environmental permitting affairs. All representations, agreement to terms and conditions and covenants made by the former responsible person that were used in the establishment of limiting permit conditions on this permit will continue to be binding on the installation until such time that a revision to this permit is obtained that would change said representations, agreements and covenants.

10 CSR 10-6.065(6)(E)6 Reopening-Permit for Cause

1. This permit may be reopened for cause if:
   a) The Missouri Department of Natural Resources receives notice from EPA that a petition for disapproval of a permit pursuant to §70.8(d) has been granted, provided that the reopening may be stayed pending judicial review of that determination,
   b) The Missouri Department of Natural Resource or EPA determines that the permit contains a material mistake or that inaccurate statements were made which resulted in establishing the emissions limitation standards or other terms of the permit,
   c) Additional applicable requirements under the Act become applicable to the installation; however, reopening on this ground is not required if—:
      i) The permit has a remaining term of less than three years;
      ii) The effective date of the requirement is later than the date on which the permit is due to expire; or
      iii) The additional applicable requirements are implemented in a general permit that is applicable to the installation and the installation receives authorization for coverage under that general permit,
   d) The installation is an affected source under the acid rain program and additional requirements (including excess emissions requirements), become applicable to that source, provided that, upon approval by EPA, excess emissions offset plans shall be deemed to be incorporated into the permit; or
   e) The Missouri Department of Natural Resources or EPA determines that the permit must be reopened and revised to assure compliance with applicable requirements.

10 CSR 10-6.065(6)(E)1.C Statement of Basis

This permit is accompanied by a statement setting forth the legal and factual basis for the permit conditions (including references to applicable statutory or regulatory provisions). This Statement of Basis, while referenced by the permit, is not an actual part of the permit.

VI. Attachments

Attachments follow. Attachment P contains a list of abbreviations and acronyms used throughout this permit.

Attachment A
Fugitive Emission Observations

Date	Time	Visible Emissions Beyond Property Boundary		Initial
		No	Yes	

Attachment B

Method 22 Visible Emissions Observations	
Installation Name	Observer Name
Location	Date
Sky Conditions	Wind Direction
Precipitation	Wind Speed
Time	Emission unit
Sketch emission unit: indicate observer position relative to emission unit; indicate potential emission points and/or actual emission points.	

Minute	Seconds				Comments
	0	15	30	45	
	Visible Emissions Yes (Y) or No (N)				
0					
1					
2					
3					
4					
5					
6					

If visible emissions are observed, the installation is not required to complete the entire six-minute observation. The installation shall note when the visible emissions were observed and shall conduct a Method 9 opacity observation.

Attachment C

Method 9 Opacity Observations		
Installation Name:	Sketch of the observer's position relative to the emission unit	
Emission Point:		
Emission Unit:		
Observer Name and Affiliation:		
Observer Certification Date:		
Method 9 Observation Date:		
Height of Emission Point:		
Time:	Start of observations	End of observations
Distance of Observer from Emission Point:		
Observer Direction from Emission Point:		
Approximate Wind Direction:		
Estimated Wind Speed:		
Ambient Temperature:		
Description of Sky Conditions (Presence and color of clouds):		
Plume Color:		
Approximate Distance Plume is Visible from Emission Point:		

Minute	Seconds				6-minute Avg. % Opacity	Steam Plume (check if applicable)		Comments
	0	15	30	45		Attached	Detached	
	Opacity Readings (% Opacity)							
0					N/A			
1					N/A			
2					N/A			
3					N/A			
4					N/A			
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								

18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

The emission unit is in compliance if each six-minute average opacity is less than or equal to 20%. Exception: The emission unit is in compliance if one six-minute average opacity is greater than 20%, but less than 60%.

Was the emission unit in compliance at the time of evaluation (yes or no)? _____

_____
Signature of Observer

Attachment D

Inspection/Maintenance/Repair/Malfunction Log

Emission Unit # _____

Date /Time	Inspection /Maintenance Activities	Malfunction Activities					
		Malfunction	Impact	Duration	Cause	Action	Initials

Attachment E

Best Management Practices (BMPs)

Haul roads and vehicular activity areas shall be maintained in accordance with at least one of the following options when the plant is operating.

1. Pavement
   a) The permittee shall pave the area with materials such as asphalt, concrete or other materials approved by the Air Pollution Control Program. The pavement will be applied in accordance with industry standards to achieve control of fugitive emissions while the plant is operating.
   b) Maintenance and repair of the road surface will be conducted as necessary to ensure that the physical integrity of the pavement is adequate to achieve control of fugitive emissions from these areas while the plant is operating.
   c) The permittee shall periodically wash or otherwise clean all of the paved portions of the haul roads as necessary to achieve control of fugitive emissions from these areas while the plant is operating.
2. Application of Chemical Dust Suppressants
   a) The permittee shall apply a chemical dust suppressant (such as magnesium chloride, calcium chloride, lignosulfonates, etc.) to unpaved areas.
   b) The quantities of the chemical dust suppressant shall be applied and maintained in accordance with the manufacturer's recommendation (if available) and in sufficient quantities to achieve control of fugitive emissions from these areas while the plant is operating.
   c) The permittee shall record the time, date and the amount of material applied for each application of the chemical dust suppressant agent on the above areas. The permittee shall keep these records with the plant for not less than five years and make these records available to Department of Natural Resources' personnel upon request.
3. Application of Water-Documented Daily
   a) The permittee shall apply water to unpaved areas. Water shall be applied at a rate of 100 gallons per day per 1,000 square feet of unpaved or untreated surface area while the plant is operating.
   b) Precipitation may be substituted for watering if the precipitation is greater than one quarter of one inch and is sufficient to control fugitive emissions.
   c) Watering may also be suspended when the ground is frozen, during periods of freezing conditions when watering would be inadvisable for traffic safety reasons, or when there will be no traffic on the roads.
   d) The permittee shall record the date, volume of water application and total surface area of active haul roads or the amount of precipitation that day. The permittee shall also record the rational for not watering (e.g. freezing conditions or not operating).
   e) The permittee shall keep these records with the plant for not less than five years, and the permittee shall make these records available to Department of Natural Resources' personnel upon request.

Attachment F
EU-97 NO_x Tracking Sheet

Date (Month/Year)	Nonresettable Meter Reading (hours)	Monthly Usage[33] (hours)	NO_x Emission Rate[34] (lb/hr)	Monthly SSM NO_x Emissions[35] (tons)	Monthly NO_x Emissions[36] (tons)	12-Monthly Rolling Total NO_x Emissions[37] (tons)
			12.4			
			12.4			
			12.4			
			12.4			
			12.4			
			12.4			
			12.4			
			12.4			
			12.4			
			12.4			
			12.4			
			12.4			
			12.4			
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			12.4			
			12.4			
			12.4			
			12.4			
			12.4			
			12.4			
			12.4			

[33] Monthly Usage (hours) = the current month's Nonresetable Meter Reading (hours) – the previous month's Nonresetable Meter Reading (hours)
[34] The engine has an MHDR of 400 HP. The maximum hourly NO_x emission rate was determined by multiplying the MHDR of the engine by an emission factor of 0.031 lb/HP-hr from AP-42 Table 3.3-1 (October 1996).
[35] As reported to the Air Pollution Control Program's Compliance/Enforcement Section in accordance with the requirements of 10 CSR 10-6.050 *Start-up, Shutdown, and Malfunction Conditions*.
[36] Monthly NO_x Emissions (tons) = Monthly Usage (hours) x NO_x Emission Rate (lb/hr) x 0.0005 (ton/lb) + Monthly SSM NO_x Emissions (tons).
[37] 12-Month Rolling Total NO_x Emissions (tons) = the sum of the 12 most recent Monthly NO_x Emissions (tons). **12-Month Rolling Total NO_x Emissions of less than 40 tons demonstrates compliance with Permit Condition 004.**

Attachment G

CD-37 Dry Lime Scrubber Sulfuric Acid Mist Tracking Sheet

Date (Month/Year)	Monthly EU-9 Reverberatory Furnace Feed Throughput (tons)	CD-37 Dry Lime Scrubber Sulfuric Acid Mist Emission Factor[38] (lb/ton Reverb feed)	Monthly SSM Sulfuric Acid Mist Emissions[39] (tons)	Monthly Sulfuric Acid Mist Emissions[40] (tons)	12-Monthly Rolling Total Sulfuric Acid Mist Emissions[41] (tons)
		0.273			
		0.273			
		0.273			
		0.273			
		0.273			
		0.273			
		0.273			
		0.273			
		0.273			
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		0.273			
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		0.273			
		0.273			
		0.273			
		0.273			
		0.273			
		0.273			

[38] An emission factor of 0.273 pounds sulfuric acid mist per ton of reverberatory furnace feed was approved from testing conducted on CD-37 Dry Lime Scrubber in September 2012. This emission factor shall be replaced by the approved stack tested emission factor from December 2018.

[39] As reported to the Air Pollution Control Program's Compliance/Enforcement Section in accordance with the requirements of 10 CSR 10-6.050 *Start-up, Shutdown, and Malfunction Conditions*.

[40] Monthly Sulfuric Acid Mist Emissions (tons) = Monthly EU-9 Reverberatory Furnace Feed Throughput (tons) x CD-37 Dry Lime Scrubber Sulfuric Acid Mist Emission Factor (lb/ton Reverb feed) x 0.0005 (ton/lb) + Monthly SSM Sulfuric Acid Mist Emissions (tons).

[41] 12-Month Rolling Total Sulfuric Acid Mist Emissions (tons) = the sum of the 12 most recent Monthly Sulfuric Acid Mist Emissions (tons). **12-Month Rolling Total Sulfuric Acid Mist Emissions of less than 7.0 tons demonstrates compliance with Permit Condition 008.**

Attachment H
CD-37 Dry Lime Scrubber $PM_{2.5}$ Tracking Sheet

Date (Month/Year)	Monthly EU-9 Reverberatory Furnace Feed Throughput (tons)	CD-37 Dry Lime Scrubber $PM_{2.5}$ Emission Factor[42] (lb/ton Reverb feed)	Monthly SSM $PM_{2.5}$ Emissions[43] (tons)	Monthly $PM_{2.5}$ Emissions[44] (tons)	12-Monthly Rolling Total $PM_{2.5}$ Emissions[45] (tons)
		0.06			
		0.06			
		0.06			
		0.06			
		0.06			
		0.06			
		0.06			
		0.06			
		0.06			
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		0.06			
		0.06			
		0.06			
		0.06			
		0.06			
		0.06			
		0.06			

[42] An emission factor of 0.06 pounds $PM_{2.5}$ per ton of reverberatory furnace feed was approved from testing conducted on CD-37 Dry Lime Scrubber in September 2012. This emission factor shall be replaced by the approved stack tested emission factor from December 2018.
[43] As reported to the Air Pollution Control Program's Compliance/Enforcement Section in accordance with the requirements of 10 CSR 10-6.050 *Start-up, Shutdown, and Malfunction Conditions*.
[44] Monthly $PM_{2.5}$ Emissions (tons) = Monthly EU-9 Reverberatory Furnace Feed Throughput (tons) x CD-37 Dry Lime Scrubber $PM_{2.5}$ Emission Factor (lb/ton Reverb feed) x 0.0005 (ton/lb) + Monthly SSM $PM_{2.5}$ Emissions (tons).
[45] 12-Month Rolling Total $PM_{2.5}$ Emissions (tons) = the sum of the 12 most recent Monthly $PM_{2.5}$ Emissions (tons). **12-Month Rolling Total $PM_{2.5}$ Emissions of less than 13.68 tons demonstrates compliance with Permit Condition 008.**

Attachment I
EP-8 Lead Tracking Sheet

Date (Month/Year)	Monthly Blast, Sweat, and Reverberatory Furnaces Castable Lead Production (tons)	EP-8 Lead Emission Factor[46] (lb/ton castable lead produced)	Monthly SSM Lead Emissions[47] (tons)	Monthly Lead Emissions[48] (tons)	12-Monthly Rolling Total Lead Emissions[49] (tons)
		0.007			
		0.007			
		0.007			
		0.007			
		0.007			
		0.007			
		0.007			
		0.007			
		0.007			
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		0.007			
		0.007			
		0.007			
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		0.007			
		0.007			
		0.007			
		0.007			
		0.007			
		0.007			
		0.007			
		0.007			

[46] An emission factor of 0.007 pounds lead emissions per ton of castable lead produced was approved from testing conducted on EP-8 in April 2016. This emission factor shall be replaced by the approved stack tested emission factor from September 2018.
[47] As reported to the Air Pollution Control Program's Compliance/Enforcement Section in accordance with the requirements of 10 CSR 10-6.050 *Start-up, Shutdown, and Malfunction Conditions*.
[48] Monthly Lead Emissions (tons) = Monthly Blast, Sweat, and Reverberatory Furnaces Castable Lead Production (tons) x EP-8 Lead Emission Factor (lb/ton castable lead produced) x 0.0005 (ton/lb) + Monthly SSM Lead Emissions (tons).
[49] 12-Month Rolling Total Lead Emissions (tons) = the sum of the 12 most recent Monthly Lead Emissions (tons). **12-Month Rolling Total Lead Emissions of less than 4.9 tons demonstrates compliance with Permit Condition 011.**

Attachment J
Blast Furnace CO Tracking Sheet

Only use this tracking sheet on days during which the blast furnace operated.

Date (Month/Day/Year)	CO Emissions[50] (pounds per day)	Blast Furnace Feed (tons per day)	CO Emissions[51] (pounds per ton of blast furnace feed)	30-day Rolling Average CO Emissions[52] (pounds per tons of blast furnace feed)

[50] Obtained from the CO CEMS if operational for all hours during the day. If the CO CEMS was not operational for any hour that the blast furnace operated, substitute the highest CO value from the most recent 30-day period.
[51] CO Emissions (pounds per ton of blast furnace feed) = CO Emissions (pounds per day) divided by Blast Furnace Feed (tons per day).
[52] 30-day Rolling Average CO Emissions (pounds per ton of blast furnace feed) = The average of the 30 most recent CO Emissions (pounds per ton blast furnace feed) during which the blast furnace operated. Days on which the blast furnace did not operate shall not be included in the most recent 30 days. **30-day Rolling Average CO Emissions of less than 364 pounds per ton of blast furnace feed indicates compliance with Permit Condition 010.**

Attachment K
EP-8 CO Tracking Sheet

Only use this tracking sheet if the blast furnace has operated within the last 365 days. If the blast furnace has not operated within the last 365 days, use Attachment M.

Date (Month/Day/Year)	Daily CO Emissions[53] (pounds)	Monthly CO Emissions[54] (tons)	12-Month Rolling Total CO Emissions[55] (tons)

[53] Obtained from the CO CEMS if operational for all hours during the day. If the CO CEMS was not operational for any hour that the blast furnace operated, substitute the highest CO value from the most recent 30-day period from Attachment J. If the CO CEMS was not operational for any hour that the blast furnace was not operating, substitute the highest CO value from the most recent 30-day period from Attachment L.
[54] Monthly CO Emissions (tons) = the sum of all Daily CO Emissions (tons) for the calendar month.
[55] 12-Month Rolling Total CO Emissions (tons) = the sum of the 12 most recent Monthly CO Emissions (tons). **12-Month Rolling Total CO Emissions of less than 79,078 tons indicates compliance with Permit Condition 010.**

Attachment L
Reverberatory Furnace CO Tracking Sheet

Only use this tracking sheet on days that the blast furnace did not operate.

Date (Month/Day/Year)	CO Emissions[56] (pounds per day)	Reverberatory Furnace Feed (tons per day)	CO Emissions[57] (pounds per ton of reverberatory furnace feed)	30-day Rolling Average CO Emissions[58] (pounds per tons of reverberatory furnace feed)

[56] Obtained from the CO CEMS if operational for all hours during the day. If the CO CEMS was not operational for any hour, substitute the highest CO value from the most recent 30-day period.
[57] CO Emissions (pounds per ton of reverberatory furnace feed) = CO Emissions (pounds per day) divided by Reverberatory Furnace Feed (tons per day).
[58] 30-day Rolling Average CO Emissions (pounds per ton of reverberatory furnace feed) = The average of the 30 most recent CO Emissions (pounds per ton reverberatory furnace feed) during which the blast furnace did not operate. Days on which the blast furnace operated shall not be included in the most recent 30 days. **30-day Rolling Average CO Emissions of less than 38.5 pounds per ton of reverberatory furnace feed indicates compliance with Permit Condition 010.**

Attachment M
EP-8 CO Tracking Sheet

Only use this tracking sheet if the blast furnace has not operated within the last 365 days. If the blast furnace has operated within the last 365 days, use Attachment K.

Date (Month/Day/Year)	Daily CO Emissions[59] (pounds)	Monthly CO Emissions[60] (tons)	12-Month Rolling Total CO Emissions[61] (tons)

[59] Obtained from the CO CEMS if operational for all hours during the day. If the CO CEMS was not operational for any hour, substitute the highest CO value from the most recent 30-day period from Attachment L.
[60] Monthly CO Emissions (tons) = the sum of all Daily CO Emissions (tons) for the calendar month.
[61] 12-Month Rolling Total CO Emissions (tons) = the sum of the 12 most recent Monthly CO Emissions (tons). **12-Month Rolling Total CO Emissions of less than 6,121 tons indicates compliance with Permit Condition 010.**

Attachment N
Blast Furnace Coke Sulfur Content Tracking Sheet

Date (Month/Day/Year)	Quantity of Coke Received (tons)	Sulfur Content of Coke Received (wt %)	12-Month Rolling Total Weighted Average Sulfur Content[62] (wt%)

[62] 12-Month Rolling Total Weighted Average Sulfur Content (wt%) = the sum for each date during the 12-month period of Quantity of Coke Received (tons) x Sulfur Content of Coke Received (wt%) divided by the sum of all Quantity of Coke Received (tons) during the 12-month period. **A 12-Month Rolling Total Weighted Average Sulfur Content of less than 1.5 weight percent indicates compliance with Permit Condition 009.**

Attachment O

Scrubber Bypass Operating Mode Worksheet

Date (Month/Year)	Monthly Scrubber Bypass Operation (hours)	12-Monthly Rolling Total Scrubber Bypass Operation[63] (hours)

[63] 12-Month Rolling Total Scrubber Bypass Operation (hours) = the sum of the 12 most recent Monthly Scrubber Bypass Operation (hours). **12-Month Rolling Total Scrubber Bypass Operation of less than or equal to 720 hours demonstrates compliance with Permit Condition 012.**

Attachment P
Abbreviations and Acronyms

°F ..... degrees Fahrenheit
AAQIA..... ambient air quality impact analysis
ACD ..... air curtain destructor
acfm ..... actual cubic feet per minute
BACT..... Best Available Control Technology
BLDS ..... bag leak detection system
BMPs ..... Best Management Practices
BSN ..... breaking, separation, and neutralization
Btu..... British thermal unit
CAM ..... Compliance Assurance Monitoring
CAS..... Chemical Abstracts Service
CEMS ..... Continuous Emission Monitor System
CFR..... Code of Federal Regulations
CO..... carbon monoxide
CO_2..... carbon dioxide
CO_2e..... carbon dioxide equivalent
COMS..... Continuous Opacity Monitoring System
CSR..... Code of State Regulations
dscf..... dry standard cubic feet
dscm..... dry standard cubic meter
EIQ..... Emission Inventory Questionnaire
EP..... Emission Point
EPA..... Environmental Protection Agency
ERP ..... enhanced refining process
EU ..... Emission Unit
FGD ..... flue gas desulfurization
FIRE..... EPA's Factor Information Retrieval System
fps..... feet per second
ft..... feet
GACT ..... Generally Available Control Technology
GHG..... Greenhouse Gas
gpm ..... gallons per minute
gr..... grains
GWP ..... Global Warming Potential
HAP ..... Hazardous Air Pollutant
hr..... hour
HP ..... horsepower
lb..... pound
lb/hr ..... pounds per hour
LBM..... lead bearing material
MACT ..... Maximum Achievable Control Technology
µg/m^3 ..... micrograms per cubic meter
m/s ..... meters per second
MERV ..... minimum efficiency reporting value
mg..... milligrams
Mgal ..... 1,000 gallons
MW..... megawatt
MHDR..... maximum hourly design rate
MMBtu..... Million British thermal units
mmHg..... millimeters mercury
MMscf..... Million standard cubic feet
NAAQS .... National Ambient Air Quality Standards
NESHAPs. National Emissions Standards for Hazardous Air Pollutants
NO_x ..... nitrogen oxides
NSPS..... New Source Performance Standards
NSR ..... New Source Review
PM ..... particulate matter
$PM_{2.5}$ ..... PM less than 2.5 microns in aerodynamic diameter
PM_{10}..... PM less than 10 microns in aerodynamic diameter
ppm..... parts per million
PSD..... Prevention of Significant Deterioration
psi..... pounds per square inch
PTE..... potential to emit
RACT ..... Reasonable Available Control Technology
RAL..... Risk Assessment Level
SCC ..... Source Classification Code
scfm ..... standard cubic feet per minute
SCR ..... selective catalytic reduction
SDS..... Safety Data Sheet
SIC..... Standard Industrial Classification
SIP ..... State Implementation Plan
SMAL..... Screening Model Action Levels
SO_x..... sulfur oxides
SO_2..... sulfur dioxide
tph..... tons per hour
tpy..... tons per year
VMT ..... vehicle miles traveled
VOC ..... Volatile Organic Compounds

STATEMENT OF BASIS

INSTALLATION DESCRIPTION

The Doe Run Resources Corporation owns and operates the Buick Resources Recycling Facility, LLC located near Boss, Missouri. The Doe Run Resources Corporation purchased the property on November 1, 1986 when it was known as the AMAX primary lead smelter. In 1989, the Doe Run Resources Corporation received a PSD permit to convert the primary smelter to a secondary smelter for battery recycling. The Buick Resources Recycling Facility, LLC began operation as a lead-acid battery recycling operation and a secondary lead smelter in 1991.

The Buick Resources Recycling Facility, LLC receives and processes approximately 460 million pounds of lead-bearing materials annually, including approximately 13.5 million recycled lead-acid batteries each year. Other recycled lead-bearing materials include ammunition, submarine ballasts, lead-bearing glass, and lead-based paint blasting grit material and debris, as well as cathode ray tube (CRT) glass. The installation converts these materials into pure lead and lead alloys for new products. The installation is an existing major source for both construction and operating permits. The installation is secondary metal production plant. Secondary metal production plants are named stationary sources; therefore, fugitive emissions from the installation count towards major source applicability. The installation is located in Iron County, a nonattainment area for the 2008 lead NAAQS. The installation's secondary metal production operations consist of three main areas: raw material preparation, smelting, and refining. The installation also contains other miscellaneous operations.

Raw Material Preparation

The Buick Resource Recycling Facility, LLC receives automotive and industrial batteries, lead dross, lead fume, and other lead bearing materials from over the road trucks. Approximately 75 percent or more of the lead recycled at the installation comes from automotive and industrial batteries. The materials received are sorted during the unloading process for efficient processing at the installation.

Blast Furnace Feed

The feed to the blast furnace consists of metallurgical coke, iron scrap, lime (limestone), silica, lead bearing scrap, and other plant secondaries (i.e. dross and slag) generated by the smelting and refining operations. The metallurgical coke, iron scrap, limestone, and silica are delivered to the installation by trucks and placed into dedicated storage piles, segregated by feed material type. The installation uses a front-end loader, equipped with an on-board scale for weight measurement of the individual feed components, to retrieve the feed materials from the individual dedicated storage piles, and then transfer them to a charge hopper. This hopper empties onto the main conveyor that delivers the blended feed materials to the blast furnace. The component "blend" sent to the blast furnace is dependent on the specific metallurgical properties desired for the product lead.

BSN Process

Trucks containing lead-acid batteries and other lead bearing materials are unloaded at the receiving dock. The batteries are either stored in areas adjacent to the dock or immediately processed. There are

two major types of lead acid batteries: starting, lighting, and ignition (SLIs) which are relatively small like a car battery, and industrial batteries from large equipment or large capacity power backup. Industrial batteries often come in a steel outer casing and the battery cells must either be pulled or cut from the outer casing before processing. Industrial batteries that must have the steel cut off are taken to the industrial line cutting station adjacent to the receiving dock. Once removed from the steel outer casing industrial batteries are stored or processed like other batteries.

Each lead-acid battery contains metal grids, lead posts, plastic components, separators, lead sulfate paste, and battery acid (weak sulfuric acid). Approximately one-third of all batteries received still have a charge on them; therefore, the batteries must be shredded. After coming off a truck or from storage, batteries are placed onto a tilt table and vibrating pan that feeds the battery shredder. The batteries are then shredded in the battery shredder. After the batteries are shredded, they move to a vibrating screen. A conveyor transfers oversized material from the vibrating screen to the conveyor (8210) that feeds the hammer mill. Electrolyte (dilute sulfuric acid) is removed in the vibrating screen and drains to the V102, V103, and V104 electrolyte storage tanks. The overflow is conveyed to the electrolyte tank (referred to as the "Pinta" tank). Some residual acid remains on the lead bearing material.

The 8210 conveyor feeds the lead bearing material into the hammer mill. From the hammer mill, battery components go to an enclosed vibrating screen that washes lead sulfate paste off the components. The lead sulfate paste is directed to the 202 Tank for holding and settling. Paste from the 202 Tank is pumped to the 301A or B Tanks, which feed the filter press. The filter press squeezes excess liquid from the lead sulfate paste. The lead sulfate paste is stored in the Paste Bunker.

From the enclosed vibrating screen, all remaining components (plastic, posts and grids, and separators[64]) go to a hydrodynamic separator to separate out the posts and grids. The posts and grids proceed via two enclosed conveyors to the Paste Bunker where they are stored for later processing in the blast furnace or reverberatory furnace. The remaining materials from the hydrodynamic separator (the plastic and separators) are then sent to a trommel screen to remove any fines. The fines proceed to the sink float and onto a screw conveyor, which conveys the fines to the Paste Bunker. Plastics and separators go to a hydrostatic separator tank to separate the separators from the recyclable plastics. The separators move through an enclosed conveyor to Separator Storage. The plastics are sent to a wash tank (known as a "poly wash tank"). After the poly wash tank the plastics proceed through a trommel screen and through a screw conveyor. After the screw conveyor, the material moves through a poly blower and to a truck to transport the plastics off-site for recycling.

The entire BSN process is contained within the BSN building. The BSN building (TE-5 BSN Building) contains lead bearing material and is required to meet the total enclosure standards at §63.544. Each vent from the total enclosure is required to meet the process vent standards at §63.543. To achieve compliance with the process vent standards for the BSN Process, the installation uses three different

[64] A battery separator is the material that separates the positive plate from the negative plate in the internal portions of the battery container. It offers resistance to electrical conductivity for isolation of the electrodes. Separators are electrically insulating membranes whose ionic resistance is brought into the desired range by manipulating the membrane thickness and porosity. Separator composition varies due to different types of batteries and different manufacturers. A typical separator composition is 29% moisture, 27% carbon, 10% lead, 22.7% silicon dioxide, 5% oxygen, and 6.3% other elements.

control devices: CD-103 BSN Baghouse, CD-101 Receiving Dock Baghouse, and CD-10 BSN Scrubber.

The following equipment/processes in lead bearing material service vent to CD-103 BSN Baghouse:

- Steel Conveyor
- Battery shredder
- Acid vibrator
- V102 tank
- H103 conveyor
- 8210 conveyor
- Diversion chute
- Vibrating hopper
- Paste bunker
- Acid Filter Press

The following equipment/processes in lead bearing material service vent to CD-101 Receiving Dock Baghouse:

- Truck unloading of batteries
- Palletized storage area
- Industrial battery dump
- Battery tilters
- Vibration pan

The following equipment/processes are either a sulfuric acid mist emission source or are in lead bearing material service and vent to CD-10 BSN Scrubber:

- Industrial battery cutting station
- V103 tank
- V104 tank
- Hammer mill
- Paste vibrator
- Hydrodynamic separator
- First trommel
- Hydrostatic separator
- Second trommel
- Poly wash tank
- Santa maria/paste settler
- 202 tank paste
- 301A tank
- 301B tank
- Paste filter press
- 311C tank
- 311F tank

Drum Shredder Process

The drum shredder is a Saturn Model No. 60-44HT with two 300 HP motors and a 22.25" cutter diameter. The Drum Shredder has a maximum hourly design rate of 25 tph. The Drum Shredder is

located in a three-sided bunker within the Paste Storage Room. A door separates the three-sided bunker from the Drum Shredder Room. The door is opened to access the Drum Shredder, but remains closed at all other times. Emissions from the Drum Shredder route to EP-31B Drum Shredder Hygiene Baghouse and EP-31C Drum Shredder Process Baghouse.

The drum shredder is used to shred containers of lead bearing material such as manufacturing plant scrap, post-consumer lead bearing materials, batteries without free liquid, and remediation materials. Iron and steel from the shredded material is magnetically separated from the lead bearing material and stored for later use in the blast furnace. The lead is stored for later processing in the blast or reverberatory furnaces.

The Paste Bunker, the three-sided Drum Shredder bunker, and the Drum Shredder Room are all located within the larger BSN building (TE-5 BSN Building) which meets the definition of total enclosure under §63.542, meets the requirements of §63.544(c)(1) and (2), and is monitored pursuant to §63.548(k).

Sweat Furnaces

Two sweat furnaces (also known as reclamation furnaces) are used to remove metal and nonmetal contaminants from lead bearing scrap cables and related lead scrap metal. The scrap wire is fed to a sweat furnace, which is fired with propane. The propane burners on each sweat furnace are rated at 7.5 MMBtu/hr. The installation heats the lead scrap in the sweat furnace to drive off the nonmetal contaminants and to sweat the lead from the metals with higher melting points. The installation taps lead from the sweat furnace into molds. The installation processes the molds in the refinery area.

Each sweat furnace exhausts to an afterburner to control volatile organic materials driven off in the furnace. The installation vents emissions from the afterburners to CD-38 Process Baghouse or CD-9 Main Baghouse for filterable particulate control. The sweat furnaces are located in the TE-4 Hot Metals Building total enclosure.

Smelting

The smelting process produces lead by melting and separating the lead from other metal and non-metal contaminants and by reducing oxides to elemental lead. The installation performs smelting in two different furnaces – the blast furnace or the reverberatory furnace.

Blast Furnace and Slag Processing

The blast furnace utilizes several different types of raw materials to produce a hard lead. Hard lead has a high antimony content lead (~3.0%). The raw materials for the blast furnace include iron, limestone, silica, pretreated lead bearing scrap materials, and other plant secondaries (i.e. recycled dross, rerun slag, and flue dust). The raw materials are fed to the blast furnace through a series of conveyors. The installation layers the raw materials in the top of the blast furnace with metallurgical coke. As the raw materials slowly move through the furnace, the material becomes fluid as the metallurgical coke burns and melts the charge. Within the blast furnace, lead oxides are reduced to elemental lead and the limestone and iron form a slag byproduct. The blast furnace also operates a propane burner rated at 2 MMBtu/hr.

The molten lead and slag are transferred to a settler that separates the two components. The lead is poured into a transfer pot and is further processed in the refinery. The slag is water granulated, separated, and then disposed of in the onsite landfill.

The exhaust from the blast furnace is transferred through a cooling chamber and then to either CD-38 Process Baghouse (normal operating mode) or CD-9 Main Baghouse (bypass mode) for filterable particulate control. The dust captured in these baghouses is recycled back into the blast furnace feed or reverberatory furnace feed.

The blast furnace, settler, transfer pot, and conveyer 3110 are located in the TE-4 Hot Metal Building which meets the definition of total enclosure under §63.542.

Reverberatory Furnace

The reverberatory furnace produces a soft lead. Soft lead is a product with low antimony content. Soft lead is typically produced from the battery paste from the BSN Process.

The battery paste is transferred from the Paste Bunker using front-end loaders and dump trucks. The trucks unload the paste into the reverberatory feed storage building. The paste is then mixed with fluxes and other material prior to being placed into the screw feed system. The screw feeders then continuously deliver the feed materials to the reverberatory furnace.

The reverberatory furnace has internal dimensions of approximately 17 feet by 35 feet. The reverberatory furnace contains five oxy-fuel fired propane burners; three rated at 10 MMBtu/hr and two rated at 6 MMBtu/hr. Oxy-fuel fired means that the installation uses oxygen as the combustion gas rather than ambient air. During oxy-firing, oxygen replaces more than 90% of the nitrogen in the combustion gas. Exhaust gases from the reverberatory furnace vent to an afterburner. Excess air blown into the afterburner oxidizes sulfur compounds to SO_2 and CO to CO_2. The afterburner is designed to operate at approximately 1900°F with a residence time of 1 second. From the afterburner, exhaust gases enter the sonic cooler where the temperature of the gas is reduced using air and water sprays. In Normal Operating Mode, gases from the sonic cooler route to a baghouse to control filterable particulates and then to a dry lime scrubber. In the dry lime scrubber, hydrated lime absorbs SO_2 and SO_3. The gas stream then passes through another baghouse before venting to atmosphere. The installation recycles dust from the baghouses by transferring the dust via enclosed screw conveyors back to the reverberatory furnace or blast furnace. During Scrubber Bypass Operating Mode, the installation routes the exhaust gases from the sonic cooler to CD-38 Process Baghouse or CD-9 Main Baghouse prior to venting to the atmosphere. The installation adds soda ash to the reverberatory furnace feed during Scrubber Bypass Operating Mode to reduce SO_2 emissions.

The installation continuously taps the reverberatory furnace slag via a water-cooled launder. The slag produced in the reverberatory furnace contains a significant amount of lead; therefore, the slag is recycled back to either the reverberatory furnace or the blast furnace. The installation taps lead intermittently using an underflow siphon lead well from the reverberatory furnace to a 225-ton dross kettle.

The waste from the scrubber is processed by a pug mill to reach a moisture content of 20 to 25 percent, by weight, prior to disposal in the onsite landfill or an offsite landfill.

Refining and Casting

The refinery area receives crude lead from the smelting area. In the refinery area, the installation softens, alloys, and/or oxidizes the lead to achieve the desired degree of purity and the desired type of lead alloy.

Dross Kettles

The installation has five 225-ton dross kettles (D1-D5). Agents used to create dry dross typically include coke breeze, sawdust, and ebonite. The installation pumps lead from underneath the dross layer to a refinery kettle (R1 or R2). Dross kettles D1 and D2 have a combined propane burner rating of 9 MMBtu/hr. Dross kettles D3-D5 have a combined propane burner rating of 9 MMBtu/hr.

Both process and combustion emissions from the five dross kettles (D1-D5) are vented to CD-9 Main Baghouse.

Refinery Kettles

Refinery kettles R1 and R2 receive lead from the smelting area. The installation makes numerous different alloys for customers. All refinery kettles, excluding R5 and R6, are used to perform various treatments, and to add alloying materials. The treatments performed include those to remove copper, tin, antimony, and arsenic. Several reagents are used to perform these treatments including pyrite, sulfur, caustic, and sodium nitrate. After treatments are performed, the dross that forms is skimmed from the top of the kettle using an overhead crane and this dross is transferred to either drums or containers for shipment to customers or a wet dross screw conveyor. The wetted dross from the screw conveyor is transferred to the smelting furnace for metals recovery. Kettles R5 and R6 are used to remove zinc from the molten metal using vacuum seal hoods. From the refinery kettles lead is pumped to the casting machines.

Each refinery kettle, with the exception of R10, has a capacity of 225 tons. R10 has a capacity of 70 tons.

The installation vents process emissions from refinery kettles R1, R2, and R4 to CD-28 North Refinery Baghouse. The installation vents process emissions from refinery kettles R3 and R7 through R10 to CD-38 Process Baghouse (normal operating mode) or CD-9 Main Baghouse (bypass mode). Process emissions from refinery kettles R5, R6, R11, and R12 vent to CD-40 ERP Baghouse.

Refinery kettles R1 and R2 have a combined propane burner rating of 11.5 MMBtu/hr. Refinery kettles R3 and R4 have a combined propane burner rating of 11.5 MMBtu/hr. Refinery kettles R5 and R6 have a combined propane burner rating of 11.5 MMBtu/hr. Refinery kettles R7 and R8 have a combined propane burner rating of 13.5 MMBtu/hr. Refinery kettles R9 and R10 have a combined propane burner rating of 8.4 MMBtu/hr. Refinery kettles R11 and R12 have a combined propane burner rating of 12 MMBtu/hr. Combustion emissions from refinery kettles R1 through R8 are uncontrolled. Combustion emissions from refinery kettles R9 through R12 vent to CD-40 ERP Baghouse.

Casting Machines

The installation pumps lead to the casting machines from the refinery kettles. The installation may cast the lead into 1-ton blocks, ½-ton blocks, 100-pound pigs, 60-pound pigs, or billets of various weights.

There are two pig-casting machines, a single block caster, and a single billet-casting machine. The lines that transfer lead to the casting machines have a 0.608 MMBtu/hr propane burner that keeps the lead molten as it is transferred. Both process and combustion emissions from the casting machines vent to CD-81 Baghouse.

Other Operations

Pallet Burning/Grinding

The installation receives lead bearing materials, raw materials, and warehouse supplies on wooden pallets. The installation disposes of clean wooden pallets (i.e. those that have not been contaminated with battery acid or are covered in lead bearing dust) by grinding them or incinerating them.

Incineration occurs in an ACD, which is capable of incinerating 30 tons per day. The ACD forms a high velocity airflow. The installation directs the airflow over/into the fire pit creating a circular current of air. The continued airflow keeps the fire temperature high to achieve better combustion. The curtain of air created in the process traps unburned fine particles under the curtain in the high temperature zone. The increased combustion time and turbulence result in a reburn and more complete combustion of the wooden pallets. The installation provides airflow to the ACD using a 66 hp diesel engine.

Grinding is performed by the pallet grinder (Maxigrind 460G), which is rated at 22.5 tph. The installation powers the pallet grinder with a diesel engine (Caterpillar 3406). A conveyor transfers the ground wood from the pallet grinder to a 0.36-acre storage pile. The installation uses the ground wood for ground cover on tailing piles.

Steel Processing

The installation receives and generates several pieces of steel contaminated with lead bearing material. In the steel processing building cutting torches and mechanical shears are used to cut the contaminated steel into small pieces in order to feed the steel to the blast furnace as a flux and to recover the lead. Additionally, steel may be cleaned in this area to allow for offsite recycling of the metal.

Landfill

Slag, gypsum, and other waste materials generated onsite are landfilled onsite. The landfill consists of approximately 13 acres; of that amount, approximately eight acres have been closed and re-vegetated.

Cooling Towers

The installation contains four cooling towers. Two cooling towers with a circulation rate of approximately 800 gpm each are associated with the blast furnace. One cooling tower with a circulation

rate of approximately 800 gpm is associated with the reverberatory furnace. One cooling tower with a circulation rate of 600 gpm is associated with the refinery area.

Gasoline Storage

The installation contains a 1,950-gallon gasoline storage tank, which is used to fuel mobile equipment.

Emergency Fire Pump

The installation maintains a 115 HP diesel fired engine to pump firewater in case of an emergency during a power outage. The installation fuels the engine with diesel from a 1,950-gallon diesel storage tank. The installation also utilizes the diesel storage tank to fuel mobile equipment.

Change house Boiler

The installation operates a boiler to provide hot water for their employee showers and to heat the change house building. The Change house boiler is rated at 2.93 MMBtu/hr propane.

Haul Roads

The installation contains multiple paved haul roads and one unpaved haul road. Due to the amount of lead processed onsite, lead is present in the silt on the haul roads. These haul roads are fugitive emission sources. As the installation is named, the installation must count fugitive emissions major source applicability. The installation controls emissions from the haul roads by sweeping and applying water.

Updated Potential to Emit for the Installation

Pollutant	Potential to Emit (tons/yr)[65]
PM_{10}	N/D
$PM_{2.5}$	N/D
SO_x	Major
NO_x	Major
VOC	N/D
CO	Major
Pb	N/D[66]
HAP	Major

[65] A PTE could not be calculated for the entire installation; however, it is known based on past actual emissions that the installation is a major source for the specified pollutants. For pollutants for which it is unknown if the installation is major or minor/area, N/D (not determined) is listed in this table.

[66] The installation is major for the hazardous air pollutant – lead compounds as the installation's lead compound PTE is greater than 10 tons per year; however, it has not been determined if the installation is a major source of the criteria pollutant – lead (i.e. if the installation's lead PTE is greater than 100 tons per year).

Reported Air Pollutant Emissions, tons per year

Pollutants	2017	2016	2015	2014	2013
PM_{10}	57.35	52.46	26.38	25.97	41.72
$PM_{2.5}$	56.39	51.46	25.29	22.31	37.26
SO_x	2,629.58	2,423.88	2,638.47	1,649.34	2,962.06
NO_x	38.61	35.33	42.90	129.53	210.39
VOC	10.11	8.79	10.13	9.18	9.98
CO	14,970.16	17,079.08	12,569.44	10,175.25	17,982.13
Pb	1.41	1.41	1.18	1.29	13.70
HAP	11.37	10.21	10.04	10.92	26.06
1,3-Butadiene (106-99-0)	0.33	0.30	0.30	0.31	0.34
Antimony Compounds (20-00-8)	None reported	None reported	<0.01	<0.01	0.05
Arsenic Compounds (20-01-9)	0.31	0.03	0.08	0.22	1.74
Benzene (71-43-2)	8.17	7.43	7.43	7.81	8.56
Cadmium Compounds (20-04-2)	0.03	0.03	0.04	0.17	0.32
Chromium Compounds (20-06-4)	<0.01	<0.01	<0.01	<0.01	0.01
Hydrogen Chloride (7647-01-0)	0.22	0.20	0.20	0.21	0.23
Manganese Compounds (20-12-2)	0.02	0.02	0.02	0.04	0.14
Mercury Compounds (20-13-3)	0.01	0.01	0.01	0.01	0.01
Naphthalene (91-20-3)	0.85	0.77	0.77	0.81	0.89
Nickel Compounds (20-14-4)	0.01	0.01	0.01	0.03	0.06

Permit Reference Documents

These documents were relied upon in the preparation of the operating permit. Because they are not incorporated by reference, they are not an official part of the operating permit.

1. Part 70 Operating Permit Application, received June 1, 2017[67]; revised June 26, 2017;
2. 2016, 2015, 2014, 2013, and 2012 Emissions Inventory Questionnaires;
3. 2013 Consent Judgement, Case No. 13IR-CC00016;
4. Permits 0179-018, 0792-016, 1093-010, 1093-003, 0989-003, 0989-003A, 0989-003B, 1095-009, 1296-012, 0297-015, 0997-006, 102000-007, 012005-008, 012005-008A, 012005-008B, 012005-008C, 012005-008D, 092006-007, 012010-006, 032011-011, 062011-004, 062011-004A, 102011-005, 072015-013, 072015-013A, 092014-006, 092014-006A, 072015-017, and 052017-004;
5. No Construction Permit Required Determinations 2004-12-103, 2006-12-080, 2008-01-021, 2008-03-069, 2010-05-038, 2012-10-014, 2012-11-050, and 2016-11-029; and
6. U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*; Volume I, Stationary Point and Area Sources, Fifth Edition.

Construction Permit History

Construction Permit 0179-018, Issued January 1, 1979:

- This minor NSR permit is for the installation of an electric furnace.
- This permit contains no special conditions.

[67] The installation submitted their original Part 70 operating permit application May 13, 1997. The application was subsequently updated May 15, 2002. These applications were too out-of-date to be useful in drafting the operating permit due to the issuance of a PSD permit, issuance of multiple subsequent amendments of the PSD permit, issuance of other minor NSR permits, issuance of a consent decree, and multiple regulatory updates.

Construction Permit 0792-016, Issued June 30, 1992:
- This minor NSR permit is for the installation of a drum shredder/chipper system.
- The drum shredder permitted under Construction Permit 052017-004 replaced this drum shredder/chipper system.
- The conditions of this permit were superseded by PSD Permit 012005-008A.

Construction Permit 1093-010, Issued October 5, 1993:
- This minor NSR permit is for the installation of an LPG burner to flame skim lead bar surfaces.
- This permit contains no special conditions.

Construction Permit 1093-003, Issued August 30, 1993:
- This minor NSR permit is for the installation of a metal reclamation furnace with fugitive dust capture hoods.
- This permit contains no special conditions.

Construction Permit 0989-003, Issued September 13, 1989:
Construction Permit 0989-003A, Issued November 10, 1993:
Construction Permit 0989-003B, Issued August 7, 1996:
- This PSD permit is for the installation of a secondary lead processes.
- Amendment A revises the production limits on the blast and reverberatory furnaces.
- Amendment B revises the production limit on the blast furnace.
- The conditions of these permits were superseded by PSD Permit 012005-008A.

Construction Permit 1095-009, Issued October 6, 1995:
- This minor NSR permit is for the installation of a baghouse dust agglomeration furnace with associated screw conveyors and surge bin.
- The conditions of this permit were superseded by PSD Permit 012005-008A.
- The dust agglomeration furnace is no longer in operation. Buick Resources Recycling Facility, LLC now recycles the dust collected by their baghouses back into the reverberatory and blast furnaces.

Construction Permit 1296-012, Issued July 10, 1997:
- This minor NSR permit is for the installation of a bulk storage silo and pneumatic conveying system (lead oxide transfer system) that exhausts to an existing baghouse.
- The conditions of this permit were superseded by PSD Permit 012005-008A.

Construction Permit 0297-015, Issued July 10, 1997:
- This minor NSR permit is for the installation of a slag treatment system consisting of a hopper, blender, material silo, and two conveyors.
- The conditions of this permit were superseded by PSD Permit 012005-008A.
- The slag treatment system has been modified since this construction permit. EP-56 Load Feed Hopper, EP-58 Material Blender, EP-59 Chemical Reaction, and EP-62 Load Railcar are no longer in operation.

Construction Permit 0997-006, Issued September 4, 1997:

- This minor NSR permit is for the installation of a sweat (metal reclamation) furnace, mold pouring, and material screening.
- The conditions of this permit were superseded by PSD Permit 012005-008A.

Construction Permit 102000-007, Issued October 5, 2000:

- This temporary construction permit was for an increase in blast furnace lead production by 8,000 tons and a decrease in rotary melter lead production by 10,000 tons.
- This temporary permit expired December 31, 2000.

Construction Permit 012005-008, Issued January 26, 2005:
Construction Permit 012005-008A, Issued November 26, 2007:
Construction Permit 012005-008B, Issued November 8, 2011:
Construction Permit 012005-008C, Issued December 16, 2013:
Construction Permit 012005-008D, Issued September 25, 2017:

- This PSD permit eliminates the annual lead production limits from the individual furnaces and increases the installation's total lead production limit to 175,000 tons per year.
- Amendment A modifies limits established using theoretical estimations based on stack tested actual emissions.
    - Special Condition 1 states that the conditions of this permit supersede all special conditions found in all previously issued construction permits.
    - Construction Permit 062011-004 superseded Special Conditions 2, 3, 4, and 5.
    - Special Conditions 6 and 7 contain recordkeeping and reporting requirements, which are no longer applicable given that Special Conditions 2, 3, 4, and 5 were superseded.
    - Amendment B superseded Special Condition 8.
    - Special Conditions 9, 10, 11, 12, and 22 were applied in Permit Condition 009.
    - Special Condition 13 was applied in Permit Condition 010.
    - The rotary melter, sodium sulfate operations, sodium carbonate operations, BDC boiler, and material blender are no longer in operation and have been permanently dismantled; therefore, the requirements applicable to these emission sources in Special Conditions 14 and 15 have not been applied in this operating permit.
    - Special Condition 14:
        - The drum shredder has been replaced (see history for Construction Permit 052017-004); therefore, the BACT requirements applicable to previous drum shredder in Special Condition 14 have not been applied in this operating permit.
        - The NO_x BACT requirements have been applied in Permit Condition 005.
        - The SO_2 BACT requirements have been applied in Permit Conditions 009 and 014. SO_2 BACT for the reverberatory furnace was determined to be feed desulfurization; however, in 2011 the installation switched to dry lime scrubbing. As the SO_2 BACT analysis performed under PSD Permit 012005-008 indicates that feed desulfurization and dry lime scrubbing both achieve 60% to 85% control and as the installation continues to comply with the same SO_2 BACT limit of 1,688.43 lb/hr and accepted an SO_2 12-month rolling total limit of 3,118.42 tons in Construction Permit 062011-004 which is lower than their previously effective SO_2 BACT limit of 3,400 tons in PSD Permit 012005-008, no PSD permit amendment was required to replace the BACT required feed desulfurization with dry lime scrubbing.
        - The CO BACT requirements have been applied in Permit Condition 010.

        - The lead and PM_{10} BACT requirements have been applied in Permit Condition 015. The PM10 BACT requirements for the Blast Furnace (aka, Main Baghouse) and Reveberatory Furnace in Table 2 of Special Condition 14 were superseded by Amendment D.
    - Special Condition 15:
        - The baghouse requirement for EP-8 in Table 3 of Special Condition 15 was superseded by Amendment D.
        - The remaining application portions of Special Condition 15 have been applied in Permit Condition 015.
    - Special Conditions 16, 17, 18, 19, 20, 21, 24 and 25 have been applied in Permit Conditions 015.
    - Special Conditions 19 and 20 require daily monitoring of the pressure drop across and flow rate through the wet scrubber. This is less stringent than the wet scrubber monitoring requirements in MACT X included in Permit Condition 021.
    - Special Condition 23 has been applied in Permit Condition 005.
    - Special Condition 26 requires the installation to comply with NSPS L. NSPS L requirements were included in Permit Condition 017.
    - Special Condition 27 requires the installation to comply with MACT X. MACT X requirements were included in Permit Conditions PW005, 020, 021, 022, and 023.
    - Special Conditions 28 and 29 were superseded by Amendment D.
- Amendment B modifies the CO limit applicable to EP-08.
    - Special Condition 1 states that the conditions of Amendment B supersede Special Condition 8 of Amendment A and Special Condition 2.E of Construction Permit 062011-004.
    - Special Conditions 2 – 7 and 10 were applied in Permit Condition 010.
    - Amendment C superseded Special Condition 8.
    - This amendment contained no Special Condition 9.
- Amendment C corrects errors in the PM_{10} limits applicable to EP-20 and EP-71.
    - Special Condition 1 states that the conditions of Amendment C supersede Special Condition 8 of Amendment B.
    - The PM_{10} BACT limits in Special Condition 2 were superseded by Amendment D.
    - The NO_x BACT limit in Special Condition 2 was superseded by Construction Permit 062011-004A.
    - The CO BACT limit was applied in Permit Condition 010.
    - The lead BACT limits of 0.00087 gr/dscf are less stringent that MACT X (0.00043 gr/dscf for existing sources and 0.000087 gr/dscf for new sources); therefore, only MACT X has been applied in this permit. MACT X requirements for EP-8, EP-16, EP-71, and EP-72 appear in Permit Conditions 020 and 021.
    - The SO_2 BACT limits were applied in Permit Condition 009.
    - Since the issuance of this PSD permit amendment emissions from the sweat furnace have been re-routed to EP-8 (instead of EP-73).
- Amendment D includes condensables, which were not previously analyzed when setting PM_{10} emission limits.
    - Special Condition 1 states that the conditions of Amendment D supersede Special Conditions 28 and 29 of Amendment A; Special Conditions 2.F, 4, and 5 of Construction Permit 062011-004; the PM_{10} BACT limits in Special Condition 2 of Amendment C; the PM_{10} BACT requirements for the Blast Furnace (aka, Main Baghouse) and Reverberatory Furnace

in Table 2 of Special Condition 14 of Amendment A; and the baghouse requirement for EP-8 in Table 3 of Special Condition 15 of Amendment A.
- Special Conditions 2, 6.A have been applied in Permit Condition 015.
- Special Conditions 3.B, 5.C.4, 5.C.5, 5.D, and 13 have been applied in Permit Condition 009.
- Special Condition 3.A, 3.C, 3.D, 3.E, 3.F, 3.G, 4, 5.B, 5.C.1, 5.C.2, 5.C.3, 5.C.6, 6.B, 6.C, 6.D, 6.E, 6.F, 7, and 12 have been applied in Permit Condition 012.
- Special Condition 8 has been applied in Permit Condition 013.
- Special Conditions 9, 10, and 11 have been applied in Permit Condition PW003.
- Special Conditions 5.A have been applied in Permit Condition 015.

No Construction Permit Required Determination, Issued March 9, 2005:
- This no construction permit required determination is for the installation of a gasification energy system.
- The gasification energy system was never installed.

Construction Permit 092006-007, Issued September 26, 2006:
- This minor NSR permit is for the installation of a multiple hearth rotary furnace to process battery separators as a heat source for the reverberatory furnace and for metal recovery.
- This multiple hearth rotary furnace is no longer in operation and has been permanently dismantled.

No Construction Permit Required Determination, Issued January 19, 2007:
- This no construction permit required determination is for the construction of a 14 acre (519,000 cubic yards) slag storage landfill with a projected life of 20 years based on a slag production rate of 50,000 tons per year.

No Construction Permit Required Determination, Issued January 24, 2008:
- This no construction permit required determination is for the installation of a baghouse adjacent to the refinery.

No Construction Permit Required Determination, Issued April 4, 2008:
- This no construction permit required determination is for the rerouting of exhaust gas from the multi-hearth furnace to a point just downstream of the sonic cooler, bypassing the current pathway through the reverberatory furnace and sonic cooler, removal of two existing 3 MMBtu/hr burners on the cooling chamber, and installation of a 3 MMBtu/hr propane burner on the cooling chamber. The multi-hearth furnace is no longer in operation. The 3 MMBtu/hr propane burner on the cooling chamber is no longer in operation.

Construction Permit 012010-006, Issued January 19, 2010:
- This minor NSR permit is for the installation of a 34.87 MMBtu/hr propane boiler for the sodium sulfate crystallization process.
- This boiler is no longer in operation and has been permanently dismantled.

No Construction Permit Required Determination, Issued May 26, 2010:
- This no construction permit required determination is for the installation of a 34-tph lead paste reverberatory furnace feed system.

Construction Permit 032011-011, Issued March 24, 2011:
- This minor NSR permit is for the installation of a new portable screening plant consisting of a 40-tph screen, a conveyor, a 0.2-acre storage pile, and a 95 HP generator.
- This equipment is no longer in operation and has been permanently dismantled and removed from the installation. The equipment was formerly reported in the installation's EIQs under emission points 91, 92, and 93.

Construction Permit 062011-004, Issued June 8, 2011:
- This minor NSR permit is for modifications to the reverberatory furnace's control scheme.
- Special Condition 2.E was superseded by PSD Permit 012005-008B.
- PSD Permit 012005-008D superseded Special Conditions 2.F, 4, and 5.
- Special Condition 1 states that the conditions of this permit supersede Special Conditions 2, 3, 4, and 5 of PSD Permit 012005-008A.
- Special Conditions 2.A, 2.B, 2.C, 3.A, 3.B, 3.D, 3.E, 3.F, 3.G, and 3.H have been applied in Permit Condition 008.
- Special Conditions 2.D and 2.H have been applied in Permit Condition 009.
- Special Conditions 2.G, 2.H, 3.A, 3.C, 3.G, and 3.H have been applied in Permit Condition 011.
- Special Condition 3.F required testing to verify that the PM emission rate from CD-37 Dry Lime Scrubber is 0.01 gr/dscf and that CD-37 Dry Lime Scrubber achieves an SO_2 reduction efficiency of 95%. This one-time testing was conducted in September 2012; CD-37 Dry Lime Scrubber emitted 0.00239 gr/dscf and reduced SO_2 emissions by 98.05%.
- Special Conditions 4 and 5 were superseded by PSD Permit 012005-008D
- Special Condition 6 requires the installation to comply with MACT X. MACT X requirements have been applied in Permit Conditions PW005, 020, 021, 022, and 023.
- Special Condition 7 requires the installation to comply with NSPS L. NSPS L requirements have been applied in Permit Condition 017.

Construction Permit 102011-005, Issued October 6, 2011:
- This minor NSR permit is for the installation of EU-95 Pallet Grinder, EU-96 Pallet Grinder Material Handling, EU-97 Pallet Grinder Diesel Engine, EU-98 Pallet Haul Road, and EU-99 Pallet Storage Pile.
- Special Conditions 1 – 4 have been applied in Permit Condition 004.

No Construction Permit Required Determination, Issued October 26, 2012:
- This no construction permit required determination is for the installation of a baghouse and stack (EP-100). The baghouse was to control emissions from various process gas and hygiene air gas streams. The baghouse was to create negative pressure for the blast furnace, reverberatory furnace, and refinery buildings.
- Rather than install a new baghouse and construct a new stack, the installation routed these emissions to CD-9 Main Baghouse, which vents to EP-08 (see http://dnr.mo.gov/env/apcp/docs/buick-stack-modificationsip-5-23-13.pdf).

No Construction Permit Required Determination, Issued December 27, 2012:
- This no construction permit required determination is for the replacement of EU-95 Pallet Grinder. The replacement pallet grinder is also 22.5 tph and is powered by the existing EU-97 Pallet Grinder Diesel Engine. This determination states that the conditions applicable to the replaced pallet grinder in Construction Permit 102011-005 remain applicable to the replacement pallet grinder.

Construction Permit 062011-004A, Issued May 21, 2015:

- This amendment to NSR permit 062011-004 addresses NO_x emissions increases from the afterburner that were not adequately addressed in the original permit.
- Special Condition 1 states that this permit supersedes the NO_x BACT limit for EP-8 found in Table 1 of PSD Permit 012005-008C.
- Special Conditions 2 – 5 have been applied in Permit Condition 005.

Construction Permit 072015-013, Issued July 22, 2015:
Construction Permit 072015-013A, Issued June 13, 2017:

- This minor NSR permit is for the combustion of natural gas in all existing propane combustion sources.
- Amendment A extends the time the permit remains effective prior to the start-up of construction to July 22, 2019.
- Construction of natural gas burners has yet to occur and the installation is unsure if construction will occur at all; therefore, the conditions of this construction permit have not been included in this operating permit. If construction does occur, the installation is required to submit a significant modification to this operating permit no later than one year after start-up of the natural gas burners.

Construction Permit 092014-006, Issued September 23, 2014:
Construction Permit 092014-006A, Issued August 29, 2016:

- This minor NSR permit is for the installation of EU-105A and EU-105B ERP Kettles: two 225 ton refining kettles each with a 6 MMBtu/hr propane burner, a 100 ton refining kettle with a 6 MMBtu/hr propane burner, and 20 ton liquation kettle with a 3 MMBtu/hr propane burner and modification of an existing 70 ton kettle to increase the capacity to 100 tons with a 6 MMBtu/hr propane burner.
- Amendment A extends the time the permit remains effective prior to the start-up of construction to September 23, 2017.
- On June 9, 2017 the installation informed the Air Pollution Control Program that they would not be installing the 100 ton refining kettle with a 6 MMBtu/hr propane burner, and the 20 ton liquation kettle with a 3 MMBtu/hr propane burner and they would not be modifying an existing 70 ton kettle to increase the capacity to 100 tons with a 6 MMBtu/hr propane burner.
- Special Condition 1.A requires EP-105 to comply with the new process vent standards in §63.543(b). These standards have been applied to EP-105 in Permit Condition 021.
- Special Conditions 1.B, 4.A, 5.B, and 6 have been applied in Permit Condition 003.
- Special Condition 2 requires the ERP Kettles to comply with §63.544(a), §63.544(c), and §63.548(k). These standards have been applied to the ERP Kettles in Permit Condition 023.
- Special Condition 3 is equivalent to the material transport requirements in §63.545(c)(7). This requirement has been applied in Permit Condition PW005.
- Special Condition 4.B requires the installation to monitor the baghouse according to §63.548(a) through (f). These standards have been applied in Permit Condition 021.
- Special Condition 4.C requires the installation to install lead CEMS according to §63.548(l) and (m). These standards have been applied in Permit Condition 021.
- Special Condition 5.A requires the installation to retain the records in §63.550(c)(1) through (3), (c)(6) through (12), (e)(3) through (6), (e)(10), and (e)(11). These recordkeeping requirements have been applied in Permit Conditions PW005, 021, and 023.

- Special Condition 6 requires the installation to conduct performance testing according to §63.547. These performance-testing requirements have been applied in Permit Condition 021.

Construction Permit 072015-017, Issued July 28, 2015:
- This minor NSR permit is a remedial action permit for the operation of EU-110 Air Curtain Destructor. EU-106 ACD Engine supplies airflow. This equipment was originally installed in 2008 without a permit.
- The special conditions of this permit have been applied in Permit Condition 002.
    - Special Condition 6 required the installation to comply with the opacity limitations at §60.2250. These opacity limits are the same as the opacity limits in 10 CSR 10-6.161 and NSPS DDDD (see Permit Condition 003A).
- This permit states that NSPS IIII does not apply to EU-106 ACD Engine "because it was manufactured November 24, 2007 (prior to April 1, 2016)." NSPS IIII does apply to this engine as §60.4200(a)(2) states that this regulation applies to "owners and operators of stationary CI ICE that commence construction after July 11, 2005, where the stationary CI ICE are manufactured after April 1, 2006, and are not fire pump engines."

No Construction Permit Required Determination, Issued October 4, 2017:
- This no construction permit required determination is for the modifications to the BSN Process.

Construction Permit 052017-004, Issued May 15, 2017:
- This minor NSR permit was issued for the replacement and relocation of the Drum Shredder (EU-31B and EU-31C).
- The special conditions of this permit have been applied in Permit Condition 001.
- Special Condition 1.B was not applied, as it is redundant with Special Condition 4.
- Special Condition 2.D was not applied, as it is less stringent than the requirements in MACT X (see Permit Condition 021).
- Special Condition 4.A was not applied in the permit, as it required initial testing which has already been conducted.

NSPS Applicability

40 CFR Part 60, Subpart D – *Standards of Performance for Fossil-Fuel-Fired Steam Generators*, 40 CFR Part 60, Subpart Da – *Standards of Performance for Electric Utility Steam Generating Units*, 40 CFR Part 60, Subpart Db – *Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units,* and 40 CFR Part 60, Subpart Dc – *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units* are not applicable to the installation. EU-33 Change house Boiler has an MHDR of 2.93 MMBtu/hr, which is less than the applicable thresholds in these regulations.

40 CFR Part 60, Subpart E – *Standards of Performance for Incinerators,* 40 CFR Part 60, Subpart Ea – *Standards of Performance for Municipal Waste Combustors for Which Construction is Commenced After December 20, 1989 and on or before September 20, 1994,* and 40 CFR Part 60, Subpart Eb – *Standards of Performance for Large Municipal Waste Combustors for Which Construction is Commenced After September 20, 1994 or for Which Modification or Reconstruction is Commenced After June 19, 1996* is not applicable to the installation. The ACD is only allowed to combust untreated wood waste. Untreated wood waste meets the definition of *clean wood* at §60.51b. Clean wood is not included

in the definition of *municipal solid waste* at §60.51b. As the ACD does not combust municipal solid waste, it does not meet the definition of *municipal waste combustor unit* at §60.51b.

40 CFR Part 60, Subpart K – *Standards of Performance for Storage Vessels for Petroleum Liquids for which construction, reconstruction, or modification commenced after June 11, 1973, and prior to May 19, 1978,* 40 CFR Part 60, Subpart Ka – *Standards of Performance for Storage Vessels for Petroleum Liquids for which construction, reconstruction, or modification commenced after May 18, 1978, and prior to July 23, 1984,* and 40 CFR Part 60, Subpart Kb – *Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for which construction, reconstruction, or modification commenced after July 23, 1984* are not applicable to the installation. The only storage tanks located at the installation with capacities greater than 75 m^3 (19,812 gallons) are the electrolyte tanks and the propane tanks. The propane tanks are pressure vessels designed to operate in excess of 204.96 kPa and without emissions to the atmosphere; therefore, per §60.110b(d)(2), this regulation does not apply to them. The electrolyte tanks contain weak sulfuric acid. Sulfuric acid does not meet the definition of *volatile organic liquid* at §60.111b as it does not emit VOC. If the electrolyte tanks store any other material in the future, NSPS Kb applicability must be re-evaluated.

40 CFR Part 60, Subpart L – *Standards of Performance for Secondary Lead Smelters* is applicable to the installation and has been applied in Permit Condition 017.

40 CFR Part 60, Subpart N – *Standards of Performance for Primary Emissions from Basic Oxygen Process Furnaces for Which Construction is Commenced After June 11, 1973* and 40 CFR Part 60, Subpart Na – *Standards of Performance for Secondary Emissions from Basic Oxygen Process Steelmaking Facilities for Which Construction is Commenced After January 20, 1983* are not applicable to the installation and have not been applied in this permit. Basic oxygen process furnace is defined at §60.141 and §60.141a as "any furnace with a refractory lining in which molten steel is produced by charging scrap metal, molten iron, and flux materials or alloy additions into a vessel and introducing a high volume of oxygen-rich gas. Open hearth, blast, and reverberatory furnaces are not included in this definition." The sweat furnaces have a refractory lining; however, they do not produce molten steel. No molten iron is added to the sweat furnaces.

40 CFR Part 60, Subpart R – *Standards of Performance for Primary Lead Smelters* is not applicable. This regulation applies to affected facilities at primary lead smelters. §60.181 defines a primary lead smelter as "any installation or any intermediate process engaged in the production of lead from lead sulfide ore concentrates through the use of pyro metallurgical techniques." The installation no longer processes any lead sulfide ore concentrates; therefore, the installation does not meet the definition of a primary lead smelter.

40 CFR Part 60, Subpart HH – *Standards of Performance for Lime Manufacturing Plants* is not applicable to the installation. This regulation applies to each rotary limekiln used in the manufacture of lime. The installation does not operate a rotary limekiln. The installation purchases all of their lime from other installations.

40 CFR Part 60, Subpart KK – *Standards of Performance for Lead-Acid Battery Manufacturing Plants* is not applicable. This regulation applies to affected facilities at lead-acid battery manufacturing plants. The installation does not manufacture lead-acid batteries. The installation recycles used lead-acid batteries.

40 CFR Part 60, Subparts WWW and XXX – *Standards of Performance for Municipal Solid Waste Landfills* are not applicable to the installation. The installation operates a hazardous waste landfill. The installation does not landfill household waste. Hazardous waste does not meet the definitions of solid waste or industrial solid waste in §60.751 and §60.761.

40 CFR Part 60, Subpart CCCC – *Standards of Performance for Commercial and Industrial Solid Waste Incineration Units* is not applicable to EU-110 Air Curtain Destructor and has not been applied in this permit. The ACD is subject to 10 CSR 10-6.161 which implements NSPS DDDD; therefore, per §60.2015(b) the ACD is not subject to this regulation.

40 CFR Part 60, Subpart DDDD – *Emissions Guidelines and Compliance Times for Commercial and Industrial Solid Waste Incineration Units* as promulgated February 7, 2013 is applicable to the installation per 10 CSR 10-6.161 (see Permit Condition 019). 10 CSR 10-6.161 does not incorporate any subsequent amendments or additions.

40 CFR Part 60, Subpart IIII – *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines* is applicable to the installation and has been applied in Permit Conditions 006, 007, and 018.

40 CFR Part 60, Subpart JJJJ – *Standards of Performance for Stationary Spark Ignition Internal Combustion Engines* is not applicable to the installation. All of the installation's engines are compression ignition and subject to NSPS IIII.

MACT Applicability

40 CFR Part 63, Subpart Q – *National Emission Standards for Hazardous Air Pollutants for Industrial Process Cooling Towers* is not applicable to the installation. This regulation, per §63.400(a) applies to all new and existing industrial process cooling towers that are operated with chromium-based water treatment chemicals and are either major sources or are integral parts of facilities that are major sources as defined in §63.401. This regulation does not apply, as the installation does not use chromium-based water treatment chemicals.

40 CFR Part 63, Subpart X – *National Emission Standards For Hazardous Air Pollutants From Secondary Lead Smelting* applies to the installation and has been applied in Permit Conditions PW005 (fugitive dust sources), 020 (existing process vents), 021 (new process vents), 022 (hydrocarbon and D/F standards), and 023 (total enclosures). The D/F and THC standards apply to furnace sources and not to the process fugitive emission sources. As smelting furnace charging points, lead taps, and slag taps are included in the definition of process fugitive emission sources at §63.542, the D/F and THC standards were not applied to these emission sources.

- EU-16A (EP-16) is subject to the new process vent standards in MACT X; however, the emission source is exempt from the total enclosure requirements in §63.544(b) as all lead bearing material is stored in closed containers and handled by enclosed mechanical conveyors. If the enclosures are removed from this equipment, the equipment will become subject to the total enclosure requirements.
- The installation has stated that their slag is not a *lead bearing material* as defined at §63.542, i.e. their slag contains less than 5 mg/L of lead as measured by EPA Method 1311. Therefore, this

regulation was not applied to EU-60 Convey Slag Material, EU-61 Loadout of Slag, Blast Furnace Wet Slag Conveyance, Slag Gator Box, Slag Sand Screw, South Collection Sump, North Collection Sump, South Sump Collection, Slag Screw Conveyors, or Slag Roll-off Storage.

- The installation has stated that their Onsite Landfill is required to meet toxicity characteristic leaching procedure (TCLP) limits; therefore, the landfill is not permitted to contain *lead bearing material* as defined at §63.542, i.e. their landfill materials contains less than 5 mg/L of lead as measured by EPA Method 1311.
- Permit Condition 002 restricts EU-110 Air Curtain Destructor from burning *lead bearing material* as defined at §63.542, i.e. the material burned contains less than 5 mg/L of lead as measured by EPA Method 1311. EU-111 ACD Ash Loading and EU-113 ACD Ash Unloading would; therefore, also not meet the definition of *lead bearing material* at §63.542.
- The installation has stated that their pallets are not *lead bearing material* as defined at §63.542, i.e. the pallets contains less than 5 mg/L of lead as measured by EPA Method 1311. Therefore, this regulation was not applied to EU-95 Pallet Grinder, EU-96 Pallet Grinder Material Handling, or EU-99 Ground Pallet Storage Pile.
- The installation has stated that the *lead bearing material* stored in the East Awning and Parking Lot is only stored in closed containers; therefore, it is not subject to MACT X.
- The installation has stated that Lead Product Storage is not subject to MACT X.
- The installation has stated that the Cooling Towers are not subject to MACT X as the cooling tower water does not meet the definition of *lead bearing material* at §63.542.
- The installation has stated that the Steel Case Storage area is not subject to MACT X as the steel cases do not meet the definition of *lead bearing material* at §63.542.
- The installation has stated that the Electrolyte Tanks, and Acid Neutralization Tanks 311D and 311E are not subject to MACT X as the acids stored in the tanks does not meet the definition of *lead bearing material* at §63.542.
- The installation has stated that the Pinta Tank, Electrolyte Tanks, and Acid Neutralization Tanks 311D and 311E are considered part of their wastewater treatment process. §63.544(b) exempts storm water and wastewater treatment areas from the total enclosure requirements.
- The installation has stated that the Poly Blower and Poly Vibrator are not subject to MACT X as the poly battery casing chips do not meet the definition of *lead bearing material* at §63.542.
- The installation has stated that Copper Storage is not subject to MACT X as the copper does not meet the definition of *lead bearing material* at §63.542.
- The installation has stated that EU-13 Open Storage Fugitives of Iron, Coke, Limestone, and Silica is not subject to MACT X as none of the materials stored meet the definition of *lead bearing material* at §63.542.
- The installation has stated that EU-32 Laboratory Activities (Sample Crusher) is not subject to MACT X as none of the laboratory materials meet the definition of *lead bearing material* at §63.542.
- EU-86 Lime Transfer from Truck to Storage Bin and EU-87 Hydrator are not subject to MACT X as lime does not meet the definition of *lead bearing material* at §63.542.

40 CFR Part 63, Subpart TTT – *National Emission Standards for Hazardous Air Pollutants for Primary Lead Smelting* is not applicable to the installation. The installation does not produce lead metal from ore concentrates; therefore, the installation does not meet the applicability requirements of §63.1541(a).

40 CFR Part 63, Subpart AAAA – *National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills* is not applicable to the installation. The installation operates a hazardous waste landfill. The installation does not meet the definition of *municipal solid waste landfill* at §63.1990.

40 CFR Part 63, Subpart ZZZZ – *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines* is applicable to EU-97, EU-106, and EU-114, but has not been applied in this permit. As new CI stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, EU-97, EU-106, and EU-114 must meet the requirements of MACT ZZZZ by complying with NSPS IIII per §63.6590(c). No further requirements apply to the engines under MACT ZZZZ. NSPS IIII has been applied in Permit Conditions 006, 007, and 018.

40 CFR Part 63, Subpart DDDDD – *National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters* is applicable to the installation and has been applied in Permit Condition 024. This regulation is not applicable to refining kettles covered by MACT X per §63.7491; therefore, this regulation does not apply to EU-11, EU-22-23, EU-24, EU-25, EU-26A, EU-27, EU-28, EU-105A, or EU-105B. The Blast Furnace (EU-8), Reverberatory Furnace (EU-9A), and casting machines (EU-12) do not meet the definition of *process heater* at §63.7575 as combustion gases come into direct contact with process materials.

40 CFR Part 63, Subpart CCCCCC – *National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities* is not applicable to EU-15A Gasoline Storage Tank and has not been applied in this permit. This regulation applies to each gasoline dispensing facility located at an area source per §63.11111. The installation is a major source (not an area source) of HAP.

40 CFR Part 63, Subpart JJJJJJ – *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources* is not applicable to EU-33 Change house Boiler and has not been applied in this permit. The installation is a major source (not an area source) of HAP.

40 CFR Part 63, Subpart PPPPPP – *National Emission Standards for Hazardous Air Pollutants for Lead Acid Battery Manufacturing Area Sources* is not applicable to the installation and has not been applied in this permit. The installation is a major source (not an area source) of HAP, additionally the installation does not manufacture any lead acid batteries – the installation only recycles them.

National Emission Standards for Hazardous Air Pollutants (NESHAP) Applicability

40 CFR Part 61, Subpart C – *National Emission Standard for Beryllium* is not applicable to the installation. The installation does not melt or cast beryllium metal or alloy. Where beryllium alloy is defined at §61.31 as any metal to which beryllium has been added in order to increase its beryllium content and which contains more than 0.1 percent beryllium by weight.

40 CFR Part 61, Subpart M – *National Emission Standards for Asbestos* applies to the installation and has been applied in Permit Condition PW002.

Compliance Assurance Monitoring (CAM) Applicability
40 CFR Part 64, *Compliance Assurance Monitoring (CAM)*
The CAM rule applies to each pollutant specific emission unit that:

- Is subject to an emission limitation or standard, and
- Uses a control device to achieve compliance, and
- Has pre-control emissions that exceed or are equivalent to the major source threshold.

The reverberatory furnace and blast furnace are subject to a PM standard of 0.022 gr/dscf in NSPS L which satisfies the criteria in §64.2(a)(1). The furnaces use baghouses to demonstrate compliance with the PM standard which satisfies the criteria in §64.2(a)(2). Potential pre-control PM emissions from the individual furnaces exceed 100 tons per year which satisfies the criteria in §64.2(a)(3). As all of the applicability criteria in §64.2(a) are met and none of the exemptions in §64.2(b) apply (note: NSPS L was promulgated prior to November 15, 1990), 40 CFR Part 64 applies.

Potential post-control PM emissions from the individual furnaces could not be determined; however, Method 5 PM testing of EP-8 (which includes emissions from the blast furnace, reverberatory furnace, and multiple other PM emission sources) in 2010 indicated an emission rate of 3.32 lb PM/hr. The 2010 stack testing was not conducted at MHDR, actual feed rates during the testing were 21.7 tph for the blast furnace (~66% of MHDR) and 25 tph for the reverberatory furnace (~74% of MHDR); therefore, a potential hourly PM emission rate from the two furnaces combined was estimated by scaling up the stack tested rate by a factor of 1.52 (~1/.66) and determined to be 5.05 lb PM/hr (22.10 tpy PM). As potential post-control PM emissions are less than the major source threshold for PM of 100 tons per year, CAM requires a minimum monitoring frequency of once per 24-hour period. The MACT X BLDS requirements (see Permit Condition 020) are sufficient to meet the CAM requirements. As the PM testing is over eight years old, a new PM test is required by Permit Condition 017 to ensure that the furnaces remain post-control minor sources and do not trigger the more stringent four equally spaced values per hour CAM monitoring frequency.

Greenhouse Gas Emissions

Note that this source is subject to the Greenhouse Gas Reporting Rule. However, the preamble of the GHG Reporting Rule clarifies that 40 CFR Part 98 requirements do not have to be incorporated in 40 CFR Part 70 permits operating permits at this time. In addition, Missouri regulations do not require the installation to report CO_2 emissions in their Missouri Emissions Inventory Questionnaire; therefore, the installation's CO_2 emissions were not included within this permit. The applicant is required to report the data directly to EPA. The public may obtain CO_2 emissions data for this installation by visiting http://epa.gov/ghgreporting/ghgdata/reportingdatasets.html.

Other Regulatory Determinations

10 CSR 10-6.120 *Restriction of Emissions of Lead From Specific Lead Smelter-Refinery Installations* is applicable to the installation and has been applied in Permit Condition PW001. 10 CSR 10-6.120(3)(B)2 would apply a 0.00087 grains of lead per dry standard cubic feet of air limit to the main stack (EP-08). The limit at 10 CSR 10-6.120(3)(B)2 is less stringent than the lead limit to which EP-08 is subject in §63.543(a) (see Permit Condition 020); therefore, only the most stringent limit has been applied within this permit.

2013 Consent Judgement

- The lead limit on EP-31C of 0.025 lb/hr is less stringent than the MACT X lead limit of 0.000087 gr/dscf applicable to the new drum shredder (see Construction Permit 052017-004) which has an airflow rate of 15,000 dscfm resulting in lead emissions of 0.011 lb/hr.

10 CSR 10-6.220 *Restriction of Emission of Visible Air Contaminants* is applicable to the installation and has been applied in Permit Condition 025.

- 10 CSR 10-6.220(1)(A) exempts internal combustion engines; therefore, EU-97, EU-106, and EU-114 are not subject to this regulation.
- 10 CSR 10-6.220(1)(H) exempts sources regulated by an NSPS; therefore, EP-8, EP-24, EP-25, EP-26, EP-27, EP-71, EP-72, EP-81, and EP-105 are not subject to this regulation (see Permit Condition 017).
- 10 CSR 10-6.220(1)(K) exempts fugitive emissions subject to 10 CSR 10-6.170 (see Section IV. Core Permit Requirements); therefore, the following fugitive emission sources are not subject to this regulation:
  - EU-13 Open Storage Fugitives of Iron, Coke, Limestone, and Silica
  - EU-74 Paved Haul Road – Coke Delivery Route
  - EU-75 Paved Haul Road – Battery Delivery Route
  - EU-76 Paved Haul Road – Paste Transfer Route
  - EU-77 Paved Haul Road – Feed Transfer Route No. 1: Refinery to Covered Materials Storage Building
  - EU-78 Paved Haul Road – Feed Transfer Route No. 2: Coke Storage to the Blast Furnace Feed Building
  - EU-79 Paved Haul Road – Feed Transfer Route No. 3: Outdoor Storage to the Blast Furnace Feed Building
  - EU-85 Paved Haul Road – Lime and Gypsum from Entrance to Scrubber
  - EU-98 Pallet Paved Haul Roads
  - EU-99 Ground Pallet Storage Pile
  - EU-111 ACD Ash Loading
  - EU-112A ACD Paved Haul Road
  - EU-112B ACD Unpaved Haul Road
  - EU-113 ACD Ash Unloading
  - Poly Blower
  - Poly Vibrator
  - Cooling Towers
  - Onsite Landfill
- 10 CSR 10-6.220(1)(L) exempts emission units burning only propane; therefore, EU-33 is not subject to this regulation.
- This regulation is applicable to EU-110 Air Curtain Incinerator, but has not been applied in this permit. The 20% opacity standard in this regulation is less stringent than the 10% opacity standard in 10 CSR 10-6.161 (Permit Condition 003A).

10 CSR 10-6.260 *Restriction of Emission of Sulfur Compounds*

- This regulation indicates that Doe Run Company, Buick Smelter – Boss, Missouri is subject to an SO_2 limit of 8,650 lb/hr. A thorough review of the files for 10 CSR 10-6.261, 10 CSR 10-6.260, and

10 CSR 10-3.100 indicates that this limit applies to a single stack (EP-8) and not the entire facility. This limit is less stringent than EP-8's SO_2 BACT limit of 1,688.43 lb/hr (see Permit Condition 009); therefore, the limit in 10 CSR 10-6.260 has not been applied in this permit.

- 10 CSR 10-6.260(1)(A)2 exempts combustion equipment that uses exclusively liquefied petroleum gas as defined by American Society for Testing and Materials (ASTM); therefore, this regulation does not apply to EU-12, EU-24, EU-25, EU-26A, EU-27, EU-28, EU-33, and EU-105B.
- This regulation is applicable to EU-97, EU-106, EU-110, and EU-114 and has been applied in Permit Conditions 026 and 027.

10 CSR 10-6.261 *Control of Sulfur Dioxide Emissions*

- This regulation indicates that Doe Run Company, Buick Smelter – Boss, Missouri is subject to an SO_2 limit of 8,650 lb/hr. A thorough review of the files for 10 CSR 10-6.261, 10 CSR 10-6.260, and 10 CSR 10-3.100 indicates that this limit applies to a single stack (EP-8) and not the entire facility. This limit is less stringent than EP-8's SO_2 BACT limit of 1,688.43 lb/hr (see Permit Condition 009); therefore, the limit in 10 CSR 10-6.261 has not been applied in this permit.
- This regulation states that it applies to any source that emits SO_2; however, EU-110 ACD is not covered by 10 CSR 10-6.261(3)(A) as the ACD is not called out in Tables 1 or 2, is not covered by 10 CSR 10-6.261(3)(B) as the ACD is not an indirect heating source, and is not covered by 10 CSR 10-6.261(3)(C) as the ACD does not combust liquid fuel; therefore, while this regulation is technically applicable there are no requirements (limits, monitoring, recordkeeping, or reporting) to be included in the permit.
- This regulation is not applicable to EU-97, EU-106, or EU-114 as individual units subject to a more restrictive fuel sulfur content limit under 10 CSR 10-6.070 are exempt per 10 CSR 10-6.261(1)(C). These engines are each subject to a fuel sulfur content limit of 15 ppm by NSPS IIII (see Permit Conditions 006, 007, and 018) which is more stringent that the fuel sulfur content limit 10 CSR 10-6.261(3)(C) would apply of 8,812 ppm.
- 10 CSR 10-6.261(1)(A) exempts individual units fueled exclusively with liquefied petroleum gas as defined by American Society for Testing and Materials (ASTM) International; therefore, this regulation does not apply to EU-12, EU-24, EU-25, EU-26A, EU-27, EU-28, EU-33, and EU-105B.

10 CSR 10-6.400 *Restriction of Emission of Particulate Matter From Industrial Processes.*

- 10 CSR 10-6.400(1)(B)15 exempts any particulate matter emission unit that is subject to a federally enforceable requirement to install, operate, and maintain a particulate matter control device system that controls at least 90% of particulate matter emissions:
  - EU-8, EU-9A, EU-9B, EU-10, EU-11, EU-12, EU-16A, EU-16B, EU-16C, EU-22-23, EU-24, EU-25, EU-26A, EU-26B, EU-27, EU-28, EU-31B, EU-31C, EU-39, EU-64, EU-71, EU-72, EU-73, EU-81, EU-94, EU-101, EU-102, EU-104, EU-105A, EU-105B are required by MACT X (see Permit Conditions 020, 021, and 023) to be in total enclosures and vent to baghouses or a wet scrubber. Baghouses and wet scrubbers achieve greater than 90% control of particulates; therefore, these emission sources are exempt.
  - EU-32 is subject to a BACT requirement to operate a baghouse (see Permit Condition 015). Baghouses achieve greater than 90% control of particulates; therefore, this emission source is exempt.
- 10 CSR 10-6.400(1)(B)7 exempts fugitive emissions; therefore, EU-13, EU-74, EU-75, EU-76, EU-77, EU-78, EU-79, EU-85, EU-98, EU-99, EU-111, EU-112A, EU-112B, and EU-113.

- 10 CSR 10-6.400(1)(B)6 exempts the burning of fuel for indirect heating; therefore, EU-33 is exempt.
- Liquids used solely as fuels are excluded from the definition of process weight at 10 CSR 10-6.400(2)(P)60; therefore, EU-97, EU-106, and EU-114 are not subject to this regulation.
- 10 CSR 10-6.400(1)(B)10 exempts the burning of refuse; therefore, EU-110 is not subject to this regulation.
- 10 CSR 10-6.400(1)(B)12 exempts emission units that at maximum design capacity have a potential to emit less than 0.5 lb/hr of PM; therefore, EU-87 is not subject to this regulation.

Emission Source	MHDR (tph)	Uncontrolled PM Emission Factor (lb/ton)	Emission Factor Source	Potential Uncontrolled PM Emission Rate (lb/hr)
EU-87	1.51	0.067	AP-42 Table 11.17-2	0.10

10 CSR 10-6.405 *Restriction of Particulate Matter Emissions From Fuel Burning Equipment Used For Indirect Heating* is not applicable to the installation and has not been applied in this permit. EU-8, EU-9A, EU-97, EU-106, EU-110 and EU-114 are not indirect heating sources as defined at 10 CSR 10-6.020(2)(I)5 as the products of combustion come into direct contact with process materials. EU-22-23, EU-24, EU-25, EU-26A, EU-27, EU-28, EU-33, EU-39, EU-64, and EU-105B are the only indirect heating sources and they are all fueled only by propane; therefore, per 10 CSR 10-6.405(1)(E) the installation is exempt from this rule as all of the installation's applicable units are fueled only by propane.

On June 9, 2017, the installation informed the Air Pollution Control Program that EU-091 Metso Mobile Screen, EU-092 Metso Mobile Screen Conveyor, and EU-093 Metso Mobile Screen Storage Pile had ceased operation and should not be included in this operating permit.

On May 17, 2018, the installation informed the Air Pollution Control Program that EU-57 CaS Silo had been removed from the installation and should not be included in this operating permit.

Compliance Plan

The installation is currently not in compliance with some of the applicable requirements within this permit. The installation has been issued multiple notices of violation, some of which have been resolved while others are still pending. The installation has conducted multiple stack tests in recent months with preliminary results indicating additional violations; however, notices of violation will not be issued until the final results have been submitted and reviewed. As compliance plans and/or consent judgements are issued by the Department of Natural Resources, the installation is required to submit significant modification applications to include the requirements of the compliance plans and/or consent judgements in this permit. Significant modification applications shall be submit no later than 180 days after the effective date of the compliance plan/consent judgement.

This permit and the terms and conditions herein do not affect the installation's past and/or continuing obligation with respect to statutory or regulatory requirements under Titles I and V of the CAA. Further, neither the issuance of this permit nor any of the terms or conditions of the permit shall alter or affect the liability of the installation for any violation of applicable requirements prior to or at the time of permit issuance.

Other Regulations Not Cited in the Operating Permit or the Above Statement of Basis

Any regulation, which is not specifically listed in either the Operating Permit or in the above Statement of Basis, does not appear, based on this review, to be an applicable requirement for this installation for one or more of the following reasons:

1. The specific pollutant regulated by that rule is not emitted by the installation;
2. The installation is not in the source category regulated by that rule;
3. The installation is not in the county or specific area that is regulated under the authority of that rule;
4. The installation does not contain the type of emission unit which is regulated by that rule;
5. The rule is only for administrative purposes.

Should a later determination conclude that the installation is subject to one or more of the regulations cited in this Statement of Basis or other regulations which were not cited, the installation shall determine and demonstrate, to the Air Pollution Control Program's satisfaction, the installation's compliance with that regulation(s) or that the regulation is not applicable. If the installation does not comply with a regulation, which was not previously cited, the installation shall submit to the Air Pollution Control a schedule for achieving compliance for that regulation(s).

Response to Public Comments

The draft Part 70 Operating Permit, Project 093-0009-027, for Buick Resources Recycling Facility, LLC (093-0009) was placed on public notice as of August 31, 2018, for a 30-day comment period. The public notice was published on the Department of Natural Resources' Air Pollution Control Program's web page at: http://www.dnr.mo.gov/env/apcp/PermitPublicNotices.htm on Friday, August 31, 2018.

On September 7, 2018, the Air Pollution Control Program received comments from Leslye E. Werner, Air Permitting and Compliance Branch Acting Chief, EPA Region 7.

EPA Comment #1:
Permit Condition PW001 incorporates requirements from 10 CSR 10-6.120: *Restriction of Lead from Specific Lead Smelter-Refinery Installations* which have been determined to be applicable to the Doe Run-Buick installation. The Operational Limitation limits that total lead production, at the installation, to "175,000 tons per year." It is unclear if MoDNR intends the tons per year limit to be a calendar year or on a 12-month rolling total, rolled monthly. Also, General Provisions 1., in Permit Condition PW001, requires the permittee to maintain a file which identifies the date and time of any "significant" malfunction of plant process operations or of emission control equipment, which results in "increased" lead emissions. The terms "significant" malfunction and "increased lead emissions" appear to be too vague as to be enforceable as a practical matter. EPA recommends MoDNR consider including additional qualification on the operational limitations and include additional specificity as to what defines a significant malfunction and increased lead emissions.

Air Pollution Control Program Response to Comment:
Permit Condition PW001 has been revised to clarify that the installation's lead production limit is on a calendar year basis.

The Air Pollution Control Program interprets a "significant malfunction" to be a malfunction, which results in "increased lead emissions". The permittee is required to maintain a file of all "significant malfunctions". If the "significant malfunction" results in "increased lead emissions" for one hour or more, the permittee is also required to submit an SSM report under 10 CSR 10-6.050. To re-iterate:

- All malfunctions which result in "increased lead emissions" are "significant malfunctions".
- "Significant malfunctions" lasting less than one hour must be recorded in the file described at 10 CSR 10-6.120(3)(A)1.
- For "significant malfunctions" lasting one hour or more, the installation must record the "significant malfunction" in the file described at 10 CSR 10-6.120(3)(A)1 and submit an SSM report per 10 CSR 10-6.050.

The Air Pollution Control Program interprets "increased lead emissions" to mean any emission of lead exceeding a lead emission standard/limit and any lead emissions from abnormal operating periods. All applicable lead emission standards/limits have been included in this permit. Abnormal operating periods include, but are not limited to:

- Time periods of any duration during which upset events cause uncontrolled or partially uncontrolled lead emissions to release into the atmosphere
- Time periods of any duration during which total enclosure and/or negative pressure was not maintained/achieved causing increased fugitive lead emissions from the MACT X total enclosures
- Time periods of any duration during which local exhaust ventilation operations are fully or partially inactive or ineffective due to an upset condition causing diversion of lead emissions to an alternate emissions point (increasing lead emissions from that alternate emissions point) or causing increased fugitive lead emissions from the MACT X total enclosures
- Time periods of any duration during which lead emissions are generated from an activity not covered by standard operating procedures (e.g. minor/routine construction, modification, replacement of equipment components, demolition, etc.) where an upset event exacerbates the lead emissions that would have occurred from the activity if not for the upset event

EPA Comment #2:
Permit Condition PW004 and Permit Condition 016 both incorporate applicable requirements from a 2013 Consent Judgement-Case No 13IR-CC00016; 2013 Lead NAAQS Attainment Demonstration SIP; and 2008 National Ambient Air Quality Standard for Lead. Requirements associated with the achievement and maintenance of NAAQS are "State Only" and EPA recommends MoDNR consider including a "State Only Requirement" notation in both Permit Condition PW004 and Permit Condition 016.

Air Pollution Control Program Response to Comment:
The permit has been revised as requested.

EPA Comments #3:
Performance Testing 1., in Permit Condition 001 incorporates special conditions from Permit to Construct #052017-004, as it applies to the Drum Shredder Hygiene Baghouse (EP-31B) and Drum Shredder Process Baghouse (EP-31C). The permittee is required to conduct subsequent stack testing to demonstrate ongoing compliance with the PM10 emission rate limits in Special Condition 1.A. Special Conditions are usually associated with permits to construct and not with operating permits. Operating permits incorporate all applicable Special Conditions as specific permit condition requirements and Permit Condition 001 includes emission limitations required by Special Condition 1.A. EPA recommends MoDNR consider replacing "Special Condition 1.A." in Performance Testing 1., with the "Emission Limitation above." Additionally, Monitoring / Record keeping 1., in Permit Condition 001, requires the permittee to monitor and record the operating pressure drop across baghouse CD-31B and CD-31C at least once every 24 hours. Pressure drop is a parameter that lends itself to continuous monitoring and recording, therefore, EPA recommends MoDNR consider continuous monitoring and recordkeeping of the pressure drop across both baghouses.

Air Pollution Control Program Response to Comment:
Special conditions are applicable requirements. Nothing prohibits special conditions from being referenced in an operating permit. Special conditions do not have to be relabeled. Relabeling can result in incorrect cross-referencing. Special Condition 1.A of Construction Permit 052017-004 was incorporated into the permit at Permit Condition 001 Emission Limitation as indicated by

the square brackets at the end of the emission limitation within the draft permit; therefore, no further clarification is necessary.

CD-31B Drum Shredder Hygiene Baghouse and CD-31C Drum Shredder Process Baghouse are equipped with BLDS per the requirements of MACT X (see Permit Condition 021). A BLDS is sufficient to demonstrate that the baghouses are continuously operating effectively. The requirement to monitor and record the operating pressure drop in Permit Condition 001 has been removed from the permit as it is less stringent than the requirements of MACT X.

EPA Comment #4:
Permit Condition 002 incorporates special conditions from Permit to Construct #072015-017 as applicable to ACD Engine (EU-106), Air Curtain Destructor (EU-110), ACD Paved haul Road (EU-112A), and ACD Unpaved Haul Road (EU-112B). Monitoring / Recordkeeping requirement 1 has the permittee demonstrating compliance with "Special Condition 9A" by obtaining record of the fuel's sulfur content from the vendor for each fuel shipment. Special Conditions are usually associated with permits to construct and not with operating permits. Operating permits incorporate all applicable construction permit Special Conditions as operating permit condition requirements and Operational Limitation 11, in Permit Condition 002 incorporates Special Condition 9.A. Therefore, EPA recommends MoDNR consider replacing "Special condition 9.A.," in Monitoring / Record keeping 1., with "Operational Limitation 11."

Air Pollution Control Program Response to Comment:
Special conditions are applicable requirements. Nothing prohibits special conditions from being referenced in an operating permit. Special conditions do not have to be relabeled. Relabeling can result in incorrect cross-referencing. Special Condition 9.A of Construction Permit 072015-017 was incorporated into the permit at Permit Condition 002 Operational Limitation 11 as indicated by the square brackets at the end of the operational limitation within the draft permit; therefore, no further clarification is necessary.

EPA Comment #5:
Permit Condition 003 incorporates special conditions from Permit to Construct #09201-006 as they apply to ERP Kettles R11 & R12 (EU105A and EU105B), Refinery Kettles R9 & R10 (EU-28) and Refinery Kettles R5 & R6 (EU-26B). Operational Limitation 1 requires the air flow rate through emission point EP-105 to be less than or equal to 60,000 dscfm. However, there are no requirements in Permit Condition 003 describing the method for air flow monitoring. Additionally, the Performance Testing requirement, in Permit Condition 003, asks the permittee to demonstrate compliance with Special Condition 1. B. Special Conditions are usually associated with permits to construct and not operating permits. Operating permits incorporate all applicable construction permit special conditions as operating permit condition requirements and Operational Limitation 1., in Permit Condition 003, incorporates Special Condition 1. B. Therefore, EPA recommends MoDNR consider using the reference to Operational Limitation 1, in lieu of Special Condition 1. B., in Performance Testing.

Air Pollution Control Program Response to Comment:
Permit Condition 003 Performance Testing has been clarified to indicate that EPA Method 2 at NSPS Appendix A-1; EPA Method 5D at NSPS Appendix A-3, Section 8.3 for positive pressure

fabric filters; or other methods approved by the Air Pollution Control Program's Stack Testing Unit shall be used to measure the volumetric airflow rate.

Special conditions are applicable requirements. Nothing prohibits special conditions from being referenced in an operating permit. Special conditions do not have to be relabeled. Relabeling can result in incorrect cross-referencing. Special Condition 1.B of Construction Permit 092014-006 was incorporated into the permit at Permit Condition 003 Operational Limitation 1 as indicated by the square brackets at the end of the operational limitation within the draft permit; therefore, no further clarification is necessary.

EPA Comment #6:
Permit Condition 004 incorporates special conditions from Permit to Construct #102011-005 applicable to Pallet Grinder (EU-95), Pallet Grinder Diesel Engine (EU-97), and Pallet Grinding Paved Haul Roads (EU-98). Operational Limitation 2. e) identifies "wood waste from farms from an open dump" as unacceptable material for wood grinding. EPA finds "Wood waste from farms from an open dump" to be unclear and confusing and recommends MoDNR consider if the language used in Operational Limitation 2. e) might be better worded.

Air Pollution Control Program Response to Comment:
The permit has been revised to clarify that wood waste generated offsite is an unacceptable material for wood grinding.

EPA Comment #7:
Permit Condition 005 incorporates the requirements from Permit to Construct #062011-004A and PSD Permit #012005-008A. Performance Testing 1 requires the permittee to demonstrate compliance with Special Condition 2 of Permit to Construct #062011-004A and Performance Testing 2 requires the permittee to demonstrate compliance with Special Condition 3 of Permit to Construct #062011-004A. Special Conditions are usually associated with permits to construct and not operating permit. Operating permits incorporate all applicable construction permit Special Conditions as operating permit condition requirements. Emission Limitation 1 and Emission Limitation 2, in Permit Condition 005, indicate Special Condition 2 and Special Condition 3 as the origin or authority for inclusion in the operating permit, respectively. Therefore, EPA recommends MoDNR consider replacing the special condition references in Performance Testing 1 and Performance Testing 2 with Emission Limitation references.

Air Pollution Control Program Response to Comment:
Special conditions are applicable requirements. Nothing prohibits special conditions from being referenced in an operating permit. Special conditions do not have to be relabeled. Relabeling can result in incorrect cross-referencing. Special Condition 2 of Construction Permit 062011-004A was incorporated into the operating permit at Permit Condition 005 Emission Limitation 1 and Special Condition 3 of Construction Permit 062011-004A was incorporated into the operating permit at Permit Condition 005 Emission Limitation 2 as indicated by the square brackets at the end of the emission limitations within the draft permit; therefore, no further clarification is necessary.

EPA Comment #8:
Permit Condition 008 incorporates special conditions from Permit to Construct #062011-004 applicable to the reverberatory furnace. Performance Testing 2 requires the permittee to no operate the scrubber by-pass during performance testing required by Special Condition 3. A. The performance testing requirements from Special Condition 3. A are included in Permit Condition 008 in the section Performance Testing 1. EPA suggests MoDNR consider changing the reference in Performance Testing 2 to "in Performance Testing 1., above. Also, Footnote 10 requires the next sulfuric acid mix and PM10 tests are required in September 2017. Since this date has passed, MoDNR should update the reference date in Footnote 10. If the permittee hasn't completed the September 2017 testing requirement, then MoDNR should consider establishing a compliance plan and include the compliance plan in this operating permit.

Air Pollution Control Program Response to Comment:
Special conditions are applicable requirements. Nothing prohibits special conditions from being referenced in an operating permit. Special conditions do not have to be relabeled. Relabeling can result in incorrect cross-referencing. Special Condition 3.A of Construction Permit 062011-004 was incorporated into the operating permit at Permit Condition 008 Performance Testing 1 as indicated by the square brackets at the end of the performance testing requirement within the draft permit; therefore, no further clarification is necessary.

The installation conducted sulfuric acid and $PM_{2.5}$ testing in September 2017. The installation believes that the September 2017 stack test results are invalid and should not be used to demonstrate compliance with the emission limitations in Special Conditions 2.A and 2.B of Construction Permit 062011-004. The installation has scheduled a retest for December 2018. Once valid test results are obtained, Attachments G and H will be revised.

EPA Comment #9:
Permit Condition 009, Permit Condition 010, Permit Condition 011, Permit Condition 012, Permit Condition 014 and Permit Condition 015 all incorporate Special Conditions from Permit to Construct #062011-004 and PSD permit #012005-008A, -008B, -008C. and -008D regarding SO2 requirements, CO requirements, Lead requirements, Condensable PM requirements, and PM10 & Baghouse requirements. All six (6) of these permit conditions include multiple references to Special Conditions within the operating permit condition requirements. All of the referenced Special Conditions are already included as requirements within the permit conditions and EPA recommends MoDNR consider reviewing these six permit conditions and replacing the Special Condition references with the actual operating permit requirement reference.

Air Pollution Control Program Response to Comment:
Special conditions are applicable requirements. Nothing prohibits special conditions from being referenced in an operating permit. Special conditions do not have to be relabeled. Relabeling can result in incorrect cross-referencing. All of the referenced special conditions were incorporated into the operating permit at as indicated by the square brackets at the end of the condition within the draft permit; therefore, no further clarification is necessary.

EPA Comment #10:
Performance Testing 1., in Permit Condition 015, requires the permittee to conduct an initial stack test on each emission point by no later than March 24, 2018. It appears that this initial stack

testing will have been completed by the time this operating permit is issued and therefore, this requirement may no longer be applicable. If the March 24, 2018 testing hasn't been completed, MoDNR should consider establishing a compliance plan and include the compliance plan in this operating permit.

Air Pollution Control Program Response to Comment:
The permit has been revised to include the following information:

> On March 20, 2018 stack testing was conducted on EP-71 with a reported emission rate of 0.14 lb/hr PM_{10}. As this emission rate is greater than 75% of 0.16 lb/hr, the next periodic PM_{10} testing of EP-71 shall occur by no later than March 20, 2020.
>
> On May 8, 2018 stack testing was conducted on EP-16 with a reported emission rate of 0.249 lb/hr PM_{10}. As this emission rate is greater than 75% of 0.283 lb/hr, the next periodic PM_{10} testing of EP-16 shall occur by no later than May 8, 2020.

EPA Comment #11:
Permit Condition 017 incorporates applicable requirements from 40 CFR Part 60, Subpart L: *Standards of Performance for Secondary Lead Smelters;* and 40 CFR Part 64: *Compliance Assurance Monitoring.* Monitoring 4 requires the permittee, upon detecting an excursion or exceedance, to restore operation of the pollutant specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. This requirement, as written, is too vague to be enforceable as a practical matter and EPA recommends MoDNR consider specific measurable time for restoring operations. Also, Monitoring 5 requires the permittee to promptly notify MoDNR in the event a change to the compliance assurance monitoring plan is determined to be required and MoDNR has defined Prompt as "within 90 days." EPA believes 90 days is not prompt and recommends MoDNR consider a shorter time.

Air Pollution Control Program Response to Comment:
Permit Condition 017 Monitoring requirement 4.a incorporates federal regulation §64.7(d)(1). The Air Pollution Control Program was unable to locate any judicial or EPA interpretation of the term "expeditiously as practicable" as used within §64.7(d)(1). In the absence of any judicial or EPA interpretation, the Air Pollution Control Program interpreted "expeditiously as practicable" to be within 60 minutes. As the CAM Monitoring Approach table already defines an excursion as an alarm and an exceedance as any alarm not corrected within 60 minutes, no revisions to the permit are necessary.

The permit has been revised to clarify that the permittee is required to promptly notify the Air Pollution Control Program within 10 days and must submit any necessary permit modification application within 90 days.

EPA Comment #12:
Permit Condition 019 incorporates requirements from 40 CFR Part 60, Subpart DDDD: *Emission Guidelines and Compliance Times for Commercial and Industrial Solid Waste Incineration Units* as they apply to the air curtain destructor (EU-110). Permit Condition 019 limits the materials the

air curtain destructor can burn to wood waste, clean lumber and a mixture of wood waste, clean lumber ad/or yard waste. Permit Condition 019 also defined wood waste and clean lumber, however, there is no definition of yard waste. EPA recommends MoDNR consider including a yard waste definition in Permit Condition 019. Additionally, Monitoring 2., in Permit Condition 019, requires the permittee to conduct an initial test for opacity no later than August 6, 2018. It appears that this opacity test will have been completed by the time this operating permit is issued and therefore, this requirement may no longer be applicable. If the permittee fails to meet the August 6, 2018 test date, they would appear to be in non-compliance with 40 CFR Part 60, Subpart DDDD and EPA believes MoDNR consider establish a compliance plan and include the compliance plan in this operating permit.

Air Pollution Control Program Response to Comment:
The definition of yard waste at §62.15370 has been added to the permit as requested.

The initial opacity test for the ACD was conducted on March 11, 2015.

EPA Comment #13:
In Emission Standard 2, in both Permit Condition 020 and Permit Condition 021, the permittee is required to conduct additional performance tests on a schedule based upon the initial performance or compliance test to determine compliance. These requirements are incorporated from 40 CFR Part 63, Subpart X, as amended in January 2014. However, neither Permit Condition 020 nor Permit Condition 021 identify the date by which the initial performance or compliance test is to be completed. According to 40 CFR Part 63, Subpart X, in paragraph §63.546(a), sources that commenced construction or reconstruction on or before May 19, 2011, compliance was to have been demonstrated no later than January 6, 2014. Therefore, it appears the initial performance or compliance tests should have already been completed and the continuing performance test schedule adopted and it should be included in this operating permit. If the 40 CFR Part 63, Subpart X, testing requirements have not been met, then MoDNR should establish a compliance plan and include in the operating permit.

Air Pollution Control Program Response to Comment:
The installation has completed initial compliance testing of all MACT X subject emission sources. The permit has been revised to reflect that initial compliance testing has been completed.

EPA Comment #14:
Permit Condition 024 incorporates requirements from 40 CFR Part 63, Subpart DDDDD: *National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters* as applied to Change House Boiler (EU-33). Initial Requirement 1 requires the permittee to complete an initial tune-up no later than April 1, 2013. Since this date is now past the initial boiler tune-up should have already been completed. If the initial boiler tune-up has not been completed, then MoDNR should establish a compliance plan and include the plan in this operating permit.

Air Pollution Control Program Response to Comment:
The installation conducted the initial tune-up of EU-33 Change house Boiler on November 24, 2016. As the initial compliance requirements have already been met, these requirements have

been removed from the permit. The permit has been revised to reflect that the next tune-up is due by no later than November 2021.

EPA Comment #15:
Footnote 35 on Attachment G indicates "the emission factor of 0.272 pounds of sulfuric acid mist per ton of reverberatory furnace feed was approved from testing conducted on CD-37 Dry Lime Scrubber in September 2012. This emission factor shall be replaced by the approved stack tested emission factor from September 2017." EPA recommends MoDNR consider using the September 2017 emission factor on Attachment G. Also, footnote 39 on Attachment H indicates "the emission factor of 0.06 pounds of PM2.5 per ton of reverberatory feed was approved from testing conducted on CD-37 Dry Lime Scrubber in September 2012. This emission factor shall be replaced by the approved stack tested emission factor from September 2017." EPA recommends MoDNR consider using the September 2017 emission factor on Attachment H. Additionally, footnote 43 on Attachment I indicates "an emission factor of 0.007 pounds lead emissions per ton of castable lead produced was approved from testing conducted on EP-8 in April 2016. This emission factor shall be replaced by the approved stack tested emission factor from April 2018." EPA recommends MoDNR consider using the April 2018 emission factor on Attachment I.

Air Pollution Control Program Response to Comment:
The installation conducted sulfuric acid and $PM_{2.5}$ testing of CD-37 in September 2017. The $PM_{2.5}$ test results were high; however, the installation believes that the September 2017 stack test results are invalid and should not be used to demonstrate compliance with the emission limitations in Special Conditions 2.A and 2.B of Construction Permit 062011-004. The following is an excerpt from an e-mail submitted by the installation on November 16, 2018:

> "The condition of the Scrubber outlet duct work where the testing was completed was poor during the testing due to premature wear of manufacturer recommended stainless steel ductwork. There were some holes in the duct work upstream of the Scrubber baghouse fan that pulled outside air into the ductwork upstream of the sampling point. The moisture content of the dry scrubber outlet gases was high during testing (12-20%) and BRRF believes this combined with the holes in the duct work created a condition in the duct that caused very difficult testing conditions and skewed the test results which came back an order of magnitude greater than the previous results (average of 1.90 lb/hr in 2012 vs. 19.6 lb/hr in 2017). Because BRRF does not believe these results are representative they have not used these values to calculate annual emissions. BRRF has attempted to retest this source twice since the ductwork was replaced in April 2018 in order to demonstrate compliance and to determine an appropriate emission factor. Following the replacement of the duct work the flow at the sampling location was found to be cyclonic and cannot be tested using Method 201A and Method 202. BRRF contracted an engineering firm to design straightening vanes for this section of duct work. The engineering has been completed and BRRF is scheduled to install the vanes during their December 2018 plant shutdown."

The installation has scheduled a retest for December 2018. The Air Pollution Control Program has not completed their review of the installation's explanation and does not agree or disagree with the installation's claim of unrepresentative testing conditions. The installation is required to

submit their performance test results within 60 days of testing completion. Once valid test results are obtained, Attachments G and H will be revised.

The installation conducted lead testing of EP-8 in September 2018. The test results did not demonstrate compliance with MACT X; therefore, the installation is retesting in December 2018. The installation is required to submit their performance test results within 60 days of testing completion. Once valid test results are approved, Attachment I will be revised.

EPA Comment #16:
MoDNR has included Attachment P for use in identifying abbreviations and acronyms. However, there are several acronyms, including but not limited to BLDS, LBM, ERP, BSN, ACD, and MERV, which are not included on Attachment P. EPA suggests MoDNR consider including all acronyms used within this operating permit on Attachment P.

Air Pollution Control Program Response to Comment:
Attachment P has been modified as requested.