ARCELORMITTAL CALVERT, LLC

MOBILE COUNTY, AL

FACILITY NO.: 503-0157

PREVENTION OF SIGNIFICANT DETERIORATION
PRELIMINARY DETERMINATION

APRIL 2, 2025

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On November 20, 2024, ArcelorMittal Calvert, LLC ("AM Calvert") submitted an air permit application for the construction of a non-oriented electrical steel ("NOES") mill located at 1 Steel Way, Calvert, Mobile County, Alabama. The AM Calvert NOES mill will be adjacent to the existing AM/NS Calvert, LLC ("AM/NS Calvert") steel mill (facility no. 503-0095) on the same site. AM/NS Calvert is a joint venture between ArcelorMittal and Nippon Steel.

A revision to the application was received on February 11, 2024. In correspondence with the Department, AM Calvert submitted further small addendums and replacement pages on February 27. A further revision was submitted March 25, 2025, correcting an error found in the emission rate of the cold rolling mills and remodeling accordingly; final addendums to this revision were submitted March 28 and April 1, 2025.

The proposed AM Calvert NOES mill will produce coils, sheets, and other forms of electrical steel (i.e., silicon steel) strips for customers in various industries, particularly the automotive industry. Electrical steel or silicon steel differs from standard carbon steel in its composition, typically being alloyed with >1% silicon and minimal carbon. The electrical steel will be annealed and cold rolled in such a way that the crystalline grains of the metal have a random orientation ("non-oriented").

Permitted sources at the proposed NOES mill will consist of:

- One annealing and pickling line ("APL") with a 93.65 MMBtu/hr continuous annealing furnace with selective catalytic reduction ("SCR") (**AEAL_1**), shot blasting and de-scaling operations with a baghouse (**SHOT_B**), and hydrochloric pickling operations and associated tanks with a scrubber (**PICKL**);
- One acid regeneration plant ("ARP") for the spent hydrochloric acid from the APL with iron oxide removal and storage (**OXIDE**), acid regeneration line with 13.0 MMBtu/hr spray roaster burners (**SPRY_R**), and associated tank farm with scrubber (**TNK_FM)**;
- Two reversing cold rolling mills with mist eliminators (**CRM_1 & CRM_2**);
- Two 45.5 MMBtu/hr boilers (**BOIL_1 & BOIL_2**);
- Two annealing and coating lines ("ACL"), each with an alkaline degreasing/cleaning section with mist eliminator (**CLEAN_1 & CLEAN_2**), an electric annealing furnace with hydrogen purge flares (**HYPU_A1 – HYPU_A5 & HYPU_B1 – HYPU_B5**), and a coating line consisting of a roll coating station and 11.88 MMBtu/hr curing oven controlled by a regenerative thermal oxidizer ("RTO") (**RTO_1 & RTO_2**) followed by an uncontrolled cooling section (**ACL_C1 & ACL_C2**) and quench section (**QUEN_1 & QUEN_2**);
- Four cooling towers (**COOL_1 – COOL_4**); and
- Two emergency diesel engines (**ENG_1 & ENG_2**).

The annealing & pickling line ("APL") will receive hot-rolled electrical steel from the adjacent AM/NS Calvert mill. These hot-rolled coils would be sent through the APL's direct-fired annealing furnace (**AEAL_1**), de-scaled and shot-blasted (**SHOT_B**) to remove iron oxide scale formed during annealing, and subjected to hydrochloric acid pickling (**PICKL**) to

remove surface impurities. Acid tanks for the process would also be controlled by the PICKL scrubber.

Similar to the acid regeneration operations at AM/NS Calvert, AM Calvert is proposing to add a hydrochloric acid regeneration plant ("ARP") (**OXIDE, SPRY_R, TNK_FM**) to regenerate the spent acid or pickling liquor from the NOES mill's APL. The iron salts formed from the pickling process would be oxidized via contact with reactor gases in a series of columns to ferric oxide and reformed hydrochloric acid. The ferric oxide would be removed and discharged into silos controlled by a baghouse (**OXIDE**), and off gases from the regeneration columns would be controlled by a scrubber (**SPRY_R**). The spent acid tanks associated with the new ARP would have a smaller stand-alone scrubber (**TNK_FM**).

Annealed and pickled coils would be cold rolled via one of two proposed cold rolling mills (**CRM_1 & CRM_2**) to reduce coil thickness to the final gauge desired for the end product. Two natural gas-fired 45.5 MMBtu/hr boilers (**BOIL_1 & BOIL_2**) would provide process heat to other units at the mill.

Cold-rolled coils would be sent to one of two parallel annealing and coating lines ("ACL1" & "ACL2"). At each line, the coils would be temporarily welded together as a continuous strip, and an alkaline degreasing/cleaning section with mist eliminator (**CLEAN_1 & CLEAN_2**) would remove residual oil from cold rolling. An electric annealing furnace would anneal the strip to achieve the final desired mechanical properties for the product under a controlled hydrogen-nitrogen atmosphere, with purge flares (**HYPU_A1 – HYPU_A5 & HYPU_B1 – HYPU_B5**). Following annealing, varnishes would be applied to the strip in a coating line consisting of a roll coating station and 11.88 MMBtu/hr curing oven controlled by a regenerative thermal oxidizer ("RTO") (**RTO_1 & RTO_2**) followed by an uncontrolled cooling section (**ACL_C1 & ACL_C2**) and quench section (**QUEN_1 & QUEN_2**).

AM Calvert intends to install two emergency generators powered by a 2,667 kWm diesel-fired engine and a 333 kWm diesel-fired engine (**ENG_1 & ENG_2**). Additionally, quench and other processes will be supported by four 15,170 gpm cooling towers (**COOL_1 – COOL_4**)

Process narratives may be found in each individual section of this analysis, addressing the APL, the ARP, the cold rolling mills, the boilers, ACL 1 & 2, and the remaining miscellaneous sources.

MAJOR SOURCE OPERATING PERMIT (TITLE V)

The existing AM/NS Calvert, LLC steel mill is a major source with respect to Title V permitting and is subject to ADEM Admin. Code Chapter 335-3-16 which was adopted pursuant to the federal requirements for the issuance of major source operating permits under 40 CFR Part 70 "State Operating Permit Programs". ADEM Admin. Code r. 335-3-16-.01(1)(q) defines a major source as a group of stationary sources located on contiguous/adjacent properties, under common control of the same person, and belonging to the same major industrial group that emit greater than 100 TPY of criteria pollutants (including fugitives, for iron & steel mills), 10 TPY of any single HAP, or 25 TPY of all HAP.

The proposed AM Calvert NOES mill would not meet these Title V major source pollutant thresholds by itself, but because existing AM/NS Calvert carbon steel mill and the proposed

AM Calvert NOES mill meet the grouping criteria, they are considered the same source for Title V permitting purposes. AM Calvert concurs with this assessment in section 4.1.2 of their application.

However, although AM Calvert and AM/NS Calvert are under common control to a such degree that they must be considered the same source for Title V applicability (and PSD applicability as discussed in the next section), they will have separate organizational structure at the corporate and facility levels. AM Calvert has requested, and the Department has agreed, to assign a separate Air Division facility number (facility no. 503-0157) to the AM Calvert NOES mill. There is precedent for ADEM Air Division splitting facilities meeting the grouping criteria into separate permits for organizational purposes if and only if both facilities are still ultimately subject to the Title V major source operating permit program. In 2011, after ThyssenKrupp Steel & Stainless USA, LLC (facility no. 503-0095) separated its carbon and stainless steel operations, the Department re-permitted the carbon steel operations to ThyssenKrupp Steel USA, LLC (retaining facility no. 503-0095) and the stainless steel operations to ThyssenKrupp Stainless USA, LLC (new facility no. 503-0106) despite the two entities still meeting the three source grouping criteria. Both facilities ultimately later received major source operating permits, though under new ownership—AM/NS Calvert, LLC and Outokumpu Steel USA, LLC, respectively.

Air Permit Nos. 503-0157-X001 – X009 will be issued to AM Calvert, LLC, and within one year of starting production, they must apply for a major source operating permit to replace the initial air permits. Should the organizational structure of AM/NS Calvert, LLC and AM Calvert, LLC change to be more integrated in the future, these facilities and their permits may be merged back under one facility number.

PREVENTION OF SIGNIFICANT DETERIORATION (PSD)

The existing AM/NS Calvert, LLC steel mill is a major source with respect to PSD and is subject to ADEM Admin. Code r. 335-3-14-.04 which was adopted pursuant to the federal requirements for prevention of significant deterioration (PSD). ADEM Admin. Code rules 335-3-14-.04(2)(e)&(f) together define a stationary source as all NSR pollutant-emitting activities belonging to the same industry, located on contiguous/adjacent properties, and under common control. The existing AM/NS Calvert carbon steel mill and the proposed AM Calvert NOES mill meet these criteria and are thus considered the same source for PSD purposes.

Because AM Calvert and AM/NS Calvert are the same source for PSD purposes, emission increases to AM/NS Calvert sources must be considered alongside estimated emissions from the sources from the proposed NOES mill. According to the application, electrical steel slabs will be cast in the AM/NS Calvert meltshop currently under construction (at this time, EAF #1 is anticipated to start up in Q2 2025) and hot rolled in the existing AM/NS Calvert rolling mill. However, AM Calvert has stated that the actual emissions from the existing AM/NS Calvert hot rolling mill are not expected to increase as a result of the project; electrical steel throughput is expected to be an equivalent substitution for carbon steel throughput, with no difference between projected and baseline actual emissions. Additionally, the permitted emission limits for the AM/NS Calvert meltshop sources will not be increased.

The proposed AM Calvert NOES mill would qualify as a major modification since the emissions from the proposed sources would exceed the significant emissions thresholds for

PM, PM_{10}, $PM_{2.5}$, NO_X, VOC, and CO_2e listed in ADEM Admin. Code r. 335-3-14-.04(1)(w), as shown in Table 3-1 of the application.

PSD regulations were designed to limit pollutant concentration increases in areas that are cleaner than the National Ambient Air Quality Standards (NAAQS). The regulations establish increments that set ceilings on the amount of increased ambient pollutant concentrations that will be allowed in a PSD area. Sources subject to PSD regulations must comply with specific pre-construction review requirements.

A major source or major modification under a PSD review must be constructed with Best Available Control Technology (BACT). If the net air emissions increase of any applicable pollutant is less than its significance emission rate, PSD does not apply for that pollutant. Additionally, the effects on soils, vegetation, visibility, and ambient air quality must be addressed for each applicable pollutant [r. 335-3-14-.04(14)(a)].

The following table shows the PSD significant emissions increase threshold values and emission increases as specified in the application submitted:

Pollutant	Significant Emission Rate (TPY)	Proposed Emission Rate (TPY)	Significant Source
Particulate Matter (PM)	25	44.41	YES
Particulate Matter (< 10 µm) (PM_{10})	15	41.63	YES
Particulate Matter (< 2.5 µm) ($PM_{2.5}$)	10	30.95	YES
Sulfur Dioxide (SO_2)	40	0.59	NO
Nitrogen Oxides (NO_X)	40	72.93	YES
Carbon Monoxide (CO)	100	78.50	NO
Volatile Organic Compounds (VOCs)	40	53.97	YES
Lead (Pb)	0.6	0.0005	NO
Greenhouse Gases (CO_2e)	75,000	122,123.78	YES*

*Per ADEM Admin. Code r. 335-3-14-.04(1)(k)2., greenhouse gas emissions are only subject to PSD requirements if there is a significant net emissions increase of greenhouse gas emissions and there is a significant net emissions increase of at least one NSR pollutant. Since both of these criteria apply to this project, AM Calvert was required to address BACT for greenhouse gases.

Accordingly, AM Calvert has conducted a BACT analysis of PM/PM_{10}/$PM_{2.5}$, NO_X, VOC, and GHG emissions for each relevant proposed source. In this preliminary determination, the Department summarizes AM Calvert's analysis and the resulting PSD limits, followed by an assessment of other applicable state and federal rules.

ANNEALING & PICKLING LINE (X001)

AM Calvert is proposing to add a continuous annealing & pickling line ("APL"), to process hot-rolled coils received from the adjacent AM/NS Calvert mill. Coils entering the APL will be straightened in a flattener/leveler and adjusted to the desired width by the entry trimmer; the lead end of each new coil will be welded to the tail end of the preceding coil to form a continuous strip.

The APL's direct-fired continuous annealing furnace (**AEAL_1**) heats the silicon steel strip to annealing temperature using recuperative, natural gas-fired burners positioned along the length of the furnace, totaling to 93.65 MMBtu/hr. The flue gas will pre-heat incoming air to the burners via a heat exchanger or "recuperator." NO_X emissions in the flue gas will then be treated by selective catalytic reduction (SCR).

Following annealing, the strip will be cooled by a direct-contact water spray. Effluent from the APL cooling section will be recycled, whereas any steam formed during cooling, which may bear an insignificant amount of particulate matter, will emit to atmosphere through the APL cooling section horizontal vent. Scale/oxidation formed on the strip during annealing will be removed via shot-blasting and collected/controlled by a baghouse (**SHOT_B**).

After, the strip will be subjected to hydrochloric acid pickling in a series of covered pickling chambers vented to a scrubber (**PICKL**) to control resulting acid fumes. Acid tanks for the process, positioned along the pickling line, would also be vented to and controlled by the PICKL scrubber. Spent acid or spent pickling liquor will be pumped to the HCl acid regeneration plant (ARP).

BEST AVAILABLE CONTROL TECHNOLOGY (BACT)

Continuous Annealing (AEAL_1)

PM

The primary particulate matter emissions expected from the continuous annealing furnace are products of combustion from natural gas. As such, particulate matter emissions from the furnace are expected to be too low for add-on control technologies such as baghouses, wet scrubbers, ESPs, and other control devices to have any meaningful effect on PM emissions. AM Calvert will be limited to burning natural gas, which has inherently low PM emissions, as fuel, and will limit $PM/PM_{10}/PM_{2.5}$ (filterable + condensable) emissions to 0.70 lb/hr and 0.0075 lb/MMBtu and will limit $PM/PM_{10}/PM_{2.5}$ (filterable) emissions to 0.18 lb/hr and 0.0019 lb/MMBtu. Additionally, a 10% opacity limit will be imposed on the source.

NO_X

AM Calvert plans to install recuperative burners, which use waste heat exchangers ("recuperators") to preheat incoming air using the thermal energy of the flue gas exiting the annealing furnace, in the direct-fired continuous annealing furnace. Preheating the supplied air allows for more fuel-efficient combustion at the expense of higher base lb/MMBtu NO_X emission rates, though this is offset to some degree by less overall fuel usage due to said higher combustion efficiency. This contrasts with low-NO_X or ultra-low-NO_X burners, which vary in design but all achieve low lb/MMBtu NO_X emission rates through a combination of

staged mixing of fuel and combustion air as well as ambient (referred to as “cold”) air to reduce peak flame temperature (minimizing thermal NO_X formation). For their proposed facility, AM Calvert contends that low-NO_X burners are technically infeasible because they have diminished combustion efficiency at the high temperatures needed to anneal non-grain oriented electrical steel, making recuperative burners necessary for their process.

AM Calvert examined the usage of selective catalytic reduction (SCR), selective non-catalytic reduction (SNCR), and non-selective catalytic reduction (NSCR) as add-on NO_X-control technologies, identifying SCNR and NSCR as technically infeasible. Their analysis noted that SNCR requires a high temperature range (1,600 – 2,100 °F) that the continuous annealing furnace would not reach; it also noted that NSCR needs low oxygen conditions (as with an engine’s exhaust) to function properly.

AM Calvert plans to meet the proposed NO_X limits using an SCR system to control emissions from the recuperative burners. Because aspects of the project are still in the planning phase, AM Calvert has not identified what type of catalyst will be installed and what reductant (typically ammonia or urea) will be used as a reagent for the catalytic reduction. Annealing temperatures for silicon steel are very high, and AM Calvert does not believe that auxiliary burners will be necessary to keep the flue gas at a high enough temperature for SCR after losing heat in the recuperator.

The 0.05 lb/MMBtu and 4.68 lb/hr NO_X limits for the continuous annealing furnace are as stringent as those of similarly sized annealing furnaces found in the RBLC and the state. Before startup, AM Calvert must establish and maintain a minimum temperature for the inlet to the catalyst and a minimum flow rate for the reagent injection.

VOC

AM Calvert addressed and eliminated thermal oxidation (including direct, recuperative, and regenerative designs) from consideration as technically infeasible due to the already-low concentration of VOC in flue emissions from natural gas furnaces; afterburners were not addressed, though these would be similarly infeasible with low VOC. They also examined the use of catalytic oxidation (CatOx), wherein hot flue gas between 600 and 1,000 °F (although AM Calvert says they work best above 800 °F) passes across a bed of porous noble metal catalyst to oxidize both CO and VOC molecules to CO_2, and considered the use of this control technology to be technically infeasible again due to the low concentration of VOC in the flue gas. AM Calvert proposes to instead implement good combustion practices when burning their inherently low-VOC natural gas fuel, balancing excess oxygen to ensure minimal CO (and NO_X) formation.

The 0.0055 lb/MMBtu and 0.50 lb/hr VOC limits for the continuous annealing furnace are in line with similarly sized annealing furnaces found in the RBLC and the state.

Greenhouse Gases (CO_2e)

AM Calvert examined the possibility of using carbon capture and storage to control greenhouse gases. They consider it to be technically infeasible, but at the Department’s request, also examined the economic feasibility, determining that it would be economically infeasible to control emissions from the continuous annealing furnace. Note that this is the

largest (and therefore most benefiting from economy of scale) combustion source at the facility.

AM Calvert will only burn clean natural gas a fuel and will limit CO_2e emissions to 48,034 tons per year (TPY) based on a 12-month rolling total.

Shotblasting (SHOT_B)

PM

AM Calvert examined the use of fabric filtration (baghouse), ESP, wet scrubber, wet suppression, and "good work practices" to control filterable particulate matter in the exhaust stream of the shotblasting unit (SHOT_B). Condensable particulate matter is not anticipated from this process. In their analysis, AM Calvert considered baghouses, wet scrubbers, and good work practices to be technically feasible. Cyclones were not considered in AM Calvert's analysis, but the Department notes that cyclones have worse control efficiency than baghouses and as such would have been eliminated in Step 3 (ranking the remaining technically feasible control options) regardless. Baghouses, which are typically used to control particulate matter emissions from this type of process, are the most effective choice.

AM Calvert will be subject to their proposed 0.003 gr/dscf and 0.67 lb/hr PM_{filt} limits on emissions exiting the shotblasting process via its baghouse. AM Calvert will further limit $PM_{10,filt}$ to 0.0004 gr/dscf and 0.10 lb/hr as well as limit $PM_{2.5,filt}$ to 0.00004 gr/dscf and 0.01 lb/hr; these speciated limits are 14.3% and 1.43% of the PM_{filt} limits respectively. These limits are as stringent as similar units in the RBLC and within the state. Additionally, a 10% opacity limit will be imposed on the source.

Hydrochloric Acid Pickling (PICKL)

PM

AM Calvert addressed wet scrubbers and mist eliminators as potential control devices for reducing particulate matter emissions from the degreaser and the pickling line. Baghouses were eliminated from consideration as technically infeasible, due to their tendency to clog when controlling wet plumes and the filter media susceptibility to deteriorate when exposed to acid. AM Calvert did not address wet electrostatic precipitators, which the Department notes are feasible for wet streams but only achieve high efficiency when controlling larger emission streams with a higher PM concentration. Wet scrubbers and mist eliminators have comparable efficiency for this process (and some design overlap, with wet scrubbers often incorporating baffles/vanes), but wet scrubbers are the traditional choice for controlling acidic fumes.

The proposed 0.001 gr/dscf $PM/PM_{10}/PM_{2.5}$ (filterable) limit for the wet scrubber on the pickling line and tanks is in line with similar sources found in the RBLC and within the state. The Department is also imposing AM Calvert's assumption of 0.00078 gr/dscf PM (condensable) as a limit, along with equivalent modeled emission rates, 0.20 lb/hr PM (filterable) and 0.15 lb/hr PM (condensable), as limits. Additionally, a 10% opacity limit will be imposed on the sources.

ADEM Administrative Code Division 3 – "Air Pollution Control Program"

ADEM Admin. Code r. 335-3-1-.04(1)&(2) "Monitoring, Records, and Reporting"

This rule states that "The Director may require the owner or operator of any air contaminant source to establish and maintain such records; make such reports; install, use, and maintain such monitoring equipment or methods; sample such emissions in accordance with such methods at such locations, intervals, and procedures as the Director may prescribe; and provide such periodic emission reports as required in paragraph (2) of this Rule."

The Department cites this rule (along with the similar r. 335-3-16-.05(c) in the context of major source operating permits) as the authority to stipulate monitoring, recordkeeping, and reporting requirements as needed to determine continuous compliance with operating and emission standards such as the BACT limits determined above. This rule is also cited as the authority to stipulate monitoring, recordkeeping, and reporting requirements showing continuous compliance with anti-112(g) limits taken to avoid applicability to r. 335-3-14-.06.

ADEM Admin. Code r. 335-3-4-.01(1)(a)&(b) "Visible Emissions"

Each emission point will be subject to the requirements of this regulation and must not discharge particulate of an opacity greater than twenty percent (20%), as determined by a six-minute average, except that during one six-minute period in any sixty-minute period, the emission point may emit particulate of an opacity no greater than forty percent (40%). However, the more stringent 10% opacity PSD limit imposed on each stack will be cited in the Emission Standards section of the permit in lieu of the 20%/40% state opacity standards.

ADEM Admin. Code r. 335-3-4-.03 "Fuel Burning Equipment" and 335-3-5-.01 "Fuel Combustion"

These regulations apply to fuel-burning equipment, which ADEM Admin. Code r. 335-3-1-.02(1)(ee) defines as indirect heating equipment. Because the continuous annealing furnace will be direct-fired, these rules do not apply.

40 CFR Part 60 – "New Source Performance Standards" [NSPS]

40 CFR 60 Subpart Dc – "Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units"

40 CFR Part 60, Subpart Dc is applicable to steam-generating units at or below 100 MMBtu/hr nameplate heat capacity, as defined in §60.41c. The continuous annealing furnace, due to its direct heating design, cannot considered a steam generating unit insofar as it is not a *device that combusts any fuel and produces steam or heats water or heats any heat transfer medium*.

40 CFR PART 63 – "NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS" [NESHAP]

40 CFR 63 Subpart CCC – "National Emission Standards for Steel Pickling – HCl Process Facilities and Hydrochloric Acid Regeneration Plants"

This rule is applicable to facilities with HCl acid regeneration plants [§63.1155(a)(2)], carbon steel HCl pickling lines [§63.1155(a)(1)], and associated storage vessels [§63.1155(b)] at major sources of HAP. The proposed pickling line would be located at a major source of HAP and will pickle with HCl. Although it is not clear that the grades of electrical steel expected to be processed in the pickling line meet the §63.1156 definition of *carbon steel* as "steel that contains approximately … 0.6 percent or less silicon", the application treats this rule as applicable to the proposed picking line. The Department will include all Subpart CCC requirements in the APL permit.

AM Calvert must not emit gases containing greater than 6 ppmv HCl or at mass emission rates corresponding to less than 99% removal efficiency of HCl [§63.1158(a)(1)(i)&(ii)] from the PICKL scrubber. AM Calvert must control emissions from the HCl tanks associated with the pickling line via a closed vent system and control device [§63.1159(b)], which in this case is also the PICKL scrubber. AM Calvert has a general duty to minimize emissions from all sources [§63.1159(c)]. The pickling line must achieve compliance immediately upon startup [§63.1160(a)(2)].

AM Calvert must conduct an initial performance test within 180 days of startup and subsequent performance tests on PICKL every 2½ years to demonstrate compliance with either the HCl concentration limit or the HCl removal efficiency limit [§63.1161(a) & §63.1162(a)(1)]. HCl emissions must be determined using 40 CFR 60 Appendix A-8, Method 26a. Additionally, after each successful performance test, AM Calvert must establish operating parameters for recirculation rate through the PICKL scrubber [§63.1161(b) & §63.1162(a)(2)]. Recirculation rate shall be monitored continuously and recorded at least once per shift [§63.1162(a)(2)]. The monitoring devices used to comply with this must be calibrated yearly [§63.1162(a)(5)]. Each HCl storage vessel must be inspected semiannually to ensure the closed-vent system is functioning properly [§63.1162(c)]. AM Calvert must establish an operating & maintenance (O&M) plan for the PICKL scrubber according to the requirements of §63.1160(b).

Records of all monitoring and maintenance requirements [§63.1165(b)] and records of every problem observed and corrective action taken [§63.1165(a)] must be kept for five years. AM Calvert must report the results of all performance tests within 60 days of completion, and must submit a malfunction report to the Department semiannually [§63.1164(b)]. AM Calvert must comply with the notification requirements in §63.1163.

40 CFR 63 Subpart DDDDD – "National Emission Standards for Industrial, Commercial, and Institutional Boilers and Process Heaters" [Boiler MACT]

The Boiler MACT is applicable to boilers and process heaters as defined in §63.7575. Under this rule, *boiler* means *an enclosed device using controlled flame combustion and having the primary purpose of recovering thermal energy in the form of steam or hot water*. *Process heater* means *an enclosed device using controlled flame, and the unit's primary purpose is*

to transfer heat indirectly to a process material (liquid, gas, or solid) or to a heat transfer material (e.g., glycol or a mixture of glycol and water) for use in a process unit, instead of generating steam. Because it uses direct-fired burners, the continuous annealing furnace would not meet either of these definitions and would not be subject to this subpart.

40 CFR PART 64 – "COMPLIANCE ASSURANCE MONITORING" [CAM]

An emission source is subject to CAM (1) if that unit is subject to an emission limitation or standard for a given pollutant, (2) if that unit uses a control device, other than inherent processes, to achieve compliance with that standard for that pollutant, and (3) if that unit has pre-control potential to emit that pollutant at greater than the major-source threshold to attain a Part 70 (Title V) permit. Limitations originating from post-1990 CAA Section 111- or Section 112-derived rules (NSPS or NESHAP rules, generally) [§64.2(b)(1)(i)] and limitations for which major-source permits specify a continuous compliance method [§64.2(b)(1)(vi)], are exempt from this definition and cannot be considered when determining CAM applicability. Depending on the emission rate of a unit determined to be subject to CAM, the permittee must submit a monitoring plan for the unit as a part of the Title V permit initial application [§64.5(a)] or the first renewal application [§64.5(b)]. However, the Department has requested that PSD applicants include monitoring plans for units found to be subject to CAM.

Because uncontrolled NO_X emissions from the continuous annealing furnace would not be expected to exceed 100 TPY without the SCR, the furnace will not be subject to CAM.

AM Calvert states that the shotblaster will have the uncontrolled potential to emit more than 100 TPY PM and will be subject to CAM requirements. However, rather than a precise estimation of the *emission source*'s pre-control potential emissions, this appears to be a figure derived from back-calculating the *control device*'s purported maximum efficiency (99%) from the emission rate BACT limit. As it stands, AM Calvert has proposed monitoring for the shotblaster and will be required to submit a formal CAM plan for PM emissions from the SHOT_B baghouse with the next Title V permit renewal after construction, unless they revise their estimate at that time.

AM Calvert states that the pickling line will have the uncontrolled potential to emit PM_{10} above than the "major source" threshold, making it subject to CAM; they have also proposed monitoring for these units and the PICKL scrubber. However, they are evaluating CAM applicability using the major source modification threshold under PSD rules (15 TPY for PM_{10}) rather than the Part 70 (Title V) major source threshold (100 TPY for PM_{10}). The pickling line will not have the capability to emit greater than 100 TPY of PM and would not be subject to CAM.

As discussed in this analysis, the pickling line will have the potential to emit greater than the Part 70 major source threshold for HCl (10 TPY) and would not clearly be subject to NESHAP CCC, which is a post-1990 CAA Section 112-derived rule that specifies continuous compliance methods. However, the anti-112(g) HCl limit and monitoring requirements that AM Calvert will take are equivalent to those prescribed by NESHAP CCC. As such, the Department has determined that CAM will not be applicable to the pickling line's HCl emissions.

ACID REGENERATION PLANT (X002)

Similar to the acid regeneration operations at AM/NS Calvert, AM Calvert is proposing to add an acid regeneration plant ("ARP") (**OXIDE, SPRY_R, TNK_FM**) to regenerate the spent hydrochloric acid from the NOES mill's APL. The iron salt solution formed from the pickling process would be dehydrated and oxidized via contact with hot reactor gases (direct-fire 13.0 MMBtu/hr natural gas burners) in a series of columns to ferric oxide and reformed hydrochloric acid. Off gases from the regeneration columns would be controlled by a scrubber (**SPRY_R**). The ferric oxide would be removed and pneumatically conveyed into silos or bins controlled by a small baghouse or dust collector (**OXIDE**).

The tank farm, containing tanks for spent acid, regenerated acid, rinse water, and fresh acid, associated with the new ARP would have a smaller stand-alone scrubber (**TNK_FM**).

BEST AVAILABLE CONTROL TECHNOLOGY (BACT)

Iron Oxide Storage (OXIDE)

PM

AM Calvert examined the use of fabric filtration (baghouse or dust collector) and a wet scrubber to control filterable particulate matter in the exhaust stream of the iron oxide storage. Cyclones were not considered in AM Calvert's analysis, but the Department notes that cyclones have worse control efficiency than baghouses and as such would have been eliminated in Step 3 (ranking the remaining technically feasible control options) regardless. AM Calvert noted, and the Department concurs, that fabric filtration is a more effective form of control for filterable particulate than wet scrubbers.

AM Calvert will meet a 0.0061 gr/dscf (0.17 lb/hr) PM/$PM_{10,filt}$ limit and 0.16 lb/hr $PM_{2.5,filt}$ limit on emissions exiting the iron oxide storage bins. This is comparable to the 0.41 lb/hr PM BACT limit on the ARP iron oxide storage bins (S59) at AM/NS Calvert and the 0.005 gr/dscf (0.31 lb/hr) PM/PM_{10} on the ARP iron oxide storage bins (LO71). Although it is less stringent than the 0.002 gr/dscf (0.06 lb/hr) PM limits imposed on Outokumpu Stainless USA, LLC's proposed ARP iron oxide storage bins (LA71), that source has yet to be constructed, and the limit has not been demonstrated. Additionally, a 10% opacity limit will be imposed on the source.

AM Calvert will be required to meet their proposed 0.14 lb/hr PM_{con} limit, although the Department does not anticipate condensable particulate matter from this process. AM Calvert conservatively estimated condensable particulate matter using EPA's retired *PM Calculator* tool and its factor for SCC Code 30300999 (Steel Manufacturing/Other Not Classified).

ARP Tank Farm (TNK_FM)

PM

AM Calvert addressed wet scrubbers and mist eliminators as potential control devices for reducing particulate matter emissions from the tank farm. Baghouses were eliminated from consideration as technically infeasible, due to their tendency to clog when controlling wet plumes and the filter media susceptibility to deteriorate when exposed to acid. AM Calvert

did not address wet electrostatic precipitators, which the Department notes are feasible for wet streams but only achieve high efficiency when controlling larger emission streams with a higher PM concentration. Wet scrubbers and mist eliminators have comparable efficiency for this process, but wet scrubbers are the traditional choice for controlling acidic fumes.

The proposed limits for tank farm and its wet scrubber are in line with similar sources found in the RBLC and within the state. AM Calvert will limit particulate matter emissions to 0.001 gr/dscf PM/PM_{10}/$PM_{2.5}$ (filterable), 0.12 lb/hr PM/PM_{10}/$PM_{2.5}$ (filterable), 0.0078 lb/hr PM (condensable), and 0.09 lb/hr PM (condensable). Additionally, a 10% opacity limit will be imposed on the sources.

Acid Regeneration Plant (SPRY_R)

PM

AM Calvert addressed wet scrubbers and mist eliminators as potential control devices for reducing particulate matter emissions in the off-gases from the acid regeneration process. Baghouses were eliminated from consideration as technically infeasible, due to their tendency to clog when controlling wet plumes and the filter media susceptibility to deteriorate when exposed to acid. AM Calvert did not address wet electrostatic precipitators, which the Department notes are feasible for wet streams but only achieve high efficiency when controlling larger emission streams with a higher PM concentration. Wet scrubbers and mist eliminators have comparable efficiency for this process (and some design overlap, with wet scrubbers often incorporating baffles/vanes).

In this case, AM Calvert states that “ARP process units are routed to four control devices in series before exiting through a single stack: a packed column wet scrubber, a dust venturi scrubber and vapor separator, a second packed wet scrubber, and a mist eliminator.” However, the Department understands the first packed column wet scrubber mentioned is where the bulk of the HCl fumes are washed out as ~18% HCl regenerated pickling liquor and thus more appropriately considered a process unit rather than a control device. The Department also understands the venturi scrubber and mist eliminator mentioned to be accessory elements to the second packed-column style wet scrubber; throughout the application, outside of the quoted description above, AM Calvert mainly refers to the ARP control device as simply the wet scrubber.

The proposed 0.0042 gr/dscf and 0.07 lb/hr PM/PM_{10}/$PM_{2.5}$ (filterable + condensable) limits for the wet scrubber on the acid regeneration plant are in line with similar sources found in the RBLC and within the state. Additionally, a 10% opacity limit will be imposed on the source.

NO_X

AM Calvert examined the usage of selective catalytic reduction (SCR), non-selective catalytic reduction (NSCR), and selective non-catalytic reduction (SNCR) add-on control technologies to control NO_X emissions from the ARP (originating from 13.0 MMBtu/hr of natural gas burned in the reactor) and deemed them to be technically infeasible. AM Calvert expects emissions exiting the wet scrubber are expected to have cooled to ~150 °F, which is close to the typical exit temperature of emissions from the wet scrubber of AM/NS Calvert’s similar HCl ARP. Among other reasons, AM Calvert dismisses both SNCR and NSCR as

technically infeasible due to the high inlet temperature requirements for those technologies (>1,600 °F & >800 °F).

SCR is dismissed as technically infeasible because it is purportedly "most commonly applied to larger boilers and to natural gas-fired combustion turbines and requires ductwork" and that said ductwork "cannot be built for the spray roaster due to the specific design requirements. Ducting is not feasible". The Department is unconvinced by AM Calvert's argument, given that SCR has been installed on the similarly-sized ARP at Outokumpu Stainless Steel, USA, though at that particular mixed-acid application, it controls NO_X from both spray roaster combustion and from oxidized nitric acid fumes from Outokumpu's mixed acid pickling liquor. However, we note that a significant temperature gap between the scrubber outlet and the minimum operating temperature for most SCR systems (>600 °F) would make SCR technically infeasible to operate regardless of whether it could or could not be physically installed.

Instead, AM Calvert proposes to install low-NO_X burners in the spray roaster. AM Calvert proposes to meet 0.05 lb/MMBtu and 0.71 lb/hr NO_X limits, in line with similar sources and small natural gas combustion sources generally.

VOC

AM Calvert addressed and eliminated thermal oxidation (including direct, recuperative, and regenerative designs) from consideration as technically infeasible due to the already-low concentration of VOC in flue emissions from natural gas combustion sources; afterburners were not addressed, though these would be similarly infeasible with low VOC. They also examined the use of catalytic oxidation (CatOx), wherein hot flue gas between 600 and 1,000 °F (although AM Calvert says they work best above 800 °F) passes across a bed of porous noble metal catalyst to oxidize both CO and VOC molecules to CO_2, and considered the use of this control technology to be technically infeasible again due to the low concentration of VOC in the flue gas. AM Calvert proposes to instead implement good combustion practices when burning their inherently low-VOC natural gas fuel, balancing excess oxygen to ensure minimal CO (and NO_X) formation.

The 0.0054 lb/MMBtu (0.07 lb/hr) VOC limit for the spray roasters is in line with similarly sized natural gas combustion sources found in the RBLC and the state.

Greenhouse Gases (CO_2e)

AM Calvert examined the possibility of using carbon capture and storage to control greenhouse gases. They consider it to be technically infeasible, and the Department concurs for small combustion sources.

AM Calvert will only burn clean natural gas a fuel and will limit CO_2e emissions to 6,651 tons per year (TPY) based on a 12-month rolling total.

ADEM Administrative Code Division 3 – "Air Pollution Control Program"

ADEM Admin. Code r. 335-3-1-.04(1)&(2) "Monitoring, Records, and Reporting"

This rule states that "The Director may require the owner or operator of any air contaminant source to establish and maintain such records; make such reports; install, use, and maintain such monitoring equipment or methods; sample such emissions in accordance with such methods at such locations, intervals, and procedures as the Director may prescribe; and provide such periodic emission reports as required in paragraph (2) of this Rule."

The Department cites this rule (along with the similar r. 335-3-16-.05(c) in the context of major source operating permits) as the authority to stipulate monitoring, recordkeeping, and reporting requirements as needed to determine continuous compliance with operating and emission standards such as the BACT limits determined above.

ADEM Admin. Code r. 335-3-4-.01(1)(a)&(b) "Visible Emissions"

Each emission point will be subject to the requirements of this regulation and must not discharge particulate of an opacity greater than twenty percent (20%), as determined by a six-minute average, except that during one six-minute period in any sixty-minute period, the emission point may emit particulate of an opacity no greater than forty percent (40%). However, the more stringent 10% opacity PSD limit imposed on each stack will be cited in the Emission Standards section of the permit in lieu of the 20%/40% state opacity standards.

ADEM Admin. Code r. 335-3-4-.03 "Fuel Burning Equipment" and 335-3-5-.01 "Fuel Combustion"

These regulations apply to fuel-burning equipment, which ADEM Admin. Code r. 335-3-1-.02(1)(ee) defines as indirect heating equipment. Because the spray roaster will be direct-fired, these rules do not apply.

40 CFR Part 60 – "New Source Performance Standards" [NSPS]

40 CFR 60 Subpart Dc – "Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units"

40 CFR Part 60, Subpart Dc is applicable to steam-generating boilers between 10 to 100 MMBtu/hr nameplate heat capacity, as defined in §60.41c. The 13.0 MMBtu/hr natural gas spray roaster burners within the reactor will provide direct heat, with products of combustion intermixing with the process gases, disqualifying the source from NSPS Dc applicability.

40 CFR PART 63 – "NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS" [NESHAP]

40 CFR 63 Subpart CCC – "National Emission Standards for Steel Pickling – HCl Process Facilities and Hydrochloric Acid Regeneration Plants"

This rule is applicable to facilities with HCl acid regeneration plants [§63.1155(a)(2)], carbon steel HCl pickling lines [§63.1155(a)(1)], and associated storage vessels [§63.1155(b)] at major sources of HAP. The proposed acid regeneration plant would be located at a major source of HAP and will regenerate HCl pickling liquor. Unlike HCl pickling line affected facilities in the rule, HCl acid regeneration plant affected facilities have no stipulations regarding what type of steel the spent pickling liquor had reacted with (see the *carbon steel* discussion in Annealing & Pickling Line section).

AM Calvert must not emit gases containing greater than 12 ppmv HCl and 6 ppmv Cl_2 [§63.1158(b)] from the SPRY_R scrubber. While the ARP is in production mode, AM Calvert must operate the ARP in a manner that minimizes the proportion of excess air fed to the process and maximizes the process off-gas temperature consistent with producing usable regenerated acid or iron oxide [§63.1159(a)]. AM Calvert must control emissions from the HCl tanks associated with the ARP via a closed vent system and control device [§63.1159(b)], which in this case is also the SPRY_R scrubber. AM Calvert has a general duty to minimize emissions from all sources [§63.1159(c)]. The ARP must achieve compliance immediately upon startup [§63.1160(a)(2)].

AM Calvert must conduct an initial performance test within 180 days of startup and subsequent performance tests on the SPRY_R scrubber every 2½ years to demonstrate compliance with the HCl concentration limit [§63.1161(a) & §63.1162(a)(1)]. HCl emissions must be determined using 40 CFR 60 Appendix A-8, Method 26a. Additionally, after each successful performance test, AM Calvert must establish operating parameters for recirculation rate through the SPRY_R scrubber [§63.1161(b) & §63.1162(a)(2)]. Recirculation rate shall be monitored continuously and recorded at least once per shift [§63.1162(a)(2)]. Acid regeneration process off-gas temperature and proportion of excess air must be monitored and recorded at least once every shift while operating in production mode [§63.1162(b)(1)&(2)]. The monitoring devices used to comply with these requirements must be calibrated yearly [§63.1162(a)(5) & §63.1162(b)(3)]. Each HCl storage vessel must be inspected semiannually to ensure the closed-vent system and the TNK_FM scrubber is functioning properly [§63.1162(c)]. AM Calvert must establish an operating & maintenance (O&M) plan for both the SPRY_R and TNK_FM scrubbers according to the requirements of §63.1160(b).

Records of all monitoring and maintenance requirements [§63.1165(b)] and records of every problem observed and corrective action taken [§63.1165(a)] must be kept for five years. AM Calvert must report the results of all performance tests within 60 days of completion, and must submit a malfunction report to the Department semiannually [§63.1164(b)]. AM Calvert must comply with the notification requirements in §63.1163.

40 CFR 63 Subpart DDDDD – "National Emission Standards for Industrial, Commercial, and Institutional Boilers and Process Heaters" [Boiler MACT]

The Boiler MACT is applicable to boilers and process heaters as defined in §63.7575. Under this rule, *boiler* means *an enclosed device using controlled flame combustion and having the primary purpose of recovering thermal energy in the form of steam or hot water*. *Process heater* means *an enclosed device using controlled flame, and the unit's primary purpose is to transfer heat indirectly to a process material (liquid, gas, or solid) or to a heat transfer material (e.g., glycol or a mixture of glycol and water) for use in a process unit, instead of generating steam*. Because it uses direct-fired burners, the spray roaster at the ARP would not meet either of these definitions and would not be subject to this subpart.

40 CFR PART 64 – "COMPLIANCE ASSURANCE MONITORING" [CAM]

An emission source is subject to CAM (1) if that unit is subject to an emission limitation or standard for a given pollutant, (2) if that unit uses a control device, other than inherent processes, to achieve compliance with that standard for that pollutant, and (3) if that unit has pre-control potential to emit that pollutant at greater than the major-source threshold. Limitations originating from post-1990 NSPS or NESHAP rules [§64.2(b)(1)(i)] and limitations for which major-source permits specify a continuous compliance method [§64.2(b)(1)(vi)], are exempt from this definition and cannot be considered when determining CAM applicability.

Emissions from acid regeneration plant, either reactor emissions controlled by SPRY_R scrubber or tank farm emissions controlled by the TNK_FM scrubber, are not subject to CAM for either PM or HCl. Neither source has the uncontrolled potential to emit >100 TPY of PM, and both are subject to a post-1990 rule (NESHAP CCC) for HCl. Additionally, the iron oxide storage bins controlled by the OXIDE filter are not expected to emit more than >100 TPY PM.

BOILERS 1 & 2 (X003)

AM plans to construct two 45.5 MMBtu/hr natural gas-fired boilers (**BOIL_1 & BOIL_2**) to provide process heat to the mill. The Department will group the boilers into Air Permit No. 503-0157-X103.

BEST AVAILABLE CONTROL TECHNOLOGY (BACT)

Boilers 1 & 2 (BOIL_1 & BOIL_2)

PM

The only emissions expected from the boilers are products of combustion from natural gas. As such, the Department concurs with AM Calvert's determination that baghouses, wet scrubbers, and ESPs would be technically infeasible, as particulate matter emissions from the boilers are expected to be too low for add-on control technologies to have any meaningful effect on PM emissions. AM Calvert will be limited to burning natural gas, which has inherently low PM emissions, as fuel. AM Calvert has proposed 0.0019 lb/MMBtu and 0.08 lb/hr PM/PM_{10}/$PM_{2.5}$ (filterable) emission limits and 0.0075 lb/MMBtu and 0.35 lb/hr PM (filterable+condensable) emission limits, although the Department has converted AM Calvert's suggested limits from lb/MMscf to lb/MMBtu. These proposed BACT limits are equivalent to AP-42 factors for burning natural gas fuel and are the typical BACT limits for PM emissions from uncontrolled sources burning natural gas fuel, per a review of similar sources found in the RBLC and within the state.

NO_X

AM Calvert examined the usage of low-NO_X burner and flue gas recirculation (FGR) designs along with add-on control options including selective catalytic reduction (SCR), selective non-catalytic reduction (SNCR), and non-selective catalytic reduction (NSCR) as potential NO_X-control technologies. They found SNCR and NSCR to be technically infeasible for their designs; their analysis noted that SNCR requires a high temperature range (1,600 – 2,100 °F) that the boilers would not reach and noted that NSCR needs low oxygen conditions (as with an engine's exhaust) to function properly.

In the original application, AM Calvert attempted to argue that SCR was a technically infeasible option by virtue of not fitting within the ductwork of small boilers. The Department requested that this rationale be revised, and in the final version of the application, AM Calvert argues that SCR is technically feasible but declines to select it as an add-on control device (in addition to their low-NO_X burner design) in Step 4 on the grounds that the concentration of NO_X in the boiler flue would be too low for minimum (~70%) reduction to be achieved by SCR due to the low-NO_X burners. This is an effective argument for technical infeasibility that would have been more appropriately included in Step 2.

AM Calvert plans to use low-NO_X burners capable of achieving 0.036 lb/MMBtu NO_X. In the February 11, 2025 revision of the BACT analysis, at the Department's request, AM Calvert added FGR to the analysis, writing that FGR was technically feasible, could reduce NO_X emissions by 30-50%, and could be used in conjunction with low-NO_X burners. However, AM Calvert failed to appropriately consider FGR beyond Step 3 of the analysis. That said, per a review of similar sources found in the RBLC and within the state, the proposed limits of 0.036 lb/MMBtu NO_X and 1.64 lb/hr NO_X are BACT for small burners for which add-on control

devices are infeasible, regardless of whether it is achieved by low-NO_X burners + FGR or simply by low-NO_X burners.

VOC

AM Calvert addressed and eliminated thermal oxidation (including direct, recuperative, and regenerative designs) from consideration as technically infeasible due to the already-low concentration of VOC in flue emissions from natural gas combustion sources; afterburners were not addressed, though these would be similarly infeasible with low VOC. They also examined the use of catalytic oxidation (CatOx), wherein hot flue gas between 600 and 1,000 °F (although AM Calvert says they work best above 800 °F) passes across a bed of porous noble metal catalyst to oxidize both CO and VOC molecules to CO_2, and considered the use of this control technology to be technically infeasible again due to the low concentration of VOC in the boiler flue gas. AM Calvert proposes to instead implement good combustion practices when burning their inherently low-VOC natural gas fuel, balancing excess oxygen to ensure minimal CO (and NO_X) formation.

The 0.0054 lb/MMBtu and 0.25 lb/hr VOC limits for each of the boilers are in line with similarly sized boilers found in the RBLC and the state.

Greenhouse Gases (CO_2e)

AM Calvert examined the possibility of using carbon capture and storage to control greenhouse gases. They consider it to be technically infeasible, and the Department concurs for small combustion sources.

AM Calvert will only burn clean natural gas a fuel, and the Department will limit CO_2e emissions from each boiler to 23,336.5 tons per year (TPY) based on a 12-month rolling total. AM Calvert had requested a combined 48,233,364.78 TPY CO_2e limit between the two boilers, but this is not supported as a valid limit as it is more than the expected emissions from both boilers combined running at maximum rated capacity for 8,760 hours per year using accepted factors from 40 CFR Part 98, Subpart C.

ADEM ADMINISTRATIVE CODE DIVISION 3 – "AIR POLLUTION CONTROL PROGRAM"

ADEM Admin. Code r. 335-3-1-.04(1)&(2) "Monitoring, Records, and Reporting"

This rule states that "The Director may require the owner or operator of any air contaminant source to establish and maintain such records; make such reports; install, use, and maintain such monitoring equipment or methods; sample such emissions in accordance with such methods at such locations, intervals, and procedures as the Director may prescribe; and provide such periodic emission reports as required in paragraph (2) of this Rule."

The Department cites this rule (along with the similar r. 335-3-16-.05(c) in the context of major source operating permits) as the authority to stipulate monitoring, recordkeeping, and reporting requirements as needed to determine continuous compliance with operating and emission standards such as the BACT limits determined above.

ADEM Admin. Code r. 335-3-4-.01(1)(a)&(b) "Visible Emissions"

Each emission point will be subject to the requirements of this regulation and must not discharge particulate of an opacity greater than twenty percent (20%), as determined by a six-minute average, except that during one six-minute period in any sixty-minute period, the emission point may emit particulate of an opacity no greater than forty percent (40%).

ADEM Admin. Code r. 335-3-4-.03 "Fuel Burning Equipment" and 335-3-5-.01 "Fuel Combustion"

These regulations apply to fuel-burning equipment, which ADEM Admin. Code r. 335-3-1-.02(1)(ee) defines as indirect heating equipment. Because the boilers will be indirect-fired, these rules are applicable.

The equation given in r. 335-3-4-.03(1) would limit filterable particulate matter emissions from each boiler to 0.257 lb/MMBtu or roughly 262.4 lb/MMscf. This rule, first promulgated in 1972, was written with coal and fuel oil combustion sources in mind; the proposed 0.0019 lb/MMBtu PM_{filt} BACT limit for each boiler proposed above would fully supersede the limit imposed by this rule.

Per r. 335-3-5-.01(1), the SO_2 limit for indirect combustion sources in Category II counties (including Mobile County) is 1.8 lb/MMBtu. As above, this rule was promulgated in 1972 and aimed at high-sulfur fuels like coal; compliant, pipeline quality natural gas fuel does not have sufficient sulfur content to emit SO_2 at rates even within a couple orders of magnitude of this limit when combusted.

40 CFR PART 60 – "NEW SOURCE PERFORMANCE STANDARDS" [NSPS]

40 CFR 60 Subpart Dc – "Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units"

40 CFR Part 60, Subpart Dc "Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units" is applicable to steam-generating boilers with a maximum design heat input capacity that is ≥10 MMBtu/hr and <100 MMBtu/hr, as defined in §60.41b and §60.41c. Because the proposed 45.5 MMBtu/hr boilers would use only natural gas as a fuel, the emission standards of §60.42c and §60.43c do not apply. Per §60.48c(g), AM Calvert must record natural gas usage within these units.

40 CFR PART 63 – "NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS" [NESHAP]

40 CFR 63 Subpart DDDDD – "National Emission Standards for Industrial, Commercial, and Institutional Boilers and Process Heaters" [Boiler MACT]

40 CFR Part 63, Subpart DDDDD "National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters",

also known as the “Boiler MACT”, is applicable to boilers and process heaters at major sources of HAP as defined in §63.7575, including the two proposed 45.5 MMBtu/hr boilers.

Natural gas-fired boilers do not have specific emission standards under and are not listed within Table 1 of the Boiler MACT. However, they are subject to work practice standards found in Table 3 of the subpart. Each having a nameplate heat rating of greater than 10 MMBtu/hr, the boilers must undergo annual tune-ups per §63.7540(a)(10). AM must meet the recordkeeping requirements of §63.7555 and the reporting requirements of §63.7545 and §63.7550.

40 CFR PART 64 – “COMPLIANCE ASSURANCE MONITORING” [CAM]

An emission source is subject to CAM (1) if that unit is subject to an emission limitation or standard for a given regulated air pollutant (or surrogate thereof), (2) if that unit uses a control device, other than inherent processes, to achieve compliance with that standard for that pollutant, and (3) if that unit has pre-control potential to emit that pollutant at greater than the major-source threshold to attain a Part 70 (Title V) permit. Limitations originating from post-1990 CAA Section 111- or Section 112-derived rules (NSPS or NESHAP rules, generally) [§64.2(b)(1)(i)] and limitations for which major-source permits specify a continuous compliance method [§64.2(b)(1)(vi)], are exempt from this definition and cannot be considered when determining CAM applicability.

The boilers do not have the potential to emit greater than 100 TPY of any criteria pollutant and are not controlled.

COLD ROLLING MILLS 1 & 2 (X004)

Annealed and pickled coils will be cold rolled via one of two single-stand, reversing cold rolling mills (**CRM_1 & CRM_2**) to reduce coil thickness to the final gauge desired for the end product. At each mill, an oil-water emulsion will be sprayed onto the rolls as lubricant and coolant as the coil reduces in thickness as it is passed back and forth through the mill. Oil-laden fumes generated at the work roll and mists generated by the blow-off drying system will be captured by fume exhaust hoods routing to that mill's respective mist eliminator and condenser/chiller. Emulsion collected from the mill, mist eliminator, and condenser is filtered and recirculated.

BEST AVAILABLE CONTROL TECHNOLOGY (BACT)

PM

AM addressed cyclones, wet scrubbers, mist eliminators, and condensers as potential control devices for reducing particulate matter emissions, eliminating thermal oxidizers as technically infeasible. AM Calvert did not address baghouses, which the Department notes are technically infeasible for wet emissions due to clogging, or wet electrostatic precipitators, which are more suitable for larger emission streams with a higher PM concentration. All of the options addressed are technically feasible options, but cyclones are the least efficient. Between wet scrubbers and mist eliminators, mist eliminators are more typically used to control emissions from cold rolling and generate less oily wastewater effluent. AM Calvert plans to install a mist eliminator followed by a condenser or chiller unit at the exhaust of each cold rolling mill.

The proposed 0.0026 gr/dscf and 2.29 lb/hr PM (filterable) and 0.0017 gr/dscf and 1.49 lb/hr $PM_{2.5}$ (filterable) limits for the cold rolling mill are comparable to that of similar sources found in the RBLC and the state. The condenser removes the need to measure condensable particulate matter from the source; emissions from cold rolling mills are not exceptionally hot, and properly operated condenser/chiller units can reduce emissions to ambient temperature (below the condensation point for the mineral oil involved). Additionally, a 10% opacity limit will be imposed on the source.

ADEM ADMINISTRATIVE CODE DIVISION 3 – "AIR POLLUTION CONTROL PROGRAM"

ADEM Admin. Code r. 335-3-1-.04(1)&(2) "Monitoring, Records, and Reporting"

This rule states that "The Director may require the owner or operator of any air contaminant source to establish and maintain such records; make such reports; install, use, and maintain such monitoring equipment or methods; sample such emissions in accordance with such methods at such locations, intervals, and procedures as the Director may prescribe; and provide such periodic emission reports as required in paragraph (2) of this Rule."

The Department cites this rule (along with the similar r. 335-3-16-.05(c) in the context of major source operating permits) as the authority to stipulate monitoring, recordkeeping, and reporting requirements as needed to determine continuous compliance with operating and emission standards such as the BACT limits determined above.

ADEM Admin. Code r. 335-3-4-.01(1)(a)&(b) "Visible Emissions"

Each emission point will be subject to the requirements of this regulation and must not discharge particulate of an opacity greater than twenty percent (20%), as determined by a six-minute average, except that during one six-minute period in any sixty-minute period, the emission point may emit particulate of an opacity no greater than forty percent (40%). However, the more stringent 10% opacity PSD limit imposed on each stack will be cited in the Emission Standards section of the permit in lieu of the 20%/40% state opacity standards.

40 CFR PART 64 – "COMPLIANCE ASSURANCE MONITORING" [CAM]

An emission source is subject to CAM (1) if that unit is subject to an emission limitation or standard for a given regulated air pollutant (or surrogate thereof), (2) if that unit uses a control device, other than inherent processes, to achieve compliance with that standard for that pollutant, and (3) if that unit has pre-control potential to emit that pollutant at greater than the major-source threshold to attain a Part 70 (Title V) permit. Limitations originating from post-1990 CAA Section 111- or Section 112-derived rules (NSPS or NESHAP rules, generally) [§64.2(b)(1)(i)] and limitations for which major-source permits specify a continuous compliance method [§64.2(b)(1)(vi)], are exempt from this definition and cannot be considered when determining CAM applicability.

Each rolling mill will have the uncontrolled potential to emit more than 100 TPY PM and will be subject to CAM requirements. AM Calvert has proposed monitoring for the rolling mills and will be required to submit a formal CAM plan for PM emissions from the CRM_1 & CRM_2 mist eliminators and condensers with the next Title V permit renewal after construction.

ANNEALING AND COATING LINES 1 & 2 (X005 & X006)

Cold-rolled coils will be processed in one of two identical, parallel annealing & coating lines to produce the correct grain orientation (or lack thereof) in the steel product via annealing and apply the correct varnishes for the application that the non-oriented electrical steel will be used for.

Similar to the APL, cold-rolled coils entering either ACL will be straightened in a flattener/leveler and welded together; the lead end of each new coil will be welded to the tail end of the preceding coil to form a continuous strip. Prior to entering the annealing furnace, the residual lubricant from cold-rolling will be rinsed off with a water-based alkaline solution in a series of sprays, brushes, and electrolytic baths in the coating line cleaning section, followed by a water rinse and electric hot-air dryer. Each line's cleaning section will be vented to and controlled by a mist eliminator (**CLEAN_1 & CLEAN_2**).

After cleaning, the strip will be annealed in an electric annealing furnace with a hydrogen-nitrogen mixture atmosphere. The atmosphere of each line's furnace will be kept under positive pressure to prevent ambient air intrusions via injection of hydrogen-nitrogen mixture gas. The furnace will be sealed except for five points: the strip's entry and exit points along with three pressure relief purge valves along the line. The hydrogen gas exiting each of these five points will be auto-ignited or "flared" by contact with permanent-ignition glow heaters (no natural gas combusted as a pilot light), and exhaust fans will draw emissions out through purge stacks (**HYPU_A1 – HYPU_A5 & HYPU_B1 – HYPU_B5**). Thermal NO_X is expected to form when the hydrogen in the hydrogen-nitrogen mixture combusts.

In the coating section of each line, varnish is applied to the strip via roll coaters in an enclosed coater room that exhausts to the line's regenerative thermal oxidizer with 2 MMBtu/hr natural gas burners (**RTO_1 & RTO_2**). After, the varnish is dried and cured to evaporate solvents in the coating in a 11.88 MMBtu/hr direct-fired curing oven, controlled by the same RTO as the coater room. Between the zone burners in the line itself and the burners in each RTO, total heat capacity for each coating line will be 13.88 MMBtu/hr. After passing through the oven, the coil will pass through an air cooler which exhausts to atmosphere uncontrolled (**ACL_C1 & ACL_C2**). Following the air cooler, the strip will be further cooled via a water quench spray exhausting to a mist eliminator (**QUEN_1 & QUEN_2**). Finally, the strip will be trimmed to width as necessary and rewound.

BEST AVAILABLE CONTROL TECHNOLOGY (BACT)

ACL Cleaning Section (CLEAN_1 & CLEAN_2)

PM

AM Calvert addressed WESPs, cyclones, wet scrubbers, fabric filtration/baghouses, and mist eliminators as potential control devices for reducing particulate matter emissions from the cleaning section of each annealing & coating line. AM Calvert identified baghouses as technically infeasible for wet emissions due to clogging and wet electrostatic precipitators as technically infeasible due to the emission stream having low grain loading. AM Calvert also correctly identified that cyclones have low efficiency compared to other options, but then incorrectly dismissed them as technically infeasible on these grounds rather than carrying through to steps 3 & 4 of the BACT analysis. Wet scrubbers and mist eliminators have

comparable efficiency for this process, and AM Calvert proposes to use a mist eliminator due to its lower effluent generation.

AM Calvert has proposed 0.003 gr/dscf and 0.38 lb/hr $PM/PM_{10}/PM_{2.5}$ (filterable) limits for the cleaning section. AM Calvert has not estimated any condensable particulate matter emissions from the source, though emissions are expected to be well above ambient due to the hot air dryer. To make the proposed limits more comparable to similar degreasing or cleaning sections in the RBLC and the state, the Department is adjusting the limits to 0.003 gr/dscf and 0.38 lb/hr $PM/PM_{10}/PM_{2.5}$ (filterable+condensable). Additionally, a 10% opacity limit will be imposed on these sources.

ACL Annealing Furnace Purge (HYPU_A1 – HYPU_A5 & HYPU_B1 – HYPU_B5)

NO_X

NO_X is generated via the thermal NO_X mechanism when combusting the hydrogen-nitrogen purge gas. AM Calvert addressed the use of air-assist, steam-assist, and flare gas recovery (wherein the hydrogen-nitrogen gas is used as supplemental fuel in another process) and eliminated flare gas recovery as technically infeasible to their application as the flow and heat content of the purge gas would be too variable to be used as reliable fuel. Air-assist and steam-assist helps flares combust waste gases more completely, but this is typically used in applications where hydrocarbons are being burned and where incomplete combustion yields CO, VOC, and volatile HAP species.

AM Calvert has proposed 0.064 lb/MMBtu NO_X emission limits for their non-assisted flares along with equivalent 0.22 lb/hr NO_X limits for HYPU_A1 & HYPU_B1 and 0.37 lb/hr NO_X emission limits for HYPU_A2 – HYPU_A5 & HYPU_B2 – HYPU_B5. The heat content element of the proposed lb/MMBtu limit refers to the heat content of the purge gas. AM Calvert assumes this heat value is equivalent to 269 Btu/scf for pure hydrogen gas, which is conservative for estimating emissions when considering that the purge gas will in actuality be a mixture of hydrogen and inert nitrogen. However, because it is unclear how the heat content element of a lb/MMBtu NO_X limit could be evaluated during a stack test, the Department will only impose 0.22 lb/hr NO_X limits for HYPU_A1 & HYPU_B1 and 0.37 lb/hr NO_X emission limits for HYPU_A2 – HYPU_A5 & HYPU_B2 – HYPU_B5.

ACL Coating Section (RTO_1 & RTO_2)

PM

AM Calvert addressed baghouses, scrubbers, and ESPs as potential control devices for reducing particulate matter emissions from the coating line. AM Calvert argued that all of these control systems would be technically infeasible on the grounds that the particulate matter concentration at the outlet of RTO1 is too low for effective control (with expected outlet PM concentration for these devices being less than the expected inlet concentration).

AM Calvert notes that particulate matter emissions from coating lines and curing ovens are largely a result of incomplete combustion of the fumes from the solvents evaporated off during curing, with a trace amount of non-combustible particles in the natural gas fuel carrying through the process. Despite this, AM Calvert has proposed 0.0019 lb/MMBtu and 0.03 lb/hr $PM/PM_{10}/PM_{2.5}$ (filterable) and 0.0075 lb/MMBtu and 0.08 lb/hr PM

(filterable+condensable) emission limits, which are equivalent to AP-42 factors for burning natural gas fuel, despite prompting from the Department to estimate the contribution of incomplete combustion and account for that contribution in the proposed PM limit; as this analysis will show, AM Calvert has not accordingly proposed a minimum 100% destruction efficiency limit on VOC emissions from this source—they have ultimately accepted 99%. The permit will require stack testing to show compliance with AM Calvert's proposed PM limit. Additionally, a 10% opacity limit will be imposed on these sources.

NO_X

AM Calvert examined the usage of selective catalytic reduction (SCR), selective non-catalytic reduction (SNCR), and non-selective catalytic reduction (NSCR) as add-on NO_X-control technologies for the coating line and found all to be technically infeasible. Instead, AM Calvert proposes to use low-NO_X burner designs in the curing ovens and the RTO.

The proposed limits for each ACL coating section are in line with similar sources found in the RBLC and within the state. AM Calvert will limit NO_X emissions to 0.083 lb/MMBtu and 1.15 lb/hr via low-NO_X burners.

VOC

For the coating line, AM Calvert addressed the use of regenerative and recuperative thermal oxidizers as well as catalytic oxidizers. AM Calvert did not address direct-flame thermal oxidizers, which are an older design of thermal oxidizers that can achieve similar destruction efficiencies as other designs but with less fuel efficiency due to the lack of heat recovery that RTOs have. AM Calvert considers catalytic oxidation to be technically infeasible because "oxidation catalysts have limited demonstration in reducing VOC emissions from natural gas fired heaters, boilers, and furnaces" despite the primary source of VOC from the source being from coating solvents rather than the natural gas fuel; the Department notes however that catalytic oxidation is not known to be more effective than incineration via RTO for this type of application (RTOs are standard control devices for coating lines). The regenerative thermal oxidizer that AM Calvert proposes to use is the best available control device for this application.

AM Calvert has proposed limits of 2.06 lb/hr VOC in conjunction with a 99% minimum destruction efficiency limit or 20 ppmv VOC (as carbon) limit as BACT for RTO_1 and RTO_2. The concentration limit will function as an alternative to the 99% destruction efficiency limit for instances where the inlet concentration is too low for the destruction limit to be achievable, though Department will adjust the proposed limit to a dry basis, or 20 ppmvd VOC (as carbon). These limits are comparable to BACT limits for similar sources.

Greenhouse Gases (CO_2e)

AM Calvert examined the possibility of using carbon capture and storage to control greenhouse gases. They consider it to be technically infeasible, and the Department concurs for small combustion sources.

AM Calvert will only burn clean natural gas a fuel and will limit CO_2e emissions to 9,807 tons per year (TPY) based on a 12-month rolling total. This limit accounts for CO_2 emissions from the fuel as well as combusted organic compounds from the coating operation.

ACL Coating Cooling Section (ACL_C1 & ACL_C2)

VOC

A small amount of volatile organic compounds is expected to continue to emit from the coil for a short time after it leaves the curing ovens. For AM Calvert's coating lines, the air cooling section is where these emissions are expected to occur. AM Calvert addressed the use of regenerative and recuperative thermal oxidizers as well as catalytic oxidizers. AM Calvert did not address direct-flame thermal oxidizers, which are an older design of thermal oxidizers that can achieve similar destruction efficiencies as other designs but with less fuel efficiency due to the lack of heat recovery that RTOs have. AM Calvert notes that VOC emissions from the cooling section are too low in concentration for either thermal or catalytic oxidation to be technically feasible.

Neither AM Calvert nor the Department could find BACT determinations for similar sources while reviewing the RBLC and similar sources. AM Calvert has proposed VOC limits of 6.6 mg/Nm^3 and 2.4 lb/hr, equivalent to their vendor's estimate for emissions from the source.

PM

AM Calvert estimates a small amount of filterable particulate matter (1 mg/Nm^3 or 0.00044 gr/scf) from the cooling section, likely organic in nature and related to the volatile organic compounds expected from this section. AM Calvert addressed the use of fabric filtration, scrubbers, and ESPs but notes that the expected particulate matter concentration of the cooling section is too low for any add-on control device to be technically feasible.

Neither AM Calvert nor the Department could find BACT determinations for similar sources while reviewing the RBLC and similar sources. AM Calvert has proposed limits of 1 mg/Nm^3 and 0.37 lb/hr PM/PM_{10}/$PM_{2.5}$ (filterable), equivalent to their coating line vendor's estimate for emissions from the source. Additionally, a 10% opacity limit will be imposed on these sources.

ACL Coating Quench Section (QUEN_1 & QUEN_2)

PM

The filterable particulate matter generated in the quench section originates largely from particles in the cooling water used. For the wet plume generated from the quench section, AM Calvert addressed the use of scrubbers, cyclones, and mist eliminators. Cyclones have inferior control efficiency compared to scrubbers and mist eliminators. Wet scrubbers and mist eliminators have comparable efficiency for this process, and AM Calvert proposes to use a mist eliminator due to its lower effluent generation.

AM Calvert has proposed limits of 0.11 lb/hr PM/PM_{10} (filterable) and 0.0004 lb/hr $PM_{2.5}$ (filterable) each quench section, which equates to 0.00014 gr/dscf and 0.00000051 gr/dscf, respectively. Because the fine particulate matter limit will be achieved more through lack of fine particles in the quench water and less through mist eliminator effectiveness, the Department is only imposing the equivalent grain-loading limit for PM/PM_{10} alongside AM Calvert's proposed mass rate limits. Additionally, a 10% opacity limit will be imposed on these sources.

ADEM ADMINISTRATIVE CODE DIVISION 3 – "AIR POLLUTION CONTROL PROGRAM"

ADEM Admin. Code r. 335-3-1-.04(1)&(2) "Monitoring, Records, and Reporting"

This rule states that "The Director may require the owner or operator of any air contaminant source to establish and maintain such records; make such reports; install, use, and maintain such monitoring equipment or methods; sample such emissions in accordance with such methods at such locations, intervals, and procedures as the Director may prescribe; and provide such periodic emission reports as required in paragraph (2) of this Rule."

The Department cites this rule (along with the similar r. 335-3-16-.05(c) in the context of major source operating permits) as the authority to stipulate monitoring, recordkeeping, and reporting requirements as needed to determine continuous compliance with operating and emission standards such as the BACT limits determined above. Additionally, this rule is cited to authorize permit conditions holding AM Calvert to certain stipulations made in their application. Specifically, the permit will require that AM Calvert's coating material is free of HAP content and their coating line is a permanent total enclosure per Method 204 of Part 51 Appendix M, as attested to by the permit application.

ADEM Admin. Code r. 335-3-4-.01(1)(a)&(b) "Visible Emissions"

Each emission point will be subject to the requirements of this regulation and must not discharge particulate of an opacity greater than twenty percent (20%), as determined by a six-minute average, except that during one six-minute period in any sixty-minute period, the emission point may emit particulate of an opacity no greater than forty percent (40%). However, the more stringent 10% opacity PSD limit imposed on each stack will be cited in the Emission Standards section of the permit in lieu of the 20%/40% state opacity standards.

ADEM Admin. Code r. 335-3-4-.03 "Fuel Burning Equipment" and 335-3-5-.01 "Fuel Combustion"

These regulations apply to fuel-burning equipment, which ADEM Admin. Code r. 335-3-1-.02(1)(ee) defines as indirect heating equipment. Because the curing ovens will be direct-fired, these rules do not apply.

40 CFR PART 60 – "NEW SOURCE PERFORMANCE STANDARDS" [NSPS]

40 CFR 60 Subpart TT – "Standards of Performance for Metal Coil Surface Coating"

Each coating line is subject to 40 CFR Part 60, Subpart TT, "*Standards of Performance for Metal Coil Surface Coating*". To comply, AM Calvert must limit VOC emissions by 90% each month [§60.462(a)(3)] as determined by §60.463(c)(2) and §60.466.

The definition of *finish coat operation* in §60.461 is a "coating application station, curing oven, and quench station used to apply and dry or cure the final coating(s) on the surface of the metal coil," and a *quench station* is further defined as "that portion of the metal coil surface coating operation where the coated metal coil is cooled, usually by a water spray, after baking or curing." Both the cooling and quench sections of the coating line would fall under this definition of *quench station* and therefore *finish coat operation*.

Per §60.464(c), because RTO_1 and RTO_2 are used to meet the 90% destruction efficiency limit for their respective coating lines, AM Calvert must install, calibrate, operate, and maintain a device that continuously records the combustion temperature of any effluent gases incinerated. This device shall have an accuracy of ±2.5 °C. or ±0.75 percent of the temperature being measured expressed in degrees Celsius, whichever is greater. AM Calvert must also record all periods (during actual coating operations) in excess of 3 hours during which the average temperature in the combustion zone of each RTO remains more than 28 °C (50 °F) below the temperature at which compliance was demonstrated during the most recent stack test. The records required by §60.7 of Part 60 Subpart A shall identify each such occurrence and its duration. Additionally, AM Calvert shall maintain daily records of each RTO's combustion temperature [§60.465(e)].

AM Calvert must also submit reports at the frequency specified in §60.7(c) when the either RTO_1 or RTO_2 combustion temperature drops as defined under §60.464(c). If no such periods occur, AM Calvert shall state this in the report [§60.465(d)].

40 CFR PART 63 – "NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS" [NESHAP]

40 CFR 63 Subpart SSSS – "National Emission Standards for Hazardous Air Pollutants: Surface Coating of Metal Coil"

The coating line is subject to 40 CFR Part 63, Subpart SSSS, "*National Emission Standards for Hazardous Air Pollutants: Surface Coating of Metal Coil*". The coil coating line is located at a major source of HAP per §63.5090(a), and none of the exceptions listed in §63.5090(b)-(e) clearly apply.

To comply, AM Calvert either must limit organic HAP emissions from the coating line by 98% each 12-month compliance period (accounting for both capture and control effectiveness) [§63.5120(a)(1)], must use coatings or paints with no more than 0.046 kilogram of organic HAP per liter of solids in the paint each 12-month compliance period [§63.5120(a)(2)], or must limit organic HAP at the outlet of the coating line to no more than 20 ppmvd while having a 100% capture efficiency [§63.5120(a)(3)]. AM Calvert has stated that they expect all varnishes and solvents used in either coating line will be HAP-free and will comply with this subpart through §63.5120(a)(2); they have accordingly estimated no HAP emissions from the coating line beyond trace amounts from burning natural gas fuel. All options have been included in Air Permit Nos. 503-0157-X105 & -X106, though AM Calvert must submit a revised application with updated HAP emission estimates to get Department approval to operate using varnishes or solvents containing HAPs.

Although the definition of *coil coating line* in §63.5110 states that "A coil coating line includes a web unwind or feed section, a series of one or more work stations, any associated curing oven, wet section, and quench station," the July 18, 2000 preamble to the proposed rule states that "Wet section/pretreatment and quench operations are part of the metal coil coating line, but are not subject to the proposed emission limitations." This interpretation would preclude AM Calvert from needing to consider HAP emissions from the cooling & quench sections of the coating line when showing compliance with either §63.5120(a)(1) or (3).

For operators using incinerators to comply with the HAP standards of either §63.5120(a)(1) or (3), the average temperature within the combustion zone of the incinerator may not fall below the limit established during the most recent performance test over any 3-hour period [§63.5121(a)]. This will not apply while AM Calvert is restricting the HAP content of their material per §63.5120(a)(2); however, AM Calvert has proposed essentially identical minimum temperature requirements for RTO_1 & RTO_2 to show compliance with their VOC BACT limits.

At all times, AM Calvert must operate and maintain the coating line, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions [§63.5140(b)].

While showing compliance with the HAP content limit in §63.5120(a)(2) as stipulated in the application, AM Calvert must determine the organic HAP weight fraction of each coating material, the solids content of each coating material, and the density of each coating material [§63.5160(b)&(c)]. AM Calvert intends to show that coatings are compliant *as purchased* in that each coating material used during the 12-month compliance period does not exceed 0.046 kg HAP per liter of solids [§63.5170(a)]. Alternatively, AM Calvert may show that the coatings are compliant *as applied* either by determining that each coating material used does not exceed 0.046 kg HAP per liter solids on a rolling 12-month average (calculated monthly) [§63.5170(b)(1)] or by determining that the average of all coating materials used does not exceed 0.046 kg HAP per liter solids on a rolling 12-month average (calculated monthly) [§63.5170(b)(2)].

If AM Calvert were to show compliance with this subpart's organic HAP overall control efficiency or outlet concentration standards in §63.5120(a)(1)&(3) respectively, AM Calvert would determine the destruction efficiency of RTO_1 and RTO_2 and the organic HAP content of the emissions [§63.5160(d)] as well as the capture efficiency of the coating line enclosure [§63.5160(e)] during stack testing. If the enclosure were to meet the criteria for a "permanent total enclosure", confirmed by demonstrating that it meets the requirements of section 6 of EPA Method 204 of 40 CFR Part 51, Appendix M (or an EPA approved alternative method) and by demonstrating that all exhaust gases from the enclosure are delivered to a control device, AM Calvert would be able assume it achieves 100 percent capture efficiency. Compliance would be determined on a monthly and 12-month average basis [§63.5170(c)]. The initial performance test would be conducted within 180 days of AM Calvert choosing to use the capture system and add-on control devices (RTO_1 & RTO_2) to comply with this rule, and subsequent performance tests will be conducted once every five years thereafter [§63.5160 Table 1(2); §63.5130]. The thermocouple or temperature sensor would be required to be installed, calibrated, maintained, and operated within the each RTO's combustion chamber according to the manufacturer's specifications; the calibration of the chart recorder, data logger, or temperature indicator would need to be verified or replaced every 3 months; and each temperature monitoring device would need to be equipped with a continuous recorder and must have an accuracy of ±1 percent of the temperature being monitored in °C, or ±1 °C, whichever is greater [§63.5150(a)(3)]. To ensure that capture efficiency is maintained at the level measured during the last performance test, AM Calvert would identify an appropriate operating parameter to monitor and explain why that parameter is appropriate; additionally, the plan would specify operating limits for the chosen parameter [§63.5150(a)(4)].

The Department notes that in order to comply with VOC BACT limits and other stipulations made in the application, per r. 335-3-1-.04., the Department will require AM Calvert to maintain a permanent total enclosure over the coating section of the coating line. Additionally, although Subpart CCC only requires AM Calvert to operate a thermocouple or other temperature sensor as specified in §63.5150(a)(3) if complying with the capture and control limits, Subpart TT has similar applicable thermocouple requirements in §60.464(c).

As determined by the chosen method of compliance, AM Calvert must keep records of control device and capture system operating parameter data in accordance with §63.5150(a)(3)&(4); organic HAP content and volatile matter and solids content data in accordance with §63.5160(b)&(c); overall control efficiency determination or alternative outlet HAP concentration using capture efficiency tests and control device destruction or removal efficiency tests in accordance with §63.5160(d)&(e); material usage, HAP usage, volatile matter usage, and solids usage and any compliance demonstrations using these data in accordance with §63.5170(a)-(d); and records of all liquid-liquid material balances that are performed in accordance with the requirements of §63.5170 [§63.5190]. Also, AM Calvert must keep records of any deviation from an emission limit with record of the date, time, and duration of the deviation; a list of the affected sources or equipment for which the deviation occurred and the cause of the deviation; an estimate of the quantity of each regulated pollutant emitted over any applicable emission limit or any applicable operating limit, and a description of the method used to calculate the estimate; a record of actions taken to minimize emissions and any corrective actions taken to return the affected unit to its normal or usual manner of operation [§63.5190(a)(5)].

Compliance status notifications must be submitted according to §63.5180(b)-(e), and semiannual coating usage and deviation reports must be submitted per §63.5180(g)-(h).

40 CFR 63 Subpart DDDDD - "National Emission Standards for Industrial, Commercial, and Institutional Boilers and Process Heaters" [Boiler MACT]

40 CFR Part 63, Subpart DDDDD, is applicable to boilers and process heaters at major sources of HAP as defined in §63.7575. The annealing furnaces in both ACL1 and ACL2 are electric, with no combustion aside from the hydrogen purge flares. The curing ovens do not qualify as boilers or process heaters under the definitions of this subpart. *Boiler* means an enclosed device using controlled flame combustion and having the primary purpose of recovering thermal energy in the form of steam or hot water. *Process heater* means an enclosed device using controlled flame, and the unit's primary purpose is to transfer heat indirectly to a process material (liquid, gas, or solid) or to a heat transfer material (e.g., glycol or a mixture of glycol and water) for use in a process unit, instead of generating steam. As such, the sources in question are not subject.

40 CFR PART 64 – "COMPLIANCE ASSURANCE MONITORING" [CAM]

An emission source is subject to CAM (1) if that unit is subject to an emission limitation or standard for a given regulated air pollutant (or surrogate thereof), (2) if that unit uses a control device, other than inherent processes, to achieve compliance with that standard for that pollutant, and (3) if that unit has pre-control potential to emit that pollutant at greater than the major-source threshold to attain a Part 70 (Title V) permit. Limitations originating from post-1990 CAA Section 111- or Section 112-derived rules (NSPS or NESHAP rules, generally)

[§64.2(b)(1)(i)] and limitations for which major-source permits specify a continuous compliance method [§64.2(b)(1)(vi)], are exempt from this definition and cannot be considered when determining CAM applicability. Depending on the emission rate of a unit determined to be subject to CAM, the permittee must submit a monitoring plan for the unit as a part of the Title V permit initial application [§64.5(a)] or the first renewal application [§64.5(b)]. However, the Department has requested that PSD applicants include monitoring plans for units found to be subject to CAM.

Each coating line cooling section is uncontrolled. Each annealing furnace has several purge flares, but these control hydrogen which is not an applicable regulated pollutant under §64.2(a)(1). The mist eliminators installed on each quench section do control particulate matter emissions introduced by the quench water, but the expected uncontrolled emissions are not greater than the major-source threshold to attain a Part 70 (Title V) permit per §64.2(a)(3).

Taken at face value, the "38 lb/hr" uncontrolled PM, PM_{10}, and $PM_{2.5}$ emissions that AM Calvert states would emit from each line's cleaning section stack w/ mist eliminator (CLEAN_1 & CLEAN_2) would subject the unit to CAM requirements. However, rather than a precise estimation of the units' pre-control potential emissions, this appears to be a figure derived from back-calculating each mist eliminator's purported maximum efficiency (99%) from its vendor-guaranteed outlet grain loading value and BACT limit (0.003 gr/dscf) and the emission rate derived from its maximum volumetric throughput (0.38 lb/hr). As it stands, AM Calvert will be required to submit a PM CAM plan for CLEAN_1 and CLEAN_2 with the next Title V permit renewal after construction, unless they revise their estimate at that time.

Each coating line does have the potential to emit greater than 100 TPY VOC before control, is controlled by an RTO, and is subject to limits for VOC. Therefore, each coating line is subject to Part 64 and must submit a CAM plan with the next Title V permit renewal after construction. AM Calvert has complied with the Department's request to include a monitoring plan for these units, proposing to record and maintain RTO firebox temperature above a minimum temperature (to be determined via stack testing) as well as proposing to conduct semiannual inspections of the control device. The Department also notes that the §64.2(b)(1)(i) exemption could apply to VOC emissions from the coating lines if AM Calvert were limiting volatile HAP species, which are controlled in the same manner as VOC species and could be considered a surrogate thereof for the purposes of §64.2(a)(1), through NESHAP SSSS, which is a post-1990 rule developed pursuant to section 112 of the Clean Air Act. However, at this time AM Calvert is choosing to comply with NESHAP SSSS by using HAP-free coating materials rather than through capture and control requirements stipulated by NESHAP SSSS.

EMERGENCY ENGINES (X007)

To provide emergency power in the case of power outages, AM Calvert is proposing to install two emergency generators (**ENG_1 & ENG_2**). The units have not been selected at this stage of planning. AM Calvert knows that they will need one generator with 2,000 kWe output and one generator with 250 kWe output; they are estimating that these will be respectively driven by 2,667 kWm (3576.5 BHP) and 333 kWm (446.6 BHP) diesel engines. The engine maximum horsepower values are conservative assumptions on AM Calvert's part.

Exhausts from these emergency engines will be uncontrolled, though the engines will be certified as required by 40 CFR Part 60, Subpart IIII (NSPS IIII). The Department will group both of the engines into Air Permit No. 503-0157-X007.

BEST AVAILABLE CONTROL TECHNOLOGY (BACT)

PM

AM Calvert reviewed the use of a catalytic diesel particulate filter (CDPF) and found that it would be technically feasible but not economically feasible for the engines after considering their existing limitations. AM Calvert also lists clean fuel, good combustion practices, and ultra-low sulfur diesel (ULSD) fuel as potential BACT controls; each of these measures would also be required by NSPS IIII.

AM proposes to accept the 0.2 g/kW-hr PM limit from NSPS IIII as BACT along with a 500 hr/yr operation limitation on the engine, including emergency usage.

NO_X

AM Calvert cites the use of selective catalytic reduction (SCR) as a technically feasible way to control NO_X emissions from the engines' exhausts, but the Department concurs with Novelis' conclusion that SCR is economically infeasible for both engines when considering their other limitations. AM Calvert also cited engine certification and good combustion practices as BACT, though these measures would also be required by NSPS IIII.

AM proposes to accept the 6.4 g/kW-hr NO_X+NMHC limit from NSPS IIII as BACT for the 2,667 kWm diesel engine and the 4.0 g/kW-hr NO_X+NMHC limit from NSPS IIII as BACT for the 333 kWm diesel engine. As cited in the previous section, both engines would also take a 500 hr/yr operation limitation, including emergency usage.

VOC

AM Calvert reviewed the use of diesel oxidation catalysts (DOC) as well as catalytic diesel particulate filter (CDPF) and found that both would be technically feasible but not economically feasible for the engines after considering their existing limitations. The Department notes that the $/ton economic analysis for CDPF appears to hold even when putting both the tons of PM controlled and the tons of VOC controlled in the denominator. AM Calvert also cited engine certification and good combustion practices as BACT, though these measures would also be required by NSPS IIII.

With non-methane hydrocarbons (NMHC) serving as a conservative surrogate for VOC, AM Calvert proposes to accept the 6.4 g/kW-hr NO_X+NMHC limit from NSPS IIII as BACT for the 2,667 kWm diesel engine and the 4.0 g/kW-hr NO_X+NMHC limit from NSPS IIII as BACT for

the 333 kWm diesel engine. As cited in the previous section, both engines would also take a 500 hr/yr operation limitation, including emergency usage.

ADEM ADMINISTRATIVE CODE DIVISION 3 – "AIR POLLUTION CONTROL PROGRAM"

ADEM Admin. Code r. 335-3-1-.04(1)&(2) "Monitoring, Records, and Reporting"

This rule states that "The Director may require the owner or operator of any air contaminant source to establish and maintain such records; make such reports; install, use, and maintain such monitoring equipment or methods; sample such emissions in accordance with such methods at such locations, intervals, and procedures as the Director may prescribe; and provide such periodic emission reports as required in paragraph (2) of this Rule."

The Department cites this rule (along with the similar r. 335-3-16-.05(c) in the context of major source operating permits) as the authority to stipulate monitoring, recordkeeping, and reporting requirements as needed to determine continuous compliance with operating and emission standards such as the BACT limits determined above.

ADEM Admin. Code r. 335-3-4-.01(1)(a)&(b) "Visible Emissions"

Each emission point will be subject to the requirements of this regulation and must not discharge particulate of an opacity greater than twenty percent (20%), as determined by a six-minute average, except that during one six-minute period in any sixty-minute period, the emission point may emit particulate of an opacity no greater than forty percent (40%).

ADEM Admin. Code r. 335-3-4-.03 "Fuel Burning Equipment" and 335-3-5-.01 "Fuel Combustion"

These regulations apply to fuel-burning equipment, which ADEM Admin. Code r. 335-3-1-.02(1)(ee) defines as indirect heating equipment. Because the engines will be direct-fired, these rules are not applicable.

40 CFR PART 60 – "NEW SOURCE PERFORMANCE STANDARDS" [NSPS]

40 CFR 60 Subpart IIII – "Standards of Performance for Stationary Compression Ignition Internal Combustion Engines"

40 CFR Part 60, Subpart IIII "Standards of Performance for Stationary Compression Ignition Internal Combustion Engines" is applicable to all stationary diesel-fueled engines manufactured after 2007. The proposed engines will be new models and therefore subject to NSPS IIII.

Per §60.4205(b), the diesel engines must meet the NMHC+NO_X, CO, and PM standards specified in Appendix I to Part 1039 for engines of the same size range and model year. The 2,667 kWm engine must limit NMHC+NO_X to 6.4 g/hp-hr, and the 333 kWm engine must limit NMHC+NO_X to 4.0 g/kW-hr. Both engines must limit CO emissions to 3.5 g/kW-hr and PM emissions to 0.20 g/kW-hr.

The engines must be certified to meet the applicable emission limits [§60.4211(c)]. The engines must be installed and configured according to the manufacturer's specifications [§60.4211(a)], and they must be operated and maintained according to the manufacturer's instructions [§60.4206]. The engines must be equipped with a non-resettable hour meter [§60.4209(a)]. The engines must use diesel fuel that meets the ULSD requirements of 40 CFR §1090.305 [§60.4207(b)].

To qualify as and to show compliance as an emergency engine with respect to Subpart IIII, the conditions under §60.4211(f) must be met, primarily operating less than 100 hours per calendar year during recommended maintenance and less than 50 hours per year during other non-emergency situations. However, AM Calvert has proposed to limit all operation of each engine to 500 hours per calendar year, including during emergency situations.

Per §60.4214(b), AM Calvert must keep record of each engine's operating hours, time of each operation, and reason to operate (i.e., whether the engine is in emergency or nonemergency service) through a non-resettable hour meter.

40 CFR PART 63 – "NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS" [NESHAP]

40 CFR 63 Subpart ZZZZ – "National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines"

40 CFR Part 63, Subpart ZZZZ "National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines" is applicable to the proposed new engines. Per §60.6590(c)(6), for ENG_2, AM Calvert will show compliance with Subpart ZZZZ by meeting the requirements of Part 60 Subpart IIII. Per §63.6590(b)(1)(i), ENG_1 only needs to meet the initial notification requirements of §63.6645(f).

COOLING TOWERS (X008)

To meet process needs throughout the mill, AM Calvert plans to construct four cooling towers (**COOL_1 – COOL_4**).

BEST AVAILABLE CONTROL TECHNOLOGY (BACT)

PM

Cooling towers are a minor source of particulate matter, primarily via particulate entrained in water spray from the towers (known as “drift”). There are no known add-on pollution controls for these sources, and BACT for cooling towers is exclusively design and operating practices. AM Calvert has stated that the cooling towers will be installed with drift eliminators/baffles rated to a 0.0005% drift rate under proper operation. AM Calvert did not propose a limit on recirculation rate; however, as having a higher recirculation rate than the design capacity will cause more drift, the Department will instruct AM Calvert to limit the recirculation rate for each cooling tower to their stated design capacity, 15,170 GPM.

SLITTING & PACKAGING

Finished coils may be further processed on a slitting line to cut the final product to a specific width using edge trimmers and to package according to customer requirements. This line would be used for slitting, rewinding, and packaging strip coil. Cut pieces would drop into a scrap box for recycling. AM Calvert states that emissions would not be generated during this process; the Department concurs that these operations would not warrant an air permit per r. 335-3-14-.01(e).

FUGITIVE DUST (X009)

The Department is requiring that, within twelve months of startup, AM Calvert submit a facility-wide fugitive dust plan addressing and codifying fugitive dust abatement measures from their roads and other sources, after fugitive dust from the site is properly assessed. Prior to submitting the fugitive dust plan, the Department is requiring that reasonable precautions be implemented via each permit's general provisos.

AIR QUALITY ANALYSIS

An applicant for a PSD permit is required to conduct an air quality analysis of the ambient impacts associated with the construction and operation of the proposed new sources or modification. The main purpose of the air quality analysis is to demonstrate that new emissions from a proposed major stationary source or major modification will not cause or contribute to a violation of any applicable National Ambient Air Quality Standards (NAAQS) or PSD increment. Ambient impacts of non-criteria pollutants must also be evaluated. Generally, the analysis will include (1) an assessment of existing air quality, which may include ambient monitoring data and air quality dispersion modeling results, and (2) predictions, using dispersion modeling, of ambient concentrations that will result from the applicant's proposed project and future growth associated with the project.

National Ambient Air Quality Standards (NAAQS)

The NAAQS are maximum concentration "ceilings" measured in terms of the total concentration of a pollutant in the atmosphere. The following table presents the applicable standards for the pollutants under PSD review:

Pollutant/Averaging Time	Primary Standard	Secondary Standard
Particulate Matter (< 10 µm) (PM_{10})		
PM_{10}, 24-hour	150 µg/m^3	150 µg/m^3
Particulate Matter (< 2.5 µm) ($PM_{2.5}$)		
$PM_{2.5}$, Annual	9 µg/m^3	15 µg/m^3
$PM_{2.5}$, 24-hour	35 µg/m^3	35 µg/m^3
Sulfur Dioxide (SO_2)		
SO_2, 1-hour	75 ppb	---
SO_2, 3-hour	---	0.5 ppm
Nitrogen Dioxide (NO_2)		
NO_2, Annual	53 ppb	53 ppb
NO_2, 1-hour	100 ppb	---
Carbon Monoxide (CO)		
CO, 1-hour	35 ppm	---
CO, 8-hour	9 ppm	---

A complete review of the air quality analysis can be found in Attachment No. 1. As can be seen from the review, predicted pollutant concentrations are less than the $PM_{2.5}$ 24-hr NAAQS, the $PM_{2.5}$ annual NAAQS, and the NO_2 annual NAAQS. Modeling did show predicted exceedances of the NO_2 1-hr NAAQS, when considering nearby emission sources, but a further culpability analysis indicated that the new sources proposed by AM Calvert did not significantly contribute to these predicted violations.

The PSD requirements provide for a system of area classifications which affords an opportunity to identify local land use goals. There are three area classifications. Each

classification differs in terms of the amount of growth it would permit before significant air quality deterioration would be deemed to occur. Class I areas have the smallest increments and thus allow only a small degree of air quality deterioration. Class II areas can accommodate normal, well-managed industrial growth. Class III areas have the largest increments and thereby provide for a larger amount of development than either Class I or Class II areas. Presently, there are no Class III areas in Alabama. The table below shows the pollutants and associated Class I and II PSD increments.

Pollutant	Averaging Period	Class I ($\mu g/m^3$)	Class II ($\mu g/m^3$)
PM	Annual	5	19
PM	24-hour	10	37
PM_{10}	Annual	4	17
PM_{10}	24-hour	8	30
$PM_{2.5}$	Annual	1	5
$PM_{2.5}$	24-hour	2	9
NO_2	Annual	2.5	25

The following is a brief synopsis of each class area and how it relates to this project:

Class I Areas:

Class I Areas have the smallest increments and thus allow only a small degree of air quality deterioration. Air Permit application forms submitted by AM Calvert document that the closest Class I Area, the Breton Wildlife Refuge, is approximately 150 km away from the facility. However, the Federal Land Managers (FLM) require sources to submit Class I modeling if the SO+, NO_X, and PM_{10} emissions in TPY divided by the distance in kilometers are greater than 10; by this criterion, AM Calvert was not required to submit to the FLM.

Class II Areas:

Class II areas can accommodate normal well-managed industrial growth. AM Calvert is located in a Class II Area. Attachment No. 1 provides a review of the PSD Class II increment analysis. A Class II increment has not been established for either the NO_2 1-hour averaging period or the SO_2 1-hour averaging period; therefore, no Class II increment modeling was performed.

Class III Areas:

Class III areas have the largest increments and thereby provide for a larger amount of development than either Class I or Class II areas. Presently, there are no Class III areas in the state of Alabama. Therefore, no Class III area analysis was performed for this project.

ADDITIONAL IMPACT ANALYSIS

All PSD permit applicants must prepare an additional impact analysis, for each pollutant subject to regulation, which would be emitted by the proposed new source or modification. This analysis assesses the impacts of air, ground, and water pollution on soils, vegetation, and visibility caused by an increase in emissions and from associated growth. The additional impact analysis generally has three parts:

(a) Growth
(b) Soils and Vegetation
(c) Visibility Impairment

Growth

AM Calvert's proposed new mill is expected to have a minimal impact on the anticipated growth in the area, with the majority of new employees of the proposed facility likely to be existing residents of nearby towns and counties. Residential and commercial growth is anticipated to occur at a gradual rate in the future.

Soils and Vegetation

The project is not expected to have a significant impact on the surrounding soil. Modeled impacts of annual NO_2 are less than the significant impact level (SIL). In summary, the project is not expected to result in significant impact on soil, vegetation, or wildlife in the area surrounding the facility.

Visibility Impairment

Opacity limits are imposed on all sources at the mill by ADEM Admin. Code r. 335-3-5-.01(1). These limits reduce the events of visible plumes; thus, visibility impacts in the immediate vicinity of the mill should be negligible; therefore, no visibility analyses were required.

RECOMMENDATION

Based on the above analysis, I recommend that, upon receiving permitting fees and pending the completion of the appropriate public comment period, the following Air Permits be issued with the attached provisos (see Attachment 2):

X001 – Annealing and Pickling Line (APL)
- 93.65 MMBtu/hr Annealing Furnace w/ SCR (AEAL_1)
- Shotblaster & Scale Collection w/ Baghouse (SHOT_B)
- Hydrochloric Acid Pickling Line & Acid Tanks w/ Wet Scrubber (PICKL)

X002 – Acid Regeneration Plant (ARP)
- Acid Regeneration Plant (13.0 MMBtu/hr) w/ Wet Scrubber (SPRY_R)
- Acid Tank Farm w/ Wet Scrubber (TNK_FM)
- Iron Oxide Storage Bins and Baggers w/ Baghouse (OXIDE)

X003 – Boilers #1 & #2
- 45.5 MMBtu/hr Boiler #1 (BOIL_1)
- 45.5 MMBtu/hr Boiler #1 (BOIL_2)

X004 – Cold Rolling Mills #1 & #2
- Cold Rolling Mill #1 w/ Mist Eliminator & Condenser (CRM_1)
- Cold Rolling Mill #2 w/ Mist Eliminator & Condenser (CRM_2)

X005 – Annealing & Coating Line 1 (ACL1)
- ACL1 Cleaning Section w/ Mist Eliminator (CLEAN_1)
- ACL1 Electric Annealing Furnace w/ Hydrogen Purge Flares (HYPU_A1 – HYPU_A5)
- ACL1 Coating Section w/ Regenerative Thermal Oxidizer (RTO_1)
- ACL1 Cooling Section (ACL_C1)
- ACL1 Quench Section w/ Mist Eliminator (QUEN_1)

X006 – Annealing & Coating Line 2 (ACL2)
- ACL2 Cleaning Section w/ Mist Eliminator (CLEAN_2)
- ACL2 Electric Annealing Furnace w/ Hydrogen Purge Flares (HYPU_B1 – HYPU_B5)
- ACL2 Coating Section w/ Regenerative Thermal Oxidizer (RTO_2)
- ACL2 Cooling Section (ACL_C2)
- ACL2 Quench Section w/ Mist Eliminator (QUEN_2)

X007 – Emergency Diesel Engines
- 2,667 kWm Emergency Generator Engine (ENG_1)
- 333 kWm Emergency Generator Engine (ENG_2)

X008 – Cooling Towers
- Cooling Tower #1 (COOL_1)
- Cooling Tower #2 (COOL_2)
- Cooling Tower #3 (COOL_3)
- Cooling Tower #4 (COOL_4)

X009 – Facility-Wide Fugitive Dust Plan

R. Jackson Rogers, Jr.
Industrial Minerals Section
Energy Branch
Air Division

4/2/25
Date

ATTACHMENT NO. 1
Air Quality Analysis

LANCE R. LEFLEUR
DIRECTOR

KAY IVEY
GOVERNOR

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April 1, 2025

MEMORANDUM

TO: Jackson Rogers RJR
Industrial Minerals Section
Energy Branch
Air Division

FROM: Jim Owen JMO
Meteorological Section
Planning Branch
Air Division

SUBJECT: Air Dispersion Modeling of proposed Arcelor Mittal facility in Mobile County, Alabama.

ADEM has completed its review of an air quality modeling analysis performed by ERM on behalf of Arcelor Mittal (AM). AM proposes to construct a new annealing and pickling line, two new annealing and coating lines, two new cold rolling mills, and ancillary sources for these process lines on the shared AM/NS property. The purpose of this analysis was to assess the impacts on air quality from emissions of nitrogen dioxide (NO_2), particulate matter with an aerodynamic diameter less than 2.5 microns ($PM_{2.5}$), and particulate matter with an aerodynamic diameter less than 10 microns (PM_{10}) from the proposed new facility. An air quality analysis was performed for NO_2, $PM_{2.5}$, and PM_{10} to demonstrate that emissions from the proposed facility will not cause or contribute to a violation of any applicable National Ambient Air Quality Standard (NAAQS) or PSD Increment.

AIR QUALITY MODELS:

The American Meteorological Society/Environmental Protection Agency Regulatory Model (AERMOD), version 24142, was used in default mode for modeling all pollutants. The NO_2 modeling was performed using the regulatory default Tier 2 Ambient Ratio Method 2 (ARM2) in AERMOD.

METEOROLOGICAL DATA:

Surface and upper air meteorological data for the years 2019-2023 were used in all modeling. The surface data was from the Mobile, AL National Weather Service Office (NWS) and the upper air data was from the Slidell, LA NWS.

GOOD ENGINEERING PRACTICE ANALYSIS:

A Good Engineering Practice (GEP) Analysis was performed to assess possible building downwash effects. It was determined that all the stacks that were modeled are within the influence area (5L) of one or more of the controlling buildings and have heights less than the GEP stack height. Therefore, building downwash was considered for those sources in the modeling.

SCREENING MODELING & PRECONSTRUCTION MONITORING:

Screening modeling was performed for NO_2, $PM_{2.5}$, and PM_{10} proposed emissions at AM. Appendix A of this memo lists the stack parameters and emission rates for the proposed new sources at AM that were used in the modeling.

A Cartesian receptor grid extending out to 20 kilometers (km) was used in the modeling analysis. The receptor grid was generated using the following:

(1.) 100 meter (m) spacing along the fence line.
(2.) 100 m spacing from fence line out to 5 km.
(3.) 250 m spacing from 5 km to 7 km.
(4.) 500 m spacing from 7 km to 10 km.
(5.) 1 km spacing from 10 km to 20 km.

All maximum predicted concentrations for all pollutants for all averaging periods were resolved to within 100-meter receptor spacing. Receptor terrain elevations were generated using the EPA AERMAP program.

Table 1 lists the results of screening modeling performed for $PM_{2.5}$, PM_{10}, and SO_2.

TABLE 1
Screening Modeling Results

Pollutant	Averaging Period	Max Conc. ($\mu g/m^3$)	Signif. Level ($\mu g/m^3$)	SIA (km)
NO_2	1 hour	45.29[(c)]	7.5	10.63
NO_2	Annual	1.92[(d)]	1	0.75
$PM_{2.5}$	24 hour	3.59[(b)(c)]	1.2	2.09
$PM_{2.5}$	Annual	0.78[(b)(c)]	0.13	2.09
PM_{10}	24 hour	4.69[(a)]	5	-
PM_{10}	Annual	1.08[(d)]	1	0.35

(a) Based on high, first high concentration for all 5 years.

(b) Includes MERPS values of 0.025 ug/m3 for 24 hour and 0.001 ug/m3 for Annual.

(c) Based on the five year average high, first high for all 5 years modeled together.

(d) Based on the maximum annual concentration for all 5 years modeled separately.

Results of the modeling indicated that the maximum predicted concentration for 24 hour PM_{10} was below the significance level. Therefore, further modeling of 24 hour PM_{10} was not required. However, the 1 hour and annual NO_2, 24 hour and annual $PM_{2.5}$, and annual PM_{10} averaging periods were predicted to have concentrations greater than their significance levels. Therefore, further modeling of NO_2, $PM_{2.5}$, and PM_{10} was required.

Also, during this initial screening modeling analysis, preconstruction monitoring requirements were addressed, and it was determined that preconstruction monitoring for all pollutants was not required.

MERPs ANALYSIS:

Precursor emission impacts to Ozone and $PM_{2.5}$ (secondary $PM_{2.5}$) were considered and a Modeled Emission Rates for Precursors (MERPs) analysis was performed. The Ozone precursors are the pollutants VOC and NO_x, and the precursor emissions of interest for secondary $PM_{2.5}$ are NO_x and SO_2. For secondary $PM_{2.5}$, the following total emissions were considered: for NO_x, 64.82 TPY; and for SO_2, 0.58 TPY. For Ozone, the following total emissions were considered: for VOC, 45.86 TPY; and for NO_x, 64.82 TPY. The results for the MERPs analyses are presented in Table 2.

TABLE 2
MERPs Analysis Results

Pollutant	Results
Secondary $PM_{2.5}$ (24 hour)	0.025 $\mu g/m^3$
Secondary $PM_{2.5}$ (Annual)	0.001 $\mu g/m^3$
Ozone (8 hour)	0.27 ppb

The secondary concentrations from the MERPs analysis were added to the screening modeling, NAAQS, and Class II Increment modeling results for $PM_{2.5}$. Also, the nearest ozone monitor to the proposed project is the Chickasaw monitor. Based on that monitor, the addition of 0.27 ppb of ozone from the MERPs analysis added to the Chickasaw

monitor's 8 hour design value of 60.00 ppb gives a total of 60.27 ppb. This is less than the standard of 70 ppb and thus demonstrates passing the Tier 1 assessment for ozone. For the complete MERPS calculations see Appendix B.

REFINED MODELING:

NAAQS ANALYSIS:

When modeling for the NAAQS, all emission sources at AM and other nearby facilities were included. Results of the $PM_{2.5}$ NAAQS modeling are found in Table 3. Results of NO_2 NAAQS modeling are found in Table 4.

TABLE 3
$PM_{2.5}$ NAAQS Modeling Results

Averaging Period	Predicted Conc. ($\mu g/m^3$)	Secondary $PM_{2.5}$ ($\mu g/m^3$)	Back-ground ($\mu g/m^3$)	Total Conc. ($\mu g/m^3$)	NAAQS ($\mu g/m^3$)	% of NAAQS
24 hour	8.13[(a)]	7.82[(c)]	16	31.95	35	91
Annual	2.06[(b)]	0.43[(d)]	6.2	8.69	9	97

(a) Five year average of the eighth highest value.

(b) Five year average of the highest value from each year.

(c) Includes MERPS values of 0.025 µg/m3 for project secondary PM2.5 and 7.79 µg/m3 for offsite secondary PM2.5.

(d) Includes MERPS values of 0.001 µg/m3 for project secondary PM2.5 and 0.43 µg/m3 for offsite secondary PM2.5.

TABLE 4
NO_2 NAAQS Modeling Results

Pollutant	Averaging Period	Predicted Conc. ($\mu g/m^3$)	Back-ground ($\mu g/m^3$)	Total Conc. ($\mu g/m^3$)	NAAQS ($\mu g/m^3$)	% of NAAQS
NO_2	1 hour	1538.74[(a)]	31	1569.74	188	835
NO_2	Annual	85.98[(b)]	7.5	93.48	100	93

(a) Five year average of the eighth highest value.

(b) High, first high value over 5 years.

As shown in Tables 3 and 4, there are no predicted violations of the 24 hour and annual $PM_{2.5}$ and the annual NO_2 NAAQS. However, there were predicted violations of the 1 hour NO_2 NAAQS. A culpability analysis was performed for the 1 hour NO_2 NAAQS using MAXDCONT values generated by AERMOD. The results of this analysis showed that the proposed new sources at AM did not cause or significantly contribute to any of the predicted violations.

CLASS II INCREMENT ANALYSIS:

When modeling for the Class II Increment, all sources at AM and other nearby facilities were included. Results of the $PM_{2.5}$ Class II Increment modeling are found in Table 5. Results of the NO_2 and PM_{10} Class II Increment are found in Table 6.

TABLE 5
$PM_{2.5}$ Class II Increment Analysis

Averaging Period	Predicted Conc. ($\mu g/m^3$)	Secondary $PM_{2.5}$ ($\mu g/m^3$)	Total Conc. ($\mu g/m^3$)	Increment ($\mu g/m^3$)	% of Increment
24 hour	4.02[(a)]	3.25[(c)]	7.27	9	81
Annual	1.13[(b)]	0.43[(d)]	1.56	4	39

(a)Highest 2nd High value from each of the five years was used.

(b)Highest 1st High value from each of the five years was used.

(c) Includes MERPS values of 0.025 µg/m3 for project secondary PM2.5 and 3.217 µg/m3 for offsite secondary PM2.5.

(d) Includes MERPS values of 0.001 µg/m3 for project secondary PM2.5 and 0.425 µg/m3 for offsite secondary PM2.5.

TABLE 6
NO_2 and PM_{10} Class II Increment Analyses

Pollutant	Averaging Period	Predicted Conc. ($\mu g/m^3$)	Increment ($\mu g/m^3$)	% of Increment
NO_2	Annual	18.47[(a)]	25	74
PM_{10}	Annual	2.94[(a)]	17	17

(a)Highest 1st High value from each of the 5 years was used.

As shown in Table 5 and Table 6, there are no predicted violations of the $PM_{2.5}$, PM_{10}, and NO_2 Class II Increments for any averaging period.

CLASS I AREA MODELING:

The nearest Class I area to AM is the Breton National Wildlife Refuge (located 130 km south-southwest from AM). ADEM did not require a Class I analysis and Fish and Wildlife did not require a Class I analysis either based on information that was provided to Jaron Ming at Fish and Wildlife.

CONCLUSION:

In conclusion, emissions of NO_2, $PM_{2.5}$, and PM_{10} from the proposed new AM facility in Calvert, Alabama, are not expected to cause or significantly contribute to a violation of a NAAQS or Class II Increment.

APPENDIX A

Stack Parameters and Emission Rates
For
Proposed New AM Facility

TABLE 6-1 TABLE OF STACK PARAMETERS FOR PROPOSED PROJECT SOURCES

Source ID	Source Description	Release Type	UTM East (m)	UTM North (m)	Stack Height (m)	Stack Temperature (K)	Stack Velocity (m/s)	Stack Diameter (m)
COOL_1	Cooling Tower 1	Vertical Point	405083.634	3444817.283	9.14	305.37	12.19	9.14
COOL_2	Cooling Tower 2	Vertical Point	405075.392	3444803.600	9.14	305.37	12.19	9.14
COOL_3	Cooling Tower 3	Vertical Point	405067.830	3444788.310	9.14	305.37	12.19	9.14
COOL_4	Cooling Tower 4	Vertical Point	405059.418	3444774.357	9.14	305.37	12.19	9.14
PICKL	Pickling Line Scrubber	Vertical Point	405062.140	3444665.850	26.82	373.15	10.00	1.20
BOIL_1	Boiler 1	Vertical Point	405157.457	3444846.680	30.00	423.15	16.50	0.81
BOIL_2	Boiler 2	Vertical Point	405152.137	3444837.251	30.00	423.15	16.50	0.81
RTO_1	Curing Oven 1 + RTO 1	Vertical Point	405213.844	3444810.929	29.82	553.15	9.60	0.76
RTO_2	Curing Oven 2 + RTO 2	Vertical Point	405237.208	3444797.153	28.91	553.15	9.60	0.76
AEAL1	Annealing Furnace	Vertical Point	405160.062	3444844.932	37.91	573.15	10.00	2.20
SPRY_R	Spray Roaster	Vertical Point	405007.061	3444671.553	45.72	338.15	5.00	0.50
SHOT_B	Shot Blaster Baghouse	Vertical Point	405100.296	3444739.022	28.91	373.15	10.00	1.30
CLEAN_1	ACL Cleaning Section 1	Vertical Point	405092.173	3444585.243	29.82	348.15	15.00	0.77
CLEAN_2	ACL Cleaning Section 2	Vertical Point	405117.138	3444571.480	28.91	348.15	15.00	0.77
CRM_1	Cold Rolling Mill 1	Vertical Point	404952.030	3444543.735	53.00	293.15	10.50	2.50
CRM_2	Cold Rolling Mill 2	Vertical Point	405014.078	3444511.011	53.00	293.15	10.50	2.50
OXIDE	Iron Oxide Bins w/ Bagfilters	Vertical Point	404995.766	3444653.387	30.48	358.15	19.69	0.36
TNK_FM	Tank Farm Scrubber	Vertical Point	404978.066	3444647.215	24.99	353.15	25.69	0.56

Source ID	Source Description	Release Type	UTM East (m)	UTM North (m)	Stack Height (m)	Stack Temperature (K)	Stack Velocity (m/s)	Stack Diameter (m)
ACL_C1	ACL Cooling Section 1	Vertical Point	405206.130	3444797.930	27.91	353.15	14.81	0.69
ACL_C2	ACL Cooling Section 2	Vertical Point	405230.903	3444786.778	27.91	353.15	14.81	0.69
QUEN_1	Quenching Line 1	Vertical Point	405225.360	3444834.500	27.91	329.15	14.03	2.1
QUEN_2	Quenching Line 2	Vertical Point	405251.123	3444824.078	27.91	329.15	14.03	2.1
HYPU_A1	Hydrogen Purging #1, Line 1	Vertical Point	405118.760	3444633.770	27.91	623.15	19.49	0.38
HYPU_A2	Hydrogen Purging #2, Line 1	Vertical Point	405118.760	3444633.770	27.91	623.15	19.49	0.38
HYPU_A3	Hydrogen Purging #3, Line 1	Vertical Point	405125.160	3444644.840	27.91	623.15	19.49	0.38
HYPU_A4	Hydrogen Purging #4, Line 1	Vertical Point	405214.587	3444813.424	27.91	623.15	19.49	0.38
HYPU_A5	Hydrogen Purging #5, Line 1	Vertical Point	405219.654	3444821.998	27.91	623.15	19.49	0.38
HYPU_B1	Hydrogen Purging #1, Line 2	Vertical Point	405144.152	3444624.022	27.91	623.15	19.49	0.38
HYPU_B2	Hydrogen Purging #2, Line 2	Vertical Point	405144.152	3444624.022	27.91	623.15	19.49	0.38
HYPU_B3	Hydrogen Purging #3, Line 2	Vertical Point	405148.581	3444633.127	27.91	623.15	19.49	0.38
HYPU_B4	Hydrogen Purging #4, Line 2	Vertical Point	405237.761	3444800.620	27.91	623.15	19.49	0.38
HYPU_B5	Hydrogen Purging #5, Line 2	Vertical Point	405243.429	3444811.066	27.91	623.15	19.49	0.38

TABLE 6-2 TABLE OF EMISSIONS FOR PROPOSED PROJECT SOURCES

Source ID	Source Description	PM_{10} (g/s)	$PM_{2.5}$ (g/s)	NO_x (g/s)
COOL_1	Cooling Tower 1	1.518E-03	5.103E-06	0.000E+00
COOL_2	Cooling Tower 2	1.518E-03	5.103E-06	0.000E+00
COOL_3	Cooling Tower 3	1.518E-03	5.103E-06	0.000E+00
COOL_4	Cooling Tower 4	1.518E-03	5.103E-06	0.000E+00
PICKL	Pickling Line Scrubber	4.450E-02	3.900E-02	0.000E+00
BOIL_1	Boiler 1	4.272E-02	4.272E-02	2.064E-01
BOIL_2	Boiler 2	4.272E-02	4.272E-02	2.064E-01
RTO_1	Curing Oven 1 + RTO 1	1.303E-02	1.303E-02	1.455E-01
RTO_2	Curing Oven 2 + RTO 2	1.303E-02	1.303E-02	1.455E-01
AEAL1	Annealing Furnace	8.850E-02	8.850E-02	5.900E-01
SPRY_R	Spray Roaster	8.889E-03	8.889E-03	8.889E-02
SHOT_B	Shot Blaster Baghouse	1.214E-02	1.214E-03	0.000E+00
CLEAN_1	ACL Cleaning Section 1	4.767E-02	4.767E-02	0.000E+00
CLEAN_2	ACL Cleaning Section 2	4.767E-02	4.767E-02	0.000E+00
CRM_1	Cold Rolling Mill 1	2.887E-01	1.877E-01	0.000E+00
CRM_2	Cold Rolling Mill 2	2.887E-01	1.877E-01	0.000E+00
OXIDE	Iron Oxide Bins w/ Bagfilters	3.886E-02	3.760E-02	0.000E+00
TNK_FM	Tank Farm Scrubber	2.598E-02	2.539E-02	0.000E+00
ACL_C1	ACL Cooling Section 1	4.599E-02	4.599E-02	0.000E+00
ACL_C2	ACL Cooling Section 2	4.599E-02	4.599E-02	0.000E+00
QUEN_1	Quenching Line 1	1.326E-02	4.975E-05	0.000E+00
QUEN_2	Quenching Line 2	1.326E-02	4.975E-05	0.000E+00
HYPU_A1	Hydrogen Purging #1, Line 1	0.000E+00	0.000E+00	2.762E-02
HYPU_A2	Hydrogen Purging #2, Line 1	0.000E+00	0.000E+00	4.603E-02
HYPU_A3	Hydrogen Purging #3, Line 1	0.000E+00	0.000E+00	4.603E-02
HYPU_A4	Hydrogen Purging #4, Line 1	0.000E+00	0.000E+00	4.603E-02

Source ID	Source Description	PM_{10} (g/s)	$PM_{2.5}$ (g/s)	NO_x (g/s)
HYPU_A5	Hydrogen Purging #5, Line 1	0.000E+00	0.000E+00	4.603E-02
HYPU_B1	Hydrogen Purging #1, Line 2	0.000E+00	0.000E+00	2.762E-02
HYPU_B2	Hydrogen Purging #2, Line 2	0.000E+00	0.000E+00	4.603E-02
HYPU_B3	Hydrogen Purging #3, Line 2	0.000E+00	0.000E+00	4.603E-02
HYPU_B4	Hydrogen Purging #4, Line 2	0.000E+00	0.000E+00	4.603E-02
HYPU_B5	Hydrogen Purging #5, Line 2	0.000E+00	0.000E+00	4.603E-02

APPENDIX B

MERPs Calculations
For
Proposed New AM Facility

compliance with the PSD increments. All maximum predicted concentrations occur on the 100-meter spaced grid.

TABLE 10-3 PSD INCREMENT MODELING RESULTS

Pollutant	Averaging Period	PSD Increment ($\mu g/m^3$)	Model-Predicted Peak Conc. ($\mu g/m^3$)	% Of the Increment	Location of Peak Conc.
NO_2	Annual	25	18.47	74%	Outokumpu facility, 100m spacing
PM_{10}	Annual	17	2.94	17%	AM/NS Property boundary, 100m spacing
$PM_{2.5}$ (with secondary)	24-hour	9	7.26(1)	81%	AM/NS Property boundary, 100m spacing
	Annual	4	1.56(1)	39%	AM/NS Property boundary, 100m spacing

(1) $PM_{2.5}$ 24-hour secondary: 0.025 ($\mu g/m^3$), $PM_{2.5}$ Annual secondary: 0.001 ($\mu g/m^3$). $PM_{2.5}$ 24-hour offsite increment secondary: 3.22 ($\mu g/m^3$). $PM_{2.5}$ Annual increment offsite secondary: 0.43 ($\mu g/m^3$). These values were added to the primary 24-hour and annual $PM_{2.5}$ modeling results, respectively. The calculations for the project secondary values are shown in Section 10.5.

10.5 SECONDARY FORMATION OF $PM_{2.5}$

For estimating the Project impacts on secondary $PM_{2.5}$, AMC completed a Modeled Emission Rates for Precursors (MERPs) analysis. Secondary $PM_{2.5}$ precursors are from emissions of NO_X and SO_2.

AMC utilized the U.S. EPA's MERPs as a first-tier assessment of impacts on secondary $PM_{2.5}$ formation and following the latest guidance from April 30, 2024[6]. EPA provides a MERPs View Qlik Tool[7] for identifying a representative hypothetical source and using the hypothetical source modeled impacts on $PM_{2.5}$ to estimate Project secondary $PM_{2.5}$ impacts. Table 10-4 shows the MERPs for the most representative hypothetical source (e.g., 500 tpy and 10 meters stack) located nearest to the AMC facility. The Autauga, Alabama hypothetical source is approximately 200 km north of the AMC facility, both sites are in a relatively flat terrain. The Project elevation is about 14 meters in comparison to the Autauga site at 96 meters. Appendix C provides additional justification for the hypothetical source selection. The results of the MERPs View Qlik Tool are summarized in Table 10-4.

6 U.S. EPA. Supplement to the Guidance on Significant Impact Levels for Ozone and Fine Particles in the Prevention of Significant Deterioration Permitting Program. April 30, 2024. Available at: https://www.epa.gov/system/files/documents/2024-04/supplement-to-the-guidance-on-significant-impact-levels-for-ozone-and-fine-particles-in-the-psd-permitting-program-4-30-2024.pdf

7 United States Environmental Protection Agency. 2024. MERPs View Qlik Tool. Available at: https://www.epa.gov/scram/merps-view-qlik

TABLE 10-4 EPA MERPS VIEW QLIK OUTPUT

State	County	Metric	Precursor	Emissions (TPY)	Stack (m)	EPA Max Conc
Alabama	Autauga	8-hr Ozone	NOx	500	10	2.012 ppb
Alabama	Autauga	8-hr Ozone	VOC	500	10	0.064 ppb
Alabama	Autauga	Annual PM2.5	NOx	500	10	0.010 µg/m³
Alabama	Autauga	Annual PM2.5	SO2	500	10	0.029 µg/m³
Alabama	Autauga	Daily PM2.5	NOx	500	10	0.178 µg/m³
Alabama	Autauga	Daily PM2.5	SO2	500	10	1.231 µg/m³

The secondary formation of $PM_{2.5}$ as a result of pre-cursor emissions of NOx (64.82 tpy) and SO_2 (0.58 tpy) Project emissions was computed using Equation 1 from the 2024 guidance[6] and hypothetical source data from Table 10-4.

Equation 1:

Project Air Quality Impact = Project emissions * (modeled air quality impact from hypothetical source / modeled emissions rate from hypothetical source)

24-hour $PM_{2.5}$ Secondary Project Air Quality Impact

NO_x Project Air Quality Impact = 64.82 tpy * (0.178 µg/m³ / 500 tpy) = 0.0231 µg/m³

SO_2 Project Air Quality Impact = 0.58 tpy * (1.231 µg/m³ / 500 tpy) = 0.0014 µg/m³

Total Secondary (NO_x & SO_2) 24-hour Project Air Quality Impact =

0.0231 µg/m³ + 0.0014 µg/m³ = 0.025 µg/m³

The calculated amount of **0.025 µg/m³** will be then added to the primary $PM_{2.5}$ modeled concentration at the SIL, NAAQS, and PSD level before comparing to applicable thresholds to account for the contribution of 24-hour secondary $PM_{2.5}$.

Annual $PM_{2.5}$ Secondary Project Air Quality Impact

NO_x Project Air Quality Impact = 64.82 tpy * (0.010 µg/m³ / 500 tpy) = 0.001 µg/m³

SO_2 Project Air Quality Impact = 0.58 tpy * (0.029 µg/m³ / 500 tpy) = 0.00003 µg/m³

Total Secondary (NO_x & SO_2) Annual Project Air Quality Impact =

0.001 µg/m^3 + 0.00003 µg/m^3 = 0.001 µg/m^3

The calculated amount of **0.001 µg/m^3** was added to the primary annual $PM_{2.5}$ modeled concentration at the SIL, NAAQS, and PSD level before comparing to applicable thresholds to account for the contribution of annual secondary $PM_{2.5}$.

For the secondary offsite contribution as well as the existing AMNS sources, ADEM provided a 24-hour increment concentration (3.2165 µg/m^3), a 24-hour NAAQS concentration (7.786 µg/m^3), and an annual concentration for use in both increment and NAAQS modeling (0.425 µg/m^3). These values were added to their respective averaging periods/standards in the cumulative modeling, as shown in Tables 10-2 and 10-3.

10.6 OZONE AMBIENT IMPACT ANALYSIS

For estimating the Project impacts on ozone formation, AMC completed a Modeled Emission Rates for Precursors (MERPs) analysis. Ozone precursors are emissions of VOC and NO_X.

AMC utilized the U.S. EPA's MERPs as a first-tier assessment of impacts on ozone formation. EPA provides a MERPs tool[8] for identifying a representative hypothetical source and using the hypothetical source modeled impacts on ozone and $PM_{2.5}$ to estimate Project impacts on ozone and $PM_{2.5}$. Table 10-4 shows the MERPs for the most representative hypothetical source located nearest to the AMC facility. The Autauga, Alabama hypothetical source (e.g., 500 tpy and 10 meters stack) is approximately 200 km north of the AMC facility, both in a flat terrain. Appendix C provides additional justification for the hypothetical source selection.

Ozone concentration as a result of pre-cursor emissions of NOx (64.82 tpy) and VOC (45.86 tpy) Project emissions was computed using Equation 1 from the 2024 guidance[6] and hypothetical source data from Table 10-5.

8-hour Ozone Secondary Project Air Quality Impact

NO_x Project Air Quality Impact = 64.82 tpy * (2.01 ppb / 500 tpy) = 0.261 ppb

VOC Project Air Quality Impact = 45.86 tpy * (0.064 ppb / 500 tpy) = 0.006 ppb

Total Secondary (NO_X & VOC) Project Air Quality Impact =

0.261 ppb + 0.006 ppb = 0.27 ppb

The Project's preliminary ozone impacts are estimated to be **0.27 ppb**, which is less than the ozone SIL of 1 ppb. Table 10-6 shows the Project's ozone impacts added to a background monitor ozone value. The nearest active monitor with three recent years of complete data is the Chickasaw monitor (ID: 01-097-0003). Because of its proximity to the plant site, this monitor provides the best representative ozone data for the area of the AMC facility, as documented in Appendix C.

[8] United States Environmental Protection Agency. 2024. MERPs View Qlik Tool. Available at: https://www.epa.gov/scram/merps-view-qlik

TABLE 10-5 OZONE MERPs ANALYSIS RESULTS

Ozone Averaging Period	Ozone Class II SIL (ppb)	Precursor	Project Emissions (TPY)	Ozone MERP (TPY)	Ozone Secondary Concentration (ppb)
8-hour	1.0	NO_x	64.82	249	0.27
		VOC	45.86	7796	

TABLE 10-6 PROJECT OZONE IMPACTS AND BACKGROUND OZONE VALUE NAAQS COMPARISON

Chickasaw Background Ozone Value (2021-2023) (ppb)	Project Ozone Impact (ppb)	Total Ozone Impact (ppb)	8-hour Ozone NAAQS (ppb)	Exceeds NAAQS?
60.00	0.27	60.27	70	No

As shown in the table, the total ozone impact including the background ozone value is less than the NAAQS; therefore, this preliminary analysis shows that the Project demonstrates compliance with the ozone NAAQS in all areas.

ATTACHMENT NO. 2
Proposed Permit Provisos

AIR PERMIT

PERMITTEE: ARCELORMITTAL CALVERT, LLC

FACILITY NAME: NOES FACILITY

LOCATION: CALVERT, MOBILE COUNTY, ALABAMA

PERMIT NUMBER	DESCRIPTION OF EQUIPMENT, ARTICLE, OR DEVICE
503-0157-X001	Annealing and Pickling Line (APL) • 93.65 MMBtu/hr Annealing Furnace w/ SCR (AEAL_1) • Shotblaster & Scale Collection w/ Baghouse (SHOT_B) • Hydrochloric Acid Pickling Line & Acid Tanks vented to Wet Scrubber (PICKL)

In accordance with and subject to the provisions of the Alabama Air Pollution Control Act of 1971, Ala. Code §§22-28-1 to 22-28-23, as amended, the Alabama Environmental Management Act, Ala. Code §§22-22A-1 to 22-22A-17, as amended, and rules and regulations adopted there under, and subject further to the conditions set forth in this permit, the Permittee is hereby authorized to construct, install and use the equipment, device or other article described above.

DRAFT DATE: April 1, 2025

General Permit Provisos

1. This permit is issued on the basis of Rules and Regulations existing on the date of issuance. In the event additional Rules and Regulations are adopted, it shall be the permit holder's responsibility to comply with such rules.

2. This permit is not transferable. Upon sale or legal transfer, the new owner or operator must apply for a permit within 30 days.

3. A new permit application must be made for new sources, replacements, alterations or design changes which may result in the issuance of, or an increase in the issuance of, air contaminants, or the use of which may eliminate or reduce or control the issuance of air contaminants.

4. Each point of emission, which requires testing, will be provided with sampling ports, ladders, platforms, and other safety equipment to facilitate testing performed in accordance with procedures established by Part 60 of Title 40 of the Code of Federal Regulations, as the same may be amended or revised.

5. All air pollution control equipment shall be operated at all times while this process is operational. In the event of scheduled maintenance, unscheduled maintenance, or a breakdown of the pollution control equipment, the process shall be shutdown as expeditiously as possible (unless this act and subsequent re-start would clearly cause greater emissions than continuing operations of the process for a short period). The Department shall be notified of all such events **that exceed 1 hour** within 24 hours. The notification shall include all pertinent facts, including the duration of the process operating without the control device and the level of excess emissions which have occurred. Records of all such events, regardless of reporting requirements, shall be made and maintained for a period of five years. These records shall be available for inspection.

6. In the event there is a breakdown of air pollution control or process equipment in such a manner as to cause increased emission of air contaminants for a period greater than **1 hour**, the person responsible for such equipment shall notify the Air Division within 24 hours and provide a statement giving all pertinent facts, including the duration of the breakdown. The Air Division shall be notified when the breakdown has been corrected.

7. This process, including all air pollution control devices and capture systems for which this permit is issued shall be maintained and operated at all times in a manner so as to minimize the emissions of air contaminants. Procedures for ensuring that the above equipment is properly operated and maintained so as to minimize the emission of air contaminants shall be established.

8. This permit expires and the application is cancelled if construction has not begun within 24 months of the date of issuance of the permit.

9. On completion of construction of the device(s) for which this permit is issued, written notification of the fact is to be submitted to the Chief of the Air Division. The notification

shall indicate whether the device(s) was constructed as proposed in the application. The device(s) shall not be operated until authorization to operate is granted by the Chief of the Air Division. Failure to notify the Chief of the Air Division of completion of construction and/or operation without authorization could result in revocation of this permit.

10. Submittal of other reports regarding monitoring records, fuel analyses, operating rates, and equipment malfunctions may be required as authorized in the Department's air pollution control rules and regulations. The Department may require stack emission testing at any time.

11. Additions and revisions to the conditions of this Permit will be made, if necessary, to ensure that the Department's air pollution control rules and regulations are not violated.

12. Nothing in this permit or conditions thereto shall negate any authority granted to the Air Division pursuant to the Alabama Environmental Management Act or regulations issued thereunder.

13. This permit is issued with the condition that, should obnoxious odors arising from the plant operations be verified by Air Division inspectors, measures to abate the odorous emissions shall be taken upon a determination by the Alabama Department of Environmental Management that these measures are technically and economically feasible.

14. Unless otherwise specified in this Permit, the Air Division must be notified in writing at least 10 working days in advance of all emission tests to be conducted and submitted as proof of compliance with the Department's air pollution control rules and regulations.

    To avoid problems concerning testing methods and procedures, the following shall be included with the notification letter:

    (a) The date the test crew is expected to arrive, the date and time anticipated of the start of the first run, how many and which sources are to be tested, and the names of the persons and/or testing company that will conduct the tests.

    (b) A complete description of each sampling train to be used, including type of media used in determining gas stream components, type of probe lining, type of filter media, and probe cleaning method and solvent to be used (if test procedure requires probe cleaning).

    (c) A description of the process(es) to be tested, including the feed rate, any operating parameter used to control or influence the operations, and the rated capacity.

    (d) A sketch or sketches showing sampling point locations and their relative positions to the nearest upstream and downstream gas flow disturbances.

    A pretest meeting may be held at the request of the source owner or the Department. The necessity for such a meeting and the required attendees will be determined on a case-by-case basis.

All test reports must be submitted to the Air Division within 30 days of the actual completion of the test, unless an extension of time is specifically approved by the Air Division.

15. Records will be maintained of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the process equipment and any malfunction of the air pollution control equipment. These records will be kept in a permanent form suitable for inspection and will be retained for at least two years following the date of each occurrence.

16. Precautions shall be taken to prevent fugitive dust emanating from plant roads, grounds, stockpiles, screens, dryers, hoppers, ductwork, etc.

    Plant or haul roads and grounds will be maintained in the following manner so that dust will not become airborne. A minimum of one, or a combination, of the following methods shall be utilized to minimize airborne dust from plant or haul roads and grounds:

    (a) by the application of water any time the surface of the road is sufficiently dry to allow the creation of dust emissions by the act of wind or vehicular traffic;

    (b) by reducing the speed of vehicular traffic to a point below that at which dust emissions are created;

    (c) by paving;

    (d) by the application of binders to the road surface at any time the road surface is found to allow the creation of dust emissions;

    Should one, or a combination, of the above methods fail to adequately reduce airborne dust from plant or haul roads and grounds, alternative methods shall be employed, either exclusively or in combination with one or all of the above control techniques, so that dust will not become airborne. Alternative methods shall be approved by the Department prior to utilization.

17. If this plant relocates to another site, this plant's Air Permit remains valid for this site unless or until it is revoked for failure to comply with ADEM Air Division Rules and Regulations. The owner or operator of this plant must provide written notification of the intent to relocate the plant to this site at least two weeks in advance. The written notification should include the planned construction beginning date and the projected startup date. Failure to provide this written notification is a violation of this permit condition and is grounds for revocation of this permit.

18. Any performance tests required shall be conducted and data reduced in accordance with the test methods and procedures contained in each specific permit condition unless the Director (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (2) approves the use of an equivalent method, or (3) approves the use of an alternative method, the results of which he has determined to be adequate for indicating whether a specific source is in compliance.

19. The permittee shall not use as a defense in an enforcement action that maintaining compliance with conditions of this permit would have required halting or reducing the permitted activity.

20. The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.

21. The permittee shall keep this permit under file or on display at all times at the site where the facility for which the permit is issued is located and shall make the permit readily available for inspection by any or all persons who may request to see it.

22. An annual compliance certification shall be submitted within 60 days of the effective date of the Permittee's Title V permit, unless more frequent periods are specified according to the specific rule governing the source or required by the Department.

    (a) The compliance certification shall include the following:

        a. The identification of each term or condition of this permit that is the basis of the certification;

        b. The compliance status;

        c. The method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with Rule 335-3-16-.05(c) (Monitoring and Recordkeeping Requirements);

        d. Whether compliance has been continuous or intermittent; and

        e. Such other facts as the Department may require in order to determine the compliance status of the source.

    (b) The compliance certification shall be submitted to:

Alabama Department of Environmental Management
Air Division
P.O. Box 301463
Montgomery, AL 36130-1463

Annealing and Pickling Line (APL)

Provisos

	Regulations
Applicability	
1. These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.01(1), *"Control of Particulate Emissions: Visible Emissions".*	Rule 335-3-4-.01(1)
2. These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.04(1), "*Control of Particulate Emissions: Process Industries – General*".	Rule 335-3-4-.04(1)
3. These sources have enforceable limits in order to comply with the applicable requirements of ADEM Admin. Code r. 335-3-14-.04, "*Air Permits Authorizing Construction in Clean Air Areas (Prevention of Significant Deterioration)".*	Rule 335-3-14-.04 (PSD/BACT)
4. When processing steel containing less than or equal to 0.6 percent silicon by weight, the hydrochloric acid pickling line and associated tanks (PICKL) are subject to the applicable requirements of 40 CFR Part 63, Subpart CCC, "*National Emission Standards for Steel Pickling – HCl Process Facilities and Hydrochloric Acid Regeneration Plants*" and the applicable requirements of 40 CFR Part 63, Subpart A, "*General Provisions*", as specified in Table 1 to 40 CFR Part 63, Subpart CCC.	Rule 335-3-11-.06(54) 40 CFR §63.1155(a) Rule 335-3-11-.06(1) 40 CFR §63.1155(c)
5. When processing steel containing greater than 0.6 percent silicon by weight, the hydrochloric acid pickling line and associated tanks (PICKL) are subject to anti-112(g) limits and requirements in accordance with ADEM Admin. Code r. 335-3-14-.06 "*Determinations for Major Sources in Accordance with Clean Air Act Section 112(g)".*	Rule 335-3-14-.06 (Anti-112(g))
Emission Standards	
1. These sources shall not emit particulate of an opacity greater than ten percent (10%), as determined by a six-minute average.	Rule 335-3-14-.04 (PSD/BACT)
2. Filterable particulate matter (PM) emissions from these sources shall not exceed the allowable set by ADEM Admin. Code r. 335-3-4-.04(1).	Rule 335-3-4-.04(1)
3. Filterable and condensable $PM/PM_{10}/PM_{2.5}$ emissions from AEAL_1 shall not exceed 0.0075 lb/MMBtu and 0.70 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)

	Regulations
4. Filterable $PM/PM_{10}/PM_{2.5}$ emissions from AEAL_1 shall not exceed 0.0019 lb/MMBtu and 0.18 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
5. Filterable PM emissions from SHOT_B shall not exceed 0.003 gr/dscf and 0.67 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
6. Filterable PM_{10} emissions from SHOT_B shall not exceed 0.0004 gr/dscf and 0.10 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
7. Filterable $PM_{2.5}$ emissions from SHOT_B shall not exceed 0.00004 gr/dscf and 0.01 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
8. Filterable $PM/PM_{10}/PM_{2.5}$ emissions from PICKL shall not exceed 0.001 gr/dscf and 0.20 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
9. Condensable PM emissions from PICKL shall not exceed 0.00078 gr/dscf and 0.15 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
10. Nitrogen oxide (NO_X) emissions from AEAL_1 shall not exceed 0.05 lb/MMBtu and 4.68 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
11. Volatile Organic Compound (VOC) emissions from AEAL_1 shall not exceed 0.0054 lb/MMBtu and 0.50 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
12. Hydrochloric acid (HCl) emissions from PICKL shall not exceed 6 ppmvd or a mass emission rate that corresponds to a collection efficiency of less than 99 percent.	40 CFR §63.1158(a)(1) Rule 335-3-14-.06 (Anti-112(g))
13. CO_2e emissions from AEAL_1 shall not exceed 48,034 tons per year (TPY) based on a 12-month rolling total.	Rule 335-3-14-.04 (PSD/BACT)
14. The continuous annealing furnace shall only combust natural gas.	Rule 335-3-14-.04 (PSD/BACT)
15. These sources shall utilize good design, operating, and combustion practices.	Rule 335-3-14-.04 (PSD/BACT)
16. The Permittee shall provide and operate a closed-vent system for each hydrochloric acid storage vessel, including during loading and unloading. Each point where the acid is exposed to the atmosphere shall be equipped with a local fume capture system, ventilated through an air pollution control device.	40 CFR §63.1159(b) Rule 335-3-14-.06 (Anti-112(g))
17. At all times, the Permittee must operate and maintain the hydrochloric acid pickling line and associated storage tanks, 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	40 CFR §63.1159(c) Rule 335-3-14-.06 (Anti-112(g))

	Regulations
procedures are being used will be based on available information which 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.	
Compliance and Performance Test Methods and Procedures	
1. Method 9 of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with the opacity limit of Emission Standard No. 1.	Rule 335-3-1-.05 Rule 335-3-4-.01(2)
2. Method 5 of 40 CFR Part 60, Appendix A-3 shall be used to determine compliance with the filterable particulate matter emission limits of Emission Standard Nos. 2, 3, 4, 5, 6, 7, & 8.	Rule 335-3-1-.05
3. Method 201A of 40 CFR Part 51, Appendix M, shall be used to determine compliance with the speciated filterable particulate matter emission limits of Emission Standard Nos. 6 & 7.	Rule 335-3-1-.05
4. Method 202 of 40 CFR Part 51, Appendix M, shall be used to determine compliance with the condensable particulate matter emission limits of Emission Standard Nos. 3 & 9.	Rule 335-3-1-.05
5. Method 7E of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with the nitrogen oxide emission limits of Emission Standard No. 10.	Rule 335-3-1-.05
6. Method 25A of 40 CFR Part 60, Appendix A-7 shall be used to determine compliance with the volatile organic compound limits of Emission Standard No. 11.	Rule 335-3-1-.05
7. Method 26A of 40 CFR Part 60, Appendix A-8 shall be used to determine compliance with the hydrochloric acid emission limits of Emission Standard No. 12.	40 CFR §63.1161(d)(1)(v) Rule 335-3-1-.05
8. Compliance with Emission Standard No. 12 will be determined by conducting emission tests in accordance with the procedures detailed in 40 CFR §63.1161(a), (b), & (d).	40 CFR §63.1162(a)(1) Rule 335-3-1-.05
Emission Monitoring	
1. The Permittee shall conduct opacity monitoring for these sources in accordance with the following:	Rule 335-3-1-.04(1)
(a) An instantaneous visible emissions check shall be conducted at least once daily during daylight hours while the sources are in operation.	

	Regulations
(b) If any visible emissions are observed during the initial visible emissions check, corrective action shall be initiated within 2 hours.	
(c) After corrective action has been completed, a 12-minute visible emissions observation in accordance with Method 9 shall be conducted in order to confirm that no visible emissions are present.	
2. The Permittee shall conduct initial performance tests according to the requirements in General Permit Proviso Nos. 14 & 18 and the *Compliance and Performance Test Methods and Procedures* section of the Permit to demonstrate compliance with Emission Standard Nos. 3, 4, & 10 within twelve (12) months of start-up and compliance with Emission Standard Nos. 8, 9, & 12 within one-hundred eighty (180) days of start-up.	Rule 335-3-1-.04(1) 40 CFR §63.1161(a)
(a) Performance tests shall be conducted under such conditions as the Department specifies to the Permittee based on representative performance of the emission sources for the period being tested.	
(b) Each performance test must consist of three (3) separate runs; pollutant sampling for each run must be conducted for the time period specified in the applicable method or, in the absence of a specific time period in the test method, for a minimum of one (1) hour.	
(c) Subsequent performance tests shall be conducted once every thirty (30) months following the initial performance test to demonstrate compliance with Emission Standard Nos. 10 & 12. Each subsequent performance test shall meet the conditions specified in Provisos 2(a) and (b).	Rule 335-3-1-.04(1) 40 CFR §63.1162(a)(1)
(d) During each performance test of the pickling line conducted under this provision:	40 CFR §63.1161(b) Rule 335-3-1-.04(1)
i. The Permittee shall establish site-specific control device operating parameter values for the minimum scrubber makeup water flow rate and the minimum recirculation water flow rate;	
ii. During the emission test, each control device operating parameter must be monitored continuously and recorded with sufficient frequency to establish a representative average value for that parameter, but no less frequently than once every 15 minutes;	

	Regulations
iii. The Permittee shall determine the control device operating parameter monitoring values as the averages of the values recorded during any of the runs for which results are used to establish the emission concentration or collection efficiency; and	
iv. The Permittee may conduct multiple performance tests to establish alternative compliant operating parameter values. Also, the Permittee may reestablish compliant operating parameter values as part of any performance test that is conducted subsequent to the initial test or tests.	
3. The Permittee shall prepare an operation and maintenance (O&M) plan for the scrubber (PICKL) according to the requirements in 40 CFR §63.1160(b)(1). The plan must be consistent with good maintenance practices and at a minimum:	40 CFR §63.1160(b)(1) Rule 335-3-1-.04(1)
(a) Require monitoring and recording the pressure drop across the scrubber once per shift while the scrubber is operating in order to identify changes that may indicate a need for maintenance;	
(b) Require the manufacturer's recommended maintenance at the recommended intervals on fresh solvent pumps, recirculating pumps, discharge pumps, and other liquid pumps, in addition to exhaust system and scrubber fans and motors associated with those pumps and fans;	
(c) Require cleaning of the scrubber internals and mist eliminators at intervals sufficient to prevent buildup of solids or other fouling; and	
(d) Require an inspection of each scrubber at intervals of no less than 3 months with:	
i. Cleaning or replacement of any plugged spray nozzles or other liquid delivery devices;	
ii. Repair or replacement of missing, misaligned, or damaged baffles, trays, or other internal components;	
iii. Repair or replacement of droplet eliminator elements as needed;	
iv. Repair or replacement of heat exchanger elements used to control the temperature of fluids entering or leaving the scrubber; and	

	Regulations
v. Adjustment of damper settings for consistency with the required air flow.	
(e) If the scrubber is not equipped with a viewport or access hatch allowing visual inspection, alternate means of inspection approved by the Department may be used.	
(f) The Permittee shall initiate procedures for corrective action within 1 working day of detection of an operating problem and complete all corrective actions as soon as practicable. Procedures to be initiated are the applicable actions that are specified in the maintenance plan. Failure to initiate or provide appropriate repair, replacement, or other corrective action is a violation of the maintenance requirement of 40 CFR Part 63, Subpart CCC.	
4. The Permittee shall install, operate, and maintain systems for the measurement and recording of the scrubber (PICKL) makeup water flow rate and recirculation water flow rate. These flow rates must be monitored continuously and recorded at least once per shift while the scrubber is operating. Operation of the wet scrubber with excursions of scrubber makeup water flow rate and recirculation water flow rate less than the minimum values established during the performance test or tests will require initiation of corrective action as specified by the maintenance requirements in Emission Monitoring Proviso No. 3.	40 CFR §63.1162(a)(2) Rule 335-3-1-.04(1)
(a) Failure to record each of the operating parameters listed in this proviso is a violation of the monitoring requirements of this permit.	40 CFR §63.1162(a)(4) Rule 335-3-1-.04(1)
(b) Each monitoring device shall be certified by the manufacturer to be accurate to within 5 percent and shall be calibrated in accordance with the manufacturer's instructions but not less frequently than once per year.	40 CFR §63.1162(a)(5) Rule 335-3-1-.04(1)
(c) The Permittee may develop and implement alternative monitoring requirements subject to approval by the Administrator of U.S. EPA.	40 CFR §63.1162(a)(6) Rule 335-3-1-.04(1)
5. The Permittee shall inspect each hydrochloric acid storage vessel semiannually to determine that the closed-vent system and the scrubber is installed and operating when required.	40 CFR §63.1162(c) Rule 335-3-1-.04(1)
6. The Permittee shall continuously measure and, once per day, record the pressure differential between the inlet and the exhaust of the SHOT_B baghouse to determine if the pressure differential falls within the range specified by the manufacturer. Whenever	Rule 335-3-1-.04(1)

	Regulations
the pressure differential is outside of the range, maintenance and/or corrective action shall be initiated within one working day of detection.	
7. The Permittee shall conduct maintenance on these sources according to the manufacturer's specifications.	Rule 335-3-1-.04(1)
Recordkeeping and Reporting Requirements	
1. All records shall be maintained in a form suitable for inspection for a period of at least five (5) years from the date of generation.	Rule 335-3-1-.04(1)
2. The Permittee shall maintain a record of each visible emissions check and Method 9 observation. This should include the date and time of the check/observation, observer name, results, problems observed, and corrective actions taken. If a visible emissions observation utilizing Method 9 is required, the results shall be documented using the ADEM visible emissions observation form.	Rule 335-3-1-.04(1)
3. The Permittee shall maintain a record of the 12-month rolling total CO_2e emissions from AEAL_1.	Rule 335-3-1-.04(1)
4. The Permittee shall maintain a record of the pressure differential readings required under this Permit. This shall include any problems observed and corrective actions taken.	Rule 335-3-1-.04(1)
5. The Permittee shall maintain a record of the maintenance conducted on these sources.	Rule 335-3-1-.04(1)
6. The Permittee shall maintain the following records related to the hydrochloric acid pickling line and associated acid storage vessels with wet scrubber (PICKL):	40 CFR §63.1165(a)-(b) Rule 335-3-1-.04(1)
(a) The occurrence and duration of each malfunction of operation (*i.e.,* process equipment);	
(b) The occurrence and duration of each malfunction of the air pollution control equipment (*i.e.*, closed ventilation system and wet scrubber);	
(c) All maintenance performed on the air pollution control equipment;	
(d) Actions taken during periods of malfunction to minimize emissions in accordance with the O&M plan and the dates of such actions (including corrective actions to restore	

		Regulations
	malfunctioning process and air pollution control equipment to its normal or usual manner of operation); (e) All required measurements needed to demonstrate compliance with the standard and to support data that the source is required to report, including, but not limited to, performance test measurements (including initial and any subsequent performance tests) and measurements as may be necessary to determine the conditions of the initial test or subsequent tests; (f) All results of initial or subsequent performance tests; (g) Scrubber makeup water flow rate and recirculation water flow rate; (h) Calibration and manufacturer certification that monitoring devices are accurate to within 5 percent; (i) Each maintenance inspection and repair, replacement, or other corrective action; and (j) A written copy of the O&M plan, including previous/superseded versions of the plan.	
7.	If the Permittee process steel containing less than or equal to 0.6 percent silicon by weight in the hydrochloric acid pickling line, the Permittee must meet the initial notification requirements of 40 CFR §63.1163(a) and the notification of compliance status requirement in 40 CFR §63.1163(e). (a) The Permittee shall maintain records of all documentation supporting initial notifications and notifications of compliance status.	40 CFR §63.1163(a) 40 CFR §63.1163(e) 40 CFR §63.1165(a)(9)
8.	Notification of performance tests shall be submitted to the Department in accordance with General Permit Proviso No. 14, except prior to each test measuring hydrochloric acid emissions, the Permittee shall notify the Department in writing at least 60 calendar days before the performance test.	40 CFR §63.1163(d)
9.	Test reports shall be submitted to the Department in accordance with General Permit Proviso No. 14, except after completing each test measuring hydrochloric acid emissions, the Permittee must submit the test report within 60 days of the actual completion of the test. Additionally, if the test was conducted while processing steel containing less than or equal to 0.6 percent silicon by	40 CFR §63.1164(a) Rule 335-3-1-.04(1)

	Regulations
weight, the Permittee must follow the reporting requirements of 40 CFR §63.1164(a).	
10. The Permittee shall submit a Deviation Report for the pickling line on a semiannual basis.	40 CFR §63.1164(c) Rule 335-3-1-.04(1)
(a) The report shall include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded.	
(b) The report shall include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions, including actions taken to correct a malfunction.	
(c) The report shall be submitted according to the following schedule:	

Reporting Period	Submittal Date
January 1st through June 30th	*July 30th*
July 1st through December 31st	*January 30th*

Alabama Department of Environmental Management

AIR PERMIT

PERMITTEE: ARCELORMITTAL CALVERT, LLC

FACILITY NAME: NOES FACILITY

LOCATION: CALVERT, MOBILE COUNTY, ALABAMA

PERMIT NUMBER	DESCRIPTION OF EQUIPMENT, ARTICLE, OR DEVICE
503-0157-X002	Acid Regeneration Plant (ARP) • Acid Regeneration Plant (13.0 MMBtu/hr) vented to Wet Scrubber (SPRY_R) • Acid Tank Farm vented to Wet Scrubber (TNK_FM) • Iron Oxide Storage Bins and Baggers vented to Baghouse (OXIDE)

In accordance with and subject to the provisions of the Alabama Air Pollution Control Act of 1971, Ala. Code §§22-28-1 to 22-28-23, as amended, the Alabama Environmental Management Act, Ala. Code §§22-22A-1 to 22-22A-17, as amended, and rules and regulations adopted there under, and subject further to the conditions set forth in this permit, the Permittee is hereby authorized to construct, install and use the equipment, device or other article described above.

DRAFT DATE: April 1, 2025

General Permit Provisos

1. This permit is issued on the basis of Rules and Regulations existing on the date of issuance. In the event additional Rules and Regulations are adopted, it shall be the permit holder's responsibility to comply with such rules.

2. This permit is not transferable. Upon sale or legal transfer, the new owner or operator must apply for a permit within 30 days.

3. A new permit application must be made for new sources, replacements, alterations or design changes which may result in the issuance of, or an increase in the issuance of, air contaminants, or the use of which may eliminate or reduce or control the issuance of air contaminants.

4. Each point of emission, which requires testing, will be provided with sampling ports, ladders, platforms, and other safety equipment to facilitate testing performed in accordance with procedures established by Part 60 of Title 40 of the Code of Federal Regulations, as the same may be amended or revised.

5. All air pollution control equipment shall be operated at all times while this process is operational. In the event of scheduled maintenance, unscheduled maintenance, or a breakdown of the pollution control equipment, the process shall be shutdown as expeditiously as possible (unless this act and subsequent re-start would clearly cause greater emissions than continuing operations of the process for a short period). The Department shall be notified of all such events **that exceed 1 hour** within 24 hours. The notification shall include all pertinent facts, including the duration of the process operating without the control device and the level of excess emissions which have occurred. Records of all such events, regardless of reporting requirements, shall be made and maintained for a period of five years. These records shall be available for inspection.

6. In the event there is a breakdown of air pollution control or process equipment in such a manner as to cause increased emission of air contaminants for a period greater than **1 hour**, the person responsible for such equipment shall notify the Air Division within 24 hours and provide a statement giving all pertinent facts, including the duration of the breakdown. The Air Division shall be notified when the breakdown has been corrected.

7. This process, including all air pollution control devices and capture systems for which this permit is issued shall be maintained and operated at all times in a manner so as to minimize the emissions of air contaminants. Procedures for ensuring that the above equipment is properly operated and maintained so as to minimize the emission of air contaminants shall be established.

8. This permit expires and the application is cancelled if construction has not begun within 24 months of the date of issuance of the permit.

9. On completion of construction of the device(s) for which this permit is issued, written notification of the fact is to be submitted to the Chief of the Air Division. The notification

shall indicate whether the device(s) was constructed as proposed in the application. The device(s) shall not be operated until authorization to operate is granted by the Chief of the Air Division. Failure to notify the Chief of the Air Division of completion of construction and/or operation without authorization could result in revocation of this permit.

10. Submittal of other reports regarding monitoring records, fuel analyses, operating rates, and equipment malfunctions may be required as authorized in the Department's air pollution control rules and regulations. The Department may require stack emission testing at any time.

11. Additions and revisions to the conditions of this Permit will be made, if necessary, to ensure that the Department's air pollution control rules and regulations are not violated.

12. Nothing in this permit or conditions thereto shall negate any authority granted to the Air Division pursuant to the Alabama Environmental Management Act or regulations issued thereunder.

13. This permit is issued with the condition that, should obnoxious odors arising from the plant operations be verified by Air Division inspectors, measures to abate the odorous emissions shall be taken upon a determination by the Alabama Department of Environmental Management that these measures are technically and economically feasible.

14. Unless otherwise specified in this Permit, the Air Division must be notified in writing at least 10 working days in advance of all emission tests to be conducted and submitted as proof of compliance with the Department's air pollution control rules and regulations.

    To avoid problems concerning testing methods and procedures, the following shall be included with the notification letter:

    (a) The date the test crew is expected to arrive, the date and time anticipated of the start of the first run, how many and which sources are to be tested, and the names of the persons and/or testing company that will conduct the tests.

    (b) A complete description of each sampling train to be used, including type of media used in determining gas stream components, type of probe lining, type of filter media, and probe cleaning method and solvent to be used (if test procedure requires probe cleaning).

    (c) A description of the process(es) to be tested, including the feed rate, any operating parameter used to control or influence the operations, and the rated capacity.

    (d) A sketch or sketches showing sampling point locations and their relative positions to the nearest upstream and downstream gas flow disturbances.

    A pretest meeting may be held at the request of the source owner or the Department. The necessity for such a meeting and the required attendees will be determined on a case-by-case basis.

All test reports must be submitted to the Air Division within 30 days of the actual completion of the test, unless an extension of time is specifically approved by the Air Division.

15. Records will be maintained of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the process equipment and any malfunction of the air pollution control equipment. These records will be kept in a permanent form suitable for inspection and will be retained for at least two years following the date of each occurrence.

16. Precautions shall be taken to prevent fugitive dust emanating from plant roads, grounds, stockpiles, screens, dryers, hoppers, ductwork, etc.

    Plant or haul roads and grounds will be maintained in the following manner so that dust will not become airborne. A minimum of one, or a combination, of the following methods shall be utilized to minimize airborne dust from plant or haul roads and grounds:

    (a) by the application of water any time the surface of the road is sufficiently dry to allow the creation of dust emissions by the act of wind or vehicular traffic;

    (b) by reducing the speed of vehicular traffic to a point below that at which dust emissions are created;

    (c) by paving;

    (d) by the application of binders to the road surface at any time the road surface is found to allow the creation of dust emissions;

    Should one, or a combination, of the above methods fail to adequately reduce airborne dust from plant or haul roads and grounds, alternative methods shall be employed, either exclusively or in combination with one or all of the above control techniques, so that dust will not become airborne. Alternative methods shall be approved by the Department prior to utilization.

17. If this plant relocates to another site, this plant's Air Permit remains valid for this site unless or until it is revoked for failure to comply with ADEM Air Division Rules and Regulations. The owner or operator of this plant must provide written notification of the intent to relocate the plant to this site at least two weeks in advance. The written notification should include the planned construction beginning date and the projected startup date. Failure to provide this written notification is a violation of this permit condition and is grounds for revocation of this permit.

18. Any performance tests required shall be conducted and data reduced in accordance with the test methods and procedures contained in each specific permit condition unless the Director (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (2) approves the use of an equivalent method, or (3) approves the use of an alternative method, the results of which he has determined to be adequate for indicating whether a specific source is in compliance.

19. The permittee shall not use as a defense in an enforcement action that maintaining compliance with conditions of this permit would have required halting or reducing the permitted activity.

20. The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.

21. The permittee shall keep this permit under file or on display at all times at the site where the facility for which the permit is issued is located and shall make the permit readily available for inspection by any or all persons who may request to see it.

22. An annual compliance certification shall be submitted within 60 days of the effective date of the Permittee's Title V permit, unless more frequent periods are specified according to the specific rule governing the source or required by the Department.

    (a) The compliance certification shall include the following:

        a. The identification of each term or condition of this permit that is the basis of the certification;

        b. The compliance status;

        c. The method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with Rule 335-3-16-.05(c) (Monitoring and Recordkeeping Requirements);

        d. Whether compliance has been continuous or intermittent; and

        e. Such other facts as the Department may require in order to determine the compliance status of the source.

    (b) The compliance certification shall be submitted to:

Alabama Department of Environmental Management
Air Division
P.O. Box 301463
Montgomery, AL 36130-1463

Acid Regeneration Plant (ARP)

Provisos

	Regulations
Applicability	
1. These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.01(1), *"Control of Particulate Emissions: Visible Emissions".*	Rule 335-3-4-.01(1)
2. These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.04(1), "*Control of Particulate Emissions: Process Industries – General*".	Rule 335-3-4-.04(1)
3. These sources have enforceable limits in order to comply with the applicable requirements of ADEM Admin. Code r. 335-3-14-.04, "*Air Permits Authorizing Construction in Clean Air Areas (Prevention of Significant Deterioration)".*	Rule 335-3-14-.04 (PSD/BACT)
4. The sources associated with the acid regeneration plant (SPRY_R) and its acid tank farm (TNK_FM) are subject to the applicable requirements of 40 CFR Part 63, Subpart CCC, "*National Emission Standards for Steel Pickling – HCl Process Facilities and Hydrochloric Acid Regeneration Plants*" and the applicable requirements of 40 CFR Part 63, Subpart A, "*General Provisions*", as specified in Table 1 to 40 CFR Part 63, Subpart CCC	Rule 335-3-11-.06(54) 40 CFR §63.1155(a) Rule 335-3-11-.06(1) 40 CFR §63.1155(c)
Emission Standards	
1. These sources shall not emit particulate of an opacity greater than ten percent (10%), as determined by a six-minute average.	Rule 335-3-14-.04 (PSD/BACT)
2. Filterable particulate matter (PM) emissions from these sources shall not exceed the allowable set by ADEM Admin. Code r. 335-3-4-.04(1).	Rule 335-3-4-.04(1)
3. Filterable and condensable $PM/PM_{10}/PM_{2.5}$ emissions from SRPY_R shall not exceed 0.0042 gr/dscf and 0.07 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
4. Filterable $PM/PM_{10}/PM_{2.5}$ emissions from TNK_FM shall not exceed 0.001 gr/dscf and 0.12 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
5. Condensable PM emissions from TNK_FM shall not exceed 0.0078 gr/dscf and 0.09 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
6. Filterable PM/PM_{10} emissions from OXIDE shall not exceed 0.0061 gr/dscf and 0.17 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)

	Regulations
7. Filterable $PM_{2.5}$ emissions from OXIDE shall not exceed 0.16 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
8. Condensable PM emissions from OXIDE shall not exceed 0.14 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
9. Nitrogen oxide (NO_X) emissions from SPRY_R shall not exceed 0.054 lb/MMBtu and 0.71 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
10. Volatile organic compound (VOC) emissions from SPRY_R shall not exceed 0.0054 lb/MMBtu and 0.07 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
11. Hydrochloric acid (HCl) emissions from SPRY_R shall not exceed 12 ppmvd.	40 CFR §63.1158(b)(1)
12. Chlorine (Cl_2) emissions from SPRY_R shall not exceed 6 ppmvd.	40 CFR §63.1158(b)(2)
13. CO_2e emissions from SPRY_R shall not exceed 6,651 tons per year (TPY) based on a 12-month rolling total.	Rule 335-3-14-.04 (PSD/BACT)
14. The acid regeneration plant spray roaster shall only combust natural gas.	Rule 335-3-14-.04 (PSD/BACT)
15. These sources shall utilize good design, operating, and combustion practices.	Rule 335-3-14-.04 (PSD/BACT)
16. The Permittee must operate the acid regeneration plant at all times while in production mode in a manner that minimizes the proportion of excess air fed to the process and maximizes the process offgas temperature consistent with producing usable regenerated acid or iron oxide.	40 CFR §63.1159(a)
17. The Permittee shall provide and operate a closed-vent system for each hydrochloric acid storage vessel, including during loading and unloading. Each point where the acid is exposed to the atmosphere shall be equipped with a local fume capture system, ventilated through an air pollution control device.	40 CFR §63.1159(b)
18. At all times, the Permittee must operate and maintain the acid regeneration plant and associated storage tank farm, 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 available information which 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.	40 CFR §63.1159(c)

	Regulations
Compliance and Performance Test Methods and Procedures	
1. Method 9 of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with the opacity limit of Emission Standard No. 1.	Rule 335-3-1-.05 Rule 335-3-4-.01(2)
2. Method 5 of 40 CFR Part 60, Appendix A-3 shall be used to determine compliance with the filterable particulate matter emission limits of Emission Standard Nos. 2, 3, 4, 6, & 7.	Rule 335-3-1-.05
3. Method 201A of 40 CFR Part 51, Appendix M, shall be used to determine compliance with the speciated filterable particulate matter emission limits of Emission Standard No. 7.	Rule 335-3-1-.05
4. Method 202 of 40 CFR Part 51, Appendix M, shall be used to determine compliance with the condensable particulate matter emission limits of Emission Standard Nos. 3, 5, & 8.	Rule 335-3-1-.05
5. Method 7E of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with the nitrogen oxide emission limits of Emission Standard No. 9.	Rule 335-3-1-.05
6. Method 25A of 40 CFR Part 60, Appendix A-7 shall be used to determine compliance with the volatile organic compound limits of Emission Standard No. 10.	Rule 335-3-1-.05
7. Method 26A of 40 CFR Part 60, Appendix A-8 shall be used to determine compliance with the hydrochloric acid and chlorine emission limits of Emission Standard Nos. 11 & 12.	40 CFR §63.1161(d)(1)(v) Rule 335-3-1-.05
8. Compliance with Emission Standard Nos. 11 & 12 will be determined by conducting emission tests in accordance with the procedures detailed in 40 CFR §63.1161.	40 CFR §63.1161
Emission Monitoring	
1. The Permittee shall conduct opacity monitoring for these sources in accordance with the following:	Rule 335-3-1-.04(1)
(a) An instantaneous visible emissions check shall be conducted at least once daily during daylight hours while the sources are in operation.	
(b) If any visible emissions are observed during the initial visible emissions check, corrective action shall be initiated within 2 hours.	
(c) After corrective action has been completed, a 12-minute visible emissions observation in accordance with Method 9	

	Regulations
shall be conducted in order to confirm that no visible emissions are present.	
2. The Permittee shall conduct an initial performance test according to the requirements in General Permit Proviso Nos. 14 & 18 and the *Compliance and Performance Test Methods and Procedures* section of the Permit to demonstrate compliance with Emission Standard Nos. 6, 7, & 8 within twelve (12) months of start-up and compliance with Emission Standard Nos. 3, 9, 11, & 12 within one-hundred eighty (180) days of start-up.	Rule 335-3-1-.04(1) 40 CFR §63.1161(a)
(a) Performance tests shall be conducted under such conditions as the Department specifies to the Permittee based on representative performance of the emission sources for the period being tested.	
(b) Each performance test must consist of three (3) separate runs; pollutant sampling for each run must be conducted for the time period specified in the applicable method or, in the absence of a specific time period in the test method, for a minimum of one (1) hour.	
(c) Subsequent performance tests shall be conducted once every thirty (30) months following the initial performance test to demonstrate compliance with Emission Standard Nos. 11 & 12. Each subsequent performance test shall meet the conditions specified in Provisos 2(a) and (b).	Rule 335-3-1-.04(1) 40 CFR §63.1162(a)(1)
(d) During each performance test of the acid regeneration plant conducted under this provision:	
i. The Permittee shall establish site-specific control device operating parameter values for the minimum scrubber makeup water flow rate and the minimum recirculation water flow rate;	40 CFR §63.1161(b)
ii. The Permittee shall establish site-specific process operating parameter values for the minimum process offgas temperature and the maximum proportion of excess air fed to the process as described in 40 CFR §63.1162(b)(1);	40 CFR §63.1161(c)(1)
iii. During the emission test, each control device and process operating parameter must be monitored continuously and recorded with sufficient frequency to establish a representative average value for that	40 CFR §63.1161(b) 40 CFR §63.1161(c)(1)

	Regulations
parameter, but no less frequently than once every 15 minutes;	
iv. The amount of iron in the spent pickle liquor shall be determined for each run by sampling the liquor every 15 minutes and analyzing a composite of the samples;	40 CFR §63.1161(c)(1)
v. The Permittee shall determine the control device and process operating parameter monitoring values as the averages of the values recorded during any of the runs for which results are used to establish the emission concentration; and	40 CFR §63.1161(b) 40 CFR §63.1161(c)(1)
vi. The Permittee may conduct multiple performance tests to establish alternative compliant operating parameter values. Also, the Permittee may reestablish compliant operating parameter values as part of any performance test that is conducted subsequent to the initial test or tests.	40 CFR §63.1161(b) 40 CFR §63.1161(c)(1)
3. The Permittee shall prepare an operation and maintenance (O&M) plan for the acid regeneration plant scrubber (SPRY_R) according to the requirements in 40 CFR §63.1160(b)(1). The plan must be consistent with good maintenance practices and at a minimum:	40 CFR §63.1160(b)(1)
(a) Require monitoring and recording the pressure drop across the scrubber once per shift while the scrubber is operating in order to identify changes that may indicate a need for maintenance;	
(b) Require the manufacturer's recommended maintenance at the recommended intervals on fresh solvent pumps, recirculating pumps, discharge pumps, and other liquid pumps, in addition to exhaust system and scrubber fans and motors associated with those pumps and fans;	
(c) Require cleaning of the scrubber internals and mist eliminators at intervals sufficient to prevent buildup of solids or other fouling; and	
(d) Require an inspection of each scrubber at intervals of no less than 3 months with:	
i. Cleaning or replacement of any plugged spray nozzles or other liquid delivery devices;	
ii. Repair or replacement of missing, misaligned, or damaged baffles, trays, or other internal components;	

	Regulations
iii. Repair or replacement of droplet eliminator elements as needed; iv. Repair or replacement of heat exchanger elements used to control the temperature of fluids entering or leaving the scrubber; and v. Adjustment of damper settings for consistency with the required air flow. (e) If the scrubber is not equipped with a viewport or access hatch allowing visual inspection, alternate means of inspection approved by the Department may be used. (f) The Permittee shall initiate procedures for corrective action within 1 working day of detection of an operating problem and complete all corrective actions as soon as practicable. Procedures to be initiated are the applicable actions that are specified in the maintenance plan. Failure to initiate or provide appropriate repair, replacement, or other corrective action is a violation of the maintenance requirement of 40 CFR Part 63, Subpart CCC.	
4. The Permittee shall develop and implement a written O&M plan for the acid regeneration plant process equipment. The program shall require: (a) Performance of the manufacturer's recommended maintenance at the recommended intervals on all required systems and components; (b) Initiation of procedures for appropriate and timely repair, replacement, or other corrective action within 1 working day of detection; and (c) Maintenance of a daily record, signed by a responsible maintenance official, showing the date of each inspection for each requirement, the problems found, a description of the repair, replacement, or other action taken, and the date of repair or replacement.	40 CFR §63.1160(b)(2)
5. The Permittee shall install, operate, and maintain systems for the measurement and recording of the acid regeneration plant scrubber (SPRY_R) makeup water flow rate and recirculation water flow rate. These flow rates must be monitored continuously and recorded at least once per shift while the scrubber is operating. Operation of the wet scrubber with excursions of scrubber makeup water flow rate and recirculation water flow rate	40 CFR §63.1162(a)(2)

	Regulations
less than the minimum values established during the performance test or tests will require initiation of corrective action as specified by the maintenance requirements in Emission Monitoring Proviso No. 3.	
(a) Failure to record each of the control device operating parameters listed in this proviso is a violation of the monitoring requirements of this permit.	40 CFR §63.1162(a)(4)
(b) Each monitoring device shall be certified by the manufacturer to be accurate to within 5 percent and shall be calibrated in accordance with the manufacturer's instructions but not less frequently than once per year.	40 CFR §63.1162(a)(5)
(c) The Permittee may develop and implement alternative monitoring requirements subject to approval by the Administrator of U.S. EPA.	40 CFR §63.1162(a)(6)
6. The Permittee shall also install, operate, and maintain systems for the measurement and recording of the following acid regeneration plant process operating parameters:	40 CFR §63.1162(b)
(a) Process offgas temperature, which shall be monitored continuously and recorded at least once every shift while the facility is operating in production mode; and	40 CFR §63.1162(b)(1)
(b) Parameters from which proportion of excess air is determined. Proportion of excess air shall be determined by a combination of total air flow rate, fuel flow rate, spent pickle liquor addition rate, and amount of iron in the spent pickle liquor, or by any other combination of parameters approved by the Administrator of U.S. EPA. Proportion of excess air shall be determined and recorded at least once every shift while the plant is operating in production mode.	40 CFR §63.1162(b)(2)
(c) Each monitoring device must be certified by the manufacturer to be accurate to within 5 percent and must be calibrated in accordance with the manufacturer's instructions but not less frequently than once per year.	40 CFR §63.1162(b)(3)
(d) Operation of the plant with the process offgas temperature lower than the value established during performance testing or with the proportion of excess air greater than the value established during performance testing is a violation of the operational standard specified in Emission Standard No. 16.	40 CFR §63.1162(b)(4)

	Regulations
7. The Permittee shall inspect each hydrochloric acid storage vessel semiannually to determine that the closed-vent system and the scrubber is installed and operating when required.	40 CFR §63.1162(c)
8. The Permittee shall continuously measure and, once per day, record the pressure differential between the inlet and the exhaust of OXIDE to determine if the pressure differential falls within the range specified by the manufacturer. Whenever the pressure differential is outside of the range, maintenance and/or corrective action shall be initiated within one working day of detection.	Rule 335-3-1-.04(1)
9. The Permittee shall conduct maintenance on these sources according to the manufacturer's specifications.	Rule 335-3-1-.04(1)
Recordkeeping and Reporting Requirements	
1. All records shall be maintained in a form suitable for inspection for a period of at least five (5) years from the date of generation.	Rule 335-3-1-.04(1)
2. The Permittee shall maintain a record of each visible emissions check and Method 9 observation. This should include the date and time of the check/observation, observer name, results, problems observed, and corrective actions taken. If a visible emissions observation utilizing Method 9 is required, the results shall be documented using the ADEM visible emissions observation form.	Rule 335-3-1-.04(1)
3. The Permittee shall maintain a record of the 12-month rolling total CO_2e emissions from SPRY_R.	Rule 335-3-1-.04(1)
4. The Permittee shall maintain a record of the pressure differential readings required under this Permit. This shall include any problems observed and corrective actions taken.	Rule 335-3-1-.04(1)
5. The Permittee shall maintain a record of the maintenance conducted on these sources.	Rule 335-3-1-.04(1)
6. The Permittee shall maintain the following records related to the acid regeneration plant (SPRY_R) and its acid tank farm (TNK_FM): (a) The occurrence and duration of each malfunction of operation (*i.e.,* process equipment); (b) The occurrence and duration of each malfunction of the air pollution control equipment (*i.e.*, closed ventilation system and wet scrubber);	40 CFR §63.1165(a)-(b) Rule 335-3-1-.04(1)

	Regulations
(c) All maintenance performed on the air pollution control equipment;	
(d) Actions taken during periods of malfunction to minimize emissions in accordance with the O&M plan and the dates of such actions (including corrective actions to restore malfunctioning process and air pollution control equipment to its normal or usual manner of operation);	
(e) All required measurements needed to demonstrate compliance with the standard and to support data that the source is required to report, including, but not limited to, performance test measurements (including initial and any subsequent performance tests) and measurements as may be necessary to determine the conditions of the initial test or subsequent tests.	
(f) All results of initial or subsequent performance tests;	
(g) Scrubber makeup water flow rate and recirculation water flow rate;	
(h) Process offgas temperature and parameters that determine proportion of excess air;	
(i) Calibration and manufacturer certification that monitoring devices are accurate to within 5 percent;	
(j) Each maintenance inspection and repair, replacement, or other corrective action; and	
(k) A written copy of the O&M plan, including previous/superseded versions of the plan.	
7. The Permittee must meet the initial notification requirements of 40 CFR §63.1163(a) and the notification of compliance status requirement in 40 CFR §63.1163(e).	40 CFR §63.1163(a) 40 CFR §63.1163(e)
(a) The Permittee shall maintain records of all documentation supporting initial notifications and notifications of compliance status.	40 CFR §63.1165(a)(9)
8. Notification of performance tests shall be submitted to the Department in accordance with General Permit Proviso No. 14, except prior to each test measuring hydrochloric acid and chlorine emissions, the Permittee shall notify the Department in writing at least 60 calendar days before the performance test.	40 CFR §63.1163(d)

	Regulations
9. The Permittee must follow the reporting requirements of 40 CFR §63.1164(a). Test reports shall be submitted to the Department in accordance with General Permit Proviso No. 14, except after completing each test measuring hydrochloric acid and chlorine emissions, the Permittee must submit the test report within 60 days of the actual completion of the test.	40 CFR §63.1164(a)
10. The Permittee shall submit a Deviation Report for the acid regeneration plant on a semiannual basis. (a) The report shall include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. (b) The report shall include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions, including actions taken to correct a malfunction (c) The report shall be submitted according to the following schedule Reporting Period — Submittal Date *January 1st through June 30th* — *July 30th* *July 1st through December 31st* — *January 30th*	40 CFR §63.1164(c)

AIR PERMIT

PERMITTEE:	ARCELORMITTAL CALVERT, LLC
FACILITY NAME:	NOES FACILITY
LOCATION:	CALVERT, MOBILE COUNTY, ALABAMA

PERMIT NUMBER	DESCRIPTION OF EQUIPMENT, ARTICLE, OR DEVICE
503-0157-X003	Boilers • 45.5 MMBtu/hr Boiler #1 (BOIL_1) • 45.5 MMBtu/hr Boiler #2 (BOIL_2)

In accordance with and subject to the provisions of the Alabama Air Pollution Control Act of 1971, Ala. Code §§22-28-1 to 22-28-23, as amended, the Alabama Environmental Management Act, Ala. Code §§22-22A-1 to 22-22A-17, as amended, and rules and regulations adopted there under, and subject further to the conditions set forth in this permit, the Permittee is hereby authorized to construct, install and use the equipment, device or other article described above.

DRAFT DATE: April 1, 2025

General Permit Provisos

1. This permit is issued on the basis of Rules and Regulations existing on the date of issuance. In the event additional Rules and Regulations are adopted, it shall be the permit holder's responsibility to comply with such rules.

2. This permit is not transferable. Upon sale or legal transfer, the new owner or operator must apply for a permit within 30 days.

3. A new permit application must be made for new sources, replacements, alterations or design changes which may result in the issuance of, or an increase in the issuance of, air contaminants, or the use of which may eliminate or reduce or control the issuance of air contaminants.

4. Each point of emission, which requires testing, will be provided with sampling ports, ladders, platforms, and other safety equipment to facilitate testing performed in accordance with procedures established by Part 60 of Title 40 of the Code of Federal Regulations, as the same may be amended or revised.

5. All air pollution control equipment shall be operated at all times while this process is operational. In the event of scheduled maintenance, unscheduled maintenance, or a breakdown of the pollution control equipment, the process shall be shutdown as expeditiously as possible (unless this act and subsequent re-start would clearly cause greater emissions than continuing operations of the process for a short period). The Department shall be notified of all such events **that exceed 1 hour** within 24 hours. The notification shall include all pertinent facts, including the duration of the process operating without the control device and the level of excess emissions which have occurred. Records of all such events, regardless of reporting requirements, shall be made and maintained for a period of five years. These records shall be available for inspection.

6. In the event there is a breakdown of air pollution control or process equipment in such a manner as to cause increased emission of air contaminants for a period greater than **1 hour**, the person responsible for such equipment shall notify the Air Division within 24 hours and provide a statement giving all pertinent facts, including the duration of the breakdown. The Air Division shall be notified when the breakdown has been corrected.

7. This process, including all air pollution control devices and capture systems for which this permit is issued shall be maintained and operated at all times in a manner so as to minimize the emissions of air contaminants. Procedures for ensuring that the above equipment is properly operated and maintained so as to minimize the emission of air contaminants shall be established.

8. This permit expires and the application is cancelled if construction has not begun within 24 months of the date of issuance of the permit.

9. On completion of construction of the device(s) for which this permit is issued, written notification of the fact is to be submitted to the Chief of the Air Division. The notification

shall indicate whether the device(s) was constructed as proposed in the application. The device(s) shall not be operated until authorization to operate is granted by the Chief of the Air Division. Failure to notify the Chief of the Air Division of completion of construction and/or operation without authorization could result in revocation of this permit.

10. Submittal of other reports regarding monitoring records, fuel analyses, operating rates, and equipment malfunctions may be required as authorized in the Department's air pollution control rules and regulations. The Department may require stack emission testing at any time.

11. Additions and revisions to the conditions of this Permit will be made, if necessary, to ensure that the Department's air pollution control rules and regulations are not violated.

12. Nothing in this permit or conditions thereto shall negate any authority granted to the Air Division pursuant to the Alabama Environmental Management Act or regulations issued thereunder.

13. This permit is issued with the condition that, should obnoxious odors arising from the plant operations be verified by Air Division inspectors, measures to abate the odorous emissions shall be taken upon a determination by the Alabama Department of Environmental Management that these measures are technically and economically feasible.

14. The Air Division must be notified in writing at least 10 working days in advance of all emission tests to be conducted and submitted as proof of compliance with the Department's air pollution control rules and regulations.

    To avoid problems concerning testing methods and procedures, the following shall be included with the notification letter:

    (a) The date the test crew is expected to arrive, the date and time anticipated of the start of the first run, how many and which sources are to be tested, and the names of the persons and/or testing company that will conduct the tests.

    (b) A complete description of each sampling train to be used, including type of media used in determining gas stream components, type of probe lining, type of filter media, and probe cleaning method and solvent to be used (if test procedure requires probe cleaning).

    (c) A description of the process(es) to be tested, including the feed rate, any operating parameter used to control or influence the operations, and the rated capacity.

    (d) A sketch or sketches showing sampling point locations and their relative positions to the nearest upstream and downstream gas flow disturbances.

    A pretest meeting may be held at the request of the source owner or the Department. The necessity for such a meeting and the required attendees will be determined on a case-by-case basis.

All test reports must be submitted to the Air Division within 30 days of the actual completion of the test, unless an extension of time is specifically approved by the Air Division.

15. Records will be maintained of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the process equipment and any malfunction of the air pollution control equipment. These records will be kept in a permanent form suitable for inspection and will be retained for at least two years following the date of each occurrence.

16. Precautions shall be taken to prevent fugitive dust emanating from plant roads, grounds, stockpiles, screens, dryers, hoppers, ductwork, etc.

    Plant or haul roads and grounds will be maintained in the following manner so that dust will not become airborne. A minimum of one, or a combination, of the following methods shall be utilized to minimize airborne dust from plant or haul roads and grounds:

    (a) by the application of water any time the surface of the road is sufficiently dry to allow the creation of dust emissions by the act of wind or vehicular traffic;

    (b) by reducing the speed of vehicular traffic to a point below that at which dust emissions are created;

    (c) by paving;

    (d) by the application of binders to the road surface at any time the road surface is found to allow the creation of dust emissions;

    Should one, or a combination, of the above methods fail to adequately reduce airborne dust from plant or haul roads and grounds, alternative methods shall be employed, either exclusively or in combination with one or all of the above control techniques, so that dust will not become airborne. Alternative methods shall be approved by the Department prior to utilization.

17. If this plant relocates to another site, this plant's Air Permit remains valid for this site unless or until it is revoked for failure to comply with ADEM Air Division Rules and Regulations. The owner or operator of this plant must provide written notification of the intent to relocate the plant to this site at least two weeks in advance. The written notification should include the planned construction beginning date and the projected startup date. Failure to provide this written notification is a violation of this permit condition and is grounds for revocation of this permit.

18. Any performance tests required shall be conducted and data reduced in accordance with the test methods and procedures contained in each specific permit condition unless the Director (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (2) approves the use of an equivalent method, or (3) approves the use of an alternative method, the results of which he has determined to be adequate for indicating whether a specific source is in compliance.

19. The permittee shall not use as a defense in an enforcement action that maintaining compliance with conditions of this permit would have required halting or reducing the permitted activity.

20. The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.

21. The permittee shall keep this permit under file or on display at all times at the site where the facility for which the permit is issued is located and shall make the permit readily available for inspection by any or all persons who may request to see it.

22. An annual compliance certification shall be submitted by March 1st each year, covering the reporting period of January 1st through December 31st of the previous year, unless more frequent periods are specified according to the specific rule governing the source or required by the Department.

    (a) The compliance certification shall include the following:

        a. The identification of each term or condition of this permit that is the basis of the certification;

        b. The compliance status;

        c. The method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with Rule 335-3-16-.05(c) (Monitoring and Recordkeeping Requirements);

        d. Whether compliance has been continuous or intermittent; and

        e. Such other facts as the Department may require in order to determine the compliance status of the source.

    (b) The compliance certification shall be submitted to:

Alabama Department of Environmental Management
Air Division
P.O. Box 301463
Montgomery, AL 36130-1463

Boilers #1 & #2

Provisos

	Regulations
Applicability	
1. These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.01(1), *"Control of Particulate Emissions: Visible Emissions".*	Rule 335-3-4-.01(1)
2. These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.03(1), "*Control of Particulate Emissions: Fuel Burning Equipment*".	Rule 335-3-4-.03(1)
3. These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-5-.01(1), "*Control of Sulfur Compound Emissions: Fuel Combustion*".	Rule 335-3-5-.01(1)
4. These sources have enforceable limits in order to comply with the applicable requirements of ADEM Admin. Code r. 335-3-14-.04, "*Air Permits Authorizing Construction in Clean Air Areas (Prevention of Significant Deterioration)".*	Rule 335-3-14-.04 (PSD/BACT)
5. These sources are subject to the applicable requirements of 40 CFR Part 60, Subpart Dc, "*Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*".	Rule 335-3-10-.02(2)(c) 40 CFR §60.40c(a)
6. The facility is subject to the applicable requirements of 40 CFR Part 60, Subpart A, *"General Provisions"*.	Rule 335-3-10-.02(1) 40 CFR §60.1(a)
7. These sources are subject to the applicable requirements of 40 CFR Part 63, Subpart DDDDD, "*National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters*".	Rule 335-3-11-.06(107) 40 CFR §63.7490(a)
8. The facility is subject to the applicable requirements of 40 CFR Part 63, Subpart A, *"General Provisions"*, as listed in Table 10 of 40 CFR Part 63, Subpart DDDDD.	Rule 335-3-11-.06(1) 40 CFR §63.7565
Emission Standards	
1. These sources shall not emit particulate of an opacity greater than ten percent (10%), as determined by a six-minute average.	Rule 335-3-14-.04 (PSD/BACT)
2. Filterable particulate matter (PM) emissions from these sources shall not exceed the allowable set by ADEM Admin. Code r. 335-3-4-.03(1).	Rule 335-3-4-.03(1)

	Regulations
3. Filterable $PM/PM_{10}/PM_{2.5}$ emissions from each of these sources shall not exceed 0.0019 lb/MMBtu and 0.08 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
4. Filterable and condensable $PM/PM_{10}/PM_{2.5}$ emissions from each of these sources shall not exceed 0.0075 lb/MMBtu and 0.35 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
5. Sulfur dioxide (SO_2) emissions from each of these sources shall not exceed 1.8 lb/MMBtu.	Rule 335-3-5-.01(1)(b)
6. Nitrogen oxide (NO_X) emissions from each of these sources shall not exceed 0.036 lb/MMBtu and 1.64 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
7. Volatile organic compound (VOC) emissions from each of these sources shall not exceed 0.0054 lb/MMBtu and 0.25 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
8. CO_2e emissions from each of these sources shall not exceed 23,336.5 tons per year (TPY) based on a 12-month rolling total.	Rule 335-3-14-.04 (PSD/BACT)
9. The boilers shall only combust natural gas.	Rule 335-3-14-.04 (PSD/BACT)
10. These sources shall utilize good design, operating, and combustion practices.	Rule 335-3-14-.04 (PSD/BACT)
11. These sources are subject to Work Practice Standards in 40 CFR 63.7500 and Table 3 to 40 CFR Part 63, Subpart DDDDD.	40 CFR §63.7500(a)(1)
12. At all times, the Permittee must operate and maintain the boilers, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions.	40 CFR §63.7500(a)(3)
Compliance and Performance Test Methods and Procedures	
1. Method 9 of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with the opacity limit of Emission Standard No. 1.	Rule 335-3-1-.05 Rule 335-3-4-.01(2)
2. Method 5 of 40 CFR Part 60, Appendix A-3 shall be used to determine compliance with the filterable particulate matter emission limits of Emission Standard Nos. 2, 3, & 4.	Rule 335-3-1-.05
3. Method 202 of 40 CFR Part 51, Appendix M, shall be used to determine compliance with the condensable particulate matter emission limits of Emission Standard No. 4.	Rule 335-3-1-.05

	Regulations
4. Method 6 or 6C of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with the sulfur dioxide emission limit of Emission Standard No. 5.	Rule 335-3-1-.05
5. Method 7E of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with the nitrogen oxide emission limits of Emission Standard No. 6.	Rule 335-3-1-.05
6. Method 18 of 40 CFR Part 60, Appendix A-6 or Method 25A of 40 CFR Part 60, Appendix A-7 shall be used to determine compliance with the volatile organic compound limits of Emission Standard No. 7.	Rule 335-3-1-.05
Emission Monitoring	
1. The Permittee shall conduct opacity monitoring for these sources in accordance with the following: (a) An instantaneous visible emissions check shall be conducted at least once weekly during daylight hours while the sources are in operation. (b) If any visible emissions are observed during the initial visible emissions check, corrective action shall be initiated within 2 hours. (c) After corrective action has been completed, a 12-minute visible emissions observation in accordance with Method 9 shall be conducted in order to confirm that no visible emissions are present.	Rule 335-3-1-.04(1)
2. The Permittee shall conduct initial performance tests according to the requirements in General Permit Proviso Nos. 14 & 18 and the *Compliance and Performance Test Methods and Procedures* section of the Permit to demonstrate compliance with Emission Standard No. 6 within twelve (12) months of start-up. (a) Performance tests shall be conducted under such conditions as the Department specifies to the Permittee based on representative performance of the sources for the period being tested. (b) Each performance test must consist of three (3) separate runs; pollutant sampling for each run must be conducted for the time period specified in the applicable method or, in the absence of a specific time period in the test method, for a minimum of one (1) hour.	Rule 335-3-1-.04(1)

	Regulations
(c) Subsequent performance tests shall be conducted once every sixty (60) months following the initial performance test to demonstrate compliance with Emission Standard No. 6. Each subsequent performance test shall meet the conditions specified in Provisos 2(a) and (b). Additionally, for each subsequent performance test, the Permittee may test either Boiler #1 (BOIL_1) or Boiler #2 (BOIL_2) provided that the conditions in Proviso Nos. 2(c)(i) – (v) are met. i. The sources are operated according to the same work practices; ii. The sources are of the same design; iii. The tested source is tested under the highest load or capacity reasonably expected to occur for any sources for which the results are meant to be representative; iv. All three test runs are conducted on the same source; and v. Each source must be tested at least once every one-hundred twenty (120) months following the most recent performance test on that source.	
3. The Permittee shall conduct a tune-up of each boiler at least once every 13 months to demonstrate continuous compliance. The following activities shall be performed: (a) 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); (b) 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; (c) 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); (d) 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;	40 CFR §63.7540(a)(10) 40 CFR §63.7515(d)

	Regulations
(e) 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	
(f) Maintain on-site a report containing the information below:	
i. 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; and	
ii. A description of any corrective actions taken as a part of the tune-up.	
If a boiler is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.	40 CFR §63.7540(a)(13)
Recordkeeping and Reporting Requirements	
1. All records shall be maintained in a form suitable for inspection for a period of at least five (5) years from the date of generation.	Rule 335-3-1-.04(1)
2. The Permittee shall maintain a record of each visible emissions check and Method 9 observation. This should include the date and time of the check/observation, observer name, results, problems observed, and corrective actions taken. If a visible emissions observation utilizing Method 9 is required, the results shall be documented using the ADEM visible emissions observation form.	Rule 335-3-1-.04(1)
3. The Permittee shall maintain a record of the 12-month rolling total CO_2e emissions from these sources.	Rule 335-3-1-.04(1)
4. The Permittee shall maintain a record of the amount of natural gas combusted in the boilers during each month.	40 CFR §60.48c(g)(2)
5. The Permittee shall comply with the applicable notification requirements in 40 CFR §63.7545(b) and 40 CFR §63.9, including:	40 CFR §63.7545
(a) The Permittee shall provide notification of the following:	

	Regulations
i. Date when construction was commenced, submitted no later than 30 days after the date construction commenced; ii. Anticipated date of startup; and iii. Actual date of startup, submitted no later than 15 days after the date of startup.	
6. The Permittee shall submit an annual report by March 1 of each year covering the period from January 1 through December 31. The report shall be submitted to the Department and to the EPA via CEDRI. Each report shall include the following information: (a) Company and Facility name and address; (b) Process unit information; (c) Date of report and beginning and ending dates of the reporting period; (d) The date of the most recent tune-up for each boiler and the date of the most recent burner inspection if it was not done annually and was delayed until the next scheduled or unscheduled unit shutdown; and (e) 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.	40 CFR §63.7550
7. The Permittee shall maintain a record of each notification and report that is submitted to comply with 40 CFR Part 63, Subpart DDDDD, including all documentation supporting any Initial Notification.	40 CFR §63.7555(a)(1)

AIR PERMIT

PERMITTEE:	ARCELORMITTAL CALVERT, LLC
FACILITY NAME:	NOES FACILITY
LOCATION:	CALVERT, MOBILE COUNTY, ALABAMA

PERMIT NUMBER	DESCRIPTION OF EQUIPMENT, ARTICLE, OR DEVICE
503-0157-X004	Cold Rolling Mills • Cold Rolling Mill #1 vented to Mist Eliminator with Condenser (CRM_1) • Cold Rolling Mill #2 vented to Mist Eliminator with Condenser (CRM_2)

In accordance with and subject to the provisions of the Alabama Air Pollution Control Act of 1971, Ala. Code §§22-28-1 to 22-28-23, as amended, the Alabama Environmental Management Act, Ala. Code §§22-22A-1 to 22-22A-17, as amended, and rules and regulations adopted there under, and subject further to the conditions set forth in this permit, the Permittee is hereby authorized to construct, install and use the equipment, device or other article described above.

DRAFT DATE: April 1, 2025

General Permit Provisos

1. This permit is issued on the basis of Rules and Regulations existing on the date of issuance. In the event additional Rules and Regulations are adopted, it shall be the permit holder's responsibility to comply with such rules.

2. This permit is not transferable. Upon sale or legal transfer, the new owner or operator must apply for a permit within 30 days.

3. A new permit application must be made for new sources, replacements, alterations or design changes which may result in the issuance of, or an increase in the issuance of, air contaminants, or the use of which may eliminate or reduce or control the issuance of air contaminants.

4. Each point of emission, which requires testing, will be provided with sampling ports, ladders, platforms, and other safety equipment to facilitate testing performed in accordance with procedures established by Part 60 of Title 40 of the Code of Federal Regulations, as the same may be amended or revised.

5. All air pollution control equipment shall be operated at all times while this process is operational. In the event of scheduled maintenance, unscheduled maintenance, or a breakdown of the pollution control equipment, the process shall be shutdown as expeditiously as possible (unless this act and subsequent re-start would clearly cause greater emissions than continuing operations of the process for a short period). The Department shall be notified of all such events **that exceed 1 hour** within 24 hours. The notification shall include all pertinent facts, including the duration of the process operating without the control device and the level of excess emissions which have occurred. Records of all such events, regardless of reporting requirements, shall be made and maintained for a period of five years. These records shall be available for inspection.

6. In the event there is a breakdown of air pollution control or process equipment in such a manner as to cause increased emission of air contaminants for a period greater than **1 hour**, the person responsible for such equipment shall notify the Air Division within 24 hours and provide a statement giving all pertinent facts, including the duration of the breakdown. The Air Division shall be notified when the breakdown has been corrected.

7. This process, including all air pollution control devices and capture systems for which this permit is issued shall be maintained and operated at all times in a manner so as to minimize the emissions of air contaminants. Procedures for ensuring that the above equipment is properly operated and maintained so as to minimize the emission of air contaminants shall be established.

8. This permit expires and the application is cancelled if construction has not begun within 24 months of the date of issuance of the permit.

9. On completion of construction of the device(s) for which this permit is issued, written notification of the fact is to be submitted to the Chief of the Air Division. The notification

shall indicate whether the device(s) was constructed as proposed in the application. The device(s) shall not be operated until authorization to operate is granted by the Chief of the Air Division. Failure to notify the Chief of the Air Division of completion of construction and/or operation without authorization could result in revocation of this permit.

10. Submittal of other reports regarding monitoring records, fuel analyses, operating rates, and equipment malfunctions may be required as authorized in the Department's air pollution control rules and regulations. The Department may require stack emission testing at any time.

11. Additions and revisions to the conditions of this Permit will be made, if necessary, to ensure that the Department's air pollution control rules and regulations are not violated.

12. Nothing in this permit or conditions thereto shall negate any authority granted to the Air Division pursuant to the Alabama Environmental Management Act or regulations issued thereunder.

13. This permit is issued with the condition that, should obnoxious odors arising from the plant operations be verified by Air Division inspectors, measures to abate the odorous emissions shall be taken upon a determination by the Alabama Department of Environmental Management that these measures are technically and economically feasible.

14. The Air Division must be notified in writing at least 10 working days in advance of all emission tests to be conducted and submitted as proof of compliance with the Department's air pollution control rules and regulations.

    To avoid problems concerning testing methods and procedures, the following shall be included with the notification letter:

    (a) The date the test crew is expected to arrive, the date and time anticipated of the start of the first run, how many and which sources are to be tested, and the names of the persons and/or testing company that will conduct the tests.

    (b) A complete description of each sampling train to be used, including type of media used in determining gas stream components, type of probe lining, type of filter media, and probe cleaning method and solvent to be used (if test procedure requires probe cleaning).

    (c) A description of the process(es) to be tested, including the feed rate, any operating parameter used to control or influence the operations, and the rated capacity.

    (d) A sketch or sketches showing sampling point locations and their relative positions to the nearest upstream and downstream gas flow disturbances.

    A pretest meeting may be held at the request of the source owner or the Department. The necessity for such a meeting and the required attendees will be determined on a case-by-case basis.

All test reports must be submitted to the Air Division within 30 days of the actual completion of the test, unless an extension of time is specifically approved by the Air Division.

15. Records will be maintained of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the process equipment and any malfunction of the air pollution control equipment. These records will be kept in a permanent form suitable for inspection and will be retained for at least two years following the date of each occurrence.

16. Precautions shall be taken to prevent fugitive dust emanating from plant roads, grounds, stockpiles, screens, dryers, hoppers, ductwork, etc.

    Plant or haul roads and grounds will be maintained in the following manner so that dust will not become airborne. A minimum of one, or a combination, of the following methods shall be utilized to minimize airborne dust from plant or haul roads and grounds:

    (a) by the application of water any time the surface of the road is sufficiently dry to allow the creation of dust emissions by the act of wind or vehicular traffic;

    (b) by reducing the speed of vehicular traffic to a point below that at which dust emissions are created;

    (c) by paving;

    (d) by the application of binders to the road surface at any time the road surface is found to allow the creation of dust emissions;

    Should one, or a combination, of the above methods fail to adequately reduce airborne dust from plant or haul roads and grounds, alternative methods shall be employed, either exclusively or in combination with one or all of the above control techniques, so that dust will not become airborne. Alternative methods shall be approved by the Department prior to utilization.

17. If this plant relocates to another site, this plant's Air Permit remains valid for this site unless or until it is revoked for failure to comply with ADEM Air Division Rules and Regulations. The owner or operator of this plant must provide written notification of the intent to relocate the plant to this site at least two weeks in advance. The written notification should include the planned construction beginning date and the projected startup date. Failure to provide this written notification is a violation of this permit condition and is grounds for revocation of this permit.

18. Any performance tests required shall be conducted and data reduced in accordance with the test methods and procedures contained in each specific permit condition unless the Director (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (2) approves the use of an equivalent method, or (3) approves the use of an alternative method, the results of which he has determined to be adequate for indicating whether a specific source is in compliance.

19. The permittee shall not use as a defense in an enforcement action that maintaining compliance with conditions of this permit would have required halting or reducing the permitted activity.

20. The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.

21. The permittee shall keep this permit under file or on display at all times at the site where the facility for which the permit is issued is located and shall make the permit readily available for inspection by any or all persons who may request to see it.

22. An annual compliance certification shall be submitted within 60 days of the effective date of the Permittee's Title V permit, unless more frequent periods are specified according to the specific rule governing the source or required by the Department.

    (a) The compliance certification shall include the following:

        a. The identification of each term or condition of this permit that is the basis of the certification;

        b. The compliance status;

        c. The method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with Rule 335-3-16-.05(c) (Monitoring and Recordkeeping Requirements);

        d. Whether compliance has been continuous or intermittent; and

        e. Such other facts as the Department may require in order to determine the compliance status of the source.

    (b) The compliance certification shall be submitted to:

Alabama Department of Environmental Management
Air Division
P.O. Box 301463
Montgomery, AL 36130-1463

Cold Rolling Mills #1 & #2

Provisos

	Regulations
Applicability	
1. This source is subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.01(1), *"Control of Particulate Emissions: Visible Emissions".*	Rule 335-3-4-.01(1)
2. This source is subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.04(1), "*Control of Particulate Emissions: Process Industries – General*".	Rule 335-3-4-.04(1)
3. This source has enforceable limits in order to comply with the applicable requirements of ADEM Admin. Code r. 335-3-14-.04, "*Air Permits Authorizing Construction in Clean Air Areas (Prevention of Significant Deterioration)".*	Rule 335-3-14-.04 (PSD/BACT)
Emission Standards	
1. These sources shall not emit particulate of an opacity greater than ten percent (10%), as determined by a six-minute average.	Rule 335-3-14-.04 (PSD/BACT)
2. Filterable particulate matter (PM) emissions from these sources shall not exceed the allowable set by ADEM Admin. Code r. 335-3-4-.04(1).	Rule 335-3-4-.04(1)
3. Filterable PM/PM_{10} emissions from each of these sources shall not exceed 0.0026 gr/dscf and 2.29 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
4. Filterable $PM_{2.5}$ emissions from each of these sources shall not exceed 0.0017 gr/dscf and 1.49 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
Compliance and Performance Test Methods and Procedures	
1. Method 9 of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with the opacity limit of Emission Standard No. 1.	Rule 335-3-1-.05 Rule 335-3-4-.01(2)
2. Method 5 of 40 CFR Part 60, Appendix A-3 shall be used to determine compliance with the filterable particulate matter emission limits Emission Standard Nos. 2 & 3.	Rule 335-3-1-.05
3. Method 201A of 40 CFR Part 51, Appendix M, shall be used to determine compliance with the speciated filterable particulate matter emission limits of Emission Standard No. 4.	Rule 335-3-1-.05

	Regulations
(a) When stack conditions interfere with the ability to properly conduct Method 201A (e.g., presence of entrained moisture droplets in the stack), the Permittee may show compliance with Emission Standard No. 4 using Method 5 of 40 CFR Part 60, Appendix A-3.	
Emission Monitoring	
1. The Permittee shall conduct opacity monitoring for these sources in accordance with the following:	Rule 335-3-1-.04(1)
(a) An instantaneous visible emissions check shall be conducted at least once daily during daylight hours while the sources are in operation.	
(b) If any visible emissions are observed during the initial visible emissions check, corrective action shall be initiated within 2 hours.	
(c) After corrective action has been completed, a 12-minute visible emissions observation in accordance with Method 9 shall be conducted in order to confirm that no visible emissions are present.	
2. The Permittee shall conduct initial performance tests according to the requirements in General Permit Proviso Nos. 14 & 18 and the *Compliance and Performance Test Methods and Procedures* section of the Permit to demonstrate compliance with Emission Standard No. 3 within twelve (12) months of start-up.	Rule 335-3-1-.04(1)
(a) Performance tests shall be conducted under such conditions as the Department specifies to the Permittee based on representative performance of the sources for the period being tested.	
(b) Each performance test must consist of three (3) separate runs; pollutant sampling for each run must be conducted for the time period specified in the applicable method or, in the absence of a specific time period in the test method, for a minimum of one (1) hour.	
(c) Subsequent performance tests shall be conducted once every sixty (60) months following the initial performance test to demonstrate compliance with Emission Standard No. 3. Each subsequent performance test shall meet the conditions specified in Provisos 2(a) and (b). Additionally, for each subsequent performance test, the Permittee may test either Cold Rolling Mill #1 (CRM_1) or Cold Rolling Mill #2 (CRM_2)	

		Regulations
	provided that the conditions in Proviso Nos. 2(c)(i) – (v) are met. i. The sources are operated according to the same work practices; ii. The sources are of the same design; iii. The tested source is tested under the highest load or capacity reasonably expected to occur for any sources for which the results are meant to be representative; iv. All three test runs are conducted on the same source; and v. Each source must be tested at least once every one-hundred twenty (120) months following the most recent performance test on that source.	
3.	The Permittee shall conduct semiannual inspections of each mist eliminator and condenser. Applicable maintenance will be performed according to work practices and procedures, including: (a) Repair or replacement of missing, misaligned, or damaged vanes, filters, or other internal components; (b) Cleaning or replacement of any plugged or clogged channels, sumps, or other liquid drainage components; (c) Repair or replacement of any malfunctioning monitoring devices (e.g., differential pressure sensors); and (d) Adjustment of damper settings for consistency with the required air flow.	Rule 335-3-1-.04(1)
4.	The Permittee shall continuously measure and, once per day, record the pressure differential between the inlet and the exhaust of each mist eliminator to determine if the pressure differential falls within the range specified by the manufacturer. Whenever the pressure differential is outside of the range, maintenance and/or corrective action shall be initiated one working day of detection.	Rule 335-3-1-.04(1)
5.	The Permittee shall continuously measure and record the chiller water temperature and volumetric flow rate entering each condenser to determine if these parameters fall within the range specified by the manufacturer. Whenever the temperature or flow	Rule 335-3-1-.04(1)

	Regulations
rate is outside of the range, maintenance and/or corrective action shall be initiated one working day of detection.	
Recordkeeping and Reporting Requirements	
1. All records shall be maintained in a form suitable for inspection for a period of at least five (5) years from the date of generation.	Rule 335-3-1-.04(1)
2. The Permittee shall maintain a record of each visible emissions check and Method 9 observation. This should include the date and time of the check/observation, observer name, results, problems observed, and corrective actions taken. If a visible emissions observation utilizing Method 9 is required, the results shall be documented using the ADEM visible emissions observation form.	Rule 335-3-1-.04(1)
3. The Permittee shall maintain a record of each semiannual control device inspection. This shall include any problems observed and corrective actions taken.	Rule 335-3-1-.04(1)
4. The Permittee shall maintain a record of the chiller water flow rate, chiller water temperature, and daily mist eliminator pressure differential readings. This shall include any problems observed and corrective actions taken.	Rule 335-3-1-.04(1)

AIR PERMIT

PERMITTEE: ARCELORMITTAL CALVERT, LLC

FACILITY NAME: NOES FACILITY

LOCATION: CALVERT, MOBILE COUNTY, ALABAMA

PERMIT NUMBER	DESCRIPTION OF EQUIPMENT, ARTICLE, OR DEVICE
503-0157-X005	Annealing and Coating Line #1 (ACL1) • ACL1 Cleaning Section w/ Mist Eliminator (CLEAN_1) • ACL1 Electric Annealing Furnace w/ Hydrogen Purge Flares (HYPU_A1 – HYPU_A5) • ACL1 Coating Section w/ Regenerative Thermal Oxidizer (RTO_1) • ACL1 Cooling Section (ACL_C1) • ACL1 Quench Section w/ Mist Eliminator (QUEN_1)

In accordance with and subject to the provisions of the Alabama Air Pollution Control Act of 1971, Ala. Code §§22-28-1 to 22-28-23, as amended, the Alabama Environmental Management Act, Ala. Code §§22-22A-1 to 22-22A-17, as amended, and rules and regulations adopted there under, and subject further to the conditions set forth in this permit, the Permittee is hereby authorized to construct, install and use the equipment, device or other article described above.

DRAFT DATE: April 1, 2025

General Permit Provisos

1. This permit is issued on the basis of Rules and Regulations existing on the date of issuance. In the event additional Rules and Regulations are adopted, it shall be the permit holder's responsibility to comply with such rules.

2. This permit is not transferable. Upon sale or legal transfer, the new owner or operator must apply for a permit within 30 days.

3. A new permit application must be made for new sources, replacements, alterations or design changes which may result in the issuance of, or an increase in the issuance of, air contaminants, or the use of which may eliminate or reduce or control the issuance of air contaminants.

4. Each point of emission, which requires testing, will be provided with sampling ports, ladders, platforms, and other safety equipment to facilitate testing performed in accordance with procedures established by Part 60 of Title 40 of the Code of Federal Regulations, as the same may be amended or revised.

5. All air pollution control equipment shall be operated at all times while this process is operational. In the event of scheduled maintenance, unscheduled maintenance, or a breakdown of the pollution control equipment, the process shall be shutdown as expeditiously as possible (unless this act and subsequent re-start would clearly cause greater emissions than continuing operations of the process for a short period). The Department shall be notified of all such events **that exceed 1 hour** within 24 hours. The notification shall include all pertinent facts, including the duration of the process operating without the control device and the level of excess emissions which have occurred. Records of all such events, regardless of reporting requirements, shall be made and maintained for a period of five years. These records shall be available for inspection.

6. In the event there is a breakdown of air pollution control or process equipment in such a manner as to cause increased emission of air contaminants for a period greater than **1 hour**, the person responsible for such equipment shall notify the Air Division within 24 hours and provide a statement giving all pertinent facts, including the duration of the breakdown. The Air Division shall be notified when the breakdown has been corrected.

7. This process, including all air pollution control devices and capture systems for which this permit is issued shall be maintained and operated at all times in a manner so as to minimize the emissions of air contaminants. Procedures for ensuring that the above equipment is properly operated and maintained so as to minimize the emission of air contaminants shall be established.

8. This permit expires and the application is cancelled if construction has not begun within 24 months of the date of issuance of the permit.

9. On completion of construction of the device(s) for which this permit is issued, written notification of the fact is to be submitted to the Chief of the Air Division. The notification

shall indicate whether the device(s) was constructed as proposed in the application. The device(s) shall not be operated until authorization to operate is granted by the Chief of the Air Division. Failure to notify the Chief of the Air Division of completion of construction and/or operation without authorization could result in revocation of this permit.

10. Submittal of other reports regarding monitoring records, fuel analyses, operating rates, and equipment malfunctions may be required as authorized in the Department's air pollution control rules and regulations. The Department may require stack emission testing at any time.

11. Additions and revisions to the conditions of this Permit will be made, if necessary, to ensure that the Department's air pollution control rules and regulations are not violated.

12. Nothing in this permit or conditions thereto shall negate any authority granted to the Air Division pursuant to the Alabama Environmental Management Act or regulations issued thereunder.

13. This permit is issued with the condition that, should obnoxious odors arising from the plant operations be verified by Air Division inspectors, measures to abate the odorous emissions shall be taken upon a determination by the Alabama Department of Environmental Management that these measures are technically and economically feasible.

14. Unless otherwise specified in this Permit, the Air Division must be notified in writing at least 10 working days in advance of all emission tests to be conducted and submitted as proof of compliance with the Department's air pollution control rules and regulations.

    To avoid problems concerning testing methods and procedures, the following shall be included with the notification letter:

    (a) The date the test crew is expected to arrive, the date and time anticipated of the start of the first run, how many and which sources are to be tested, and the names of the persons and/or testing company that will conduct the tests.

    (b) A complete description of each sampling train to be used, including type of media used in determining gas stream components, type of probe lining, type of filter media, and probe cleaning method and solvent to be used (if test procedure requires probe cleaning).

    (c) A description of the process(es) to be tested, including the feed rate, any operating parameter used to control or influence the operations, and the rated capacity.

    (d) A sketch or sketches showing sampling point locations and their relative positions to the nearest upstream and downstream gas flow disturbances.

    A pretest meeting may be held at the request of the source owner or the Department. The necessity for such a meeting and the required attendees will be determined on a case-by-case basis.

All test reports must be submitted to the Air Division within 30 days of the actual completion of the test, unless an extension of time is specifically approved by the Air Division.

15. Records will be maintained of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the process equipment and any malfunction of the air pollution control equipment. These records will be kept in a permanent form suitable for inspection and will be retained for at least two years following the date of each occurrence.

16. Precautions shall be taken to prevent fugitive dust emanating from plant roads, grounds, stockpiles, screens, dryers, hoppers, ductwork, etc.

    Plant or haul roads and grounds will be maintained in the following manner so that dust will not become airborne. A minimum of one, or a combination, of the following methods shall be utilized to minimize airborne dust from plant or haul roads and grounds:

    (a) by the application of water any time the surface of the road is sufficiently dry to allow the creation of dust emissions by the act of wind or vehicular traffic;

    (b) by reducing the speed of vehicular traffic to a point below that at which dust emissions are created;

    (c) by paving;

    (d) by the application of binders to the road surface at any time the road surface is found to allow the creation of dust emissions;

    Should one, or a combination, of the above methods fail to adequately reduce airborne dust from plant or haul roads and grounds, alternative methods shall be employed, either exclusively or in combination with one or all of the above control techniques, so that dust will not become airborne. Alternative methods shall be approved by the Department prior to utilization.

17. If this plant relocates to another site, this plant's Air Permit remains valid for this site unless or until it is revoked for failure to comply with ADEM Air Division Rules and Regulations. The owner or operator of this plant must provide written notification of the intent to relocate the plant to this site at least two weeks in advance. The written notification should include the planned construction beginning date and the projected startup date. Failure to provide this written notification is a violation of this permit condition and is grounds for revocation of this permit.

18. Any performance tests required shall be conducted and data reduced in accordance with the test methods and procedures contained in each specific permit condition unless the Director (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (2) approves the use of an equivalent method, or (3) approves the use of an alternative method, the results of which he has determined to be adequate for indicating whether a specific source is in compliance.

19. The permittee shall not use as a defense in an enforcement action that maintaining compliance with conditions of this permit would have required halting or reducing the permitted activity.

20. The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.

21. The permittee shall keep this permit under file or on display at all times at the site where the facility for which the permit is issued is located and shall make the permit readily available for inspection by any or all persons who may request to see it.

22. An annual compliance certification shall be submitted by March 1st each year, covering the reporting period of January 1st through December 31st of the previous year, unless more frequent periods are specified according to the specific rule governing the source or required by the Department.

    (a) The compliance certification shall include the following:

        a. The identification of each term or condition of this permit that is the basis of the certification;

        b. The compliance status;

        c. The method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with Rule 335-3-16-.05(c) (Monitoring and Recordkeeping Requirements);

        d. Whether compliance has been continuous or intermittent; and

        e. Such other facts as the Department may require in order to determine the compliance status of the source.

    (b) The compliance certification shall be submitted to:

Alabama Department of Environmental Management
Air Division
P.O. Box 301463
Montgomery, AL 36130-1463

Annealing and Coating Line #1 (ACL1)

Provisos

	Regulations
Applicability	
1. These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.01(1), *"Control of Particulate Emissions: Visible Emissions".*	Rule 335-3-4-.01(1)
2. These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.04(1), "*Control of Particulate Emissions: Process Industries – General*".	Rule 335-3-4-.04(1)
3. These sources have enforceable limits in order to comply with the applicable requirements of ADEM Admin. Code r. 335-3-14-.04, "*Air Permits Authorizing Construction in Clean Air Areas (Prevention of Significant Deterioration)".*	Rule 335-3-14-.04 (PSD/BACT)
4. The ACL1 Coating Section (RTO_1), the ACL1 Cooling Section (ACL_C1), and ACL1 Quench Section (QUEN_1) are subject to the applicable requirements of 40 CFR Part 60, Subpart TT, "*Standards of Performance for Metal Coil Surface Coating*".	Rule 335-3-10-.02(46) 40 CFR §60.460
5. The facility is subject to the applicable requirements of 40 CFR Part 60, Subpart A, *"General Provisions"*.	Rule 335-3-10-.02(1) 40 CFR §60.1(a)
6. The ACL1 Coating Section (RTO_1) is subject to the applicable requirements of 40 CFR Part 63, Subpart SSSS, "*National Emission Standards for Hazardous Air Pollutants: Surface Coating of Metal Coil*". The ACL1 Cooling Section (ACL_C1) and ACL1 Quench Section (QUEN_1) are affected sources under 40 CFR Part 63, Subpart SSSS but not subject to the emission standards of §63.5120.	Rule 335-3-11-.06(96) 40 CFR §63.5090(a)
7. The facility is subject to the applicable requirements of 40 CFR Part 63, Subpart A, *"General Provisions"*, as listed in Table 2 of 40 CFR Part 63, Subpart SSSS.	Rule 335-3-11-.06(1) 40 CFR §63.5140(c)
Emission Standards	
1. These sources shall not emit particulate of an opacity greater than ten percent (10%), as determined by a six-minute average.	Rule 335-3-14-.04 (PSD/BACT)

		Regulations
2.	Filterable particulate matter (PM) emissions from these sources shall not exceed the allowable set by ADEM Admin. Code r. 335-3-4-.04(1).	Rule 335-3-4-.04(1)
3.	Filterable and condensable $PM/PM_{10}/PM_{2.5}$ emissions from CLEAN_1 shall not exceed 0.003 gr/dscf and 0.38 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
4.	Filterable $PM/PM_{10}/PM_{2.5}$ emissions from RTO_1 shall not exceed 0.0019 lb/MMBtu and 0.03 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
5.	Filterable and condensable $PM/PM_{10}/PM_{2.5}$ emissions from RTO_1 shall not exceed 0.0075 lb/MMBtu and 0.11 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
6.	Filterable $PM/PM_{10}/PM_{2.5}$ emissions from ACL_C1 shall not exceed 0.00044 gr/dscf (1 mg/Nm^3) and 0.37 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
7.	Filterable PM/PM_{10} emissions from QUEN_1 shall not exceed 0.00014 gr/dscf and 0.11 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
8.	Filterable $PM_{2.5}$ emissions from QUEN_1 shall not exceed 0.0004 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
9.	Nitrogen oxide (NO_X) emissions from HYPU_A1 shall not exceed 0.22 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
10.	NO_X emissions from HYPU_A2, HYPU_A3, HYPU_A4, and HYPU_A5 shall not exceed 0.37 lb/hr, each.	Rule 335-3-14-.04 (PSD/BACT)
11.	NO_X emissions from RTO_1 shall not exceed 0.083 lb/MMBtu and 1.15 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
12.	Volatile organic compound (VOC) emissions from RTO_1 shall not exceed 2.06 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
13.	VOC emissions from RTO_1 shall be controlled at minimum 99% destruction efficiency or shall be emitted at a concentration less than 20 ppmvd (as carbon).	Rule 335-3-14-.04 (PSD/BACT)
14.	VOC emissions from ACL_C1 shall not exceed 6.6 mg/Nm^3 or 2.4 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
15.	The Permittee shall not cause to be discharged into the atmosphere from the coating line (RTO_1, ACL_C1, & QUEN_1) more than 10 percent of the VOC's applied for each calendar month (90 percent emission reduction).	40 CFR §60.462(a)(3)
16.	The Permittee shall limit organic hazardous air pollutant (HAP) emissions from the coating line (RTO_1) to:	40 CFR §63.5120(a)

	Regulations
(a) No more than 2 percent of the organic HAP applied for each month during each 12-month compliance period (98 percent reduction); or (b) No more than 0.046 kilogram (kg) of organic HAP per liter of solids applied during each 12-month compliance period; or (c) An outlet organic HAP concentration of no greater than 20 parts per million by volume (ppmv) on a dry basis. The efficiency of the capture system must be 100 percent.	
17. Carbon dioxide equivalent (CO_2e) emissions from RTO1 shall not exceed 9,807 tons per year (TPY) based on a 12-month rolling total.	Rule 335-3-14-.04 (PSD/BACT)
18. The coating section curing ovens shall only combust natural gas.	Rule 335-3-14-.04 (PSD/BACT)
19. These sources shall utilize good design, operating, and combustion practices.	Rule 335-3-14-.04 (PSD/BACT)
20. The Permittee shall not use HAP-bearing varnishes, solvents, or other coating materials in the ACL1 Coating Section without submitting an air permit application and receiving authorization from the Department.	Rule 335-3-14-.01(1)(a) Rule 335-3-14-.01(1)(b)
21. The average RTO combustion temperature in any 3-hour period must not fall more than 50 °F below the average combustion temperature recorded during the most recent performance test, or according to the requirements of 40 CFR §63.5160(d)(3)(i) as applicable.	40 CFR §60.464(c) 40 CFR §63.5121(a)
22. At all times, the Permittee must operate and maintain the coating line, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions.	40 CFR §63.5140(b)
Compliance and Performance Test Methods and Procedures	
1. Method 9 of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with the opacity limit of Emission Standard No. 1.	Rule 335-3-1-.05 Rule 335-3-4-.01(2)
2. Method 5 of 40 CFR Part 60, Appendix A-3 shall be used to determine compliance with the filterable particulate matter emission limits of Emission Standard Nos. 2 – 8.	Rule 335-3-1-.05

	Regulations
3. Method 201A of 40 CFR Part 51, Appendix M, shall be used to determine compliance with the speciated filterable particulate matter emission limit of Emission Standard No. 8.	Rule 335-3-1-.05
4. Method 202 of 40 CFR Part 51, Appendix M, shall be used to determine compliance with the condensable particulate matter emission limits of Emission Standard Nos. 3 & 5.	Rule 335-3-1-.05
5. Method 7E of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with the nitrogen oxide emission limits of Emission Standard Nos. 9 – 11.	Rule 335-3-1-.05
6. Method 18 of 40 CFR Part 60, Appendix A-6 or Method 25A of 40 CFR Part 60, Appendix A-7 shall be used to determine compliance with the volatile organic compound limits of Emission Standard Nos. 12 – 14.	Rule 335-3-1-.05
7. To demonstrate compliance with Emission Standard No. 15, the Permittee shall determine the overall reduction efficiency (**R**) for the capture system and RTO as prescribed below:	40 CFR §60.463(c)(2)(i) 40 CFR §60.466
(a) Determine the fraction (**F**) of total VOC's emitted by the coating line that enters the RTO using the following equation:	

$$F = \frac{\sum_{i=1}^{l} C_{bi} Q_{bi}}{\sum_{i=1}^{l} C_{bi} Q_{bi} + \sum_{i=1}^{p} C_{fi} Q_{fi}}$$

Where:

$\mathbf{C_{bi}}$ = The VOC concentration in each gas stream entering the RTO (parts per million by volume, as carbon)

$\mathbf{Q_{bi}}$ = The volumetric flow rate of each gas stream entering the RTO (dry standard cubic meters per hour)

$\mathbf{C_{fi}}$ = The VOC concentration in each gas stream emitted directly to the atmosphere (parts per million by volume, as carbon)

$\mathbf{Q_{fi}}$ = The volumetric flow rate of each gas stream emitted directly to the atmosphere (dry standard cubic meters per hour)

$\boldsymbol{l}$ = The number of gas streams entering the RTO

p = The number of gas streams emitted directly to the atmosphere

	Regulations

(b) Determine the destruction efficiency of the RTO (**E**) using values of the volumetric flow rate of each of the gas streams and the VOC content (as carbon) of each of the gas streams in and out of the device by the following equation:

$$E = \frac{\sum_{i=1}^{n} Q_{bi} C_{bi} - \sum_{j=1}^{m} Q_{aj} C_{aj}}{\sum_{i=1}^{n} Q_{bi} C_{bi}}$$

Where:

$\mathbf{C_{bi}}$ = The VOC concentration in each gas stream entering the RTO (parts per million by volume, as carbon)

$\mathbf{Q_{bi}}$ = The volumetric flow rate of each gas stream entering the RTO (dry standard cubic meters per hour)

$\mathbf{C_{aj}}$ = The VOC concentration in each gas stream leaving the RTO and entering the atmosphere (parts per million by volume, as carbon)

$\mathbf{Q_{aj}}$ = The volumetric flow rate of each gas stream leaving the control device and entering the atmosphere (dry standard cubic meters per hour)

n = The number of gas streams entering the RTO

m = The number of gas streams leaving the RTO and entering the atmosphere

(c) Determine overall reduction efficiency (**R**) using the following equation:

R = **E** (destruction efficiency) X **F** (fraction of total VOC's emitted by the coating line that enters the RTO)

(d) The Permittee shall construct the VOC emission reduction system so that all volumetric flow rates and total VOC emissions can be accurately determined by the applicable test methods and procedures specified in 40 CFR §60.466 and Proviso Nos. 7(e) and (f) of this section of the Permit. The Permittee shall construct a temporary enclosure around the coating applicator and flashoff area during performance tests for the purpose of evaluating the capture efficiency of the system, if necessary. The enclosure must be maintained at a negative pressure to ensure that all VOC emissions are measurable.

(e) Method 24 of 40 CFR Part 60, Appendix A-7, or data provided by the formulator of the coating, shall be used for

	Regulations
determining the VOC content of each coating as applied to the surface of the metal coil. In the event of a dispute, Method 24 shall be the reference method. When VOC content of waterborne coatings, determined by Method 24, is used to determine compliance, the results of the Method 24 analysis shall be adjusted as described in Section 12.6 of Method 24. i. For Method 24, the coating sample must be at least a 1-liter sample taken at a point where the sample will be representative of the coating as applied to the surface of the metal coil. (f) Method 25 of 40 CFR Part 60, Appendix A-7 shall be used both for measuring the VOC concentration in each gas stream entering and leaving the RTO and for measuring the VOC concentration in each gas stream emitted directly to the atmosphere. i. For Method 25, the sampling time for each of three runs is to be at least 60 minutes, and the minimum sampling volume is to be at least 0.003 dscm (0.11 dscf); however, shorter sampling times or smaller volumes, when necessitated by process variables or other factors, may be approved.	
8. If the Permittee chooses to demonstrate compliance with Emission Standard No. 16 by limiting HAP or volatile matter content of the coatings, the Permittee shall determine the HAP or volatile matter and solids content of coating materials according to the procedures below: (a) The Permittee must determine the organic HAP weight fraction of each coating material applied by following one of the procedures below: i. The Permittee may test the material in accordance with Method 311 of 40 CFR Part 63, Appendix. The Method 311 determination may be performed by the manufacturer of the material. The Permittee shall: (A) Count only those organic HAP in Table 3 of 40 CFR Part 63, Subpart SSSS that are measured to be present at greater than or equal to 0.1 weight percent and greater than or equal to 1.0 weight percent for other organic HAP compounds; (B) Express the weight fraction of each organic HAP counted according to Proviso 8(a)i.(A) of this section	40 CFR §63.5160(b) 40 CFR §63.5160(c)

	Regulations
of the Permit as a value truncated to four places after the decimal point; and (C) Calculate the total weight fraction of organic HAP in the tested material by summing the counted individual organic HAP weight fractions and truncating the result to three places after the decimal point. ii. For coatings, the Permittee may determine the total volatile matter content as weight fraction of nonaqueous volatile matter and use it as a substitute for organic HAP, using Method 24 of 40 CFR Part 60, Appendix A-7. As an alternative to using Method 24, the Permittee may use ASTM D2369-10 (2015), "Test Method for Volatile Content of Coatings" (see 40 CFR §63.14). The determination of total volatile matter content may be performed by the manufacturer of the coating. iii. The Permittee may use formulation data provided that the information represents each organic HAP in Table 3 of 40 CFR Part 63, Subpart SSSS that is present at a level equal to or greater than 0.1 percent and equal to or greater than 1.0 percent for other organic HAP compounds in any raw material used, weighted by the mass fraction of each raw material used in the material. Formulation data may be provided by the manufacturer of the coating material. (b) The Permittee must determine the solids content and the density of each coating material applied. The Permittee may determine the volume solids content using ASTM D2697-03(2014) Standard Test Method for Volume Nonvolatile Matter in Clear or Pigmented Coatings or ASTM D6093-97 (2016) Standard Test Method for Percent Volume Nonvolatile Matter in Clear or Pigmented Coatings Using a Helium Gas Pycnometer, or an EPA approved alternative method. The Permittee must determine the density of each coating using ASTM D1475-13 "Standard Test Method for Density of Liquid Coatings, Inks, and Related Products" or ASTM D2111-10 (2015) "Standard Test Methods for Specific Gravity and Density of Halogenated Organic Solvents and Their Admixtures". The solids determination using ASTM D2697-03(2014) or ASTM D6093-97 (2016) and the density determination using ASTM D1475-13 or ASTM 2111-10 (2015) may be performed by the manufacturer of the material. Alternatively, the Permittee may rely on formulation	

	Regulations
data provided by material providers to determine the volume solids.	
9. If the Permittee chooses to demonstrate compliance with Emission Standard No. 16 by using a capture system and the RTO, the Permittee shall conduct performance testing to determine the destruction or removal efficiency of the RTO, the capture efficiency of the capture system, and confirm or re-establish the operating limits according to the procedures below:	40 CFR §63.5160(d) 40 CFR §63.5160(e)
(a) Performance tests conducted to determine the destruction or removal efficiency of the RTO must be performed such that RTO inlet and outlet testing is conducted simultaneously. To determine the outlet organic HAP concentration achieved by the RTO, only RTO outlet testing must be conducted. The data must be reduced in accordance with the test methods and procedures in 40 CFR §63.5160(d)(1)(i) through (ix).	
i. Each performance test must consist of three separate runs, except as provided by 40 CFR §63.7(e)(3); each run must be conducted for at least 1 hour under the conditions that exist when the coating line is operating under normal operating conditions. For the purpose of determining volatile organic matter concentrations and mass flow rates, the average of the results of all runs will apply. If the Permittee is demonstrating compliance with the outlet organic HAP concentration limit in Proviso No. 16(c) of the *Emission Standards* section of this permit, only the average outlet volatile organic matter concentration must be determined.	
ii. For each performance test run, the Permittee shall determine the volatile organic matter mass flow rates using the equation below: $$M_f = Q_{sd} C_C (12)(0.0416)\left(10^{-6}\right)$$ Where: $\mathbf{M_f}$ = Total organic volatile matter mass flow rate, kg/hour $\mathbf{C_c}$ = Concentration of organic compounds as carbon in the vent gas, as determined by Method 25 or Method 25A, ppmv, dry basis $\mathbf{Q_{sd}}$ = Volumetric flow rate of gases entering or exiting the RTO, as determined by Method 2, 2A, 2C, 2D, 2F, or 2G, dry standard cubic meters (dscm)/hour	

	Regulations

0.0416 = Conversion factor for molar volume

iii. For each performance test run, the Permittee shall determine the control device destruction or removal efficiency using the equation below:

$$DRE = \frac{M_{fi} - M_{fo}}{M_{fi}} x\ 100$$

Where:

DRE = Organic emissions destruction or removal efficiency of the add-on control device, percent

$\mathbf{M_{fi}}$ = Organic volatile matter mass flow rate at the inlet to the control device, kg/h

$\mathbf{M_{fo}}$ = Organic volatile matter mass flow rate at the outlet of the control device, kg/h

iv. The RTO destruction or removal efficiency is determined as the average of the efficiencies determined in the three test runs.

(b) During performance tests, the Permittee must monitor and record the RTO combustion temperature at least once every 15 minutes during each of the three test runs. The Permittee must monitor the temperature in the firebox of the thermal oxidizer or immediately downstream of the firebox before any substantial heat exchange occurs.

(c) The Permittee shall use the data collected during the performance test to calculate and record the average RTO combustion temperature maintained during the performance test. This average combustion temperature is the minimum operating limit for the RTO.

(d) The Permittee shall determine capture efficiency according to one of the following procedures:

i. For an enclosure that meets the criteria for a permanent total enclosure (PTE), the Permittee may assume it achieves 100 percent capture efficiency. The Permittee must confirm that the capture system is a PTE by demonstrating that it meets the requirements of section 6 of Method 204 of 40 CFR Part 51, Appendix M, and that all exhaust gases from the enclosure are delivered to a control device.

	Regulations
ii. The Permittee may determine capture efficiency, CE, according to the protocols for testing with temporary total enclosures that are specified in Method 204A through F of 40 CFR Part 51, Appendix M.	
10. If the Permittee chooses to demonstrate compliance with Emission Standard No. 16 by using "as purchased" compliant coatings, then the Permittee must demonstrate that each coating material used during the 12-month compliance period does not exceed 0.046 kg HAP per liter solids, as purchased, according to 40 CFR §63.5170(a).	40 CFR §63.5170(a)
11. If the Permittee chooses to demonstrate compliance with Emission Standard No. 16 by using "as applied" compliant coatings, then the Permittee must demonstrate that: (a) Each coating material used does not exceed 0.046 kg HAP per liter solids on a rolling 12-month average as applied basis, determined monthly, according to 40 CFR §63.5170(b)(1); or (b) The average of all coating materials used does not exceed 0.046 kg HAP per liter solids on a rolling 12-month average as applied basis, determined monthly, according to 40 CFR §63.5170(b)(2).	40 CFR §63.5170(b)
12. If the Permittee chooses to demonstrate compliance with Emission Standard No. 16 by using a capture system and the RTO, then the Permittee must demonstrate that: (a) The overall organic HAP control efficiency is at least 98 percent on a monthly basis for individual or groups of coil coating lines according to 40 CFR §63.5170(c); or (b) The overall organic HAP control efficiency is at least 98 percent during performance tests conducted according to Proviso No. 9 of this section of the Permit and operating limits are achieved continuously for individual coil coating lines according to 40 CFR §63.5170(c); or (c) The RTO outlet HAP concentration is no greater than 20 ppmv and there is 100-percent capture efficiency during performance tests conducted according to Proviso No. 9 of this section of the Permit and operating limits are achieved continuously for individual coil coating lines according to 40 CFR §63.5170(c).	40 CFR §63.5170(c)

	Regulations
13. If the Permittee chooses to demonstrate compliance with Emission Standard No. 16 by using a combination of compliant coatings and control devices and maintaining an acceptable equivalent emission rate, then the Permittee must demonstrate that the average equivalent emission rate does not exceed 0.046 kg HAP per liter solids on a rolling 12-month average as applied basis, determined monthly, according to 40 CFR §63.5170(d).	40 CFR §63.5170(d)
Emission Monitoring	
1. The Permittee shall conduct opacity monitoring for the CLEAN_1, HYPU_A1 – HYPU_A5, and RTO_1 stacks in accordance with the following: (a) An instantaneous visible emissions check shall be conducted at least once weekly during daylight hours while the sources are in operation. (b) If any visible emissions are observed during the initial visible emissions check, corrective action shall be initiated within 2 hours. (c) After corrective action has been completed, a 12-minute visible emissions observation in accordance with Method 9 shall be conducted in order to confirm that no visible emissions are present.	Rule 335-3-1-.04(1)
2. The Permittee shall conduct initial performance tests according to the requirements in General Permit Proviso Nos. 14 & 18 and the *Compliance and Performance Test Methods and Procedures* section of the Permit to demonstrate compliance with Emission Standard Nos. 3, 11, & 14 within twelve (12) months of start-up and compliance with Emission Standard Nos. 4, 5, 12, & 13 within one-hundred eighty (180) days of start-up. (a) Subsequent performance tests shall be conducted once every sixty (60) months following the initial performance test to demonstrate compliance with Emission Standard Nos. 4, 5, 12, & 13.	Rule 335-3-1-.04(1) 40 CFR §60.463(b)
3. The Permittee shall continuously measure and, once per day, record the pressure differential between the inlet and the exhaust of CLEAN_1 and QUEN_1 to determine if the pressure differential falls within the range specified by the manufacturer. Whenever the pressure differential is outside of the range, maintenance and/or corrective action shall be initiated within one working day of detection.	Rule 335-3-1-.04(1)

	Regulations
4. The Permittee shall conduct an initial performance test as required under 40 CFR §60.8(a) to demonstrate compliance with Emission Standard No. 15 and thereafter a performance test for each calendar month according to the procedures in Proviso No. 7 of the *Compliance and Performance Test Methods and Procedures* section of the Permit. (a) The Permittee is not required to conduct a performance test each month provided that the RTO and capture system operating conditions have not changed. If the Permittee elects to operate the RTO or capture system at conditions different from the initial performance test, the Permittee must retest according to the requirements above.	40 CFR §60.463(b) 40 CFR §60.463(c)(2)(i)
5. The Permittee shall install, calibrate, operate, and maintain a device that continuously records the RTO combustion temperature of any effluent gases incinerated to achieve compliance with Emission Standard No. 15. (a) The device shall have an accuracy of ±2.5 °C. or ±0.75 percent of the temperature being measured expressed in degrees Celsius, whichever is greater. (b) The Permittee shall record all periods (during actual coating operations) in excess of 3 hours during which the average temperature in the RTO remains more than 28 °C (50 °F) below the temperature at which compliance with Emission Standard No. 15 was demonstrated during the most recent measurement of incinerator efficiency required by Proviso No. 5 of this section of the Permit.	40 CFR §60.464(c)
6. The Permittee shall conduct an initial performance test according to the requirements of Proviso No. 9 of the *Compliance and Performance Test Methods and Procedures* section of the Permit to demonstrate compliance with Emission Standard No. 16 within 180 days of start-up, if applicable. (a) Subsequent performance tests shall be conducted once every sixty (60) months following the initial performance test, unless the conditions of 40 CFR §63.5160(a) are met.	40 CFR §63.5160
7. To demonstrate continuous compliance with the operating limit established according to Proviso Nos. 9(b) and (c) of the *Compliance and Performance Test Methods and Procedures* section of the Permit, the Permittee must install a thermocouple or temperature sensor in the RTO combustion chamber at a location in the combustion zone.	40 CFR §63.5150(a)(3)

	Regulations
(a) The thermocouple or temperature sensor shall be installed, calibrated, maintained, and operated according to the manufacturer's specifications.	
(b) The calibration of the chart recorder, data logger, or temperature indicator must be verified every 3 months; or the chart recorder, data logger, or temperature indicator must be replaced. The Permittee must replace the equipment either if the calibration is not performed, or if the equipment cannot be calibrated properly.	
(c) Each temperature monitoring device must be equipped with a continuous recorder. The device must have an accuracy of ±1 percent of the temperature being monitored in degrees Celsius, or ±1 °Celsius, whichever is greater.	
8. If the Permittee chooses to demonstrate compliance with Emission Standard No. 16 by using a capture system and the RTO, the Permittee must develop a capture system monitoring plan and must monitor the capture system according to the requirements below:	40 CFR §63.5150(a)(4)
(a) The monitoring plan must identify the operating parameter to be monitored to ensure that the capture efficiency measured during compliance tests is maintained, explain why this parameter is appropriate for demonstrating ongoing compliance, and identify the specific monitoring procedures.	
(b) The plan must specify operating limits at the capture system operating parameter value, or range of values, that demonstrates compliance with Emission Standard No. 12. The operating limits must represent the conditions indicative of proper operation and maintenance of the capture system.	
(c) The Permittee must conduct monitoring in accordance with the plan.	
9. A permanent total enclosure (PTE) that meets the criteria of Method 204 of appendix M, 40 CFR Part 51 for a PTE, and that directs all the exhaust gases from the enclosure to RTO_1 must be installed around the ACL1 Coating Line sources.	Rule 335-3-1-.04
Recordkeeping and Reporting Requirements	
1. All records shall be maintained in a form suitable for inspection for a period of at least five (5) years from the date of generation.	Rule 335-3-1-.04(1)

		Regulations
2.	The Permittee shall maintain a record of each visible emissions check and Method 9 observation. This should include the date and time of the check/observation, observer name, results, problems observed, and corrective actions taken. If a visible emissions observation utilizing Method 9 is required, the results shall be documented using the ADEM visible emissions observation form.	Rule 335-3-1-.04(1)
3.	The Permittee shall maintain a record of the daily pressure differential readings required by this Permit. This shall include any problems observed and corrective actions taken.	Rule 335-3-1-.04(1)
4.	The Permittee shall maintain a record of the 12-month rolling total CO_2e emissions from the RTO stack.	Rule 335-3-1-.04(1)
5.	The Permittee shall maintain daily records of the RTO combustion temperature.	40 CFR §60.465(e)
6.	For the performance test required by Proviso No. 4 of the *Emission Monitoring* section of the Permit, the initial compliance report shall include the following data: (a) The overall VOC destruction rate and the RTO combustion temperature used to attain compliance with Emission Standard No. 15.	40 CFR §60.465(b)
7.	The Permittee shall submit a semiannual report to the Department, postmarked by the 30th day following the end of each six-month period, identifying the periods when the RTO temperature dropped as defined under Proviso No. 5 of the *Emission Monitoring* section of the Permit.	40 CFR §60.465(d)
8.	The Permittee shall maintain the following records to demonstrate compliance with 40 CFR Part 63, Subpart SSSS: (a) Records of the coating lines on which each compliance option was used and the time periods (beginning and ending dates and times) each option was used. (b) Records specified in 40 CFR §63.10(b)(2) of all measurements needed to demonstrate compliance with 40 CFR Part 63, Subpart SSSS, including: i. Control device and capture system operating parameter data in accordance with 40 CFR §63.5150(a)(3) and (4) and Proviso Nos. 7 & 8 of the *Emission Monitoring* section of the Permit.	40 CFR §63.5190

	Regulations
ii. Organic HAP content and volatile matter and solids content data for the purpose of demonstrating compliance in accordance with 40 CFR §63.5160(b) and (c) and Proviso No. 8 of the *Compliance and Performance Test Methods and Procedures* section of the Permit.	
iii. Overall control efficiency determination or alternative outlet HAP concentration using capture efficiency tests and control device destruction or removal efficiency tests in accordance with 40 CFR §63.5160(d) and (e) and Proviso No. 9 of the *Compliance and Performance Test Methods and Procedures* section of the Permit.	
iv. Material usage, HAP usage, volatile matter usage, and solids usage and compliance demonstrations using these data in accordance with 40 CFR §63.5170(a), (b), and (d) and Proviso Nos. 10, 11, & 13 of the *Compliance and Performance Test Methods and Procedures* section of the Permit.	
(c) Records specified in 40 CFR §63.10(b)(3).	
(d) For each deviation from an emission limitation, a record of the following information:	
i. The date, time, and duration of the deviation;	
ii. A list of the affected sources or equipment for which the deviation occurred and the cause of the deviation;	
iii. An estimate of the quantity of each regulated pollutant emitted over any applicable emission limit or any applicable operating limit, and a description of the method used to calculate the estimate.	
iv. A record of actions taken to minimize emissions and any corrective actions taken to return the affected unit to its normal or usual manner of operation.	
(e) Maintain records of all liquid-liquid material balances that are performed in accordance with the requirements of 40 CFR §63.5170.	
9. The Permittee must submit an initial notification as required by 40 CFR §63.9(b) within 120 days of start-up.	40 CFR §63.5180(b)
10. The Permittee must submit a Notification of Performance Test as specified in 40 CFR §§63.7 and 63.9(e) if the Permittee chooses to comply with Emission Standard No. 16 using a control device.	40 CFR §63.5180(c)

	Regulations
This notification and the site-specific test plan required under 40 CFR §63.7(c)(2) must identify the operating parameter to be monitored to ensure that the capture efficiency measured during the performance test is maintained. The Permittee may consider the operating parameter identified in the site-specific test plan to be approved unless explicitly disapproved.	
11. The Permittee must submit a Notification of Compliance Status as specified in 40 CFR §63.9(h). The Permittee must submit the Notification of Compliance Status no later than 30 calendar days following the end of the initial 12-month compliance period after start-up.	40 CFR §63.5180(d)
12. For the performance tests required by Proviso No. 6 of the *Emission Monitoring* section of the Permit, the Permittee must submit performance test reports as specified in 40 CFR §63.10(d)(2).	40 CFR §63.5180(e)
13. The Permittee shall submit semiannual compliance reports to comply with 40 CFR Part 63, Subpart SSSS according to the following requirements:	40 CFR §63.5180(g) 40 CFR §63.5180(h)
(a) The first semiannual reporting period begins one day after the end of the initial compliance period (12 months after startup) and ends 6 months later.	
(b) The first semiannual compliance report must cover the first semiannual reporting period and be postmarked or delivered no later than 30 days after the reporting period ends.	
(c) Each subsequent compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.	
(d) Each subsequent compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.	
(e) The report must contain the following information:	
i. Company name and address.	
ii. Statement by a responsible official with that official's name, title, and signature, certifying the accuracy of the content of the report.	

	Regulations
iii. Date of report and beginning and ending dates of the reporting period. The reporting period is the 6-month period ending on June 30 or December 31. Note that the information reported for each of the 6 months in the reporting period will be based on the last 12 months of data prior to the date of each monthly calculation.	
iv. Identification of the compliance option or options specified in Table 1 to 40 CFR §63.5170 that were used on each coating operation during the reporting period. If multiple compliance options were used during the reporting period, the Permittee must report the beginning dates each option was used.	
v. A statement that there were no deviations from Emission Standard No. 16 or the applicable operating limit(s) during the reporting period.	
(f) For each deviation that occurred during the reporting period, the following information must be submitted:	
i. The total operating time of each affected source during the reporting period.	
ii. For each deviation from Emission Standard No. 16 or any applicable operating limit, the Permittee must provide a list of the affected source or equipment, an estimate of the quantity of each regulated pollutant emitted over Emission Standard No. 16, a description of the method used to estimate the emissions, and the actions taken to minimize emissions.	

AIR PERMIT

PERMITTEE: ARCELORMITTAL CALVERT, LLC

FACILITY NAME: NOES FACILITY

LOCATION: CALVERT, MOBILE COUNTY, ALABAMA

PERMIT NUMBER	DESCRIPTION OF EQUIPMENT, ARTICLE, OR DEVICE
503-0157-X006	Annealing and Coating Line #2 (ACL2) • ACL2 Cleaning Section w/ Mist Eliminator (CLEAN_2) • ACL2 Electric Annealing Furnace w/ Hydrogen Purge Flares (HYPU_B1 – HYPU_B5) • ACL2 Coating Section w/ Regenerative Thermal Oxidizer (RTO_2) • ACL2 Cooling Section (ACL_C2) • ACL2 Quench Section w/ Mist Eliminator (QUEN_2)

In accordance with and subject to the provisions of the Alabama Air Pollution Control Act of 1971, Ala. Code §§22-28-1 to 22-28-23, as amended, the Alabama Environmental Management Act, Ala. Code §§22-22A-1 to 22-22A-17, as amended, and rules and regulations adopted there under, and subject further to the conditions set forth in this permit, the Permittee is hereby authorized to construct, install and use the equipment, device or other article described above.

DRAFT DATE: April 1, 2025

General Permit Provisos

1. This permit is issued on the basis of Rules and Regulations existing on the date of issuance. In the event additional Rules and Regulations are adopted, it shall be the permit holder's responsibility to comply with such rules.

2. This permit is not transferable. Upon sale or legal transfer, the new owner or operator must apply for a permit within 30 days.

3. A new permit application must be made for new sources, replacements, alterations or design changes which may result in the issuance of, or an increase in the issuance of, air contaminants, or the use of which may eliminate or reduce or control the issuance of air contaminants.

4. Each point of emission, which requires testing, will be provided with sampling ports, ladders, platforms, and other safety equipment to facilitate testing performed in accordance with procedures established by Part 60 of Title 40 of the Code of Federal Regulations, as the same may be amended or revised.

5. All air pollution control equipment shall be operated at all times while this process is operational. In the event of scheduled maintenance, unscheduled maintenance, or a breakdown of the pollution control equipment, the process shall be shutdown as expeditiously as possible (unless this act and subsequent re-start would clearly cause greater emissions than continuing operations of the process for a short period). The Department shall be notified of all such events **that exceed 1 hour** within 24 hours. The notification shall include all pertinent facts, including the duration of the process operating without the control device and the level of excess emissions which have occurred. Records of all such events, regardless of reporting requirements, shall be made and maintained for a period of five years. These records shall be available for inspection.

6. In the event there is a breakdown of air pollution control or process equipment in such a manner as to cause increased emission of air contaminants for a period greater than **1 hour**, the person responsible for such equipment shall notify the Air Division within 24 hours and provide a statement giving all pertinent facts, including the duration of the breakdown. The Air Division shall be notified when the breakdown has been corrected.

7. This process, including all air pollution control devices and capture systems for which this permit is issued shall be maintained and operated at all times in a manner so as to minimize the emissions of air contaminants. Procedures for ensuring that the above equipment is properly operated and maintained so as to minimize the emission of air contaminants shall be established.

8. This permit expires and the application is cancelled if construction has not begun within 24 months of the date of issuance of the permit.

9. On completion of construction of the device(s) for which this permit is issued, written notification of the fact is to be submitted to the Chief of the Air Division. The notification

shall indicate whether the device(s) was constructed as proposed in the application. The device(s) shall not be operated until authorization to operate is granted by the Chief of the Air Division. Failure to notify the Chief of the Air Division of completion of construction and/or operation without authorization could result in revocation of this permit.

10. Submittal of other reports regarding monitoring records, fuel analyses, operating rates, and equipment malfunctions may be required as authorized in the Department's air pollution control rules and regulations. The Department may require stack emission testing at any time.

11. Additions and revisions to the conditions of this Permit will be made, if necessary, to ensure that the Department's air pollution control rules and regulations are not violated.

12. Nothing in this permit or conditions thereto shall negate any authority granted to the Air Division pursuant to the Alabama Environmental Management Act or regulations issued thereunder.

13. This permit is issued with the condition that, should obnoxious odors arising from the plant operations be verified by Air Division inspectors, measures to abate the odorous emissions shall be taken upon a determination by the Alabama Department of Environmental Management that these measures are technically and economically feasible.

14. The Air Division must be notified in writing at least 10 working days in advance of all emission tests to be conducted and submitted as proof of compliance with the Department's air pollution control rules and regulations.

    To avoid problems concerning testing methods and procedures, the following shall be included with the notification letter:

    (a) The date the test crew is expected to arrive, the date and time anticipated of the start of the first run, how many and which sources are to be tested, and the names of the persons and/or testing company that will conduct the tests.

    (b) A complete description of each sampling train to be used, including type of media used in determining gas stream components, type of probe lining, type of filter media, and probe cleaning method and solvent to be used (if test procedure requires probe cleaning).

    (c) A description of the process(es) to be tested, including the feed rate, any operating parameter used to control or influence the operations, and the rated capacity.

    (d) A sketch or sketches showing sampling point locations and their relative positions to the nearest upstream and downstream gas flow disturbances.

    A pretest meeting may be held at the request of the source owner or the Department. The necessity for such a meeting and the required attendees will be determined on a case-by-case basis.

All test reports must be submitted to the Air Division within 30 days of the actual completion of the test, unless an extension of time is specifically approved by the Air Division.

15. Records will be maintained of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the process equipment and any malfunction of the air pollution control equipment. These records will be kept in a permanent form suitable for inspection and will be retained for at least two years following the date of each occurrence.

16. Precautions shall be taken to prevent fugitive dust emanating from plant roads, grounds, stockpiles, screens, dryers, hoppers, ductwork, etc.

    Plant or haul roads and grounds will be maintained in the following manner so that dust will not become airborne. A minimum of one, or a combination, of the following methods shall be utilized to minimize airborne dust from plant or haul roads and grounds:

    (a) by the application of water any time the surface of the road is sufficiently dry to allow the creation of dust emissions by the act of wind or vehicular traffic;

    (b) by reducing the speed of vehicular traffic to a point below that at which dust emissions are created;

    (c) by paving;

    (d) by the application of binders to the road surface at any time the road surface is found to allow the creation of dust emissions;

    Should one, or a combination, of the above methods fail to adequately reduce airborne dust from plant or haul roads and grounds, alternative methods shall be employed, either exclusively or in combination with one or all of the above control techniques, so that dust will not become airborne. Alternative methods shall be approved by the Department prior to utilization.

17. If this plant relocates to another site, this plant's Air Permit remains valid for this site unless or until it is revoked for failure to comply with ADEM Air Division Rules and Regulations. The owner or operator of this plant must provide written notification of the intent to relocate the plant to this site at least two weeks in advance. The written notification should include the planned construction beginning date and the projected startup date. Failure to provide this written notification is a violation of this permit condition and is grounds for revocation of this permit.

18. Any performance tests required shall be conducted and data reduced in accordance with the test methods and procedures contained in each specific permit condition unless the Director (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (2) approves the use of an equivalent method, or (3) approves the use of an alternative method, the results of which he has determined to be adequate for indicating whether a specific source is in compliance.

19. The permittee shall not use as a defense in an enforcement action that maintaining compliance with conditions of this permit would have required halting or reducing the permitted activity.

20. The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.

21. The permittee shall keep this permit under file or on display at all times at the site where the facility for which the permit is issued is located and shall make the permit readily available for inspection by any or all persons who may request to see it.

22. An annual compliance certification shall be submitted by March 1st each year, covering the reporting period of January 1st through December 31st of the previous year, unless more frequent periods are specified according to the specific rule governing the source or required by the Department.

    (a) The compliance certification shall include the following:

        a. The identification of each term or condition of this permit that is the basis of the certification;

        b. The compliance status;

        c. The method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with Rule 335-3-16-.05(c) (Monitoring and Recordkeeping Requirements);

        d. Whether compliance has been continuous or intermittent; and

        e. Such other facts as the Department may require in order to determine the compliance status of the source.

    (b) The compliance certification shall be submitted to:

Alabama Department of Environmental Management
Air Division
P.O. Box 301463
Montgomery, AL 36130-1463

Annealing and Coating Line #2 (ACL2)

Provisos

	Regulations
Applicability	
1. These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.01(1), *"Control of Particulate Emissions: Visible Emissions".*	Rule 335-3-4-.01(1)
2. These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.04(1), "*Control of Particulate Emissions: Process Industries – General*".	Rule 335-3-4-.04(1)
3. These sources have enforceable limits in order to comply with the applicable requirements of ADEM Admin. Code r. 335-3-14-.04, "*Air Permits Authorizing Construction in Clean Air Areas (Prevention of Significant Deterioration)".*	Rule 335-3-14-.04 (PSD/BACT)
4. The ACL2 Coating Section (RTO_2), the ACL2 Cooling Section (ACL_C2), and ACL2 Quench Section (QUEN_2) are subject to the applicable requirements of 40 CFR Part 60, Subpart TT, "*Standards of Performance for Metal Coil Surface Coating*".	Rule 335-3-10-.02(46) 40 CFR §60.460
5. The facility is subject to the applicable requirements of 40 CFR Part 60, Subpart A, *"General Provisions"*.	Rule 335-3-10-.02(1) 40 CFR §60.1(a)
6. The ACL2 Coating Section (RTO_2) is subject to the applicable requirements of 40 CFR Part 63, Subpart SSSS, "*National Emission Standards for Hazardous Air Pollutants: Surface Coating of Metal Coil*". The ACL2 Cooling Section (ACL_C2) and ACL2 Quench Section (QUEN_2) are affected sources under 40 CFR Part 63, Subpart SSSS but not subject to the emission standards of §63.5120.	Rule 335-3-11-.06(96) 40 CFR §63.5090(a)
7. The facility is subject to the applicable requirements of 40 CFR Part 63, Subpart A, *"General Provisions"*, as listed in Table 2 of 40 CFR Part 63, Subpart SSSS.	Rule 335-3-11-.06(1) 40 CFR §63.5140(c)
Emission Standards	
1. These sources shall not emit particulate of an opacity greater than ten percent (10%), as determined by a six-minute average.	Rule 335-3-14-.04 (PSD/BACT)

		Regulations
2.	Filterable particulate matter (PM) emissions from these sources shall not exceed the allowable set by ADEM Admin. Code r. 335-3-4-.04(1).	Rule 335-3-4-.04(1)
3.	Filterable and condensable $PM/PM_{10}/PM_{2.5}$ emissions from CLEAN_2 shall not exceed 0.003 gr/dscf and 0.38 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
4.	Filterable $PM/PM_{10}/PM_{2.5}$ emissions from RTO_2 shall not exceed 0.0019 lb/MMBtu and 0.03 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
5.	Filterable and condensable $PM/PM_{10}/PM_{2.5}$ emissions from RTO_2 shall not exceed 0.0075 lb/MMBtu and 0.11 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
6.	Filterable $PM/PM_{10}/PM_{2.5}$ emissions from ACL_C2 shall not exceed 0.00044 gr/dscf (1 mg/Nm^3) and 0.37 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
7.	Filterable PM/PM_{10} emissions from QUEN_2 shall not exceed 0.00014 gr/dscf and 0.11 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
8.	Filterable $PM_{2.5}$ emissions from QUEN_2 shall not exceed 0.0004 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
9.	Nitrogen oxide (NO_X) emissions from HYPU_B1 shall not exceed 0.22 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
10.	NO_X emissions from either HYPU_B2, HYPU_B3, HYPU_B4, or HYPU_B5 shall not exceed 0.37 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
11.	NO_X emissions from RTO_2 shall not exceed 0.083 lb/MMBtu and 1.15 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
12.	Volatile organic compound (VOC) emissions from RTO_2 shall not exceed 2.06 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
13.	VOC emissions from RTO_2 shall be controlled at minimum 99% destruction efficiency or shall emit at a concentration less than 20 ppmvd (as carbon).	Rule 335-3-14-.04 (PSD/BACT)
14.	VOC emissions from ACL_C2 shall not exceed 6.6 mg/Nm^3 or 2.4 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
15.	The Permittee shall not cause to be discharged into the atmosphere from the coating line (RTO_2, ACL_C2, & QUEN_2) more than 10 percent of the VOC's applied for each calendar month (90 percent emission reduction).	40 CFR §60.462(a)(3)
16.	The Permittee shall limit organic hazardous air pollutant (HAP) emissions from the coating line (RTO_2) to:	40 CFR §63.5120(a)

	Regulations
(a) No more than 2 percent of the organic HAP applied for each month during each 12-month compliance period (98 percent reduction); or (b) No more than 0.046 kilogram (kg) of organic HAP per liter of solids applied during each 12-month compliance period; or (c) An outlet organic HAP concentration of no greater than 20 parts per million by volume (ppmv) on a dry basis. The efficiency of the capture system must be 100 percent.	
17. Carbon dioxide equivalent (CO_2e) emissions from RTO1 shall not exceed 9,807 tons per year (TPY) based on a 12-month rolling total.	Rule 335-3-14-.04 (PSD/BACT)
18. The coating section curing ovens shall only combust natural gas.	Rule 335-3-14-.04 (PSD/BACT)
19. These sources shall utilize good design, operating, and combustion practices.	Rule 335-3-14-.04 (PSD/BACT)
20. The Permittee shall not use HAP-bearing varnishes, solvents, or other coating materials in the ACL2 Coating Section without submitting an air permit application and receiving authorization from the Department.	Rule 335-3-14-.01(1)(a) Rule 335-3-14-.01(1)(b)
21. The average RTO combustion temperature in any 3-hour period must not more than 50 °F below the average combustion temperature recorded during the most recent performance test, or according to the requirements of 40 CFR §63.5160(d)(3)(i) as applicable.	40 CFR §60.464(c) 40 CFR §63.5121(a)
22. At all times, the Permittee must operate and maintain the coating line, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions.	40 CFR §63.5140(b)
Compliance and Performance Test Methods and Procedures	
1. Method 9 of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with the opacity limit of Emission Standard No. 1.	Rule 335-3-1-.05 Rule 335-3-4-.01(2)
2. Method 5 of 40 CFR Part 60, Appendix A-3 shall be used to determine compliance with the filterable particulate matter emission limits of Emission Standard Nos. 2 – 8.	Rule 335-3-1-.05

	Regulations
3. Method 201A of 40 CFR Part 51, Appendix M, shall be used to determine compliance with the speciated filterable particulate matter emission limit of Emission Standard No. 8.	Rule 335-3-1-.05
4. Method 202 of 40 CFR Part 51, Appendix M, shall be used to determine compliance with the condensable particulate matter emission limits of Emission Standard Nos. 3 & 5.	Rule 335-3-1-.05
5. Method 7E of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with the nitrogen oxide emission limits of Emission Standard Nos. 9 – 11.	Rule 335-3-1-.05
6. Method 18 of 40 CFR Part 60, Appendix A-6 or Method 25A of 40 CFR Part 60, Appendix A-7 shall be used to determine compliance with the volatile organic compound limits of Emission Standard Nos. 12 – 14.	Rule 335-3-1-.05
7. To demonstrate compliance with Emission Standard No. 15, the Permittee shall determine the overall reduction efficiency (**R**) for the capture system and RTO as prescribed below:	40 CFR §60.463(c)(2)(i) 40 CFR §60.466
(a) Determine the fraction (**F**) of total VOC's emitted by the coating line that enters the RTO using the following equation:	

$$F = \frac{\sum_{i=1}^{l} C_{bi} Q_{bi}}{\sum_{i=1}^{l} C_{bi} Q_{bi} + \sum_{i=1}^{p} C_{fi} Q_{fi}}$$

Where:

$\mathbf{C_{bi}}$ = The VOC concentration in each gas stream entering the RTO (parts per million by volume, as carbon)

$\mathbf{Q_{bi}}$ = The volumetric flow rate of each gas stream entering the RTO (dry standard cubic meters per hour)

$\mathbf{C_{fi}}$ = The VOC concentration in each gas stream emitted directly to the atmosphere (parts per million by volume, as carbon)

$\mathbf{Q_{fi}}$ = The volumetric flow rate of each gas stream emitted directly to the atmosphere (dry standard cubic meters per hour)

$\boldsymbol{l}$ = The number of gas streams entering the RTO

p = The number of gas streams emitted directly to the atmosphere

	Regulations

(b) Determine the destruction efficiency of the RTO (**E**) using values of the volumetric flow rate of each of the gas streams and the VOC content (as carbon) of each of the gas streams in and out of the device by the following equation:

$$E = \frac{\sum_{i=1}^{n} Q_{bi} C_{bi} - \sum_{j=1}^{m} Q_{aj} C_{aj}}{\sum_{i=1}^{n} Q_{bi} C_{bi}}$$

Where:

$\mathbf{C_{bi}}$ = The VOC concentration in each gas stream entering the RTO (parts per million by volume, as carbon)

$\mathbf{Q_{bi}}$ = The volumetric flow rate of each gas stream entering the RTO (dry standard cubic meters per hour)

$\mathbf{C_{aj}}$ = The VOC concentration in each gas stream leaving the RTO and entering the atmosphere (parts per million by volume, as carbon)

$\mathbf{Q_{aj}}$ = The volumetric flow rate of each gas stream leaving the control device and entering the atmosphere (dry standard cubic meters per hour)

n = The number of gas streams entering the RTO

m = The number of gas streams leaving the RTO and entering the atmosphere

(c) Determine overall reduction efficiency (**R**) using the following equation:

R = **E** (destruction efficiency) X **F** (fraction of total VOC's emitted by the coating line that enters the RTO)

(d) The Permittee shall construct the VOC emission reduction system so that all volumetric flow rates and total VOC emissions can be accurately determined by the applicable test methods and procedures specified in 40 CFR §60.466 and Proviso Nos. 7(e) and (f) of this section of the Permit. The Permittee shall construct a temporary enclosure around the coating applicator and flashoff area during performance tests for the purpose of evaluating the capture efficiency of the system, if necessary. The enclosure must be maintained at a negative pressure to ensure that all VOC emissions are measurable.

(e) Method 24 of 40 CFR Part 60, Appendix A-7, or data provided by the formulator of the coating, shall be used for

	Regulations
determining the VOC content of each coating as applied to the surface of the metal coil. In the event of a dispute, Method 24 shall be the reference method. When VOC content of waterborne coatings, determined by Method 24, is used to determine compliance, the results of the Method 24 analysis shall be adjusted as described in Section 12.6 of Method 24. i. For Method 24, the coating sample must be at least a 1-liter sample taken at a point where the sample will be representative of the coating as applied to the surface of the metal coil. (f) Method 25 of 40 CFR Part 60, Appendix A-7 shall be used both for measuring the VOC concentration in each gas stream entering and leaving the RTO and for measuring the VOC concentration in each gas stream emitted directly to the atmosphere. i. For Method 25, the sampling time for each of three runs is to be at least 60 minutes, and the minimum sampling volume is to be at least 0.003 dscm (0.11 dscf); however, shorter sampling times or smaller volumes, when necessitated by process variables or other factors, may be approved.	
8. If the Permittee chooses to demonstrate compliance with Emission Standard No. 16 by limiting HAP or volatile matter content of the coatings, the Permittee shall determine the HAP or volatile matter and solids content of coating materials according to the procedures below: (a) The Permittee must determine the organic HAP weight fraction of each coating material applied by following one of the procedures below: i. The Permittee may test the material in accordance with Method 311 of 40 CFR Part 63, Appendix. The Method 311 determination may be performed by the manufacturer of the material. The Permittee shall: (A) Count only those organic HAP in Table 3 of 40 CFR Part 63, Subpart SSSS that are measured to be present at greater than or equal to 0.1 weight percent and greater than or equal to 1.0 weight percent for other organic HAP compounds; (B) Express the weight fraction of each organic HAP counted according to Proviso 8(a)i.(A) of this section	40 CFR §63.5160(b) 40 CFR §63.5160(c)

	Regulations
of the Permit as a value truncated to four places after the decimal point; and (C) Calculate the total weight fraction of organic HAP in the tested material by summing the counted individual organic HAP weight fractions and truncating the result to three places after the decimal point. ii. For coatings, the Permittee may determine the total volatile matter content as weight fraction of nonaqueous volatile matter and use it as a substitute for organic HAP, using Method 24 of 40 CFR Part 60, Appendix A-7. As an alternative to using Method 24, the Permittee may use ASTM D2369-10 (2015), "Test Method for Volatile Content of Coatings" (see 40 CFR §63.14). The determination of total volatile matter content may be performed by the manufacturer of the coating. iii. The Permittee may use formulation data provided that the information represents each organic HAP in Table 3 of 40 CFR Part 63, Subpart SSSS that is present at a level equal to or greater than 0.1 percent and equal to or greater than 1.0 percent for other organic HAP compounds in any raw material used, weighted by the mass fraction of each raw material used in the material. Formulation data may be provided by the manufacturer of the coating material. (b) The Permittee must determine the solids content and the density of each coating material applied. The Permittee may determine the volume solids content using ASTM D2697-03(2014) Standard Test Method for Volume Nonvolatile Matter in Clear or Pigmented Coatings or ASTM D6093-97 (2016) Standard Test Method for Percent Volume Nonvolatile Matter in Clear or Pigmented Coatings Using a Helium Gas Pycnometer, or an EPA approved alternative method. The Permittee must determine the density of each coating using ASTM D1475-13 "Standard Test Method for Density of Liquid Coatings, Inks, and Related Products" or ASTM D2111-10 (2015) "Standard Test Methods for Specific Gravity and Density of Halogenated Organic Solvents and Their Admixtures". The solids determination using ASTM D2697-03(2014) or ASTM D6093-97 (2016) and the density determination using ASTM D1475-13 or ASTM 2111-10 (2015) may be performed by the manufacturer of the material. Alternatively, the Permittee may rely on formulation	

	Regulations
data provided by material providers to determine the volume solids.	
9. If the Permittee chooses to demonstrate compliance with Emission Standard No. 16 by using a capture system and the RTO, the Permittee shall conduct performance testing to determine the destruction or removal efficiency of the RTO, the capture efficiency of the capture system, and confirm or re-establish the operating limits according to the procedures below:	40 CFR §63.5160(d) 40 CFR §63.5160(e)
(a) Performance tests conducted to determine the destruction or removal efficiency of the RTO must be performed such that RTO inlet and outlet testing is conducted simultaneously. To determine the outlet organic HAP concentration achieved by the RTO, only RTO outlet testing must be conducted. The data must be reduced in accordance with the test methods and procedures in 40 CFR §63.5160(d)(1)(i) through (ix).	
i. Each performance test must consist of three separate runs, except as provided by 40 CFR §63.7(e)(3); each run must be conducted for at least 1 hour under the conditions that exist when the coating line is operating under normal operating conditions. For the purpose of determining volatile organic matter concentrations and mass flow rates, the average of the results of all runs will apply. If the Permittee is demonstrating compliance with the outlet organic HAP concentration limit in Proviso No. 16(c) of the *Emission Standards* section of this permit, only the average outlet volatile organic matter concentration must be determined.	
ii. For each performance test run, the Permittee shall determine the volatile organic matter mass flow rates using the equation below: $$M_f = Q_{sd} C_C (12)(0.0416)\left(10^{-6}\right)$$ Where: $\mathbf{M_f}$ = Total organic volatile matter mass flow rate, kg/hour $\mathbf{C_c}$ = Concentration of organic compounds as carbon in the vent gas, as determined by Method 25 or Method 25A, ppmv, dry basis $\mathbf{Q_{sd}}$ = Volumetric flow rate of gases entering or exiting the RTO, as determined by Method 2, 2A, 2C, 2D, 2F, or 2G, dry standard cubic meters (dscm)/hour	

	Regulations

0.0416 = Conversion factor for molar volume

iii. For each performance test run, the Permittee shall determine the control device destruction or removal efficiency using the equation below:

$$DRE = \frac{M_{fi} - M_{fo}}{M_{fi}} x\ 100$$

Where:

DRE = Organic emissions destruction or removal efficiency of the add-on control device, percent

$\mathbf{M_{fi}}$ = Organic volatile matter mass flow rate at the inlet to the control device, kg/h

$\mathbf{M_{fo}}$ = Organic volatile matter mass flow rate at the outlet of the control device, kg/h

iv. The RTO destruction or removal efficiency is determined as the average of the efficiencies determined in the three test runs.

(b) During performance tests, the Permittee must monitor and record the RTO combustion temperature at least once every 15 minutes during each of the three test runs. The Permittee must monitor the temperature in the firebox of the thermal oxidizer or immediately downstream of the firebox before any substantial heat exchange occurs.

(c) The Permittee shall use the data collected during the performance test to calculate and record the average RTO combustion temperature maintained during the performance test. This average combustion temperature is the minimum operating limit for the RTO.

(d) The Permittee shall determine capture efficiency according to one of the following procedures:

i. For an enclosure that meets the criteria for a permanent total enclosure (PTE), the Permittee may assume it achieves 100 percent capture efficiency. The Permittee must confirm that the capture system is a PTE by demonstrating that it meets the requirements of section 6 of Method 204 of 40 CFR Part 51, Appendix M, and that all exhaust gases from the enclosure are delivered to a control device.

	Regulations
ii. The Permittee may determine capture efficiency, CE, according to the protocols for testing with temporary total enclosures that are specified in Method 204A through F of 40 CFR Part 51, Appendix M.	
10. If the Permittee chooses to demonstrate compliance with Emission Standard No. 16 by using "as purchased" compliant coatings, then the Permittee must demonstrate that each coating material used during the 12-month compliance period does not exceed 0.046 kg HAP per liter solids, as purchased, according to 40 CFR §63.5170(a).	40 CFR §63.5170(a)
11. If the Permittee chooses to demonstrate compliance with Emission Standard No. 16 by using "as applied" compliant coatings, then the Permittee must demonstrate that: (a) Each coating material used does not exceed 0.046 kg HAP per liter solids on a rolling 12-month average as applied basis, determined monthly, according to 40 CFR §63.5170(b)(1); or (b) The average of all coating materials used does not exceed 0.046 kg HAP per liter solids on a rolling 12-month average as applied basis, determined monthly, according to 40 CFR §63.5170(b)(2).	40 CFR §63.5170(b)
12. If the Permittee chooses to demonstrate compliance with Emission Standard No. 16 by using a capture system and the RTO, then the Permittee must demonstrate that: (a) The overall organic HAP control efficiency is at least 98 percent on a monthly basis for individual or groups of coil coating lines according to 40 CFR §63.5170(c); or (b) The overall organic HAP control efficiency is at least 98 percent during performance tests conducted according to Proviso No. 9 of this section of the Permit and operating limits are achieved continuously for individual coil coating lines according to 40 CFR §63.5170(c); or (c) The RTO outlet HAP concentration is no greater than 20 ppmv and there is 100-percent capture efficiency during performance tests conducted according to Proviso No. 9 of this section of the Permit and operating limits are achieved continuously for individual coil coating lines according to 40 CFR §63.5170(c).	40 CFR §63.5170(c)

	Regulations
13. If the Permittee chooses to demonstrate compliance with Emission Standard No. 16 by using a combination of compliant coatings and control devices and maintaining an acceptable equivalent emission rate, then the Permittee must demonstrate that the average equivalent emission rate does not exceed 0.046 kg HAP per liter solids on a rolling 12-month average as applied basis, determined monthly, according to 40 CFR §63.5170(d).	40 CFR §63.5170(d)
Emission Monitoring	
1. The Permittee shall conduct opacity monitoring for the CLEAN_2, HYPU_B1 – HYPU_B5, and RTO_2 stacks in accordance with the following: (a) An instantaneous visible emissions check shall be conducted at least once weekly during daylight hours while the sources are in operation. (b) If any visible emissions are observed during the initial visible emissions check, corrective action shall be initiated within 2 hours. (c) After corrective action has been completed, a 12-minute visible emissions observation in accordance with Method 9 shall be conducted in order to confirm that no visible emissions are present.	Rule 335-3-1-.04(1)
2. The Permittee shall conduct initial performance tests according to the requirements in General Permit Proviso Nos. 14 & 18 and the *Compliance and Performance Test Methods and Procedures* section of the Permit to demonstrate compliance with Emission Standard Nos. 3, 11, & 14 within twelve (12) months of start-up and compliance with Emission Standard Nos. 4, 5, 12, & 13 within one-hundred eighty (180) days of start-up. (a) Subsequent performance tests shall be conducted once every sixty (60) months following the initial performance test to demonstrate compliance with Emission Standard Nos. 3, 12, & 13.	Rule 335-3-1-.04(1)
3. The Permittee shall continuously measure and, once per day, record the pressure differential between the inlet and the exhaust of CLEAN_2 and QUEN_2 to determine if the pressure differential falls within the range specified by the manufacturer. Whenever the pressure differential is outside of the range, maintenance and/or corrective action shall be initiated within one working day of detection.	Rule 335-3-1-.04(1)

	Regulations
4. The Permittee shall conduct an initial performance test as required under 40 CFR §60.8(a) to demonstrate compliance with Emission Standard No. 15 and thereafter a performance test for each calendar month according to the procedures in Proviso No. 7 of the *Compliance and Performance Test Methods and Procedures* section of the Permit. (a) The Permittee is not required to conduct a performance test each month provided that the RTO and capture system operating conditions have not changed. If the Permittee elects to operate the RTO or capture system at conditions different from the initial performance test, the Permittee must retest according to the requirements above.	40 CFR §60.463(b) 40 CFR §60.463(c)(2)(i)
5. The Permittee shall install, calibrate, operate, and maintain a device that continuously records the RTO combustion temperature of any effluent gases incinerated to achieve compliance with Emission Standard No. 15. (a) The device shall have an accuracy of ±2.5 °C. or ±0.75 percent of the temperature being measured expressed in degrees Celsius, whichever is greater. (b) The Permittee shall record all periods (during actual coating operations) in excess of 3 hours during which the average temperature in the RTO remains more than 28 °C (50 °F) below the temperature at which compliance with Emission Standard No. 15 was demonstrated during the most recent measurement of incinerator efficiency required by Proviso No. 5 of this section of the Permit.	40 CFR §60.464(c)
6. The Permittee shall conduct an initial performance test according to the requirements of Proviso No. 9 of the *Compliance and Performance Test Methods and Procedures* section of the Permit to demonstrate compliance with Emission Standard No. 16 within 180 days of start-up, if applicable. (a) Subsequent performance tests shall be conducted once every sixty (60) months following the initial performance test, unless the conditions of 40 CFR §63.5160(a) are met.	40 CFR §63.5160
7. To demonstrate continuous compliance with the operating limit established according to Proviso Nos. 9(b) and (c) of the *Compliance and Performance Test Methods and Procedures* section of the Permit, the Permittee must install a thermocouple or temperature sensor in the RTO combustion chamber at a location in the combustion zone.	40 CFR §63.5150(a)(3)

	Regulations
(a) The thermocouple or temperature sensor shall be installed, calibrated, maintained, and operated according to the manufacturer's specifications.	
(b) The calibration of the chart recorder, data logger, or temperature indicator must be verified every 3 months; or the chart recorder, data logger, or temperature indicator must be replaced. The Permittee must replace the equipment either if the calibration is not performed, or if the equipment cannot be calibrated properly.	
(c) Each temperature monitoring device must be equipped with a continuous recorder. The device must have an accuracy of ±1 percent of the temperature being monitored in degrees Celsius, or ±1 °Celsius, whichever is greater.	
8. If the Permittee chooses to demonstrate compliance with Emission Standard No. 16 by using a capture system and the RTO, the Permittee must develop a capture system monitoring plan and must monitor the capture system according to the requirements below:	40 CFR §63.5150(a)(4)
(a) The monitoring plan must identify the operating parameter to be monitored to ensure that the capture efficiency measured during compliance tests is maintained, explain why this parameter is appropriate for demonstrating ongoing compliance, and identify the specific monitoring procedures.	
(b) The plan must specify operating limits at the capture system operating parameter value, or range of values, that demonstrates compliance with Emission Standard No. 12. The operating limits must represent the conditions indicative of proper operation and maintenance of the capture system.	
(c) The Permittee must conduct monitoring in accordance with the plan.	
9. A permanent total enclosure (PTE) that meets the criteria of Method 204 of appendix M, 40 CFR Part 51 for a PTE, and that directs all the exhaust gases from the enclosure to RTO_2 must be installed around the ACL2 Coating Line sources.	Rule 335-3-1-.04
Recordkeeping and Reporting Requirements	
1. All records shall be maintained in a form suitable for inspection for a period of at least five (5) years from the date of generation.	Rule 335-3-1-.04(1)

	Regulations
2. The Permittee shall maintain a record of each visible emissions check and Method 9 observation. This should include the date and time of the check/observation, observer name, results, problems observed, and corrective actions taken. If a visible emissions observation utilizing Method 9 is required, the results shall be documented using the ADEM visible emissions observation form.	Rule 335-3-1-.04(1)
3. The Permittee shall maintain a record of the daily pressure differential readings required by this Permit. This shall include any problems observed and corrective actions taken.	Rule 335-3-1-.04(1)
4. The Permittee shall maintain a record of the 12-month rolling total CO_2e emissions from the RTO stack.	Rule 335-3-1-.04(1)
5. The Permittee shall maintain daily records of the RTO combustion temperature.	40 CFR §60.465(e)
6. For the performance test required by Proviso No. 4 of the *Emission Monitoring* section of the Permit, the initial compliance report shall include the following data: (a) The overall VOC destruction rate and the RTO combustion temperature used to attain compliance with Emission Standard No. 15.	40 CFR §60.465(b)
7. The Permittee shall submit a semiannual report to the Department, postmarked by the 30th day following the end of each six-month period, identifying the periods when the RTO temperature dropped as defined under Proviso No. 5 of the *Emission Monitoring* section of the Permit.	40 CFR §60.465(d)
8. The Permittee shall maintain the following records to demonstrate compliance with 40 CFR Part 63, Subpart SSSS: (a) Records of the coating lines on which each compliance option was used and the time periods (beginning and ending dates and times) each option was used. (b) Records specified in 40 CFR §63.10(b)(2) of all measurements needed to demonstrate compliance with 40 CFR Part 63, Subpart SSSS, including: i. Control device and capture system operating parameter data in accordance with 40 CFR §63.5150(a)(3) and (4) and Proviso Nos. 7 & 8 of the *Emission Monitoring* section of the Permit.	40 CFR §63.5190

	Regulations
ii. Organic HAP content and volatile matter and solids content data for the purpose of demonstrating compliance in accordance with 40 CFR §63.5160(b) and (c) and Proviso No. 8 of the *Compliance and Performance Test Methods and Procedures* section of the Permit.	
iii. Overall control efficiency determination or alternative outlet HAP concentration using capture efficiency tests and control device destruction or removal efficiency tests in accordance with 40 CFR §63.5160(d) and (e) and Proviso No. 9 of the *Compliance and Performance Test Methods and Procedures* section of the Permit.	
iv. Material usage, HAP usage, volatile matter usage, and solids usage and compliance demonstrations using these data in accordance with 40 CFR §63.5170(a), (b), and (d) and Proviso Nos. 10, 11, & 13 of the *Compliance and Performance Test Methods and Procedures* section of the Permit.	
(c) Records specified in 40 CFR §63.10(b)(3).	
(d) For each deviation from an emission limitation, a record of the following information:	
i. The date, time, and duration of the deviation;	
ii. A list of the affected sources or equipment for which the deviation occurred and the cause of the deviation;	
iii. An estimate of the quantity of each regulated pollutant emitted over any applicable emission limit or any applicable operating limit, and a description of the method used to calculate the estimate.	
iv. A record of actions taken to minimize emissions and any corrective actions taken to return the affected unit to its normal or usual manner of operation.	
(e) Maintain records of all liquid-liquid material balances that are performed in accordance with the requirements of 40 CFR §63.5170.	
9. The Permittee must submit an initial notification as required by 40 CFR §63.9(b) within 120 days of start-up.	40 CFR §63.5180(b)
10. The Permittee must submit a Notification of Performance Test as specified in 40 CFR §§63.7 and 63.9(e) if the Permittee chooses to comply with Emission Standard No. 16 using a control device.	40 CFR §63.5180(c)

	Regulations
This notification and the site-specific test plan required under 40 CFR §63.7(c)(2) must identify the operating parameter to be monitored to ensure that the capture efficiency measured during the performance test is maintained. The Permittee may consider the operating parameter identified in the site-specific test plan to be approved unless explicitly disapproved.	
11. The Permittee must submit a Notification of Compliance Status as specified in 40 CFR §63.9(h). The Permittee must submit the Notification of Compliance Status no later than 30 calendar days following the end of the initial 12-month compliance period after start-up.	40 CFR §63.5180(d)
12. For the performance tests required by Proviso No. 6 of the *Emission Monitoring* section of the Permit, the Permittee must submit performance test reports as specified in 40 CFR §63.10(d)(2).	40 CFR §63.5180(e)
13. The Permittee shall submit semiannual compliance reports to comply with 40 CFR Part 63, Subpart SSSS according to the following requirements:	40 CFR §63.5180(g) 40 CFR §63.5180(h)
(a) The first semiannual reporting period begins one day after the end of the initial compliance period (12 months after startup) and ends 6 months later.	
(b) The first semiannual compliance report must cover the first semiannual reporting period and be postmarked or delivered no later than 30 days after the reporting period ends.	
(c) Each subsequent compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.	
(d) Each subsequent compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.	
(e) The report must contain the following information:	
i. Company name and address.	
ii. Statement by a responsible official with that official's name, title, and signature, certifying the accuracy of the content of the report.	

	Regulations
iii. Date of report and beginning and ending dates of the reporting period. The reporting period is the 6-month period ending on June 30 or December 31. Note that the information reported for each of the 6 months in the reporting period will be based on the last 12 months of data prior to the date of each monthly calculation.	
iv. Identification of the compliance option or options specified in Table 1 to 40 CFR §63.5170 that were used on each coating operation during the reporting period. If multiple compliance options were used during the reporting period, the Permittee must report the beginning dates each option was used.	
v. A statement that there were no deviations from Emission Standard No. 16 or the applicable operating limit(s) during the reporting period.	
(f) For each deviation that occurred during the reporting period, the following information must be submitted:	
i. The total operating time of each affected source during the reporting period.	
ii. For each deviation from Emission Standard No. 16 or any applicable operating limit, the Permittee must provide a list of the affected source or equipment, an estimate of the quantity of each regulated pollutant emitted over Emission Standard No. 16, a description of the method used to estimate the emissions, and the actions taken to minimize emissions.	

AIR PERMIT

PERMITTEE:	ARCELORMITTAL CALVERT, LLC
FACILITY NAME:	NOES FACILITY
LOCATION:	CALVERT, MOBILE COUNTY, ALABAMA

PERMIT NUMBER	DESCRIPTION OF EQUIPMENT, ARTICLE, OR DEVICE
503-0157-X007	Emergency Diesel Engines • 2,667 kWm Emergency Generator Engine (ENG_1) • 333 kWm Emergency Generator Engine (ENG_2)

In accordance with and subject to the provisions of the Alabama Air Pollution Control Act of 1971, Ala. Code §§22-28-1 to 22-28-23, as amended, the Alabama Environmental Management Act, Ala. Code §§22-22A-1 to 22-22A-17, as amended, and rules and regulations adopted there under, and subject further to the conditions set forth in this permit, the Permittee is hereby authorized to construct, install and use the equipment, device or other article described above.

DRAFT DATE: April 1, 2025

General Permit Provisos

1. This permit is issued on the basis of Rules and Regulations existing on the date of issuance. In the event additional Rules and Regulations are adopted, it shall be the permit holder's responsibility to comply with such rules.

2. This permit is not transferable. Upon sale or legal transfer, the new owner or operator must apply for a permit within 30 days.

3. A new permit application must be made for new sources, replacements, alterations or design changes which may result in the issuance of, or an increase in the issuance of, air contaminants, or the use of which may eliminate or reduce or control the issuance of air contaminants.

4. Each point of emission, which requires testing, will be provided with sampling ports, ladders, platforms, and other safety equipment to facilitate testing performed in accordance with procedures established by Part 60 of Title 40 of the Code of Federal Regulations, as the same may be amended or revised.

5. All air pollution control equipment shall be operated at all times while this process is operational. In the event of scheduled maintenance, unscheduled maintenance, or a breakdown of the pollution control equipment, the process shall be shutdown as expeditiously as possible (unless this act and subsequent re-start would clearly cause greater emissions than continuing operations of the process for a short period). The Department shall be notified of all such events **that exceed 1 hour** within 24 hours. The notification shall include all pertinent facts, including the duration of the process operating without the control device and the level of excess emissions which have occurred. Records of all such events, regardless of reporting requirements, shall be made and maintained for a period of five years. These records shall be available for inspection.

6. In the event there is a breakdown of air pollution control or process equipment in such a manner as to cause increased emission of air contaminants for a period greater than **1 hour**, the person responsible for such equipment shall notify the Air Division within 24 hours and provide a statement giving all pertinent facts, including the duration of the breakdown. The Air Division shall be notified when the breakdown has been corrected.

7. This process, including all air pollution control devices and capture systems for which this permit is issued shall be maintained and operated at all times in a manner so as to minimize the emissions of air contaminants. Procedures for ensuring that the above equipment is properly operated and maintained so as to minimize the emission of air contaminants shall be established.

8. This permit expires and the application is cancelled if construction has not begun within 24 months of the date of issuance of the permit.

9. On completion of construction of the device(s) for which this permit is issued, written notification of the fact is to be submitted to the Chief of the Air Division. The notification

shall indicate whether the device(s) was constructed as proposed in the application. The device(s) shall not be operated until authorization to operate is granted by the Chief of the Air Division. Failure to notify the Chief of the Air Division of completion of construction and/or operation without authorization could result in revocation of this permit.

10. Submittal of other reports regarding monitoring records, fuel analyses, operating rates, and equipment malfunctions may be required as authorized in the Department's air pollution control rules and regulations. The Department may require stack emission testing at any time.

11. Additions and revisions to the conditions of this Permit will be made, if necessary, to ensure that the Department's air pollution control rules and regulations are not violated.

12. Nothing in this permit or conditions thereto shall negate any authority granted to the Air Division pursuant to the Alabama Environmental Management Act or regulations issued thereunder.

13. This permit is issued with the condition that, should obnoxious odors arising from the plant operations be verified by Air Division inspectors, measures to abate the odorous emissions shall be taken upon a determination by the Alabama Department of Environmental Management that these measures are technically and economically feasible.

14. The Air Division must be notified in writing at least 10 working days in advance of all emission tests to be conducted and submitted as proof of compliance with the Department's air pollution control rules and regulations.

    To avoid problems concerning testing methods and procedures, the following shall be included with the notification letter:

    (a) The date the test crew is expected to arrive, the date and time anticipated of the start of the first run, how many and which sources are to be tested, and the names of the persons and/or testing company that will conduct the tests.

    (b) A complete description of each sampling train to be used, including type of media used in determining gas stream components, type of probe lining, type of filter media, and probe cleaning method and solvent to be used (if test procedure requires probe cleaning).

    (c) A description of the process(es) to be tested, including the feed rate, any operating parameter used to control or influence the operations, and the rated capacity.

    (d) A sketch or sketches showing sampling point locations and their relative positions to the nearest upstream and downstream gas flow disturbances.

    A pretest meeting may be held at the request of the source owner or the Department. The necessity for such a meeting and the required attendees will be determined on a case-by-case basis.

All test reports must be submitted to the Air Division within 30 days of the actual completion of the test, unless an extension of time is specifically approved by the Air Division.

15. Records will be maintained of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the process equipment and any malfunction of the air pollution control equipment. These records will be kept in a permanent form suitable for inspection and will be retained for at least two years following the date of each occurrence.

16. Precautions shall be taken to prevent fugitive dust emanating from plant roads, grounds, stockpiles, screens, dryers, hoppers, ductwork, etc.

    Plant or haul roads and grounds will be maintained in the following manner so that dust will not become airborne. A minimum of one, or a combination, of the following methods shall be utilized to minimize airborne dust from plant or haul roads and grounds:

    (a) by the application of water any time the surface of the road is sufficiently dry to allow the creation of dust emissions by the act of wind or vehicular traffic;

    (b) by reducing the speed of vehicular traffic to a point below that at which dust emissions are created;

    (c) by paving;

    (d) by the application of binders to the road surface at any time the road surface is found to allow the creation of dust emissions;

    Should one, or a combination, of the above methods fail to adequately reduce airborne dust from plant or haul roads and grounds, alternative methods shall be employed, either exclusively or in combination with one or all of the above control techniques, so that dust will not become airborne. Alternative methods shall be approved by the Department prior to utilization.

17. If this plant relocates to another site, this plant's Air Permit remains valid for this site unless or until it is revoked for failure to comply with ADEM Air Division Rules and Regulations. The owner or operator of this plant must provide written notification of the intent to relocate the plant to this site at least two weeks in advance. The written notification should include the planned construction beginning date and the projected startup date. Failure to provide this written notification is a violation of this permit condition and is grounds for revocation of this permit.

18. Any performance tests required shall be conducted and data reduced in accordance with the test methods and procedures contained in each specific permit condition unless the Director (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (2) approves the use of an equivalent method, or (3) approves the use of an alternative method, the results of which he has determined to be adequate for indicating whether a specific source is in compliance.

19. The permittee shall not use as a defense in an enforcement action that maintaining compliance with conditions of this permit would have required halting or reducing the permitted activity.

20. The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.

21. The permittee shall keep this permit under file or on display at all times at the site where the facility for which the permit is issued is located and shall make the permit readily available for inspection by any or all persons who may request to see it.

22. An annual compliance certification shall be submitted by March 1st each year, covering the reporting period of January 1st through December 31st of the previous year, unless more frequent periods are specified according to the specific rule governing the source or required by the Department.

    (a) The compliance certification shall include the following:

        a. The identification of each term or condition of this permit that is the basis of the certification;

        b. The compliance status;

        c. The method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with Rule 335-3-16-.05(c) (Monitoring and Recordkeeping Requirements);

        d. Whether compliance has been continuous or intermittent; and

        e. Such other facts as the Department may require in order to determine the compliance status of the source.

    (b) The compliance certification shall be submitted to:

Alabama Department of Environmental Management
Air Division
P.O. Box 301463
Montgomery, AL 36130-1463

Emergency Diesel Engines

Provisos

	Regulations
Applicability	
1. These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.01(1), *"Control of Particulate Emissions: Visible Emissions".*	Rule 335-3-4-.01(1)
2. These sources have enforceable limits in order to comply with the applicable requirements of ADEM Admin. Code r. 335-3-14-.04, "*Air Permits Authorizing Construction in Clean Air Areas (Prevention of Significant Deterioration)".*	Rule 335-3-14-.04 (PSD/BACT)
3. The engines are subject to the applicable requirements of 40 CFR Part 60, Subpart IIII, "*Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*".	Rule 335-3-10-.02(87) 40 CFR §60.4200(a)(2)(ii)
4. The facility is subject to the applicable requirements of 40 CFR Part 60, Subpart A, *"General Provisions"* as specified in Table of 40 CFR Part 60, Subpart IIII.	Rule 335-3-10-.02(1) 40 CFR §60.4218
5. The engines are subject to the applicable requirements of 40 CFR Part 63, Subpart ZZZZ, "*National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*".	Rule 335-3-11-.06(103) 40 CFR §63.6590(c)(6) 40 CFR §63.6590(c)(7)
6. ENG_1 is subject to the initial notification requirements in §63.6645(f) of 40 CFR Part 63, Subpart ZZZZ.	Rule 335-3-11-.06(103) 40 CFR §63.6590(b)(1)(i)
7. The facility is subject to the applicable requirements of 40 CFR Part 63, Subpart A, *"General Provisions"*, as listed in §63.6645(f) of 40 CFR Part 63, Subpart ZZZZ.	Rule 335-3-11-.06(1) 40 CFR §63.6645(f)
Emission Standards	
1. These sources shall not emit particulate of an opacity greater than twenty percent (20%), as determined by a six-minute average except that, during one six-minute period in any sixty-minute period, the source may emit particulate of an opacity not greater than forty percent (40%).	Rule 335-3-4-.01(1)

	Regulations
2. Each engine shall operate no more than 500 hours per calendar year.	Rule 335-3-14-.04 (PSD/BACT)
3. ENG_1 shall comply with the following emission standards:	40 CFR §60.4205(c)
(a) Nonmethane hydrocarbon (NMHC) + Nitrogen oxide (NO_X) emissions shall not exceed 6.4 g/kW-hr.	
(b) Carbon monoxide (CO) emissions shall not exceed 3.5 g/kW-hr.	
(c) Filterable particulate matter (PM) emissions shall not exceed 0.2 g/kW-hr.	
4. ENG_2 shall comply with the following emission standards:	40 CFR §60.4205(c)
(a) NMHC + NO_X emissions shall not exceed 4.0 g/kW-hr.	
(b) CO emissions shall not exceed 3.5 g/kW-hr.	
(c) PM emissions shall not exceed 0.2 g/kW-hr.	
5. The Permittee must operate and maintain each engine over the entire life of the engine.	40 CFR §60.4206
6. The Permittee must use diesel fuel that meets the requirements of 40 CFR §1090.305.	40 CFR §60.4207(b)
Compliance and Performance Test Methods and Procedures	
1. Method 9 of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with the opacity limit of Emission Standard No. 1.	Rule 335-3-1-.05 Rule 335-3-4-.01(2)
2. The Permittee shall demonstrate compliance with Emission Standard Nos. 3 & 4 by purchasing engines certified to the emission standards. Each engine must be installed and configured according to the manufacturer's emission-related specifications.	40 CFR §60.4211(c)
Emission Monitoring	
1. The Permittee must install a non-resettable hour meter on each engine prior to startup.	40 CFR §60.4209(a)
2. The Permittee shall comply with the following requirements for each engine:	40 CFR §63.4211(a)

	Regulations
(a) Operate and maintain the engines according to the manufacturer's emission-related written instructions;	
(b) Change only those emission-related settings that are permitted by the manufacturer; and	
(c) Meet the requirements of 40 CFR Parts 1039 and 1068, as they apply.	
3. The Permittee must operate the engines according to the requirements below. In order for the engines to be considered emergency stationary ICE under 40 CFR Part 60, Subpart IIII, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described below, is prohibited. If the facility does not operate the engines according to the requirements below, the engines will not be considered an emergency engine under 40 CFR Part 60, Subpart IIII and must meet all requirements for non-emergency engines.	40 CFR §60.4211(f)
(a) The 500 hours per calendar year limitation of Emission Standard No. 2 applies to operation under both emergency and non-emergency situations.	Rule 335-3-14-.04 (PSD/BACT)
(b) The Permittee may operate the engines for any combination of the purposes specified below for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by Proviso 3(c) of this section of the Permit counts as part of the 100 hours per calendar year allowed by this proviso.	
i. The engines 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 EPA for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the facility maintains records indicating that federal, state, or local standards require maintenance and testing of the engines beyond 100 hours per calendar year.	
(c) The engines 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	

	Regulations
provided in Proviso 3(b) of this section of the Permit. Except as provided below, the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity. 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: (A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator. (B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region. (C) The dispatch follows reliability, emergency operation, or similar protocols that follow specific NERC, regional, state, public utility commission, or local standards or guidelines. (D) The power is provided only to the facility itself or to support the local transmission and distribution system. (E) 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.	
Recordkeeping and Reporting Requirements	
1. All records shall be maintained in a form suitable for inspection for a period of at least five (5) years from the date of generation.	Rule 335-3-1-.04(1)
2. The Permittee shall maintain a record of the hours of operation of each engine that is recorded through the non-resettable hour meter. The Permittee must document how many hours are spent for emergency operation, including what classified the operation	40 CFR §60.4214(b)

	Regulations
as emergency and how many hours are spent for non-emergency operation.	
3. For ENG_1, the Permittee shall submit an Initial Notification, to include: (a) The information in 40 CFR §63.9(b)(2)(i) through (v); and (b) A statement that each engine has no additional requirements and explain the basis of the exclusion (e.g., that it operates exclusively as an emergency stationary RICE, has a site rating of more than 500 brake HP, and is located at a major source of HAP emissions).	40 CFR §63.6645(f)

Alabama Department of Environmental Management

AIR PERMIT

PERMITTEE: ARCELORMITTAL CALVERT, LLC

FACILITY NAME: NOES FACILITY

LOCATION: CALVERT, MOBILE COUNTY, ALABAMA

PERMIT NUMBER	DESCRIPTION OF EQUIPMENT, ARTICLE, OR DEVICE
503-0157-X008	Cooling Towers • Cooling Tower #1 (COOL_1) • Cooling Tower #2 (COOL_2) • Cooling Tower #3 (COOL_3) • Cooling Tower #4 (COOL_4)

In accordance with and subject to the provisions of the Alabama Air Pollution Control Act of 1971, Ala. Code §§22-28-1 to 22-28-23, as amended, the Alabama Environmental Management Act, Ala. Code §§22-22A-1 to 22-22A-17, as amended, and rules and regulations adopted there under, and subject further to the conditions set forth in this permit, the Permittee is hereby authorized to construct, install and use the equipment, device or other article described above.

DRAFT DATE: April 1, 2025

General Permit Provisos

1. This permit is issued on the basis of Rules and Regulations existing on the date of issuance. In the event additional Rules and Regulations are adopted, it shall be the permit holder's responsibility to comply with such rules.

2. This permit is not transferable. Upon sale or legal transfer, the new owner or operator must apply for a permit within 30 days.

3. A new permit application must be made for new sources, replacements, alterations or design changes which may result in the issuance of, or an increase in the issuance of, air contaminants, or the use of which may eliminate or reduce or control the issuance of air contaminants.

4. Each point of emission, which requires testing, will be provided with sampling ports, ladders, platforms, and other safety equipment to facilitate testing performed in accordance with procedures established by Part 60 of Title 40 of the Code of Federal Regulations, as the same may be amended or revised.

5. All air pollution control equipment shall be operated at all times while this process is operational. In the event of scheduled maintenance, unscheduled maintenance, or a breakdown of the pollution control equipment, the process shall be shutdown as expeditiously as possible (unless this act and subsequent re-start would clearly cause greater emissions than continuing operations of the process for a short period). The Department shall be notified of all such events **that exceed 1 hour** within 24 hours. The notification shall include all pertinent facts, including the duration of the process operating without the control device and the level of excess emissions which have occurred. Records of all such events, regardless of reporting requirements, shall be made and maintained for a period of five years. These records shall be available for inspection.

6. In the event there is a breakdown of air pollution control or process equipment in such a manner as to cause increased emission of air contaminants for a period greater than **1 hour**, the person responsible for such equipment shall notify the Air Division within 24 hours and provide a statement giving all pertinent facts, including the duration of the breakdown. The Air Division shall be notified when the breakdown has been corrected.

7. This process, including all air pollution control devices and capture systems for which this permit is issued shall be maintained and operated at all times in a manner so as to minimize the emissions of air contaminants. Procedures for ensuring that the above equipment is properly operated and maintained so as to minimize the emission of air contaminants shall be established.

8. This permit expires and the application is cancelled if construction has not begun within 24 months of the date of issuance of the permit.

9. On completion of construction of the device(s) for which this permit is issued, written notification of the fact is to be submitted to the Chief of the Air Division. The notification

shall indicate whether the device(s) was constructed as proposed in the application. The device(s) shall not be operated until authorization to operate is granted by the Chief of the Air Division. Failure to notify the Chief of the Air Division of completion of construction and/or operation without authorization could result in revocation of this permit.

10. Submittal of other reports regarding monitoring records, fuel analyses, operating rates, and equipment malfunctions may be required as authorized in the Department's air pollution control rules and regulations. The Department may require stack emission testing at any time.

11. Additions and revisions to the conditions of this Permit will be made, if necessary, to ensure that the Department's air pollution control rules and regulations are not violated.

12. Nothing in this permit or conditions thereto shall negate any authority granted to the Air Division pursuant to the Alabama Environmental Management Act or regulations issued thereunder.

13. This permit is issued with the condition that, should obnoxious odors arising from the plant operations be verified by Air Division inspectors, measures to abate the odorous emissions shall be taken upon a determination by the Alabama Department of Environmental Management that these measures are technically and economically feasible.

14. The Air Division must be notified in writing at least 10 working days in advance of all emission tests to be conducted and submitted as proof of compliance with the Department's air pollution control rules and regulations.

    To avoid problems concerning testing methods and procedures, the following shall be included with the notification letter:

    (a) The date the test crew is expected to arrive, the date and time anticipated of the start of the first run, how many and which sources are to be tested, and the names of the persons and/or testing company that will conduct the tests.

    (b) A complete description of each sampling train to be used, including type of media used in determining gas stream components, type of probe lining, type of filter media, and probe cleaning method and solvent to be used (if test procedure requires probe cleaning).

    (c) A description of the process(es) to be tested, including the feed rate, any operating parameter used to control or influence the operations, and the rated capacity.

    (d) A sketch or sketches showing sampling point locations and their relative positions to the nearest upstream and downstream gas flow disturbances.

    A pretest meeting may be held at the request of the source owner or the Department. The necessity for such a meeting and the required attendees will be determined on a case-by-case basis.

All test reports must be submitted to the Air Division within 30 days of the actual completion of the test, unless an extension of time is specifically approved by the Air Division.

15. Records will be maintained of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the process equipment and any malfunction of the air pollution control equipment. These records will be kept in a permanent form suitable for inspection and will be retained for at least two years following the date of each occurrence.

16. Precautions shall be taken to prevent fugitive dust emanating from plant roads, grounds, stockpiles, screens, dryers, hoppers, ductwork, etc.

    Plant or haul roads and grounds will be maintained in the following manner so that dust will not become airborne. A minimum of one, or a combination, of the following methods shall be utilized to minimize airborne dust from plant or haul roads and grounds:

    (a) by the application of water any time the surface of the road is sufficiently dry to allow the creation of dust emissions by the act of wind or vehicular traffic;

    (b) by reducing the speed of vehicular traffic to a point below that at which dust emissions are created;

    (c) by paving;

    (d) by the application of binders to the road surface at any time the road surface is found to allow the creation of dust emissions;

    Should one, or a combination, of the above methods fail to adequately reduce airborne dust from plant or haul roads and grounds, alternative methods shall be employed, either exclusively or in combination with one or all of the above control techniques, so that dust will not become airborne. Alternative methods shall be approved by the Department prior to utilization.

17. If this plant relocates to another site, this plant's Air Permit remains valid for this site unless or until it is revoked for failure to comply with ADEM Air Division Rules and Regulations. The owner or operator of this plant must provide written notification of the intent to relocate the plant to this site at least two weeks in advance. The written notification should include the planned construction beginning date and the projected startup date. Failure to provide this written notification is a violation of this permit condition and is grounds for revocation of this permit.

18. Any performance tests required shall be conducted and data reduced in accordance with the test methods and procedures contained in each specific permit condition unless the Director (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (2) approves the use of an equivalent method, or (3) approves the use of an alternative method, the results of which he has determined to be adequate for indicating whether a specific source is in compliance.

19. The permittee shall not use as a defense in an enforcement action that maintaining compliance with conditions of this permit would have required halting or reducing the permitted activity.

20. The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.

21. The permittee shall keep this permit under file or on display at all times at the site where the facility for which the permit is issued is located and shall make the permit readily available for inspection by any or all persons who may request to see it.

22. An annual compliance certification shall be submitted by March 1st each year, covering the reporting period of January 1st through December 31st of the previous year, unless more frequent periods are specified according to the specific rule governing the source or required by the Department.

    (a) The compliance certification shall include the following:

        a. The identification of each term or condition of this permit that is the basis of the certification;

        b. The compliance status;

        c. The method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with Rule 335-3-16-.05(c) (Monitoring and Recordkeeping Requirements);

        d. Whether compliance has been continuous or intermittent; and

        e. Such other facts as the Department may require in order to determine the compliance status of the source.

    (b) The compliance certification shall be submitted to:

Alabama Department of Environmental Management
Air Division
P.O. Box 301463
Montgomery, AL 36130-1463

Cooling Towers #1 - #4

Provisos

	Regulations
Applicability	
1. These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.01(1), *"Control of Particulate Emissions: Visible Emissions".*	Rule 335-3-4-.01(1)
2. These sources have enforceable standards in order to comply with the applicable requirements of ADEM Admin. Code r. 335-3-14-.04, "*Air Permits Authorizing Construction in Clean Air Areas (Prevention of Significant Deterioration)".*	Rule 335-3-14-.04 (PSD/BACT)
Emission Standards	
1. These sources shall not emit particulate of an opacity greater than twenty percent (20%), as determined by a six-minute average except that, during one six-minute period in any sixty-minute period, the source may emit particulate of an opacity not greater than forty percent (40%).	Rule 335-3-4-.01(1)
2. The cooling towers shall be equipped with drift eliminators and have a maximum drift of 0.0005% of recirculated water.	Rule 335-3-14-.04 (PSD/BACT)
3. The cooling towers shall utilize good design and operating practices.	Rule 335-3-14-.04 (PSD/BACT)
Compliance and Performance Test Methods and Procedures	
1. Method 9 of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with the opacity limit of Emission Standard No. 1.	Rule 335-3-1-.05 Rule 335-3-4-.01(2)
Emission Monitoring	
1. The Permittee shall continuously measure and, once per day, record the circulating water flow rate to determine if the flow rate is below 15,170 gallons per minute (GPM) for each cooling tower. Whenever the flow rate is outside of the range, maintenance and/or corrective action shall be initiated within one working day of detection.	Rule 335-3-1-.04(1)

	Regulations
Recordkeeping and Reporting Requirements	
1. All records shall be maintained in a form suitable for inspection for a period of at least five (5) years from the date of generation.	Rule 335-3-1-.04(1)
2. The Permittee shall maintain a record of the daily circulating water flow rate readings. This shall include any problems observed and corrective actions taken.	Rule 335-3-1-.04(1)

AIR PERMIT

PERMITTEE:	ARCELORMITTAL CALVERT, LLC
FACILITY NAME:	NOES FACILITY
LOCATION:	CALVERT, MOBILE COUNTY, ALABAMA

PERMIT NUMBER	DESCRIPTION OF EQUIPMENT, ARTICLE, OR DEVICE
503-0157-X009	Facility-Wide Fugitive Dust Plan

In accordance with and subject to the provisions of the Alabama Air Pollution Control Act of 1971, Ala. Code §§22-28-1 to 22-28-23, as amended, the Alabama Environmental Management Act, Ala. Code §§22-22A-1 to 22-22A-17, as amended, and rules and regulations adopted there under, and subject further to the conditions set forth in this permit, the Permittee is hereby authorized to construct, install and use the equipment, device or other article described above.

DRAFT DATE: April 1, 2025

ArcelorMittal Calvert LLC
Calvert, Alabama
(Permit No. 503-0157-X009)
Provisos

General Permit Provisos

1. This permit is issued on the basis of Rules and Regulations existing on the date of issuance. In the event additional Rules and Regulations are adopted, it shall be the permit holder's responsibility to comply with such rules.

2. This permit is not transferable. Upon sale or legal transfer, the new owner or operator must apply for a permit within 30 days.

3. A new permit application must be made for new sources, replacements, alterations or design changes which may result in the issuance of, or an increase in the issuance of, air contaminants, or the use of which may eliminate or reduce or control the issuance of air contaminants.

4. Each point of emission, which requires testing, will be provided with sampling ports, ladders, platforms, and other safety equipment to facilitate testing performed in accordance with procedures established by Part 60 of Title 40 of the Code of Federal Regulations, as the same may be amended or revised.

5. All air pollution control equipment shall be operated at all times while this process is operational. In the event of scheduled maintenance, unscheduled maintenance, or a breakdown of the pollution control equipment, the process shall be shutdown as expeditiously as possible (unless this act and subsequent re-start would clearly cause greater emissions than continuing operations of the process for a short period). The Department shall be notified of all such events **that exceed 1 hour** within 24 hours. The notification shall include all pertinent facts, including the duration of the process operating without the control device and the level of excess emissions which have occurred. Records of all such events, regardless of reporting requirements, shall be made and maintained for a period of five years. These records shall be available for inspection.

6. In the event there is a breakdown of air pollution control or process equipment in such a manner as to cause increased emission of air contaminants for a period greater than **1 hour**, the person responsible for such equipment shall notify the Air Division within 24 hours and provide a statement giving all pertinent facts, including the duration of the breakdown. The Air Division shall be notified when the breakdown has been corrected.

7. This process, including all air pollution control devices and capture systems for which this permit is issued shall be maintained and operated at all times in a manner so as to minimize the emissions of air contaminants. Procedures for ensuring that the above equipment is properly operated and maintained so as to minimize the emission of air contaminants shall be established.

8. This permit expires and the application is cancelled if construction has not begun within 24 months of the date of issuance of the permit.

9. On completion of construction of the device(s) for which this permit is issued, written notification of the fact is to be submitted to the Chief of the Air Division. The notification

shall indicate whether the device(s) was constructed as proposed in the application. The device(s) shall not be operated until authorization to operate is granted by the Chief of the Air Division. Failure to notify the Chief of the Air Division of completion of construction and/or operation without authorization could result in revocation of this permit.

10. Submittal of other reports regarding monitoring records, fuel analyses, operating rates, and equipment malfunctions may be required as authorized in the Department's air pollution control rules and regulations. The Department may require stack emission testing at any time.

11. Additions and revisions to the conditions of this Permit will be made, if necessary, to ensure that the Department's air pollution control rules and regulations are not violated.

12. Nothing in this permit or conditions thereto shall negate any authority granted to the Air Division pursuant to the Alabama Environmental Management Act or regulations issued thereunder.

13. This permit is issued with the condition that, should obnoxious odors arising from the plant operations be verified by Air Division inspectors, measures to abate the odorous emissions shall be taken upon a determination by the Alabama Department of Environmental Management that these measures are technically and economically feasible.

14. The Air Division must be notified in writing at least 10 working days in advance of all emission tests to be conducted and submitted as proof of compliance with the Department's air pollution control rules and regulations.

    To avoid problems concerning testing methods and procedures, the following shall be included with the notification letter:

    (a) The date the test crew is expected to arrive, the date and time anticipated of the start of the first run, how many and which sources are to be tested, and the names of the persons and/or testing company that will conduct the tests.

    (b) A complete description of each sampling train to be used, including type of media used in determining gas stream components, type of probe lining, type of filter media, and probe cleaning method and solvent to be used (if test procedure requires probe cleaning).

    (c) A description of the process(es) to be tested, including the feed rate, any operating parameter used to control or influence the operations, and the rated capacity.

    (d) A sketch or sketches showing sampling point locations and their relative positions to the nearest upstream and downstream gas flow disturbances.

    A pretest meeting may be held at the request of the source owner or the Department. The necessity for such a meeting and the required attendees will be determined on a case-by-case basis.

All test reports must be submitted to the Air Division within 30 days of the actual completion of the test, unless an extension of time is specifically approved by the Air Division.

15. Records will be maintained of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the process equipment and any malfunction of the air pollution control equipment. These records will be kept in a permanent form suitable for inspection and will be retained for at least two years following the date of each occurrence.

16. Precautions shall be taken to prevent fugitive dust emanating from plant roads, grounds, stockpiles, screens, dryers, hoppers, ductwork, etc.

    Plant or haul roads and grounds will be maintained in the following manner so that dust will not become airborne. A minimum of one, or a combination, of the following methods shall be utilized to minimize airborne dust from plant or haul roads and grounds:

    (a) by the application of water any time the surface of the road is sufficiently dry to allow the creation of dust emissions by the act of wind or vehicular traffic;

    (b) by reducing the speed of vehicular traffic to a point below that at which dust emissions are created;

    (c) by paving;

    (d) by the application of binders to the road surface at any time the road surface is found to allow the creation of dust emissions;

    Should one, or a combination, of the above methods fail to adequately reduce airborne dust from plant or haul roads and grounds, alternative methods shall be employed, either exclusively or in combination with one or all of the above control techniques, so that dust will not become airborne. Alternative methods shall be approved by the Department prior to utilization.

17. If this plant relocates to another site, this plant's Air Permit remains valid for this site unless or until it is revoked for failure to comply with ADEM Air Division Rules and Regulations. The owner or operator of this plant must provide written notification of the intent to relocate the plant to this site at least two weeks in advance. The written notification should include the planned construction beginning date and the projected startup date. Failure to provide this written notification is a violation of this permit condition and is grounds for revocation of this permit.

18. Any performance tests required shall be conducted and data reduced in accordance with the test methods and procedures contained in each specific permit condition unless the Director (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (2) approves the use of an equivalent method, or (3) approves the use of an alternative method, the results of which he has determined to be adequate for indicating whether a specific source is in compliance.

19. The permittee shall not use as a defense in an enforcement action that maintaining compliance with conditions of this permit would have required halting or reducing the permitted activity.

20. The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.

21. The permittee shall keep this permit under file or on display at all times at the site where the facility for which the permit is issued is located and shall make the permit readily available for inspection by any or all persons who may request to see it.

22. An annual compliance certification shall be submitted within 60 days of the effective date of the Permittee's Title V permit, unless more frequent periods are specified according to the specific rule governing the source or required by the Department.

    (a) The compliance certification shall include the following:

        a. The identification of each term or condition of this permit that is the basis of the certification;

        b. The compliance status;

        c. The method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with Rule 335-3-16-.05(c) (Monitoring and Recordkeeping Requirements);

        d. Whether compliance has been continuous or intermittent; and

        e. Such other facts as the Department may require in order to determine the compliance status of the source.

    (b) The compliance certification shall be submitted to:

Alabama Department of Environmental Management
Air Division
P.O. Box 301463
Montgomery, AL 36130-1463

Facility-Wide Fugitive Dust Plan

Provisos

	Regulations
Applicability	
1. Fugitive emission sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.02, "*Control of Particulate Emissions: Fugitive Dust and Fugitive Emissions*".	Rule 335-3-4-.02
Emission Standards	
1. The Permittee shall take reasonable precautions as directed in Proviso No. 1 of the *Compliance and Performance Test Methods and Procedures* section of the Permit to prevent fugitive dust at the facility from travelling beyond the facility property line and causing a nuisance.	Rule 335-3-4-.02
Compliance and Performance Test Methods and Procedures	
1. The Permittee shall develop, and submit to the Department for approval, a Facility-Wide Fugitive Dust Plan within 12 months of startup. The plan shall identify each source of fugitive dust emissions at the facility and the measures that will be taken to minimize and address fugitive dust emissions.	Rule 335-3-1-.04(1)
Emission Monitoring	
1. The Permittee shall conduct weekly, considering factors such as naturally wet conditions, visual observations for fugitive dust in the areas listed in the Facility-Wide Fugitive Dust Plan. If visible emissions travelling beyond the facility property line are observed, corrective action(s) shall be initiated within two (2) hours of the observation.	Rule 335-3-1-.04(1)
Recordkeeping and Reporting Requirements	
1. All records shall be maintained in a form suitable for inspection for a period of at least five (5) years from the date of generation.	Rule 335-3-1-.04(1)
2. The Permittee shall maintain a record of the weekly visual observations. This shall include any problems observed and corrective actions taken.	Rule 335-3-1-.04(1)