

OUTOKUMPU STAINLESS USA, LLC

MOBILE COUNTY, AL
FACILITY No.: 503-0106

PREVENTION OF SIGNIFICANT DETERIORATION
PRELIMINARY DETERMINATION
OCTOBER 17, 2023

OUTOKUMPU STAINLESS USA, LLC

MOBILE COUNTY, AL
Facility No.: 503-0106

On August 17, 2023, Outokumpu Stainless USA, LLC submitted an air permit application for an expansion to their existing stainless steel mill located at 1 Steel Way, Calvert, Mobile County, Alabama. A revision to the application was received on September 11, 2023. In correspondence with the Department, Outokumpu submitted further small addendums and placement pages on September 12, 25, 27, and 29 as well as October 13.

The expansion will consist of an additional mixed annealing and pickling line (“MAPL”) with degreasing (**LA43**), a 143 MMBtu/hr continuous annealing furnace (**LA44**), shot blasting operations with a baghouse (**LA45**), sodium sulfate pickling (**LA46**), mixed nitric and hydrofluoric acid pickling (**LA47**); an acid regeneration plant (“ARP”) for the mixed nitric and hydrofluoric acid from the MAPL with iron oxide removal and storage (**LA71**) and acid regeneration line with 10.75 MMBtu/hr burners (**LA72**); a dual-line steckel mill with two 24 MMBtu/hr holding furnaces (**LA21 & LA22**), two 305 MMBtu/hr walking beam furnaces (**LA23 & LA24**), two roughing & finishing mills with a single stack (**LA25**), and two steckel coiler furnaces with 20.8 MMBtu/hr burners (**LA26 & LA27**); new 6 MMBtu/hr burners to the meltshop hotbox (**LO2A**) and an additional 10 MMBtu/hr ladle treatment stand (**LO2B**) to be controlled by the existing AOD baghouse (**LO2**); a new 30 MMBtu/hr passive annealing furnace (**LO41B**); a new 25 MMBtu/hr slab holding furnace (**LO42B**) to be routed to the existing stack (**LO11**); and an additional cold rolling mill (**LO51**).

A process narrative may be found in each individual section of this analyses, addressing the MAPL, the ARP, the steckel mill, the new meltshop sources, and the remaining miscellaneous sources.

PREVENTION OF SIGNIFICANT DETERIORATION (PSD)

Because Outokumpu’s Calvert mill is a major source with respect to PSD, the proposed expansion would qualify as a major source modification since the emissions of PM, PM₁₀, PM_{2.5}, NO_x, CO, and CO_{2e} would be increased more than the significant emissions thresholds listed in ADEM Admin. Code r. 335-3-14-.04(1)(w). Outokumpu has stated that neither the emissions nor the permit limits from their existing meltshop and mill will increase as a result of the project. The proposed major modification would be subject to ADEM Admin. Code r. 335-3-14-.04 which was adopted pursuant to the federal requirements for prevention of significant deterioration (PSD).

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). Additionally, the effects on soils, vegetation, visibility, and ambient air quality must be addressed for each applicable pollutant. If the net air

emissions increase of any applicable pollutant is less than its significance emission rate, PSD does not apply for that pollutant.

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	56.6	YES
Particulate Matter (< 10 µm) (PM₁₀)	15	52.7	YES
Particulate Matter (< 2.5 µm) (PM_{2.5})	10	43.3	YES
Sulfur Dioxide (SO₂)	40	2.38	NO
Nitrogen Oxides (NO_x)	40	323	YES
Carbon Monoxide (CO)	100	189	YES
Volatile Organic Compounds (VOCs)	40	21.9	NO
Lead (Pb)	0.6	0.002	NO
Fluorides (excluding HF)	3	0 [†]	NO
Greenhouse Gases (CO_{2e})	75,000	476,359	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, Outokumpu was required to address BACT for greenhouse gases.

[†]HF potential emissions expected to be 1.036 TPY.

Accordingly, Outokumpu has conducted a BACT analysis of PM, NO_x, CO, and GHG emissions for each relevant proposed source. In this preliminary determination, the Department summarizes Outokumpu's analysis, and the resulting PSD limits.

Currently, Outokumpu melts raw materials including scrap, iron, ferronickel, ferrochrome, and other alloys to create molten stainless steel in the electric arc furnace ("EAF") controlled by the meltshop baghouse #1 (**LO1**), further refining this molten steel in the adjacent argon-oxygen decarburization vessel ("AOD") controlled by the meltshop baghouse #2 (**LO2**). After refining in the AOD, ladles of steel are deslagged and if needed, further refined in the two existing ladle treatment stands, also controlled by LO2, prior to casting into steel slabs. When

needed, Outokumpu can set aside steel slabs in a refractory-lined hotbox to retain their temperature until the slabs can proceed to the rolling mills. Outokumpu is proposing to add a third ladle treatment stand (**LO2B**) to this setup as well as adding burners to the existing hotbox (**LO2A**), with emissions routed to LO2.

Outokumpu currently only has cold rolling capability via their three cold rolling mills (**LO48 – LO50**). In addition to expanding the cold rolling capabilities by adding a new cold rolling mill (**LO51**), Outokumpu is proposing to add hot rolling to the mill via a new dual-line steckel mill. Slabs from the caster will pass through one of the two lines' small holding furnaces (**LO21 & LO22**) and, following that, one of the walking beam furnaces (**LO23 & LO24**) to bring the slabs to the correct temperature for hot rolling. Hot slabs from the walking beam furnaces are reduced in thickness in the roughing mill before being further reduced and coiled in the finishing steckel mill, with emissions from both mills for both lines being routed to stack **LO25**. The steckel mill coilers at each end of each line's finishing mill have 10.4 MMBtu/hr burners to retain heat, i.e., 20.8 MMBtu/hr for each line, routed to stacks (**LO26 & LO27**).

Outokumpu currently operates a slab holding furnace (**LO42A**) and is proposing to add a second, new slab holding furnace (**LO42B**) serving the same function in between the slab laydown yard and the new hot rolling steckel mills.

Outokumpu is proposing to add a mixed annealing & pickling line ("MAPL") (**LA43-LA47**), similar to their existing hot annealing & pickling line ("HAPL") (LO43-LO47) and cold annealing & pickling line ("CAPL") (LO52-LO57). Although the pickling would be conducted with mixed acids, the MAPL is so-named because it would be capable of processing both hot-rolled and cold-rolled coils. As such, the MAPL would have a degreaser (**LA43**) at the beginning of the line for cold-rolled coils comparable to the CAPL's degreaser (LO52). As with both the CAPL and HAPL, hot-rolled and degreased cold-rolled coils would be sent through the MAPL's passive annealing furnace (**LA44**) before being shot-blasted (**LA45**) to remove scale formed during annealing, subjected to sodium sulfate pickling (**LA46**), also known as neutral pickling, and subsequently mixed nitric-and-hydrofluoric acid pickling (**LA47**). Acid tanks for the process would also be controlled by the LA47 scrubber.

Finally, Outokumpu is proposing to add a second acid regeneration plant ("ARP") (**LA71-LA72**) to regenerate the additional spent nitric and hydrofluoric acid from the new pickling lines, similar to their existing ARP (LO71-LO73). 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 nitric and hydrofluoric acid. The ferric oxide would be removed and discharged into silos controlled by a baghouse (**LA71**), and off gases from the regeneration columns would be controlled in series by a SCR to remove NO_x and a scrubber (**LA72**). Unlike the existing ARP, the spent acid tanks associated with the new ARP would not have a stand-alone scrubber and would instead be routed to the LA47 scrubber.

PASSIVE ANNEALING FURNACE LO41B (X025)

Outokumpu currently operates a passive annealing furnace (LO41A) to anneal finished coils, and as a part of the overall project, they are proposing to expand their passive annealing capability with a second, smaller 30 MMBtu/hr passive annealing furnace (**LO41B**). In the addendum provided September 27, 2023, Outokumpu clarified that the design of the second passive annealing furnace would incorporate direct-fired natural gas burners, where products of combustion would come into contact with the steel.

BEST AVAILABLE CONTROL TECHNOLOGY (BACT)

Particulate Matter

Because the slabs are merely being heated, the only emissions expected from the passive annealing furnace are products of combustion from the natural gas fuel with negligible contributions from iron oxide scale formed on the slabs. 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 or WESPs, and mist eliminators to have any meaningful effect on PM emissions. Outokumpu will be limited to burning natural gas, which has inherently low PM emissions, as fuel, and will limit total particulate emission to 0.22 lb/hr (equivalent to 7.6 lb/MMscf). Additionally, a 10% opacity limit will be imposed on the source.

NO_x

Outokumpu examined the usage of selective catalytic reduction (SCR) and selective non-catalytic reduction (SNCR) as NO_x-control technologies and demonstrated that both are technically infeasible, as the exhaust from the passive annealing furnace would not be steady-state (a precondition for effective control via ammonia/urea reagent injection). Additionally, the exhaust, expected to be at ~400 °F, would far too cool for the effective 1600 – 2000 °F range for SNCR. It would be technically feasible to require auxiliary vent burners to bring the temperature above 600 °F for SCR, but the non-steady-state exhaust issue remains, and would introduce new emissions via fuel combustion.

Outokumpu did not address the usage of non-selective catalytic reduction (NSCR, i.e., “3-way catalyst” using precious metal catalyst and operating at temperatures between SCR and SNCR) for NO_x control, but Department notes that the technology is sufficiently similar to SCR and SNCR that analyses showing technical or economic infeasibility for those control systems would indicate the same for NSCR.

Outokumpu plans to meet the proposed NO_x limits using air-staged, cold-air low-NO_x burners or “ultra-low NO_x burners” (“ULNB”). These burners would have staged combustion zones; an initial combustion stage, a fuel-rich or oxygen-lean mix of fuel and combustion air, would be followed by a fuel-lean or oxygen-rich mix to have a net effect of having a more consistent flame temperature, without a particularly hot zone, reducing thermal NO_x formation. The fuel and air would be pre-mixed to reduce the amount of excess air needed compared to burners with separate air flows. These burners contrast with recuperative burners which use waste heat to preheat the combustion air; these recuperative burners have higher fuel efficiency but higher relative NO_x emissions as well.

Outokumpu also proposes to implement flue-gas recirculation or FGR, wherein a portion of the exhaust gas would supplement the combustion air mix. Relative to normal air, exhaust gas has less oxygen and more inerts, which helps to lower thermal NO_x formation.

The 0.0825 lb/MMBtu (2.48 lb/hr) NO_x limit for the passive annealing furnace is in line with similarly sized annealing furnaces found in the RBLC and equivalent to the limit the existing annealing furnace LO41A is subject to.

CO

In section 4.3.3 of the BACT analysis (for the reheat furnace, but applying to other combustion sources as well), Outokumpu eliminated thermal oxidation and afterburners from consideration as technically infeasible due to the already-low concentration of CO in flue emissions from natural gas furnaces. They also examined the use of catalytic oxidation (CatOx), wherein hot flue gas between 600 and 1,000 °F (although Outokumpu says they work best above 800 °F) passes across a bed of porous noble metal catalyst to oxidize CO molecules to CO₂, and considered the use of this control technology to be technically infeasible due to the temperature range. They also note that this oxidation would cause an increase in NO_x emissions as well. Outokumpu proposes to instead implement good combustion practices, balancing excess oxygen to ensure minimal CO (and NO_x) formation.

The 0.05 lb/MMBtu (1.50 lb/hr) CO limit for the passive annealing furnace is in line with those of similarly sized annealing furnaces found in the RBLC and equivalent to the limit the existing annealing furnace LO41A is subject to.

Greenhouse Gases (CO₂e)

Outokumpu examined the possibility of using carbon capture and storage to control greenhouse gases but determined that it would be economically infeasible to control emissions from even the largest (and therefore most benefitting from economy of scale) combustion sources at the facility.

Outokumpu will only burn clean natural gas a fuel and will limit CO₂e emissions to 15,770 tons per year (TPY) based on a 12-month rolling total.

NEW SOURCE PERFORMANCE STANDARDS (NSPS)

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 – 100 MMBtu/hr nameplate heat capacity, as defined in §60.41c. Process heaters are excluded in these definitions. The passive annealing furnace, due to its direct heating design, is not considered a steam generating boiler because it is not a *device that combusts any fuel and produces steam or heats water or heats any heat transfer medium*, although certain indirect-heat annealing furnaces could fit this definition.

Even if the passive annealing had been subject, it uses only natural gas as a fuel, so the emission standards of §60.43c would not have applied and, per §60.48c(g), only the natural gas usage recordkeeping would have been applicable.

NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS (NESHAP)

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 passive annealing furnace does not qualify as a boiler or process heater 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 passive annealing furnace is not subject.

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 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. With no control device on the passive annealing furnace stack and no criteria pollutant above 100 TPY, CAM would not apply.

MIXED ANNEALING & PICKLING LINE LA43 – LA47 (X026)

Outokumpu is proposing to add a mixed annealing & pickling line (“MAPL”) (LA43-LA47), similar to their existing hot annealing & pickling line (“HAPL”) (LO43-LO47) and cold annealing & pickling line (“CAPL”) (LO52-LO57). Although the pickling would be conducted with mixed acids, the MAPL is so-named because it would be capable of processing both hot-rolled and cold-rolled coils. As such, the line would have a degreaser to remove oils and lubricants from the coil at the beginning of the line for cold-rolled coils comparable to the CAPL’s degreaser (LO52). Emissions from the degreaser would be routed to a small wet scrubber (LA43) for particulate matter control.

As with both the CAPL and HAPL, hot-rolled and degreased cold-rolled coils would be sent through the MAPL’s continuous annealing furnace (LA44), with burners positioned along the length of the furnace totaling to 143 MMBtu/hr. The inner chamber or oven of the furnace would indirectly be heated by these natural gas burners.

Following annealing, scale/oxidation formed on the coils will be removed via shot-blasting, controlled by a baghouse (LA45). After, the coils will be subjected to sodium sulfate pickling controlled by a scrubber (LA46), also known as neutral pickling, and subsequently mixed nitric-and-hydrofluoric acid pickling controlled by a scrubber (LA47). Acid tanks for the process as well as the associated acid regeneration plant would also be controlled by the LA47 scrubber.

BEST AVAILABLE CONTROL TECHNOLOGY (BACT)

Degreasing (LA43) & Pickling (LA46 & LA47)

PM

Outokumpu addressed wet scrubbers and mist eliminators as potential control devices for reducing particulate matter emissions from the degreaser and the pickling line. Outokumpu 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. Wet scrubbers and mist eliminators have comparable efficiency for this process.

The proposed 0.0022 gr/dscf PM/PM₁₀/PM_{2.5} (filterable+condensable) limits for the degreasing, sodium sulfate pickling, and mixed acid pickling scrubbers are in line with similar sources found in the RBLC and more stringent than the 0.005 gr/dscf PM/PM₁₀/PM_{2.5} (filterable only) limits that Outokumpu’s existing HAPL and CAPL scrubbers are subject to. Additionally, a 10% opacity limit will be imposed on the sources.

NO_x

Of these sources, only the mixed acid pickling line (LA47) is expected to emit NO_x due to the nitric acid within the pickling liquor.

Outokumpu examined the usage of wet scrubbers and selective catalytic reduction (SCR) NO_x-control technologies and deemed them both to be technically feasible. Selective non-

catalytic reduction (SNCR), which is generally less efficient than SCR, was dismissed as infeasible because it requires a temperature range well above 1,500 °F. Outokumpu did not address the usage of non-selective catalytic reduction (NSCR, i.e., “3-way catalyst” using precious metal catalyst and operating at temperatures between SCR and SNCR) for NO_x control, but the Department notes that if a gas stream is within the ideal temperature range for SCR (600 – 800 °F), it would be out of range for NSCR.

Because the acid gases in the untreated exhaust from the pickling line would degrade the catalyst in the SCR, Outokumpu will install the scrubber upstream of the SCR, in large part to remove HF emissions.

Outokumpu proposes to meet 100 ppmvd and 5.74 lb/hr NO_x limits on emissions exiting the scrubber + SCR, as determined by a continuous emission monitoring system (CEMS). The 100 ppmvd limit matches that of comparable scrubbers in the RBLC, and the lb/hr limit is equivalent to the limits Outokumpu’s existing HAPL and CAPL scrubbers are subject to after controlling for flow.

Shotblasting (LA45)

PM

Outokumpu examined the use of fabric filtration (baghouse), a cyclone, and a wet scrubber to control filterable particulate matter in the exhaust stream of the shotblasting unit (LA45). Condensable particulate matter is not anticipated from this process. In their analysis, Outokumpu only considered a baghouse to be technically feasible, citing poor fine-particle removal efficiency of cyclones and the cost of treating water effluent streams for wet scrubbers. The Department agrees that cyclones have poor control efficiency for fine particles but notes that consideration of efficiency is a matter for Step 3 (ranking the remaining technically feasible control options) and Step 4 (evaluating the remaining control technologies) of a BACT analysis, wherein cyclones are often eliminated in favor of baghouses. Additionally, costs associated with operating wet scrubbers should only be considered in Step 4 of a BACT analysis, although the Department notes that baghouses are the most efficient option for control.

Outokumpu will meet a 0.0030 gr/dscf (0.95 lb/hr) PM_{fit} limit on emissions exiting the shotblasting unit, with PM₁₀ and PM_{2.5} emissions being limited to 14.3% of this value. Accordingly, the Department will limit PM₁₀/PM_{2.5} to 0.00043 gr/dscf (0.14 lb/hr). This limit is within the range of limits that similar units in the RBLC are subject to and more stringent than the existing HAPL shotblaster (LO45) limits.

Continuous Annealing (LA44)

PM

The only particulate matter emissions expected from the continuous annealing furnace are products of combustion from the natural gas fuel. 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 or WESPs, and mist eliminators to have any meaningful effect on PM emissions. Outokumpu will be limited to burning natural gas, which has inherently low PM emissions, as fuel, and will limit total particulate emission to 1.07 lb/hr (equivalent to 7.6

lb/MMscf) and filterable particulate matter emissions to 0.266 lb/hr (equivalent to 1.9 lb/MMscf). Additionally, a 10% opacity limit will be imposed on the source.

NO_x

Outokumpu examined the usage of selective catalytic reduction (SCR) and selective non-catalytic reduction (SNCR) as NO_x-control technologies and identified SNCR as technically infeasible, as the exhaust, expected to be at ~550 °F, would far too cool for the effective 1600 – 2000 °F range for SNCR. It would be technically feasible to require auxiliary vent burners to bring the temperature above 600 °F for SCR.

Outokumpu did not address the usage of non-selective catalytic reduction (NSCR, i.e., “3-way catalyst” using precious metal catalyst and operating at temperatures between SCR and SNCR) for NO_x control, but the Department notes that the technology is sufficiently similar to SCR and SNCR that analyses showing technical or economic infeasibility for those control systems would indicate the same for NSCR.

Outokumpu plans to meet the proposed NO_x limits using air-staged, cold-air low-NO_x burners or “ultra-low NO_x burners” (“ULNB”). These burners would have staged combustion zones; an initial combustion stage, a fuel-rich or oxygen-lean mix of fuel and combustion air, would be followed by a fuel-lean or oxygen-rich mix to have a net effect of having a more consistent flame temperature, without a particularly hot zone, reducing thermal NO_x formation. The fuel and air would be pre-mixed to reduce the amount of excess air needed compared to burners with separate air flows. These burners contrast with recuperative burners which use waste heat to preheat the combustion air; these recuperative burners have higher fuel efficiency but higher relative NO_x emissions as well.

Outokumpu also proposes to implement flue-gas recirculation or FGR, wherein a portion of the exhaust gas would supplement the combustion air mix. Relative to normal air, exhaust gas has less oxygen and more inerts, which helps to lower thermal NO_x formation.

The 0.06 lb/MMBtu (8.58 lb/hr) NO_x limit for the continuous annealing furnace LA44 is in line with that of similarly sized annealing furnaces found in the RBLC and equivalent to the limit the existing annealing furnaces LO43 and LO53 are subject to and have shown compliance with. In selecting the use of ULNB + FGR over SCR to achieve these limits, Outokumpu demonstrated that the comparable annealing furnaces in the RBLC that use SCR are not held to stricter standards than 0.06 lb/MMBtu; the Department also notes that this trend holds true when examining Nucor Steel Decatur’s 118.48 MMBtu/hr continuous galvanizing furnace, subject to a 0.067 lb/MMBtu NO_x limit.

CO

In section 4.3.3 of the BACT analysis (for the reheat furnace, but applying to other combustion sources as well), Outokumpu eliminated thermal oxidation and afterburners from consideration as technically infeasible due to the already-low concentration of CO in flue emissions from natural gas furnaces. They also examined the use of catalytic oxidation (CatOx), wherein hot flue gas between 600 and 1,000 °F (although Outokumpu says they work best above 800 °F) passes across a bed of porous noble metal catalyst to oxidize CO molecules to CO₂, and considered the use of this control technology to be technically infeasible due to the temperature range. They also note that this oxidation would cause an

increase in NO_x emissions as well. Outokumpu proposes to instead implement good combustion practices, balancing excess oxygen to ensure minimal CO (and NO_x) formation.

The 0.06 lb/MMBtu (8.58 lb/hr) CO limit for the continuous annealing furnace is in line with similarly sized annealing furnaces found in the RBLC and equivalent to the limit the existing annealing furnaces LO43 & LO53 are subject to.

Greenhouse Gases (CO₂e)

Outokumpu examined the possibility of using carbon capture and storage to control greenhouse gases but determined that it would be economically infeasible to control emissions from even the largest (and therefore most benefitting from economy of scale) combustion sources at the facility.

Outokumpu will only burn clean natural gas a fuel and will limit CO₂e emissions to 73,695 tons per year (TPY) based on a 12-month rolling total.

NEW SOURCE PERFORMANCE STANDARDS (NSPS)

Subpart Db - "Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units"

40 CFR Part 60, Subpart Db is applicable to steam-generating boilers above 100 MMBtu/hr nameplate heat capacity, as defined in §60.41b. Process heaters are excluded in these definitions, although the Department has determined that the physical changes made to the crystalline structure of the steel during annealing does not constitute a "chemical reaction" as required by the definition of *process heater: a device that is primarily used to heat a material to initiate or promote a chemical reaction in which the material participates as a reactant or catalyst*. The formation of iron oxide scale on the steel surface during annealing would be a chemical reaction, but this is incidental to rather than the point of annealing, and that scale is subsequently removed by shotblasting.

The continuous annealing furnace, due to its indirect heating design, could only be considered a steam generating boiler insofar as it is a *device that combusts any fuel and produces steam or heats water or heats any heat transfer medium*. The Department has determined in the past that certain indirect-heat annealing furnaces, such as those designed to heat water (i.e., a heat transfer medium) to subsequently radiate heat onto the process material via the tube-lined inner walls of the furnace, do qualify as boilers under this specific definition in §60.41b. However, in conversation with the Department, Outokumpu stated that the design of this continuous annealing furnace does not include a fluid as a *heat transfer medium* in this manner. Outokumpu, in their application, believes the atmosphere of the furnace's oven or inner chamber to be a *heat transfer medium*, but the Department believes this interpretation to be too broad and counter to the intent of the rule's definition. Thus, we consider Subpart Db to be inapplicable to the continuous annealing furnace.

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]

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.* Although it would not qualify as a boiler under this rule, as a process heater, the continuous annealing furnace would be considered a metal process furnace, a subcategory of process heaters, as defined in this subpart, which include natural gas-fired annealing furnaces, per §63.7575.

Metal process furnaces have no emission standards in Table 1 of Boiler MACT. Additionally, natural gas-fired boilers neither have specific emission standards under nor are listed within Table 1 of the Boiler MACT. However, under both definitions, the continuous annealing furnace is subject to work practice standards found in Table 3 of the subpart. Having a nameplate heat rating of greater than 10 MMBtu/hr, the continuous annealing furnace must undergo annual tune-ups per §63.7540(a)(10). Outokumpu must meet the recordkeeping requirements of §63.7555 and the reporting requirements of §63.7545 and §63.7550.

ADEM ADMIN. CODE R. 335-3-14-.06: REQUIREMENTS FOR CONTROL TECHNOLOGY [DETERMINATIONS FOR MAJOR SOURCES IN ACCORDANCE WITH CLEAN AIR ACT SECTION 112(G)]

Under this rule, newly constructed major sources of HAP that are not subject to a MACT/NESHAP rule already established by the EPA must undergo a review to determine what the max available control for that HAP is. Uncontrolled, the hydrofluoric acid (HF) emissions from the MAPL and the new ARP would be estimated to exceed the major source threshold of 10 TPY. Unlike for hydrochloric acid pickling of steel and associated acid regeneration plants (Part 63, Subpart CCC), no rule addressing hydrofluoric acid pickling of steel has been established. However, Outokumpu would control emissions from these sources via scrubbers LA47 and LA72 and has proposed 10 ppm HF limits on each of these stacks, which the Department will implement as anti-112(g) limits to avoid applicability to this rule.

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.

The continuous annealing furnace LA44 will reduce NO_x emissions via ultra-low NO_x burners and flue-gas recirculation, which are inherent to the process and excluded from the definition of control device in §64.1. Because of the NO_x CEMS that will be installed upstream of the SCR, Outokumpu will not be required to submit a CAM plan for NO_x emissions from LA47. The pre-control PTE of particulate matter emissions from either the degreaser or the sodium sulfate pickling process and their respective scrubbers LA43 & LA46 are not expected to exceed 100 TPY.

Taken at face value, the “950 lb/hr” uncontrolled PM emissions that Outokumpu states would emit from the shotblaster absent baghouse LA45 would subject the unit to CAM requirements. However, rather than a precise estimation of the unit’s pre-control potential emissions, this appears to be a figure derived from back-calculating the baghouse’s purported maximum efficiency (99.9%) from its vendor-guaranteed outlet grain loading value (0.0030 gr/dscf) and the emission rate derived from its maximum volumetric throughput of 36,960 dscfm (0.95 lb/hr). As it stands, Outokumpu will be required to submit a PM CAM plan for LA45 with the next Title V permit renewal after construction, unless they revise their estimate at that time.

ACID REGENERATION PLANT (X027)

Outokumpu is proposing to add a second acid regeneration plant (“ARP”) (LA71-LA72) to regenerate the additional spent nitric and hydrofluoric acid from the new pickling line (MAPL), similar to their existing ARP (LO71-LO73). The iron salts formed from the pickling process would be oxidized via contact with reactor gases, including combustion of 10.75 MMBtu/hr of natural gas fuel, in a series of columns to ferric oxide and reformed nitric and hydrofluoric acid. The ferric oxide would be removed and discharged into storage silos, with both the material handling systems and the silos themselves controlled by baghouse (LA71), and off gases from the regeneration columns would be controlled in series by a SCR to remove NO_x and a scrubber (LA72). Unlike the existing ARP, the spent acid tanks associated with the new ARP would not have a stand-alone scrubber and would instead be routed to the LA47 scrubber.

BEST AVAILABLE CONTROL TECHNOLOGY (BACT)

Iron Oxide Storage (LA71)

PM

Outokumpu examined the use of fabric filtration (baghouse), a cyclone, and a wet scrubber to control filterable particulate matter in the exhaust stream of the iron oxide storage (LA71). Condensable particulate matter is not anticipated from this process. In their analysis, Outokumpu only considered a baghouse to be technically feasible in this section of their analysis, possibly relying on conclusions made in other sections. As noted previously, the Department considers wet scrubbers and especially cyclones to have worse control efficiency for dry, filterable particulate matter than baghouses, making them less preferable.

Outokumpu will meet a 0.0020 gr/dscf (0.06 lb/hr) PM_{filt} limit on emissions exiting the iron oxide storage bins.

Acid Regeneration Plant (LA72)

PM

As with the pickling line, Outokumpu addressed wet scrubbers and mist eliminators as potential control devices for reducing particulate matter emissions from the process gas exhaust from the acid regeneration plant. Between wet scrubbers and mist eliminators, wet scrubbers are more efficient at PM removal.

The proposed 0.0043 gr/dscf (0.08 lb/hr) PM/PM₁₀/PM_{2.5} (filterable+condensable) limit for the new ARP scrubber is equivalent to that of the existing ARP scrubber (LO72). Additionally, a 10% opacity limit will be imposed on the source.

NO_x

Outokumpu examined the usage of wet scrubbers and selective catalytic reduction (SCR) NO_x-control technologies to control NO_x emissions from the ARP (originating from both the reformed nitric acid and the 10.75 MMBtu/hr of natural gas burned in the reactor) and deemed them both to be technically feasible. Selective non-catalytic reduction (SNCR), which is generally less efficient than SCR, was dismissed as infeasible because it requires a temperature range well above 1,500 °F. Outokumpu did not address the usage of non-selective catalytic reduction (NSCR, i.e., “3-way catalyst” using precious metal catalyst and operating at temperatures between SCR and SNCR) for NO_x control, but the Department notes that if a gas stream is within the ideal temperature range for SCR (600 – 800 °F), it would be out of range for NSCR. As with the pickling line, Outokumpu will install the scrubber upstream of the SCR.

Outokumpu proposes to meet 100 ppmvd (1.61 lb/hr) NO_x limits on emissions exiting the scrubber + SCR, as determined by a CEMS. The 100 ppmvd limit matches that of comparable scrubbers in the RBLC, and the lb/hr limit is equivalent to the limit Outokumpu’s existing ARP scrubber is subject to after controlling for flow.

CO

In section 4.3.3 of the BACT analysis (for the reheat furnace, but applying to other combustion sources as well), Outokumpu eliminated thermal oxidation and afterburners from consideration as technically infeasible due to the already-low concentration of CO in flue emissions from natural gas furnaces. They also examined the use of catalytic oxidation (CatOx), wherein hot flue gas between 600 and 1,000 °F (although Outokumpu says they work best above 800 °F) passes across a bed of porous noble metal catalyst to oxidize CO molecules to CO₂, and considered the use of this control technology to be technically infeasible due to the temperature range. They also note that this oxidation would cause an increase in NO_x emissions as well. Outokumpu proposes to instead implement good combustion practices, balancing excess oxygen to ensure minimal CO (and NO_x) formation.

Outokumpu proposed to meet 0.082 lb/MMBtu as a CO limit, equivalent to the standard emission factor for burning natural gas found in AP-42 Chapter 1.4.

NEW SOURCE PERFORMANCE STANDARDS (NSPS)

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 10.75 MMBtu/hr natural gas burners within the reactor constitute a process heater in that it is *a device that is primarily used to heat a material to initiate or promote a chemical reaction in which the material participates as a reactant or catalyst*. Thus, the NSPS is inapplicable to this process.

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]

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.* Neither definition describes the direct-fired burners within the reactor, thus the Boiler MACT is inapplicable.

ADEM ADMIN. CODE R. 335-3-14-.06: REQUIREMENTS FOR CONTROL TECHNOLOGY [DETERMINATIONS FOR MAJOR SOURCES IN ACCORDANCE WITH CLEAN AIR ACT SECTION 112(G)]

Under this rule, newly constructed major sources of HAP that are not subject to a MACT/NESHAP rule already established by the EPA must undergo a review to determine what the max available control for that HAP is. Unlike for hydrochloric acid pickling of steel and associated acid regeneration plants (Part 63, Subpart CCC), no rule addressing hydrofluoric acid pickling of steel has been established. Uncontrolled, the hydrofluoric acid (HF) emissions from the MAPL and the new ARP would be estimated to exceed the major source threshold of 10 TPY. However, Outokumpu would control emissions from these sources via scrubbers LA47 and LA72 and has proposed 10 ppm HF limits on each of these stacks, which the Department will implement as anti-112(g) limits to avoid applicability to this rule.

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.

Because of the NO_x CEMS that will be installed upstream of the SCR, Outokumpu will not be required to submit a CAM plan for NO_x emissions from LA72.

Taken at face value, the “62 lb/hr” uncontrolled PM emissions that Outokumpu states would emit from the iron oxide transport system and silo absent baghouse LA71 would subject the unit to CAM requirements. However, rather than a precise estimation of the unit’s pre-control

potential emissions, this appears to be a figure derived from back-calculating the baghouse's purported maximum efficiency (99.9%) from its vendor-guaranteed outlet grain loading value (0.0020 gr/dscf) and the emission rate derived from its maximum volumetric throughput of 3,625 dscfm (0.062 lb/hr). As it stands, Outokumpu will be required to submit a PM CAM plan for LA71 with the next Title V permit renewal after construction, unless they revise their estimate at that time.

COLD ROLLING MILL (X028)

Outokumpu currently only has cold rolling capability via their three cold rolling mills (**LO48 – LO50**). As a part of the project, Outokumpu is proposing to expand the cold rolling capabilities by adding a new cold rolling mill (**LO51**), wherein hot-rolled, annealed, and pickled coils will be uncoiled and run through the mill stand for further gauge reduction. During the process, a mineral oil emulsion will be sprayed on to the coil to function as both a lubricant and coolant, and the resultant oil mist (filterable particulate matter) will be captured and controlled by fume hoods routing the emissions to a mist eliminator.

BEST AVAILABLE CONTROL TECHNOLOGY (BACT)

Particulate Matter

Because exhaust from this mill will be ambient temperature, emissions expected from this process are only expected to be filterable particulate matter, being below the condensation point for the mineral oil involved. Outokumpu addressed cyclones, wet scrubbers, mist eliminators, and thermal oxidizer systems as potential control devices for reducing particulate matter emissions, eliminating thermal oxidizers as technically infeasible. Outokumpu 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. Of the three technically feasible options, 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.

The proposed 0.0025 gr/dscf (1.46 lb/hr) PM (filterable+condensable), 0.0024 gr/dscf (1.41 lb/hr) PM₁₀ (filterable+condensable), and 0.0013 gr/dscf (0.76 lb/hr) PM_{2.5} (filterable+condensable) limits for the cold rolling mill are as stringent as similar sources found in the RBLC, including the mist eliminators controlling the cold rolling mills at Big River Steel #1 in Osceola, at Nucor Steel Gallatin, and the existing LO48 - LO50 mills currently at Calvert. The existing LO48 – LO50 mills have a further allowance for condensable particulate matter, being subject to both 0.0025 gr/dscf PM (filterable) and 0.0075 gr/dscf PM (filterable+condensable) limits, although it should be noted that these cold rolling mills also exhaust at ambient temperatures where oil fumes would have already condensed. Additionally, a 10% opacity limit will be imposed on the source.

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.

Taken at face value, the “1,460 lb/hr” uncontrolled PM emissions that Outokumpu states would emit from the cold rolling mill’s mist eliminator LA51 would subject the unit to CAM requirements. However, rather than a precise estimation of the unit’s pre-control potential emissions, this appears to be a figure derived from back-calculating the mist eliminator’s purported maximum efficiency (99.9%) from its vendor-guaranteed outlet grain loading value

(0.0025 gr/dscf) and the emission rate derived from its maximum volumetric throughput of 117,149 dscfm (1.46 lb/hr). As it stands, Outokumpu will be required to submit a PM CAM plan for LA51 with the next Title V permit renewal after construction, unless they revise their estimate at that time.

DUAL-LINE STECKEL MILL LA21 – LA27 (X029 – X031)

Outokumpu is proposing to add hot rolling to the mill via a new dual-line steckel mill. Slabs from the caster will pass through one of the two lines' 24 MMBtu/hr small holding furnaces (LA21 & LA22) and, following that, one of the 305 MMBtu/hr walking beam furnaces (LA23 & LA24) to bring the slabs to the correct temperature for hot rolling. Hot slabs from the walking beam furnaces are reduced in thickness in the roughing mill before being further reduced and coiled in the finishing steckel mill, with emissions from both mills for both lines being routed to stack LA25. The steckel mill coilers at each end of each line's finishing mill have 10.4 MMBtu/hr burners to retain heat, i.e., 20.8 MMBtu/hr for each line, routed to stacks (LA26 & LA27).

BEST AVAILABLE CONTROL TECHNOLOGY (BACT)

Combustion sources: small holding furnaces (LA21 – LA22), walking beam furnaces (LA23 – LA24), and steckel mill coiler burners (LA26 – LA27)

PM

The only particulate matter emissions expected from these sources are products of combustion from the natural gas fuel with negligible contributions from iron oxide scale formed on the slabs (although possibly enough to contribute to catalyst fouling, for larger sources such as the walking beam furnaces). As such, particulate matter emissions from the furnaces are expected to be too low for add-on control technologies such as baghouses, wet scrubbers, ESPs or WESPs, and mist eliminators to have any meaningful effect on PM emissions. Outokumpu will be limited to burning natural gas, which has inherently low PM emissions, as fuel, and will limit total particulate emission to the lb/hr equivalent of 7.6 lb/MMscf and filterable particulate matter emissions to the lb/hr equivalent of 1.9 lb/MMscf, which are the AP-42 Chapter 1.4 factors for natural gas combustion, for each source. Additionally, 10% opacity limits will be imposed on the sources.

CO

Outokumpu eliminated thermal oxidation and afterburners from consideration as technically infeasible due to the already-low concentration of CO in flue emissions from natural gas furnaces. They also examined the use of catalytic oxidation (CatOx), wherein hot flue gas between 600 and 1,000 °F (although Outokumpu says they work best above 800 °F) passes across a bed of porous noble metal catalyst to oxidize CO molecules to CO₂, and considered the use of this control technology to be technically infeasible due to the temperature range. They also note that this oxidation would cause an increase in NO_x emissions as well. Outokumpu proposes to instead implement good combustion practices, balancing excess oxygen to ensure minimal CO (and NO_x) formation.

The 0.035 lb/MMBtu (10.7 lb/hr) CO limit for the walking beam furnaces, the 0.082 lb/MMBtu (1.98 lb/hr) CO limit for the small holding furnaces, and the 0.082 lb/MMBtu (1.71 lb/hr) CO limit for the steckel mill coiler furnaces is in line with that of similarly sized walking units in the RBLC.

Greenhouse Gases (CO₂e)

Outokumpu examined the possibility of using carbon capture and storage to control greenhouse gases but determined that it would be economically infeasible to control emissions from even the largest (and therefore most benefitting from economy of scale) combustion sources at the facility (i.e., the walking beam furnaces).

Outokumpu will only burn clean natural gas a fuel and will limit CO₂e emissions to 157,193 tons per year (TPY) per walking beam furnace, 12,368 tons per year (TPY) per small holding furnace, and 5,353 tons per year (TPY) per steckel mill line, each based on a 12-month rolling total.

Walking beam furnaces (LA23 – LA24)

NO_x

Outokumpu examined the usage of selective catalytic reduction (SCR) and selective non-catalytic reduction (SNCR) as NO_x-control technologies and demonstrated that both are technically infeasible, as the exhaust from these sources would not be steady-state (a precondition for effective control via ammonia/urea reagent injection). Additionally, the exhaust, expected to be at ~400 °F for each source, would far too cool for the effective 1600 – 2000 °F range for SNCR. It would be technically feasible to require auxiliary vent burners to bring the temperature above 600 °F for SCR (or potentially install the SCR farther upstream), but the non-steady-state exhaust issue remains, and would introduce new emissions via fuel combustion. Additionally, walking beam furnaces may have a small amount of iron oxide scale in the exhaust, which can clog a catalyst bed.

Outokumpu did not address the usage of non-selective catalytic reduction (NSCR, i.e., “3-way catalyst” using precious metal catalyst and operating at temperatures between SCR and SNCR) for NO_x control, but the Department notes that the technology is sufficiently similar to SCR and SNCR that analyses showing technical or economic infeasibility for those control systems would indicate the same for NSCR.

Outokumpu plans to meet the proposed NO_x limits using air-staged, cold-air low-NO_x burners or “ultra-low NO_x burners” (“ULNB”). These burners would have staged combustion zones; an initial combustion stage a fuel-rich or oxygen-lean mix of fuel and combustion air would be followed by a fuel-lean or oxygen-rich mix to have a net effect of having a more consistent flame temperature, without a particularly hot zone, reducing thermal NO_x formation. The fuel and air would be pre-mixed to reduce the amount of excess air needed compared to burners with separate air flows. These burners contrast with recuperative burners which use waste heat to preheat the combustion air; these recuperative burners have higher fuel efficiency but higher relative NO_x emissions as well. However, Outokumpu also notes that certain grades of steel require more heat prior to rolling, such that more thermally efficient auxiliary burners in the furnace will have to be used at times.

The 0.070 lb/MMBtu (21.4 lb/hr) NO_x limit for the walking beam furnaces is in line with that of similarly sized walking beam furnaces in the RBLC.

Small holding furnaces (LA21 – LA22) and steckel mill coiler burners (LA26 – LA27)

NO_x

Outokumpu examined the usage of selective catalytic reduction (SCR) and selective non-catalytic reduction (SNCR) as NO_x-control technologies and, rather than arguing technical infeasibility by way of low temperatures (the exhausts of these units are purported to be below 400 °F) or by way of non-steady-state exhausts (the small holding furnaces in particular will only be used as needed during periods where the casthouse and hot rolling mill are not in sync), elected to eliminate these technologies in Step 4 via economic infeasibility analyses summarized in Table 4-4 of the application.

Outokumpu did not address the usage of non-selective catalytic reduction (NSCR, i.e., “3-way catalyst” using precious metal catalyst and operating at temperatures between SCR and SNCR) for NO_x control, but the Department notes that the technology is sufficiently similar to SCR and SNCR that analyses showing technical or economic infeasibility for those control systems would indicate the same for NSCR.

Outokumpu plans to meet the proposed NO_x limits using standard low-NO_x burners (“LNB”). The 0.10 lb/MMBtu (2.40 lb/hr) NO_x limit for the small holding furnaces and the 0.10 lb/MMBtu (2.08 lb/hr) NO_x limit for the steckel mill coiler furnaces are in line with that of other small combustion units in the RBLC.

Roughing & Finishing Mills (LA25)

PM

Emissions from this process will mostly comprise of iron oxide scale constantly forming on the surface of the hot steel slab, and the exhaust stream will be laden with water vapor from the high pressure water sprays used throughout the process; condensable particulate matter is not anticipated from this process.

Outokumpu addressed the use of fabric filtration (baghouse), cyclones, wet electrostatic precipitators (WESP), and wet scrubbers to control filterable particulate matter in the exhaust stream of the mills, which will all be captured and manifolded together to one emission point (LA25). In their analysis, Outokumpu stated all of the above options to be technically feasible and selected WESPs with only references to other mills using WESPs by way of explanation. Regardless, the Department agrees with this selection due to the following: baghouses are unreliable for wet streams due to clogging, and cyclones are the least efficient of the technically feasible options.

The proposed 0.0044 gr/dscf (3.21 lb/hr) PM/PM₁₀ (filterable+condensable) and 0.0025 gr/dscf (1.82 lb/hr) PM_{2.5} (filterable+condensable) limits for the combined exhaust stream from the two roughing and finishing mills are as stringent as similar sources found in the RBLC, besides those at the Nucor Steel Gallatin mill. The extent to which that mill will be able to meet its much more stringent 0.0003 gr/dscf limit on the roughing mill without any add-on control devices calls to question both the similarity of those mills to these and the feasibility of determining compliance with that limit (without an exhaust stack to test).

NEW SOURCE PERFORMANCE STANDARDS (NSPS)

Subpart Db - "Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units"

and

Subpart Dc - "Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units"

40 CFR Part 60, Subparts Db & Dc is applicable to steam-generating boilers, differentiated by nameplate heat capacity, as defined in §60.41b & §60.41c. Process heaters are excluded in these definitions. These furnaces, due to their direct heating design, are not considered a steam generating boilers because none of them could be considered a *device that combusts any fuel and produces steam or heats water or heats any heat transfer medium*.

NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS (NESHAP)

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. None of the furnaces qualify as a boiler or process heater 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 direct-fired furnaces in question are not subject.

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 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.

With no add-on control device on the furnaces stacks (devices inherent to the process such as burner types do not qualify under the definition of *control device* in §64.1) and no criteria pollutant above 100 TPY, CAM would not apply to the furnaces.

Taken at face value, the "3,210 lb/hr" uncontrolled PM emissions that Outokumpu states would emit from the two lines' combined roughing and finishing mill stack w/ WESP (LA25) 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 the WESP's purported maximum efficiency (99.9%) from its vendor-guaranteed outlet grain loading value (0.0044 gr/dscf) and the emission rate derived from its maximum volumetric throughput of 150,091 dscfm (3.21 lb/hr). As it stands, Outokumpu will be required to submit a PM CAM plan for LA25 with the next Title V permit renewal after construction, unless they revise their estimate at that time.

NEW MELTSHOP SOURCES (X034)

Currently, Outokumpu melts raw materials including scrap, iron, ferronickel, ferrochrome, and other alloys to create molten stainless steel in the electric arc furnace (“EAF”) controlled by the meltshop baghouse #1 (**LO1**), further refining this molten steel in the adjacent argon-oxygen decarburization vessel (“AOD”) controlled by the meltshop baghouse #2 (**LO2**). After refining in the AOD, ladles of steel are deslagged and if needed, further refined in the two existing ladle treatment stands, also controlled by LO2, prior to casting into steel slabs. When needed, Outokumpu can set aside steel slabs in a refractory-lined hotbox to retain their temperature until the slabs can proceed to the rolling mills. Outokumpu is proposing to add a third ladle treatment stand (**LO2B**) to this setup as well as adding burners to the existing hotbox (**LO2A**), with emissions routed to LO2.

LO2 is currently subject to BACT limits on all criteria pollutants that will not be modified as a part of this project. As a result, these units will effectively have no potential emissions not already accounted for, and no unit-specific BACT limits will be imposed by the Department, with the exception of GHG. Permit X034 will require that emissions from these units be routed to LO2, with the intention that the permit will be rolled into the meltshop section of the Major Source Operating Permit after construction.

Greenhouse Gases (CO₂e)

Outokumpu examined the possibility of using carbon capture and storage to control greenhouse gases but determined that it would be economically infeasible to control emissions from even the largest (and therefore most benefitting from economy of scale) combustion sources at the facility (i.e., the walking beam furnaces).

Outokumpu will only burn clean natural gas a fuel and will limit CO₂e emissions to 3,092 tons per year (TPY) from LO2A and 5,154 tons per year (TPY) from LO2B, each based on a 12-month rolling total.

SLAB HOLDING FURNACE LO42B (X035)

Outokumpu currently operates a slab holding furnace (**LO42A**). Outokumpu is proposing to add a second, new, indirect-fired 25 MMBtu/hr slab holding furnace (**LO42B**) serving the same function in between the slab laydown yard and the new hot rolling steckel mills.

BEST AVAILABLE CONTROL TECHNOLOGY (BACT)

Particulate Matter

The only emissions expected from the furnace are products of combustion from the natural gas fuel. As such, particulate matter emissions from the slab holding furnace are expected to be too low for add-on control technologies such as baghouses, wet scrubbers, ESPs or WESPs, and mist eliminators to have any meaningful effect on PM emissions. Outokumpu will be limited to burning natural gas, which has inherently low PM emissions, as fuel. Additionally, filterable PM emissions will be limited to 0.047 lb/hr, and total PM emissions will be limited to 0.19 lb/hr.

NO_x

Outokumpu examined the usage of selective catalytic reduction (SCR) and selective non-catalytic reduction (SNCR) as NO_x-control technologies and, rather than arguing technical infeasibility by way of low temperature or by way of non-steady-state exhaust (the slab holding furnace will only be used as needed), elected to eliminate these technologies in Step 4 via economic infeasibility analyses summarized in Table 4-4 of the application.

Outokumpu did not address the usage of non-selective catalytic reduction (NSCR, i.e., “3-way catalyst” using precious metal catalyst and operating at temperatures between SCR and SNCR) for NO_x control, but the Department notes that the technology is sufficiently similar to SCR and SNCR that analyses showing technical or economic infeasibility for those control systems would indicate the same for NSCR.

Outokumpu plans to meet the proposed NO_x limits using standard low-NO_x burners (“LNB”). The 0.085 lb/MMBtu (2.13 lb/hr) NO_x limit is in line with that of other small combustion units in the RBLC and equivalent to the limit that the existing slab holding furnace LO42A is currently subject to.

CO

Outokumpu eliminated thermal oxidation and afterburners from consideration as technically infeasible due to the already-low concentration of CO in flue emissions from natural gas furnaces. They also examined the use of catalytic oxidation (CatOx), wherein hot flue gas between 600 and 1,000 °F (although Outokumpu says they work best above 800 °F) passes across a bed of porous noble metal catalyst to oxidize CO molecules to CO₂, and considered the use of this control technology to be technically infeasible due to the temperature range. They also note that this oxidation would cause an increase in NO_x emissions as well. Outokumpu proposes to instead implement good combustion practices, balancing excess oxygen to ensure minimal CO (and NO_x) formation.

The 0.082 lb/MMBtu (2.06 lb/hr) CO limit is in line with that of similarly sized walking units in the RBLC.

Greenhouse Gases (CO₂e)

Outokumpu examined the possibility of using carbon capture and storage to control greenhouse gases but determined that it would be economically infeasible to control emissions from even the largest (and therefore most benefitting from economy of scale) combustion sources at the facility (i.e., the walking beam furnaces).

Outokumpu will only burn clean natural gas a fuel and will limit CO₂e emissions from the furnace to 12,884 tons per year (TPY) based on a 12-month rolling total.

NEW SOURCE PERFORMANCE STANDARDS (NSPS)

Subpart Dc - "Standards of Performance for small Industrial-Commercial-Institutional Steam Generating Units"

40 CFR Part 60, Subpart Db is applicable to steam-generating boilers between 10 – 100 MMBtu/hr nameplate heat capacity, as defined in §60.41c. A boiler, under this rule, is a *device that combusts any fuel and produces steam or heats water or heats any heat transfer medium* This slab holding furnace does not fit this definition, and we consider Subpart Dc to be inapplicable to the continuous annealing furnace.

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]

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.* Although it would not qualify as a boiler under this rule, as a process heater, the slab holding furnace would be considered a metal process furnace, a subcategory of process heaters, as defined in this subpart, which include natural gas-fired annealing furnaces, per §63.7575.

Metal process furnaces have no emission standards in Table 1 of Boiler MACT. Additionally, natural gas-fired boilers neither have specific emission standards under nor are listed within Table 1 of the Boiler MACT. However, under both definitions, the slab holding furnace is subject to work practice standards found in Table 3 of the subpart. Having a nameplate heat rating of greater than 10 MMBtu/hr, the slab holding furnace must undergo annual tune-ups per §63.7540(a)(10). Outokumpu must meet the recordkeeping requirements of §63.7555 and the reporting requirements of §63.7545 and §63.7550.

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 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.

With no add-on control device on the furnace stack (devices inherent to the process such as burner types do not qualify under the definition of *control device* in §64.1) and no criteria pollutant above 100 TPY, CAM would not apply to the furnace.

FUGITIVE DUST (X033)

It is unclear how much vehicular traffic (and the resulting particulate matter arising from the mill's access roads) may increase as a result of this project. Regardless, the Department is requiring that, within twelve months of startup, Outokumpu 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:

<u>Pollutant/Averaging Time</u>	<u>Primary Standard</u>	<u>Secondary Standard</u>
Particulate Matter (< 10 µm) (PM₁₀)		
PM ₁₀ , 24-hour	150 µg/m ³	150 µg/m ³
Particulate Matter (< 2.5 µm) (PM_{2.5})		
PM _{2.5} , Annual	12 µg/m ³	15 µg/m ³
PM _{2.5} , 24-hour	35 µg/m ³	35 µg/m ³
Sulfur Dioxide (SO₂)		
SO ₂ , 1-hour	75 ppb	---
SO ₂ , 3-hour	---	0.5 ppm
Nitrogen Dioxide (NO₂)		
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 NO₂ annual NAAQS. Modeling did show predicted exceedances of the NO₂ 1-hr NAAQS, when considering nearby emission sources, but a further culpability analysis indicated that the new sources proposed by Outokumpu 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.

<u>Pollutant</u>	<u>Averaging Period</u>	<u>Class I ($\mu\text{g}/\text{m}^3$)</u>	<u>Class II ($\mu\text{g}/\text{m}^3$)</u>
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
SO ₂	Annual	2	20
SO ₂	24-hour	5	91
SO ₂	3-hour	25	512
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 Outokumpu 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 SO₂, NO_x, and PM₁₀ emissions in TPY divided by the distance in kilometers are greater than 10; by this criterion, Outokumpu was not required to submit to the FLM.

Class II Areas:

Class II areas can accommodate normal well-managed industrial growth. Outokumpu 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 NO₂ 1-hour averaging period or the SO₂ 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

Since the mill is an existing source, Outokumpu's proposed construction changes will have a minimal impact on the anticipated growth in the area. 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 NO₂ 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.

ENVIRONMENTAL JUSTICE AND COASTAL CONSISTENCY ANALYSIS


Using EPA's EJSCREEN mapping and screening tool and Justice 40, the Department analyzed the demographic makeup of the area within five miles of Outokumpu. The five-mile radius area from the center of Outokumpu intersects with populations in Mobile and Washington Counties as well as Clarke and Baldwin Counties' uninhabited portion of the Mobile-Tensaw River Delta. The EJSCREEN ACS Report breaks down the population by race, sex, age, education level, English-language proficiency, household income, housing status (owned or rented), and employment status, with separate reports for residents within a 1-mile radius, a 3-mile radius, and a 5-mile radius from the center of Outokumpu. The Department determined that no additional outreach is needed prior to issuing these construction permits.

The construction of the proposed sources would occur on existing plant property that has a base elevation of around 40 feet, therefore the Coastal Branch of ADEM was not contacted concerning the construction of this facility.

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 3):

- | | |
|---|--|
| X025 – 30.0 MMBtu/hr Passive Annealing Furnace (LO41B) | X026 – Mixed Annealing and Pickling Line · Degreasing vented to Wet Scrubber (LA43) · 143 MMBtu/hr Continuous Annealing Furnace (LA44) · Shotblasting vented to Baghouse (LA45) · Sodium Sulfate Pickling vented to Wet Scrubber (LA46) · Nitric & Hydrofluoric Acid Pickling vented to Wet Scrubber and de-NOx SCR (LA47) |
| X027 – Acid Regeneration Plant (10.75 MMBtu/hr) vented to Wet Scrubber and de-NOx SCR (LA72)
Iron Oxide Storage Bins and Baggers vented to Baghouse (LA71) | X028 – Cold Rolling Mill vented to Mist Eliminator (LO51) |
| X029 – 24.0 MMBtu/hr Small Holding Furnace #1 (LA21)
24.0 MMBtu/hr Small Holding Furnace #2 (LA22) | X030 – 305 MMBtu/hr Walking Beam Furnace #1 (LA23)
305 MMBtu/hr Walking Beam Furnace #2 (LA24) |
| X031 – Roughing Mill and Finishing Stand vented to WESP (LA25) | X032 – 20.8 MMBtu/hr Steckel Mill Furnace #1 (LA26)
20.8 MMBtu/hr Steckel Mill Furnace #2 (LA27) |
| X033 – Facility-Wide Fugitive Dust Plan | X034 – 6.0 MMBtu/hr Meltshop Hot Box (LO2A) vented to Baghouse Stack LO2
10.0 MMBtu/hr Ladle Treatment Stand Furnace (LO2B) vented to Baghouse Stack LO2 |
| X035 – 25.0 MMBtu/hr Slab Holding Furnace (LO42B) vented to Stack LO11 | |



Jackson Rogers
Industrial Minerals Section
Energy Branch
Air Division

10/17/23

Date

ATTACHMENT NO. 1
Air Quality Analysis



Alabama Department of Environmental Management
adem.alabama.gov

1400 Coliseum Blvd. 36110-2400 ■ Post Office Box 301463
Montgomery, Alabama 36130-1463
(334) 271-7700 ■ FAX (334) 271-7950

September 28, 2023

MEMORANDUM

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

FROM: Michael Leach/Megan Travis *ML MCT*
Meteorological Section
Planning Branch
Air Division

SUBJECT: Air Dispersion Modeling for Outokumpu Stainless USA, LLC Prevention of Significant Deterioration (PSD) Permit Application

ADEM has completed its review of an air quality modeling analysis performed by SOLA Environmental on behalf of Outokumpu Stainless USA, LLC. The purpose of the analysis was to assess the impacts on air quality from emissions of particulate matter less than 10 microns (PM₁₀), particulate matter less than 2.5 microns (PM_{2.5}), Carbon Monoxide (CO), and Nitrogen Dioxide (NO₂) from proposed modifications at the steel mill located in Calvert, Alabama. An air quality analysis was performed for these pollutants 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 22112, was used in default mode for modeling all pollutants. NO₂ modeling was performed using the Tier 3 Plume Volume Molar Ratio Method (PVMRM) option in AERMOD.

METEOROLOGICAL DATA:

The most recent 5 years (2017-2021) of surface and upper air meteorological data from the closest National Weather Service (NWS) office was used. Surface data from Mobile, Alabama, and upper air data from Slidell, Louisiana were used in the analysis.



GOOD ENGINEERING PRACTICE ANALYSIS:

A Good Engineering Practice (GEP) Analysis was performed to assess possible building downwash effects. It was determined that the stacks modeled will be within 5L (the influence area) of one or more of the controlling buildings. Building downwash was considered for those sources in the modeling.

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 for this application. The Ozone precursors include the pollutants VOC and NO_x, and the precursor emissions of interest for secondary PM_{2.5} are NO_x and SO₂. The results of the MERPs analyses are presented in Table 1 and Table 2. The details of the analysis can be found in the application.

Table 1
PM_{2.5} MERPs Analysis

Averaging Period	Precursor	SIL (µg/m ³)	PM _{2.5} MERP (tpy)	Project Emissions (tpy)	% of Air Quality Threshold	Secondary PM _{2.5} Impact (µg/m ³)
24-hr	NO _x	1.2	7,875	328	4.16%	0.050
Annual	NO _x	0.3	50,999		0.64%	0.00193
24-hr	SO ₂	1.2	2,224	2.38	0.11%	0.00128
Annual	SO ₂	0.3	14,816		0.02%	4.58E-05
					24-hr Total	0.051
					Annual Total	0.00198

These secondary PM_{2.5} concentrations were added to the project's direct modeled PM_{2.5} concentrations (using AERMOD) to estimate total project concentrations for both the SIL and NAAQS/PSD increment analyses, as applicable. The project's secondary PM_{2.5} concentrations are calculated in Table 1 above. These concentrations were added to the modeled AERMOD concentrations to demonstrate compliance with the applicable PM_{2.5} NAAQS and PSD Class II increments.

Table 2
Ozone MERPs Analysis

Averaging Period	Precursor	SIL (ppb)	Ozone MERP (tpy)	Project Emissions (tpy)	% of Air Quality Threshold	Secondary Ozone Impact (ppb)
8-hour	NOX	1.0	207	328	158%	1.58
8-hour	VOC	1.0	9,362	21.9	0.23%	0.0023
					Total	1.58

The current 8-hour ozone NAAQS design value for Chickasaw is 56 ppb. The project's estimated ozone impact (from Table 2) of 1.58 ppb is added to the 56 ppb design value resulting in a total concentration of 57.58 ppb. This concentration is below the ozone NAAQS of 70 ppb. Thus, no additional analyses are warranted to show compliance with the ozone NAAQS.

SCREENING MODELING:

The sources modeled at the facility associated with the modification are provided in Appendix A of this memo. The tables include stack parameters as well as emission rates for the modified sources.

The base receptor grid consisted of a cartesian grid and discrete receptors placed along the ambient air boundary and was extended to the extent of the SIA (Significant Impact Area) for the respective pollutants. The receptor grids were generated using the following:

- 25 meter (m) spacing along the ambient air boundary,
- 100 m spacing from the ambient air boundary to 5 km,
- 250 m spacing from 5 km to 10 km,
- 500 m spacing from 10 km to 15 km,
- 1000 m spacing from 15km to 50km.

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 developed from the USGS digital elevation model (DEM) using data from the 1/3 arc-second resolution map.

Table 3 lists the results of screening modeling performed for NO₂, CO, PM_{2.5}, and PM₁₀,

TABLE 3
Screening Modeling Results for NO₂, CO, PM_{2.5}, and PM₁₀

Pollutant	Averaging Period	Max. Conc. (µg/m³)	Significance Level (µg/m³)
NO ₂	1-Hour	45.7	7.5
NO ₂	Annual	4.13	1
CO	1-Hour	34.0	2000
CO	8-Hour	23.0	500
PM _{2.5}	24-Hour	3.68	1.2
PM _{2.5}	Annual	0.490	0.3
PM ₁₀	24-Hour	4.05	5.0
PM ₁₀	Annual	0.575	1.0

The modeling results indicated that the maximum predicted concentrations exceeded the significance levels for all averaging periods for NO₂ and PM_{2.5}. Therefore, refined modeling was required for these pollutants.

Also, during this initial screening modeling analysis, preconstruction monitoring requirements were addressed, and it was determined that preconstruction monitoring was not required for this application. Representative monitoring data provided by ADEM was included in the application.

REFINED MODELING:

NAAQS ANALYSIS:

Since impacts for 1-hour and annual NO₂, and 24-hour and annual PM_{2.5} were above the significance levels, refined modeling was required. These analyses included all emission sources at Outokumpu as well as an inventory of other nearby sources.

TABLE 4
NAAQS Modeling Results

Pollutant	Averaging Period	Predicted Conc. (ug/m3)	NAAQS (ug/m3)	% of NAAQS
NO ₂	1-Hour	731*	188.7	387.39
NO ₂	Annual	17.36*	100	17.36
PM _{2.5}	24-Hour	32.19^	35	91.97
PM _{2.5}	Annual	11.682^	12	97.35

*Includes background concentrations.

^Includes background and MERPs concentrations.

As shown in Table 4, there are no predicted violations of the 24-hour and annual PM_{2.5} or annual NO₂. However, there were predicted violations of the 1-hour NO₂. A culpability analysis was performed for the 1-hour NO₂ using MAXDCONT values generated by AERMOD. The results of this analysis showed that the proposed modifications at Outokumpu did not cause or significantly contribute to any of the predicted violations. ADEM is currently working to resolve the potential violations.

CLASS II INCREMENT ANALYSIS:

When modeling for the Class II Increment, all proposed and existing emission sources at Outokumpu and other nearby facilities were included. Results of the 24-hour and annual PM_{2.5} as well as the annual NO₂ Class II Increment modeling are found in Table 5.

TABLE 5
PSD Increment Modeling Results

Pollutant	Averaging Period	Predicted Conc. (ug/m3)	PSD Increment (ug/m3)	% of Increment
NO ₂	Annual	9.90	25	39.6
PM _{2.5}	24-Hour	3.70*	9	41.11
PM _{2.5}	Annual	0.506*	4	12.65

*Includes MERPs concentrations.

As shown in Table 5, there are no predicted violations of the PM_{2.5}, or NO₂ Class II Increments for any averaging period.

CLASS I AREA ANALYSIS:

The proposed facility is located approximately 150 km from the nearest Class I area, the Breton Wildlife Refuge. ADEM did not require a Class I analysis. The FLM did not request an AQRV analysis for this project.

CONCLUSION:

In conclusion, emissions of PM₁₀, PM_{2.5}, NO_x, and CO from the proposed Outokumpu Stainless USA, LLC project in Mobile County, Alabama, are not expected to cause or contribute to any violation of the NAAQS or PSD Class II Increments.

Appendix A

Proposed Stack Characteristics

Source	Unit ID	UTM East (m)	UTM North (m)	PM2.5 Emissions (g/s)	PM10 Emissions (g/s)	NOx Emissions (g/s)	CO Emissions (g/s)	Stack Height (m)	Stack Temperature (K)	Stack Velocity (m/s)	Stack Diameter (m)
New Melshop Hot Box	LO2A	406674.1	3447406	5.63E-03	5.63E-03	7.41E-02	6.23E-02	61.0	307	15.35	4.88
	LO2B	406674.1	3447406	9.39E-03	9.39E-03	0.124	0.104	61.0	307	15.35	4.88
Small Holding Furnace Phase 1	LA21	406209.9	3447193	2.25E-02	2.25E-02	0.302	0.249	30.0	473	3.64	1.10
Small Holding Furnace Phase 2	LA22	406233.3	3447216	2.25E-02	2.25E-02	0.302	0.249	30.0	473	3.64	1.10
Walking Beam Furnace Phase 1	LA23	406143.3	3447208	0.286	0.286	2.69	1.35	80.0	464	5.95	3.70
Walking Beam Furnace Phase 2	LA24	406160.6	3447224	0.286	0.286	2.69	1.35	80.0	464	5.95	3.70
Roughing/Finishing	LA25	406090.0	3446977	0.229	0.404	--	--	30.0	339	18.30	2.22
Steckel Mill Furnace Phase 1	LA26	406054.4	3446985	1.95E-02	1.95E-02	0.262	0.216	80.0	450	0.32	6.5
Steckel Mill Furnace Phase 2	LA27	406067.4	3446997	1.95E-02	1.95E-02	0.262	0.216	80.0	450	0.32	6.5
Passive Annealing Furnace	LO41B	406027.4	3446778	2.82E-02	2.82E-02	0.416	0.227	50	473	16.80	1.1
Slab Holding Furnace	LO42B	406398.0	3447456	2.35E-02	2.35E-02	0.315	0.259	40	303	11.80	1.4
MAPL Degreasing	LA43	405788.6	3447618	1.40E-02	1.40E-02	--	--	25	333	4.75	0.8
MAPL Annealing Furnace	LA44	405716.6	3447551	0.134	0.134	1.08	1.08	25	523	18.80	3.5
MAPL Shot Blaster	LA45	405639.3	3447476	1.71E-02	1.71E-02	--	--	25	318	13.40	0.9
MAPL H2SO4 Pickling	LA46	405623.8	3447463	9.98E-03	9.98E-03	--	--	25	303	10.61	0.8
APL HNO3/HF Pickling	LA47	405542.5	3447385	1.90E-02	1.90E-02	0.723	--	25	523	17.37	1
Cold Rolling Mill	LO51	406139.8	3447406	9.59E-02	0.177	--	--	45.0	293	19.50	1.90
ARP Oxide Transportation	LA71	405843.2	3447193	7.83E-03	7.83E-03	--	--	60	328	6.11	0.9
ARP DeNox	LA72	405828.7	3447179	1.04E-02	1.04E-02	0.202	0.112	60	589	5.60	0.94

ATTACHMENT NO. 2
Proposed Permit Provisos

AIR PERMIT

PERMITTEE: OUTOKUMPU STAINLESS USA, LLC
FACILITY NAME: OUTOKUMPU STAINLESS USA, LLC
LOCATION: CALVERT, MOBILE COUNTY, ALABAMA

<u>PERMIT NUMBER</u>	<u>DESCRIPTION OF EQUIPMENT, ARTICLE, OR DEVICE</u>
503-0106-X025	30.0 MMBtu/hr Passive Annealing Furnace (LO41B)

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.

ISSUANCE DATE: DRAFT

Outokumpu Stainless USA, LLC
CALVERT, ALABAMA
(PERMIT NO. 503-0106-X025)
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

PERMIT NO. 503-0106-X025

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.

PERMIT NO. 503-0106-X025

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.

PERMIT NO. 503-0106-X025

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

30.0 MMBtu/hr Passive Annealing Furnace (LO41B)

Provisos

	Regulations
Applicability	
1. This source is subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.01(1), <i>“Control of Particulate Emissions: Visible Emissions”</i> .	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), <i>“Control of Particulate Emissions: Process Industries – General”</i> .	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, <i>“Air Permits Authorizing Construction in Clean Air Areas (Prevention of Significant Deterioration)”</i> .	Rule 335-3-14-.04 (PSD/BACT)
Emission Standards	
1. This source 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)
	Rule 335-3-4-.01(1)
2. Filterable particulate matter (PM) emissions from this source 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 emissions from this source shall not exceed 0.056 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
4. Filterable and condensable PM ₁₀ /PM _{2.5} emissions from this source shall not exceed 0.22 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
5. Nitrogen oxide (NO _x) emissions from this source shall not exceed 0.0825 lb/MMBtu and 2.48 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
6. Carbon monoxide (CO) emissions from this source shall not exceed 0.05 lb/MMBtu and 1.50 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
7. CO _{2e} emissions from this source shall not exceed 15,770 tons per year (TPY) based on a 12-month rolling total.	Rule 335-3-14-.04 (PSD/BACT)
8. This source shall only combust natural gas.	Rule 335-3-14-.04 (PSD/BACT)

	Regulations
9. This source shall utilize good design, operating, and combustion 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 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 Emission Standard Nos. 2 & 3.	Rule 335-3-1-.05
3. Method 201A and Method 202 of 40 CFR Part 51, Appendix M, shall be used to determine compliance with Emission Standard No. 4.	Rule 335-3-1-.05
4. Method 7E of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with Emission Standard No. 5.	Rule 335-3-1-.05
5. Method 10 of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with Emission Standard No. 6.	Rule 335-3-1-.05
Emission Monitoring	
1. The Permittee shall conduct opacity monitoring for LO41B in accordance with the following: <ul style="list-style-type: none"> (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. 	Rule 335-3-1-.04(1)
2. The Permittee shall conduct an initial performance test according to the requirements in General Permit Proviso Nos. 14 & 18 and the <i>Compliance and Performance Test Methods and Procedures</i> section of the Permit to demonstrate compliance with Emission Standard Nos. 3, 4, 5, & 6 within twelve (12) months of start-up. <ul style="list-style-type: none"> (a) Performance tests shall be conducted under such conditions as the Department specifies to the Permittee based on 	Rule 335-3-1-.04(1)

Regulations

representative performance of LO41B 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.

3. The Permittee shall conduct maintenance on this source 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 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 CO₂e emissions from this source. Rule 335-3-1-.04(1)

4. The Permittee shall maintain a record of the maintenance conducted on this source. Rule 335-3-1-.04(1)

AIR PERMIT

PERMITTEE: OUTOKUMPU STAINLESS USA, LLC
FACILITY NAME: OUTOKUMPU STAINLESS USA, LLC
LOCATION: CALVERT, MOBILE COUNTY, ALABAMA

<u>PERMIT NUMBER</u>	<u>DESCRIPTION OF EQUIPMENT, ARTICLE, OR DEVICE</u>
503-0106-X026	Mixed Annealing and Pickling Line (MAPL) <ul style="list-style-type: none">• Degreasing vented to Wet Scrubber (LA43)• 143 MMBtu/hr Continuous Annealing Furnace (LA44)• Shotblasting vented to Baghouse (LA45)• Sodium Sulfate Pickling vented to Wet Scrubber (LA46)• Nitric & Hydrofluoric Acid Pickling Line & Acid Tanks vented to Wet Scrubber and de-NOx SCR (LA47)

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.

ISSUANCE DATE: DRAFT

Outokumpu Stainless USA, LLC
CALVERT, ALABAMA
(PERMIT NO. 503-0106-X026)
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

PERMIT NO. 503-0106-X026

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.

PERMIT NO. 503-0106-X026

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.

PERMIT NO. 503-0106-X026

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

Mixed Annealing and Pickling Line (LA43-LA47)

Provisos

Applicability	Regulations
1. These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.01(1), <i>“Control of Particulate Emissions: Visible Emissions”</i> .	Rule 335-3-4-.01(1)
2. The Continuous Annealing Furnace (LA44) is subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.03(1), <i>“Control of Particulate Emissions: Fuel Burning Equipment”</i> .	Rule 335-3-4-.03(1)
3. These sources, except the Continuous Annealing Furnace (LA44), are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.04(1), <i>“Control of Particulate Emissions: Process Industries – General”</i> .	Rule 335-3-4-.04(1)
4. The Continuous Annealing Furnace (LA44) is subject to the applicable requirements of ADEM Admin. Code r. 335-3-5-.01, <i>“Control of Sulfur Compound Emissions: Fuel Combustion”</i> .	Rule 335-3-5-.01
5. These sources have enforceable limits in order to comply with the applicable requirements of ADEM Admin. Code r. 335-3-14-.04, <i>“Air Permits Authorizing Construction in Clean Air Areas (Prevention of Significant Deterioration)”</i> .	Rule 335-3-14-.04 (PSD/BACT)
6. The Continuous Annealing Furnace (LA44) is subject to the applicable requirements of 40 CFR Part 63, Subpart DDDDD, <i>“National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters”</i> .	Rule 335-3-11-.06(107) 40 CFR §63.7490(a)
7. The Continuous Annealing Furnace (LA44) is subject to the applicable requirements of 40 CFR Part 63, Subpart A, <i>“General Provisions”</i> , as specified in Table 10 to 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 LA44 shall not exceed the allowable set by ADEM Admin. Code r. 335-3-4-.03(1).	Rule 335-3-4-.01(1) Rule 335-3-4-.03(1)

	Regulations
3. Filterable PM emissions from these sources, except LA44, shall not exceed the allowable set by ADEM Admin. Code r. 335-3-4-.04(1).	Rule 335-3-4-.04(1)
4. Filterable and condensable PM/PM ₁₀ /PM _{2.5} emissions from LA43 shall not exceed 0.0022 gr/dscf and 0.11 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
5. Filterable PM emissions from LA44 shall not exceed 0.266 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
6. Filterable and condensable PM ₁₀ /PM _{2.5} emissions from LA44 shall not exceed 1.07 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
7. Filterable PM emissions from LA45 shall not exceed 0.0030 gr/dscf and 0.95 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
8. Filterable PM ₁₀ /PM _{2.5} emissions from LA45 shall not exceed 0.14 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
9. Filterable and condensable PM/PM ₁₀ /PM _{2.5} emissions from LA46 shall not exceed 0.0022 gr/dscf and 0.08 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
10. Filterable and condensable PM/PM ₁₀ /PM _{2.5} emissions from LA47 shall not exceed 0.0022 gr/dscf and 0.15 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
11. Nitrogen oxide (NO _x) emissions from LA44 shall not exceed 0.06 lb/MMBtu and 8.58 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
12. NO _x emissions from LA47 shall not exceed 100 ppmvd and 5.74 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
13. Carbon monoxide (CO) emissions from LA44 shall not exceed 0.06 lb/MMBtu and 8.58 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
14. Hydrofluoric acid (HF) emissions from LA47 shall not exceed 10 ppmvd and 0.25 lb/hr.	Rule 335-3-14-.06 (Anti-112(g))
15. CO _{2e} emissions from LA44 shall not exceed 64,419 tons per year (TPY) based on a 12-month rolling total.	Rule 335-3-14-.04 (PSD/BACT)
16. These sources shall only combust natural gas.	Rule 335-3-14-.04 (PSD/BACT)
17. These sources shall utilize good design, operating, and combustion practices.	Rule 335-3-14-.04 (PSD/BACT)
18. The Continuous Annealing Furnace (LA44) must comply with 40 CFR Part 63, Subpart DDDDD upon startup.	40 CFR §63.7495(a)

	Regulations
19. The Continuous Annealing Furnace (LA44) is subject to the work practice standards in §63.7500 and Table 3 to 40 CFR Part 63, Subpart DDDDD.	40 CFR §63.7500(a)(1)
20. At all times, the Permittee must operate and maintain the Continuous Annealing Furnace (LA44), 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 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 Emission Standard Nos. 2, 3, 5, & 7.	Rule 335-3-1-.05
3. Method 201A and Method 202 of 40 CFR Part 51, Appendix M, shall be used to determine compliance with Emission Standard Nos. 4, 6, 9, & 10.	Rule 335-3-1-.05
4. Method 7E of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with Emission Standard No. 11.	Rule 335-3-1-.05
5. A NO _x Continuous Emission Monitoring System (CEMS) shall be used to determine compliance with Emission Standard No. 12. The NO _x CEMS shall be operated and maintained according to the procedures in Performance Specification 2 of 40 CFR Part 60, Appendix B and Procedure 1 of 40 CFR Part 60, Appendix F.	Rule 335-3-1-.05
6. Method 10 of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with Emission Standard No. 13.	Rule 335-3-1-.05
7. Method 26A of 40 CFR Part 60, Appendix A-8 shall be used to determine compliance with Emission Standard No. 14.	Rule 335-3-1-.05
Emission Monitoring	
1. LA47 shall be equipped with a CEMS to continuously measure NO _x concentration and flow rate. The data will be used to calculate an emission rate in lb/hr, based on a rolling 1-hour average, which will be updated at least every 60 seconds.	Rule 335-3-1-.04(1)
2. The Permittee shall conduct opacity monitoring for these sources in accordance with the following:	Rule 335-3-1-.04(1)

Regulations

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|--|----------------------------|
| <p>(a) An instantaneous visible emissions check shall be conducted at least once daily during daylight hours while the sources are in operation.</p> <p>(b) If any visible emissions are observed during the initial visible emissions check, corrective action shall be initiated within 2 hours.</p> <p>(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.</p> | |
| <p>3. The Permittee shall conduct an initial performance test according to the requirements in General Permit Proviso Nos. 14 & 18 and the <i>Compliance and Performance Test Methods and Procedures</i> section of the Permit to demonstrate compliance with Emission Standard Nos. 5, 6, 11, 12, 13, & 14 within twelve (12) months of start-up.</p> <p>(a) Performance tests shall be conducted under such conditions as the Department specifies to the Permittee based on representative performance of LA44 & LA47 for the period being tested.</p> <p>(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.</p> <p>(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 & 13. Each subsequent performance test shall meet the conditions specified in Provisos 2(a) and (b).</p> | <p>Rule 335-3-1-.04(1)</p> |
| <p>4. The Permittee shall continuously (at least once every 15 minutes) monitor and record the scrubber (LA43, LA46, & LA47) water recirculation flow rate. The water recirculation flow rate shall, on a 3-hour block average, be maintained at levels equal to or greater than those recommended by the manufacturer. Whenever the water recirculation flow rate is outside of the range, maintenance and/or corrective action shall be initiated.</p> | <p>Rule 335-3-1-.04(1)</p> |
| <p>5. The Permittee shall continuously measure and, once per day, record the pressure differential between the inlet and the exhaust of LA45 to determine if the pressure differential falls within the</p> | <p>Rule 335-3-1-.04(1)</p> |

	Regulations
<p>range specified by the manufacturer. Whenever the pressure differential is outside of the range, maintenance and/or corrective action shall be initiated.</p>	
<p>6. The Permittee shall conduct maintenance on these sources according to the manufacturer's specifications.</p>	Rule 335-3-1-.04(1)
<p>7. The Permittee shall conduct an annual tune-up of LA44 in accordance with the following requirements:</p>	40 CFR §63.7540(a)(10)
<p>(a) Inspect the burner, and clean or replace any components of the burner as necessary (the burner inspection may be performed any time prior to the tune-up or the burner inspection may be delayed until the next scheduled unit shutdown);</p>	
<p>(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;</p>	
<p>(c) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly;</p>	
<p>(d) Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available; and</p>	
<p>(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.</p>	
<p>8. If LA44 is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.</p>	40 CFR §63.7540(a)(13)
<p>Recordkeeping and Reporting Requirements</p>	
<p>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.</p>	Rule 335-3-1-.04(1)
<p>2. The Permittee shall maintain a record of each visible emissions check and Method 9 observation. This should include problems observed and corrective actions taken. If a visible emissions</p>	Rule 335-3-1-.04(1)

	Regulations
<p>observation utilizing Method 9 is required, the results shall be documented using the ADEM visible emissions observation form.</p>	
<p>3. The Permittee shall maintain a record of the 12-month rolling total CO₂e emissions from LA44.</p>	Rule 335-3-1-.04(1)
<p>4. The Permittee shall maintain a record of the water recirculation flow rate readings. This shall include any problems observed and corrective actions taken.</p>	Rule 335-3-1-.04(1)
<p>5. The Permittee shall maintain a record of the pressure differential readings. This shall include any problems observed and corrective actions taken.</p>	Rule 335-3-1-.04(1)
<p>6. The Permittee shall maintain a record of the maintenance conducted on these sources.</p>	Rule 335-3-1-.04(1)
<p>7. The Permittee shall maintain onsite and submit, if requested by the Department, a report containing the following information for LA44:</p>	40 CFR §63.7540(a)(10)(vi)
<p>(a) 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 source; and</p> <p>(b) A description of any corrective actions taken as a part of the tune-up.</p>	
<p>8. The Permittee shall comply with the applicable notification requirements in 40 CFR §63.7545(b) and 40 CFR §63.9, including:</p>	40 CFR §63.7545
<p>(a) The Permittee shall provide notification of the following:</p> <p>i. Date when construction was commenced, submitted no later than 30 days after the date construction commenced;</p> <p>ii. Anticipated date of startup; and</p> <p>iii. Actual date of startup, submitted no later than 15 days after the date of startup.</p>	
<p>9. 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:</p>	40 CFR §63.7550

Regulations

<ul style="list-style-type: none"> (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 unit 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. (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. 	
<p>10. 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.</p>	<p>40 CFR §63.7555(a)(1)</p>
<p>11. The Permittee shall submit an Excess Emission Monitoring Report (ADEM Form 373) for LA47 on a quarterly basis. The report shall include the following information:</p> <ul style="list-style-type: none"> (a) NO_x emission rates over 5.74 lb/hr hr or concentration over 100 ppmvd, based on a rolling 1-hour average. Note: Data recorded during periods of monitor system breakdowns, maintenance, adjustments, and calibration checks shall not be included in the above data averages. (b) The date and time each excess emissions event commenced and ended. (c) The nature and cause of the excess emissions and the corrective action(s) taken or preventative measure(s) adopted. (d) The date and time of each period during which the monitor was inoperative (except zero and span checks) and the nature of the repairs or adjustments. (e) The equations used to convert NO_x emissions data as monitored to the required reporting standard (lb/hr). (f) If, during a reporting period, no excess emission events occurred and the monitoring systems were operable at all 	<p>Rule 335-3-1-.04(1)</p>

Regulations

times, a statement to that effect shall be included in the report.

- (g) The report shall be submitted according to the following schedule:

<u>Reporting Period</u>	<u>Submittal Date</u>
<i>January 1st through March 31st</i>	<i>April 30th</i>
<i>April 1st through June 30th</i>	<i>July 30th</i>
<i>July 1st through September 30th</i>	<i>October 30th</i>
<i>October 1st through December 31st</i>	<i>January 30th</i>

DRAFT

AIR PERMIT

PERMITTEE: OUTOKUMPU STAINLESS USA, LLC
FACILITY NAME: OUTOKUMPU STAINLESS USA, LLC
LOCATION: CALVERT, MOBILE COUNTY, ALABAMA

<u>PERMIT NUMBER</u>	<u>DESCRIPTION OF EQUIPMENT, ARTICLE, OR DEVICE</u>
503-0106-X027	Acid Regeneration Plant (10.75 MMBtu/hr) vented to Wet Scrubber and de-NOx SCR (LA72) Iron Oxide Storage Bins and Baggers vented to Baghouse (LA71)

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.

ISSUANCE DATE: DRAFT

Outokumpu Stainless USA, LLC
CALVERT, ALABAMA
(PERMIT NO. 503-0106-X027)
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

PERMIT NO. 503-0106-X027

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.

PERMIT NO. 503-0106-X027

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.

PERMIT NO. 503-0106-X027

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 w/ Wet Scrubber + de-NO_x SCR (LA72)
Iron Oxide Storage Bins and Baggers w/ Baghouse (LA71)**

Provisos

	Regulations
Applicability	
1. These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.01(1), <i>“Control of Particulate Emissions: Visible Emissions”</i> .	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), <i>“Control of Particulate Emissions: Process Industries – General”</i> .	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, <i>“Air Permits Authorizing Construction in Clean Air Areas (Prevention of Significant Deterioration)”</i> .	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)
	Rule 335-3-4-.01(1)
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 LA71 shall not exceed 0.0020 gr/dscf and 0.06 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
4. Filterable and condensable PM/PM ₁₀ /PM _{2.5} emissions from LA72 shall not exceed 0.0043 gr/dscf and 0.08 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
5. Nitrogen oxide (NO _x) emissions from LA72 shall not exceed 100 ppmvd and 1.61 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
6. Carbon monoxide (CO) emissions from LA72 shall not exceed 0.082 lb/MMBtu and 0.89 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
7. Hydrofluoric acid (HF) emissions from LA72 shall not exceed 10 ppmvd and 0.07 lb/hr.	Rule 335-3-14-.06 (Anti-112(g))
8. CO _{2e} emissions from LA72 shall not exceed 5,540 tons per year (TPY) based on a 12-month rolling total.	Rule 335-3-14-.04 (PSD/BACT)

	Regulations
9. These sources 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)
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 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 Emission Standard No. 2.	Rule 335-3-1-.05
3. Method 201A and Method 202 of 40 CFR Part 51, Appendix M, shall be used to determine compliance with Emission Standard Nos. 3 & 4.	Rule 335-3-1-.05
4. A NO _x Continuous Emission Monitoring System (CEMS) shall be used to determine compliance with Emission Standard No. 5. The NO _x CEMS shall be operated and maintained according to the procedures in Performance Specification 2 of 40 CFR Part 60, Appendix B and Procedure 1 of 40 CFR Part 60, Appendix F.	Rule 335-3-1-.05
5. Method 10 of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with Emission Standard No. 6.	Rule 335-3-1-.05
6. Method 26A of 40 CFR Part 60, Appendix A-8 shall be used to determine compliance with Emission Standard No. 7.	Rule 335-3-1-.05
Emission Monitoring	
1. LA72 shall be equipped with a CEMS to continuously measure NO _x concentration and flow rate. The data will be used to calculate an emission rate in lb/hr, based on a rolling 1-hour average, which will be updated at least every 60 seconds.	Rule 335-3-1-.04(1)
2. 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.	

Regulations

<p>(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.</p>	
<p>3. The Permittee shall conduct an initial performance test according to the requirements in General Permit Proviso Nos. 14 & 18 and the <i>Compliance and Performance Test Methods and Procedures</i> section of the Permit to demonstrate compliance with Emission Standard Nos. 5 & 7 within twelve (12) months of start-up.</p>	<p>Rule 335-3-1-.04(1)</p>
<p>(a) Performance tests shall be conducted under such conditions as the Department specifies to the Permittee based on representative performance of LA72 for the period being tested.</p>	
<p>(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.</p>	
<p>4. The Permittee shall continuously measure and, once per day, record the pressure differential between the inlet and the exhaust of LA71 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.</p>	<p>Rule 335-3-1-.04(1)</p>
<p>5. The Permittee shall continuously (at least once every 15 minutes) monitor and record the scrubber water recirculation flow rate. The water recirculation flow rate shall, on a 3-hour block average, be maintained at levels equal to or greater than those recommended by the manufacturer. Whenever the water recirculation flow rate is outside of the range, maintenance and/or corrective action shall be initiated.</p>	<p>Rule 335-3-1-.04(1)</p>
<p>6. The Permittee shall conduct maintenance on these sources according to the manufacturer's specifications.</p>	<p>Rule 335-3-1-.04(1)</p>
<p>Recordkeeping and Reporting Requirements</p>	
<p>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.</p>	<p>Rule 335-3-1-.04(1)</p>
<p>2. The Permittee shall maintain a record of each visible emissions check and Method 9 observation. This should include problems observed and corrective actions taken. If a visible emissions</p>	<p>Rule 335-3-1-.04(1)</p>

Regulations

<p>observation utilizing Method 9 is required, the results shall be documented using the ADEM visible emissions observation form.</p>	
<p>3. The Permittee shall maintain a record of the 12-month rolling total CO₂e emissions from LA72.</p>	<p>Rule 335-3-1-.04(1)</p>
<p>4. The Permittee shall maintain a record of the water recirculation flow rate readings. This shall include any problems observed and corrective actions taken.</p>	<p>Rule 335-3-1-.04(1)</p>
<p>5. The Permittee shall maintain a record of the pressure differential readings. This shall include any problems observed and corrective actions taken.</p>	<p>Rule 335-3-1-.04(1)</p>
<p>6. The Permittee shall maintain a record of the maintenance conducted on these sources.</p>	<p>Rule 335-3-1-.04(1)</p>
<p>7. The Permittee shall submit an Excess Emission Monitoring Report (ADEM Form 373) for LA72 on a quarterly basis. The report shall include the following information:</p> <p>(a) NO_x emission rates over 1.61 lb/hr or concentration over 100 ppmvd, based on a rolling 1-hour average.</p> <p>Note: Data recorded during periods of monitor system breakdowns, maintenance, adjustments, and calibration checks shall not be included in the above data averages.</p> <p>(b) The date and time each excess emissions event commenced and ended.</p> <p>(c) The nature and cause of the excess emissions and the corrective action(s) taken or preventative measure(s) adopted.</p> <p>(d) The date and time of each period during which the monitor was inoperative (except zero and span checks) and the nature of the repairs or adjustments.</p> <p>(e) The equations used to convert NO_x emissions data as monitored to the required reporting standard (lb/hr).</p> <p>(f) If, during a reporting period, no excess emission events occurred and the monitoring systems were operable at all times, a statement to that effect shall be included in the report.</p> <p>(g) The report shall be submitted according to the following schedule:</p>	<p>Rule 335-3-1-.04(1)</p>

Regulations

<u>Reporting Period</u>	<u>Submittal Date</u>	
<i>January 1st through March 31st</i>	<i>April 30th</i>	
<i>April 1st through June 30th</i>	<i>July 30th</i>	
<i>July 1st through September 30th</i>	<i>October 30th</i>	
<i>October 1st through December 31st</i>	<i>January 30th</i>	

DRAFT

AIR PERMIT

PERMITTEE: OUTOKUMPU STAINLESS USA, LLC
FACILITY NAME: OUTOKUMPU STAINLESS USA, LLC
LOCATION: CALVERT, MOBILE COUNTY, ALABAMA

<u>PERMIT NUMBER</u>	<u>DESCRIPTION OF EQUIPMENT, ARTICLE, OR DEVICE</u>
503-0106-X028	Cold Rolling Mill vented to Mist Eliminator (LO51)

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.

ISSUANCE DATE: DRAFT

Outokumpu Stainless USA, LLC
CALVERT, ALABAMA
(PERMIT NO. 503-0106-X028)
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

PERMIT NO. 503-0106-X028

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.

PERMIT NO. 503-0106-X028

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.

PERMIT NO. 503-0106-X028

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 Mill vented to Mist Eliminator (LO51)

Provisos

	Regulations
Applicability	
1. This source is subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.01(1), <i>“Control of Particulate Emissions: Visible Emissions”</i> .	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), <i>“Control of Particulate Emissions: Process Industries – General”</i> .	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, <i>“Air Permits Authorizing Construction in Clean Air Areas (Prevention of Significant Deterioration)”</i> .	Rule 335-3-14-.04 (PSD/BACT)
Emission Standards	
1. This source 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. Filterable particulate matter (PM) emissions from this source 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 emissions from this source shall not exceed 0.0025 gr/dscf and 1.46 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
4. Filterable and condensable PM ₁₀ emissions from this source shall not exceed 0.0024 gr/dscf and 1.41 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
5. Filterable and condensable PM _{2.5} emissions from this source shall not exceed 0.0013 gr/dscf and 0.76 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 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 Emission Standard Nos. 2 & 3.	Rule 335-3-1-.05

	Regulations
<p>3. Method 201A and Method 202 of 40 CFR Part 51, Appendix M shall be used to determine compliance with Emission Standard Nos. 4 & 5.</p>	<p>Rule 335-3-1-.05</p>
<p>Emission Monitoring</p>	
<p>1. The Permittee shall conduct opacity monitoring for the LO51 stack in accordance with the following:</p> <ul style="list-style-type: none"> (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. 	<p>Rule 335-3-1-.04(1)</p>
<p>2. The Permittee shall conduct an initial performance test according to the requirements in General Permit Proviso Nos. 14 & 18 and the <i>Compliance and Performance Test Methods and Procedures</i> section of the Permit to demonstrate compliance with Emission Standard Nos. 3, 4, & 5 within twelve (12) months of start-up.</p> <ul style="list-style-type: none"> (a) Performance tests shall be conducted under such conditions as the Department specifies to the Permittee based on representative performance of LO51 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. 	<p>Rule 335-3-1-.04(1)</p>
<p>3. The Permittee shall continuously measure and, once per day, record the pressure differential between the inlet and the exhaust of LO51 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.</p>	<p>Rule 335-3-1-.04(1)</p>

	Regulations
<p>Recordkeeping and Reporting Requirements</p>	
<p>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.</p>	<p>Rule 335-3-1-.04(1)</p>
<p>2. The Permittee shall maintain a record of each visible emissions check and Method 9 observation. This should include 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.</p>	<p>Rule 335-3-1-.04(1)</p>
<p>3. The Permittee shall maintain a record of the daily pressure differential readings. This shall include any problems observed and corrective actions taken.</p>	<p>Rule 335-3-1-.04(1)</p>

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AIR PERMIT

PERMITTEE: OUTOKUMPU STAINLESS USA, LLC
FACILITY NAME: OUTOKUMPU STAINLESS USA, LLC
LOCATION: CALVERT, MOBILE COUNTY, ALABAMA

PERMIT NUMBER	DESCRIPTION OF EQUIPMENT, ARTICLE, OR DEVICE
503-0106-X029	24.0 MMBtu/hr Small Holding Furnace #1 (LA21) 24.0 MMBtu/hr Small Holding Furnace #2 (LA22)

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.

ISSUANCE DATE: DRAFT

**Outokumpu Stainless USA, LLC
CALVERT, ALABAMA
(PERMIT NO. 503-0106-X029)
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

PERMIT NO. 503-0106-X029

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.

PERMIT NO. 503-0106-X029

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.

PERMIT NO. 503-0106-X029

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

Small Holding Furnaces #1 & #2 (LA21 & LA22)

Provisos

Applicability	Regulations
1. These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.01(1), <i>“Control of Particulate Emissions: Visible Emissions”</i> .	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), <i>“Control of Particulate Emissions: Fuel Burning Equipment”</i> .	Rule 335-3-4-.03(1)
3. These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-5-.01, <i>“Control of Sulfur Compound Emissions: Fuel Combustion”</i> .	Rule 335-3-5-.01
4. These sources have enforceable limits in order to comply with the applicable requirements of ADEM Admin. Code r. 335-3-14-.04, <i>“Air Permits Authorizing Construction in Clean Air Areas (Prevention of Significant Deterioration)”</i> .	Rule 335-3-14-.04 (PSD/BACT)
5. These sources are subject to the applicable requirements of 40 CFR Part 63, Subpart DDDDD, <i>“National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters”</i>.	Rule 335-3-11-.06(107) 40 CFR §63.7490(a)
6. These sources are subject to the applicable requirements of 40 CFR Part 63, Subpart A, <i>“General Provisions”</i>, as specified in Table 10 to 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-.01(1) Rule 335-3-4-.03(1)
3. Filterable PM emissions from each of these sources shall not exceed 0.045 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
4. Filterable and condensable PM ₁₀ /PM _{2.5} emissions from each of these sources shall not exceed 0.18 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)

	Regulations
5. Sulfur dioxide (SO ₂) emissions from each of these sources shall not exceed 1.8 lb/MMBtu.	Rule 335-3-5-.01(1)(a)
6. Nitrogen oxide (NO _x) emissions from each of these sources shall not exceed 0.10 lb/MMBtu and 2.40 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
7. Carbon monoxide (CO) emissions from each of these sources shall not exceed 0.082 lb/MMBtu and 1.98 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
8. CO ₂ e emissions from each of these sources shall not exceed 12,368 tons per year (TPY) based on a 12-month rolling total.	Rule 335-3-14-.04 (PSD/BACT)
9. These sources 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 must comply with 40 CFR Part 63, Subpart DDDDD upon startup.	40 CFR §63.7495(a)
12. These sources are subject to the work practice standards in §63.7500 and Table 3 to 40 CFR Part 63, Subpart DDDDD.	40 CFR §63.7500(a)(1)
13. At all times, the Permittee must operate and maintain these sources, 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 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 Emission Standard Nos. 2 & 3.	Rule 335-3-1-.05
3. Method 201A and Method 202 of 40 CFR Part 51, Appendix M, shall be used to determine compliance with Emission Standard No. 4.	Rule 335-3-1-.05
4. Method 6 or 6C of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with 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 Emission Standard No. 6.	Rule 335-3-1-.05

	Regulations
<p>6. Method 10 of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with Emission Standard No. 7.</p>	<p>Rule 335-3-1-.05</p>
<p>Emission Monitoring</p>	
<p>1. The Permittee shall conduct opacity monitoring for these sources in accordance with the following:</p> <ul style="list-style-type: none"> (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. 	<p>Rule 335-3-1-.04(1)</p>
<p><u>2. The Permittee shall conduct maintenance on these sources according to the manufacturer's specifications.</u></p>	<p><u>Rule 335-3-1-.04(1)</u></p>
<p>2. The Permittee shall conduct an annual tune-up of each source in accordance with the following requirements:</p> <ul style="list-style-type: none"> (a) Inspect the burner, and clean or replace any components of the burner as necessary (the burner inspection may be performed any time prior to the tune-up or the burner inspection may be delayed 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; (d) Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available; and (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 	<p>40 CFR §63.7540(a)(10)</p>

	Regulations
<p>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.</p>	
<p>3. If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.</p>	<p>40 CFR §63.7540(a)(13)</p>
<p>Recordkeeping and Reporting Requirements</p>	
<p>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.</p>	<p>Rule 335-3-1-.04(1)</p>
<p>2. The Permittee shall maintain a record of each visible emissions check and Method 9 observation. This should include 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.</p>	<p>Rule 335-3-1-.04(1)</p>
<p>3. The Permittee shall maintain a record of the 12-month rolling total CO₂e emissions from these sources.</p>	<p>Rule 335-3-1-.04(1)</p>
<p><u>4. The Permittee shall maintain a record of the maintenance conducted on these sources.</u></p>	<p><u>Rule 335-3-1-.04(1)</u></p>
<p>4. The Permittee shall maintain onsite and submit, if requested by the Department, a report containing the following information:</p> <p>(a) 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 source; and</p> <p>(b) A description of any corrective actions taken as a part of the tune up.</p>	<p>40 CFR §63.7540(a)(10)(vi)</p>
<p>5. The Permittee shall comply with the applicable notification requirements in 40 CFR §63.7545(b) and 40 CFR §63.9, including:</p> <p>(a) The Permittee shall provide notification of the following:</p> <p>i. Date when construction was commenced, submitted no later than 30 days after the date construction commenced;</p> <p>ii. Anticipated date of startup; and</p>	<p>40 CFR §63.7545</p>

	Regulations
<p>iii. Actual date of startup, submitted no later than 15 days after the date of startup.</p> <p>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:</p> <ul style="list-style-type: none"> (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 unit 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. (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. <p>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.</p>	<p>40 CFR §63.7550</p> <p>40 CFR §63.7555(a)(1)</p>

AIR PERMIT

PERMITTEE: OUTOKUMPU STAINLESS USA, LLC
FACILITY NAME: OUTOKUMPU STAINLESS USA, LLC
LOCATION: CALVERT, MOBILE COUNTY, ALABAMA

<u>PERMIT NUMBER</u>	<u>DESCRIPTION OF EQUIPMENT, ARTICLE, OR DEVICE</u>
503-0106-X030	305 MMBtu/hr Walking Beam Furnace #1 (LA23) 305 MMBtu/hr Walking Beam Furnace #2 (LA24)

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.

ISSUANCE DATE: DRAFT

Outokumpu Stainless USA, LLC
CALVERT, ALABAMA
(PERMIT NO. 503-0106-X030)
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

PERMIT NO. 503-0106-X030

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.

PERMIT NO. 503-0106-X030

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.

PERMIT NO. 503-0106-X030

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

Walking Beam Furnaces #1 & #2 (LA23 & LA24)

Provisos

	Regulations
Applicability	
1. These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.01(1), <i>“Control of Particulate Emissions: Visible Emissions”</i> .	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), <i>“Control of Particulate Emissions: Process Industries – General”</i> .	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, <i>“Air Permits Authorizing Construction in Clean Air Areas (Prevention of Significant Deterioration)”</i> .	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)
	Rule 335-3-4-.01(1)
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 emissions from each of these sources shall not exceed 0.57 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
4. Filterable and condensable PM ₁₀ /PM _{2.5} emissions from each of these sources shall not exceed 2.27 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
5. Nitrogen oxide (NO _x) emissions from each of these sources shall not exceed 0.070 lb/MMBtu and 21.4 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
6. Carbon monoxide (CO) emissions from each of these sources shall not exceed 0.035 lb/MMBtu and 10.7 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
7. CO _{2e} emissions from each of these sources shall not exceed 157,193 tons per year (TPY) based on a 12-month rolling total.	Rule 335-3-14-.04 (PSD/BACT)
8. These sources shall only combust natural gas.	Rule 335-3-14-.04 (PSD/BACT)

	Regulations
9. These sources shall utilize good design, operating, and combustion 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 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 Emission Standard Nos. 2 & 3.	Rule 335-3-1-.05
3. Method 201A and Method 202 of 40 CFR Part 51, Appendix M, shall be used to determine compliance with Emission Standard No. 4.	Rule 335-3-1-.05
4. Method 7E of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with Emission Standard No. 5.	Rule 335-3-1-.05
5. Method 10 of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with Emission Standard No. 6.	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.	
(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 an initial performance test according to the requirements in General Permit Proviso Nos. 14 & 18 and the <i>Compliance and Performance Test Methods and Procedures</i> section of the Permit to demonstrate compliance with Emission Standard Nos. 3, 4, 5, & 6 within twelve (12) months of start-up.	Rule 335-3-1-.04(1)
(a) For the initial performance test, the Permittee may test <u>either</u> Walking Beam Furnace #1 (LA23) <u>or</u> Walking Beam Furnace	

Regulations

#2 (LA24) to show compliance for both sources, provided the following conditions 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; and
- iv. All 3 test runs are conducted on the same source.

(b) Subsequent performance tests shall be conducted once every thirty (30) months following the initial performance test to demonstrate compliance with Emission Standard Nos. 5 & 6.

- i. For each subsequent performance test, the Permittee may test either Walking Beam Furnace #1 (LA23) or Walking Beam Furnace #2 (LA24) to show compliance for both sources, provided the conditions in Proviso Nos. 2(a)(i) through (iv) are met.

(c) Each source must be tested at least once every 10 years (120 months) following the most recent performance test on that source.

3. 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 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 maintenance conducted on these sources.

Rule 335-3-1-.04(1)

AIR PERMIT

PERMITTEE: OUTOKUMPU STAINLESS USA, LLC
FACILITY NAME: OUTOKUMPU STAINLESS USA, LLC
LOCATION: CALVERT, MOBILE COUNTY, ALABAMA

PERMIT NUMBER	DESCRIPTION OF EQUIPMENT, ARTICLE, OR DEVICE
503-0106-X031	#1 & #2 Roughing Mill and Finishing Stands vented to WESP (LA25)

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.

ISSUANCE DATE: DRAFT

Outokumpu Stainless USA, LLC
CALVERT, ALABAMA
(PERMIT NO. 503-0106-X031)
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

PERMIT NO. 503-0106-X031

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.

PERMIT NO. 503-0106-X031

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.

PERMIT NO. 503-0106-X031

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

Roughing Mill and Finishing Stand vented to WESP (LA25)

Provisos

	Regulations
Applicability	
1. This source is subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.01(1), <i>“Control of Particulate Emissions: Visible Emissions”</i> .	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), <i>“Control of Particulate Emissions: Process Industries – General”</i> .	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, <i>“Air Permits Authorizing Construction in Clean Air Areas (Prevention of Significant Deterioration)”</i> .	Rule 335-3-14-.04 (PSD/BACT)
Emission Standards	
1. This source 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)
	Rule 335-3-4-.01(1)
2. Filterable particulate matter (PM) emissions from this source 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 emissions from this source shall not exceed 0.0044 gr/dscf and 3.21 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
4. Filterable and condensable PM ₁₀ emissions from this source shall not exceed 0.0044 gr/dscf and 3.21 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
5. Filterable and condensable PM _{2.5} emissions from this source shall not exceed 0.0025 gr/dscf and 1.82 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 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 Emission Standard Nos. 2 & 3.	Rule 335-3-1-.05

Regulations

3. Method 201A and Method 202 of 40 CFR Part 51, Appendix M shall be used to determine compliance with Emission Standard Nos. 4 & 5.

Rule 335-3-1-.05

Emission Monitoring

1. The Permittee shall conduct opacity monitoring for the LA25 stack 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 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. 3, 4, & 5 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 LA25 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.

3. The Permittee shall continuously (at least once every 15 minutes) monitor and record the WESP secondary voltages. The WESP secondary voltages shall, on a 3-hour block average, be maintained at levels equal to or greater than those recorded during the most recent performance test that indicated compliance with the applicable emission limits. Whenever the secondary voltage is outside of the range, maintenance and/or corrective action shall be initiated.

Rule 335-3-1-.04(1)

Regulations

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| 4. The Permittee shall conduct maintenance on these sources according to the manufacturer's specifications. | Rule 335-3-1-.04(1) |
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Recordkeeping and Reporting Requirements

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| 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 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 WESP secondary voltage readings. This shall include any problems observed and corrective actions taken. | Rule 335-3-1-.04(1) |
| 4. Permittee shall maintain a record of the maintenance conducted on these sources. | Rule 335-3-1-.04(1) |

DRAFT

AIR PERMIT

PERMITTEE: OUTOKUMPU STAINLESS USA, LLC
FACILITY NAME: OUTOKUMPU STAINLESS USA, LLC
LOCATION: CALVERT, MOBILE COUNTY, ALABAMA

PERMIT NUMBER	DESCRIPTION OF EQUIPMENT, ARTICLE, OR DEVICE
503-0106-X032	20.8 MMBtu/hr Steckel Mill Furnaces #1 (LA26) 20.8 MMBtu/hr Steckel Mill Furnaces #2 (LA27)

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.

ISSUANCE DATE: DRAFT

**Outokumpu Stainless USA, LLC
CALVERT, ALABAMA
(PERMIT NO. 503-0106-X032)
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

PERMIT NO. 503-0106-X032

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.

PERMIT NO. 503-0106-X032

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.

PERMIT NO. 503-0106-X032

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

Steckel Mill Furnaces #1 & #2 (LA26 & LA27)

Provisos

	Regulations
Applicability	
1. These sources are subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.01(1), <i>“Control of Particulate Emissions: Visible Emissions”</i> .	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), <i>“Control of Particulate Emissions: Process Industries – General”</i> .	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, <i>“Air Permits Authorizing Construction in Clean Air Areas (Prevention of Significant Deterioration)”</i> .	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)
	Rule 335-3-4-.01(1)
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 emissions from each of these sources shall not exceed 0.039 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
4. Filterable and condensable PM ₁₀ /PM _{2.5} emissions from each of these sources shall not exceed 0.15 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
5. Nitrogen oxide (NO _x) emissions from each of these sources shall not exceed 0.10 lb/MMBtu and 2.08 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
6. Carbon monoxide (CO) emissions from each of these sources shall not exceed 0.082 lb/MMBtu and 1.71 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
7. CO _{2e} emissions from each of these sources shall not exceed 5,353 tons per year (TPY) based on a 12-month rolling total.	Rule 335-3-14-.04 (PSD/BACT)
8. These sources shall only combust natural gas.	Rule 335-3-14-.04 (PSD/BACT)

	Regulations
<p>9. These sources shall utilize good design, operating, and combustion practices.</p>	<p>Rule 335-3-14-.04 (PSD/BACT)</p>
<p>Compliance and Performance Test Methods and Procedures</p>	
<p>1. Method 9 of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with Emission Standard No. 1.</p>	<p>Rule 335-3-1-.05 Rule 335-3-4-.01(2)</p>
<p>2. Method 5 of 40 CFR Part 60, Appendix A-3 shall be used to determine compliance with Emission Standard Nos. 2 & 3.</p>	<p>Rule 335-3-1-.05</p>
<p>3. Method 201A and Method 202 of 40 CFR Part 51, Appendix M, shall be used to determine compliance with Emission Standard No. 4.</p>	<p>Rule 335-3-1-.05</p>
<p>4. Method 7E of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with Emission Standard No. 5.</p>	<p>Rule 335-3-1-.05</p>
<p>5. Method 10 of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with Emission Standard No. 6.</p>	<p>Rule 335-3-1-.05</p>
<p>Emission Monitoring</p>	
<p>1. The Permittee shall conduct opacity monitoring for these sources in accordance with the following:</p> <ul style="list-style-type: none"> (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. 	<p>Rule 335-3-1-.04(1)</p>
<p>2. The Permittee shall conduct an initial performance test according to the requirements in General Permit Proviso Nos. 14 & 18 and the <i>Compliance and Performance Test Methods and Procedures</i> section of the Permit to demonstrate compliance with Emission Standard Nos. 3, 4, 5, & 6 within twelve (12) months of start-up.</p> <ul style="list-style-type: none"> (a) The Permittee may test <u>either</u> Steckel Mill Furnace #1 (LA26) <u>or</u> Steckel Mill Furnace #2 (LA27) to show compliance for both sources, provided the following conditions are met: 	<p>Rule 335-3-1-.04(1)</p>

Regulations

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| <ul style="list-style-type: none"> 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; and iv. All 3 test runs are conducted on the same source. | |
| <ul style="list-style-type: none"> 3. The Permittee shall conduct maintenance on these sources according to the manufacturer's specifications. | Rule 335-3-1-.04(1) |

Recordkeeping and Reporting Requirements

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| <ul style="list-style-type: none"> 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) |
| <ul style="list-style-type: none"> 2. The Permittee shall maintain a record of each visible emissions check and Method 9 observation. This should include 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) |
| <ul style="list-style-type: none"> 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) |
| <ul style="list-style-type: none"> 4. The Permittee shall maintain a record of the maintenance conducted on these sources. | Rule 335-3-1-.04(1) |

AIR PERMIT

PERMITTEE: OUTOKUMPU STAINLESS USA, LLC
FACILITY NAME: OUTOKUMPU STAINLESS USA, LLC
LOCATION: CALVERT, MOBILE COUNTY, ALABAMA

<u>PERMIT NUMBER</u>	<u>DESCRIPTION OF EQUIPMENT, ARTICLE, OR DEVICE</u>
503-0106-X033	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.

ISSUANCE DATE: DRAFT

Outokumpu Stainless USA, LLC
CALVERT, ALABAMA
(PERMIT NO. 503-0106-X033)
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

PERMIT NO. 503-0106-X033

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.

PERMIT NO. 503-0106-X033

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.

PERMIT NO. 503-0106-X033

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, “ <i>Control of Particulate Emissions: Fugitive Dust and Fugitive Emissions</i> ”.	Rule 335-3-4-.02
Emission Standards	
1. The Permittee shall take reasonable precautions as directed in Proviso No. 1 of the <i>Compliance and Performance Test Methods and Procedures</i> 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)

AIR PERMIT

PERMITTEE: OUTOKUMPU STAINLESS USA, LLC
FACILITY NAME: OUTOKUMPU STAINLESS USA, LLC
LOCATION: CALVERT, MOBILE COUNTY, ALABAMA

<u>PERMIT NUMBER</u>	<u>DESCRIPTION OF EQUIPMENT, ARTICLE, OR DEVICE</u>
503-0106-X034	6.0 MMBtu/hr Meltshop Hot Box (LO2A) vented to Baghouse Stack LO2 10.0 MMBtu/hr Ladle Treatment Stand Furnace (LO2B) vented to Baghouse Stack LO2

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.

ISSUANCE DATE: DRAFT

Outokumpu Stainless USA, LLC
CALVERT, ALABAMA
(PERMIT NO. 503-0106-X034)
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

PERMIT NO. 503-0106-X034

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.

PERMIT NO. 503-0106-X034

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.

PERMIT NO. 503-0106-X034

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

**Meltshop Hot Box (LO2A) & Ladle Treatment Stand Furnace (LO2B)
Vented to Baghouse Stack LO2**

Provisos

Applicability	Regulations
<p>1. These sources have enforceable limits in order to comply with the applicable requirements of ADEM Admin. Code r. 335-3-14-.04, “<i>Air Permits Authorizing Construction in Clean Air Areas (Prevention of Significant Deterioration)</i>”.</p>	<p>Rule 335-3-14-.04 (PSD/BACT)</p>
Emission Standards	
<p>1. These sources shall comply with the emission standards applicable to the LO2 stack in Major Source Operating Permit No. 503-0106.</p>	<p>Rule 335-3-14-.04 (PSD/BACT)</p>
<p>2. CO_{2e} emissions from LO2A shall not exceed 3,092 tons per year (TPY) based on a 12-month rolling total.</p>	<p>Rule 335-3-14-.04 (PSD/BACT)</p>
<p>3. CO_{2e} emissions from LO2B shall not exceed 5,154 tons per year (TPY) based on a 12-month rolling total.</p>	<p>Rule 335-3-14-.04 (PSD/BACT)</p>
<p>4. These sources shall only combust natural gas.</p>	<p>Rule 335-3-14-.04 (PSD/BACT)</p>
<p>5. These sources shall utilize good design, operating, and combustion practices.</p>	<p>Rule 335-3-14-.04 (PSD/BACT)</p>
Compliance and Performance Test Methods and Procedures	
<p>1. These sources shall comply with the compliance and performance test methods and procedures applicable to the LO2 stack in Major Source Operating Permit No. 503-0106.</p>	<p>Rule 335-3-1-.05</p>
Emission Monitoring	
<p>1. These sources shall comply with the emission monitoring applicable to the LO2 stack in Major Source Operating Permit No. 503-0106.</p>	<p>Rule 335-3-1-.04(1)</p>
Recordkeeping and Reporting Requirements	
<p>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.</p>	<p>Rule 335-3-1-.04(1)</p>

Regulations

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| 2. These sources shall comply with the recordkeeping and reporting requirements applicable to the LO2 stack in Major Source Operating Permit No. 503-0106. | Rule 335-3-1-.04(1) |
| 3. The Permittee shall maintain a record of the 12-month rolling total CO ₂ e emissions from these sources. | Rule 335-3-1-.04(1) |

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AIR PERMIT

PERMITTEE: OUTOKUMPU STAINLESS USA, LLC
FACILITY NAME: OUTOKUMPU STAINLESS USA, LLC
LOCATION: CALVERT, MOBILE COUNTY, ALABAMA

PERMIT NUMBER	DESCRIPTION OF EQUIPMENT, ARTICLE, OR DEVICE
503-0106-X035	25.0 MMBtu/hr Slab Holding Furnace (LO42B) vented to Stack LO11

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.

ISSUANCE DATE: DRAFT

Outokumpu Stainless USA, LLC
CALVERT, ALABAMA
(PERMIT NO. 503-0106-X035)
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

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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.

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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.

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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

25.0 MMBtu/hr Slab Holding Furnace (LO42B)

Provisos

Applicability	Regulations
1. This source is subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.01(1), <i>“Control of Particulate Emissions: Visible Emissions”</i> .	Rule 335-3-4-.01(1)
2. This source is subject to the applicable requirements of ADEM Admin. Code r. 335-3-4-.03(1), <i>“Control of Particulate Emissions: Fuel Burning Equipment”</i> .	Rule 335-3-4-.03(1)
3. This source is subject to the applicable requirements of ADEM Admin. Code r. 335-3-5-.01, <i>“Control of Sulfur Compound Emissions: Fuel Combustion”</i> .	Rule 335-3-5-.01
4. This source has enforceable limits in order to comply with the applicable requirements of ADEM Admin. Code r. 335-3-14-.04, <i>“Air Permits Authorizing Construction in Clean Air Areas (Prevention of Significant Deterioration)”</i> .	Rule 335-3-14-.04 (PSD/BACT)
5. This source is subject to the applicable requirements of 40 CFR Part 63, Subpart DDDDD, <i>“National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters”</i> .	Rule 335-3-11-.06(107) 40 CFR §63.7490(a)
6. This source is subject to the applicable requirements of 40 CFR Part 63, Subpart A, <i>“General Provisions”</i> , as specified in Table 10 to 40 CFR Part 63, Subpart DDDDD.	Rule 335-3-11-.06(1) 40 CFR §63.7565
Emission Standards	
1. This source 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) Rule 335-3-4-.01(1)
2. Filterable particulate matter (PM) emissions from this source shall not exceed the allowable set by ADEM Admin. Code r. 335-3-4-.03(1).	Rule 335-3-4-.03(1)
3. Filterable PM emissions from this source shall not exceed 0.047 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
4. Filterable and condensable PM ₁₀ /PM _{2.5} emissions from this source shall not exceed 0.19 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)

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5. Sulfur dioxide (SO ₂) emissions from this source shall not exceed 1.8 lb/MMBtu.	Rule 335-3-5-.01(1)(a)
6. Nitrogen oxide (NO _x) emissions from this source shall not exceed 0.085 lb/MMBtu and 2.13 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
7. Carbon monoxide (CO) emissions from this source shall not exceed 0.082 lb/MMBtu and 2.06 lb/hr.	Rule 335-3-14-.04 (PSD/BACT)
8. CO _{2e} emissions from this source shall not exceed 12,884 tons per year (TPY) based on a 12-month rolling total.	Rule 335-3-14-.04 (PSD/BACT)
9. This source shall only combust natural gas.	Rule 335-3-14-.04 (PSD/BACT)
10. This source shall utilize good design, operating, and combustion practices.	Rule 335-3-14-.04 (PSD/BACT)
11. This source must comply with 40 CFR Part 63, Subpart DDDDD upon startup.	40 CFR §63.7495(a)
12. This source is subject to the work practice standards in §63.7500 and Table 3 to 40 CFR Part 63, Subpart DDDDD.	40 CFR §63.7500(a)(1)
13. At all times, the Permittee must operate and maintain this source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions.	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 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 Emission Standard Nos. 2 & 3.	Rule 335-3-1-.05
3. Method 201A and Method 202 of 40 CFR Part 51, Appendix M, shall be used to determine compliance with Emission Standard No. 4.	Rule 335-3-1-.05
4. Method 6 or 6C of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with 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 Emission Standard No. 6.	Rule 335-3-1-.05

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<p>6. Method 10 of 40 CFR Part 60, Appendix A-4 shall be used to determine compliance with Emission Standard No. 7.</p>	<p>Rule 335-3-1-.05</p>
<p>Emission Monitoring</p>	
<p>1. The Permittee shall conduct opacity monitoring for this source in accordance with the following:</p> <ul style="list-style-type: none"> (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. 	<p>Rule 335-3-1-.04(1)</p>
<p>2. The Permittee shall conduct an annual tune-up of this source in accordance with the following requirements:</p> <ul style="list-style-type: none"> (a) Inspect the burner, and clean or replace any components of the burner as necessary (the burner inspection may be performed any time prior to the tune-up or the burner inspection may be delayed 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; (d) Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available; and (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 	<p>40 CFR §63.7540(a)(10)</p>

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<p>basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer.</p>	
<p>3. If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.</p>	<p>40 CFR §63.7540(a)(13)</p>
<p>Recordkeeping and Reporting Requirements</p>	
<p>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.</p>	<p>Rule 335-3-1-.04(1)</p>
<p>2. The Permittee shall maintain a record of each visible emissions check and Method 9 observation. This should include 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.</p>	<p>Rule 335-3-1-.04(1)</p>
<p>3. The Permittee shall maintain a record of the 12-month rolling total CO_{2e} emissions from this source.</p>	<p>Rule 335-3-1-.04(1)</p>
<p>4. The Permittee shall maintain onsite and submit, if requested by the Department, a report containing the following information:</p>	<p>40 CFR §63.7540(a)(10)(vi)</p>
<p>(a) 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 source; and</p>	
<p>(b) A description of any corrective actions taken as a part of the tune-up.</p>	
<p>5. The Permittee shall comply with the applicable notification requirements in 40 CFR §63.7545(b) and 40 CFR §63.9, including:</p>	<p>40 CFR §63.7545</p>
<p>(a) The Permittee shall provide notification of the following:</p>	
<p>i. Date when construction was commenced, submitted no later than 30 days after the date construction commenced;</p>	
<p>ii. Anticipated date of startup; and</p>	
<p>iii. Actual date of startup, submitted no later than 15 days after the date of startup.</p>	
<p>6. The Permittee shall submit an annual report by March 1 of each year covering the period from January 1 through December 31.</p>	<p>40 CFR §63.7550</p>

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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 unit 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.
- (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.

- 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)

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