

December 23, 2022

Ms. JoAnn Truchan, P.E. Allegheny County Health Department Air Quality Division 301 39th Street Pittsburgh, PA 15201

Dear Ms. Truchan,

Subject: ATI Flat Rolled Products Holdings, LLC - Brackenridge RACT III

On September 26, 2022, we received a request from Allegheny County Health Department to submit a case-by-case RACT evaluation, for applicable source(s) where there are no presumptive requirements or source standards.

Please be advised that many of the emission units which were previously subject to RACT have been idled, permanently shut down, and/or removed. Also, please note that the emissions units installed at our Hot Rolling and Processing Facility (HRPF) were demonstrated to meet LAER for NO_x and/or BACT for VOC. The case-by-case RACT analysis applies to the Argon-Oxygen Decarburization (AOD) vessel. The RBLC was searched, no emissions control technologies, which were not previously evaluated, are available, and the RACT cost-effectiveness was deemed to be economically infeasible.

Attachment 1 contains our Presumptive RACT notification and RACT "Top-Down Analysis" for the AOD. Potential emissions estimates and subsequent cost-effectiveness (\$/ton) are based on the RACT II Analysis, which was submitted to the Department in January 2014, and subsequently approved. In addition, Attachment 2 contains source and emissions information.

If you have any questions or require additional information, please do not hesitate to telephone me at (724) 226-5947.

Very truly yours,

Deborah L. Calderazzo

Director, EHS

Attachments

ATTACHMENT 1

PRESUMPTIVE RACT, RACT EXEMPT UNITS,

and

CASE-BY-CASE RACT ANALYSIS

ATTACHMENT 1

PRESUMPTIVE RACT

The Brackenridge Facility of ATI is a major source of NO_x and a major source of VOC.

The following units are natural gas-fired boilers or natural gas-fired combustion sources with a rated heat input capacity <20 MMBtu/hr, emergency standby engines operating less than 500 hours per year, electric arc furnaces, sources with capacity factor less than 5%, sources with NOx potential to emit <5 tons per year and/or sources with VOC potential to emit <2.7 tons per year. These units will comply with the Presumptive RACT requirement pursuant to §129.112(c); operate in accordance with manufacturer's specifications and good operating practices.

Source ID	Description	Rated Capacity
112-114	F1	F2C 2C7 tonelyeer
109-111	F2	536,267 tons/year
0014	Continuous Caster Tundish Preheater No. 1	2.5 MMBtu/hr
0014	Continuous Caster Tundish Preheater No. 2	2.5 MMBtu/hr
0010	Horizontal EAF Ladle Preheater	4.5 MMBtu/hr
007	Vertical EAF Ladle Preheater No. 1	10.5 MMBtu/hr
007	Vertical EAF Ladle Preheater No. 2	10.5 MMBtu/hr
	Amer Horiz AOD Ladle Preheaters No. 1	8 MMBtu/hr
009	Amer Horiz AOD Ladle Preheaters No. 2	8 MMBtu/hr
	Amer Horiz AOD Ladle Preheaters No. 3	8 MMBtu/hr
	Bloom Horiz AOD Ladle Preheaters No. 4	15 MMBtu/hr
000	Bloom Horiz AOD Ladle Preheaters No. 5	15 MMBtu/hr
800	Bloom Horiz AOD Ladle Preheaters No. 6	15 MMBtu/hr
	Bloom Horiz AOD Ladle Preheaters No. 7	15 MMBtu/hr
0011	AOD Vessel Preheater	6 MMBtu/hr
0033	Plate Burner/Torch Cutters No. 1 & No. 2, NG	6 MMBtu/hr
0035	Tandem Mill Preheater	3 MMBtu/hr
0034	Misc Space Heaters/Misc. NG usage	< 20 MMBtu/hr each
EG-01	HRPF - Emergency Generator No. 1	2,250 KW
EG-02	HRPF - Emergency Generator No. 2	2,000 KW
S207A	HRPF - Active Hot Box No. 1	10 MMBtu/hr
S207B	HRPF - Active Hot Box No. 2	10 MMBtu/hr
S207C	HRPF - Active Hot Box No. 3	10 MMBtu/hr
S222	Plasma Cutter	30,000 tons per year
The following NO	G combustion sources have capacity factor <5%:	•
S059	Loftus Soaking Pit No.11	26 MMBtu/hr
S060	Loftus Soaking Pit No.12	26 MMBtu/hr
S061	Loftus Soaking Pit No.13	26 MMBtu/hr
S062	Loftus Soaking Pit No.14	26 MMBtu/hr
S063	Loftus Soaking Pit No.15	26 MMBtu/hr
S064	Loftus Soaking Pit No.16	26 MMBtu/hr

PRESUMPTIVE RACT

The following units are natural gas-fired combustion units with rated heat input capacities equal to or greater than 20 MMBtu/hr each and less than 50 MMBtu/hr. These units will comply with the Presumptive RACT requirement pursuant to §129.112(b); biennial combustion tune-up. Please note that <u>annual</u> RACT tune-ups / inspections are existing permit requirements for these sources.

Source ID	Description	Rated Capacity
S097	No. 3 Dept Boiler No.1	34 MMBtu/hr
S098	No. 3 Dept Boiler No. 2	34 MMBtu/hr

PRESUMPTIVE RACT

The following sources have demonstrated to meet NOx LAER and will comply with 129.112(k) based on CEMS (WBFs) or annual tune-ups / portable analyzer tests (CB1-4 (fugitive/exhaust indoors)). Please note that annual RACT inspections are existing permit requirements for CB1-4. Since tests were performed in calendar year 2022 and annual tune-ups/portable analyzer tests will continue to be performed, in accordance with §129.115, ATI requests a waiver to perform additional tests prior to January 1, 2023.

S201	WBF No. 1	465 MMBtu/hr
S202	WBF No. 2	465 MMBtu/hr
S212	Car Bottom Furnace No. 1	21.2 MMBtu/hr
S213	Car Bottom Furnace No. 2	21.2 MMBtu/hr
S214	Car Bottom Furnace No. 3	21.2 MMBtu/hr
S215	Car Bottom Furnace No. 4	21.2 MMBtu/hr

ALTERNATIVE RACT PROPOSAL

A case-by-case RACT Analysis is attached for the following emission units in accordance with §129.114. Please note that a RACT II case-by-case analysis was performed and approved by the Department. The RBLC was searched and new technologies were not identified.

Source ID	Description	Rated Capacity
115-116	AOD	100 tons/hour

RACT Exempt Emission Units

RACT EXEM	MPT pursuant to § 129.111(c) - PTE NOx <1 TPY;	PTE VOC <1 TPY			
	Continuous Caster Torch Cutter No. 1, NG	1.174 MMBtu/hr			
0013	Continuous Caster Torch Cutter No. 2, NG	1.174 MMBtu/hr			
	Continuous Caster Torch Cutter No. 3, NG	1.174 MMBtu/hr			
FP-01	FP-01 HRPF - Emergency Fire Pumps (North/South) 376 HP each				
RACT EXEM	IPT per § 129.111(a) - source standards exist				
140	140 Parts Cleaners				
RACT EXEMPT per § 129.111(a) - source standards exist					
139	Misc Paint Usage (maintenance)				

The following units have been idled and/or permanently shutdown. Deactivation Plans have been or will be submitted to the Department. If these units are reactivated, applicable reactivation notices will be provided to the Department and units will be evaluated for RACT III requirements as necessary. If reactivated, these units will comply with the Presumptive RACT requirement pursuant to §129.112(c) [operate per manufacturer's specifications and good operating practices], will be evaluated for case-by-case RACT in accordance with §129.114, or are RACT exempt in accordance with §129.111. Please note that annual RACT tune-ups/inspections are existing permit requirements for many of these sources, and tune-ups would commence upon reactivation.

Source ID	Description	Rate	ed Capacity
0012	AOD Mold Dryers (24 dryers)	48	MMBtu/hr
0029	No. 3 B&P Coil Preheater	16	MMBtu/hr
0030	No. 3 B&P Strip Dryer	2	MMBtu/hr
0025	No. 1 A&P Strip Dryer	2	MMBtu/hr
0027	No. 2 A&P Kolene Heater	5	MMBtu/hr
0028	No. 2 A&P Strip Dryer	2	MMBtu/hr
NA	Emergency Generator - No. 3 Dept WWTP (500 hours/yr)	200	KW
S057	Loftus Soaking Pit No. 9 (idled with GOES)	26	MMBtu/hr
S058	Loftus Soaking Pit No. 10 (idled with GOES)	26	MMBtu/hr
S065	Loftus Soaking Pit No. 17 (idled with GOES)	26	MMBtu/hr
S066	Loftus Soaking Pit No. 18 (idled with GOES)	26	MMBtu/hr
S067	Loftus Soaking Pit No. 19 (idled with GOES)	26	MMBtu/hr
S068	Loftus Soaking Pit No. 20 (idled with GOES)	26	MMBtu/hr
S069	Loftus Soaking Pit No. 21 (idled with GOES)	26	MMBtu/hr
S070	Loftus Soaking Pit No. 22 (idled with GOES)	26	MMBtu/hr
S071	Loftus Soaking Pit No. 23 (idled with GOES)	26	MMBtu/hr
S091A	No. 1 A&P Annealing Furnace	49	MMBtu/hr
S092A	No. 2 A&P Annealing Furnace	44	MMBtu/hr
125	No. 3 B&P H2SO4-HF/HNO3 Pickling	39	tons/hr
125	No. 1 A&P HNO3/HF Pickling	30	tons/hr
125	No. 2 A&P HNO3/HF Pickling	17	tons/hr

ATI FLAT ROLLED PRODUCTS HOLDINGS, LLC - BRACKENRIDGE FACILITY

RACT TOP-DOWN ANALYSIS

SOURCE S019 - AOD

NOx RACT PROPOSAL

CONTROL OPTIONS:						
Control Technology	Typical Control Effectiveness	Technical Feasibility				
Selective Catalytic Reduction (SCR)	40 - 90 %	No (See Note 1)				
Selective Non-Catalytic Reduction (SNCR)	25 - 70 %	No (See Note 2)				
Flue Gas Recirculation (FGR)	10 - 50 %	No (See Note 3)				

Notes

- 1. SCR is infeasible for application at the AOD for the following reasons:
 - a) the AOD exhaust gas is highly variable with regard to flow rate, temperature and concentration of pollutants. This is due to the violent nature of the process which results when process gases are blown into the hot metal;
 - b) the temperature of the exhaust gas often exceeds the operating range of the catalyst;
 - c) metals and other particulates present in the exhaust gas stream would blind the catalyst, making it ineffective for reduction of NOx.
- 2. SNCR is infeasible for application at the AOD for many of the same reasons listed for SCR. Maintaining the near stable gas conditions necessary to affect NOx controlled by SNCR would be nearly impossible given the highly variable nature of the gas stream. In addition, the great variations in exhaust gas pollutant concentration would make it difficult to maintain the proper stoichiometric ratio of the reducing reagent, resulting in an undesirable level of ammonia slip and/or reduced efficiency.
- 3. FGR is considered infeasible for application at the AOD because the AOD does not utilize a burner.

		C	ONTROL OP	TION COSTS:			
Control Technology	Estimated Control %	Emission Reduction (tons/yr)	Controlled Emissions (tons/yr)	Total Annualized Costs (\$/yr)	Total Cost Effectiveness (\$/ton)	Incremental Cost Effectiveness (\$/ton)	Potential for Adverse or Additional Environmental Impacts
NOT APPLICABLE		·- n nu					

ATI FLAT ROLLED PRODUCTS HOLDINGS, LLC - BRACKENRIDGE FACILITY

RACT TOP-DOWN ANALYSIS

SOURCE S019 - AOD

VOC RACT PROPOSAL

CONTROL OPTIONS:					
Control Technology	Typical Control Effectiveness	Technical Feasibility			
Thermal Oxidation:					
Regenerative	95 - 98 %	Yes			
Recuperative	95 - 98 %	Yes			
Afterburner	95 - 98 %	Yes			
Absorption (Scrubbing)	90 - 95 %	Yes			
Carbon Adsorption	90 - 95 %	No - See Note 1			
Catalytic Oxidation	90 - 95 %	No - See Note 2			
nertial Separation	60 - 80 %	No - See Note 3			
Condensation	50 - 90 %	No - See Note 4			

- Particulate in outlet gas will foul the carbon beds.
 Particulate in outlet gas will foul the catalyst.
 Applicable for removal of liquid droplets only.
 Not feasible due to high VOC inlet loading requirements. Requires > 5,000 ppm.

CONTROL OPTION COSTS:							
Control Technology	Estimated Control %	Emission Reduction (tons/yr)	Controlled Emissions (tons/yr)	Total Annualized Costs (\$/yr)	Total Cost Effectiveness (\$/ton)	Incremental Cost Effectiveness (\$/ton)	Potential for Adverse or Additional Environmental Impacts
Thermal Oxidation:							
Regenerative	96	35	1	\$17,354,140	\$502,145	NA	
Recuperative	96	35	1	\$31,443,304	\$909,818	NA	
Afterburner	96	35	1	\$74,754,506	\$2,163,035	NA	
Absorption	93	33	3	\$30,358,972	\$906,779	\$906,779	Requires disposal/reuse of captured VOCs
Baseline (No Control)	0	-	36.0	-		•	

SOURCE NO. S019 - AOD

CONTROL OPTION -

THERMAL OXIDATION - REGENERATIVE

CAPITAL CO	ST ESTIMATE	50 EU/02/07/18	ANNUALIZED C	OST ESTIMATE	
Cost Item	Cost Factor	\$	Cost Item	Cost Factor	\$
DIRECT COSTS:			DIRECT OPERATING COSTS:		
Purchase Equipment Costs:			Operating Labor	0.5 hr/turn	\$21,900
Thermal Oxidizer	EC	\$11,669,494	Supervision	15% of labor	\$3,285
Auxiliary Equipment	-	<u> </u>	Operating Materials	-	\$0
Instrumentation	0.1 EC	\$1,166,949			
Sales Taxes	0.07 EC	\$816,865	Maintenance Labor	0.5 hr/turn	\$21,900
Freight	0.05 EC	\$583,475	Materials	100% of labor	\$21,900
Total Purchased Equip. Cost (PEC)		\$14,236,783	Utilities - Natural Gas	\$7.25/mcf at 1704 scfm	\$6,493,262
Installation:			Waste Disposal	-	\$0
Foundation and Supports	0.12 PEC	\$1,708,414	Wastewater Treatment	-	\$0
Handling and Erection	0.4 PEC	\$5,694,713			
Electrical	0.01 PEC	\$142,368	Total Direct Operating Costs (DOC) =		\$6,562,247
Piping	0.02 PEC	\$284,736			
Insulation for Ductwork	0.01 PEC	\$142,368			
Painting	0.01 PEC	\$142,368	INDIRECT OPERATING COSTS:		
Total Installation Cost		\$8,114,966	Overhead	80% of DOC	\$5,249,798
			Property Tax	1% of TCC	\$273,346
Total Direct Costs (DC) =		\$22,351,749	Insurance	1% of TCC	\$273,346
			Administration	2 % of TCC	\$546,692
INDIRECT COSTS:			Capital Recovery	0.16275	\$4,448,710
Engineering	0.1 PEC	\$1,423,678			
Construction and Field Expenses	0.1 PEC	\$1,423,678	TOTAL ANNUALIZED COST =		\$17,354,140
Contractor Fees	0.1 PEC	\$1,423,678			017,000,010
Start-up	0.01 PEC	\$142,368			
Performance Test	0.01 PEC	\$142,368	Notes:		
Contingencies	0.03 PEC	\$427,103			
			Maximum no. of turns/yr =	1095	
Total Indirect Cost (IC)		\$4,982,874	Operating labor cost (\$/hr) =	40	
			Maintenance labor cost (\$/hr) =	40	
			Capital recovery assumes 10 year life	(term) at 10% inter	est rate.
TOTAL CAPITAL COST (TCC) =		\$27,334,622		,	

Reference: EPA Air Pollution Control Cost Manual, Sixth Edition, EPA/452/B-02-001, January 2002

THERMAL OXIDATION - REGENERATIVE **EQUIPMENT COST ESTIMATION**

EC (8/22 \$)	11,669,494
	_
EC (3/13 \$)	6,348,151
EC (1/96 \$)	4,753,867
EC (4/88 \$)	4,118,383
Qtot (scfm)	336,904
-	
Qd (scfm)	0
Qf (scfm)	1704.28
The (F)	1527.1
he (Btu/lb)	90.0
he (Btu/scf)	0.005
VOC (ppmv)	7
02 (% v/v)	70
Te (F)	142
Qe (scfm)	335200
Source	AOD
Source ID No.	S019

where Hi = heat content of VOC (as propane in Btu/scf) = 2274

Qf = supplementary fuel (methane) flow rate (scfm) = De * Qe * [Cp-air * (1.1Tc - The - 0.1Tr) - he] / Df * [hf - 1.1Cp-air * (Tc - Tr)] 0.264 0.0408 1600 21600 0.0739 5 where The = emission stream temperature after heat recovery (F) = (HR/100) * Tc + [1 - (HR/100)]*Te where HR = heat recovery (%) = Reference: USEPA, Handbook - Control Technologies for Hazardous Air Pollutants, EPA 625/6-91-014, June 1991 where hd = desired heat content of emission stream (Btu/scf) = where yi = percent composition of VOC in emission stream where hf = LHV of supplementary fuel (methane) (Btu/lb) = where De = density of emission stream (lb/scf) = where Cp-air = heat capacity of air (Btu/lb-F) = where Df = density of fuel (lb/scf as methane) = where Tc = combustion temperature (F) = where Tr = reference temperature (F) = VOC = VOC concentration of emission stream (ppmv) Qd = dilution air flow rate (scfm) = [(he/hd) - 1] * Qe he = heat content of emission steam = 0.01 * yi * Hi 02 = oxygen content of emission stream (% v/v) Qe = emission stream flow rate (scfm) Te = emission stream temperature (F)

Note: If emission stream heat content is less than or equal to 13 Btu/scf,

no dilution air is required.

Qtot = total exhaust gas flow rate (scfm) = Qe + Qf + Qd

EC = thermal incinerator equipment cost (\$)

Note: EC based on OAQPS Cost Control Manual (USEPA, EPA 450/3-90/006, March 1990) as follows:

EC (4/88 \$) = 2.204E+05 + 11.57*Qtot

Note: EC (4/88 \$) is escalated to 1/96 \$ using Chemical Engineering Equipment Indices. Note: EC (1/96 \$) is escalated to 3/13 \$ using Chemical Engineering Equipment Indices. Note: EC is escalated to 8/22 \$ [Final] using Chemical Engineering Equipment Indices. 369.4 426.4 Jan-96 Apr-88

569.4 1046.7 EC Escalation Factor =
EC Escalation Factor '96-'13=
EC Escalation Factor '13-'22= Mar-13 Aug-22

* = Estimate assumed that EC formula is still valid and applicable for flows outside of the 10,000 to 100,000 SCFM range. 1.34

SOURCE NO. S019 - AOD

CONTROL OPTION -

THERMAL OXIDATION - RECUPERATIVE

CAPITAL COST ESTIMATE			ANNUALIZED COST ESTIMATE					
Cost Item	Cost Factor	\$	Cost Item	Cost Factor	\$			
DIRECT COSTS:			DIRECT OPERATING COSTS:					
Purchase Equipment Costs:			Operating Labor	0.5 hr/turn	\$21,900			
Thermal Oxidizer	EC	\$1,459,901	Supervision	15% of labor	\$3,285			
Auxiliary Equipment	-	-	Operating Materials	-	\$0			
Instrumentation	0.1 EC	\$145,990	- F		40			
Sales Taxes	0.07 EC	\$102,193	Maintenance Labor	0.5 hr/turn	\$21,900			
Freight	0.05 EC	\$72,995	Materials	100% of labor	\$21,900			
Total Purchased Equip. Cost (PEC)		\$1,781,079	Utilities - Natural Gas	\$7.25/mcf at 4465 scfm	\$17,014,329			
Installation:			Waste Disposal	•	\$0			
Foundation and Supports	0.12 PEC	\$213,729	Wastewater Treatment	. 11	\$0			
Handling and Erection	0.4 PEC	\$712,432						
Electrical	0.01 PEC	\$17,811	Total Direct Operating Costs (DOC) =		\$17,083,314			
Piping	0.02 PEC	\$35,622						
Insulation for Ductwork	0.01 PEC	\$17,811						
Painting	0.01 PEC	\$17,811	INDIRECT OPERATING COSTS:					
Total Installation Cost		\$1,015,215	Overhead	80% of DOC	\$13,666,651			
T. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.			Property Tax	1% of TCC	\$34,197			
Total Direct Costs (DC) =		\$2,796,294	Insurance	1% of TCC	\$34,197			
			Administration	2 % of TCC	\$68,393			
INDIRECT COSTS:			Capital Recovery	0.16275	\$556,552			
Engineering	0.1 PEC	\$178,108						
Construction and Field Expenses	0.1 PEC	\$178,108	TOTAL ANNUALIZED COST =		\$31,443,304			
Contractor Fees	0.1 PEC	\$178,108						
Start-up	0.01 PEC	\$17,811						
Performance Test	0.01 PEC	\$17,811	Notes:					
Contingencies	0.03 PEC	\$53,432						
			Maximum no. of turns/yr =	1095				
Total Indirect Cost (IC)		\$623,378	Operating labor cost (\$/hr) =	40				
			Maintenance labor cost (\$/hr) =	40				
			Capital recovery assumes 10 year life (term) at 10% inter	rest rate.			
TOTAL CAPITAL COST (TCC) =		\$3,419,672		•				

Reference: EPA Air Pollution Control Cost Manual, Sixth Edition, EPA/452/B-02-001, January 2002

THERMAL OXIDATION - RECUPERATIVE **EQUIPMENT COST ESTIMATION**

EC (8/22 \$)	1,459,901
EC (3/13 \$)	794,179
EC (1/96 \$)	594,728
EC (4/88 \$)	515,226
Qtot (scfm)	339,666
Qd (scfm)	0
Qf (scfm)	4465.63
The (F)	1162.6
he (Btu/lb)	90.00
he (Btu/scf)	0.005
VOC (ppmv)	7
02 (% v/v)	70
Te (F)	142
Qe (scfm)	335200
Source	AOD
Source ID No.	S019

where Hi = heat content of VOC (as propane in Btu/scf) = 2274

Qf = supplementary fuel (methane) flow rate (scfm) = De * Qe * [Cp-air * (1.1Tc - The - 0.1Tr) - he] / Df * [hf - 1.1Cp-air * (Tc - Tr)]

where De = density of emission stream (lb/scf) = 0.0739 0.264 where The = emission stream temperature after heat recovery (F) = (HR/100) * Tc + [1 - (HR/100)]*Te 21600 1600 13 Reference: USEPA, Handbook - Control Technologies for Hazardous Air Pollutants, EPA 625/6-91-014, June 1991 where hd = desired heat content of emission stream (Btu/scf) = where yi = percent composition of VOC in emission stream where Hi = heat content of VOC (as propane in Btu/scf) = where hf = LHV of supplementary fuel (methane) (Btu/lb) = where HR = heat recovery (%) = where Df = density of fuel (lb/scf as methane) = where Cp-air = heat capacity of air (Btu/Ib-F) = where Tc = combustion temperature (F) = where Tr = reference temperature (F) = VOC = VOC concentration of emission stream (ppmv) he = heat content of emission steam = 0.01 * yi * Hi Qd = dilution air flow rate (scfm) = [(he/hd) - 1] * Qe 02 = oxygen content of emission stream (% v/v) Te = emission stream temperature (F) Qe = emission stream flow rate (scfm)

Note: If emission stream heat content is less than or equal to 13 Btu/scf,

no dilution air is required.

Qtot = total exhaust gas flow rate (scfm) = Qe + Qf + Qd EC = thermal incinerator equipment cost (\$) Note: EC based on OAQPS Cost Control Manual (USEPA, EPA 450/3-90/006, March 1990) as follows:

EC (4/88 \$) = 21342 * Qtot ^^ 0.2500

Note: EC (4/88 \$) is escalated to 1/96 \$ using Chemical Engineering Equipment Indices. Note: EC (1/96 \$) is escalated to 3/13 \$ using Chemical Engineering Equipment Indices. Note: EC is escalated to 8/22 \$ [Final] using Chemical Engineering Equipment Indices. 426.4 569.4 1046.7 369.4 Apr-88 Jan-96 Mar-13 Aug-22

* = Estimate assumed that EC formula is still valid and applicable for flows outside of the 500 to 50,000 SCFM range. 1.15 1.84 EC Escalation Factor =
EC Escalation Factor '96-'13=
EC Escalation Factor '13-'22=

SOURCE NO. S019 - AOD

CONTROL OPTION -

AFTERBURNER

CAPITAL C	OST ESTIMATE		ANNUALIZED C	OST ESTIMATE	
ost Item	Cost Factor	\$	Cost Item	Cost Factor	
RECT COSTS:			DIRECT OPERATING COSTS:		
rchase Equipment Costs:			Operating Labor	0.5 hr/turn	
ermal Oxidizer	EC	\$588,538	Supervision	15% of labor	
diary Equipment	-	-	Operating Materials		
rumentation	0.1 EC	\$58,854	Operating materials		
es Taxes	0.07 EC	\$41,198	Maintenance Labor	0.5 hr/turn	
pht	0.05 EC	\$29,427	Materials	100% of labor	
al Purchased Equip. Cost (PEC)		\$718,016	Utilities - Natural Gas	\$7.25/mcf at 12197 scfm	
tallation:			Waste Disposal	-	
ndation and Supports	0.12 PEC	\$86,162	Wastewater Treatment	-	
ndling and Erection	0.4 PEC	\$287,206			
trical	0.01 PE	\$7,180	Total Direct Operating Costs (DOC) =		
ng	0.02 PEC	\$14,360			
lation for Ductwork	0.01 PEC	\$7,180			
ing	0.01 PEC	\$7,180	INDIRECT OPERATING COSTS:		
al Installation Cost		\$409,269	Overhead	60% of DOC	
			Property Tax	1% of TCC	
Direct Costs (DC) =		\$1,127,285	Insurance	1% of TCC	
			Administration	2 % of TCC	
ECT COSTS:			Capital Recovery	0.16275	
eering	0.1 PEC	\$71,802			
struction and Field Expenses	0.1 PEC	\$71,802	TOTAL ANNUALIZED COST =		3
ractor Fees	0.1 PEC	\$71,802			
-up	0.01 PEC	\$7,180			
rmance Test	0.01 PEC	\$7,180	Notes:		
ingencies	0.03 PEC	\$21,540			
-			Maximum no. of turns/yr =	1095	;
al Indirect Cost (IC)		\$251,306	Operating labor cost (\$/hr) = Maintenance labor cost (\$/hr) =	40 40	
			Capital recovery assumes 10 year life		
TAL CAPITAL COST (TCC) =		\$1,378,590			

Reference: EPA Air Pollution Control Cost Manual, Sixth Edition, EPA/452/B-02-001, January 2002

EQUIPMENT COST ESTIMATION THERMAL OXIDATION - AFTERBURNER (NO HEAT RECOVERY)

EC (8/22 \$)	588,538
EC (3/13 \$)	320,162
EC (1/96 \$)	239,756
EC (4/88 \$)	207,706
Qtot (scfm)	347,397
Qd (scfm)	0
Qf (scfm)	12197.40
(F)	142
he (Btu/lb)	90.0
he (Btu/scf)	0.005
VOC (ppmv)	7
02 (% v/v)	70
Te (F)	142
Qe (scfm)	335200
Source	AOD
Source ID No.	S019

where Hi = heat content of VOC (as propane in Btu/scf) = 2274

Qf = supplementary fuel (methane) flow rate (scfm) = De * Qe * [Cp-air * (1.1Tc - The - 0.1Tr) - he] / Df * [hf - 1.1Cp-air * (Tc - Tr)]

where De = density of emission stream (lb/scf) = 0.0739

where Cp-air = heat capacity of air (Btu/lb-F) = 0.264

where Df = density of fuel (lb/scf as methane) = 0.0408

where Tc = combustion temperature (F) = 1600 Reference: USEPA, Handbook - Control Technologies for Hazardous Air Pollutants, EPA 625/6-91-014, June 1991 where yi = percent composition of VOC in emission stream VOC = VOC concentration of emission stream (ppmv) he = heat content of emission steam = 0.01 * yi * Hi 02 = oxygen content of emission stream (% v/v) Te = emission stream temperature (F) Qe = emission stream flow rate (scfm)

21600 where The = emission stream temperature after heat recovery (F) = $(HR/100) \times Tc + [1 - (HR/100)]^{T}$ where hf = LHV of supplementary fuel (methane) (Btu/lb) = where HR = heat recovery (%) = where Tr = reference temperature (F) =

where hd = desired heat content of emission stream (Btu/scf) = Qd = dilution air flow rate (scfm) = [(he/hd) - 1] * Qe

5

Note: If emission stream heat content is less than or equal to 13 Btu/scf,

no dilution air is required.

Qtot = total exhaust gas flow rate (scfm) = Qe + Qf + Qd

EC = thermal incinerator equipment cost (\$)

Note: EC based on OAQPS Cost Control Manual (USEPA, EPA 450/3-90/006, March 1990) as follows:

EC (4/88 \$) = 10294 * Qtot**0.2355

Note: EC (4/88 \$) is escalated to 1/96 \$ using Chemical Engineering Equipment Indices. Note: EC (1/96 \$) is escalated to 3/13 \$ using Chemical Engineering Equipment Indices. Note: EC is escalated to 8/22 \$ [Final] using Chemical Engineering Equipment Indices. 369.4 Jan-96 Mar-13 Apr-88

426.4 569.4 1046.7 EC Escalation Factor =
EC Escalation Factor '96-'13=
EC Escalation Factor '13-'22= Aug-22

* = Estimate assumed that EC formula is still valid and applicable for flows outside of the 500 to 50,000 SCFM range

SOURCE NO. S019 - AOD

CONTROL OPTION -

ABSORPTION

CAPITAL CO	ST ESTIMATE		ANNUALIZED COST ESTIMATE					
Cost Item	Cost Factor	\$	Cost Item	Cost Factor	\$			
DIRECT COSTS:			DIRECT OPERATING COSTS:					
Purchase Equipment Costs:			Operating Labor	0.5 hr/turn	\$21,900			
Absorption	EC	\$1,166,625	Supervision	15% of labor	\$3,285			
Auxiliary Equipment	-	-	Operating Materials	-	\$0			
Instrumentation	0.1 EC	\$116,663			**			
Sales Taxes	0.07 EC	\$81,664	Maintenance Labor	0.5 hr/turn	\$21,900			
Freight	0.05 EC	\$58,331	Materials	100% of labor	\$21,900			
Total Purchased Equip. Cost (PEC)		\$1,423,283	Utilities - Water	-	\$0			
Installation:			Waste Disposal	•	\$0			
Foundation and Supports	0.08 PEC	\$113,863	Wastewater Treatment	\$0.37/1000gal	\$16,539,000			
Handling and Erection	0.14 PEC	\$199,260						
Electrical	0.04 PEC	\$56,931	Total Direct Operating Costs (DOC) =		\$16,607,985			
Piping	0.02 PEC	\$28,466						
Insulation for Ductwork	0.01 PEC	\$14,233						
Painting	0.01 PEC	\$14,233	INDIRECT OPERATING COSTS:					
Total Installation Cost		\$426,985	Overhead	80% of DOC	\$13,286,388			
			Property Tax	1% of TCC	\$22,915			
Total Direct Costs (DC) =		\$1,850,268	Insurance	1% of TCC	\$22,915			
			Administration	2 % of TCC	\$45,830			
INDIRECT COSTS:			Capital Recovery	0.16275	\$372,939			
Engineering	0.1 PEC	\$142.328						
Construction and Field Expenses	0.05 PEC	\$71,164	TOTAL ANNUALIZED COST =		\$30,358,972			
Contractor Fees	0.1 PEC	\$142,328						
Start-up	0.02 PEC	\$28,466						
Performance Test	0.01 PEC	\$14,233	Notes:					
Contingencies	0.03 PEC	\$42,698						
Total Indicast Cost (IC)		****	Maximum no. of turns/yr =	1095				
Total Indirect Cost (IC)		\$441,218	Operating labor cost (\$/hr) =	40				
			Maintenance labor cost (\$/hr) =	40				
TOTAL CAPITAL COST (TCC) =		£2 204 40E	Capital recovery assumes 10 year I	ire (term) at 10% inter	rest rate.			
	ration or buildings	\$2,291,485						
Note - does not account for site prepa	iration or pulldings							

Reference: EPA Air Pollution Control Cost Manual, Sixth Edition, EPA/452/B-02-001, January 2002

ÉQUIPMENT COST ESTIMATION ABSORPTION

PC (6/88 \$)	185,178
Vpack (ft^3)	14524
ī E	24.24
Hpack (f)	12.70
H (#)	
ĪĒ	1.45
fe	29,1
Nog	
VOC-out	
VOC-out (ppmv)	0.14
TC (6/88 \$)	228998
Dcolumn (ft)	38
Area (ft^2)	1141
Garea lb/sec-ft^2]	0.36
Gareaf Garea (lb/sec-ft^2) (lb/sec-ft^2)	0.49
ORD	0.11
ABS	0.09
L (lb/hr)	3777409
G (lb/hr)	1496333
Lgal (gal/min)	84992
Lmol (mol/hr)	2360881
Gmol (mol/hr)	51956
voc (ppm/)	7
F)	142
Oe (scfm)	335200
Source	AOD
Source ID No.	S019

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rerence.	Kejerence. OSETA, nanubook - Conico i aciniologias iui nazaudus An rundans, ETA VESIO-51-514, Suna 1991			(000)			(8/22 \$)
	Qe = emission stream flow rate (scfm) T = emission stream temperature (F) Ω2 = oxyvean context of emission stream (% v/v)			414,176	475,255	634,639 1	1,166,625
	VOC = VOC concentration of emission stream - uncontrolled (ppmv) Limit = solvent (water) flow rate (mol/hr) = AF * m * Gmol						
	where AF = absorption factor =	1.6					
	where m = stepe of vapor-liquia equilibrum curve = where Gmol = emission stream flow rate (mol/hr) = 0.155 Qe	4.07					
	Lgal = solvent (water) flow rate (gal/hr) = 0.036 Lmol						
	ABS = abscissa of flooding curve (see Keference, Section 4.7., Figure 4.7.4.) * (DG/DI)************************************	18					
	where G = emission stream flow rate (Ib/hr) = MW * Gmol where MWg (Ib/mol) =	28.8					
	where DI = density of solvent (water) (Ib/ff*3) =	62.3					
	Where bg = density of emission stream (Indir.s) = (ORD = ordinate of flooding curve (see Reference, Section 4.7, Figure 4.7-2) = (Gareeffv2 * (alew3) * (ulvv0.2)Dg * Dl * gc	Pv0.2)/Dg * DI * gc					
	where Gareaf = emission steam flow rate at flooding conditions (Ib/ff ^{th/2} - sec)						
	where a = packing factor =	28	(Based on 2" ceramic Raschig rings)				
	where e = packing ractor = where ut = viscosity of solvent (water) (centipoises) =	, ·	(pessed on 2 ceramic Nascing rings)				
	where gc = gravitational constant (ft/sec/2) =	32.2					
	Garea = emission stream flow rate (lb/ft ^{M2} - sec) = Gareaf * f						
	where t = traction of flooding =	0.75					
	Add = cross-section area of column (it = 2) = G(3000 Gards)						
	Hoack = packing height (ft) = Nog * Hog						
	where Nog = no, of gas transfer units determined from Reference Section 4.7, Figure 4.7-3						
	where Hog = height of overall transfer unit (ft) = Hg + (1/AF)*H						
	Hg = height of gas transfer unit (ft) = [b*(3600*Garea)**c)/(L*)**d](Scg)**0.5	6					
	Where D is	3.82	(Based on Z. ceramic Reschip rings)				
	in passing	0.45	(Based on 2" ceramic Reschip rings)				
	where Scg = Schmidt number for emission stream =	0.75					
	where L" = L/Area						
	HI = height of liquid transfer und (ft) = Y*(L"/ul")**(ScI)**0.5	90000					
	Where I is the Act of	2.42	based on 2 ceramic Rescrip imps)				
	where Sci = Schmidt number for liquid stream =	558					
	where s =	0,22	(Based on 2" ceramic Raschig rings)				
	Ht = column height = Hpack + 2 + 0.25Dcolumn						
_	Vpack = volume of packing = 0.785(Ucolumn)^22 * Rt Packing Cost (PC) (\$/#^3) =	12,75					
	Ptot = pressure drop = Pa * Ht where Pa = In * 15_081*110********************************						
	Where is	0.00295	(Based on 2" ceramic Raschig rings)				
	where g =	11,13	(Based on 2" ceremic Reschig rings)				
	VOC-out ≈ VOC concentration of emission stream -controlled (ppmv) Assume removal efficiency =	83					
	Note. Tower Cost based on Reference. Section 4.7., Figure 4.7.4. Assume Tower Cost (\$\text{stnch-Doolumn}\) ==	200					
	EC (6/88 \$) = Tower Cost + Packing Cost						
	Note: EC (6/88 \$) is escalated to 1/96 \$ using Chemical Engineering Equipment Indices. Note: EC (1/96 \$) is escalated to 3/13 \$ using Chemical Engineering Equipment Indices.						
	Note: EC is escalated to 8/22 \$ (Final) using Chemical Engineering Equipment Indices.						
	Jun-88 371.6 Jun-96 426.4						
	3.7						
	EC Escalation Factor = 1.15						
_	Fp = fan power (kWh/hr) = 1,815-04 * Qe-acfm * Ptot *8760						
	ASR = annual solvent (water) usage = 60 * Lgal *8760						

ATTACHMENT 2

SOURCE INFORMATION AND EMISSIONS

PLANT NAME AND LOCATION:

PART I - DESCRIPTION OF PROCI	ESS (MAKE A COPY OF	SCHEDULE A FOR EACH	PROCESS.)
Company Identification:	F1 (S015) and F	2 (\$017)	
Installer: AL			F1 – 2003 ; F2 – 2004
Contractor (if operated by another):		motanation bate.	11 2000;12 2007
Design Charging or _X Product): 120 tons of hot	metal per furnace
Total Annual Production (specify uni			
Raw			
Materials: Scrap, fluxes			
Materials Produced: Specialty me			
Process Operation Units: (1	.) ACHD Installation	on Permit No. 0059-IC	06
(Name and Previous County (2	2.)		
Permit Number, if any)	5.)		
(4	.)		
(5	j.)		
(6			
	ation Segments. Lab	el product intake poin	v diagram of this process, labeling each ts and product discharge points for each ol devices.
PART II - PROCESS OPERATION	SCHEDULE		
Start time 00:00 En Seasonal: Periods correspor	ek 7 Week d time 24:00 nd to seasons instea , and February of the	s/year <u>52</u> Ho	urs/year 8760 rs. The first season is split to include
December, January, & February	25 June.	July, & August	25
March, April, & May		nber, October, & Nove	
B. Requested limits: (Limitations X 8760 hours (no limitations) of I/We request the following limits how this can be enforced: experienced operating hour reporting requesting hours are not required.	on operating hours and or mitation This may wither list an operating irement.	re optional.) Choose C become a federally e g schedule or downtin	
Company: Allegheny Ludlum	Page:	Application – 1	Submit Original and Two Copies

PART VII - STACK DATA			
F2	10000F		
Stack Identification: P006 (F2 CANOPY BAG			
UTM East 607720	UTM North 4495805		
Stack Height: 61 ft. Ground level ele Material Outer:	evation <u>770</u> ft.	Diameter 10' X	82' ft.
	IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	f/s.	
Exhaust Rate	velocity. <u>IVA</u>	1/5.	
per unit: <u>300,000</u> (ACFM) % Mo	isture: 5		
Nearest building to stack:			
distance 10 ft. height	30 ft. length	280 ft.	width <u>100</u> ft.
Draceses Charing Stocky If more than one pro-			and the discussion of the section
Processes Sharing Stack: If more than one proc Description N/A	ess shares a stack, list al	nd estimate relative o	contribution of each.
Contribution to emissions from stack	%		
Description N/A			
Contribution to emissions from stack	%		
-	re:		
Stack Identification: P007/P008 (F2 DEC BAG			
UTM East 607698 / 607685	UTM North 4495858 / 4	4495876	
Stack Height: 84 ft. Ground level ele Material Outer:	evation <u>770</u> ft.	Diameter	ft.
	Velocity: NA		
Exhaust Rate per unit: 100,000 (ACFM) % Mo			
Nearest building to stack:	<u> </u>		
	84 ft. length	800 ft.	width <u>300</u> ft.
Processes Sharing Stack: If more than one proc Description N/A	ess shares a stack, list a	nd estimate relative o	contribution of each.
Contribution to emissions from stack	%		
Description N/A			
Contribution to emissions from stack	%		
Company: Allegheny Ludlum Page:	Application – 6		Submit Original and Two Copies

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•	•

Stack Identifie	cation:	P009 (F1 CAN	OPY/AC	D BAGHO	USE E	XHAUST)			
	607628		N.		UTM No		496059				
Stack Height:	: 74	ft.	Grou	nd level	elevation	770	ft.	Diameter	N/A	ft.	
Material											
Outer:					lini	ing:					
Exit temperat	ture (°F):	Est.	200	_ E	xit Velocity:	_	2	f/s.			
Exhaust Rate	•										
per unit:	_480,0	000	(ACFM)	%	Moisture:	_5					
Nearest build											
dis	tance _	0	ft.	height	_30	ft.	length	450	ft. w	ridth <u>150</u>	ft.
Processes St	haring Sta	ack: If r	more tha	n one p	rocess shar	es a sta	: ack list a	nd estimate re	elative cor	ntribution of ea	ch
Description	-			опо р		00 0 0	2011, 1101 0		J.G.1. V G G G I		J. 1.
Contribution (m stack	46	%						
Description											
Contribution	to emissio	ons fro	m stack	54	%						
0											
Stack Identific	_			DEC B							
UTM East	607676 /	60766	6		UTM No	rth 4	495884 /	4495896			
Stack Height:	: 75	ft.	Grou	nd level	elevation	770	ft.	Diameter	NA	ft.	
Material											
Outer:					lini	ing:					
Exit temperat	ture (°F):	Est.	200	Е	xit Velocity:						
Exhaust Rate				_							
per unit:	_34,00	00	(ACFM)) %	Moisture:	_5					
Nearest build											
dis	tance _	10	ft.	height	_30	ft.	length	800	ft. w	ridth 300	ft.
Processes SI	haring Sta	ack: If i	more tha	n one n	rocess shar	res a st	ack list a	and estimate re	elative co	ntribution of ea	ch
Description	-	ack. II I	more trie	iii one p	100033 31141	C3	ack, not a	ind estimate re	siative coi	illibation of ea	on.
Contribution		ons fro	m stack		%						
Description			• • • • •								
Contribution		ons fro	m stack		%	_			· · · · · · · · · · · · · · · · · · ·		
DADT \//!!	DEMARK	Calleta	STATE AND RELACE		engal plane a West	log grupe e pelo		VII. auto alle VII. auto alle VIII.	VALUE A VALUE A	Charles or come content	
PART VIII – I	KEWAKN	O WHILE							Maria Production		
N/A											
Attach calcu	ulatione s	and rot	foronco	all amic	ssion facto	re for /	Allowabl	e Potential t	o Emit a	nd Actual Emi	iccione to
								ol equipment		nu Actual Elli	13310113 10
Company:	Allegh	eny Luc	dlum	Page	:	Applic	ation – 7			Submit Origina	al and Two
			,	_							Copies

PLANT NAME AND LOCATION:

PART I - DESC	RIPTION OF PR	OCESS (MAKE A	COPY OF SCHEDULE A FOR EACH	PROCESS.)
Company Ident Description:	ification or	S019 - A	rgon Oxygen Decarburization	ı Vessel (AOD)
installer: AL			Installation Date:	
-	perated by anoth	er): N/A		
	•		cify units): 100 tons per ho	ur
			sed): 600,000 tons per yea	
Raw Materials:	, , ,	•		
	uced: Specialty	motale		
Process Opera		(4) 51/5		
(Name and Pre				
Permit Number		(2.)		
	,,	(3.)		
		(4.)		7
		(6.)		
See Attachme				
PART II - PRO	CESS OPERATION	ON SCHEDULE		
A. Normal scho Hours/day Start time Seasonal:	24 Days 00 : 00 Periods corre	s/week <u>7</u> End time <u>24</u> spond to seasor uary, and Februa		urs/year 8760 rs. The first season is split to include
December,	January, & Febru	uary 25	June, July, & August	25
March, Apri	il, & May	25	September, October, & Nove	mber 25
X 8760 h I/We reconstructed how this operating	nours (no limitation quest the following can be enforced by hour reporting to the contract of	ns) or ng limitation Th d: either list an requirement.		one: enforceable permit condition: Describe ne (e.g. only operate 8:00 to 4:00) or an
Company:	Allegheny Ludlur	n Page:	Application – 1	Submit Original and Two Copies

PART VII - STACK DATA							
Stack Identification: P009 (F1 CANOPY/AOD BAGHOUSE EXHAUST)							
UTM East 607628 UTM North 4496059							
Stack Height: 74 ft. Ground level elevation 770 ft. Diameter N/A ft. Material							
Outer: lining:							
Exit temperature (°F): Est. 200 Exit Velocity: 11.2 f/s.							
Exhaust Rate							
per unit: <u>480,000</u> (ACFM) % Moisture: <u>5</u>							
Nearest building to stack:							
distance 0 ft. height 30 ft. length 450 ft. width 150 ft.							
Processes Sharing Stack: If more than one process shares a stack, list and estimate relative contribution of each. Description F1 Canopy							
Contribution to emissions from stack 46 %							
Description AOD							
Contribution to emissions from stack 54 %							
PART VIII REMARKS							
N/A							
N/A							

Attach calculations and reference all emission factors for Allowable, Potential to Emit, and Actual Emissions to this sheet. Reference all emission factors and efficiencies of control equipment.

Company: Allegheny Ludlum Page: Application – 4 Submit Original and Two Copies

PLANT NAME AND LOCATION:

DADTI DES	COUDTION OF DE	OCESS (MAKE A	00DV 05 00U5DU 5 4 50D 540U	1220200	
FARIT-DES	CKIF HON OF FR	OCESS (MAKE A	COPY OF SCHEDULE A FOR EACH	TPROCESS.)	
Company Ide	ntification:	S020 - C	ontinuous Caster Tundish I	Preheater No. 1	
Installer: A			Installation Date:	Unknown	
Contractor (if	operated by anoth	er): <u>N/A</u>		279.200	
Design Ch	narging or <u>X</u> Pro	duction rate (spec	cify units): 2.5 MMBtu/hr		
Total Annual I	Production (specify	y units normally us	sed): 22 MMcf/yr		
Raw Materials	s: Natural G	as			
Materials Pro	duced: N/A				
Process Oper	ration Units:	(1.) N/A			
(Name and Pi	revious County	(2.)			
Permit Number	er, if any)	(3.)			
		(4.)	150100 - 50		
		(5)			
		(0.)			
	oel emissions discl		nts. Label product intake poil he location of emissions cont	nts and product discharge points for each rol devices.	
PART II - PRO	OCESS OPERATI	ON SCHEDULE			
Hours/day Start time Seasonal: Decembe	24 Days 00:00 Periods corre December, January, & Febru	s/week 7 End time 24 spond to season uary, and Februar Perduary 25	s instead of calendar quartery of the calendar year reporter cent of Annual Production June, July, & August	ers. The first season is split to include ed.	
March, April, & May					
Company:	Allegheny Ludlui	m Page:	Application – 1	Submit Original and Two Copies	

PLANT NAME AND LOCATION:

PART I - DES	SCRIPTION OF PI	ROCESS (MAKE A C	OPY OF SCHEDULE A FOR EACH	PROCESS.)		
Company Ide		\$021 – Co	ontinuous Caster Tundish F	reheater No. 2		
Installer: A			Installation Date:	Unknown		
Contractor (if	operated by anoth	ner): N/A				
Design C	harging or <u>X</u> Pro	oduction rate (speci	fy units): 2.5 MMBtu/hr			
Total Annual	Production (specif	y units normally use	ed): 22 MMcf/yr			
Raw Material	s: Natural G	as				
Materials Pro	duced: N/A					
Process Ope	ration Units:	(1.) N/A				
•	revious County					
Permit Numb		(3)				
		(4.)	7.00			
		(4.)				
		(5.)				
		(6.)				
See Attachm		ION COUPER F	Control Contro			
PART II - PR	OCESS OPERAT	ION SCHEDULE				
A. Normal so Hours/day Start time Seasonal:	24 Day 00:00 Periods corre	rs/week 7 End time 24 espond to seasons nuary, and February		urs/year _8760 ers. The first season is split to include		
Decembe	r, January, & Febr	uary _25	June, July, & August	25		
March, A	oril, & May	25	September, October, & Nove	ember 25		
B. Requested limits: (Limitations on operating hours are optional.) Choose One: X 8760 hours (no limitations) or I/We request the following limitation This may become a federally enforceable permit condition: Describe how this can be enforced: either list an operating schedule or downtime (e.g. only operate 8:00 to 4:00) or an operating hour reporting requirement. Total days x Hours/day = Hours/year						
Company:	Allegheny Ludiu	m Page: 	Application – 1	Submit Original and Two Copies		

PLANT NAME AND LOCATION:

PART I - DES	CRIPTION OF PR	OCESS (MAKE A C	OPY OF SCHEDULE A FOR EACH	PROCESS)		
Company Idei		S027 - Ho	prizontal EAF Ladle Preheat			
Installer: Al			Installation Date:	Unknown		
Contractor (if	operated by anoth	er): N/A	- 15			
Design Ch	narging or <u>X</u> Pro	duction rate (speci	fy units): 4.5 MMBtu/hr			
Total Annual I	Production (specify	units normally use	ed): 39.4 MMcf/yr			
Raw Materials	: Natural G	as				
Materials Prod	duced: N/A					
Process Oper	ation Units:	(1.) N/A				
•	revious County					
Permit Number	•	(3.)				
	• • • • • • • • • • • • • • • • • • • •	(3.)				
		(4.)				
		(5.)	****			
		(6.)	**			
segment. Lat See Attachm	oel emissions discl ent	narge points and th	e location of emissions conti	nts and product discharge points for each rol devices.		
PART II - PRO	OCESS OPERATI	ON SCHEDULE				
Hours/day Start time Seasonal:	24 Days 00:00 Periods corre December, January, & February	s/week 7 End time 24 spond to seasons uary, and February Perc	_	ers. The first season is split to include d.		
B. Requested limits: (Limitations on operating hours are optional.) Choose One: X_ 8760 hours (no limitations) or I/We request the following limitation This may become a federally enforceable permit condition: Describe how this can be enforced: either list an operating schedule or downtime (e.g. only operate 8:00 to 4:00) or an operating hour reporting requirement. Total days x Hours/day = Hours/year						
Company:	Allegheny Ludlu	n Page:	Application – 1	Submit Original and Two Copies		

PLANT NAME AND LOCATION: Allegheny Luc

PART I - DESCRIPTION OF PROCES	S (MAKE A COPY OF	SCHEDULE A FOR EACH I	PROCESS.)			
Company Identification: Installer: N/A	S022, S023, S02	4 – Continuous Caste	r Torch Cutters 1-3			
	NI/A	Installation Date:	2000			
	N/A	\				
Design Charging or _X Production						
Total Annual Production (specify units	· · · · · · · · · · · · · · · · · · ·	31 MMcf/yr; 3,942,000	tons/yr (3 torches combined)			
Raw Materials: Natural Gas / Sla	abs					
Materials Produced: Cut Slabs						
	0059-1005					
(Name and Previous County (2.)	1					
Permit Number, if any) (3.)						
(4.)		**************************************				
(5.)						
(6.)						
	on Segments. Lab	el product intake point	diagram of this process, labeling each is and product discharge points for each ol devices.			
PART II - PROCESS OPERATION SC	HEDULE					
A. Normal schedule: (Provide information for last year. If a new unit, please estimate) Hours/day 24 Days/week 7 Weeks/year 52 Hours/year 8760 Start time 00:00 End time 24:00 Seasonal: Periods correspond to seasons instead of calendar quarters. The first season is split to include December, January, and February of the calendar year reported. Percent of Annual Production December, January, & February 25 June, July, & August 25						
		mber, October, & Nove	mber 25			
B. Requested limits: (Limitations on operating hours are optional.) Choose One: X 8760 hours (no limitations) or I/We request the following limitation This may become a federally enforceable permit condition: Describe how this can be enforced: either list an operating schedule or downtime (e.g. only operate 8:00 to 4:00) or an operating hour reporting requirement. Total days x Hours/day = Hours/year						
Company: Allegheny Ludlum	Page:	Application – 1	Submit Original and Two			

PART VI - EMISSION C	CONTROLS				
D007 BAGHOUSE	(fabric collec	tor) – F1 CANOI	PY/AOD BAGHO	USE	
Percent Est. Capture 90	% (not con	trol efficiency)			
Gas flow through contro units	480,000 ACFM) @_200_	°F		
Manufacturer's Name a	nd Model _W	HEELABRATOF	R FRYE 264 SERI	ES 8S	
Type of bag material	WOVEN POL	YESTER GORT	EX		
Total filter cloth area	247,296 sc	դ. ft., air to	cloth ratio 3.0:	1	
Bag cleaning method:	SHAKER		cycle NA	Min	
Pressure Drop:	12 "H	l ₂ 0,			
<u>Pollutant</u>	Efficien	cy (%)	Basis for Efficience	CY	Outlet Grain Loading
PM / PM-10	99.	.5	Mfg Est.		<0.0052 gr/dscf
FUGITIVE DUST CONT not discussed in Form E N/A	FROLS : Descri E - Roads or Fol	be below or attac rm F - Storage P	ch a complete exp iles.	planation of all	controls of fugitive emissions
PART VII - STACK DAT	ΓΑ				
Stack Identification: PUTM East 607628 Stack Height: 74 Material Outer:		UTM No	DUSE EXHAUST orth 4496059 ft. ning:	Diameter	_N/A ft.
Exit temperature (°F):	Est. 200	Exit Velocity	: 11.2	f/s.	
Exhaust Rate					
per unit: 480,00		% Moisture:			
Nearest building to stack		oight 20	ft langth	450	ft width 150 ft
distance 0	H. H	eight 30	ft. length	450	ft. width ft.
Processes Sharing Stac Description F1 Canop		one process sha	res a stack, list ar	nd estimate rel	lative contribution of each.
Contribution to emission	-	46 %			- 1- 1-11 - 125
Description AOD (includes torch cutters)					
Contribution to emission		54 %			
Company: Alleghen	y Ludlum	Page:	Application – 3		Submit Original and Two Copies

PLANT NAME AND LOCATION:

			antantio depuis salemos see li salemos	and a control of the control of the same of the control of the con		
PART I - DESC	RIPTION OF PRO	CESS (MAKE A CO	PY OF SCHEDULE A FOR EACH	PROCESS.)		
Company Identi	fication:	S027 – Hori	zontal EAF Ladle Preheat	er		
Installer: AL		\$	Installation Date:	Unknown		
Contractor (if op	erated by another	: N/A				
Design Cha	rging or <u>X</u> Produ	ction rate (specify	units): 4.5 MMBtu/hr			
Total Annual Pr	oduction (specify u	nits normally used): 39.4 MMcf/yr			
Raw Materials:	Natural Gas	•		J8		
Materials Produ	ced: N/A			10-02-0		
Process Operat	ion Units:	(1.) N/A				
(Name and Prev						
Permit Number,		(2.)				
·	• •	(3.)		Wiles		
		(4.)	\$ 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			
		(6.)		100		
	l emissions discha		Label product intake poir location of emissions contr	nts and product discharge points for each ol devices.		
PART II - PROC	CESS OPERATION	SCHEDULE				
zec West Pheta Then (Jest Steb a						
A. Normal sche	edule: (Provide inf	ormation for last y	ear. If a new unit, please e	estimate)		
Hours/day	24 Days/v	/eek <u>7</u> \	Weeks/year <u>52</u> Ho	urs/year <u>8760</u>		
Start time _	<u>00 : 00</u> E	End time	00			
Seasonal:		ry, and February o	nstead of calendar quarte f the calendar year reporte it of Annual Production	ers. The first season is split to include d.		
December,	January, & Februa	ry 25 Ji	une, July, & August	25		
March, April	, & May	25 S	eptember, October, & Nove	ember 25		
B. Requested limits: (Limitations on operating hours are optional.) Choose One:						
Company:	Allegheny Ludlum	Page:	Application – 1	Submit Original and Two Copies		

PLANT NAME AND LOCATION:

PART I - DESCRIPTION OF PROCESS	3				
Company Identification:	S035 –AOD Vessel	Preheater		-	
Installer: American Combustion	71000	Installation Date:	1983		
	N/A	motomation pate.	1000		
Design Charging or X Production		6 MMBtu/hr			
Total Annual Production (specify units n					
Raw Materials: Natural Gas					
Materials Produced: N/A					
Process Operation Units: (1.)	N/A				
Permit Number, if any) (3.)	<u> </u>				
(4.)					
(5.)					
(6.)					
Diagram of Process Flow: Attach a segment listed under Process Operatio segment. Label emissions discharge posses Attachment	on Segments. Label oints and the location	product intake point	s and product dis		
PART II - PROCESS OPERATION SCI	HEDULE				
Start time 00:00 End ti	7 Weeks/yme24 : 00 to seasons instead	ear <u>52</u> Hou of calendar quarter endar year reported	rs/year <u>8760</u> s. The first sea	ason is split to include	
December, January, & February _2	25 June, July	/, & August	25		
March, April, & May	September	er, October, & Nove	mber <u>25</u>		
B. Requested limits: (Limitations on operating hours are optional.) Choose One: X 8760 hours (no limitations) or I/We request the following limitation This may become a federally enforceable permit condition: Describe how this can be enforced: either list an operating schedule or downtime (e.g. only operate 8:00 to 4:00) or an operating hour reporting requirement. Total days x Hours/day = Hours/year					
Company: Allegheny Ludium	Page: Ap	olication – 1	5	Submit Original and Two Copies	

PLANT NAME AND LOCATION:

PART I - DES	PART I - DESCRIPTION OF PROCESS					
Company Idea	ntification:	5032 S033 S	034 American Horizon	tal AOD Ladie Preheaters 1-3		
	nerican Combustio		Installation Date:			
	operated by another		mstallation bate.	1994		
•	•		nits): 8 MMBtu/hr eac	n		
		inits normally used):				
Raw Materials	• • •	• ,	210.0 minory			
Materials Prod				, , , , , , , , , , , , , , , , , , , ,		
Process Oper		(1.) 93-I-0026				
•	revious County	` '				
Permit Number		(3)				
		12		-10-3		
		(0)				
		(0.)	in i	7002		
See Attachm	ent		cation of emissions contr	or devices.		
PART II - PRO	OCESS OPERATION	N SCHEDULE				
A. Normal sci Hours/day Start time Seasonal:	24 Days/v 00:00 Periods corresp	veek 7 We End time 24:00 ond to seasons insry, and February of the seasons instry, and February of the seasons instry, and February of the seasons instructions with the seasons instructions are seasons in the seasons		rs. The first season is split to include		
December	r, January, & Februa	ry 25 June	e. July. & August	25		
March, Ap			tember, October, & Nove			
B. Requested limits: (Limitations on operating hours are optional.) Choose One: X 8760 hours (no limitations) or I/We request the following limitation This may become a federally enforceable permit condition: Describe how this can be enforced: either list an operating schedule or downtime (e.g. only operate 8:00 to 4:00) or an operating hour reporting requirement. Total days x Hours/day = Hours/year						
Company:	Allegheny Ludlum	Page:	Application – 1	Submit Original and Two Copies		

PLANT NAME AND LOCATION:

PART I - DESCRIPTION OF PROCES	S					
Company Identification:	Sxx1, xx2, xx2, xx4 – Bloom Hori	zontal AOD Ladie Preheaters 4-7				
Installer: Bloom	Installation Da					
Contractor (if operated by another):						
Design Charging or X Production		nr each				
Total Annual Production (specify units						
Raw Materials: Natural Gas						
Materials Produced: N/A	***					
Process Operation Units: (1.)	0059-1007					
,	2 1993					
Permit Number, if any) (3)		33.41				
(4.)						
(5.)						
(6.)	7					
	on Segments. Label product intake	a flow diagram of this process, labeling each points and product discharge points for each control devices.				
PART II - PROCESS OPERATION SO	HEDULE					
Start time 00:00 End Seasonal: Periods correspond December, January, a	7 Weeks/year 52 time 24:00 to seasons instead of calendar quand February of the calendar year rep Percent of Annual Production	Hours/year 8760 uarters. The first season is split to include ported.				
December, January, & February _ March, April, & May _	June, July, & August September, October, &	25 November 25				
B. Requested limits: (Limitations on operating hours are optional.) Choose One: X 8760 hours (no limitations) or I/We request the following limitation This may become a federally enforceable permit condition: Describe how this can be enforced: either list an operating schedule or downtime (e.g. only operate 8:00 to 4:00) or an operating hour reporting requirement. Total days x Hours/day = Hours/year						
Company: Allegheny Ludlum	Page: Application – 1	Submit Original and Two				

PLANT NAME AND LOCATION:

PART I - DESCRIPTION OF PROCE	ESS (MAKE A COPY OF SC	CHEDULE A FOR EACH	PROCESS.)		
Company Identification:	S029 – Vertical EA	F Ladle Preheater 2			
Installer: Bloom Engineering		Installation Date:			
Contractor (if operated by another):	N/A	motaliation Date.			
Design Charging or _X Product		10.5 MMBtu/hr			
Total Annual Production (specify unit					
Raw Materials: Natural Gas	-				
Materials Produced: N/A		1202 - 1204			
7100	.) N/A				
•					
Down it Niverbox if on a			33.00.00		
(4	·/				
(5					
(6			.,		
(0	··) ₂	01=015			
See Attachment	•	or emissions contro	oi devices.		
PART II - PROCESS OPERATION S	SCHEDULE				
Start time 00:00 En Seasonal: Periods correspor December, January	ek 7 Weeks/y d time 24:00 nd to seasons instead , and February of the ca Percent of An	year <u>52</u> Hou of calendar quarted lendar year reported nual Production	rs. The first season is split to include		
December, January, & February	June, Jul	y, & August			
March, April, & May	25 Septemb	er, October, & Nove	mber <u>25</u>		
B. Requested limits: (Limitations on operating hours are optional.) Choose One:					
Company: Allegheny Ludlum	Page: Ap	plication – 1	Submit Original and Two Copies		

PLANT NAME AND LOCATION:

TANKS TO SERVICE SERVI		HIVMUKSIANDEST & SATUMBERS AND SATURATION OF THE				
PART I - DESCRIPTION OF PRO	OCESS (MAKE A COPY C	F SCHEDULE A FOR EACH	PROCESS.)			
Company Identification:	S028 - Vertical	S028 – Vertical EAF Ladle Preheater 1				
Installer: Bloom Engineering		Installation Date:	1983			
Contractor (if operated by another						
Design Charging or X Prod	• • •					
Total Annual Production (specify	• ,	92 MMcf/yr				
Raw Materials: Natural Gas	<u> </u>					
Materials Produced: N/A						
Process Operation Units:	(1.) N/A					
(Name and Previous County	(2.)					
Permit Number, if any)	(3.)					
	(4.)					
	(0.)					
		91				
Diagram of Process Flow: Attach a separate sheet with a drawing of a flow diagram of this process, labeling each segment listed under Process Operation Segments. Label product intake points and product discharge points for each segment. Label emissions discharge points and the location of emissions control devices. See Attachment						
PART II - PROCESS OPERATIO	N SCHEDULE					
A. Normal schedule: (Provide information for last year. If a new unit, please estimate) Hours/day 24 Days/week 7 Weeks/year 52 Hours/year 8760 Start time 00: 00 End time 24: 00 Seasonal: Periods correspond to seasons instead of calendar quarters. The first season is split to include December, January, and February of the calendar year reported. Percent of Annual Production December, January, & February 25 June, July, & August 25 March, April, & May 25 September, October, & November 25						
B. Requested limits: (Limitations on operating hours are optional.) Choose One: X 8760 hours (no limitations) or I/We request the following limitation This may become a federally enforceable permit condition: Describe how this can be enforced: either list an operating schedule or downtime (e.g. only operate 8:00 to 4:00) or an operating hour reporting requirement. Total days x Hours/day = Hours/year						
Company: Allegheny Ludlum	Page:	Application – 1	Submit Original and Two Copies			

PLANT NAME AND LOCATION:

PART I - DESCRIPTION OF PROCES	SS (MAKE A COPY OF	SCHEDULE A FOR EACH F	PROCESS.)			
Company Identification:						
	3040, 047 - Flat	S046, 047 – Plate Burner / Torch Cutter Nos. 1-2				
Installer: AL	NI/A	Installation Date:	1973			
Contractor (if operated by another):	N/A	\ 00 PERED (#	1 0/00/			
Design Charging or _X_ Production rate (specify units):3.0 MMBtu/hr each; 21.36 tons/hour each						
Total Annual Production (specify units		52.6 MMcf/yr; 374,227	tons/yr (both)			
Raw Materials: Natural Gas / Slabs						
Materials Produced: Cut Slabs			2000 to 300			
Process Operation Units: (1.)	0025603-000-11	600				
(Name and Previous County (2.))					
Permit Number, if any) (3.)		7)				
(4.)		1012				
(5.)						
(6.)	-		*** *** ***			
(0.)	S-3-05					
Diagram of Process Flow: Attach a separate sheet with a drawing of a flow diagram of this process, labeling each segment listed under Process Operation Segments. Label product intake points and product discharge points for each segment. Label emissions discharge points and the location of emissions control devices. See Attachment						
PART II - PROCESS OPERATION S	CHEDULE					
A. Normal schedule: (Provide information for last year. If a new unit, please estimate) Hours/day 24 Days/week 7 Weeks/year 52 Hours/year 8760 Start time 00:00 End time 24:00 Seasonal: Periods correspond to seasons instead of calendar quarters. The first season is split to include December, January, and February of the calendar year reported. Percent of Annual Production December, January, & February 25 June, July, & August 25 March, April, & May 25 September, October, & November 25 B. Requested limits: (Limitations on operating hours are optional.) Choose One: X 8760 hours (no limitations) or I/We request the following limitation This may become a federally enforceable permit condition: Describe						
how this can be enforced: eit operating hour reporting requir	ement.	_	e (e.g. only operate 8:00 to 4:00) or an			
Company: Allegheny Ludlum	Page:	Application – 1	Submit Original and Two Copies			

PART VI - EMISSION C	ONTROLS				
D011 BAGHOUSE	(fabrio callact	or) - Dioto Dur-	or / Torob C	Cuttor Paghavas	
Percent 90-	•	or) – Plate Burn rol efficiency)	ei / TOICH C	Cutter Baghouse	
Capture 100		. 2. 25.5.1037			
Gas flow through contro					
units	_ACFM_	@ _70	_ ºF		
Manufacturer's Name a	nd Model W/	HEELABRATOR	FRYE Mode	al 1 <i>44</i>	
Total filter cloth area	-			4.7:1	
Bag cleaning method:	Pulse Jet	,	cycle		*
Pressure Drop:	8 "H:	20,	_		
Pollutant	Efficienc	y (%)	Basis for Effi	iciency	Outlet Grain Loading
PM / PM-10	99.5	5	Mfg Es	t.	<0.01 gr/dscf
FUGITIVE DUST CONT	ROLS: Describ	e below or attacl	n a complete	e explanation of all	controls of fugitive emissions
not discussed in Form E				- Signation of on	
N/A					
DADT WILL OTA OK DA		TOTAL SAN	Sono tipoliti tipolici e		200 - 17 (II) 11 (II) 12 (II) 13 (II) 14 (III) 15 (III) 16 (III) 1
PART VII - STACK DA	IA				
Stack Identification: P	013 Vent Exhau	ıet			
UTM East 607317	OTO VEIN EXITA	UTM No	rth 44958	96	
8.					
Stack Height: 40	_ ft. Ground	level elevation	760	ft. Diameter	<u>N/A</u> ft.
Material		11	No. 2 .		
Outer: Exit temperature (°F):	70	Exit Velocity:	ng: 83.3	f/s.	
Exhaust Rate	70	Exit velocity.	00.0		
per unit: 60,000	(ACFM)	% Moisture:	5		
Nearest building to stac	k:				
distance <u>0</u>	ft. he	eight <u>50</u>	ft. lenç	gth <u>560</u>	ft. width <u>300</u> ft.
Processes Sharing Star	ck: If more than	one process shar	es a stack l	list and estimate re	lative contribution of each.
Description S046 Plat		•	co a stack, i	not and commute re	native contribution of each.
Contribution to emission		50 %			
Description S046 Plan	te Burner / Torch	n Cutter No. 2			NA
Contribution to emission	ns from stack	50 %			
Company: Allegher	ıy Ludlum	Page:	Application	1 – 3	Submit Original and Two

PLANT NAME AND LOCATION:

PART I - DESCRIPTION OF PRO	OCESS (MAKE A COR)	OF SCHEDULE A FOR FACH	DDOCESS)
			PROCESS.
Company Identification:	-	s Soaking Pit #11	
Installer: Loftus Engineering (Installation Date:	1970
Contractor (if operated by anothe	r): N/A		
Design Charging or X Prod	luction rate (specify u	inits): 26 MMBtu/hr	
Total Annual Production (specify	units normally used):	228 MMcf/yr	
Raw Materials: Ingots, Nat	tural Gas	245.1	
Materials Produced: Heated in	ante		
Process Operation Units:	(1.) N/A		
(Name and Previous County			
Permit Number, if any)	/2 \		
	` '	3378	
	40.3		
	(0.)		\$ 740 - C 1 2 - C
segment. Label emissions discha See Attachment PART II - PROCESS OPERATION		ocation of emissions contr	of devices.
A. Normal schedule: (Provide in	nformation for last ye	ar. If a new unit, please e	estimate)
Hours/day 24 Days/	/week 7 W	eeks/year 52 Ho	urs/year 8760
Seasonal: Periods corres	pond to seasons in ary, and February of		ers. The first season is split to include d.
December, January, & Februa	ary _25 Jui	ne, July, & August	_25
March, April, & May	25 Se	ptember, October, & Nove	ember _ 25
how this can be enforced operating hour reporting re	ns) or g limitation This m : either list an opera equirement.	ay become a federally	enforceable permit condition: Describe me (e.g. only operate 8:00 to 4:00) or an
Company: Allegheny Ludlum	Page:	Application – 1	Submit Original and Two Copies

PLANT NAME AND LOCATION:

PART I - DESCRIPTION OF PRO	CESS (MAKE A COPY O	F SCHEDULE A FOR EACH	PROCESS.)
Company Identification:	S060 – Loftus S	Soaking Pit #12	
Installer: Loftus Engineering C			1970
Contractor (if operated by another			
	-	s): 26 MMBtu/hr	
Total Annual Production (specify u			
Raw Materials: Ingots, Natu	1 0		
Materials Produced: Heated inc	-4-		
	A. P. C.		
(Name and Previous County			T-480
Permit Number, if any)	(2.)		
,			
	(5.)		
	(6.)		
segment. Label emissions discha See Attachment			ts and product discharge points for each ol devices.
PART II - PROCESS OPERATION	N SCHEDULE		
Start time 00:00 I Seasonal: Periods corresp	week 7 Week End time 24:00 bond to seasons insteary, and February of the	ks/year <u>52</u> Ho	urs/year
December, January, & Februa	ry 25 June,	July, & August	25
March, April, & May		ember, October, & Nove	ember 25
	s) or limitation This may either list an operation quirement.	become a federally on generally of the schedule or downting	enforceable permit condition: Describe ne (e.g. only operate 8:00 to 4:00) or an
Company: Allegheny Ludlum	Page:	Application – 1	Submit Original and Two

PART VII - STACK DATA
Stack Identification: P015 Soaking Pits #9-12 Stack Exhaust
UTM East 607260 UTM North 4495547
Stack Height: 125 ft. Ground level elevation 760 ft. Diameter 6 ft. Material Outer: Steel lining: Brick
Exit temperature (°F): 1000 Exit Velocity: 11.24 f/s.
Exhaust Rate per unit: 19,070 (ACFM) % Moisture: 10 Nearest building to stack: distance 20 ft. height TBD ft. length TBD ft. width TBD ft.
Processes Sharing Stack: If more than one process shares a stack, list and estimate relative contribution of each. Description _S057 Loftus Soaking Pit #9
Contribution to emissions from stack 25 % Description S058 Loftus Soaking Pit #10
Contribution to emissions from stack 25 % Description S059 Loftus Soaking Pit #11
Contribution to emissions from stack 25 % Description S060 Loftus Soaking Pit #12
Contribution to emissions from stack 25 %

Company: Allegheny Ludlum Page: Application – 3 Subm

PLANT NAME AND LOCATION:

PART I - DESCRIPTION OF PRO	OCESS (MAKE A CODY	OF COUEDINE A FOR FACIL	I PROCESS)
PART I - DESCRIPTION OF PRO	OCESS (MAKE A COPY)	OF SCHEDULE A FOR EACH	PROCESS.)
	S061 - Loftus		
Installer: Loftus Engineering (Installation Date:	1970
Contractor (if operated by anothe	· -		
Design Charging or X Prod			
Total Annual Production (specify	• •	228 MMcf/yr	
Raw Materials: Ingots, Nat			17
Materials Produced: Heated in			
Process Operation Units:	(1.) N/A		
(Name and Previous County	(2.)		
Permit Number, if any)	(3.)		
	(4.)		
	(5.)		197 - 198 -
	(6.)	11-2	
segment listed under Process Of segment. Label emissions discharge See Attachment			nts and product discharge points for each rol devices.
PART II - PROCESS OPERATIO	ON SCHEDULE		
Start time Seasonal: Periods corres December, Janu	week 7 We End time 24:00 pond to seasons instary, and February of the Percent of	eeks/year <u>52</u> Ho tead of calendar quarte he calendar year reporte of Annual Production	ers. The first season is split to include d.
December, January, & Febru			
how this can be enforced operating hour reporting re	ons on operating hours ns) or g limitation This ma d: either list an operat equirement.	y become a federally	One: enforceable permit condition: Describe me (e.g. only operate 8:00 to 4:00) or an
Company: Allegheny Ludlum	Page:	Application – 1	Submit Original and Two Copies

PLANT NAME AND LOCATION:

PART I - DESC	CRIPTION OF PR	OCESS (MAKE A C	OPY OF SCHEDULE A FOR EACH	PPOCESS /
				FROCE33./
Company Iden			oftus Soaking Pit #14	
Installer: Lof	tus Engineering	Company	Installation Date:	1970
Contractor (if o	perated by anoth	er): N/A		
Design Cha	arging or <u>X</u> Pro	duction rate (spec	ify units): 26 MMBtu/hr	
Total Annual P	roduction (specify	units normally us	ed): _228 MMcf/yr	
Raw Materials:	Ingots, Na	tural Gas		
Materials Prod	uced: Heated i		······································	
Process Opera	ation Units:	(1.) N/A		
(Name and Pre	evious County	(2.)	54	
Permit Number		(3)		
		(4.)	100	
		(4.)		
		(5.)		
		(6.)		
	el emissions discl		ne location of emissions contr	ts and product discharge points for each ol devices.
PART II - PRO	CESS OPERATI	ON SCHEDULE		
Hours/day Start time Seasonal:	24 Days 00:00 Periods corre December, Jane	s/week 7 End time 24 spond to seasons uary, and February Perc	instead of calendar quarte of the calendar year reported ent of Annual Production	rs. The first season is split to include d.
			June, July, & August	<u> 25 </u>
March, Apr	il, & May	25	September, October, & Nove	mber <u>25</u>
X 8760 I I/We re how this operatir	nours (no limitation equest the following socan be enforced ng hour reporting i	ns) or ng limitation Thi d: either list an o requirement.	s may become a federally eperating schedule or downting lay = Hours/year	One: enforceable permit condition: Describe ne (e.g. only operate 8:00 to 4:00) or an
Company:	Allegheny Ludlur	n Page:	Application – 1	Submit Original and Two Copies

PLANT NAME AND LOCATION:

DART L DESCRIPTION OF PROCESS		
PART I - DESCRIPTION OF PROCESS (MAKE A COPY OF SCHEDULE A FOR EACH	PROCESS.)
Company Identification:	6063 – Loftus Soaking Pit #15	
Installer: Loftus Engineering Company	y Installation Date:	1970
Contractor (if operated by another): N/A	4	
Design Charging or _X Production ra	ate (specify units): 26 MMBtu/hr	
Total Annual Production (specify units nor	mally used): 228 MMcf/yr	
Raw Materials: Ingots, Natural Gas		
Materials Produced: Heated ingots	****	
	N/A	
(Name and Previous County (2.)		
Permit Number, if any)	-	
(4)		
(5.)		
(6.)	200 1 <u>20</u>	
(6.)		700
Diagram of Process Flow: Attach a se segment listed under Process Operation segment. Label emissions discharge poin See Attachment	Segments. Label product intake point its and the location of emissions control	ts and product discharge points for each
PART II - PROCESS OPERATION SCHE	DULE	
Start time 00:00 End time Seasonal: Periods correspond to	7 Weeks/year 52 House 24:00 seasons instead of calendar quarter February of the calendar year reported Percent of Annual Production June, July, & August	rs. The first season is split to include it.
how this can be enforced: either operating hour reporting requireme	on This may become a federally e list an operating schedule or downtim	enforceable permit condition: Describe ne (e.g. only operate 8:00 to 4:00) or an
Company: Allegheny Ludium Pa	age: Application – 1	Submit Original and Two

PLANT NAME AND LOCATION:

DARTI DES	CDIDTION OF DE	OCESS (MAKE A CO	DPY OF SCHEDULE A FOR EACH	DDOCESS)
FARTI-DES	CKIPTION OF PR	OCESS (MAKE A CC	IPT OF SCHEDULE A FOR EACH	PROCESS.)
Company Idea	ntification:	S064 - Lot	tus Soaking Pit #16	
Installer: Lo	ftus Engineering	Company	Installation Date:	1970
Contractor (if	operated by anoth	er): <u>N/A</u>		
Design Ch	narging or X Pro	duction rate (specif	y units): 26 MMBtu/hr	
Total Annual I	Production (specify	units normally use	d): 228 MMcf/yr	
Raw Materials	i: Ingots, Na	atural Gas		
Materials Prod	duced: Heated i	ngots		
Process Oper	ation Units:	(1.) N/A		
(Name and Pr	revious County	(2.)		
Permit Number	er, if any)	(3.)	1000	
		(4.)	1407	
		(5.)	1991	
		14.7		
See Attachm	ent	ē	e location of emissions contr	ol devices.
PART II - PRO	OCESS OPERATI	ON SCHEDULE		
Hours/day Start time Seasonal:	24 Days 00:00 Periods corre December, Jan	s/week 7 End time24 : spond to seasons uary, and February Perce		urs/year 8760 rs. The first season is split to include
March, Ap	•	-	September, October, & Nove	
X 8760 I/We re how th operati	hours (no limitation equest the following is can be enforce ing hour reporting	ns) or ng limitation This d: either list an op requirement.	ours are optional.) Choose (may become a federally of erating schedule or downting at the company and the company are the co	enforceable permit condition: Describe ne (e.g. only operate 8:00 to 4:00) or an
Company:	Allegheny Ludlui	n Page:	Application – 1	Submit Original and Two Copies

PART VII - STACK DATA
Stack Identification: P016 Soaking Pits #13-16 Stack Exhaust
UTM East 607260 UTM North 4495547
Stack Height: 125 ft. Ground level elevation 760 ft. Diameter 6 ft. Material Outer: Steel lining: Brick
Exit temperature (°F): 1000 Exit Velocity: 11.24 f/s.
Exhaust Rate per unit: 19,070 (ACFM) % Moisture: 10 Nearest building to stack: distance 20 ft. height TBD ft. length TBD ft. width TBD ft.
Processes Sharing Stack: If more than one process shares a stack, list and estimate relative contribution of each. Description _S061 Loftus Soaking Pit #13
Contribution to emissions from stack 25 % Description S062 Loftus Soaking Pit #14
Contribution to emissions from stack 25 % Description S063 Loftus Soaking Pit #15
Contribution to emissions from stack 25 % Description S064 Loftus Soaking Pit #16
Contribution to emissions from stack 25 %

Company:

Allegheny Ludium

Page:

Application – 3

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PLANT NAME AND LOCATION:

PART I - DESCRIPTION OF PROCES	S (MAKE A COPY OF SC	HEDULE A FOR FACH I	PROCESS.)
Company Identification:	S090A - 56" Tande		
Installer: AL		Installation Date:	Unknown
Contractor (if operated by another):			
Design Charging or _X Production			227
Total Annual Production (specify units	normally used): 26	.3 MMcf/yr	W - W - W - W - W - W - W - W - W - W -
Raw Materials: Natural Gas			3
Materials Produced: N/A	N/A		
Process Operation Units: (1.)	N/A		1,2
(Name and Previous County Permit Number, if any) (2.)			
(5.)			
(4.)			
(5.)			
(6.)	5		
segment. Label emissions discharge p See Attachment		or emissions contro	ol devices.
PART II - PROCESS OPERATION SC	HEDULE		
Start time <u>00 : 00</u> End t	7 Weeks/y time 24:00 to seasons instead	ear <u>52</u> Hou of calendar quarter endar year reported	rs/year 8760 s. The first season is split to include
December, January, & February	25 June, July	, & August	25
March, April, & May	25 September	er, October, & Nove	mber 25
	operating hours are of ation This may be ner list an operating sement.	ptional.) Choose O come a federally e chedule or downtim	
Company: Allegheny Ludlum	Page: Ap	olication – 1	Submit Original and Two Copies

PERMIT APPLICATION FORM B FUEL BURNING OR COMBUSTION EQUIPMENT

PLANT NAME AND LOCATION:

Allegheny Ludlum

100 River Road, Brackenridge, PA 15014

PART I - DESCRI	PTION OF COMBL	ISTION UNIT (MA	KE A COPY OF SCHED	DULE B FOR EA	ACH UNIT)
Company Identific	ation:	S097 No. 3 De	epartment Boiler 1	ı	
	nson Boiler Compa		Unit Model		
	t and Type of Firing				
Steam Boiler	•		, ,	•	
Installer: AL			Installation D	Date: <u>1983</u>	
Contractor (if oper	ated by another):	NA			
Installation Date:	<u>NA</u>	Yo	ur Identification:	NA	
Previous County A	Air Pollution Permit	Number (if any):	0025603-000-0	0905	
Rated Capacity (B	34 (BTU/hr)	, ,,,	Maximum Capacity	/ (BTU/hr):	34
Normal Use (BTU	, <u> </u>		,		
Percent of Heat U	,	26			
Power Generation	n 0 % pro	cess 100	% space heating	0	% (Annual average)
	<u> </u>		_ ,		·
PART II - OPERA	TION SCHEDULE	Refer por 17th agr	- 4 。蝦 。	P=91	b 4 产业。 医战斗场 "但
RESIDENCE MOS PHILES	MILES THE CONTRACT OF THE PARTY		101 A 9		<u> </u>
A Normal sched	ule: (Provide infor	mation for last ves	r If a new unit nle	assa estimat	a)
	24 Days/wee	•	eks/year 52	Hours/yea	•
-	00 : 00		4 : 00	110013/yea	<u> </u>
				ro. The first o	accomic pulit to include December
	enous correspond to anuary, and Februa			rs. The iirst s	eason is split to include December,
	andary, and rebida	•	of Annual Productio	un.	
Docombor Io	nuani 9 Eahruani			· · · ·	25
•	nuary, & February		e, July, & August		25
March, April, 8	k May	25 Sep	tember, October, &	November	
•	nits: (limitations or		are optional) Choo	se One:	
	urs (no limitations) o				
					e permit condition: Describe how
		st an operating sc	hedule or downtime	e (e.g. only op	perate 8:00 to 4:00) or an operating
nour repo	rting requirement.				
	Total days ::	11	- /-l	Harmat :-	
	Total days x	Hour -	s/day	Hours/ye	аг
					

Company: Page: Application – 1 Submit Original and
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PERMIT APPLICATION FORM B FUEL BURNING OR COMBUSTION EQUIPMENT

PLANT NAME AND LOCATION:

Allegheny Ludium

100 River Road, Brackenridge, PA 15014

PART I - DESCRIPTION OF COMBUSTION UNI	T (MAKE A COPY OF SCHEDUL	E B FOR EACH UNIT)
Company Identification: \$098 No	o. 3 Department Boiler 2	
Unit Make: Johnson Boiler Company	Unit Model:	N/A
Description of Unit and Type of Firing (e.g. spread		
Steam Boiler	ac. stoker, haveling grate, c	,
Installer: AL	Installation Date	e: 1983
Contractor (if operated by another): NA		
Installation Date: NA	Your Identification: NA	A
Previous County Air Pollution Permit Number (if a	any): 0025603-000-0090	05
Rated Capacity (BTU/hr) 34	Maximum Capacity (E	3TU/hr): 34
Normal Use (BTU/hr) NA		,
Percent of Heat Used for:		300000000000000000000000000000000000000
Power Generation 0 % process 1	00 % space heating	0 % (Annual average)
PART II - OPERATION SCHEDULE		
December, January, & February March, April, & May 25 25 B. Requested limits: (limitations on operating limits) or I/We request the following limitation This	Weeks/year 52 24:00 Instead of calendar quarters. endar year reported.) Instead of Annual Production June, July, & August September, October, & Noncors are optional) Choose of may become a federally expression.	Hours/year 8760 The first season is split to include December, 25 ovember 25
Total days x	Hours/day	Hours/year

Company:	Page:	Application – 1	Submit Original and Two Copies
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PART VII - STACK DATA
Stack Identification: P035 Stack Exhaust
UTM East 606681 UTM North 4495693 or
Stack Height: 20 ft. Ground level elevation 760 ft. Diameter NA ft. Material
Outer: N/A Lining: N/A
Exit temperature (F): 350 Exit Velocity: 5.71 (f/s).
Exhaust rate: 11,200 (ACFM) % Moisture: 5
Nearest building to stack:
Distance 15 ft. height 60 ft. length 50 ft. width 35 ft.
Processes Sharing Stack: If more than one process shares a stack, list them and estimate relative contribution of each. Description S097 No. 3 Dept. Boiler 1 Contribution to emissions from stack 50 % Description S098 No. 3 Dept. Boiler 2 Contribution to emissions from stack 50 %

PERMIT APPLICATION FORM B FUEL BURNING OR COMBUSTION EQUIPMENT

PLANT NAME AND LOCATION:

Allegheny Ludlum

100 River Road, Brackenridge, PA 15014

PART I - DESCRIPTION O	F COMBUSTION U	NIT (MAKE A COPY OF	SCHEDULE B FOR I	EACH UNIT)
Company Identification:	S116	Misc. Natural Gas U	sage (space hea	aters, etc.)
Unit Make: Varies			Model: Varies	
Description of Unit and Type	e of Firing (e.g. spre			
Varies		, ,	, ,	
Installer: AL		Installa	ation Date: NA	
Contractor (if operated by a	nother): NA			
Installation Date: NA		Your Identificati	on: NA	
Previous County Air Pollution	n Permit Number (i	fany): NA		
•	160 MMBtu/hr			160 MMBtu/hr
Rated Capacity (BTU/hr)	(combined)	Maximum Ca	apacity (BTU/hr):	(combined)
Normal Use (BTU/hr)	NA			,
Percent of Heat Used for:				=
Power Generation 0	% process	0 % space h	eating 100	% (Annual average)
	<u> </u>	<u> </u>		
PART II - OPERATION SC	HEDULE	recommendado e a la composição de la compo		
Start time 00:00 Seasonal: (Periods cor	Days/week 7 End time respond to seasons and February of the c	Weeks/year	Hours/yequarters. The first	•
December, January, & F	ebruary <u>25</u>	June, July, & Au	gust	25
March, April, & May	25	September, Octo	ber, & November	25
	itations) or owing limitation Th d: Either list an oper	is may become a fe	derally enforcea	ble permit condition : Describe how operate 8:00 to 4:00) or an operating
Total o	days x	Hours/day =	Hours/y	/ear

Company:	Page:	Application – 1	Submit Original and Two Copies
- Company.	9	, delinearies 1	oubline original and 1 no oopioo

PLANT NAME AND LOCATION:

Allegheny Ludlum Corporation (ALC) 100 River Road, Brackenridge, PA 15014

PART I - DES	CRIPTION OF PR	OCESS (MAKE	A COPY OF SCH	IEDULE A FOR EACH	PROCESS.)
Company Ider	itification or				
Description:	itilication of	(2) Wal	lking Beam F	urnaces (S201, S	202)
Installer: AL	.C			nstallation Date:	
Contractor (if o	perated by anothe	er): N/A			
Design Ch	arging or X Pro	duction rate (sp	ecify units):	465 MMBtu/hr/f	urnace
Total Annual F	Production (specify	units normally	used): 6,1	10 MMscf/year/tot	al
Raw					(10
Materials:	Natural Gas fo			s	
	uced: Heated S				
Process Opera		(1.) <u>N/A</u>			0.3
	evious County	(2.)	100		
Permit Numbe	r, ir any)	(3.)			
		(4.)		2000	***************************************
		(5.)			
					- Ar was a
See Technica	el emissions disch I Support Docum OCESS OPERATIO	ent, Figure 2-2	2, General Flo	ow Path for the H	ot Rolling Technology Project
TAKI II-TIKC	OLOG OF ERATIO	JIV GOTTEDOLE	ASSESSMENT STORY		
	Periods corres	/week 7 End time 2 spond to seaso lary, and Febru	Weeks/ye 24 : 00 ons instead clary of the cale	ear <u>52</u> Ho	urs/year 8760 ers. The first season is split to include
December	, January, & Febru	ary 25	June, July	. & August	25
	ril, & May			r, October, & Nove	
<u>X</u> 8760 I/We re how thi	s can be enforced ng hour reporting r	ons on operating ns) or g limitation 1 d: either list ar equirement.	g hours are o This may bed n operating so	otional.) Choose (One: enforceable permit condition: Describe ne (e.g. only operate 8:00 to 4:00) or an
Company:	Allegheny Ludlun Corporation	n Page:	A pp	lication – 1	Submit Original and Two Copies

PART VII - S	TACK DATA			
	nust be provided for eac open air through a restr		ck, chimney or conduit (s	stacks) at which collected emissions
Stack Identifi	cation: P201; P202			
UTM East	607.097 Km	UTM North	4495.748 km	or
Longitude _	8-149-14-14-14-14-1-1-1-1-1-1-1-1-1-1-1-1	Latitude		
				If you know the UTM coordinates or together, a common location may be
Stack Height Material		nd level elevation _7	ft. Diameter	r <u>11</u> ft.
Outer:	TBD	lining	TBD	(4)
Exit temperat	ture (°F): <u>approx 920</u>	_ Exit Velocity: _	36 f/s.	
Exhaust Rate	e			
per unit:	_ 67,839 (SCFM)	% Moisture: <u>1</u>	7.8	
Nearest build		ility Layout		
dis	tance ft.	height	ft. length	ft. width ft.
each. Description Contribution Description Contribution Description	N/A to emissions from stack N/A to emissions from stack N/A to emissions from stack	% %	nares a stack, list them	and estimate relative contribution of
		Taking i		
PART VIII –	REMARKS			
			for Allowable, Potentia ies of control equipme	to Emit, and Actual Emissions to nt.
Company:	Allegheny Ludlum Corporation	Page: A	oplication – 7	Submit Original and Two Copies

PLANT NAME AND LOCATION:

Allegheny Ludlum Corporation (ALC)
100 River Road, Brackenridge, PA 15014

PART I - DESCRIPTION OF PROCESS (MAKE A COPY OF SCHEDULE A FOR EACH PROCESS.)

Company Identification or Description: Active Hot Boxes 1	
	Installation Date: 2010-2011
Contractor (if operated by another): N/A	
Design Charging or X Production rate (specify units):	10 MMBtu/hr each
Total Annual Production (specify units normally used): 19	/ MMscf/year (total)
Raw	
Materials Produced: Heated Specialty Products	
Process Operation Units: (1.) N/A	
(Name and Previous County (2.)	
(5.)	Are a whellouse soon
(0.)	
Diagram of Process Flow: Attach a separate sheet with segment listed under Process Operation Segments. Label processegment. Label emissions discharge points and the location See Technical Support Document, Figure 2-2, General Flows	product intake points and product discharge points for each of emissions control devices.
Đ	
	emption-squiritionaries experimentalismes and already of a second consequence of a first source transfer in the second consequence in the second consequence of the second con
PART II - PROCESS OPERATION SCHEDULE	
A. Normal schedule: (Provide information for last year. If a Hours/day 24 Days/week 7 Weeks/year Start time 00:00 End time 24:00	new unit, please estimate) ear <u>52</u> Hours/year <u>8760</u>
Seasonal: Periods correspond to seasons instead of December, January, and February of the call Percent of Anni	•
December, January, & February 25 June, July	v, & August 25
March, April, & May 25 September	er, October, & November 25
	come a federally enforceable permit condition: Describe chedule or downtime (e.g. only operate 8:00 to 4:00) or an
Company: Allegheny Ludium Page: App	Olication – 1 Submit Original and Two Copies

PART VII - ST	TACK DATA				
	ust be provided for ea open air through a res		e, stack, chimney o	or conduit (stack	s) at which collected emissions
Stack Identific	cation: N/A (Volume	Source)(Z206)			
UTM East		UTM N			0.00,000 (0.00,000,000,000,000,000,000,000,000,00
					u know the UTM coordinates or ther, a common location may be
Stack Height:	ft. Gro	und level elevation	n ft.	Diameter	ft.
Material				_	
Outer:			lining:		
Exit temperate	ure (°F):	Exit Veloci	ty: N/A	f/s.	
	: (SCFI	M) % Moisture	e:		
	ing to stack: N/A cance ft.	hoight	ft langth		ft. width ft.
uisi	.ance it.	neight	it. length		_ ft. width ft.
Processes S each.	haring Stack: If mo	ore than one proc	ess shares a stack	k, list them and	estimate relative contribution of
Description	N/A				
	o emissions from stack	%	F.1.		II- L. III GRO
Description					
	o emissions from stack	<u> </u>			
Description		<u></u>			
Contribution t	o emissions from stack	·%			5/9
Description	N/A				
PART VIII - R	EMARKS	经验的表示 更是			
N/A		B CANADA CONTRACTOR OF THE STREET			
	lations and reference Reference all emission				Emit, and Actual Emissions to
Company:	Allegheny Ludlum Corporation	Page:	Application – 6		Submit Original and Two Copies

PLANT NAME AND LOCATION:

Corporation

Allegheny Ludlum Corporation (ALC) 100 River Road, Brackenridge, PA 15014

PART I - DESC	CRIPTION OF PR	OCESS (MAKE A C	OPY OF SCHEDULE A FOR EACH I	PROCESS.)	
Company Iden	tification or		754		
Description:		(6) Car B	ottom Furnaces (S211, S212,	S213, S214, S215, S2	16)
Installer: AL	C		Installation Date:		
	perated by anoth	er): N/A			
•	•	·	ify units): 21.2 MMBtu/hr/f		
		, ,	ed): 846 MMscf/year/total		
Raw	(-,	,			
Materials:	Natural Gas fo	r Heating Special	ty Products		
Materials Prod	uced: <i>Heated</i>	Specialty Product			
Process Opera	tion Units:	(1.) N/A			
(Name and Pre	evious County	• •			
Permit Number	r, if any)	(3.)			
		(4)		400	
		(5.)			
		(0.)	17.5 E. S.		
		_	General Flow Path for the Ho	ot Rolling Technology	Project
PART II - PRO	CESS OPERATI	ON SCHEDULE			
Hours/day Start time Seasonal:	24 Days 00:00 Periods corre December, Jan	s/week 7 End time 24 spond to seasons uary, and February Perc	t year. If a new unit, please ex Weeks/year <u>52</u> Hou : 00 s instead of calendar quarter of the calendar year reported ent of Annual Production June, July, & August	rs. The first season	is split to include
March, Apr		25 25	September, October, & Nove		
Maion, Api	II, & Iviay		September, October, & Nove	111Del <u>23</u>	
X 8760 h l/We re how this	nours (no limitation	ns) or ng limitation Thi d: either list an o	ours are optional.) Choose C s may become a federally e perating schedule or downtim	enforceable permit co	ndition: Describe :00 to 4:00) or an
Company:	Allegheny Ludlui	n Page:	Application – 1	Submi	it Original and Two

PART VII - S	TACK DATA						
	ust be provided for e open air through a re			himney o	r conduit (stack	s) at which collect	ed emissions
Stack Identific	cation: N/A (fugitiv	e source, Z211,	Z212, Z213,	Z214, Z2	15, Z216)		
UTM East		UT	M North			or	
			titude				
	nt stacks have been ongitude, provide this						
Stack Height:	ft. Gr	ound level eleva	ation	ft.	Diameter	ft.	
Material	-				_		
Outer:			lining:				
	ure (ºF):				f/s.		
Exhaust Rate	: (SCF	M per frnc)	% Moisture:				
	ing to stack: N/A		_				_
dis	tance1	ft. height	ft.	length		_ ft. width	ft.
Processes S each.	haring Stack: If r	nore than one p	rocess share	s a stack	, list them and	estimate relative of	ontribution of
Description	NA						
	o emissions from sta	ck	%	55			
Description			-				
	o emissions from sta	ck	%				-
Description							
•	o emissions from sta	ck	%				
Description							
DADT VIII - D	EHADIZO		NETO LICENTARI MARKA				
	REMARKS						
	lations and reference Reference all emissi					Emit, and Actual	Emissions to
Company:	Allegheny Ludlum Corporation	Page:		Applicat	ion – 6	Submit Or	ginal and Two Copies

PART I - DESCRIPTION OF PROCESS (MAKE A COPY OF SCHEDULE A FOR EACH PROCESS.)

PLANT NAME AND LOCATION:

Allegheny Ludlum Corporation (ALC) 100 River Road, Brackenridge, PA 15014

Company	Identification or Descriptio	n: Plas	sma Torch C	utting Opera	ition (S221)		
Installer:	ALC			Instal	ation Date:	2010-2	011
Contractor	r (if operated by another):	N/A					
Design _	_ Charging or <u>X</u> Product	ion rate (specify	y units):	_30,	000 tons /yea	ır	
Total Annu	ual Production (specify uni	ts normally use	d):	30,000 to	ns/year		
Raw Mate	rials: Specialty Produ	ucts					
Materials I	Produced: Specialty	y Products					
Process C	peration Units:	(1.) N/A					
	d Previous County Permit				11 537 11 537		
Number, it	f any)	(0.)					
		(4.)					
		(5.)					
AT ESSA KARI KRESASSAR	PROCESS OPERATION S schedule: (Provide information of the control	mation for last y		unit, please	•	Hours/year	8760
Start tin	, <u> </u>	End time	vve	cks/year	I	ioui si yeai	8700
Season		to seasons instant	stead of cale	ır year repor		season is s	plit to include
Decem	ber, January, & February	25	June	, July, & Aug	ust		25
March,	April, & May	25	Sept	ember, Octo	oer, & Novem	ber	25
B Reque	sted limits: (Limitations o	on operating ho	ure are ention		_		
_X 87 I/W Des	(60 hours (no limitations) of Ve request the following scribe how this can be enfoly or an operating hour rep	or Iimitation Th orced: either li	i is may bec st an operati ent.	ome a fedeng schedule	erally enforce or downtime	(e.g. only o	

PART VII -	STACK DATA						
	must be provided to open air through			ck, chimney o	r conduit (sta	cks) at which c	ollected emissions
Stack Identi	ification: P221		70000				
UTM East	TBD		UTM North	TBD		or	
Longitude			Latitude				
							TM coordinates or on location may be
Stack Heigh	nt: _TBD ft.	Ground level e	elevation _7	65 ft.	Diameter	TBD ft.	
Material			_				
Outer:	(05) TDD		lining	•	•		
	ature (°F): TBD		-	TBD	f/s.		
Exhaust Ra		•	Moisture: <u>T</u>	BD			
	ilding to stack: N listance			_ ft. length		ft. width	ft.
each. Description Contribution Contribution Description Contribution Contribution Contribution Description	n to emissions from N/A n to emissions from N/A n to emissions from N/A	stack	% % %	ondres a stack	, iist them an	u estimate rela	tive contribution of
PART VIII -	REMARKS						
	culations and refe Reference all em						tual Emissions to
Company:	Allegheny Ludi Corporation	um Page:	9	Applicat	tion – 6	Subn	nit Original and Two Copies

TABLE V-A-1: Walking Beam Furnaces Emission Limitations

POLLUTANT	HOURLY EMISSION LIMIT (each furnace) (lb/hr)	ANNUAL EMISSION LIMIT (each furnace) (tons/year) ¹	ANNUAL EMISSION LIMIT (combined furnaces) ² (tons/year) ¹
PM ³	4.9	21.46	32.19
PM10 ⁴	4.9	21.46	32.19
PM2.5 ⁵	4.9	21.46	32.19
SOx (as SO ₂)	0.28	1.22	1.83
NOx	32.55	142.57	213.85
СО	9.30	40.73	61.10
VOCs	2.51	11.00	16.50

A year is defined as any 12 consecutive months.

j. The pounds per hour emissions limitations in Condition V.A.1.i above apply at all times during operation including startup and shutdown. (§2102.04.b.6, §2102.06.b.1, §2104.08, 25 Pa. Code §129.97(g)(1)(i))

2. Testing Requirements:

- a. The permittee shall conduct emissions tests at the maximum production rate at which each Walking Beam furnace will be operated at least once every five (5) years in accordance with the Site Level Condition IV.13 above ("Emissions Testing Requirements") to determine compliance with the emissions limitations of Condition V.A.1.i above for NO_X and VOC, CO, PM, PM₁₀, PM_{2.5}, and for manganese while a manganese-containing mold flux is used. Upon written application setting forth all information necessary to evaluate the application, the Department may, for good cause shown, extend the time for conducting such tests beyond 120 days after startup, but shall not extend the time beyond 60 days after achieving full production. (§2102.04.b.6, §2102.04.e., §2103.12.i., §2108.02, 25 Pa. Code §129.100)
- b. Emissions testing shall be performed in accordance with the following test methods unless an alternate test method is approved by the Department in writing: (§2102.04.b.6, §2102.04.e., §2103.12.i., §2108.02)
 - 1) Particulate matter emissions shall be determined in accordance with EPA Method 5;
 - 2) PM₁₀ (filterable and condensable) and PM_{2.5} (filterable and condensable) emissions shall be determined in accordance with EPA Method 202;
 - 3) Emissions of nitrogen oxides shall be determined in accordance with EPA Method 7E;
 - 4) Emissions of volatile organic compounds shall be determined in accordance with EPA Method 25 or 25A;
 - 5) Emissions of carbon monoxide shall be determined in accordance with EPA Method 10.

² Combined emissions are based on natural gas usage limit in condition V.A.1.c above.

³ PM emissions include filterable and condensable particulate matter and include PM₁₀ and PM_{2.5} emissions.

⁴ PM₁₀ emissions include filterable and condensable particulate matter and include PM_{2.5} emissions.

⁵ PM_{2.5} emissions include filterable and condensable particulate matter.

D. **Process P-006:** Three Active Hot Boxes

Process Description:

Active Hot Boxes

Facility ID:

P-006

Max. Design Rate/Units:

10 MMBtu/hr each

Raw Materials:

Natural Gas

Control Device(s):

Ultra low NOx burners

1. Restrictions

- a. The Active Hot Boxes shall only fire pipeline quality natural gas. (§2102.04.b.6, §2102.05, §2102.06.b.1, §2102.07, 25 Pa. Code §129.97(c)(2) and (3))
- b. Heat input to the Active Hot Boxes shall be limited to 10 MMBtu/hr. each (§2102.04.b.6, 25 Pa. Code §129.97(c)(2)and (3))
- The total natural gas input to the Active Hot Boxes shall not exceed 188 million cubic feet per any c. twelve (12) consecutive months. (§2102.04.b.6, §2102.05, §2102.06.b.1, §2102.07, 25 Pa. Code §129.97(c)(2) and (3))
- d. The permittee shall not operate or allow to be operated the Active Hot Boxes unless ultra-low NO_X burners (ULNBs) are in place and operating according to manufacturer's specifications. (§2102.04.b.6, §2102.05, §2102.06.b.1, §2102.07; §2105.03, 25 Pa. Code §129.97(c)(2) and (3))
- e. The permittee shall employ effective combustion and operational control practices to minimize emissions of VOC, CO, SO_X, PM, PM₁₀, and PM_{2.5}. (§2102.04.b.6, §2102.05, §2102.06.b.1, §2102.07, §2105.03, 25 Pa. Code §129.97(c)(2) and (3))
- f. Emissions from the Active Hot Boxes shall not exceed the following (§2102.04.b.6, §2102.06.b.1):

Table V-D-1: Active Hot Boxes 1, 2 and 3 Emissions, Total

POLLUTANT	COMBINED EMISSIONS (lbs/hr)	COMBINED EMISSIONS (tpy ¹⁾
PM ²	0.22	0.73
PM_{10}^{3}	0.22	0.73
PM _{2.5} ⁴	0.22	0.73
SULFUR OXIDES (as SO ₂)	0.02	0.06
NITROGEN OXIDES	2.10	6.90
CARBON MONOXIDE	2.10	6.90
VOLATILE ORGANIC COMPOUNDS	0.15	0.49

¹ A year is defined as any 12 consecutive months.

² PM emissions include filterable and condensable particulate matter and include PM₁₀ and PM_{2.5}

³ PM₁₀ emissions include filterable and condensable particulate matter and include PM_{2.5} emissions.

E. Process P-006: Four (4) Car Bottom Furnaces

Process Description:

Four (4) Car Bottom Furnaces

Facility ID:

P-006

Max. Design Rate/Units:

21.2 MMBtu/hr per furnace

Raw Materials:

Natural Gas

Control Device(s):

Ultra low NO_X burners on each furnace

1. Restrictions

a. The four (4) Car Bottom furnaces shall only fire pipeline quality natural gas. (§2102.04.b.6, §2102.05, §2102.06.b.1, §2102.07, 25 Pa. Code §129.97(b)(1) and (c)(2))

- b. Heat input to the four (4) Car Bottom furnaces shall be limited to 21.2 MMBtu/hr each. (§2102.04.b.6, 25 Pa. Code §129.97(b)(1) and (c)(2))
- c. The total natural gas input to the four (4) Car Bottom furnaces shall not exceed 531 million cubic feet per any twelve (12) consecutive months. (§2102.04.b.6, §2102.05, §2102.06.b.1, §2102.07, 25 Pa. Code §129.97(b)(1) and (c)(2))
- d. The permittee shall not operate or allow to be operated any of the Car Bottom furnaces unless ultralow NO_x burners (ULNBs) are in place and operating according to manufacturer's specifications. (§2102.04.b.6, §2102.05, §2102.06.b.1, §2102.07)
- e. The permittee shall employ effective combustion and operational control practices to minimize emissions of VOC, CO, SO_X, PM, PM₁₀, and PM_{2.5}. ($\S2102.04.b.6$, $\S2102.05$, $\S2102.06.b.1$, $\S2102.07$, $\S2105.03$, $\S2$ Pa. Code $\S129.97(b)(1)$ and (c)(2))
- f. Emissions from the four (4) Car Bottom furnaces shall not exceed the following (§2102.04.b.6, §2102.06.b.1, 25 Pa. Code §129.97(b)(1) and (c)(2)):

Table V-E-1: Car Bottom Furnaces 1, 2, 3 and 4 Emissions

POLLUTANT	LBS/HR (each furnace)	TPY (each furnace) ¹	TPY (combined emissions) ²
PM ³	0.16	0.69	2.06
PM ₁₀ ⁴	0.16	0.69	2.06
PM _{2.5} ⁵	0.16	0.69	2.06
SULFUR OXIDES	0.01	0.05	0.16
NITROGEN OXIDES	1.87	8.17	24.51
CARBON MONOXIDE	1.48	6.50	19.50
VOLATILE ORGANIC COMPOUNDS	0.11	0.46	1.39

A year is defined as any 12 consecutive months.

² Combined emissions are based on natural gas usage limit in Condition V.E.1.c above.

³ PM emissions include filterable and condensable particulate matter and include PM₁₀ and PM_{2.5} emissions.

G. Process P-007: Plasma Torch Cutting Operation

Process Description:

Plasma Torch Cutting Operation

Facility ID:

P-007

Capacity:

30,000 tons/yr

Raw Materials:

Specialty Steel Products

Control Device:

Baghouse

1. Restrictions

- a. The permittee shall employ effective operational control practices to minimize emissions of NO_x. (§2102.04.b.6, §2102.05, §2102.06.b.1, §2102.07, §2105.03, 25 Pa. Code §129.97(c)(1))
- b. NO_X emissions from the Plasma Torch Cutting operation shall not exceed 0.79 pound per hour. ($\S2102.04.b.6$, $\S2102.05$, $\S2102.06.b.1$, $\S2102.07$, 25 Pa. Code $\S129.97(c)(1)$)
- c. NO_X emissions from the Plasma Torch Cutting operation shall not exceed 3.46 tons per year. ($\S2102.04.b.6$, $\S2102.05$, $\S2102.06.b.1$, $\S2102.07$, 25 Pa. Code $\S129.97(c)(1)$)
- d. Emissions of PM, PM₁₀ and PM_{2.5} from the Plasma Torch Cutting operation shall be controlled by a baghouse. (§2102.04.b.6)
- e. PM, PM₁₀ and PM_{2.5} emissions from the Plasma Torch Cutting operation baghouse shall not exceed 0.01 pound per hour. (§2102.04.b.6)
- f. In addition to the requirements of Site Level Condition IV.2 above, visible emissions from the stack shall not exceed 10.0% opacity, based on a 6-minute average. Such opacity shall be determined by EPA Method 9. (§2102.04.b.6). §2102.04.b.6)
- g. Emissions from the Plasma Torch Cutting operation shall not exceed the following: (§2102.04.b.6, §2102.06.b.1, §2104.02.b, 25 Pa. Code §129.97(c)(1)):

Table V-G-1: Plasma Torch Cutting Emissions

POLLUTANT	LBS/HR	TPY 1
PM ²	0.01	0.04
PM_{10}^{3}	0.01	0.04
PM _{2.5} ⁴	0.01	0.04
NITROGEN OXIDES	0.79	3.46

¹ A year is defined as any 12 consecutive months.

2. Testing Requirements

The Department reserves the right to require emissions testing sufficient to assure compliance with the terms and conditions of this permit. Such testing shall be performed in accordance with Article XXI

² PM emissions include filterable particulate matter and include PM₁₀ and PM_{2.5} emissions.

³ PM₁₀ emissions include filterable particulate matter and include PM_{2.5} emissions.

⁴ PM_{2.5} emissions include filterable particulate matter.

H. Process P-014: One (1) Emergency Generator

Process Description:

One (1) Emergency Generator

Facility ID:

EG-001

Max. Design Rate/Units:

2,250 kW (3,015 hp)

Raw Materials:

Diesel Fuel

Control Device(s):

Uncontrolled

1. Restrictions

- a. The operation of the emergency generator shall be limited to two hundred (200) hours per twelve (12) consecutive month period during those times when power supplied by a public utility is unavailable. (§2102.04.b.6, §2102.05, §2102.06.b.1, §2102.07, 25 Pa. Code §129.97(c)(8))
- b. The emergency generator (EG-001) must comply with the emission limitations in Table V-H-1 below. (§2102.04.b.6, §2102.06.b.1, 25 Pa. Code §129.97(c)(8))

TABLE V-H-1: Emergency Generator Emissions

POLLUTANT	HOURLY EMISSION LIMIT (lbs/hr)	ANNUAL EMISSION LIMIT (tons/year) ¹
PM	1.00	0.10
PM ₁₀	1.00	0.10
PM _{2.5}	1.00	0.10
SO ₂	0.04	0.004
NO _x	31.91	3.19
CO	17.28	1.73
VOC	31.91	3.19

¹ A year is defined as any consecutive 12-month period.

- c. The permittee shall only combust or allow to be combusted fuel oil that meets the following requirements: (§60.4207(b), §2103.20.b.4, §80.510(b), §2102.04.b.6D, §2105.03, 25 Pa. Code §129.97(c)(8))
 - 1) Sulfur content no higher than 0.0015% sulfur content (by weight); and
 - 2) Cetane index equal to 40 minimum or aromatic content equal to 35% volume maximum.
- d. The engines may be operated for the purpose of maintenance check and readiness testing, provided that the tests are recommended by the Federal, State County, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing are limited to 100 hours per year. ((§2102.04.b.6, §60.4211(e), 25 Pa. Code §129.97(c)(8))

2. Testing Requirements

a. The Department reserves the right to require emissions testing sufficient to assure compliance with the terms and conditions of this permit. Such testing shall be performed in accordance with Site Level Condition IV.13 above entitled "Emissions Testing. (§2103.12.h.1, §2108.02, 25 Pa. Code §129. 100)