



Environmental Affairs Department
100 River Road, Brackenridge, PA 15014-1597

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12/23/2022

AIR QUALITY
DEP, Southwest Regional Office

December 23, 2022

Mr. Mark Gorog, P.E.
PA Department of Environmental Protection
Southwest Regional Office
400 Waterfront Drive
Pittsburgh, PA 15222-4745

Dear Mark:

Subject: Reasonably Available Control Technology Notification (RACT III)
ATI Flat Rolled Products Holdings, LLC – Vandergrift Facility

In accordance with proposed Air Quality Regulations of the Pennsylvania Department of Environmental Protection (PADEP), major sources of Volatile Organic Compounds (VOC) and/or Oxides of Nitrogen (NO_x) are required to submit a RACT notification and/or proposal identifying how our facility will comply with RACT III requirements. Accordingly, enclosed is the RACT notification and proposal for ATI Flat Rolled Products Holdings, LLC which identifies presumptive RACT requirements, methods of demonstrating compliance, and case-by-case analyses for the emission units located at our Vandergrift, PA Facility.

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

Very Truly Yours,

A handwritten signature in blue ink, appearing to read "Deborah L. Calderazzo", with a horizontal line extending to the right.

Deborah, L. Calderazzo
Director, EHS

Attachments

ATTACHMENT 1

PRESUMPTIVE RACT,

RACT EXEMPT UNITS,

and

CASE-BY-CASE RACT ANALYSIS

ATTACHMENT 1

PRESUMPTIVE RACT

The Vandergrift Facility of ATI is a major source of NO_x and is not 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, and/or sources with NO_x potential to emit <5 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. Please note that the requirement to operate in accordance with manufacturer's specifications and good operating practices is an existing Title V/RACT and/or Plan Approval Permit requirement for these sources.

Source ID	Description	Rated Capacity
116	Misc Space Heaters	<20 MMBTU/hr each
033	Boiler No. 3	7 MMBtu/hr
121F	No. 91 A&P - Kolene Heater	8 MMBtu/hr
123B	BA Furnace (<i>startup CY2023</i>)	17.7 MMBtu/hr
124	Hood Anneal Furnace (<i>startup CY2023</i>)	3.6 MMBtu/hr

ATTACHMENT 1 - CONTINUED

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 annual RACT tune-ups and inspections are existing Title V/RACT Permit requirements for these sources.

Source ID	Description	Rated Capacity
031	No. 1 Boiler	26.1 MMBTU/hr
032	No. 2 Boiler	26.1 MMBTU/hr

ATTACHMENT 1 - CONTINUED

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 on No. 90 A&P Annealing Furnace, No. 90 A&P HNO₃/HF Pickling, and No. 91 A&P HNO₃/HF Pickling and approved by PA DEP. The No. 91 A&P Annealing Furnace case-by-case analysis is based on the same technologies and rationale as No. 90 A&P Annealing Furnace, and No. 91 A&P HNO₃/HF Pickling case-by-case analysis is based on the same technologies and rationale as No. 90 A&P HNO₃/HF Pickling. In addition, the RACT II case-by-case analysis results were incorporated into the Title V Permit. The RBLC was searched and new technologies were not identified. In addition, the No. 90 A&P Annealing Furnace and the No. 91 A&P Annealing Furnace undergo RACT combustion tune-ups/inspections annually (existing Title V requirements) and NO_x is tested annually using a portable analyzer.

Source ID	Description	Rated Capacity
120A	No. 90 A&P - Annealing Furnace	50.5 MMBTU/hr
121B	No. 91 A&P - Annealing Furnace	42 MMBTU/hr
120D	No. 90 A&P - HNO ₃ /HF Pickling	40 tons/hr
121E	No. 91 A&P - HNO ₃ /HF Pickling	35 tons/hr

ATTACHMENT 1 - CONTINUED

RACT Exempt Emission Units

RACT EXEMPT per § 129.111(c) - PTE NO _x < 1 TPY		Rated Capacity
120E	No. 90 A&P - Strip Dryer	1.3 MMBTU/hr
121A	No. 91 A&P - Strip Dryer No. 1	1.3 MMBTU/hr
	No. 91 A&P - Strip Dryer No. 2	1.3 MMBTU/hr
118	Emergency Generator (startup CY2023)	410 KW

ATI FLAT ROLLED PRODUCTS HOLDINGS, LLC

VANDERGRIFT FACILITY – RACT PROPOSAL

December 2022

1. GENERAL

In accordance with proposed Air Quality Regulations of the Pennsylvania Department of Environmental Protection (PADEP), major sources of Volatile Organic Compounds (VOC) and/or Oxides of Nitrogen (NO_x) are required to submit a Proposal to achieve Reasonably Available Control Technology (RACT) on specified sources of VOC and/or NO_x. Proposed regulations in 25 PA Code §129.114 and §129.115 require that a RACT Proposal and/or notification be submitted for certain sources by December 31, 2022.

At the Vandergrift Facility of ATI Flat Rolled Products Holdings, LLC (ATI), four (4) sources of NO_x were evaluated for top-down analysis in this RACT Proposal:

- No. 90 Anneal and Pickling (A&P) Line Annealing Furnace
- No. 91 Anneal and Pickling (A&P) Line Annealing Furnace
- No. 90 A&P Line Mixed Acid Pickling
- No. 91 A&P Line Mixed Acid Pickling.

Applicable control technologies were identified, technically infeasible options were eliminated, remaining technologies were ranked by control effectiveness, and the total and incremental cost effectiveness for each remaining control option was determined. Note that No. 90 A&P Line and No. 91 A&P Line are already regulated under our existing Title V Operating Permit and RACT regulations.

Based on the results of the top-down analyses, it was concluded that No. 90 A&P Line Annealing Furnace, No. 91 A&P Line Annealing Furnace, No. 90 A&P Line Mixed Acid Pickling, and No. 91 A&P Line Mixed Acid Pickling processes satisfy RACT requirements under present operating conditions.

2. FACILITY DESCRIPTION

The Vandergrift Facility of ATI is a specialty materials finishing facility. The principal products produced at Vandergrift are finished specialty strip. In general, finishing operations include annealing, pickling and cold rolling. Annealing is the process of altering the properties of the product by subjecting it to controlled thermal cycles with moderate peak temperatures. Annealing relieves thermal and mechanical stresses induced by the rolling operations and softens the product to improve its formability. Mixed Acid Pickling is a cleaning process for specialty products; mixed acid (nitric and hydrofluoric acids) dissolve and chemically remove oxidized metal and other materials from the product.

3. EMISSIONS INFORMATION

Nos. 90 and 91 Anneal and Pickle (A&P) Lines are included in Title V Permit 65-00137. NO_x potential emissions are based on the permitted NO_x emission rates.

TABLE 1 - NO_x POTENTIAL TO EMIT

Source ID	Description	Emission Rate (lb/hr)	Potential to Emit (TPY)
120A	No. 90 A&P Line Anneal Furnace	5.94 lb/hr	26 tons/year
121B	No. 91 A&P Line Anneal Furnace	6.0 lb/hr	24.9 tons/year
120D	No. 90 A&P Line HNO ₃ /HF Pickling	23.5 lb/hr	103 tons/year
121E	No. 91 A&P Line HNO ₃ /HF Pickling	19.7 lb/hr	57.4 tons/year

4. TECHNICAL AND ECONOMIC ANALYSES OF NO_x CONTROL OPTIONS

The principal methodology employed for case-by-case analysis is patterned after the "Guidance Document on Reasonably Available Control Technology for Sources of NO_x Emissions." There are two (2) major phases of analyses incorporated into the top-down review of control options.

First is a review of available control options to determine their feasibility for application to specific individual sources and the associated control effectiveness. Among the factors taken into consideration in determining technological feasibility are temperature requirements/limitations, potential for fouling, installation space limitations and creation of additional environmental liabilities such as secondary pollutants or new wastestreams.

Only the control options that were judged to be technologically feasible were analyzed for economic feasibility. This was the second major phase of the top-down approach. The principal activities during this phase were estimating the capital and operating costs for incorporating each control option into each applicable source. Cost information was obtained from the technology references and budgetary vendor quotations were obtained for selected items of control equipment and detailed construction estimates were prepared.

Calculations of annualized total costs for control options were developed in accordance with the PADEP Guidelines and the cost control manual of EPA's OAQPS. By dividing the annualized total costs by the estimated annual reduction in NO_x, the "total cost effectiveness" of each option was computed. Incremental cost effectiveness ratios were calculated and reported.

The calculated total cost effectiveness was compared with the regulatory cost effectiveness threshold to determine the economic feasibility of each option. For NO_x, in accordance with the PA DEP proposed regulation in §129.114, the regulatory threshold is \$7,500/ton. If the calculated cost effectiveness exceeded this threshold value, the control option was determined to be economically infeasible, therefore, beyond RACT. The economic comparison of costs versus the threshold proceeded from the top-listed control option to lower listed options. The top-down process was continued until a control option was evaluated as both technologically feasible and cost effective, or until no options were found to be feasible and cost effective.

Description of Available NO_x Control Technologies

Technologies for controlling NO_x emissions from various steel making processes can be divided into three basic categories: 1) combustion modifications; 2) post-combustion or post-process modifications; and 3) post-process controls.

1) Combustion Modifications:

- Low excess air (LEA) operation
- Low-NO_x burners (LNB)
- Low-NO_x burners plus flue gas recirculation (FGR)

2) Post-Combustion or Post-Process Modifications:

- Selective catalytic reduction (SCR)
- Selective non-catalytic reduction (SNCR)

3) Post-Process Controls:

- Hydrogen-peroxide Injection
- Absorption with chemical reaction
- Absorption

Combustion Modifications

Low Excess Air (LEA) Operation

LEA operation inhibits NO_x formation by reducing excess air levels. Since NO_x formation at furnace conditions is strongly influenced by oxygen availability, reducing the local flame concentration of oxygen reduces NO_x formation. LEA typically provides relatively low NO_x reductions and is relatively easy to implement. It can be implemented alone but is almost always included when other combustion modifications are implemented. Some important factors which can affect application of LEA to a given combustion process include the condition and age of existing burners and control systems and variability of load swings.

From an economic standpoint, it is desirable to maintain minimum excess air since providing excessive amounts of air increases the heat losses in the flue gases, thereby increasing fuel consumption. In general, ATI furnace atmospheres must be controlled to promote the required scale formation based on the product type being processed. Therefore, LEA operation is not a feasible NO_x control option.

Low-NO_x Burners (LNB)

LNBs control NO_x formation by carrying out combustion in stages and either the air or the fuel can be added in stages. Compared to standard burners, the combustion process is prolonged. The flame has a chance to radiate heat (and thereby cool) before combustion is complete, which reduces NO_x formation. The most commonly applied type of LNB is a staged air design with low turbulence, less-than-stoichiometric combustion in the primary zone. One or more zones of additional air introduction with the burner provide air staging within the flame envelope and complete combustion. The end result is generally an increase in flame length over that produced by a standard burner, so applicability is limited to furnaces with adequate dimensions. Staged air burners can be fitted with FGR connections or designed so furnace gases are induced into the flame.

In contrast, a staged fuel LNB applies all the air in the initial mixing zone with only part of the fuel, so that the initial flame is relatively cool and NO_x formation is limited. After some heat has been absorbed by the furnace, the remaining fuel is added through high velocity nozzles positioned around the perimeter of the burner. This promotes rapid mixing and entrains furnace gases into the flame, which provides the benefits of FGR. Staged fuel burners generally have a more compact flame than staged air types. One possible drawback is that in contrast to staged air burners, staged fuel burners are only applicable to installations using gaseous fuel because of the need for high pressure second stage fuel injection.

LNBs provide moderate NO_x reductions. A negative side effect of low NO_x burner combustion may be an increase in CO emissions due to low excess air levels, cooler flames and relatively lower turbulence.

Flue Gas Recirculation (FGR)

FGR decreases the peak flame temperature by increasing the inert gaseous components in the flame (i.e., by "diluting" the heat released from combustion) and reduces the oxygen availability in the flame both of which reduce thermal NO_x formation. However, the reduction in flame temperature is dependent on the temperature of the recycled flue gas; this reduces the effectiveness of this control method as the flue gas temperature increases. It is implemented only as part of a LNB retrofit (since burners must be designed for FGR) and provides relatively small additional NO_x reductions.

Post-Combustion or Post-Process NO_x Reduction Technologies

Selective catalytic reduction (SCR) and Selective non-catalytic reduction (SNCR)

Post-combustion or post-process NO_x reduction technologies involve injecting a chemical reagent into the flue gas stream to reduce the NO_x that has already been formed. This contrasts with combustion techniques that are focused on controlling the initial formation of NO_x. The chemical reaction between the reagent and NO_x selectively reduces NO_x to molecular oxygen and nitrogen.

The reduction reaction can take place in the presence of a metal oxide or ceramic composite catalyst that promotes this reaction and is termed Selective Catalytic Reduction (SCR). SCR provides a relatively high potential for NO_x destruction (up to 90% NO_x removal). An aqueous ammonia solution or anhydrous ammonia is used as the reducing agent and is injected into the gas stream upstream of the catalyst grid, usually with compressed air as a carrier gas to assist in mixing and penetration. Major hardware components of the system include the catalyst grid, ammonia storage, flow control and metering station, and controls.

The optimal temperature range for the reduction reaction is 500 to 800°F - temperatures below this range do not provide enough energy to promote the reaction and lead to unreacted ammonia (or "slip") in the gas stream. If the flue gas exceeds the upper temperature limit, the chemical reactions can produce additional NO_x and excessive temperatures can destroy the catalyst. Other major issues of concern when considering SCR are the particulate concentration of the gas stream (particulate can foul the catalyst) and the additional pressure drop imposed by the catalyst bed (which requires additional fan capacity).

When a catalyst is not used, the process is termed Selective Non-Catalytic Reduction (SNCR). SNCR is accomplished in a combustion gas temperature range of 1,600 to 2,100 °F. Temperatures above and below this range cause the same effects as with SCR - ammonia slip at low temperatures and NO_x formation at high temperature. NO_x removal efficiency is typically lower, and either ammonia or urea (or a urea-based formulation) is used as the reagent.

The technical feasibility of SNCR depends on the availability of access to a zone that has a temperature within the previously stated working range over all normal operating conditions. Suitable retention time at the optimal temperature range is also necessary to allow the reducing reactions to take place. SNCR is infeasible for application at a specialty steel pickling operation and ATI's annealing furnaces due to the temperature requirements necessary for SNCR. At the Vandergrift facility, the exhaust temperatures of the pickling operations are typically 100 to 150 °F; the exhaust temperature of the annealing furnaces are typically 800 to 900 °F. Also, according to USEPA's Air Pollution Control Technology Fact Sheet (EPA-452/F-03-031), SNCR is typically applied to industrial processes with uncontrolled NO_x loading of 200 to 400 ppm. ATI's annealing furnace NO_x loading is typically 30 to 50 ppm, which is well below the threshold for SNCR application. Finally, based on a review of the RBLC, no instances of an SNCR being installed on a specialty steel pickling process or annealing furnace were identified.

Hydrogen Peroxide Injection

Hydrogen peroxide injection is a means of reducing NO_x emissions from a mixed acid (nitric/hydrofluoric) solution. During the pickling process, the nitric acid is converted to nitrous acid that is insoluble in the mixed acid solution and decomposes into mixed NO_x that escapes to the atmosphere. Injecting hydrogen peroxide into the acid bath oxidizes the dissolved NO_x back to nitric acid before it escapes out of the solution. The rate of peroxide injection is controlled by the oxidation-reduction potential of the acid bath. Although the operating cost is high due to hydrogen peroxide consumption, the process would affect NO_x reduction in deep-bath pickling.

Absorption with Chemical Reaction

Absorption with chemical reaction is a NO_x reduction technique potentially applicable to the pickling line. It is a multi-stage, wet chemical mass transfer reduction process, designed to reduce NO₂ to molecular nitrogen and water. The reduction process is carried out in a packed column which is fed from a recirculation tank having chemical concentrations held to specific levels based on pH and reduction potential requirements.

5. RESULTS OF TOP-DOWN ANALYSES

The results of the top-down analysis for NO_x control alternatives reveal that no control option would be cost effective relative to the \$7,500/ton cost effectiveness threshold.

6. RACT DETERMINATIONS

As a result of the case-by-case analyses, existing equipment configurations, operating practices and control systems at the Vandergrift facility meet the requirements of RACT. Although technologically feasible control enhancements were identified during top-down

analyses of the sources, none of the control options could be installed and operated for less than \$7,500 per ton NO_x reduced, the PADEP threshold for cost effectiveness.

ATI is not proposing to add any specific new control equipment to demonstrate RACT. Consequently, there is no need to submit Plan Approval Applications with this RACT Proposal; nor is it necessary to submit a RACT Implementation Plan.

APPENDIX 1

TOP DOWN ANALYSIS

AND

CONSTRUCTION COST ESTIMATES

FOR CONTROL OPTIONS

ATI FLAT ROLLED PRODUCTS HOLDINGS - VANDERGRIFT FACILITY

RACT TOP-DOWN ANALYSIS

Source 120A - NO. 90 A&P Line Annealing Furnace (50.5 MMBtu/hr)

NOx RACT PROPOSAL

CONTROL OPTIONS:		
Control Technology	Typical Control Effectiveness	Technical Feasibility
SCR + LNB	95 - 97%	Yes (1)
SCR	50 - 95%	Yes
SNCR	30 - 50%	No (2)
LNB + FGR	30 - 60%	Yes
LNB	20 - 50%	Yes (3)
Notes: 1. LNB portion currently installed and operating. 2. See RACT Proposal for technical basis for infeasibility. 3. Currently installed and operating.		

CONTROL OPTION COSTS:							
Control Technology	Estimated Control % from Additional Technology	Controlled Emissions (tons/yr)	Emission Reduction (tons/yr)	Total Annualized Costs (\$/yr)	Total Cost Effectiveness (\$/ton)	Incremental Cost Effectiveness (\$/ton)	Potential for Adverse or Additional Environmental Impacts
<u>BASELINE CONDITION:</u>							
LNB (90 Line Annealing Furnace baseline emission rate for NOx = 26 TPY. This is existing Title V limit, which is based on LNB control technology.)	currently installed	26	-	-	-	-	
Additional control technology #1: LNB + SCR	80%	5	21	\$2,272,869	\$109,273	\$238,680	
Additional control technology #2: LNB + FGR	50%	13	13	\$411,165	\$31,628	\$31,628	

CAPITAL AND ANNUALIZED COST ESTIMATE WORKSHEET

SOURCE 120A - No. 90 A&P Line Annealing Furnace

CONTROL OPTION - SELECTIVE CATALYTIC REDUCTION (SCR)

CAPITAL COST ESTIMATE*

Cost Item		\$
DIRECT COSTS:		
Purchase Equipment Costs:		
Control Equipment	EC	\$2,251,014
Hoods & Ductwork		\$320,408
Piping		\$165,025
Electrical		\$75,281
Instrumentation & Controls		\$98,273
Foundations		\$13,350
Steelwork		\$38,938
Site Preparation		\$9,271
Buildings/Demo.		included above
Material Markup (10%)		\$29,786
Labor Markup (20%)		\$134,234
Equipment Markup (5%)		\$100,127
Sales Tax (7%)		\$161,027
Freight (FOB Jobsite)		\$92,017
Total Purchased Equip. Cost (PEC)		\$3,488,752
Installation:		
Engr & Const. Management		\$418,651
Const. Mobilization		\$122,107
Contractor Fees		\$279,100
Startup Testing		\$34,889
Performance Testing		\$55,626
Contingencies		\$348,874
Total Installation Cost		\$1,259,248
Total Direct Costs (DC) =		\$4,748,000

DC \$ based on 2015 actual installation.
DC 1/2015 is escalated to 8/2022 using Chemical Engineering Equipment Indices.

Jan-15	694.8
Aug-22	1046.7

EC Escalation Factor = 1.51

TOTAL CAPITAL COST (TCC) = \$7,152,751

* NOTES:

- 1) Total Direct Cost (DC) from 2015 actual SCR installation (Midland, PA).
- 2) Operating Materials Cost based on 2018 cost/usage info at existing installation with EC Escalation Factor to 8/2022, and ratioed to applicable source's production tons.

ANNUALIZED COST ESTIMATE

Cost Item	Cost Factor	\$
DIRECT OPERATING COSTS:		
Operating Labor	0.5 hr/turn	\$49,930
Supervision	15% of labor	\$7,489
Operating Materials * (ammonia water)	-	\$356,877
Maintenance Labor	0.5 hr/turn	\$49,930
Materials	100% of labor	\$49,930
Utilities - Natural Gas (assumes auxiliary burner not required for Anneal Furnace)	\$6.69/mcf	\$0
Waste Disposal	-	\$0
Wastewater Treatment	-	\$0
Total Direct Operating Costs (DOC) =		\$514,156
INDIRECT OPERATING COSTS:		
Overhead	60% of DOC	\$308,493
Property Tax	1% of TCC	\$71,528
Insurance	1% of TCC	\$71,528
Administration	2 % of TCC	\$143,055
Capital Recovery	0.16275	\$1,164,110
TOTAL ANNUALIZED COST =		\$2,272,869

Notes:

Maximum no. of turns/yr = 1095
 Operating labor cost (\$/hr) = 91.20
 Maintenance labor cost (\$/hr) = 91.20
 Due to the corrosive nature of specialty steel annealing and acid pickling at ATI, capital recovery assumes 10 year life (term) at 10% interest rate.

CAPITAL AND ANNUALIZED COST ESTIMATE WORKSHEET

SOURCE 120A - No. 90 A&P Line Annealing Furnace

CONTROL OPTION - LOW NOx BURNERS + FLUE GAS RECIRCULATION

CAPITAL COST ESTIMATE

Cost Item		\$
DIRECT COSTS:		
Purchase Equipment Costs:		
Control Equipment	EC	\$96,400
Hoods & Ductwork		\$131,200
Piping		\$47,500
Electrical		\$15,400
Instrumentation & Controls		\$14,500
Foundations		\$2,500
Steelwork		\$5,400
Site Preparation		\$1,600
Buildings		\$0
Material Markup (10%)		\$7,143
Labor Markup (20%)		\$34,935
Equipment Markup (5%)		\$3,420
Sales Tax (6%)		\$9,788
Freight (FOB Jobsite)		\$5,593
Total Purchased Equip. Cost (PEC)		\$375,378
Installation:		
Engr & Const. Management		\$45,045
Const. Mobilization		\$13,138
Contractor Fees		\$30,030
Startup Testing		\$3,754
Performance Testing		\$15,000
Contingencies		\$37,538
Total Installation Cost		\$144,505
Total Direct Costs (DC) =		\$519,884

DC (1/96 \$) is escalated to 6/16 \$ using Chemical Engineering Equipment Indices.
 DC (6/16 \$) is escalated to 8/22 \$ using Chemical Engineering Equipment Indices.

Jan-96	426.4
Jun-16	645.3
Aug-22	1046.7

EC Escalation Factor = 1.51
 EC Escalation Factor (8/22) = 1.62

TOTAL CAPITAL COST (TCC) = \$786,775

ANNUALIZED COST ESTIMATE

Cost Item	Cost Factor	\$
DIRECT OPERATING COSTS:		
Operating Labor	0.5 hr/turn	\$49,930
Supervision	15% of labor	\$7,489
Operating Materials	-	\$0
Maintenance Labor	0.5 hr/turn	\$49,930
Materials	100% of labor	\$49,930
Utilities - Natural Gas	\$6.69/mcf	\$0
Waste Disposal	-	\$0
Wastewater Treatment	-	\$0
Total Direct Operating Costs (DOC) =		\$157,279
INDIRECT OPERATING COSTS:		
Overhead	60% of DOC	\$94,367
Property Tax	1% of TCC	\$7,868
Insurance	1% of TCC	\$7,868
Administration	2% of TCC	\$15,736
Capital Recovery	0.16275	\$128,048
TOTAL ANNUALIZED COST =		\$411,165

Notes:

Maximum no. of turns/yr = 1095
 Operating labor cost (\$/hr) = 91.20
 Maintenance labor cost (\$/hr) = 91.20
 Due to the corrosive nature of specialty steel annealing and acid pickling at ATI, capital recovery assumes 10 year life (term) at 10% interest rate.

ATI FLAT ROLLED PRODUCTS HOLDINGS - VANDERGRIFT FACILITY

RACT TOP-DOWN ANALYSIS

Source 121B - No. 91 A&P Line Annealing Furnace (42 MMBtu/hr)

NOx RACT PROPOSAL

CONTROL OPTIONS:		
Control Technology	Typical Control Effectiveness	Technical Feasibility
SCR + LNB	95 - 97%	Yes (1)
SCR	50 - 95%	Yes
SNCR	30 - 50%	No (2)
LNB + FGR	30 - 60%	Yes
LNB	20 - 50%	Yes (3)
Notes: 1. LNB portion currently installed and operating. 2. See RACT Proposal for technical basis for infeasibility. 3. Currently installed and operating.		

CONTROL OPTION COSTS:							
Control Technology	Estimated Control % from Additional Technology	Controlled Emissions (tons/yr)	Emission Reduction (tons/yr)	Total Annualized Costs (\$/yr)	Total Cost Effectiveness (\$/ton)	Incremental Cost Effectiveness (\$/ton)	Potential for Adverse or Additional Environmental Impacts
<u>BASELINE CONDITION:</u>							
LNB (91 Line Annealing Furnace baseline emission rate for NOx = 24.9 TPY. This is existing Title V limit, which is based on LNB control technology.)	currently installed	24.9	-	-	-	-	
Additional control technology #1: LNB + SCR	80%	5	20	\$2,201,494	\$110,517	\$239,669	
Additional control technology #2: LNB + FGR	50%	12	12	\$411,165	\$33,025	\$33,025	

CAPITAL AND ANNUALIZED COST ESTIMATE WORKSHEET

SOURCE 121B - No. 91 A&P Line Annealing Furnace

CONTROL OPTION - SELECTIVE CATALYTIC REDUCTION (SCR)

CAPITAL COST ESTIMATE*

Cost Item		\$
DIRECT COSTS:		
Purchase Equipment Costs:		
Control Equipment	EC	\$2,251,014
Hoods & Ductwork		\$320,408
Piping		\$165,025
Electrical		\$75,281
Instrumentation & Controls		\$98,273
Foundations		\$13,350
Steelwork		\$38,938
Site Preparation		\$9,271
Buildings/Demo.		included above
Material Markup (10%)		\$29,786
Labor Markup (20%)		\$134,234
Equipment Markup (5%)		\$100,127
Sales Tax (7%)		\$161,027
Freight (FOB Jobsite)		\$92,017
Total Purchased Equip. Cost (PEC)		\$3,488,752
Installation:		
Engr & Const. Management		\$418,651
Const. Mobilization		\$122,107
Contractor Fees		\$279,100
Startup Testing		\$34,889
Performance Testing		\$55,626
Contingencies		\$348,874
Total Installation Cost		\$1,259,248
Total Direct Costs (DC) =		\$4,748,000

DC \$ based on 2015 actual installation.
DC 1/2015 is escalated to 8/2022 using Chemical Engineering Equipment Indices.

Jan-15	694.8
Aug-22	1046.7
EC Escalation Factor =	1.51

ANNUALIZED COST ESTIMATE

Cost Item	Cost Factor	\$
DIRECT OPERATING COSTS:		
Operating Labor	0.5 hr/turn	\$49,930
Supervision	15% of labor	\$7,489
Operating Materials * (ammonia water)	-	\$312,267
Maintenance Labor	0.5 hr/turn	\$49,930
Materials	100% of labor	\$49,930
Utilities - Natural Gas (assumes auxiliary burner not required for Anneal Furnace)	\$6.69/mcf	\$0
Waste Disposal	-	\$0
Wastewater Treatment	-	\$0
Total Direct Operating Costs (DOC) =		\$469,546
INDIRECT OPERATING COSTS:		
Overhead	60% of DOC	\$281,728
Property Tax	1% of TCC	\$71,528
Insurance	1% of TCC	\$71,528
Administration	2 % of TCC	\$143,055
Capital Recovery	0.16275	\$1,164,110
TOTAL ANNUALIZED COST =		\$2,201,494

Notes:

Maximum no. of turns/yr = 1095
 Operating labor cost (\$/hr) = 91.20
 Maintenance labor cost (\$/hr) = 91.20
 Due to the corrosive nature of specialty steel annealing and acid pickling at ATI, capital recovery assumes 10 year life (term) at 10% interest rate.

TOTAL CAPITAL COST (TCC) = \$7,152,751

* NOTES:

- 1) Total Direct Cost (DC) from 2015 actual SCR installation (Midland, PA).
- 2) Operating Materials Cost based on 2018 cost/usage info at existing installation with EC Escalation Factor to 8/2022, and ratioed to applicable source's production tons.

CAPITAL AND ANNUALIZED COST ESTIMATE WORKSHEET

SOURCE 121B - No. 91 A&P Line Annealing Furnace

CONTROL OPTION - LOW NOx BURNERS + FLUE GAS RECIRCULATION

CAPITAL COST ESTIMATE

Cost Item		\$
DIRECT COSTS:		
Purchase Equipment Costs:		
Control Equipment	EC	\$96,400
Hoods & Ductwork		\$131,200
Piping		\$47,500
Electrical		\$15,400
Instrumentation & Controls		\$14,500
Foundations		\$2,500
Steelwork		\$5,400
Site Preparation		\$1,600
Buildings		\$0
Material Markup (10%)		\$7,143
Labor Markup (20%)		\$34,935
Equipment Markup (5%)		\$3,420
Sales Tax (6%)		\$9,788
Freight (FOB Jobsite)		\$5,593
Total Purchased Equip. Cost (PEC)		\$375,378
Installation:		
Engr & Const. Management		\$45,045
Const. Mobilization		\$13,138
Contractor Fees		\$30,030
Startup Testing		\$3,754
Performance Testing		\$15,000
Contingencies		\$37,538
Total Installation Cost		\$144,505
Total Direct Costs (DC) =		\$519,884

DC (1/96 \$) is escalated to 6/16 \$ using Chemical Engineering Equipment Indices.
 DC (6/16 \$) is escalated to 8/22 \$ using Chemical Engineering Equipment Indices.

Jan-96	426.4
Jun-16	645.3
Aug-22	1046.7

EC Escalation Factor = 1.51
 EC Escalation Factor (8/22) = 1.62

TOTAL CAPITAL COST (TCC) = \$786,775

ANNUALIZED COST ESTIMATE

Cost Item	Cost Factor	\$
DIRECT OPERATING COSTS:		
Operating Labor	0.5 hr/turn	\$49,930
Supervision	15% of labor	\$7,489
Operating Materials	-	\$0
Maintenance Labor	0.5 hr/turn	\$49,930
Materials	100% of labor	\$49,930
Utilities - Natural Gas	\$6.69/mcf	\$0
Waste Disposal	-	\$0
Wastewater Treatment	-	\$0
Total Direct Operating Costs (DOC) =		\$157,279
INDIRECT OPERATING COSTS:		
Overhead	60% of DOC	\$94,367
Property Tax	1% of TCC	\$7,868
Insurance	1% of TCC	\$7,868
Administration	2% of TCC	\$15,736
Capital Recovery	0.16275	\$128,048
TOTAL ANNUALIZED COST =		\$411,165

Notes:

Maximum no. of turns/yr = 1095
 Operating labor cost (\$/hr) = 91.20
 Maintenance labor cost (\$/hr) = 91.20
 Due to the corrosive nature of specialty steel annealing and acid pickling at ATI, capital recovery assumes 10 year life (term) at 10% interest rate.

ATI FLAT ROLLED PRODUCTS - VANDERGRIFT FACILITY

RACT TOP-DOWN ANALYSIS

Source 120D - 90 A&P Line - Mixed Acid Pickling

NOx RACT PROPOSAL

CONTROL OPTIONS:		
Control Technology	Typical Control Effectiveness	Technical Feasibility
Selective Catalytic Reduction (SCR)	40 - 90 %	Yes (See Note 1)
Hydrogen Peroxide Injection	70 - 80 %	Yes (See Note *2)
Selective Non-Catalytic Reduction (SNCR)	30 -50 %	No (See Note 3)
Absorption (Wet Scrubber) plus Chemical Reaction	40 - 60 %	Yes (See Note 4)
Absorption (Wet Scrubber)	10 - 20 %	Yes (N/A, see Note 5)
Notes:		
1. Temperature too low to apply this technology, auxiliary burner required. *2. 90L does not use "deep tank" design, therefore emission reduction may be lower than estimated; however, hydrogen peroxide injection is included in cost analysis. 3. See RACT Proposal for technical basis for infeasibility. 4. Currently installed and operating 5. This technology is not applicable for cost analysis - current technology (which includes chemical reaction) provides better NOx reduction.		

CONTROL OPTION COSTS:							
Control Technology	Estimated Control % from Additional Technology	Controlled Emissions (tons/yr)	Emission Reduction (tons/yr)	Total Annualized Costs (\$/yr)	Total Cost Effectiveness (\$/ton)	Incremental Cost Effectiveness (\$/ton)	Potential for Adverse or Additional Environmental Impacts
BASELINE CONDITION: Absorption plus Chemical Reaction (90 Line Mixed Acid Pickling baseline emission rate for NOx = 103 TPY. This is existing Title V limit, which is based on absorption plus chemical reaction control technology.)							
	currently installed	103	-	-	-	-	
<u>Additional control technology #1:</u> SCR	80	21	82	\$2,507,287	\$30,428	\$76,988	additional emissions from duct burner
<u>Additional control technology #2:</u> Hydrogen Peroxide Injection	75	26	77	\$2,110,797	\$27,324	\$27,324	
<u>Additional control technology #3:</u> Absorption	15	N/A - current technology (which includes chemical reaction) provides better NOx reduction.					

CAPITAL AND ANNUALIZED COST ESTIMATE WORKSHEET

SOURCE 120D - #90 A&P Mixed Acid Pickling

CONTROL OPTION - SELECTIVE CATALYTIC REDUCTION (SCR)

CAPITAL COST ESTIMATE*

Cost Item		\$
DIRECT COSTS:		
Purchase Equipment Costs:		
Control Equipment	EC	\$2,251,014
Hoods & Ductwork		\$320,408
Piping		\$165,025
Electrical		\$75,281
Instrumentation & Controls		\$98,273
Foundations		\$13,350
Steelwork		\$38,938
Site Preparation		\$9,271
Buildings/Demo.		included above
Material Markup (10%)		\$29,786
Labor Markup (20%)		\$134,234
Equipment Markup (5%)		\$100,127
Sales Tax (7%)		\$161,027
Freight (FOB Jobsite)		\$92,017
Total Purchased Equip. Cost (PEC)		\$3,488,752
Installation:		
Engr & Const. Management		\$418,651
Const. Mobilization		\$122,107
Contractor Fees		\$279,100
Startup Testing		\$34,889
Performance Testing		\$55,626
Contingencies		\$348,874
Total Installation Cost		\$1,259,248
Total Direct Costs (DC) =		\$4,748,000

DC \$ based on 2015 actual installation
 DC 1/2015 is escalated to 8/2022 using Chemical Engineering Equipment Indices.

Jan-15	694.8
Aug-22	1046.7
EC Escalation Factor =	1.51

ANNUALIZED COST ESTIMATE

Cost Item	Cost Factor	\$
DIRECT OPERATING COSTS:		
Operating Labor	0.5 hr/turn	\$49,930
Supervision	15% of labor	\$7,489
Operating Materials * (ammonia water)	-	\$356,877
Maintenance Labor	0.5 hr/turn	\$49,930
Materials	100% of labor	\$49,930
Utilities - Natural Gas	\$6.69/mcf	\$146,511
Waste Disposal	-	\$0
Wastewater Treatment	-	\$0
Total Direct Operating Costs (DOC) =		\$660,667
INDIRECT OPERATING COSTS:		
Overhead	60% of DOC	\$396,400
Property Tax	1% of TCC	\$71,528
Insurance	1% of TCC	\$71,528
Administration	2 % of TCC	\$143,055
Capital Recovery	0.16275	\$1,164,110
TOTAL ANNUALIZED COST =		\$2,507,287

Notes:

Maximum no. of turns/yr = 1095
 Operating labor cost (\$/hr) = 91.20
 Maintenance labor cost (\$/hr) = 91.20
 Due to the corrosive nature of specialty steel annealing and acid pickling at ATI, capital recovery assumes 10 year life (term) at 10% interest rate.

TOTAL CAPITAL COST (TCC) = \$7,152,751

* NOTES:

- 1) Total Direct Cost (DC) from 2015 actual SCR installation (Midland, PA).
- 2) Operating Materials Cost based on 2018 cost/usage info at existing installation with EC Escalation Factor to 8/2022, and ratioed to applicable source's production tons.

CAPITAL AND ANNUALIZED COST ESTIMATE WORKSHEET

SOURCE 120D - #90 A&P Mixed Acid Pickling

CONTROL OPTION - HYDROGEN PEROXIDE INJECTION

CAPITAL COST ESTIMATE

Cost Item		\$
DIRECT COSTS:		
Purchase Equipment Costs:		
Control Equipment	EC	\$204,000
Hoods & Ductwork		\$13,700
Piping		\$8,500
Electrical		\$6,200
Instrumentation & Controls		\$5,600
Foundations		\$2,000
Steelwork		\$2,500
Site Preparation		\$1,500
Buildings		\$0
Material Markup (10%)		\$1,645
Labor Markup (20%)		\$11,111
Equipment Markup (5%)		\$8,600
Sales Tax (7%)		\$13,191
Freight (FOB Jobsite)		\$7,538
Total Purchased Equip. Cost (PEC)		\$286,085
Installation:		
Engr & Const. Management		\$34,330
Const. Mobilization		\$10,013
Contractor Fees		\$22,887
Startup Testing		\$2,861
Performance Testing		\$15,000
Contingencies		\$28,608
Total Installation Cost		\$113,699
Total Direct Costs (DC) =		\$399,784

2016 DC est. not available.
 DC 1/96 \$ is escalated to 6/16 \$ using Chemical Engineering Equipment Indices.
 DC 6/2016 is escalated to 8/2022 using Chemical Engineering Equipment Indices.

Jan-96	426.4
Jun-16	645.3
Aug-22	1046.7

EC Escalation Factor = 1.51
 EC Escalation Factor (8/22) = 1.62

TOTAL CAPITAL COST (TCC) = \$981,365

* NOTES:

- 90L pickling does not use "deep tank" design; this technology may not be feasible.
- Operating Materials Cost based on 2018 cost/usage info at existing facility, and ratioed to current source production tons.

ANNUALIZED COST ESTIMATE

Cost Item	Cost Factor	\$
DIRECT OPERATING COSTS:		
Operating Labor	0.5 hr/turn	\$49,930
Supervision	15% of labor	\$7,489
Operating Materials (peroxide) *	-	\$1,037,612
Maintenance Labor	0.5 hr/turn	\$49,930
Materials	100% of labor	\$49,930
Utilities - Natural Gas	\$6.69/mcf	\$0
Waste Disposal	-	\$0
Wastewater Treatment	-	\$0
Total Direct Operating Costs (DOC) =		\$1,194,891
INDIRECT OPERATING COSTS:		
Overhead	60% of DOC	\$716,935
Property Tax	1% of TCC	\$9,814
Insurance	1% of TCC	\$9,814
Administration	2% of TCC	\$19,627
Capital Recovery	0.16275	\$159,717
TOTAL ANNUALIZED COST =		\$2,110,797

Notes:

Maximum no. of turns/yr = 1095
 Operating labor cost (\$/hr) = 91.20
 Maintenance labor cost (\$/hr) = 91.20
 Due to the corrosive nature of specialty steel annealing and acid pickling at ATI, capital recovery assumes 10 year life (term) at 10% interest rate.

ATI FLAT ROLLED PRODUCTS - VANDERGRIFT FACILITY

RACT TOP-DOWN ANALYSIS

Source 121E - 91 A&P Line - Mixed Acid Pickling

NOx RACT PROPOSAL

CONTROL OPTIONS:		
Control Technology	Typical Control Effectiveness	Technical Feasibility
Selective Catalytic Reduction (SCR)	40 - 90 %	Yes (See Note 1)
Hydrogen Peroxide Injection	70 - 80 %	Yes (See Note *2)
Selective Non-Catalytic Reduction (SNCR)	30 - 50 %	No (See Note 3)
Absorption (Wet Scrubber) plus Chemical Reaction	40 - 60 %	Yes (See Note 4)
Absorption (Wet Scrubber)	10 - 20 %	Yes (N/A, see Note 5)
Notes:		
1. Temperature too low to apply this technology, auxiliary burner required. *2. 91L does not use "deep tank" design, therefore emission reduction may be lower than estimated; however, hydrogen peroxide injection included in cost analysis. 3. See RACT Proposal for technical basis for infeasibility. 4. Currently installed and operating 5. This technology is not applicable - current technology (which includes chemical reaction) provides better NOx reduction.		

CONTROL OPTION COSTS:							
Control Technology	Estimated Control % from Additional Technology	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
BASELINE CONDITION:							
Absorption plus Chemical Reaction (91 Line Mixed Acid Pickling baseline emission rate for NOx = 57.4 TPY. This is existing Title V limit, which is based on absorption plus chemical reaction control technology.)	currently installed	-	57.4	-	-	-	
<u>Additional control technology #1:</u> SCR	80	46	11.5	\$2,435,912	\$53,047	\$185,588	additional emissions from duct burner
<u>Additional control technology #2:</u> Hydrogen Peroxide Injection	75	43	14.4	\$1,903,275	\$44,211	\$44,211	
<u>Additional control technology #3:</u> Absorption	15	N/A - current technology (which includes chemical reaction) provides better NOx reduction.					

CAPITAL AND ANNUALIZED COST ESTIMATE WORKSHEET

SOURCE 121E - #91 A&P Mixed Acid Pickling

CONTROL OPTION - SELECTIVE CATALYTIC REDUCTION (SCR)

CAPITAL COST ESTIMATE*

Cost Item		\$
DIRECT COSTS:		
Purchase Equipment Costs:		
Control Equipment	EC	\$2,251,014
Hoods & Ductwork		\$320,408
Piping		\$165,025
Electrical		\$75,281
Instrumentation & Controls		\$98,273
Foundations		\$13,350
Steelwork		\$38,938
Site Preparation		\$9,271
Buildings/Demo.		included above
Material Markup (10%)		\$29,786
Labor Markup (20%)		\$134,234
Equipment Markup (5%)		\$100,127
Sales Tax (7%)		\$161,027
Freight (FOB Jobsite)		\$92,017
Total Purchased Equip. Cost (PEC)		\$3,488,752
Installation:		
Engr & Const. Management		\$418,651
Const. Mobilization		\$122,107
Contractor Fees		\$279,100
Startup Testing		\$34,889
Performance Testing		\$55,626
Contingencies		\$348,874
Total Installation Cost		\$1,259,248
Total Direct Costs (DC) =		\$4,748,000

DC \$ based on 2015 actual installation
 DC 1/2015 is escalated to 8/2022 using Chemical Engineering Equipment Indices.

Jan-15	694.8
Aug-22	1046.7

EC Escalation Factor = 1.51

TOTAL CAPITAL COST (TCC) = \$7,152,751

* NOTES:

- 1) Total Direct Cost (DC) from 2015 actual SCR installation (Midland, PA).
- 2) Operating Materials Cost based on 2018 cost/usage info at existing installation with EC Escalation Factor to 8/2022, and ratioed to applicable source's production tons.

ANNUALIZED COST ESTIMATE

Cost Item	Cost Factor	\$
DIRECT OPERATING COSTS:		
Operating Labor	0.5 hr/turn	\$49,930
Supervision	15% of labor	\$7,489
Operating Materials * (ammonia water)	-	\$312,267
Maintenance Labor	0.5 hr/turn	\$49,930
Materials	100% of labor	\$49,930
Utilities - Natural Gas	\$6.69/mcf	\$146,511
Waste Disposal	-	\$0
Wastewater Treatment	-	\$0
Total Direct Operating Costs (DOC) =		\$616,057
INDIRECT OPERATING COSTS:		
Overhead	60% of DOC	\$369,634
Property Tax	1% of TCC	\$71,528
Insurance	1% of TCC	\$71,528
Administration	2 % of TCC	\$143,055
Capital Recovery	0.16275	\$1,164,110
TOTAL ANNUALIZED COST =		\$2,435,912

Notes:

Maximum no. of turns/yr = 1095
 Operating labor cost (\$/hr) = 91.20
 Maintenance labor cost (\$/hr) = 91.20
 Due to the corrosive nature of specialty steel annealing and acid pickling at ATI, capital recovery assumes 10 year life (term) at 10% interest rate.

CAPITAL AND ANNUALIZED COST ESTIMATE WORKSHEET

SOURCE 121E - #91 A&P Mixed Acid Pickling

CONTROL OPTION - HYDROGEN PEROXIDE INJECTION

CAPITAL COST ESTIMATE

Cost Item		\$
DIRECT COSTS:		
Purchase Equipment Costs:		
Control Equipment	EC	\$204,000
Hoods & Ductwork		\$13,700
Piping		\$8,500
Electrical		\$6,200
Instrumentation & Controls		\$5,600
Foundations		\$2,000
Steelwork		\$2,500
Site Preparation		\$1,500
Buildings		\$0
Material Markup (10%)		\$1,645
Labor Markup (20%)		\$11,111
Equipment Markup (5%)		\$8,600
Sales Tax (7%)		\$13,191
Freight (FOB Jobsite)		\$7,538
Total Purchased Equip. Cost (PEC)		\$286,085
Installation:		
Engr & Const. Management		\$34,330
Const. Mobilization		\$10,013
Contractor Fees		\$22,887
Startup Testing		\$2,861
Performance Testing		\$15,000
Contingencies		\$28,608
Total Installation Cost		\$113,699
Total Direct Costs (DC) =		\$399,784

2016 DC est. not available.
 DC 1/96 \$ is escalated to 6/16 \$ using Chemical Engineering Equipment Indices.
 DC 6/2016 is escalated to 8/2022 using Chemical Engineering Equipment Indices.

Jan-96	426.4
Jun-16	645.3
Aug-22	1046.7

EC Escalation Factor =	1.51
EC Escalation Factor (8/22) =	1.62

TOTAL CAPITAL COST (TCC) = \$981,365

* NOTES:

- 1) Operating Materials Cost based on 2018 cost/usage info at existing facility, and ratioed to current source production tons.
- 2) 91L pickling does not use "deep tank" design; this technology may not be feasible.

ANNUALIZED COST ESTIMATE

Cost Item	Cost Factor	\$
DIRECT OPERATING COSTS:		
Operating Labor	0.5 hr/turn	\$49,930
Supervision	15% of labor	\$7,489
Operating Materials (peroxide) *	-	\$907,911
Maintenance Labor	0.5 hr/turn	\$49,930
Materials	100% of labor	\$49,930
Utilities - Natural Gas	\$6.69/mcf	\$0
Waste Disposal	-	\$0
Wastewater Treatment	-	\$0
Total Direct Operating Costs (DOC) =		\$1,065,190
INDIRECT OPERATING COSTS:		
Overhead	60% of DOC	\$639,114
Property Tax	1% of TCC	\$9,814
Insurance	1% of TCC	\$9,814
Administration	2 % of TCC	\$19,627
Capital Recovery	0.16275	\$159,717
TOTAL ANNUALIZED COST =		\$1,903,275

Notes:

Maximum no. of turns/yr = 1095
 Operating labor cost (\$/hr) = 91.20
 Maintenance labor cost (\$/hr) = 91.20
 Due to the corrosive nature of specialty steel annealing and acid pickling at ATI, capital recovery assumes 10 year life (term) at 10% interest rate.

ATTACHMENT 2

***SOURCE INFORMATION
AND EMISSIONS***

Section 7 - Process Operational Inventory

(Complete this section for each process at this site. Duplicate this section as needed).

For renewals, review and correct any pre-printed information and add additional sections for any new process listed in Section 3 of this application.

7.1 General Source Information

- a. Unit ID: 121A
- b. Company Designation: No. 91 Line Strip Dryers Nos. 1 and 2
- c. Plan Approval or Operating Permit No.: Title V Operating Permit No. 65-00137
- d. Manufacturer: Hoffman Dryer
- e. Model No.: Dryer No. 1 - 540361-G51
Dryer No. 2 - 219
- f. Source Description: Process
- g. Rated Heat Input/Thruput: 1.3 MMBTu per hour
- h. Installation Date: 1995
- i. Exhaust Temperature - Units -
- j. Exhaust % Moisture -
- k. Exhaust Flow Volume: - ACFM

7.2 CAM Information

- Yes No
- Emissions unit uses a control device to achieve compliance with emission limitations or standards.
 - Potential precontrol emissions of applicable pollutant are at least 100 percent of the major source amount.

(Addendum 3 must be completed if both are checked "Yes")

7.3 Exhaust System Components

Explain how the exhaust components are configured:

From Unit	Unit Description	To Unit	Unit Description	Percent Flow
121A	Process	Z121A	Fugutuve	100

Section B - Processes Information

1. Source Information

Source Description (give type, use, raw materials, product, etc). Attach additional sheets as necessary.

No. 91 Line Kolene Heater (Source 121F)

Manufacturer Kolene	Model No. TBD	Number of Sources 1
Source Designation No. 91 Line Kolene Heater (121F)	Maximum Capacity	Rated Capacity 8 MMBtu/hour 68.04 mmcf annual

Type of Material Processed
Specialty Products

Maximum Operating Schedule

Hours/Day 24	Days/Week 7	Days/Year 365	Hours/Year 8,760
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Operational restrictions existing or requested, if any (e.g., bottlenecks or voluntary restrictions to limit PTE)

Capacity (specify units)

Per Hour	Per Day	Per Week	Per Year
----------	---------	----------	----------

Operating Schedule

Hours/Day	Days/Week	Days/Year	Hours/Year
-----------	-----------	-----------	------------

Seasonal variations (Months) From _____ to _____

If variations exist, describe them
Not Applicable

2. Fuel - See Attached Potential Emissions Spreadsheet

Type	Quantity Hourly	Annually	Sulfur	% Ash (Weight)	BTU Content
Oil Number _____	GPH @ 60°F	X 10 ³ Gal	% by wt		Btu/Gal. & Lbs./Gal. @ 60 °F
Oil Number _____	GPH @ 60°F	X 10 ³ Gal	% by wt		Btu/Gal. & Lbs./Gal. @ 60 °F
Natural Gas	SCFH	X 10 ⁶ SCF	grain/100 SCF		Btu/SCF
Gas (other) _____	SCFH	X 10 ⁶ SCF	grain/100 SCF		Btu/SCF
Coal _____	TPH	Tons	% by wt		Btu/lb
Other * _____					

*Note: Describe and furnish information separately for other fuels in Addendum B.

Section B - Processes Information

1. Source Information

Source Description (give type, use, raw materials, product, etc). Attach additional sheets as necessary.

Bright Anneal – Heater

Manufacturer Ebner	Model No. TBD	Number of Sources 1
Source Designation Bright Anneal Heater (Source 123B)	Maximum Capacity	Rated Capacity 17.7 MMBtu/hour 150.54 mmcf annual

Type of Material Processed
Specialty Products

Maximum Operating Schedule

Hours/Day 24	Days/Week 7	Days/Year 365	Hours/Year 8,760
-----------------	----------------	------------------	---------------------

Operational restrictions existing or requested, if any (e.g., bottlenecks or voluntary restrictions to limit PTE)

Capacity (specify units)

Per Hour	Per Day	Per Week	Per Year
----------	---------	----------	----------

Operating Schedule

Hours/Day	Days/Week	Days/Year	Hours/Year
-----------	-----------	-----------	------------

Seasonal variations (Months) From _____ to _____

If variations exist, describe them
Not Applicable

2. Fuel – See Potential Emissions Spreadsheet

Type	Quantity Hourly	Annually	Sulfur	% Ash (Weight)	BTU Content
Oil Number _____	GPH @ 60°F	X 10 ³ Gal	% by wt		Btu/Gal. & Lbs./Gal. @ 60 °F
Oil Number _____	GPH @ 60°F	X 10 ³ Gal	% by wt		Btu/Gal. & Lbs./Gal. @ 60 °F
Natural Gas	SCFH	X 10 ⁶ SCF	grain/100 SCF		Btu/SCF
Gas (other) _____	SCFH	X 10 ⁶ SCF	grain/100 SCF		Btu/SCF
Coal	TPH	Tons	% by wt		Btu/lb
Other *					

*Note: Describe and furnish information separately for other fuels in Addendum B.

Section B - Processes Information					
1. Source Information					
Source Description (give type, use, raw materials, product, etc). Attach additional sheets as necessary. Hood Anneal Furnace					
Manufacturer TBD		Model No.		Number of Sources 1	
Source Designation Hood Anneal Furnace (Source 124)		Maximum Capacity		Rated Capacity 3.6 MMBtu/hour 30.62 mmcf annual	
Type of Material Processed Specialty Products					
Maximum Operating Schedule					
Hours/Day 24		Days/Week 7		Days/Year 365	
				Hours/Year 8,760	
Operational restrictions existing or requested, if any (e.g., bottlenecks or voluntary restrictions to limit PTE)					
Capacity (specify units)					
Per Hour		Per Day		Per Week	
				Per Year	
Operating Schedule					
Hours/Day		Days/Week		Days/Year	
				Hours/Year	
Seasonal variations (Months) From _____ to _____					
If variations exist, describe them Not Applicable					
2. Fuel Not Applicable					
Type	Quantity Hourly	Annually	Sulfur	% Ash (Weight)	BTU Content
Oil Number _____	GPH @ 60°F	X 10 ³ Gal	% by wt		Btu/Gal. & Lbs./Gal. @ 60 °F
Oil Number _____	GPH @ 60°F	X 10 ³ Gal	% by wt		Btu/Gal. & Lbs./Gal. @ 60 °F
Natural Gas	SCFH	X 10 ⁶ SCF	grain/100 SCF		Btu/SCF
Gas (other) _____	SCFH	X 10 ⁶ SCF	grain/100 SCF		Btu/SCF
Coal	TPH	Tons	% by wt		Btu/lb
Other *					
*Note: Describe and furnish information separately for other fuels in Addendum B.					

Section B - Processes Information

1. Source Information

Source Description (give type, use, raw materials, product, etc). Attach additional sheets as necessary.

Emergency Generator -Diesel

Manufacturer Kohler	Model No. TBD	Number of Sources 1
Source Designation Emergency Generator (Source 117)	Maximum Capacity	Rated Capacity 410 kw (100 hours usage) 362 gallons of diesel fuel

Type of Material Processed
Specialty Products

Maximum Operating Schedule

Hours/Day	Days/Week	Days/Year	Hours/Year 100
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Operational restrictions existing or requested, if any (e.g., bottlenecks or voluntary restrictions to limit PTE)

Capacity (specify units)

Per Hour	Per Day	Per Week	Per Year
----------	---------	----------	----------

Operating Schedule

Hours/Day	Days/Week	Days/Year	Hours/Year
-----------	-----------	-----------	------------

Seasonal variations (Months) From _____ to _____

If variations exist, describe them
Not Applicable

2. Fuel

Type	Quantity Hourly	Annually	Sulfur	% Ash (Weight)	BTU Content
Oil Number _____	GPH @ 60°F	X 10 ³ Gal	% by wt		Btu/Gal. & Lbs./Gal. @ 60 °F
Oil Number _____	GPH @ 60°F	X 10 ³ Gal	% by wt		Btu/Gal. & Lbs./Gal. @ 60 °F
Natural Gas	SCFH	X 10 ⁶ SCF	grain/100 SCF		Btu/SCF
Gas (other) _____	SCFH	X 10 ⁶ SCF	grain/100 SCF		Btu/SCF
Coal	TPH	Tons	% by wt		Btu/lb
Other *					

*Note: Describe and furnish information separately for other fuels in Addendum B.

Section B - Combustion Unit Information

1. Combustion Units: Coal Oil Natural Gas Other: _____

Description:
Boiler No. 3 (S033)

Manufacturer Cleaver Brooks	Model No. TBD	Number of units 1	
Maximum heat input (Btu/hr)	Rated heat input (Btu/hr) 7 MMBtu/hr	Typical heat input (Btu/hr)	Furnace Volume
Grate Area (if applicable)		Method of firing Natural Gas	

Indicate how combustion air is supplied to boiler

Indicate the Steam Usage:

Mark and describe soot Cleaning Method:

- i. Air Blown
- ii. Steam Blown
- iii. Brushed and Vacuumed
- iv. Other _____
- v. Frequency of Cleaning _____

Maximum Operating schedule

Hours/Day 24	Days/Week 7	Days/Year 365	Hours/Year 8,760
Operational restrictions taken or requested, if any (e.g., bottlenecks or voluntary restrictions to limit potential to emit)			
Capacity (specify units)			
Per hour	Per day	Per week	Per year

Typical Operating schedule

Hours/Day	Days/Week	Days/Year	Hours/Year
Seasonal variations (Months): If variations exist, describe them.			
Operating using primary fuel: _____		From _____ to _____	
Operating using secondary fuel: _____		Form _____ to _____	
Non-operating: _____		From _____ to _____	

2. Specify the primary, secondary and startup fuel. Furnish the details in item 3.
Commercial Natural Gas

**SECTION C. Site Level Requirements**

visible emissions;

(3) The emission results from sources specified in 25 Pa. Code Section 123.1(a)(1)-(9).

007 [25 Pa. Code §127.441]**Operating permit terms and conditions.**

All air cleaning devices and air contamination sources at the facility shall be operated and maintained in accordance with manufacturer's specification and good air pollution and engineering practices.

008 [25 Pa. Code §127.441]**Operating permit terms and conditions.**

. A facility-wide inspection shall be conducted by the Owner/Operator, at a minimum of once each day, that the facility is in operation. The facility-wide inspection shall be conducted for the presence of the following:

- a. Visible stack emissions;
- b. Fugitive emissions; and
- c. Potentially objectionable odors at the property line.

These observations are to ensure continued compliance with source-specific visible emission limitations, fugitive emissions prohibited under 25 Pa. Code §§123.1 or 123.2, and malodors prohibited under 25 Pa. Code §123.31. This observation does not require that it be performed by a person certified as a qualified observer for EPA Method 9 for Visual Determination of the Opacity of Emissions from Stationary Sources. Observations for visible stack emissions shall be conducted during daylight hours and all observations shall be conducted while sources are in operation. If visible stack emissions, fugitive emissions, or potentially objectionable odors are apparent, the Owner/Operator shall take corrective action.

009 [25 Pa. Code §127.444]**Compliance requirements.**

A person may not cause or permit the operation of a source subject to this article unless the source and air cleaning devices identified in the application for the plan approval and operating permit and the plan approval issued to the source are operated and maintained in accordance with specifications in the application and conditions in the plan approval and operating permit issued by the Department. A person may not cause or permit the operation of an air contamination source subject to this chapter in a manner inconsistent with good operating practices.

010 [25 Pa. Code §129.14]**Open burning operations**

(a) The permittee shall not permit the open burning of material in a manner that:

(1) The emissions are visible, at any time, at the point such emissions pass outside the property of the person on whose land the open burning is being conducted.

(2) Malodorous air contaminants from the open burning are detectable outside the property of the person on whose land the open burning is being conducted.

(3) The emissions interfere with the reasonable enjoyment of life or property.

(4) The emissions cause damage to vegetation or property.

(5) The emissions are or may be deleterious to human or animal health.

(b) Exceptions: The requirements of subsection (a) do not apply where the open burning operations result from:

(1) A fire set to prevent or abate a fire hazard, when approved by the Department and set by or under the supervision of a public officer.

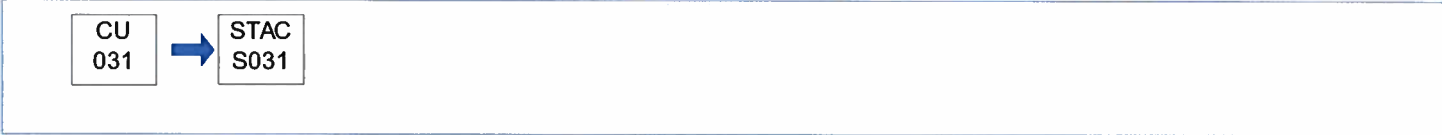
(2) A fire set for the purpose of instructing personnel in fire fighting, when approved by the Department.



SECTION D. Source Level Requirements

Source ID: 031 Source Name: BOILER #1
Source Capacity/Throughput: 26.100 MMBTU/HR

Conditions for this source occur in the following groups: 2. RACT II
>20 MMBTU/HR
PARTICULATE SOURCES



I. RESTRICTIONS.

Emission Restriction(s).

- # 001 [25 Pa. Code §123.11]
Combustion units
The permittee shall not permit the emission into the outdoor atmosphere of particulate matter from this boiler in excess of the rate of 0.4 pounds per million Btu of heat input.

- # 002 [25 Pa. Code §123.22]
Combustion units
The permittee shall not permit the emission into the outdoor atmosphere of sulfur oxides, expressed as SO₂, from this boiler in excess of the rate of 4 pounds per million Btu of heat input over any 1-hour period.

Compliance with this requirement specified in this streamline permit condition assures compliance with the provisions specified in the S.I.P. approved SO₂ limits found in 40 CFR 52.202(c)(1).

- # 003 [25 Pa. Code §127.441]
Operating permit terms and conditions.
In accordance with RACT Operating Permit No. 65-000-137, Condition No.7, NO_x emissions from this boiler shall not exceed 14.3 tons in any 12 consecutive month period.

II. TESTING REQUIREMENTS.

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

III. MONITORING REQUIREMENTS.

- # 004 [25 Pa. Code §127.511]
Monitoring and related recordkeeping and reporting requirements.
At a minimum, the permittee shall verify particulate matter emission rates using the most current AP-42 emission factors in conjunction with fuel usage records.

- # 005 [25 Pa. Code §127.511]
Monitoring and related recordkeeping and reporting requirements.
At a minimum, the permittee shall verify SO₂ emission rates using the most current AP-42 emission factors in conjunction with fuel usage records.

IV. RECORDKEEPING REQUIREMENTS.

- # 006 [25 Pa. Code §127.441]
Operating permit terms and conditions.
The company shall maintain 12 month rolling records of NO_x emissions from this boiler and maintain on site for a minimum of five years and shall be made available to the Department upon request.

**SECTION D. Source Level Requirements**

Source ID: 032

Source Name: BOILER #2

Source Capacity/Throughput: 26.100 MMBTU/HR

Conditions for this source occur in the following groups: 2. RACT II
>20 MMBTU/HR
PARTICULATE SOURCES

CU
032STAC
S032**I. RESTRICTIONS.****Emission Restriction(s).****# 001 [25 Pa. Code §123.11]****Combustion units**

The permittee shall not permit the emission into the outdoor atmosphere of particulate matter from this boiler in excess of the rate of 0.4 pounds per million Btu of heat input.

002 [25 Pa. Code §123.22]**Combustion units**

The permittee shall not permit the emission into the outdoor atmosphere of sulfur oxides, expressed as SO₂, from this boiler in excess of the rate of 4 pounds per million Btu of heat input over any 1-hour period.

Compliance with this requirement specified in this streamline permit condition assures compliance with the provisions specified in the S.I.P. approved SO₂ limits found in 40 CFR 52.202(c)(1).

003 [25 Pa. Code §127.411]**Content of applications.**

In accordance with RACT Operating Permit No. 65-000-137, Condition No.7, NO_x emissions from this boiler shall not exceed 14.3 tons in any 12 consecutive month period.

II. TESTING REQUIREMENTS.

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

III. MONITORING REQUIREMENTS.**# 004 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

At a minimum, the permittee shall verify particulate matter emission rates using the most current AP-42 emission factors in conjunction with fuel usage records.

005 [25 Pa. Code §127.511]**Monitoring and related recordkeeping and reporting requirements.**

At a minimum, the permittee shall verify SO₂ emission rates using the most current AP-42 emission factors in conjunction with fuel usage records.

IV. RECORDKEEPING REQUIREMENTS.**# 006 [25 Pa. Code §127.411]****Content of applications.**

The company shall maintain 12 month rolling records of NO_x emissions from this boiler and maintain on site for a minimum of five years and shall be made available to the Department upon request.

**SECTION D. Source Level Requirements**

Source ID: 116

Source Name: MISCELLANEOUS SPACE HEATERS

Source Capacity/Throughput: 90.000 MCF/HR Natural Gas

Conditions for this source occur in the following groups: 1. RACT II

**I. RESTRICTIONS.****Emission Restriction(s).****# 001 [25 Pa. Code §123.11]****Combustion units**

(a) A person may not permit the emission into the outdoor atmosphere of particulate matter from a combustion unit in excess of the following:

(1) The rate of 0.4 pound per million Btu of heat input, when the heat input to the combustion unit in millions of Btus per hour is greater than 2.5 but less than 50.

002 [25 Pa. Code §127.441]**Operating permit terms and conditions.**

No person may permit the emission from the exhaust of each space heater into the outdoor atmosphere in a manner that the concentration of the sulfur oxides (SOX), expressed as SO₂, in the effluent gas exceeds 500 parts per million, by volume, dry basis.

II. TESTING REQUIREMENTS.

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

III. MONITORING REQUIREMENTS.

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

IV. RECORDKEEPING REQUIREMENTS.**# 003 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

The Owner/Operator shall maintain records of all natural gas and fuel oil utilized in these space heaters.

004 [25 Pa. Code §127.511]**Monitoring and related recordkeeping and reporting requirements.**

The Owner/Operator shall maintain records containing at a minimum:

- i) a Certification of sulfur content from the fuel supplier or
- ii) a Certification from the fuel supplier verifying the natural gas used is pipeline grade gas or from a public utility.

**SECTION D. Source Level Requirements****V. REPORTING REQUIREMENTS.**

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

VI. WORK PRACTICE REQUIREMENTS.**# 005 [25 Pa. Code §129.93]****Presumptive RACT emission limitations**

In accordance with 25 Pa. Code Ch. 129.93(c)(1), the permittee shall install, maintain and operate these space heaters with individual rated gross heat inputs less than twenty (20) million Btu/hour of operation, in accordance with the manufacturers specifications.

VII. ADDITIONAL REQUIREMENTS.

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

***** Permit Shield in Effect. *****

**SECTION D. Source Level Requirements**

Source ID: 120A

Source Name: 90 LINE ANNEALING FURNACES

Source Capacity/Throughput:	50.500 MCF/HR	Natural Gas
	40.000 Tons/HR	STEEL

Conditions for this source occur in the following groups: #90 A/P LINE
3. RACT II
>20 MMBTU/HR

PROC 120A	→	STAC S120A
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I. RESTRICTIONS.**Emission Restriction(s).**

001 [25 Pa. Code §123.13]
Processes

In accordance with 25 Pa. Code Ch.123.13(c)(1), the permittee shall not permit the emission into the outdoor atmosphere of particulate matter from this source in a manner that the concentration of particulate matter in the effluent gas exceeds 0.04 grains per dry standard cubic foot.

002 [25 Pa. Code §123.21]
General

The permittee shall not permit the emission into the outdoor atmosphere of sulfur oxides from the pickle line heat treating furnaces in a manner that the concentration of the sulfur oxides, expressed as SO₂, in the effluent gas exceeds 500 parts per million, by volume, dry basis.

II. TESTING REQUIREMENTS.

003 [25 Pa. Code §127.511]
Monitoring and related recordkeeping and reporting requirements.

The permittee shall conduct a stack test for emissions of NO_x for this source, no less often than once every 5 years.

III. MONITORING REQUIREMENTS.

004 [25 Pa. Code §127.511]
Monitoring and related recordkeeping and reporting requirements.

At a minimum, the permittee shall verify particulate matter emission rates using the most recent AP-42 emission factors, along with fuel usage records or other methods with prior approval from the Department.

005 [25 Pa. Code §127.511]
Monitoring and related recordkeeping and reporting requirements.

At a minimum, the permittee shall verify SO₂ emission rates using the most recent periodic monitoring data and/or AP-42 emission factors in conjunction with fuel usage records.

IV. RECORDKEEPING REQUIREMENTS.

006 [25 Pa. Code §127.511]
Monitoring and related recordkeeping and reporting requirements.

The permittee shall maintain records of natural gas usage on a monthly basis for this furnace.

V. REPORTING REQUIREMENTS.

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**SECTION D. Source Level Requirements**

Source ID: 120D

Source Name: 90 LINE HF/HNO3 PICKLING

Source Capacity/Throughput: 40.000 Tons/HR STEEL

Conditions for this source occur in the following groups: #90 A/P LINE
3. RACT II
PARTICULATE SOURCES

**I. RESTRICTIONS.****Emission Restriction(s).****# 001 [25 Pa. Code §123.13]****Processes**

In accordance with 25 Pa. Code Ch.123.13(c)(1), the permittee shall not permit the emission into the outdoor atmosphere of particulate matter from this source in a manner that the concentration of particulate matter in the effluent gas exceeds 0.04 grains per dry standard cubic foot.

II. TESTING REQUIREMENTS.

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

III. MONITORING REQUIREMENTS.**# 002 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

At a minimum, the permittee shall verify particulate matter emission rates using the most recent AP-42 emission factor and/or stack testing data, along with steel throughput records or other methods with prior approval from the Department

003 [40 CFR Part 64 Compliance Assurance Monitoring for Major Stationary Sources §40 CFR 64.2]**Sections of PART 64****Applicability**

For Compliance Assurance Monitoring (CAM), the permittee will monitor mixed acid pickling fume scrubber differential pressure and monitor for the presence of visible emissions from the exhaust to demonstrate a reasonable assurance that the fume scrubber controls NOx to levels in compliance with the emissions restrictions in this permit.

1. Indicator: Fume Scrubber Differential Pressure

(a) Measurement Approach: Differential pressure (DP) from the fume scrubber shall be monitored.

(b) Indicator Range: DP shall be maintained = 7 inches, w.c. Excursions will trigger an internal inspection and corrective actions.

(c) Performance Criteria:

(i) Data Representativeness: Daily DP monitoring; DP values =7 inches w.c. indicate that the fume scrubber is operating properly.

(ii) Verification of Operational Status: Upon observation of abnormal DP at the fume scrubber, an inspection shall be conducted, and repairs made if necessary.

(iii) QA/QC practices and Criteria: Actual DP values will be compared to desired values.

(iv) Monitoring Frequency: Daily when the No. 90 A&P Line is operating

(v) Data Collection Procedures: DP shall be recorded each day. DP records shall be maintained onsite for a minimum of 5-years and shall be made available to the Department upon request.

**SECTION D. Source Level Requirements**

(vi) Averaging Period: Not applicable.

2. Indicator: Visible Emissions Monitoring

(a) Measurement Approach: Stack exhaust will be observed on a routine basis to determine if visible emissions are present.

(b) Indicator Range: Exhaust condition will be determined to be "normal" (abnormal visible emissions are not present) or "abnormal" (abnormal visible emissions are present). An "abnormal" observation will trigger an internal inspection and corrective actions.

(c) Performance Criteria:

(i) Data Representativeness: Stack exhaust observations will be performed when the No. 90 A&P Line is operating during daylight hours. The stack exhaust condition will be recorded, and each value will be compared to the acceptable range. A "normal" observation indicates that the fume scrubber is operating properly.

(ii) Verification of Operational Status: Upon completion of an "abnormal" observation, an inspection shall be conducted, and repairs made if necessary.

(iii) QA/QC Practices and Criteria: The personnel conducting the stack exhaust observations shall be trained in observing normal stack conditions.

(iv) Monitoring Frequency: Weekly observations will be performed. Routine observations are currently performed at this frequency and have proven to be reasonable and adequately demonstrate that the mist eliminator is operating properly. This approach routinely verifies that abnormal visible emissions are not present and reasonably justifies that particulate matter emissions are not exceeding the limitation.

(v) Data Collection Procedures: Observation records are documented on a log sheet and shall be maintained for a minimum of 5-years. Records shall be made available to the Department upon request.

(vi) Averaging Period: Not applicable.

IV. RECORDKEEPING REQUIREMENTS.

No additional record keeping requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

V. REPORTING REQUIREMENTS.

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

VI. WORK PRACTICE REQUIREMENTS.

No additional work practice requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

VII. ADDITIONAL REQUIREMENTS.

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

***** Permit Shield in Effect. *****

**SECTION D. Source Level Requirements**

Source ID: 120E

Source Name: 90 LINE STRIP DRYER

Source Capacity/Throughput:	1.300 MCF/HR	Natural Gas
	40.000 Tons/HR	STEEL

Conditions for this source occur in the following groups: 1. RACT II
PARTICULATE SOURCES

PROC 120E	→	STAC Z120E
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I. RESTRICTIONS.**Emission Restriction(s).**

001 [25 Pa. Code §123.13]
Processes

In accordance with 25 Pa. Code Ch.123.13(c)(1), the permittee shall not permit the emission into the outdoor atmosphere of particulate matter from this source in a manner that the concentration of particulate matter in the effluent gas exceeds 0.04 grains per dry standard cubic foot.

002 [25 Pa. Code §123.21]
General

The permittee shall not permit the emission into the outdoor atmosphere of sulfur oxides from the pickle line strip dryer in a manner that the concentration of the sulfur oxides, expressed as SO₂, in the effluent gas exceeds 500 parts per million, by volume, dry basis.

II. TESTING REQUIREMENTS.

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

III. MONITORING REQUIREMENTS.

003 [25 Pa. Code §127.511]
Monitoring and related recordkeeping and reporting requirements.

At a minimum, the permittee shall verify SO₂ emission rates using the most recent periodic monitoring data and/or AP-42 emission factors in conjunction with fuel usage records.

004 [25 Pa. Code §127.511]
Monitoring and related recordkeeping and reporting requirements.

At a minimum, the permittee shall verify particulate matter emission rates using the most recent AP-42 emission factors, along with fuel usage records or other methods with prior approval from the Department.

IV. RECORDKEEPING REQUIREMENTS.

005 [25 Pa. Code §127.511]
Monitoring and related recordkeeping and reporting requirements.

The permittee shall maintain records of natural gas usage on a monthly basis for this dryer.

V. REPORTING REQUIREMENTS.

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**SECTION D. Source Level Requirements**

Source ID: 121B

Source Name: 91 LINE ANNEALING FURNACE

Source Capacity/Throughput:	42.000 MCF/HR	Natural Gas
	35.000 Tons/HR	STEEL

Conditions for this source occur in the following groups: #91 A/P LINE
2. RACT II
>20 MMBTU/HR
PARTICULATE SOURCES

PROC 121B	→	STAC S121B
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I. RESTRICTIONS.**Emission Restriction(s).****# 001 [25 Pa. Code §123.13]****Processes**

In accordance with 25 Pa. Code Ch.123.13(c)(1), the permittee shall not permit the emission into the outdoor atmosphere of particulate matter from this source in a manner that the concentration of particulate matter in the effluent gas exceeds 0.04 grains per dry standard cubic foot.

002 [25 Pa. Code §123.21]**General**

The permittee shall not permit the emission into the outdoor atmosphere of sulfur oxides from the pickle line heat treating furnaces in a manner that the concentration of the sulfur oxides, expressed as SO₂, in the effluent gas exceeds 500 parts per million, by volume, dry basis.

II. TESTING REQUIREMENTS.

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

III. MONITORING REQUIREMENTS.**# 003 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

At a minimum, the permittee shall verify particulate matter emission rates using the most recent AP-42 emission factors, along with fuel usage records or other methods with prior approval from the Department.

004 [25 Pa. Code §127.511]**Monitoring and related recordkeeping and reporting requirements.**

At a minimum, the permittee shall verify SO₂ emission rates using the most recent periodic monitoring data and/or AP-42 emission factors in conjunction with fuel usage records.

IV. RECORDKEEPING REQUIREMENTS.**# 005 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

The permittee shall maintain records of natural gas usage on a monthly basis for this furnace.

V. REPORTING REQUIREMENTS.

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**SECTION D. Source Level Requirements**

Source ID: 121E

Source Name: 91 LINE HF/HNO3 PICKLING

Source Capacity/Throughput: 35.000 Tons/HR

Conditions for this source occur in the following groups: #91 A/P LINE
3. RACT II
PARTICULATE SOURCES

**I. RESTRICTIONS.****Emission Restriction(s).****# 001 [25 Pa. Code §123.13]****Processes**

In accordance with 25 Pa. Code Ch.123.13(c)(1), the permittee shall not permit the emission into the outdoor atmosphere of particulate matter from this source in a manner that the concentration of particulate matter in the effluent gas exceeds 0.04 grains per dry standard cubic foot.

II. TESTING REQUIREMENTS.

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

III. MONITORING REQUIREMENTS.**# 002 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

At a minimum, the permittee shall verify particulate matter emission rates using the most recent AP-42 emission factor and/or stack testing data, along with steel throughput records or other methods with prior approval from the Department.

003 [40 CFR Part 64 Compliance Assurance Monitoring for Major Stationary Sources §40 CFR 64.2]**Sections of PART 64****Applicability**

For Compliance Assurance Monitoring (CAM), the permittee will monitor the mixed acid pickling fume scrubber differential pressure and monitor for the presence of visible emissions from the exhaust to demonstrate a reasonable assurance that the fume scrubber controls NOx to levels in compliance with the emissions restrictions in this permit.

1. Indicator: Fume Scrubber Differential Pressure**(a) Measurement Approach:**

Differential pressure (DP) from the fume scrubber shall be monitored.

(b) Indicator Range:

DP shall be maintained ≤ 7 inches, w.c. Excursions will trigger an internal inspection and corrective actions.

(c) Performance Criteria:

(i) Data Representativeness: Daily DP monitoring; DP values ≤ 7 inches w.c. indicate that the fume scrubber is operating properly.

(ii) Verification of Operational Status: Upon observation of abnormal DP at the fume scrubber, an inspection shall be conducted and repairs made if necessary.

**SECTION D. Source Level Requirements**

- (iii) QA/QC practices and Criteria: Actual DP values will be compared to desired values.
- (iv) Monitoring Frequency: Daily when the No. 91 A&P Line is operating
- (v) Data Collection Procedures: DP shall be recorded each day. DP records shall be maintained onsite for a minimum of 5-years and shall be made available to the Department upon request.
- (vi) Averaging Period: Not applicable.

2. Indicator: Visible Emissions Monitoring**(a) Measurement Approach:**

Stack exhaust will be observed on a routine basis to determine if visible emissions are present.

(b) Indicator Range:

Exhaust condition will be determined to be "normal" (abnormal visible emissions are not present) or "abnormal" (abnormal visible emission are present). An "abnormal" observation will trigger an internal inspection and corrective actions.

(c) Performance Criteria:

- (i) Data Representativeness: Stack exhaust observations will be performed when the No. 91 A&P Line is operating during daylight hours. The stack exhaust condition will be recorded and each value will be compared to the acceptable range. A "normal" observation indicates that the fume scrubber is operating properly.
- (ii) Verification of Operational Status: Upon completion of an "abnormal" observation, an inspection shall be conducted and repairs made if necessary.
- (iii) QA/QC Practices and Criteria: The personnel conducting the stack exhaust observations shall be trained in observing normal stack conditions.
- (iv) Monitoring Frequency: Weekly observations will be performed. Routine observations are currently performed at this frequency and have proven to be reasonable and adequately demonstrate that the mist eliminator is operating properly. This approach routinely verifies that abnormal visible emissions are not present and reasonably justifies that particulate matter emissions are not exceeding the limitation.
- (v) Data Collection Procedures: Observation records are documented on a log sheet and shall be maintained for a minimum of 5-years. Records shall be made available to the Department upon request.
- (vi) Averaging Period: Not applicable.

IV. RECORDKEEPING REQUIREMENTS.

No additional record keeping requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

V. REPORTING REQUIREMENTS.

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

VI. WORK PRACTICE REQUIREMENTS.

No additional work practice requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

VII. ADDITIONAL REQUIREMENTS.

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements) and/or Section E (Source Group Restrictions).

**SECTION E. Source Group Restrictions.**

Group Name: #90 A/P LINE

Group Description: Annealing Furnaces and Pickling Sources

Sources included in this group

ID	Name
120A	90 LINE ANNEALING FURNACES
120B	90 LINE SHOTBLAST
120C	90 LINE H2SO4 PICKLING
120D	90 LINE HF/HNO3 PICKLING

I. RESTRICTIONS.**Emission Restriction(s).****# 001 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

In accordance with RACT Permit No. 65-000-137, Condition No.7, stack emission limits shall be established as follows:

- Nitrogen oxide (NOx) emissions from the pickle line shall not exceed 103 tons/year.
- Nitrogen oxide (NOx) emissions from the annealing furnace shall not exceed 26 tons/year.

002 [25 Pa. Code §127.441]**Operating permit terms and conditions.**

In accordance with Operating Permit No. 65-307-064, Condition No.11, stack emission limits shall be established as follows:

- The outlet concentration of hydrofluoric acid (HF) shall not exceed 1 ppm
- The outlet concentration of nitric acid (HNO3) shall not exceed 8 ppm..
- Sulfuric Acid (H2SO4) emissions from shall not exceed 0.15 lb./hr.
- Visible emissions from the #90 line and its associated air cleaning devices shall not exceed an opacity of 20 percent.
- Odors from the #90 line and its associated air cleaning devices shall not be detectable beyond the property of the facility.

II. TESTING REQUIREMENTS.**# 003 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

The permittee shall conduct stack testing for emissions of NOx, HF and HNO3 from this pickle line no less often than once every 5 years.

III. MONITORING REQUIREMENTS.

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

IV. RECORDKEEPING REQUIREMENTS.**# 004 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

In accordance with Operating Permit No. 65-307-064, Condition No. 4, the permittee shall maintain a daily log of the operating hours for the #90 line and shall be made available to the Department upon request.

**SECTION E. Source Group Restrictions.****# 005 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

In accordance with Operating Permit No. 65-307-064, Condition No. 7, the permittee shall maintain a log of any malfunctions to the air cleaning devices and it shall be made available to the Department upon request.

006 [25 Pa. Code §127.441]**Operating permit terms and conditions.**

The company shall maintain records of NO_x, HF, HNO₃, H₂SO₄ and particulate emissions from this source group and maintain on site for a minimum of five years and shall be made available to the Department upon request.

007 [25 Pa. Code §127.441]**Operating permit terms and conditions.**

The company shall maintain records of NO_x emissions from this source group and maintain on site for a minimum of five years and shall be made available to the Department upon request.

V. REPORTING REQUIREMENTS.

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

VI. WORK PRACTICE REQUIREMENTS.**# 008 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

In accordance with Operating Permit No. 65-307-064, Condition No. 6, at least once per day, while the subject equipment is in operation, the permittee shall conduct an inspection of the #90 line and its associated air cleaning devices. At a minimum, the permittee shall monitor and record the following information:

- a. the color of the scrubber plume;
- b. the pH of each stage of the three-stage cross flow scrubber.
- c. the ORP of the three-stage cross flow scrubber.
- d. the pressure drop of the three-stage cross flow scrubber.
- e. the flow rate of each stage of the three-stage cross flow scrubber.
- f. the pressure drop of the packed bed scrubber.
- g. the flow rate of the packed bed scrubber.

009 [25 Pa. Code §127.441]**Operating permit terms and conditions.**

In accordance with Operating Permit No. 65-307-064, Condition No. 7, in the event of a malfunction to the air cleaning devices, the permittee shall promptly shut the source down. The permittee shall not restart the source until the air cleaning devices have been repaired and are functioning properly.

VII. ADDITIONAL REQUIREMENTS.

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

***** Permit Shield in Effect. *****

**SECTION E. Source Group Restrictions.**

Group Name: #91 A/P LINE

Group Description: Annealing furnace and pickling sources

Sources included in this group

ID	Name
121A	91 LINE STRIP DRYERS (1 AND 2 COMBINED)
121B	91 LINE ANNEALING FURNACE
121C	91 LINE ESS DESCALING
121E	91 LINE HF/HNO3 PICKLING

I. RESTRICTIONS.**Emission Restriction(s).****# 001 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

In accordance with Operating Permit No. 65-307-076, Condition No.4i, H₂SO₄ emissions from the H₂SO₄/Na₂SO₄ pickling system shall not exceed 0.2 lb./hr., and Na₂SO₄ emissions from the H₂SO₄/Na₂SO₄ pickling system shall not exceed 0.2 lb./hr.

002 [25 Pa. Code §127.441]**Operating permit terms and conditions.**

In accordance with Operating Permit No. 65-307-076, Condition No.4c, process-related odors from the #91 line and its associated air cleaning devices shall not be detectable beyond the property of the owner/operator.

003 [25 Pa. Code §127.441]**Operating permit terms and conditions.**

In accordance with Operating Permit No. 65-307-076, Condition No.4g, HNO₃ emissions at the outlet of the Tri-Mer four stage scrubber shall not exceed 0.3 lb./hr.

004 [25 Pa. Code §127.441]**Operating permit terms and conditions.**

In accordance with Operating Permit No. 65-307-076, Condition No.4b, NO_x emissions from the annealing furnace shall not exceed 6.0 lb./hr. and 24.9 tons in any consecutive 12 month period.

005 [25 Pa. Code §127.441]**Operating permit terms and conditions.**

In accordance with Operating Permit No. 65-307-076, Condition No.4h, HF emissions at the outlet of the Tri-Mer four stage scrubber shall not exceed 0.1 lb./hr.

006 [25 Pa. Code §127.441]**Operating permit terms and conditions.**

In accordance with Operating Permit No. 65-307-076, Condition No.4e, NO_x emissions at the outlet of the Tri-Mer four stage scrubber shall not exceed 19.7 lb./hr. and 57.4 tons in any consecutive 12 month period.

II. TESTING REQUIREMENTS.**# 007 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

The permittee shall conduct stack testing for emissions of NO_x, HF, and HNO₃ from the #91Line Tri-Mer four stage scrubber exhaust no less often than once every 5 years.

III. MONITORING REQUIREMENTS.**# 008 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

In accordance with Operating Permit No. 65-307-076, Condition No.5d, the permittee shall maintain and operate monitoring devices on the single-stage packed bed scrubber that measure the following:

**SECTION E. Source Group Restrictions.**

(1) Pressure drop of gas stream across scrubber bed (w.g.).

(2) Liquid flow rate (gpm).

(3) Liquid line or nozzle pressure (psi).

009 [25 Pa. Code §127.441]**Operating permit terms and conditions.**

In accordance with Operating Permit No. 65-307-076, Condition No.5c, the permittee shall maintain and operate monitoring devices on the Tri-Mer four-stage scrubber that measure the following:

(1) pH and ORP.

(2) Pressure drop of gas stream across scrubber bed (w.g.).

(3) Liquid flow rate (gpm).

(4) Liquid line or nozzle pressure (psi).

010 [25 Pa. Code §127.511]**Monitoring and related recordkeeping and reporting requirements.**

At a minimum of once per year, the permittee shall measure NOx emission from the acid pickling process (Tri-Mer four stage scrubber exhaust), using portable analyzers or other Department approved measuring techniques.

IV. RECORDKEEPING REQUIREMENTS.**# 011 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

In accordance with Operating Permit No. 65-307-076, Condition No.4a, the permittee shall maintain a log of any malfunctions to the air cleaning devices and provide it to the Department upon request.

012 [25 Pa. Code §127.511]**Monitoring and related recordkeeping and reporting requirements.**

The company shall maintain 12 month rolling records of NOx emissions from No. 91 Line Annealing Furnace (Source ID 121B) and HNO3/HF pickling (Source ID 121E) and shall be made available to the Department upon request.

V. REPORTING REQUIREMENTS.

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

VI. WORK PRACTICE REQUIREMENTS.**# 013 [25 Pa. Code §127.441]****Operating permit terms and conditions.**

In accordance with Operating Permit No. 65-307-076, Condition No.7b, the permittee shall perform and maintain a log of the following maintenance on the fume scrubbers:

WEEKLY

- * Verify that ORP and pH probes are clean or remove and clean ORP and pH probes
- * Check Flow Sensors for proper flow range
- * Check/Inspect centrifugal circulation pumps
- * Check/Inspect chemical feed air diaphragm pumps
- * Check/Inventory chemicals in chemical storage tanks

MONTHLY

- * Check and clean centrifugal circulation pump strainers

**SECTION E. Source Group Restrictions.**

* Check/Inspect centrifugal blowers

QUARTERLY

- * Flush recirculation headers; Inspect nozzles
- * Check/Inspect chemical storage tanks for leaks

SEMI-ANNUALLY

- * Check/Inspect packed bed column scrubbers, including packing

014 [25 Pa. Code §127.441]**Operating permit terms and conditions.**

In accordance with Operating Permit No. 65-307-076, Condition No.7a, the opacity of the exhaust emissions and other parameters associated with the operation of the #91 line shall show that the source is being operated in conformance with good air pollution control practices.

015 [25 Pa. Code §127.441]**Operating permit terms and conditions.**

In accordance with Operating Permit No. 65-307-076, Condition No.4f, the Tri-Mer 4 stage scrubber shall achieve a minimum control efficiency of 72% for NOx (expressed as NO₂). Compliance with the outlet NOx emission limitation, as determined during the once every 5-years stack test, shall serve as demonstration of compliance with this condition.

016 [25 Pa. Code §127.441]**Operating permit terms and conditions.**

In accordance with Operating Permit No. 65-307-076, Condition No.7c, the permittee shall perform an annual adjustment or tune-up on the annealing furnace. This adjustment shall include, at a minimum, the following:

- (i) Inspection, adjustment, cleaning or replacement of fuel-burning equipment, including the burners and moving parts necessary for proper operation as specified by the manufacturer.
- (ii) Inspection of the flame pattern or characteristics and adjustments necessary to minimize total emissions of NOx, and to the extent practicable minimize emissions of CO.
- (iii) Inspection of the air-to-fuel ratio control system and adjustments necessary to ensure proper calibration and operation as specified by the manufacturer.

017 [25 Pa. Code §127.441]**Operating permit terms and conditions.**

In accordance with Operating Permit No. 65-307-076, Condition No.4a, in the event of a malfunction to the air cleaning devices, the permittee shall promptly shut the source down and discontinue operation until the source and the air cleaning devices have been repaired and are functioning properly. For purposes of this condition, a malfunction is any sudden, infrequent, and not reasonably preventable failure of air control equipment.

VII. ADDITIONAL REQUIREMENTS.

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

***** Permit Shield in Effect. *****

**SECTION E. Source Group Restrictions.**

Group Name: 1. RACT II

Group Description: Sources Rated <20 MMBtu/hr.

Sources included in this group

ID	Name
116	MISCELLANEOUS SPACE HEATERS
120E	90 LINE STRIP DRYER
121A	91 LINE STRIP DRYERS (1 AND 2 COMBINED)

I. RESTRICTIONS.**Emission Restriction(s).****# 001 [25 Pa. Code §129.97]****Presumptive RACT requirements, RACT emission limitations and petition for alternative compliance schedule.**

(c) The owner and operator of a source specified in this subsection, which is located at a major NOx emitting facility or major VOC emitting facility subject to § 129.96 shall install, maintain and operate the source in accordance with the manufacturer's specifications and with good operating practices:

(1) N/A

(2) N/A

(3) A boiler or other combustion source with an individual rated gross heat input less than 20 million Btu/hour.

II. TESTING REQUIREMENTS.

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

III. MONITORING REQUIREMENTS.

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

IV. RECORDKEEPING REQUIREMENTS.**# 002 [25 Pa. Code §129.100]****Compliance demonstration and recordkeeping requirements.**

(d) The owner and operator of an air contamination source subject to this section and § § 129.96—129.99 shall keep records to demonstrate compliance with § § 129.96—129.99 in the following manner:

(1) The records must include sufficient data and calculations to demonstrate that the requirements of § § 129.96—129.99 are met.

(2) Data or information required to determine compliance shall be recorded and maintained in a time frame consistent with the averaging period of the requirement.

V. REPORTING REQUIREMENTS.

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

VI. WORK PRACTICE REQUIREMENTS.

No additional work practice requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

**SECTION E. Source Group Restrictions.**

Group Name: 3. RACT II

Group Description: Sources Subject to Case by Case RACT

Sources included in this group

ID	Name
120A	90 LINE ANNEALING FURNACES
120D	90 LINE HF/HNO3 PICKLING
121E	91 LINE HF/HNO3 PICKLING

I. RESTRICTIONS.**Emission Restriction(s).****# 001 [25 Pa. Code §129.99]****Alternative RACT proposal and petition for alternative compliance schedule.**

Alternative RACT proposal and petition for alternative compliance schedule.

All air cleaning devices and air contamination sources at the facility shall be operated and maintained in accordance with manufacturer's specification and good air pollution and engineering practices.

II. TESTING REQUIREMENTS.

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

III. MONITORING REQUIREMENTS.

No additional monitoring requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

IV. RECORDKEEPING REQUIREMENTS.**# 002 [25 Pa. Code §129.100]****Compliance demonstration and recordkeeping requirements.**

(d) The owner and operator of an air contamination source subject to this section and §§ 129.96—129.99 shall keep records to demonstrate compliance with §§ 129.96—129.99 in the following manner:

(1) The records must include sufficient data and calculations to demonstrate that the requirements of §§ 129.96—129.99 are met.

(2) Data or information required to determine compliance shall be recorded and maintained in a time frame consistent with the averaging period of the requirement.

V. REPORTING REQUIREMENTS.

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

VI. WORK PRACTICE REQUIREMENTS.

No additional work practice requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

VII. ADDITIONAL REQUIREMENTS.

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

***** Permit Shield in Effect. *****

**SECTION E. Source Group Restrictions.**

Group Name: >20 MMBTU/HR

Group Description: RACT Combustion Sources

Sources included in this group

ID	Name
031	BOILER #1
032	BOILER #2
120A	90 LINE ANNEALING FURNACES
121B	91 LINE ANNEALING FURNACE

I. RESTRICTIONS.

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

II. TESTING REQUIREMENTS.

No additional testing requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

III. MONITORING REQUIREMENTS.**# 001 [25 Pa. Code §127.511]****Monitoring and related recordkeeping and reporting requirements.**

The permittee shall utilize a portable analyzer to measure emission rates of NO_x and CO for these combustion sources. At a minimum, periodic monitoring shall occur once in each 12 month consecutive period for each source in this group.

IV. RECORDKEEPING REQUIREMENTS.**# 002 [25 Pa. Code §129.93]****Presumptive RACT emission limitations**

In accordance with RACT Operating Permit No. 65-000-137, Condition No.4, the Permittee shall maintain records for each adjustment conducted during the performance of the annual adjustment or tune-up on each boiler. These records shall contain, at a minimum, the following information;

- (i) The date of the tuning procedure
- (ii) The name of the service company and the technicians
- (iii) The final operating rate or load
- (iv) The final CO and NO_x emission rates
- (v) The final excess oxygen rate.

V. REPORTING REQUIREMENTS.

No additional reporting requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

VI. WORK PRACTICE REQUIREMENTS.**# 003 [25 Pa. Code §129.93]****Presumptive RACT emission limitations**

The permittee shall make the annual adjustment in accordance with the EPA document "Combustion Efficiency Optimization Manual for Operators of Oil and Gas-Fired Boilers," September 1983 (EPA-340/1-83-023) or equivalent procedures approved in writing by the Department.

004 [25 Pa. Code §129.93]**Presumptive RACT emission limitations**

The permittee shall perform an annual adjustment or tune-up as required by RACT Operating Permit No. 65-000-137, for these sources. This adjustment shall include, at a minimum, the following:

- (i) Inspection, adjustment, cleaning or replacement of fuel-burning equipment, including the burners and moving parts necessary for proper operation as specified by the manufacturer.
- (ii) Inspection of the flame pattern or characteristics and adjustments necessary to minimize total emissions of NO_x, and

**SECTION E. Source Group Restrictions.**

to the extent practicable minimize emissions of CO.

(iii) Inspection of the air-to-fuel ratio control system and adjustments necessary to ensure proper calibration and operation as specified by the manufacturer.

VII. ADDITIONAL REQUIREMENTS.

No additional requirements exist except as provided in other sections of this permit including Section B (Title V General Requirements).

***** Permit Shield in Effect. *****

**SECTION H. Miscellaneous.****INSIGNIFICANT ACTIVITIES**

The following sources qualify as insignificant activities and have no applicable requirements, emission limits, monitoring and/or recordkeeping:

- Acid tanks, oil tanks, NaOH tanks, NAHS tanks, Diesel fuel tanks & gasoline tanks
- Wastewater Treatment Plant
- Process Tanks and Non-VOC/HAP Tanks
- Thomas & Betts Space Heater
- Lime silo & TSP Silo
- Parts cleaners