

**CONSTRUCTION PERMIT
OFFICE OF AIR MANAGEMENT**

**Allegheny Ludlum Corporation
State Route 38 West
New Castle, Indiana 47362**

is hereby authorized to construct increase in the capacity of the No. 11 A&P Line Annealing Furnace consisting of the following equipment:

One (1) No. 11 A&P Line Annealing Furnace, identified as S001A, fired by natural gas and using liquid propane gas as a backup fuel and exhausting to fugitive emission point P001, maximum capacity: 27 tons of steel per hour, and increasing maximum heat input capacity from 42.0 million British thermal units per hour to 60.0 million British thermal units per hour.

This permit is issued to the above mentioned company (herein known as the Permittee) under the provisions of 326 IAC 2-1 and 40 CFR 52.780, with conditions listed on the attached pages.

Construction Permit No.: CP 065-9719-00014	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date:

Construction Conditions

General Construction Conditions

1. The data and information supplied with the application shall be considered part of this permit. Prior to any proposed change in construction which may affect allowable emissions, the change must be approved by the Office of Air Management (OAM).
2. This permit to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

Effective Date of the Permit

3. Pursuant to IC 13-15-5-3, this permit becomes effective upon its issuance.
4. Pursuant to 326 IAC 2-1-9(b)(Revocation of Permits), the Commissioner may revoke this permit if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.
5. Notwithstanding Construction Condition No. 6, all requirements and conditions of this construction permit shall remain in effect unless modified in a manner consistent with procedures established for modifications of construction permits pursuant to 326 IAC 2 (Permit Review Rules).

First Time Operation Permit

6. This document shall also become a first-time operation permit pursuant to 326 IAC 2-1-4 (Operating Permits) when, prior to start of operation, the following requirements are met:
 - (a) The attached affidavit of construction shall be submitted to the Office of Air Management (OAM), Permit Administration & Development Section, verifying that the facilities were constructed as proposed in the application. The facilities covered in the Construction Permit may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM.
 - (b) If construction is completed in phases; i.e., the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.
 - (c) Permittee shall receive an Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section and attach it to this document.
 - (d) The operation permit will be subject to annual operating permit fees pursuant to 326 IAC 2-7-19 (Fees).
 - (e) The Permittee has submitted their Part 70 (T 065-7593-00014) application on December 13, 1996 for the existing source. The equipment being reviewed under this permit shall be incorporated in the submitted Part 70 application.

7. When the facility is constructed and placed into operation the following operation conditions shall be met:

Operation Conditions

General Operation Conditions

1. The data and information supplied in the application shall be considered part of this permit. Prior to any change in the operation which may result in an increase in allowable emissions exceeding those specified in 326 IAC 2-1-1 (Construction and Operating Permit Requirements), the change must be approved by the Office of Air Management (OAM).
2. The Permittee shall comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder.

Preventive Maintenance Plan

3. Pursuant to 326 IAC 1-6-3 (Preventive Maintenance Plans), the Permittee shall prepare and maintain a preventive maintenance plan, including the following information:
 - (a) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices.
 - (b) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions.
 - (c) Identification of the replacement parts which will be maintained in inventory for quick replacement.

The preventive maintenance plan shall be submitted to IDEM, OAM upon request and shall be subject to review and approval.

Transfer of Permit

4. Pursuant to 326 IAC 2-1-6 (Transfer of Permits):
 - (a) In the event that ownership of this No. 11 A&P Line Annealing Furnace is changed, the Permittee shall notify OAM, Permit Branch, within thirty (30) days of the change. Notification shall include the date or proposed date of said change.
 - (b) The written notification shall be sufficient to transfer the permit from the current owner to the new owner.
 - (c) The OAM shall reserve the right to issue a new permit.

Permit Revocation

5. Pursuant to 326 IAC 2-1-9(a)(Revocation of Permits), this permit to construct and operate may be revoked for any of the following causes:
 - (a) Violation of any conditions of this permit.

- (b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.
- (c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.
- (d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.
- (e) For any cause which establishes in the judgment of IDEM, the fact that continuance of this permit is not consistent with purposes of 326 IAC 2-1 (Permit Review Rules).

Availability of Permit

6. Pursuant to 326 IAC 2-1-3(l), the Permittee shall maintain the applicable permit on the premises of this source and shall make this permit available for inspection by the IDEM, or other public official having jurisdiction.

Annual Emission Reporting

7. Pursuant to 326 IAC 2-6 (Emission Reporting), the Permittee must annually submit an emission statement for the source. This statement must be received by July 1 of each year and must comply with the minimum requirements specified in 326 IAC 2-6-4. A copy of this rule is enclosed. The annual statement must be submitted to:

Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

The annual emission statement covers the twelve (12) consecutive month time period starting January 1 and ending December 31.

Opacity Limitations

8. Pursuant to 326 IAC 5-1-2 (Visible Emission Limitations) except as provided in 326 IAC 5-1-3 (Temporary Exemptions), the visible emissions shall meet the following:
- (a) Visible emissions shall not exceed an average of forty percent (40%) opacity in 24 consecutive readings.
 - (b) Visible emissions shall not exceed 60 percent opacity for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period.

Fugitive Dust Emissions

9. Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions), the Permittee shall be in violation of 326 IAC 6-4 (Fugitive Dust Emissions) if any of the criteria specified in 326 IAC 6-4-2(1) through (4) are violated. Observations of visible emissions crossing the property line of the source at or near ground level must be made by a qualified representative of IDEM. [326 IAC 6-4-5(c)].

10. Open Burning
The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6.
11. Particulate Matter (PM and PM₁₀) and Volatile Organic Compounds (VOC)
Any change or modification which may increase actual emissions from the equipment covered in this permit to 25 tons per year or more of PM, 15 tons per year or more of PM₁₀, or 40 tons per year or more of VOC shall obtain a PSD permit pursuant to 326 IAC 2-2 before such a change may occur.

Indiana Department of Environmental Management
Office of Air Management

Technical Support Document (TSD) for New Construction and Operation

Source Background and Description

Source Name: Allegheny Ludlum Corporation
Source Location: State Route 38 West, New Castle, Indiana 47362
County: Henry
Construction Permit No.: CP 065-9719-00014
SIC Code: 3316, 3398
Permit Reviewer: CarrieAnn Ortolani

The Office of Air Management (OAM) has reviewed an application from Allegheny Ludlum Corporation relating to the construction and operation of an increase in the capacity of the No. 11 A&P Line Annealing Furnace from 42.0 million British thermal units per hour to 60.0 million British thermal units per hour. The increase in capacity will take place upon issuance of this permit. The existing No. 11 A&P Line Annealing Furnace was constructed in 1967 and will be permitted as Enhanced New Source Review with the Part 70 Operating Permit for this source. The public notice period for the proposed Part 70 Operating Permit ended on April 24, 1998. The permit for the increase in capacity is being issued outside of the Part 70 Operating Permit so that the increase in capacity may take place as soon as possible. The Part 70 Operating Permit will be modified to include this increase in capacity and all conditions from this permit. The modification consists of the following equipment:

One (1) No. 11 A&P Line Annealing Furnace, identified as S001A, fired by natural gas and using liquid propane gas as a backup fuel and exhausting to fugitive emission point P001, maximum capacity: 27 tons of steel per hour, and increasing maximum heat input capacity from 42.0 million British thermal units per hour to 60.0 million British thermal units per hour.

Enforcement Issue

- (a) IDEM is aware that the following equipment at this source was constructed and operated prior to receipt of the proper permit. Equipment constructed prior to 1968 did not require a construction permit, but should have received an operation permit.
- (1) One (1) No. 11 A&P Line Annealing Furnace, identified as S001A, constructed in 1967, fired by natural gas and using liquid propane gas as a backup fuel and exhausting to fugitive emission point P001, maximum capacity: 27 tons of steel per hour, and maximum heat input capacity: 42 million British thermal units per hour.
 - (2) One (1) No. 12 A&P Line Annealing Furnace, identified as S002A, constructed in 1967, fired by natural gas and using liquid propane gas as a backup fuel and exhausting to fugitive emission point P005, maximum capacity: 27 tons of steel per hour, and maximum heat input capacity: 40 million British thermal units per hour.

- (3) One (1) Strip Grinder, identified as S003A, constructed in 1967, using oil mist eliminators identified as D004, D005 and D006 as control, and exhausting to stack P007, maximum capacity: 25 tons of steel per hour.
 - (4) One (1) Strip Polisher, identified as S003B, constructed in 1967, and exhausting to stack P008, maximum capacity: 25 tons of steel per hour.
 - (5) One (1) Z-Mill, identified as S004, constructed in 1967, using an oil mist eliminator identified as D007 as control, and exhausting to stack P009, maximum capacity: 35 tons of steel per hour.
 - (6) One (1) Temper Mill, identified as S005, constructed in 1967, and exhausting to fugitive emission point P010, maximum capacity: 50 tons of steel per hour.
 - (7) Three (3) Parts Cleaners, identified as S009A, constructed between 1980 and 1988, using a sealed reservoir as control, and exhausting to fugitive emission point P014, maximum throughput: 0.5 gallons of mineral spirits per hour.
 - (8) One (1) Parts Cleaner, identified as S009B, constructed between 1980 and 1988, using a sealed reservoir as control, and exhausting to fugitive emission point P015, maximum throughput: 0.5 gallons of kerosene per hour.
- (b) IDEM is reviewing this matter and will take appropriate action.
- (c) These facilities will be permitted under Enhanced New Source Review with the proposed Title V operating permit (T 065-7593-00014).

Recommendation

The staff recommends to the Commissioner that the construction and operation be approved. This recommendation is based on the following facts and conditions:

Information, unless otherwise stated, used in this review was derived from the application and additional information submitted by the applicant.

A complete application for the purposes of this review was received on April 28, 1998, with additional information received on May 22, 1998 via telephone.

Emissions Calculations

See Appendix A (Emissions Calculation Spreadsheets) for detailed calculations (two (2) pages).

Total Potential and Allowable Emissions

Indiana Permit Allowable Emissions Definition (after compliance with applicable rules, based on 8,760 hours of operation per year at rated capacity):

Pollutant	Allowable Emissions (tons/yr)	Potential Emissions (tons/yr)
Particulate Matter (PM)	3.60	3.60
Particulate Matter (PM ₁₀)	3.60	3.60
Sulfur Dioxide (SO ₂)	0.158	0.158
Volatile Organic Compounds (VOC)	13.2	13.2
Carbon Monoxide (CO)	9.20	9.20
Nitrogen Oxides (NO _x)	53.1	53.1
Single Hazardous Air Pollutant (HAP)	0.00	0.00
Combination of HAPs	0.00	0.00

- (a) The potential emissions before control are equivalent to the allowable emissions, therefore, the potential emissions before control are used for the permitting determination.
- (b) The potential emissions (as defined in the Indiana Rule) of NO_x are greater than 25 tons per year. Therefore, pursuant to 326 IAC 2-1, Sections 1 and 3, a construction permit is required.

County Attainment Status

- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NO_x) are precursors for the formation of ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to the ozone standards. Henry County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) Henry County has been classified as attainment or unclassifiable for all remaining criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (c) Fugitive Emissions
 Since this type of operation is one of the 28 listed source categories under 326 IAC 2-2, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are counted toward determination of PSD applicability.

Source Status

Existing Source PSD, Part 70 or FESOP Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

Pollutant	Actual Emissions (tons/year)
PM	42.1
PM ₁₀	37.6
SO ₂	0.152
VOC	75.0
CO	1.64
Methanol	6.65
MIBK	4.38
Chromium	0.093
Manganese	0.046
Nickel	0.267
HF	0.130
NO _x	115

- (a) This existing source is a major stationary source because it is in one of the 28 listed source categories and at least one regulated pollutant is emitted at a rate of 100 tons per year or more.
- (b) This information reflects 1996 emission data. The actual emissions of criteria pollutants are those reported in the Airs Facility Quick Look Report dated July 24, 1997. The actual emissions of hazardous air pollutants (HAPs) are based on calculations using emission factors supplied by the source in the Title V application submitted on December 13, 1996. There are no HAP emissions on file at IDEM for this source.

Proposed Modification

PTE from the proposed modification (based on 8,760 hours of operation per year at rated capacity including enforceable emission control and production limit, where applicable):

Pollutant	PM (tons/yr)	PM₁₀ (tons/yr)	SO₂ (tons/yr)	VOC (tons/yr)	CO (tons/yr)	NO_x (tons/yr)
Future Potential	3.60	3.60	0.158	13.2	9.20	53.1
Present Actual	0.34	0.34	0.068	0.63	0.00	18.4
Proposed Modification (Net Increase)	3.27	3.27	0.090	12.6	9.20	34.7
PSD or Offset Significant Level	25	15	40	40	100	40

- (a) The present actual emissions are the average of the actual annual emissions from the No. 11 A&P Line Annealing Furnace for 1996 and 1997.
- (b) This modification to an existing major stationary source is not major because the emissions increase is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source has submitted their Part 70 (T 065-7593-00014) application on December 13, 1996. The equipment being reviewed under this permit shall be incorporated in the submitted Part 70 application.

Federal Rule Applicability

- (a) There are no New Source Performance Standards (326 IAC 12 and 40 CFR Part 60) applicable to this source.
- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAP) (326 IAC 14 and 40 CFR Part 63) applicable to this source.

State Rule Applicability

326 IAC 2-6 (Emission Reporting)

This facility alone is not subject to 326 IAC 2-6 (Emission Reporting), because the facility emits less than 100 tons per year of each criteria pollutant. However, the source emits more than 100 tons per year of VOC, NO_x, and PM₁₀. Therefore, the entire source is subject to the requirements of 326 IAC 2-6 (Emission Reporting). Pursuant to this rule, the owner/ operator of this facility must annually submit an emission statement of the facility. The annual statement must be received by July 1 of each year and must contain the minimum requirements as specified in 326 IAC 2-6-4.

326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating)

Since this annealing furnace is not a boiler, the requirements of 326 IAC 6-2 do not apply.

326 IAC 6-3-2 (Particulate Emission Limitations)

Since the the particulate matter (PM) emissions are from combustion and not from the annealing process, the requirements of 326 IAC 6-3-2, Process operations: particulate emission limitations, do not apply to this modification.

326 IAC 8-1-6 (Best Available Control Technology)

Since this furnace does not have the potential to emit more than 25 tons per year of VOC, the requirements of 326 IAC 8-1-6 are not applicable.

326 IAC 9-1 (Carbon Monoxide Emission Limitations)

Since this facility is not a petroleum refinery, ferrous metal smelter, or refuse incineration and burning facility, the requirements of 326 IAC 9-1-2 do not apply. Also, in previous testing of a similar facility the CO emissions were determined to be zero (0).

326 IAC 10-1 (Nitrogen Oxide Limitations in Clark and Floyd Counties)

Since this source is not located in Clark or Floyd County, the requirements of 326 IAC 10-1 do not apply.

Air Toxic Emissions

Indiana presently requests applicants to provide information on emissions of the 187 hazardous air pollutants set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Management (OAM) Construction Permit Application Form Y.

None of these listed air toxics will be emitted from this proposed modification.

Conclusion

The construction of this increase in the capacity of the No. 11 A&P Line Annealing Furnace will be subject to the conditions of the attached proposed **Construction Permit No. CP 065-9719-00014**.

Indiana Department of Environmental Management Office of Air Management

Addendum to the Technical Support Document for New Construction and Operation

Source Name: Allegheny Ludlum Corporation
Source Location: State Route 38 West, New Castle, Indiana 47362
County: Henry
Construction Permit No.: CP 065-9719-00014
SIC Code: 3316, 3398
Permit Reviewer: CarrieAnn Ortolani

On July 31, 1998, the Office of Air Management (OAM) had a notice published in the Courier Times, New Castle, Indiana, stating that Allegheny Ludlum Corporation had applied for a construction permit to construct and operate an increase in the capacity of the No. 11 A&P Line Annealing Furnace from 42.0 million British thermal units per hour to 60.0 million British thermal units per hour. The notice also stated that OAM proposed to issue a permit for this installation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On September 8, 1998, Kevin P. Polivick on behalf of Interlocal Community Action Program, Inc. submitted comments on the proposed construction permit. Thirty-one (31) signatures were attached to the letter. The summary of the comments and corresponding responses are as follows:

COMMENT 1:

Pursuant to the Legal Notice published in the New Castle Courier Times regarding a Construction and Operation Permit for Allegheny Ludlum Corporation, this letter addresses some concerns.

We, the undersigned, work at a non-profit corporation directly west of Allegheny Ludlum. Both personal and company vehicles experience exterior paint damage due to air-borne pollutants, most likely originating from the two steel plants to our east.

In years past we voiced our concerns though nothing has changed. New vehicles, either company or employee owned, have visual damage within a 3-month period. IDEM's opacity test is inadequate to insure industry meets EPA regulations.

We hasten to add if this acid pollution is causing this type of damage to vehicles, what damage is it doing to us?

We believe IDEM should increase its enforcement efforts so damage to persons and property is minimized. If this can't be achieved, at least communicate to us the dangers we collectively face.

RESPONSE 1:

This proposed construction and operation permit is for the increase in capacity of one (1) annealing furnace at the source. The emissions resulting from this modification to the existing source will be minor and will not result in damage to vehicles.

Allegheny Ludlum Corporation has applied for a Title V, Part 70 Operating Permit for the entire source. This permit will contain conditions, in addition to the opacity limitations, that will ensure that all facilities at the source remain in compliance with all state and federal regulations. In addition, your concerns have been forwarded to the inspector assigned to the source.

Mail to: Permit Administration & Development Section
Office of Air Management
100 North Senate Avenue
P.O. Box 6015
Indianapolis, Indiana 46206-6015

Allegheny Ludlum Corporation
100 River Road
Brackenridge, PA 15014

Affidavit of Construction

I, _____, being duly sworn upon my oath, depose and say:
(Name of the Authorized Representative)

1. I live in _____ County, Indiana and being of sound mind and over twenty-one (21) years of age, I am competent to give this affidavit.
2. I hold the position of _____ for _____
(Title) (Company Name)
3. By virtue of my position with Allegheny Ludlum Corporation, I have personal knowledge of the representations contained in this affidavit and am authorized to make these representations on behalf of Allegheny Ludlum Corporation.
4. I hereby certify that Allegheny Ludlum Corporation, State Route 38 West, New Castle, Indiana 47362, has constructed the increase in the capacity of the No. 11 A&P Line Annealing Furnace in conformity with the requirements and intent of the Construction Permit application received by the Office of Air Management on April 28, 1998 and as permitted pursuant to **Construction Permit No. 065-9719, Plant ID No. 065-00014** issued on _____.
5. Additional TYPEOFFACILITY were constructed/substituted as described in the attachment to this document and were not made in accordance with the Construction Permit. (Delete this statement if it does not apply.)
6. I hereby certify that Allegheny Ludlum Corporation has submitted their Part 70 (T 065-7593-00014) application on December 13, 1996 for the existing source. The equipment being reviewed under this permit shall be incorporated in the submitted Part 70 application.

Further Affiant said not.

I affirm under penalties of perjury that the representations contained in this affidavit are true, to the best of my information and belief.

Signature

Date

STATE OF INDIANA)
)SS

COUNTY OF _____)

Subscribed and sworn to me, a notary public in and for _____ County and State of Indiana
on this _____ day of _____, 19 _____.

My Commission expires: _____.

Signature

Name (typed or printed)

**Appendix A: Emissions Calculations
Natural Gas Combustion Only
10 < MM BTU/HR <100
Small Industrial Boiler**

**Company Name: Allegheny Ludlum Corporation
Address City IN Zip: State Route 38 West, New Castle, IN 47362
CP: 065-9719
Plt ID: 065-00014
Reviewer: Carrie Ann Ortolani
Date: April 28, 1998**

**Before Modification
S001A Annealing furnace**

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr	Potential Throughput tons/yr
42.0	367.9	236520

	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
1996 Actual Emissions in tons/yr	0.33	0.33	0.067	18.3	0.63	0.00
1997 Actual Emissions in tons/yr	0.34	0.34	0.068	18.5	0.63	0.00
Average Actual Emissions in tons/yr	0.34	0.34	0.068	18.4	0.63	0.00

**After Modification
S001A Annealing furnace**

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr	Potential Throughput tons/yr
60.0	525.6	236520

	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
Combustion Emission Factor in lb/MMCF	13.7	13.7	0.6	164.0	2.8	35.0
Process Emission Factor in lb/ton	0.0	0.0	0.0	0.0	0.1	0.0
Potential Emission in tons/yr	3.60	3.60	0.158	43.1	12.6	9.20

	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
Initial Actual Emission in tons/yr	0.34	0.34	0.068	18.4	0.6	0.00
Emission Increase in tons/yr	3.27	3.27	0.090	24.7	11.9	9.20
New Potential Emission in tons/yr	3.60	3.60	0.158	43.1	12.6	9.20

Methodology:

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors for NOx: Uncontrolled = 164, Low NOx Burner = 81, Flue gas recirculation = 30

Emission Factors for CO: Uncontrolled = 35, Low NOx Burner = 61, Flue gas recirculation = 37

Potential Throughput (MMCF/yr) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Potential Throughput (tons/yr) = 27 tons/hr x 8,760 hrs/yr

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, (SCC #1-02-006-02), and applicant supplied factors

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton + Throughput (tons/yr) x Emission Factor (lb/ton)/2,000 lb/ton

Appendix A: Emission Calculations
LPG-Propane (alternate fuel possibility)
10 < MM BTU/HR <100
Small Industrial Boiler

Company Name: Allegheny Ludlum Corporation
Address City IN Zip: State Route 38 West, New Castle, IN 47362
CP: 065-9719
Plt ID: 065-00014
Reviewer: Carrie Ann Ortolani
Date: April 28, 1998

Before Modification

S001A Annealing furnace

Heat Input Capacity MMBtu/hr Potential Throughput kgals/year SO2 Emission factor = 0.10 x SPotential Throughput
S = Weight % Sulfur = tons/yr
0.000123

42.0 3914 236520

1996 Actual Emissions in tons/yr	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
0.33	0.33	0.33	0.067	18.3	0.63	0.00
1997 Actual Emissions in tons/yr	0.34	0.34	0.068	18.5	0.63	0.00
Average Actual Emissions in tons/yr	0.34	0.34	0.068	18.4	0.63	0.00

S001A Annealing furnace

Heat Input Capacity MMBtu/hr Potential Throughput kgals/year SO2 Emission factor = 0.10 x SPotential Throughput
S = Weight % Sulfur = tons/yr
0.000123

60.0 5591 236520

Combustion Emission Factor in lb/kgal	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
0.6	0.6	0.6	0.00001 (0.10S)	19.0	0.5	3.2
Process Emission Factor in lb/ton	0.0	0.0	0.0	0.0	0.1	0.0
Potential Emission in tons/yr	1.68	1.68	0.00003	53.1	13.2	8.95

	PM	PM10	SO2	NOx	VOC	CO
Initial Actual Emissions in tons/yr	0.34	0.34	0.068	18.4	0.63	0.00
Emission Increase in tons/yr	1.34	1.34	0.00	34.7	12.6	8.95
New Potential Emission in tons/yr	1.68	1.68	0.00003	53.1	13.2	8.95

Methodology:

1 gallon of LPG has a heating value of 94,000 Btu
Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1kgal per 1000 gallon x 1 gal per 0.094 MMBtu
Emission Factors are from AP 42, Table 1.5-2 (SCC #1-02-010-02)
Emission (tons/yr) = Throughput (kgals/yr) x Emission Factor (lb/kgal) / 2,000 lb/ton
+ Process Emission Factor (lbs/ton) (for annealing furnaces) * Throughput(tons/yr) /2000 lbs/ton