

February 2020
Project No. 20-059

REGULATION 30 PERMIT
RENEWAL APPLICATION

PERMIT NUMBER R30-09700001-2015

SAINT-GOBAIN CERAMICS AND PLASTICS,
INC.

DbA CORHART REFREACTORIES
BUCKHANNON, WEST VIRGINIA

PREPARED BY:

BENCHMARK SH&E SERVICES LLC
1000 Green River Drive, Suite 116
Fairmont, West Virginia 26554
304-363-1446

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WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF AIR QUALITY

601 57th Street SE
Charleston, WV 25304
Phone: (304) 926-0475

www.dep.wv.gov/daq

INITIAL/RENEWAL TITLE V PERMIT APPLICATION - GENERAL FORMS

Section 1: General Information

Form with 10 numbered sections: 1. Name of Applicant, 2. Facility Name or Location, 3. DAQ Plant ID No., 4. Federal Employer ID No., 5. Permit Application Type, 6. Type of Business Entity, 7. Is the Applicant the..., 8. Number of onsite employees, 9. Governmental Code, 10. Business Confidentiality Claims.

11. Mailing Address		
Street or P.O. Box: 87 Corhart Road		
City: Buckhannon	State: WV	Zip: 26201-8815
Telephone Number: (304) 472-4000	Fax Number: (304) 472-1215	

12. Facility Location		
Street: 87 Corhart Road	City: Buckhannon	County: Upshur
UTM Easting: 465.3 km	UTM Northing: 4,316.8 km	Zone: <input checked="" type="checkbox"/> 17 or <input type="checkbox"/> 18
Directions: Interstate 79 to Exit 99. Proceed east on US Route 33 approximately 12 miles to the intersection with Brushy Fork Road. Turn left at the light and proceed 0.1 miles to intersection. Turn right onto Old Weston Road. Continue approximately 0.5 miles and turn left onto Liggett Avenue. Travel 0.2 mile to plant on the left.		
Portable Source? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Is facility located within a nonattainment area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes, for what air pollutants?	
Is facility located within 50 miles of another state? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, name the affected state(s). Maryland	
Is facility located within 100 km of a Class I Area¹? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If no, do emissions impact a Class I Area¹? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes, name the area(s). Dolly Sods Wilderness Otter Creek Wilderness	
¹ Class I areas include Dolly Sods and Otter Creek Wilderness Areas in West Virginia, and Shenandoah National Park and James River Face Wilderness Area in Virginia.		

13. Contact Information		
Responsible Official: Benjamin Watkins		Title: Plant Manager
Street or P.O. Box: 87 Corhart Road		
City: Buckhannon	State: WV	Zip: 26201-8815
Telephone Number: (304) 472-4000		Fax Number: (304) 472-1215
E-mail address: Benjamin.Watkins@saint-gobain.com		
Environmental Contact: Derrick Campbell		Title: Facilities and Environmental Supervisor
Street or P.O. Box: 87 Corhart Road		
City: Buckhannon	State: WV	Zip: 26201-8815
Telephone Number: (304) 472-4000		Fax Number: (304) 472-1215
E-mail address: Derrick.Cambell@saint-gobain.com		
Application Preparer: Daniel T. Arnold		Title: Environmental Scientist
Company: Benchmark SH&E Services LLC		
Street or P.O. Box: 1000 Green River Drive Suite 116		
City: Fairmont	State: WV	Zip: 26554-
Telephone Number: (304) 363-1446		Fax Number: () -
E-mail address: darnold@benchmarkpllc.com		

14. Facility Description

List all processes, products, NAICS and SIC codes for normal operation, in order of priority. Also list any process, products, NAICS and SIC codes associated with any alternative operating scenarios if different from those listed for normal operation.

Process	Products	NAICS	SIC
Non-clay refractory manufacturer	Non-clay refractory	327125	3297

Provide a general description of operations.

Corhart Refractories Buckhannon facility is a non-clay refractory manufacturing facility covered by Standard Industrial Code (SIC) 3297. The facility has the potential to operate seven (7) days per week, twenty-four (24) hours per day and fifty-two (52) weeks per year. The facility consists of six (6) natural gas fueled dryers, twentyfive (25) natural gas fueled kilns, forty-six (46) natural gas fueled space heaters, two (2) 275-gallon above ground fuel storage tanks, one (1) diesel fueled emergency back-up electrical generator, various pieces of equipment to form articles, one (1) bulk material storage bin, various crushers, screeners, and mixers for material handling, various machines for surface grinding, sawing, milling, drilling, lathes, and packaging equipment.

15. Provide an Area Map showing plant location as ATTACHMENT A.

16. Provide a Plot Plan(s), e.g. scaled map(s) and/or sketch(es) showing the location of the property on which the stationary source(s) is located as ATTACHMENT B. For instructions, refer to "Plot Plan - Guidelines."

17. Provide a detailed Process Flow Diagram(s) showing each process or emissions unit as ATTACHMENT C. Process Flow Diagrams should show all emission units, control equipment, emission points, and their relationships.

19. Non Applicability Determinations (Continued) - Attach additional pages as necessary.

List all requirements which the source has determined not applicable and for which a permit shield is requested. The listing shall also include the rule citation and the reason why the shield applies.

Permit Shield

20. Facility-Wide Applicable Requirements

List all facility-wide applicable requirements. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements).

- 45CSR6-3.1. Open burning is prohibited
- 45CSR6-3.2. Open burning exemptions
- 40 C.F.R. 61.145(b) and 45CSR15 Inspect facility for asbestos prior to demolition or renovation.
- 45CSR4-3.1 State-Enforceable Only. No objectionable odors.
- 45CSR11-5.2. Standby plan for reducing emissions.
- W. Va. Code 22-5-4(a)(14) Emission Inventory
- 40 C.F.R. 82, Subpart F Ozone-depleting substances.
- 40 C.F.R. 68 Risk Management Plan.
- 45CSR7-5.1 and R13-2182, Condition B.I. Minimize fugitive emissions from storage structures.
- 45CSR7.5.2 and R13-2182, Condition B.I. Maintain particulate matter control.

Permit Shield

For all facility-wide applicable requirements listed above, provide monitoring/testing / recordkeeping / reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number and/or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

- 45CSR30-5.1.c. Maintain records of dust suppressants or other dust control measures used. Inspect all fugitive dust control systems. Maintain maintenance records.
- WV Code 22-5-4(a)(15), R13-2433C, 3.3.1, and 45CSR7-8.1. 8.2 Stack testing as required by the Secretary.
- 45CSR30-5.1.c.2.A., R13-2433C condition 4.4.1. Keep records of monitoring information.
- 45CSR30-5.1.c.2.B. Keep records of all required monitoring data for at least five (5) years.
- 45CSR30-5.1.c. State-Enforceable only. Maintain records of all odor complaints received as well as corrective actions taken.
- 45CSR30-4.4. and 5.1.c.3.D. Any application, form, report, or compliance certification required shall contain a certification by the responsible official.
- 45CSR30-5.1.c.3 .E. A permittee may request confidential treatment for submission of required reports.
- 45CSR30-8. The permittee shall submit a certified emissions statement and pay fees on an annual basis.
- 45CSR30-5.3.e. The permittee shall certify compliance with the conditions of the permit annually.
- 45CSR30-5.1.c.3.A. The permittee shall submit semi-annual monitoring reports on September 15 and March 15.
- 45CSR30-5.1.c.3.C. The permittee shall promptly submit supplemental reports and notices for deviations.
- 45CSR30-5.1.c.3.B. The permittee shall report probable cause of the deviations and corrective measures taken.
- 45CSR30-5.1.c.3.D. Every deviation report shall be certified by a responsible official.
- 45CSR30-4.3 .h.I.B. The permittee shall meet the requirements of any new applicable requirements on a timely basis.

Are you in compliance with all facility-wide applicable requirements? Yes No

If no, complete the Schedule of Compliance Form as ATTACHMENT F.

20. Facility-Wide Applicable Requirements (Continued) - Attach additional pages as necessary.

List all facility-wide applicable requirements. For each applicable requirement, include the rule citation and/or permit with the condition number.

Permit Shield

For all facility-wide applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number and/or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Are you in compliance with all facility-wide applicable requirements? Yes No

If no, complete the Schedule of Compliance Form as ATTACHMENT F.

22. Inactive Permits/Obsolete Permit Conditions

Permit Number	Date of Issuance	Permit Condition Number
	MM/DD/YYYY	
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Section 3: Facility-Wide Emissions

23. Facility-Wide Emissions Summary [Tons per Year]	
Criteria Pollutants	Potential Emissions
Carbon Monoxide (CO)	112.98
Nitrogen Oxides (NO _x)	103
Lead (Pb)	
Particulate Matter (PM _{2.5}) ¹	5.86
Particulate Matter (PM ₁₀) ¹	5.86
Total Particulate Matter (TSP)	5.86
Sulfur Dioxide (SO ₂)	0.48
Volatile Organic Compounds (VOC)	75.45
Hazardous Air Pollutants²	Potential Emissions
Total Chromium	0.017
Regulated Pollutants other than Criteria and HAP	Potential Emissions

¹PM_{2.5} and PM₁₀ are components of TSP.

²For HAPs that are also considered PM or VOCs, emissions should be included in both the HAPs section and the Criteria Pollutants section.

Section 4: Insignificant Activities

24. Insignificant Activities (Check all that apply)	
<input checked="" type="checkbox"/>	1. Air compressors and pneumatically operated equipment, including hand tools.
<input checked="" type="checkbox"/>	2. Air contaminant detectors or recorders, combustion controllers or shutoffs.
<input checked="" type="checkbox"/>	3. Any consumer product used in the same manner as in normal consumer use, provided the use results in a duration and frequency of exposure which are not greater than those experienced by consumer, and which may include, but not be limited to, personal use items; janitorial cleaning supplies, office supplies and supplies to maintain copying equipment.
<input checked="" type="checkbox"/>	4. Bathroom/toilet vent emissions.
<input checked="" type="checkbox"/>	5. Batteries and battery charging stations, except at battery manufacturing plants.
<input checked="" type="checkbox"/>	6. Bench-scale laboratory equipment used for physical or chemical analysis, but not lab fume hoods or vents. Many lab fume hoods or vents might qualify for treatment as insignificant (depending on the applicable SIP) or be grouped together for purposes of description.
<input type="checkbox"/>	7. Blacksmith forges.
<input checked="" type="checkbox"/>	8. Boiler water treatment operations, not including cooling towers.
<input checked="" type="checkbox"/>	9. Brazing, soldering or welding equipment used as an auxiliary to the principal equipment at the source.
<input type="checkbox"/>	10. CO ₂ lasers, used only on metals and other materials which do not emit HAP in the process.
<input checked="" type="checkbox"/>	11. Combustion emissions from propulsion of mobile sources, except for vessel emissions from Outer Continental Shelf sources.
<input type="checkbox"/>	12. Combustion units designed and used exclusively for comfort heating that use liquid petroleum gas or natural gas as fuel.
<input checked="" type="checkbox"/>	13. Comfort air conditioning or ventilation systems not used to remove air contaminants generated by or released from specific units of equipment.
<input type="checkbox"/>	14. Demineralized water tanks and demineralizer vents.
<input type="checkbox"/>	15. Drop hammers or hydraulic presses for forging or metalworking.
<input type="checkbox"/>	16. Electric or steam-heated drying ovens and autoclaves, but not the emissions from the articles or substances being processed in the ovens or autoclaves or the boilers delivering the steam.
<input type="checkbox"/>	17. Emergency (backup) electrical generators at residential locations.
<input type="checkbox"/>	18. Emergency road flares.
<input type="checkbox"/>	19. Emission units which do not have any applicable requirements and which emit criteria pollutants (CO, NO _x , SO ₂ , VOC and PM) into the atmosphere at a rate of less than 1 pound per hour and less than 10,000 pounds per year aggregate total for each criteria pollutant from all emission units. Please specify all emission units for which this exemption applies along with the quantity of criteria pollutants emitted on an hourly and annual basis: _____ _____ _____ _____ _____ _____ _____ _____ _____

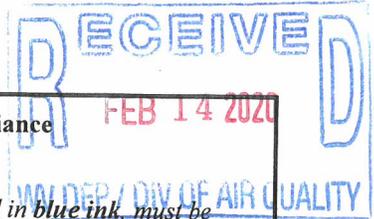
24. Insignificant Activities (Check all that apply)	
<input type="checkbox"/>	20. Emission units which do not have any applicable requirements and which emit hazardous air pollutants into the atmosphere at a rate of less than 0.1 pounds per hour and less than 1,000 pounds per year aggregate total for all HAPs from all emission sources. This limitation cannot be used for any source which emits dioxin/furans nor for toxic air pollutants as per 45CSR27. Please specify all emission units for which this exemption applies along with the quantity of hazardous air pollutants emitted on an hourly and annual basis: _____ _____ _____ _____
<input type="checkbox"/>	21. Environmental chambers not using hazardous air pollutant (HAP) gases.
<input checked="" type="checkbox"/>	22. Equipment on the premises of industrial and manufacturing operations used solely for the purpose of preparing food for human consumption.
<input type="checkbox"/>	23. Equipment used exclusively to slaughter animals, but not including other equipment at slaughterhouses, such as rendering cookers, boilers, heating plants, incinerators, and electrical power generating equipment.
<input checked="" type="checkbox"/>	24. Equipment used for quality control/assurance or inspection purposes, including sampling equipment used to withdraw materials for analysis.
<input type="checkbox"/>	25. Equipment used for surface coating, painting, dipping or spray operations, except those that will emit VOC or HAP.
<input checked="" type="checkbox"/>	26. Fire suppression systems.
<input type="checkbox"/>	27. Firefighting equipment and the equipment used to train firefighters.
<input type="checkbox"/>	28. Flares used solely to indicate danger to the public.
<input type="checkbox"/>	29. Fugitive emission related to movement of passenger vehicle provided the emissions are not counted for applicability purposes and any required fugitive dust control plan or its equivalent is submitted.
<input type="checkbox"/>	30. Hand-held applicator equipment for hot melt adhesives with no VOC in the adhesive formulation.
<input type="checkbox"/>	31. Hand-held equipment for buffing, polishing, cutting, drilling, sawing, grinding, turning or machining wood, metal or plastic.
<input type="checkbox"/>	32. Humidity chambers.
<input checked="" type="checkbox"/>	33. Hydraulic and hydrostatic testing equipment.
<input checked="" type="checkbox"/>	34. Indoor or outdoor kerosene heaters.
<input checked="" type="checkbox"/>	35. Internal combustion engines used for landscaping purposes.
<input type="checkbox"/>	36. Laser trimmers using dust collection to prevent fugitive emissions.
<input type="checkbox"/>	37. Laundry activities, except for dry-cleaning and steam boilers.
<input checked="" type="checkbox"/>	38. Natural gas pressure regulator vents, excluding venting at oil and gas production facilities.
<input type="checkbox"/>	39. Oxygen scavenging (de-aeration) of water.
<input type="checkbox"/>	40. Ozone generators.

24. Insignificant Activities (Check all that apply)	
<input checked="" type="checkbox"/>	41. Plant maintenance and upkeep activities (e.g., grounds-keeping, general repairs, cleaning, painting, welding, plumbing, re-tarring roofs, installing insulation, and paving parking lots) provided these activities are not conducted as part of a manufacturing process, are not related to the source's primary business activity, and not otherwise triggering a permit modification. (Cleaning and painting activities qualify if they are not subject to VOC or HAP control requirements. Asphalt batch plant owners/operators must still get a permit if otherwise requested.)
<input type="checkbox"/>	42. Portable electrical generators that can be moved by hand from one location to another. "Moved by Hand" means that it can be moved without the assistance of any motorized or non-motorized vehicle, conveyance, or device.
<input checked="" type="checkbox"/>	43. Process water filtration systems and demineralizers.
<input checked="" type="checkbox"/>	44. Repair or maintenance shop activities not related to the source's primary business activity, not including emissions from surface coating or de-greasing (solvent metal cleaning) activities, and not otherwise triggering a permit modification.
<input checked="" type="checkbox"/>	45. Repairs or maintenance where no structural repairs are made and where no new air pollutant emitting facilities are installed or modified.
<input type="checkbox"/>	46. Routing calibration and maintenance of laboratory equipment or other analytical instruments.
<input type="checkbox"/>	47. Salt baths using nonvolatile salts that do not result in emissions of any regulated air pollutants. Shock chambers.
<input type="checkbox"/>	48. Shock chambers.
<input type="checkbox"/>	49. Solar simulators.
<input checked="" type="checkbox"/>	50. Space heaters operating by direct heat transfer.
<input type="checkbox"/>	51. Steam cleaning operations.
<input checked="" type="checkbox"/>	52. Steam leaks.
<input type="checkbox"/>	53. Steam sterilizers.
<input checked="" type="checkbox"/>	54. Steam vents and safety relief valves.
<input type="checkbox"/>	55. Storage tanks, reservoirs, and pumping and handling equipment of any size containing soaps, vegetable oil, grease, animal fat, and nonvolatile aqueous salt solutions, provided appropriate lids and covers are utilized.
<input type="checkbox"/>	56. Storage tanks, vessels, and containers holding or storing liquid substances that will not emit any VOC or HAP. Exemptions for storage tanks containing petroleum liquids or other volatile organic liquids should be based on size limits such as storage tank capacity and vapor pressure of liquids stored and are not appropriate for this list.
<input type="checkbox"/>	57. Such other sources or activities as the Director may determine.
<input type="checkbox"/>	58. Tobacco smoking rooms and areas.
<input type="checkbox"/>	59. Vents from continuous emissions monitors and other analyzers.

Section 5: Emission Units, Control Devices, and Emission Points

25. Equipment Table
Fill out the Title V Equipment Table and provide it as ATTACHMENT D .
26. Emission Units
For each emission unit listed in the Title V Equipment Table , fill out and provide an Emission Unit Form as ATTACHMENT E .
For each emission unit not in compliance with an applicable requirement, fill out a Schedule of Compliance Form as ATTACHMENT F .
27. Control Devices
For each control device listed in the Title V Equipment Table , fill out and provide an Air Pollution Control Device Form as ATTACHMENT G .
For any control device that is required on an emission unit in order to meet a standard or limitation for which the potential pre-control device emissions of an applicable regulated air pollutant is greater than or equal to the Title V Major Source Threshold Level, refer to the Compliance Assurance Monitoring (CAM) Form(s) for CAM applicability. Fill out and provide these forms, if applicable, for each Pollutant Specific Emission Unit (PSEU) as ATTACHMENT H .

Section 6: Certification of Information



28. Certification of Truth, Accuracy and Completeness and Certification of Compliance

Note: This Certification must be signed by a responsible official. The **original**, signed in **blue ink**, must be submitted with the application. Applications without an **original** signed certification will be considered as incomplete.

a. Certification of Truth, Accuracy and Completeness

I certify that I am a responsible official (as defined at 45CSR§30-2.38) and am accordingly authorized to make this submission on behalf of the owners or operators of the source described in this document and its attachments. I certify under penalty of law that I have personally examined and am familiar with the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine and/or imprisonment.

b. Compliance Certification

Except for requirements identified in the Title V Application for which compliance is not achieved, I, the undersigned hereby certify that, based on information and belief formed after reasonable inquiry, all air contaminant sources identified in this application are in compliance with all applicable requirements.

Responsible official (type or print)

Name: Benjamin Watkins

Benjamin D. Watkins

Title: Plant Manager

PLANT MANAGER

Responsible official's signature:

Signature:

Benjamin D. Watkins

Signature Date:

2/13/2020

(Must be signed and dated in blue ink)

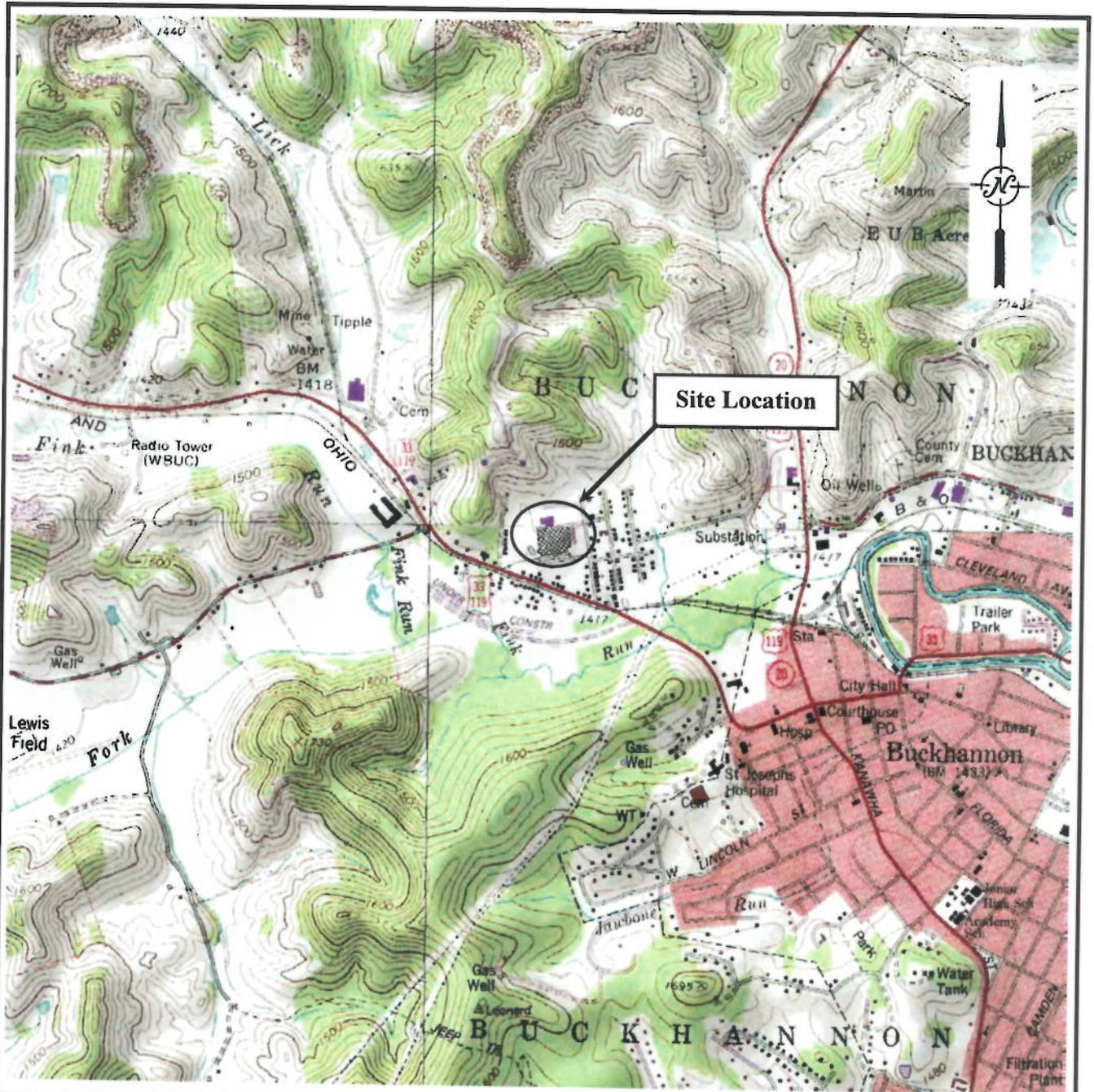
Note: Please check all applicable attachments included with this permit application:

<input checked="" type="checkbox"/>	ATTACHMENT A: Area Map
<input type="checkbox"/>	ATTACHMENT B: Plot Plan(s)
<input checked="" type="checkbox"/>	ATTACHMENT C: Process Flow Diagram(s)
<input checked="" type="checkbox"/>	ATTACHMENT D: Equipment Table
<input checked="" type="checkbox"/>	ATTACHMENT E: Emission Unit Form(s)
<input type="checkbox"/>	ATTACHMENT F: Schedule of Compliance Form(s)
<input checked="" type="checkbox"/>	ATTACHMENT G: Air Pollution Control Device Form(s)
<input type="checkbox"/>	ATTACHMENT H: Compliance Assurance Monitoring (CAM) Form(s)

All of the required forms and additional information can be found and downloaded from, the DEP website at www.dep.wv.gov/dag, requested by phone (304) 926-0475, and/or obtained through the mail.

ATTACHMENT A

Area Map



Reference:
 3-D TopoQuads © DeLorme,
 Yarmouth, Me 04096
 Source Data:
 7.5 Minute USGS
 Topographic Quadrangles

Berlin, WV
 Century, WV
 Adrian, WV
 Buckhannon, WV

Vicinity Map

Scale 1" = 2000'

**Benchmark SH&E
 Services LLC**
 Fairmont, West Virginia

Corhart Refractories

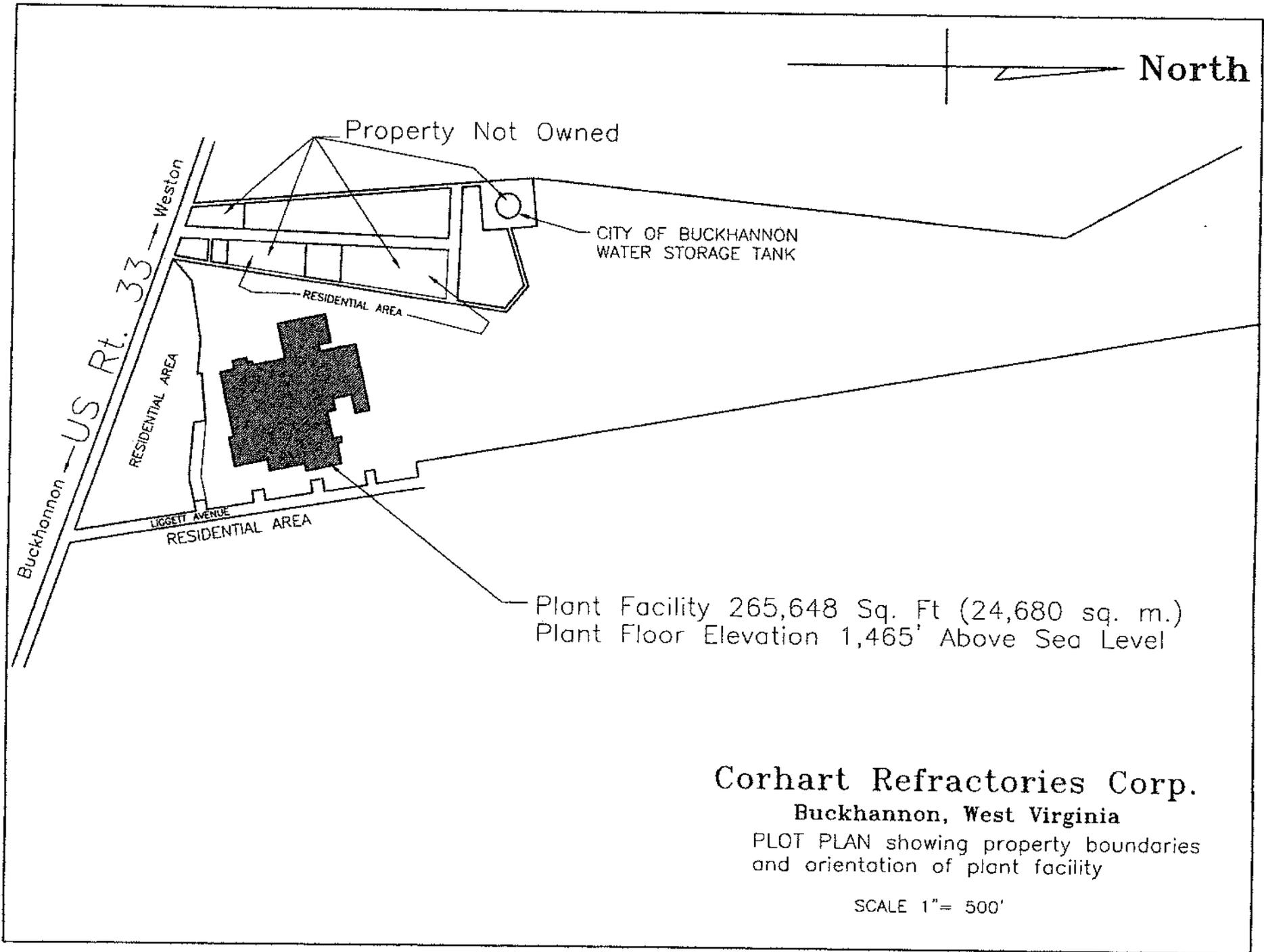
Air Permit Application

Project No. 20-059

Figure 1

ATTACHMENT B

Plot Plan



North

Property Not Owned

CITY OF BUCKHANNON
WATER STORAGE TANK

RESIDENTIAL AREA

RESIDENTIAL AREA

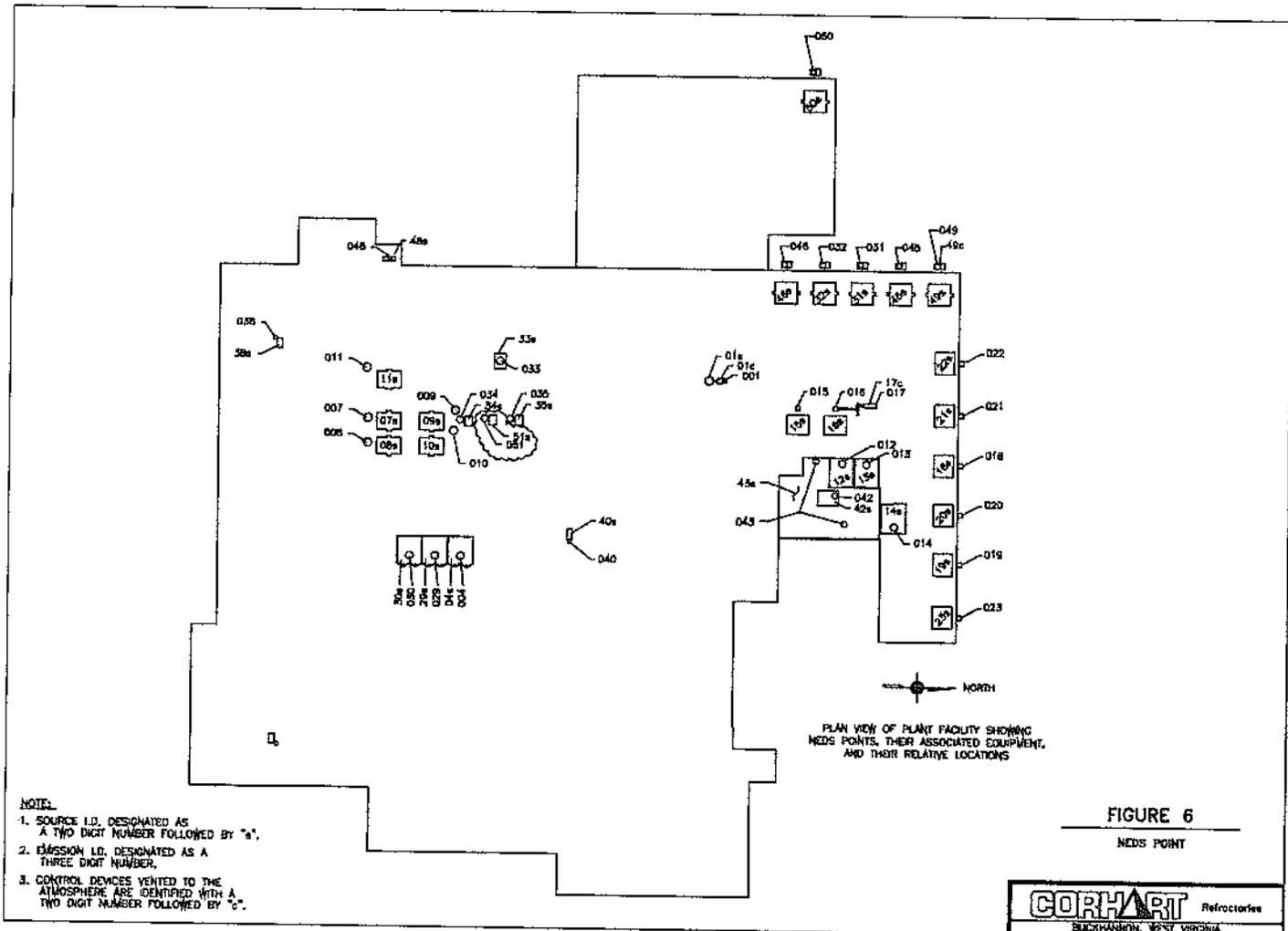
LIGGETT AVENUE

RESIDENTIAL AREA

Plant Facility 265,648 Sq. Ft (24,680 sq. m.)
Plant Floor Elevation 1,465' Above Sea Level

Corhart Refractories Corp.
Buckhannon, West Virginia
PLOT PLAN showing property boundaries
and orientation of plant facility

SCALE 1" = 500'



NOTE:

1. SOURCE I.D. DESIGNATED AS A TWO DIGIT NUMBER FOLLOWED BY "a".
2. EMASION I.D. DESIGNATED AS A THREE DIGIT NUMBER.
3. CONTROL DEVICES VENTED TO THE ATMOSPHERE ARE IDENTIFIED WITH A TWO DIGIT NUMBER FOLLOWED BY "c".

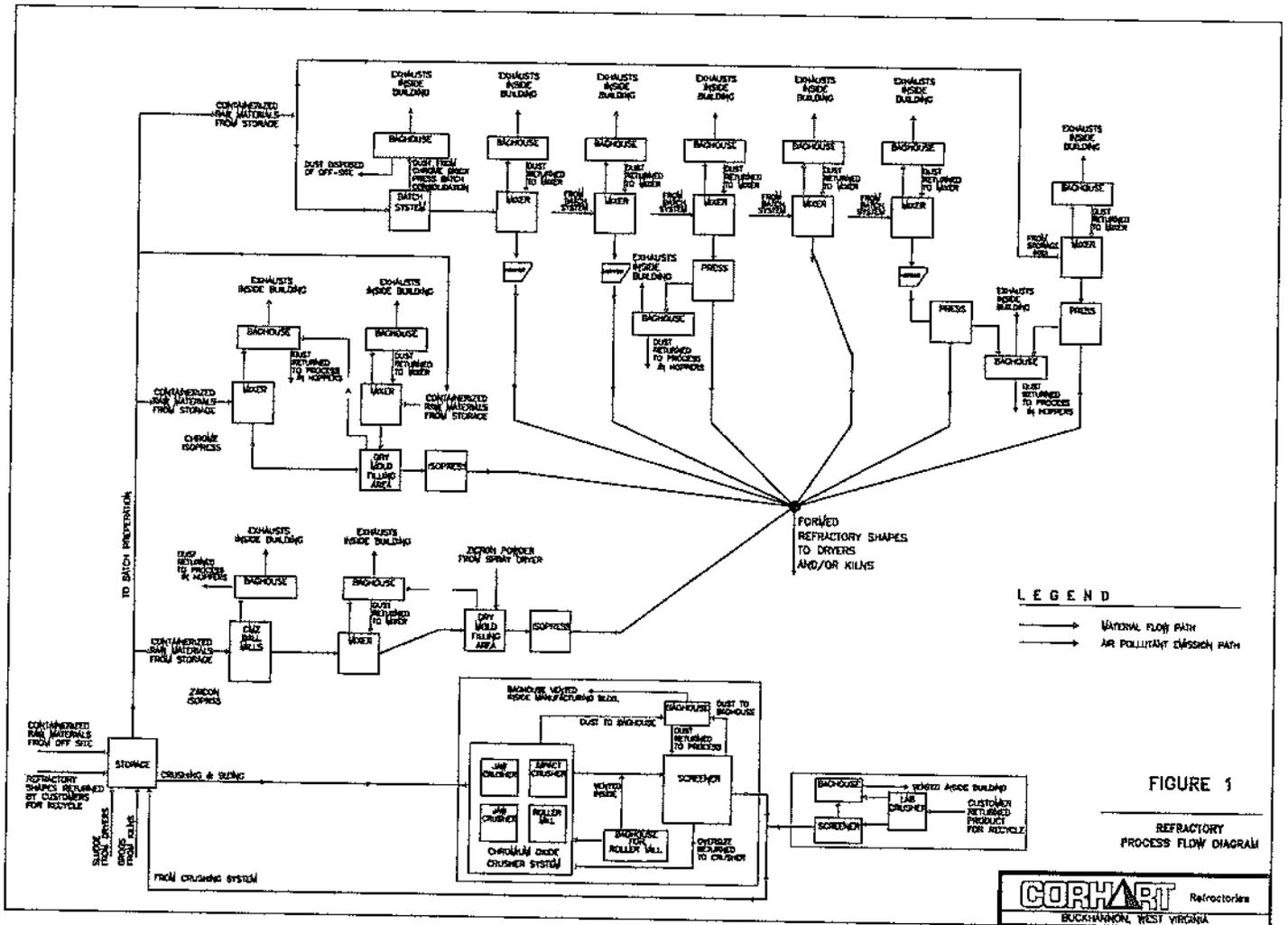
FIGURE 6

NEDS POINT



ATTACHMENT C

Process Flow Diagrams



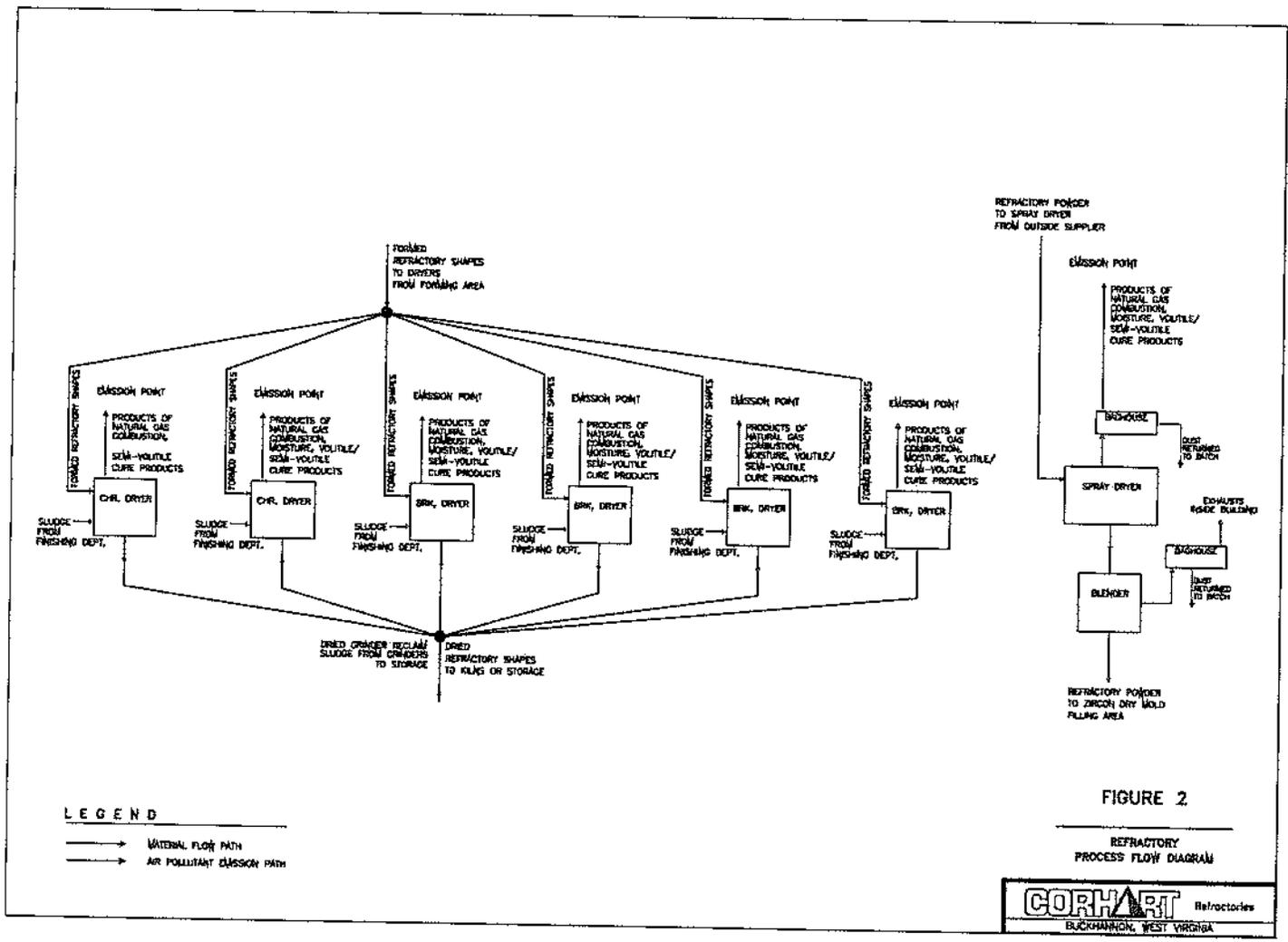
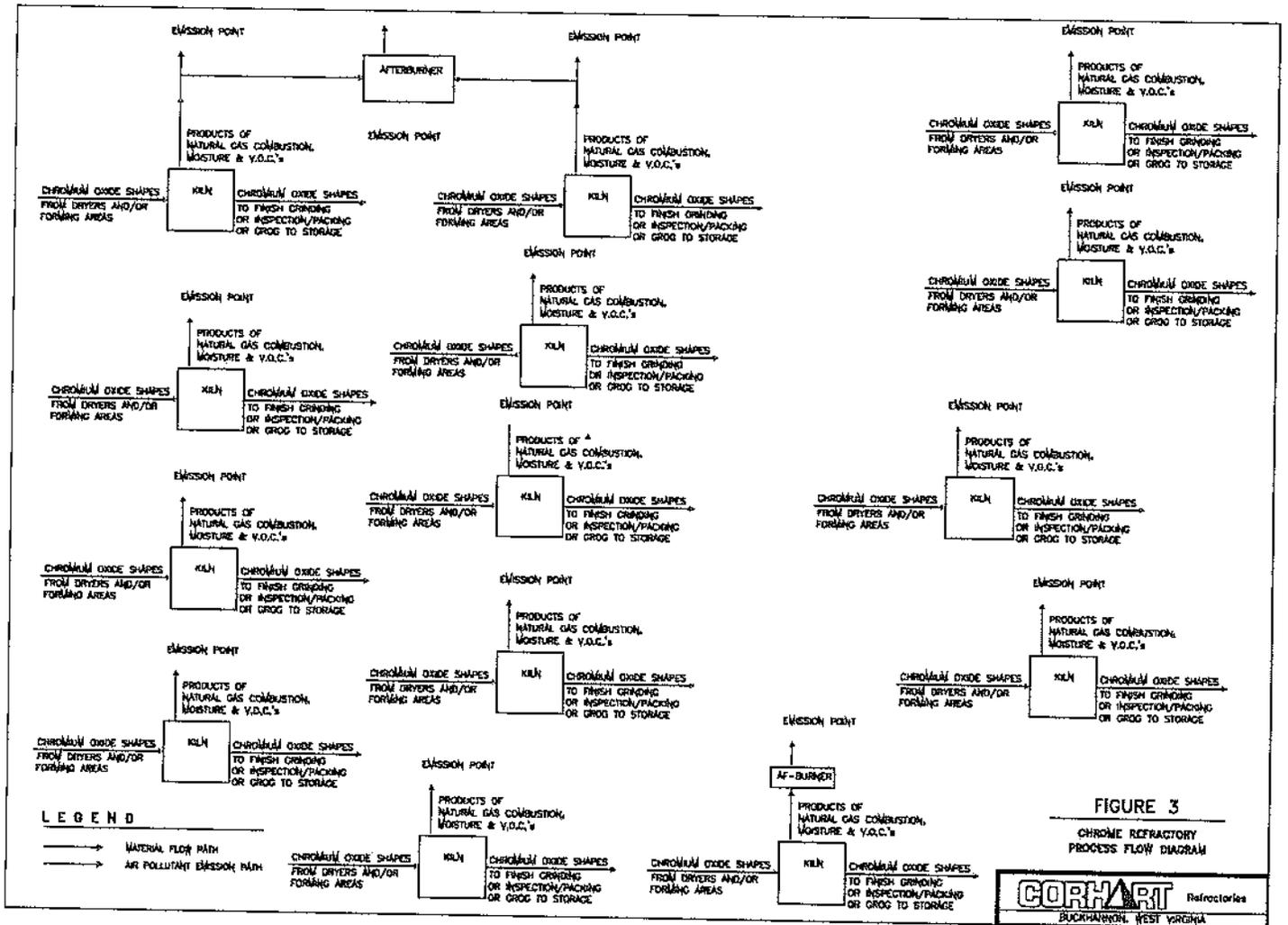
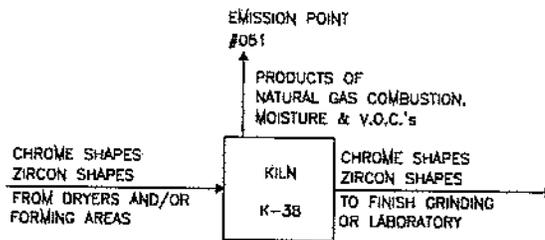


FIGURE 2

REFRACTORY PROCESS FLOW DIAGRAM







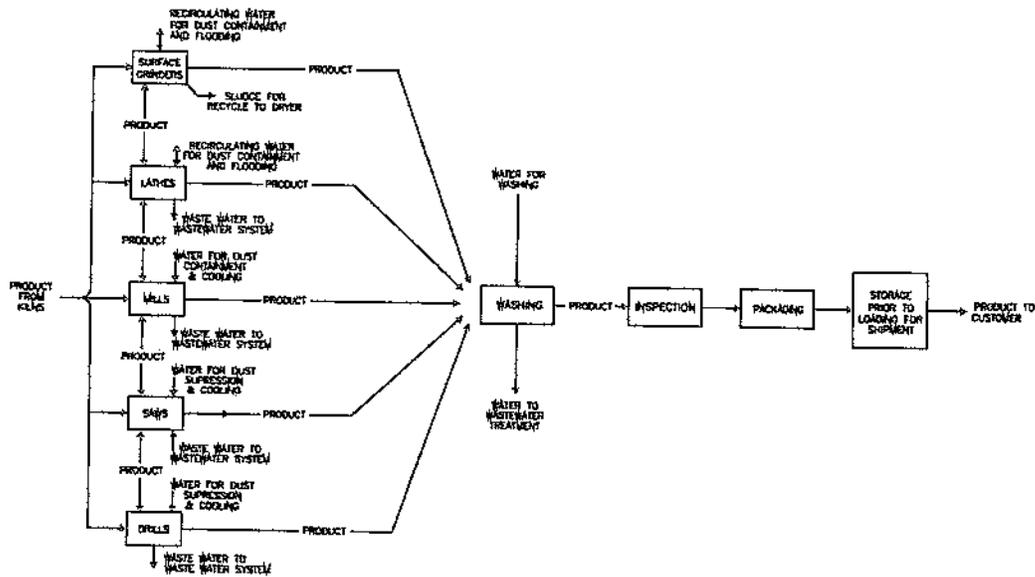
LEGEND

- MATERIAL FLOW PATH
- AIR POLLUTANT EMISSION PATH

FIGURE 4

ZIRCON REFRACTORIES
PROCESS FLOW DIAGRAM





LEGEND
 ———> MATERIAL FLOW PATH
 - - - -> AIR POLLUTANT EMISSION PATH

FIGURE 5

REFRACTORY
 PROCESS FLOW DIAGRAM



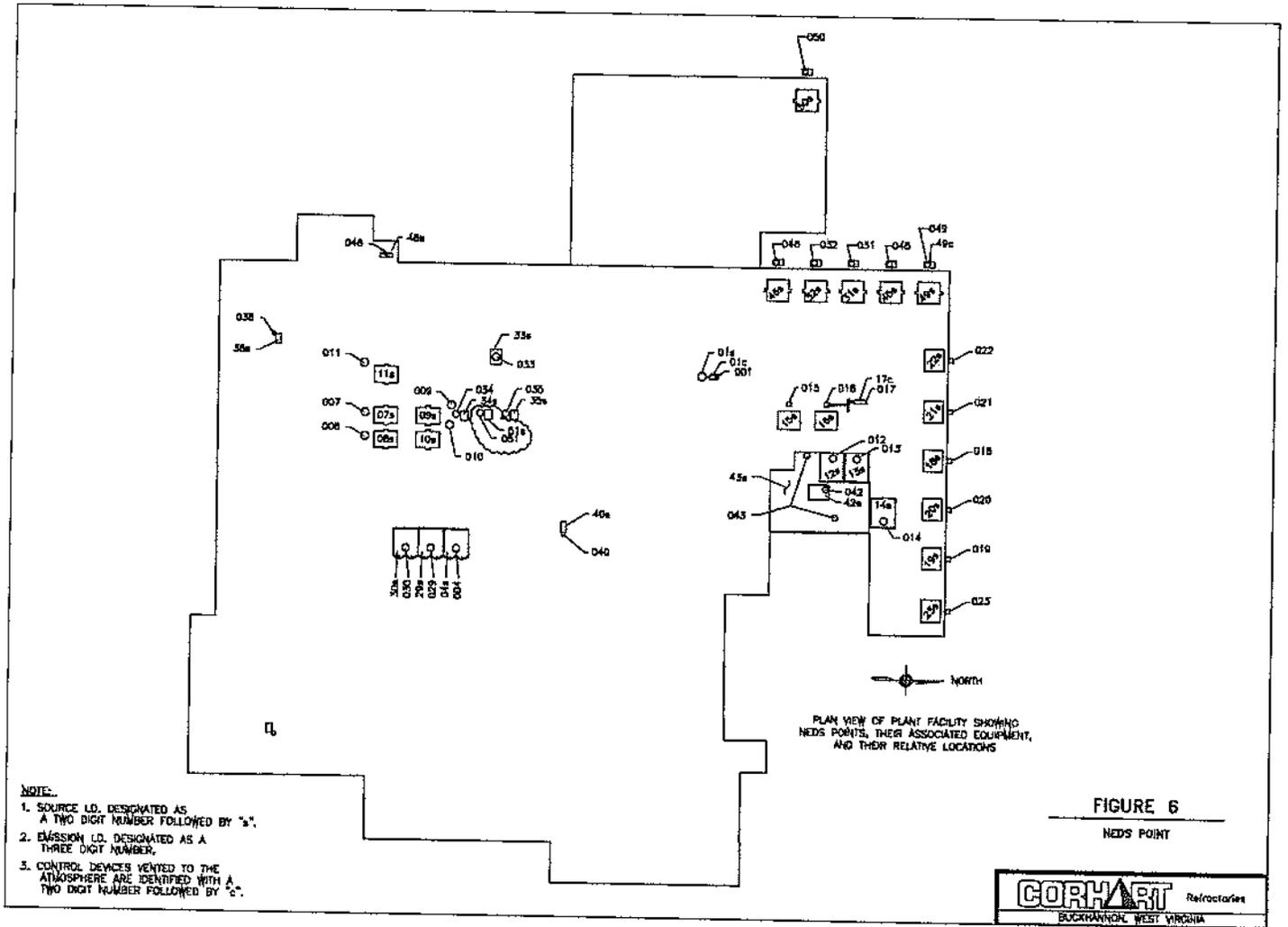
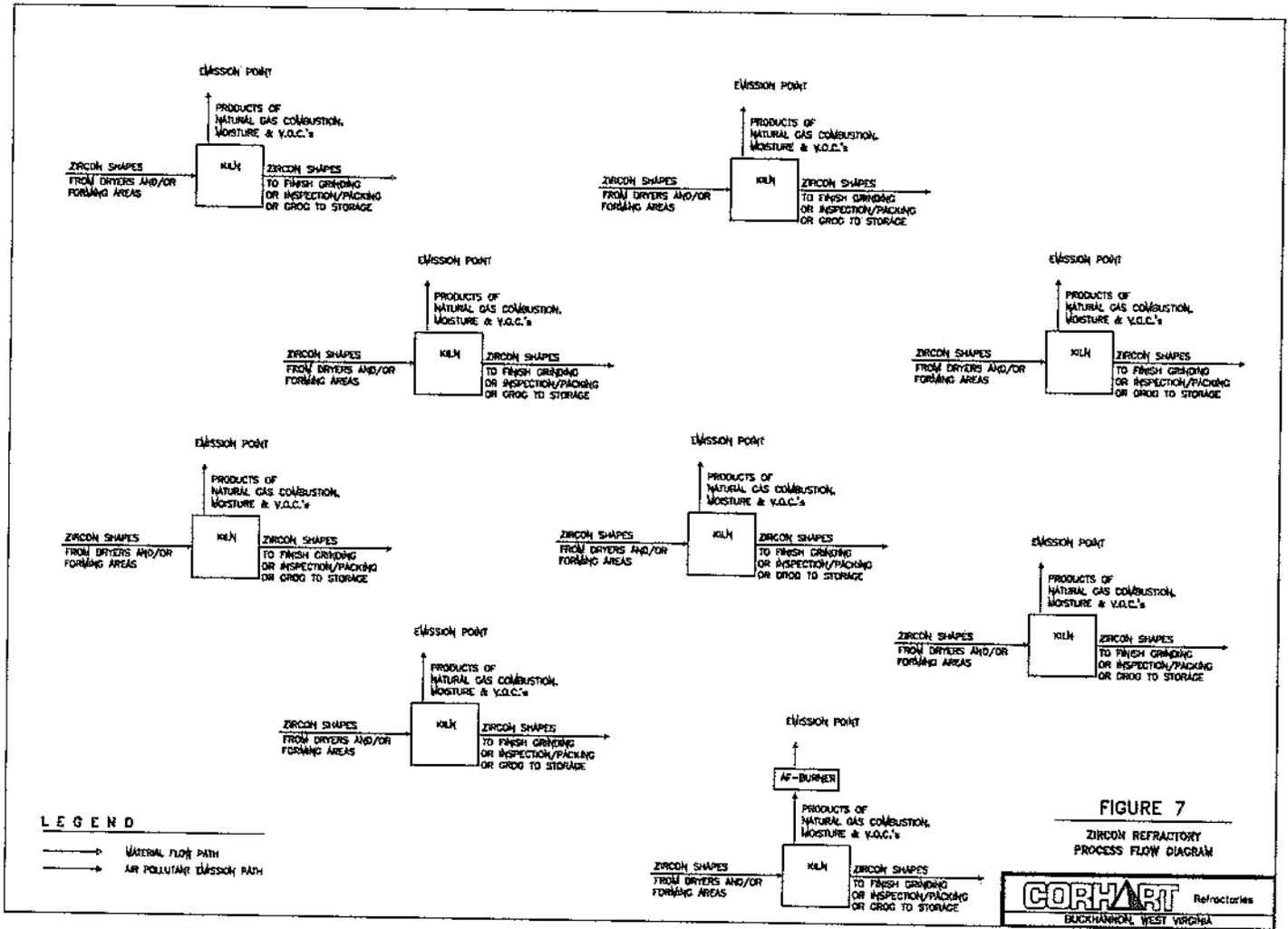


FIGURE 6

NEDS POINT





ATTACHMENT D

Emission Units Table

ATTACHMENT D - Title V Equipment Table
(includes all emission units at the facility except those designated as
insignificant activities in Section 4, Item 24 of the General Forms)

Emission Point ID ¹	Control Device ¹	Emission Unit ID ¹	Emission Unit Description	Design Capacity	Year Installed/Modified
7S	None	007	Kiln K-4	3.5 mmbtu/hr	1961
8S	None	008	Kiln K-9	3.5 mmbtu/hr	1963
9S	None	009	Kiln K-10	3.5 mmbtu/hr	1963
10S	None	010	Kiln K-11	5.0 mmbtu/hr	1967
11S	None	011	Kiln K-15	6.0 mmbtu/hr	1970
15S	0.94 mmbtu/hr Afterburner 017C	015	Kiln K-1	10.48 mmbtu/hr	1961
16S	0.94 mmbtu/hr Afterburner 017C	016	Kiln K-2	10.48 mmbtu/hr	1961
18S	None	018	Kiln K-13	10.48 mmbtu/hr	1971
19S	None	019	Kiln K-14	10.48 mmbtu/hr	1972
20S	None	020	Kiln K-21	10.48 mmbtu/hr	1974
21S	None	021	Kiln K-22	10.48 mmbtu/hr	1975
22S	None	022	Kiln K-27	10.48 mmbtu/hr	1989
23S	None	023	Kiln K-30	10.48 mmbtu/hr	1990
31S	None	031	Bickley Bell Kiln K-23	8.0 mmbtu/hr	1978
32S	None	032	Bickley Bell Kiln K-24	8.0 mmbtu/hr	1978
33S	None	033	C.P.C. Shuttle Kiln K-26	3.75 mmbtu/hr	1988
34S	None	034	Bickley Lab Kiln K-12	2.0 mmbtu/hr	1964
35S	None	035	Bickley Lab Kiln K-28	2.0 mmbtu/hr	1990
45S	None	045	Bickley Bell Kiln K-33	9.0 mmbtu/hr	1996
46S	None	046	Bickley Bell Kiln K-34	9.0 mmbtu/hr	1996
48S	None	048	Emergency Diesel Generator	896 bhp	2000
49S	1.1 mmbtu/hr Afterburner 049C	049	Car Bell Kiln K-35	8.72 mmbtu/hr	2001
50S	None	050	Car Bell Kiln K-36	12.0 mmbtu/hr	2005
51S	None	051	Kiln K-38	4.0 mmbtu/hr	2009

¹For 45CSR13 permitted sources, the numbering system used for the emission points, control devices, and emission units should be consistent with the numbering system used in the 45CSR13 permit. For grandfathered sources, the numbering system should be consistent with registrations or emissions inventory previously submitted to DAQ. For emission points, control devices, and emissions units which have not been previously labeled, use the following 45CSR13 numbering system: 1S, 2S, 3S,... or other appropriate description for emission units; 1C, 2C, 3C,... or other appropriate designation for control devices; 1E, 2E, 3E,... or other appropriate designation for emission points

ATTACHMENT E

Emission Unit Forms

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:

7S

Emission unit name:

Kiln K-4

List any control devices associated with this emission unit:

Provide a description of the emission unit (type, method of operation, design parameters, etc.):

3.5 mmbtu/hr natural gas fired kiln

Manufacturer:

Model number:

Serial number:

Construction date:

MM/DD/YYYY

Installation date:

01/01/1961

Modification date(s):

MM/DD/YYYY

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 27,000 lbs per batch load and 3.5 mmbtu/hr design heat input

Maximum Hourly Throughput:

Maximum Annual Throughput:

Maximum Operating Schedule:

Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? Yes No

If yes, is it?

Indirect Fired Direct Fired

Maximum design heat input and/or maximum horsepower rating:

3.5 mmbtu/hr

Type and Btu/hr rating of burners:

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Natural Gas 3,500 cf/hr and 20.16 mmcf/year

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas			1000

<i>Emissions Data</i>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		3.30
Nitrogen Oxides (NO _x)		1.51
Lead (Pb)		
Particulate Matter (PM _{2.5})	0.0783	0.11
Particulate Matter (PM ₁₀)	0.0783	0.11
Total Particulate Matter (TSP)	0.0783	0.11
Sulfur Dioxide (SO ₂)		0.009
Volatile Organic Compounds (VOC)		1.37
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

AP-42 emission factors for natural gas combustion, engineering calculations for CO and VOC resulting from VOCs in product, chrome, NO_x, and PM/PM10/PM2.5 emissions from stack test results.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

- 45CSR7-3.1. Visible emissions cannot exceed 20 percent.
- 45CSR7-3.7. No visible emissions from any storage structure.
- 45CSR7-4.1. Process weight rate particulate matter emission limit.
- 45CSR7-9.1. Excess particulate matter emissions due to equipment malfunctions.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

- 45CSR30-5.1.c. Monthly visible emission checks. Maintain records of visible emission checks.
- 45CSR30-5.1.c., 45CSR7-8.1 and 8.2. Stack test at the request of the director to determine compliance with weight-based PM limits.
- 45CSR30-5.1.c. Calculations from stack test used for determining compliance with annual emission limits.
- 45CSR30-5.1.c. Use only natural gas; maintain records of fuel burned each month; maintain records of fuel quality.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the Schedule of Compliance Form as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number: 8S	Emission unit name: Kiln K-9	List any control devices associated with this emission unit:
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Provide a description of the emission unit (type, method of operation, design parameters, etc.):
 3.5 mmbtu/hr natural gas fired kiln

Manufacturer:	Model number:	Serial number:
Construction date: MM/DD/YYYY	Installation date: 01/01/1963	Modification date(s): MM/DD, YYYY

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 27,000 lbs per batch load and 3.5 mmbtu/hr design heat input

Maximum Hourly Throughput:	Maximum Annual Throughput:	Maximum Operating Schedule:
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Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, is it? <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired
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Maximum design heat input and/or maximum horsepower rating: 3.5 mmbtu/hr	Type and Btu/hr rating of burners:
--	---

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Natural Gas 3,500 cf/hr and 20.16 mmcf/year

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas			1000

<i>Emissions Data</i>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		3.30
Nitrogen Oxides (NO _x)		1.51
Lead (Pb)		
Particulate Matter (PM _{2.5})	0.39	0.11
Particulate Matter (PM ₁₀)	0.39	0.11
Total Particulate Matter (TSP)	0.39	0.11
Sulfur Dioxide (SO ₂)		0.009
Volatile Organic Compounds (VOC)		1.37
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

AP-42 emission factors for natural gas combustion, engineering calculations for CO and VOC resulting from VOCs in product, chrome, NO_x, and PM/PM10/PM2.5 emissions from stack test results.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

- 45CSR7-3.1. Visible emissions cannot exceed 20 percent.
- 45CSR7-3.7. No visible emissions from any storage structure.
- 45CSR7-4.1. Process weight rate particulate matter emission limit.
- 45CSR7-9.1. Excess particulate matter emissions due to equipment malfunctions.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

- 45CSR30-5.1.c. Monthly visible emission checks. Maintain records of visible emission checks.
- 45CSR30-5.1.c., 45CSR7-8.1. and 8.2. Stack test at the request of the director to determine compliance with weight-based PM limits.
- 45CSR30-5.1.c. Calculations from stack test used for determining compliance with annual emission limits.
- 45CSR30-5.1.c. Use only natural gas; maintain records of fuel burned each month; maintain records of fuel quality.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the Schedule of Compliance Form as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:

9S

Emission unit name:

Kiln K-10

List any control devices associated with this emission unit:

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
3.5 mmbtu/hr natural gas fired kiln

Manufacturer:

Model number:

Serial number:

Construction date:
MM/DD/YYYY

Installation date:
01/01/1963

Modification date(s):
MM/DD/YYYY

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 27,000 lbs per batch load and 3.5 mmbtu/hr design heat input

Maximum Hourly Throughput:

Maximum Annual Throughput:

Maximum Operating Schedule:

Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? Yes No

If yes, is it?

Indirect Fired Direct Fired

Maximum design heat input and/or maximum horsepower rating:
3.5 mmbtu/hr

Type and Btu/hr rating of burners:

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Natural Gas 3,500 cf/hr and 20.16 mmcf/year

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas			1000

Page ____ of ____

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		3.30
Nitrogen Oxides (NO _x)		1.51
Lead (Pb)		
Particulate Matter (PM _{2.5})	0.39	0.11
Particulate Matter (PM ₁₀)	0.39	0.11
Total Particulate Matter (TSP)	0.39	0.11
Sulfur Dioxide (SO ₂)		0.009
Volatile Organic Compounds (VOC)		1.37
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

AP-42 emission factors for natural gas combustion, engineering calculations for CO and VOC resulting from VOCs in product, NO_x and PM/PM10/PM2.5 emissions calculated from stack test results.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

- 45CSR7-3.1. Visible emissions cannot exceed 20 percent.
- 45CSR7-3.7. No visible emissions from any storage structure.
- 45CSR7-4.1. Process weight rate particulate matter emission limit.
- 45CSR7-9.1. Excess particulate matter emissions due to equipment malfunctions.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

- 45CSR30-5.1.c. Monthly visible emission checks. Maintain records of visible emission checks.
- 45CSR30-5.1.c., 45CSR7-8.1. and 8.2. Stack test at the request of the director to determine compliance with weight-based PM limits.
- 45CSR30-5.1.c. Calculations from stack test used for determining compliance with annual emission limits.
- 45CSR30-5.1.c. Use only natural gas; maintain records of fuel burned each month; maintain records of fuel quality.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the Schedule of Compliance Form as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

<i>Emission Unit Description</i>			
Emission unit ID number: 10S	Emission unit name: Kiln K-11	List any control devices associated with this emission unit:	
Provide a description of the emission unit (type, method of operation, design parameters, etc.): 5.0 mmbtu/hr natural gas fired kiln			
Manufacturer:	Model number:	Serial number:	
Construction date: MM/DD/YYYY	Installation date: 01/01/1967	Modification date(s): MM DD/YYYY	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 38,000 lbs per batch load and 5.0 mmbtu/hr design heat input			
Maximum Hourly Throughput:	Maximum Annual Throughput: 570,000 lbs	Maximum Operating Schedule:	
Fuel Usage Data (fill out all applicable fields)			
Does this emission unit combust fuel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		If yes, is it? <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired	
Maximum design heat input and/or maximum horsepower rating: 5.0 mmbtu/hr		Type and Btu/hr rating of burners:	
List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each. Natural Gas 5,000 cf/hr and 28.80 mmcf/year			
Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas			1000

<i>Emissions Data</i>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		4.66
Nitrogen Oxides (NO _x)		2.16
Lead (Pb)		
Particulate Matter (PM _{2.5})	0.39	0.16
Particulate Matter (PM ₁₀)	0.39	0.16
Total Particulate Matter (TSP)	0.39	0.16
Sulfur Dioxide (SO ₂)		0.013
Volatile Organic Compounds (VOC)		1.93
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

AP-42 emission factors for natural gas combustion, engineering calculations for CO and VOC resulting from VOCs in product, NO_x and PM/PM10/PM2.5 emissions calculated from stack test results.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

- 45CSR7-3.1. Visible emissions cannot exceed 20 percent.
- 45CSR7-3.7. No visible emissions from any storage structure.
- 45CSR7-4.1. Process weight rate particulate matter emission limit.
- 45CSR7-9.1. Excess particulate matter emissions due to equipment malfunctions.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

- 45CSR30-5.1.c. Monthly visible emission checks. Maintain records of visible emission checks.
- 45CSR30-5.1.c., 45CSR7-8.1. and 8.2. Stack test at the request of the director to determine compliance with weight-based PM limits.
- 45CSR30-5.1.c. Calculations from stack test used for determining compliance with annual emission limits.
- 45CSR30-5.1.c. Use only natural gas; maintain records of fuel burned each month; maintain records of fuel quality.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the Schedule of Compliance Form as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number: 11S	Emission unit name: Kiln K-15	List any control devices associated with this emission unit:
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Provide a description of the emission unit (type, method of operation, design parameters, etc.):
 6.0 mmbtu/hr natural gas fired kiln

Manufacturer:	Model number:	Serial number:
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Construction date: MM/DD/YYYY	Installation date: 01/01/1970	Modification date(s): MM/DD/YYYY
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 46,000 lbs per batch load and 6.0 mmbtu/hr design heat input

Maximum Hourly Throughput:	Maximum Annual Throughput:	Maximum Operating Schedule:
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Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, is it? <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired
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Maximum design heat input and/or maximum horsepower rating: 6.0 mmbtu/hr	Type and Btu/hr rating of burners:
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List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Natural Gas 6,000 cf/hr and 34.56 mmcf/year

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas			1000

<i>Emissions Data</i>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		5.62
Nitrogen Oxides (NO _x)		2.59
Lead (Pb)		
Particulate Matter (PM _{2.5})	0.39	0.20
Particulate Matter (PM ₁₀)	0.39	0.20
Total Particulate Matter (TSP)	0.39	0.20
Sulfur Dioxide (SO ₂)		0.016
Volatile Organic Compounds (VOC)		2.34
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

AP-42 emission factors for natural gas combustion, engineering calculations for CO and VOC resulting from VOCs in product, NO_x and PM/PM₁₀/PM_{2.5} emissions calculated from stack test results.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

- 45CSR7-3.1. Visible emissions cannot exceed 20 percent.
- 45CSR7-3.7. No visible emissions from any storage structure.
- 45CSR7-4.1. Process weight rate particulate matter emission limit.
- 45CSR7-9.1. Excess particulate matter emissions due to equipment malfunctions.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

- 45CSR30-5.1.c. Monthly visible emission checks. Maintain records of visible emission checks.
- 45CSR30-5.1.c., 45CSR7-8.1. and 8.2. Stack test at the request of the director to determine compliance with weight-based PM limits.
- 45CSR30-5.1.c. Calculations from stack test used for determining compliance with annual emission limits.
- 45CSR30-5.1.c. Use only natural gas; maintain records of fuel burned each month; maintain records of fuel quality.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the Schedule of Compliance Form as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:

155

Emission unit name:

Kiln K-1

List any control devices associated with this emission unit:

Afterburner

Provide a description of the emission unit (type, method of operation, design parameters, etc.):

10.48 mmbtu/hr natural gas fired kiln

Manufacturer:

Model number:

Serial number:

Construction date:

MM/DD/YYYY

Installation date:

01/01/1961

Modification date(s):

MM/DD/YYYY

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 80,000 lbs per batch load and 10.48 mmbtu/hr design heat input

Maximum Hourly Throughput:

Maximum Annual Throughput:

1,192,000 lbs

Maximum Operating Schedule:

Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? Yes No

If yes, is it?

Indirect Fired Direct Fired

Maximum design heat input and/or maximum horsepower rating:
10.48 mmbtu/hr

Type and Btu/hr rating of burners:

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Natural Gas 10.480 cf/hr and 60.36 mmcf/year

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas			1000

<i>Emissions Data</i>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		9.79
Nitrogen Oxides (NO _x)		4.53
Lead (Pb)		
Particulate Matter (PM _{2.5})	0.275	0.34
Particulate Matter (PM ₁₀)	0.275	0.34
Total Particulate Matter (TSP)	0.275	0.34
Sulfur Dioxide (SO ₂)		0.027
Volatile Organic Compounds (VOC)		4.06
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Total Chrome		0.0011
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
Carbon Dioxide		3622

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

AP-42 emission factors for natural gas combustion, engineering calculations for CO and VOC resulting from VOCs in product, chrome, NO_x, and PM/PM10/PM2.5 emissions from stack test results.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

- 45CSR6-4.1. Particulate matter emission limit for incinerators.
- 45CSR7-3.1. Visible emissions cannot exceed 20 percent.
- 45CSR7-3.7. No visible emissions from any storage structure.
- 45CSR7-4.1. Process weight rate particulate matter emission limit.
- 45CSR7-9.1. Excess particulate matter emissions due to equipment malfunctions.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

- 45CSR30-5.1.c. Monthly visible emission checks. Maintain records of visible emission checks.
- 45CSR30-5.1.c., 45CSR7-8.1 and 8.2. Stack test at the request of the director to determine compliance with weight-based PM limits.
- 45CSR30-5.1.c. Calculations from stack test used for determining compliance with annual emission limits.
- 45CSR30-5.1.c. Use only natural gas; maintain records of fuel burned each month; maintain records of fuel quality.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the Schedule of Compliance Form as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:
16S

Emission unit name:
Kiln K-2

List any control devices associated with this emission unit:
017C Afterburner

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
10.48 mmbtu/hr natural gas fired kiln

Manufacturer:

Model number:

Serial number:

Construction date:
MM/DD/YYYY

Installation date:
01/01/1961

Modification date(s):
MM/DD/YYYY

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 80,000 lbs per batch load and 10.48 mmbtu/hr design heat input

Maximum Hourly Throughput:

Maximum Annual Throughput:
1,192,000 lbs

Maximum Operating Schedule:

Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? Yes No

If yes, is it?

Indirect Fired Direct Fired

Maximum design heat input and/or maximum horsepower rating:
10.48 mmbtu/hr

Type and Btu/hr rating of burners:

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Natural Gas 10,480 cft/hr and 60.36 mmcf/year

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas			1000

<i>Emissions Data</i>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		9.79
Nitrogen Oxides (NO _x)		4.53
Lead (Pb)		
Particulate Matter (PM _{2.5})	0.275	0.34
Particulate Matter (PM ₁₀)	0.275	0.34
Total Particulate Matter (TSP)	0.275	0.34
Sulfur Dioxide (SO ₂)		0.027
Volatile Organic Compounds (VOC)		4.06
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Total Chrome		0.0011
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

AP-42 emission factors for natural gas combustion, engineering calculations for CO and VOC resulting from VOCs in product, chrome, NO_x, and PM/PM10/PM2.5 emissions from stack test results.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

- 45CSR7-3.1. Visible emissions cannot exceed 20 percent.
- 45CSR7-3.7. No visible emissions from any storage structure.
- 45CSR7-4.1. Process weight rate particulate matter emission limit.
- 45CSR7-9.1. Excess particulate matter emissions due to equipment malfunctions.
- 45CSR6-4.1. Particulate matter emission limit for incinerators.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

- 45CSR30-5.1.c. Monthly visible emission checks. Maintain records of visible emission checks.
- 45CSR30-5.1.c., 45CSR7-8.1 and 8.2. Stack test at the request of the director to determine compliance with weight-based PM limits.
- 45CSR30-5.1.c. Calculations from stack test used for determining compliance with annual emission limits.
- 45CSR30-5.1.c. Use only natural gas; maintain records of fuel burned each month; maintain records of fuel quality.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the Schedule of Compliance Form as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description			
Emission unit ID number: 18S	Emission unit name: Kiln K-13	List any control devices associated with this emission unit:	
Provide a description of the emission unit (type, method of operation, design parameters, etc.): 10.48 mmbtu/hr natural gas fired kiln			
Manufacturer:	Model number:	Serial number:	
Construction date: MM/DD/YYYY	Installation date: 01/01/1971	Modification date(s): MM/DD/YYYY	
Design Capacity (examples: furnaces - tons/hr. tanks - gallons): 80,000 lbs per batch load and 10.48 mmbtu/hr design heat input			
Maximum Hourly Throughput:	Maximum Annual Throughput: 1,192,000 lbs	Maximum Operating Schedule:	
Fuel Usage Data (fill out all applicable fields)			
Does this emission unit combust fuel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		If yes, is it? <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired	
Maximum design heat input and/or maximum horsepower rating: 10.48 mmbtu/hr		Type and Btu/hr rating of burners:	
List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each. Natural Gas 10,480 cf/hr and 60.36 mmcf/year			
Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas			1000

<i>Emissions Data</i>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		9.79
Nitrogen Oxides (NO _x)		4.53
Lead (Pb)		
Particulate Matter (PM _{2.5})	0.275	0.34
Particulate Matter (PM ₁₀)	0.275	0.34
Total Particulate Matter (TSP)	0.275	0.34
Sulfur Dioxide (SO ₂)		0.027
Volatile Organic Compounds (VOC)		4.06
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Total Chrome		0.0011
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

AP-42 emission factors for natural gas combustion, engineering calculations for CO and VOC resulting from VOCs in product, and chrome, NO_x, and PM PM10/PM2.5 emissions calculated from stack test results.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

- 45CSR7-3.1. Visible emissions cannot exceed 20 percent.
- 45CSR7-3.7. No visible emissions from any storage structure.
- 45CSR7-4.1. Process weight rate particulate matter emission limit.
- 45CSR7-9.1. Excess particulate matter emissions due to equipment malfunctions

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

- 45CSR30-5.1.c. Monthly visible emission checks. Maintain records of visible emission checks.
- 45CSR30-5.1.c., 45CSR7-8.1. and 8.2. Stack test at the request of the director to determine compliance with weight-based PM limits.
- 45CSR30-5.1.c. Calculations from stack test used for determining compliance with annual emission limits.
- 45CSR30-5.1.c. Use only natural gas; maintain records of fuel burned each month; maintain records of fuel quality

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the Schedule of Compliance Form as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number: 19S	Emission unit name: Kiln K-14	List any control devices associated with this emission unit:
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Provide a description of the emission unit (type, method of operation, design parameters, etc.):
10.48 mmbtu/hr natural gas fired kiln

Manufacturer:	Model number:	Serial number:
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Construction date: MM/DD/YYYY	Installation date: 01/01/1971	Modification date(s): MM/DD/YYYY
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 80,000 lbs per batch load and 10.48 mmbtu/hr design heat input

Maximum Hourly Throughput:	Maximum Annual Throughput: 1,192,000 lbs	Maximum Operating Schedule:
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Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, is it? <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired
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Maximum design heat input and/or maximum horsepower rating: 10.48 mmbtu/hr	Type and Btu/hr rating of burners:
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List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Natural Gas 10,480 cfm/hr and 60.36 mmcf/year

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas			1000

<i>Emissions Data</i>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		9.79
Nitrogen Oxides (NO _x)		4.53
Lead (Pb)		
Particulate Matter (PM _{2.5})	0.275	0.34
Particulate Matter (PM ₁₀)	0.275	0.34
Total Particulate Matter (TSP)	0.275	0.34
Sulfur Dioxide (SO ₂)		0.027
Volatile Organic Compounds (VOC)		4.06
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Total Chrome		0.0011
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>AP-42 emission factors for natural gas combustion, engineering calculations for CO and VOC resulting from VOCs in product, and chrome, NO_x, and PM/PM10/PM2.5 emissions calculated from stack test results.</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

- 45CSR7-3.1. Visible emissions cannot exceed 20 percent.
- 45CSR7-3.7. No visible emissions from any storage structure.
- 45CSR7-4.1. Process weight rate particulate matter emission limit.
- 45CSR7-9.1. Excess particulate matter emissions due to equipment malfunctions.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

- 45CSR30-5.1.c. Monthly visible emission checks. Maintain records of visible emission checks.
- 45CSR30-5.1.c., 45CSR7-8.1. and 8.2. Stack test at the request of the director to determine compliance with weight-based PM limits.
- 45CSR30-5.1.c. Calculations from stack test used for determining compliance with annual emission limits.
- 45CSR30-5.1.c. Use only natural gas; maintain records of fuel burned each month; maintain records of fuel quality.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the Schedule of Compliance Form as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number: 20S	Emission unit name: Kiln K-21	List any control devices associated with this emission unit:
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Provide a description of the emission unit (type, method of operation, design parameters, etc.):
10.48 mmbtu/hr natural gas fired kiln

Manufacturer:	Model number:	Serial number:
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Construction date: MM/DD/YYYY	Installation date: 01/01/1974	Modification date(s): MM/DD/YYYY
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 80,000 lbs per batch load and 10.48 mmbtu/hr design heat input

Maximum Hourly Throughput:	Maximum Annual Throughput: 1,192,000 lbs	Maximum Operating Schedule:
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Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, is it? <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired
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Maximum design heat input and/or maximum horsepower rating: 10.48 mmbtu/hr	Type and Btu/hr rating of burners:
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List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Natural Gas 10,480 cf/hr and 60.36 mmtcf/year

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas			1000

<i>Emissions Data</i>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		9.79
Nitrogen Oxides (NO _x)		4.53
Lead (Pb)		
Particulate Matter (PM _{2.5})	0.275	0.34
Particulate Matter (PM ₁₀)	0.275	0.34
Total Particulate Matter (TSP)	0.275	0.34
Sulfur Dioxide (SO ₂)		0.027
Volntile Organic Compounds (VOC)		4.06
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Total Chrome		0.0011
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

AP-42 emission factors for natural gas combustion, engineering calculations for CO and VOC resulting from VOCs in product, chrome, NO_x, and PM.PM10/PM2.5 emissions calculated from stack test results.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

- 45CSR7-3.1. Visible emissions cannot exceed 20 percent.
- 45CSR7-3.7. No visible emissions from any storage structure.
- 45CSR7-4.1. Process weight rate particulate matter emission limit.
- 45CSR7-9.1. Excess particulate matter emissions due to equipment malfunctions.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

- 45CSR30-5.1.c. Monthly visible emission checks. Maintain records of visible emission checks.
- 45CSR30-5.1.c., 45CSR7-8.1. and 8.2. Stack test at the request of the director to determine compliance with weight-based PM limits.
- 45CSR30-5.1.c. Calculations from stack test used for determining compliance with annual emission limits.
- 45CSR30-5.1.c. Use only natural gas; maintain records of fuel burned each month; maintain records of fuel quality.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the Schedule of Compliance Form as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number: 21S	Emission unit name: Kiln K-22	List any control devices associated with this emission unit:
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Provide a description of the emission unit (type, method of operation, design parameters, etc.):
 10.48 mmbtu/hr natural gas fired kiln

Manufacturer:	Model number:	Serial number:
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Construction date: MM/DD/YYYY	Installation date: 01/01/1975	Modification date(s): MM/DD/YYYY
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 80,000 lbs per batch load and 10.48 mmbtu/hr design heat input

Maximum Hourly Throughput:	Maximum Annual Throughput: 1,192,000 lbs	Maximum Operating Schedule:
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Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, is it? <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired
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Maximum design heat input and/or maximum horsepower rating: 10.48 mmbtu/hr	Type and Btu/hr rating of burners:
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List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Natural Gas 10,480 cf/hr and 60,36 mmcf/year

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas			1000

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		9.79
Nitrogen Oxides (NO _x)		4.53
Lead (Pb)		
Particulate Matter (PM _{2.5})	0.275	0.34
Particulate Matter (PM ₁₀)	0.275	0.34
Total Particulate Matter (TSP)	0.275	0.34
Sulfur Dioxide (SO ₂)		0.027
Volatile Organic Compounds (VOC)		4.06
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Total Chrome		0.0011
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

AP-42 emission factors for natural gas combustion, engineering calculations for CO and VOC resulting from VOCs in product, and chrome, NO_x, and PM/PM10/PM2.5 emissions calculated from stack test results.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

- 45CSR7-3.1. Visible emissions cannot exceed 20 percent.
- 45CSR7-3.7. No visible emissions from any storage structure.
- 45CSR7-4.1. Process weight rate particulate matter emission limit.
- 45CSR7-10. Excess particulate matter emissions due to equipment malfunctions.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

- 45CSR30-5.1.c. Monthly visible emission checks. Maintain records of visible emission checks.
- 45CSR30-5.1.c., 45CSR7-8.1. and 8.2. Stack test at the request of the director to determine compliance with weight-based PM limits.
- 45CSR30-5.1.c. Calculations from stack test used for determining compliance with annual emission limits.
- 45CSR30-5.1.c. Use only natural gas; maintain records of fuel burned each month; maintain records of fuel quality.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the Schedule of Compliance Form as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number: 22S	Emission unit name: Kiln K-27	List any control devices associated with this emission unit: None
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Provide a description of the emission unit (type, method of operation, design parameters, etc.):
 80,000 lb maximum batch load natural gas fired kiln

Manufacturer:	Model number:	Serial number:
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Construction date: MM/DD/YYYY	Installation date: 01/01/1989	Modification date(s): MM/DD/YYYY
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 80,000 lbs per batch load

Maximum Hourly Throughput:	Maximum Annual Throughput:	Maximum Operating Schedule:
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Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, is it? <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired
--	---

Maximum design heat input and/or maximum horsepower rating: 10.48 mmbtu/hr	Type and Btu/hr rating of burners:
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List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Natural Gas 10,480 cf/hr and 91.80 mmcf/year

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas			1000

<i>Emissions Data</i>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	48	14.7
Nitrogen Oxides (NO _x)	5.47	4.23
Lead (Pb)		
Particulate Matter (PM _{2.5})	0.211	0.61
Particulate Matter (PM ₁₀)	0.211	0.61
Total Particulate Matter (TSP)	0.211	0.61
Sulfur Dioxide (SO ₂)	0.1	0.44
Volatile Organic Compounds (VOC)	17	5.10
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Total Chrome	0.045	0.08
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

AP-42 emission factors for natural gas combustion, engineering calculations for CO and VOC resulting from VOCs in product, chrome, NO_x, and PM/PM10/PM2.5 emissions from stack test results.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

- R13-2433C, Condition 4.1.3.a. Operating limits.
- R13-2433C, Condition 4.1.3.b. and c., 45CSR7-4.1. Hourly and annual emission limits, process weight rate particulate matter emission limit.
- R13-2433C, Condition 4.1.3.d., 45CSR7-3.1. and 3.2. Visible emissions cannot exceed 20% opacity.
- 45CSR7-9.1. Excess particulate matter emissions due to equipment malfunctions.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

- R13-2433C, Condition 4.2.1., 45CSR30-5.1.c. Maintain a certified record of the total fuel consumed and amount of refractory fired.
- R13-2433C, Condition 4.2.2. and 4.4.4., 45CSR30-5.1.c. Monthly visible emission checks. Maintain records of visible emission checks.
- R13-2433C, Condition 4.1.3.e. Kiln shall be equipped with a temperature measuring device/system in the combustion chamber with accuracy of $\pm 1.5^{\circ}\text{C}$ or $\pm 1\%$ of the temperature in $^{\circ}\text{C}$.
- 45CSR30-5.1.c. Calculations from production records and stack test used for determining compliance with annual emission limits.
- 45CSR30-5.1.c. Use only natural gas; maintain records of fuel burned each month; maintain records of fuel quality.
- R13-2433C, Condition 4.5.1. Report exceedances of visible emissions.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the Schedule of Compliance Form as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number: 23S	Emission unit name: Kiln K-30	List any control devices associated with this emission unit: None
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Provide a description of the emission unit (type, method of operation, design parameters, etc.):
 80,000 lb maximum batch load natural gas fired kiln

Manufacturer:	Model number:	Serial number:
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Construction date: MM/DD/YYYY	Installation date: 01/01.1990	Modification date(s): MM/DD/YYYY
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 80,000 lbs per batch load

Maximum Hourly Throughput:	Maximum Annual Throughput:	Maximum Operating Schedule:
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Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, is it? <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired
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Maximum design heat input and/or maximum horsepower rating:	Type and Btu/hr rating of burners:
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List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
 Natural Gas 10,480 cE/hr and 91.80 mmcf/year

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas			1000

<i>Emissions Data</i>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	48	14.7
Nitrogen Oxides (NO _x)	5.47	4.23
Lead (Pb)		
Particulate Matter (PM _{2.5})	0.211	0.61
Particulate Matter (PM ₁₀)	0.211	0.61
Total Particulate Matter (TSP)	0.211	0.61
Sulfur Dioxide (SO ₂)	0.1	0.44
Volatile Organic Compounds (VOC)	17	5.10
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Total Chrome	0.045	0.08
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

AP-42 emission factors for natural gas combustion, engineering calculations for CO and VOC resulting from VOCs in product, chrome, NO_x, and PM/PM10/PM2.5 emissions from stack test results.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

- R13-2433C, Condition 4.1.3.a. Operating limits.
- R13-2433C, Condition 4.1.3.b. and c., 45CSR7-4.1. Hourly and annual emission limits, process weight rate particulate matter emission limit.
- R13-2433C, Condition 4.1.3.d., 45CSR7-3.1. and 3.2. Visible emissions cannot exceed 20% opacity
- 45CSR7-9.1. Excess particulate matter emissions due to equipment malfunctions.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

- R13-2433C, Condition 4.2.1., 45CSR30-5.1.c. Maintain a certified record of the total fuel consumed and amount of refractory fired.
- R13-2433C, Condition 4.2.2. and 4.4.4., 45CSR30-5.1.c. Monthly visible emission checks. Maintain records of visible emission checks.
- R13-2433C, Condition 4.1.3.e. Kiln shall be equipped with a temperature measuring device/system in the combustion chamber with accuracy of $\pm 1.5^{\circ}\text{C}$ or $\pm 1\%$ of the temperature in $^{\circ}\text{C}$.
- 45CSR30-5.1.c. Calculations from production records and stack test used for determining compliance with annual emission limits.
- 45CSR30-5.1.c. Use only natural gas; maintain records of fuel burned each month; maintain records of fuel quality.
- R13-2433C, Condition 4.5.1. Report exceedances of visible emissions.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the Schedule of Compliance Form as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number: 31S	Emission unit name: Bickley Bell Kiln K-23	List any control devices associated with this emission unit:
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Provide a description of the emission unit (type, method of operation, design parameters, etc.):
8 mmbtu/hr natural gas fired kiln

Manufacturer:	Model number:	Serial number:
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Construction date: MM/DD/YYYY	Installation date: 01.01/1978	Modification date(s): MM/DD/YYYY
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 90,000 lbs per batch load and 8 mmbtu/hr design heat input

Maximum Hourly Throughput:	Maximum Annual Throughput: 1,324,444 lbs	Maximum Operating Schedule:
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Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, is it? <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired
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Maximum design heat input and/or maximum horsepower rating: 8 mmbtu/hr	Type and Btu/hr rating of burners:
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List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Natural Gas 8,000 cf/hr and 46.08 mmmcf/year

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas			1000

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		10.1
Nitrogen Oxides (NO _x)		3.46
Lead (Pb)		
Particulate Matter (PM _{2.5})	0.245	0.26
Particulate Matter (PM ₁₀)	0.245	0.26
Total Particulate Matter (TSP)	0.245	0.26
Sulfur Dioxide (SO ₂)		0.021
Volatile Organic Compounds (VOC)		4.48
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

AP-42 emission factors for natural gas combustion, engineering calculations for CO and VOC resulting from VOCs in product, and NO_x and PM/PM10/PM2.5 emissions calculated from stack test results.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

- 45CSR7-3.1. Visible emissions cannot exceed 20 percent.
- 45CSR7-3.7. No visible emissions from any storage structure.
- 45CSR7-4.1. Process weight rate particulate matter emission limit.
- 45CSR7-9.1. Excess particulate matter emissions due to equipment malfunctions

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

- 45CSR30-5.1.c. Monthly visible emission checks. Maintain records of visible emission checks.
- 45CSR30-5.1.c., 45CSR7-8 1. and 8.2. Stack test at the request of the director to determine compliance with weight-based PM limits.
- 45CSR30-5.1.c. Calculations from stack test used for determining compliance with annual emission limits.
- 45CSR30-5.1.c. Use only natural gas; maintain records of fuel burned each month; maintain records of fuel quality.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the Schedule of Compliance Form as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description			
Emission unit ID number: 32S	Emission unit name: Bickley Bell Kiln K-24	List any control devices associated with this emission unit:	
Provide a description of the emission unit (type, method of operation, design parameters, etc.): 8 mmbtu/hr natural gas fired kiln			
Manufacturer:	Model number:	Serial number:	
Construction date: MM/DD/YYYY	Installation date: 01/01/1978	Modification date(s): MM/DD/YYYY	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 90,000 lbs per batch load and 8 mmbtu/hr design heat input			
Maximum Hourly Throughput:	Maximum Annual Throughput: 1,324,444 lbs	Maximum Operating Schedule:	
Fuel Usage Data (fill out all applicable fields)			
Does this emission unit combust fuel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		If yes, is it? <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired	
Maximum design heat input and/or maximum horsepower rating: 8 mmbtu/hr		Type and Btu/hr rating of burners:	
List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each. Natural Gas 8,000 ccf/hr and 46.08 mmcE/year			
Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas			1000

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		10.1
Nitrogen Oxides (NO _x)		3.46
Lead (Pb)		
Particulate Matter (PM _{2.5})	0.245	0.26
Particulate Matter (PM ₁₀)	0.245	0.26
Total Particulate Matter (TSP)	0.245	0.26
Sulfur Dioxide (SO ₂)		0.021
Volatile Organic Compounds (VOC)		4.48
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

AP-42 emission factors for natural gas combustion, engineering calculations for CO and VOC resulting from VOCs in product, and NO_x and PM/PM10/PM2.5 emissions calculated from stack test results.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

- 45CSR7-3.1. Visible emissions cannot exceed 20 percent.
- 45CSR7-3.7. No visible emissions from any storage structure.
- 45CSR7-4.1. Process weight rate particulate matter emission limit.
- 45CSR7-9.1. Excess particulate matter emissions due to equipment malfunctions.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

- 45CSR30-5.1.c. Monthly visible emission checks. Maintain records of visible emission checks.
- 45CSR30-5.1.c., 45CSR7-8.1. and 8.2. Stack test at the request of the director to determine compliance with weight-based PM limits.
- 45CSR30-5.1.c. Calculations from stack test used for determining compliance with annual emission limits.
- 45CSR30-5.1.c. Use only natural gas; maintain records of fuel burned each month; maintain records of fuel quality.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the Schedule of Compliance Form as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number: 33S	Emission unit name: C.P.C. Shuttle Kiln K-26	List any control devices associated with this emission unit: None
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Provide a description of the emission unit (type, method of operation, design parameters, etc.):
 18,000 lb maximum batch load natural gas fired kiln

Manufacturer:	Model number:	Serial number:
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Construction date: MM/DD/YYYY	Installation date: 01/01/1988	Modification date(s): MM/DD/YYYY
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 18,000 lbs per batch load

Maximum Hourly Throughput:	Maximum Annual Throughput:	Maximum Operating Schedule:
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Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, is it? <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired
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Maximum design heat input and/or maximum horsepower rating: 3.75 mmbtu/hr	Type and Btu/hr rating of burners:
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List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Natural Gas 6,750 cf/hr and 59.13 mscf/year

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas			1000

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	11	3.37
Nitrogen Oxides (NO _x)	3.52	2.72
Lead (Pb)		
Particulate Matter (PM _{2.5})	0.047	0.14
Particulate Matter (PM ₁₀)	0.047	0.14
Total Particulate Matter (TSP)	0.047	0.14
Sulfur Dioxide (SO ₂)	0.1	0.44
Volatile Organic Compounds (VOC)	3.8	1.15
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Total Chrome	0.010	0.018
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

AP-42 emission factors for natural gas combustion, engineering calculations for CO and VOC resulting from VOCs in product, chrome, NO_x, and PM/PM10/PM2.5 emissions from stack test results.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

R13-2433C, Condition 4.1.3.a. Operating limits.
R13-2433C, Condition 4.1.3.b. and c., 45CSR7-4.1. Hourly and annual emission limits, process weight rate particulate matter emission limit.
R13-2433C, Condition 4.1.3.d., 45CSR7-3.1. and 3.2. Visible emissions cannot exceed 20% opacity.
45CSR7-9.1. Excess particulate matter emissions due to equipment malfunctions.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

R13-2433C, Condition 4.2.1., 45CSR30-5.1.c. Maintain a certified record of the total fuel consumed and amount of refractory fired.
R13-2433C, Condition 4.2.2. and 4.4.4., 45CSR30-5.1.c. Monthly visible emission checks. Maintain records of visible emission checks.
R13-2433C, Condition 4.1.3.e. Kiln shall be equipped with a temperature measuring device/system in the combustion chamber with accuracy of $\pm 1.5^{\circ}\text{C}$ or $\pm 1\%$ of the temperature in $^{\circ}\text{C}$.
45CSR30-5.1.c. Calculations from production records and stack test used for determining compliance with annual emission limits.
45CSR30-5.1.c. Use only natural gas; maintain records of fuel burned each month; maintain records of fuel quality
R13-2433C, Condition 4.5.1. Report exceedances of visible emissions.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the Schedule of Compliance Form as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

<i>Emission Unit Description</i>			
Emission unit ID number: 34S	Emission unit name: Bickley Lab Kiln K-12	List any control devices associated with this emission unit:	
Provide a description of the emission unit (type, method of operation, design parameters, etc.): 2 mmbtu/hr natural gas fired kiln			
Manufacturer:	Model number:	Serial number:	
Construction date: MM/DD/YYYY	Installation date: 01/01/1964	Modification date(s): MM/DD/YYYY	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 22,000 lbs per batch load and 2 mmbtu/hr design heat input			
Maximum Hourly Throughput:	Maximum Annual Throughput: 230,000	Maximum Operating Schedule:	
<i>Fuel Usage Data (fill out all applicable fields)</i>			
Does this emission unit combust fuel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		If yes, is it? <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired	
Maximum design heat input and/or maximum horsepower rating: 2 mmbtu/hr		Type and Btu/hr rating of burners:	
List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each. Natural Gas 2,000 cf/hr and 11.52 mmcf/year			
Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas			1000

<i>Emissions Data</i>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		2.48
Nitrogen Oxides (NO _x)		0.86
Lead (Pb)		
Particulate Matter (PM _{2.5})	0.0783	0.07
Particulate Matter (PM ₁₀)	0.0783	0.07
Total Particulate Matter (TSP)	0.0783	0.07
Sulfur Dioxide (SO ₂)		0.005
Volatile Organic Compounds (VOC)		1.10
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

AP-42 emission factors for natural gas combustion, engineering calculations for CO and VOC resulting from VOCs in product, NO_x and PM/PM10:PM2.5 emissions calculated from stack test results.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

- 45CSR7-3.1. Visible emissions cannot exceed 20 percent.
- 45CSR7-3.7. No visible emissions from any storage structure.
- 45CSR7-4.1. Process weight rate particulate matter emission limit.
- 45CSR7-9.1. Excess particulate matter emissions due to equipment malfunctions.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

- 45CSR30-5.1.c. Monthly visible emission checks. Maintain records of visible emission checks.
- 45CSR30-5.1.c., 45CSR7-8.1. and 8.2. Stack test at the request of the director to determine compliance with weight-based PM limits.
- 45CSR30-5.1.c. Calculations from stack test used for determining compliance with annual emission limits.
- 45CSR30-5.1.c. Use only natural gas; maintain records of fuel burned each month; maintain records of fuel quality.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the Schedule of Compliance Form as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number: 35S	Emission unit name: Bickley Lab Kiln K-28	List any control devices associated with this emission unit:
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Provide a description of the emission unit (type, method of operation, design parameters, etc.):
2 mmbtu/hr natural gas fired kiln

Manufacturer:	Model number:	Serial number:
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Construction date: MM/DD/YYYY	Installation date: 01/01/1990	Modification date(s): MM/DD/YYYY
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 22,000 lbs per batch load and 2 mmbtu/hr design heat input

Maximum Hourly Throughput:	Maximum Annual Throughput: 230,000	Maximum Operating Schedule:
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Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, is it? <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired
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Maximum design heat input and/or maximum horsepower rating: 2 mmbtu/hr	Type and Btu/hr rating of burners:
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List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
Natural Gas 2,000 cf/hr and 11.52 mmcf/year

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas			1000

<i>Emissions Data</i>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		2.48
Nitrogen Oxides (NO _x)		0.86
Lead (Pb)		
Particulate Matter (PM _{2.5})	0.0783	0.07
Particulate Matter (PM ₁₀)	0.0783	0.07
Total Particulate Matter (TSP)	0.0783	0.07
Sulfur Dioxide (SO ₂)		0.005
Volatile Organic Compounds (VOC)		1.10
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Total Chrome		0.0002
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

AP-42 emission factors for natural gas combustion, engineering calculations for CO and VOC resulting from VOCs in product, and chrome, NO_x, and PM/PM10/PM2.5 emissions calculated from stack test results.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

- 45CSR7-3.1. Visible emissions cannot exceed 20 percent.
- 45CSR7-3.7. No visible emissions from any storage structure.
- 45CSR7-4.1. Process weight rate particulate matter emission limit.
- 45CSR7-9.1. Excess particulate matter emissions due to equipment malfunctions.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

- 45CSR30-5.1.c. Monthly visible emission checks. Maintain records of visible emission checks.
- 45CSR30-5.1.c., 45CSR7-8.1. and 8.2. Stack test at the request of the director to determine compliance with weight-based PM limits.
- 45CSR30-5.1.c. Calculations from stack test used for determining compliance with annual emission limits.
- 45CSR30-5.1.c. Use only natural gas; maintain records of fuel burned each month; maintain records of fuel quality.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the Schedule of Compliance Form as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description			
Emission unit ID number: 45S	Emission unit name: Bickley Bell Kiln K-33	List any control devices associated with this emission unit: None	
Provide a description of the emission unit (type, method of operation, design parameters, etc.): 100,000 lb maximum batch load natural gas fired kiln			
Manufacturer:	Model number:	Serial number:	
Construction date: MM/DD/YYYY	Installation date: 01/01/1996	Modification date(s): MM/DD/YYYY	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 100,000 lbs per batch load, 9.0 mmbtu/hr			
Maximum Hourly Throughput:	Maximum Annual Throughput:	Maximum Operating Schedule:	
Fuel Usage Data (fill out all applicable fields)			
Does this emission unit combust fuel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		If yes, is it? <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired	
Maximum design heat input and/or maximum horsepower rating: 9.0 mmbtu/hr		Type and Btu/hr rating of burners:	
List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each. Natural Gas 9,000 cf/hr and 78.84 mmcf/year			
Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas			1000

<i>Emissions Data</i>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	60	18.3
Nitrogen Oxides (NO _x)	4.70	3.63
Lead (Pb)		
Particulate Matter (PM _{2.5})	0.264	0.76
Particulate Matter (PM ₁₀)	0.264	0.76
Total Particulate Matter (TSP)	0.264	0.76
Sulfur Dioxide (SO ₂)	0.1	0.44
Volatile Organic Compounds (VOC)	21	6.37
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Total Chrome	0.056	0.10
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

AP-42 emission factors for natural gas combustion, engineering calculations for CO and VOC resulting from VOCs in product, chrome, NO_x, and PM/PM10/PM2.5 emissions from stack test results

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

R13-2433C, Condition 4.1.3.a. Operating limits.

R13-2433C, Condition 4.1.3.b. and c., 45CSR7-4.1. Hourly and annual emission limits, process weight rate particulate matter emission limit.

R13-2433C, Condition 4.1.3.d., 45CSR7-3.1. and 3.2. Visible emissions cannot exceed 20% opacity.

45CSR7-9.1. Excess particulate matter emissions due to equipment malfunctions.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

R13-2433C, Condition 4.2.1., 45CSR30-5.1.c. Maintain a certified record of the total fuel consumed and amount of refractory fired.

R13-2433C, Condition 4.2.2. and 4.4.4., 45CSR30-5.1.c. Monthly visible emission checks. Maintain records of visible emission checks.

R13-2433C, Condition 4.1.3.e. Kiln shall be equipped with a temperature measuring device/system in the combustion chamber with accuracy of $\pm 1.5^{\circ}\text{C}$ or $\pm 1\%$ of the temperature in $^{\circ}\text{C}$.

45CSR30-5.1.c. Calculations from production records and stack test used for determining compliance with annual emission limits.

45CSR30-5.1.c. Use only natural gas; maintain records of fuel burned each month; maintain records of fuel quality

R13-2433C, Condition 4.5.1. Report exceedances of visible emissions.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the Schedule of Compliance Form as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number: 46S	Emission unit name: Bickley Bell Kiln K-34	List any control devices associated with this emission unit: None
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Provide a description of the emission unit (type, method of operation, design parameters, etc.):
100,000 lb maximum batch load natural gas fired kiln

Manufacturer:	Model number:	Serial number:
Construction date: MM/DD/YYYY	Installation date: 01/01/1996	Modification date(s): MM/DD/YYYY

Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 100,000 lbs per batch load, 9.0 mmbtu/hr

Maximum Hourly Throughput:	Maximum Annual Throughput:	Maximum Operating Schedule:
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Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, is it? <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired
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Maximum design heat input and/or maximum horsepower rating: 9.0 mmbtu/hr	Type and Btu/hr rating of burners:
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List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Natural Gas 9,000 cf/hr and 78.84 mmcf/year

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas			1000

<i>Emissions Data</i>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	60	18.3
Nitrogen Oxides (NO _x)	4.70	3.63
Lead (Pb)		
Particulate Matter (PM _{2.5})	0.264	0.76
Particulate Matter (PM ₁₀)	0.264	0.76
Total Particulate Matter (TSP)	0.264	0.76
Sulfur Dioxide (SO ₂)	0.1	0.44
Volatile Organic Compounds (VOC)	21	6.37
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Total Chrome	0.056	0.10
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

AP-42 emission factors for natural gas combustion, engineering calculations for CO and VOC resulting from VOCs in product, chrome, NO_x, and PM/PM10/PM2.5 emissions from stack tes:

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

R13-2433C, Condition 4.1.3.a. Operating limits.
R13-2433C, Condition 4.1.3.b. and c., 45CSR7-4.1. Hourly and annual emission limits, process weight rate particulate matter emission limit.
R13-2433C, Condition 4.1.3.d., 45CSR7-3.1. and 3.2. Visible emissions cannot exceed 20% opacity.
45CSR7-9.1. Excess particulate matter emissions due to equipment malfunctions.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

R13-2433C, Condition 4.2.1., 45CSR30-5.1.c. Maintain a certified record of the total fuel consumed and amount of refractory fired.
R13-2433C, Condition 4.2.2. and 4.4.4., 45CSR30-5.1.c. Monthly visible emission checks. Maintain records of visible emission checks.
R13-2433C, Condition 4.1.3.e. Kiln shall be equipped with a temperature measuring device/system in the combustion chamber with accuracy of $\pm 1.5^{\circ}\text{C}$ or $\pm 1\%$ of the temperature in $^{\circ}\text{C}$.
45CSR30-5.1.c. Calculations from production records and stack test used for determining compliance with annual emission limits.
45CSR30-5.1.c. Use only natural gas; maintain records of fuel burned each month; maintain records of fuel quality.
R13-2433C, Condition 4.5.1. Report exceedances of visible emissions.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the Schedule of Compliance Form as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number: -18S	Emission unit name: Emergency Diesel Generator	List any control devices associated with this emission unit: None
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Provide a description of the emission unit (type, method of operation, design parameters, etc.):
 Emergency backup generator

Manufacturer: Caterpillar	Model number: 3412 DITA	Serial number: _____
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Construction date: MM/DD/YYYY	Installation date: 01/01/2000	Modification date(s): MM/DD/YYYY
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 896 bph

Maximum Hourly Throughput: 44.5 gallons of diesel fuel	Maximum Annual Throughput: _____	Maximum Operating Schedule: 100 hours per year
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Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, is it? <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired
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Maximum design heat input and/or maximum horsepower rating: 896 bph	Type and Btu/hr rating of burners: _____
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List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Diesel fuel – 44.5 gallons per hour and 4450 gallons per year

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Diesel			14400

<i>Emissions Data</i>		
Criteria Pollutants	Potential Emissions	
	PPH	PPY
Carbon Monoxide (CO)	0.57	57.0
Nitrogen Oxides (NO _x)	14.8	1480
Lead (Pb)		
Particulate Matter (PM _{2.5})	1.09	109
Particulate Matter (PM ₁₀)	1.09	109
Total Particulate Matter (TSP)	1.09	109
Sulfur Dioxide (SO ₂)	1.45	145
Volatile Organic Compounds (VOC)	0.26	26.0
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

AP-42 emission factors for diesel fueled internal combustion engines and manufacturer's emission factors.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

R13-2412, Condition A.1. Hourly and annual emission limits.

R13-2412, Condition A.2. Annual operating hours shall not exceed 100 hours per year as determined using a rolling yearly total.

R13-2412, Condition A.3. The engine shall not consume more than 44.5 gallons of diesel fuel per hour.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

R13-2412, Condition B.1. Maintain records of the amount of diesel fuel consumed, hours of operation, and the 12-month rolling average hours of operation each month. Records shall be certified by a responsible official and kept on site for 5 years.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the Schedule of Compliance Form as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number: 49S	Emission unit name: Kiln K-35	List any control devices associated with this emission unit: Afterburner
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Provide a description of the emission unit (type, method of operation, design parameters, etc.):
80,000 lb maximum batch load natural gas fired kiln
Car Bell Kiln

Manufacturer:	Model number:	Serial number:
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Construction date: MM/DD/YYYY	Installation date: 01/01/2001	Modification date(s): MM/DD/YYYY
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 90,000 lbs per batch load

Maximum Hourly Throughput:	Maximum Annual Throughput:	Maximum Operating Schedule:
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Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, is it? <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired
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Maximum design heat input and/or maximum horsepower rating: 8.72 mmbtu/hr	Type and Btu/hr rating of burners:
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List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
Natural Gas 8720 cf/hr and 106.7 mmcf/year

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas			1000

<i>Emissions Data</i>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	6.76	7.06
Nitrogen Oxides (NO _x)	6.30	10.5
Lead (Pb)		
Particulate Matter (PM _{2.5})	0.29	0.86
Particulate Matter (PM ₁₀)	0.29	0.86
Total Particulate Matter (TSP)	0.29	0.86
Sulfur Dioxide (SO ₂)	0.01	0.02
Volatile Organic Compounds (VOC)	3.66	2.75
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Total Chrome	0.001	0.0005
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

AP-42 emission factors for natural gas combustion, engineering calculations for CO and VOC resulting from VOCs in product, chrome, NO_x, and PM/PM10/PM2.5 emissions from stack test results.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

- R13-2433C, Condition 4.1.1.a. Operating limits
- R13-2433C, Condition 4.1.1.b., 45CSR7-4.1, 45CSR6-4.1 Hourly emission limits
- R13-2433C, Condition 4.1.1.c. Annual emission limits
- R13-2433C, Condition 4.1.1.d. Items a and b of this condition are required to be a hereto only when refractory is being fired that contains a liquid polyethylene glycol based binder or a refractory formulation that is known to exhibit visible emissions without controls.
- R13-2433C, Condition 4.1.1.e. Operate afterburner when kiln temperatures reach 150°C until temperature reaches 500°C.
- R13-2433C, Condition 4.1.1.f. Minimum combustion temperature of the afterburner shall be no less than 750°C.
- 45CSR7-3.1., 45CSR6-4.3., R13-2433C, Condition 4.1.1.h. Visible emissions cannot exceed 20 percent
- 45CSR7-9.1. Excess particulate matter emissions due to equipment malfunctions.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

- R13-2433C, Condition 4.2.1. Maintain a certified record of the total fuel consumed by the kiln and afterburner, the total number of kiln cycles completed, the amount of refractory produced that contains liquid polyethylene glycol based binder, and the total refractory production.
- R13-2433C, Condition 4.2.2, 45CSR30-5.1.c. Monthly visible emission checks. Maintain records of visible emission checks.
- R13-2433C, Condition 4.1.1.g. 45CSR30-5.1.c. Afterburner and kiln shall be equipped with a temperature measuring device/system in the combustion chamber with accuracy of $\pm 1.5^\circ\text{C}$ or $\pm 1\%$ of the temperature in $^\circ\text{C}$.
- 45CSR30-5.1.c. Stack test required one per permit term for CO, NO_x, and VOC.
- 45CSR30-5.1.c. Calculations from stack test and production records shall be used for determining compliance with annual emission limits.
- 45CSR30-5.1.c. Only use natural gas, maintain monthly records of the quantity of fuel burned, maintain records of the quality of fuel burned.
- R13-2433C, Condition 4.4.2. Record maintenance of air pollution control equipment.
- R13-2433C, Condition 4.4.3. Maintain records of the occurrence and duration of any air pollution equipment malfunction.
- R13-2433C, Condition 4.4.4. Maintain certified monthly records of operations, total fuel consumed by the kiln and afterburner, total number of kiln cycles completed, and total refractory production.
- 45CSR30-5.1.c. Submit results of stack testing within 30 days of completion.
- R13-2433C, Condition 4.5.1. Report exceedances of the allowable visible emission requirement.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the Schedule of Compliance Form as ATTACHMENT F

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number: 50S	Emission unit name: Kiln K-36	List any control devices associated with this emission unit:
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Provide a description of the emission unit (type, method of operation, design parameters, etc.):
 80,000 lb maximum batch load natural gas fired kiln
 Car Bell Kiln

Manufacturer:	Model number:	Serial number:
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Construction date: MM/DD/YYYY	Installation date: 01/01/2005	Modification date(s): MM/DD/YYYY
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 170,000 lbs per batch load

Maximum Hourly Throughput:	Maximum Annual Throughput: 1,400,000 lbs	Maximum Operating Schedule:
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Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, is it? <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired
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Maximum design heat input and/or maximum horsepower rating: 12.0 mmbtu/hr	Type and Btu/hr rating of burners:
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List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
 Natural Gas 12,000 cf/hr and 97.8 mmcf/year

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas			1000

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	5.97	7.35
Nitrogen Oxides (NO _x)	8.67	13.24
Lead (Pb)		
Particulate Matter (PM _{2.5})	0.40	1.18
Particulate Matter (PM ₁₀)	0.40	1.18
Total Particulate Matter (TSP)	0.40	1.18
Sulfur Dioxide (SO ₂)	0.01	0.03
Volatile Organic Compounds (VOC)	6.20	4.61
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

AP-42 emission factors for natural gas combustion, engineering calculations for CO and VOC resulting from VOCs in product, stack test results for NO_x and PM/PM10/PM2.5.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

- R13-2433C, Condition 4.1.2.a. Operating limits
- R13-2433C, Condition 4.1.2.b., 45CSR7-4.1. Hourly emission limits, process weight rates limits for PM
- R13-2433C, Condition 4.1.2.c. Annual emission limits
- R13-2433C, Condition 4.1.2.d. No polyethylene glycol based binder
- R13-2433C, Condition 4.1.4. Operation and Maintenance of Air Pollution Control Equipment
- 45CSR7-3.1., 45CSR6-4.3., R13-2433C, Condition 4.1.2.c. Visible emissions cannot exceed 20 percent.
- 45CSR7-8.1. Stack tests of particulate matter required per Director.
- 45CSR7-8.2. The Director may conduct the stack tests.
- 45CSR7-9.1. Excess particulate matter emissions due to equipment malfunctions.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

- R13-2433C, Condition 4.2.1. Maintain a certified record of the total fuel consumed by the kiln and afterburner, the total number of kiln cycles completed, and the total refractory production.
- R13-2433C, Condition 4.2.2., 45CSR30-5.1.c. Monthly visible emission checks. Maintain records of visible emission checks.
- 45CSR30-5.1.c. Stack test required one per permit term for CO, NOx, and VOC.
- 45CSR30-5.1.c. Calculations from stack test and production records shall be used for determining compliance with annual emission limits.
- 45CSR30-5.1.c. Use only natural gas; maintain monthly records of the quantity of fuel burned; maintain records of fuel quality.
- R13-2433C, Condition 4.4.1. Keep records of required monitoring.
- R13-2433C, Condition 4.4.4. Maintain certified monthly records of operations, total fuel consumed by the kiln, total number of kiln cycles completed, and total refractory production.
- 45CSR30-5.1.c. Submit results of stack testing within 30 days of completion.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the Schedule of Compliance Form as ATTACHMENT E.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number: 51s	Emission unit name: Kiln K-38	List any control devices associated with this emission unit: None
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Provide a description of the emission unit (type, method of operation, design parameters, etc.):
4.0 mmBtu/hr natural gas fired kiln for firing zircon or chromic oxide refractory material.

Manufacturer: HED International	Model number: ELG-23 Down Draft Elevator Plus	Serial number:
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Construction date: MM/DD/YYYY	Installation date: 04/01/2009	Modification date(s): MM/DD/YYYY
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 5,000 lbs of zircon or chromic oxide refractory per kiln load

Maximum Hourly Throughput: 3,720 cf/hr natural gas	Maximum Annual Throughput: 35,000 lbs of refractory per year 18.6 mmcf/yr natural gas burned	Maximum Operating Schedule: 5,000 hours per year
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Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, is it? <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired
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Maximum design heat input and/or maximum horsepower rating: 4.0 mmBtu/hr	Type and Btu/hr rating of burners: Four (4) high velocity, high turn down nozzle mix
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List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
Pipeline quality natural gas

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural Gas	0.25 gr/100 scf	NA	1,075

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.60	2.65
Nitrogen Oxides (NO _x)	1.93	2.65
Lead (Pb)	--	--
Particulate Matter (PM _{2.5})	0.16	0.71
Particulate Matter (PM ₁₀)	0.16	0.71
Total Particulate Matter (TSP)	0.16	0.71
Sulfur Dioxide (SO ₂)	0.004	0.02
Volatile Organic Compounds (VOC)	0.055	0.24
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Total Chrome	1.74E-04	3.10E-05
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>AP-42 Emissions factors for natural gas combustion in external combustion sources (Section 1.4 Table 1.4-1). Revised potential emissions based on 8,760 hours of operation. Emissions of CO and VOCs include product related emissions. NO_x and PM/PM10/PM2.5 emissions based on stack test results.</p> <p>Chrome emissions from stack test.</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

45CSR7-3.1. No person shall cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any process source operation which is greater twenty (20) percent opacity, except as noted in subsections 3.2, 3.3, 3.4, 3.5, 3.6, and 3.7 of 45CSR7.

45CSR7-4.1 No person shall cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any process source operation, or duplicate source operation, or from all air pollution control equipment installed on any type source operation in excess of 0.051 pounds per hour. Compliance with this PM limit will assure compliance with the weight based emission limits of Rule 6 at 45CSR§6-4.1.

45CSR7-8.1. At such reasonable times as the Director may designate the operator of any manufacturing process source operation may be required to conduct or have conducted stack tests to determine the particulate matter loading in exhaust gases when the Director has reason to believe that the stack emission limitation(s) is/are being violated. Such tests shall be conducted in such manner as the Director may specify and be filed on forms and in a manner acceptable to the Director. The Director, or his duly authorized representative, may at his option witness or conduct such stack tests. Should the Director exercise his option to conduct such test, the operator will provide all the necessary sampling connections and sampling ports to be located in such manner as the Director may require, power for test equipment, and the required safety equipment such as scaffolding, railings, and ladders to comply with generally accepted good safety practices.

45CSR7-8.2. The Director, or his duly authorized representative, may conduct such other tests as he or she may deem necessary to evaluate air pollution emissions.

45CSR7-9.1. Due to unavoidable malfunction of equipment, emissions exceeding those provided for in this rule may be permitted by the Director for periods not to exceed ten (10) days upon specific application to the Director. Such application shall be made within twenty-four (24) hours of the malfunction. In cases of major equipment failure, additional time periods may be granted by the Director provided a corrective program has been submitted by the owner or operator and approved by the Director.

Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

45CSR30-5.1.c. Visual emission checks shall be conducted monthly by plant personnel. If visible emissions are observed at any point at any time, compliance shall be determined by a certified observer using 45CSR7A. Records shall be maintained on site stating the date and time of each visible emission check and whether visible emissions were observed. Visible emission checks shall not be required during start-ups, shut-downs, and malfunctions.

45CSR30-5.1.c. Testing at the request of the Director shall be performed to demonstrate compliance with weight-based PM limits.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the Schedule of Compliance Form as ATTACHMENT F.

ATTACHMENT G

Air Pollution Control Device Form

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: 017C	List all emission units associated with this control device. Kilns K-1 and K-2 (15S and 16S)	
Manufacturer:	Model number:	Installation date: 01/01/1961

Type of Air Pollution Control Device:

<input type="checkbox"/> Baghouse/Fabric Filter	<input type="checkbox"/> Venturi Scrubber	<input type="checkbox"/> Multiclone
<input type="checkbox"/> Carbon Bed Adsorber	<input type="checkbox"/> Packed Tower Scrubber	<input type="checkbox"/> Single Cyclone
<input type="checkbox"/> Carbon Drum(s)	<input type="checkbox"/> Other Wet Scrubber	<input type="checkbox"/> Cyclone Bank
<input type="checkbox"/> Catalytic Incinerator	<input type="checkbox"/> Condenser	<input type="checkbox"/> Settling Chamber
<input checked="" type="checkbox"/> Thermal Incinerator	<input type="checkbox"/> Flare	<input type="checkbox"/> Other (describe) _____
<input type="checkbox"/> Wet Plate Electrostatic Precipitator		<input type="checkbox"/> Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Carbon Monoxide	100 %	90 %
Volatile Organic Compounds	100 %	90 %

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

0.94 mmbtu/hr burner

Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes No

If Yes, Complete ATTACHMENT H

If No, Provide justification. Maximum potential emissions less than 100 tpy.

Describe the parameters monitored and/or methods used to indicate performance of this control device.

Monthly visible emissions inspections.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: 049C	List all emission units associated with this control device. Kiln K-35 (49S)	
Manufacturer:	Model number:	Installation date: 01/01/2001

Type of Air Pollution Control Device:

<input type="checkbox"/> Baghouse/Fabric Filter	<input type="checkbox"/> Venturi Scrubber	<input type="checkbox"/> Multiclone
<input type="checkbox"/> Carbon Bed Adsorber	<input type="checkbox"/> Packed Tower Scrubber	<input type="checkbox"/> Single Cyclone
<input type="checkbox"/> Carbon Drum(s)	<input type="checkbox"/> Other Wet Scrubber	<input type="checkbox"/> Cyclone Bank
<input type="checkbox"/> Catalytic Incinerator	<input type="checkbox"/> Condenser	<input type="checkbox"/> Settling Chamber
<input checked="" type="checkbox"/> Thermal Incinerator	<input type="checkbox"/> Flare	<input type="checkbox"/> Other (describe) _____
<input type="checkbox"/> Wet Plate Electrostatic Precipitator		<input type="checkbox"/> Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Carbon Monoxide	100 %	90 %
Volatile Organic Compounds	100 %	90 %

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

3.1 mmbtu/hr burner

Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes No

If Yes, Complete ATTACHMENT H

If No, Provide justification. Maximum potential emissions less than 100 tpy.

Describe the parameters monitored and/or methods used to indicate performance of this control device.

Monthly visible emissions inspections; fuel consumed by afterburner.