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NORTHROP GRUMMAN

Northrop Grumman Corporation
Innovation Systems

Defense Systems Group
Alliant Techsystems Operations LLC
ABL Operations
210 State Route 956
Rocket Center, WV 26726

Mr. Fred Durham, Director
WVDEP - Division of Air Quality
601 57th Street
Charleston, WV 25304

Overnight Delivery

**Alliant Techsystems Operations LLC
ATK Missile Subsystems & Components Division
Allegany Ballistics Laboratory
WVDAQ ID# 057-00011**

REFERENCE: Permit R30-05700011-2014 Part 3 of 3 (Issued July 29, 2014)

SUBJECT: Title V Permit Renewal Application

Dear Director Durham:

NGIS – Alliant Techsystems Operations LLC – Allegany Ballistics Laboratory hereby submits the enclosed application for renewal of the referenced Title V permit. We believe the enclosed renewal application contains the appropriate elements as indicated by the DAQ's "Title V Permit Application Checklist for Administrative Completeness".

Should you have additional questions regarding this submittal please contact Sue Ellen Foor, Environmental Engineer, at 304-726-5506 or sueellen.foor@ngc.com; or Jill Clayton, Environmental Engineer, at 304-726-7984 or jill.clayton@ngc.com.

Respectfully,



Jill Clayton
Environmental Engineer
NGIS-Alliant Techsystems Operations LLC
Allegany Ballistics Laboratory

Enclosures

**TITLE V PERMIT APPLICATION CHECKLIST
FOR ADMINISTRATIVE COMPLETENESS**

A complete application is demonstrated when all of the information required below is properly prepared, completed and attached. The items listed below are required information which must be submitted with a Title V permit application. Any submittal will be considered incomplete if the required information is not included.*

<input checked="" type="checkbox"/>	Two signed copies of the application (at least one <u>must</u> contain the original “ <i>Certification</i> ” page signed and dated in blue ink)
<input checked="" type="checkbox"/>	Correct number of copies of the application on separate CDs or diskettes, (i.e. at least one disc per copy)
<input checked="" type="checkbox"/>	*Table of Contents (needs to be included but not for administrative completeness)
<input checked="" type="checkbox"/>	Facility information
<input checked="" type="checkbox"/>	Description of process and products, including NAICS and SIC codes, and including alternative operating scenarios
<input checked="" type="checkbox"/>	Area map showing plant location
<input checked="" type="checkbox"/>	Plot plan showing buildings and process areas
<input checked="" type="checkbox"/>	Process flow diagram(s), showing all emission units, control equipment, emission points, and their relationships
<input type="checkbox"/>	Identification of all applicable requirements with a description of the compliance status, the methods used for demonstrating compliance, and a Schedule of Compliance Form (ATTACHMENT F) for all requirements for which the source is not in compliance
<input checked="" type="checkbox"/>	Listing of all active permits and consent orders (if applicable)
<input checked="" type="checkbox"/>	Facility-wide emissions summary
<input checked="" type="checkbox"/>	Identification of Insignificant Activities
<input checked="" type="checkbox"/>	ATTACHMENT D - Title V Equipment Table completed for all emission units at the facility except those designated as insignificant activities
<input checked="" type="checkbox"/>	ATTACHMENT E - Emission Unit Form completed for each emission unit listed in the Title V Equipment Table (ATTACHMENT D) and a Schedule of Compliance Form (ATTACHMENT F) for all requirements for which the emission unit is not in compliance
<input checked="" type="checkbox"/>	ATTACHMENT G - Air Pollution Control Device Form completed for each control device listed in the Title V Equipment Table (ATTACHMENT D)
<input checked="" type="checkbox"/>	ATTACHMENT H – Compliance Assurance Monitoring (CAM) Plan Form completed for each control device for which the “Is the device subject to CAM?” question is answered “Yes” on the Air Pollution Control Device Form (ATTACHMENT G)
<input checked="" type="checkbox"/>	General Application Forms signed by a Responsible Official
<input type="checkbox"/>	Confidential Information submitted in accordance with 45CSR31



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 (Alliant Techsystems Operations LLC), 2. Facility Name (Allegany Ballistics Laboratory), 3. DAQ Plant ID No. (0 5 7 - 0 0 0 1 1), 4. Federal Employer ID No. (2 7 4 0 2 6 9 0 8), 5. Permit Application Type (Permit Renewal), 6. Type of Business Entity (Corporation), 7. Is the Applicant the: (Both), 8. Number of onsite employees (~1,350), 9. Governmental Code (Facility is owned by the Navy and operated by Alliant Techsystems), 10. Business Confidentiality Claims.

11. Mailing Address		
Street or P.O. Box: 210 State Route 956		
City: Rocket Center	State: WV	Zip: 26726-3548
Telephone Number: (304) 726-5506	Fax Number: (304) 726-5562	

12. Facility Location		
Street: 210 State Route 956	City: Rocket Center	County: Mineral
UTM Easting: 686.47 km	UTM Northing: 4,381.25 km	Zone: <input checked="" type="checkbox"/> 17 or <input type="checkbox"/> 18
Directions: Turn left off of WV State Route 956 onto plant access road just after crossing bridge into West Virginia from Maryland.		
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). MD, PA, VA
Is facility located within 100 km of a Class I Area ¹ ? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If no, do emissions impact a Class I Area ¹ ? <input type="checkbox"/> Yes <input type="checkbox"/> No		If yes, name the area(s). Dolly Sods, Otter Creek, Shenandoah National Park
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: Gerald Brode		Title: V.P. & Site Manager - ABL Operations
Street or P.O. Box: 210 State Route 956		
City: Rocket Center	State: WV	Zip: 26726-3548
Telephone Number: (304) 726-5200	Fax Number: (304) 726-5183	
E-mail address: gerald.brode@ngc.com		
Environmental Contact: Sue Ellen Foor OR Jill Clayton		Title: Environmental Engineer
Street or P.O. Box: 210 State Route 956		
City: Rocket Center	State: WV	Zip: 26726-3548
Telephone Number: (304) 726-5506 Or (304) 726-7984	Fax Number: (304) 726-5562	
E-mail address: sueellen.foor@ngc.com OR jill.clayton@ngc.com		
Application Preparer: Sue Ellen Foor / Jill Clayton		Title: Environmental Engineer
Company: Alliant Techsystems Operations LLC Allegany Ballistics Laboratory (ABL)		
Street or P.O. Box: 210 State Route 956		
City: Rocket Center	State: WV	Zip: 26726-3548
Telephone Number: (304) 726-5506 OR (304) 726-7984	Fax Number: (304) 726-5562	
E-mail address: sueellen.foor@ngc.com OR jill.clayton@ngc.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
Rocket Motor Manufacture	Rocket motors, metal rocket cases, composite rocket cases	336415	3764
F-22 Composites Manufacturing	Pivot shafts and obturator plates for F-22	336413	3728
Electronic Fuzing and Ammunition	Medium caliber ammunition (not loaded), proximity switches, and multiple fuze products for DoD	332995	3489

NOTE: Part 3 of this permit covers auxiliary operations or miscellaneous processes that are not included in either rocket motor manufacturing (Part 1), composite structures, or metal fabrication (Part 2).

Provide a general description of operations.

Naval Industrial Reserve Ordnance Plant (NIROP)/Allegany Ballistics Laboratory (ABL) is a facility which is operated by Northrup Grumman Innovation Systems (NGIS) (headquartered in Dulles, VA) under the company name Alliant Techsystems Operations LLC and business unit Missile Products Group. The majority of the facility is owned by the U.S. Navy and is operated by NGIS under a facilities use contract (~1530 acres designated as Plant 1). 57 acres is owned and operated by NGIS and is designated as Plant 2. In 2017, development began on an approximately 41 acre area designated as Plant 3 which will be used for production of GMLRS rocket motors. Approximately 500 acres of Plant 1 are developed. The remaining acreage is undeveloped at this time. All property is contiguous with internal roads to reach each separate area.

Operations at the plant include:

- metal fabrication of rocket motor and warhead cases;
- metal fabrication of tank ammunition training rounds;
- manufacture of composite material rocket motor and warhead cases;
- manufacture of composite material aircraft components;
- preparation of cases for addition of explosives;
- mixing, casting, curing, and associated operations with propellants and explosives;
- static firing of rocket motors;
- open burning of waste propellants and explosives;
- development and production of laser firing devices;
- analytical and research & development laboratories;
- explosive loading and packing operations for tank ammunition;
- x-ray testing; and
- maintenance and utility operations.

In addition, to these operations, the site is also home to the Robert C. Byrd Institute for Machining and office space for IBM.

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.

Section 2: Applicable Requirements

18. Applicable Requirements Summary	
Instructions: Mark all applicable requirements.	
<input checked="" type="checkbox"/> SIP	<input type="checkbox"/> FIP
<input checked="" type="checkbox"/> Minor source NSR (45CSR13)	<input type="checkbox"/> PSD (45CSR14)
<input checked="" type="checkbox"/> NESHAP (45CSR34)	<input type="checkbox"/> Nonattainment NSR (45CSR19)
<input checked="" type="checkbox"/> Section 111 NSPS	<input checked="" type="checkbox"/> Section 112(d) MACT standards
<input type="checkbox"/> Section 112(g) Case-by-case MACT	<input type="checkbox"/> 112(r) RMP
<input type="checkbox"/> Section 112(i) Early reduction of HAP	<input type="checkbox"/> Consumer/commercial prod. reqts., section 183(e)
<input type="checkbox"/> Section 129 Standards/Reqts.	<input checked="" type="checkbox"/> Stratospheric ozone (Title VI)
<input type="checkbox"/> Tank vessel reqt., section 183(f)	<input type="checkbox"/> Emissions cap 45CSR§30-2.6.1
<input type="checkbox"/> NAAQS, increments or visibility (temp. sources)	<input checked="" type="checkbox"/> 45CSR27 State enforceable only rule
<input checked="" type="checkbox"/> 45CSR4 State enforceable only rule	<input type="checkbox"/> Acid Rain (Title IV, 45CSR33)
<input type="checkbox"/> Emissions Trading and Banking (45CSR28)	<input type="checkbox"/> Compliance Assurance Monitoring (40CFR64)
<input type="checkbox"/> CAIR NO _x Annual Trading Program (45CSR39)	<input type="checkbox"/> CAIR NO _x Ozone Season Trading Program (45CSR40)
<input type="checkbox"/> CAIR SO ₂ Trading Program (45CSR41)	

19. Non Applicability Determinations

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.

45CSR21– Regulation to Prevent and Control Air Pollution from the Emission of Volatile Organic Compounds. The facility is not located in a county that is currently subject to 45CSR21, and is therefore currently exempt from this regulation.

40CFR63, Subpart PPP – National Emission Standards for Polyether Polyol Production. The facility manufactures Terathane Polyethylene Glycol Block Copolymer (TPEG), which is a Polyether Polyol. However, the operation is exempted from this MACT because there are no HAPs used or generated during the manufacturing operation.

40CFR63, Subpart GGGGG – National Emission Standards for Site Remediation. The facility currently has one site under remediation for groundwater contamination. This site is a Superfund site and is thus exempt from the MACT requirements. The facility also has a second site, which will begin remediation as part of a RCRA corrective action program within the next year. This second site would also be exempted since it is being conducted under a RCRA corrective action permit. In addition, neither site would generate emissions of more than 1 megagram per year of HAPs.

40CFR63, Subpart P P P P P – National Emission Standards for Hazardous Air Pollutants from Engine Test Sells/Stands (05/27/03)- This rule applies to the X-Range Static Rocket Motor Firing facility (Group 00Q). However, per 40CFR63.9290(b) & (d)(2) it is exempt from the requirements of this Subpart due to facility was existing source on May 14, 2002 (partially modified in summer of 2002, Source Q-3S) and also, it is used exclusively for rocket motors testing.

40CFR63, Subpart W W W W W – National Emission Standards for Reinforced Plastic Composites Manufacturing. The facility manufactures composite based rocket motor chambers and aircraft components. However, the facility is exempt from this MACT because none of the resin or fiber systems used, contain HAPs.

Permit Shield

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.

See above.

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. & 3.2. Open burning & open burning exemptions.

40CFR61 Subpart M - 61.145, 61.148, and 61.150 Asbestos.

45CSR4-3.1. [State-Enforceable only.] Odors.

45CSR11-5.2. Standby plan for reducing emissions.

WV Code § 22-5-4(a)(14) Emission inventory.

40 CFR Part 82, Subpart F Ozone-depleting substances.

40 CFR Part 68 Risk Management Plan.

45CSR7-3.7. Visible emissions from any storage structures.

45CSR7-5.1. & 5.2. Fugitive particulate matter.

45CSR§30-5.1.c. Monthly visible emissions checks.

WV Code § 22-5-4(a)(15) and 45CSR13 Stack testing.

45CSR§30-5.1.c.2.A. Monitoring information.

45CSR§30-5.1.c.2.B. Retention of records.

45CSR§§30-4.4. and 5.1.c.3.D. Responsible official.

45CSR31, 45CSR§30-5.1.c.3.E. Confidential business information.

45CSR§30-8. Certified emissions statement.

45CSR§30-5.3.e. Compliance certification.

45CSR§30-5.1.c.3.A. Semi-annual monitoring reports.

45CSR§30-5.7. Emergencies.

45CSR§30-5.1.c.3. Deviations.

45CSR§30-4.3.h.1.B. New applicable requirement.

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.)

45CSR6-3.1. & 3.2. Open burning & open burning exemptions – Compliance is demonstrated by Condition#s 3.1.1 & 3.1.2.
40CFR61 Subpart M - 61.145, 61.148, and 61.150 Asbestos – Compliance is demonstrated by Condition# 3.1.3.
45CSR4-3.1.; 45CSR§30-5.1.c. Odors – Compliance is demonstrated by Condition#s 3.1.4 & 3.4.3.
45CSR11-5.2. Standby plan for reducing emissions – Compliance is demonstrated by Condition# 3.1.5.
WV Code § 22-5-4(a)(14) Emission inventory – Compliance is demonstrated by Condition# 3.1.6.
40 CFR Part 82, Subpart F Ozone-depleting substances – Compliance is demonstrated by Condition# 3.1.7.
40 CFR Part 68 Risk Management Plan – Compliance is demonstrated by Condition# 3.1.8.
45CSR7-3.7; 45CSR7-5.1. & 5.2.; 45CSR§30-5.1.c. Visible emissions from any storage structures and Fugitive particulate matter– Compliance is demonstrated by Condition#s 3.1.9; 3.1.10; 3.1.11; 3.2.1; 3.5.10.
45CSR§30-5.1.c. Visible emissions checks – Compliance is demonstrated by Condition# 3.2.1; 3.4.4; 3.5.10.
WV Code § 22-5-4(a)(15) and 45CSR13 Stack testing – Compliance is demonstrated by Condition#s 3.3.1-3.3.4.
45CSR§30-5.1.c.2.A. Monitoring information – Compliance is demonstrated by Condition# 3.4.1.
45CSR§30-5.1.c.2.B. Retention of records – Compliance is demonstrated by Condition# 3.4.2; 3.4.5.
45CSR§§30-4.4 and 5.1.c.3.D. Responsible official – Compliance is demonstrated by Condition# 3.5.1.
45CSR31, 45CSR§30-5.1.c.3.E. Confidential business information– Compliance is demonstrated by Condition# 3.5.2.
45CSR§30-8. Certified emissions statement – Compliance is demonstrated by Condition# 3.5.3; 3.5.4.
45CSR§30-5.3.e. Compliance certification – Compliance is demonstrated by Condition# 3.5.5.
45CSR§30-5.1.c.3.A. Semi-annual monitoring reports – Compliance is demonstrated by Condition# 3.5.3; 3.5.6.
45CSR§30-5.7. Emergencies – Compliance is demonstrated by Condition# 3.5.7.
45CSR§30-5.1.c.3. Deviations – Compliance is demonstrated by Condition# 3.5.8.
45CSR30-4.3.h.1.B. New applicable requirement – Compliance is demonstrated by Condition# 3.5.9.

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.

21. Active Permits/Consent Orders

Permit or Consent Order Number	Date of Issuance MM/DD/YYYY	List any Permit Determinations that Affect the Permit (<i>if any</i>)
R13-0974A	05/23/2001	
R13-1771B	04/27/2004	
R13-2023C	05/05/2014	
R13-2301A	07/13/2001	
R13-3186	08/12/2014	
G60-C020	09/30/2010	
	/ /	
	/ /	

22. Inactive Permits/Obsolete Permit Conditions

Permit Number	Date of Issuance	Permit Condition Number
	MM/DD/YYYY	
	/ /	

Section 3: Facility-Wide Emissions

23. Facility-Wide Emissions Summary [Tons per Year]	
Criteria Pollutants	Potential Emissions
Carbon Monoxide (CO)	59.97
Nitrogen Oxides (NO _x)	41.31
Lead (Pb)	1.322
Particulate Matter (PM _{2.5}) ¹	4.88
Particulate Matter (PM ₁₀) ¹	12.34
Total Particulate Matter (TSP)	23.22
Sulfur Dioxide (SO ₂)	33.67
Volatile Organic Compounds (VOC)	144.75
Hazardous Air Pollutants ²	Potential Emissions
Acetonitrile	0.27
Antimony compounds*	2.0E-04
Benzene	0.37
Cadmium compounds*	6.0E-04
Chloroform	0.096
Chromium*	8.0E-04
Chromium compounds (not identified)*	0.136
Cobalt*	1.7E-04
Diethyl phthalate	0.85
Ethyl benzene	0.62
Formaldehyde	0.029
Glycol ether compounds	0.06
Hexane	0.80
Hydrochloric Acid	4.40
Lead *	1.322
Lead compounds*	5.0E-05
Mercury*	2.0E-04

Methanol	1.81
Methyl isobutyl ketone	3.73
Methylene chloride	1.995
Nickel*	2.0E-04
Phenol	0.16
Strontium chromate*	0.0012
Toluene	30.89
Trichloroethylene	0.125
Xylene	5.29
Zinc chromate*	1.2E-05
Other (not specified)	0.1
Total HAPs	53.06
Regulated Pollutants other than Criteria and HAP	Potential Emissions
¹ PM _{2.5} and PM ₁₀ are components of TSP. ² For 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 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 checked="" type="checkbox"/>	14. Demineralized water tanks and demineralizer vents.
<input checked="" type="checkbox"/>	15. Drop hammers or hydraulic presses for forging or metalworking.
<input checked="" 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 checked="" type="checkbox"/>	18. Emergency road flares.
<input checked="" 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: <u>Gasoline and diesel small storage tanks – VOC < 1.0 lb/hr & <0.1 tpy</u> <u>Gasoline and diesel fuel dispensing pumps – VOC < 1.0 lb/hr & <0.1 tpy</u> _____ _____ _____ _____ _____ _____ _____

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 checked="" 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 checked="" 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 checked="" 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 checked="" 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 checked="" type="checkbox"/>	30. Hand-held applicator equipment for hot melt adhesives with no VOC in the adhesive formulation.
<input checked="" type="checkbox"/>	31. Hand-held equipment for buffing, polishing, cutting, drilling, sawing, grinding, turning or machining wood, metal or plastic.
<input checked="" type="checkbox"/>	32. Humidity chambers.
<input checked="" type="checkbox"/>	33. Hydraulic and hydrostatic testing equipment.
<input type="checkbox"/>	34. Indoor or outdoor kerosene heaters.
<input checked="" type="checkbox"/>	35. Internal combustion engines used for landscaping purposes.
<input checked="" type="checkbox"/>	36. Laser trimmers using dust collection to prevent fugitive emissions.
<input checked="" 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 checked="" 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 checked="" 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 checked="" 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 checked="" type="checkbox"/>	51. Steam cleaning operations.
<input checked="" type="checkbox"/>	52. Steam leaks.
<input checked="" 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 checked="" 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 checked="" 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.

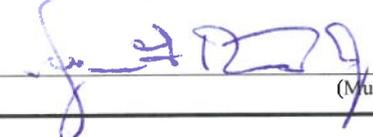
b. Compliance Certification

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: Gerald Brode	Title: V.P. & Site Manager
--------------------	----------------------------

Responsible official's signature:

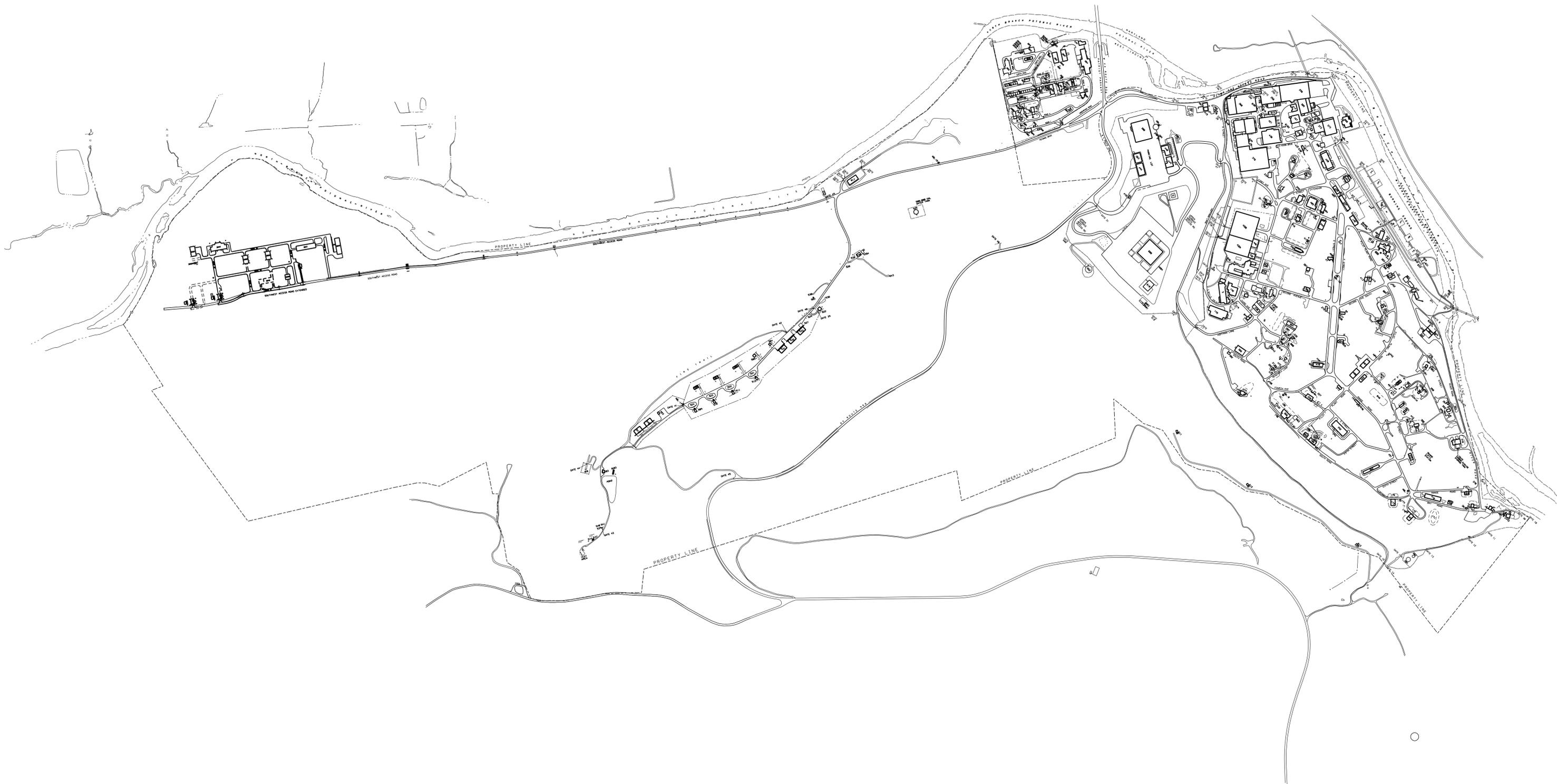
Signature:  Signature Date: 01/09/2019
 (Must be signed and dated in blue ink)

Note: Please check all applicable attachments included with this permit application:	
<input checked="" type="checkbox"/>	ATTACHMENT A: Area Map
<input checked="" 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 checked="" 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/daq, requested by phone (304) 926-0475, and/or obtained through the mail.

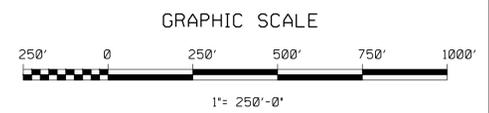
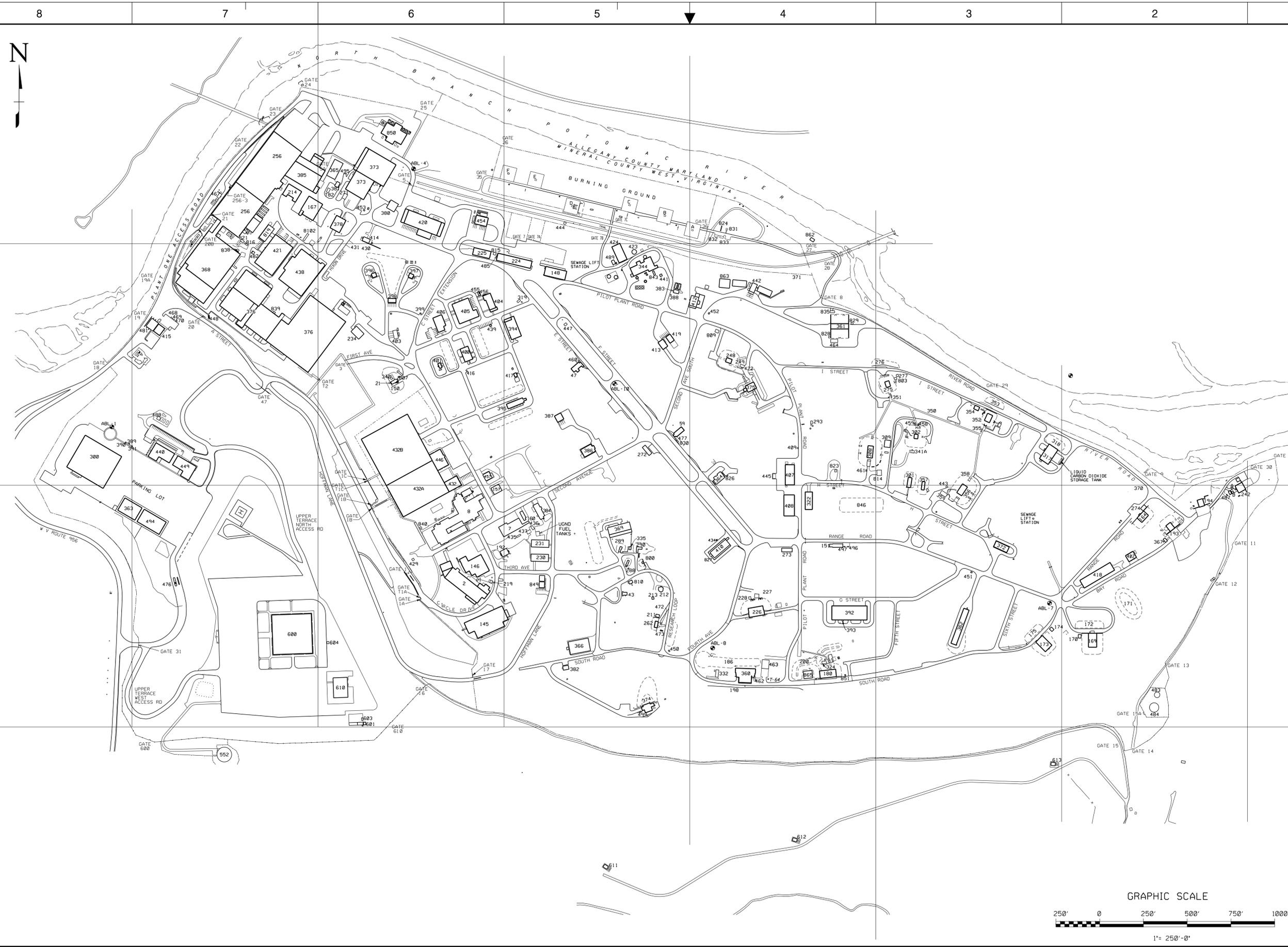
Attachment A

Figure 1 - Site Location Map



Attachment B

Figure 2 - Site Plot Plan



Orbital ATK 210 STATE ROUTE 956 ROCKET CENTER, WV 26726	
DRAWN BY:	DRB
CHECKED BY:	DRB
ENGR:	
DES SUPV:	
AREA SUPV:	
SAFETY:	

SCALE: 1" = 250'0"	PROJ. NO.
DRAWING PKG	
BUILDING NO.	
BASE	PLT1
CONTRACTOR DRAWING NO.	SIZE: D
1-112-AB	

PLANT 1 GENERAL MAP PLAN AND BUILDING LIST	
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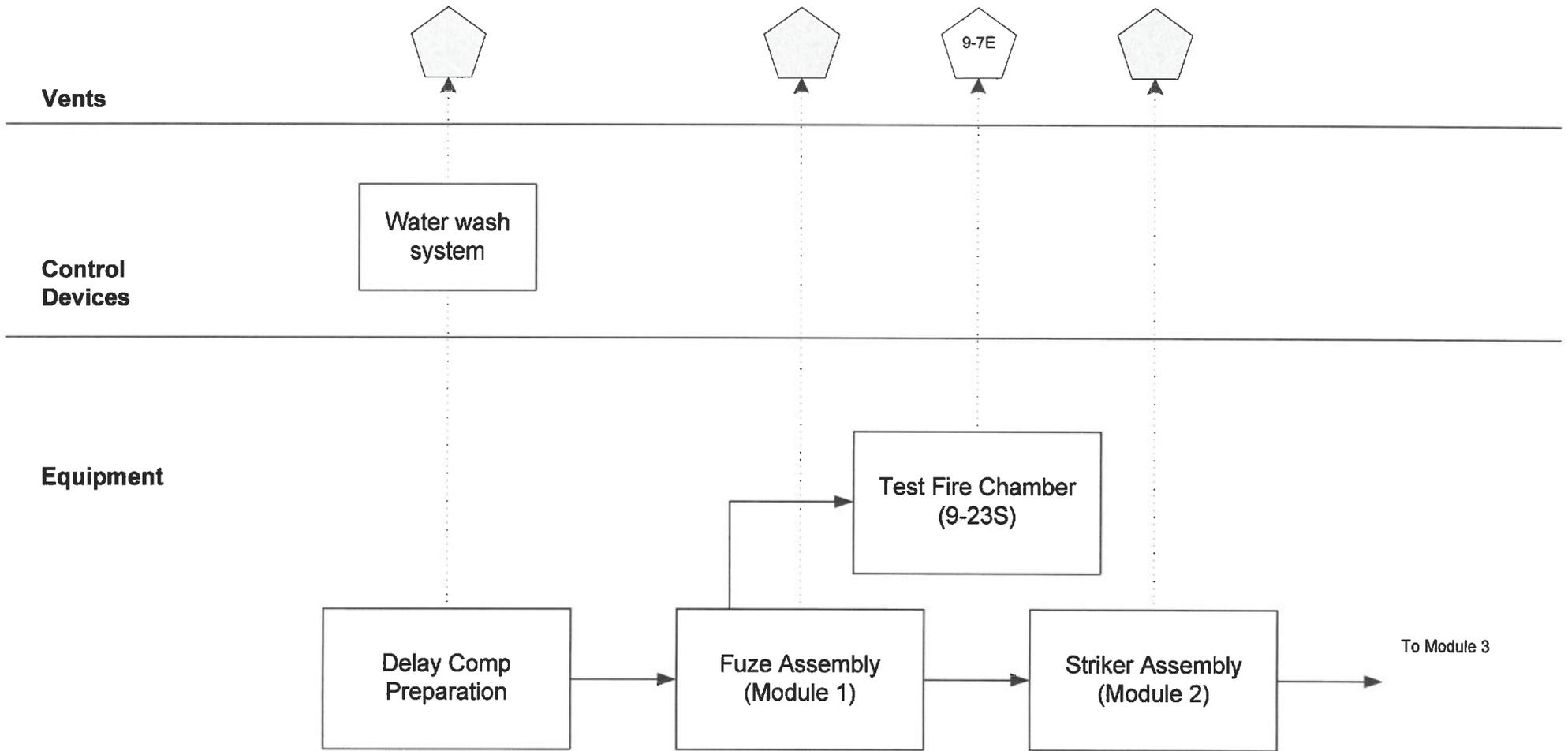
INTERPRET THIS DRAWING IN ACCORDANCE WITH DOD-STD-100

REVISIONS	BY	DATE	CHK	APPD

Attachment C

Figure 3 - Process Flow Diagrams

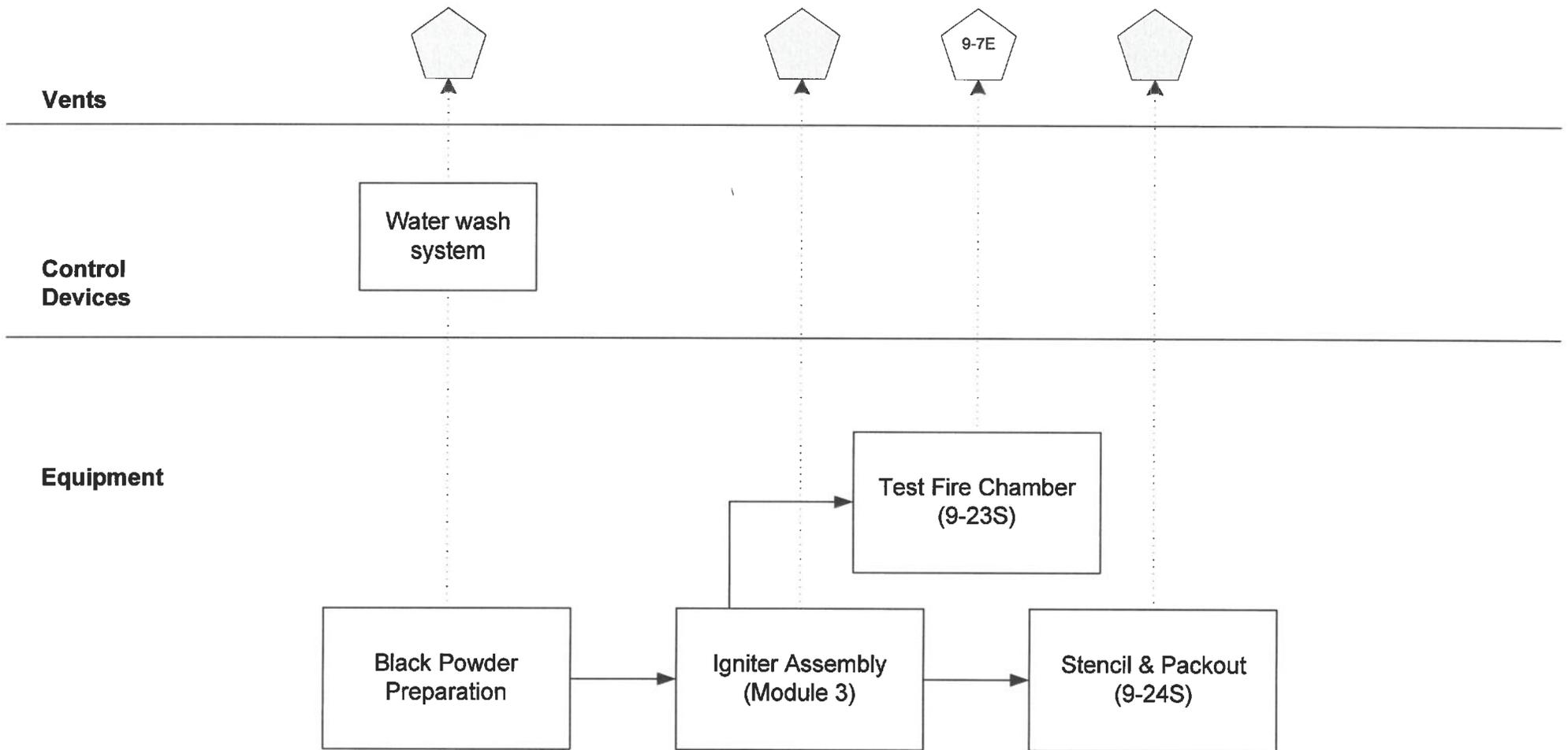
Building 361 Process Flow (Grenade Fuze Production)



Allegany Ballistics Laboratory
Operated by Alliant Techsystems Inc
Rocket Center, WV 26726



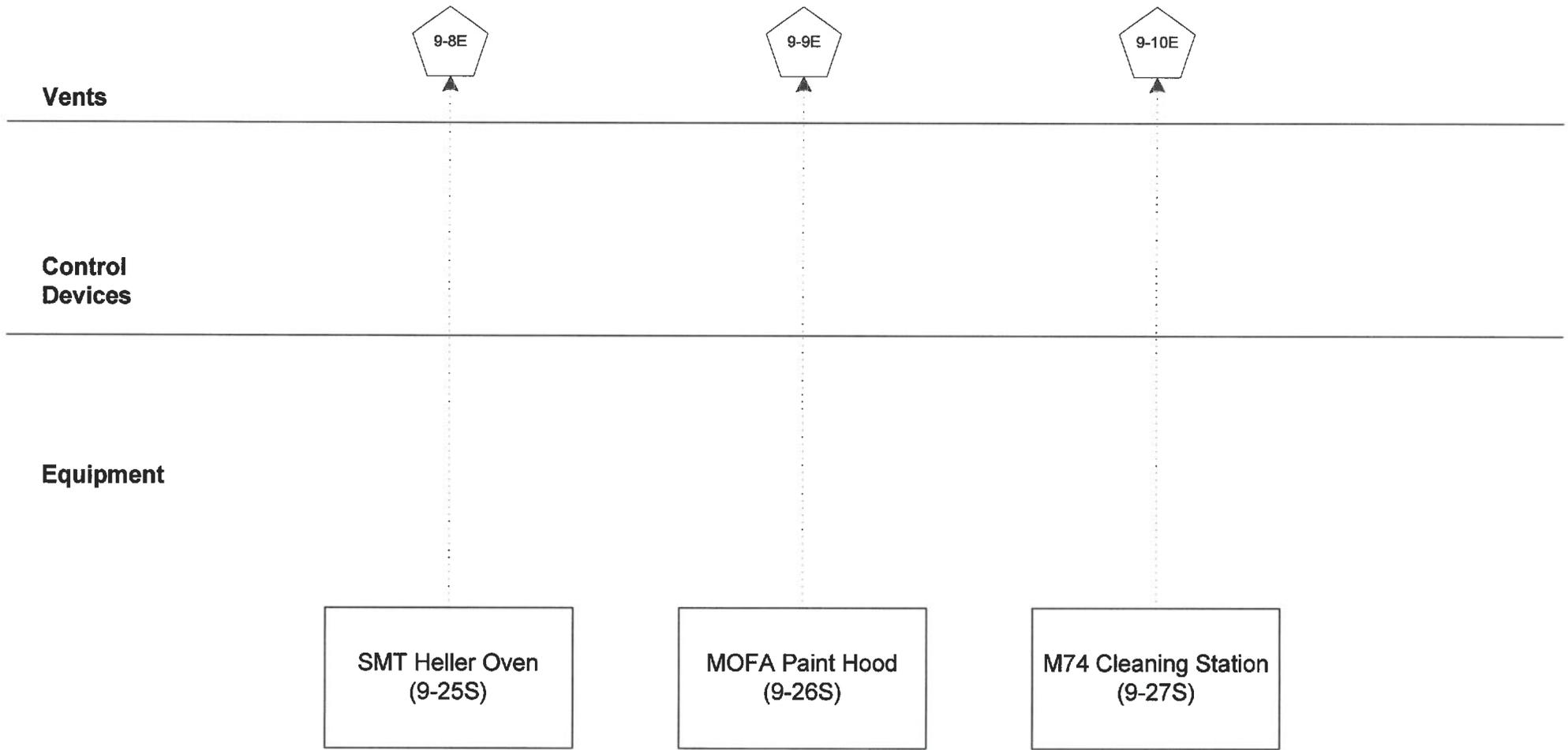
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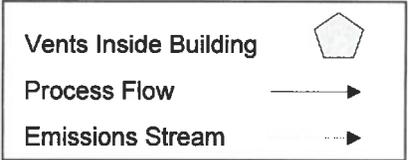
Allegany Ballistics Laboratory
Operated by Alliant Techsystems Inc
Rocket Center, WV 26726



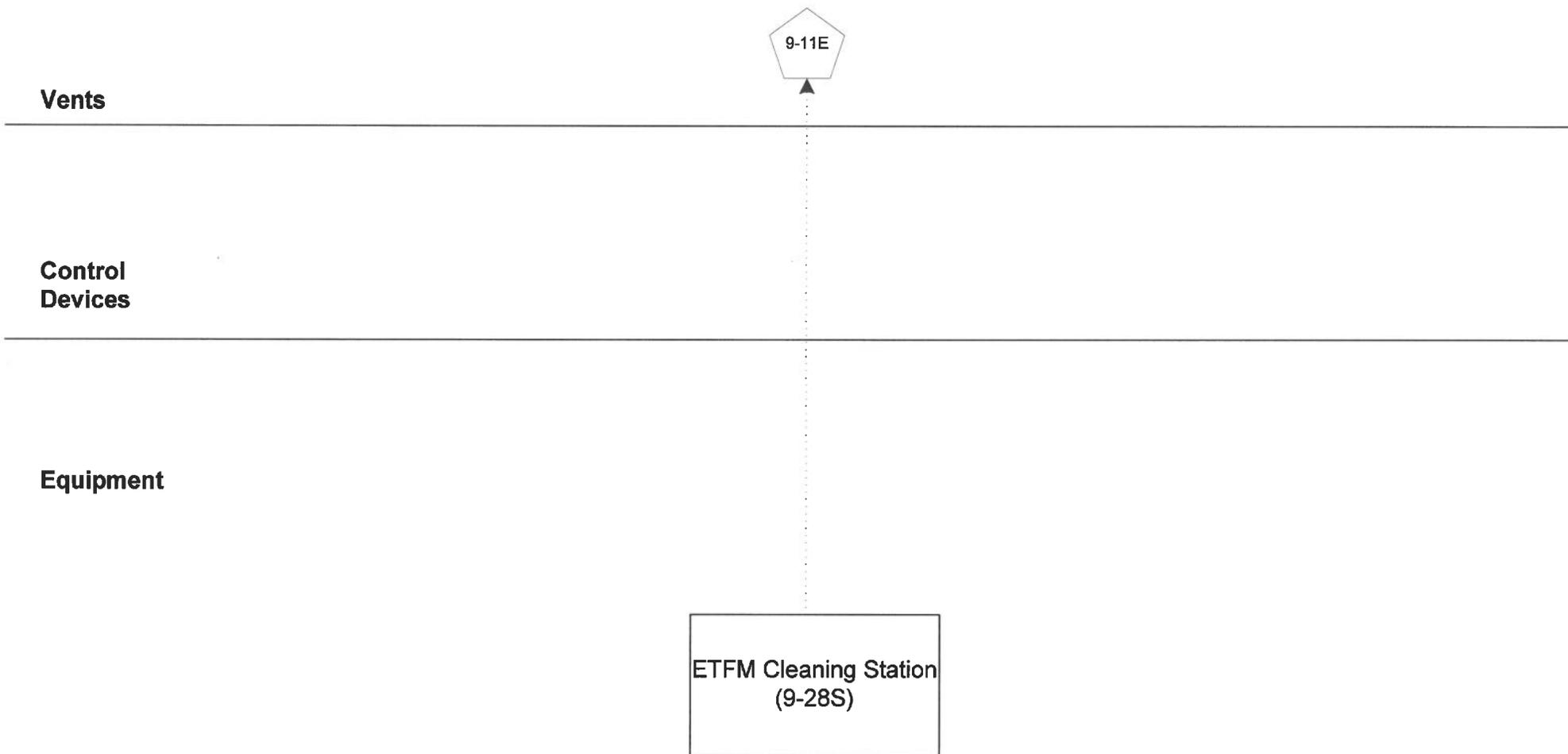
Building 432A Process Flow (Electronic Fuze Production)



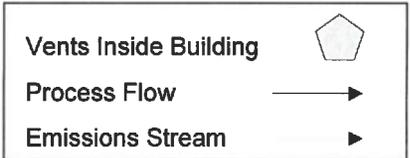
Allegany Ballistics Laboratory
Operated by Alliant Techsystems Inc
Rocket Center, WV 26726



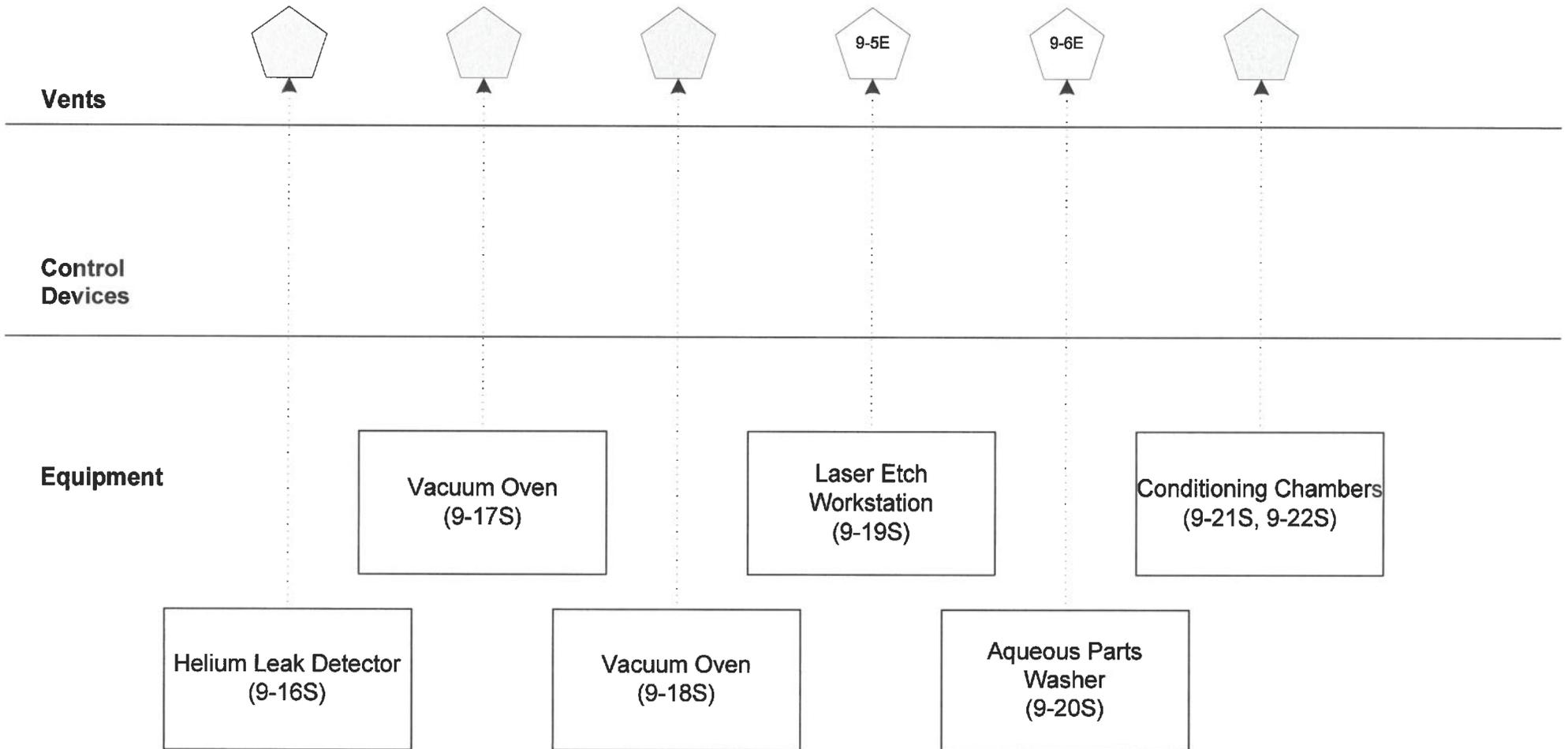
Building 432B Process Flow (Electronic Fuze Production)



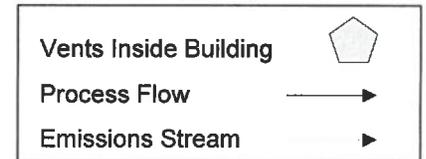
Allegany Ballistics Laboratory
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Rocket Center, WV 26726



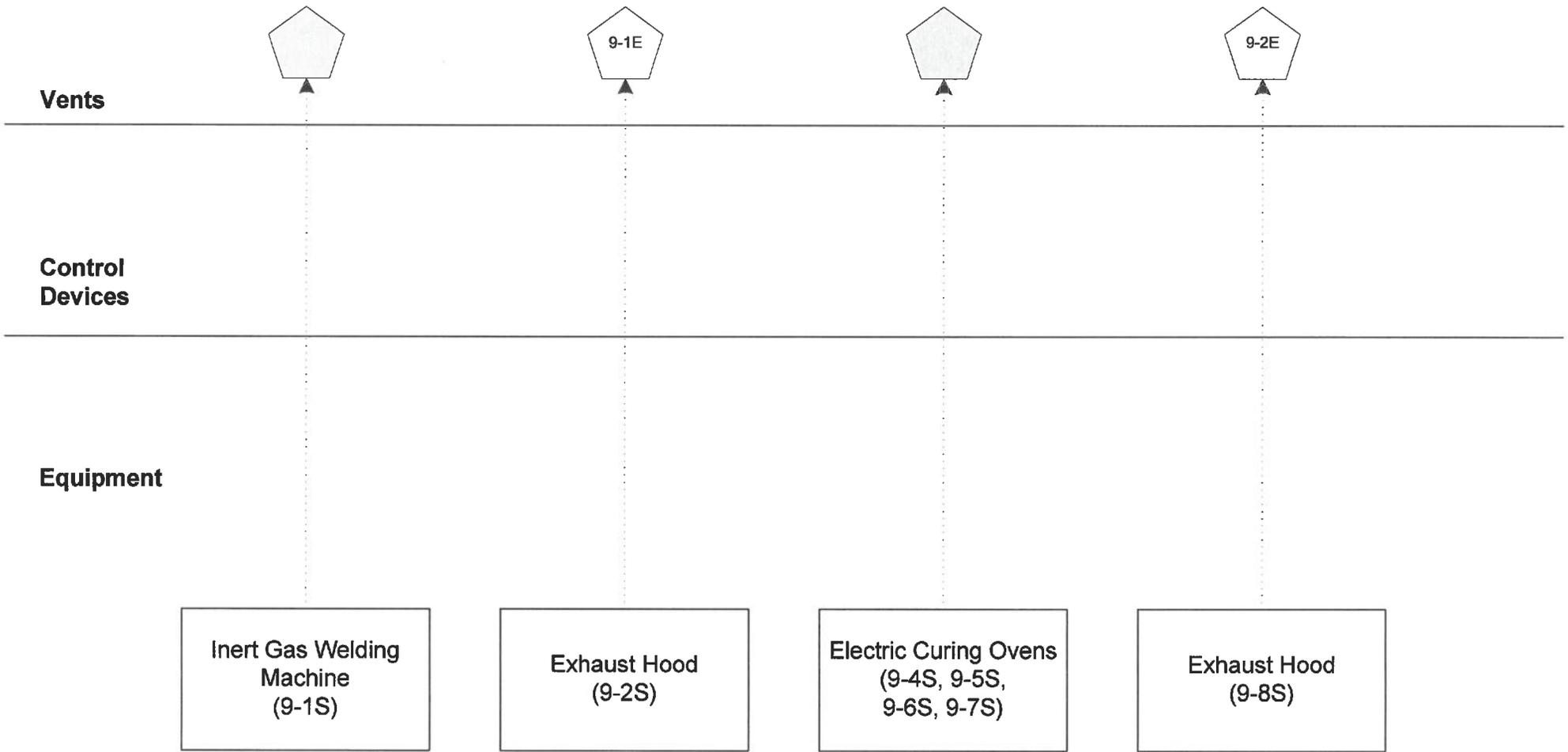
Building 432 Process Flow (Laser Products Fab.)



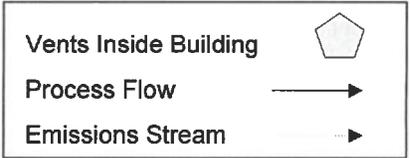
Allegany Ballistics Laboratory
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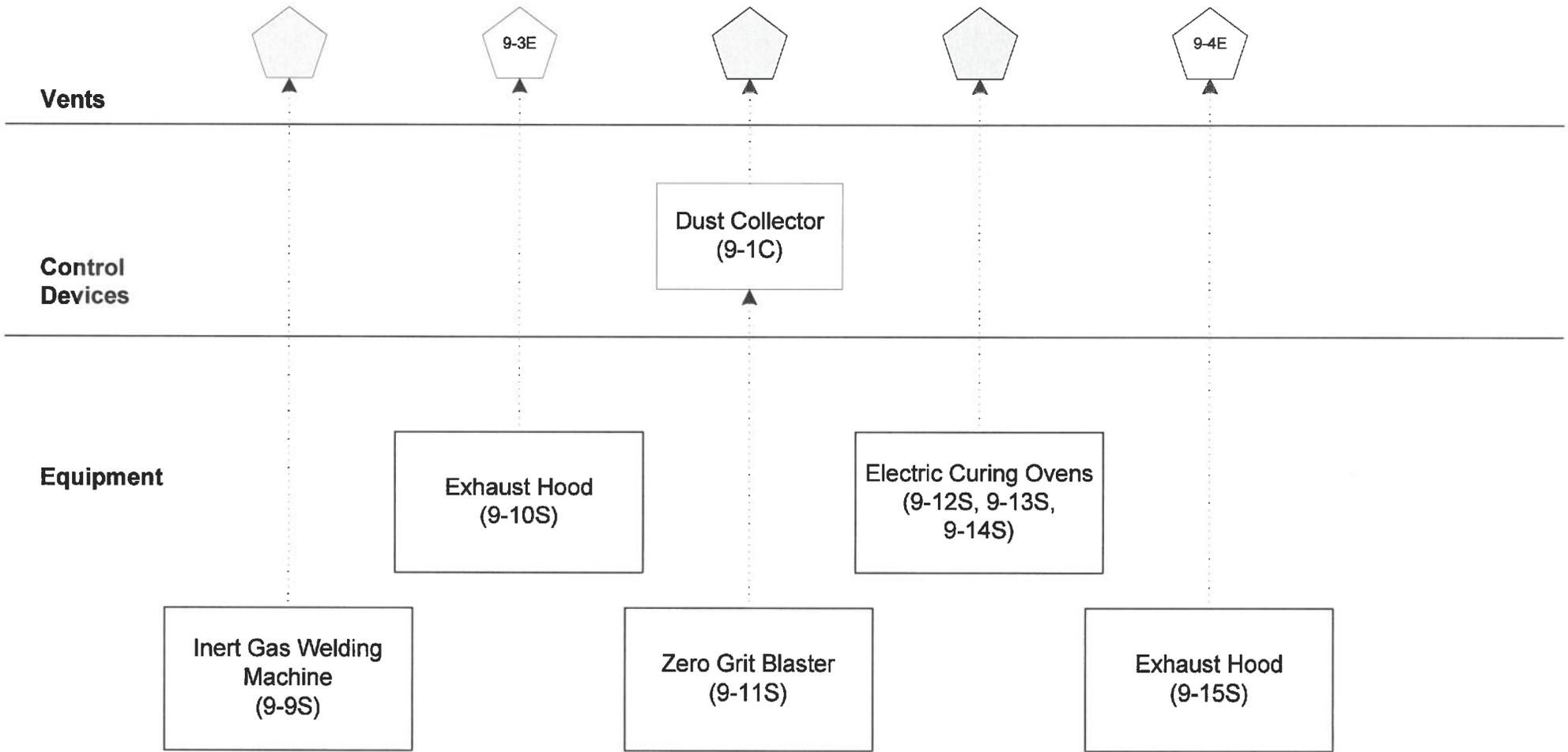
Building 8 Process Flow (Laser Products Dev.)



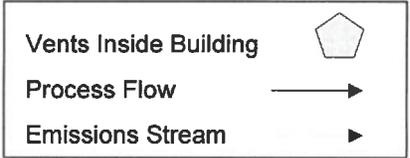
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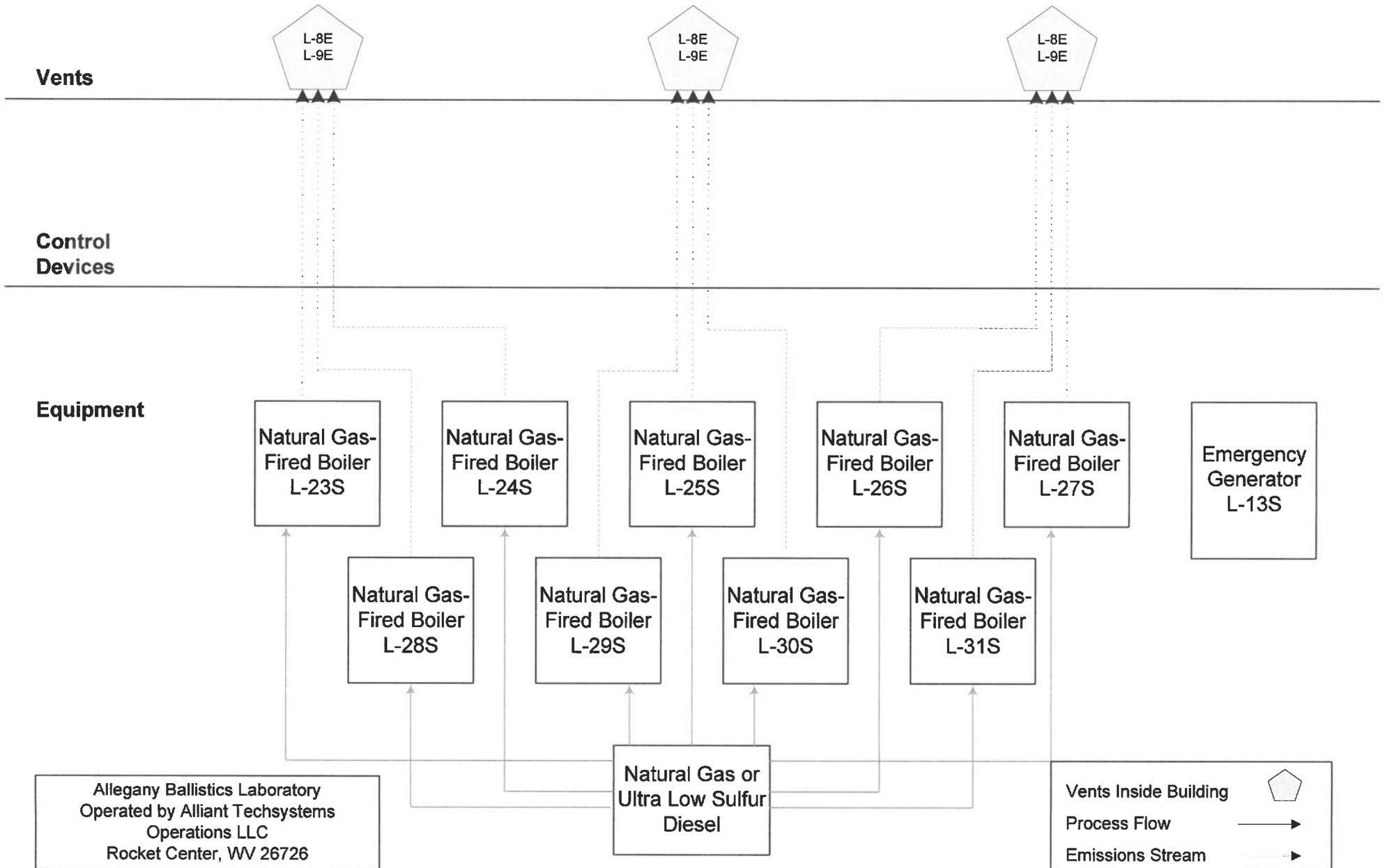
Building 432 Process Flow (Laser Products Fab.)



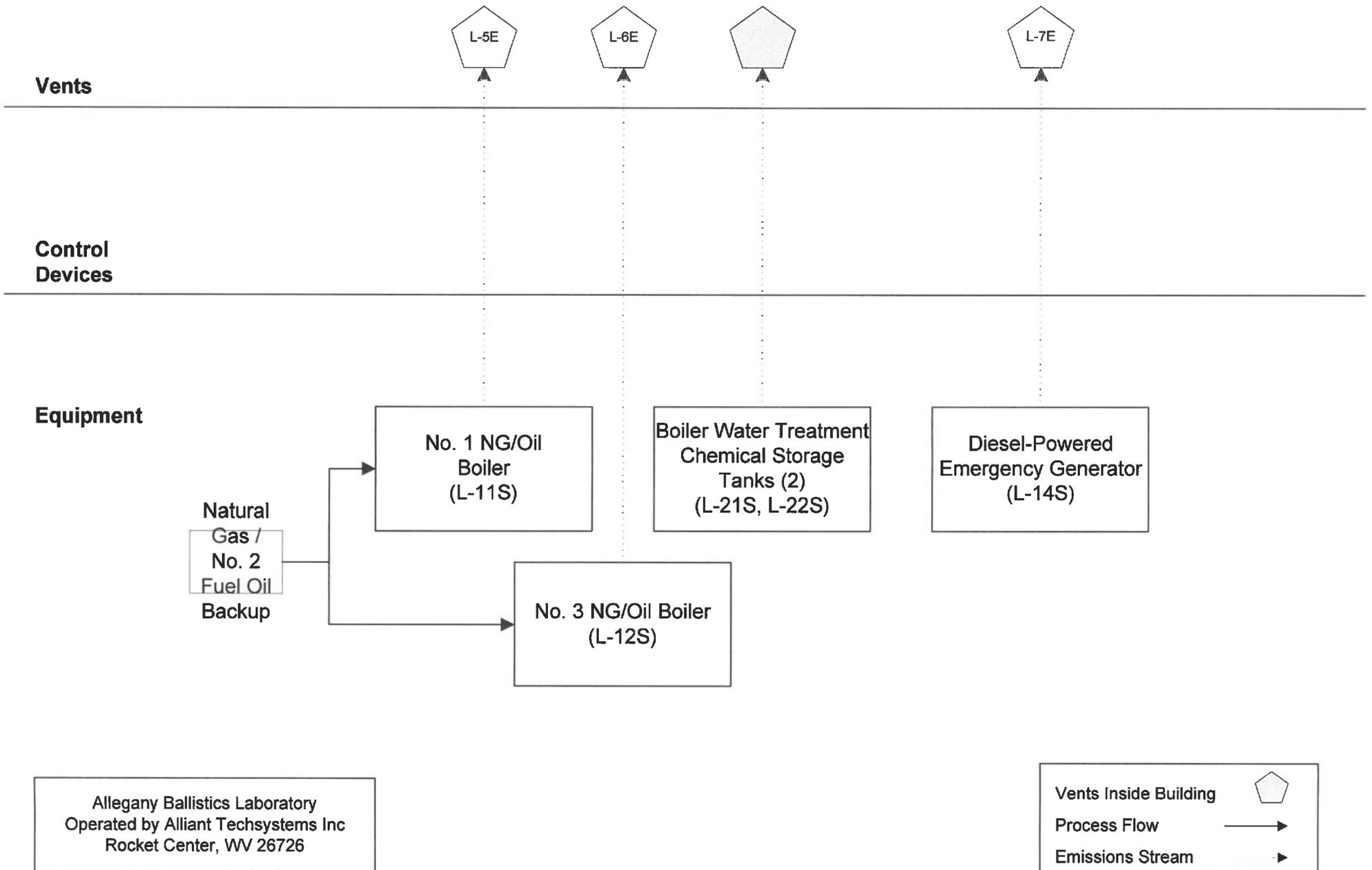
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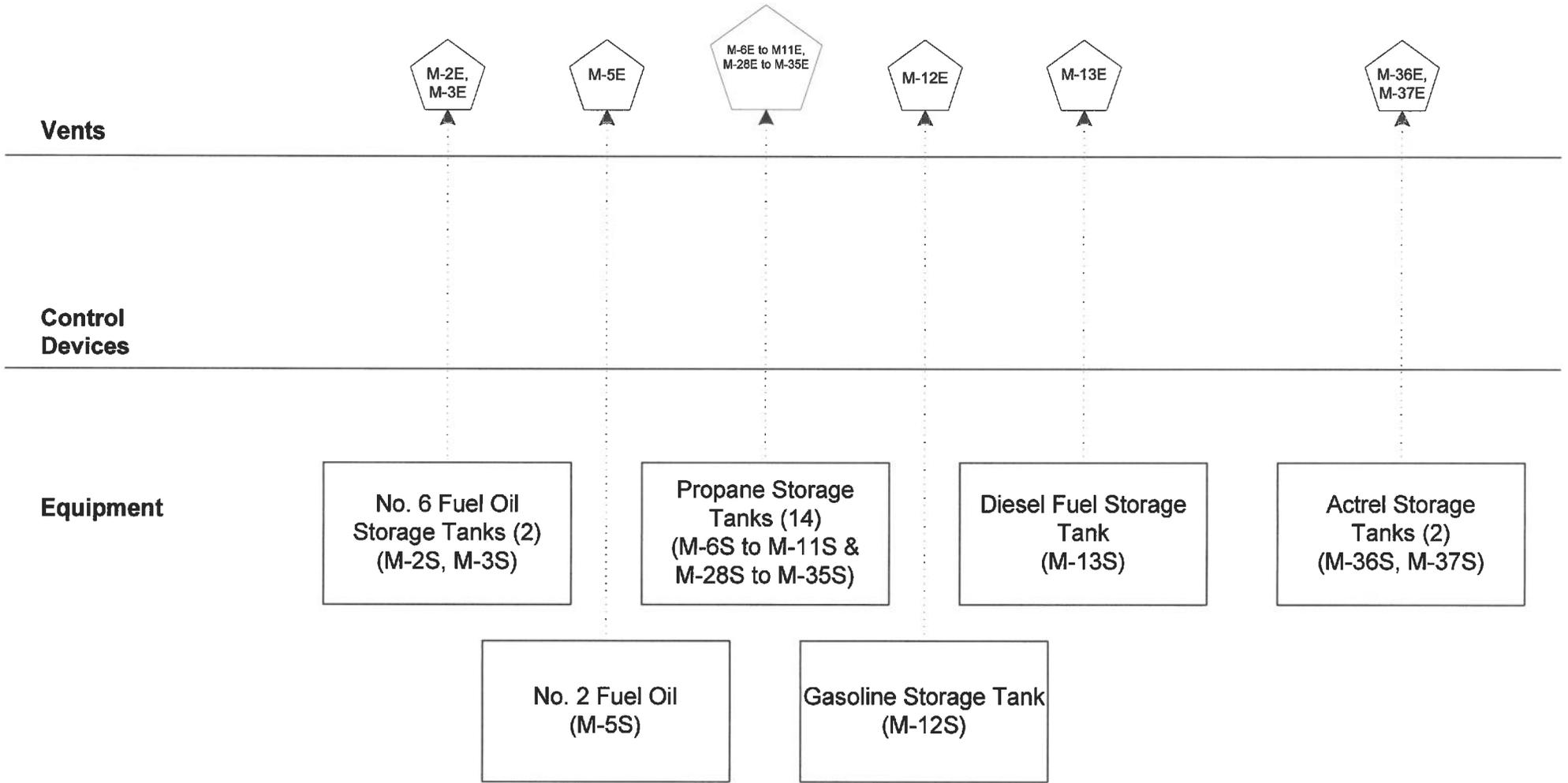
Building 850 Process Flow Plant 1 Boilers



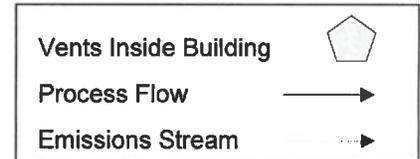
Building 8501 Process Flow (Plant 2 Boilers)



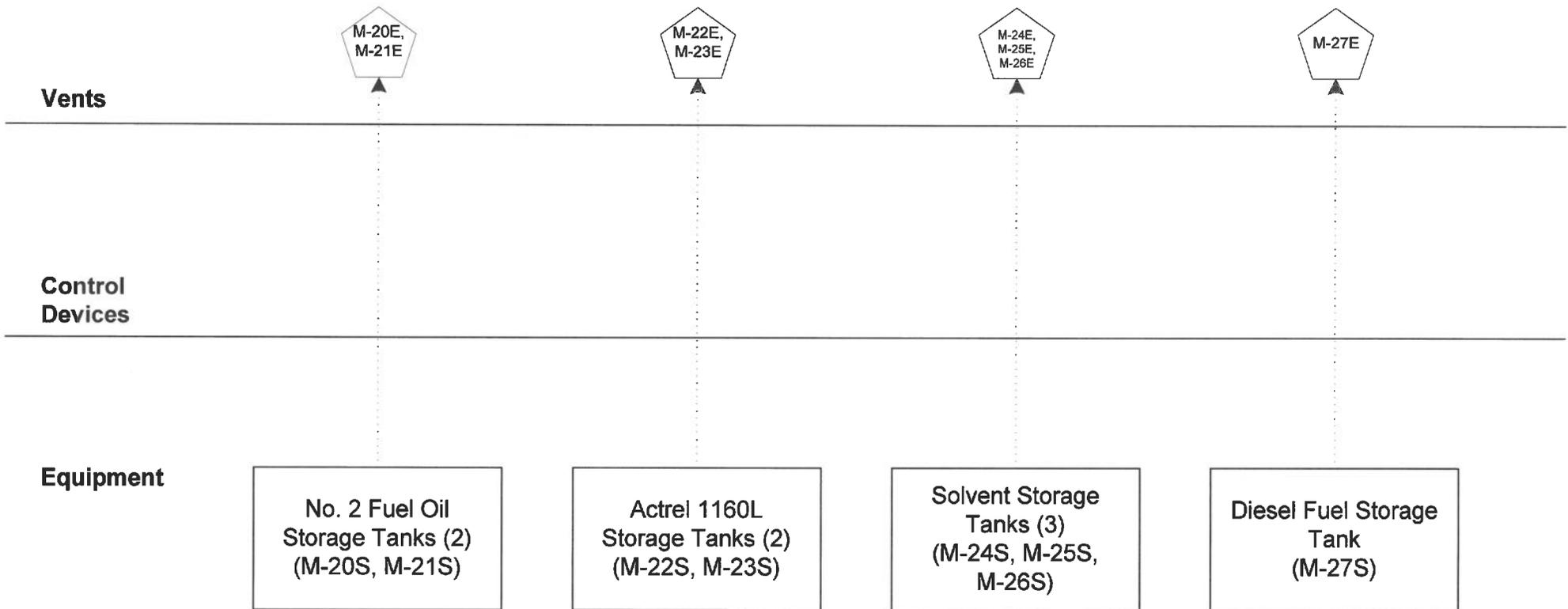
Plant 1 Storage Tanks Process Flow



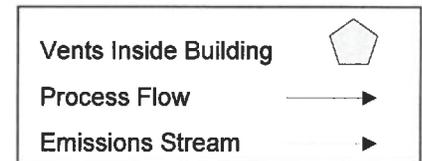
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Plant 2 Storage Tanks Process Flow



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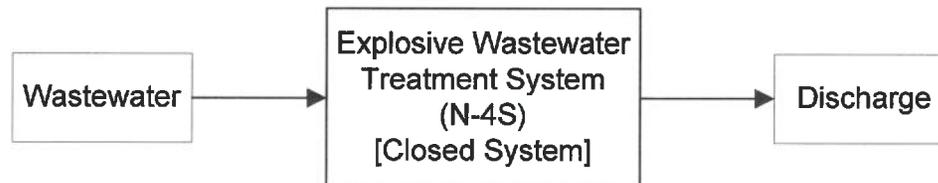


Building 383/389 Process Flow (Explosive Wastewater Treatment)

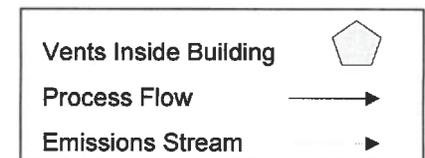
Vents

Control Devices

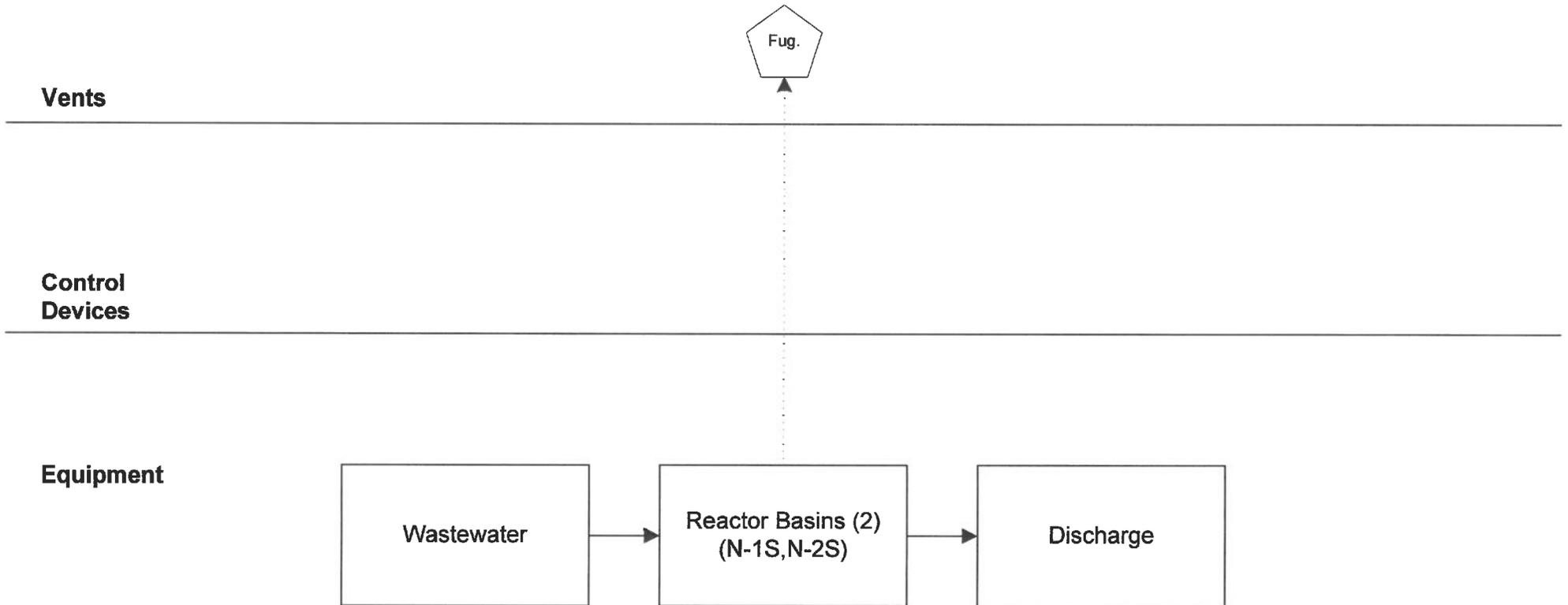
Equipment



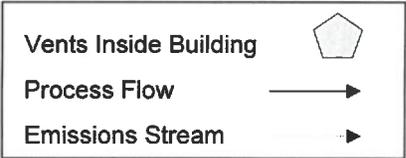
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Building 442 Process Flow (Plant 1 Wastewater Treatment)



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Operated by Alliant Techsystems Inc
Rocket Center, WV 26726

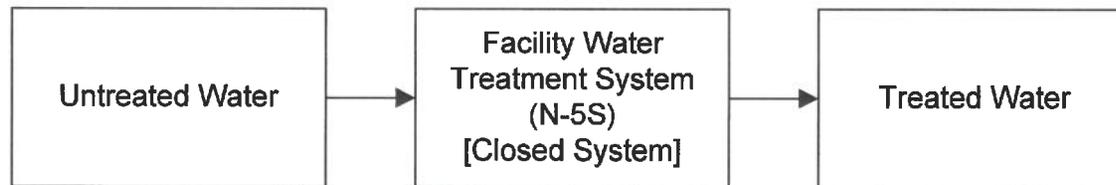


Building 535 Process Flow (Potable Water Treatment)

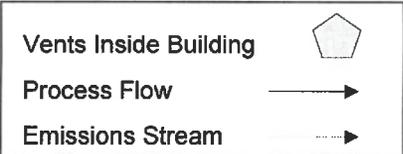
Vents

Control
Devices

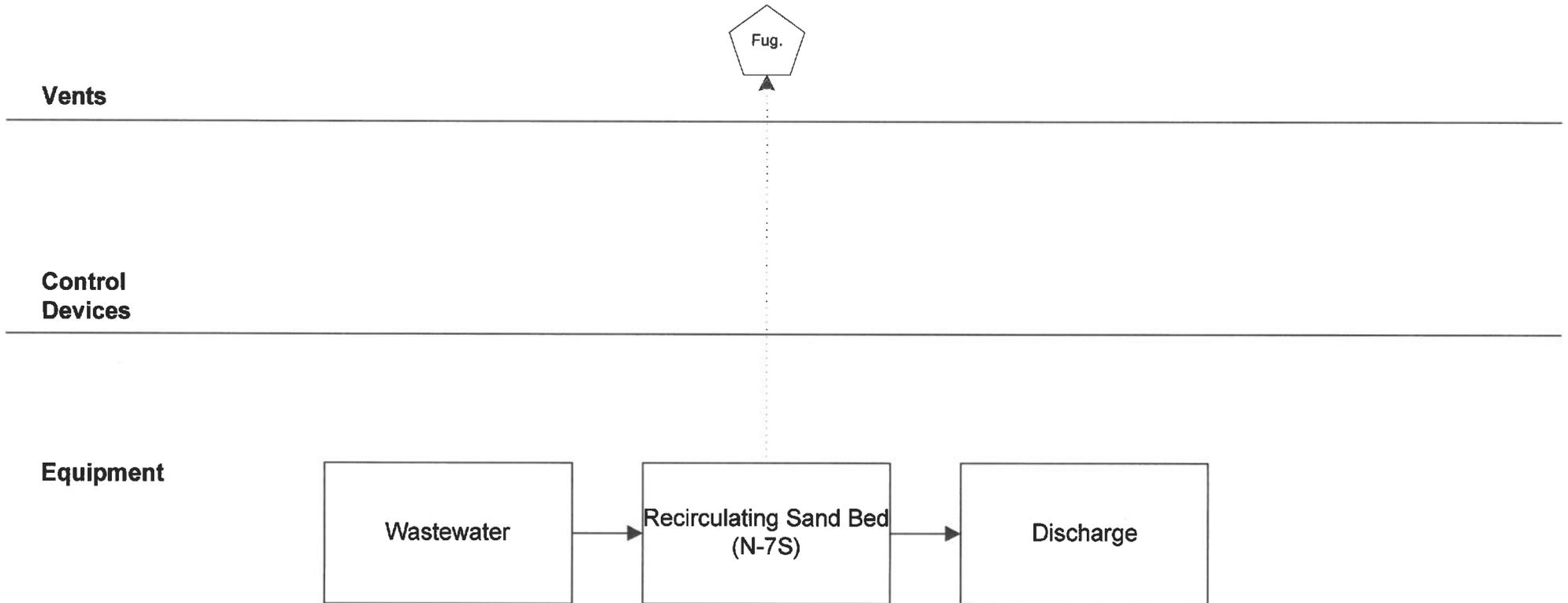
Equipment



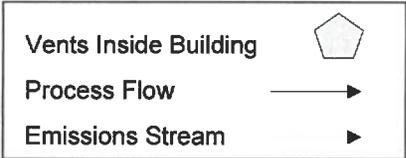
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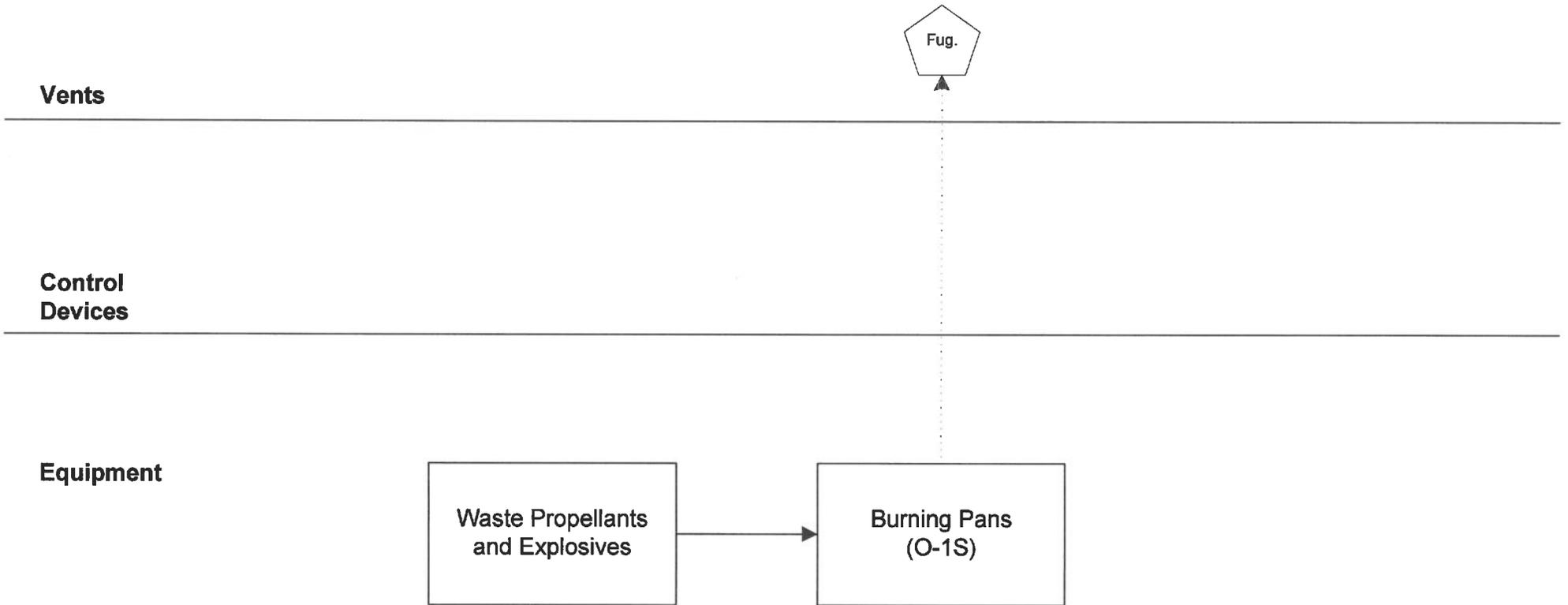
Building 8563 Process Flow (Plant 2 Wastewater Treatment)



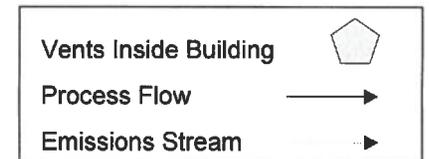
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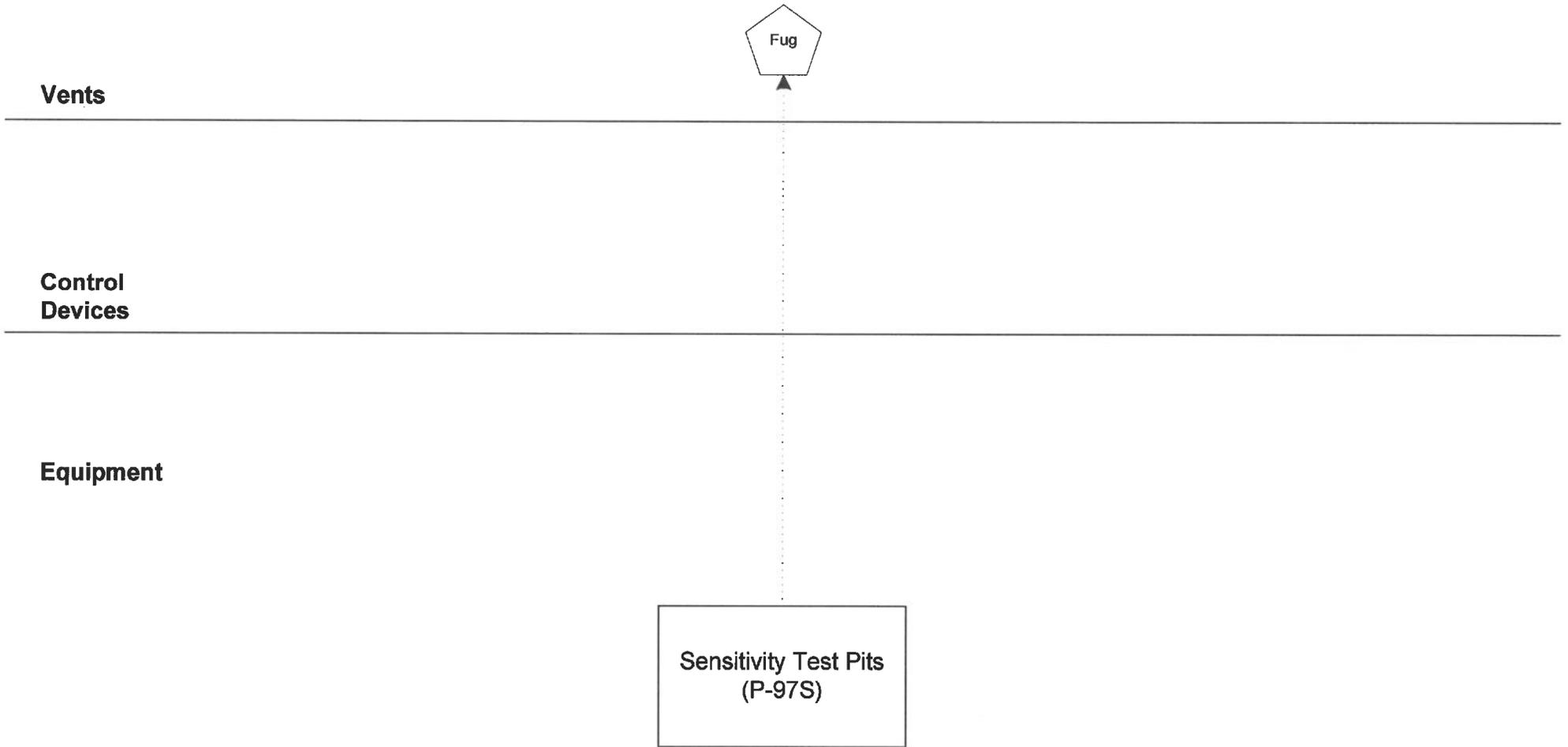
Burning Ground Process Flow



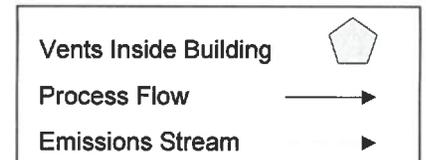
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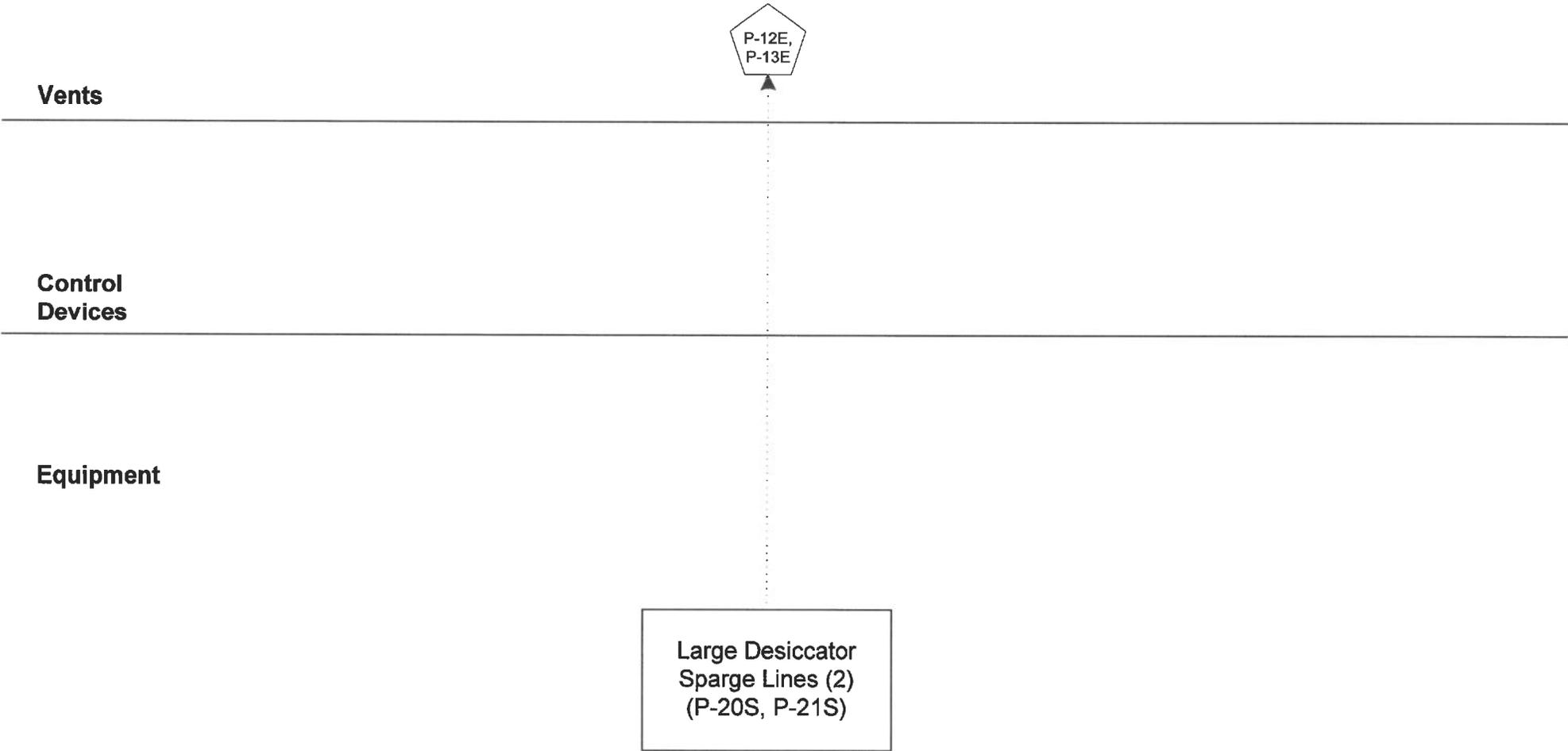
500 Area Process Flow (Sensitivity Testing)



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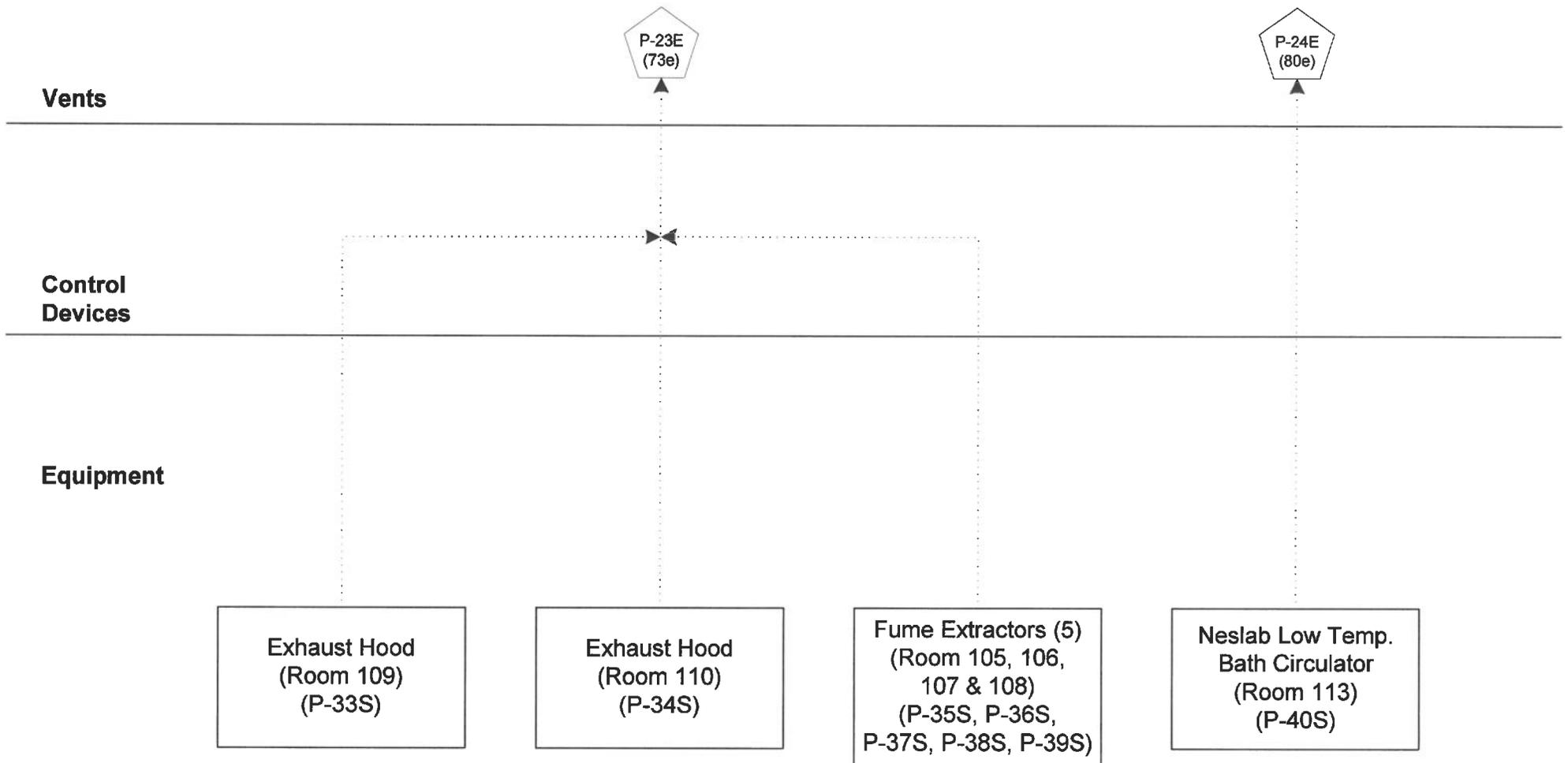
Building 21 Process Flow (Lacquer Preparation)



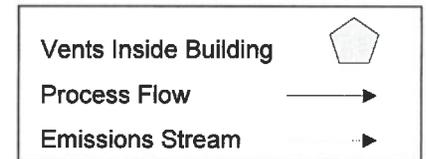
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Vents Inside Building	
Process Flow	
Emissions Stream	

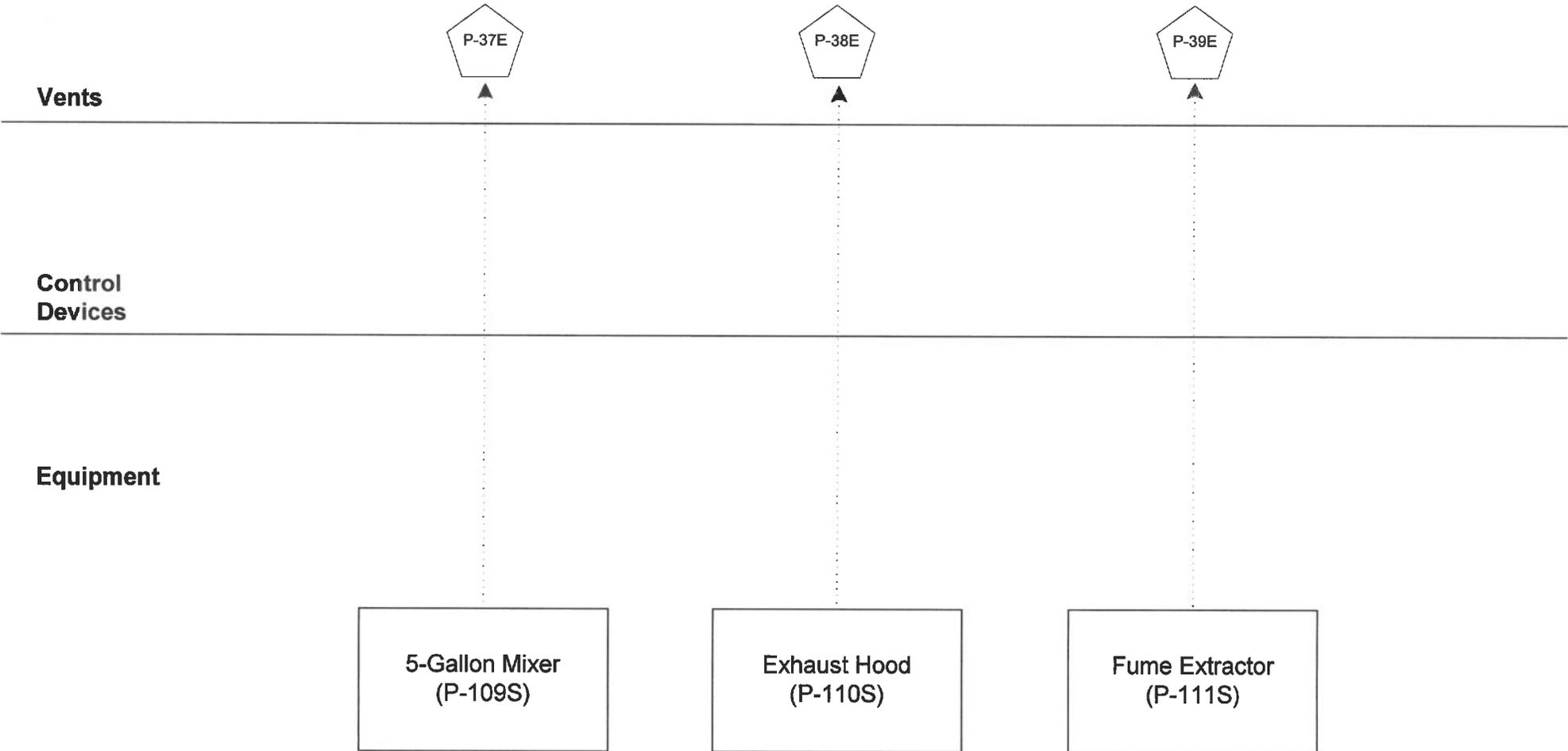
Building 394 Process Flow (Physical & Hazards Testing)



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Building 396 Process Flow (Five-Gallon Mixer)



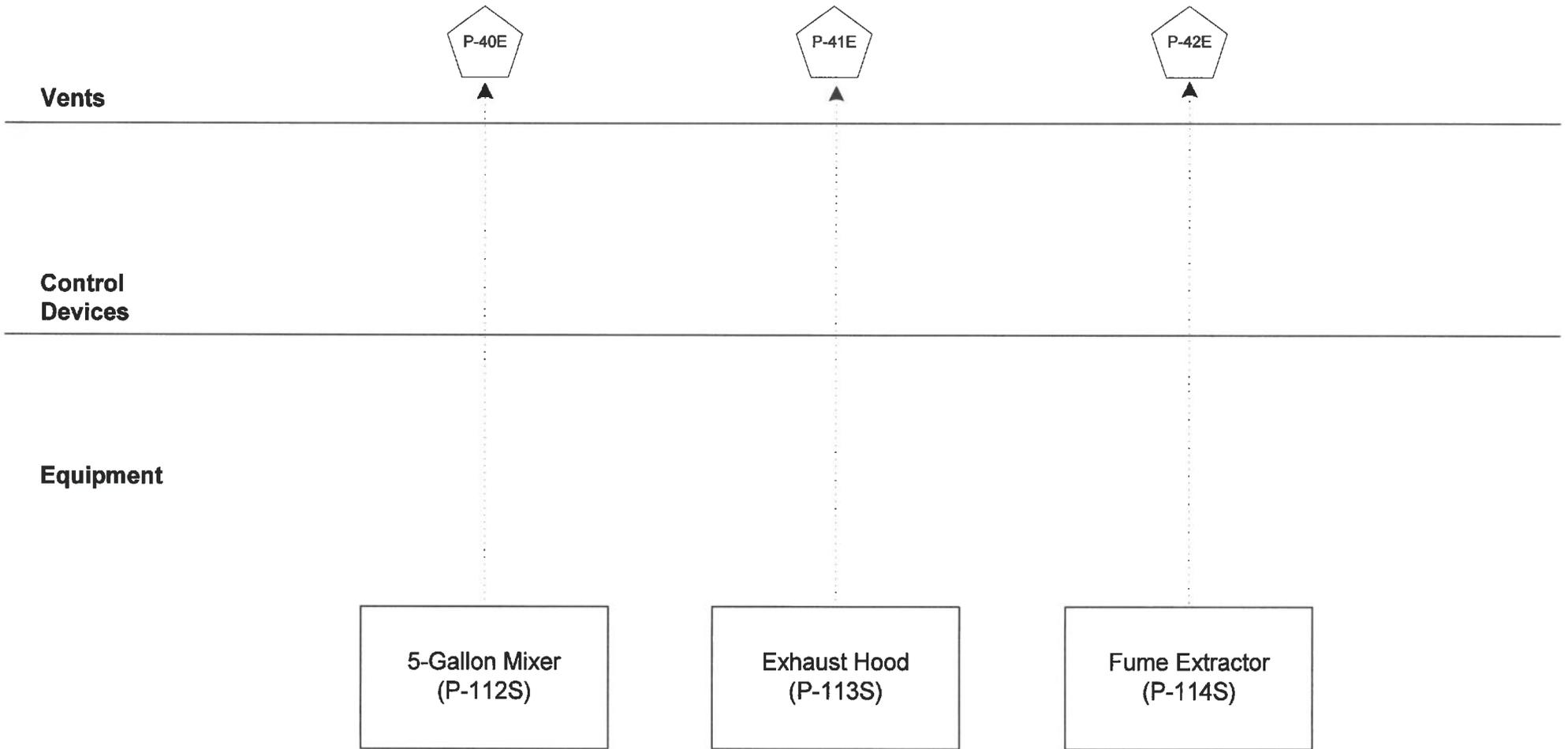
Allegany Ballistics Laboratory
Operated by Alliant Techsystems
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Vents Inside Building 

Process Flow 

Emissions Stream 

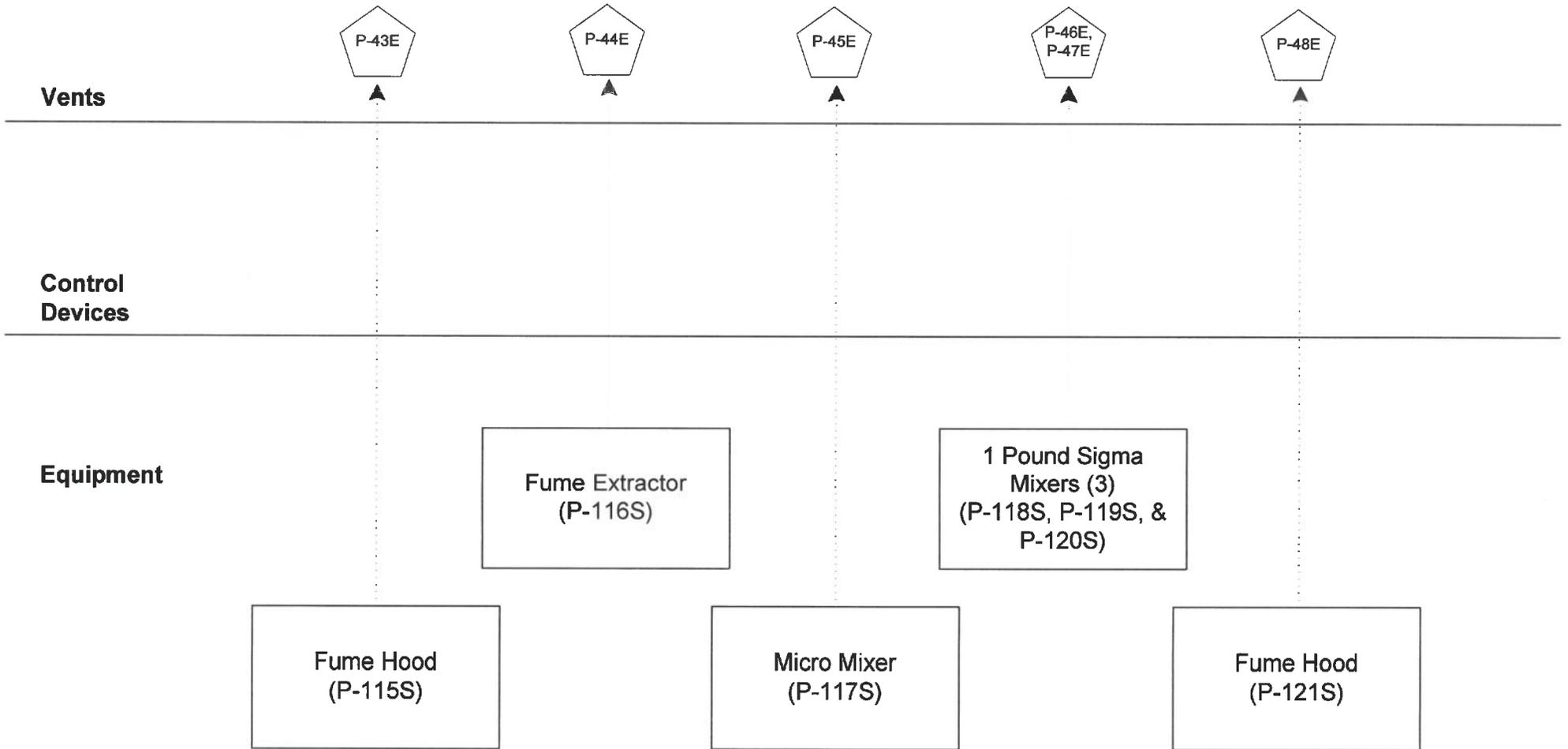
Building 397 Process Flow (Five-Gallon Mixer)



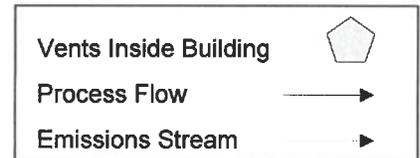
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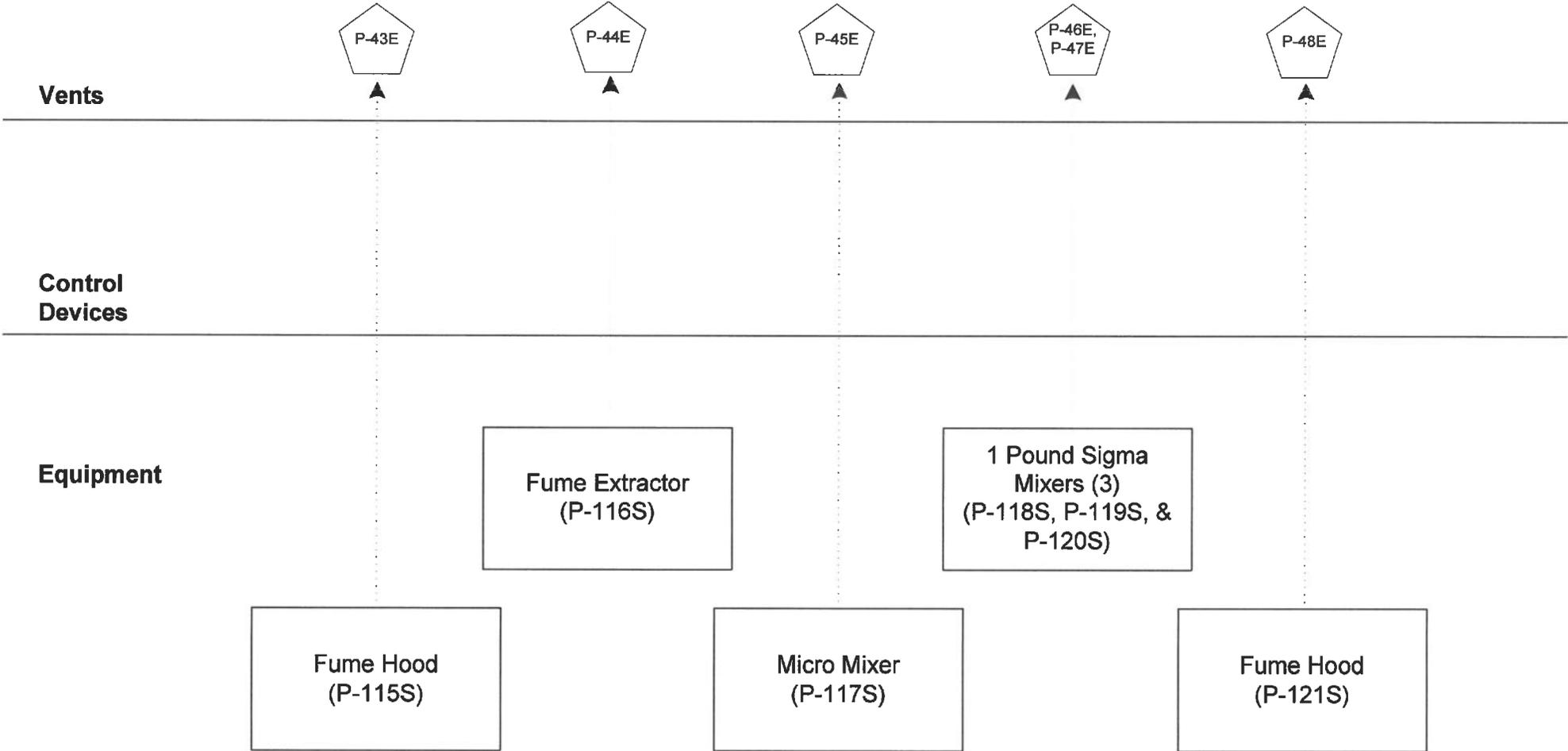
Building 400 Process Flow (Subscale Mixers)



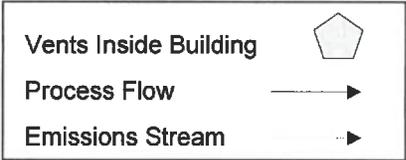
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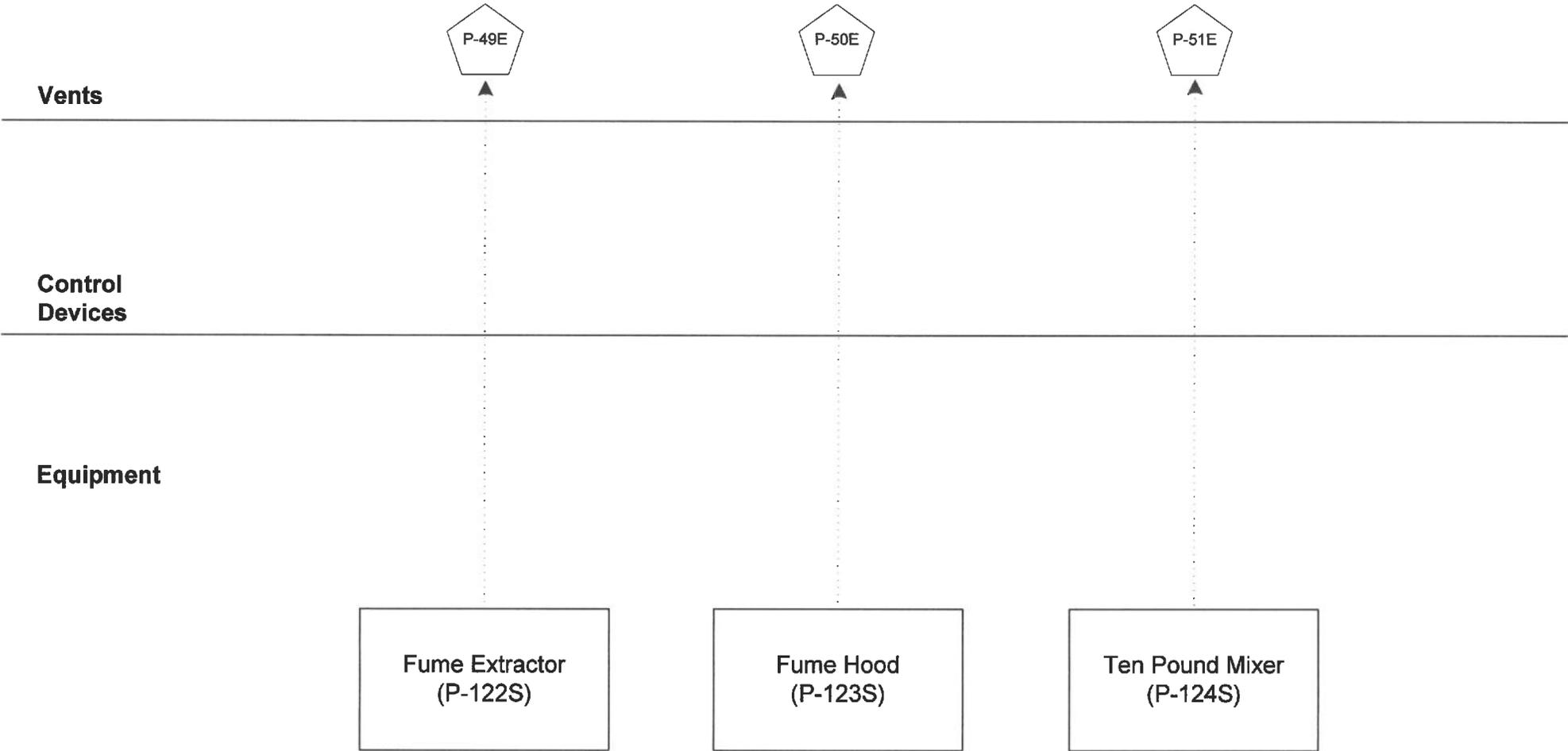
Building 400 Process Flow (Subscale Mixers)



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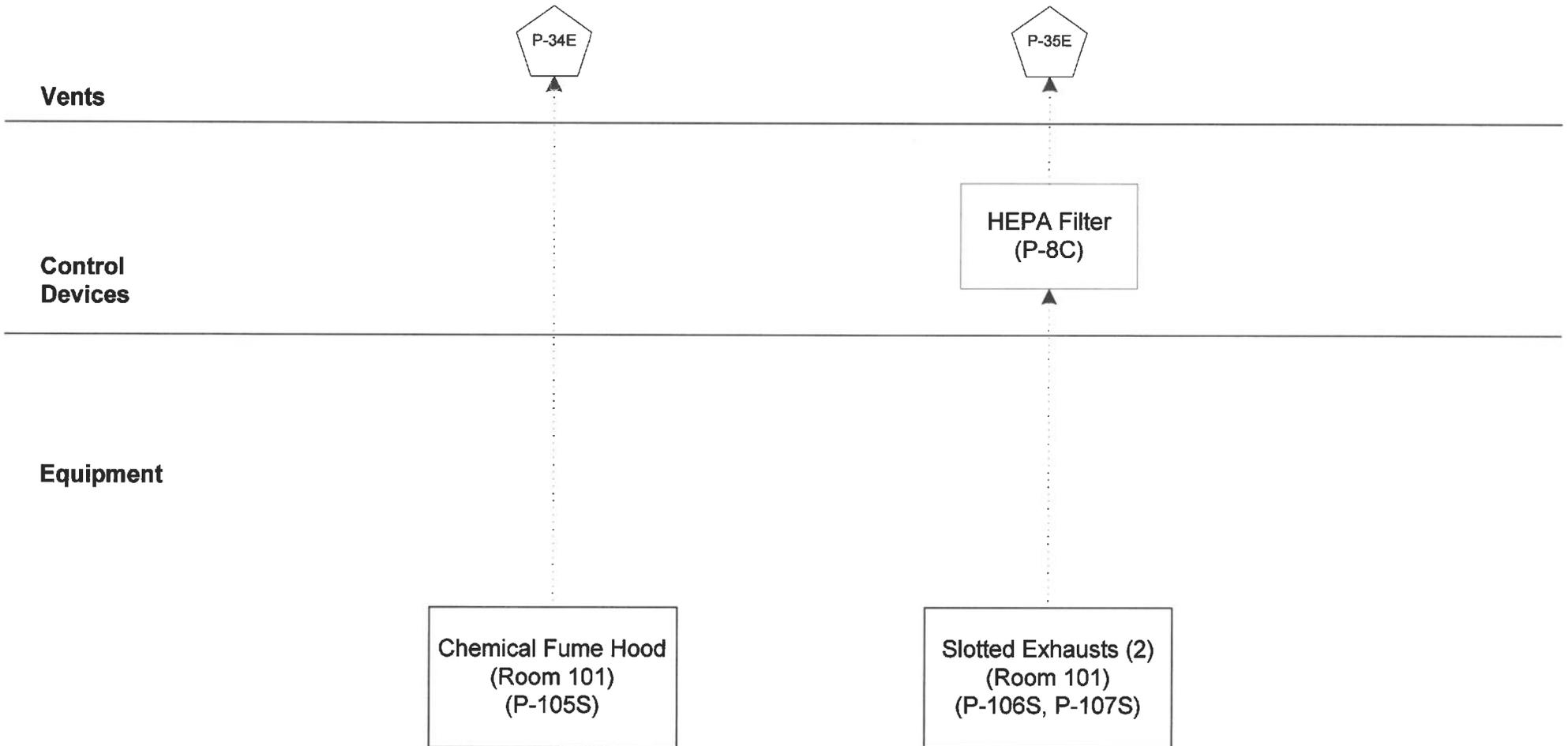
Building 401 Process Flow (Ten Pound Mixer)



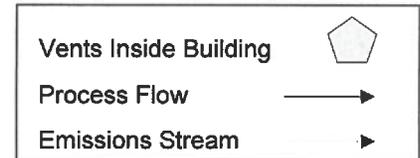
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Vents Inside Building 
Process Flow 
Emissions Stream 

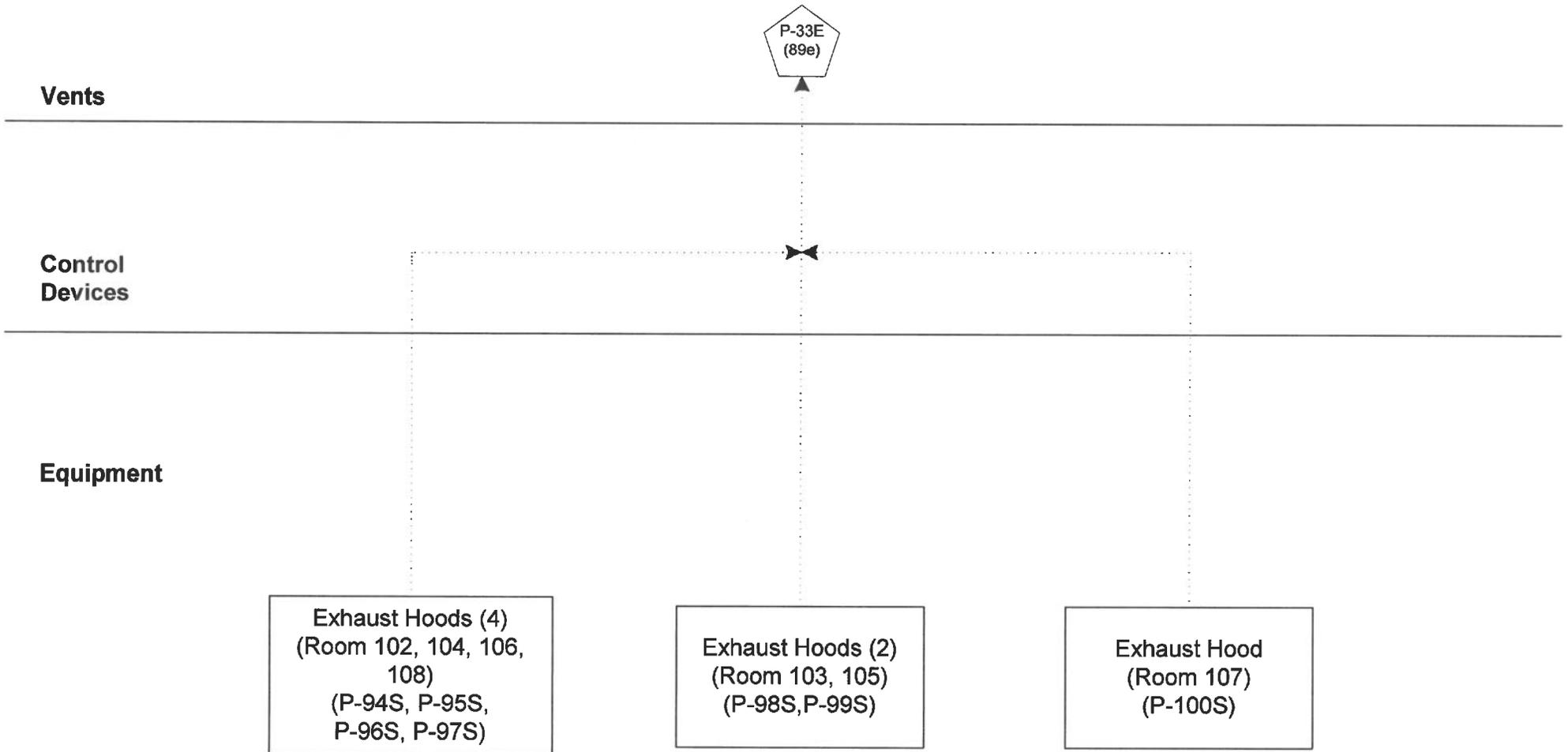
Building 403 Process Flow (Ingredient Preparation)



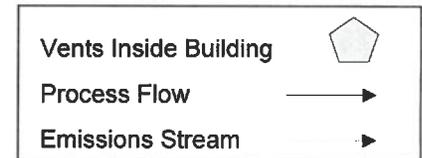
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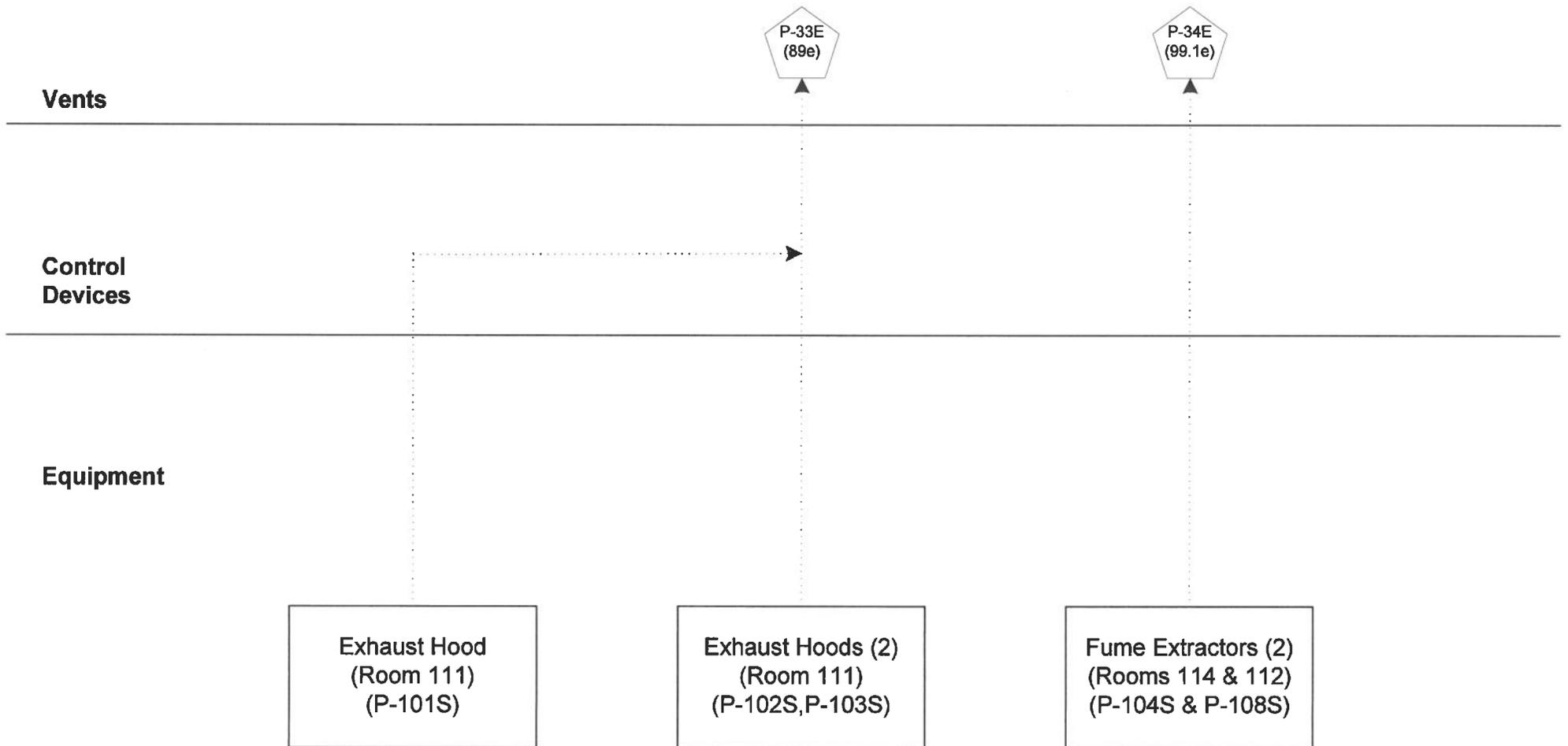
Building 404 Process Flow (Propellant Laboratory)



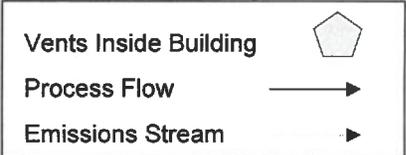
Allegany Ballistics Laboratory
Operated by Alliant Techsystems
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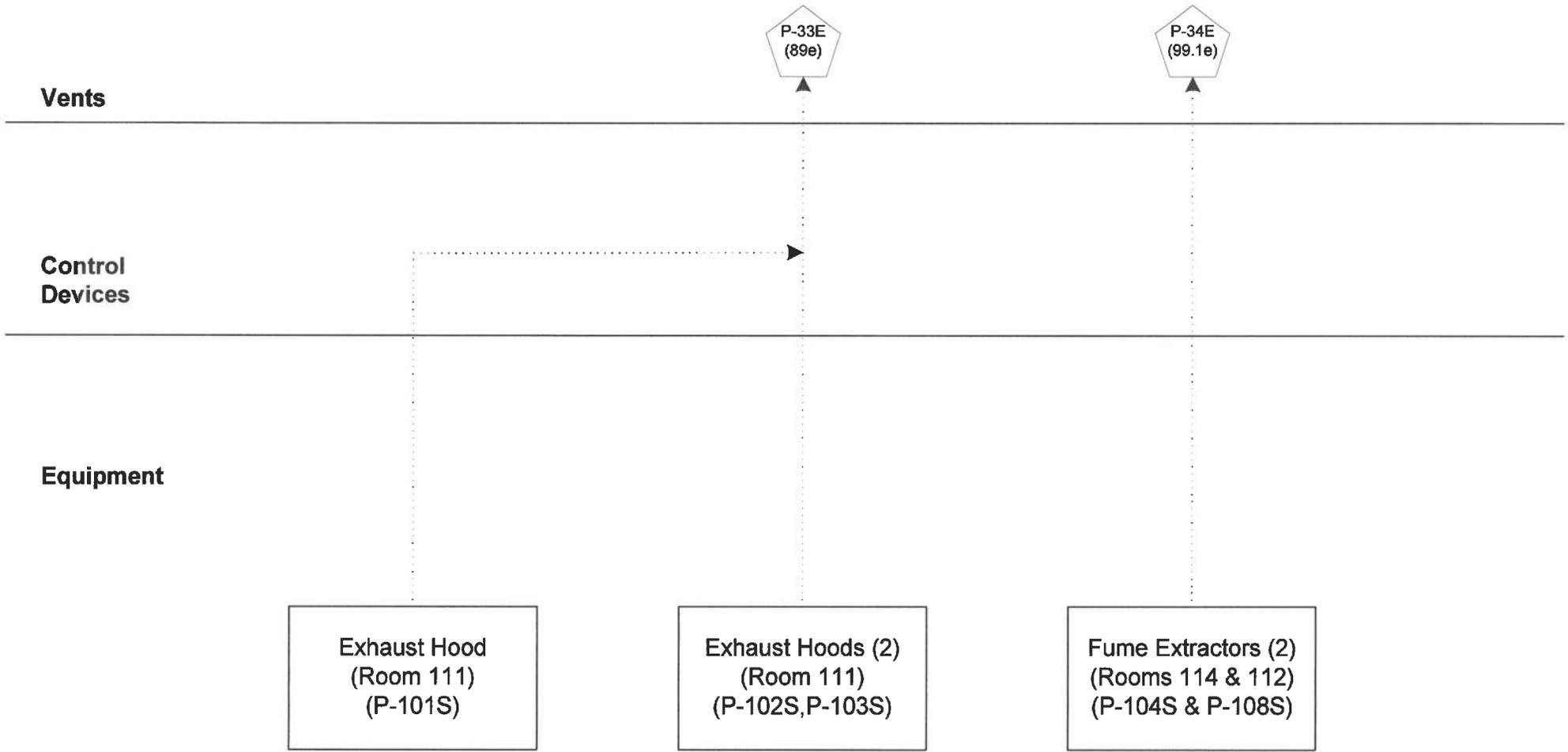
Building 404 Process Flow (Propellant Laboratory - Strand Bomb)



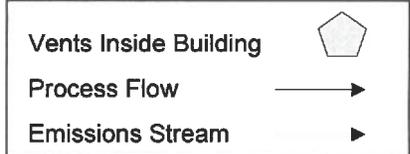
Allegany Ballistics Laboratory
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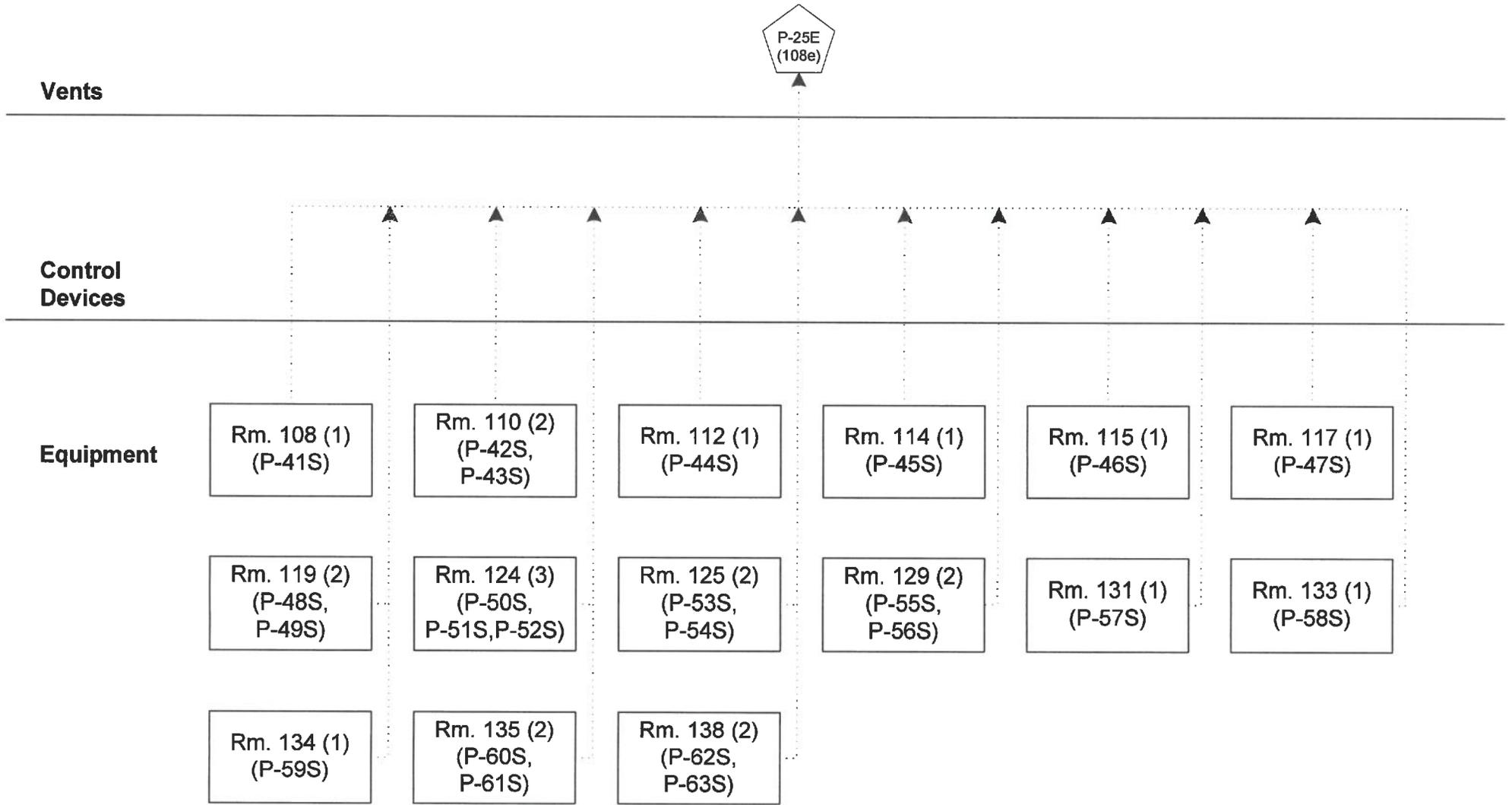
Building 404 Process Flow (Propellant Laboratory - Strand Bomb)



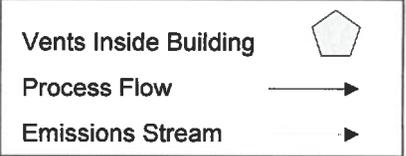
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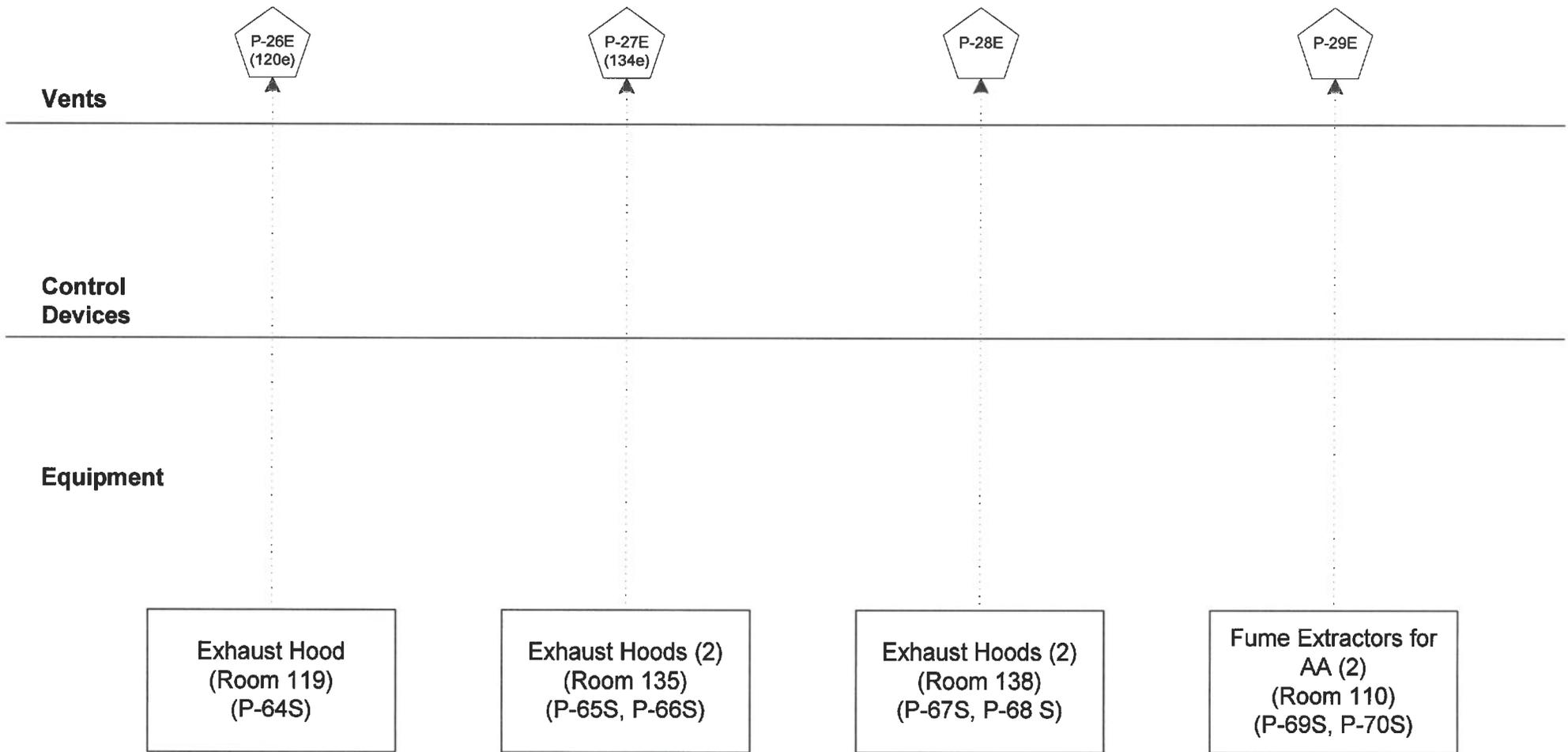
Building 405 Process Flow (Materials Laboratory)



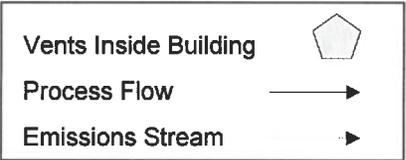
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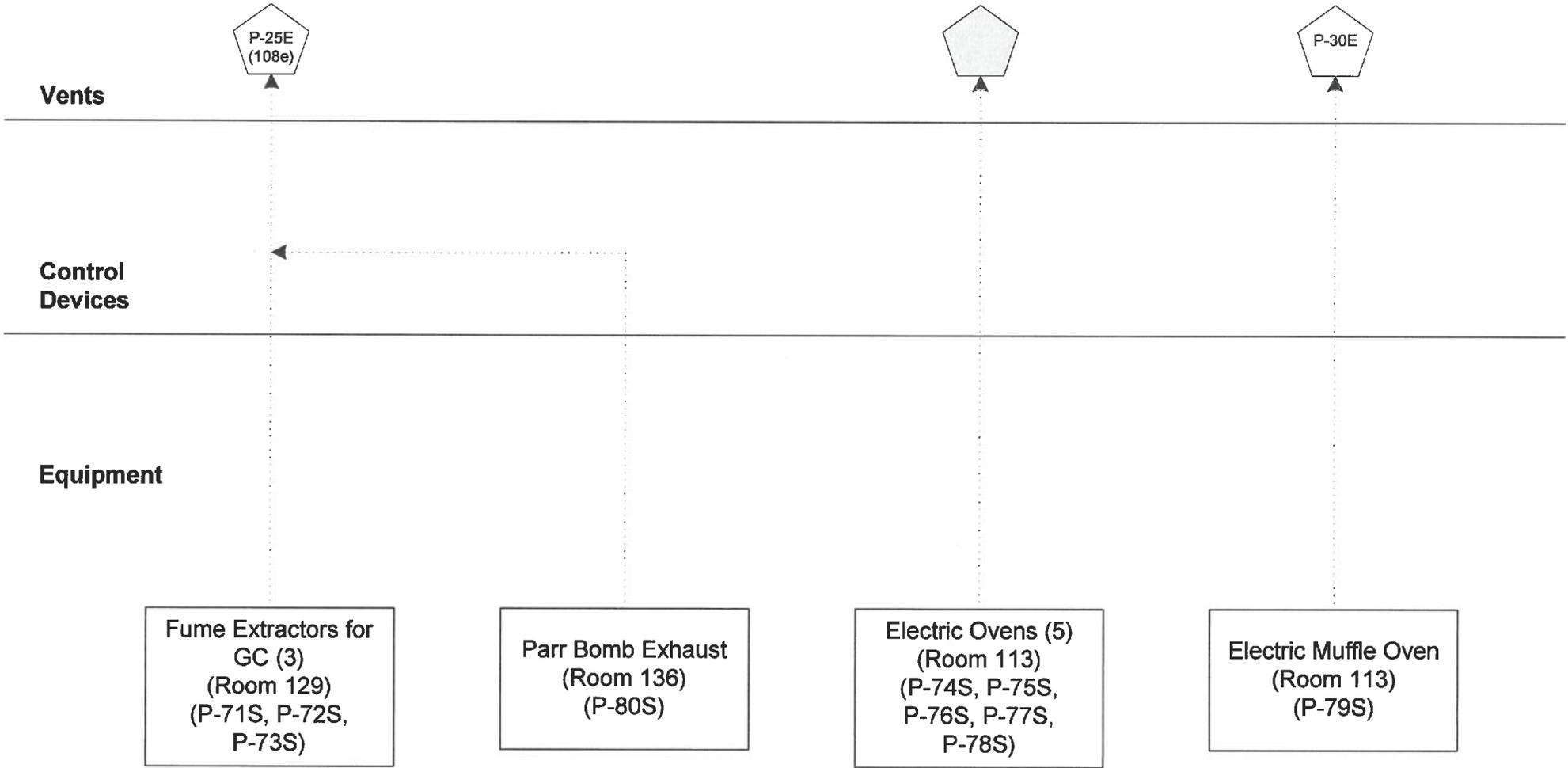
Building 405 Process Flow (Materials Laboratory)



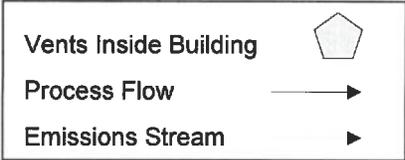
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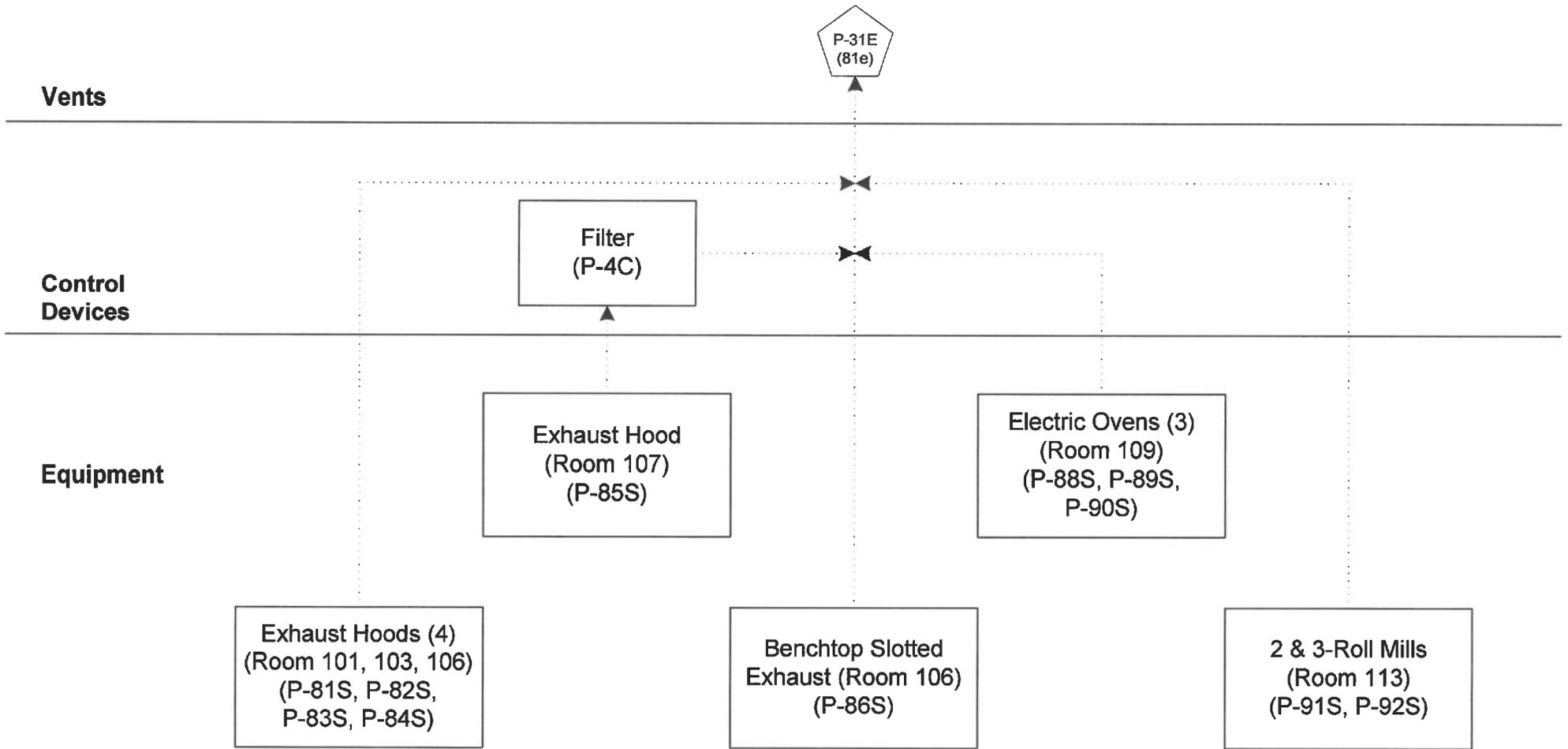
Building 405 Process Flow (Materials Laboratory)



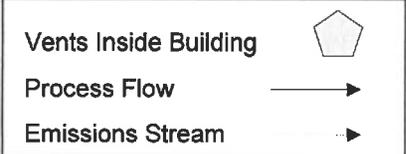
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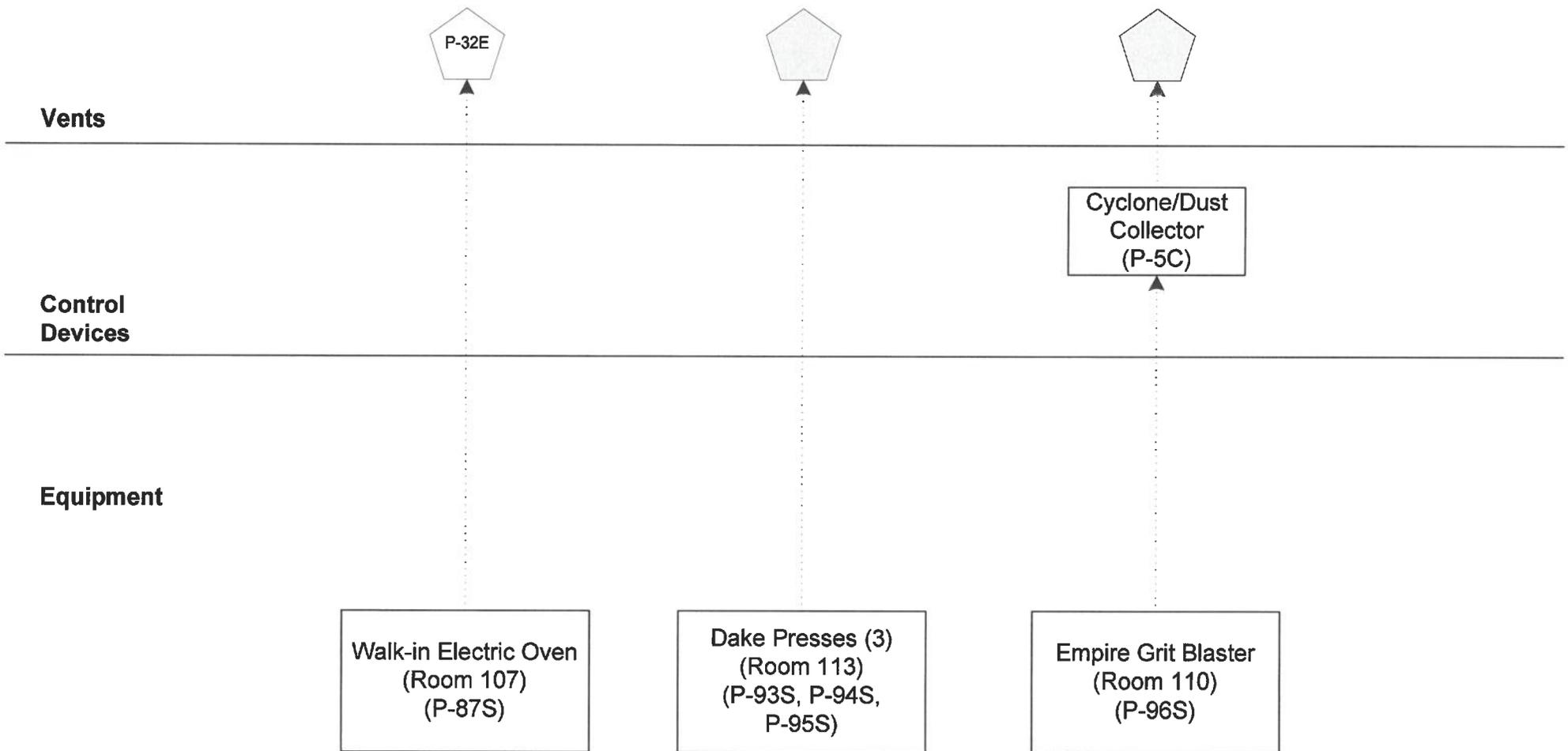
Building 406 Process Flow (Adhesives Laboratory)



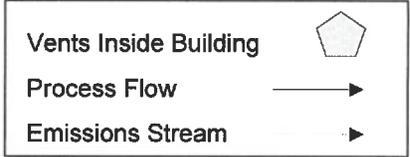
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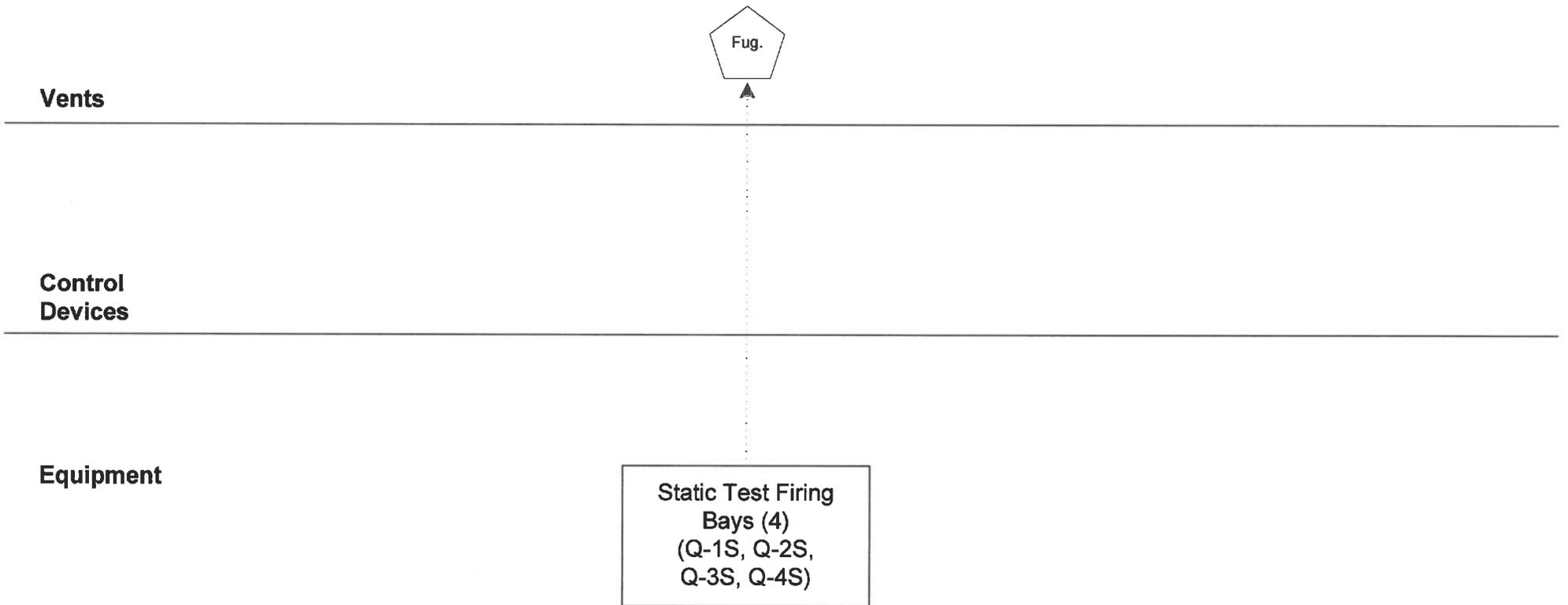
Building 406 Process Flow (Adhesives Laboratory)



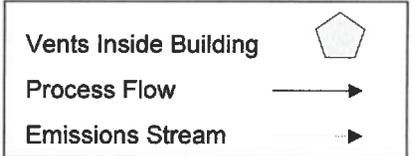
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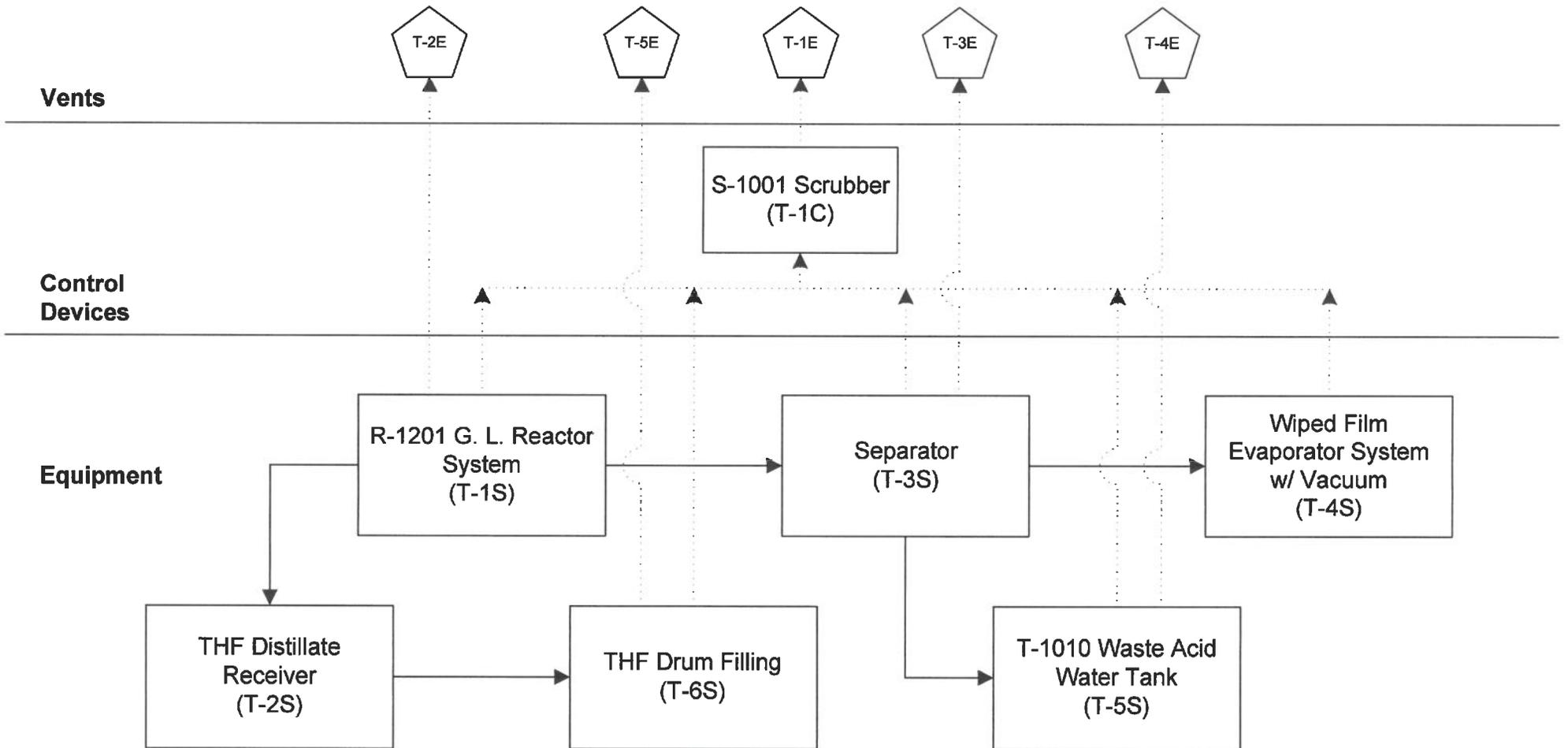
Building 164 Process Flow (Static Firing Range)



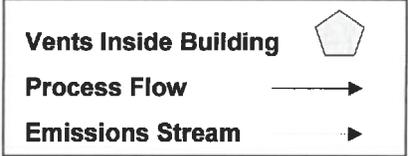
Allegheny Ballistics Laboratory
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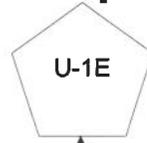
Building 454 Process Flow (TPEG Polymer Manufacturing)



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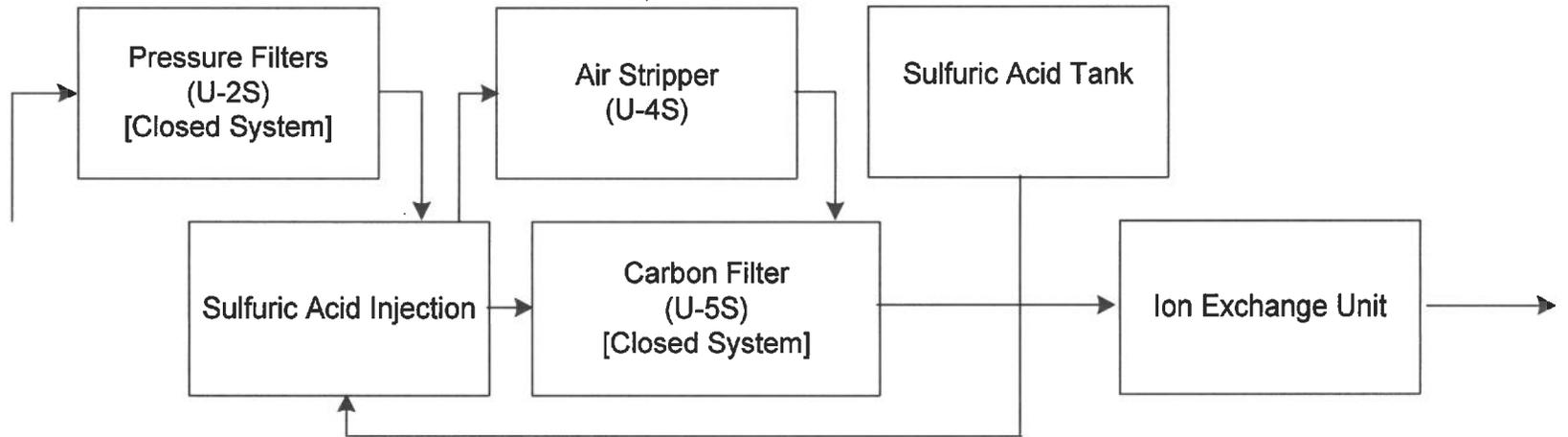
Building 424 Groundwater Pump & Treat System



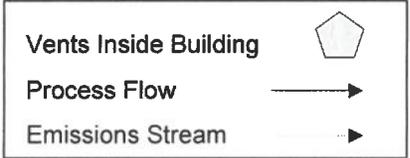
Vents

Control
Devices

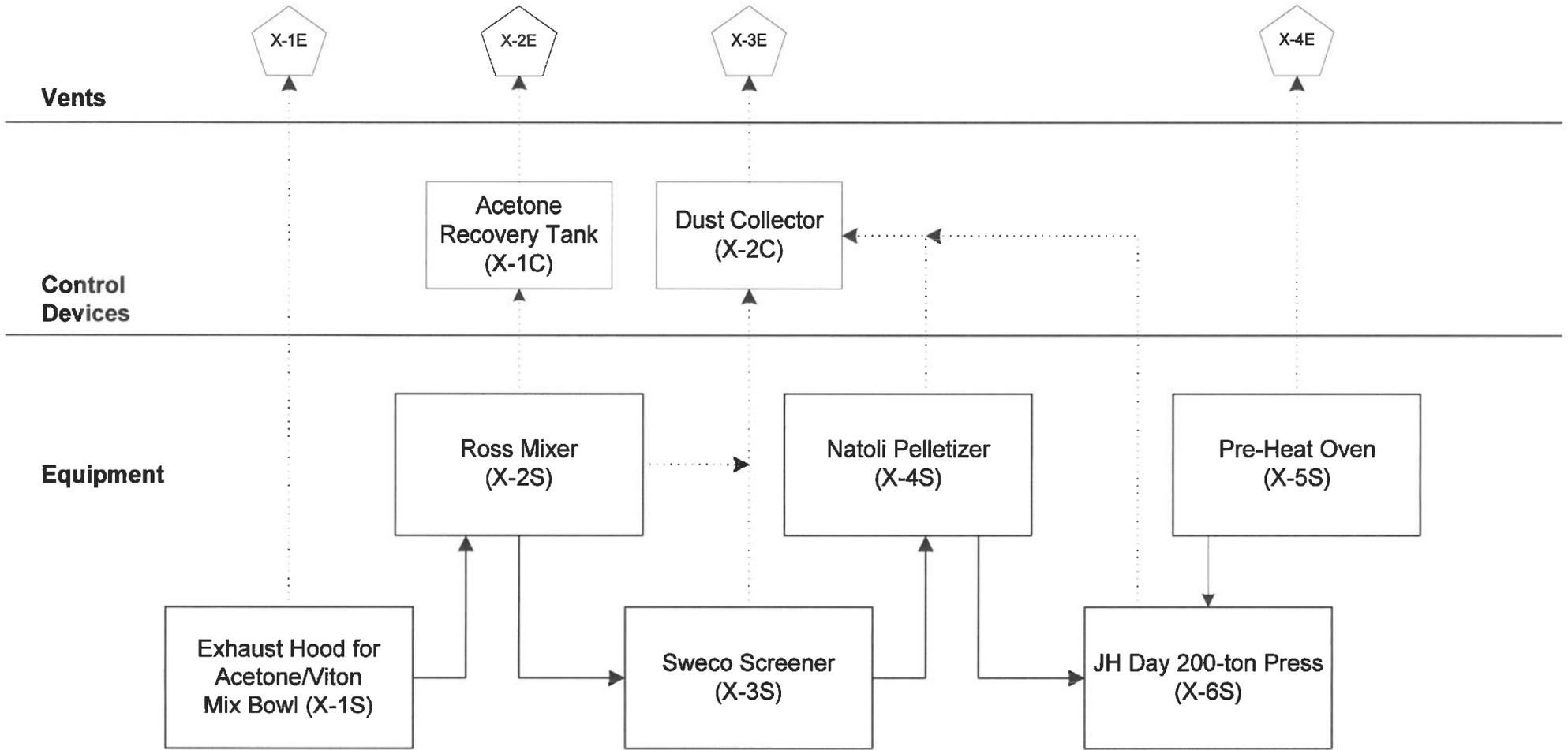
Equipment



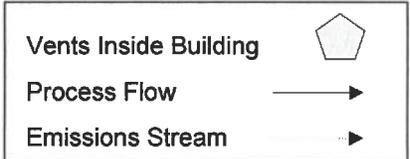
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Building 413 Process Flow (MAC Warhead Operations)



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

Emission Unit ID ¹	Emission Point ID ^{1, a}	Emission Unit Description	Year Installed/ Modified	Design Capacity	Control Device ^{1, b}
<i>Laser Products Fabrication - Group 009</i>					
9-1S	NDV	Inert Gas Welding Machine-8	1997	Variable	
9-2S	9-1E	Exhaust Hood-8	Early 90s	Variable	
9-4S	NDV	Small Electric Oven-8	Early 90s	Variable	
9-5S	NDV	Small Electric Oven-8	Early 90s	Variable	
9-6S	NDV	Small Electric Oven-8	Early 90s	Variable	
9-7S	NDV	Small Electric Oven-8	Early 90s	Variable	
9-8S	9-2E	Exhaust Hood-8	Early 90s	Variable	
9-9S	NDV	Inert Gas Welding Machine-432	1997	Variable	
9-10S	9-3E	Exhaust Hood-432	1997	Variable	
9-11S	NDV	Zero Grit Blaster-432	1997	Variable	9-1C
9-12S	NDV	Small Electric Oven-432	1997	Variable	
9-13S	NDV	Small Electric Oven-432	1997	Variable	
9-14S	NDV	Small Electric Oven-432	1997	Variable	
9-15S	9-4E	Exhaust Hood-432	1997	Variable	
9-16S	NDV	Helium Leak Detector-432	1997	Variable	
9-17S	NDV	Vacuum Oven-432	1997	Variable	
9-18S	NDV	Vacuum Oven-432	1997	Variable	
9-19S	9-5E	Laser Etch Workstation-432	1997	Variable	
9-20S	9-6E	Aqueous Parts Washer-432	1997	Variable	
9-21S	NDV	Conditioning Chamber-432	1997	Variable	
9-22S	NDV	Conditioning Chamber-432	1997	Variable	

Emission Unit ID ¹	Emission Point ID ^{1, a}	Emission Unit Description	Year Installed/ Modified	Design Capacity	Control Device ^{1,b}
9-23S	9-7E	Grenade Fuze Testing Chamber – 361	2006	Variable	
9-24E	NDV	Grenade Fuze Marking Printer - 361	2006	Variable	
9-25S	9-8E	Electronic Fuze – SMT Heller Oven – 432A	2005	Variable	
9-26S	9-9E	Electronic Fuze – MOFA Paint Hood – 432A	2006	Variable	9-2C
9-27S	9-10E	Electronic Fuze – M74 Cleaning Station – 432A	2007	9 gal	
9-28S	9-11E	Electronic Fuze – ETFM Cleaning Station	2008	100 gal	
Boilers - Group 00L					

Emission Unit ID ¹	Emission Point ID ^{1, a}	Emission Unit Description	Year Installed/ Modified	Design Capacity	Control Device ^{1, b}
L-11S	L-5E	No. 1 NG-Fired Boiler-8501	1996 / 2013	9.65 mmBTU/hr	
L-12S	L-6E	No. 3 NG-Fired Boiler-8501	2005 / 2013	9.92 mmBTU/hr	
L-14S	L-7E	Diesel-Powered Emergency Generator-8501		90 hp	
L-21S	NDV	Nalco 1720 Oxygen Scavenger Feed Tank-8501	2001	100 gal	
L-22S	NDV	Boiler Feedwater Chemical Tank-8501	2001	100 gal	
L-23S	L-8E or L-9E	Boiler, NG with Diesel back-up (Miura EXN-300SGOF)	2015	12MMBtu/hr	
L-24S	L-8E or L-9E	Boiler, NG with Diesel back-up (Miura EXN-300SGOF)	2015	12MMBtu/hr	
L-25S	L-8E or L-9E	Boiler, NG with Diesel back-up (Miura EXN-300SGOF)	2015	12MMBtu/hr	
L-26S	L-8E or L-9E	Boiler, NG with Diesel back-up (Miura EXN-300SGOF)	2015	12MMBtu/hr	
L-27S	L-8E or L-9E	Boiler, NG with Diesel back-up (Miura EXN-300SGOF)	2015	12MMBtu/hr	
L-29S	L-8E or L-9E	Boiler, NG with Diesel back-up (Miura EXN-300SGOF)	2015	12MMBtu/hr	
L-30S	L-8E or L-9E	Boiler, NG with Diesel back-up (Miura EXN-300SGOF)	2015	12MMBtu/hr	
L-31S	L-8E or L-9E	Boiler, NG with Diesel back-up (Miura EXN-300SGOF)	2015	12MMBtu/hr	
L-32S	L-8E or L-9E	Boiler, NG with Diesel back-up (Miura EXN-300SGOF)	2015	12MMBtu/hr	
<i>Emergency Generators</i>					
EG-1	EG-1	Onan DGEA (Portable) (Bldg 372)	1998	167.6 bhp / 1800 rpm	
EG-2	EG-2	Cummins-Onan 400 DFEB (Bldg 344)	2000	600 bhp / 1800 rpm	
EG-3	EG-3	Kohler (Bldg 415)	1999	241.4 bhp / 1800 rpm	
EG-4	EG-4	Kohler 300ROEZD71 (Bldg 440)	1995	490 bhp / 1800 rpm	
EG-5	EG-5	Kohler 300ROEZD72 (Bldg 440)	1998	490 bhp / 1800 rpm	
EG-6	EG-6	Kohler 800REOZM (Bldg 449)	2004	1207 bhp / 1800 rpm	

Emission Unit ID ¹	Emission Point ID ^{1, a}	Emission Unit Description	Year Installed/ Modified	Design Capacity	Control Device ^{1, b}
EG-7	EG-7	Kohler 500REOZVB-IC2C2 Tier 2 (Bldg 440)	2008	757 bhp / 1800 rpm	
EG-8	EG-8	Stamford D5847/1(Bldg 8501)	Before 1990	90 bhp / 1800 rpm	
EG-9	EG-9	MTU 1250RXC5DT2 Tier 2 (Bldg 449)	2010	1675.25 bhp / 1800 rpm	
EG-10	EG-10	Caterpillar D100-4 Tier 2 (Bldg 385)	November 2006	157.5 bhp / 1800 rpm	
EG-11	EG-11	Caterpillar C3456 Tier 2 (Bldg 2006)	2012	670.5 bhp / 1800 rpm	
EG-12	EG-12	MTU 2250-RXC6DT2 Tier 2 (Bldg 600)	2012	3017.3 bhp / 1800 rpm	
EG-13	EG-13	Generator Set (Emergency Use) (Kohler 700 REOZDE) w/ Diesel	2015	750 kW / 1046 bhp	
<i>Storage Tanks - Group 00M</i>					
M-6S	M-6E	Propane Storage Tank-256	1993	1,000 gal	
M-7S	M-7E	Propane Storage Tank-256	1993	1,000 gal	
M-8S	M-8E	Propane Storage Tank-256	1993	1,000 gal	
M-28S	M-28E	Propane Storage Tank-256	1993	1,000 gal	
M-29S	M-29E	Propane Storage Tank-256	1993	1,000 gal	
M-30S	M-30E	Propane Storage Tank-256	1993	1,000 gal	
M-9S	M-9E	Propane Storage Tank-412	1997	1,000 gal	
M-10S	M-10E	Propane Storage Tank-412	1997	1,000 gal	
M-31S	M-31E	Propane Storage Tank-412	1997	1,000 gal	
M-11S	M-11E	Propane Storage Tank-438	1996	18,000 gal	
M-32S	M-32E	Propane Storage Tank-420	1999	1,000 gal	
M-33S	M-33E	Propane Storage Tank-420	1999	1,000 gal	
M-34S	M-34E	Propane Storage Tank-420	1999	1,000 gal	
M-35S	M-35E	Propane Storage Tank-420	1999	1,000 gal	
M-12S	M-12E	Gasoline Storage Tank-7	1993	6,000 gal	
M-13S	M-13E	Diesel Storage Tank-7	1993	4,000 gal	

Emission Unit ID ¹	Emission Point ID ^{1, a}	Emission Unit Description	Year Installed/ Modified	Design Capacity	Control Device ^{1, b}
M-20S	M-20E	Fuel Oil Storage Tank-8501	1996	15,000 gal	
M-21S	M-21E	Fuel Oil Storage Tank-8501	1996	15,000 gal	
M-22S	M-22E	Actrel Storage Tank-2014	1995	1,800 gal	
M-23S	M-23E	Actrel Storage Tank-2014	1995	1,500 gal	
M-24S	M-24E	Solvent Storage Tank-8203	1998	500 gal	
M-25S	M-25E	Solvent Storage Tank-8203	1998	500 gal	
M-26S	M-26E	Solvent Storage Tank-8203	1998	500 gal	
M-36S (M-28S in R13-3186)	N/A	Storage Vessel (Ultra-Low Sulfur Diesel)	2015	30,000 gal	
<i>Water Treatment - Group 00N</i>					
N-1S	FUG	Reactor Basin-442	1996	100,000 gal	
N-2S	FUG	Reactor Basin-442	1996	100,000 gal	
N-4S	CS	Explosive Wastewater Treatment System-383	1994	14,000 gal/day	Full Enclosure
N-5S	FUG	Facility Water Treatment System-535	1996	504,000 gal/day	
N-7S	FUG	Recirculating Sand Filter-8563	2013	6,000 gal	
<i>Explosive Solid Waste Treatment - Group 00O</i>					
O-1S	FUG	Burning pans BG	Pre-70s / 2005	Variable	
<i>Research Complex - Group 00P</i>					
P-20S	P-12E	Large (100 pound) Dessicator Sparge Line-21	1992	100 lb	
P-21S	P-13E	Large (100 pound) Dessicator Sparge Line-21	1992	100 lb	
P-30S	OS	Sweco Grinder	NA		
P-28S	NDV	Scrap Storage Drum-289	1996	55 gallon	
P-29S	NDV	Scrap Storage Drum-289	1996	55 gallon	
P-31S	P-21E	5-gal Mixer-290	1963	5 gallon	
P-32S	P-22E	Parts Cleaning Station-290	1963	Variable	

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Emission Unit ID ¹	Emission Point ID ^{1, a}	Emission Unit Description	Year Installed/ Modified	Design Capacity	Control Device ^{1, b}
P-33S	P-23E	Exhaust hood (Rm.109)-394	1996	Variable	
P-34S	P-23E	Exhaust hood (Rm.110)- 394	1996	Variable	
P-35S	P-23E	Fume extractor-394	1996	Variable	
P-36S	P-23E	Fume extractor-394	1996	Variable	
P-37S	P-23E	Fume extractor-394	1996	Variable	
P-38S	P-23E	Fume extractor-394	1996	Variable	
P-39S	P-23E	Fume extractor-394	1996	Variable	
P-40S	P-24E	Neslab Low Temp Bath Circulator for Tensile Testing-394	1996	Variable	
P-41S	P-25E	Exhaust hood-405-108	1996	Variable	
P-42S	P-25E	Exhaust hood-405-110	1996	Variable	
P-43S	P-25E	Exhaust hood-405-110	1996	Variable	
P-44S	P-25E	Exhaust hood-405-112	1996	Variable	
P-45S	P-25E	Exhaust hood-405-114	1996	Variable	
P-46S	P-25E	Exhaust hood-405-115	1996	Variable	
P-47S	P-25E	Exhaust hood-405-117	1996	Variable	
P-48S	P-25E	Exhaust hood-405-119	1996	Variable	
P-49S	P-25E	Exhaust hood-405-119	1996	Variable	
P-50S	P-25E	Exhaust hood-405-124	1996	Variable	
P-51S	P-25E	Exhaust hood-405-124	1996	Variable	
P-52S	P-25E	Exhaust hood-405-124	1996	Variable	
P-53S	P-25E	Exhaust hood-405-125	1996	Variable	
P-54S	P-25E	Exhaust hood-405-125	1996	Variable	
P-55S	P-25E	Exhaust hood-405-129	1996	Variable	
P-56S	P-25E	Exhaust hood-405-129	1996	Variable	

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Emission Unit ID ¹	Emission Point ID ^{1, a}	Emission Unit Description	Year Installed/ Modified	Design Capacity	Control Device ^{1, b}
P-57S	P-25E	Exhaust hood-405-131	1996	Variable	
P-58S	P-25E	Exhaust hood-405-133	1996	Variable	
P-59S	P-25E	Exhaust hood-405-134	1996	Variable	
P-61S	P-25E	Exhaust hood-405-135	1996	Variable	
P-62S	P-25E	Exhaust hood-405-138	1996	Variable	
P-63S	P-25E	Exhaust hood-405-138	1996	Variable	
P-64S	P-26E	Exhaust hood-405-119	1996	Variable	
P-65S	P-27E	Exhaust hood-405-135	1996	Variable	
P-66S	P-27E	Exhaust hood-405-135	1996	Variable	
P-67S	P-28E	Exhaust hood-405-138	1996	Variable	
P-68S	P-28E	Exhaust hood-405-138	1996	Variable	
P-69S	P-29E	Fume Extractors for Atomic Absorption Test Equipment-405-	1996	Variable	
P-70S	P-29E	Fume Extractors for Atomic Absorption Test Equipment-405-	1996	Variable	
P-71S	P-25E	Fume Extractors for Gas Chromatography-405-129	1996	Variable	
P-72S	P-25E	Fume Extractors for Gas Chromatography-405-129	1996	Variable	
P-73S	P-25E	Fume Extractors for Gas Chromatography-405-129	1996	Variable	
P-74S	P-30E	Electric oven-405-113	1996	Variable	
P-75S	P-30E	Electric oven-405-113	1996	Variable	
P-76S	P-30E	Electric oven-405-113	1996	Variable	
P-77S	P-30E	Electric oven-405-113	1996	Variable	
P-78S	P-30E	Electric oven-405-113	1996	Variable	
P-79S	P-30E	Electric oven-405-113	1996	Variable	
P-80S	P-25E	Parr Bomb Exhaust-405-136	1996	Variable	
P-81S	P-31E	Exhaust hood-406-101	1996	Variable	

Emission Unit ID ¹	Emission Point ID ^{1, a}	Emission Unit Description	Year Installed/ Modified	Design Capacity	Control Device ^{1, b}
P-82S	P-31E	Exhaust hood-406-103	1996	Variable	
P-83S	P-31E	Exhaust hood-406-106	1996	Variable	
P-84S	P-31E	Exhaust hood-406-106	1996	Variable	
P-85S	P-31E	Exhaust hood-406-107	1996	Variable	P-4C
P-86S	P-31E	Benchtop Slotted Exhaust-406-106	1996	Variable	
P-87S	P-31E	Walk-in Electric Oven-406-107	1996	Variable	
P-88S	P-31E	Despatch Electric Oven-406-109	1996	Variable	
P-89S	P-31E	Young Brothers Electric Oven-406-109	1996	Variable	
P-90S	P-31E	Young Brothers Electric Oven-406-109	1996	Variable	
P-91S	P-31E	3 Roll Mill-406-113	1996	Variable	
P-92S	P-31E	2 Roll Mill-406-113	1996	Variable	
P-93S	NDV	Dake Press-406-113	1996	Variable	
P-94S	NDV	Dake Press-406-113	1996	Variable	
P-95S	NDV	Dake Press-406-113	1996	Variable	
P-96S	NDV	Empire Grit Blaster-406-110	1996		P-5C
P-97S	FUG	Sensitivity Test Pits-500	Pre-70s	Variable	
P-94S	P-33E	Exhaust hood-404-102	1997	Variable	
P-95S	P-33E	Exhaust hood-404-104	1997	Variable	
P-96S	P-33E	Exhaust hood-404-106	1997	Variable	
P-97S	P-33E	Exhaust hood-404-108	1997	Variable	
P-98S	P-33E	Exhaust hood-404-103	1997	Variable	
P-99S	P-33E	Exhaust hood-404-105	1997	Variable	
P-100S	P-33E	Exhaust hood-404-107	1997	Variable	
P-101	P-33E	Exhaust hood-404-111	1997	Variable	

Emission Unit ID ¹	Emission Point ID ^{1, a}	Emission Unit Description	Year Installed/ Modified	Design Capacity	Control Device ^{1, b}
P-102S	P-33E	Exhaust hood-404-111	1997	Variable	
P-103S	P-33E	Exhaust hood-404-111	1997	Variable	
P-104S	P-34E	Fume extractor-404-114	1997	Variable	P-7C
P-108S	P-34E	Fume extractor-404-112	2001	Variable	P-7C
P-105S	P-35E	Chemical fume hood-403-101	1998	Variable	
P-106S	P-36E	Slotted exhaust-403-101	1998	Variable	P-8C
P-107S	P-36E	Slotted exhaust-403-101	1998	Variable	P-8C
P-109S	P-37E	5 gallon mixer-396	2001	5 gallons	
P-110S	P-38E	Exhaust hood-396	2001	Variable	
P-111S	P-39E	Fume extractor-396	2001	Variable	
P-115S	P-43E	Fume hood-400-121	1999	Variable	
P-116S	P-44E	Fume extractor-400-116	1999	Variable	
P-117S	P-45E	Micro mixer-400-116	1999	Variable	
P-118S	P-46E	One pound Sigma mixer-400-116	1999	1 lb	
P-119S	P-46E	One pound Sigma mixer-400-110	1999	1 lb	
P-120S	P-47E	One pound Sigma mixer-400-106	1999	1 lb	
P-121S	P-48E	Fume hood-400-117	1999	Variable	
P-122S	P-49E	Fume extractor-401	1999	Variable	
P-123S	P-50E	Fume hood-401	1999	Variable	
P-124S	P-51E	Ten pound mixer-401	1999	10 lb	
<i>Static Firing / X-Range - Group 00Q</i>					
Q-1S	FUG	Static Test Firing Bay-77	1959	Variable	
Q-2S	FUG	Static Test Firing Bay-193	1959	Variable	
Q-3S	FUG	Static Test Firing Bay-194	1959/ Summer 2002	Variable	
Q-4S	FUG	Static Test Firing Bay-242	1961	Variable	

Emission Unit ID ¹	Emission Point ID ^{1, a}	Emission Unit Description	Year Installed/ Modified	Design Capacity	Control Device ^{1, b}
<i>Hazardous Waste Storage - Group 00R</i>					
N/A	FUG	Hazardous Waste Storage Pad	1989	320 drums	
<i>Photographic Development - Group 00S</i>					
S-1S	NDV	3M-2300 Processor Camera-8	1995	Variable	
S-2S	NDV	Photo Developer Machine	1995	Variable	
S-3S	NDV	Kodamatic 42S Processor	1995	Variable	
S-4S	NDV	Agfa-Geraert Developer	1995	Variable	
<i>TPEG Polymer Manufacture - Group 00T</i>					
T-1S	T-1E or T-2E	Reactor vessel	1999	6500 lb/batch	T-1C
T-2S	T-1E	Reactor distillate receiver	1999	7 GPM	T-1C
T-3S	T-1E or T-3E	Separator	1999	5000 lb/batch	T-1C
T-4S	T-1E	Wiped film evaporator	1999	120 GPM	T-1C
T-5S	T-1E or T-4E	Waste acid water tank	2001	1000	T-1C
T-6S	T-5E	Tetrahydrofuran drum filling	1999	6 GPM	
<i>Groundwater Pump & Treatment- Group 00U</i>					
U-1S	CS	Peroxide contact tank-424	1999	300 gpm	closed
U-2S	CS	Pressure filters-424	1999	5 gpm/SF	closed
U-3S	CS	UV/Oxidation unit-424	1999	220 gpm	closed
U-4S	U-1E	Air stripper-424	1999	Variable	
U-5S	CS	Carbon filter-424	1999	300 gpm	closed
U-6S	CS	Peroxide storage tote-424	1999	100 gal	closed

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Emission Unit ID ¹	Emission Point ID ^{1, a}	Emission Unit Description	Year Installed/ Modified	Design Capacity	Control Device ^{1, b}
U-7S	CS	Peroxide storage tote-424	1999	100 gal	closed
U-8S	CS	Peroxide storage tote-424	1999	100 gal	closed
<i>MAC Warhead Aluminum Preparation – Group 00X</i>					
X-1S	X-1E	Exhaust Hood for Acetone/Viton Mixing	2005	55 gal	
X-2S	X-2E, X-3E	Ross Mixer for Viton/Aluminum coating	2005	250 lb	X-1C, X-2C
X-3S	X-3E	Sweco Shaker	2005	Variable	X-2C
X-4S	X-3E	Natoli Pelletizer	2005	20 lb	X-2C
X-5S	X-4E	Grieve Pre Heat Oven	2005	Variable	
X-6S	X-3E	JH Day 200 Ton Press	2005	Variable	X-2C

Control Devices					
Control	Emission	Control Device Description	Year	Design Capacity	Comments
9-1C	NDV	Cyclone dust collector grit blaster	1997	99.9% (PM)	
P-4C	P-31E	Fabric filter for exhaust hood	1996	90-95% (PM)	
P-5C	NDV	Cyclone dust collector grit blaster	1999	99.9% (PM)	
P-8C	P-36E	HEPA filter for slotted hood	1996	99.9% (PM)	
T-1C	T-1E, T-2E, T-3E,	Packed bed scrubber	1999	99% (THF)	
X-1C	X-2S	Acetone Recovery	2005	80% (acetone)	
X-2C	X-2S, X-3S, X-4S, X-6S	Dust Collector	2005	99.9% (PM)	

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.

NDV = No Direct Vent
 FUG = Fugitive emissions
 CS = Closed System
 OS = Out of Service

ATTACHMENT E - Emission Unit Form			
<i>Emission Unit Description</i> Laser and Fuze Operations			
Emission unit ID number: 9-1E or 9-2E	Emission unit name: 9-1S, 9-2S, 9-4S through 9-8S	List any control devices associated with this emission unit: None	
<p>Provide a description of the emission unit (type, method of operation, design parameters, etc.): Bldg. 8 - Laser Products Development</p> <p>--Inert Gas Welding Machine (ID# 9-1S) - used for TIG welding of small initiator closures (both inert and explosive). Vents inside building.</p> <p>--Exhaust Hood (ID# 9-2S) - used to vent emissions from low volume, small-scale pyrotechnic testing. Vents to atmosphere through vent ID# 9-1E.</p> <p>--Small Electric Ovens (4) (ID# 9-4S, 9-5S, 9-6S, & 9-7S) - used to cure small quantities of epoxy adhesives used to bond components. All 4 ovens vent inside building.</p> <p>--Exhaust Hood (ID# 9-8S) - used to house a small- scale temperature test chamber and vents emissions from small-scale pyrotechnic testing and hand soldering. Vents to atmosphere through vent ID# 9-2E.</p>			
Manufacturer: Unknown	Model number: Unknown	Serial number: Unknown	
Construction date: Early 1990's	Installation date: Early 1990's	Modification date(s): None	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): Variable			
Maximum Hourly Throughput: NA	Maximum Annual Throughput: Variable	Maximum Operating Schedule: 2,080 hours/year	
Fuel Usage Data (fill out all applicable fields) NA			
Does this emission unit combust fuel? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		If yes, is it? <input type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired	
Maximum design heat input and/or maximum horsepower rating:		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.			
Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		
Total Particulate Matter (TSP)		0.1
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)		0.1
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
NA		0.075
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		
<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>Potential emissions of criteria pollutants are based on historical data for the operation that was doubled for conservatism. HAPs were conservatively assumed to be 75% of the total VOC emissions.</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.

There are no underlying applicable requirements associated with this equipment.

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.*)

There are no specified monitoring/testing/recordkeeping/ reporting requirements for this equipment.

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 Laser Products Fabrication – B432

Emission unit ID number: 9-3E, 9-4E, 9-5E, 9-6E and VI	Emission unit name: 9-9S through 9-22S	List any control devices associated with this emission unit: 9-1C (for 9-11S only)
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Provide a description of the emission unit (type, method of operation, design parameters, etc.):

Bldg 432 - Laser Products Fabrication

- Inert Gas Welding Machine (ID# 9-9S) - used for TIG welding of small initiator closures (both inert and explosive). Vents inside building.
- Exhaust Hood (ID# 9-10S) - used to vent emissions from low volume, small-scale conformal coating application operation. Vents to atmosphere through vent ID# 9-3E.
- Zero Grit Blaster (ID# 9-11S) - used for low volume, small-scale grit cleaning of parts. Vents inside building.
- Small Electric Ovens (3) (ID# 9-12S, 9-13S, & 9-14S) - used to cure small quantities of epoxy adhesives used to bond components. All 3 ovens vent inside building.
- Exhaust Hood (ID# 9-15S) - used for fume extraction at 24 workstations involving soldering and adhesive bonding. Vents to atmosphere through vent ID# 9-4E.
- Helium Leak Detector (ID# 9-16S) - used to leak test hermetically sealed devices using small quantities of helium trace gas. Vents inside building.
- Vacuum Oven (ID# 9-17S) - used to cure small quantities of adhesives and epoxies. Vents inside building.
- Vacuum Oven (ID# 9-18S) - used for removing moisture from boron potassium nitrate igniter material. Vents inside building.
- Laser Etch Workstation (ID# 9-19S) - used to mark aluminum, stainless steel, plastic and printed circuit board materials using a laser device. Vents to atmosphere through vent ID# 9-5E.
- Aqueous Parts Washer (ID# 9-20S) - used to clean metal parts and deflux electronic assemblies using water based materials. Drying cycle vents moisture to atmosphere through vent ID# 9-6E.
- Conditioning Chambers (2) (ID# 9-21S & 9-22S) - used to thermal cycle inert and explosive assemblies. Vents inside building.

Manufacturer: Unknown	Model number: Unknown	Serial number: Unknown
Construction date: 1997	Installation date: 1997	Modification date(s): None
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): Variable		
Maximum Hourly Throughput: Not determined	Maximum Annual Throughput: Not determined	Maximum Operating Schedule: 4,160 hours/year
Fuel Usage Data (fill out all applicable fields) NA		
Does this emission unit combust fuel? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Does this emission unit combust fuel? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Maximum design heat input and/or maximum horsepower rating:		Maximum design heat input and/or maximum horsepower rating:	
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.			
Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
<i>Emissions Data</i>			
Criteria Pollutants	Potential Emissions		
	PPH	TPY	
Carbon Monoxide (CO)			
Nitrogen Oxides (NO _x)			
Lead (Pb)			
Particulate Matter (PM _{2.5})			
Particulate Matter (PM ₁₀)			
Total Particulate Matter (TSP)			
Sulfur Dioxide (SO ₂)			
Volatile Organic Compounds (VOC)		0.1	
Hazardous Air Pollutants	Potential Emissions		
	PPH	TPY	
NA		0.075	
Regulated Pollutants other than Criteria and HAP	Potential Emissions		
	PPH	TPY	
NA			
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>Potential emissions of criteria pollutants are based on historical data for the operation that was doubled for conservatism. HAPs were conservatively assumed to be 75% of the total VOC emissions.</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.

There are no underlying applicable requirements associated with this equipment.

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.)

There are no specified monitoring/testing/recordkeeping/ reporting requirements for this equipment.

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 M228 Grenade Fuze Testing – B361			
Emission unit ID number: 9-7E	Emission unit name: 9-23S	List any control devices associated with this emission unit: None	
<p>Provide a description of the emission unit (type, method of operation, design parameters, etc.): Bldg 361 – Grenade Fuze Testing Chamber</p> <p>Test chamber (ID# 9-23S) used to test fire grenade fuze firing pins for quality control during manufacture. Firing pins contain approximately 2 grams of black powder and delay composition per unit. Vents to atmosphere through ID# 9-7E.</p>			
Manufacturer: ABL	Model number: Unknown	Serial number: Unknown	
Construction date: 2006	Installation date: 2006	Modification date(s): None	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): Variable			
Maximum Hourly Throughput: Not determined	Maximum Annual Throughput: Not determined	Maximum Operating Schedule: 8,760 hours/year	
Fuel Usage Data (fill out all applicable fields) NA			
Does this emission unit combust fuel? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Does this emission unit combust fuel? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Maximum design heat input and/or maximum horsepower rating:		Maximum design heat input and/or maximum horsepower rating:	
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.			
Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		0.021
Nitrogen Oxides (NO _x)		0.0021
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		0.25
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Nickel oxide		0.039
Chromium		0.027
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		
<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>Potential emissions of criteria pollutants are based on maximum potential production and quality control numbers. See attached calculation sheets.</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.

There are no underlying applicable requirements associated with this equipment.

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.*)

There are no specified monitoring/testing/recordkeeping/ reporting requirements for this equipment.

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 M228 Grenade Fuze Marking – B361			
Emission unit ID number: VI	Emission unit name: 9-24S	List any control devices associated with this emission unit: None	
<p>Provide a description of the emission unit (type, method of operation, design parameters, etc.): Bldg 361 – Grenade Fuze Marking</p> <p>Inkjet printer (ID# 9-24S) used to mark units with lot and serial numbers. Vents inside the building.</p>			
Manufacturer: ABL	Model number: Unknown	Serial number: Unknown	
Construction date: 2006	Installation date: 2006	Modification date(s): None	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): Variable			
Maximum Hourly Throughput: Not determined	Maximum Annual Throughput: Not determined	Maximum Operating Schedule: 8,760 hours/year	
Fuel Usage Data (fill out all applicable fields) NA			
Does this emission unit combust fuel? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Does this emission unit combust fuel? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Maximum design heat input and/or maximum horsepower rating:		Maximum design heat input and/or maximum horsepower rating:	
<p>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.</p>			
Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)		0.2
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Methyl ethyl ketone (MEK)		0.2
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		
<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>Potential emissions of criteria pollutants are based on maximum potential production and quality control numbers. See attached calculation sheet. Printing inks are 95% MEK.</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.

There are no underlying applicable requirements associated with this equipment.

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.*)

There are no specified monitoring/testing/recordkeeping/ reporting requirements for this equipment.

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 Electronic Fuze Lines – Bldg 432A			
Emission unit ID number: 9-8E	Emission unit name: 9-25S – SMT Heller Oven Vent	List any control devices associated with this emission unit: None	
Provide a description of the emission unit (type, method of operation, design parameters, etc.): Bldg 432A – SMT Heller Oven Vent SMT Line Heller Oven (ID# 9-25S) used to cure solder paste on boards. Vents to atmosphere through ID# 9-8E.			
Manufacturer: Heller	Model number: Unknown	Serial number: Unknown	
Construction date: 2005	Installation date: 2005	Modification date(s): None	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): Variable			
Maximum Hourly Throughput: Not determined	Maximum Annual Throughput: Not determined	Maximum Operating Schedule: 8,760 hours/year	
Fuel Usage Data (fill out all applicable fields) NA			
Does this emission unit combust fuel? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Does this emission unit combust fuel? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Maximum design heat input and/or maximum horsepower rating:		Maximum design heat input and/or maximum horsepower rating:	
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.			
Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
NA		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		
<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>Ovens are used to cure solder paste and are not hot enough to drive off solder vapors. Emissions are expected to be negligible.</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.

There are no underlying applicable requirements associated with this equipment.

X 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.)

There are no specified monitoring/testing/recordkeeping/ reporting requirements for this equipment.

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

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

ATTACHMENT E - Emission Unit Form			
Emission Unit Description Electronic Fuze Lines – Bldg 432A			
Emission unit ID number: 9-9E	Emission unit name: 9-26S – MOFA Paint Hood	List any control devices associated with this emission unit: 9-2C	
<p>Provide a description of the emission unit (type, method of operation, design parameters, etc.): Bldg 432A – MOFA Paint Hood</p> <p>MOFA Paint Hood (ID# 9-26S) used to stencil fuze packaging. Vents to atmosphere through ID# 9-9E.</p>			
Manufacturer: ABL	Model number: Unknown	Serial number: Unknown	
Construction date: 2005	Installation date: 2005	Modification date(s): None	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): Variable			
Maximum Hourly Throughput: Not determined	Maximum Annual Throughput: Not determined	Maximum Operating Schedule: 8,760 hours/year	
Fuel Usage Data (fill out all applicable fields) NA			
Does this emission unit combust fuel? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Does this emission unit combust fuel? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Maximum design heat input and/or maximum horsepower rating:		Maximum design heat input and/or maximum horsepower rating:	
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.			
Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)		0.2
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
MEK/Methanol		0.15
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		
<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>Potential emissions are based on historical data from Wisconsin operations. HAP total of 0.15 TPY is based on an assumption of a maximum 75% of VOC total made up of HAPs. HAPs include MEK and methanol.</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.

There are no underlying applicable requirements associated with this equipment.

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.)

There are no specified monitoring/testing/recordkeeping/ reporting requirements for this equipment.

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> Electronic Fuze Lines – Bldg 432A			
Emission unit ID number: 9-10E	Emission unit name: 9-27S – M74 Cleaning Station	List any control devices associated with this emission unit: None	
Provide a description of the emission unit (type, method of operation, design parameters, etc.): Bldg 432A – M74 Cleaning Station M74 Cleaning Station (ID# 9-27S) used to clean parts with n-propyl bromide prior to soldering. Vents to atmosphere through ID# 9-10E. Unit is refrigerated to minimize evaporative losses from the system.			
Manufacturer: Branson	Model number: Unknown	Serial number: Unknown	
Construction date: 2007	Installation date: 2007	Modification date(s): None	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 10 gal			
Maximum Hourly Throughput: Not determined	Maximum Annual Throughput: Not determined	Maximum Operating Schedule: 8,760 hours/year	
Fuel Usage Data (fill out all applicable fields) NA			
Does this emission unit combust fuel? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Does this emission unit combust fuel? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Maximum design heat input and/or maximum horsepower rating:		Maximum design heat input and/or maximum horsepower rating:	
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.			
Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)		0.25
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
NA		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		
<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>Potential emissions are based on engineering estimates of equipment and production totals.</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.

There are no underlying applicable requirements associated with this equipment.

X 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.*)

There are no specified monitoring/testing/recordkeeping/ reporting requirements for this equipment.

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

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

ATTACHMENT E - Emission Unit Form			
Emission Unit Description Electronic Fuze Lines – Bldg 432A			
Emission unit ID number: 9-11E	Emission unit name: 9-28S – ETFM Cleaning Station	List any control devices associated with this emission unit: None	
<p>Provide a description of the emission unit (type, method of operation, design parameters, etc.): Bldg 432A – ETFM Cleaning Station</p> <p>ETFM Cleaning Station (ID# 9-28S) used to clean parts with n-propyl bromide prior to soldering. Vents to atmosphere through ID# 9-11E. Unit is refrigerated to minimize evaporative losses from the system. In addition, system is drained if there will be more than a few days of down time.</p>			
Manufacturer: Infinity	Model number: Unknown	Serial number: Unknown	
Construction date: 2008	Installation date: 2008	Modification date(s): None	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 100 gal			
Maximum Hourly Throughput: Not determined	Maximum Annual Throughput: Not determined	Maximum Operating Schedule: 8,760 hours/year	
Fuel Usage Data (fill out all applicable fields) NA			
Does this emission unit combust fuel? __Yes __X No		Does this emission unit combust fuel? __Yes __X No	
Maximum design heat input and/or maximum horsepower rating:		Maximum design heat input and/or maximum horsepower rating:	
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.			
Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)		0.5
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
NA		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		
<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>Potential emissions are based on engineering estimates of equipment and production totals.</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.

There are no underlying applicable requirements associated with this equipment.

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.)

There are no specified monitoring/testing/recordkeeping/ reporting requirements for this equipment.

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 No. 1 & 3 NG Fired Boilers – Plant 2			
Emission unit ID number: L-5E	Emission unit name: L-11S, (NG Boiler 1)	List any control devices associated with this emission unit: None	
Provide a description of the emission unit (type, method of operation, design parameters, etc.): NG-Fired Boiler (ID# L-11S) - used to generate steam for Plant 2. Uses natural gas as the primary fuel with No.2 fuel oil as backup. Vents to atmosphere through vent ID# L-5E. Unit was modified December 2013.			
Manufacturer: Cleaver Brooks	Model number: CB-600-2238-150ST	Serial number: Unknown	
Construction date: 2001	Installation date: 2001	Modification date(s): December 2013	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 180 gallon per hour			
Maximum Hourly Throughput: 65 gal/hr	Maximum Annual Throughput: 569,400 gal/yr	Maximum Operating Schedule: 8,760 hours/year	
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 checked="" type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired	
Maximum design heat input and/or maximum horsepower rating: 9.92 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 with No. 2 oil backup.			
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	0.0%	NA	1020
No. 2 Distillate	0.5%	NA	138,000
Emissions Data			

Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	1.18	3.67
Nitrogen Oxides (NO _x)	2.41	4.62
Lead (Pb)		2.02E-6
Particulate Matter (PM _{2.5})	0.08	0.04
Particulate Matter (PM ₁₀)	0.08	0.04
Total Particulate Matter (TSP)	0.24	0.08
Sulfur Dioxide (SO ₂)	5.11	1.30
Volatile Organic Compounds (VOC)	0.07	0.24
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
HCl	0.135	0.03
Chromium		6.73E-7
Beryllium		6.73E-7
Nickel		6.73E-7
Mercury		6.73E-7
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
Ammonia	0.05	0.013
<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>Potential emissions of criteria pollutants are based on maximum usage combined with AP-42 factors. PTE for HAPS - used 8760 hours/year NG for 9.92 mmBTU/hr plus 500 hours/year at 65 gallons oil/hour. HCl = 0.015 lb / mmBTU; (AP-42 factors Table 1.1-15, Sep. 1998) Cr = 3 lb / 10¹² BTU; (AP-42 factors Table 1.1-18, Sep. 1998) Be = 3 lb / 10¹² BTU; (AP-42 factors Table 1.1-18, Sep. 1998) Ni = 3 lb / 10¹² BTU; (AP-42 factors Table 1.1-18, Sep. 1998) Hg = 3 lb / 10¹² BTU; (AP-42 factors Table 1.1-17, Sep. 1998) Pb = 9 lb / 10¹² BTU; AP-42 factors Table 1.1-18, Sep. 1998). Max annual oil gallons = 32,500 gallons / year. Hourly rates for metals are not given due to the low mass involved.</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.

1. Operating Parameters - R30-05700011-2014: 4.1.5. - 4.1.8.; 45CSR13, R13-2023, A.1. - A.4.; 4.4.3., 4.4.4.; R13-2023, B.1., B.2.; 45CSR45CSR30-5.1.c.
2. Emission Limits (PM) – R30-05700011-2014: 4.1.9; 45CSR2.; 4.2.4., 4.4.7.; 45CSR45CSR30-5.1.c.

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.)

1. Visible Emissions – R30-05700011-2014: 3.1.9.; 45CSR7-3.1, 7-3.2., 7-3.7., 7-4.1., 7-4.12., 7-5.1., 7-5.2., 7-8.1., 7-8.2.
2. Monitoring & Recordkeeping - R30-05700011-2014: 4.4.5.; 45CSR13, R13-2023.
3. Reporting – R30-05700011-2014: 4.5.2.- 4.5.4; 45CSR13, R13-2023.

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 No. 1 & 3 Oil Fired Boilers – Plant 2			
Emission unit ID number: L-6E	Emission unit name: L-12S (Oil Boiler 3)	List any control devices associated with this emission unit: None	
Provide a description of the emission unit (type, method of operation, design parameters, etc.): NG-Fired Boiler (ID# L-12S) - used to generate steam for Plant 2. Uses natural gas as the primary fuel with No.2 fuel oil as backup. Vents to atmosphere through vent ID#L-6E. Unit was modified December 2013.			
Manufacturer: Cleaver Brooks	Model number: CB-600-2238-150ST	Serial number: Unknown	
Construction date: 2005	Installation date: February 2005	Modification date(s): December 2013	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 180 gallon per hour			
Maximum Hourly Throughput: 75 gal/hr	Maximum Annual Throughput: 657,000 gal/yr	Maximum Operating Schedule: 8,760 hours/year	
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 checked="" type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired	
Maximum design heat input and/or maximum horsepower rating: 9.96 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 with No. 2 oil backup.			
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	0.0%	NA	1020
No. 2 Distillate	0.5%	NA	138,000
Emissions Data			
Criteria Pollutants	Potential Emissions		
	PPH	TPY	

Carbon Monoxide (CO)	1.18	3.68
Nitrogen Oxides (NO _x)	2.17	3.53
Lead (Pb)		2.33E-6
Particulate Matter (PM _{2.5})	0.08	0.04
Particulate Matter (PM ₁₀)	0.08	0.04
Total Particulate Matter (TSP)	0.24	0.08
Sulfur Dioxide (SO ₂)	5.13	1.31
Volatile Organic Compounds (VOC)	0.07	0.24
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
HCl	0.16	0.04
Chromium		7.76E-7
Beryllium		7.76E-7
Nickel		7.76E-7
Mercury		7.76E-7
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
Ammonia	0.06	0.015
<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>Potential emissions of criteria pollutants are based on maximum usage combined with AP-42 factors. PTE for HAPS - used 8760 hours/year NG for 9.92 mmBTU/hr plus 500 hours/year at 65 gallons oil/hour. HCl = 0.015 lb / mmBTU; (AP-42 factors Table 1.1-15, Sep. 1998) Cr = 3 lb / 10¹² BTU; (AP-42 factors Table 1.1-18, Sep. 1998) Be = 3 lb / 10¹² BTU; (AP-42 factors Table 1.1-18, Sep. 1998) Ni = 3 lb / 10¹² BTU; (AP-42 factors Table 1.1-18, Sep. 1998) Hg = 3 lb / 10¹² BTU; (AP-42 factors Table 1.1-17, Sep. 1998) Pb = 9 lb / 10¹² BTU; AP-42 factors Table 1.1-18, Sep. 1998). Max annual oil gallons = 37,500 gallons / year. Hourly rates for metals are not given due to the low mass involved.</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.

1. Operating Parameters - R30-05700011-2014: 4.1.5. - 4.1.8.; 45CSR13, R13-2023, A.1. - A.4.; 4.4.3., 4.4.4.; R13-2023, B.1., B.2.; 45CSR45CSR30-5.1.c.
2. Emission Limits (PM) – R30-05700011-2014: 4.1.9; 45CSR2.; 4.2.4., 4.4.7.; 45CSR45CSR30-5.1.c.

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.)

1. Visible Emissions – R30-05700011-2014: 3.1.9.; 45CSR7-3.1, 7-3.2., 7-3.7., 7-4.1., 7-4.12., 7-5.1., 7-5.2., 7-8.1., 7-8.2.
2. Monitoring & Recordkeeping - R30-05700011-2014: 4.4.5.; 45CSR13, R13-2023.
3. Reporting – R30-05700011-2014: 4.5.2.- 4.5.4.; 45CSR13, R13-2023.

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 10 NG Fired Boilers – Plant 1			
Emission unit ID number: L-8E or L-9E	Emission unit name: L-23S-L-32S	List any control devices associated with this emission unit: None	
Provide a description of the emission unit (type, method of operation, design parameters, etc.): 10 NG-Fired Boilers (ID# L-23S – 32S) - used to generate steam for Plant 1. Uses natural gas as primary fuel and No. 2 fuel oil as back-up fuel. Vents to atmosphere through vent ID# L-8E or 9E.			
Manufacturer: Miura	Model number: EXN-300SGOF	Serial number: Unknown	
Construction date: 2015	Installation date: 2015	Modification date(s):	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 87.6 gallon each per hour for FO			
Maximum Hourly Throughput: 87.6 gal/hr each (FO) 12,000 cf/hr each (NG)	Maximum Annual Throughput: 109324.8 gal/yr each (FO) 90144000 cf/yr each (NG)	Maximum Operating Schedule: 8,760 hours/year	
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 checked="" type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired	
Maximum design heat input and/or maximum horsepower rating: 12 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 with No. 2 oil backup.			
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	0.0%	NA	1020
No. 2 Distillate	0.5%	NA	138,000
Emissions Data			
Criteria Pollutants	Potential Emissions		
	PPH	TPY	
Carbon Monoxide (CO)	1.45	40.59	

Nitrogen Oxides (NO _x)	2.35	33.47
Lead (Pb)	6.00E-06	2.25E-04
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)	0.09	0.55
Total Particulate Matter (TSP)	0.38	5.23
Sulfur Dioxide (SO ₂)	4.98	31.32
Volatile Organic Compounds (VOC)	0.17	5.18
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
HCl	1.80E-10	0.00
Chromium	1.68E-05	6.0E-04
Beryllium	5.28E-05	2.0E-03
Nickel	2.52E-05	9.0E-04
Mercury	3.12E-06	1.0E-04
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.).

Potential emissions of criteria pollutants are based on maximum usage combined with AP-42 factors.

PTE for HAPS - used 7512 hours/year NG for 12 mmBTU/hr plus 1248 hours/year at 87.6 gallons oil/hour.

HCl = 0.015 lb / mmBTU; (AP-42 factors Table 1.1-15, Sep. 1998)

Cr = 3 lb / 10¹² BTU; (AP-42 factors Table 1.1-18, Sep. 1998)

Be = 3 lb / 10¹² BTU; (AP-42 factors Table 1.1-18, Sep. 1998)

Ni = 3 lb / 10¹² BTU; (AP-42 factors Table 1.1-18, Sep. 1998)

Hg = 3 lb / 10¹² BTU; (AP-42 factors Table 1.1-17, Sep. 1998)

Pb = 9 lb / 10¹² BTU; AP-42 factors Table 1.1-18, Sep. 1998).

Max annual oil gallons = 1,093,248 gallons / year.

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.

1. Operating Parameters - R30-05700011-2014: 4.1.5. - 4.1.8.; 45CSR13, R13-2023, A.1. - A.4.; 4.4.3., 4.4.4.; R13-2023, B.1., B.2.; 45CSR45CSR30-5.1.c.
2. Emission Limits (PM) – R30-05700011-2014: 4.1.9; 45CSR2.; 4.2.4., 4.4.7.; 45CSR45CSR30-5.1.c.

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.)

1. Visible Emissions – R30-05700011-2014: 3.1.9.; 45CSR7-3.1, 7-3.2., 7-3.7., 7-4.1., 7-4.12., 7-5.1., 7-5.2., 7-8.1., 7-8.2.
2. Monitoring & Recordkeeping - R30-05700011-2014: 45CSR13, R13-2023, 4.4.5.
3. Reporting – R30-05700011-2014: 45CSR13, R13-2023, 4.5.2, 4.5.3, 4.5.4.

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 Waste Water Treatment Plants			
Emission unit ID number: Fugitive	Emission unit name: N-1S through N-5S	List any control devices associated with this emission unit: None	
<p>Provide a description of the emission unit (type, method of operation, design parameters, etc.): Bldg. 442 - Plant 1 Wastewater Treatment --Reactor Basins (2) (100,000 gallon capacity) (ID# N-1S & N-2S) - used to treat Plant 1 sewage and non-explosive process wastewater. Vents to atmosphere via fugitive emissions. Constructed in 1996.</p> <p>Bldgs 383/389 - Explosive 1 Wastewater Treatment --Explosive Wastewater Treatment System (ID# N-4S) - used to treat Plant 1 explosive process wastewater containing nitrate esters and nitramines by oxidation with hydrogen peroxide and ultraviolet light. Closed treatment system with no significant air emissions. Constructed in 1994.</p> <p>Bldg. 535 - Potable Water Treatment --Facility Water Treatment System (ID# N-5S) - used to treat water for facility-wide usage by filtration, softening and chlorination. Approximately 14,000 gallons of water per day is discharged to a filter backwash pond with no significant air emissions. Constructed in 1996.</p> <p>Bldg. 8563 – Plant 2 Wastewater Treatment --Recirculating Sand Filter (6000 gallon capacity) (ID# N-7S) - used to treat Plant 2 sewage and non-explosive process wastewater. Vents to atmosphere via fugitive emissions. Constructed in 2013. Replaces N-6S.</p>			
Manufacturer: Unknown	Model number: Unknown	Serial number: Unknown	
Construction date: See above	Installation date: See above	Modification date(s): See above	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): See above			
Maximum Hourly Throughput: NA	Maximum Annual Throughput: Varies	Maximum Operating Schedule: 8,760 hours/year	
Fuel Usage Data (fill out all applicable fields) NA			
Does this emission unit combust fuel? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		If yes, is it? <input type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired	
Maximum design heat input and/or maximum horsepower rating:		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.			
Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
NA		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		
<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>Potential emissions of criteria pollutants are expected to be minimal. Chlorine disinfection is only used for potable water, not for waste water treatment, thus reducing any chlorine or chloroform emissions. Proper operation of the plant precludes the formation of large quantities of methane.</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.

There are no underlying applicable requirements associated with this equipment.

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.)

There are no specified monitoring/testing/recordkeeping/ reporting requirements for this equipment.

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 Burning Grounds			
Emission unit ID number: Fugitive	Emission unit name: O-1S	List any control devices associated with this emission unit: None	
Provide a description of the emission unit (type, method of operation, design parameters, etc.): Burning pans (ID# O-1S) - used for open burning of waste propellants and explosives. Vents to atmosphere via fugitive emissions.			
Manufacturer: ABL	Model number: NA	Serial number: NA	
Construction date: Pre-1970	Installation date: Pre-1970	Modification date(s): 2005	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): See above			
Maximum Hourly Throughput: NA	Maximum Annual Throughput: Varies	Maximum Operating Schedule: 1,460 hours/year	
Fuel Usage Data (fill out all applicable fields) NA			
Does this emission unit combust fuel? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		If yes, is it? <input type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired	
Maximum design heat input and/or maximum horsepower rating:		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.			
Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		10.38
Nitrogen Oxides (NO _x)		0.64
Lead (Pb)		1.10
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		7.13
Total Particulate Matter (TSP)		14.83
Sulfur Dioxide (SO ₂)		0.18
Volatile Organic Compounds (VOC)		0.56
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
HCl		3.58
Other HAPs		0.76
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		
<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>Potential emissions of criteria pollutants are based on emission factors from ABL Burning Grounds Air Modeling Report - Appendix A Tables 3-4 and 3-5. Annual totals are based on a maximum of 250,000 pounds per year per waste type (Composite, Aluminized Composite, Double Base, or PBX Explosives).</p>		

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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.

The burning grounds operations are governed by 45CSR25 Permit HW-X-1 dated July 31, 2005.

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.*)

There are no specified monitoring/testing/recordkeeping/ reporting requirements for this equipment.

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 Research Complex – Building 394 Laboratories			
Emission unit ID number: P-23E, P-24E	Emission unit name: P-33S through P-40S	List any control devices associated with this emission unit: None	
<p>Provide a description of the emission unit (type, method of operation, design parameters, etc.): Bldg. 394 - Physical and Hazards Testing</p> <p>--Exhaust hood (Rm.109) (ID# P-33S) - used to clean glassware used for particle size analysis. Vents to atmosphere through vent ID# P-23E.</p> <p>--Exhaust hood (Rm.110) (ID# P-34S) - used to prepare adhesive samples and perform acid etching of small components. Vents to atmosphere through vent ID# P-23E.</p> <p>--Fume extractors (Rm.105, Rm.106, Rm.107, Rm.108) (ID# P-35S, P-36S, P-37S, P-38S, & P-39S) - used to remove combustion products from sensitivity testing of explosives and propellants. (No emissions expected from the two units in Rm.105 used for the tensile strength test machines.) Vent to atmosphere through vent ID# P-23E.</p> <p>--Neslab Low Temp Bath Circulator for Tensile Testing (ID# P-40S) - used to reduce the temperature of the test chamber so that mechanical properties of cold samples can be obtained. The system previously used trichloroethylene as the refrigerant. Prior to putting the unit back in service after moving to Bldg. 394, the system was converted to use ethylene glycol as the refrigerant. Vents to the atmosphere through vent ID# P-24E.</p>			
Manufacturer: Nederman / Visionaire	Model number: NA	Serial number: NA	
Construction date: 1996	Installation date: 1996	Modification date(s):	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): Variable			
Maximum Hourly Throughput: NA	Maximum Annual Throughput: Variable	Maximum Operating Schedule: 8,760 hours/year	
Fuel Usage Data (fill out all applicable fields) NA			
Does this emission unit combust fuel? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		If yes, is it? <input type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired	
Maximum design heat input and/or maximum horsepower rating:		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.			
Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		0.001
Nitrogen Oxides (NO _x)		0.001
Lead (Pb)		0.001
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		
Total Particulate Matter (TSP)		0.003
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)		1
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
HAP		0.25
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		
<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>Potential emissions of criteria pollutants are based on limits provided in permit R13-1771B.</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.

1. Emission Limits – R30-05700011-2009: 5.1.1., 5.1.2., 5.1.3., 5.1.4.; 45CSR13, R13-1771B, A.1., A.2., A.3., A.4.

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.*)

1. Emission Limits – R30-05700011-2009: 5.2., 5.3., 5.4.; 45CSR13, R13-1771B, B.1. - B.5.; 45CSR45CSR30-5.1.c.

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 Research Complex – Building 396 – 5 gallon mixer			
Emission unit ID number: P-37E, P-38E, P-39E	Emission unit name: P-109S through P-111S	List any control devices associated with this emission unit: None	
<p>Provide a description of the emission unit (type, method of operation, design parameters, etc.): Bldg. 396 – 5 Gallon Mixer</p> <p>--5 gallon mixer (ID# P-109S) – used to produce 5 gallon propellant mixes for physical and mechanical properties testing. Vents to atmosphere through vent ID# P-37E.</p> <p>--Exhaust hood (ID# P-110S) – used to exhaust wash basin used for cleaning operations. Vents to atmosphere through vent ID# P-38E.</p> <p>--Fume extractor (ID# P-111S) – used for mix bowl and blade cleaning operations. Vents to atmosphere through vent ID# P-39E.</p>			
Manufacturer: Labconco / Day	Model number: Unknown	Serial number: Unknown	
Construction date: 2001	Installation date: 2001	Modification date(s):	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): Variable			
Maximum Hourly Throughput: NA	Maximum Annual Throughput: Variable	Maximum Operating Schedule: 8,760 hours/year	
Fuel Usage Data (fill out all applicable fields) NA			
Does this emission unit combust fuel? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		If yes, is it? <input type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired	
Maximum design heat input and/or maximum horsepower rating:		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.			
Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

<i>Emissions Data</i>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)		1.6
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
HAP		1.5
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		
<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>Potential emissions of criteria pollutants are based on limits provided in permit R13-1771B.</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.

1. Emission Limits – R30-05700011-2009: 5.1.1., 5.1.2., 5.1.3., 5.1.4.; 45CSR13, R13-1771B, A.1., A.2., A.3., A.4.

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.*)

1. Emission Limits – R30-05700011-2009: 5.2., 5.3., 5.4.; 45CSR13, R13-1771B, B.1. - B.5.; 45CSR45CSR30-5.1.c.

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 Research Complex – Building 400 – Subscale Mixers (1 lb)			
Emission unit ID number: P-43E through P-48E	Emission unit name: P-115S through P-121S	List any control devices associated with this emission unit: None	
<p>Provide a description of the emission unit (type, method of operation, design parameters, etc.): Bldg. 400 – Subscale Mixers (1 Pound) --Fume hood (Rm. 121) (ID# P-115S) – used for cleaning extrusion press hardware. Vents to atmosphere through vent ID# P-43E.</p> <p>---Fume extractor (Rm. 116) (ID# P-116S) – used to remove vapors during operation of the Sigma micro mixer and cleanup of one pound mixers. Vents to atmosphere through vent ID# P-44E.</p> <p>–Micro mixer (Rm. 116 (ID# P-117S) – used to produce 50 gram propellant mixes for physical and mechanical properties testing. Vents to atmosphere through vent ID# P-45E.</p> <p>–One pound Sigma mixers (3) (Rms. 116, 110, 106) (ID# P-118S, P-119S, & P-120S) – used to produce 1 pound propellant mixes for physical and mechanical properties testing. Vent to atmosphere through vent ID# P-46E and P-47E.</p> <p>–Fume hood (Rm.117) (ID# P-121S) – used for cleaning viscometer hardware. Vents to atmosphere through vent ID# P-48E.</p>			
Manufacturer: Labconco / Sigma	Model number: Unknown	Serial number: Unknown	
Construction date: 1999	Installation date: 1999	Modification date(s):	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): Variable			
Maximum Hourly Throughput: NA	Maximum Annual Throughput: Variable	Maximum Operating Schedule: 8,760 hours/year	
Fuel Usage Data (fill out all applicable fields) NA			
Does this emission unit combust fuel? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		If yes, is it? <input type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired	
Maximum design heat input and/or maximum horsepower rating:		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.			
Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)		1
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
HAP		0.5
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		
<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>Potential emissions of criteria pollutants are based on limits provided in permit R13-1771B.</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.

1. Emission Limits – R30-05700011-2009: 5.1.1., 5.1.2., 5.1.3., 5.1.4.; 45CSR13, R13-1771B, A.1., A.2., A.3., A.4.

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.*)

1. Emission Limits – R30-05700011-2009: 5.2., 5.3., 5.4.; 45CSR13, R13-1771B, B.1. - B.5.; 45CSR45CSR30-5.1.c.

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 Research Complex – Building 401 – 10 Pound Mixers			
Emission unit ID number: P-49E, P-50E, P-51E	Emission unit name: P-122S, P-123S, P-124S	List any control devices associated with this emission unit: None	
<p>Provide a description of the emission unit (type, method of operation, design parameters, etc.): Bldg. 401 – 10 Pound Mixers</p> <p>--Fume extractor (ID# P-122S) – used to remove vapors from dough mixer operation. Vents to atmosphere through vent ID# P-49E. This mixer has not been installed. No date has been determined for installation at this time.</p> <p>--Fume hood (ID# P-123S) – used for cleaning mold tooling. Vents to atmosphere through vent ID# P-50E.</p> <p>--Ten pound mixer (ID# P-124S) – used to produce 10 pound propellant mixes for physical and mechanical properties testing. Vents to atmosphere through vent ID# P-51E.</p>			
Manufacturer: Labconco / Day	Model number: Unknown	Serial number: Unknown	
Construction date: 1999	Installation date: 1999	Modification date(s):	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): Variable			
Maximum Hourly Throughput: NA	Maximum Annual Throughput: Variable	Maximum Operating Schedule: 8,760 hours/year	
Fuel Usage Data (fill out all applicable fields) NA			
Does this emission unit combust fuel? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		If yes, is it? <input type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired	
Maximum design heat input and/or maximum horsepower rating:		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.			
Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)		1.5
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
HAP		1
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		
<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>Potential emissions of criteria pollutants are based on limits provided in permit R13-1771B.</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.

1. Emission Limits – R30-05700011-2009: 5.1.1., 5.1.2., 5.1.3., 5.1.4.; 45CSR13, R13-1771B, A.1., A.2., A.3., A.4.

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.)

1. Emission Limits – R30-05700011-2009: 5.2., 5.3., 5.4.; 45CSR13, R13-1771B, B.1. - B.5.; 45CSR45CSR30-5.1.c.

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> Research Complex – Building 403 – Ingredient Preparation			
Emission unit ID number: P-35E, P-36E	Emission unit name: P-105S, P-106S. P-107S	List any control devices associated with this emission unit: None	
Provide a description of the emission unit (type, method of operation, design parameters, etc.): Bldg. 403 - Ingredient Preparation --Chemical fume hood (Rm. 101) (ID# P-105S) - used to vent vapors from cleaning tools and hardware used for ingredient preparation. Vents to atmosphere through P-35E. --Slotted exhausts (2) (Rm. 101) (ID# P-106S & P-107S) - used to vent vapors from transfer of materials from large containers to smaller ones. Minimal emissions are expected due to the types of materials and the quantities involved. Vent to atmosphere through vent P-36E.			
Manufacturer: Hamilton	Model number: Unknown	Serial number: Unknown	
Construction date: 1998	Installation date: 1998	Modification date(s):	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): Variable			
Maximum Hourly Throughput: NA	Maximum Annual Throughput: Variable	Maximum Operating Schedule: 8,760 hours/year	
Fuel Usage Data (fill out all applicable fields) NA			
Does this emission unit combust fuel? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		If yes, is it? <input type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired	
Maximum design heat input and/or maximum horsepower rating:		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.			
Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)		1
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
HAP		1
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		
<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>Potential emissions of criteria pollutants are based on limits provided in permit R13-1771B.</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.

1. Emission Limits – R30-05700011-2009: 5.1.1., 5.1.2., 5.1.3., 5.1.4.; 45CSR13, R13-1771B, A.1., A.2., A.3., A.4.

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.*)

1. Emission Limits – R30-05700011-2009: 5.2., 5.3., 5.4.; 45CSR13, R13-1771B, B.1. - B.5.; 45CSR45CSR30-5.1.c.

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 Research Complex – Building 404 – Propellant Lab		
Emission unit ID number: P-33E, P-34E	Emission unit name: P-94S through P-104S, P-108S	List any control devices associated with this emission unit: None
<p>Provide a description of the emission unit (type, method of operation, design parameters, etc.): Bldg. 404 - Propellant Lab --Exhaust hoods (Rm.102, Rm.104, Rm.106, Rm.108) (ID# P-94S, P-95S, P-96S, P-97S) used to vent vapors from casting powder coating and catalyst solution preparation for propellant mixes. Vent to atmosphere through vent ID# P-33E. --Exhaust hoods (Rm.103, Rm.105) (ID# P-98S & P-99S) - used to remove vapors from sample preparation and heat gassing studies of propellant samples in mineral oil bath. Vent to atmosphere through vent ID# P-33E. --Exhaust hood (Rm.107) (ID# P-100S) - used to vent vapors (acetone) from sample prep and cleanup of aging study samples. Vents to atmosphere through vent ID# P-33E. --Exhaust hood (Rm.111) (ID# P-101S) - used to vent vapors from coating propellant strands with inhibiting coating. Vents to atmosphere through vent ID# P-33E. --Exhaust hoods (2) (Rm.111) (ID# P-102S & P-103S) - used during installation and disassembly of strand bomb test equipment before and after firing. No emissions expected. Vent to atmosphere through vent ID# P-33E. --Fume extractor (Rm. 114) (ID# P-104S) - used to vent combustion products from 10000 psi strand bomb firing rate testing of propellant samples. Vent to atmosphere through vent ID# P-52E. -- Fume extractor (Rm. 112) (ID# P-108S) - used to vent combustion products from 5000 psi strand bomb firing rate testing of propellant samples. Vents to atmosphere through vent ID# P-34E.</p>		
Manufacturer: Visionaire	Model number: Unknown	Serial number: Unknown
Construction date: 1997	Installation date: 1997	Modification date(s):
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): Variable		
Maximum Hourly Throughput: NA	Maximum Annual Throughput: Variable	Maximum Operating Schedule: 8,760 hours/year
Fuel Usage Data (fill out all applicable fields) NA		
Does this emission unit combust fuel? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		If yes, is it? <input type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired
Maximum design heat input and/or maximum horsepower rating:		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.		

Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
<i>Emissions Data</i>			
Criteria Pollutants	Potential Emissions		
	PPH	TPY	
Carbon Monoxide (CO)		0.001	
Nitrogen Oxides (NO _x)		0.001	
Lead (Pb)		0.001	
Particulate Matter (PM _{2.5})			
Particulate Matter (PM ₁₀)			
Total Particulate Matter (TSP)		0.01	
Sulfur Dioxide (SO ₂)			
Volatile Organic Compounds (VOC)		1	
Hazardous Air Pollutants	Potential Emissions		
	PPH	TPY	
HAP		0.5	
Regulated Pollutants other than Criteria and HAP	Potential Emissions		
	PPH	TPY	
NA			
<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>Potential emissions of criteria pollutants are based on limits provided in permit R13-1771B.</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.

1. Emission Limits – R30-05700011-2009: 5.1.1., 5.1.2., 5.1.3., 5.1.4.; 45CSR13, R13-1771B, A.1., A.2., A.3., A.4.

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.*)

1. Emission Limits – R30-05700011-2009: 5.2., 5.3., 5.4.; 45CSR13, R13-1771B, B.1. - B.5.; 45CSR45CSR30-5.1.c.

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> Research Complex – Building 405 – Propellant Lab		
Emission unit ID number: P-25E through P-29E	Emission unit name: P-41S through P-80S	List any control devices associated with this emission unit: None
<p>Provide a description of the emission unit (type, method of operation, design parameters, etc.): Bldg. 405 - Materials Lab</p> <p>--Exhaust hoods (1 in Rm.108 - ID# P-41S; 2 in Rm.110 - ID# P-42S & P-43S; 1 in Rm.112 - ID# P-44S; 1 in Rm.114 - ID# P-45S; 1 in Rm.115 - ID# P-46S; 1 in Rm.117 - ID# P-47S; 2 in Rm.119 - ID# P-48S & P-49S; 3 in Rm.124 - ID# P-50S, P-51S & P-52S; 2 in Rm.125 - ID# P-53S & P-54S; 2 in Rm.129 - ID# P-55S & P-56S; 1 in Rm.131 - ID# P-57S; 1 in Rm.133 - ID# P-58S; 1 in Rm.134 - ID# P-59S; 2 in Rm.135 - ID# P-60S & P-61S; 2 in Rm.138 -ID# P-62S & P-63S) - used to remove vapors and emissions from various methods of laboratory analysis. Vent to atmosphere through vent ID# P-25E.</p> <p>--Exhaust hood (1 in Rm.119) (ID# P-64S) - used to remove vapors from acid digestion of substances. Vents to atmosphere through vent ID# P-26E.</p> <p>--Exhaust hoods (2 in Rm.135) (ID# P-65S & P-66S) - used to remove vapors from soxlet extractions. Vent to atmosphere through vent ID# P-27E.</p> <p>--Exhaust hoods (2 in Rm.138) (ID# P-67S & P-68S) - used to remove vapors from stability and properties testing of energetic materials (explosives). Vent to atmosphere through vent ID# P-28E.</p> <p>--Fume Extractors for Atomic Absorption Test Equipment (2 in Rm.110) (ID# P-69S & P-70S) - used to remove exhaust from furnace and flame atomic absorption equipment. Vent to atmosphere through vent ID# P-29E.</p> <p>--Fume Extractors for Gas Chromatography (3 in Rm.129) (ID# P-71S, P-72S, & P-73S) used to remove emissions from gas chromatography equipment. Vent to atmosphere through vent ID# P-25E.</p> <p>--Electric ovens (6 in Rm.113) (ID# P-74S, P-75S, P-76S, P-77S, P-78S, & P-79S) - 5 are used for drying and curing samples of various materials which will either be analyzed or used in analysis of other materials. Vent inside building. The remaining muffle oven is used to reduce materials to ash in order to complete specific testing. This oven vents to atmosphere through vent ID# P-30E.</p> <p>--Parr Bomb Exhaust (Rm.136) (ID# P-80S) - used to vent exhaust from the Parr Bomb calorimeter. Vents to atmosphere through vent ID# P-25E.</p>		
Manufacturer: Visionaire	Model number: Unknown	Serial number: Unknown
Construction date: 1996	Installation date: 1996	Modification date(s):
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): Variable		
Maximum Hourly Throughput: NA	Maximum Annual Throughput: Variable	Maximum Operating Schedule: 8,760 hours/year
Fuel Usage Data (fill out all applicable fields) NA		
Does this emission unit combust fuel? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		If yes, is it? <input type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired

Maximum design heat input and/or maximum horsepower rating:		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.			
Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
<i>Emissions Data</i>			
Criteria Pollutants	Potential Emissions		
	PPH	TPY	
Carbon Monoxide (CO)			
Nitrogen Oxides (NO _x)			
Lead (Pb)			
Particulate Matter (PM _{2.5})			
Particulate Matter (PM ₁₀)			
Total Particulate Matter (TSP)			
Sulfur Dioxide (SO ₂)			
Volatile Organic Compounds (VOC)		1	
Hazardous Air Pollutants	Potential Emissions		
	PPH	TPY	
HAP		1	
Regulated Pollutants other than Criteria and HAP	Potential Emissions		
	PPH	TPY	
NA			
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.).			
Potential emissions of criteria pollutants are based on limits provided in permit R13-1771B.			

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.

1. Emission Limits – R30-05700011-2009: 5.1.1., 5.1.2., 5.1.3., 5.1.4.; 45CSR13, R13-1771B, A.1., A.2., A.3., A.4.

X 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.)

1. Emission Limits – R30-05700011-2009: 5.2., 5.3., 5.4; 45CSR13, R13-1771B, B.1. - B.5.; 45CSR45CSR30-5.1.c.

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

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

ATTACHMENT E - Emission Unit Form		
Emission Unit Description Research Complex – Building 406 – Adhesives Lab		
Emission unit ID number: P-31E	Emission unit name: P-81S through P-96S	List any control devices associated with this emission unit: None
<p>Provide a description of the emission unit (type, method of operation, design parameters, etc.): Bldg. 406 - Adhesives Lab</p> <p>--Exhaust hoods (Rm.101, 103, 106, 107) (ID# P-81S, P-82S, P-83S, P-84S, & P-85S) used to remove vapors from cleaning propellant contaminated parts; mixing of bondliner, adhesives, and coatings; sample preparation; and bondliner application. Vents to atmosphere through vent ID# P-31E.</p> <p>--Benchtop Slotted Exhaust (Rm.106) (ID# P-86S) - used to remove vapors from sample preparation. Vents to atmosphere through vent ID# P-31E.</p> <p>--Walk-in Electric Oven (Rm.107) (ID#P-87S) - used for drying materials and curing sample's. Vents to atmosphere through vent ID# P-32E.</p> <p>--Despatch Electric Oven (Rm. 109) (ID# P-88S) - used for drying materials and curing samples. Vents to atmosphere through vent ID# P-31E.</p> <p>--Young Brothers Electric Ovens (Rm.109) (ID# P-89S & P-90S) - used for drying materials and curing samples. Vent to atmosphere through vent ID# P-31E.</p> <p>--3 Roll Mill (Rm.113) (ID# P-91S) - used to mill case bondliner samples to insure homogeneity. Vents to atmosphere through vent ID# P-31E.</p> <p>--2 Roll Mill (Rm.113) (ID# P-92S) - used to mill rubber used in case bondliner samples. No emissions are expected. Vents to atmosphere through vent ID# P-31E.</p> <p>--Dake Presses (3) (Rm.113) (ID# P-93S, P-94S, & P-95S) - used to press and mold rubber samples. Vent inside building.</p> <p>--Empire Grit Blaster (Rm.110) (ID# P-96S) - used to grit blast small parts prior to conducting bonding operations. Vents inside building.</p>		
Manufacturer: Visionaire	Model number: Unknown	Serial number: Unknown
Construction date: 1996	Installation date: 1996	Modification date(s):
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): Variable		
Maximum Hourly Throughput: NA	Maximum Annual Throughput: Variable	Maximum Operating Schedule: 8,760 hours/year
Fuel Usage Data (fill out all applicable fields) NA		
Does this emission unit combust fuel? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		If yes, is it? <input type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired
Maximum design heat input and/or maximum horsepower rating:		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.			
Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
<i>Emissions Data</i>			
Criteria Pollutants	Potential Emissions		
	PPH	TPY	
Carbon Monoxide (CO)			
Nitrogen Oxides (NO _x)			
Lead (Pb)			
Particulate Matter (PM _{2.5})			
Particulate Matter (PM ₁₀)			
Total Particulate Matter (TSP)			
Sulfur Dioxide (SO ₂)			
Volatile Organic Compounds (VOC)		0.5	
Hazardous Air Pollutants	Potential Emissions		
	PPH	TPY	
HAP		0.25	
Regulated Pollutants other than Criteria and HAP	Potential Emissions		
	PPH	TPY	
NA			
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.).			
Potential emissions of criteria pollutants are based on limits provided in permit R13-1771B.			

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.

1. Emission Limits – R30-05700011-2009: 5.1.1., 5.1.2., 5.1.3., 5.1.4.; 45CSR13, R13-1771B, A.1., A.2., A.3., A.4.

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.*)

1. Emission Limits – R30-05700011-2009: 5.2., 5.3., 5.4.; 45CSR13, R13-1771B, B.1. - B.5.; 45CSR45CSR30-5.1.c.

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> X-Range Static Firing			
Emission unit ID number: Fugitive	Emission unit name: Q-1S through Q-4S	List any control devices associated with this emission unit: None	
Provide a description of the emission unit (type, method of operation, design parameters, etc.): Static Test Firing Bays (3 - Bldgs, 193, 194, and 242) (ID# Q-1S, Q-2S, Q-3S) - used to test fire rocket motor assemblies. Bay 4 contains a 1,000 gallon propane storage tank and an 850K BTU burner system (Q-4S) used for a pebble bed heat source.			
Manufacturer: ABL	Model number: NA	Serial number: NA	
Construction date: 1959	Installation date: 1959	Modification date(s): 2002	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): See above			
Maximum Hourly Throughput: NA	Maximum Annual Throughput: Varies	Maximum Operating Schedule: 8,760 hours/year	
Fuel Usage Data (fill out all applicable fields) NA			
Does this emission unit combust fuel? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		If yes, is it? <input type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired	
Maximum design heat input and/or maximum horsepower rating:		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.			
Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

<i>Emissions Data</i>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		2.08
Nitrogen Oxides (NO _x)		0.13
Lead (Pb)		0.22
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		1.43
Total Particulate Matter (TSP)		2.97
Sulfur Dioxide (SO ₂)		0.04
Volatile Organic Compounds (VOC)		0.11
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
HCl		0.72
Other HAPs		0.16
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		
<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>Potential emissions of criteria pollutants are based on emission factors from ABL Burning Grounds Air Modeling Report - Appendix A Tables 3-4 and 3-5. Annual totals are based on a maximum of 250,000 pounds per year per waste type (Composite, Aluminized Composite, Double Base, or PBX Explosives).</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.

There are no underlying applicable requirements associated with this equipment.

40CFR63, Subpart P P P P P – National Emission Standards for Hazardous Air Pollutants from Engine Test Cells/Stands (05/27/03) – This rule applies to the X-Range Static Rocket Motor Firing facility. However, because the facility is used exclusively for testing rocket motors, and also because it was constructed before 05/14/02 (except modification to Q-3S in summer of 2002) it is exempted from notification requirements, control requirements, recordkeeping requirements, and reporting requirements set forth in the final rule (per 40CFR63.9290 (b) & (d)(2)).

X 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.)

There are no specified monitoring/testing/recordkeeping/ reporting requirements for this equipment.

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

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

ATTACHMENT E - Emission Unit Form			
Emission Unit Description TPEG Manufacturing System			
Emission unit ID number: T-1E or T-2E	Emission unit name: T-1S, T-2S, T-3S, T-4S, and T-5S	List any control devices associated with this emission unit: T-1C	
<p>Provide a description of the emission unit (type, method of operation, design parameters, etc.): Reactor vessel (ID# T-1S) – used to carry out the reaction of the Terathane feed product to form a new polymer chain. Vents to the atmosphere through vent ID# T-1E or T-2E (relief valve).</p> <p>Reactor distillate receiver (ID# T-2S) – used to collect tetrahydrofuran which is generated during the reaction phase. Vents to the atmosphere through vent ID# T-1E. (Ceramic Coating Co. – SN 6-44107)</p> <p>Separator (ID# T-3S) – used to separate the newly formed polymer from the water phase and neutralize the polymer layer prior to filtration and drying. Vents to atmosphere through vent ID# T-1E or T-3E (relief vent). (Ceramic Coating Co. – SN 5-44268)</p> <p>Wiped film evaporator (ID# T-4S) – used to remove any remaining moisture from the polymer prior to drumming. Vents to atmosphere through vent ID# T-1E. (Incon Tech. – SN 99034)</p> <p>Waste acid water tank (ID# T-5S) – used to collect water/sulfuric acid solution used during reaction for disposal off-site. Vents to atmosphere through vent ID# T-1E or T-4E (relief vent). (Central Fabricators – SN E-54)</p>			
Manufacturer: Ceramic Coating Company	Model number: Unknown	Serial number: 5-442676	
Construction date: 1999	Installation date: 1999	Modification date(s): None	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 6500 lb / batch			
Maximum Hourly Throughput: NA	Maximum Annual Throughput: 250 tons / year	Maximum Operating Schedule: 8,760 hours/year	
Fuel Usage Data (fill out all applicable fields) NA			
Does this emission unit combust fuel? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		If yes, is it? <input type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired	
Maximum design heat input and/or maximum horsepower rating:		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.			
Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)	1.25	0.85
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
NA		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		
<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>Potential emissions of criteria pollutants are based on limits provided in permit R13-2301A.</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.

1. Production Limits R30-05700011-2009: 6.1.1.; 45CSR13, R13-2301A, A.1.
2. Emission Limits – R30-05700011-2009: 6.1.2.; 45CSR13, R13-2301A, A.2.
3. Operating Parameters - R30-05700011-2009: 6.1.3.; 45CSR13, R13-2301A, A.3.
4. Testing Requirements – R30-05700011-2009: 3.1.11., 3.3.1; 45CSR13; R13-2301A, B.6.

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.)

1. Production Limits R30-05700011-2009: 6.4.1.; 45CSR13, R13-2301A, B.2.
2. Emission Limits – R30-05700011-2009: 6.3.1., 6.4.3.; 45CSR13, R13-2301, C.4.; 45CSR45CSR30-5.1.c.
3. Operating Parameters - R30-05700011-2009: 6.4.4., 6.4.5.; 45CSR13, R13-2301A, B.5.; 45CSR45CSR30-5.1.c.
4. Testing Requirements – R30-05700011-2009: 6.3.1.; 45CSR13; R13-2301A, C.4.; 45CSR45CSR30-5.1.c.

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 THF Drum Filling Station			
Emission unit ID number: T-5E	Emission unit name: T-6S	List any control devices associated with this emission unit: None	
Provide a description of the emission unit (type, method of operation, design parameters, etc.): Tetrahydrofuran drum filling -- (ID# T-6S) -- station used to drum tetrahydrofuran generated during reaction phase for resale or disposal. Vents to atmosphere through vent ID# T-5E.			
Manufacturer: Velcon	Model number: VFC 104-N7	Serial number: 21045	
Construction date: 1999	Installation date: 1999	Modification date(s): None	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons): 3000 lb THF / batch			
Maximum Hourly Throughput: Not determined	Maximum Annual Throughput: 250 ton/yr	Maximum Operating Schedule: 8,760 hours/year	
Fuel Usage Data (fill out all applicable fields) NA			
Does this emission unit combust fuel? __Yes <input checked="" type="checkbox"/> No		Does this emission unit combust fuel? __Yes <input checked="" type="checkbox"/> No	
Maximum design heat input and/or maximum horsepower rating:		Maximum design heat input and/or maximum horsepower rating:	
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.			
Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)	2.5	0.40
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
NA		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		
<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>Potential emissions of criteria pollutants are based on limits provided in permit R13-2301A.</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.

1. Production Limits R30-05700011-2009: 6.1.1.; 45CSR13, R13-2301A, A.1.
2. Emission Limits – R30-05700011-2009: 6.1.2.; 45CSR13, R13-2301A, A.2.

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.*)

1. Production Limits R30-05700011-2009: 6.4.1.; 45CSR13, R13-2301A, B.2.
2. Emission Limits – R30-05700011-2009: 6.4.2 45CSR13, R13-2301A, B.3.; 45CSR45CSR30-5.1.c.

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 Onan DGEA Portable Generator			
Emission unit ID number: EG-1	Emission unit name: EG-1	List any control devices associated with this emission unit:	
Provide a description of the emission unit (type, method of operation, design parameters, etc.): Onan DGEA Portable Generator rated at 167.6 bhp / 1800 rpm.			
Manufacturer: Onan	Model number: DGEA-4493456 (Portable Unit)	Serial number:	
Construction date:	Installation date: 1998	Modification date(s): None	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons):			
Maximum Hourly Throughput: 10 gph	Maximum Annual Throughput: 87600 gpy	Maximum Operating Schedule: 100 hr	
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 checked="" type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired	
Maximum design heat input and/or maximum horsepower rating: 167.6 bhp / 1800 rpm		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.			
Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Diesel Fuel	0.05%	0.00	1.35E+06

<i>Emissions Data</i>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	1.12	0.06
Nitrogen Oxides (NO _x)	5.20	0.26
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)	0.37	0.02
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)	0.34	0.02
Volatile Organic Compounds (VOC)	0.41	0.10
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
HCl		
HF		
Chromium		
Beryllium		
Nickel		
Mercury		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
Ammonia		
<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>Potential emissions of criteria pollutants are based on limits provided in permit G60-C020 Hourly rates for metals are not given due to the low mass involved.</p>		

<i>Applicable Requirements</i>
<p>List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (<i>Note: Title V permit condition numbers alone are not the underlying applicable requirements</i>). 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.</p>

1. Emission Limits –R30-05700011-2014: 7.1.1.; 45CSR34; 40 C.F.R § 63.6602
2. Operating Parameters - R30-05700011-2014: 7.1.2. 45CSR34; 40 C.F.R § 63.6602
3. RICE NESHAP –R30-05700011-2014: 7.1.3.; 45CSR34; 40 C.F.R § 63.6602

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.)

1. Emission Limits –R30-05700011-2014: 7.2. – 7.5.; 45CSR34; 40 C.F.R § 63.6625
2. Operating Parameters - R30-05700011-2014: 7.2. – 7.5.; 45CSR34; 40 C.F.R § 63.6625
3. RICE NESHAP –R30-05700011-2014: 7.2. – 7.5.; 45CSR34; 40 C.F.R § 63.6625

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 Kohler Emergency Generator

Emission unit ID number: EG-3	Emission unit name: EG-3	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.):

Kohler Emergency Generator rated at 241.4 bhp / 1800 rpm.

Manufacturer: Kohler	Model number: 180ROZT	Serial number:
Construction date: 1999	Installation date: 1999	Modification date(s): None

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):

Maximum Hourly Throughput: 14.4 gph	Maximum Annual Throughput: 126144 gpy	Maximum Operating Schedule: 100 hr
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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 checked="" type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired
--	---

Maximum design heat input and/or maximum horsepower rating: 241.4 bhp / 1800 rpm	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.

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

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Diesel Fuel	0.05%	0.00	1.94E+06

<i>Emissions Data</i>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	1.61	0.08
Nitrogen Oxides (NO _x)	7.48	0.37
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)	0.53	0.03
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)	0.49	0.02
Volatile Organic Compounds (VOC)	0.60	0.03
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
HCl		
HF		
Chromium		
Beryllium		
Nickel		
Mercury		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
Ammonia		
<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>Potential emissions of criteria pollutants are based on limits provided in permit G60-C020 Hourly rates for metals are not given due to the low mass involved.</p>		

<i>Applicable Requirements</i>
<p>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.</p>

1. Emission Limits –R30-05700011-2014: 7.1.1.; 45CSR34; 40 C.F.R § 63.6602
2. Operating Parameters - R30-05700011-2014: 7.1.2. 45CSR34; 40 C.F.R § 63.6602
3. RICE NESHAP –R30-05700011-2014: 7.1.3.; 45CSR34; 40 C.F.R § 63.6602

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.)

1. Emission Limits –R30-05700011-2014: 7.2. – 7.5.; 45CSR34; 40 C.F.R § 63.6625
2. Operating Parameters - R30-05700011-2014: 7.2. – 7.5.; 45CSR34; 40 C.F.R § 63.6625
3. RICE NESHAP –R30-05700011-2014: 7.2. – 7.5.; 45CSR34; 40 C.F.R § 63.6625

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 Kohler Emergency Generator

Emission unit ID number: EG-4	Emission unit name: EG-4	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.):

Kohler Emergency Generator rated at 490.0 bhp / 1800 rpm.

Manufacturer: Kohler	Model number: 300ROEZD71	Serial number:
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Construction date: 1995	Installation date: 1995	Modification date(s): None
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons):

Maximum Hourly Throughput: 23.5 gph	Maximum Annual Throughput: 205860 gpy	Maximum Operating Schedule: 100 hr
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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 checked="" type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired
--	---

Maximum design heat input and/or maximum horsepower rating: 490.0 bhp / 1800 rpm	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.

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

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Diesel Fuel	0.05%	0.00	3.17E+06

<i>Emissions Data</i>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	3.27	0.16
Nitrogen Oxides (NO _x)	15.19	0.76
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)	1.08	0.05
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)	1.00	0.05
Volatile Organic Compounds (VOC)	1.21	0.06
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
HCl		
HF		
Chromium		
Beryllium		
Nickel		
Mercury		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
Ammonia		
<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>Potential emissions of criteria pollutants are based on limits provided in permit G60-C020 Hourly rates for metals are not given due to the low mass involved.</p>		

<i>Applicable Requirements</i>
<p>List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (<i>Note: Title V permit condition numbers alone are not the underlying applicable requirements</i>). 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.</p>

1. Emission Limits –R30-05700011-2014: 7.1.1.; 45CSR34; 40 C.F.R § 63.6602
2. Operating Parameters - R30-05700011-2014: 7.1.2. 45CSR34; 40 C.F.R § 63.6602
3. RICE NESHAP –R30-05700011-2014: 7.1.3.; 45CSR34; 40 C.F.R § 63.6602

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.)

1. Emission Limits –R30-05700011-2014: 7.2. – 7.5.; 45CSR34; 40 C.F.R § 63.6625
2. Operating Parameters - R30-05700011-2014: 7.2. – 7.5.; 45CSR34; 40 C.F.R § 63.6625
3. RICE NESHAP –R30-05700011-2014: 7.2. – 7.5.; 45CSR34; 40 C.F.R § 63.6625

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 Kohler Emergency Generator

Emission unit ID number: EG-5	Emission unit name: EG-5	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.):

Kohler Emergency Generator rated at 490.0 bhp / 1800 rpm.

Manufacturer: Kohler	Model number: 300ROEzd72	Serial number:
Construction date: 1998	Installation date: 1998	Modification date(s): None

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):

Maximum Hourly Throughput: 23.5 gph	Maximum Annual Throughput: 205860 gpy	Maximum Operating Schedule: 100 hr
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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 checked="" type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired
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Maximum design heat input and/or maximum horsepower rating: 490.0 bhp / 1800 rpm	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.

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

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Diesel Fuel	0.05%	0.00	3.17E+06

<i>Emissions Data</i>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	3.27	0.16
Nitrogen Oxides (NO _x)	15.19	0.76
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)	1.08	0.05
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)	1.00	0.05
Volatile Organic Compounds (VOC)	1.21	0.06
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
HCl		
HF		
Chromium		
Beryllium		
Nickel		
Mercury		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
Ammonia		
<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>Potential emissions of criteria pollutants are based on limits provided in permit G60-C020 Hourly rates for metals are not given due to the low mass involved.</p>		

<i>Applicable Requirements</i>
<p>List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (<i>Note: Title V permit condition numbers alone are not the underlying applicable requirements</i>). 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.</p>

1. Emission Limits –R30-05700011-2014: 7.1.1.; 45CSR34; 40 C.F.R § 63.6602
2. Operating Parameters - R30-05700011-2014: 7.1.2. 45CSR34; 40 C.F.R § 63.6602
3. RICE NESHAP –R30-05700011-2014: 7.1.3.; 45CSR34; 40 C.F.R § 63.6602

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.)

1. Emission Limits –R30-05700011-2014: 7.2. – 7.5.; 45CSR34; 40 C.F.R § 63.6625
2. Operating Parameters - R30-05700011-2014: 7.2. – 7.5.; 45CSR34; 40 C.F.R § 63.6625
3. RICE NESHAP –R30-05700011-2014: 7.2. – 7.5.; 45CSR34; 40 C.F.R § 63.6625

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> Kohler Emergency Generator			
Emission unit ID number: EG-6	Emission unit name: EG-6	List any control devices associated with this emission unit:	
Provide a description of the emission unit (type, method of operation, design parameters, etc.): Kohler Emergency Generator rated at 1207.0 bhp / 1800 rpm.			
Manufacturer: Kohler	Model number: 800REOZM	Serial number:	
Construction date: 2004	Installation date: 2004	Modification date(s): None	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons):			
Maximum Hourly Throughput: 62.2 gph	Maximum Annual Throughput: 544872 gpy	Maximum Operating Schedule: 100 hr	
<i>Fuel Usage Data</i> (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 checked="" type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired	
Maximum design heat input and/or maximum horsepower rating: 1207.0 bhp / 1800 rpm		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.			
Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Diesel Fuel	0.05%	0.00	8.40E+06

<i>Emissions Data</i>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	6.64	0.33
Nitrogen Oxides (NO _x)	28.97	1.45
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)	0.84	0.04
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)	0.49	0.02
Volatile Organic Compounds (VOC)	0.85	0.04
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
HCl		
HF		
Chromium		
Beryllium		
Nickel		
Mercury		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
Ammonia		
<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>Potential emissions of criteria pollutants are based on limits provided in permit G60-C020 Hourly rates for metals are not given due to the low mass involved.</p>		

<i>Applicable Requirements</i>
<p>List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> 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.</p>

1. Emission Limits –R30-05700011-2014: 7.1.1.; 45CSR34; 40 C.F.R § 63.6602
2. Operating Parameters - R30-05700011-2014: 7.1.2. 45CSR34; 40 C.F.R § 63.6602
3. RICE NESHAP –R30-05700011-2014: 7.1.3.; 45CSR34; 40 C.F.R § 63.6602

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.)

1. Emission Limits –R30-05700011-2014: 7.2. – 7.5.; 45CSR34; 40 C.F.R § 63.6625
2. Operating Parameters - R30-05700011-2014: 7.2. – 7.5.; 45CSR34; 40 C.F.R § 63.6625
3. RICE NESHAP –R30-05700011-2014: 7.2. – 7.5.; 45CSR34; 40 C.F.R § 63.6625

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* Kohler Emergency Generator**

Emission unit ID number: EG-7	Emission unit name: EG-7	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.):

Kohler Emergency Generator (Tier 2) rated at 757.0 bhp / 1800 rpm.

Manufacturer: Kohler	Model number: 500REOZVB-I2C2 (Tier 2 rated)	Serial number:
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Construction date: 2008	Installation date: 2008	Modification date(s): None
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons):

Maximum Hourly Throughput: 36.8 gph	Maximum Annual Throughput: 322368 gpy	Maximum Operating Schedule: 100 hr
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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 checked="" type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired
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Maximum design heat input and/or maximum horsepower rating: 757.0 bhp / 1800 rpm	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.

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

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Diesel Fuel	0.05%	0.00	4.97E+06

<i>Emissions Data</i>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	4.34	0.22
Nitrogen Oxides (NO _x)	8.01	0.40
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)	0.25	0.01
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)	0.31	0.02
Volatile Organic Compounds (VOC)	0.53	0.03
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
HCl		
HF		
Chromium		
Beryllium		
Nickel		
Mercury		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
Ammonia		
<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>Potential emissions of criteria pollutants are based on limits provided in permit G60-C020 Hourly rates for metals are not given due to the low mass involved.</p>		

<i>Applicable Requirements</i>
<p>List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> 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.</p>

1. Emission Limits –R30-05700011-2014: 7.1.1.; 45CSR34; 40 C.F.R § 63.6602
2. Operating Parameters - R30-05700011-2014: 7.1.2. 45CSR34; 40 C.F.R § 63.6602
3. RICE NESHAP –R30-05700011-2014: 7.1.3.; 45CSR34; 40 C.F.R § 63.6602

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.)

1. Emission Limits –R30-05700011-2014: 7.2. – 7.5.; 45CSR34; 40 C.F.R § 63.6625
2. Operating Parameters - R30-05700011-2014: 7.2. – 7.5.; 45CSR34; 40 C.F.R § 63.6625
3. RICE NESHAP –R30-05700011-2014: 7.2. – 7.5.; 45CSR34; 40 C.F.R § 63.6625

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 Stamford Emergency Generator

Emission unit ID number: EG-8	Emission unit name: EG-8	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.):

Stamford Emergency Generator rated at 90 bhp / 1800 rpm.

Manufacturer: Stamford	Model number: D5847/1	Serial number:
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Construction date:	Installation date:	Modification date(s): None
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons):

Maximum Hourly Throughput: 6.0 gph	Maximum Annual Throughput: 52560 gpy	Maximum Operating Schedule: 100 hr
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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 checked="" type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired
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Maximum design heat input and/or maximum horsepower rating: 0.81MMBtu/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.

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

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Diesel Fuel	0.05%	0.00	8.1E+05

<i>Emissions Data</i>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.60	0.03
Nitrogen Oxides (NO _x)	2.79	0.14
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)	0.20	0.01
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)	0.18	0.01
Volatile Organic Compounds (VOC)	0.22	0.01
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
HCl		
HF		
Chromium		
Beryllium		
Nickel		
Mercury		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
Ammonia		
<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>Potential emissions of criteria pollutants are based on limits provided in permit G60-C020 Hourly rates for metals are not given due to the low mass involved.</p>		

<i>Applicable Requirements</i>
<p>List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> 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.</p>

1. Emission Limits –R30-05700011-2014: 7.1.1.; 45CSR34; 40 C.F.R § 63.6602
2. Operating Parameters - R30-05700011-2014: 7.1.2. 45CSR34; 40 C.F.R § 63.6602
3. RICE NESHAP –R30-05700011-2014: 7.1.3.; 45CSR34; 40 C.F.R § 63.6602

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.)

1. Emission Limits –R30-05700011-2014: 7.2. – 7.5.; 45CSR34; 40 C.F.R § 63.6625
2. Operating Parameters - R30-05700011-2014: 7.2. – 7.5.; 45CSR34; 40 C.F.R § 63.6625
3. RICE NESHAP –R30-05700011-2014: 7.2. – 7.5.; 45CSR34; 40 C.F.R § 63.6625

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 MTU Emergency Generator

Emission unit ID number: EG-9	Emission unit name: EG-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.):

MTU Emergency Generator (Tier 2) rated at 1676.25 bhp / 1800 rpm.

Manufacturer: MTU	Model number: 1250RXC6DT2 (Tier 2 rated)	Serial number:
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Construction date: 2010	Installation date: 2010	Modification date(s): None
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Design Capacity (examples: furnaces - tons/hr, tanks - gallons):

Maximum Hourly Throughput: 100.0 gph	Maximum Annual Throughput: 876000 gpy	Maximum Operating Schedule: 100 hr
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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 checked="" type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired
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Maximum design heat input and/or maximum horsepower rating: 1676.25 bhp / 1800 rpm	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.

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

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Diesel Fuel	0.05%	0.00	1.35E+07

<i>Emissions Data</i>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	9.61	0.48
Nitrogen Oxides (NO _x)	17.74	0.89
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)	0.55	0.03
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)	0.68	0.03
Volatile Organic Compounds (VOC)	1.18	0.06
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
HCl		
HF		
Chromium		
Beryllium		
Nickel		
Mercury		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
Ammonia		
<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>Potential emissions of criteria pollutants are based on limits provided in permit G60-C020 Hourly rates for metals are not given due to the low mass involved.</p>		

<i>Applicable Requirements</i>
<p>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.</p> <p>1. Emission Limits –R30-05700011-2014: 7.1.1.; 45CSR34; 40 C.F.R § 63.6602</p>

2. Operating Parameters - R30-05700011-2014: 7.1.2. 45CSR34; 40 C.F.R § 63.6602
3. RICE NESHAP –R30-05700011-2014: 7.1.3.; 45CSR34; 40 C.F.R § 63.6602

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.)

1. Emission Limits –R30-05700011-2014: 7.2. – 7.5.; 45CSR34; 40 C.F.R § 63.6625
2. Operating Parameters - R30-05700011-2014: 7.2. – 7.5.; 45CSR34; 40 C.F.R § 63.6625
3. RICE NESHAP –R30-05700011-2014: 7.2. – 7.5.; 45CSR34; 40 C.F.R § 63.6625

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 Caterpillar Emergency Generator

Emission unit ID number: EG-10	Emission unit name: EG-10	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.):

Caterpillar Emergency Generator (Tier 2) rated at 157.5 bhp / 1800 rpm.

Manufacturer: Caterpillar	Model number: D100-4 (Tier 2 rated)	Serial number:
Construction date: 2006	Installation date: 2006	Modification date(s): None

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):

Maximum Hourly Throughput: 8.0 gph	Maximum Annual Throughput: 70080 gpy	Maximum Operating Schedule: 100 hr
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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 checked="" type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired
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Maximum design heat input and/or maximum horsepower rating: 157.5 bhp / 1800 rpm	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.

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

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Diesel Fuel	0.05%	0.00	1.08E+06

<i>Emissions Data</i>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	1.28	0.06
Nitrogen Oxides (NO _x)	1.70	0.09
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)	0.08	0.00
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)	0.06	0.00
Volatile Organic Compounds (VOC)	0.39	0.02
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
HCl		
HF		
Chromium		
Beryllium		
Nickel		
Mercury		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
Ammonia		
<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>Potential emissions of criteria pollutants are based on limits provided in permit G60-C020 Hourly rates for metals are not given due to the low mass involved.</p>		

<i>Applicable Requirements</i>
<p>List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> 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.</p>

1. Emission Limits –R30-05700011-2014: 7.1.1.; 45CSR34; 40 C.F.R § 63.6602
2. Operating Parameters - R30-05700011-2014: 7.1.2. 45CSR34; 40 C.F.R § 63.6602
3. RICE NESHAP –R30-05700011-2014: 7.1.3.; 45CSR34; 40 C.F.R § 63.6602

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.)

1. Emission Limits –R30-05700011-2014: 7.2. – 7.5.; 45CSR34; 40 C.F.R § 63.6625
2. Operating Parameters - R30-05700011-2014: 7.2. – 7.5.; 45CSR34; 40 C.F.R § 63.6625
3. RICE NESHAP –R30-05700011-2014: 7.2. – 7.5.; 45CSR34; 40 C.F.R § 63.6625

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 Caterpillar Emergency Generator

Emission unit ID number:
EG-11

Emission unit name:
EG-11

List any control devices associated with this emission unit:

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

Caterpillar Emergency Generator (Tier 2) rated at 670.5 bhp / 1800 rpm.

Manufacturer:
Caterpillar

Model number:
C3456 (Tier 2 rated)

Serial number:

Construction date:
2007

Installation date:
2012

Modification date(s):
None

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):

Maximum Hourly Throughput:
40.0 gph

Maximum Annual Throughput:
350400 gpy

Maximum Operating Schedule:
100 hr

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:
670.5 bhp / 1800 rpm

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.

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

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Diesel Fuel	0.05%	0.00	5.40E+06

<i>Emissions Data</i>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	3.84	0.19
Nitrogen Oxides (NO _x)	7.10	0.35
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)	0.33	0.02
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)	0.27	0.01
Volatile Organic Compounds (VOC)	0.47	0.02
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
HCl		
HF		
Chromium		
Beryllium		
Nickel		
Mercury		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
Ammonia		
<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>Potential emissions of criteria pollutants are based on limits provided in permit G60-C020 Hourly rates for metals are not given due to the low mass involved.</p>		

<i>Applicable Requirements</i>
<p>List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> 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.</p>

1. Emission Limits –R30-05700011-2014: 7.1.1.; 45CSR34; 40 C.F.R § 63.6602
2. Operating Parameters - R30-05700011-2014: 7.1.2. 45CSR34; 40 C.F.R § 63.6602
3. RICE NESHAP –R30-05700011-2014: 7.1.3.; 45CSR34; 40 C.F.R § 63.6602

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.)

1. Emission Limits –R30-05700011-2014: 7.2. – 7.5.; 45CSR34; 40 C.F.R § 63.6625
2. Operating Parameters - R30-05700011-2014: 7.2. – 7.5.; 45CSR34; 40 C.F.R § 63.6625
3. RICE NESHAP –R30-05700011-2014: 7.2. – 7.5.; 45CSR34; 40 C.F.R § 63.6625

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 MTU Emergency Generator			
Emission unit ID number: EG-12	Emission unit name: EG-12	List any control devices associated with this emission unit:	
Provide a description of the emission unit (type, method of operation, design parameters, etc.): MTU Emergency Generator (Tier 2) rated at 3017.3 bhp / 1800 rpm.			
Manufacturer: MTU	Model number: 2250-RXC6DT2 (Tier 2 rated)	Serial number:	
Construction date: 2009	Installation date: 2012	Modification date(s): None	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons):			
Maximum Hourly Throughput: 180.0 gph	Maximum Annual Throughput: 1576800 gpy	Maximum Operating Schedule: 100 hr	
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 checked="" type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired	
Maximum design heat input and/or maximum horsepower rating: 3017.3 bhp / 1800 rpm		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.			
Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Diesel Fuel	0.05%	0.00	2.43E+07

<i>Emissions Data</i>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	17.30	0.86
Nitrogen Oxides (NO _x)	31.93	1.60
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)	1.46	0.07
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)	1.22	0.06
Volatile Organic Compounds (VOC)	2.13	0.11
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
HCl		
HF		
Chromium		
Beryllium		
Nickel		
Mercury		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
Ammonia		
<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>Potential emissions of criteria pollutants are based on limits provided in permit G60-C020 Hourly rates for metals are not given due to the low mass involved.</p>		

<i>Applicable Requirements</i>
<p>List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (<i>Note: Title V permit condition numbers alone are not the underlying applicable requirements</i>). 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.</p>

1. Emission Limits –R30-05700011-2014: 7.1.1.; 45CSR34; 40 C.F.R § 63.6602
2. Operating Parameters - R30-05700011-2014: 7.1.2. 45CSR34; 40 C.F.R § 63.6602
3. RICE NESHAP –R30-05700011-2014: 7.1.3.; 45CSR34; 40 C.F.R § 63.6602

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.)

1. Emission Limits –R30-05700011-2014: 7.2. – 7.5.; 45CSR34; 40 C.F.R § 63.6625
2. Operating Parameters - R30-05700011-2014: 7.2. – 7.5.; 45CSR34; 40 C.F.R § 63.6625
3. RICE NESHAP –R30-05700011-2014: 7.2. – 7.5.; 45CSR34; 40 C.F.R § 63.6625

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 MTU Emergency Generator			
Emission unit ID number: EG-13	Emission unit name: EG-13	List any control devices associated with this emission unit:	
Provide a description of the emission unit (type, method of operation, design parameters, etc.): Kohler 700 REOZDE Emergency Generator (Tier 2) rated at 1046 bhp / 750kW.			
Manufacturer: Kohler	Model number: 700 REOZDE (Tier 2 rated)	Serial number:	
Construction date:	Installation date: 2015	Modification date(s): None	
Design Capacity (examples: furnaces - tons/hr, tanks - gallons):			
Maximum Hourly Throughput: 60.0 gph	Maximum Annual Throughput: 525600 gpy	Maximum Operating Schedule: 100 hr	
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 checked="" type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired	
Maximum design heat input and/or maximum horsepower rating: 1046.0 bhp / 8.1 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.			
Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Diesel Fuel	0.05%	0.00	8.10E+06

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.35	0.02
Nitrogen Oxides (NO _x)	0.00	0.00
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)	0.00	0.00
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)	0.42	0.02
Volatile Organic Compounds (VOC)	0.74	0.04
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
HCl		
HF		
Chromium		
Beryllium		
Nickel		
Mercury		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
Ammonia		
<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>Potential emissions of criteria pollutants are based on limits provided in permit G60-C020 Hourly rates for metals are not given due to the low mass involved.</p>		

Applicable Requirements
<p>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.</p>

1. Emission Limits –R30-05700011-2014: 7.1.1.; 45CSR34; 40 C.F.R § 63.6602
2. Operating Parameters - R30-05700011-2014: 7.1.2. 45CSR34; 40 C.F.R § 63.6602
3. RICE NESHAP –R30-05700011-2014: 7.1.3.; 45CSR34; 40 C.F.R § 63.6602

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.)

1. Emission Limits –R30-05700011-2014: 7.2. – 7.5.; 45CSR34; 40 C.F.R § 63.6625
2. Operating Parameters - R30-05700011-2014: 7.2. – 7.5.; 45CSR34; 40 C.F.R § 63.6625
3. RICE NESHAP –R30-05700011-2014: 7.2. – 7.5.; 45CSR34; 40 C.F.R § 63.6625

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		
Control device ID number: 9-1C	List all emission units associated with this control device. 9-11S (No direct vent)	
Manufacturer: Zero	Model number: Unknown	Installation date: 1997
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 checked="" 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 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
Aluminum oxide grit	99.5%	99%
Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.). Single cyclone with baghouse. Unit runs at ambient pressure and temperature.		
Is this device subject to the CAM requirements of 40 C.F.R. 64? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
If Yes, Complete ATTACHMENT H		
If No, Provide justification.		
Potential pre-control device annual emissions of applicable regulated air pollutants are less than major source levels, and thus are exempt per 40 C.F.R. §64.2(a)(3).		
Describe the parameters monitored and/or methods used to indicate performance of this control device. Pressure drop is monitored to determine cleaning cycles. Unit undergoes preventive maintenance annually.		

ATTACHMENT G - Air Pollution Control Device Form		
Control device ID number: P-4C	List all emission units associated with this control device. P-31E	
Manufacturer: Various	Model number: Unknown	Installation date: 1996
Type of Air Pollution Control Device:		
<input checked="" 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 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
Particulate matter	90	90
Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.). Booths have a minimum face velocity of 100 fpm at ambient pressure and temperature. Manometers indicate pressure drop to indicate when filters need changed.		
Is this device subject to the CAM requirements of 40 C.F.R. 64? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
If Yes, Complete ATTACHMENT H		
If No, Provide justification.		
Potential pre-control device annual emissions of applicable regulated air pollutants are less than major source levels, and thus are exempt per 40 C.F.R. §64.2(a)(3).		
Describe the parameters monitored and/or methods used to indicate performance of this control device. Manometers indicate pressure drop to indicate when filters need changed.		

ATTACHMENT G - Air Pollution Control Device Form		
Control device ID number: P-5C	List all emission units associated with this control device. P-96S (No direct vent)	
Manufacturer: Empire	Model number: Unknown	Installation date: 1996
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 checked="" 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 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
Aluminum oxide grit	99.5%	99%
Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.). Single cyclone with baghouse. Unit runs at ambient pressure and temperature.		
Is this device subject to the CAM requirements of 40 C.F.R. 64? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, Complete ATTACHMENT H If No, Provide justification. Potential pre-control device annual emissions of applicable regulated air pollutants are less than major source levels, and thus are exempt per 40 C.F.R. §64.2(a)(3).		
Describe the parameters monitored and/or methods used to indicate performance of this control device. Pressure drop is monitored to determine cleaning cycles. Units undergo preventive maintenance annually.		

ATTACHMENT G - Air Pollution Control Device Form		
Control device ID number: P-8C	List all emission units associated with this control device. P-36E	
Manufacturer: Unknown	Model number: Unknown	Installation date: 1996
Type of Air Pollution Control Device:		
<input checked="" 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 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
Particulate	99.97	99
Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).		
This unit operates at ambient temperature and pressure with a normal flow of 1150 cfm. Filters are HEPA class with a 99.97% efficiency.		
Is this device subject to the CAM requirements of 40 C.F.R. 64? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
If Yes, Complete ATTACHMENT H		
If No, Provide justification.		
Potential pre-control device annual emissions of applicable regulated air pollutants are less than major source levels, and thus are exempt per 40 C.F.R. §64.2(a)(3).		
Describe the parameters monitored and/or methods used to indicate performance of this control device.		
Manometers are used to determine pressure differential across the filters. Procedures include a manometer check prior to operations. Unit undergoes preventive maintenance annually.		

ATTACHMENT G - Air Pollution Control Device Form		
Control device ID number: T-1C	List all emission units associated with this control device. T-1E, T-2E, and T-3E (TPEG reactor vessel, separator equipment, etc.)	
Manufacturer: EST Corporation	Model number: S/N EC-96.2809	Installation date: March 1999
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 checked="" 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 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
Tetrahydrofuran	90	
Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.). Scrubber is a water bath type with mist eliminator. Routine sampling and replacement w/fresh water.		
Is this device subject to the CAM requirements of 40 C.F.R. 64? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
If Yes, Complete ATTACHMENT H		
If No, Provide justification		
Potential pre-control device annual emissions of applicable regulated air pollutants are less than major source levels, and thus are exempt per 40 C.F.R. §64.2(a)(3).		
Describe the parameters monitored and/or methods used to indicate performance of this control device. pH is electronically monitored and adjusted to maintain scrubbing efficiency.		

ATTACHMENT G - Air Pollution Control Device Form		
Control device ID number: X-1C	List all emission units associated with this control device. X-2S (Ross Mixer)	
Manufacturer: Helex	Model number: PB-1-PF	Installation date: 2005
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 checked="" type="checkbox"/> Condenser	<input type="checkbox"/> Settling Chamber
<input 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
Acetone	80%	Unknown
Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.). Acetone is heated in Ross mixer and is chilled in condenser. Runs to recovery tank.		
Is this device subject to the CAM requirements of 40 C.F.R. 64? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
If Yes, Complete ATTACHMENT H		
If No, Provide justification.		
Potential pre-control device annual emissions of applicable regulated air pollutants are less than major source levels, and thus are exempt per 40 C.F.R. §64.2(a)(3).		
Describe the parameters monitored and/or methods used to indicate performance of this control device. Vacuum levels, tank levels, and chilled water temperature.		

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: X-2C	List all emission units associated with this control device. X-2S, X-3S, X-4S, and X-6S
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Manufacturer: American Air Filtration	Model number: Type N Rotoclone	Installation date: 2005
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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 type="checkbox"/> Thermal Incinerator	<input type="checkbox"/> Flare	<input checked="" type="checkbox"/> Other (describe) <u>Dust collector</u>
<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
Aluminum/viton dust	20 micron – 99.9%	Unknown

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).
 Aluminum/viton dust is pulled off Ross mixer, Sweco screener, Natoli pelletizer and JH Day press. Vacuum draws into water bed in external collection vessel.

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.**

Potential pre-control device annual emissions of applicable regulated air pollutants are less than major source levels, and thus are exempt per 40 C.F.R. §64.2(a)(3).

Describe the parameters monitored and/or methods used to indicate performance of this control device.
 Air flow is monitored at the pickup points on a periodic basis.
 Dust collector is opened and emptied at least every 2 weeks (more frequently if needed) to prevent build-up of hydrogen.

ATTACHMENT H - Compliance Assurance Monitoring (CAM) Plan Form

For definitions and information about the CAM rule, please refer to 40 CFR Part 64. Additional information (including guidance documents) may also be found at <http://www.epa.gov/ttn/emc/cam.html>

CAM APPLICABILITY DETERMINATION

1) Does the facility have a PSEU (Pollutant-Specific Emissions Unit considered separately with respect to EACH regulated air pollutant) that is subject to CAM (40 CFR Part 64), which must be addressed in this CAM plan submittal? To determine applicability, a PSEU must meet all of the following criteria (*If No, then the remainder of this form need not be completed*): YES NO **

- a. The PSEU is located at a major source that is required to obtain a Title V permit;
- b. The PSEU is subject to an emission limitation or standard for the applicable regulated air pollutant that is NOT exempt;

LIST OF EXEMPT EMISSION LIMITATIONS OR STANDARDS:

- NSPS (40 CFR Part 60) or NESHAP (40 CFR Parts 61 and 63) proposed after 11/15/1990.
 - Stratospheric Ozone Protection Requirements.
 - Acid Rain Program Requirements.
 - Emission Limitations or Standards for which a WVDEP Division of Air Quality Title V permit specifies a continuous compliance determination method, as defined in 40 CFR §64.1.
 - An emission cap that meets the requirements specified in 40 CFR §70.4(b)(12).
- c. The PSEU uses an add-on control device (as defined in 40 CFR §64.1) to achieve compliance with an emission limitation or standard;
 - d. The PSEU has potential pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than the Title V Major Source Threshold Levels; AND
 - e. The PSEU is NOT an exempt backup utility power emissions unit that is municipally-owned.

BASIS OF CAM SUBMITTAL

2) Mark the appropriate box below as to why this CAM plan is being submitted as part of an application for a Title V permit: **Not Applicable**

- RENEWAL APPLICATION. ALL PSEUs for which a CAM plan has NOT yet been approved need to be addressed in this CAM plan submittal.
- INITIAL APPLICATION (submitted after 4/20/98). ONLY large PSEUs (i. e., PSEUs with potential post-control device emissions of an applicable regulated air pollutant that are equal to or greater than Major Source Threshold Levels) need to be addressed in this CAM plan submittal.
- SIGNIFICANT MODIFICATION TO LARGE PSEUs. ONLY large PSEUs being modified after 4/20/98 need to be addressed in this cam plan submittal. For large PSEUs with an approved CAM plan, Only address the appropriate monitoring requirements affected by the significant modification.

** **Rationale for CAM Exemption:** The ATK Missile Subsystems & Components Division/Allegany Ballistics Laboratory manufacturing facility does not own or operate a subject pollutant-specific emissions unit as defined at 40 C.F.R. §64.1, because all plant control devices either have potential pre-control device annual emissions of applicable regulated air pollutants that are less than major source levels, and thus are exempt per 40 C.F.R. §64.2(a)(3), or are already subject to a Title V permit that specifies a continuous compliance determination method as defined in §64.1, and thus are exempt from CAM requirements per 40 C.F.R. §64.2(b)(1)(vi), or are not subject to a regulated air pollutant emission limitation or standard, and thus are not subject to CAM requirements per 40 C.F.R. §64.2(a)(1)(i).

3) ^a BACKGROUND DATA AND INFORMATION

Complete the following table for **all** PSEUs that need to be addressed in this CAM plan submittal. This section is to be used to provide background data and information for each PSEU in order to supplement the submittal requirements specified in 40 CFR §64.4. If additional space is needed, attach and label accordingly.

PSEU DESIGNATION	DESCRIPTION	POLLUTANT	CONTROL DEVICE	^b EMISSION LIMITATION or STANDARD	^c MONITORING REQUIREMENT
Not Applicable					
<u>EXAMPLE</u> Boiler No. 1	Wood-Fired Boiler	PM	Multiclone	45CSR§2-4.1.c.; 9.0 lb/hr	Monitor pressure drop across multiclone: Weekly inspection of multiclone

^a If a control device is common to more than one PSEU, one monitoring plan may be submitted for the control device with the affected PSEUs identified and any conditions that must be maintained or monitored in accordance with 40 CFR §64.3(a). If a single PSEU is controlled by more than one control device similar in design and operation, one monitoring plan for the applicable control devices may be submitted with the applicable control devices identified and any conditions that must be maintained or monitored in accordance with 40 CFR §64.3(a).

^b Indicate the emission limitation or standard for any applicable requirement that constitutes an emission limitation, emission standard, or standard of performance (as defined in 40 CFR §64.1).

^c Indicate the monitoring requirements for the PSEU that are required by an applicable regulation or permit condition.

CAM MONITORING APPROACH CRITERIA

Complete this section for EACH PSEU that needs to be addressed in this CAM plan submittal. This section may be copied as needed for each PSEU. This section is to be used to provide monitoring data and information for EACH indicator selected for EACH PSEU in order to meet the monitoring design criteria specified in 40 CFR §64.3 and §64.4. If more than two indicators are being selected for a PSEU or if additional space is needed, attach and label accordingly with the appropriate PSEU designation, pollutant, and indicator numbers.

4a) PSEU Designation: Not Applicable	4b) Pollutant:	4c) ^a Indicator No. 1:	4d) ^a Indicator No. 2:
5a) GENERAL CRITERIA Describe the <u>MONITORING APPROACH</u> used to measure the indicators:			
^b Establish the appropriate <u>INDICATOR RANGE</u> or the procedures for establishing the indicator range which provides a reasonable assurance of compliance:			
5b) PERFORMANCE CRITERIA Provide the <u>SPECIFICATIONS FOR OBTAINING REPRESENTATIVE DATA</u> , such as detector location, installation specifications, and minimum acceptable accuracy:			
^c For new or modified monitoring equipment, provide <u>VERIFICATION PROCEDURES</u> , including manufacturer's recommendations, <u>TO CONFIRM THE OPERATIONAL STATUS</u> of the monitoring:			
Provide <u>QUALITY ASSURANCE AND QUALITY CONTROL (QA/QC) PRACTICES</u> that are adequate to ensure the continuing validity of the data, (i.e., daily calibrations, visual inspections, routine maintenance, RATA, etc.):			
^d Provide the <u>MONITORING FREQUENCY</u> :			
Provide the <u>DATA COLLECTION PROCEDURES</u> that will be used:			
Provide the <u>DATA AVERAGING PERIOD</u> for the purpose of determining whether an excursion or exceedance has occurred:			

^a Describe all indicators to be monitored which satisfies 40 CFR §64.3(a). Indicators of emission control performance for the control device and associated capture system may include measured or predicted emissions (including visible emissions or opacity), process and control device operating parameters that affect control device (and capture system) efficiency or emission rates, or recorded findings of inspection and maintenance activities.

^b Indicator Ranges may be based on a single maximum or minimum value or at multiple levels that are relevant to distinctly different operating conditions, expressed as a function of process variables, expressed as maintaining the applicable indicator in a particular operational status or designated condition, or established as interdependent between more than one indicator. For CEMS, COMS, or PEMS, include the most recent certification test for the monitor.

^c The verification for operational status should include procedures for installation, calibration, and operation of the monitoring equipment, conducted in accordance with the manufacturer's recommendations, necessary to confirm the monitoring equipment is operational prior to the commencement of the required monitoring.

^d Emission units with post-control PTE ≥ 100 percent of the amount classifying the source as a major source (i.e., Large PSEU) must collect four or more values per hour to be averaged. A reduced data collection frequency may be approved in limited circumstances. Other emission units must collect data at least once per 24 hour period.

RATIONALE AND JUSTIFICATION

Complete this section for EACH PSEU that needs to be addressed in this CAM plan submittal. This section may be copied as needed for each PSEU. This section is to be used to provide rationale and justification for the selection of EACH indicator and monitoring approach and EACH indicator range in order to meet the submittal requirements specified in 40 CFR §64.4.

6a) PSEU Designation:
 Not Applicable

6b) Regulated Air Pollutant:

7) **INDICATORS AND THE MONITORING APPROACH:** Provide the rationale and justification for the selection of the indicators and the monitoring approach used to measure the indicators. Also provide any data supporting the rationale and justification. Explain the reasons for any differences between the verification of operational status or the quality assurance and control practices proposed, and the manufacturer's recommendations. (If additional space is needed, attach and label accordingly with the appropriate PSEU designation and pollutant):

8) **INDICATOR RANGES:** Provide the rationale and justification for the selection of the indicator ranges. The rationale and justification shall indicate how EACH indicator range was selected by either a COMPLIANCE OR PERFORMANCE TEST, a TEST PLAN AND SCHEDULE, or by ENGINEERING ASSESSMENTS. Depending on which method is being used for each indicator range, include the specific information required below for that specific indicator range. (If additional space is needed, attach and label accordingly with the appropriate PSEU designation and pollutant):

- COMPLIANCE OR PERFORMANCE TEST (Indicator ranges determined from control device operating parameter data obtained during a compliance or performance test conducted under regulatory specified conditions or under conditions representative of maximum potential emissions under anticipated operating conditions. Such data may be supplemented by engineering assessments and manufacturer's recommendations). The rationale and justification shall INCLUDE a summary of the compliance or performance test results that were used to determine the indicator range, and documentation indicating that no changes have taken place that could result in a significant change in the control system performance or the selected indicator ranges since the compliance or performance test was conducted.
- TEST PLAN AND SCHEDULE (Indicator ranges will be determined from a proposed implementation plan and schedule for installing, testing, and performing any other appropriate activities prior to use of the monitoring). The rationale and justification shall INCLUDE the proposed implementation plan and schedule that will provide for use of the monitoring as expeditiously as practicable after approval of this CAM plan, except that in no case shall the schedule for completing installation and beginning operation of the monitoring exceed 180 days after approval.
- ENGINEERING ASSESSMENTS (Indicator Ranges or the procedures for establishing indicator ranges are determined from engineering assessments and other data, such as manufacturers' design criteria and historical monitoring data, because factors specific to the type of monitoring, control device, or PSEU make compliance or performance testing unnecessary). The rationale and justification shall INCLUDE documentation demonstrating that compliance testing is not required to establish the indicator range.

RATIONALE AND JUSTIFICATION:

**CAM Assessment for Alliant Techsystems Operations LLC / Allegany Ballistics Lab
R30-05700011-2014, Part 3 of 3 Title V Renewal Application**

Not CAM - already subject to Title V permit continuous compliance determination method as defined in §64.1.

Not CAM - potential pre-control device annual emissions of applicable regulated air pollutants less than major source levels.

Not CAM - not subject to pollutant emission limit or standard.

1.0 Emission Units

Control Devices					
Control Device ID	Emission Point ID	Control Device Description	Year Installed / Modified	Design Capacity	Comments
9-1C	NDV	Cyclone dust collector grit blaster	1997	99.9% (PM)	
P-4C	P-31E	Fabric filter for exhaust hood	1996	90-95% (PM)	
P-5C	NDV	Cyclone dust collector grit blaster	1999	99.9% (PM)	
P-8C	P-36E	HEPA filter for slotted hood	1996	99.9% (PM)	
T-1C	T-1E, T-2E, T-3E, T-4E	Packed bed scrubber	1999	99% (THF)	

Facility Information and 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
Rocket Motor Manufacture	Rocket motors, metal rocket cases, composite rocket cases	336415	3764
F-22 Composites Manufacturing	Pivot shafts and obturator plates for F-22	336413	3728
Electronic Fuzing and Ammunition	Medium caliber ammunition (not loaded), proximity switches, and multiple fuze products for DoD	332995	3489
<p>NOTE: Part 3 of this permit covers auxiliary operations or miscellaneous processes that are not included in either rocket motor manufacturing (Part 1), composite structures, or metal fabrication (Part 2). For purposes of this permit, these processes include Electronic Fuzing operations, Research and Analytical operations, Maintenance operations (steam generating units, water and waste water treatment units, and emergency generators), and miscellaneous manufacturing processes (TPEG manufacturing, storage tanks, static firing range, X-ray processes, and waste storage, and aluminum preparation processes).</p>			
<p>Provide a general description of operations.</p> <p>Naval Industrial Reserve Ordnance Plant (NIROP)/Allegany Ballistics Laboratory (ABL) is a facility which is operated by Alliant Techsystems Operations LLC (Northrup Grumman) (headquarters in Falls Church, VA) under the Northrup Grumman Innovation Systems (NGIS) Missile Products Group. The majority of the facility is owned by the U.S. Navy and is operated by NGIS under a facilities use contract (~1530 acres designated as Plant 1). 57 acres is owned and operated by NGIS and is designated as Plant 2. Approximately 500 acres of Plant 1 are developed. In 2017, development began on an approximately 41 acre area designated as Plant 3 which will be utilized for production of rocket motors. The remaining acreage is undeveloped at this time. All property is contiguous with internal roads to reach each separate area.</p> <p>Operations at the plant include:</p> <ul style="list-style-type: none"> • metal fabrication of rocket motor and warhead cases; • metal fabrication of tank ammunition training rounds; • manufacture of composite material rocket motor and warhead cases; • manufacture of composite material aircraft components; • preparation of cases for addition of explosives; • mixing, casting, curing, and associated operations with propellants and explosives; • static firing of rocket motors; • open burning of waste propellants and explosives; • development and production of laser firing devices; • analytical and research & development laboratories; • explosive loading and packing operations for tank ammunition; • x-ray testing; and • maintenance and utility operations. <p>In addition, to these operations, the site is also home to the Robert C. Byrd Institute for Machining.</p>			

Active Permits/Consent Orders (Part 3 of 3 only)		
Permit or Consent Order Number	Date of Issuance MM/DD/YYYY	List any Permit Determinations that Affect the Permit (<i>if any</i>)
R13-0974A	05/23/2001	
R13-1771B	04/27/2004	
R13-2023C	05/05/2014	
R13-2301A	07/13/2001	
G60-C020	09/30/2010	
R13-3186	08/12/2014	

Primary changes to Part 3 of 3 since 2009:

1. Plant 1 boilers Nos. 15, 16, and 17 (Group L) have been permanently shut down and a formal request was submitted to remove R13-0974A.
2. Plant 1 boilers Nos. 23-32(Group L) were installed and burn Natural Gas with No. 2 Fuel Oil for backup and are under R13-3186.

Plantwide Emissions Summary [Tons per Year]		
Regulated Pollutants	Potential Emissions	2017 Actual Emissions
Carbon Monoxide (CO)	59.97	20.06
Nitrogen Oxides (NO _x)	41.31	22.10
Particulate Matter (PM _{2.5}) ¹	4.88	1.08
Particulate Matter uncontrolled (PM ₁₀)	12.34	1.97
Total Particulate Matter controlled or uncontrolled? (TSP)	23.22	1.998
Sulfur Dioxide (SO ₂)	33.67	0.16
Volatile Organic Compounds (VOC)	144.75	23.55

PM_{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.

Hazardous Air Pollutants	Potential Emissions	2017 Actual Emissions
Acetonitrile	0.27	0.024
Antimony compounds*	2.0E-04	7.0E-06
Benzene	0.37	0.032
Cadmium compounds*	6.0E-04	4.5E-05
Chloroform	0.096	0.008
Chromium*	8.0E-04	5.7E-05
Chromium compounds (not identified)*	0.136	0.012
Cobalt*	1.7E-04	4.0E-06
Diethyl phthalate	0.85	0.07
Ethyl benzene	0.62	0.05
Formaldehyde	0.029	0.0025
Glycol ether compounds	0.06	0.005
Hexane	0.80	0.07

Hydrochloric Acid	4.40	0.993
Lead *	1.322	0.239
Lead compounds*	5.0E-05	4.0E-06
Mercury*	2.0E-04	1.95E-08
Methanol	1.81	0.16
Methyl isobutyl ketone	3.73	0.32
Methylene chloride	1.995	1.116
Nickel*	2.0E-04	1.95E-08
Phenol	0.16	0.01
Strontium chromate*	0.0012	0.0001
Toluene	30.89	2.67
Trichloroethylene	0.125	0
Xylene	5.29	0.46
Zinc chromate*	1.2E-05	1.0E-06
Other (not specified)	0.1	0.016
Total	53.06	6.26

* Component of TSP emissions in Plantwide Emission Summary table above

Some of the above HAPs may be counted as PM or VOCs.

Changes to PTE table

Criteria pollutants updated to reflect removal of coal and #6 oil boilers from service and addition of permit limits from R13-3334 and R13-3408.

Updated Actuals from 2012 to 2017 actuals (based on AEI and CES)

Hydrochloric acid updated to reflect removal of coal and #6 oil boilers from service.

Removed Hydrofluoric acid to reflect removal of coal and #6 oil boilers from service.

Insignificant Activities (Check all that apply)	
<input type="checkbox"/>	<p>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.</p> <p>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:</p> <p>_____</p>
<input checked="" 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 checked="" 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 checked="" 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 checked="" 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 checked="" type="checkbox"/>	30. Hand-held applicator equipment for hot melt adhesives with no VOC in the adhesive formulation.
<input checked="" type="checkbox"/>	31. Hand-held equipment for buffing, polishing, cutting, drilling, sawing, grinding, turning or machining wood, metal or plastic.
<input checked="" type="checkbox"/>	32. Humidity chambers.
<input checked="" type="checkbox"/>	33. Hydraulic and hydrostatic testing equipment.
<input type="checkbox"/>	34. Indoor or outdoor kerosene heaters.
<input checked="" type="checkbox"/>	35. Internal combustion engines used for landscaping purposes.
<input checked="" type="checkbox"/>	36. Laser trimmers using dust collection to prevent fugitive emissions.
<input checked="" 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 checked="" type="checkbox"/>	39. Oxygen scavenging (de-aeration) of water.

Insignificant Activities (Check all that apply)	
<input type="checkbox"/>	40. Ozone generators.
<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 checked="" 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 checked="" 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 checked="" type="checkbox"/>	51. Steam cleaning operations.
<input checked="" type="checkbox"/>	52. Steam leaks.
<input checked="" 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 checked="" 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 checked="" type="checkbox"/>	58. Tobacco smoking rooms and areas.
<input type="checkbox"/>	59. Vents from continuous emissions monitors and other analyzers.