

Alliant Techsystems Operations LLC
Allegany Ballistics Laboratory
210 State Route 956
Rocket Center, WV 26726

DAQ Plant ID No. 057-00011

Permit No. R30-05700011-2014

Temporary Steam Boiler Permit Application
February 2015

Steve
13-3235T
~~13-3235T~~
057-00011

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Alliant Techsystems Operations LLC
Allegany Ballistics Laboratory
210 State Route 956
Rocket Center, WV 26726

February 5, 2015

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

Overnight Delivery

**Alliant Techsystems Operations LLC
Allegany Ballistics Laboratory
WVDAQ ID# 057-00011**

SUBJECT: Temporary Steam Boiler Permit Application

Dear Director Durham:

Alliant Techsystems Operations, LLC – Allegany Ballistics Laboratory hereby submits the enclosed application for a temporary steam boiler while permitted boilers Emission Unit IDS L-1S, L-2S, and L-3S are repaired. We believe the enclosed application contains the appropriate elements as indicated by the DAQ's checklist for the NSR (45CSR13) Application. Should you have additional questions regarding this submittal please contact Jill Clayton, Environmental Engineer, at 304-726-7984 or Jill.Clayton@atk.com.

Sincerely,

Patrick Nolan
V.P. & G.M. – ABL Operations
Alliant Techsystems Operations LLC
Allegany Ballistics Laboratory



WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF AIR QUALITY

601 57th Street, SE
Charleston, WV 25304
(304) 926-0475
www.dep.wv.gov/daq

**APPLICATION FOR NSR PERMIT
AND
TITLE V PERMIT REVISION
(OPTIONAL)**

PLEASE CHECK ALL THAT APPLY TO NSR (45CSR13) (IF KNOWN):

- CONSTRUCTION MODIFICATION RELOCATION
 CLASS I ADMINISTRATIVE UPDATE TEMPORARY
 CLASS II ADMINISTRATIVE UPDATE AFTER-THE-FACT

PLEASE CHECK TYPE OF 45CSR30 (TITLE V) REVISION (IF ANY):

- ADMINISTRATIVE AMENDMENT MINOR MODIFICATION
 SIGNIFICANT MODIFICATION

IF ANY BOX ABOVE IS CHECKED, INCLUDE TITLE V REVISION INFORMATION AS ATTACHMENT S TO THIS APPLICATION

FOR TITLE V FACILITIES ONLY. Please refer to "Title V Revision Guidance" in order to determine your Title V Revision options (Appendix A, "Title V Permit Revision Flowchart") and ability to operate with the changes requested in this Permit Application.

Section I. General

1. Name of applicant (as registered with the WV Secretary of State's Office): Alliant Techsystems Operations LLC		2. Federal Employer ID No. (FEIN): 27-4026908	
3. Name of facility (if different from above): Alliant Techsystems Operations LLC Allegany Ballistics Laboratory (ABL)		4. The applicant is the: <input type="checkbox"/> OWNER <input type="checkbox"/> OPERATOR <input checked="" type="checkbox"/> BOTH	
5A. Applicant's mailing address: Allegany Ballistics Laboratory 210 State Route 956 Rocket Center, WV 26728		5B. Facility's present physical address: Same as mailing address	
6. West Virginia Business Registration. Is the applicant a resident of the State of West Virginia? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO - If YES, provide a copy of the Certificate of Incorporation/Organization/Limited Partnership (one page) including any name change amendments or other Business Registration Certificate as Attachment A. - If NO, provide a copy of the Certificate of Authority/Authority of L.L.C./Registration (one page) including any name change amendments or other Business Certificate as Attachment A.			
7. If applicant is a subsidiary corporation, please provide the name of parent corporation:			
8. Does the applicant own, lease, have an option to buy or otherwise have control of the proposed site? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO - If YES, please explain: - If NO, you are not eligible for a permit for this source.			

9. Type of plant or facility (stationary source) to be constructed, modified, relocated, administratively updated or temporarily permitted (e.g., coal preparation plant, primary crusher, etc.): Temporary steam boiler.		10. North American Industry Classification System (NAICS) code for the facility: 336415	
11A. DAQ Plant ID No. (for existing facilities only): 057-00011		11B. List all current 45CSR13 and 45CSR30 (Title V) permit numbers associated with this process (for existing facilities only): R30-05700011-2014 Part 3 (for this process only) R13-2023B	

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

- 12A.
- For **Modifications, Administrative Updates** or **Temporary permits** at an existing facility, please provide directions to the *present location* of the facility from the nearest state road;
 - For **Construction** or **Relocation permits**, please provide directions to the *proposed new site location* from the nearest state road. Include a **MAP** as **Attachment B**.

Turn left off of WV State Route 956 onto plant access road just after crossing bridge into West Virginia.

12.B. New site address (if applicable):	12C. Nearest city or town: Short Gap, WV	12D. County: Mineral
12.E. UTM Northing (KM): 686.5	12F. UTM Easting (KM): 4381.2	12G. UTM Zone: 17

13. Briefly describe the proposed change(s) at the facility:
Using a 30.88mmBtu, 800 HP #2 FO-fired temp boiler for steam generation while boilers #15, 16, and 17 are repaired.

14A. Provide the date of anticipated installation or change: 02/12/15 - If this is an After-The-Fact permit application, provide the date upon which the proposed change did happen: / /	14B. Date of anticipated Start-Up if a permit is granted: 02/12/15
--	--

14C. Provide a **Schedule** of the planned **Installation of/Change** to and **Start-Up** of each of the units proposed in this permit application as **Attachment C** (if more than one unit is involved).

15. Provide maximum projected **Operating Schedule** of activity/activities outlined in this application:
Hours Per Day 24 Days Per Week 7 Weeks Per Year 24

16. Is demolition or physical renovation at an existing facility involved? **YES** **NO**

17. **Risk Management Plans.** If this facility is subject to 112(r) of the 1990 CAAA, or will become subject due to proposed changes (for applicability help see www.epa.gov/ceppo), submit your **Risk Management Plan (RMP)** to U. S. EPA Region III.

18. **Regulatory Discussion.** List all Federal and State air pollution control regulations that you believe are applicable to the proposed process (*if known*). A list of possible applicable requirements is also included in Attachment S of this application (Title V Permit Revision Information). Discuss applicability and proposed demonstration(s) of compliance (*if known*). Provide this information as **Attachment D**.

Section II. Additional attachments and supporting documents.

19. Include a check payable to WVDEP – Division of Air Quality with the appropriate **application fee** (per 45CSR22 and 45CSR13).

20. Include a **Table of Contents** as the first page of your application package.

21. Provide a **Plot Plan**, e.g. scaled map(s) and/or sketch(es) showing the location of the property on which the stationary source(s) is or is to be located as **Attachment E** (Refer to **Plot Plan Guidance**).
- Indicate the location of the nearest occupied structure (e.g. church, school, business, residence).

22. Provide a **Detailed Process Flow Diagram(s)** showing each proposed or modified emissions unit, emission point and control device as **Attachment F**.

23. Provide a **Process Description** as **Attachment G**.
- Also describe and quantify to the extent possible all changes made to the facility since the last permit review (if applicable).

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

24. Provide **Material Safety Data Sheets (MSDS)** for all materials processed, used or produced as **Attachment H**.
- For chemical processes, provide a MSDS for each compound emitted to the air.

25. Fill out the **Emission Units Table** and provide it as **Attachment I**.

26. Fill out the **Emission Points Data Summary Sheet (Table 1 and Table 2)** and provide it as **Attachment J**.

27. Fill out the **Fugitive Emissions Data Summary Sheet** and provide it as **Attachment K**.

28. Check all applicable **Emissions Unit Data Sheets** listed below:

- | | | |
|--|---|--|
| <input type="checkbox"/> Bulk Liquid Transfer Operations | <input type="checkbox"/> Haul Road Emissions | <input type="checkbox"/> Quarry |
| <input type="checkbox"/> Chemical Processes | <input type="checkbox"/> Hot Mix Asphalt Plant | <input type="checkbox"/> Solid Materials Sizing, Handling and Storage Facilities |
| <input type="checkbox"/> Concrete Batch Plant | <input type="checkbox"/> Incinerator | <input type="checkbox"/> Storage Tanks |
| <input type="checkbox"/> Grey Iron and Steel Foundry | <input checked="" type="checkbox"/> Indirect Heat Exchanger | |
| <input type="checkbox"/> General Emission Unit, specify | | |

Fill out and provide the **Emissions Unit Data Sheet(s)** as **Attachment L**.

29. Check all applicable **Air Pollution Control Device Sheets** listed below:

- | | | |
|---|---|--|
| <input type="checkbox"/> Absorption Systems | <input type="checkbox"/> Baghouse | <input type="checkbox"/> Flare |
| <input type="checkbox"/> Adsorption Systems | <input type="checkbox"/> Condenser | <input type="checkbox"/> Mechanical Collector |
| <input type="checkbox"/> Afterburner | <input type="checkbox"/> Electrostatic Precipitator | <input type="checkbox"/> Wet Collecting System |

Other Collectors, specify

Fill out and provide the **Air Pollution Control Device Sheet(s)** as **Attachment M**.

30. Provide all **Supporting Emissions Calculations** as **Attachment N**, or attach the calculations directly to the forms listed in Items 28 through 31.

31. **Monitoring, Recordkeeping, Reporting and Testing Plans.** Attach proposed monitoring, recordkeeping, reporting and testing plans in order to demonstrate compliance with the proposed emissions limits and operating parameters in this permit application. Provide this information as **Attachment O**.

➤ Please be aware that all permits must be practically enforceable whether or not the applicant chooses to propose such measures. Additionally, the DAQ may not be able to accept all measures proposed by the applicant. If none of these plans are proposed by the applicant, DAQ will develop such plans and include them in the permit.

32. **Public Notice.** At the time that the application is submitted, place a **Class I Legal Advertisement** in a newspaper of general circulation in the area where the source is or will be located (See 45CSR§13-8.3 through 45CSR§13-8.5 and **Example Legal Advertisement** for details). Please submit the **Affidavit of Publication** as **Attachment P** immediately upon receipt.

33. **Business Confidentiality Claims.** Does this application include confidential information (per 45CSR31)?

YES NO

➤ If **YES**, identify each segment of information on each page that is submitted as confidential and provide justification for each segment claimed confidential, including the criteria under 45CSR§31-4.1, and in accordance with the DAQ's **"Precautionary Notice - Claims of Confidentiality"** guidance found in the **General Instructions** as **Attachment Q**.

Section III. Certification of Information

34. **Authority/Delegation of Authority.** Only required when someone other than the responsible official signs the application. Check applicable **Authority Form** below:

- | | |
|---|---|
| <input checked="" type="checkbox"/> Authority of Corporation or Other Business Entity | <input type="checkbox"/> Authority of Partnership |
| <input type="checkbox"/> Authority of Governmental Agency | <input type="checkbox"/> Authority of Limited Partnership |

Submit completed and signed **Authority Form** as **Attachment R**.

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

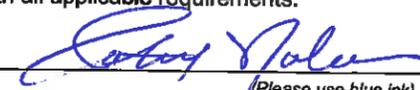
35A. **Certification of Information.** To certify this permit application, a Responsible Official (per 45CSR§13-2.22 and 45CSR§30-2.28) or Authorized Representative shall check the appropriate box and sign below.

Certification of Truth, Accuracy, and Completeness

I, the undersigned **Responsible Official** / **Authorized Representative**, hereby certify that all information contained in this application and any supporting documents appended hereto, is true, accurate, and complete based on information and belief after reasonable inquiry I further agree to assume responsibility for the construction, modification and/or relocation and operation of the stationary source described herein in accordance with this application and any amendments thereto, as well as the Department of Environmental Protection, Division of Air Quality permit issued in accordance with this application, along with all applicable rules and regulations of the West Virginia Division of Air Quality and W.Va. Code § 22-5-1 et seq. (State Air Pollution Control Act). If the business or agency changes its Responsible Official or Authorized Representative, the Director of the Division of Air Quality will be notified in writing within 30 days of the official change.

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.

SIGNATURE  DATE: 2/5/15
(Please use blue ink) *(Please use blue ink)*

35B. Printed name of signee: Patrick Nolan 35C. Title: V.P. & G.M. - ABL Ops

35D. E-mail: Pat.Nolan@ATK.com 36E. Phone: 304-726-5200 36F. FAX: 304-726-5183

36A. Printed name of contact person (if different from above): Jill W Clayton 36B. Title: Env. Engineer

36C. E-mail: Jill.Clayton@ATK.com 36D. Phone: 304-726-7984 36E. FAX: 304-726-5562

PLEASE CHECK ALL APPLICABLE ATTACHMENTS INCLUDED WITH THIS PERMIT APPLICATION:

- | | |
|--|--|
| <input checked="" type="checkbox"/> Attachment A: Business Certificate | <input type="checkbox"/> Attachment K: Fugitive Emissions Data Summary Sheet |
| <input checked="" type="checkbox"/> Attachment B: Map(s) | <input checked="" type="checkbox"/> Attachment L: Emissions Unit Data Sheet(s) |
| <input checked="" type="checkbox"/> Attachment C: Installation and Start Up Schedule | <input type="checkbox"/> Attachment M: Air Pollution Control Device Sheet(s) |
| <input checked="" type="checkbox"/> Attachment D: Regulatory Discussion | <input checked="" type="checkbox"/> Attachment N: Supporting Emissions Calculations |
| <input checked="" type="checkbox"/> Attachment E: Plot Plan | <input checked="" type="checkbox"/> Attachment O: Monitoring/Recordkeeping/Reporting/Testing Plans |
| <input checked="" type="checkbox"/> Attachment F: Detailed Process Flow Diagram(s) | <input checked="" type="checkbox"/> Attachment P: Public Notice |
| <input checked="" type="checkbox"/> Attachment G: Process Description | <input type="checkbox"/> Attachment Q: Business Confidential Claims |
| <input checked="" type="checkbox"/> Attachment H: Material Safety Data Sheets (MSDS) | <input type="checkbox"/> Attachment R: Authority Forms |
| <input checked="" type="checkbox"/> Attachment I: Emission Units Table | <input type="checkbox"/> Attachment S: Title V Permit Revision Information |
| <input checked="" type="checkbox"/> Attachment J: Emission Points Data Summary Sheet | <input checked="" type="checkbox"/> Application Fee |

Please mail an original and three (3) copies of the complete permit application with the signature(s) to the DAQ, Permitting Section, at the address listed on the first page of this application. Please DO NOT fax permit applications.

FOR AGENCY USE ONLY - IF THIS IS A TITLE V SOURCE:

- Forward 1 copy of the application to the Title V Permitting Group and:
- For Title V Administrative Amendments:
 - NSR permit writer should notify Title V permit writer of draft permit,
- For Title V Minor Modifications:
 - Title V permit writer should send appropriate notification to EPA and affected states within 5 days of receipt,
 - NSR permit writer should notify Title V permit writer of draft permit.
- For Title V Significant Modifications processed in parallel with NSR Permit revision:
 - NSR permit writer should notify a Title V permit writer of draft permit,
 - Public notice should reference both 45CSR13 and Title V permits,
 - EPA has 45 day review period of a draft permit.

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

**WEST VIRGINIA
STATE TAX DEPARTMENT
BUSINESS REGISTRATION
CERTIFICATE**

ISSUED TO:
**ALLIANT TECHSYSTEMS OPERATIONS LLC
210 STATE ROUTE 956
KEYSER, WV 26726-9219**

BUSINESS REGISTRATION ACCOUNT NUMBER: 2247-4467

This certificate is issued on: 06/1/2011

*This certificate is issued by
the West Virginia State Tax Commissioner
in accordance with Chapter 11, Article 12, of the West Virginia Code*

*The person or organization identified on this certificate is registered
to conduct business in the State of West Virginia at the location above.*

This certificate is not transferrable and must be displayed at the location for which issued.

This certificate shall be permanent until cessation of the business for which the certificate of registration was granted or until it is suspended, revoked or cancelled by the Tax Commissioner.

Change in name or change of location shall be considered a cessation of the business and a new certificate shall be required.

**TRAVELING/STREET VENDORS: Must carry a copy of this certificate in every vehicle operated by them.
CONTRACTORS, DRILLING OPERATORS, TIMBER/LOGGING OPERATIONS: Must have a copy of
this certificate displayed at every job site within West Virginia.**



ATTACHMENT C

EQUIPMENT INSTALLATION AND START-UP SCHEDULE

Proposed Installation Date	Proposed Start-Up Date	Emissions Unit (Source)	
		ID No. ¹	Source
02/11/15	02/11/15	TB-1S	800HP Temporary No. 2 Fuel Fired Boiler

ATTACHMENT D
REGULATORY DISCUSSION

A description of all state and federal regulations which affect the entire ATK facility is included in the facility's Title V permits. The temporary No. 2 fuel-fired boiler addressed in this application is not included in Part 3 of the facility's Title V permit. The following discussions include only regulations which pertain to the operations which are proposed in this permit application.

--Facility Level Applicable Regulations and Compliance Statements:

---WVDAQ Regulation 4 - Objectionable odors are not a normal occurrence. However, facility will comply with applicable prohibition from emitting objectionable odors by taking all reasonable measures to minimize objectionable odors if such a situation occurs.

---WVDAQ Regulation 7 - Facility will comply with applicable opacity limits (Sections 3.1 and 3.2) by maintaining trained opacity observer personnel to notify plant supervision if a non-compliance condition occurs or by calculations.

---WVDAQ Regulation 11 - Facility will comply with all applicable requirements of this regulation as requested by the West Virginia Air Pollution Control Commission during declared air pollution emergency episodes.

---WVDAQ Regulation 22 - Facility will comply with all applicable requirements of this regulation regarding payment of processing fees for permit applications by prompt payment of all applicable fees.

---WVDAQ Regulation 27 - Facility is complying with all applicable requirements of this regulation regarding the prevention and control of discharges of toxic air pollutants (TAPS) by application of technology or operational changes as defined in CO-R27-91-20 issued June 25, 1991 (superseded by CO-R27-99-23-A(91) issued June 14, 1999) (see below for a detailed explanation of the plant's compliance status on CO-R27-91-20).

---WVDAQ Regulation 29 - Facility will comply with all applicable requirements of this regulation regarding any requested submission of air emissions inventory data by timely submission of the required emission inventory.

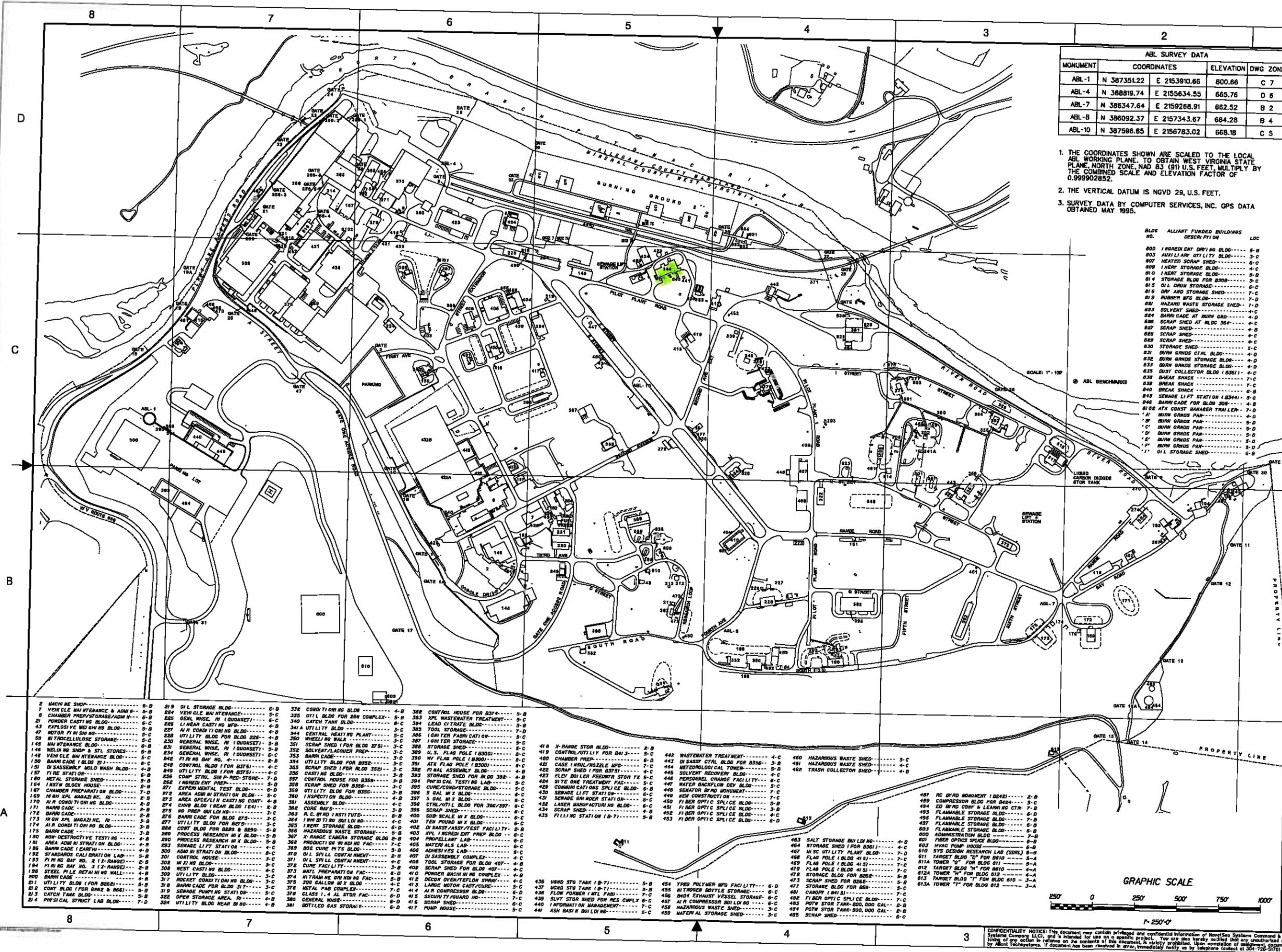
---WVDAQ Regulation 30 - Facility will comply with all applicable requirements of this regulation regarding its Title V Operating Permit.

---WVDAQ Regulation 31 - Facility will comply with all applicable requirements of this regulation regarding confidential information.

--Existing Permits and Consent Orders:

1. Reg. 13-401 issued 1978. Superseded by 13-0401A issued in 1999. Superseded by 13-0401B issued in May, 2001.
2. Reg. 13-573 issued 1980. Deemed inactive by 13-573A issued in May, 2001.
3. Reg. 13-621 issued 1981. Deemed inactive by 13-621A issued in May, 2001.

4. Reg. 13-898 issued 1986. Superseded by 13-898A issued in July, 2001.
5. Reg. 13-974 issued 1988. Superseded by 13-974A issued in May, 2001.
6. Reg. 13-1047 issued 1988. Superseded by 13-1047A issued in July, 2001. Superseded by 13-1047B issued in March, 2002.
7. Reg. 13-1307 issued 1991. Deemed inactive in 1997.
8. Reg. 13-1403 issued 1991. Superseded by 13-1642 issued 1994. Superseded by 13-1694 issued in 1994. Superseded by 13-1694A issued in July, 2001.
9. Reg. 13-1455 issued 1992. Superseded by 13-1455A issued in July, 2001.
10. Reg. 13-1771 issued 1995. Superseded by 13-1771A issued in April, 2003.
11. Reg. 13-1782 issued 1995. Superseded by 13-1782A issued in July, 2001.
12. Reg. 13-1797 issued 1995. Superseded by 13-1797A issued in January, 2002.
13. Reg. 13-1798 issued 1995. Superseded by 13-1798A issued in July, 2001.
14. Reg. 13-2023 issued 1996. Superseded by 13-2023A issued in June, 2001.
15. Reg. 13-2037 issued 1996. Superseded by 13-2037A issued in July, 2001.
16. Reg. 13-2246 issued 1999.
17. Reg. 13-2301 issued 1999. Superseded by 13-2301A issued in July, 2001. Superseded by 13-2606B in April, 2009.
18. Reg. 13-2579 issued in October, 2005.
19. Reg. 13-2606 issued in February, 2005. Superseded by 13-2606A in January, 2006.
19. CO-R6,13,25-99-35A(95) issued January 5, 2000 (Open Burning). (This amended and updated CO-R6,13,25-95-8 issued November 8, 1995).
20. Reg 30-05700014 Part 1 issued April, 2014.
21. Reg. 30-05700014 Part 2 issued June, 2014.
22. Reg. 30-05700014 Part 3 issued July, 2014 and January, 2015.



ABL SURVEY DATA				
MONUMENT	COORDINATES		ELEVATION	DWG. ZONE
ABL-1	N 387351.22	E 2153910.66	800.66	C 7
ABL-4	N 388819.74	E 2155634.55	665.76	D 6
ABL-7	N 386347.64	E 2159268.91	662.52	B 2
ABL-8	N 386092.37	E 2157343.67	684.28	B 4
ABL-10	N 387596.85	E 2156783.02	668.18	C 5

- THE COORDINATES SHOWN ARE SCALED TO THE LOCAL ABL WORKING PLANE. TO OBTAIN WEST VIRGINIA STATE PLANE, NORTH ZONE, NAD 83 (91) U.S. FEET, MULTIPLY BY THE COMBINED SCALE AND ELEVATION FACTOR OF 0.999902852.
- THE VERTICAL DATUM IS NGVD 29, U.S. FEET.
- SURVEY DATA BY COMPUTER SERVICES, INC. GPS DATA OBTAINED MAY 1995.

BLDG NO.	ALLIANT FUNDED BUILDINGS DESCRIPTION	LDC
800	INTEGRATED DRYING BLDG	5-B
803	AUXILIARY UTILITY BLDG	3-C
807	HEATED SCRAP SHED	6-C
808	INERT STORAGE BLDG	4-C
810	INERT STORAGE BLDG	5-B
814	STORAGE BLDG FOR B300	3-C
815	DI L DRY STORAGE	6-C
816	DRY AND STORAGE SHED	7-C
819	RUBBER BFG BLDG	7-D
821	HAZARDOUS WASTE STORAGE SHED	7-D
823	SOLVENT SHED	4-C
824	BARRI CADE AT BURN GRD	4-D
825	SCRAP SHED AT BLDG 364	4-C
826	SCRAP SHED	4-B
827	SCRAP SHED	4-C
828	SCRAP SHED	4-C
830	STORAGE SHED	5-C
831	BURN WINDS CTAL BLDG	4-D
832	BURN WINDS STORAGE BLDG	4-D
833	BURN WINDS STORAGE BLDG	4-D
835	DUST COLLECTOR BLDG (B361)	4-C
836	BREAK SHACK	7-C
840	BREAK SHACK	6-B
843	SEWAGE LIFT STATION (B344)	5-C
846	BARRI CADE FOR BLDG 308	4-B
812	ATK COSTY MANAGER TRAILER	7-D
1	BURN GRDS PAM	5-D
2	BURN GRDS PAM	5-D
3	BURN GRDS PAM	5-D
4	BURN GRDS PAM	5-D
5	BURN GRDS PAM	5-D
6	BURN GRDS PAM	5-D
7	BURN GRDS PAM	5-D
11	DI L STORAGE SHED	6-B

APPROVALS	DATE
DRAFTER J.R. ROBINSON	01/09/97
CHECKER R. OBREN	02/03/97
ENGR	
DES SUPV WH SMITH, JR.	03/26/97
AREA SUPV LH/MAR	03/25/97
SAFETY WR WORKMAN	03/25/97
ENR MGR LH MULL	03/25/97

ATK ACTUAL SYSTEMS COMPANY LLC

 ALLEGANY COUNTY, WEST VIRGINIA

 20720-3548

 ALLEGANY COUNTY LABORATORY

 20720-3548

CAGE CODE 70272 SIZE: D

 SCALE: 1" = 250' 0"

 NEXT ASSEMBLY 7 USED ON

 BUILDING NO. DRAWING PROJ.

 BASE PLT1

 CONTRACTOR DRAWING NO. REV.

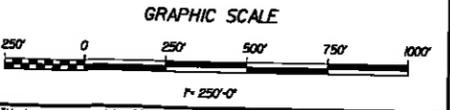
 T-112-AB

 SHEET 2 OF 4

 PLT-1

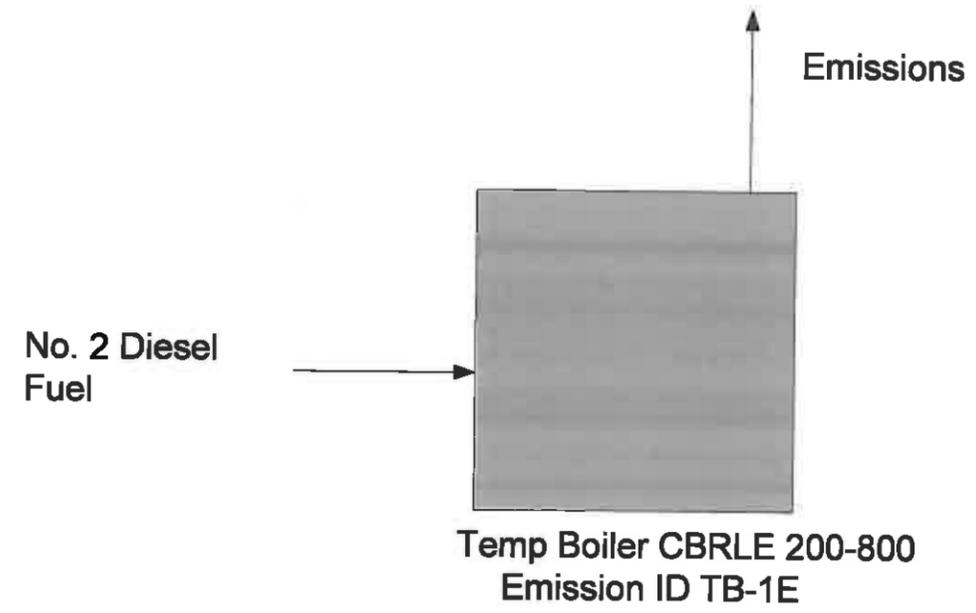
DRAWING HISTORY
 THIS DRAWING HAS BEEN ARCHIVED PER 1986 STATUS
 UPDATED PER CURRENT CONSTRUCTION & DEMOLITION
 9/28/01
 DATE
 INTERPRET THIS DRAWING IN ACCORDANCE WITH DOD-STD-100
 A

- | | | | | | | | | | | | | | |
|----------------------------------|-----|----------------------------------|-----|---------------------------------|-----|---------------------------------|-----|----------------------------------|-----|---------------------------------|-----|--------------------------|-----|
| 2 MACH ME SHOP | 5-B | 219 DI L STORAGE BLDG | 6-B | 332 CONDITIOING BLDG | 4-B | 388 CONTROL HOUSE FOR B374 | 5-B | 418 X-RANGE STOR BLDG | 2-B | 442 WASTEWATER TREATMENT | 4-C | 460 HAZARDOUS WASTE SHED | 5-C |
| 7 VEH CLE MAINTENANCE & ADM | 5-B | 220 GENERAL WHESE, RI (GOUNSETI) | 4-B | 335 UTIL BLDG FOR BSM COMPLEX | 5-B | 389 U.S. FLAG POLE (B300) | 8-C | 419 CONTROL UTILITY FOR B413 | 5-C | 443 DI SASSY CTAL BLDG FOR B350 | 3-B | 461 HAZARDOUS WASTE SHED | 4-C |
| 8 CHAMBER PREP/STORAGE/ADM | 5-B | 221 LI NEAR CASTI NO WFS | 4-B | 340 CATCH TANK BLDG | 6-C | 390 WY FLAG POLE (B300) | 8-C | 420 CASE INSUL/NOZZLE WFS | 6-D | 444 METEOROLOGICAL TOWER | 5-D | 462 TRASH COLLECTOR SHED | 4-B |
| 21 POWDER CASTI NO BLDG | 6-C | 222 AIR CONDITIOING BLDG | 4-B | 341 A UTILITY BLDG | 3-C | 391 ATK FLAG POLE (B300) | 8-C | 421 SCRAP SHED (FOR B375) | 7-C | 445 SOLVENT RECOVERY BLDG | 4-C | | |
| 43 EXPLOSIVE WEI BHN NO BLDG | 5-B | 223 AIR CONDITIOING BLDG | 4-B | 342 CENTRAL HEATNG PLANT | 5-C | 392 FI HAL ASSEMBLY BLDG | 4-B | 422 ELEV BOLLER FEEDWTR STOR TK | 5-C | 446 WATER BACKFLOW DEY BLDG | 5-C | | |
| 47 MOTOR FI IN SH NO | 4-B | 224 GENERAL WHESE, RI (GOUNSETI) | 4-B | 343 BARRI CADE | 5-C | 393 STORAGE SHED FOR BLDG 392 | 4-B | 423 SITE ONE TREATMENT FAC | 5-C | 447 PERSONNEL CHANGE FACILITY | 6-C | | |
| 50 NI TROCELLULOSE STORAGE | 5-C | 225 UTILITY BLDG FOR BLDG 225 | 4-B | 344 UTILITY BLDG FOR B352 | 3-C | 394 PHYSICAL TEST NO LAB | 6-C | 424 COMMUNICATIONS SPLICE BLDG | 6-C | 448 SENATOR BYRD MONUMENT | 7-C | | |
| 146 WELD NO SHOP & STL STORES | 6-B | 226 GENERAL WHESE, RI (GOUNSETI) | 4-B | 345 SCRAP SHED (FOR BLDG 273) | 3-C | 395 CURE/CONDY STORAGE BLDG | 5-C | 425 SERWAGE LIFT STATION | 6-C | 449 NEW CONSTRUCTION | 7-C | | |
| 148 VEH CLE MAINTENANCE BLDG | 6-B | 227 FI RI NO BAY NO. 4 | 4-B | 346 SCRAP SHED FOR B356 | 3-C | 396 3 GAL W X BLDG | 5-C | 426 LASER MANUFACTURING NO BLDG | 6-C | 450 FIBER OPTIC SPLICE BLDG | 5-B | | |
| 150 BARRI CADE (BLDG 21) | 6-C | 228 COMP STNU, SH P-REC-STORE | 7-D | 347 EXPERT MENTAL TEST BLDG | 4-B | 397 UTILITY BLDG FOR B358 | 3-C | 427 SCRAP SHED | 6-C | 451 FIBER OPTIC SPLICE BLDG | 3-B | | |
| 151 DI SASSY/FLY BOLD WASH BLDG | 4-B | 229 BARRI CADE (FOR B375) | 4-C | 271 AREA ADM IN STRATION BLDG | 4-B | 398 ASSEMBLY BLDG | 4-C | 272 AREA OPERELI H CASTI NO CONT | 4-B | 452 FIBER OPTIC SPLICE BLDG | 4-C | | |
| 152 FINE STATION | 6-B | 230 CONTROL BLDG (FOR B375) | 4-C | 273 AREA ADM IN STRATION BLDG | 4-B | 399 SCRAP SHED | 6-C | 274 CHNG BLDG (NEAR BLDG 104) | 2-B | 453 SCRAP SHED | 6-C | | |
| 180 METAL STORAGE SHED | 5-B | 231 COMP STNU, SH P-REC-STORE | 7-D | 275 INSPCTION BLDG | 3-C | 400 SUB-SCALE W X BLDG | 6-C | 276 INSPCTION BLDG | 3-C | 454 SCRAP SHED | 6-C | | |
| 184 INST BLDG HOUSE | 2-B | 232 EXPERT MENTAL TEST BLDG | 4-B | 277 INSPCTION BLDG | 3-C | 401 TEN POUND W X BLDG | 6-C | 278 INSPCTION BLDG | 3-C | 455 FIBER OPTIC SPLICE BLDG | 6-D | | |
| 187 CHAMBER PREP/STORAGE/ADM | 5-B | 233 GENERAL WHESE, RI (GOUNSETI) | 4-B | 279 UTILITY BLDG FOR B358 | 3-C | 402 DI SASSY/ASSY/TEST FACILITY | 2-B | 280 UTILITY BLDG FOR B358 | 3-C | 456 HAZARDOUS WASTE SHED | 5-C | | |
| 189 IN SH XPL MAAZI ME, RI | 2-B | 234 GENERAL WHESE, RI (GOUNSETI) | 4-B | 281 AREA ADM IN STRATION BLDG | 4-B | 403 WFL I BORDEN EXT PHEP BLDG | 6-C | 282 CHNG BLDG (NEAR BLDG 104) | 2-B | 457 FLAMMABLE STORAGE BLDG | 6-B | | |
| 170 AIR CONDITIOING BLDG | 4-B | 235 CONTROL BLDG (FOR B375) | 4-C | 283 INSPCTION BLDG | 3-C | 404 PROPELLANT LAB | 6-C | 283 INSPCTION BLDG | 3-C | 458 FLAMMABLE STORAGE BLDG | 6-B | | |
| 171 BARRI CADE | 2-B | 236 COMP STNU, SH P-REC-STORE | 7-D | 284 CURE BUIS | 4-B | 405 MATER ALS LAB | 6-C | 284 CURE BUIS | 4-B | 459 FLAMMABLE STORAGE BLDG | 6-B | | |
| 172 BARRI CADE | 2-B | 237 EXPERT MENTAL TEST BLDG | 4-B | 285 R. C. BYRD ISTITUTE | 3-B | 406 DUSHEVES LAB | 6-C | 285 R. C. BYRD ISTITUTE | 3-B | 460 FLAMMABLE STORAGE BLDG | 6-B | | |
| 173 IN SH XPL MAAZI ME, RI | 2-B | 238 UTILITY BLDG FOR B358 | 3-C | 286 INSPCTION BLDG | 3-C | 407 DI SASSY/ASSY/TEST FACILITY | 2-B | 286 INSPCTION BLDG | 3-C | 461 FIBER OPTIC SPLICE BLDG | 7-C | | |
| 174 AIR CONDITIOING BLDG | 4-B | 239 BARRI CADE (FOR B375) | 4-C | 287 X-RANGE CAMERA STORAGE BLDG | 2-B | 408 TOOL STORAGE FOR BLDG 407 | 4-B | 287 X-RANGE CAMERA STORAGE BLDG | 2-B | 462 STORAGE BLDG FOR B25 | 5-C | | |
| 175 BARRI CADE | 2-B | 240 GENERAL WHESE, RI (GOUNSETI) | 4-B | 288 CONTROL HOUSE | 5-C | 409 SCRAP SHED FOR BLDG 407 | 4-C | 288 CONTROL HOUSE | 5-C | 463 CARBOR (B413) | 7-C | | |
| 180 NON-DESTRUCTIVE TESTNG | 4-B | 241 PROCESS RESEARCH W X BLDG | 5-B | 289 PRODUCTI ON WIND NG FAC | 7-C | 410 ADHESIVES LAB | 6-C | 289 PROCESS RESEARCH W X BLDG | 5-B | 464 FLAM POLE (BLDG 413) | 7-C | | |
| 181 AREA ADM IN STRATION BLDG | 4-B | 242 BARRI CADE (FOR B375) | 4-C | 290 UTILITY BLDG FOR B358 | 3-C | 411 TOL STORAGE FOR BLDG 407 | 4-B | 290 UTILITY BLDG FOR B358 | 3-C | 465 FLAM POLE (BLDG 413) | 7-C | | |
| 186 BARRI CADE (CAMRY) | 4-B | 243 ADM IN STRATION BLDG | 4-B | 291 DI SASSY/ASSY/TEST FACILITY | 2-B | 412 DECON OVEN/TEFLON SPRAY | 4-C | 291 ADM IN STRATION BLDG | 4-B | 466 FLAM POLE (BLDG 413) | 7-C | | |
| 192 STANDARDS CALIBRATION LAB | 5-B | 244 UTILITY BLDG FOR B358 | 3-C | 292 CURE BUIS | 4-B | 413 LARGE MOTOR CASH/CURE | 5-D | 292 UTILITY BLDG FOR B358 | 3-C | 467 POTW STOR TANK-500,000 GAL | 2-B | | |
| 193 FI RI NO BAY NO. 2 (X-RANGE) | 2-B | 245 WEST CASTI NO BLDG | 3-C | 293 ROE CURE PITS BLDG | 4-C | 414 AIR COMPRESSOR BLDG | 5-D | 293 WEST CASTI NO BLDG | 3-C | 468 POTW STOR TANK-500,000 GAL | 2-B | | |
| 194 FI RI NO BAY NO. 3 (X-RANGE) | 2-B | 246 UTILITY BLDG FOR B358 | 3-C | 294 DI SASSY/ASSY/TEST FACILITY | 2-B | 415 SECURIT Y/ADJARD | 6-D | 294 UTILITY BLDG FOR B358 | 3-C | 469 HAZARDOUS WASTE SHED | 5-C | | |
| 198 STEEL PLE RETAN NI NO WALL | 4-B | 247 ROCKET CONDITIOING NO BLDG | 3-C | 295 METAL FAB COMPLEX | 4-C | 416 SCRAP SHED | 6-C | 295 ROCKET CONDITIOING NO BLDG | 3-C | 470 SCRAP SHED | 6-C | | |
| 200 BARRI CADE | 4-B | 248 SCRAP CADE FOR BLDG 317 | 3-C | 296 GENERAL WHESE, RI | 4-B | 417 PUMP HOUSE | 5-C | 296 SCRAP CADE FOR BLDG 317 | 3-C | 471 STORAGE BLDG FOR B25 | 5-C | | |
| 211 UTILITY BLDG (FOR B25) | 5-B | 249 OPEN STORAGE AREA, RI | 5-C | 297 BOTTLED GAS STORAGE | 6-D | | | 297 UTILITY BLDG NEAR B 80 | 4-B | 472 CARBOR (B413) | 7-C | | |
| 212 CATCH TANK BLDG | 5-B | 250 UTILITY BLDG NEAR B 80 | 4-B | | | | | 298 UTILITY BLDG NEAR B 80 | 4-B | 473 SCRAP SHED FOR B25 | 5-B | | |
| 214 PHYSICAL STRUCT LAB BLDG | 7-D | | | | | | | | | 474 STORAGE BLDG FOR B25 | 5-C | | |



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Attachment F
ABL Temporary Boiler
Process Flow Diagram



ATTACHMENT G
PROCESS DESCRIPTION

TEMPORARY 800-HP # 2 FO --FIRED BOILER FOR PLANT 1

ABL is in need of a temporary boiler to provide supplemental steam while the existing boilers, #17 coal boiler and #15 and 16 oil boilers, undergo repairs. The temporary boiler is a 2012 Cleaver Brooks boiler, Serial # T2986-1-1, rated at 800HP, has a heat input of 30.88 MMBtu/hr and burns #2 FO. ABL anticipates using the rental boiler for approximately 24-hours, 7-days per week, 24 weeks.

The same fuel requirements that are currently in place for the fuel oil number 2 will continue with the rental boiler as having a sulfur content of 0.05% or less.



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US GHS

Synonyms: Ultra Low Sulfur Diesel; Low Sulfur Diesel; No. 2 Diesel; Motor Vehicle Diesel Fuel; Non-Road Diesel Fuel; Locomotive/Marine Diesel Fuel

*** Section 1 - Product and Company Identification ***

Manufacturer Information

Hess Corporation
1 Hess Plaza
Woodbridge, NJ 07095-0961

Phone: 732-750-6000 Corporate EHS
Emergency # 800-424-9300 CHEMTREC
www.hess.com (Environment, Health, Safety Internet Website)

*** Section 2 - Hazards Identification ***

GHS Classification:

Flammable Liquids - Category 3
Skin Corrosion/Irritation - Category 2
Germ Cell Mutagenicity - Category 2
Carcinogenicity - Category 2
Specific Target Organ Toxicity (Single Exposure) - Category 3 (respiratory irritation, narcosis)
Aspiration Hazard - Category 1
Hazardous to the Aquatic Environment, Acute Hazard - Category 3

GHS LABEL ELEMENTS

Symbol(s)



Signal Word

DANGER

Hazard Statements

Flammable liquid and vapor.
Causes skin irritation.
Suspected of causing genetic defects.
Suspected of causing cancer.
May cause respiratory irritation.
May cause drowsiness or dizziness.
May be fatal if swallowed and enters airways.
Harmful to aquatic life.

Precautionary Statements

Prevention

Keep away from heat/sparks/open flames/hot surfaces. No smoking
Keep container tightly closed.
Ground/bond container and receiving equipment.

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Use explosion-proof electrical/ventilating/lighting/equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Wear protective gloves/protective clothing/eye protection/face protection.
Wash hands and forearms thoroughly after handling.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Avoid breathing fume/mist/vapours/spray.

Response

In case of fire: Use water spray, fog or foam to extinguish.
IF ON SKIN (or hair): Wash with plenty of soap and water. Remove/Take off immediately all contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell.
If swallowed: Immediately call a poison center or doctor. Do NOT induce vomiting.
IF exposed or concerned: Get medical advice/attention.

Storage

Store in a well-ventilated place. Keep cool.
Keep container tightly closed.
Store locked up.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

*** Section 3 - Composition / Information on Ingredients ***

CAS #	Component	Percent
68476-34-6	Fuels, diesel, no. 2	100
91-20-3	Naphthalene	<0.1

A complex mixture of hydrocarbons with carbon numbers in the range C9 and higher.

*** Section 4 - First Aid Measures ***

First Aid: Eyes

In case of contact with eyes, immediately flush with clean, low-pressure water for at least 15 min. Hold eyelids open to ensure adequate flushing. Seek medical attention.

First Aid: Skin

Remove contaminated clothing. Wash contaminated areas thoroughly with soap and water or with waterless hand cleanser. Obtain medical attention if irritation or redness develops. Thermal burns require immediate medical attention depending on the severity and the area of the body burned.

First Aid: Ingestion

DO NOT INDUCE VOMITING. Do not give liquids. Obtain immediate medical attention. If spontaneous vomiting occurs, lean victim forward to reduce the risk of aspiration. Monitor for breathing difficulties. Small amounts of material which enter the mouth should be rinsed out until the taste is dissipated.

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First Aid: Inhalation

Remove person to fresh air. If person is not breathing, provide artificial respiration. If necessary, provide additional oxygen once breathing is restored if trained to do so. Seek medical attention immediately.

*** Section 5 - Fire Fighting Measures ***

General Fire Hazards

See Section 9 for Flammability Properties.

Vapors may be ignited rapidly when exposed to heat, spark, open flame or other source of ignition. When mixed with air and exposed to an ignition source, flammable vapors can burn in the open or explode in confined spaces. Being heavier than air, vapors may travel long distances to an ignition source and flash back. Runoff to sewer may cause fire or explosion hazard.

Hazardous Combustion Products

Carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke).

Extinguishing Media

SMALL FIRES: Any extinguisher suitable for Class B fires, dry chemical, CO₂, water spray, fire fighting foam, and other gaseous agents.

LARGE FIRES: Water spray, fog or fire fighting foam. Water may be ineffective for fighting the fire, but may be used to cool fire-exposed containers.

Unsuitable Extinguishing Media

None

Fire Fighting Equipment/Instructions

Small fires in the incipient (beginning) stage may typically be extinguished using handheld portable fire extinguishers and other fire fighting equipment. Firefighting activities that may result in potential exposure to high heat, smoke or toxic by-products of combustion should require NIOSH/MSHA- approved pressure-demand self-contained breathing apparatus with full facepiece and full protective clothing. Isolate area around container involved in fire. Cool tanks, shells, and containers exposed to fire and excessive heat with water. For massive fires the use of unmanned hose holders or monitor nozzles may be advantageous to further minimize personnel exposure. Major fires may require withdrawal, allowing the tank to burn. Large storage tank fires typically require specially trained personnel and equipment to extinguish the fire, often including the need for properly applied fire fighting foam.

*** Section 6 - Accidental Release Measures ***

Recovery and Neutralization

Carefully contain and stop the source of the spill, if safe to do so.

Materials and Methods for Clean-Up

Take up with sand or other oil absorbing materials. Carefully shovel, scoop or sweep up into a waste container for reclamation or disposal. Caution, flammable vapors may accumulate in closed containers.

Emergency Measures

Evacuate nonessential personnel and remove or secure all ignition sources. Consider wind direction; stay upwind and uphill, if possible. Evaluate the direction of product travel, diking, sewers, etc. to confirm spill areas. Spills may infiltrate subsurface soil and groundwater; professional assistance may be necessary to determine the extent of subsurface impact.

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Personal Precautions and Protective Equipment

Response and clean-up crews must be properly trained and must utilize proper protective equipment (see Section 8).

Environmental Precautions

Protect bodies of water by diking, absorbents, or absorbent boom, if possible. Do not flush down sewer or drainage systems, unless system is designed and permitted to handle such material. The use of fire fighting foam may be useful in certain situations to reduce vapors. The proper use of water spray may effectively disperse product vapors or the liquid itself, preventing contact with ignition sources or areas/equipment that require protection.

Prevention of Secondary Hazards

None

* * * Section 7 - Handling and Storage * * *

Handling Procedures

Handle as a combustible liquid. Keep away from heat, sparks, excessive temperatures and open flame! No smoking or open flame in storage, use or handling areas. Bond and ground containers during product transfer to reduce the possibility of static-initiated fire or explosion.

Special slow load procedures for "switch loading" must be followed to avoid the static ignition hazard that can exist when higher flash point material (such as fuel oil) is loaded into tanks previously containing low flash point products (such as this product) - see API Publication 2003, "Protection Against Ignitions Arising Out Of Static, Lightning and Stray Currents."

Storage Procedures

Keep away from flame, sparks, excessive temperatures and open flame. Use approved vented containers. Keep containers closed and clearly labeled. Empty product containers or vessels may contain explosive vapors. Do not pressurize, cut, heat, weld or expose such containers to sources of ignition.

Store in a well-ventilated area. This storage area should comply with NFPA 30 "Flammable and Combustible Liquid Code". Avoid storage near incompatible materials. The cleaning of tanks previously containing this product should follow API Recommended Practice (RP) 2013 "Cleaning Mobile Tanks In Flammable and Combustible Liquid Service" and API RP 2015 "Cleaning Petroleum Storage Tanks."

Incompatibilities

Keep away from strong oxidizers.

* * * Section 8 - Exposure Controls / Personal Protection * * *

Component Exposure Limits

Fuels, diesel, no. 2 (68476-34-6)

ACGIH: 100 mg/m³ TWA (inhalable fraction and vapor, as total hydrocarbons, listed under Diesel fuel)
Skin - potential significant contribution to overall exposure by the cutaneous route (listed under Diesel fuel)

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Naphthalene (91-20-3)

ACGIH: 10 ppm TWA
15 ppm STEL

Skin - potential significant contribution to overall exposure by the cutaneous route

OSHA: 10 ppm TWA; 50 mg/m³ TWA

NIOSH: 10 ppm TWA; 50 mg/m³ TWA
15 ppm STEL; 75 mg/m³ STEL

Engineering Measures

Use adequate ventilation to keep vapor concentrations of this product below occupational exposure and flammability limits, particularly in confined spaces.

Personal Protective Equipment: Respiratory

A NIOSH/MSHA-approved air-purifying respirator with organic vapor cartridges or canister may be permissible under certain circumstances where airborne concentrations are or may be expected to exceed exposure limits or for odor or irritation. Protection provided by air-purifying respirators is limited.

Use a positive pressure, air-supplied respirator if there is a potential for uncontrolled release, exposure levels are not known, in oxygen-deficient atmospheres, or any other circumstance where an air-purifying respirator may not provide adequate protection.

Personal Protective Equipment: Hands

Gloves constructed of nitrile, neoprene, or PVC are recommended.

Personal Protective Equipment: Eyes

Safety glasses or goggles are recommended where there is a possibility of splashing or spraying.

Personal Protective Equipment: Skin and Body

Chemical protective clothing such as of E.I. DuPont TyChem®, Saranex® or equivalent recommended based on degree of exposure. Note: The resistance of specific material may vary from product to product as well as with degree of exposure. Consult manufacturer specifications for further information.

*** Section 9 - Physical & Chemical Properties ***

Appearance: Clear, straw-yellow.	Odor: Mild, petroleum distillate odor
Physical State: Liquid	pH: ND
Vapor Pressure: 0.009 psia @ 70 °F (21 °C)	Vapor Density: >1.0
Boiling Point: 320 to 690 °F (160 to 366 °C)	Melting Point: ND
Solubility (H₂O): Negligible	Specific Gravity: 0.83-0.876 @ 60°F (16°C)
Evaporation Rate: Slow; varies with conditions	VOC: ND
Percent Volatile: 100%	Octanol/H₂O Coeff.: ND
Flash Point: >125 °F (>52 °C) minimum	Flash Point Method: PMCC
Upper Flammability Limit (UFL): 7.5	Lower Flammability Limit (LFL): 0.6
Burning Rate: ND	Auto Ignition: 494°F (257°C)

*** Section 10 - Chemical Stability & Reactivity Information ***

Chemical Stability

This is a stable material.

Hazardous Reaction Potential

Will not occur.

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Conditions to Avoid

Avoid high temperatures, open flames, sparks, welding, smoking and other ignition sources.

Incompatible Products

Keep away from strong oxidizers.

Hazardous Decomposition Products

Carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke).

*** Section 11 - Toxicological Information ***

Acute Toxicity

A: General Product Information

Harmful if swallowed.

B: Component Analysis - LD50/LC50

Naphthalene (91-20-3)

Inhalation LC50 Rat >340 mg/m³ 1 h; Oral LD50 Rat 490 mg/kg; Dermal LD50 Rat >2500 mg/kg; Dermal LD50 Rabbit >20 g/kg

Potential Health Effects: Skin Corrosion Property/Stimulativeness

Practically non-toxic if absorbed following acute (single) exposure. May cause skin irritation with prolonged or repeated contact. Liquid may be absorbed through the skin in toxic amounts if large areas of skin are repeatedly exposed.

Potential Health Effects: Eye Critical Damage/ Stimulativeness

Contact with eyes may cause mild irritation.

Potential Health Effects: Ingestion

Ingestion may cause gastrointestinal disturbances, including irritation, nausea, vomiting and diarrhea, and central nervous system (brain) effects similar to alcohol intoxication. In severe cases, tremors, convulsions, loss of consciousness, coma, respiratory arrest, and death may occur.

Potential Health Effects: Inhalation

Excessive exposure may cause irritations to the nose, throat, lungs and respiratory tract. Central nervous system (brain) effects may include headache, dizziness, loss of balance and coordination, unconsciousness, coma, respiratory failure, and death.

WARNING: the burning of any hydrocarbon as a fuel in an area without adequate ventilation may result in hazardous levels of combustion products, including carbon monoxide, and inadequate oxygen levels, which may cause unconsciousness, suffocation, and death.

Respiratory Organs Sensitization/Skin Sensitization

This product is not reported to have any skin sensitization effects.

Generative Cell Mutagenicity

This material has been positive in a mutagenicity study.

Carcinogenicity

A: General Product Information

Suspected of causing cancer.

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Studies have shown that similar products produce skin tumors in laboratory animals following repeated applications without washing or removal. The significance of this finding to human exposure has not been determined. Other studies with active skin carcinogens have shown that washing the animal's skin with soap and water between applications reduced tumor formation.

B: Component Carcinogenicity

Fuels, diesel, no. 2 (68476-34-6)

ACGIH: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans (listed under Diesel fuel)

Naphthalene (91-20-3)

ACGIH: A4 - Not Classifiable as a Human Carcinogen

NTP: Reasonably Anticipated To Be A Human Carcinogen (Possible Select Carcinogen)

IARC: Monograph 82 [2002] (Group 2B (possibly carcinogenic to humans))

Reproductive Toxicity

This product is not reported to have any reproductive toxicity effects.

Specified Target Organ General Toxicity: Single Exposure

This product is not reported to have any specific target organ general toxicity single exposure effects.

Specified Target Organ General Toxicity: Repeated Exposure

This product is not reported to have any specific target organ general toxicity repeat exposure effects.

Aspiration Respiratory Organs Hazard

The major health threat of ingestion occurs from the danger of aspiration (breathing) of liquid drops into the lungs, particularly from vomiting. Aspiration may result in chemical pneumonia (fluid in the lungs), severe lung damage, respiratory failure and even death.

*** Section 12 - Ecological Information ***

Ecotoxicity

A: General Product Information

Keep out of sewers, drainage areas and waterways. Report spills and releases, as applicable, under Federal and State regulations.

B: Component Analysis - Ecotoxicity - Aquatic Toxicity

Fuels, diesel, no. 2 (68476-34-6)

Test & Species	Conditions
96 Hr LC50 Pimephales promelas	35 mg/L [flow-through]

Naphthalene (91-20-3)

Test & Species	Conditions
96 Hr LC50 Pimephales promelas	5.74-6.44 mg/L [flow-through]
96 Hr LC50 Oncorhynchus mykiss	1.6 mg/L [flow-through]
96 Hr LC50 Oncorhynchus mykiss	0.91-2.82 mg/L [static]
96 Hr LC50 Pimephales promelas	1.99 mg/L [static]

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96 Hr LC50 Lepomis macrochirus	31.0265 mg/L [static]
72 Hr EC50 Skeletonema costatum	0.4 mg/L
48 Hr LC50 Daphnia magna	2.16 mg/L
48 Hr EC50 Daphnia magna	1.96 mg/L [Flow through]
48 Hr EC50 Daphnia magna	1.09 - 3.4 mg/L [Static]

Persistence/Degradability

No information available.

Bioaccumulation

No information available.

Mobility in Soil

No information available.

*** Section 13 - Disposal Considerations ***

Waste Disposal Instructions

See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations.

Disposal of Contaminated Containers or Packaging

Dispose of contents/container in accordance with local/regional/national/international regulations.

*** Section 14 - Transportation Information ***

DOT Information

Shipping Name: Diesel Fuel

NA #: 1993 Hazard Class: 3 Packing Group: III

Placard:



*** Section 15 - Regulatory Information ***

Regulatory Information

Component Analysis

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) and/or CERCLA (40 CFR 302.4).

Naphthalene (91-20-3)

CERCLA: 100 lb final RQ; 45.4 kg final RQ

SARA Section 311/312 – Hazard Classes

<u>Acute Health</u>	<u>Chronic Health</u>	<u>Fire</u>	<u>Sudden Release of Pressure</u>	<u>Reactive</u>
X	X	X	--	--

Safety Data Sheet

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SARA SECTION 313 - SUPPLIER NOTIFICATION

This product may contain listed chemicals below the de minimis levels which therefore are not subject to the supplier notification requirements of Section 313 of the Emergency Planning and Community Right- To-Know Act (EPCRA) of 1986 and of 40 CFR 372. If you may be required to report releases of chemicals listed in 40 CFR 372.28, you may contact Hess Corporate Safety if you require additional information regarding this product.

State Regulations

Component Analysis - State

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA	RI
Fuels, diesel, no. 2	68476-34-6	No	No	No	Yes	No	No
Naphthalene	91-20-3	Yes	Yes	Yes	Yes	Yes	No

The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):

WARNING! This product contains a chemical known to the state of California to cause cancer.

Component Analysis - WHMIS IDL

No components are listed in the WHMIS IDL.

Additional Regulatory Information

Component Analysis - Inventory

Component	CAS #	TSCA	CAN	EEC
Fuels, diesel, no. 2	68476-34-6	Yes	DSL	EINECS
Naphthalene	91-20-3	Yes	DSL	EINECS

*** Section 16 - Other Information ***

NFPA® Hazard Rating

Health	1
Fire	2
Reactivity	0



HMIS® Hazard Rating

Health	1*	Slight
Fire	2	Moderate
Physical	0	Minimal

*Chronic

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SDS No. 9909

Key/Legend

ACGIH = American Conference of Governmental Industrial Hygienists; ADG = Australian Code for the Transport of Dangerous Goods by Road and Rail; ADR/RID = European Agreement of Dangerous Goods by Road/Rail; AS = Standards Australia; DFG = Deutsche Forschungsgemeinschaft; DOT = Department of Transportation; DSL = Domestic Substances List; EEC = European Economic Community; EINECS = European Inventory of Existing Commercial Chemical Substances; ELINCS = European List of Notified Chemical Substances; EU = European Union; HMIS = Hazardous Materials Identification System; IARC = International Agency for Research on Cancer; IMO = International Maritime Organization; IATA = International Air Transport Association; MAK = Maximum Concentration Value in the Workplace; NDSL = Non-Domestic Substances List; NFPA = National Fire Protection Association; NOHSC = National Occupational Health & Safety Commission; NTP = National Toxicology Program; STEL = Short-term Exposure Limit; TDG = Transportation of Dangerous Goods; TLV = Threshold Limit Value; TSCA = Toxic Substances Control Act; TWA = Time Weighted Average

Literature References

None

Other Information

Information presented herein has been compiled from sources considered to be dependable, and is accurate and reliable to the best of our knowledge and belief, but is not guaranteed to be so. Since conditions of use are beyond our control, we make no warranties, expressed or implied, except those that may be contained in our written contract of sale or acknowledgment.

Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, vendor assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material, even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in their use of the material.

End of Sheet

**Attachment J
EMISSION POINTS DATA SUMMARY SHEET**

Table 1: Emissions Data															
Emission Point ID No. (Must match Emission Units Table & Plot Plan)	Emission Point Type ¹	Emission Unit Vented Through This Point (Must match Emission Units Table & Plot Plan)		Air Pollution Control Device (Must match Emission Units Table & Plot Plan)		Vent Time for Emission Unit (chemical processes only)		All Regulated Pollutants - Chemical Name/CAS ³ (Speciate VOCs & HAPS)	Maximum Potential Uncontrolled Emissions ⁴		Maximum Potential Controlled Emissions ⁵		Emission Form or Phase (At exit conditions, Solid, Liquid or Gas/Vapor)	Est. Method Used ⁶	Emission Concentration (ppmv or mg/m ³)
		ID No.	Source	ID No.	Device Type	Short Term ²	Max (hr/yr)		lb/hr	ton/yr*	lb/hr	ton/yr**			
TB-1E	Vert stack	TB-1S		None				PM SO2 NOX CO VOCnm	0.278 3.156 3.063 2.155 0.309	0.560 6.362 6.176 4.345 0.623	0.278 3.156 3.063 2.155 0.309	0.560 6.362 6.176 4.345 0.623	Gas	O Emissions data provided by manufacturer	

*24-hr x 7 days per week x 24 weeks = 4032 hr/yr

The EMISSION POINTS DATA SUMMARY SHEET provides a summation of emissions by emission unit. Note that uncaptured process emission unit emissions are not typically considered to be fugitive and must be accounted for on the appropriate EMISSIONS UNIT DATA SHEET and on the EMISSION POINTS DATA SUMMARY SHEET. Please note that total emissions from the source are equal to all vented emissions, all fugitive emissions, plus all other emissions (e.g. uncaptured emissions). Please complete the FUGITIVE EMISSIONS DATA SUMMARY SHEET for fugitive emission activities.

¹ Please add descriptors such as upward vertical stack, downward vertical stack, horizontal stack, relief vent, rain cap, etc.

² Indicate by "C" if venting is continuous. Otherwise, specify the average short-term venting rate with units, for intermittent venting (i.e., 15 min/hr). Indicate as many rates as needed to clarify frequency of venting (e.g., 5 min/day, 2 days/wk).

³ List all regulated air pollutants. Speciate VOCs, including all HAPs. Follow chemical name with Chemical Abstracts Service (CAS) number. LIST Acids, CO, CS₂, VOCs, H₂S, Inorganics, Lead, Organics, O₃, NO, NO₂, SO₂, SO₃, all applicable Greenhouse Gases (including CO₂ and methane), etc. DO NOT LIST H₂, H₂O, N₂, O₂, and Noble Gases.

⁴ Give maximum potential emission rate with no control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).

⁵ Give maximum potential emission rate with proposed control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).

⁶ Indicate method used to determine emission rate as follows: MB = material balance; ST = stack test (give date of test); EE = engineering estimate; O = other (specify).

⁷ Provide for all pollutant emissions. Typically, the units of parts per million by volume (ppmv) are used. If the emission is a mineral acid (sulfuric, nitric, hydrochloric or phosphoric) use units of milligram per dry cubic meter (mg/m³) at standard conditions (68 °F and 29.92 inches Hg) (see 45CSR7). If the pollutant is SO₂, use units of ppmv (See 45CSR10

**Attachment J
EMISSION POINTS DATA SUMMARY SHEET**

Table 2: Release Parameter Data

Emission Point ID No. (Must match Emission Units Table)	Inner Diameter (ft.)	Exit Gas		Emission Point Elevation (ft)			UTM Coordinates (km)	
		Temp. (°F)	Volumetric Flow ¹ (acfm) at operating conditions	Velocity (fps)	Ground Level (Height above mean sea level)	Stack Height ² (Release height of emissions above ground level)	Northing	Easting
TB-1E	2	375	11044	61.9	670	21	685	4381

¹ Give at operating conditions. Include inerts.
² Release height of emissions above ground level.

Attachment L
Emission Unit Data Sheet
(INDIRECT HEAT EXCHANGER)

Control Device ID No. (must match List Form): TB-1S (no control device)

Equipment Information

1. Manufacturer: Cleaver Brooks	2. Model No. CBRLE-200-800 Serial No. T2986-1-1
3. Number of units: 1	4. Use Temporary steam generation for manufacturing while boilers # 15, 16 & 17 are repaired
5. Rated Boiler Horsepower: 800 hp	6. Boiler Serial No.:
7. Date constructed: 2012	8. Date of last modification and explain:
9. Maximum design heat input per unit: 30.88 $\times 10^6$ BTU/hr	10. Peak heat input per unit: 30.88 $\times 10^6$ BTU/hr
11. Steam produced at maximum design output: 27600 LB/hr 125 psig	12. Projected Operating Schedule: Hours/Day 24 Days/Week 7 Weeks/Year 24
13. Type of firing equipment to be used: <input type="checkbox"/> Pulverized coal <input type="checkbox"/> Spreader stoker <input checked="" type="checkbox"/> Oil burners <input type="checkbox"/> Natural Gas Burner <input type="checkbox"/> Others, specify	14. Proposed type of burners and orientation: <input type="checkbox"/> Vertical <input checked="" type="checkbox"/> Front Wall <input type="checkbox"/> Opposed <input type="checkbox"/> Tangential <input type="checkbox"/> Others, specify
15. Type of draft: <input checked="" type="checkbox"/> Forced <input type="checkbox"/> Induced	16. Percent of ash retained in furnace: Trace %
17. Will flyash be reinjected? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	18. Percent of carbon in flyash: Trace %

Stack or Vent Data

19. Inside diameter or dimensions: 2 ft.	20. Gas exit temperature: 375 °F
21. Height: 5 (675 if including empty elevation) ft.	22. Stack serves: <input checked="" type="checkbox"/> This equipment only <input type="checkbox"/> Other equipment also (submit type and rating of all other equipment exhausted through this stack or vent)
23. Gas flow rate: 31740 PPH ft ³ /min	
24. Estimated percent of moisture: %	

Emissions Stream

37. What quantities of pollutants will be emitted from the boiler before controls?

Pollutant	Pounds per Hour lb/hr	grain/ACF	@ °F	PSIA
CO	2.155	0.2277		
Hydrocarbons				
NO _x	3.063	0.0323		
Pb				
PM ₁₀	0.278	0.0029		
SO ₂	3.156	0.0333		
VOCs	0.309	0.0033		
Other (specify)				

38. What quantities of pollutants will be emitted from the boiler after controls?

Pollutant	Pounds per Hour lb/hr	grain/ACF	@ °F	PSIA
CO	2.155	0.2277		
Hydrocarbons				
NO _x	3.063	0.0323		
Pb				
PM ₁₀	0.278	0.0029		
SO ₂	3.156	0.0333		
VOCs	0.309	0.0033		
Other (specify) Hg				

39. How will waste material from the process and control equipment be disposed of?
 There should be no ash or waste material from the boiler since it will run on #2 FO.

40. Have you completed an *Air Pollution Control Device Sheet(s)* for the control(s) used on this Emission Unit. NA

41. Have you included the *air pollution rates* on the Emissions Points Data Summary Sheet? Yes

42. Proposed Monitoring, Recordkeeping, Reporting, and Testing

Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING PLAN: Please list (1) describe the process parameters and how they were chosen (2) the ranges and how they were established for monitoring to demonstrate compliance with the operation of this process equipment operation or air pollution control device.

1. Fuel analysis with each shipment of oil to include sulfur content to insure sulfur at 0.05% or less.
2. Fuel analysis from gas company at least monthly.
2. Daily fuel use and hour records
3. Maximum fuel use of 240 gal/hr and 967,680 gallons of #2 fuel oil per year.
4. Method 22 observations monthly. Any observances would be handled according to Title V permit language.

TESTING PLAN: Please describe any proposed emissions testing for this process equipment or air pollution control device.

1. If the director would require it, stack testing will be conducted in accordance with appropriate EPA methods.

RECORDKEEPING: Please describe the proposed recordkeeping that will accompany the monitoring.

1. Daily records of fuel use and hours of operation to be maintained on site for 5 years.
2. Sulfur analysis records to be maintained on site for 5 years.
3. Rolling annual total by pollutant calculated monthly.

REPORTING: Please describe the proposed frequency of reporting of the recordkeeping.

1. Excess emissions or opacity shall be reported as required in Reg.2 9.3.a and 9.3.b.
2. All emissions shall be included in the annual emissions inventory and certified emission statements.

43. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty.
Not known.

ATTACHMENT N
ATK-ABL Temporary Boiler Emissions Estimate
Maximum PTE for use of Temp Boiler

Max hourly #2 FO rate 240 gal/hr
 MDHI: 30.88 mmBtu/hr
 AFCM 11044
 Grains/lb 7000 grains/lb
 Exhaust Flow 3715.00 fpm
 61.91667 fps

Boiler #	Fuel	S%	mmBTU/hr	Max hr/yr	max feed (gal or cf/hr)	Max feed (gal or cf/yr)
Temp Boiler (FO2)	FO #2	0.4	30.88	4032	240.0	967680

0.5 %S is based on maximum allowable sulfur content specified in existing permit

Max FO based on running on oil 24 hours x 7 day per week x 24 weeks

Emission Factors	PM10	SO2	NOx	CO	VOCnm
Boiler #	lb/mmBtu	lb/mmBtu	lb/mmBtu	lb/mmBtu	lb/mmBtu
Temp Boiler (FO2)	0.0090	0.1022	0.0992	0.0698	0.010

Emission Factors were supplied by vendor

Emission Rates	PM10		SO2		NOx		CO		VOCnm	
	ave lb/hr	TPY								
Temp Boiler (FO2)	0.278	0.560	3.156	6.362	3.063	6.176	2.155	4.345	0.309	0.623

Grains/ACF	PM10	SO2	NOx	CO	VOCnm
Boiler #	lb/mmBtu	lb/mmBtu	lb/mmBtu	lb/mmBtu	lb/mmBtu
Temp Boiler (FO2)	0.002936	0.03334	0.03236	0.02277	0.00326

Grains/ACF= emission rate of the pollutant of interest in lb/hr * (7000 gr/lb)/(number of ACFM in the exhaust)/60

**ATTACHMENT O
MONITORING, RECORDKEEPING, REPORTING AND TESTING PLAN**

Monitoring

Proposed Emission Limits Table

1.

Source ID No.	Source Description	Emission Point ID No.	PM (lb/hr)	PM (TPY)*	SO2 (lb/hr)	SO2 (TPY)*	NOx (lb/hr)	NOx (TPY)*
TB-1S	#2 FO-fired Temp Boiler	TB1E	0.278	0.280	3.156	3.181	3.063	3.088
Source ID No.	Source Description	Emission Point ID No.	CO (lb/hr)	CO (TPY)*	VOC (lb/hr)	VOC (TPY)*		
TB-1S	#2 FO-fired Temp Boiler	TB1E	2.155	2.173	0.309	0.311		

*24-hr x 7 days per week x 24 weeks = 4032 hr/yr

2. Visual emission observations shall be conducted weekly during periods of normal facility operation to determine if the unit has visible emissions using procedures outlined in 40CFR60 Appendix A, Method 22 for a minimum of 4 consecutive weeks. If in compliance, then monthly visual emission observations shall be conducted.

Anytime when not in compliance with the opacity limit per 45CSR§2-3.1 for any emission point, visual emission observations shall revert back to the weekly frequency requirement and begin the progressive monitoring cycle again.

[NOTE: ATK recommends that the language of Title V permit term 4.2.4 be used in the R13 permit for the temporary boiler.]

3. All required monitoring and data collection per 40CFR63 Subpart DDDDD (Boiler MACT) shall be performed.

Recordkeeping

- Company shall maintain monthly and annual records of hours of operation, start-up and shut-down, fuel use, and fuel quality. Compliance with emission limits shall be determined using a rolling annual total calculated on a monthly basis.
- Records shall be maintained on site for a period of no less than five years. Records shall be made available and certified upon request of the Director.
- All required recordkeeping per 40CFR63 Subpart DDDDD (Boiler MACT) shall be performed.

Reporting

1. Annual emissions inventory and certified emission statement shall be submitted annually as required by Reg. 30.
2. All required reporting and notifications per 40CFR63 Subpart DDDDD (Boiler MACT) shall be submitted.

Testing

1. All required stack testing per 40CFR63 Subpart DDDDD (Boiler MACT) shall be performed.



Alliant Techsystems Operations, LLC
Allegany Ballistics Laboratory
210 State Route 956
Rocket Center, WV 26726

www.atk.com

February 5, 2015

Notice is given that Alliant Techsystems Operations LLC has applied to the West Virginia Department of Environmental Protection, Division of Air Quality, for a Temporary Permit for a 800-HP #2 FO-fired temporary boiler located on 210 State Route, near Keyser in Mineral County, West Virginia. The latitude and longitude coordinates are: 39.561degrees latitude, -78.833 degrees longitude.

The applicant estimates that the potential change to discharge the following Regulated Air Pollutants will be:

Volatile Organic Compounds (VOC) – 0.309 lb/hr and 0.623 TPY;
Carbon Monoxide (CO) – 2.155 lb/hr and 4.345 TPY;
Particulate Matter (PM) – 0.278 lb/hr and 0.560 TPY;
Nitrogen Oxides (NOx) – 3.063 lb/hr and 6.176 TPY;
Sulfur Dioxide (SO₂) – 3.156 lb/hr and 6.362 TPY.

Startup of operation is planned to begin on or about the 11th day of February, 2015. Written comments will be received by the West Virginia Department of Environmental Protection, Division of Air Quality, 601 57th Street, SE, Charleston, West Virginia, 25304, for a period of 30 days calendar days from the date of publication of this notice.

Any questions regarding this permit application should be directed to the DAQ at (304) 926-0499, extension 1227, during normal business hours.

Dated this the 5th day of February 2015.

By: Alliant Techsystems Operations LLC
Patrick Nolan
Vice President & General Manager
210 State Route 956
Rocket Center, West Virginia 26726-3548

APPLICATION FEE

Permit application fee for the Temporary Boiler Permit being paid by VISA upon receipt of permit application number from DAQ.

Please contact Sandra Atkins @ WVDEP.

Cleaver Brooks Temporary Boiler

PREDICTED PERFORMANCE - STACK EMISSIONS with 18% FGR (corrected to 3% O2, dry)

POWERHOUSE UNIT NO.	B-533 or equal	
BOILER MODEL	CBLE200-800	
BOILER / BURNER MFG	Cleaver Brooks	
BOILER CAPACITY	800	HP
FUEL INPUT (#2 OIL)	30.88	MMBTU/HR *
FUEL INPUT (NAT GAS)	32.10	MMBTU/HR *
FUEL INPUT (PROPANE)	32.10	MMBTU/HR *
STEAM FLOW, F&A 212 F / 0 PSI	27600	PPH
STEAM PRESSURE, OPERATING	125	PSIG

*Note: Fuel input and efficiencies based on manufacturers published data.

NATURAL GAS (subject to fuel analysis)				
COMPONENT	PPM	#/MMBTU	#/HR	#/DAY
CO	50.00	0.0365	1.1714	28.1131
NOx	30.00	0.0357	1.1463	27.5107
SOx	1.00	0.0017	0.0535	1.2838
VOC (as Non CH4)	12.00	0.0048	0.1541	3.6974
Particulates (PM10)	-----	0.0060	0.1926	4.6218

PROPANE (subject to fuel analysis)				
COMPONENT	PPM	#/MMBTU	#/HR	#/DAY
CO	50.00	0.0365	1.1714	28.1131
NOx	40.00	0.0476	1.5284	36.6809
SOx	1.00	0.0017	0.0535	1.2838
VOC (as Non CH4)	12.00	0.0048	0.1541	3.6974
Particulates (PM10)	-----	0.0060	0.1926	4.6218

#2 OIL (Subject to Fuel Analysis)				
COMPONENT	PPM	#/MMBTU	#/HR	#/DAY
CO	90.00	0.0698	2.1558	51.7387
NOx	74.00	0.0992	3.0627	73.5054
SOx	55.00	0.1022	3.1564	75.7542
VOC (as Non CH4)	20.00	0.0100	0.3088	7.4101
Particulates (PM10)	-----	0.0090	0.2779	6.6691

EXHAUST GAS FLOW	31740 PPH	11044 ACFM
EXHAUST GAS TEMP.	375 DEG. F.	191 DEG C.
STACK DIAMETER	24.00 IN.	
EXHAUST VELOCITY	3517 FPM	

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