

**May 2016
Project No. 16-021**

45CSR13 APPLICATION FOR A CLASS II ADMINISTRATIVE UPDATE TO R13-2679E

**PRATT & WHITNEY ENGINE SERVICES, INC.
BRIDGEPORT, WEST VIRGINIA
FACILITY ID NO. 033-00005**

PREPARED BY:

**MSES Consultants, Inc.
P.O. Drawer 190
Clarksburg, West Virginia 26302-0190
(304) 624-9700**

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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): Pratt & Whitney Engine Services, Inc.		2. Federal Employer ID No. (FEIN): 5 5 0 5 2 1 7 9 4	
3. Name of facility (if different from above): Bridgeport		4. The applicant is the: <input type="checkbox"/> OWNER <input type="checkbox"/> OPERATOR <input checked="" type="checkbox"/> BOTH	
5A. Applicant's mailing address: 1525 Midway Park Road Bridgeport, WV 26330		5B. Facility's present physical address: 1525 Midway Park Road Bridgeport, WV 26330	
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: United Technologies			
8. Does the applicant own, lease, have an option to buy or otherwise have control of the <i>proposed site</i> ? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO - If YES, please explain: Applicant owns the site - 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.): Aircraft engine maintenance and repair facility		10. North American Industry Classification System (NAICS) code for the facility: 336412	
11A. DAQ Plant ID No. (for existing facilities only): 0 3 3 - 0 0 0 5		11B. List all current 45CSR13 and 45CSR30 (Title V) permit numbers associated with this process (for existing facilities only): R13-2679E	

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**.

From I-79 exit 119 follow US Route 50 East through Bridgeport. Follow US 50 East approximately 4 miles to Midway Park Road. Turn left onto Midway Park Road and continue approximately 0.5 miles to facility on the left.

12.B. New site address (if applicable):

NA

12C. Nearest city or town:

Bridgeport

12D. County:

Harrison

12.E. UTM Northing (KM): 4350.1

12F. UTM Easting (KM): 567.0

12G. UTM Zone: 17

13. Briefly describe the proposed change(s) at the facility: Revise SO₂ emission limits based on new data.

14A. Provide the date of anticipated installation or change: 09/01/2016

- 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:

09/01/2016

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 52

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 type="checkbox"/> Indirect Heat Exchanger	
<input checked="" type="checkbox"/> General Emission Unit, specify Aircraft engine test cells		

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
<input type="checkbox"/> 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 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: _____
(Please use blue ink) (Please use blue ink)

35B. Printed name of signee: Louis Gaudreau		35C. Title: General Manager
35D. E-mail: Louis.Gaudreau@pwc.ca	36E. Phone: 304-842-5422	36F. FAX: 304-842-1242
36A. Printed name of contact person (if different from above): Bruce Henderson		36B. Title: EH&S Manager
36C. E-mail: Bruce.Henderson@pwc.ca	36D. Phone: 304-842-1360	36E. FAX: 304-842-1242

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 type="checkbox"/> Attachment C: Installation and Start Up Schedule | <input type="checkbox"/> Attachment M: Air Pollution Control Device Sheet(s) |
| <input type="checkbox"/> Attachment D: Regulatory Discussion | <input checked="" type="checkbox"/> Attachment N: Supporting Emissions Calculations |
| <input type="checkbox"/> Attachment E: Plot Plan | <input 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 checked="" type="checkbox"/> Attachment Q: Business Confidential Claims |
| <input 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.

ATTACHMENT A
Business Certificate

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

**ISSUED TO:
PRATT & WHITNEY ENGINE SERVICES INC
1 W BENEDUM INDUSTRIAL DR
BRIDGEPORT, WV 26330-9642**

BUSINESS REGISTRATION ACCOUNT NUMBER: 1035-5997

This certificate is issued on: 06/25/2010

*This certificate is issued by
the West Virginia State Tax Commissioner
in accordance with W.Va. Code § 11-12.*

*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.

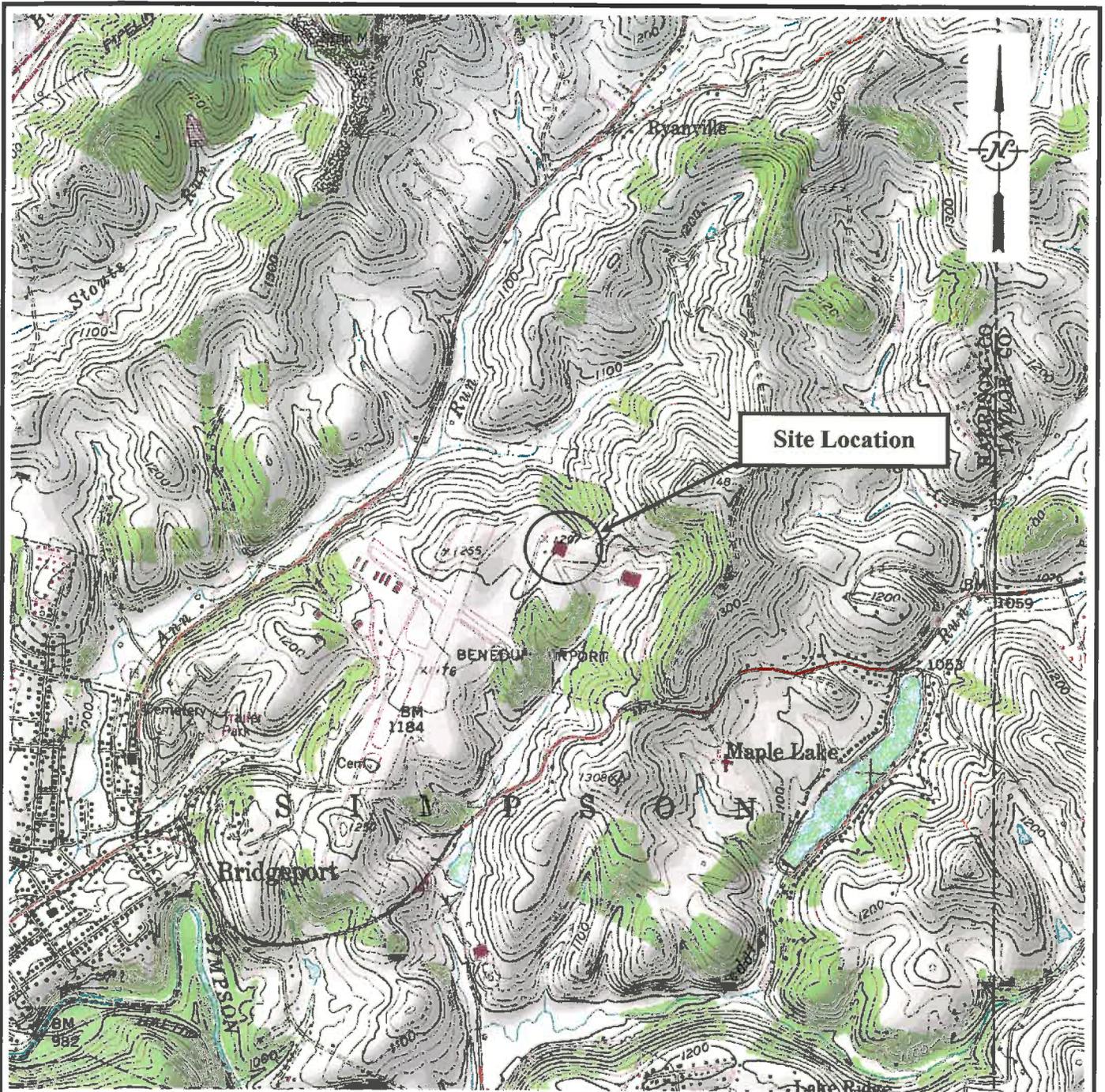
This certificate shall be permanent until cessation of the business for which the certificate of registration was granted or until it is suspended, revoked or cancelled by the Tax Commissioner.

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 B

Map(s)



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

Rosemont, WV

Vicinity Map

Scale 1" = 2000'

MSES Consultants, Inc.
 Clarksburg, West Virginia

PRATT & WHITNEY
 Engine Services

Attachment B

ATTACHMENT G
Process Description

ATTACHMENT G

Process Description

Engine Test Cell Operations

PWES as described in its Regulation 13 Permit (R13-2679E) has a variety of operations at the Bridgeport, WV facility. One of the operations involves Test Cells in which aircraft engines are tested in simulated normal operating conditions after an engine is serviced.

The current permit requires PWES to track the number of engines tested and has maximum annual emission limits for the pollutants associated with the test cells. Prior to accepting engines for testing, PWES reviews the engine potential emissions to verify that the engine is acceptable for testing at Bridgeport. In reviewing potential new engine models, new emission data for engines to be tested, and the varying sulfur content in fuel (Jet A), which could impact the sulfur dioxide emissions, PWES believes their current permit limit should be increased. The current permit limit for annual sulfur dioxide (SO₂) emissions is 0.2 tons (400 pounds) per year for Test Cells #5 and #6 combined.

In order to provide additional flexibility in the engines that can be tested at the facility, PWES has prepared this Class II Administrative Update to increase the potential annual emissions for the test cells with respect to SO₂.

The proposed increase in annual emissions of SO₂ is to ensure permit compliance with respect to any future conditions (new engine models, engine emission factors, and fuel sulfur content variations). PWES proposes to increase the SO₂ annual limit to one and a half (1.5) tons per year. PWES requests that this limit not be split between the various test cells but considered a facility test cell aggregate emission limit.

PWES requests that the permit terms and conditions be maintained as currently required with the exception of the increase in the SO₂ annual emission limit to 1.5 tons per year for the test cell operations and the additional requirement that PWES maintain the specification sheet for each load of Jet A fuel received for documentation of sulfur content for a three (3) year time period.

ATTACHMENT I

Emission Units Table

ATTACHMENT J

Emission Points Data Summary 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 ⁷ (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			
146	Upward Vertical Stack	TC1	Test Cell 1	NA	None	NA	NA	CO NOx VOC SO ₂	4.88 3.07 1.04 0.16	NA	NA	NA	Gas/Vapor		
151	Upward Vertical Stack	TC3	Test Cell 3	NA	None	NA	NA	CO NOx VOC SO ₂	4.88 3.07 1.04 0.16	NA	NA	NA	Gas/Vapor		
87	Upward Vertical Stack	TC5	Test Cell 5	NA	None	NA	NA	CO NOx VOC SO ₂ PM	22.18 34.02 13.19 0.49 0.09	NA	NA	NA	Gas/Vapor		
164	Upward Vertical Stack	TC6	Test Cell 6	NA	None	NA	NA	CO NOx VOC SO ₂ PM	22.18 34.02 7.89 0.65 0.09	NA	NA	NA	Gas/Vapor		

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 (ie., 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, SO_x, 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 L

Emissions Unit Data Sheet(s)

Attachment L
EMISSIONS UNIT DATA SHEET
GENERAL

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.

Identification Number (as assigned on *Equipment List Form*): TC1

<p>1. Name or type and model of proposed affected source:</p> <p>Aircraft engine test cell</p>
<p>2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicated the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.</p>
<p>3. Name(s) and maximum amount of proposed process material(s) charged per hour:</p> <p>A maximum of 730 engines per year may be tested in the test cell.</p>
<p>4. Name(s) and maximum amount of proposed material(s) produced per hour:</p> <p>None</p>
<p>5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants:</p> <p>None</p>

* The identification number which appears here must correspond to the air pollution control device identification number appearing on the *List Form*.

6. Combustion Data (if applicable):					
(a) Type and amount in appropriate units of fuel(s) to be burned:					
An average of 48,000 gallons of jet fuel per year.					
(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash:					
NA					
(c) Theoretical combustion air requirement (ACF/unit of fuel):					
		@		°F and psia.	
(d) Percent excess air:					
(e) Type and BTU/hr of burners and all other firing equipment planned to be used:					
NA					
(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:					
NA					
(g) Proposed maximum design heat input:				NA × 10 ⁶ BTU/hr.	
7. Projected operating schedule:					
Hours/Day	24	Days/Week	7	Weeks/Year	52

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used:

	@	°F and psia
a. NO _x	3.07 tpy lb/hr	grains/ACF
b. SO ₂	0.16 tpy lb/hr	grains/ACF
c. CO	4.88 tpy lb/hr	grains/ACF
d. PM ₁₀	lb/hr	grains/ACF
e. Hydrocarbons	1.04 tpy lb/hr	grains/ACF
f. VOCs	lb/hr	grains/ACF
g. Pb	lb/hr	grains/ACF
h. Specify other(s)	lb/hr	grains/ACF
	lb/hr	grains/ACF
	lb/hr	grains/ACF
	lb/hr	grains/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.

9. 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

RECORDKEEPING

Number of tests conducted per month per engine type.
 Fuel usage per month.

REPORTING

None proposed

TESTING

None proposed

MONITORING. PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS PROCESS EQUIPMENT OPERATION/AIR POLLUTION CONTROL DEVICE.

RECORDKEEPING. PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.

REPORTING. PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

TESTING. PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THIS PROCESS EQUIPMENT/AIR POLLUTION CONTROL DEVICE.

10. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty

Not applicable.

Attachment L
EMISSIONS UNIT DATA SHEET
GENERAL

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.

Identification Number (as assigned on *Equipment List Form*): TC3

<p>1. Name or type and model of proposed affected source:</p> <p>Aircraft engine test cell</p>
<p>2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicated the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.</p>
<p>3. Name(s) and maximum amount of proposed process material(s) charged per hour:</p> <p>A maximum of 730 engines per year may be tested in the test cell.</p>
<p>4. Name(s) and maximum amount of proposed material(s) produced per hour:</p> <p>None</p>
<p>5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants:</p> <p>None</p>

* The identification number which appears here must correspond to the air pollution control device identification number appearing on the *List Form*.

6. Combustion Data (if applicable):

(a) Type and amount in appropriate units of fuel(s) to be burned:

An average of 48,000 gallons of jet fuel per year.

(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash:

NA

(c) Theoretical combustion air requirement (ACF/unit of fuel):

@

°F and

psia.

(d) Percent excess air:

(e) Type and BTU/hr of burners and all other firing equipment planned to be used:

NA

(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:

NA

(g) Proposed maximum design heat input:

NA

× 10⁶ BTU/hr.

7. Projected operating schedule:

Hours/Day

24

Days/Week

7

Weeks/Year

52

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used:		
@	°F and	psia
a. NO _x	3.07 tpy lb/hr	grains/ACF
b. SO ₂	0.16 tpy lb/hr	grains/ACF
c. CO	4.88 tpy lb/hr	grains/ACF
d. PM ₁₀	lb/hr	grains/ACF
e. Hydrocarbons	1.04 tpy lb/hr	grains/ACF
f. VOCs	lb/hr	grains/ACF
g. Pb	lb/hr	grains/ACF
h. Specify other(s)		
	lb/hr	grains/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.

9. 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

RECORDKEEPING

Number of tests conducted per month per engine type.
 Fuel usage per month.

REPORTING

None proposed

TESTING

None proposed

MONITORING. PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS PROCESS EQUIPMENT OPERATION/AIR POLLUTION CONTROL DEVICE.

RECORDKEEPING. PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.

REPORTING. PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

TESTING. PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THIS PROCESS EQUIPMENT/AIR POLLUTION CONTROL DEVICE.

10. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty

Not applicable.

Attachment L
EMISSIONS UNIT DATA SHEET
GENERAL

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.

Identification Number (as assigned on *Equipment List Form*): TC5

<p>1. Name or type and model of proposed affected source:</p> <p>Aircraft engine test cell</p>
<p>2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicated the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.</p>
<p>3. Name(s) and maximum amount of proposed process material(s) charged per hour:</p> <p>A maximum of 730 engines per year may be tested in the test cell.</p>
<p>4. Name(s) and maximum amount of proposed material(s) produced per hour:</p> <p>None</p>
<p>5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants:</p> <p>None</p>

* The identification number which appears here must correspond to the air pollution control device identification number appearing on the *List Form*.

6. Combustion Data (if applicable):			
(a) Type and amount in appropriate units of fuel(s) to be burned:			
An average of 144,000 gallons of jet fuel per year.			
(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash:			
NA			
(c) Theoretical combustion air requirement (ACF/unit of fuel):			
@		°F and psia.	
(d) Percent excess air:			
(e) Type and BTU/hr of burners and all other firing equipment planned to be used:			
NA			
(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:			
NA			
(g) Proposed maximum design heat input:		NA × 10 ⁶ BTU/hr.	
7. Projected operating schedule:			
Hours/Day	24	Days/Week	7
		Weeks/Year	52

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used:			
@	°F and		psia
a. NO _x	34.02 tpy	lb/hr	grains/ACF
b. SO ₂	0.49 tpy	lb/hr	grains/ACF
c. CO	22.18 tpy	lb/hr	grains/ACF
d. PM ₁₀	0.19 tpy	lb/hr	grains/ACF
e. Hydrocarbons	13.19 tpy	lb/hr	grains/ACF
f. VOCs		lb/hr	grains/ACF
g. Pb		lb/hr	grains/ACF
h. Specify other(s)		lb/hr	grains/ACF
		lb/hr	grains/ACF
		lb/hr	grains/ACF
		lb/hr	grains/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.

9. 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

RECORDKEEPING

Number of tests conducted per month per engine type.
 Fuel usage per month.

REPORTING

None proposed

TESTING

None proposed

MONITORING. PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS PROCESS EQUIPMENT OPERATION/AIR POLLUTION CONTROL DEVICE.

RECORDKEEPING. PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.

REPORTING. PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

TESTING. PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THIS PROCESS EQUIPMENT/AIR POLLUTION CONTROL DEVICE.

10. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty

Not applicable.

Attachment L
EMISSIONS UNIT DATA SHEET
GENERAL

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.

Identification Number (as assigned on *Equipment List Form*): TC6

<p>1. Name or type and model of proposed affected source:</p> <p>Aircraft engine test cell</p>
<p>2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicated the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.</p>
<p>3. Name(s) and maximum amount of proposed process material(s) charged per hour:</p> <p>A maximum of 730 engines per year may be tested in the test cell.</p>
<p>4. Name(s) and maximum amount of proposed material(s) produced per hour:</p> <p>None</p>
<p>5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants:</p> <p>None</p>

* The identification number which appears here must correspond to the air pollution control device identification number appearing on the *List Form*.

6. Combustion Data (if applicable):

(a) Type and amount in appropriate units of fuel(s) to be burned:

An average of 192,000 gallons of jet fuel per year.

(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash:

NA

(c) Theoretical combustion air requirement (ACF/unit of fuel):

@

°F and

psia.

(d) Percent excess air:

(e) Type and BTU/hr of burners and all other firing equipment planned to be used:

NA

(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:

NA

(g) Proposed maximum design heat input:

NA

× 10⁶ BTU/hr.

7. Projected operating schedule:

Hours/Day

24

Days/Week

7

Weeks/Year

52

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used:

@	°F and		psia
a. NO _x	34.02 tpy	lb/hr	grains/ACF
b. SO ₂	0.65 tpy	lb/hr	grains/ACF
c. CO	22.18 tpy	lb/hr	grains/ACF
d. PM ₁₀	0.19 tpy	lb/hr	grains/ACF
e. Hydrocarbons	7.89 tpy	lb/hr	grains/ACF
f. VOCs		lb/hr	grains/ACF
g. Pb		lb/hr	grains/ACF
h. Specify other(s)		lb/hr	grains/ACF
		lb/hr	grains/ACF
		lb/hr	grains/ACF
		lb/hr	grains/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.

9. 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

RECORDKEEPING

Number of tests conducted per month per engine type.
 Fuel usage per month.

REPORTING

None proposed

TESTING

None proposed

MONITORING. PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS PROCESS EQUIPMENT OPERATION/AIR POLLUTION CONTROL DEVICE.

RECORDKEEPING. PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.

REPORTING. PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

TESTING. PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THIS PROCESS EQUIPMENT/AIR POLLUTION CONTROL DEVICE.

10. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty

Not applicable.

ATTACHMENT N

Supporting Emissions Calculations

ATTACHMENT N

Sulfur Dioxide Calculations

Average Sulfur Content (wt%) = 0.023453 (Per fuel analysis of shipments received 01-01-16 through 4-30-16)

Total annual fuel usage = 432000 gallons (based on monthly fuel usage for each test cell x 12 months)

Total annual fuel usage = 2937600 pounds (@ 6.8 lb/gallon)

$2,937,600 \text{ lbs of fuel/year} \times 0.023453/100 = 688.97 \text{ lbs S}$

1 lb sulfur = 2 lbs SO₂

$688.97 \text{ lbs S} \times 2 \text{ lbs SO}_2/\text{lb S} = 1378 \text{ lb/year SO}_2$
0.689 tpy SO₂

PTE

assume 0.05 % sulfur in fuel

$\text{SO}_2 \text{ tpy} = 2,937,600 \text{ lbs of fuel/year} \times 0.05/100 \times \text{ton}/2000 \text{ lb} \times 2 \text{ lb SO}_2/\text{lb S} = 1.5 \text{ tpy SO}_2$

	Average Fuel Usage		tpy SO ₂	
Test Cell #1	4000 gal/mo x 12 mo/yr =	48000 gal/yr	326400 lbs/year	0.16
Test Cell #3	4000 gal/mo x 12 mo/yr =	48000 gal/yr	326400 lbs/year	0.16
Test Cell #5	12000 gal/mo x 12 mo/yr =	144000 gal/yr	979200 lbs/year	0.49
Test Cell #6	16000 gal/mo x 12 mo/yr =	192000 gal/yr	1305600 lbs/year	0.65
	Total =	432000 gal/yr	2937600 lbs/year	1.5

ATTACHMENT N

Annual Test Cell Emissions

Test Cell # 1 Average Number of Engine Tests Per Day =	2
Average Annual Emissions	
	(tpy)
CO	4.88
NOx	3.07
HC	1.04
SO2	0.16

Test Cell # 3 Average Number of Engine Tests Per Day =	2
Average Annual Emissions	
	(tpy)
CO	4.88
NOx	3.07
HC	1.04
SO2	0.16

Test Cell # 5 Average Number of Engine Tests Per Day =	2
Average Annual Emissions	
	(tpy)
CO	22.18
NOx	21.44
HC	13.19
SO2	0.49
PM	0.09

Test Cell # 6 Average Number of Engine Tests Per Day =	2
Average Annual Emissions	
	(tpy)
CO	22.18
NOx	21.44
HC	7.89
SO2	0.65
PM	0.19

Total Combined Annual Emissions (tons per year)

CO	54.1
NOx	49.0
HC	23.2
SO2	1.5
PM	0.3

ATTACHMENT P

Public Notice

AIR QUALITY PERMIT NOTICE

Notice of Application

Notice is given that Pratt & Whitney Engine Services, Inc. has applied to the West Virginia Department of Environmental Protection, Division of Air Quality, for a Class II Administrative Update for an aircraft engine maintenance and repair facility located near at 1525 Midway Park Drive in Bridgeport, Harrison County, West Virginia. The latitude and longitude coordinates are: 39.299539 north latitude, -80.222608 west longitude.

The applicant estimates an increase in the potential to discharge the following Regulated Air Pollutants: 1.3 tons per year of sulfur dioxide.

The change will take place on or about the first day of September, 2016. Written comments will be received by the West Virginia Department of Environmental Protection, Division of Air Quality, 601 57th Street, SE, Charleston, WV 25304, for at least 30 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 1250, during normal business hours.

Dated this the 8th day of June, 2016.

By: Pratt & Whitney Engine Services, Inc.
Louis Gaudreau
General Manager
1525 Midway Park Drive
Bridgeport, WV 26330