

**TECHNICAL EVALUATION  
AND  
PRELIMINARY DETERMINATION**

**Draft Air Permit No. 0990021-035-AC**

United Technologies Corporation  
SR 710, 17900 Beeline Highway  
Jupiter, FL 33478

Palm Beach County, Florida

Permitting & Compliance Authority:

Department of Health Palm Beach County  
Division of Environmental Public Health  
Air & Waste Section  
P.O. Box 29 (800 Clematis Street)  
West Palm Beach, FL 33402-0029

Air Permit Engineer: Laxmana Tallam, P.E.

## 1.0 APPLICATION INFORMATION

### 1.1 Applicant

United Technologies Corporation  
P.O. Box: 109600, MS 724-02  
West Palm Beach, FL 33410

*Authorized Representative:*

Michael O'Neill, Manager  
Assembly, Instrumentation, & Test Operations

### 1.2 Application Review

06/13/2013: Health Department received application for concurrent construction permit/Title V permit revision

## 2.0 FACILITY INFORMATION

### 2.1 Location

Pratt & Whitney  
SR 710, 17900 Beeline Highway, Jupiter, FL 33478  
UTM: Zone 17; 568.41 km E; 2975.84 km N

### 2.2 Standard Industrial Classification Code

Major Group Number	37	Transportation Equipment
Industry Group Number	372	Aircraft and Parts
Industry Number	3724	Aircraft Engines and Engine Parts

### 2.3 Regulatory Classification

This facility is a PSD facility. This facility is classified as a Title V facility based on the emissions of Nitrogen Oxides, Carbon Monoxide (CO), Sulfur dioxide (SO<sub>2</sub>). The facility is classified as a synthetic-minor source for individual and total hazardous air pollutants (HAPs).

## 3.0 PROJECT DESCRIPTION

UTC sold its Rocketdyne operations to Aerojet. The purpose of this permit is to remove the sold units, 015, 016, 018, 040, 066, and 080, from the permit. **The REVISED permit is issued to correct the descriptions of the emissions units and to revise the classification of the removed units to 'Inactive' status.**

### 3.1 FACILITY DESCRIPTION

Pratt & Whitney (P&W), a division of United Technologies Corporation (UTC); Sikorsky Aircraft Corporation (SAC), a subsidiary of UTC; and Fire Innovation Test (FIT) Center; operate adjacent facilities located on a combined 7,000-acre site in rural northwest Palm Beach County, Florida. Pratt & Whitney West Palm Beach is the company's principal jet engine test facility, primarily dedicated to research and development. P&W has over 50 test stands specifically designed to perform evaluations of rocket engines, jet engines, as well as individual components for each type of engine. Jet engines are tested for research and development programs. No jet engine manufacturing is performed at West Palm Beach.

Health Department issued a Title V air operation permit to P&W on July 17, 2004 (FDEP Permit No. 0990021-006-AV), and the facility was designated as a major source of criteria pollutants, including nitrogen oxides (NO<sub>x</sub>), volatile organic compounds (VOCs), and carbon monoxide (CO).

SAC, which is located on the same campus but in wholly separate buildings, operates the Development Flight Center (DFC), which is the company's site for helicopter development testing. SAC also operates the Florida Assembly Flight Operation (FAFO), which assembles helicopters from parts delivered to the facility (in space rented from P&W). SAC was issued a

Federally Enforceable State Operating Permit (FESOP) by Health Department on February 2, 2007 (FDEP Permit No. 0990185-004-AF) and is designated as a synthetic minor source for hazardous air pollutants (HAPs).

Pursuant to permit nos. 0990021-013-AV, issued on February 03, 2011, P&W and SAC were combined into one permit.

The Fire, Innovation & Testing (FIT) center began operations on February 15, 2012 at UTC campus. The FIT center is intended to provide UTC Fire & Security (UTCFS) the ability to test current and future fire suppression products. The Health Department issued an air construction permit no. 0990021-027-AC in December 2010 for this project. Indoor fire testing is performed in an approximately 70 ft x 70 ft enclosed building with a 50 ft high ceiling. The test fuel packages will consist of variety of materials such as wood, plastics, heptane, fuel oil (Number 2), vegetable oil, isopropyl alcohol, acetone, methane, propane, and other hydrocarbon fuels.

The air emissions from indoor testing at the FIT center will be controlled by two parallel Ultra High Efficiency Filter (UHF®) trains. Exhaust gases from test fires shall be transferred via two ducts which contain water spray nozzles to cool the gases in two parallel trains. Each train includes two UHF units in series where the contaminants are removed from the exhaust gas stream by the filter media. The maximum anticipated flow rate is 100,000 ACFM from the test hall. This scrubber is used to reduce smoke and other air pollutants. Emission calculations conservatively assume no removal efficiency for pollutants – other than for particulate matter – emitted from the test hall. The facility also performs limited outdoor burning to test and quality the fire suppression products including fire fighting foams and portable fire extinguishers. The outdoor burning is regulated according to Rules 62-296.320(3), 62-256.300, F.A.C.

The Title V permit revision (0990021-029-AV) was issued on January 30, 2013 that included the FIT center in UTC's Title V permit.

**FOLLOWING IS THE LIST OF EMISSION UNITS AT THE FACILITY.**

EU No.	R / U*/I**	Brief Description
<b><i>Following emission units are located at Pratt &amp; Whitney Rocketdyne (except as noted)</i></b>		
009	U	Diesel storage tanks
010	U	Jet fuel storage tanks
012	U	Jet fuel storage tank (F-8-CFF)
014	R	Paint spray booth (PS-1-TMC) used for refinishing support equipment
015	I	Closed-loop flush cleaning (BF-1-RL-10) using Vertrel MCA <i>[This emissions unit is sold and is removed from this permit per applicants' request]</i>
016	I	Boiler (BO-12-E6) fired by natural gas – 42 MMBTU/hr Heat Input <i>[This emissions unit is sold and is removed from this permit per applicants' request]</i>
018	I	Acid gas scrubbing system (AS-2-MPL) for plating operations <i>[This emissions unit is sold and is removed from this permit per applicants' request]</i>
022	R	Boilers (BO-1-MBH, BO-2-MBH) fired by natural gas – 54 MMBTU/hr Heat Input per Boiler. <i>[This EU is demolished and is removed per applicant's request]</i>
031	U	Diesel storage tanks (DL-19-SEGF and DL-20-SEGF)
037	U	AST Gasoline storage tanks
040	I	Heat treatment furnaces (FU-3-MHT and FU-4-MHT) fired by natural gas <i>[This emissions unit is sold and is removed from this permit per applicants' request]</i>
045	U	Water evaporator (EV-1-MW)
049	U	Plasma spray booths
059	U	Air and fuel heaters fired with natural gas
064	R	Paint spray booth (PSB-1-RTF)
065	U	Diesel engines powering fire protection pumps and cooling water pumps during rocket engine testing and emergency electrical generators
066	I	Boiler (BO-14-E8) fired by propane subject – 6.7 MMBTU/Hr Heat Input <i>[This emissions unit is sold and is removed from this permit per applicants' request]</i>
068	I	Emergency electrical generating facility <i>*The emissions Unit (EU 068) is split into different emissions units – one for each engine. Originally, these</i>

EU No.	R / U*/I**	Brief Description
		<i>emissions unit consisted of 8 generators (2 engines per each generator). But, one of the generators is shut down indefinitely. Hence, 14 new EUs are created for 14 engines (7 generators).</i>
069	U	JP-8 Fueled Jet engine test stands – Test Area A/C
070	U	Aerospace hand-wiping operations
071	U	Aerospace spray gun cleaning operations
072	U	Aerospace flush cleaning operations
073	U	Aerospace primer and topcoat application operations (PS – 2 – MM)
074	U	Aerospace waste storage and handling operations
077	R	Combustion turbine test stands – Fired by Natural Gas
078	I	<i>Vertrel Vapor Degreaser [This EU is demolished and is removed per applicant's request]</i>
079	R	Two JP8 fired Turbine Engines powering air compressors used for jet engine tests (also known as RAM Test Facility)
080	I	<i>E-8 Rocket Engine Test Stand – Methane Fuel Operations [This emissions unit is sold and is removed from this permit per applicants' request]</i>
088	U	Engine Parts Coating Process
089	U	Hot Acoustic Rig (HAR) at Test Stand B-6.  The HAR utilizes propane, air and water in evaluating design and performance of aircraft components at the B-6 test area. The EU consists of two propane burners, three propane storage tanks, with a capacity of 1000 gallons each.  SCC # 1-02-010-02: 1000 gallons of propane burned
090	R	FT4000 Gas Turbine Testing at Test Stand A4
091	R	FT4000 Compressor Reciprocating Internal Combustion Engine (RICE)
<b>Following emission units are located at Sikorsky Aircraft Corporation</b>		
081	R	SYK - Spray Booth (PS-14-SIK) for aerospace coating operations [Previously EU 006 in Sikorsky permit]
082	R	SYK - Spray Booth (PS-16-SIK) for aerospace coating operations [Previously EU 008 in Sikorsky permit]
083	R	SYK - Boiler (BO-4-SIK) ] fired by natural gas– 2.93 MMBTU/Hr Heat Input [Previously EU 009 in Sikorsky permit]
084	U	Alodine tank – about 10 gallon capacity
<b>Following emission unit is used to track VOC emissions from miscellaneous activities at P&amp;W and Sikorsky</b>		
085	U	Miscellaneous VOC/HAP Emissions Sources
<b>Following emission units are located at the FIT Center</b>		
086	R	Fire Innovation and Test Center
087	R	810 KW Diesel Generator – [see Appendix ICE]

\* (R)egulated and (U)nregulated: An unregulated emissions unit is an emissions unit which emits no “emissions-limited pollutant” and which is subject to no unit-specific work practice standard, though it may be subject to regulations applied on a facility-wide basis (e.g., unconfined emissions, odor, general opacity) or to regulations that require only that it be able to prove exemption from unit-specific emissions or work practice standards. Such emissions units and/or activities are neither “regulated nor exempt.

\*\* I = Inactive

#### 4.0 RULE APPLICABILITY

The facility is subject to preconstruction review under the applicable provisions of Chapter 403, Florida Statutes (F.S.), and Chapters 62-4, 62-210, and 62-212 of the Florida Administrative Code (F.A.C.). This facility is located in Palm Beach County, an area designated as "maintenance" for the pollutant ozone and attainment for all other criteria pollutants in accordance with Rule 62-204.340, F.A.C. The facility is subject to the following air pollution control provisions:

##### Florida Administrative Code

<b>Chapter 62-4, F.A.C.</b>	-	<b>Permits.</b>
<i>Rule 62-4.160, F.A.C.</i>	-	<i>General Permit Conditions</i>
<b>Chapter 62-204, F.A.C.</b>	-	<b>Air Pollution Control - General Provisions</b>
<b>Chapter 62-210, F.A.C.</b>	-	<b>Stationary Sources - General Requirements</b>
<i>Rule 62-210.300, F.A.C.</i>	-	<i>Permits Required.</i>
<i>Rule 62-210.350, F.A.C.</i>	-	<i>Public Notice and Comment.</i>
<i>Rule 62-210.370, F.A.C.</i>	-	<i>Reports.</i>
<i>Rule 62-210.650, F.A.C.</i>	-	<i>Circumvention.</i>
<i>Rule 62-210.700, F.A.C.</i>	-	<i>Excess Emissions.</i>
<b>Chapter 62-212, F.A.C.</b>	-	<b>Stationary Sources - Preconstruction Review</b>
<i>Rule 62-212.300, F.A.C.</i>	-	<i>General Preconstruction Review Requirements</i>
<b>Chapter 62-296, F.A.C.</b>	-	<b>Stationary Sources - Emissions Standards</b>
<i>Rule 62-296.320, F.A.C.</i>	-	<i>General Pollutant Emission Limiting Standards.</i>
<b>Chapter 62-297, F.A.C.</b>	-	<b>Stationary Sources - Emissions Monitoring</b>
<i>Rule 62-297.310, F.A.C.</i>	-	<i>General Test Requirements.</i>
<i>Rule 62-297.400, F.A.C.</i>	-	<i>EPA Test Methods Adopted by Reference</i>

##### Code of Federal Regulations

The generators are subject to **40 CFR Part 63 Subpart ZZZZ** "National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines."

The painting and stripping operations are subject to the requirements of **40 CFR Part 63 Subpart HHHHHH**, "National Emission Standard for Hazardous Air Pollutants for Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources."

Some of the reciprocating internal combustion engines (RICE) – such as EU 091 – are subject to the regulations of **40 CFR Part 60 Subpart JJJJ** "New Source Performance Standards for Spark Ignition (SI) Engines." A few newer generators are subject to the regulations of **40 CFR Part 60 Subpart IIII** "New Source Performance for Stationary Internal Combustion Engines." **Appendix ICE** contains the details of the generators and the applicable regulations.

Two paint spray booths (EUs 081 and 082) are subject to 40 CFR 63 Subpart HHHHHH "National Emission Standard for Hazardous Air Pollutants for Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources."

Pratt & Whitney (P&W) was at one time subject to the 40 CFR Part 63- Subpart GG (Aerospace MACT).

Emission units that were subject to Subpart GG have been removed from the facility or transferred to other operations outside the West Palm Beach facility. The facility shall notify the Department when it is engaged in jet engine activities.

This facility is not subject to 40 CFR Part 63 Subpart PPPP "National Emission Standards for Hazardous Air Pollutants for Engine Test Cells /Stands". Rule 40 CFR 63.9290(d) (2) states that the Subpart PPPP does not apply for a source that is used exclusively for testing rocket engines.

**5.0 POTENTIAL EMISSIONS OF CRITERIA POLLUTANTS/HAZARDOUS AIR POLLUTANTS**

<b>ESTIMATED FACILITY-WIDE ANNUAL EMISSIONS (Tons per Year)</b>									
United Technologies Corp.									
<b>EU ID</b>	<b>EU Description</b>	<b>R/U</b>	<b>NO<sub>x</sub></b>	<b>CO</b>	<b>PM</b>	<b>PM<sub>10</sub></b>	<b>SO<sub>2</sub></b>	<b>VOC</b>	<b>Total HAP</b>
012	Jet fuel storage tank F-8-CFF	R	NA	NA	NA	NA	NA	0.013	NA
014	Paint Spray Booth PS-1-TMC	R	NA	NA	NA	NA	NA	11.5	2.51
022	Boiler BO-2-MBH and Boiler BO-2-MBH	R	45.05	37.84	3.42	3.42	0.27	2.48	0.81
049	Plasma spray booths	U			0.005			0.25	
059	Air and Fuel Heaters	U	25.93	21.78	1.97	1.97	0.16	1.43	0.47
064	Paint Spray Booth PSB-1-RTF	R	NA	NA	NA	NA	NA	2.84	4.74
068 <sup>1</sup>	Emergency Electrical Generators	R	131	2.37	2.8	2.3	4.22	3.6	0.06
069	Jet Engine Test Stands	U	2,611.20	693.6	81.6	18.63	408	73.44	2.28
077	Natural Gas-Fired Combustion Turbine Test Stands	R	166.66	42.71	2.45	0.99	1.77	1.09	0.07
078	Vertrel Vapor Degreaser	R	NA	NA	NA	NA	NA	13.16	NA
081	Paint Spray Booth PS-14-SIK	R	NA	NA	NA	NA	NA	2.1	2.1
082	Paint Spray Booth PS-16-SIK	R	NA	NA	NA	NA	NA	7.53	7.53
083	Boiler BO-4-SIK	R	1.22	1.03	0.09	0.09	0.0073	0.07	0.02
086	Fire Innovation and Test Center	R	15	14.8	3.45	3.13	2.5	39.26	0.85
088	Engine Parts Coating Process	R							
089	Hot Acoustic Rig (HAR) at Test Stand B-6	R	16.38	9.45	0.882	0.882	1.89	1.26	
090 <sup>2</sup>	FT4000 Gas Turbine Testing at Test Stand A4	R	35.39	27.57	0.781	0.316	0.565	0.349	0.171
091 <sup>2</sup>	FT4000 Compressor Reciprocating Internal Combustion Engine (RICE) <sup>2</sup>	R	1.59	0.09	0.032	5E-04	0.0019	0.381	0.28
<b>TOTAL</b>			<b>3049.42</b>	<b>851.24</b>	<b>97.48</b>	<b>31.73</b>	<b>419.38</b>	<b>160.75</b>	<b>21.89</b>

1 The potential to emit for EU 068 was amended pursuant to permit no. 0990021-033-AC  
 2 These two Emissions Units were permitted under a single project (permit no. 0990021-032-AC)

## 5.2 `Regulatory Applicability

*Halogenated solvent vapor cleaning machines subject to NESHAP Subpart T* - At the time the current Title V Air Operation Permit was issued, trichloroethylene was still used in two vapor cleaning machines (EU006 and EU024) subject to this NESHAP. As of November 8, 2002, both of these halogenated vapor cleaners have been closed and demolished. Trichloroethylene is no longer used for any parts cleaning at the facility, therefore, there are no emission units subject to 40 CFR 63, *Subpart T*.

*Aerospace manufacture and rework activities subject to NESHAP, Subpart GG* - This facility operates the following sources subject to this NESHAP: hand-wipe cleaning operations; spray gun cleaning operations; flush cleaning operations; primer and topcoat application operations; and waste storage and handling operations. Currently, the facility uses only specialty coatings which are not covered by the coating control requirements of the NESHAP. This facility does not have any depainting or Type I, II chemical milling maskant operations. There are three flush cleaning operations that have switched from trichloroethylene to Vertrel (non HAP solvent), in addition they are completely closed-loop systems. Jet engine manufacturing ceased in 2000 after the transfer of those operations and associated equipment to Connecticut. Because these emission units process clean space vehicle engines and tubes, Subpart GG does not apply.

*Fuel storage tanks subject to NSPS, Subpart Kb* - In the original Title V permit there were three existing fuel storage tanks subject only to the record keeping requirements (tank size and liquid vapor pressure) of this NESHAP. Recent changes in Subpart Kb have eliminated these recordkeeping requirements for tanks with this capacity. No emission units are subject to 40 CFR 60, *Subpart Kb*.

*Small boilers subject to a BACT determination* - Rule 62-296.406, F.A.C. requires a BACT determination for particulate matter and sulfur dioxide for boilers with a heat input of less than 250 MMBtu/hr. The facility operates two boilers with heat inputs of 54 MMBtu/hr (EU 022), and 2.93 MMBtu/hr (EU 083). [The other two boilers were sold to Aerojet]. The Department has determined that BACT for these small sources is use of natural gas or propane. Records are required for the fuel consumption. An annual visible emissions test is not required when the facility documents exclusive use of pipeline quality natural gas or commercial grade propane.

*Emergency electrical generating station subject to NOx RACT, and 40 CFR 63 Subpart ZZZZ "National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE)"* - The facility operates an emergency electrical generating station to provide minimal electrical power needs in the event of a power outage. This station consists of 14 identical diesel engines (two engines are inoperative) with a pair of engines powering a single generator. These engines are currently subject to Rule 62-296.570, F.A.C., major source NOx RACT. Information from the manufacturer indicates that these engines are capable of complying with this regulation. Because these engines are only operated for emergency purposes and monthly testing, this rule requires no testing unless an engine operates 400 hours or more in any 12 month period. Pursuant to regulations finalized on March 03, 2010, these emission units are subject to 40 CFR part 63 subpart ZZZZ.

*A newly permitted RICE (EU 091) is also subject to 40 CFR 63 Subpart ZZZZ.* Some of the exempt generators are subject to both 40 CFR 60 subpart ZZZZ and 40 CFR 60 subpart IIII.

*Miscellaneous spray booths* - The facility operates four spray/fume control booths used to refinish support equipment, apply adhesives to wood laminate models, and coat nonproduction prototype parts. Each booth has been through a preconstruction review and has a limit on the amount of VOC usage. Compliance is demonstrated by record keeping coating, thinner, cleaner, and adhesive usage. The recently promulgated 40 CFR 63, Subpart MMMM - National Emission Standards for Hazardous Air Pollutants for Surface Coating Operations of Miscellaneous Metal Parts and Products are not applicable to research facilities or to facilities subject to Subpart GG National Emission Standards for Hazardous Air Pollutants for aerospace manufacturing and rework facilities.

40 CFR 63 Subpart HHHHHH - Two paint spray booths (EUs 081 and 082) are subject to 40 CFR 63 Subpart HHHHHH "National Emission Standard for Hazardous Air Pollutants for Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources."

*Jet engine test stands* - Also included as an "unregulated" emissions unit are ten existing jet engine test stands. The jet engine test stands were constructed prior to the PSD baseline date. In the early 1970s, several test stands were issued air pollution "operation" permits which described the stands and estimated emissions, but did not limit operation. In a January 16, 1980 letter, the Department of Environmental Regulation made the following determination for the existing jet engine test stands:

- The Department would not require air pollution permits for the individual test stands nor the relocatable jet engines.
- The Department would not specify conditions in other permits that would affect the scheduling or utilization of individual test stands or relocatable jet engines.
- The Department would require the permittee to report jet fuel consumption on a facility-wide basis. The main concern at this time was reporting an accurate emissions inventory for tracking "reasonable further progress" towards attainment of the ozone standard.

However, recent guidance from the EPA (listed below) indicates that jet engine test stands are considered stationary sources of air pollution.

12-31-95: EPA-AEB to Georgia Department of Natural Resources: Aerospace Ground Equipment, Hush Houses, and Jet Engine Test Cells

03-12-96: EPA-AEB to Georgia Department of Natural Resources: Aerospace Ground Equipment, Hush Houses, and Jet Engine Test Cells

09-23-96: EPA-APT to Mr. John R. McDowell, PE: Title V Applicability Issues Related to the Cincinnati/Northern Kentucky International Airport

Therefore, the Health Department established the jet engine test stands as existing, "unregulated" stationary emissions units with no limits on operation.

On December 4, 2001, the Health Department issued construction permit 0990021-005-AC for the modification of the existing combustion turbine test stands. The applicant proposed to conduct both Research and Development (R&D) and Quality Assurance/Quality Control (QA/QC) activities on its stationary combustion turbine product line while firing natural gas and/or distillate oil. The applicant requested that the construction permit contain a federally-enforceable cap on emissions from the modified activities at levels below those that would trigger a major modification under Rule 62-212.400, F.A.C. The permit contains two emission limits; 39.9 tons per year for NO<sub>x</sub> and 99.9 tons per year for CO, as well as natural gas usage limit corresponding to these emissions levels.

The Health Department, in reviewing the project also concluded that those test stands not undergoing an expansion of the natural gas firing or distillate oil firing capacities would remain unchanged and unregulated. Based on discussions with the DEP, it was concluded that the R&D and QA/QC activities would not be subject to Rule 62-296.570, F.A.C. - state emission standards for gas turbines located at major NO<sub>x</sub> sources within Palm Beach County, Compliance with the emission caps will be demonstrated through a emissions inventory and record keeping system. The emissions inventory will be supported by historical Pratt & Whitney emissions data obtain through R&D and QA/QC activities. The data will be subject to a Quality Assurance Plan (QAP) that will be implemented once actual emissions equal or exceed eighty (80) percent of the emission caps.

The emissions unit has been identified as a Source Category potentially subject to the National Emission Standards for Hazardous Air Pollutants for Engine Test Cells/Standards (40 CFR Part 63, Subpart P PPPP). In accordance with 40 CFR 63.9290 (d) of this Subpart, any portion of the affected source used exclusively for

testing rocket engines is not subject to requirements of Subpart P P P P P or subpart A of Part 63. 40 CFR 63.9290(d)(1) also exempts the test stands that are used exclusively for testing the combustion turbine engines.

*Two JP8 fired Turbine Engines:* Permit No. 090021-012-AC was issued on 11/17/2008 to modify the permit for turbine engines. The operating hours of these engines are restricted to 375 hrs each per year. The potential emissions of NOx and CO from these engines are estimated to be 36.7 and 42.5 tons per year respectively. This modification of these engines remain as a minor modification under PSD regulations since the project's maximum increase in criteria pollutant emissions for CO and NOx will remain below 100 and 40 tons per year -- the PSD significant emission rates.

*Single Chrome Conversion Tank:* The tank at the facility is a 10-gallon tank, is covered and is mounted on a bench, and hence it is not subject to 40 CFR 63 Subpart W W W W W W "National Emission Standards for Hazardous Air Pollutants: Area Source Standards for Plating and Polishing Operations." The status of this EU is changed from 'regulated' to 'unregulated.'

*Fire and Innovation Test (FIT) Center:* The Fire, Innovation & Testing (FIT) center began operations on February 15, 2012 at UTC campus. The FIT center is intended to provide UTC Fire & Security (UTCFS) the ability to test current and future fire suppression products. The Health Department issued an air construction permit no. 0990021-027-AC in December 2010 and a permit modification (0990021-030-AC) was issued in November 2012. Indoor fire testing is performed in an approximately 70 ft x 70 ft enclosed building with a 50 ft high ceiling. The test fuel packages will consist of variety of materials such as wood, plastics, heptane, fuel oil (Number 2), vegetable oil, isopropyl alcohol, acetone, methane, propane, and other hydrocarbon fuels. The permit limits the emissions of particulate matter to 3.45 tons per year; nitrogen oxides to 15 tons per year; carbon monoxide to 14.8 tons per year; volatile organic compounds to 39.26 tons per year, and sulfur dioxide to 2.5 tons per year. Control efficiency of UHF units was assumed to be zero for all pollutants except for particulate matter (90%). The potential emissions from this project are below significant emissions rate as defined in Rule 62-210.200, F.A.C.

## 6.0 CONCLUSION

Based on the information provided by the applicant, the Health Department believes that there is reasonable assurance that the proposed project, as described in this evaluation, and subject to the conditions in the proposed draft permit, will not:

- Discharge, emit, or cause pollution in contravention of DEP standards or rules. **[Rule 62-4.070(1), F.A.C.]**
- Cause or contribute to a violation of any air quality standard of the Florida Administrative Code. **[Rule 62-212.300(1), F.A.C.]**
- Interfere with reasonable further progress toward maintaining the ambient air quality standards. **[Rule 62-212.500(1), F.A.C.]**

Therefore, the Health Department intends to issue the Draft Permit with the given specific conditions.