GOVERNMENT OF THE DISTRICT OF COLUMBIA

Department of Energy and Environment

FACT SHEET AND STATEMENT OF BASIS FOR PROPOSED PERMITTING ACTION UNDER 20 DCMR 300 (TITLE V-OPERATING PERMIT PROGRAM)

This "Fact Sheet and Statement of Basis" has been prepared pursuant to 20 DCMR 303.1(c) and 40 CFR 70.7(a)(5).

PERMIT NO: 042

APPLICANT AND PERMITTEE:

United States Department of the Air Force Joint Base Anacostia-Bolling 20 MacDill Ave Washington DC 20032

FACILITY LOCATION:

Joint Base Anacostia-Bolling 370 Brookley Avenue SW Washington DC 20032

FACILITY DESCRIPTION:

Anacostia Annex and Bolling Air Force Base were formerly "Bolling Field" created in 1917 to serve as a home to seaplanes. During World War II, flight testing missions were transferred to the newly constructed Patuxent River Naval Air Station. In 1950's and 1960's, flight operations were moved from "Bolling Field" to Andrews Air Force Base. After that time, Bolling Field was separated into Anacostia Naval Annex and Bolling Air Force Base. The current function of the facility is primarily an administrative center with specific missions including support of the White House helicopter fleet, Special Services Department, the Defense Intelligence Agency facility, and various training and housing facilities.

Today, Joint Base Anacostia-Bolling (JBAB) is a 905 acre military installation, located in Southeast Washington, DC, established on October 1, 2010 in accordance with congressional legislation implementing the recommendations of the 2005 Base Realignment and Closure (BRAC) Commission. The legislation ordered the consolidation of Naval Support Facility Anacostia (NSF) and Bolling Air Force Base (BAFB), which were adjoining, but separate military installations, into a single joint base.

JBAB is currently operating under Title V Operating Permit No. 003 for BAFB and Title V Operating Permit No. 011 for Naval District Washington, Anacostia Annex (NSF Anacostia). Both permits were issued September 27, 2004.

In 2009 both installations applied for Title V renewal permits per 20 DCMR 301.1(a)(4) and 303.3(b). However, since the installations combined in October 2010 and new Title V permits have not been reissued, the Air Quality Division ("AQD") of the Department of Energy and Environment ("DOEE"





or "the Department") and JBAB agreed that JBAB would reapply for a combined Title V Operation Permit. This renewal package will further serve as a basis to determine permit conditions and additional control and monitoring measures that may be needed to meet the air quality standards.

The facility includes emission units that are capable of operating twenty-four (24) hours per day, seven (7) days per week, and fifty-two (52) weeks per year. The facility consists of the following significant sources of air emissions (addressed in Condition III of the permit):

	Emission Units ¹						
Emission Unit ID	Emission Linit Location		Description				
CU-18-1, CU-18-2, & CU-18-3	Building 18 - Boiler Room	6745-R1, 6746-R1, & 6747-R1	Three (3) 30.25/28.82 million BTU per hour (MMBTU/hr) natural gas-fired Indeck International- Lamont (IBW) Boilers (these boilers are dual-fuel boilers, but are no longer permitted to burn a secondary fuel)				
CU-6000A-1 CU-6000A-2	Building 6000A - Penthouse	-	Two (2) 8 MMBTU/hr dual fuel fired (natural gas and No. 2 fuel oil) Unilux Boilers				
EG-B1-2	Building B1 - 1 (south of building)	-	One (1) 125 kWe Cummins generator set with 207 horsepower (hp) diesel engine (manufactured 7/24/2006 and installed 1/24/2007)				
EG-3-1	Building 3 - outside (east of building)	-	One (1) 200 kWe Cummins generator set with 320 hp diesel engine (manufactured 11/26/2007 and installed 5/27/2008)				
EG-5-2	Building 5/16 - outside (across street in southeast corner of the parking lot)	6538	One (1) 175 kWe Cummins generator set with 364 hp diesel engine (manufactured 12/5/2011 and installed 4/28/2012)				
EG-20-1	Building 20 - outside (north of building)	-	One (1) 300 kWe Marathon Electric generator set with 685 hp diesel engine (manufactured 10/2008 and installed 4/2009)				
EG-21-1	Building 21 - (south of Building 53)	-	One (1) 40 kWe Kohler generator set with 64 hp diesel engine (manufactured 12/8/2006 and installed 1/15/2008)				
EG-54-1	Building 54 - outside (east of building)	-	One (1) 400 kWe Cummins generator set with 755 hp diesel engine (manufactured 1/20/2009 and 11/2009)				
EG-350-1	Building 350 - outside (south of building)	7059	One (1) 125 kWe Cummins generator set with 197 hp diesel engine (manufactured 5/01/2012 and installed 10/2013)				
EG-351-1	Building 351 - outside (west of building)	6673	One (1) 300 kWe Cummins generator set with 464 hp diesel engine (manufactured and installed 2013)				
EG-370-1	Building 370/371 - outside (north of Building 371)	-	One (1) 40 kWe Marathon Electric generator set with 80 hp diesel engine (manufactured 4/17/2008 and installed 4/2009)				
EG-391-1	Building 391 - outside (patio east of building)	6403	One (1) 1,000 kWe Cummins generator set with 1,490 hp diesel engine (manufactured 1/2011 and installed 2011)				

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		Emissio	n Units ¹
Emission Unit ID	Emission Unit Location	Ch. 2 Permit No.	Description
EG-391-2	Building 391 - outside (east of building)	-	One (1) 86 hp diesel fire pump engine (manufactured 4/2011 and installed 2011)
EG-485-1 EG-485-2	Building 485 - outside (east of building)	6525 & 6526	Two (2) 1,500 kWe Caterpillar generator set with 2,206 hp diesel engine (manufactured 2008 and installed 2008)
EG-1300-1	Building 1300 - outside (south of building)	-	One (1) 350 kWe Marathon generator set with 685 hp diesel engine (manufactured 2008 and installed 3/2009)
EG-1302-1	Building 1302- outside (west of building)	-	One (1) 100 kWe Marathon Electric generator set with 173 hp diesel engine (manufactured 10/28/2008 and installed 5/2009)
EG-1304-2	Building 1304A- outside (west of building)	6965	One (1) 80 kWe Cummins generator set with 145 hp diesel engine (manufactured 12/9/2014 and installed 4/2015)
EG-4570-1	Building 4570 - 2nd Floor Penthouse	-	One (1) 20 kWe Tradewinds generator set with 45 hp diesel engine (manufactured 9/2013 and installed 2/2014)
EG-5681-1	Building 5681 - outside (south of R.V. Maisey Building)	-	One (1) 600 kWe Cummins generator set with 1,220 hp diesel engine (manufactured 2/18/2009 and installed 04/2009)
EG-6000-2	Building 6000 - Powerhouse	-	One (1) 2,000 kWe Cummins generator set with 2,920 hp diesel engine (manufactured 9/3/2015 and installed 2015)
EG-6000-5	Building 6000 - outside (near powerhouse loading dock)	-	One (1) 2,000 kWe Cummins generator set with 2,920 hp diesel engine (manufactured 9/9/2007 and installed circa 2008)
EG-73-1	Building 73 - Generator Room (south side of building)	-	One (1) 165 kWe Caterpillar generator set with 265 hp diesel engine (manufactured and installed circa 1970)
EG-94-1	Building 94 - outside (southwest corner of building)	-	One (1) 400 kWe Katolight generator set with 635 hp diesel engine (manufactured 11/2001 and installed 2004)
EG-165-1	Building 165 - outside (northeast of Building 169, adjacent to Brookley Ave)	-	One (1) 130 kWe Generac generator set with 198 hp diesel engine (manufactured 4/1996 and installed circa 1997)
EG-398-1	Building 398 - Mechanical Room (inside)	-	One (1) 900 kWe Caterpillar generator set with 1,305 hp diesel engine (manufactured 5/18/1989 and installed 1991)
EG-398-2 EG-398-3 EG-398-4	Building 398 - Fire Pump Room	-	Three (3) 231 hp diesel engines (manufactured 1988 and installed 1991)
EG-408-1	Building 408 - Emergency Generator Room	-	One (1) 1,100 kWe Caterpillar generator set with 1,847 hp diesel engine (manufactured 6/21/1989 and installed 1989)

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		Emissio	n Units ¹
Emission Unit ID	Emission Unit Location	Ch. 2 Permit No.	Description
EG-408-2	Building 408 - Emergency Generator Room	-	One (1) 1,100 kWe Caterpillar generator set with 1,847 hp diesel engine (manufactured 6/30/1989 and installed 1989)
EG-410-1	Building 410/411 - outside (east of Building 411 and west of Building 410)	-	One (1) 400 kWe Katolight generator set with 634 hp diesel engine (manufactured 1995 and installed circa 1996)
EG-1304-1	Building 1304 - outside (west of building)	-	One (1) 175 kWe Cummins generator set with 277 hp diesel engine (manufactured 12/6/1999 and installed 11/1/2001)
EG-6000-1	Building 6000 – Powerhouse	-	One (1) 2,000 kWe Cummins generator set with 2,920 hp diesel engine (manufactured 5/14/2005 and installed Fall 2006)
EG-6000-3	Building 6000 – Powerhouse	-	One (1) 2,000 kWe Cummins generator set with 2,920 hp diesel engine (manufactured 5/5/2005 and installed Fall 2006)
EG-6000-4	Building 6000 – Powerhouse	-	One (1) 2,000 kWe Cummins generator set with 2,920 hp diesel engine (manufactured 5/16/2005 and installed Fall 2006)
EG-6000A-1	Building 6000A – Penthouse	-	One (1) 1,500 kWe Cummins generator set with 2,200 hp diesel engine (manufactured 5/24/2004 and installed circa 2005)
EG-6000A-2	Building 6000A – Penthouse	-	One (1) 1,500 kWe Cummins generator set with 2,200 hp diesel engine (manufactured 5/26/2004 and installed circa 2005)
EG-6000A-3	Building 6000A – Penthouse	-	One (1) 1,500 kWe Cummins generator set with 2,200 hp diesel engine (manufactured 5/24/2004 and installed circa 2005)
EG-7400-1	Building 7400 - outside (east of building)	6632	One (1) 1,000 kWe Cummins generator set with 1,490 hp diesel engine (generator set manufactured 2013 and installed circa 2013 using refurbished model year 2002 engine)
EG-6126-1	Building 6126 - (south of building inside fence)	-	One (1) 20 kWe Generac generator set with 45 hp diesel engine (generator manufactured 11/5/2007 and installed circa 2008; engine model year unknown)
EG-8034-1	Building 8034	-	60 kWe generator set with 98 hp natural gas engine (manufactured August 2010 and installed October 2010)
EG-91-1	Building 91	-	60 kWe generator set with 105 hp natural gas engine (manufactured January 2007 and installed March 2009)
TK-90-1	Building B90 – by the water (north of building 2482)	-	One (1) 6,000 gallon gasoline underground storage tank (UST) for boat refueling
TK-365-1	Building 365 - Adjacent to building	-	One (1) 10,000 gallon gasoline UST for government vehicle refueling
TK-365-2	Building 365 - Adjacent to building	-	One (1) 10,000 gallon E-85 UST for government vehicle refueling

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Emission Units ¹					
Emission Unit ID	Emission Unit Location	Ch. 2 Permit No.	Description		
TK-1311-1, TK-1311-2, TK-1311-3, TK-1311-4	Building 1311 - west of building	-	Four (4) 12,000 gallons gasoline USTs for vehicle refueling		
PB-399-1	Building 399 - 1st floor adjacent to wood working shop	6543	One (1) paint booth room for wood and metal items		
PB-399-2	Building 399 - 2nd floor	-	One (1) enclosed paint booth room for metal items		
PB-4472-1	Building 4472 - 1st floor adjacent to wood working shop	-	One (1) paint booth room for wood and personal craft items		
PB-411-1	Building 411 - Room 66A - Curtained paint booth	-	One (1) paint booth room for vehicle priming and preparation		
PB-411-2	Building 411 - Room 66A - Enclosed paint booth	-	One (1) enclosed paint booth room for vehicle painting		
PB-362-1	Building 362 - 1st floor	-	One (1) enclosed paint booth room for vehicle painting		
DG-411-1	Building 411 paint mix room	-	Remote reservoir parts washer for paint booth spray guns, Herkules Model GW/R, Serial No. 606320		
DG-411-2	Building 411 garage bay	-	Immersion degreaser for transmission parts, Zep Model Dyna Brute		
PM-397-1	Building 397	-	Indoor firing range with three-stage filter		
PM-371-1	Building 371 Woodshop	-	Dust collector for wood working shop		
PM-399-2	Building 399 1st Floor Wood Working Shop	7269	ArrestAll AR6-25 dust collector for wood working shop, Serial No. ARS190016		

The Chapter 2 permits listed on this table have been issued since the last Title V permits were issued and are being incorporated into the new Title V permit. They will not be kept as separate documents following issuance of this updated Title V permit.

In addition, the facility includes the following miscellaneous/insignificant sources (addressed in Condition IV of the permit)

- Two (2) dual fuel boilers with less than 5 MMBTU/hr of heat input and burning natural gas and No. 2 fuel oil only during periods of natural gas interruption or curtailment;
- Two (2) dual fuel hot water heaters with less than 1.3 MMBTU/hr heat input;
- Six (6) portable space heaters with less than 1.3 million British Thermal Units per hour (MMBTU/hr) of heat input and burning No. 2 fuel oil only;

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- Numerous heaters, furnaces, hot water heaters, hot water boilers, humidifiers, laundry dryers, kitchen equipment, and air handling units with less than 5 MMBTU/hr of heat input and burning natural gas only;
- One (1) underground storage tank (UST) for biodiesel and associated dispensing equipment;
- Two (2) USTs for jet fuel;
- Five (5) USTs for No. 2 fuel oil;
- One (1) UST for waste oil/jet fuel;
- One (1) above ground storage tank (AST) for gasoline and associated dispensing equipment;
- One (1) AST for motor oil;
- Forty-one (41) ASTs for No. 2 fuel oil;
- Seven (7) ASTs for used oil, waste oil, and/or antifreeze;
- Two (2) ASTs for jet fuel;
- Twenty-five (25) oil water separators;
- Two (2) parts washers/degreasers not containing VOCs;
- Six (d) dust collectors venting indoors for two (2) sandblasters, a woodworking shop, a paper shredder, a conventional book/paper binder, and a digital book/paper binder;
- Two (2) welders;
- Two (2) laser engravers; and
- One (1) paper and metal recycling unit.

The following emission units were included on the 2012 version of the Title V application or subsequent updates to equipment inventories; however, based on information provided by JBAB, the units were either removed or replaced as follows:

- Fifteen (15) parts washers/degreasers are no longer being used and/or have been removed from the installation;
- Two (2) internal combustion engine sources (EG-371-L3 and "Unk. (Cell Tower)") were removed from JBAB;
- Three (3) dual fuel boilers (CU-6000-1, CU-6000-2, and CU-6000-3) located in building 6000 (DIA) were removed from the facility and replaced with two (2) new units, each rated at 3.94 MMBTU/hr, in early 2016.
- Two (2) portable boilers at Building 18 (CU-18-4 and CU-18-5);
- Two (2) printing presses at Building 6000 (PB-6000-1 and PB-6000-2);
- Two (2) parts washers at Building 1311 (DG-1311-1 and DG-1311-2); and
- Dust collector at Building 399 (PM-399-1) replaced by new dust collector (PM-399-2) for the woodworking shop.

Based on these emission units, the facility has the potential to emit the following pollutants: sulfur dioxide (SO_2) , oxides of nitrogen (NO_x) , particulate matter, volatile organic compounds (VOCs), carbon monoxide, and hazardous air pollutants (HAPs).

EMISSIONS SUMMARY:

The following is an estimate of overall potential emissions from the facility:

FACILITY-WIDE EMISSIONS SUMMARY [TONS PER YEAR]					
Pollutants	Potential Emissions				
Sulfur Dioxide (SO ₂)	3.2				
Oxides of Nitrogen (NO _x)	293.2				
Total Particulate Matter (PM Total)	19.6				
Particulate Matter less than 10 microns (PM10)	15.8				
Particulate Matter less than 1.5 microns (PM2.5)	14.3				
Volatile Organic Compounds (VOCs)	32.1				
Carbon Monoxide (CO)	156.2				
Total Hazardous Air Pollutants (HAPs)	3.1				

BASIS OF 20 DCMR CHAPTER 3 (TITLE V) APPLICABILITY

JBAB has the PTE 293.2 tons per year (TPY) of NO_x , 32.1 TPY of VOCs, and 156.2 TPY of CO. These totals exceed the major source thresholds in the District of Columbia of 25 TPY of NO_x or VOCs, and/or 100 TPY of any other criteria pollutant. Because potential emissions of NO_x , VOCs, and CO exceed the relevant major source threshold, pursuant to 20 DCMR 300.1(a), the source is subject to Chapter 3 and must obtain an operating permit in accordance with that regulation and Title V of the federal Clean Air Act.

LEGAL AND FACTUAL BASIS FOR DRAFT PERMIT CONDITIONS:

The conditions contained in the draft Title V operating permit are based on underlying requirements of 20 DCMR as well as various federal regulations promulgated pursuant to the federal Clean Air Act. The regulations that are the basis of each condition are cited in the permit, except those conditions added to make another condition, with a direct underlying regulation, enforceable as a practical matter may, in some cases, not have a specific citation. These latter, un-cited conditions generally consist of monitoring, recordkeeping, and reporting requirements authorized under 20 DCMR 500.1.

The draft Title V operating permit has been developed to incorporate all applicable requirements as defined in 20 DCMR 399.1 along with additional conditions necessary to make all such requirements enforceable as a practical matter.

Any condition of the draft Title V operating permit that is enforceable by the District but is not federally-enforceable is identified in the draft Title V operating permit as such with an asterisk.

It should also be noted that this permit is being issued pursuant to the District's authority under 20 DCMR Chapter 2 as well as Chapter 3. When the permit is issued for public review, the public notice will reflect this fact.

REGULATORY REVIEW:

This facility has been found to be subject to the requirements of the following regulations (except as specified in the notes and discussion below):

Federal and District Enforceable:

20 DCMR Chapter 1 - General Rules

- 20 DCMR Chapter 2 General and Non-Attainment Area Permits
- 20 DCMR Chapter 3 Operating Permits and Acid Rain Programs
- 20 DCMR 500 Records and Reports
- 20 DCMR 502 Sampling, Tests, and Measurements
- 20 DCMR 600 Fuel-Burning Particulate Emission
- 20 DCMR 604 Open Burning
- 20 DCMR 605 Control of Fugitive Dust
- 20 DCMR 606 Visible Emissions
- 20 DCMR 700 Miscellaneous Volatile Organic Compounds (VOCs)
- 20 DCMR 704 Stage I Vapor Recovery
- 20 DCMR 705 Stage II Vapor Recovery
- 20 DCMR 718 Motor Vehicle and Mobile Equipment Non-Assembly Line Coating Operations
- 20 DCMR 744 through 747 Adhesives and Sealants (*Note: AQD did not make a positive determination that this regulation was applicable to the facility, but included it as a standard requirement in the permit.*)
- 20 DCMR 764 Solvent Cleaning Cold Cleaning
- 20 DCMR 774 Architectural and Industrial Maintenance Coatings
- 20 DCMR 800 Control of Asbestos
- 20 DCMR 801 Sulfur Contents of Fuel Oils
- 20 DCMR 805 Reasonably Available Control Technology for Major Stationary Sources of the Oxides of Nitrogen
- 40 CFR 51.212, 52.12, 52.30, 60.11, and 61.12 Credible Evidence
- 40 CFR 60, Subpart Dc Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units
- 40 CFR 60, Subpart IIII Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (CI-ICE)
- 40 CFR 60, Subpart JJJJ Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (SI-ICE)
- 40 CFR 60, Subpart Kb Standards of Performance for Volatile Organic Liquid Storage Vessels

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- 40 CFR 63, Subpart CCCCCC National Emission Standards for Hazardous Air Pollutants (NESHAP) for Source Category: Gasoline Dispensing Facilities
- 40 CFR 63, Subpart HHHHHH National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources
- 40 CFR 63, Subpart JJJJJJ National Emission Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers Area Sources
- 40 CFR 63, Subpart ZZZZ National Emission Standards for Hazardous Air Pollutants (NESHAP) for Reciprocating Internal Combustion Engines (RICE)
- 40 CFR 82, Subpart G Protection of Stratospheric Ozone (Federally enforceable only except through Title V) (*Note: AQD did not make a positive determination that this regulation was applicable to the facility, but included it as a standard requirement in the permit.*)
- 40 CFR 82, Subpart H Halon Emissions Reduction (Federally enforceable only except through Title V) (*Note: AQD did not make a positive determination that this regulation was applicable to the facility, but included it as a standard requirement in the permit.*)

District Enforceable Only:

- 20 DCMR 402 Chemical Accident Prevention (*Note: AQD did not make a positive determination that this regulation was applicable to the facility, but included it as a standard requirement in the permit.*)
- 20 DCMR 900 Engine idling
- 20 DCMR 901 Vehicular exhaust emissions
- 20 DCMR 902 Lead Content of Gasoline
- 20 DCMR 903 Odorous or other nuisance air pollutants

20 DCMR Chapter 2 - General and Non-Attainment Area Permits:

Due to their potential to emit air pollution, Chapter 2 permitting is required for all of the significant equipment at the facility. AQD is incorporating all existing Chapter 2 permits as referenced in the equipment table above. Additionally, AQD is using Chapter 2 authority to update other permit requirements where applicable. As such, this draft Title V permit will be issued for public notice pursuant to both Chapter 2 and Chapter 3 public notice requirements.

It should be noted that one recent Chapter 2 permit, Permit No. 7269, issued October 23, 2019, for a dust collector at Building 399 (unit ID PM-399-2) is being revised as it is incorporated into the Title V permit to significantly increase the particulate matter emission limit. This is because it was determined that the JBAB significantly underestimated possible use of the unit when calculating the potential to emit when applying for the Chapter 2 permit. The emission limit is being increased from 5.3 lbs/yr to 29.1 lbs/yr.

20 DCMR 704 Stage I Vapor Recovery:

The capacities of seven (7) gasoline and E-85 (a gasoline blend) storage tanks at the facility exceed two hundred and fifty (250) gallons. Thus 20 DCMR 704 is applicable to those units and has been included in the permit in Condition III(h). One gasoline storage tank, TK-398-5 is

Emission Unit ID	Emission Unit Location	Description
TK-90-1	Building B90 – by the water (north of building 2482)	One (1) 6,000 gallon gasoline underground storage tank (UST) for boat refueling
TK-365-1	Building 365 - Adjacent to building	One (1) 10,000 gallon gasoline UST for government vehicle refueling
TK-365-2	Building 365 - Adjacent to building	One (1) 10,000 gallon E-85 UST for government vehicle refueling
TK-1311-1	Building 1311 - west of building	12,000 gallon gasoline UST for vehicle refueling
TK-1311-2	Building 1311 - west of building	12,000 gallon gasoline UST for vehicle refueling
TK-1311-3	Building 1311 - west of building	12,000 gallon gasoline UST for vehicle refueling
TK-1311-4	Building 1311 - west of building	12,000 gallon gasoline UST for vehicle refueling

exactly a 250 gallon tank, and is therefore not subject Stage I requirements. The units subject to Stage I are as follows:

20 DCMR 705: Stage II Vapor Recovery:

The potential throughput for five (5) of the gasoline dispensers at the facility is more than 10,000 gallons per month. The threshold for 20 DCMR 705 is 10,000 gallons per month throughput per 20 DCMR 705.3. Thus 20 DCMR 705 is applicable and has been included in the permit in Condition III(i), covering the following equipment:

Emission Unit ID	Emission Unit Location	Description
TK-365-1	Building 365 - Adjacent to building	One (1) 10,000 gallon gasoline UST for government vehicle refueling
TK-365-2	Building 365 - Adjacent to building	One (1) 10,000 gallon E-85 UST for government vehicle refueling
TK-1311-1	Building 1311 - west of building	12,000 gallon gasoline UST for vehicle refueling
TK-1311-2	Building 1311 - west of building	12,000 gallon gasoline UST for vehicle refueling
TK-1311-3	Building 1311 - west of building	12,000 gallon gasoline UST for vehicle refueling
TK-1311-4	Building 1311 - west of building	12,000 gallon gasoline UST for vehicle refueling

At the time of permitting, E85 storage tank TK-365-2 does not have Stage II vapor recovery installed. Because E85 is a fuel blend that contains gasoline, AQD determined that 20 DCMR 705 is applicable, and included Stage II requirements for the unit in Condition III(i) of the permit. Additionally, a compliance schedule was added to Condition VI of the permit to require that a Stage II vapor recovery system be installed on the unit within one year of permit issuance, unless the requirements of 20 DCMR 705 change in the interim period, in which case the new requirements of 20 DCMR 705 will supersede the permit language.

It should also be noted that TK-90-1 has historically had a throughput below 10,000 gallons per month and JBAB indicated that they would be willing to establish a formal limit on throughput at that level to avoid applicability of Stage II requirements. This limit has been established in Condition III(h)(1)(G).

<u>20 DCMR 718: Motor Vehicle and Mobile Equipment Non-Assembly Line Coating Operations:</u> This regulation applies to the three automotive paint spray booths at the facility. The requirements of this regulation have been fully incorporated into Condition III(k).

It should be noted that, during the permit review, it was identified that one booth, designated PB-362-1, which has reportedly not been actively used recently, does not have an outlet stack that complies with the requirements of 20 DCMR 718.19. JBAB identified that the stack outlet has a rain cap that impedes the upward discharge of the exhaust air. As such, JBAB proposed to incorporate requirements in the permit that the stack configuration must be modified prior to using the unit again. The Department agreed to this request and has therefore added a compliance plan in Condition VI of the permit to require that JBAB obtain approval of a modified stack design, install the modified exhaust stack, and report the installation to the Department, prior to using the paint booth again.

20 DCMR 764 - Solvent Cleaning - Cold Cleaning:

This section is applicable to the following four (4) parts washers and degreasers at the facility:

Emission Unit ID	Emission Unit Location [£]	Unit Description	Degreaser Type
DG-411-1	Building 411 paint mix room	Parts washer for paint booth spray guns, Herkules Model GW/R, Serial No. 606320	Remote Reservoir
DG-411-2	Building 411 garage bay	Degreaser for transmission parts, Zep Model Dyna Brute	Immersion

[£] Building 362 and Building 1311 have parts washers that use a non-VOC detergent. Therefore, these units are not listed as emission units in this section.

It was identified during the permit review that the degreasing solvents currently used in three of these units does not comply with the vapor pressure requirements of 20 DCMR 764.5 (1.0

mmHg at 20°C). This was identified to the facility for action during the permitting process as a deficiency that would need to be addressed.

All relevant aspects of 20 DCMR 764 have been incorporated into the permit in Condition III(l).

20 DCMR 801: Sulfur Content of Fuel Oils:

This regulation limits distillate oil sulfur content to 1% by weight, at a minimum. This requirement is applicable to the diesel engines, but more stringent requirements are found in other regulations. This regulation also has more stringent requirements for "commercial fuel oil", which, for purposes of this permit covers the fuel in all of the "fuel burning equipment" (i.e. boilers, water heaters, etc. that are external combustion units). Effectively, except for fuel remaining in tanks since before July 1, 2018, all fuel in these units must meet a 0.0015% sulfur by weight standard. This requirement is contained in Condition II(f) of the permit and various equipment-specific sections of the permit, where applicable.

New Source Performance Standards (NSPS) [40 CFR 60]:

Several NSPSs apply to various equipment at this facility as the following NSPS analyses and applicability determinations indicate:

1. <u>40 CFR 60, Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units</u>

Certain combustion units are subject to NSPS Subpart Dc. Applicability for NSPS for boilers is based on unit size and age. The boilers must have heat input ratings greater than 10 MMBTU/hr and less than 100 MMBTU/hr, and must have been installed after June 9, 1989. Both criteria for age and size must be met for applicability of 40 CFR 60.40c – Subpart Dc to be triggered. The facility has three (3) dual fuel boilers in operation in the heat plant boiler room: HTHW Boiler #1 (ID# CU-18-1), HTHW Boiler #2 (ID# CU-18-2), and HTHW Boiler #3 (ID# CU-18-3). These boilers each have heat input capacities of 28.82 MMBTU/hr when burning No. 2 oil and 30.25 MMBTU/hr when burning natural gas. Boilers #1 and #2 were installed in 2014 and Boiler #3 was retrofitted and installed in 2014. The units meet both the size and age limitations, therefore, Subpart Dc is applicable to these units. The applicable requirements of Subpart Dc have been incorporated in the permit for these units in Condition III(a).

No other boilers or other "steam generating units" at the facility have heat input ratings greater than or equal to 10 MMBTU/hr, so no other units are subject to Subpart Dc.

2. <u>40 CFR 60, Subpart IIII - Standards of Performance for Stationary Compression Ignition</u> Internal Combustion Engines (CI-ICE)

Pursuant to 40 CFR 60.4200, NSPS Subpart IIII applies to stationary CI-ICE: 1) with model years of 2007 or later, 2) that commenced construction after July 11, 2005 and were manufactured after April 1, 2006, or 3) that were modified or reconstructed after July 11,

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2005. Twenty-one (21) diesel generator and fire pump engines are subject to Subpart IIII as follows:

Equipment Location	Unit ID	Chapter 2 Permit No. [†]	Emission Unit Description	Generator Set / Engine Serial Numbers
Building B1 - outside(south of building)	EG-B1-2	-	One (1) 125 kWe Cummins generator set with 207 horsepower (hp) diesel engine (manufactured 7/24/2006 and installed 1/24/2007)	K060988102/ 46643982
Building 3 - outside (east of building)	EG-3-1	-	One (1) 200 kWe Cummins generator set with 320 hp diesel engine (manufactured 11/26/2007 and installed 5/27/2008)	K070128191 / 21811128
Building 5/16 - outside (across street in southeast corner of the parking lot)	EG-5-2	6538	One (1) 175 kWe Cummins generator set with 364 hp diesel engine (manufactured 12/5/2011 and installed 4/28/2012)	L110280135 / 73325919
Building 20 - outside (north of building)	EG-20-1	-	One (1) 300 kWe Marathon Electric generator set with 685 hp diesel engine (manufactured 10/2008 and installed 4/2009)	MX12-12791- 1108 / 303227-3- 1-0908
Building 21 - (south of Building 53)	EG-21-1	-	One (1) 40 kWe Kohler generator set with 64 hp diesel engine (manufactured 12/8/2006 and installed 1/15/2008)	2140760 / PE3029T633304
Building 54 - outside (east of building)	EG-54-1	-	One (1) 400 kWe Cummins generator set with 755 hp diesel engine (manufactured 1/20/2009 and 11/2009)	A090229326 / 79355926
Building 350 - outside (south of building)	EG-350-1	7059	One (1) 125 kWe Cummins generator set with 197 hp diesel engine (manufactured 5/01/2012 and installed 10/2013)	J130571761 / 4990443 04 81-04- 070
Building 351 - outside (west of building)	EG-351-1	6673	One (1) 300 kWe Cummins generator set with 464 hp diesel engine (manufactured and installed 2013)	A130440842 / 73487489

Equipment Location	Unit ID	Chapter 2 Permit No. [†]	Emission Unit Description	Generator Set / Engine Serial Numbers
Building 370/371 - outside (north of Building 371)	EG-370-1	-	One (1) 40 kWe Marathon Electric generator set with 80 hp diesel engine (manufactured 4/17/2008 and installed 4/2009)	687471-04-08 / PE4024L003424
Building 391 - outside (patio east of building)	EG-391-1	6403	One (1) 1,000 kWe Cummins generator set with 1,490 hp diesel engine (manufactured 1/2011 and installed 2011)	C110196039 / 372247885
Building 391 - outside (east of building)	EG-391-2	-	One (1) 86 hp diesel fire pump engine (manufactured 4/2011 and installed 2011)	N/A / PE40451167049
Building 485 - outside (east of building)	EG-485-1 and EG- 485-2	6525 & 6526	Two (2) 1,500 kWe Caterpillar generator sets with 2,206 hp diesel engines (manufactured 2008 and installed 2008)	G4W00513 / SBG00439 and G4W00512 / SBG00436
Building 1300 - outside (south of building)	EG-1300-1	-	One (1) 350 kWe Marathon generator set with 685 hp diesel engine (manufactured 2008 and installed 3/2009)	MX-127189-1108 / 303227-7-1-1208
Building 1302-, outside (west of building)	EG-1302-1	-	One (1) 100 kWe Marathon Electric generator set with 173 hp diesel engine (manufactured 10/28/2008 and installed 5/2009)	MX-127728-1108 / PE4045L069236
Building 1304 -2 outside (west of building)	EG-1304-2	6965	One (1) 80 kWe Cummins generator set with 145 hp diesel engine (manufactured 12/9/2014 and installed 4/2015)	L140775285 / P1411126221
Building 4570 - 2nd Floor Penthouse	EG-4570-1	-	One (1) 20 kWe Tradewinds generator set with 45 hp diesel engine (manufactured 9/2013 and installed 2/2014)	34885 / Unknown
Building 5681 - outside (south of RV Maisey Building)	EG-5681-1	-	One (1) 600 kWe Cummins generator set with 1,220 hp diesel engine (manufactured 2/18/2009 and installed 04/2009)	B09023595 / Unknown
Building 6000 - Powerhouse	EG-6000-2	-	One (1) 2,000 kWe Cummins generator set with 2,920 hp diesel	D050773511 / 33204159

Equipment Location	Unit ID	Chapter 2 Permit No. [†]	Emission Unit Description	Generator Set / Engine Serial Numbers
			engine (manufactured 9/3/2015 and installed 2015)	
Building 6000 - outside (near powerhouse loading dock)	EG-6000-5	-	One (1) 2,000 kWe Cummins generator set with 2,920 hp diesel engine (manufactured 9/9/2007 and installed circa 2008)	Unknown / 33170173

[†]The Chapter 2 permit numbers listed here are for reference only. The requirements of the Chapter 2 permits have been incorporated into this permit and the separate Chapter 2 permit documents are no longer maintained.

The requirements of NSPS Subpart IIII have been included in Condition III(c) of the permit, covering these units.

In addition to the above units, one additional generator set at the facility, manufactured November 5, 2007, has an installed engine of unknown model year. The unit is described in the following table:

Equipment Location	Unit ID	Emission Unit Description	GenSet / Engine Serial Numbers
Building 6126 - (south of building inside fence)	EG-6126-1	One (1) 20 kWe Generac generator set with 45 hp diesel engine (generator manufactured 11/5/2007 and installed circa 2008; engine model year unknown – treated as 2007)	2095523 / Unknown

After significant research into the engine, it was determined that the Department must treat the engine as a 2007 model year engine, and has therefore prepared Condition III(e) of the permit to reflect this determination and relevant requirements. It should be noted that this section of the permit requires in-use testing of the unit to determine compliance with the standards for 2007 model year engines.

3. <u>40 CFR 60, Subpart JJJJ - Standards of Performance for Stationary Spark Ignition Internal</u> <u>Combustion Engines (SI-ICE)</u>

Pursuant to 40 CFR 60, NSPS Subpart JJJJ applies to stationary spark ignition internal combustion engines (SI-ICE) with various dates of manufacture, depending upon the use (emergency or non-emergency), maximum engine power, and engine configuration. Based on the requirements of 40 CFR 60.4230, this subpart applies to the following emergency engine at the facility:

Equipment Location	Unit ID	Emission Unit Description	GenSet / Engine Serial Number
Building 8034	EG-8034-1	60 kWe generator set with 98 hp natural gas engine (manufactured August 2010 and installed October 2010)	H100148605

The requirements of Subpart JJJJ have been incorporated into Condition III(f) covering this generator set.

 40 CFR 60, Subpart Kb — Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction Reconstruction or Modification Commenced after July 23 1984

Per 40 CFR 60.110b, this subpart is applicable to storage vessels with a capacity greater than or equal to 75 m³ but less than 151 m³ storing a liquid with a maximum true vapor pressure more than 15.0 kPa. Seven fuel tanks at the facility have a volume of 25,000 gallons, or 94.6 m³, and three fuel tanks have a volume of 30,000 gallons, or 113.56 m³. All ten fuel tanks store No. 2 oil. Per AP-42, the true vapor pressure (TVP) at 80°F of distillate fuel oil No. 2 is 0.012 psi (0.083 kPa). Thus, this subpart is not applicable.

<u>National Emission Standards for Hazardous Air Pollutants (NESHAP) [40 CFR 63]:</u> Several NESHAPs apply to various equipment at this facility as the following NESHAP analyses and applicability determinations indicate:

1. <u>40 CFR 63, Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for</u> <u>Reciprocating Internal Combustion Engines (NESHAP for RICE)</u>

Subpart ZZZZ of 40 CFR 63 regulates/monitors HAPs such as acetaldehyde, acrolein, benzene, toluene, xylene, cadmium, chromium, lead, etc., through surrogate compounds such as formaldehyde, CO and/or VOC. A facility that emits or has the PTE of 10 tons/year of any single HAP or 25 tons/year of any combination of HAPs, is considered a major source of HAPs. Any source that is not a major source is an area source of HAPs. Because this facility does not have the potential to emit more than 10 tons/year of a single HAP or an aggregate of more than 25 tons of total HAPs, it is not a major source; it is an area source.

Subpart ZZZZ is applicable to new or reconstructed spark ignition (SI) and compression ignition (CI) engines at this facility, where "new" is defined as those engines that are manufactured or reconstructed after June 12, 2006. Note that, per 40 CFR 63.6590(c), Subpart ZZZZ defers regulations of newer engines to the NSPSs, 40 CFR Part 60 Subpart IIII and Subpart JJJJ, though Subpart ZZZZ remains technically applicable to them. This applies to the 22 engines previously discussed that are subject to NSPS Subpart IIII and the one engine previously discussed that is subject to NSPS Subpart JJJJ. The relevant sections of the

permits only cite NSPS applicability conditions and do not have separate citations to Subpart ZZZZ requirements as there are none beyond the NSPS requirements.

Additionally, Subpart ZZZZ covers existing engines at the facility. Specifically, it covers the 21 CI-ICE emergency generators and fire pumps listed in Condition III(d) of the permit as follows:

Equipment Location	Unit ID	Chapter 2 Permit No. [†]	Emission Unit Description	Generator Set/Engine Serial Numbers
Building 73- Generator room (south side of building)	EG-73-1		165 kWe Caterpillar generator set with 265 hp diesel engine (manufactured and installed circa 1970)	46B4947/ 66D23369
Building 94 - Outside (southwest corner of building)	EG-94-1		400 kWe Katolight generator set with 635 hp diesel engine (manufactured 11/2001 and installed 2004)	LM240643 77447/ L11344
Building 165 - outside (northeast of Building 169, adjacent to Brookley Ave)	EG-165-1		130 kWe Generac generator set with 198 hp diesel engine (manufactured 4/1996 and installed circa 1997)	2026502/ 76815
Building 398 - Mechanical room (inside)	EG-398-1		900 kWe Caterpillar generator set with 1,305 hp diesel engine (manufactured 5/18/1989 and installed 1991)	6NA01670/ 24Z02747
Building 398 - Fire pump room (inside)	EG-398-2		231 hp diesel engine Fire Pump #1 (manufactured 1988 and installed 1991)	Unknown/ 64Z07414
Building 398 - Fire pump room (inside)	EG-398-3		231 hp diesel engine Fire Pump #2 (manufactured 1988 and installed 1989 1991)	Unknown/ 64Z07561
Building 398 - Fire pump room (inside)	EG-398-4		231 hp diesel engine Fire Pump #3 (manufactured 1988 and installed 1991	Unknown/ 64Z07491
Building 408 - Emergency generator room	EG-408-1		1,100 kWe Caterpillar generator set with 1,847 hp diesel engine (manufactured	STD00732/ 25Z01666

Equipment Location	Unit ID	Chapter 2 Permit No. [†]	Emission Unit Description	Generator Set/Engine Serial Numbers
(inside)			June 21, 1989 and installed 1989)	
Building 408 - Emergency generator room (inside)	EG-408-2		1,100 kWe Caterpillar generator set with 1,847 hp diesel engine (manufactured June 31, 1989 and installed 1989)	5TD00733/ 25Z01682
Building 410/411 - Outside (East of building 411 and west of 410)	EG-410-1		One (1) 400 kWe Katolight generator set with 634 hp diesel engine (manufactured 1995 and installed circa 1996)	WAS02348 E-42836/ DD08VF168 370
Building B421	EG-B421-1		One (1) 125 kWe Kohler generator set with 190 hp diesel engine (manufactured 8/7/2004 and installed 1/20/2007)	2004423/ PE6068T383 720
Building 1304 - Outside (West of building)	EG-1304-1		One (1) 175 kWe Cummins generator set with 277 hp diesel engine (manufactured 12/6/1999 and installed 11/1/2001)	L990033510/ 45923408
Building 6000 - Powerhouse	EG-6000-1		2,000 kWe Cummins generator set with 2,920 hp diesel engine (manufactured May 14, 2005 and installed Fall 2006)	D050773510 / 33160048
Building 6000 - Powerhouse	EG-6000-3		2,000 kWe Cummins generator set with 2,920 hp diesel engine (manufactured May 5, 2005 and installed Fall 2006)	D050773509 / 33159990
Building 6000 - Powerhouse Building 6000A -	EG-6000-4 EG-6000A-1		2,000 kWe Cummins generator set with 2,920 hp diesel engine (manufactured May 16, 2005 and installed Fall 2006) 1,500 kWe Cummins	D050773512 / 33160098 F040657054/

Equipment Location	Unit ID	Chapter 2 Permit No. [†]	Emission Unit Description	Generator Set/Engine Serial Numbers
Penthouse			generator set with 2,200 hp diesel engine (manufactured May 24, 2004 and installed circa 2005)	33156681
Building 6000A - Penthouse	EG-6000A-2		1,500 kWe Cummins generator set with 2,200 hp diesel engine (manufactured May 26, 2004 and installed circa 2005)	F040657052/ 33156685
Building 6000A - Penthouse	EG-6000A-3		1,500 kWe Cummins generator set with 2,200 hp diesel engine (manufactured May 24, 2004 and installed circa 2005)	F040657053/ 33156684
Building 7400 - outside (east of building)	EG-7400-1	6632	1,000 kWe Cummins generator set with 1,490 hp diesel engine (generator set manufactured 2013 using refurbished model year 2002 engine and installed circa 2013)	L020451401 / 10429

Additionally, this regulation covers the non-NSPS SI-ICE emergency generator set listed in Condition III(g) of the permit as follows:

Equipment Location	Unit ID	Chapter 2 Permit No.	Emission Unit Description	GenSet / Engine Serial Number
Building 91	EG-91-1	-	60 kWe generator set with 105 hp natural gas engine (manufactured January 2007 and installed March 2009)	2137357/ 5P7211869

The applicable requirements of Subpart ZZZZ have been incorporated into both of these sections of the permit.

Note that no national security exemptions have been requested/justified pursuant to 40 CFR 63.6585(e). Additionally, because the units are intended for use, not just during full loss of

power, but also during situations of low voltage or frequency (considered non-emergency operation per Delaware v. EPA), they are not eligible for exemption from the requirements of this regulation per 40 CFR 63.6585(f)(3).

- <u>40 CFR 63 Subpart CCCCCC National Emission Standards for Hazardous Air</u> <u>Pollutants for Source Category: Gasoline Dispensing Facilities:</u> 40 CFR 63 Subpart CCCCCC applies to any existing or new gasoline distribution facility that is located at an area source of HAPs as defined in 40 CFR 63.2 (See 40 CFR 63.11111(a)). The facility has gasoline dispensing facilities, including gasoline storage tanks with maximum throughputs of less than 100,000 gallons per month as confirmed by information provided by the applicant. Thus 40 CFR 63, Subpart CCCCCC was determined to be applicable and the requirements of 40 CFR 63.11117 apply to the facility per 40 CFR 63.11111(c). The requirements of this regulation have been included in Conditions III(h) and III(i) of the permit.
- 3. <u>40 CFR 63, Subpart HHHHHH National Emission Standards for Hazardous Air Pollutants:</u> <u>Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources</u> This regulation does not apply to the automotive painting operations contained in Condition III(k). This is because, as a military installation, JBAB is exempt from 40 CFR 63, Subpart HHHHHH per 40 CFR 63.11169(d)(1). Also note that 20 DCMR 1409, which adopts 40 CFR 63, Subpart HHHHHH by reference also does not apply for the same reason.

However, it should be noted that some of the requirements contained in 40 CFR 63, Subpart HHHHHH are adopted by direct reference in requirements in 20 DCMR 718. These requirements are contained in the permit under the authority of 20 DCMR 718.

40 CFR 63, Subpart HHHHHH also does not apply to the non-automotive paint spray booths contained in Condition III(j) of the permit pursuant to 40 CFR 63.11170(a) for the same reason it does not apply to the automotive painting operations. Additionally, these units do not perform paint stripping using methylene chloride (MeCl) (see Condition III(j)(2)(A)), they are not used for coating of motor vehicles or mobile equipment (see Condition III(j)(2)(C)), and they do not perform spray applications using coating containing target HAPs (see Condition III(j)(2)(F)(i)).

 40 CFR 63, Subpart JJJJJJ - National Emission Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers Area Sources This regulation does not apply to the boilers as they are prohibited from operating using No. 2 fuel oil except during natural gas interruptions and for up to 48 hours per year for periodic testing, maintenance or operator training. See Conditions III(a)(2)(D), III(b)(2)(C), and IV(d)(11)(B)(iii) of the permit. This regulation does not apply to units firing natural gas only.

Compliance Assurance Monitoring (CAM) [40 CFR 64]:

A CAM Plan does not apply to the emission units at JBAB that are covered by the draft Title V permit. The emissions units covered in the permit include primarily boilers, engines, heaters, and emergency engines. These combustion units do not use a control device other than the inherent design of the unit and the proper operation and maintenance. Emissions from these units are products of the combustion of fuel burned and are controlled by proper operation, good combustion, and maintenance practices. Individually, emissions from each of these units will not exceed the major source threshold for air contaminant emissions identified within 40 CFR 64; therefore none of the units meet the criteria for CAM applicability. Certain units do use control devices, such as the dust collectors and paint booths, but their pre-control emission rates are low enough that they are not subject to CAM requirements.

Greenhouse Gas (GHG) Requirements:

Because Chapter 3 (Title V) was triggered by other pollutants, no evaluation was made to determine if the facility would trigger Title V applicability under the GHG Tailoring Rule. No modifications have been made to the source that would trigger Prevention of Significant Deterioration (PSD) applicability. Other than this requirement, there are no other applicable requirements related to GHGs at this time, therefore none were included in the permit.

COMPLIANCE HISTORY:

The applicant has been subject to no enforcement actions by AQD in the past three (3) years. JBAB failed stack tests in February 2016 on Boilers 1 and 2 for NOx while burning natural gas. It was later determined that the permit applications used incorrect emission factors so the permits were revised in 2019. Additionally, during the Title V permit review, it was determined that the facility has been using noncompliant degreaser solvents in three of their parts washers/degreasers and that a disused automotive painting spray booth has a noncompliant stack configuration. No enforcement actions have been taken in response to these discoveries at this time. However, a compliance schedule was added to Condition VI of the permit to establish requirement that the Permittee must meet to bring the paint spray booth into compliance before using it.

No air quality violations are identified in the U.S. Environmental Protection Agency (EPA) Enforcement and Compliance History Online (ECHO) database over the last three (3) years, as of the time of this writing.

COMMENT PERIOD:

Beginning Date: March 12, 2021 Ending Date: April 12, 2021

All written comments should be addressed to the following individual and office:

Stephen S. Ours, P.E. Chief, Permitting Branch Department of Energy and Environment

Air Quality Division 1200 First Street, NE, 5th Floor Washington DC 20002

or

stephen.ours@dc.gov

PROCEDURE FOR REQUESTING PUBLIC HEARING:

During the public comment period, any interested person may submit written comments on the draft Title V permit and may request a public hearing, if no public hearing has already been scheduled. A request for public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. The Department shall grant such a request if it is deemed appropriate. The venue, date, and time for any public hearing shall be announced in the D.C. Register and a daily newspaper.

POINT OF CONTACT FOR INQUIRIES:

Abraham T. Hagos Environmental Engineer Department of Energy and Environment Air Quality Division 1200 First Street NE, 5th Floor Washington, DC 20002 (202) 535-1354

REVIEWS:

Prepared by:

UND FORATH

Abraham T. Hagos Environmental Engineer

SSO:ATH

Approved by:

Stephen S. Ours, P.E. Chief, Permitting Branch