I. FACILITY INFORMATION
West Deptford Energy, LLC (WDE) is located at 3 Paradise Road, West Deptford, NJ 08066, Gloucester County and consists of natural-gas fired combined-cycle turbine power generating facility. The facility is owned by LS Power and operated by West Deptford Energy LLC.

The facility is classified as a major facility based on its potential to emit: 38.4 tons per year of volatile organic compounds (VOC), 185 tons per year of nitrogen oxides (NOx), 480 tons per year of carbon monoxide (CO), and 2.27 million tons per year of greenhouse gases in a carbon dioxide equivalent (CO2e) basis.

This permit allows individual hazardous air pollutant (HAP) to be emitted at a rate to not exceed: 220 lb per year of acrolein, 8740 lb per year of formaldehyde, 80 lb per year of polycyclic organic matter (POM), 4640 lb per year of toluene, 1420 lb per year of acetaldehyde, 0.4 lb per year of arsenic, 440 lb per year of benzene, 20 lb per year of 1,3-butadiene, 2.6 lb per year of cadmium, 0.04 lb per year of 7,12-dimethylbenz(a)anthracene, 1140 lb per year of ethylbenzene, 40 lb per year of naphthalene, 4.8 lb per year of nickel, 1.2 lb per year of lead, and 1040 lb per year of propylene oxide.

II. AREA ATTAINMENT CLASSIFICATION
The Federal Clean Air Act (CAA) sets National Ambient Air Quality Standards (NAAQS) for six common air pollutants. These commonly found air pollutants (also known as "criteria pollutants") are particulate matter, ground-level ozone, carbon monoxide (CO), sulfur dioxide (SO2), nitrogen dioxide (NO2), and lead. The US Environmental Protection Agency (USEPA) also classifies areas as “attainment” or “nonattainment” for each criteria pollutant, based on the magnitude of an area's problem. Nonattainment classifications are used to specify what air pollution reduction measures an area must adopt, and when the area must reach attainment. Currently, the entire State of New Jersey is designated as nonattainment for the 8-hour ozone NAAQS. New Jersey is designated attainment for all other pollutants. For nonattainment classification refer to https://www.epa.gov/green-book/green-book-national-area-and-county-level-multi-pollutant-information.

III. BACKGROUND AND HISTORY
The equipment that emits air contaminants from this facility include: two 384 MW combined-cycle combustion turbine generators (each with a duct burner), two 6-cell wet mechanical cooling towers draft cooling towers, 40 MM Btu/hr auxiliary boiler, 282 hp diesel fire water pump, three 4 MW Black Start Generators and 1000 KW emergency diesel engine-driven generator. The facility controls Nitrogen Oxide (NOx) emissions by using a dry low-NOx (DLN) combustion system on the combustion turbines along with selective catalytic reduction (SCR) on the combustion turbines/duct burners. WDE uses an oxidation catalyst to reduce Carbon Monoxide (CO) and Volatile Organic Compounds (VOC) emissions from the combustion turbines/duct burners.

Table 1 - Operating Permit Revision History (located at the end of this document) provides a summary of all the changes that have been incorporated into the operating permit through seven-day notice changes, administrative amendments, minor modifications, or significant modifications since the approval of the initial operating permit or the most recent renewal thereof. Please refer to the attached explanation sheet for the structure and configuration of conditions of approval, included in the Facility Specific Requirements section of this permit.

A Facility-Wide Risk Assessment was conducted on May 4, 2020, and health risk was determined to be negligible consistent with NJDEP Technical Manual 1003.

This application to renew Air Pollution Control Operating Permit for West Deptford Energy Station in accordance with N.J.A.C. 7:27-22.30. There are no proposed changes to air contaminants.

IV. BASIS FOR MONITORING AND RECORDKEEPING REQUIREMENTS
The facility’s operating permit includes monitoring, recordkeeping and reporting requirements that are sufficient to demonstrate the facility’s continued compliance with the applicable requirements consistent with the following:
STATEMENT OF BASIS for WEST DEPTFORD ENERGY LLC.

TITLE V OPERATING PERMIT RENEWAL
Program Interest (PI): 56078 / Permit Activity Number: BOP180001

1. Provisions to implement the testing and monitoring requirements of N.J.A.C. 7:27-22.18, the recordkeeping and reporting requirements of N.J.A.C. 7:27-22.19, and all emissions monitoring and analysis procedures or compliance assurance methods required under the applicable requirements, including any procedures and methods promulgated pursuant to 40 CFR 64; and

2. Where the applicable requirement does not require direct periodic monitoring of emissions, the Department requires periodic monitoring of surrogate parameters sufficient to yield reliable data from the relevant time period that are representative of the facility's compliance with the permit.

**Equipment / Emission Unit**

**U1 Combustion Turbines/Duct Burners:** The facility monitors natural gas use as the surrogate for the short-term and long-term (TPY) emissions limits for SO2, Sulfuric Acid, and HAPs.

3. In some cases, direct periodic monitoring of emissions and/or surrogate parameters is not required due to one or more of the following:
   - Equipment size and capacity limitations,
   - Subject equipment being permitted at the maximum rated capacity,
   - There is no specific state or Federal standard that applies to this piece of equipment,
   - Not a pollutant of concern for this piece of equipment,
   - Agreements with EPA on the frequency of testing and monitoring for combustion sources.

**V. APPLICABLE STATE AND FEDERAL RULES**

The facility is subject to New Jersey Air Pollution Control Regulations, codified in N.J.A.C. 7:27-1 through 34, as applicable. A complete text of these regulations is available at: [http://www.nj.gov/dep/ajm/rules27.html](http://www.nj.gov/dep/ajm/rules27.html)

The facility is also subject to Federal regulations listed below.

- 40 CFR Part 52.21: Prevention of Significant Deterioration,
- NSPS - Subpart A: Standards of Performance for New Stationary Sources: General Provisions,
- NSPS - Subpart Dc: NSPS for Industrial Steam Generating Units greater than or equal to 10 MM Btu/hr but less than 100 MM Btu/hr (auxiliary boiler),
- NSPS - Subpart IIII: NSPS for Stationary Compression Ignition Internal Combustion Engine,
- NSPS - Subpart KKKK: Standards of Performance for Stationary Combustion Turbines,
- MACT - Subpart ZZZZ Maximum Achievable Control Technology for Stationary Reciprocating Internal Combustion Engines,
- 40 CFR Part 72: Acid Rain Permit,

The Greenhouse Gas (GHG) emissions from this facility are 2,271,673 TPY CO2e and there is no GHG emission increase.

**VI. FACILITY’S COMPLIANCE STATUS**

The Responsible Official at the facility has certified that the facility currently meets all applicable requirements of the Federal Clean Air Act and the New Jersey Air Pollution Control Act. Based on this certification, the Department’s evaluation of the information included in the facility’s application, and a review of the facility’s compliance status, the Department has concluded that this air pollution control operating permit should be approved.

The facility has submitted a timely and complete application to renew their operating permit and an application shield is in effect.
This operating permit also includes a permit shield, pursuant to the provisions of N.J.A.C. 7:27-22.17. A permit shield provides that compliance with the relevant conditions of the operating permit shall be deemed compliance with the specific applicable requirements that are in effect on the date of issuance of the draft operating permit, and which form the basis for the conditions in the operating permit.

Also, prior to the expiration of the five-year period, the facility will be required to apply for a renewal of this operating permit, at which time the Department will evaluate the facility and issue a public notice with its findings.

**VII. EXEMPT ACTIVITIES**

The facility’s operating permit does not include exempt activities such as office and interior maintenance activities, maintenance shop activities, food preparation facilities, cafeterias and dining rooms, etc. A complete list of exempt activities, as allowed by the Operating Permit rule, can be found at N.J.A.C. 7:27-22.1.
### Table 1 - Operating Permit Revision History

New Jersey Department of Environmental Protection

<table>
<thead>
<tr>
<th>Permit Activity Number</th>
<th>Type of Revision</th>
<th>Description of Revision</th>
<th>Final Action Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>BOP210001</td>
<td>Minor Modification</td>
<td>To remove a redundant hour/year operational limit for the U6 auxiliary boiler and to reduce the annual natural gas usage limitation to be consistent with the natural gas heat content of 1,040 Btu/scf shown in the permit. WDE is also proposing to update the facility contact information.</td>
<td>8/3/21</td>
</tr>
</tbody>
</table>
| BOP190001              | Significant Modification | This modification is being proposed for the following changes:  
(1) To increase TSP emission limits and to revise the monitoring requirements to base compliance with all stack-tested pollutant emission limits on the average of three Department validated stack test runs in emission unit U1,  
(2) To add a CO2 budget source (RGGI Rule) in accordance with N.J.A.C. 7:27C-3.3,  
(3) To reduce the frequency of PM-10 and PM-2.5 stack testing from every quarter to at least 18 months prior to the expiration of the renewal operating permit,  
(4) To revise U7 to reflect that West Deptford Energy constructed three (3) not four (4) black start generators, U7 OS Summary annual emission limits have been reduced to reflect this change,  
(5) HAPs emissions from emission unit U1 were added based on the new Subchapter 17 reporting thresholds. HAPs added include: acetaldehyde, arsenic, benzene, 1,3-butadiene, cadmium, cobalt, 7,12-dimethylbenz(a)anthracene, ethylbenzene, naphthalene, nickel, and propylene oxide.  
(6) Methane and Nitrous oxide emissions from turbines, emergency generator, aux boiler and black start generators were added based on AP-42 calculations.  
(7) Also, Insignificant Source IS6 (2 Off-site Metering Station Emergency Generators <1MMBtu/hr) was never constructed, therefore, IS6 has been removed from the permit. | 9/29/20          |
<p>| BOP190003              | Administrative Amendment | This administrative amendment updates the facility contact information and the permit text.                                                                                                                                   | 1/8/20            |</p>
<table>
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<td>BOP170001</td>
<td>Significant Modification</td>
<td>The modification is being proposed for the WDES Turbine Upgrade Project and also the removal of previously permitted Phase II turbine with other equipment. The intent of the Upgrade Project is to improve the plant power output and heat rate by installing enhanced hardware in the turbine sections of the combustion turbine along with site-specific control logic optimizations. The maximum heat input to each combustion turbine will increase approximately 18%. The maximum heat input to the duct burners will not change. WDE has decided not to install the Phase II equipment currently included in the permit, therefore WDE is requesting that the Department remove the Phase II equipment from the operating permit. The following 6 pieces of equipment were the Phase II equipment: (1) 427 MW (2,352 MMBtu/hr) Siemens Combined Cycle Unit with Duct Burner No.3, (2) Multi Cell (8 cells) Cooling Tower No. 3, (3) 100 KW Diesel Emergency Generator No. 2, (4) 282 HP Diesel Fire Water Pump 2, (5) 40 MMBtu/hr Aux Boiler 2, and (6) Duct Burner No. 3. Removal of these equipment resulting the reduction of the Facility’s potential to emit for all pollutants. Other changes: Addition of a summary of Applicable Federal Regulations in the OS Summary level in the compliance plan. Addition of N.J.A.C. 7:27-18.3(b) citation for NOx and VOC for U1. Addition of stack testing requirements for Formaldehyde emission in Emission Unit U1 for combustion turbines 1 and 2.</td>
<td>8/20/18</td>
</tr>
</tbody>
</table>
**FACILITY NAME (FACILITY ID NUMBER)**
BOP050001

**New Jersey Department of Environmental Protection**
**Facility Specific Requirements**

**Emission Unit:** U40 Sewage Sludge Incinerators

**Operating Scenario:** OS Summary

**OR**

OS2 Fluidized Bed Incinerator

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**Table: Facility Specific Requirements**

<table>
<thead>
<tr>
<th>Ref.#</th>
<th>Applicable Requirement</th>
<th>Monitoring Requirement</th>
<th>Recordkeeping Requirement</th>
<th>Submittal/Action Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>The permittee shall conduct an annual performance test for each pollutant in Table 2 of 40CFR62 Subpart LLL between 11 and 13 calendar months after the previous performance test or within 60 days of a process change. [40 CFR 62.16000(a)]</td>
<td>Other: Conduct the performance test using the test methods, averaging methods and minimum sampling volumes or durations as specified in 40CFR62 Subpart LLL and according to the testing, monitoring and calibration requirements specified in 40 CFR 62.16015(a). [40 CFR 62.16000(a)].</td>
<td>Other: (1) Maintain records of the results of initial, annual and any subsequent performance tests conducted to determine compliance with the emission limits and standards and/or to establish operating limits, as applicable. [40 CFR 62.16025(c)].</td>
<td>Submit a report: Annually to the Administrator and to the Department. The permittee shall submit an annual compliance report as specified in 40 CFR 62. [40 CFR 62.16000(d)]</td>
</tr>
</tbody>
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**Explanation Sheet for Facility Specific Requirements**