STATEMENT OF BASIS for Cogen Technologies Linden Venture L.P.

TITLE V OPERATING PERMIT RENEWAL/Permit Modification
Program Interest (PI): 41809 / Permit Activity Number: BOP180002

I. FACILITY INFORMATION
Cogen Technologies, Linden Venture L.P. (Cogen Technologies Linden) is a 1182 megawatts (MW) electric and steam generating plant located at Railroad Avenue, Linden, New Jersey 07036, Union County. The facility is owned and operated by Cogen Technologies Linden Venture, L.P.

The facility is classified as a major facility based on its potential to emit 932 tons per year of nitrogen oxides, 165 tons per year of volatile organic compounds, 741 tons per year of carbon monoxide, 137 tons per year of Total Suspended Particulates (TSP), 475 tons per year of Particulate under 10 microns (PM10), 475 tons per year of Particulate Matter less than 2.5 microns (PM2.5); 45.7 tons per year of sulfur dioxide (SO2), and 5,222,690 tons per year of Greenhouse gases as Carbon Dioxide Equivalent (CO2e) to the atmosphere.

This permit allows individual hazardous air pollutants to be emitted at a rate not to exceed: 0.05 tons per year of 1,3-Butadiene, 1.74 tons per year of Acetaldehyde, 0.29 tons per year of Acrolein, 0.02 tons per year of Arsenic, 052 tons per year of Benzene, 0.04 tons per year of Cadmium, 1.39 tons per year of Ethylbenzene, 4.73 tons per year of Formaldehyde, 0.17 tons per year of Lead, 0.74 tons per year of Manganese, 0.1 tons per year of Mercury, 0.17 tons per year of PAH, 1.26 tons per year of Propylene Oxyde,0.05 tons per year of Selenium, 3.6 tons per year of Toluene, 4.4.tons per year of Xylene.

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 facility's current operating permit was approved on March 31, 2021. The original Prevention of Significant Deterioration (PSD) permit was issued on 12/20/90 and was modified via Major Modification to PSD Permit on 12/07/99. PSD permit was also modified via Major Modification BOP170001 that was approved July 30, 2019 to add a new combined-cycle turbine Unit 7 (EU11). The equipment that emits air contaminants from this facility include: 7 combined-cycle turbines, five of them are identical GE turbines each equipped with heat recovery steam generator (HRSG) with a duct burner and the sixth turbine is a GE turbine equipped with HRSG without a duct burner. Combined-cycle turbine Unit 7 is not in operation yet. Auxiliary equipment includes three steam turbo-generator sets, two emergency black start engines that are allowed to operate during blackout events only, emergency fire pump, and an ammonia storage tank. Five turbines (Units 1 through 5) are permitted to burn natural gas and butane and are equipped with Selective Catalytic Reduction System (SCR) to control Nitrogen Oxides (NOx) emissions. Unit 6 is permitted to burn natural gas, natural gas/refinery gas blend, and distillate oil as back up fuel and is equipped with SCR and Catalytic Oxidizer to control NOx and Carbon Monoxide (CO) emissions.

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 April 13, 2021 as part of the review of this permit application and health risk was determined to be negligible consistent with NJDEP Technical Manual 1003. With regard to the recently enacted Environmental Justice Legislation, the restrictions set forth in the bill do not take effect until the adoption of the necessary regulations. Once adopted, to the extent any future permitting activities are governed by the regulations, those activities will be subject to the requirements set forth therein.

This is a Permit Renewal/Permit Modification and includes the following changes:

This renewal incorporates Minor Modification BOP210001 that includes HAPS emissions above the reporting thresholds in N.J.A.C. 7:27-17.

The changes made during this permitting action result in allowable annual emissions changes for hazardous air pollutants as provided in Section I of this Statement of Basis.

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:

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. Such monitoring requirements include continuous monitoring of fuel consumption. The scope of the stack testing and Continuous Emission Monitoring (CEMS) is detailed in the facility specific requirements of the draft compliance plan.

2. 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/agram/rules27.html

The facility is also subject to Federal regulations listed below.

- 40 CFR 52.21 Prevention of Significant Deterioration (PSD) rule
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TITLE V OPERATING PERMIT RENEWAL/Permit Modification
Program Interest (PI): 41809 / Permit Activity Number: BOP 180002

- N.J.A.C. 7:27-18 Emission Offset Rule
- 40 CFR 60 NSPS Subpart KKKK New Source Performance Standards for Stationary Gas Turbines
- 40 CFR 60 NSPS Subpart GG New Source Performance Standards for Stationary Gas Turbines (U1-5)
- 40 CFR 60 NSPS Subpart Da New Source Performance Standards for Duct Burners
- 40 CFR 63 MACT Subpart ZZZZ NESHAP for Emergency Diesel RICE
- 40 CFR Part 72 Acid Rain Program
- 40 CFR Part 97 Cross-State Air Pollution Rule (CSAPR)

The Greenhouse Gas (GHG) emissions from this facility are 5,222,690 TPY CO2e and there is no GHG emissions increase. This renewal is not subject to PSD rules at 40 CFR 52.21.

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.
New Jersey Department of Environmental Protection
Operating Permit Revision History

COGEN TECH LINDEN VENTURE LP  PI 41809

<table>
<thead>
<tr>
<th>Permit Activity Number</th>
<th>Type of Revision</th>
<th>Description of Revision</th>
<th>Final Action Date</th>
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</thead>
<tbody>
<tr>
<td>BOP200001</td>
<td>Minor Modification</td>
<td>Cogen Technologies Linden Venture L.P. proposed a Minor Modification to Air Pollution Control Operating Permit to replace the duct burners for Units 1 through 5 (collectively referred to as L5) with functionally equivalent equipment. Duct Burners cannot operate independently from combustion turbines Units 1 through 5. There will be no increase in either the currently authorized maximum heat input of each duct burner or allowable emission rates. The replacement of the duct burners will not result in an increase in actual emissions. The proposed action does not meet the definition of &quot;Reconstruction&quot; as defined at N.J.A.C. 7:27-22.1. Facility Specific Requirements were updated under U1 through U5, OS Summary, Ref. #14.</td>
<td>3/31/2021</td>
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</table>
Cogen Technologies Linden Venture, L.P. (Linden Cogen) is submitting an application for significant modification to Operating Permit. Linden Cogen is physically located inside the Bayway industrial complex along with Phillips 66 Bayway Refinery (Refinery, or Bayway) in Linden, Union County, New Jersey.

This permit will authorize the following changes to the existing Linden 6 combustion turbine (Linden 6):

- Replacing the current combustion system with novel technology by PSM to enable combustion of a blend of natural gas and refinery fuel gas (RFG) (U6, OS7);

- Upgrading combustion turbine hardware to increase power output by 7%, improve efficiency and extend turnaround intervals; Increase heat input and short-term NOx emission increase. Annual permitted NOx and CO emissions will not change; Linden 6 combustion turbine is newly subject to NSPS KKKK.

- Upgrading process controls to improve combustion efficiency;

- Installation of evaporative cooling, wet compression, and/or supplemental air injection to improve efficiency and output during warm weather operation.

- Increase sulfur content in natural gas that will cause an increase in SO2 and sulfuric acid mist emissions.

This permit incorporates Minor Modification BOP190002 to include RGGI requirements under GR27.
Cogen Technologies Linden Venture, L.P. (Linden Cogen) is proposing to construct Unit 7 - one (1) General Electric (GE) 7F.05 combustion turbine (CT), 250 MW, with unfired heat recovery steam generator (HRSG) on a 3.2 acre tract of land located within the Phillips 66 Bayway Refinery in the vicinity of the existing cogeneration facility. The CT will fire natural gas as the primary fuel, and ultra-low sulfur distillate (ULSD) fuel oil as the back-up fuel for up to 800 hours per year. [Emission Unit U11].

The CT will drive an electric generator which will be connected to Con Edison's Goethal's 345kv substation on Staten Island via an existing underwater cable. The HRSG will recover heat and produce steam for utilization in the cogeneration facility's existing three (3) steam turbines. Post-combustion emissions control equipment will include a Selective Catalytic Reduction (SCR) system to minimize NOx emissions, and an oxidation catalyst to minimize CO and VOC emissions.

Additional equipment for this project includes insignificant sources: one (1) ULSD 526,000 gallon fuel oil storage tank (IS24), one (1) aqueous ammonia storage tank (IS25), one (1) oil/water separator (IS26), one (1) demineralized water storage tank, one (1) waste water storage tank, one (1) fin fan cooling water module, associated electric transmission and distribution equipment, and maintenance, warehouse, and office buildings. Additional fugitive emissions are covered under FG11 through FG16.

The project is a Major modification pursuant to Prevention of Significant Deterioration (PSD) requirements, 40 CFR 52.21. This project triggers N.J.A.C. 7:27-18 (Emission Offset rule) requirements. New turbine is also subject to Acid Rain regulations.

This modification replaces the Clean Air Interstate Rule (CAIR) permit for the facility with Cross-State Air Pollution Rule (CSAPR) requirements (U1-U5, U6, and U11).

This permit also incorporates minor modification BOP180001 to revise acrolein emissions for Unit 6. [U6 OS0 Ref. 15]. This permit incorporates new
Responsibility Official, Mr. PETER GEISSLER, per facility Adm Amendment BOP190001.
This minor modification application has been filed in accordance with N.J.A.C. 7:27-22.23 to replace the Linden Unit 600 (U6) existing compressor with a new compressor that incorporates the current more efficient flared rotor design. The existing compressor with unflared rotor is no longer in standard production. Certain physical changes will be made to the compressor section of the combustion turbine to allow the installation of the flared compressor.

The proposed project will not result in changes in the turbine combustion process and will not require changes to hourly or annual permitted emission rates. There is no increase in actual hourly or annual emissions. Linden Cogen is the existing PSD facility. The project is not a major modification subject to NSR review since it is not projected to result in a significant net emission increase of a regulated pollutant. Neither is there a "reasonable possibility" of a significant net emission increase.

This permit incorporates administrative amendment BOP160001 changes: new Responsible Official, Ms. Tina Lee of Star West Generation. In addition, updates include Ms. Natalie Dubanowitz as the Fees/Billing Contact and Mr. David Llewelyn as the Onsite Manager.
This amendment application has been filed in accordance with N.J.A.C. 7:27-22.20 to update the combustion turbine and duct burner adjustment process applicable requirements to reflect the most recent language agreed to by NJDEP management for the combustion process adjustments required by N.J.A.C. 7:27-19.

The revised language pertaining to the combustion adjustment process requirements:

- U1-U5, OS Summary, Reference No. 4 - revise to reflect NJDEP's new language for combustion adjustments for combustion turbines and duct burners
- U1-U5, OS 2, Reference No. 5 - remove since the duct burner adjustment requirements are incorporated into Reference No. 4, above.
- U6, OS Summary Reference No. 4 - revise to reflect NJDEP's new language for combustion adjustments for combustion turbines and duct burners. New requirement has been added that duct burner cannot be operated independently of a combustion turbine. (U1-U5; OS Summary, Ref. #10).

In addition, the application requests correction to the stack test emission factors for VOC and TSP addressed in U6, OS Summary, Reference Nos. 8 and 10 to be consistent with the stack test results on file with NJDEP BTS. The TSP stack test emission factor in the monitoring requirement for Reference No. 8 should be revised from 0.0025 to 0.0029 lb/MMBtu. The VOC stack test emission factor addressed in the monitoring requirement for Reference No. 10 should be revised from 0.00003 to 0.0001 lb/MMBtu.

Amendment clarifies the performance testing requirements for Butane firing after firing Butane for more than 100 hours in a calendar year during a permit
The amendment application also requests updates to the Insignificant Source (IS) pages in the Operating Permit to remove duplicate items and to update the ID numbers to show consistency between the Facility Specific Requirement pages and the Insignificant Source Inventory in the back of the permit. Compliance plan was included for IS23.

The amendment updates Mr. Roy Belden's title from Vice President to Authorized Signatory and revises the Fees/Billing Contact to Mr. Thomas Fogarty.

This permit also updates FC general conditions.
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)]

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)].

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(e)].

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)].