

# STATEMENT OF BASIS for PSE&G CENTRAL GAS PLANT

## TITLE V OPERATING PERMIT RENEWAL AND PERMIT MODIFICATION

Program Interest (PI): 17824 / Permit Activity Number: BOP200001

### I. FACILITY INFORMATION

PSE&G Central Gas Plant (formerly PSEG Edison Generating Station) is located at 410 Silver Lake Avenue in Edison, Middlesex County, New Jersey 08817 and is an electric and gas utility company. The facility is owned and operated by Public Service Electric and Gas (PSE&G).

The facility is a formerly major facility that has a Title V permit but its emissions are below major source threshold, since the removal of the PSEG combustion turbines in May 2015.

PSE&G Central Gas Plant is not a major HAP emissions source, as the total HAPs from the facility are 0.0094 tpy, which is less than 25 tpy of combined HAPs or less than 10 tpy of individual HAP. This permit allows individual hazardous air pollutant to be emitted at a rate to not exceed: 0.021 pounds per year of Cobalt, 0.005 pounds per year of 7,12-Dimethylbenz(a)anthracene, and 18.8 pounds per year of Formaldehyde.

### 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 (SO<sub>2</sub>), nitrogen dioxide (NO<sub>2</sub>), 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:

- Six (6) natural gas-fired packaged hydronic boilers at Emission Unit U16. Three of these boilers have maximum heat input ratings of 3.0 million British thermal units per hour, high heating value (MMBtu/hr HHV), and the other three boilers have maximum heat input ratings of 2.5 MMBtu/hr HHV.
- Four (4) natural gas-fired water-bath heaters (Emission Unit U15) that are used to vaporize liquefied propane for addition to the local distribution system, during periods of peak demand. Each of these vaporizers has a maximum heat input of 13 MMBtu/hr HHV.
- One (1) natural gas-fired emergency generator (Emission Unit U14), with a maximum heat input of 1.2 MMBtu/hr HHV, permitted for 100 hours per year.

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.

Health Risk screening was conducted as part of the review of this permit application and the health risk was determined to be negligible consistent with NJDEP Technical Manual 1003.

# STATEMENT OF BASIS for PSE&G CENTRAL GAS PLANT

## TITLE V OPERATING PERMIT RENEWAL AND PERMIT MODIFICATION

Program Interest (PI): 17824 / Permit Activity Number: BOP200001

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

1. Remove two (2) liquid propane vapor units Equipment E33 and E34 at Emission Unit U11 and its associated emission points PT39, PT40, PT41, and PT42.
2. Remove Five (5) natural gas-fired water bath heaters Equipment IDs, E26, E27, E28, E29 and E30 (Emission Unit U5) and its associated nine emission points PT26 through PT34.
3. Remove Group GR3 for U16 and U5, as it is no longer applicable since U5 is being removed.
4. There will be no change in facility annual emissions as U5, U11 and U15 were in a common fuel cap.
5. Regroup emergency generators in insignificant sources into IS2, emergency generators subject to NESHAPS ZZZZ and IS11, emergency generators subject to NSPS JJJJ. Update emissions from insignificant sources.
6. As requested in modification application BOP180001, remove requirements pertaining to National Emission Standards for Hazardous Air Pollutants (NESHAP) Subpart DDDDD for Industrial, Commercial, and Institutional Boilers and Process Heaters at major sources of Hazardous Air Pollutant (HAP) emissions for vaporizer No. 1 at Emission Unit U15. Vaporizer No 1 is not subject to MACT DDDDD because it commenced operation on July 28<sup>th</sup>, 2015 after the facility became an area source of HAPs on May 1, 2015. The applicability of MACT DDDDD is based on the date of commencement of operation and not on the date of installation of equipment.

There are no proposed changes to air contaminant allowable emission rates.

#### IV. CASE-BY-CASE DETERMINATIONS

No case-by-case determinations were required for this permit action.

#### V. EMISSION OFFSET REQUIREMENTS

This permit action is not subject to Emission Offset requirements.

#### VI. 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.
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.

## STATEMENT OF BASIS for PSE&G CENTRAL GAS PLANT

### TITLE V OPERATING PERMIT RENEWAL AND PERMIT MODIFICATION

Program Interest (PI): 17824 / Permit Activity Number: BOP200001

#### **VII. 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/aqm/rules27.html>

The facility is subject to Federal regulations listed below.

- NSPS Subpart A: New Source Performance Standards - General Provisions
- NSPS Subpart Dc: New Source Performance Standards for Small Industrial-Commercial-Institutional Steam Generating Units
- NSPS Subpart JJJJ New Source Performance Standards for Stationary Spark Ignition Internal Combustion Engine
- NESHAP Subpart ZZZZ national Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

The Greenhouse Gas (GHG) emissions from this facility are 18,676 TPY CO<sub>2</sub>e and there is no GHG emission increase. This renewal and modification is not subject to PSD rules at 40 CFR 52.21.

#### **VIII. 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 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.

#### **IX. 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

Permit Activity Number	Type of Revision	Description of Revision	Final Action Date
BOP240001	Administrative Amendment	This Title V Administrative Amendment application is to change the facility contact information at the Central Gas Plant, including the Responsible Official. Craig Bartley is the new Responsible Official, replacing Wade Miller, Oleg Krotoff is the new Air Permit Information, BOP, and General Contact, and Edward Twilley is the new Fees/Billing Contact.	7/9/24
BOP220001	Minor Modification	This Minor Modification application for the installation and operation of six new natural gas-fired Hydronic Boilers at the facility. Three of these hydronic boilers have maximum heat input ratings of 3.0 MMBtu/hr, and the other three have maximum heat input ratings of 2.5 MMBtu/hr. These new indirect hydronic boilers will replace the five existing waterbath heaters in Emission Unit U5 of the Title V permit. The six new hydronic boilers will be covered under a new Emission Unit U16, along with equipment E40-E45 and emission points PT76-PT81. Another three new natural gas-fired hydronic boilers, each with maximum heat ratings below 1 MMBtu/hr, will be added to existing insignificant source category IS2.	9/7/22
BOP170001	Significant Modification	This significant modification is to add and operate two (2) new, replacement natural gas-fired liquefied propane vaporizers. The new vaporizers are replacements for existing Vaporizer No. 3 (U11, E33) and Vaporizer No. 4 (U11, E34). Both of the replacement vaporizers are Algas-SDI "Aquavaire" Model Q12500H, each with a maximum heat input of 13 MMBtu/hr. Following are the details of changes:  1. Addition of two, 13 MMBtu/Hr(HHV), Million British Thermal Unit per hour (MMBtu/hr) Higher Heating Value(HHV) Natural Gas fired vaporizers, Equipment IDs E38 and E39, at Emission Unit U15, with Emission Points PT72, PT73, PT74 and PT75, each vaporizer having two emission points, with resultant increase in emissions. The four vaporizers at Emission unit U15 will be under fuel a fuel cap of 250 million cubic feet per year (MMft3/yr), however each of these four vaporizers will be permitted to burn up to 98.75 MMft3/yr of natural gas, which is equivalent to 7,900 hours per year of operation. 2. Removal of two 15.4 MMBtu/hr (HHV) natural gas fired liquefied propane vaporizers Equipment IDs E33 and E34, at emission unit U11, with Emission Points PT39, PT40, PT41 and PT42, each vaporizer having two emission points, prior to the installation of the two new vaporizers as per Reference #17 under U11, OS Summary. This modification also changes contact information, including the Responsible Official, as provided in the "Facility Profile" section of this permit application.	1/29/18

BOP160001	Significant Modification	<p>This application for a significant modification to the Title V Operating Permit for the PSEG Fossil LLC (PSEG Fossil) Edison Generating Station (Edison) to install and operate a second new, replacement natural gas-fired liquefied propane vaporizer, as well as to transfer ownership of the Title V permit from PSEG Fossil to PSE&amp;G and change the facility name from "PSEG Fossil Edison Generating Station" to "PSE&amp;G Central Gas Plant".</p> <p>The new vaporizer is a replacement for the existing Vaporizer No. 2 (U11, E32). The replacement vaporizer is an Algas-SDI "Aquavaire" Model Q12500H with a maximum heat input of 13 MMBtu/hr.</p>	3/15/17
-----------	--------------------------	---	---------

FACILITY NAME (FACILITY ID NUMBER)  
BOP050001

Activity Number assigned by the Department

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

Emission Unit Number assigned by the Facility

Brief description of emission unit

**Emission Unit:** U40 Sewage Sludge Incinerators  
**Operating Scenario:** OS Summary

**OR** OS2 Fluidized Bed Incinerator

OS Summary lists all rules and requirements that apply to an emission unit. An emission unit may contain one or more pieces of equipment and corresponding operating scenarios.

OSX denotes the operating scenario number and lists the rules and requirements that apply to a scenario. An operating scenario represents various ways (or scenarios) a piece of equipment is permitted to operate.

Item Number

Description of applicable requirement

Monitoring method to ensure compliance

Recordkeeping to show facility's compliance

Actions and submittals required for the facility

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
3	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)]

Rule citation for applicable requirement

Rule citation for monitoring requirement

Rule citation for recordkeeping requirement

Rule citation for submittal/ action requirement

**Explanation Sheet for Facility Specific Requirements**