NEWARK
ENERGY CENTER

955 Delancy St
Newark, NJ 07105

**VIA OVERNIGHT DELIVERY**

September 3, 2019

Michael Hogan
NJDEP - Air Quality Permitting Program
Bureau of Air Permits
Operating Permits Section
P.O. Box 027
Trenton, NJ 08625-0027
(609) 292-0834

**Re: Newark Energy Center**
**Program Interest Number: 08857**
**Operating Permit Minor Modification Application**

Enclosed is a minor modification application for the existing operating permit for the Newark Energy Center (NEC), Program Interest Number: 08857. This modification is intended to update the existing operating permit to include the new requirements associated with the Regional Greenhouse Gas Initiative (RGGI).

This application consists of the following:

1. RADIUS Submission File
2. Attachment A – RADIUS Printout PDF
3. Attachment B – NJ03 Application for Adding a CO2 Budget Source in Operating Permit

If you have any questions or require further information, please contact Monica Howell at (609) 221-2859 or mhowell@ppmsllc.com.

Sincerely,

Richard Grubb
Vice President, Project Management

cc: Ron Dolinski – NEC
Kevin Lopez – NEC
Brian Farbanish - NJDEP Northern Enforcement

# CO2 BUDGET TRADING PROGRAM | NJ03 - APPLICATION FOR ADDING A CO2 BUDGET SOURCE IN OPERATING PERMIT

Consistent with N.J.A.C. 7:27C-3.3

## 1. FACILITY INFORMATION

Facility PI: 08857 Facility Name: Newark Energy Center ORIS Code: 58079

CO2 Authorized Account Representative Name: Richard Grubb Title: Vice President, Project Management

## 2. CO2 BUDGET UNIT IDENTIFICATION

| CO2 Budget Unit ID | CO2 Budget Unit Description | Op. Permit U# | Op. Permit E# |
|---|---|---|---|
| U001 | Combustion Turbine 1 and Associated HRSG 1 | U1 | E1 and E3 |
| U002 | Combustion Turbine 2 and Associated HRSG 2 | U1 | E2 and E4 |
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## 3. COMPLIANCE REQUIREMENTS AND CERTIFICATION

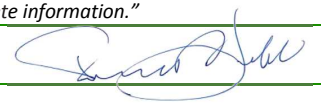
The CO2 budget source and each CO2 budget unit at the source must comply with the general provisions at N.J.A.C. 7:27C-1.4, compliance requirements at N.J.A.C. 7:27C-6.9, and monitoring, recordkeeping, and reporting requirements at N.J.A.C. 7:27C-8. The Department will incorporate these requirements into the facility's operating permit pursuant to N.J.A.C. 7:27-22.28. See the compliance plan template at the link above.

A Compliance Certification must be submitted for the CO2 budget source and each CO2 budget unit at the source by March 1 following the relevant control period or initial control period (not required during an interim control period).

## 4. APPLICATION CERTIFICATION

Responsible Official as Defined in N.J.A.C. 7:27- 1.4

*"I certify, under penalty of law, that I have personally examined and am familiar with the information submitted in this attachment to the RADIUS Operating Permit Application and all attached documents and, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate and complete. I am aware that there are significant civil and criminal penalties, including the possibility of fine or imprisonment or both, for submitting false, inaccurate or incomplete information."*

| Name: Richard Grubb | Signature:  | Date: 9/4/2019 |
|---|---|---|

Individuals (may include consultants) with direct knowledge of and responsibility for the information contained within this document as defined in N.J.A.C. 7:27-1.4

*"I certify, under penalty of law, that I believe the information provided in this document is true, accurate and complete. I am aware that there are significant civil and criminal penalties, including the possibility of fine and imprisonment or both, for submitting false, inaccurate or incomplete information."*

| Name: Kevin Lopez | Signature:  | Date: 9/4/2019 |
|---|---|---|

**Newark Energy Center, LLC (08857)**

Date: 8/21/2019

# New Jersey Department of Environmental Protection
# Reason for Application

**Permit Being Modified**

**Permit Class:** BOP **Number:** 180001

**Description of Modifications:** This application is intended to update the Operating Permit to include the new requirements for the facility in order to comply with the new RGGI rules.

# New Jersey Department of Environmental Protection
# Facility Profile (General)

**Facility Name (AIMS):** Newark Energy Center, LLC **Facility ID (AIMS):** 08857

**Street Address:** 955 DELANCY ST
NEWARK, NJ 07105

**Mailing Address:** 955 DELANCY ST
NEWARK, NJ 07105

**State Plane Coordinates:**
**X-Coordinate:**
**Y-Coordinate:**
**Units:**
**Datum:**
**Source Org.:**
**Source Type:**

**County:** Essex
**Location Description:**

**Industry:**
**Primary SIC:**
**Secondary SIC:**
**NAICS:** 221112

# New Jersey Department of Environmental Protection
# Facility Profile (General)

**Contact Type: Air Permit Information Contact**

**Organization:** Newark Energy Center, LLC
**Org. Type:** Corporation
**Name:** Monica Howell
**NJ EIN:** 00452391369
**Title:** Environmental Manager
**Phone:** (609) 221-2859 x
**Fax:** ( ) - x
**Other:** ( ) - x
**Type:**
**Email:** mhowell@ppmsllc.com
**Mailing Address:** 955 DELANCY ST
NEWARK, NJ 07105

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**Contact Type: BOP - Operating Permits**

**Organization:** NJDEP
**Org. Type:** State
**Name:** Michael Hogan
**NJ EIN:**
**Title:** Environmental Engineer 2
**Phone:** (609) 633-1124 x
**Fax:** (609) 633-1112 x
**Other:** ( ) - x
**Type:**
**Email:** michael.hogan@dep.nj.gov
**Mailing Address:** Mail Code 41-02
DEP Air Quality Program, PO Box 420
401 East State Street, 2nd Floor
Trenton, NJ 08625-0420

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**Contact Type: Fees/Billing Contact**

**Organization:** Newark Energy Center, LLC
**Org. Type:** Corporation
**Name:** Richard Grubb
**NJ EIN:** 00452391369
**Title:** Vice President, Project Management
**Phone:** (704) 315-4432 x
**Fax:** (973) 466-1550 x
**Other:** ( ) - x
**Type:**
**Email:** rgrubb@ppmsllc.com
**Mailing Address:** 955 Delancy St
Newark, NJ 07105

# New Jersey Department of Environmental Protection
## Facility Profile (General)

**Contact Type: General Contact**

**Organization:** Newark Energy Center, LLC
**Name:** Monica Howell
**Title:** Environmental Manager
**Phone:** (609) 221-2859 x
**Fax:** ( ) - x
**Other:** ( ) - x
**Type:**
**Email:** mhowell@ppmsllc.com

**Org. Type:** Corporation
**NJ EIN:** 00452391369

**Mailing Address:** 955 DELANCY ST
NEWARK, NJ 07105

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**Contact Type: Owner (Current Primary)**

**Organization:** Newark Energy Center, LLC
**Name:** Richard Grubb
**Title:** Vice President, Project Management
**Phone:** (704) 315-4432 x
**Fax:** (973) 466-1550 x
**Other:** ( ) - x
**Type:**
**Email:** rgrubb@ppmsllc.com

**Org. Type:** Corporation
**NJ EIN:** 00452391369

**Mailing Address:** 955 Delancy St
Newark, NJ 07105

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**Contact Type: Responsible Official**

**Organization:** Newark Energy Center, LLC
**Name:** Richard Grubb
**Title:** Vice President, Project Management
**Phone:** (704) 315-4432 x
**Fax:** (973) 466-1550 x
**Other:** ( ) - x
**Type:**
**Email:** rgrubb@ppmsllc.com

**Org. Type:** Corporation
**NJ EIN:** 00452391369

**Mailing Address:** 955 Delancy St
Newark, NJ 07105

**Newark Energy Center, LLC (08857)** Date: 8/21/2019

# New Jersey Department of Environmental Protection
# Equipment Inventory

| Equip. NJID | Facility's Designation | Equipment Description | Equipment Type | Certificate Number | Install Date | Grand-Fathered | Last Mod. (Since 1968) | Equip. Set ID |
|---|---|---|---|---|---|---|---|---|
| E1 | Turbine 1 | Combustion Turbine 1 | Combustion Turbine | | | No | | |
| E2 | Tubine 2 | Combustion Turbine 2 | Combustion Turbine | | | No | | |
| E3 | HRSG 1 | HRSG w/ Duct Burner 1 | Duct Burner | | | No | | |
| E4 | HRSG 2 | HRSG w/ Duct Burner 2 | Duct Burner | | | No | | |

**Newark Energy Center, LLC (08857)** Date: 8/21/2019

# New Jersey Department of Environmental Protection
# Control Device Inventory

| CD NJID | Facility's Designation | Description | CD Type | Install Date | Grand-Fathered | Last Mod. (Since 1968) | CD Set ID |
|---|---|---|---|---|---|---|---|
| CD101 | SCR 1 | Selective Catalytic Reduction for Turbine 1 | Selective Catalytic Reduction | | No | | |
| CD102 | Ox Cat 1 | CO Oxidation Catalyst for Turbine 1 | Oxidizer (Catalytic) | | No | | |
| CD201 | SCR 2 | Selective Catalytic Reduction for Turbine 2 | Selective Catalytic Reduction | | No | | |
| CD202 | Ox Cat 2 | CO Oxidation Catalyst for Turbine 2 | Oxidizer (Catalytic) | | No | | |

**Newark Energy Center, LLC (08857)**

Date: 8/21/2019

## New Jersey Department of Environmental Protection
## Emission Points Inventory

| PT NJID | Facility's Designation | Description | Config. | Equiv. Diam. (in.) | Height (ft.) | Dist. to Prop. Line (ft) | Exhaust Temp. (deg. F) | | | Exhaust Vol. (acfm) | | | Discharge Direction | PT Set ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Avg. | Min. | Max. | Avg. | Min. | Max. | | |
| PT1 | Turbine 1 | Turbine 1 and HRSG Emission Point | Round | 222 | 252 | 185 | 181.2 | 161.3 | 300.0 | 1,121,050.0 | 0.0 | 1,232,750.0 | Up | |
| PT2 | Turbine 2 | Turbine 2 and HRSG Emission Point | Round | 222 | 252 | 185 | 181.2 | 161.3 | 3,000.0 | 1,121,050.0 | 0.0 | 1,232,750.0 | Up | |

**Newark Energy Center, LLC (08857)**

Date: 8/21/2019

## New Jersey Department of Environmental Protection
## Emission Unit/Batch Process Inventory

**U 1 2 Turbine/DB 2 Turbines, each with HRSG**

| UOS NJID | Facility's Designation | UOS Description | Operation Type | Signif. Equip. | Control Device(s) | Emission Point(s) | SCC(s) | Annual Oper. Hours Min. | Annual Oper. Hours Max. | VOC Range | Flow (acfm) Min. | Flow (acfm) Max. | Temp. (deg F) Min. | Temp. (deg F) Max. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OS1 | CT1 | Combustion Turbine (CT) 1 firing natural gas at full load without supplemental duct burner firing in Heat Recovery Steam Generator (HRSG) 1 | Normal - Steady State | E1 | CD101 (P)<br>CD102 (S) | PT1 | | 0.0 | 8,760.0 | | 0.0 | 1,232,750.0 | 161.3 | 187.3 |
| OS2 | CT2 | Combustion Turbine (CT) 2 firing natural gas at full load without supplemental duct burner firing in Heat Recovery Steam Generator (HRSG) 2 | Normal - Steady State | E2 | CD201 (P)<br>CD202 (S) | PT2 | | 0.0 | 8,760.0 | | 0.0 | 1,232,750.0 | 161.3 | 187.3 |
| OS3 | CT/HRSG 1 | Combustion Turbine (CT) 1 firing natural gas at full load with supplemental duct burner firing in Heat Recovery Steam Generator (HRSG) 1 | Normal - Steady State | E3 | CD101 (P)<br>CD102 (S) | PT1 | | 0.0 | 8,760.0 | | 0.0 | 1,232,750.0 | 161.3 | 187.3 |
| OS4 | CT/HRSG 2 | Combustion Turbine (CT) 2 firing natural gas at full load with supplemental duct burner firing in Heat Recovery Steam Generator (HRSG) 2 | Normal - Steady State | E4 | CD201 (P)<br>CD202 (S) | PT2 | | 0.0 | 8,760.0 | | 0.0 | 1,232,750.0 | 161.3 | 187.3 |

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

**Emission Unit:** **U1 2 Turbines, each with HRSG**

**Operating Scenario:** **OS Summary**

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

| Ref.# | Applicable Requirement | Monitoring Requirement | Recordkeeping Requirement | Submittal/Action Requirement |
|---|---|---|---|---|
| 1 | The owners and operators of each CO2 budget source and each CO2 budget unit at the source shall, as of the CO2 allowance transfer deadline, hold CO2 allowances in the sources's compliance account, available for compliance deductions under N.J.A.C. 7:27C-6.9, as follows:<br><br>1) In the case of an initial control period, the number of CO2 allowances held shall be no less than the amount equivalent to the total CO2 emissions for the initial control period from all CO2 budget units at the source;<br><br>2) In the case of a control period, the number of CO2 allowances held shall be no less than the total CO2 emissions for the control period from all CO2 budget units at the source, less the CO2 allowances deducted to meet the requirements of N.J.A.C 7:27C-1.4(g) with respect to the previous two interim control periods, as determined in accordance with N.J.A.C. 7:27C-6 and 7:27C-8;<br><br>3) In the case of an interim control period, the number of CO2 allowances held shall be no less than the total CO2 emissions for the interim control period from all CO2 budget units at the source, multiplied by 0.50, as determined in accordance with N.J.A.C. 7:27C-6 and 7:27C-8. [N.J.A.C. 7:27C-1.4(f)] | Monitored by calculations at the approved frequency The Department shall use the emission measurements recorded and reported in accordance with N.J.A.C. 7:27C-8 to determine the unit's compliance. Total tons for a control period shall be calculated as the sum of all recorded hourly emissions (or the tonnage equivalent of the recorded hourly emissions rates) in accordance with N.J.A.C. 7:27C-8. The Department will round total CO2 emissions to the nearest whole ton, so that any fraction of a ton equal to or greater than 0.50 tons is deemed to equal one ton and any fraction of a ton less than 0.50 tons is deemed to equal zero tons. [N.J.A.C. 7:27C-1.4(d)] | Recordkeeping by data acquisition system (DAS) / electronic data storage continuously Maintain records of all CO2 emissions from each CO2 budget unit. [N.J.A.C. 7:27C-8] | Submit a report: Every April 30, July 30, October 30, and January 30 for the preceding quarter year (the quarter years begin on January 1, April 1, July 1, and October 1) The CO2 authorized account representative shall submit quarterly reports to the Bureau of Energy and Sustainability, for each calendar quarter beginning with:<br><br>i. For a unit that commences commercial operation before [effective date - 6 months], the calendar quarter beginning January 1, 2020; or<br><br>ii. For a unit commencing commercial operation on or after [effective date - 6 months], the calendar quarter corresponding to the earlier of the date of provisional certification or the applicable deadline for initial certification under N.J.A.C. 7:27C-8.1(d). If the calendar quarter so determined is the third or fourth quarter of 2019, reporting shall commence in the quarter beginning January 1, 2020.<br><br>Quarterly reports shall be submitted in the manner specified in Subpart H of 40 CFR 75 and 40 CFR 75.64. Quarterly reports shall be submitted for each CO2 budget unit (or group of units using a common stack), and shall include all of the data and information required in Subpart G of 40 CFR 75, except for opacity, heat input, NOx and SO2 provisions.<br><br>The CO2 authorized account representative shall submit, to the Bureau of Energy and Sustainability, a compliance certification in support of each quarterly report, pursuant to N.J.A.C. 7:27C-8.5(c)3. [N.J.A.C. 7:27C-8.5(c)] |

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

| Ref.# | Applicable Requirement | Monitoring Requirement | Recordkeeping Requirement | Submittal/Action Requirement |
|---|---|---|---|---|
| 2 | CO2 Allowance Tracking System (COATS): CO2 allowances shall be held in, deducted from, or transferred among COATS accounts in accordance with N.J.A.C 7:27C-5, 6, and 7. [N.J.A.C 7:27C-1.4(i)] A CO2 allowance shall not be deducted, in order to comply with N.J.A.C. 7:27-1.4(f), for a control period that ends prior to the year for which the CO2 allowance was allocated. [N.J.A.C 7:27C-1.4(j)] A CO2 offset allowance shall not be deducted, in order to comply with N.J.A.C. 7:27-1.4(f), beyond the applicable percent limitations at N.J.A.C. 7:27C6.9(a)3. [N.J.A.C. 7:27C-1.4(k)] | Monitored by other method (provide description) at no required frequency The Permittee shall review any transactions recorded in its COATS account for accuracy. [N.J.A.C. 7:27-22.16(o)] | None. | Submit a report: As per the approved schedule Submit compliance certification reports pursuant to N.J.A.C 7:27C-4.1(a) and CO2 allowance transfer requests, as necessary, pursuant to N.J.A.C 7:27C-7.1(a), to the Bureau of Energy and Sustainability.<br><br>If information in COATS account is found to be inaccurate, notify the Bureau of Energy and Sustainability. [N.J.A.C. 7:27-22.16(o)] |
| 3 | CO2: The owners and operators of a CO2 budget source that has excess emissions in any control period or in the initial control period, or has excess interim emissions in any interim control period, shall:<br>1. Forfeit the CO2 allowances required for deduction under N.J.A.C. 7:27C-6.9(e);<br>2. Not use any CO2 offset allowances to cover any part of such excess emissions; and<br>3. Pay any fine, penalty, or assessment or comply with any other remedy imposed under N.J.A.C. 7:27C-6.9(f). [N.J.A.C. 7:27C-1.4(n)] | The Permittee shall review any transactions recorded in its COATS account for accuracy. CO2: Monitored by other method (provide description) at no required frequency. [N.J.A.C. 7:27-22.16(o)] | None. | Submit notification: Upon occurrence of event If information in COATS account is found to be inaccurate, notify the Bureau of Energy and Sustainability. [N.J.A.C. 7:27-22.16(o)] |

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

| Ref.# | Applicable Requirement | Monitoring Requirement | Recordkeeping Requirement | Submittal/Action Requirement |
|---|---|---|---|---|
| 4 | CO2: Account certificate of representation and supporting documents. [N.J.A.C. 7:27C-1.4(o)1] | None. | CO2: Recordkeeping by manual logging of parameter or storing data in a computer data system upon occurrence of event The owners and operators of the CO2 budget source and each CO2 budget unit at the source shall keep on site at the source the account certificate of representation for the CO2 authorized account representative for the CO2 budget source and each CO2 budget unit at the source and all documents that demonstrate the truth of the statements in the account certificate of representation, in accordance with N.J.A.C. 7:27C-2.4. These documents shall be retained on site at the source until such documents are superseded by a newly submitted account certificate of representation changing the CO2 authorized account representative. [N.J.A.C. 7:27C-1.4(o)1] | None. |

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

| Ref.# | Applicable Requirement | Monitoring Requirement | Recordkeeping Requirement | Submittal/Action Requirement |
|---|---|---|---|---|
| 5 | CO2: Copies of Documents & Reports [N.J.A.C. 7:27C-1.4(o)] | None. | CO2: Recordkeeping by manual logging of parameter or storing data in a computer data system upon occurrence of event The owners and operators of the CO2 budget source and each CO2 budget unit at the source shall keep on site at the source each of the following documents for a period of 10 years from the date the document is created. The Department may at any time prior to the end of the 10-year period extend the 10-year period in writing, if it determines that retention of the documents beyond the 10-year period is necessary to determine compliance with the requirements of N.J.A.C. 7:27C:<br><br>- All emissions monitoring information, in accordance with N.J.A.C. 7:27C-8 and 40 CFR 75.57;<br><br>- Copies of all reports, compliance certifications, and other submissions, and all records made or required under the CO2 Budget Trading Program; and<br><br>- Copies of all documents used to complete an application for a new or modified operating permit that incorporates the requirements of the CO2 Budget Trading Program and any other submission under the CO2 Budget Trading Program or to demonstrate compliance with the requirements of the CO2 Budget Trading Program.<br><br>[N.J.A.C 7:27C-1.4(o)2, [N.J.A.C 7:27C-1.4(o)3 and. [N.J.A.C. 7:27C-1.4(o)4] | None. |

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

| Ref.# | Applicable Requirement | Monitoring Requirement | Recordkeeping Requirement | Submittal/Action Requirement |
|---|---|---|---|---|
| 6 | CO2: Compliance Certification Report: [N.J.A.C. 7:27C-1.4(p)] and [N.J.A.C. 7:27C-4.1] | None. | None. | Submit a report: As per the approved schedule For each control period, including the initial control period, in which a CO2 budget source is subject to the CO2 requirements of N.J.A.C 7:27C-1.4, the CO2 authorized account representative shall submit, to the Bureau of Energy and Sustainability, by March 1 following each relevant three-calendar-year control period, the compliance certification report that includes the following elements listed in N.J.A.C. 7:27C-4.1(b):<br><br>1. Identification of the CO2 budget source and each CO2 budget unit at the source;<br><br>2. At the CO2 authorized account representative's option, the serial numbers of the CO2 allowances that are to be deducted from the CO2 budget source's compliance account under N.J.A.C. 7:27C-6.9 for the control period, including the serial numbers of any CO2 offset allowances that are to be deducted subject to the limitations of N.J.A.C. 7:27C-6.9(a)3; and<br><br>3. The compliance certification: In the compliance certification report, the CO2 authorized account representative shall certify whether the CO2 budget source and each CO2 budget unit at the source for which the compliance certification is submitted was operated, during the calendar years covered by the report, in compliance with the requirements of the CO2 Budget Trading Program, based on reasonable inquiry of those persons with primary responsibility for operating the CO2 budget source and the CO2 budget units at the source in compliance with the CO2 Budget Trading Program. [N.J.A.C. 7:27C-4.1(b)] and. [N.J.A.C. 7:27C-4.1] |

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

| Ref.# | Applicable Requirement | Monitoring Requirement | Recordkeeping Requirement | Submittal/Action Requirement |
|---|---|---|---|---|
| 7 | CO2: The owner or operator of each CO2 budget unit shall install all monitoring systems necessary to monitor CO2 mass emissions in accordance with 40 CFR Part 75, except for equation G-1 of Appendix G, which shall not be used to determine CO2 emissions. Compliance with this paragraph may require systems to monitor CO2 concentration, stack gas flow rate, O2 concentration, heat input, and fuel flow rate [N.J.A.C. 7:27C-8.1(c)1] | CO2: Monitored by other method (provide description) at no required frequency The owner or operator of a CO2 budget unit shall meet the monitoring system certification and other requirements of N.J.A.C. 7:27C-8.1(c) and shall quality-assure the data from the monitoring systems in accordance with the schedule prescribed in N.J.A.C. 7:27C-8.1(d)(1) for a CO2 budget unit that commenced commercial operation before [effective date - 6m], N.J.A.C. 7:27C-8.1(d)(2) for a CO2 budget unit that commenced commercial operation on or after [effective date - 6m] or N.J.A.C. 7:27C-8.1(d)(3) for a CO2 budget unit for which construction of a new stack or flue installation is completed after the applicable deadlines at N.J.A.C. 7:27C-8.1(d)(1) and (2). [N.J.A.C 7:27C-8.1(c)2], [N.J.A.C 7:27C-8.1(c)3] and [N.J.A.C 7:27C-8.1(d)]. The owner or operator shall ensure, for each continuous emissions monitoring system (including the automated data acquisition and handling system) the successful completion of all of the initial certification testing required under 40 CFR 75.20 by the applicable deadlines listed above. In addition, whenever the owner or operator installs a monitoring system in order to meet the requirements of N.J.A.C. 7:27C-8 in a location where no such monitoring system was previously installed, initial certification in accordance with 40 CFR 75.20 is required. [N.J.A.C. 7:27C-8.2(d)] | CO2: Recordkeeping by manual logging of parameter or storing data in a computer data system at the approved frequency The owner or operator of a CO2 budget unit shall record the data from the monitoring systems in accordance with the schedule prescribed in N.J.A.C. 7:27C-8.1(d)(1) for a CO2 budget unit that commenced commercial operation before [effective date - 6m], N.J.A.C. 7:27C-8.1(d)(2) for a CO2 budget unit that commenced commercial operation on or after [effective date - 6m] or N.J.A.C. 7:27C-8.1(d)(3) for a CO2 budget unit for which construction of a new stack or flue installation is completed after the applicable deadlines at N.J.A.C. 7:27C-8.1(d)(1) and (2). [N.J.A.C 7:27C-8.1(c)3] and. [N.J.A.C. 7:27C-8.1(d)] | Submit a report: As per the approved schedule The owner or operator of a CO2 budget unit shall report the data from the monitoring systems in accordance with the schedule prescribed in N.J.A.C. 7:27C-8.1(d)(1) for a CO2 budget unit that commenced commercial operation before [effective date - 6m], N.J.A.C. 7:27C-8.1(d)(2) for a CO2 budget unit that commenced commercial operation on or after [effective date - 6m] or N.J.A.C. 7:27C-8.1(d)(3) for a CO2 budget unit for which construction of a new stack or flue installation is completed after the applicable deadlines at N.J.A.C. 7:27C-8.1(d)(1) and (2). [N.J.A.C 7:27C-8.1(c)3] and. [N.J.A.C. 7:27C-8.1(d)] |

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

| Ref.# | Applicable Requirement | Monitoring Requirement | Recordkeeping Requirement | Submittal/Action Requirement |
|---|---|---|---|---|
| 8 | CO2: The owner or operator of a CO2 budget unit that commenced commercial operation before (effective date - 6m) and did not certify all monitoring systems required under N.J.A.C. 7:27C8.1(c) by the operative date of the rule; or a CO2 budget unit that commenced commercial operation on or after (effective date - 6m) and did not certify all monitoring systems required under N.J.A.C. 7:27C8.1(c) by the operative date of the rule or the earlier of 90 unit operating days or 180 calendar days after the date on which the unit commenced commercial operation;<br>or<br>a CO2 budget unit for which construction of a new stack or flue installation is completed after the above deadline and did not certify all monitoring systems required under N.J.A.C. 7:27C8.1(c) by the earlier of 90 unit operating days or 180 calendar days after the date on which emissions first exited the new stack or flue and entered the atmosphere; shall, for each such monitoring system, determine, record and report, the necessary data as specified. [N.J.A.C. 7:27C-8.1(e)] | CO2: Monitored by other method (provide description) at no required frequency The owner or operator shall, for each monitoring system, determine maximum (or, as appropriate, minimum) potential values for CO2 concentration, CO2 emissions rate, stack gas moisture content, fuel flow rate, heat input, and any other parameter required to determine CO2 mass emissions in accordance with 40 CFR 75.31(b)(2) or (c)(3) and section 2.4 of Appendix D of 40 CFR Part 75, as applicable. [N.J.A.C. 7:27C-8.1(e)] | CO2: Recordkeeping by manual logging of parameter or storing data in a computer data system at the approved frequency The owner or operator shall, for each monitoring system, record maximum (or, as appropriate, minimum) potential values for CO2 concentration, CO2 emissions rate, stack gas moisture content, fuel flow rate, heat input, and any other parameter required to determine CO2 mass emissions in accordance with 40 CFR 75.31(b)(2) or (c)(3) and section 2.4 of Appendix D of 40 CFR Part 75, as applicable. [N.J.A.C. 7:27C-8.1(e)] | Submit a report: As per the approved schedule The owner or operator shall, for each monitoring system, report maximum (or, as appropriate, minimum) potential values for CO2 concentration, CO2 emissions rate, stack gas moisture content, fuel flow rate, heat input, and any other parameter required to determine CO2 mass emissions in accordance with 40 CFR 75.31(b)(2) or (c)(3) and section 2.4 of Appendix D of 40 CFR Part 75, as applicable. [N.J.A.C. 7:27C-8.1(e)] |
| 9 | No owner or operator of a CO2 budget unit shall use any alternative monitoring system, alternative reference method, or any other alternative for the required continuous emissions monitoring system without having obtained prior written approval in accordance with N.J.A.C. 7:27C-8.6. [N.J.A.C. 7:27C-8.1(j)1] | None. | None. | Obtain approval: Upon occurrence of event The CO2 authorized account representative of a CO2 budget unit may submit a petition to the Administrator under 40 CFR 75.66, and to the Department requesting approval to apply an alternative to any requirement of 40 CFR Part 75 or to a requirement concerning any additional CEMS required under the common stack provisions of 40 CFR 75.72 or a CO2 concentration CEMS used under 40 CFR 75.71(a)(2). [N.J.A.C. 7:27C-8.6] |

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

| Ref.# | Applicable Requirement | Monitoring Requirement | Recordkeeping Requirement | Submittal/Action Requirement |
|---|---|---|---|---|
| 10 | CO2: The owner or operator of a CO2 budget unit shall comply with the initial certification and recertification procedures set forth at N.J.A.C. 7:27C-8.2(d) through (r) for a continuous emissions monitoring system and an excepted monitoring system under Appendix D of 40 CFR Part 75, except as provided in N.J.A.C. 7:27C-8.2(a). The owner or operator of a CO2 budget unit that qualifies to use the low mass emissions excepted monitoring methodology in 40 CFR 75.19 or that qualifies to use an alternative monitoring system under Subpart E of 40 CFR Part 75 shall comply with the initial certification and recertification procedures set forth at N.J.A.C. 7:27C-8.2(q) or (r), respectively. [N.J.A.C. 7:27C-8.2(c)] | None. | None. | Submit notification: Upon occurrence of event The CO2 authorized account representative shall submit to the Department, EPA Region 2 office and the Administrator a written notice of the dates of certification in accordance with N.J.A.C. 7:27C-8.4. [N.J.A.C. 7:27C-8.2(h)] |

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

| Ref.# | Applicable Requirement | Monitoring Requirement | Recordkeeping Requirement | Submittal/Action Requirement |
|---|---|---|---|---|
| 11 | CO2: The owner or operator shall recertify a monitoring system in accordance in 40 CFR 75.20(b) whenever the owner or operator makes the replacement, modification, or changes described in N.J.A.C. 7:27C-8.2(f). [N.J.A.C. 7:27C-8.2(f)]<br><br>A provisionally certified monitor may be used under the CO2 Budget Trading Program for a period not to exceed 120 days after the Department receives the complete certification application for the monitoring system, or component thereof, under N.J.A.C.7:27C-8.2(h). [N.J.A.C. 7:27C-8.2(j)]<br><br>Whenever any monitoring system fails to meet the quality assurance and quality control requirements or data validation requirements of 40 CFR Part 75, data shall be substituted using the applicable procedures in Subpart D or Appendix C, of 40 CFR Part 75. [N.J.A.C. 7:27C-8.3(a)] | CO2: Monitored by other method (provide description) at no required frequency The owner or operator of a CO2 budget unit shall submit a monitoring plan in the manner prescribed in 40 CFR 75.62, either electronically or hardcopy. If electronic, no later than 21 days prior to the initial certification tests; at the time of each certification or recertification application submission; and (prior to or concurrent with) the submittal of the electronic quarterly report for a reporting quarter where an update of the electronic monitoring plan information is required. If hardcopy, no later than 21 days prior to the initial certification test; with any certification or recertification application, if a hardcopy monitoring plan change is associated with the certification or recertification event; and within 30 days of any other event with which a hardcopy monitoring plan change is associated, pursuant to 40 CFR 75.53(b). Electronic submittal of all monitoring plan information, including hardcopy portions, is permissible provided that a paper copy of the hardcopy portions can be furnished upon request. [N.J.A.C. 7:27C-8.5(b)] | None. | Submit documentation of compliance: As per the approved schedule The CO2 authorized account representative shall submit a certification or recertification application to the Department for each monitoring system within 45 days after completing all CO2 monitoring system initial certification or recertification tests required under N.J.A.C. 7:27C-8.2 including the information required under 40 CFR 75.53(g) and (h) and 75.63. [N.J.A.C. 7:27C-8.2(e)] |
| 12 | The CO2 authorized account representative of a CO2 budget unit that co-fires eligible biomass as a compliance mechanism under N.J.A.C. 7:27C shall report the information as provided in N.J.A.C. 7:27C-8.7 to the Department for each calendar quarter. [N.J.A.C. 7:27C-8.7(a)] | None. | None. | Submit a report: Every April 30, July 30, October 30, and January 30 for the preceding quarter year (the quarter years begin on January 1, April 1, July 1, and October 1). [N.J.A.C. 7:27C-8.7] |

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

| Ref.# | Applicable Requirement | Monitoring Requirement | Recordkeeping Requirement | Submittal/Action Requirement |
|---|---|---|---|---|
| 13 | Net electric output and net thermal output. [N.J.A.C. 7:27C-8.8(a)] | Monitored by other method (provide description) at no required frequency Other: The output monitoring plan shall include:<br>- a diagram of the electrical and/or steam system,<br>- a description of each output monitoring system,<br>- a detailed description of all quality assurance and quality control activities, and<br>- documentation supporting any output value(s) to be used as a missing data value should there be periods of invalid output data. [N.J.A.C. 7:27C-8.8(g)]<br><br>Ongoing quality assurance and quality control (QA/QC) activities shall be performed in order to maintain the output system in accordance with N.J.A.C. 7:27C-8.8(i). [N.J.A.C. 7:27C-8.8] | Recordkeeping by other recordkeeping method (provide description) at no required frequency The owner or operator of a CO2 budget source shall retain data used to monitor, determine, or calculate net electrical output and net thermal output for 10 years. [N.J.A.C. 7:27C-8.8(j)] | Submit a report: Annually The CO2 authorized account representative shall submit annual output reports electronically to the Department, pursuant to N.J.A.C. 7:27C-8.8(b) through (j), by the March 1 following the immediately preceding calendar year. These reports shall also be submitted, upon Department request, in hardcopy. The annual output report shall include unit level megawatt-hours and all useful steam output; and shall include a certification from the CO2 authorized account representative pursuant to N.J.A.C. 7:27C-8.8(k). [N.J.A.C. 7:27C-8.8(a)] and. [N.J.A.C. 7:27C-8.8(k)] |

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

**000000 E1 (Combustion Turbine)**
**Print Date: 8/21/2019**

| | | | |
|---|---|---|---|
| Make: | GE 7FA | | |
| Manufacturer: | GE | | |
| Model: | 7FA.05 | | |
| Maximum rated Gross Heat Input (MMBtu/hr-HHV): | 2,320.00 | | |
| Type of Turbine: | Industrial | | |
| Type of Cycle: | Combined-Cycle | Description: | |
| Industrial Application: | Electical Generator | Description: | |
| Power Output: | 225.00 | Units: | Megawatts |

Is the combustion turbine using (check all that apply):

| | | | |
|---|---|---|---|
| A Dry Low NOx Combustor: | ☑ | | |
| Steam Injection: | ☐ | Steam to Fuel Ratio: | |
| Water Injection: | ☐ | Water to Fuel Ratio: | |
| Other: | ☐ | Description: | |

Is the turbine Equipped with a Duct Burner? ◉ Yes ○ No

Have you attached a diagram showing the location and/or the configuration of this equipment? ◉ Yes ○ No

Have you attached any manuf.'s data or specifications to aid the Dept. in its review of this application? ◉ Yes ○ No

Comments:

**000000 E2 (Combustion Turbine)**
**Print Date: 8/21/2019**

| | | | |
|---|---|---|---|
| Make: | GE 7FA | | |
| Manufacturer: | GE | | |
| Model: | 7FA.05 | | |
| Maximum rated Gross Heat Input (MMBtu/hr-HHV): | 2,320.00 | | |
| Type of Turbine: | Industrial | | |
| Type of Cycle: | Combined-Cycle | Description: | |
| Industrial Application: | Electical Generator | Description: | |
| Power Output: | 225.00 | Units: | Megawatts |

Is the combustion turbine using (check all that apply):

| | | | |
|---|---|---|---|
| A Dry Low NOx Combustor: | ☑ | | |
| Steam Injection: | ☐ | Steam to Fuel Ratio: | |
| Water Injection: | ☐ | Water to Fuel Ratio: | |
| Other: | ☐ | Description: | |

Is the turbine Equipped with a Duct Burner? ◉ Yes ○ No

Have you attached a diagram showing the location and/or the configuration of this equipment? ◉ Yes ○ No

Have you attached any manuf.'s data or specifications to aid the Dept. in its review of this application? ◉ Yes ○ No

Comments:

**000000 E3 (Duct Burner)**
**Print Date: 8/21/2019**

| | |
|---|---|
| Make: | De Jong DJC |
| Manufacturer: | De Jong Combustion |
| Model: | DJC |
| Maximum rated Gross Heat Input (MMBtu/hr-HHV): | 211.00 |
| Equipment Type Description: | Supplementary-fired heat recovery steam generator (HRSG) |

Have you attached a diagram showing the location and/or the configuration of this equipment?

- (●) Yes
- ( ) No

Have you attached any manuf.'s data or specifications to aid the Dept. in its review of this application?

- (●) Yes
- ( ) No

Comments:

Include Emission Rates on the Potential to Emit Screen for each contaminant in ppmvd @ 7%O2 in addition to lbs/hr and tons/yr.

**000000 E4 (Duct Burner)**
**Print Date: 8/21/2019**

| | |
|---|---|
| Make: | De Jong DJC |
| Manufacturer: | De Jong Combustion |
| Model: | DJC |
| Maximum rated Gross Heat Input (MMBtu/hr-HHV): | 211.00 |
| Equipment Type Description: | Supplementary-fired heat recovery steam generator (HRSG) |

Have you attached a diagram showing the location and/or the configuration of this equipment?

- (●) Yes
- ( ) No

Have you attached any manuf.'s data or specifications to aid the Dept. in its review of this application?

- (●) Yes
- ( ) No

Comments:

Include Emission Rates on the Potential to Emit Screen for each contaminant in ppmvd @ 7%O2 in addition to lbs/hr and tons/yr.

**000000 CD101 (Selective Catalytic Reduction)**
**Print Date: 8/21/2019**

| | |
|---|---|
| Make: | DNX |
| Manufacturer: | Haldor Topsoe, Inc |
| Model: | DNX Catalyst |
| Minimum Temperature at Catalyst Bed (°F): | 400.0 |
| Maximum Temperature at Catalyst Bed (°F): | 825.0 |
| Minimum Temperature at Reagent Injection Point (°F): | 400.0 |
| Maximum Temperature at Reagent Injection Point (°F): | 825.0 |
| Type of Reagent: | Ammonia |
| Description: | |
| Chemical Formula of Reagent: | NH3OH |
| Minimum Reagent Charge Rate (gpm): | 0.8 |
| Maximum Reagent Charge Rate (gpm): | 0.9 |
| Minimum Concentration of Reagent in Solution (% Volume): | |
| Minimum NOx to Reagent Mole Ratio: | 19.00 |
| Maximum NOx to Reagent Mole Ratio: | |
| Maximum Anticipated Ammonia Slip (ppm): | 5.000 |
| Type of Catalyst: | Ceramic |
| Volume of Catalyst (ft³): | |
| Form of Catalyst: | Ceramic Monolith Modules |
| Anticipated Life of Catalyst: | 39.00 |
| Units: | months |
| Have you attached a catalyst replacement schedule? | ○ Yes ● No |
| Method of Determining Breakthrough: | |
| Maximum Number of Sources Using this Apparatus as a Control Device (Include Permitted and Non-Permitted Sources): | 2 |
| Alternative Method to Demonstrate Control Apparatus is Operating Properly: | |
| Have you attached any manufacturer's data or specifications in support of the feasibility and/or effectiveness of this control apparatus? | ○ Yes ● No |
| Have you attached a diagram showing the location and/or configuration of this control apparatus? | ○ Yes ● No |

**000000 CD101 (Selective Catalytic Reduction)**
**Print Date: 8/21/2019**

| | |
|---|---|
| Comments: | The maximum concentration of ammonia in solution is 19% by weight |

**000000 CD102 (Oxidizer (Catalytic))**
**Print Date: 8/21/2019**

| | |
|---|---|
| Make: | ADCAT |
| Manufacturer: | Emero Chem |
| Model: | ADCAT |
| Minimum Inlet Temperature (°F): | 535.0 |
| Maximum Inlet Temperature (°F) | 800.0 |
| Minimum Outlet Temperature (°F) | 550.0 |
| Maximum Outlet Temperature (°F): | 800.0 |
| Minimum Residence Time (sec) | |
| Fuel Type: | Natural gas |
| Description: | |
| Maximum Rated Gross Heat Input (MMBtu/hr): | 2320.00 |
| Minimum Pressure Drop Across Catalyst (psi): | 0.020 |
| Maximum Pressure Drop Across Catalyst (psi): | 0.050 |
| Catalyst Material: | Platinum / Palladium / Rhodium / Alumna / Stainless Steel Monolith |
| Form of Catalyst: | Other |
| Description: | Module Carbon Steel Frame |
| Minimum Expected Life of Catalyst: | 39.00 |
| Units: | months |
| Volume of Catalyst ($ft^3$): | |
| Maximum Number of Sources Using this Apparatus as a Control Device (Include Permitted and Non-Permitted Sources): | 2 |
| Alternative Method to Demonstrate Control Apparatus is Operating Properly: | |
| Have you attached data from recent performance testing? | ○ Yes ● No |
| Have you attached any manufacturer's data or specifications in support of the feasibility and/or effectiveness of this control apparatus? | ○ Yes ● No |
| Have you attached a diagram showing the location and/or configuration of this control apparatus? | ○ Yes ● No |
| Comments: | |

**000000 CD201 (Selective Catalytic Reduction)**
**Print Date: 8/21/2019**

| | |
|---|---|
| Make: | DNX |
| Manufacturer: | Haldor Topsoe, Inc |
| Model: | DNX Catalyst |
| Minimum Temperature at Catalyst Bed (°F): | 400.0 |
| Maximum Temperature at Catalyst Bed (°F): | 825.0 |
| Minimum Temperature at Reagent Injection Point (°F): | 400.0 |
| Maximum Temperature at Reagent Injection Point (°F): | 825.0 |
| Type of Reagent: | Ammonia |
| Description: | |
| Chemical Formula of Reagent: | NH3OH |
| Minimum Reagent Charge Rate (gpm): | 0.8 |
| Maximum Reagent Charge Rate (gpm): | 0.9 |
| Minimum Concentration of Reagent in Solution (% Volume): | |
| Minimum NOx to Reagent Mole Ratio: | 19.00 |
| Maximum NOx to Reagent Mole Ratio: | |
| Maximum Anticipated Ammonia Slip (ppm): | 5.000 |
| Type of Catalyst: | Ceramic |
| Volume of Catalyst (ft³): | |
| Form of Catalyst: | Ceramic Monolith Modules |
| Anticipated Life of Catalyst: | 39.00 |
| Units: | months |
| Have you attached a catalyst replacement schedule? | ○ Yes ● No |
| Method of Determining Breakthrough: | |
| Maximum Number of Sources Using this Apparatus as a Control Device (Include Permitted and Non-Permitted Sources): | 2 |
| Alternative Method to Demonstrate Control Apparatus is Operating Properly: | |
| Have you attached any manufacturer's data or specifications in support of the feasibility and/or effectiveness of this control apparatus? | ○ Yes ● No |
| Have you attached a diagram showing the location and/or configuration of this control apparatus? | ○ Yes ● No |

**000000 CD201 (Selective Catalytic Reduction)**
**Print Date: 8/21/2019**

| | |
|---|---|
| Comments: | The maximum concentration of ammonia in solution is 19% by weight |

**000000 CD202 (Oxidizer (Catalytic))**
**Print Date: 8/21/2019**

| | |
|---|---|
| Make: | ADCAT |
| Manufacturer: | Emero Chem |
| Model: | ADCAT |
| Minimum Inlet Temperature (°F): | 535.0 |
| Maximum Inlet Temperature (°F) | 800.0 |
| Minimum Outlet Temperature (°F) | 550.0 |
| Maximum Outlet Temperature (°F): | 800.0 |
| Minimum Residence Time (sec) | |
| Fuel Type: | Natural gas |
| Description: | |
| Maximum Rated Gross Heat Input (MMBtu/hr): | 2320.00 |
| Minimum Pressure Drop Across Catalyst (psi): | 0.020 |
| Maximum Pressure Drop Across Catalyst (psi): | 0.050 |
| Catalyst Material: | Platinum / Palladium / Rhodium / Alumna / Stainless Steel Monolith |
| Form of Catalyst: | Other |
| Description: | Module Carbon Steel Frame |
| Minimum Expected Life of Catalyst: | 39.00 |
| Units: | months |
| Volume of Catalyst ($ft^3$): | |
| Maximum Number of Sources Using this Apparatus as a Control Device (Include Permitted and Non-Permitted Sources): | 2 |
| Alternative Method to Demonstrate Control Apparatus is Operating Properly: | |
| Have you attached data from recent performance testing? | ○ Yes ● No |
| Have you attached any manufacturer's data or specifications in support of the feasibility and/or effectiveness of this control apparatus? | ○ Yes ● No |
| Have you attached a diagram showing the location and/or configuration of this control apparatus? | ○ Yes ● No |
| Comments: | |