**Table D-1. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - NOx**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MEC SOUTH, LLC | MARSHALL ENERGY CENTER, LLC | CALHOUN | MI | 6/23/2022 | Natural gas combined cycle power plant (Two Plants: North and South) | The two plants (MEC North, LLC and MEC South, LLC) will operate as separate entities but they are considered a single stationary source and the installation of the two new plants was reviewed as a single project. | EUCTGHRSG (South Plant): A combined-cycle natural gas-fired combustion turbine generator with heat recovery steam generator. | 15.21 | Natural gas | 3064 | MMBTU/H | Nominal 500 MW electricity production. Turbine rating of 3064 MMBTU/H (HHV) and HRSG duct burner rating of 889 MMBTU/H (HHV).□<br>□<br>A combined-cycle natural gas-fired combustion turbine generator (CTG) with heat recovery steam generator (HRSG) in a 1x1 configuration with a steam turbine generator (STG) for a nominal 500 MW electricity production. The CTG is a H-class turbine with a rating of 3,064 MMBTU/hr (HHV). The HRSG is equipped with a natural gas fired duct burner, with a maximum heat input rating of 889 MMBTU/hr (HHV) and rated at 874 MMBTU/hr (HHV) at ISO conditions to provide heat for additional steam production. The HRSG is not capable of operating independently from the CTG. The CTG/HRSG is equipped with dry low NOx burner (DLNB), SCR, and an oxidation catalyst. | Nitrogen Oxides (NOx) | SCR with DLNB [Selective Catalytic Reduction with Dry Low NOx Burners] | 2 | PPM | 24-HR ROLLING AVG |
| LIQUEFACTION PLANT | ALASKA GASLINE DEVELOPMENT CORPORATION | KENAI PENNINSULA BOROUGH | AK | 7/7/2022 | The Liquefaction Plant is planned to encompass 921 acres, including 901 acres onshore for the liquefied natural gas (LNG) Plant as well as 20 acres offshore for the Marine Terminal. The Liquefaction Plant will be the terminus of an approximately 807-mile gas pipeline, allowing natural gas from Alaskaâ€™s North Slope to be shipped to outside markets. The stationary source will consist of structures and equipment associated with processing, storage, and loading of LNG. There will be three liquefaction trains combining to process up to approximately 20 million metric tons per annun of LNG. | | Four Combined Cycle Gas-Fired Turbines | 15.21 | Natural Gas | 384 | MMBtu/hr | EUs 7 - 10 are combined cycle gas turbines used for power generation at LNG facility | Nitrogen Oxides (NOx) | SCR, DLN combustors, and good combustion practices | 2 | PPMV @ 15% O2 | 3-HOURS |
| LINCOLN LAND ENERGY CENTER | LINCOLN LAND ENERGY CENTER (A/K/A EMBERCLEAR) | SANGAMON | IL | 7/29/2022 | The proposed facility is designed to generate baseload power. It will consist of two combined-cycle generating units, with each a Siemens combustion turbine (3,647 mmBtu/hr) and a heat recovery steam generator (HRSG) with duct burners (35 mmBtu/hr); fired by natural gas only. Other units at the facility include an auxiliary boiler, engines, piping and piping components, circuit breakers and roadways. | Additional facility-wide pollutants, in tons/year: PM10/PM 2.5: 131.7 and 131.6 (respectively); sulfuric acid mist (SAM): 17.2; greenhouse gasses (GHG): 3,586,918 | Combined-Cycle Combustion Turbines | 15.21 | Natural Gas | 3647 | mmBtu/hour | Combined-cycle comustion turbines and heat recovery steam generators (HRSG) with a 35 mmBtu/hr duct burner. Turbine inlets would have evaporative cooling systems to cool the inlet air during warm weather to increase power output. | Nitrogen Oxides (NOx) | Dry low-NOx combustion with ultra-low NOx combustors; low-NOx duct burners; and selective catalytic reduction (SCR) | 2 | PPMV @ 15% O2 | SEE NOTES |
| LBWL-ERICKSON STATION | LANSING BOARD OF WATER AND LIGHT | EATON | MI | 12/20/2022 | Natural gas combined-cycle power plant | The proposed new plant will be replacing the electrical generating capacity of both BWLâ€™s existing coal-fired power plants. BWL intends to retire those coal-fired power plants from service by 2025. However, before they can be retired, the new natural gas power plant must be operational. Emissions in the area will increase for a short period if the new combined-cycle plant is built. However, there will be overall reductions in emissions when the existing coal fired power plants are taken out of service. | EUCTGHRSG1 | 15.21 | Natural gas | 667 | MMBTU/H | EUCTGHRSG1- A nominally rated 667 MMBtu/hr natural gas-fired combustion turbine generator (CTG) coupled with a heat recovery steam generator (HRSG). The HRSG is equipped with a natural gas-fired duct burner rated at 204 MMBtu/hr to provide heat for additional steam production. The CTG is capable of operating in combined-cycle mode where the exhaust is routed to the HRSG or in simple-cycle mode where the HRSG is bypassed. The HRSG is not capable of operating independently from the CTG. The CTG/HRSG is equipped with a dry low NOx burner (DLNB), selective catalytic reduction (SCR), and oxidation catalyst. | Nitrogen Oxides (NOx) | Dry low NOx burners and selective catalytic reduction for NOx control for each CTG/HRSG unit. | 3 | PPM | PPMVD AT 15%O2; 24-HR ROLL AVG EXC SU/SD |

**Table D-1. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - NOx**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LBWL-ERICKSON STATION | LANSING BOARD OF WATER AND LIGHT | EATON | MI | 12/20/2022 | Natural gas combined-cycle power plant | The proposed new plant will be replacing the electrical generating capacity of both BWLâ€™s existing coal-fired power plants. BWL intends to retire those coal-fired power plants from service by 2025. However, before they can be retired, the new natural gas power plant must be operational. Emissions in the area will increase for a short period if the new combined-cycle plant is built. However, there will be overall reductions in emissions when the existing coal fired power plants are taken out of service. | EUCTGHRSG2 | 15.21 | Natural gas | 667 | MMBTU/H | EUCTGHRSG2- A nominally rated 667 MMBtu/hr natural gas-fired CTG coupled with a HRSG. The HRSG is equipped with a natural gas-fired duct burner rated at 204 MMBtu/hr to provide heat for additional steam production. The CTG is capable of operating in combined-cycle mode where the exhaust is routed to the HRSG or in simple-cycle mode where the HRSG is bypassed. The HRSG is not capable of operating independently from the CTG. The CTG/HRSG is equipped with a DLNB, SCR, and oxidation catalyst. | Nitrogen Oxides (NOx) | Dry low NOx burners and selective catalytic reduction for NOx control for each CTG/HRSG unit. | 3 | PPM | @15%OX; 24-HR ROLL AVG EXCEPT START/SHUT |
| MIDLAND COGENERATION VENTURE LIMITED PARTNERSHIP | MIDLAND COGENERATION VENTURE LIMITED PARTNERSHIP | MIDLAND | MI | 2/1/2023 | Electric and steam generation | | EUCTGHRSG1 | 15.21 | Natural gas | 4197.6 | MMBTU/H | | Nitrogen Oxides (NOx) | Selective catalytic regeneration | 2 | PPM | PPMVD AT 15%O2; 24-HR ROLL AVG EXC SU/SD |
| MAPLE CREEK ENERGY LLC | SULLIVAN | IN | 6/19/2023 | | | | Combined Cycle Turbine CTGB | 15.21 | natural gas | 4200 | MMBtu per hour | Option 2 GE Model 7HA.03 Turbine - natural gas-fired combined cycle system with a maximum heat input capacity of 4,200 MMBtu per hour, equipped with a GE combustion turbine generator (CTG) exhausting to a heat recovery steam generator (HRSG) which will feed steam to one steam turbine generator (STG), using dry-low-NOx (DLN) combustors and selective catalytic reduction (SCR) for control of NOx emissions, and an oxidation catalyst as VOC and CO control, and exhausting to stack CTG with continuous emissions monitors for NOx and CO.□<br>□<br>Facility will install only one turbine, but at the time of permitting had not decided which turbine would be used. | Nitrogen Oxides (NOx) | Selective Catalytic Reduction system and dry-low-NOx combustors. | 2 | PPMVD | 15% O2 BASED ON A 3-HR AVERAGE |
| MAPLE CREEK ENERGY LLC | SULLIVAN | IN | 6/19/2023 | | | | Combined Cycle Turbine CTGA SU/SD | 15.21 | Natural gas | 3800 | MMBtu per hour | Startup and Shutdown Limitations for Combustion Turbine Option 1: Siemens Model SCC6-9000HL Turbine. | Nitrogen Oxides (NOx) | | 20.7 | TONS PER YEAR | FOR DURATION OF THE COMBINED SU/SD EVENT |

**Table D-1. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - NOx**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MAPLE CREEK ENERGY LLC | | SULLIVAN | IN | 6/19/2023 | | | Combined Cycle Turbine CTGA | 15.21 | Natural Gas | 3800 | MMBtu per hour | Option 1 Siemens Model SCC6-9000HL Turbine - natural gas-fired combined cycle system with a maximum heat input capacity of 3,800 MMBtu per hour, equipped with a Siemens combustion turbine generator (CTG) exhausting to a heat recovery steam generator (HRSG) which will feed steam to one steam turbine generator (STG), using dry-low-NOx (DLN) combustors and selective catalytic reduction (SCR) for control of NOx emissions, and an oxidation catalyst as VOC and CO control, and exhausting to stack CTG with continuous emissions monitors for NOx and CO.□<br>□<br>Facility will install only one turbine, but at the time of permitting had not decided which turbine would be used. | Nitrogen Oxides (NOx) | Selective catalytic reduction system and dry-low-NOx combustors | 0.0085 | POUND PER MMBTU | |
| WABASH VALLEY RESOURCES, LLC | | VIGO | IN | 1/11/2024 | | | Integrated Gasification Combined Cycle Combustion Turbine | 15.21 | Natural Gas | 2292 | MMBtu/hr | Can also combust hydrogen syngas and mixtures of natural gas/hydrogen syngas | Nitrogen Oxides (NOx) | Steam Injection/SCR and Good Combustion Practices | 2 | PPMV | 15% OXYGEN WHEN COMBUSTING >50% NAT. GAS |

**Table D-2. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - PM**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| COLORADO BEND ENERGY CENTER | COLORADO BEND II POWER, LLC | WHARTON | TX | 4/1/2015 | Combined cycle combustion turbine electric generating facility. These will be the first two General Electric (GE) Model 7HA.02 Combustion Turbines in a combined cycle power plant that uses two combustion turbines and one steam turbine using air-cooled condensers and controlled with Selective catalytic reduction (SCR) and oxidation catalyst. | | Combined-cycle gas turbine electric generating facility | 15.21 | natural gas | 1100 | MW | combined cycle power plant that uses two combustion turbines and one steam turbine, model GE 7HA.02 | Particulate matter, total (TPM) | efficient combustion, natural gas fuel | 43 | LB/H | |
| COLORADO BEND ENERGY CENTER | COLORADO BEND II POWER, LLC | WHARTON | TX | 4/1/2015 | Combined cycle combustion turbine electric generating facility. These will be the first two General Electric (GE) Model 7HA.02 Combustion Turbines in a combined cycle power plant that uses two combustion turbines and one steam turbine using air-cooled condensers and controlled with Selective catalytic reduction (SCR) and oxidation catalyst. | | Combined-cycle gas turbine electric generating facility | 15.21 | natural gas | 1100 | MW | combined cycle power plant that uses two combustion turbines and one steam turbine, model GE 7HA.02 | Particulate matter, total < 10 Âµ (TPM10) | efficient combustion, natural gas fuel | 43 | LB/H | |
| COLORADO BEND ENERGY CENTER | COLORADO BEND II POWER, LLC | WHARTON | TX | 4/1/2015 | Combined cycle combustion turbine electric generating facility. These will be the first two General Electric (GE) Model 7HA.02 Combustion Turbines in a combined cycle power plant that uses two combustion turbines and one steam turbine using air-cooled condensers and controlled with Selective catalytic reduction (SCR) and oxidation catalyst. | | Combined-cycle gas turbine electric generating facility | 15.21 | natural gas | 1100 | MW | combined cycle power plant that uses two combustion turbines and one steam turbine, model GE 7HA.02 | Particulate matter, total < 2.5 Âµ (TPM2.5) | efficient combustion, natural gas fuel | 43 | LB/H | |
| ROLLING HILLS GENERATING, LLC | | VINTON | OH | 5/20/2015 | Electrical services | Note: The proposed modification was not installed.□<br>□<br>Chapter 31 major modification to convert four of the existing five simple cycle peaking units, SW501F turbines nominally rated at 209 megawatts (MW) each, to combined cycle configuration consisting of two 2x1 combined cycle blocks, the addition of four heat recovery steam generators (HRSGs), each of which will be equipped with duct burners, and two steam turbine generators.□<br>□<br>Permit includes 2 options for the units. Siemens Westinghouse Power Corp. SW501F, (Scenario 1: 200 MW, with 2022 MMBtu/hr input & 550 MMBtu/hr duct burner. Scenario 2: 207.5 MW with 2144 MMbtu/hr input & 550 MMBtu/hr duct burner.) combined cycle natural gas fired turbine with Dry Low-NOX combusters, SCR and duct burner. Emissions increase noted below is for scenario 1.□<br>Scenario 2 = 5101.7 CO, 449.31 NOx, 346.8 PM and 600.62 VOC. | Combustion Turbines, Scenario 1 (4, identical) (P001, P002, P004, P005) | 15.21 | Natural gas | 2022 | MMBTU/H | Scenario 1 only. Other scenario added as separate process. Siemens Westinghouse Power Corp. SW501F, (Scenario 1: 200 MW, with 2022 MMBtu/hr input & 550 MMBtu/hr duct burner. Scenario 2: 207.5 MW with 2144 MMbtu/hr input & 550 MMBtu/hr duct burner.) combined cycle natural gas fired turbine with Dry Low-NOX combusters, SCR and duct burner. | Particulate matter, total (TPM) | good combustion practices along with clean fuels | 0.0068 | LB/MMBTU | HHV, 3 HR AVG. SEE NOTES. |
| ROLLING HILLS GENERATING, LLC | | VINTON | OH | 5/20/2015 | Electrical services | Note: The proposed modification was not installed.□<br>□<br>Chapter 31 major modification to convert four of the existing five simple cycle peaking units, SW501F turbines nominally rated at 209 megawatts (MW) each, to combined cycle configuration consisting of two 2x1 combined cycle blocks, the addition of four heat recovery steam generators (HRSGs), each of which will be equipped with duct burners, and two steam turbine generators.□<br>□<br>Permit includes 2 options for the units. Siemens Westinghouse Power Corp. SW501F, (Scenario 1: 200 MW, with 2022 MMBtu/hr input & 550 MMBtu/hr duct burner. Scenario 2: 207.5 MW with 2144 MMbtu/hr input & 550 MMBtu/hr duct burner.) combined cycle natural gas fired turbine with Dry Low-NOX combusters, SCR and duct burner. Emissions increase noted below is for scenario 1.□<br>Scenario 2 = 5101.7 CO, 449.31 NOx, 346.8 PM and 600.62 VOC. | Combustion Turbines, Scenario 1 (4, identical) (P001, P002, P004, P005) | 15.21 | Natural gas | 2022 | MMBTU/H | Scenario 1 only. Other scenario added as separate process. Siemens Westinghouse Power Corp. SW501F, (Scenario 1: 200 MW, with 2022 MMBtu/hr input & 550 MMBtu/hr duct burner. Scenario 2: 207.5 MW with 2144 MMbtu/hr input & 550 MMBtu/hr duct burner.) combined cycle natural gas fired turbine with Dry Low-NOX combusters, SCR and duct burner. | Particulate matter, total < 10 Âµ (TPM10) | good combustion practices along with clean fuels | 0.0068 | LB/MMBTU | HHV, 3 HR AVG. SEE NOTES. |

**Table D-2. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - PM**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROLLING HILLS GENERATING, LLC | | VINTON | OH | 5/20/2015 | Electrical services | Note: The proposed modification was not installed.□ □ Chapter 31 major modification to convert four of the existing five simple cycle peaking units, SW501F turbines nominally rated at 209 megawatts (MW) each, to combined cycle configuration consisting of two 2x1 combined cycle blocks, the addition of four heat recovery steam generators (HRSGs), each of which will be equipped with duct burners, and two steam turbine generators.□ □ Permit includes 2 options for the units. Siemens Westinghouse Power Corp. SW501F, (Scenario 1: 200 MW, with 2022 MMBtu/hr input & 550 MMBtu/hr duct burner. Scenario 2: 207.5 MW with 2144 MMbtu/hr input & 550 MMBtu/hr duct burner.) combined cycle natural gas fired turbine with Dry Low-NOX combusters, SCR and duct burner. Emissions increase noted below is for scenario 1.□ Scenario 2 = 5101.7 CO, 449.31 NOx, 346.8 PM and 600.62 VOC. | Combustion Turbines, Scenario 1 (4, identical) (P001, P002, P004, P005) | 15.21 | Natural gas | 2022 | MMBTU/H | Scenario 1 only. Other scenario added as separate process. Siemens Westinghouse Power Corp. SW501F, (Scenario 1: 200 MW, with 2022 MMBtu/hr input & 550 MMBtu/hr duct burner. Scenario 2: 207.5 MW with 2144 MMbtu/hr input & 550 MMBtu/hr duct burner.) combined cycle natural gas fired turbine with Dry Low-NOX combusters, SCR and duct burner. | Particulate matter, total < 2.5 Âµ (TPM2.5) | good combustion practices along with clean fuels | 0.0068 | LB/MMBTU | HHV, 3 HR AVG. SEE NOTES. |
| ROLLING HILLS GENERATING, LLC | | VINTON | OH | 5/20/2015 | Electrical services | Note: The proposed modification was not installed.□ □ Chapter 31 major modification to convert four of the existing five simple cycle peaking units, SW501F turbines nominally rated at 209 megawatts (MW) each, to combined cycle configuration consisting of two 2x1 combined cycle blocks, the addition of four heat recovery steam generators (HRSGs), each of which will be equipped with duct burners, and two steam turbine generators.□ □ Permit includes 2 options for the units. Siemens Westinghouse Power Corp. SW501F, (Scenario 1: 200 MW, with 2022 MMBtu/hr input & 550 MMBtu/hr duct burner. Scenario 2: 207.5 MW with 2144 MMbtu/hr input & 550 MMBtu/hr duct burner.) combined cycle natural gas fired turbine with Dry Low-NOX combusters, SCR and duct burner. Emissions increase noted below is for scenario 1.□ Scenario 2 = 5101.7 CO, 449.31 NOx, 346.8 PM and 600.62 VOC. | Combustion Turbines, Scenario 2 (4, identical) (P001, P002, P004, P005) | 15.21 | Natural gas | 2144 | MMBTU/H | Scenario 1 only. Other scenario added as separate process. Siemens Westinghouse Power Corp. SW501F, (Scenario 1: 200 MW, with 2022 MMBtu/hr input & 550 MMBtu/hr duct burner. Scenario 2: 207.5 MW with 2144 MMbtu/hr input & 550 MMBtu/hr duct burner.) combined cycle natural gas fired turbine with Dry Low-NOX combusters, SCR and duct burner. | Particulate matter, total (TPM) | good combustion practices along with clean fuels | 0.0085 | LB/MMBTU | HHV, 3 HR AVG. SEE NOTES. |
| ROLLING HILLS GENERATING, LLC | | VINTON | OH | 5/20/2015 | Electrical services | Note: The proposed modification was not installed.□ □ Chapter 31 major modification to convert four of the existing five simple cycle peaking units, SW501F turbines nominally rated at 209 megawatts (MW) each, to combined cycle configuration consisting of two 2x1 combined cycle blocks, the addition of four heat recovery steam generators (HRSGs), each of which will be equipped with duct burners, and two steam turbine generators.□ □ Permit includes 2 options for the units. Siemens Westinghouse Power Corp. SW501F, (Scenario 1: 200 MW, with 2022 MMBtu/hr input & 550 MMBtu/hr duct burner. Scenario 2: 207.5 MW with 2144 MMbtu/hr input & 550 MMBtu/hr duct burner.) combined cycle natural gas fired turbine with Dry Low-NOX combusters, SCR and duct burner. Emissions increase noted below is for scenario 1.□ Scenario 2 = 5101.7 CO, 449.31 NOx, 346.8 PM and 600.62 VOC. | Combustion Turbines, Scenario 2 (4, identical) (P001, P002, P004, P005) | 15.21 | Natural gas | 2144 | MMBTU/H | Scenario 1 only. Other scenario added as separate process. Siemens Westinghouse Power Corp. SW501F, (Scenario 1: 200 MW, with 2022 MMBtu/hr input & 550 MMBtu/hr duct burner. Scenario 2: 207.5 MW with 2144 MMbtu/hr input & 550 MMBtu/hr duct burner.) combined cycle natural gas fired turbine with Dry Low-NOX combusters, SCR and duct burner. | Particulate matter, total < 10 Âµ (TPM10) | good combustion practices along with clean fuels | 0.0085 | LB/MMBTU | HHV, 3 HR AVG. SEE NOTES. |
| ROLLING HILLS GENERATING, LLC | | VINTON | OH | 5/20/2015 | Electrical services | Note: The proposed modification was not installed.□ □ Chapter 31 major modification to convert four of the existing five simple cycle peaking units, SW501F turbines nominally rated at 209 megawatts (MW) each, to combined cycle configuration consisting of two 2x1 combined cycle blocks, the addition of four heat recovery steam generators (HRSGs), each of which will be equipped with duct burners, and two steam turbine generators.□ □ Permit includes 2 options for the units. Siemens Westinghouse Power Corp. SW501F, (Scenario 1: 200 MW, with 2022 MMBtu/hr input & 550 MMBtu/hr duct burner. Scenario 2: 207.5 MW with 2144 MMbtu/hr input & 550 MMBtu/hr duct burner.) combined cycle natural gas fired turbine with Dry Low-NOX combusters, SCR and duct burner. Emissions increase noted below is for scenario 1.□ Scenario 2 = 5101.7 CO, 449.31 NOx, 346.8 PM and 600.62 VOC. | Combustion Turbines, Scenario 2 (4, identical) (P001, P002, P004, P005) | 15.21 | Natural gas | 2144 | MMBTU/H | Scenario 1 only. Other scenario added as separate process. Siemens Westinghouse Power Corp. SW501F, (Scenario 1: 200 MW, with 2022 MMBtu/hr input & 550 MMBtu/hr duct burner. Scenario 2: 207.5 MW with 2144 MMbtu/hr input & 550 MMBtu/hr duct burner.) combined cycle natural gas fired turbine with Dry Low-NOX combusters, SCR and duct burner. | Particulate matter, total < 2.5 Âµ (TPM2.5) | good combustion practices along with clean fuels | 0.0085 | LB/MMBTU | HHV, 3 HR AVG. SEE NOTES. |

**Table D-2. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - PM**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| YORK ENERGY CENTER BLOCK 2 ELECTRICITY GENERATION PROJECT | CALPINE MID-MERIT, LLC | YORK | PA | 6/15/2015 | Calpine Mid-Merit, LLC. currently operates Block 1 of the York Energy Center under Title V operating permit 67-05083 with a rated capacity of 565 MW. This plan approval is for the construction and temporary operation of Block 2 Electricity Generation Project having a nominal generating capacity of 835 MW. Block 2 consists of two combined cycle NG/USLD fuel fired combustion turbines, one NG-fired auxiliary boiler, one cooling tower, NG piping componets, circuit breaker upgrades, five NG condensate tanks, and additional ULSD fuel oil storage tank. Each CT will be limited to 4500 hr/yr with duct firing; 480 hr/yr of ULSD | | Two combined cycle turbines with out duct burner | 15.21 | Natural Gas | 2291.64 | MCF/hr | Two (2) Combustion Turbine, 235 MW / 2512.5 MMBtu/hr, will fire NG and with the design having no bypasss from the CT to HRSG the CT will always be in combined cycle mode, the HRSG with NG-fired Duct Burner maximum rated heat input capacity 722 MMBtu/hr. CT will employ dry low NOx burner technology (NG firing), controled by SCR and oxidation catalyst. (Operational limits are for each CCCT NG-fired without duct burner) | Particulate matter, total (TPM) | Good combustion practices and low sulfur fuels | 0.0068 | LB/MMBTU | |
| YORK ENERGY CENTER BLOCK 2 ELECTRICITY GENERATION PROJECT | CALPINE MID-MERIT, LLC | YORK | PA | 6/15/2015 | Calpine Mid-Merit, LLC. currently operates Block 1 of the York Energy Center under Title V operating permit 67-05083 with a rated capacity of 565 MW. This plan approval is for the construction and temporary operation of Block 2 Electricity Generation Project having a nominal generating capacity of 835 MW. Block 2 consists of two combined cycle NG/USLD fuel fired combustion turbines, one NG-fired auxiliary boiler, one cooling tower, NG piping componets, circuit breaker upgrades, five NG condensate tanks, and additional ULSD fuel oil storage tank. Each CT will be limited to 4500 hr/yr with duct firing; 480 hr/yr of ULSD | | Two combined cycle turbines with out duct burner | 15.21 | Natural Gas | 2291.64 | MCF/hr | Two (2) Combustion Turbine, 235 MW / 2512.5 MMBtu/hr, will fire NG and with the design having no bypasss from the CT to HRSG the CT will always be in combined cycle mode, the HRSG with NG-fired Duct Burner maximum rated heat input capacity 722 MMBtu/hr. CT will employ dry low NOx burner technology (NG firing), controled by SCR and oxidation catalyst. (Operational limits are for each CCCT NG-fired without duct burner) | Particulate matter, total < 10 Âµ (TPM10) | Good combustion practices and low sulfur fuels | 0.0068 | LB/MMBTU | |
| YORK ENERGY CENTER BLOCK 2 ELECTRICITY GENERATION PROJECT | CALPINE MID-MERIT, LLC | YORK | PA | 6/15/2015 | Calpine Mid-Merit, LLC. currently operates Block 1 of the York Energy Center under Title V operating permit 67-05083 with a rated capacity of 565 MW. This plan approval is for the construction and temporary operation of Block 2 Electricity Generation Project having a nominal generating capacity of 835 MW. Block 2 consists of two combined cycle NG/USLD fuel fired combustion turbines, one NG-fired auxiliary boiler, one cooling tower, NG piping componets, circuit breaker upgrades, five NG condensate tanks, and additional ULSD fuel oil storage tank. Each CT will be limited to 4500 hr/yr with duct firing; 480 hr/yr of ULSD | | Two combined cycle turbines with out duct burner | 15.21 | Natural Gas | 2291.64 | MCF/hr | Two (2) Combustion Turbine, 235 MW / 2512.5 MMBtu/hr, will fire NG and with the design having no bypasss from the CT to HRSG the CT will always be in combined cycle mode, the HRSG with NG-fired Duct Burner maximum rated heat input capacity 722 MMBtu/hr. CT will employ dry low NOx burner technology (NG firing), controled by SCR and oxidation catalyst. (Operational limits are for each CCCT NG-fired without duct burner) | Particulate matter, total < 2.5 Âµ (TPM2.5) | Good combustion practices and low sulfur fuels | 0.0068 | LB/MMBTU | |
| YORK ENERGY CENTER BLOCK 2 ELECTRICITY GENERATION PROJECT | CALPINE MID-MERIT, LLC | YORK | PA | 6/15/2015 | Calpine Mid-Merit, LLC. currently operates Block 1 of the York Energy Center under Title V operating permit 67-05083 with a rated capacity of 565 MW. This plan approval is for the construction and temporary operation of Block 2 Electricity Generation Project having a nominal generating capacity of 835 MW. Block 2 consists of two combined cycle NG/USLD fuel fired combustion turbines, one NG-fired auxiliary boiler, one cooling tower, NG piping componets, circuit breaker upgrades, five NG condensate tanks, and additional ULSD fuel oil storage tank. Each CT will be limited to 4500 hr/yr with duct firing; 480 hr/yr of ULSD | | Two Combine Cycle Combustion Turbine with Duct Burner | 15.21 | Natural Gas | 3001.57 | MCF/hr | Two (2) Combustion Turbine, 235 MW / 2512.5 MMBtu/hr, will fire NG and with the design having no bypasss from the CT to HRSG the CT will always be in combined cycle mode the HRSG with NG-fired Duct Burner maximum rated heat input capacity 722 MMBtu/hr. CT will employ dry low NOx burner technology (NG firing), controled by SCR and oxidation catalyst. . (Operational limits are for each CCCT NG-fired with duct burner) | Particulate matter, total (TPM) | Good combustion practices and low sulfur fuels | 0.0066 | LB/MMBTU | |
| YORK ENERGY CENTER BLOCK 2 ELECTRICITY GENERATION PROJECT | CALPINE MID-MERIT, LLC | YORK | PA | 6/15/2015 | Calpine Mid-Merit, LLC. currently operates Block 1 of the York Energy Center under Title V operating permit 67-05083 with a rated capacity of 565 MW. This plan approval is for the construction and temporary operation of Block 2 Electricity Generation Project having a nominal generating capacity of 835 MW. Block 2 consists of two combined cycle NG/USLD fuel fired combustion turbines, one NG-fired auxiliary boiler, one cooling tower, NG piping componets, circuit breaker upgrades, five NG condensate tanks, and additional ULSD fuel oil storage tank. Each CT will be limited to 4500 hr/yr with duct firing; 480 hr/yr of ULSD | | Two Combine Cycle Combustion Turbine with Duct Burner | 15.21 | Natural Gas | 3001.57 | MCF/hr | Two (2) Combustion Turbine, 235 MW / 2512.5 MMBtu/hr, will fire NG and with the design having no bypasss from the CT to HRSG the CT will always be in combined cycle mode the HRSG with NG-fired Duct Burner maximum rated heat input capacity 722 MMBtu/hr. CT will employ dry low NOx burner technology (NG firing), controled by SCR and oxidation catalyst. . (Operational limits are for each CCCT NG-fired with duct burner) | Particulate matter, total < 10 Âµ (TPM10) | Good combustion practices and low sulfur fuels | 0.0066 | LB/MMBTU | |
| YORK ENERGY CENTER BLOCK 2 ELECTRICITY GENERATION PROJECT | CALPINE MID-MERIT, LLC | YORK | PA | 6/15/2015 | Calpine Mid-Merit, LLC. currently operates Block 1 of the York Energy Center under Title V operating permit 67-05083 with a rated capacity of 565 MW. This plan approval is for the construction and temporary operation of Block 2 Electricity Generation Project having a nominal generating capacity of 835 MW. Block 2 consists of two combined cycle NG/USLD fuel fired combustion turbines, one NG-fired auxiliary boiler, one cooling tower, NG piping componets, circuit breaker upgrades, five NG condensate tanks, and additional ULSD fuel oil storage tank. Each CT will be limited to 4500 hr/yr with duct firing; 480 hr/yr of ULSD | | Two Combine Cycle Combustion Turbine with Duct Burner | 15.21 | Natural Gas | 3001.57 | MCF/hr | Two (2) Combustion Turbine, 235 MW / 2512.5 MMBtu/hr, will fire NG and with the design having no bypasss from the CT to HRSG the CT will always be in combined cycle mode the HRSG with NG-fired Duct Burner maximum rated heat input capacity 722 MMBtu/hr. CT will employ dry low NOx burner technology (NG firing), controled by SCR and oxidation catalyst. . (Operational limits are for each CCCT NG-fired with duct burner) | Particulate matter, total < 2.5 Âµ (TPM2.5) | Good combustion practices and low sulfur fuels | 0.0066 | LB/MMBTU | |

**Table D-2. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - PM**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EAGLE MOUNTAIN STEAM ELECTRIC STATION | EAGLE MOUNTAIN POWER COMPANY LLC | TARRANT | TX | 6/18/2015 | Eagle is proposing to construct two new combined cycle combustion turbines (CTG) which will generate electric power for sale on the wholesale electric market. The ancillary equipment includes an auxiliary boiler, a firewater pump, an emergency generator, a steam turbine, and various support facilities. | | Combined Cycle Turbines (>25 MW) â€" natural gas | 15.21 | natural gas | 210 | MW | Two power configuration options authorized□<br>Siemens â€" 231 MW + 500 million British thermal units per hour (MMBtu/hr) duct burner□<br>GE â€" 210 MW + 349.2 MMBtu/hr duct burner | Particulate matter, total < 10 Âµ (TPM10) | | 35.47 | LB/H | |
| EAGLE MOUNTAIN STEAM ELECTRIC STATION | EAGLE MOUNTAIN POWER COMPANY LLC | TARRANT | TX | 6/18/2015 | Eagle is proposing to construct two new combined cycle combustion turbines (CTG) which will generate electric power for sale on the wholesale electric market. The ancillary equipment includes an auxiliary boiler, a firewater pump, an emergency generator, a steam turbine, and various support facilities. | | Combined Cycle Turbines (>25 MW) â€" natural gas | 15.21 | natural gas | 210 | MW | Two power configuration options authorized□<br>Siemens â€" 231 MW + 500 million British thermal units per hour (MMBtu/hr) duct burner□<br>GE â€" 210 MW + 349.2 MMBtu/hr duct burner | Particulate matter, total < 2.5 Âµ (TPM2.5) | | 35.47 | LB/H | |
| THE EMPIRE DISTRICT ELECTRIC COMPANY | THE EMPIRE DISTRICT ELECTRIC COMPANY | CHEROKEE | KS | 7/14/2015 | The Empire District Electric Company â€" Riverton Plant (EDEC) (Source ID: 0210002) is a fossil fuel electricity generation facility located in Cherokee County, Kansas. | This PSD permit with tracking number C-12987 is a modification of PSD permits C-12670 (Administrative Amendment, issued on 2/19/2015) and C-10913 (original PSD Permit for the proposed project, issued on 7/11/2013). | Combined cycle combustion turbine | 15.21 | Natural gas | 250 | MW | Combined cycle combustion unit; this unit includes a heat recovery steam generator (HRSG) with supplemental natural gas duct firing (duct burners) and a condensing steam turbine generator with SCR and CO catalyst. | Particulate matter, total < 2.5 Âµ (TPM2.5) | dry low NOx burners□<br>heat recovery steam generator (HRSG) | 30.2 | LB/H | |
| THE EMPIRE DISTRICT ELECTRIC COMPANY | THE EMPIRE DISTRICT ELECTRIC COMPANY | CHEROKEE | KS | 7/14/2015 | The Empire District Electric Company â€" Riverton Plant (EDEC) (Source ID: 0210002) is a fossil fuel electricity generation facility located in Cherokee County, Kansas. | This PSD permit with tracking number C-12987 is a modification of PSD permits C-12670 (Administrative Amendment, issued on 2/19/2015) and C-10913 (original PSD Permit for the proposed project, issued on 7/11/2013). | Combined cycle combustion turbine | 15.21 | Natural gas | 250 | MW | Combined cycle combustion unit; this unit includes a heat recovery steam generator (HRSG) with supplemental natural gas duct firing (duct burners) and a condensing steam turbine generator with SCR and CO catalyst. | Particulate matter, total < 10 Âµ (TPM10) | dry low NOx burners□<br>heat recovery steam generator (HRSG) | 30.2 | LB/H | |
| THE EMPIRE DISTRICT ELECTRIC COMPANY | THE EMPIRE DISTRICT ELECTRIC COMPANY | CHEROKEE | KS | 7/14/2015 | The Empire District Electric Company â€" Riverton Plant (EDEC) (Source ID: 0210002) is a fossil fuel electricity generation facility located in Cherokee County, Kansas. | This PSD permit with tracking number C-12987 is a modification of PSD permits C-12670 (Administrative Amendment, issued on 2/19/2015) and C-10913 (original PSD Permit for the proposed project, issued on 7/11/2013). | Combined cycle combustion turbine | 15.21 | Natural gas | 250 | MW | Combined cycle combustion unit; this unit includes a heat recovery steam generator (HRSG) with supplemental natural gas duct firing (duct burners) and a condensing steam turbine generator with SCR and CO catalyst. | Particulate matter, total (TPM) | dry low NOx burners□<br>heat recovery steam generator (HRSG) | 30.2 | LB/H | |
| CLEAN ENERGY FUTURE - LORDSTOWN, LLC | CLEAN ENERGY FUTURE - LORDSTOWN, LLC | TRUMBULL | OH | 8/25/2015 | 962 MW (gross winter output) combined cycle gas turbine (CCGT) facility | Initial installation permit for the construction of the Lordstown Energy Center - a nominal 940 MW combined cycle gas turbine (CCGT) facility. | Combined Cycle Combustion Turbines (two, identical) (P001 and P002) | 15.21 | Natural gas | 2725 | MMBTU/H | Combined cycle combustion turbine (2,725 MMBtu/hr heat input turbine at ISO conditions and 179 MMBtu/hr heat input duct burner) with dry low NOx combustors, selective catalytic reduction (SCR), and catalytic oxidizer. □<br>Limits and throughputs are for single turbine. | Particulate matter, total < 10 Âµ (TPM10) | Low sulfur fuel | 14.9 | LB/H | WITH DUCT BURNER. SEE NOTES. |
| CLEAN ENERGY FUTURE - LORDSTOWN, LLC | CLEAN ENERGY FUTURE - LORDSTOWN, LLC | TRUMBULL | OH | 8/25/2015 | 962 MW (gross winter output) combined cycle gas turbine (CCGT) facility | Initial installation permit for the construction of the Lordstown Energy Center - a nominal 940 MW combined cycle gas turbine (CCGT) facility. | Combined Cycle Combustion Turbines (two, identical) (P001 and P002) | 15.21 | Natural gas | 2725 | MMBTU/H | Combined cycle combustion turbine (2,725 MMBtu/hr heat input turbine at ISO conditions and 179 MMBtu/hr heat input duct burner) with dry low NOx combustors, selective catalytic reduction (SCR), and catalytic oxidizer. □<br>Limits and throughputs are for single turbine. | Particulate matter, total < 2.5 Âµ (TPM2.5) | Low sulfur fuel | 14.9 | LB/H | WITH DUCT BURNER. SEE NOTES. |

**Table D-2. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - PM**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MOXIE FREEDOM GENERATION PLANT | MOXIE FREEDOM LLC | LUZERNE | PA | 9/1/2015 | The Project is for the construction and operation of two identical 1 x 1 power blocks, each consisting of a combustion gas turbine (CGT or CT) and a steam turbine (ST) configured in single shaft alignment, where each CT and ST train share one common electric generator. The turbines to be used for this project are Two General Electric (GE) 7HA.02 CTs, each in 1 x 1 single shaft combined- cycle power islands.<br>Each CT and duct burner will exclusively fire pipeline-quality natural gas. The HRSGs will be equipped with selective catalytic reduction (SCR) to minimize nitrogen oxide (NOx) emissions and oxidation catalysts to minimize carbon monoxide (CO) and volatile organic compound (VOC) emissions from the CTs and DBâ€™s. The Project will also include several pieces of ancillary equipment. The list of equipment includes:<br>One fuel gas dew-point heater - natural gas fired, common for all CTs<br>Two CT inlet evaporative coolers - one for each CT (not emissions sources)<br>Two air-cooled condensers (ACCs) - one for each HRSG (not emissions sources)<br>One auxiliary boiler, natural gas-fired<br>One diesel engine powered emergency generator<br>One diesel engine powered fire water pump<br>Diesel fuel, lubricating oil, and aqueous ammonia storage tanks<br>The project once operational will produce 1050 MW Electric Generation | | Combustion Turbine With Duct Burner | 15.21 | Natural Gas | 3727 | MMBtu/hr | DLN burner, SCR, Oxidation Catalyst and shall maintain and operate the sources and associated air cleaning devices in accordance with good engineering practice. shall install, certify, maintain and operate continuous emission monitoring systems (CEMS) for nitrogen oxides, carbon monoxide, carbon dioxide, and ammonia emissions on the exhaust of each combined-cycle powerblock.□<br>Emissions limits are for each combustion turbine/duct burner block. | Particulate matter, total (TPM) | | 0.0063 | LB/MMBTU | |
| MOXIE FREEDOM GENERATION PLANT | MOXIE FREEDOM LLC | LUZERNE | PA | 9/1/2015 | The Project is for the construction and operation of two identical 1 x 1 power blocks, each consisting of a combustion gas turbine (CGT or CT) and a steam turbine (ST) configured in single shaft alignment, where each CT and ST train share one common electric generator. The turbines to be used for this project are Two General Electric (GE) 7HA.02 CTs, each in 1 x 1 single shaft combined- cycle power islands.<br>Each CT and duct burner will exclusively fire pipeline-quality natural gas. The HRSGs will be equipped with selective catalytic reduction (SCR) to minimize nitrogen oxide (NOx) emissions and oxidation catalysts to minimize carbon monoxide (CO) and volatile organic compound (VOC) emissions from the CTs and DBâ€™s. The Project will also include several pieces of ancillary equipment. The list of equipment includes:<br>One fuel gas dew-point heater - natural gas fired, common for all CTs<br>Two CT inlet evaporative coolers - one for each CT (not emissions sources)<br>Two air-cooled condensers (ACCs) - one for each HRSG (not emissions sources)<br>One auxiliary boiler, natural gas-fired<br>One diesel engine powered emergency generator<br>One diesel engine powered fire water pump<br>Diesel fuel, lubricating oil, and aqueous ammonia storage tanks<br>The project once operational will produce 1050 MW Electric Generation | | Combustion Turbine With Duct Burner | 15.21 | Natural Gas | 3727 | MMBtu/hr | DLN burner, SCR, Oxidation Catalyst and shall maintain and operate the sources and associated air cleaning devices in accordance with good engineering practice. shall install, certify, maintain and operate continuous emission monitoring systems (CEMS) for nitrogen oxides, carbon monoxide, carbon dioxide, and ammonia emissions on the exhaust of each combined-cycle powerblock.□<br>Emissions limits are for each combustion turbine/duct burner block. | Particulate matter, total < 10 Âµ (TPM10) | | 0.0063 | LB/MMBTU | |

**Table D-2. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - PM**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MOXIE FREEDOM GENERATION PLANT | MOXIE FREEDOM LLC | LUZERNE | PA | 9/1/2015 | The Project is for the construction and operation of two identical 1 x 1 power blocks, each consisting of a combustion gas turbine (CGT or CT) and a steam turbine (ST) configured in single shaft alignment, where each CT and ST train share one common electric generator. The turbines to be used for this project are Two General Electric (GE) 7HA.02 CTs, each in 1 x 1 single shaft combined- cycle power islands.<br>Each CT and duct burner will exclusively fire pipeline-quality natural gas. The HRSGs will be equipped with selective catalytic reduction (SCR) to minimize nitrogen oxide (NOx) emissions and oxidation catalysts to minimize carbon monoxide (CO) and volatile organic compound (VOC) emissions from the CTs and DBâ€™s. The Project will also include several pieces of ancillary equipment. The list of equipment includes:<br>One fuel gas dew-point heater - natural gas fired, common for all CTs<br>Two CT inlet evaporative coolers - one for each CT (not emissions sources)<br>Two air-cooled condensers (ACCs) - one for each HRSG (not emissions sources)<br>One auxiliary boiler, natural gas-fired<br>One diesel engine powered emergency generator<br>One diesel engine powered fire water pump<br>Diesel fuel, lubricating oil, and aqueous ammonia storage tanks<br>The project once operational will produce 1050 MW Electric Generation | | Combustion Turbine With Duct Burner | 15.21 | Natural Gas | 3727 | MMBtu/hr | DLN burner, SCR, Oxidation Catalyst and shall maintain and operate the sources and associated air cleaning devices in accordance with good engineering practice. shall install, certify, maintain and operate continuous emission monitoring systems (CEMS) for nitrogen oxides, carbon monoxide, carbon dioxide, and ammonia emissions on the exhaust of each combined-cycle powerblock.□<br>Emissions limits are for each combustion turbine/duct burner block. | Particulate matter, total < 2.5 Âµ (TPM2.5) | | 0.0063 | LB/MMBTU | |
| LON C. HILL POWER STATION | LON C. HILL, L.P. | NUECES | TX | 10/2/2015 | The Lon C. Hill Power Station (LCHP) will include two natural gas-fired combined cycle combustion turbines (CTGs) equipped with dry low NOx burners (DLNs), heat recovery steam generators (HRSG), and natural gas-fired duct burners (DBs). Ancillary equipment includes evaporative coolers or inlet chillers, a single steam turbine (ST), auxiliary boiler, emergency generator, firewater pump, two cooling towers, oil water separator, degreaser, two diesel storage tanks, gasoline storage tank, selective catalytic reduction (SCR) and ammonia (NH3) handling systems including an NH3 storage tank, and two water tanks. The LCHP will be a 2x1 combined cycle power plant consisting of two CTGs, two HRSGs and one ST. The CTGs and ST will be one of two options: two Siemens SCC6-5000 CTGs and a SST6-5000 ST, or two General Electric 7FA CTGs and a D-11 ST. | | Combined Cycle Turbines (>25 MW) | 15.21 | natural gas | 195 | MW | Two power configuration options authorized□<br>Siemens â€“ 240 MW + 250 million British thermal units per hour (MMBtu/hr) duct burner□<br>GE â€“ 195 MW + 670 MMBtu/hr duct burner | Particulate matter, total < 10 Âµ (TPM10) | Good combustion practices and use of pipeline quality natural gas | 16 | LB/HR | |
| LON C. HILL POWER STATION | LON C. HILL, L.P. | NUECES | TX | 10/2/2015 | The Lon C. Hill Power Station (LCHP) will include two natural gas-fired combined cycle combustion turbines (CTGs) equipped with dry low NOx burners (DLNs), heat recovery steam generators (HRSG), and natural gas-fired duct burners (DBs). Ancillary equipment includes evaporative coolers or inlet chillers, a single steam turbine (ST), auxiliary boiler, emergency generator, firewater pump, two cooling towers, oil water separator, degreaser, two diesel storage tanks, gasoline storage tank, selective catalytic reduction (SCR) and ammonia (NH3) handling systems including an NH3 storage tank, and two water tanks. The LCHP will be a 2x1 combined cycle power plant consisting of two CTGs, two HRSGs and one ST. The CTGs and ST will be one of two options: two Siemens SCC6-5000 CTGs and a SST6-5000 ST, or two General Electric 7FA CTGs and a D-11 ST. | | Combined Cycle Turbines (>25 MW) | 15.21 | natural gas | 195 | MW | Two power configuration options authorized□<br>Siemens â€“ 240 MW + 250 million British thermal units per hour (MMBtu/hr) duct burner□<br>GE â€“ 195 MW + 670 MMBtu/hr duct burner | Particulate matter, total < 2.5 Âµ (TPM2.5) | Good combustion practices and use of pipeline quality natural gas | 16 | LB/HR | |
| FGE EAGLE PINES PROJECT | FGE EAGLE PINES, LLC | CHEROKEE | TX | 11/4/2015 | The FGEEP Project will include three natural gas-fired combined cycle (NGCC) power blocks, each block comprised of two gas-fired combustion turbines, two supplemental fired duct burners (DBs) heat recovery steam generators (HRSGs), and one steam turbine. FGEEP selected Alstom GT36 combustion turbines (CTs), each nominally rated at 321 megawatts (MW). Each HRSG is equipped with DBs that will have a maximum design heat input capacity of 799 million British thermal units per hour (MMBtu/hr). The CTs and DBs are fueled with pipeline quality natural gas. Each power block will also have a steam turbine generator designed to produce approximately 502 MW with the additional duct firing. Each of the three blocks will include the following ancillary equipment: one multi-cell condenser/cooling tower, one emergency generator, one firewater pump, two diesel storage tanks, and pressurized aqueous ammonia storage tanks. | | Combined Cycle Turbines (>25 MW) | 15.21 | natural gas | 321 | MW | Alstom GT36 combustion turbines (321 MW)+ 799 million British thermal units per hour (MMBtu/hr) duct burner | Particulate matter, total < 10 Âµ (TPM10) | | 21.4 | LB/H | |

**Table D-2. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - PM**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FGE EAGLE PINES PROJECT | FGE EAGLE PINES, LLC | CHEROKEE | TX | 11/4/2015 | The FGEEP Project will include three natural gas-fired combined cycle (NGCC) power blocks, each block comprised of two gas-fired combustion turbines, two supplemental fired duct burners (DBs) heat recovery steam generators (HRSGs), and one steam turbine. FGEEP selected Alstom GT36 combustion turbines (CTs), each nominally rated at 321 megawatts (MW). Each HRSG is equipped with DBs that will have a maximum design heat input capacity of 799 million British thermal units per hour (MMBtu/hr). The CTs and DBs are fueled with pipeline quality natural gas. Each power block will also have a steam turbine generator designed to produce approximately 502 MW with the additional duct firing. Each of the three blocks will include the following ancillary equipment: one multi-cell condenser/cooling tower, one emergency generator, one firewater pump, two diesel storage tanks, and pressurized aqueous ammonia storage tanks. | | Combined Cycle Turbines (>25 MW) | 15.21 | natural gas | 321 | MW | Alstom GT36 combustion turbines (321 MW)+ 799 million British thermal units per hour (MMBtu/hr) duct burner | Particulate matter, total < 2.5 Âµ (TPM2.5) | | 21.4 | LB/H | |
| MATTAWOMAN ENERGY CENTER | MATTAWOMAN ENERGY, LLC | PRINCE GEORGE'S | MD | 11/13/2015 | 990 MW COMBINED-CYCLE NATURAL GAS-FIRED POWER PLANTNOTE: PARTICULATE MATTER FACILITYWIDE EMISSIONS ARE PARTICULATE MATTER (FILTERABLE) | NOTE: PARTICULATE MATTER FACILITYWIDE EMISSIONS ARE PARTICULATE MATTER (FILTERABLE). THE FACILITY INCLUDES A WET MECHANICAL DRAFT COOLING TOWER (12 CELL) with 0.0005% RECIRCULATING WATER FLOW. | 2 COMBINED-CYCLE COMBUSTION TURBINES | 15.21 | NATURAL GAS | 286 | MW | TWO SIEMENS H-CLASS (SGT-8000H VERSION 1.4-OPTIMIZED) COMBINED CYCLE COMBUSTION TURBINES (CTS) WITH A NOMINAL GENERATING CAPACITY OF 286 MW (EACH), COUPLED WITH A HEAT RECOVERY STEAM GENERATOR (HRSG) EQUIPPED WITH DUCT BURNERS, DRY LOW-NOX BURNERS, SCR, OXIDATION CATALYST.□<br>□<br>HEAT RATE LIMITED TO 6,793 BTU/KWH (NET) AT ALL TIMES WHEN THE CTS/HRSGS ARE OPERATING (LHV). INITIAL COMPLIANCE WITH THE HEAT RATE LIMITATION SHALL BE DEMONSTRATED USING ASME PTC-46 TEST METHOD. ANNUAL THERMAL EFFICIENCY TEST CONDUCTED ACCORDING TO ASME PTC-46, OR ANOTHER METHODOLOGY APPROVED BY MDE-ARMA, AND COMPARE RESULTS TO DESIGN THERMAL EFFICIENCY VALUE. AN EXCEEDANCE OF THE HEAT RATE LIMIT IS NOT CONSIDERED A VIOLATION OF THIS PERMIT, BUT TRIGGERS A REQUIREMENT FOR MATTAWOMAN TO SUBMIT A MAINTENANCE PLAN TO MDE-ARMA WHICH SPECIFIES THE ACTIONS MATTAWOMAN PLANS TO TAKE IN ORDER TO ACHIEVE THE HEAT RATE LIMIT. THE PLAN SHALL INCLUDE A TIMEFRAME THAT THE HEAT | Particulate matter, filterable (FPM) | USE OF PIPELINE-QUALITY NATURAL GAS EXCLUSIVELY AND GOOD COMBUSTION PRACTICE | 8.9 | LB/H | 3-HOUR BLOCK AVERAGE (W/OUT DUCT FIRING) |
| MATTAWOMAN ENERGY CENTER | MATTAWOMAN ENERGY, LLC | PRINCE GEORGE'S | MD | 11/13/2015 | 990 MW COMBINED-CYCLE NATURAL GAS-FIRED POWER PLANTNOTE: PARTICULATE MATTER FACILITYWIDE EMISSIONS ARE PARTICULATE MATTER (FILTERABLE) | NOTE: PARTICULATE MATTER FACILITYWIDE EMISSIONS ARE PARTICULATE MATTER (FILTERABLE). THE FACILITY INCLUDES A WET MECHANICAL DRAFT COOLING TOWER (12 CELL) with 0.0005% RECIRCULATING WATER FLOW. | 2 COMBINED-CYCLE COMBUSTION TURBINES | 15.21 | NATURAL GAS | 286 | MW | TWO SIEMENS H-CLASS (SGT-8000H VERSION 1.4-OPTIMIZED) COMBINED CYCLE COMBUSTION TURBINES (CTS) WITH A NOMINAL GENERATING CAPACITY OF 286 MW (EACH), COUPLED WITH A HEAT RECOVERY STEAM GENERATOR (HRSG) EQUIPPED WITH DUCT BURNERS, DRY LOW-NOX BURNERS, SCR, OXIDATION CATALYST.□<br>□<br>HEAT RATE LIMITED TO 6,793 BTU/KWH (NET) AT ALL TIMES WHEN THE CTS/HRSGS ARE OPERATING (LHV). INITIAL COMPLIANCE WITH THE HEAT RATE LIMITATION SHALL BE DEMONSTRATED USING ASME PTC-46 TEST METHOD. ANNUAL THERMAL EFFICIENCY TEST CONDUCTED ACCORDING TO ASME PTC-46, OR ANOTHER METHODOLOGY APPROVED BY MDE-ARMA, AND COMPARE RESULTS TO DESIGN THERMAL EFFICIENCY VALUE. AN EXCEEDANCE OF THE HEAT RATE LIMIT IS NOT CONSIDERED A VIOLATION OF THIS PERMIT, BUT TRIGGERS A REQUIREMENT FOR MATTAWOMAN TO SUBMIT A MAINTENANCE PLAN TO MDE-ARMA WHICH SPECIFIES THE ACTIONS MATTAWOMAN PLANS TO TAKE IN ORDER TO ACHIEVE THE HEAT RATE LIMIT. THE PLAN SHALL INCLUDE A TIMEFRAME THAT THE HEAT | Particulate matter, total < 10 Âµ (TPM10) | USE OF PIPELINE QUALITY NATURAL GAS EXCLUSIVELY AND GOOD COMBUSTION PRACTICES | 17.9 | LB/H | W/OUT DUCT FIRING, AVG. OF 3 STACK TESTS |

**Table D-2. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - PM**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MATTAWOMAN ENERGY CENTER | MATTAWOMAN ENERGY, LLC | PRINCE GEORGE'S | MD | 11/13/2015 | 990 MW COMBINED-CYCLE NATURAL GAS-FIRED POWER PLANTNOTE: PARTICULATE MATTER FACILITYWIDE EMISSIONS ARE PARTICULATE MATTER (FILTERABLE) | NOTE: PARTICULATE MATTER FACILITYWIDE EMISSIONS ARE PARTICULATE MATTER (FILTERABLE). THE FACILITY INCLUDES A WET MECHANICAL DRAFT COOLING TOWER (12 CELL) with 0.0005% RECIRCULATING WATER FLOW. | 2 COMBINED-CYCLE COMBUSTION TURBINES | 15.21 | NATURAL GAS | 286 | MW | TWO SIEMENS H-CLASS (SGT-8000H VERSION 1.4-OPTIMIZED) COMBINED CYCLE COMBUSTION TURBINES (CTS) WITH A NOMINAL GENERATING CAPACITY OF 286 MW (EACH), COUPLED WITH A HEAT RECOVERY STEAM GENERATOR (HRSG) EQUIPPED WITH DUCT BURNERS, DRY LOW-NOX BURNERS, SCR, OXIDATION CATALYST.□<br>□<br>HEAT RATE LIMITED TO 6,793 BTU/KWH (NET) AT ALL TIMES WHEN THE CTS/HRSGS ARE OPERATING (LHV). INITIAL COMPLIANCE WITH THE HEAT RATE LIMITATION SHALL BE DEMONSTRATED USING ASME PTC-46 TEST METHOD. ANNUAL THERMAL EFFICIENCY TEST CONDUCTED ACCORDING TO ASME PTC-46, OR ANOTHER METHODOLOGY APPROVED BY MDE-ARMA, AND COMPARE RESULTS TO DESIGN THERMAL EFFICIENCY VALUE. AN EXCEEDANCE OF THE HEAT RATE LIMIT IS NOT CONSIDERED A VIOLATION OF THIS PERMIT, BUT TRIGGERS A REQUIREMENT FOR MATTAWOMAN TO SUBMIT A MAINTENANCE PLAN TO MDE-ARMA WHICH SPECIFIES THE ACTIONS MATTAWOMAN PLANS TO TAKE IN ORDER TO ACHIEVE THE HEAT RATE LIMIT. THE PLAN SHALL INCLUDE A TIMEFRAME THAT THE HEAT | Particulate matter, total < 2.5 Âµ (TPM2.5) | USE OF PIPELINE QUALITY NATURAL GAS EXCLUSIVELY AND GOOD COMBUSTION PRACTICES. | 17.9 | LB/H | W/OUT DUCT FIRING, AVG. OF 3 STACK TESTS |
| CPV TOWANTIC, LLC | CPV TOWANTIC, LLC | NEW HAVEN | CT | 11/30/2015 | 805 MW Combined Cycle Power Plant | | Combined Cycle Power Plant | 15.21 | Natural Gas | 21200000 | MMBtu/12 months | | Particulate matter, total < 2.5 Âµ (TPM2.5) | | 9.73 | LB/H | |
| CPV TOWANTIC, LLC | CPV TOWANTIC, LLC | NEW HAVEN | CT | 11/30/2015 | 805 MW Combined Cycle Plant | | Combined Cycle Power Plant | 15.21 | Natural Gas | 21200000 | MMBtu/yr | | Particulate matter, total < 2.5 Âµ (TPM2.5) | | 9.73 | LB/H | |
| LACKAWANNA ENERGY CTR/JESSUP | LACKAWANNA ENERGY CENTER, LLC | LACKAWANNA | PA | 12/23/2015 | This plan approval is for the construction and temporary operation of three (3) identical General Electric Model 7HA.02 natural gas fired combustion turbines and heat recovery steam generator with duct burners (CT/HRSG). Each CT/HRSG combined-cycle process block includes one (1) combustion gas turbine and one (1) heat recovery steam generator with duct burners with all three (3) CT/HRSG sharing one (1) steam turbine. The entire power block is rated at 1,500 MW.<br>Additional equipment includes:<br>one (1) 2,000 kW diesel-fired emergency generator<br>one (1) 315 HP diesel-fired emergency fire water pump<br>one (1) 184.8 MM BTU/hr natural gas fired boiler<br>one (1) 12 MMBTU/hr natural gas fuel gas heater<br>two (2) Diesel fuel storage tanks<br>four (4) lubricating oil tanks<br>one (1) aqueous ammonia storage tank | | Combustion turbine with duct burner | 15.21 | Natural gas | 3304.3 | MMBtu/hr | Limits are for each CCCT and yearly limits are for cumulative turbine and duct burner. Duct burner throughput is 637.9 MMBtu/hr. | Particulate matter, filterable (FPM) | Exclusive natural gas, high-efficiency inlet air filters and DLN | 0.003 | LB/MMBTU | |

**Table D-2. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - PM**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LACKAWANNA ENERGY CTR/JESSUP | LACKAWANNA ENERGY CENTER, LLC | LACKAWANNA | PA | 12/23/2015 | This plan approval is for the construction and temporary operation of three (3) identical General Electric Model 7HA.02 natural gas fired combustion turbines and heat recovery steam generator with duct burners (CT/HRSG). Each CT/HRSG combined-cycle process block includes one (1) combustion gas turbine and one (1) heat recovery steam generator with duct burners with all three (3) CT/HRSG sharing one (1) steam turbine. The entire power block is rated at 1,500 MW. Additional equipment includes: one (1) 2,000 kW diesel-fired emergency generator one (1) 315 HP diesel-fired emergency fire water pump one (1) 184.8 MM BTU/hr natural gas fired boiler one (1) 12 MMBTU/hr natural gas fuel gas heater two (2) Diesel fuel storage tanks four (4) lubricating oil tanks one (1) aqueous ammonia storage tank | | Combustion turbine with duct burner | 15.21 | Natural gas | 3304.3 | MMBtu/hr | Limits are for each CCCT and yearly limits are for cumulative turbine and duct burner. Duct burner throughput is 637.9 MMBtu/hr. | Particulate matter, total < 10 Âµ (TPM10) | Exclusive natural gas, high-efficiency inlet air filters and DLN | 0.0059 | LB/MMBTU | |
| LACKAWANNA ENERGY CTR/JESSUP | LACKAWANNA ENERGY CENTER, LLC | LACKAWANNA | PA | 12/23/2015 | This plan approval is for the construction and temporary operation of three (3) identical General Electric Model 7HA.02 natural gas fired combustion turbines and heat recovery steam generator with duct burners (CT/HRSG). Each CT/HRSG combined-cycle process block includes one (1) combustion gas turbine and one (1) heat recovery steam generator with duct burners with all three (3) CT/HRSG sharing one (1) steam turbine. The entire power block is rated at 1,500 MW. Additional equipment includes: one (1) 2,000 kW diesel-fired emergency generator one (1) 315 HP diesel-fired emergency fire water pump one (1) 184.8 MM BTU/hr natural gas fired boiler one (1) 12 MMBTU/hr natural gas fuel gas heater two (2) Diesel fuel storage tanks four (4) lubricating oil tanks one (1) aqueous ammonia storage tank | | Combustion turbine with duct burner | 15.21 | Natural gas | 3304.3 | MMBtu/hr | Limits are for each CCCT and yearly limits are for cumulative turbine and duct burner. Duct burner throughput is 637.9 MMBtu/hr. | Particulate matter, total < 2.5 Âµ (TPM2.5) | Exclusive natural gas, high-efficiency inlet air filters and DLN | 0.0059 | LB/MMBTU | |
| TENASKA PA PARTNERS/WESTMORELAND GEN FAC | TENASKA PA PARTNERS LLC | WESTMORELAND | PA | 2/12/2016 | The plan approval will allow construction and temporary operation of a power plant is a single 2 on 1 combined cycle turbine configuration with 2 combustion turbines serving a single steam turbine generator equipped with heat recovery steam generator with supplemental 400MMBtu/hr natural gas fired duct burners. The approximate maximum plant nominal generating capacity is 930-1065 MW. Additional facilities will include 245 MMBtu/hr Auxiliary Boiler, one cooling tower, one diesel-fired emergency generator, and one diesel-fired emergency fire pump engine. | Application for plan approval 65-00990E received on 12/10/2015 from Tenaska to reduce the facility wide PTE authorized under plan approval 65-00990C based on revised emission information for startup and shutdown from the manufacturer. | Large combustion turbine | 15.21 | Natural Gas | 0 | | This process entry is for operations with the duct burner. Limits entered are for each turbine. | Particulate matter, total (TPM) | Good combustion practices with the use of low ash/sulfer fuels | 0.0039 | LB/MMBTU | |
| TENASKA PA PARTNERS/WESTMORELAND GEN FAC | TENASKA PA PARTNERS LLC | WESTMORELAND | PA | 2/12/2016 | The plan approval will allow construction and temporary operation of a power plant is a single 2 on 1 combined cycle turbine configuration with 2 combustion turbines serving a single steam turbine generator equipped with heat recovery steam generator with supplemental 400MMBtu/hr natural gas fired duct burners. The approximate maximum plant nominal generating capacity is 930-1065 MW. Additional facilities will include 245 MMBtu/hr Auxiliary Boiler, one cooling tower, one diesel-fired emergency generator, and one diesel-fired emergency fire pump engine. | Application for plan approval 65-00990E received on 12/10/2015 from Tenaska to reduce the facility wide PTE authorized under plan approval 65-00990C based on revised emission information for startup and shutdown from the manufacturer. | Large combustion turbine | 15.21 | Natural Gas | 0 | | This process entry is for operations with the duct burner. Limits entered are for each turbine. | Particulate matter, total < 10 Âµ (TPM10) | Good combustion practices with the use of low ash/sulfer fuels | 0.0039 | LB/MMBTU | |
| TENASKA PA PARTNERS/WESTMORELAND GEN FAC | TENASKA PA PARTNERS LLC | WESTMORELAND | PA | 2/12/2016 | The plan approval will allow construction and temporary operation of a power plant is a single 2 on 1 combined cycle turbine configuration with 2 combustion turbines serving a single steam turbine generator equipped with heat recovery steam generator with supplemental 400MMBtu/hr natural gas fired duct burners. The approximate maximum plant nominal generating capacity is 930-1065 MW. Additional facilities will include 245 MMBtu/hr Auxiliary Boiler, one cooling tower, one diesel-fired emergency generator, and one diesel-fired emergency fire pump engine. | Application for plan approval 65-00990E received on 12/10/2015 from Tenaska to reduce the facility wide PTE authorized under plan approval 65-00990C based on revised emission information for startup and shutdown from the manufacturer. | Large combustion turbine | 15.21 | Natural Gas | 0 | | This process entry is for operations with the duct burner. Limits entered are for each turbine. | Particulate matter, total < 2.5 Âµ (TPM2.5) | Good combustion practices | 0.0039 | LB/MMBTU | |
| DECORDOVA STEAM ELECTRIC STATION | DECORDOVA II POWER COMPANY LLC | HOOD | TX | 3/8/2016 | The DeCordova Station will consist of two combustion turbine generators (CTGs) operating in simple cycle or combined cycle modes. The gas turbines will be one of two options: Siemens or General Electric. | | Combined Cycle & Cogeneration | 15.21 | natural gas | 231 | MW | 2 CTGs to operate in simple cycle & combined cycle modes. 231 MW (Siemens) or 210 MW (GE). Simple cycle operations limited to 2,500 hr/yr. | Particulate matter, total < 10 Âµ (TPM10) | GOOD COMBUSTION PRACTICES AND LOW SULFUR FUEL | 35.47 | LB/H | |

**Table D-2. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - PM**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DECORDOVA STEAM ELECTRIC STATION | DECORDOVA II POWER COMPANY LLC | HOOD | TX | 3/8/2016 | The DeCordova Station will consist of two combustion turbine generators (CTGs) operating in simple cycle or combined cycle modes. The gas turbines will be one of two options: Siemens or General Electric. | | Combined Cycle & Cogeneration | 15.21 | natural gas | 231 | MW | 2 CTGs to operate in simple cycle & combined cycle modes. 231 MW (Siemens) or 210 MW (GE). Simple cycle operations limited to 2,500 hr/yr. | Particulate matter, total < 2.5 Âµ (TPM2.5) | GOOD COMBUSTION PRACTICES AND LOW SULFUR FUEL | 35.47 | LB/H | |
| OKEECHOBEE CLEAN ENERGY CENTER | FLORIDA POWER & LIGHT | OKEECHOBEE | FL | 3/9/2016 | Fossil-fueled power plant, consisting of a 3-on-1 combined cycle unit and auxiliary equipment. The combined cycle unit consists of three GE 7HA.02 turbines, each with nominal generating capacity of 350 MW. The total generating capacity for the combined cycle unit is 1,600 MW. | Technical evaluation of project available at□ http://depedms.dep.state.fl.us/Oculus/servlet/shell?command=getEntity&[guid=75.89000.1]&[profile=Permitting_Authorization] | Combined-cycle electric generating unit | 15.21 | Natural gas | 3096 | MMBtu/hr per turbine | 3-on-1 combined cycle unit. GE 7HA.02 turbines, approximately 350 MW per turbine. Total unit generating capacity is approximately 1,600 MW. Primarily fueled with natural gas. Permitted to burn the base-load equivalent of 500 hr/yr per turbine on ULSD. | Particulate matter, total (TPM) | Use of clean fuels | 2 | GRAIN S/100 SCF GAS | FOR NATURAL GAS |
| OKEECHOBEE CLEAN ENERGY CENTER | FLORIDA POWER & LIGHT | OKEECHOBEE | FL | 3/9/2016 | Fossil-fueled power plant, consisting of a 3-on-1 combined cycle unit and auxiliary equipment. The combined cycle unit consists of three GE 7HA.02 turbines, each with nominal generating capacity of 350 MW. The total generating capacity for the combined cycle unit is 1,600 MW. | Technical evaluation of project available at□ http://depedms.dep.state.fl.us/Oculus/servlet/shell?command=getEntity&[guid=75.89000.1]&[profile=Permitting_Authorization] | Combined-cycle electric generating unit | 15.21 | Natural gas | 3096 | MMBtu/hr per turbine | 3-on-1 combined cycle unit. GE 7HA.02 turbines, approximately 350 MW per turbine. Total unit generating capacity is approximately 1,600 MW. Primarily fueled with natural gas. Permitted to burn the base-load equivalent of 500 hr/yr per turbine on ULSD. | Particulate matter, total < 10 Âµ (TPM10) | Use of clean fuels | 2 | GR. S/100 SCF GAS | FOR NATURAL GAS |
| OKEECHOBEE CLEAN ENERGY CENTER | FLORIDA POWER & LIGHT | OKEECHOBEE | FL | 3/9/2016 | Fossil-fueled power plant, consisting of a 3-on-1 combined cycle unit and auxiliary equipment. The combined cycle unit consists of three GE 7HA.02 turbines, each with nominal generating capacity of 350 MW. The total generating capacity for the combined cycle unit is 1,600 MW. | Technical evaluation of project available at□ http://depedms.dep.state.fl.us/Oculus/servlet/shell?command=getEntity&[guid=75.89000.1]&[profile=Permitting_Authorization] | Combined-cycle electric generating unit | 15.21 | Natural gas | 3096 | MMBtu/hr per turbine | 3-on-1 combined cycle unit. GE 7HA.02 turbines, approximately 350 MW per turbine. Total unit generating capacity is approximately 1,600 MW. Primarily fueled with natural gas. Permitted to burn the base-load equivalent of 500 hr/yr per turbine on ULSD. | Particulate matter, total < 2.5 Âµ (TPM2.5) | Use of clean fuels | 2 | GR. S/100 SCF GAS | FOR NATURAL GAS |
| NECHES STATION | APEX TEXAS POWER LLC | CHEROKEE | TX | 3/24/2016 | either 4 simple cycle combustion turbine generators (CTGs) or two CTGs operating in simple cycle or combined cycle modes. The CTGs will be one of two options: Siemens or General Electric. | | Combined Cycle & Cogeneration | 15.21 | natural gas | 231 | MW | 2 CTGs to operate in simple cycle & combined cycle modes. 231 MW (Siemens) or 210 MW (GE) Simple cycle operations limited to 2,500 hr/yr. | Particulate matter, total < 10 Âµ (TPM10) | GOOD COMBUSTION PRACTICES, LOW SULFUR FUEL | 19.35 | LB/H | |
| NECHES STATION | APEX TEXAS POWER LLC | CHEROKEE | TX | 3/24/2016 | either 4 simple cycle combustion turbine generators (CTGs) or two CTGs operating in simple cycle or combined cycle modes. The CTGs will be one of two options: Siemens or General Electric. | | Combined Cycle & Cogeneration | 15.21 | natural gas | 231 | MW | 2 CTGs to operate in simple cycle & combined cycle modes. 231 MW (Siemens) or 210 MW (GE) Simple cycle operations limited to 2,500 hr/yr. | Particulate matter, total < 2.5 Âµ (TPM2.5) | GOOD COMBUSTION PRACTICES AND LOW SULFUR FUEL | 19.35 | LB/H | |

**Table D-2. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - PM**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JOHNSONVILLE COGENERATION | TENNESSEE VALLEY AUTHORITY | HUMPHREYS | TN | 4/19/2016 | Existing gas-fired combustion turbine with new heat recovery steam generator (HRSG) with duct burner and two new gas-fired auxiliary boilers. | Facility-wide emissions increases do not include decreases due to shutdown of coal-fired units. | Natural Gas-Fired Combustion Turbine with HRSG | 15.21 | Natural Gas | 1339 | MMBtu/hr | Turbine throughput is 1019.7 MMBtu/hr when burning natural gas and 1083.7 MMBtu/hr when burning No. 2 oil. Duct burner throughput is 319.3 MMBtu/hr. Duct burner firing will occur during natural gas combustion only. | Particulate matter, total (TPM) | Good combustion design and practices | 0.005 | LB/MMBTU | |
| GREENSVILLE POWER STATION | VIRGINIA ELECTRIC AND POWER COMPANY | GREENSVILLE | VA | 6/17/2016 | The proposed project will be a new, nominal 1,600 MW combined-cycle electrical power generating facility utilizing three combustion turbines each with a duct-fired heat recovery steam generator (HRSG) with a common reheat condensing steam turbine generator (3 on 1 configuration). The proposed fuel for the turbines and duct burners is pipeline-quality natural gas. | | COMBUSTION TURBINE GENERATOR WITH DUCT-FIRED HEAT RECOVERY STEAM GENERATORS (3) | 15.21 | natural gas | 3227 | MMBTU/HR | 3227 MMBTU/HR CT with 500 MMBTU/HR Duct Burner, 3 on 1 configuration. | Particulate matter, filterable < 2.5 Âµ (FPM2.5) | Pipeline Quality Natural Gas | 0.0039 | LB/MMBTU | AVG OF 3 TEST RUNS |
| GREENSVILLE POWER STATION | VIRGINIA ELECTRIC AND POWER COMPANY | GREENSVILLE | VA | 6/17/2016 | The proposed project will be a new, nominal 1,600 MW combined-cycle electrical power generating facility utilizing three combustion turbines each with a duct-fired heat recovery steam generator (HRSG) with a common reheat condensing steam turbine generator (3 on 1 configuration). The proposed fuel for the turbines and duct burners is pipeline-quality natural gas. | | COMBUSTION TURBINE GENERATOR WITH DUCT-FIRED HEAT RECOVERY STEAM GENERATORS (3) | 15.21 | natural gas | 3227 | MMBTU/HR | 3227 MMBTU/HR CT with 500 MMBTU/HR Duct Burner, 3 on 1 configuration. | Particulate matter, total < 10 Âµ (TPM10) | Low sulfur/carbon fuel and good combustion pratices | 0.0039 | LB/MMBTU | AVG OF 3 TEST RUNS |

**Table D-2. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - PM**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MIDDLESEX ENERGY CENTER, LLC | STONEGATE POWER, LLC | MIDDLESEX | NJ | 7/19/2016 | NEW 633 MEGAWATT (MW) GROSS FACILITY CONSISTING OF 1.ONE GENERAL ELECTRIC (GE) 7HA.02 CCCT NOMINALLY RATED AT 380 MW AT ISO CONDITIONS WITHOUT DUCT FIRING WITH A MAXIMUM HEAT INPUT RATE OF: O:3,462 MMBTU/HR(HHV) AT (0) DEGREES F, 100% LOAD COMBUSTING NATURAL GAS O:3,613 MMBTU/HR(HHV) AT (0) DEGREES F, 100% LOAD COMBUSTING ULSD WHICH WILL BE THE BACKUP FUEL OTHER EQUIPMENT INCLUDES: 2.ONE NATURAL GAS-FIRED DUCT BURNER (MAXIMUM HEAT INPUT OF 599 MMBTU/HR(HHV)) FOR SUPPLEMENTAL FIRING. 3.ONE 97.5 MMBTU/HR(HHV) NATURAL GAS FIRED AUXILIARY BOILER, EQUIPPED WITH LOW NOX BURNERS AND FLUE GAS RECIRCULATION FOR CONTROL OF NOX EMISSIONS; 4.ONE 2.25 MMBTU/HR(HHV), 327 BRAKE HORSEPOWER, ULSD FIRED EMERGENCY FIRE PUMP; 5.ONE 14.4 MMBTU/HR(HHV), APPROXIMATELY 1,500 KW ULSD FIRED EMERGENCY GENERATOR; AND 6.ONE 8-CELL, 124,800 GALLON PER MINUTE (GPM) MECHANICAL INDUCED DRAFT COOLING TOWER. | | Combined Cycle Combustion Turbine firing Natural Gas with Duct Burner | 15.21 | natural gas | 4000 | h/yr | | Particulate matter, total < 2.5 Âµ (TPM2.5) | COMPLIANCE BY STACK TESTING | 18.3 | LB/H | AV OF THREE ONE H STACK TESTS EVERY 5 YR |
| MIDDLESEX ENERGY CENTER, LLC | STONEGATE POWER, LLC | MIDDLESEX | NJ | 7/19/2016 | NEW 633 MEGAWATT (MW) GROSS FACILITY CONSISTING OF 1.ONE GENERAL ELECTRIC (GE) 7HA.02 CCCT NOMINALLY RATED AT 380 MW AT ISO CONDITIONS WITHOUT DUCT FIRING WITH A MAXIMUM HEAT INPUT RATE OF: O:3,462 MMBTU/HR(HHV) AT (0) DEGREES F, 100% LOAD COMBUSTING NATURAL GAS O:3,613 MMBTU/HR(HHV) AT (0) DEGREES F, 100% LOAD COMBUSTING ULSD WHICH WILL BE THE BACKUP FUEL OTHER EQUIPMENT INCLUDES: 2.ONE NATURAL GAS-FIRED DUCT BURNER (MAXIMUM HEAT INPUT OF 599 MMBTU/HR(HHV)) FOR SUPPLEMENTAL FIRING. 3.ONE 97.5 MMBTU/HR(HHV) NATURAL GAS FIRED AUXILIARY BOILER, EQUIPPED WITH LOW NOX BURNERS AND FLUE GAS RECIRCULATION FOR CONTROL OF NOX EMISSIONS; 4.ONE 2.25 MMBTU/HR(HHV), 327 BRAKE HORSEPOWER, ULSD FIRED EMERGENCY FIRE PUMP; 5.ONE 14.4 MMBTU/HR(HHV), APPROXIMATELY 1,500 KW ULSD FIRED EMERGENCY GENERATOR; AND 6.ONE 8-CELL, 124,800 GALLON PER MINUTE (GPM) MECHANICAL INDUCED DRAFT COOLING TOWER. | | Combined Cycle Combustion Turbine firing Natural Gas with Duct Burner | 15.21 | natural gas | 4000 | h/yr | | Particulate matter, filterable (FPM) | USE OF NATURAL GAS A CLEAN BURNING FUEL | 10.4 | LB/H | AV OF THREE ONE H STACK TESTS EVERY 5 YR |
| MIDDLESEX ENERGY CENTER, LLC | STONEGATE POWER, LLC | MIDDLESEX | NJ | 7/19/2016 | NEW 633 MEGAWATT (MW) GROSS FACILITY CONSISTING OF 1.ONE GENERAL ELECTRIC (GE) 7HA.02 CCCT NOMINALLY RATED AT 380 MW AT ISO CONDITIONS WITHOUT DUCT FIRING WITH A MAXIMUM HEAT INPUT RATE OF: O:3,462 MMBTU/HR(HHV) AT (0) DEGREES F, 100% LOAD COMBUSTING NATURAL GAS O:3,613 MMBTU/HR(HHV) AT (0) DEGREES F, 100% LOAD COMBUSTING ULSD WHICH WILL BE THE BACKUP FUEL OTHER EQUIPMENT INCLUDES: 2.ONE NATURAL GAS-FIRED DUCT BURNER (MAXIMUM HEAT INPUT OF 599 MMBTU/HR(HHV)) FOR SUPPLEMENTAL FIRING. 3.ONE 97.5 MMBTU/HR(HHV) NATURAL GAS FIRED AUXILIARY BOILER, EQUIPPED WITH LOW NOX BURNERS AND FLUE GAS RECIRCULATION FOR CONTROL OF NOX EMISSIONS; 4.ONE 2.25 MMBTU/HR(HHV), 327 BRAKE HORSEPOWER, ULSD FIRED EMERGENCY FIRE PUMP; 5.ONE 14.4 MMBTU/HR(HHV), APPROXIMATELY 1,500 KW ULSD FIRED EMERGENCY GENERATOR; AND 6.ONE 8-CELL, 124,800 GALLON PER MINUTE (GPM) MECHANICAL INDUCED DRAFT COOLING TOWER. | | Combined Cycle Combustion Turbine firing Natural Gas with Duct Burner | 15.21 | natural gas | 4000 | h/yr | | Particulate matter, total < 10 Âµ (TPM10) | COMPLIANCE BY STACK TESTING | 18.3 | LB/H | AV OF THREE ONE H STACK TESTS EVERY 5 YR |

**Table D-2. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - PM**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MIDDLESEX ENERGY CENTER, LLC | STONEGATE POWER, LLC | MIDDLESEX | NJ | 7/19/2016 | NEW 633 MEGAWATT (MW) GROSS FACILITY CONSISTING OF 1.ONE GENERAL ELECTRIC (GE) 7HA.02 CCCT NOMINALLY RATED AT 380 MW AT ISO CONDITIONS WITHOUT DUCT FIRING WITH A MAXIMUM HEAT INPUT RATE OF: O:3,462 MMBTU/HR(HHV) AT (0) DEGREES F, 100% LOAD COMBUSTING NATURAL GAS O:3,613 MMBTU/HR(HHV) AT (0) DEGREES F, 100% LOAD COMBUSTING ULSD WHICH WILL BE THE BACKUP FUEL OTHER EQUIPMENT INCLUDES: 2.ONE NATURAL GAS-FIRED DUCT BURNER (MAXIMUM HEAT INPUT OF 599 MMBTU/HR(HHV)) FOR SUPPLEMENTAL FIRING. 3.ONE 97.5 MMBTU/HR(HHV) NATURAL GAS FIRED AUXILIARY BOILER, EQUIPPED WITH LOW NOX BURNERS AND FLUE GAS RECIRCULATION FOR CONTROL OF NOX EMISSIONS; 4.ONE 2.25 MMBTU/HR(HHV), 327 BRAKE HORSEPOWER, ULSD FIRED EMERGENCY FIRE PUMP; 5.ONE 14.4 MMBTU/HR(HHV), APPROXIMATELY 1,500 KW ULSD FIRED EMERGENCY GENERATOR; AND 6.ONE 8-CELL, 124,800 GALLON PER MINUTE (GPM) MECHANICAL INDUCED DRAFT COOLING TOWER. | | Combined Cycle Combustion Turbine firing Natural Gas without Duct Burner | 15.21 | Natural Gas | 8040 | H/YR | | Particulate matter, filterable (FPM) | USE OF NATURAL GAS A CLEAN BURNING FUEL | 4.4 | LB/H | AV OF THREE ONE H STACK TESTS EVERY 5 YR |
| MIDDLESEX ENERGY CENTER, LLC | STONEGATE POWER, LLC | MIDDLESEX | NJ | 7/19/2016 | NEW 633 MEGAWATT (MW) GROSS FACILITY CONSISTING OF 1.ONE GENERAL ELECTRIC (GE) 7HA.02 CCCT NOMINALLY RATED AT 380 MW AT ISO CONDITIONS WITHOUT DUCT FIRING WITH A MAXIMUM HEAT INPUT RATE OF: O:3,462 MMBTU/HR(HHV) AT (0) DEGREES F, 100% LOAD COMBUSTING NATURAL GAS O:3,613 MMBTU/HR(HHV) AT (0) DEGREES F, 100% LOAD COMBUSTING ULSD WHICH WILL BE THE BACKUP FUEL OTHER EQUIPMENT INCLUDES: 2.ONE NATURAL GAS-FIRED DUCT BURNER (MAXIMUM HEAT INPUT OF 599 MMBTU/HR(HHV)) FOR SUPPLEMENTAL FIRING. 3.ONE 97.5 MMBTU/HR(HHV) NATURAL GAS FIRED AUXILIARY BOILER, EQUIPPED WITH LOW NOX BURNERS AND FLUE GAS RECIRCULATION FOR CONTROL OF NOX EMISSIONS; 4.ONE 2.25 MMBTU/HR(HHV), 327 BRAKE HORSEPOWER, ULSD FIRED EMERGENCY FIRE PUMP; 5.ONE 14.4 MMBTU/HR(HHV), APPROXIMATELY 1,500 KW ULSD FIRED EMERGENCY GENERATOR; AND 6.ONE 8-CELL, 124,800 GALLON PER MINUTE (GPM) MECHANICAL INDUCED DRAFT COOLING TOWER. | | Combined Cycle Combustion Turbine firing Natural Gas without Duct Burner | 15.21 | Natural Gas | 8040 | H/YR | | Particulate matter, total < 10 Âµ (TPM10) | USE OF NATURAL GAS A CLEAN BURNING FUEL | 11.7 | LB/H | AV OF THREE ONE H STACK TESTS EVERY 5 YR |
| MIDDLESEX ENERGY CENTER, LLC | STONEGATE POWER, LLC | MIDDLESEX | NJ | 7/19/2016 | NEW 633 MEGAWATT (MW) GROSS FACILITY CONSISTING OF 1.ONE GENERAL ELECTRIC (GE) 7HA.02 CCCT NOMINALLY RATED AT 380 MW AT ISO CONDITIONS WITHOUT DUCT FIRING WITH A MAXIMUM HEAT INPUT RATE OF: O:3,462 MMBTU/HR(HHV) AT (0) DEGREES F, 100% LOAD COMBUSTING NATURAL GAS O:3,613 MMBTU/HR(HHV) AT (0) DEGREES F, 100% LOAD COMBUSTING ULSD WHICH WILL BE THE BACKUP FUEL OTHER EQUIPMENT INCLUDES: 2.ONE NATURAL GAS-FIRED DUCT BURNER (MAXIMUM HEAT INPUT OF 599 MMBTU/HR(HHV)) FOR SUPPLEMENTAL FIRING. 3.ONE 97.5 MMBTU/HR(HHV) NATURAL GAS FIRED AUXILIARY BOILER, EQUIPPED WITH LOW NOX BURNERS AND FLUE GAS RECIRCULATION FOR CONTROL OF NOX EMISSIONS; 4.ONE 2.25 MMBTU/HR(HHV), 327 BRAKE HORSEPOWER, ULSD FIRED EMERGENCY FIRE PUMP; 5.ONE 14.4 MMBTU/HR(HHV), APPROXIMATELY 1,500 KW ULSD FIRED EMERGENCY GENERATOR; AND 6.ONE 8-CELL, 124,800 GALLON PER MINUTE (GPM) MECHANICAL INDUCED DRAFT COOLING TOWER. | | Combined Cycle Combustion Turbine firing Natural Gas without Duct Burner | 15.21 | Natural Gas | 8040 | H/YR | | Particulate matter, total < 2.5 Âµ (TPM2.5) | USE OF NATURAL GAS A CLEAN BURNING FUEL | 11.7 | LB/H | AV OF THREE ONE H STACK TESTS EVERY 5 YR |

**Table D-2. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - PM**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ST. CHARLES POWER STATION | ENTERGY LOUISIANA, LLC | ST. CHARLES | LA | 8/31/2016 | The St. Charles Power Station (SCPS) is a new electric power generating facility consisting of two (2) natural gas-fired combined cycle gas turbines, each with a heat recovery stem generator unit equipped with duct burners, and one (1) steam generator turbine. The SCPS will will have a predicted net nominal output of 980 MW at ISO conditions with supplemental duct firing. | | SCPS Combined Cycle Unit 1A | 15.21 | Natural Gas | 3625 | MMBTU/hr | | Particulate matter, filterable < 10 Âµ (FPM10) | Good combustion practices and clean burning fuels (natural gas) | 17.52 | LB/H | HOURLY MAXIMUM |
| ST. CHARLES POWER STATION | ENTERGY LOUISIANA, LLC | ST. CHARLES | LA | 8/31/2016 | The St. Charles Power Station (SCPS) is a new electric power generating facility consisting of two (2) natural gas-fired combined cycle gas turbines, each with a heat recovery stem generator unit equipped with duct burners, and one (1) steam generator turbine. The SCPS will will have a predicted net nominal output of 980 MW at ISO conditions with supplemental duct firing. | | SCPS Combined Cycle Unit 1A | 15.21 | Natural Gas | 3625 | MMBTU/hr | | Particulate matter, filterable < 2.5 Âµ (FPM2.5) | Good combustion practices and clean burning fuels (natural gas) | 17.52 | LB/H | HOURLY MAXIMUM |
| ST. CHARLES POWER STATION | ENTERGY LOUISIANA, LLC | ST. CHARLES | LA | 8/31/2016 | The St. Charles Power Station (SCPS) is a new electric power generating facility consisting of two (2) natural gas-fired combined cycle gas turbines, each with a heat recovery stem generator unit equipped with duct burners, and one (1) steam generator turbine. The SCPS will will have a predicted net nominal output of 980 MW at ISO conditions with supplemental duct firing. | | SCPS Combined Cycle Unit 1B | 15.21 | Natural Gas | 3625 | MMBTU/hr | | Particulate matter, filterable < 10 Âµ (FPM10) | Good combustion practices and clean burning fuels (natural gas) | 17.52 | LB/H | HOURLY MAXIMUM |
| ST. CHARLES POWER STATION | ENTERGY LOUISIANA, LLC | ST. CHARLES | LA | 8/31/2016 | The St. Charles Power Station (SCPS) is a new electric power generating facility consisting of two (2) natural gas-fired combined cycle gas turbines, each with a heat recovery stem generator unit equipped with duct burners, and one (1) steam generator turbine. The SCPS will will have a predicted net nominal output of 980 MW at ISO conditions with supplemental duct firing. | | SCPS Combined Cycle Unit 1B | 15.21 | Natural Gas | 3625 | MMBTU/hr | | Particulate matter, filterable < 2.5 Âµ (FPM2.5) | Good combustion practices and clean burning fuel (natural gas) | 17.52 | LB/H | HOURLY MAXIMUM |
| CPV FAIRVIEW ENERGY CENTER | CPV FAIRVIEW, LLC | CAMBRIA | PA | 9/2/2016 | This plan approval authorizes CPV Fairview, LLC to construct and temporarily operate the Fairview Energy Center.<br>Air contamination sources and air cleaning devices authorized for construction and temporary operation under this plan approval include:<br>A combined cycle electric generating unit consisting of two (2) General Electric ("GE") 7HA.02 "H"-class combustion turbines each with maximum fuel type-based heat input of 3,338-MMBtu/hr (natural gas), 3,274-MMBtu/hr (ULSD), 3,199 MMBtu/hr (ethane blend), and equipped with dry low-NOx combustors and evaporative turbine intake cooling; two (2) heat recovery steam generators (HRSGs) each equipped with a low-NOx duct burner with maximum heat input of 425-MMBtu/hr, and a common steam turbine generator. Exhaust emissions from each combined cycle electric generating unit will be controlled by oxidation catalyst and selective catalytic reduction (SCR).<br>- One (1) up to 12-cell mechanical draft wet cooling tower with high-efficiency drift eliminator.<br>- One (1) natural gas-fired auxiliary boiler with maximum heat input of 92.4 MMBtu/hr.<br>- One (1) natural gas-fired dew point heater with maximum heat input of 12.8 MMBtu/hr.<br>- One (1) natural gas-fired dew point heater with maximum heat input of 3.2 MMBtu/hr.<br>- Two (2) 1,500-ekW diesel-fired emergency genset engines.<br>One (1) 422-bhp diesel-fired fire water pump engine | | Combustion turbine and HRSG with duct burner NG only | 15.21 | Natural Gas | 3338 | MMBtu/hr | Emission limits are for each turbine operating with duct burner and do not include startup/shutdown emissions. Tons per year limits is a cumulative value for all three CCCT. CEMS for NOx, CO, and O2.□<br>Each CCCT and duct burner have 5 operational scenarios:□<br>1 CCCT with duct burner fired - fueled by NG only□<br>2 CCCT with duct burner fired - fueled by NG blend with ethane□<br>3 CCCT without duct burner fired - fueled by NG only□<br>4 CCCT without duct burner fired - fueled by NG blend with ethane□<br>5 CCCT without duct burner fired - fueled by ULSD (Limited to emergency use only) | Particulate matter, total (TPM) | Low sulfur fuel, good combustion practicies | 0.005 | LB/MMBTU |

**Table D-2. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - PM**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CPV FAIRVIEW ENERGY CENTER | CPV FAIRVIEW, LLC | CAMBRIA | PA | 9/2/2016 | This plan approval authorizes CPV Fairview, LLC to construct and temporarily operate the Fairview Energy Center.<br>Air contamination sources and air cleaning devices authorized for construction and temporary operation under this plan approval include:<br>A combined cycle electric generating unit consisting of two (2) General Electric ("GE") 7HA.02 "H"-class combustion turbines each with maximum fuel type-based heat input of 3,338-MMBtu/hr (natural gas), 3,274-MMBtu/hr (ULSD), 3,199 MMBtu/hr (ethane blend), and equipped with dry low-NOx combustors and evaporative turbine intake cooling; two (2) heat recovery steam generators (HRSGs) each equipped with a low-NOx duct burner with maximum heat input of 425-MMBtu/hr, and a common steam turbine generator. Exhaust emissions from each combined cycle electric generating unit will be controlled by oxidation catalyst and selective catalytic reduction (SCR).<br>- One (1) up to 12-cell mechanical draft wet cooling tower with high-efficiency drift eliminator.<br>- One (1) natural gas-fired auxiliary boiler with maximum heat input of 92.4 MMBtu/hr.<br>- One (1) natural gas-fired dew point heater with maximum heat input of 12.8 MMBtu/hr.<br>- One (1) natural gas-fired dew point heater with maximum heat input of 3.2 MMBtu/hr.<br>- Two (2) 1,500-ekW diesel-fired emergency genset engines.<br>- One (1) 422-bhp diesel-fired fire water pump engine. | | Combustion turbine and HRSG with duct burner NG only | 15.21 | Natural Gas | 3338 | MMBtu/hr | Emission limits are for each turbine operating with duct burner and do not include startup/shutdown emissions. Tons per year limits is a cumulative value for all three CCCT. CEMS for NOx, CO, and O2.□<br>Each CCCT and duct burner have 5 operational scenarios:□<br>1 CCCT with duct burner fired - fueled by NG only□<br>2 CCCT with duct burner fired - fueled by NG blend with ethane□<br>3 CCCT without duct burner fired - fueled by NG only□<br>4 CCCT without duct burner fired - fueled by NG blend with ethane□<br>5 CCCT without duct burner fired - fueled by ULSD (Limited to emergency use only) | Particulate matter, total < 10 Âµ (TPM10) | Low sulfur fuel, good combustion practices | 0.005 | LB/MMBTU | |
| CPV FAIRVIEW ENERGY CENTER | CPV FAIRVIEW, LLC | CAMBRIA | PA | 9/2/2016 | This plan approval authorizes CPV Fairview, LLC to construct and temporarily operate the Fairview Energy Center.<br>Air contamination sources and air cleaning devices authorized for construction and temporary operation under this plan approval include:<br>A combined cycle electric generating unit consisting of two (2) General Electric ("GE") 7HA.02 "H"-class combustion turbines each with maximum fuel type-based heat input of 3,338-MMBtu/hr (natural gas), 3,274-MMBtu/hr (ULSD), 3,199 MMBtu/hr (ethane blend), and equipped with dry low-NOx combustors and evaporative turbine intake cooling; two (2) heat recovery steam generators (HRSGs) each equipped with a low-NOx duct burner with maximum heat input of 425-MMBtu/hr, and a common steam turbine generator. Exhaust emissions from each combined cycle electric generating unit will be controlled by oxidation catalyst and selective catalytic reduction (SCR).<br>- One (1) up to 12-cell mechanical draft wet cooling tower with high-efficiency drift eliminator.<br>- One (1) natural gas-fired auxiliary boiler with maximum heat input of 92.4 MMBtu/hr.<br>- One (1) natural gas-fired dew point heater with maximum heat input of 12.8 MMBtu/hr.<br>- One (1) natural gas-fired dew point heater with maximum heat input of 3.2 MMBtu/hr.<br>- Two (2) 1,500-ekW diesel-fired emergency genset engines.<br>- One (1) 422-bhp diesel-fired fire water pump engine. | | Combustion turbine and HRSG with duct burner NG only | 15.21 | Natural Gas | 3338 | MMBtu/hr | Emission limits are for each turbine operating with duct burner and do not include startup/shutdown emissions. Tons per year limits is a cumulative value for all three CCCT. CEMS for NOx, CO, and O2.□<br>Each CCCT and duct burner have 5 operational scenarios:□<br>1 CCCT with duct burner fired - fueled by NG only□<br>2 CCCT with duct burner fired - fueled by NG blend with ethane□<br>3 CCCT without duct burner fired - fueled by NG only□<br>4 CCCT without duct burner fired - fueled by NG blend with ethane□<br>5 CCCT without duct burner fired - fueled by ULSD (Limited to emergency use only) | Particulate matter, total < 2.5 Âµ (TPM2.5) | Low sulfur fuel, good combustion practices | 0.005 | LB/MMBTU | |

**Table D-2. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - PM**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CPV FAIRVIEW ENERGY CENTER | CPV FAIRVIEW, LLC | CAMBRIA | PA | 9/2/2016 | This plan approval authorizes CPV Fairview, LLC to construct and temporarily operate the Fairview Energy Center.<br>Air contamination sources and air cleaning devices authorized for construction and temporary operation under this plan approval include:<br>A combined cycle electric generating unit consisting of two (2) General Electric ("GE") 7HA.02 "H"-class combustion turbines each with maximum fuel type-based heat input of 3,338-MMBtu/hr (natural gas), 3,274-MMBtu/hr (ULSD), 3,199 MMBtu/hr (ethane blend), and equipped with dry low-NOx combustors and evaporative turbine intake cooling; two (2) heat recovery steam generators (HRSGs) each equipped with a low-NOx duct burner with maximum heat input of 425-MMBtu/hr, and a common steam turbine generator. Exhaust emissions from each combined cycle electric generating unit will be controlled by oxidation catalyst and selective catalytic reduction (SCR).<br>- One (1) up to 12-cell mechanical draft wet cooling tower with high-efficiency drift eliminator.<br>- One (1) natural gas-fired auxiliary boiler with maximum heat input of 92.4 MMBtu/hr.<br>- One (1) natural gas-fired dew point heater with maximum heat input of 12.8 MMBtu/hr.<br>- One (1) natural gas-fired dew point heater with maximum heat input of 3.2 MMBtu/hr.<br>- Two (2) 1,500-ekW diesel-fired emergency genset engines.<br>- One (1) 422-bhp diesel-fired fire water pump engine. | | Combustion turbine and HRSG without duct burner NG only | 15.21 | Natural gas | 0 | | Emission limits are for each turbine fueled by NG and operating without duct burner being fired and do not include startup/shutdown emissions. | Particulate matter, total (TPM) | Low sulfur fuels and good combustion practices | 0.0068 | LB/MMBTU | |
| CPV FAIRVIEW ENERGY CENTER | CPV FAIRVIEW, LLC | CAMBRIA | PA | 9/2/2016 | This plan approval authorizes CPV Fairview, LLC to construct and temporarily operate the Fairview Energy Center.<br>Air contamination sources and air cleaning devices authorized for construction and temporary operation under this plan approval include:<br>A combined cycle electric generating unit consisting of two (2) General Electric ("GE") 7HA.02 "H"-class combustion turbines each with maximum fuel type-based heat input of 3,338-MMBtu/hr (natural gas), 3,274-MMBtu/hr (ULSD), 3,199 MMBtu/hr (ethane blend), and equipped with dry low-NOx combustors and evaporative turbine intake cooling; two (2) heat recovery steam generators (HRSGs) each equipped with a low-NOx duct burner with maximum heat input of 425-MMBtu/hr, and a common steam turbine generator. Exhaust emissions from each combined cycle electric generating unit will be controlled by oxidation catalyst and selective catalytic reduction (SCR).<br>- One (1) up to 12-cell mechanical draft wet cooling tower with high-efficiency drift eliminator.<br>- One (1) natural gas-fired auxiliary boiler with maximum heat input of 92.4 MMBtu/hr.<br>- One (1) natural gas-fired dew point heater with maximum heat input of 12.8 MMBtu/hr.<br>- One (1) natural gas-fired dew point heater with maximum heat input of 3.2 MMBtu/hr.<br>- Two (2) 1,500-ekW diesel-fired emergency genset engines.<br>- One (1) 422-bhp diesel-fired fire water pump engine. | | Combustion turbine and HRSG without duct burner NG only | 15.21 | Natural gas | 0 | | Emission limits are for each turbine fueled by NG and operating without duct burner being fired and do not include startup/shutdown emissions. | Particulate matter, total < 2.5 Âµ (TPM2.5) | Low sulfur fuels and good combustion practices | 0.0068 | LB/MMBTU | |

**Table D-2. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - PM**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CPV FAIRVIEW ENERGY CENTER | CPV FAIRVIEW, LLC | CAMBRIA | PA | 9/2/2016 | This plan approval authorizes CPV Fairview, LLC to construct and temporarily operate the Fairview Energy Center.<br>Air contamination sources and air cleaning devices authorized for construction and temporary operation under this plan approval include:<br>A combined cycle electric generating unit consisting of two (2) General Electric ("GE") 7HA.02 "H"-class combustion turbines each with maximum fuel type-based heat input of 3,338-MMBtu/hr (natural gas), 3,274-MMBtu/hr (ULSD), 3,199 MMBtu/hr (ethane blend), and equipped with dry low-NOx combustors and evaporative turbine intake cooling; two (2) heat recovery steam generators (HRSGs) each equipped with a low-NOx duct burner with maximum heat input of 425-MMBtu/hr, and a common steam turbine generator. Exhaust emissions from each combined cycle electric generating unit will be controlled by oxidation catalyst and selective catalytic reduction (SCR).<br>- One (1) up to 12-cell mechanical draft wet cooling tower with high-efficiency drift eliminator.<br>- One (1) natural gas-fired auxiliary boiler with maximum heat input of 92.4 MMBtu/hr.<br>- One (1) natural gas-fired dew point heater with maximum heat input of 12.8 MMBtu/hr.<br>- One (1) natural gas-fired dew point heater with maximum heat input of 3.2 MMBtu/hr.<br>- Two (2) 1,500-ekW diesel-fired emergency genset engines.<br>- One (1) 422-bhp diesel-fired fire water pump engine. | | Combustion turbine and HRSG without duct burner NG only | 15.21 | Natural gas | 0 | | Emission limits are for each turbine fueled by NG and operating without duct burner being fired and do not include startup/shutdown emissions. | Particulate matter, total < 10 Âµ (TPM10) | Low sulfur fuels and good combustion practices | 0.0068 | LB/MMBTU | |
| SOUTH FIELD ENERGY LLC | SOUTH FIELD ENERGY LLC | COLUMBIANA | OH | 9/23/2016 | 1150 MW combined-cycle gas turbine (CCGT) facility | Permit-to-install for the construction of the South Field Energy facility, a nominal 1,150 megawatt (MW) combined cycle gas turbine (CCGT) facility to be located in Wellsville, Ohio. | Combined Cycle Combustion Turbines (two, identical) (P001 and P002) | 15.21 | Natural gas | 3131 | MMBTU/H | Two identical combined cycle combustion turbine (3,131 MMBtu/hr heat input turbine at ISO conditions, natural gas firing with evaporative cooler on and 800 MMBtu/hr maximum heat input natural gas-fired duct burner) with dry low NOx combustors, selective catalytic reduction (SCR), catalytic oxidizer, and wet injection for ULSD firing. Heat input for ULSD firing at ISO conditions, with evaporative cooler on is 3,173 MMBtu/hr.□<br>□<br>Throughputs and limits are for single turbine except as noted. | Particulate matter, total < 10 Âµ (TPM10) | Good combustion controls | 25 | LB/H | NAT GAS, WITH DUCT BURNER. SEE NOTES. |
| SOUTH FIELD ENERGY LLC | SOUTH FIELD ENERGY LLC | COLUMBIANA | OH | 9/23/2016 | 1150 MW combined-cycle gas turbine (CCGT) facility | Permit-to-install for the construction of the South Field Energy facility, a nominal 1,150 megawatt (MW) combined cycle gas turbine (CCGT) facility to be located in Wellsville, Ohio. | Combined Cycle Combustion Turbines (two, identical) (P001 and P002) | 15.21 | Natural gas | 3131 | MMBTU/H | Two identical combined cycle combustion turbine (3,131 MMBtu/hr heat input turbine at ISO conditions, natural gas firing with evaporative cooler on and 800 MMBtu/hr maximum heat input natural gas-fired duct burner) with dry low NOx combustors, selective catalytic reduction (SCR), catalytic oxidizer, and wet injection for ULSD firing. Heat input for ULSD firing at ISO conditions, with evaporative cooler on is 3,173 MMBtu/hr.□<br>□<br>Throughputs and limits are for single turbine except as noted. | Particulate matter, total < 2.5 Âµ (TPM2.5) | Good combustion controls | 25 | LB/H | NAT GAS, WITH DUCT BURNER. SEE NOTES. |
| HOLLAND BOARD OF PUBLIC WORKS - EAST 5TH STREET | HOLLAND BOARD OF PUBLIC WORKS | OTTAWA | MI | 12/5/2016 | Natural gas combined heat and power plant. | Permit Number 107-13E revised Permit 107-13C as follows:□<br>□<br>1) All ppmdv limits were changed to ppmvd in the CTGHRSG section for NOx, CO and VOC. □<br>Also, □<br>2) The process notes for the natural gas emergency engine and the diesel fire pump emergency engine were revised as well. No other changes were made. As such, this RBLC entry includes the updated information as identified above.□<br>□<br>Additionally, this is an updated determination for this facility, which is still under construction and has not yet operated. The original RBLC determination for the facility is identified as MI-0412. | FGCTGHRSG (2 Combined cycle CTGs with HRSGs; EUCTGHRSG10 & EUCTGHRSG11) | 15.21 | Natural gas | 554 | MMBTU/H, each | Two combined cycle natural gas fired combustion turbine generators (CTGs) with heat recovery steam generators (HRSG) (EUCTGHRSG10 & EUCTGHRSG11 in FGCTGHRSG). The total hours for both units combined for startup and shutdown shall not exceed 635 hours per 12-month rolling time period. | Particulate matter, filterable (FPM) | Good combustion practices and the use of pipeline quality natural gas. | 0.007 | LB/MMBTU | TEST PROTOCOL WILL SPECIFY AVG TIME |

**Table D-2. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - PM**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HOLLAND BOARD OF PUBLIC WORKS - EAST 5TH STREET | HOLLAND BOARD OF PUBLIC WORKS | OTTAWA | MI | 12/5/2016 | Natural gas combined heat and power plant. | Permit Number 107-13E revised Permit 107-13C as follows:□<br>□<br>1) All ppmdv limits were changed to ppmvd in the CTGHRSG section for NOx, CO and VOC. □<br>Also, □<br>2) The process notes for the natural gas emergency engine and the diesel fire pump emergency engine were revised as well. No other changes were made. As such, this RBLC entry includes the updated information as identified above.□<br>□<br>Additionally, this is an updated determination for this facility, which is still under construction and has not yet operated. The original RBLC determination for the facility is identified as MI-0412. | FGCTGHRSG (2 Combined cycle CTGs with HRSGs; EUCTGHRSG10 & EUCTGHRSG11) | 15.21 | Natural gas | 554 | MMBTU/H, each | Two combined cycle natural gas fired combustion turbine generators (CTGs) with heat recovery steam generators (HRSG) (EUCTGHRSG10 & EUCTGHRSG11 in FGCTGHRSG). The total hours for both units combined for startup and shutdown shall not exceed 635 hours per 12-month rolling time period. | Particulate matter, total < 10 Âµ (TPM10) | Good combustion practices and the use of pipeline quality natural gas. | 0.014 | LB/MMBTU | TEST PROTOCOL WILL SPECIFY AVG TIME |
| HOLLAND BOARD OF PUBLIC WORKS - EAST 5TH STREET | HOLLAND BOARD OF PUBLIC WORKS | OTTAWA | MI | 12/5/2016 | Natural gas combined heat and power plant. | Permit Number 107-13E revised Permit 107-13C as follows:□<br>□<br>1) All ppmdv limits were changed to ppmvd in the CTGHRSG section for NOx, CO and VOC. □<br>Also, □<br>2) The process notes for the natural gas emergency engine and the diesel fire pump emergency engine were revised as well. No other changes were made. As such, this RBLC entry includes the updated information as identified above.□<br>□<br>Additionally, this is an updated determination for this facility, which is still under construction and has not yet operated. The original RBLC determination for the facility is identified as MI-0412. | FGCTGHRSG (2 Combined cycle CTGs with HRSGs; EUCTGHRSG10 & EUCTGHRSG11) | 15.21 | Natural gas | 554 | MMBTU/H, each | Two combined cycle natural gas fired combustion turbine generators (CTGs) with heat recovery steam generators (HRSG) (EUCTGHRSG10 & EUCTGHRSG11 in FGCTGHRSG). The total hours for both units combined for startup and shutdown shall not exceed 635 hours per 12-month rolling time period. | Particulate matter, total < 2.5 Âµ (TPM2.5) | Good combustion practices and the use of pipeline quality natural gas. | 0.014 | LB/MMBTU | TEST PROTOCOL WILL SPECIFY AVG TIME |
| INDECK NILES, LLC | INDECK NILES, LLC | CASS | MI | 1/4/2017 | Natural gas combined cycle power plant. | The permit includes equipment not entered into the RBLC due to a lack of emission limits or material limits; these include a cold cleaner, a number of space heaters, and two fuel tanks. | FGCTGHRSG (2 Combined Cycle CTGs with HRSGs) | 15.21 | Natural gas | 8322 | MMBTU/H | There are 2 combined cycle natural gas-fired combustion turbine generators (CTGs) with heat recovery steam generators (HRSG) identified as EUCTGHRSG1 & EUCTGHRSG2 in the flexible group FGCTGHRSG. The total hours for startup and shutdown for each train shall not exceed 500 hours per 12-month rolling time period. □<br>□<br>The throughput capacity is 3421 MMBTU/H for each turbine, and 740 MMBTU/H for each duct burner for a combined throughput of 4161 MMBTU/H or 8322 MMBTU/H for both trains. | Particulate matter, filterable (FPM) | Good combustion practices, inlet air conditioning, and the use of pipeline quality natural gas. | 9.9 | LB/H | TEST PROTOCOL WILL SPECIFY AVG TIME |

**Table D-2. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - PM**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| INDECK NILES, LLC | INDECK NILES, LLC | CASS | MI | 1/4/2017 | Natural gas combined cycle power plant. | The permit includes equipment not entered into the RBLC due to a lack of emission limits or material limits; these include a cold cleaner, a number of space heaters, and two fuel tanks. | FGCTGHRSG (2 Combined Cycle CTGs with HRSGs) | 15.21 | Natural gas | 8322 | MMBTU/H | There are 2 combined cycle natural gas-fired combustion turbine generators (CTGs) with heat recovery steam generators (HRSG) identified as EUCTGHRSG1 & EUCTGHRSG2 in the flexible group FGCTGHRSG. The total hours for startup and shutdown for each train shall not exceed 500 hours per 12-month rolling time period. □<br>□<br>The throughput capacity is 3421 MMBTU/H for each turbine, and 740 MMBTU/H for each duct burner for a combined throughput of 4161 MMBTU/H or 8322 MMBTU/H for both trains. | Particulate matter, total < 10 Âµ (TPM10) | Good combustion practices, inlet air conditioning, and the use of pipeline quality natural gas. | 19.8 | LB/H | TEST PROTOCOL WILL SPECIFY AVG TIME |
| INDECK NILES, LLC | INDECK NILES, LLC | CASS | MI | 1/4/2017 | Natural gas combined cycle power plant. | The permit includes equipment not entered into the RBLC due to a lack of emission limits or material limits; these include a cold cleaner, a number of space heaters, and two fuel tanks. | FGCTGHRSG (2 Combined Cycle CTGs with HRSGs) | 15.21 | Natural gas | 8322 | MMBTU/H | There are 2 combined cycle natural gas-fired combustion turbine generators (CTGs) with heat recovery steam generators (HRSG) identified as EUCTGHRSG1 & EUCTGHRSG2 in the flexible group FGCTGHRSG. The total hours for startup and shutdown for each train shall not exceed 500 hours per 12-month rolling time period. □<br>□<br>The throughput capacity is 3421 MMBTU/H for each turbine, and 740 MMBTU/H for each duct burner for a combined throughput of 4161 MMBTU/H or 8322 MMBTU/H for both trains. | Particulate matter, total < 2.5 Âµ (TPM2.5) | Good Combustion Practices, inlet air conditioning, and the use of pipeline quality natural gas. | 19.8 | LB/H | TEST PROTOCOL WILL SPECIFY AVG TIME |
| HILLTOP ENERGY CENTER, LLC | HILLTOP ENERGY CENTER, LLC | GREENE | PA | 4/12/2017 | The project consists of a single power block in a one-on-one (1x1), combined cycle, single shaft configuration, including a combustion turbine (CT) and heat recovery steam generator (HRSG) with a steam turbine (ST).<br>â€¢ One (1) 3,509 MMBtu/hr General Electric International, Inc. (GE) model no. GE 7HA.02 natural gas-fired combined cycle combustion turbine equipped with a heat recovery steam generator (HRSG) with supplemental 981.4 MMBtu/hr natural gas fired duct burners; controlled by selective catalytic reduction and oxidation catalyst.<br>â€¢ One (1) 42 MMBtu/hr natural gas-fired auxiliary boiler.<br>â€¢ One (1) 6.4 MMBtu/hr natural gas-fired fuel gas heater.<br>â€¢ One (1) 2.95 MMBtu/hr, 422 hp diesel-fired emergency firewater pump engine.<br>â€¢ One (1) 18.77 MMBtu/hr, 2,682 hp diesel-fired emergency generator engine.<br>â€¢ Eight-cell, mechanical draft, evaporative cooling tower controlled by drift eliminators.<br>â€¢ One (1) 3,000 gallon emergency generator diesel storage tank.<br>â€¢ One (1) 500 gallon firewater pump diesel storage tank.<br>â€¢ One (1) 35,000 gallon 19% aqueous ammonia storage tank.<br>â€¢ Lubricating oil storage tanks.<br>â€¢ Miscellaneous components in natural gas service, and SF6 containing circuit breakers; controlled by leak detection and repair (LDAR) | The project consists of a single power block in a one-on-one (1x1), combined cycle, single shaft configuration, including a combustion turbine (CT) and heat recovery steam generator (HRSG) with a steam turbine (ST).□<br>â€¢ One (1) 3,509 MMBtu/hr General Electric International, Inc. (GE) model no. GE 7HA.02 natural gas-fired combined cycle combustion turbine equipped with a heat recovery steam generator (HRSG) with supplemental 981.4 MMBtu/hr natural gas fired duct burners; controlled by selective catalytic reduction and oxidation catalyst.□<br>â€¢ One (1) 42 MMBtu/hr natural gas-fired auxiliary boiler.□<br>â€¢ One (1) 6.4 MMBtu/hr natural gas-fired fuel gas heater.□<br>â€¢ One (1) 2.95 MMBtu/hr, 422 hp diesel-fired emergency firewater pump engine. □<br>â€¢ One (1) 18.77 MMBtu/hr, 2,682 hp diesel-fired emergency generator engine. □<br>â€¢ Eight-cell, mechanical draft, evaporative cooling tower controlled by drift eliminators.□<br>â€¢ One (1) 3,000 gallon emergency generator diesel storage tank.□<br>â€¢ One (1) 500 gallon firewater pump diesel storage tank.□<br>â€¢ One (1) 35,000 gallon 19% aqueous ammonia storage tank.□<br>â€¢ Lubricating oil storage tanks.□<br>â€¢ Miscellaneous components in natural gas service, and SF6 containing circuit breakers; controlled by leak detection and repair (LDAR) □ | Combustion Turbine without Duct Burner | 15.21 | Natural Gas | 3509 | MMBtu/hr | | Particulate matter, total (TPM) | | 0.0072 | LB | MMBTU |

**Table D-2. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - PM**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HILLTOP ENERGY CENTER, LLC | HILLTOP ENERGY CENTER, LLC | GREENE | PA | 4/12/2017 | The project consists of a single power block in a one-on-one (1x1), combined cycle, single shaft configuration, including a combustion turbine (CT) and heat recovery steam generator (HRSG) with a steam turbine (ST).<br>â€¢ One (1) 3,509 MMBtu/hr General Electric International, Inc. (GE) model no. GE 7HA.02 natural gas-fired combined cycle combustion turbine equipped with a heat recovery steam generator (HRSG) with supplemental 981.4 MMBtu/hr natural gas fired duct burners; controlled by selective catalytic reduction and oxidation catalyst.<br>â€¢ One (1) 42 MMBtu/hr natural gas-fired auxiliary boiler.<br>â€¢ One (1) 6.4 MMBtu/hr natural gas-fired fuel gas heater.<br>â€¢ One (1) 2.95 MMBtu/hr, 422 hp diesel-fired emergency firewater pump engine.<br>â€¢ One (1) 18.77 MMBtu/hr, 2,682 hp diesel-fired emergency generator engine.<br>â€¢ Eight-cell, mechanical draft, evaporative cooling tower controlled by drift eliminators.<br>â€¢ One (1) 3,000 gallon emergency generator diesel storage tank.<br>â€¢ One (1) 500 gallon firewater pump diesel storage tank.<br>â€¢ One (1) 35,000 gallon 19% aqueous ammonia storage tank.<br>â€¢ Lubricating oil storage tanks.<br>â€¢ Miscellaneous components in natural gas service, and SF6 containing circuit breakers; controlled by leak detection and repair (LDAR) | The project consists of a single power block in a one-on-one (1x1), combined cycle, single shaft configuration, including a combustion turbine (CT) and heat recovery steam generator (HRSG) with a steam turbine (ST).□<br>â€¢ One (1) 3,509 MMBtu/hr General Electric International, Inc. (GE) model no. GE 7HA.02 natural gas-fired combined cycle combustion turbine equipped with a heat recovery steam generator (HRSG) with supplemental 981.4 MMBtu/hr natural gas fired duct burners; controlled by selective catalytic reduction and oxidation catalyst.□<br>â€¢ One (1) 42 MMBtu/hr natural gas-fired auxiliary boiler.□<br>â€¢ One (1) 6.4 MMBtu/hr natural gas-fired fuel gas heater.□<br>â€¢ One (1) 2.95 MMBtu/hr, 422 hp diesel-fired emergency firewater pump engine. □<br>â€¢ One (1) 18.77 MMBtu/hr, 2,682 hp diesel-fired emergency generator engine. □<br>â€¢ Eight-cell, mechanical draft, evaporative cooling tower controlled by drift eliminators.□<br>â€¢ One (1) 3,000 gallon emergency generator diesel storage tank.□<br>â€¢ One (1) 500 gallon firewater pump diesel storage tank.□<br>â€¢ One (1) 35,000 gallon 19% aqueous ammonia storage tank.□<br>â€¢ Lubricating oil storage tanks.□<br>â€¢ Miscellaneous components in natural gas service, and SF6 containing circuit breakers; controlled by leak detection and repair (LDAR) □ | Combustion Turbine without Duct Burner | 15.21 | Natural Gas | 3509 | MMBtu/hr | | Particulate matter, total < 10 Âµ (TPM10) | | 0.0072 | LB | MMBTU |
| HILLTOP ENERGY CENTER, LLC | HILLTOP ENERGY CENTER, LLC | GREENE | PA | 4/12/2017 | The project consists of a single power block in a one-on-one (1x1), combined cycle, single shaft configuration, including a combustion turbine (CT) and heat recovery steam generator (HRSG) with a steam turbine (ST).<br>â€¢ One (1) 3,509 MMBtu/hr General Electric International, Inc. (GE) model no. GE 7HA.02 natural gas-fired combined cycle combustion turbine equipped with a heat recovery steam generator (HRSG) with supplemental 981.4 MMBtu/hr natural gas fired duct burners; controlled by selective catalytic reduction and oxidation catalyst.<br>â€¢ One (1) 42 MMBtu/hr natural gas-fired auxiliary boiler.<br>â€¢ One (1) 6.4 MMBtu/hr natural gas-fired fuel gas heater.<br>â€¢ One (1) 2.95 MMBtu/hr, 422 hp diesel-fired emergency firewater pump engine.<br>â€¢ One (1) 18.77 MMBtu/hr, 2,682 hp diesel-fired emergency generator engine.<br>â€¢ Eight-cell, mechanical draft, evaporative cooling tower controlled by drift eliminators.<br>â€¢ One (1) 3,000 gallon emergency generator diesel storage tank.<br>â€¢ One (1) 500 gallon firewater pump diesel storage tank.<br>â€¢ One (1) 35,000 gallon 19% aqueous ammonia storage tank.<br>â€¢ Lubricating oil storage tanks.<br>â€¢ Miscellaneous components in natural gas service, and SF6 containing circuit breakers; controlled by leak detection and repair (LDAR) | The project consists of a single power block in a one-on-one (1x1), combined cycle, single shaft configuration, including a combustion turbine (CT) and heat recovery steam generator (HRSG) with a steam turbine (ST).□<br>â€¢ One (1) 3,509 MMBtu/hr General Electric International, Inc. (GE) model no. GE 7HA.02 natural gas-fired combined cycle combustion turbine equipped with a heat recovery steam generator (HRSG) with supplemental 981.4 MMBtu/hr natural gas fired duct burners; controlled by selective catalytic reduction and oxidation catalyst.□<br>â€¢ One (1) 42 MMBtu/hr natural gas-fired auxiliary boiler.□<br>â€¢ One (1) 6.4 MMBtu/hr natural gas-fired fuel gas heater.□<br>â€¢ One (1) 2.95 MMBtu/hr, 422 hp diesel-fired emergency firewater pump engine. □<br>â€¢ One (1) 18.77 MMBtu/hr, 2,682 hp diesel-fired emergency generator engine. □<br>â€¢ Eight-cell, mechanical draft, evaporative cooling tower controlled by drift eliminators.□<br>â€¢ One (1) 3,000 gallon emergency generator diesel storage tank.□<br>â€¢ One (1) 500 gallon firewater pump diesel storage tank.□<br>â€¢ One (1) 35,000 gallon 19% aqueous ammonia storage tank.□<br>â€¢ Lubricating oil storage tanks.□<br>â€¢ Miscellaneous components in natural gas service, and SF6 containing circuit breakers; controlled by leak detection and repair (LDAR) □ | Combustion Turbine without Duct Burner | 15.21 | Natural Gas | 3509 | MMBtu/hr | | Particulate matter, total < 2.5 Âµ (TPM2.5) | | 0.0072 | LB | MMBTU |
| GAINES COUNTY POWER PLANT | SOUTHWESTERN PUBLIC SERVICE COMPANY | | TX | 4/28/2017 | constructed in phases, with natural gas-fired simple cycle combustion turbines (SCCTs) with dry low nitrogen oxide (NOx) burners (DLN) to be converted into 2-on-1 combined cycle combustion turbines (CCCTs) with selective catalytic reduction (SCRs), heat recovery steam generators (HRSGs, one per combustion turbine) and one steam turbine per two CCCTs. Federal control review only applies to the turbines and HRSGs. | | Combined Cycle Turbine with Heat Recovery Steam Generator, fired Duct Burners, and Steam Turbine Generator | 15.21 | NATURAL GAS | 426 | MW | Four Siemens SGT6-5000F5 natural gas fired combustion turbines with HRSGs and Steam Turbine Generators | Particulate matter, total (TPM) | Pipeline quality natural gas; good combustion practices | 0 | | |
| GAINES COUNTY POWER PLANT | SOUTHWESTERN PUBLIC SERVICE COMPANY | | TX | 4/28/2017 | constructed in phases, with natural gas-fired simple cycle combustion turbines (SCCTs) with dry low nitrogen oxide (NOx) burners (DLN) to be converted into 2-on-1 combined cycle combustion turbines (CCCTs) with selective catalytic reduction (SCRs), heat recovery steam generators (HRSGs, one per combustion turbine) and one steam turbine per two CCCTs. Federal control review only applies to the turbines and HRSGs. | | Combined Cycle Turbine with Heat Recovery Steam Generator, fired Duct Burners, and Steam Turbine Generator | 15.21 | NATURAL GAS | 426 | MW | Four Siemens SGT6-5000F5 natural gas fired combustion turbines with HRSGs and Steam Turbine Generators | Particulate matter, total < 10 Âµ (TPM10) | Pipeline quality natural gas; good combustion practices | 0 | | |

**Table D-2. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - PM**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GAINES COUNTY POWER PLANT | SOUTHWESTERN PUBLIC SERVICE COMPANY | | TX | 4/28/2017 | constructed in phases, with natural gas-fired simple cycle combustion turbines (SCCTs) with dry low nitrogen oxide (NOx) burners (DLN) to be converted into 2-on-1 combined cycle combustion turbines (CCCTs) with selective catalytic reduction (SCRs), heat recovery steam generators (HRSGs, one per combustion turbine) and one steam turbine per two CCCTs. Federal control review only applies to the turbines and HRSGs. | | Combined Cycle Turbine with Heat Recovery Steam Generator, fired Duct Burners, and Steam Turbine Generator | 15.21 | NATURAL GAS | 426 | MW | Four Siemens SGT6-5000F5 natural gas fired combustion turbines with HRSGs and Steam Turbine Generators | Particulate matter, total < 2.5 Âµ (TPM2.5) | Pipeline quality natural gas; good combustion practices | 0 | | |
| KILLINGLY ENERGY CENTER | NTE CONNECTICUT, LLC | WINDHAM | CT | 6/30/2017 | 550 MW Combined Cycle Plant | | Natural Gas w/o Duct Firing | 15.21 | Natural Gas | 2969 | MMBtu/hr | Throughput is for turbine only | Particulate matter, total < 10 Âµ (TPM10) | Good Combustion | 0.044 | LB/MMBTU | |
| KILLINGLY ENERGY CENTER | NTE CONNECTICUT, LLC | WINDHAM | CT | 6/30/2017 | 550 MW Combined Cycle Plant | | Natural Gas w/o Duct Firing | 15.21 | Natural Gas | 2969 | MMBtu/hr | Throughput is for turbine only | Particulate matter, total < 2.5 Âµ (TPM2.5) | Good Combustion | 0.0044 | LB/MMBTU | |
| KILLINGLY ENERGY CENTER | NTE CONNECTICUT, LLC | WINDHAM | CT | 6/30/2017 | 550 MW Combined Cycle Plant | | Natural Gas w/Duct Firing | 15.21 | Natural Gas | 2639 | MMBtu/hr | Duct burner MRC is 946 MMbtu/hr | Particulate matter, total < 10 Âµ (TPM10) | Good Combustion | 0.005 | LB/MMBTU | |
| KILLINGLY ENERGY CENTER | NTE CONNECTICUT, LLC | WINDHAM | CT | 6/30/2017 | 550 MW Combined Cycle Plant | | Natural Gas w/Duct Firing | 15.21 | Natural Gas | 2639 | MMBtu/hr | Duct burner MRC is 946 MMbtu/hr | Particulate matter, total < 2.5 Âµ (TPM2.5) | Good Combustion | 0.005 | LB/MMBTU | |
| TRUMBULL ENERGY CENTER | TRUMBULL ENERGY CENTER | TRUMBULL | OH | 9/7/2017 | 940 MW combined cycle gas turbine (CCGT) facility | Permit-to-install for the construction of the Trumbull Energy Center, a nominal 940 megawatt (MW) combined cycle gas turbine (CCGT) facility to be located in the Village of Lordstown, Ohio. | Combined Cycle Combustion Turbines (two, identical) (P001 and P002) | 15.21 | Natural gas | 3025 | MMBTU/H | Two identical combined cycle combustion turbine (3,025 mmBtu/hr heat input turbine at ISO conditions and 237 mmBtu/hr heat input duct burner) with dry low NOx combustors, selective catalytic reduction (SCR), and catalytic oxidizer. Throughputs and limits are for single turbine except as noted. | Particulate matter, total < 10 Âµ (TPM10) | Good combustion controls and low sulfur fuel | 15.2 | LB/H | WITH DUCT BURNER. SEE NOTES. |
| TRUMBULL ENERGY CENTER | TRUMBULL ENERGY CENTER | TRUMBULL | OH | 9/7/2017 | 940 MW combined cycle gas turbine (CCGT) facility | Permit-to-install for the construction of the Trumbull Energy Center, a nominal 940 megawatt (MW) combined cycle gas turbine (CCGT) facility to be located in the Village of Lordstown, Ohio. | Combined Cycle Combustion Turbines (two, identical) (P001 and P002) | 15.21 | Natural gas | 3025 | MMBTU/H | Two identical combined cycle combustion turbine (3,025 mmBtu/hr heat input turbine at ISO conditions and 237 mmBtu/hr heat input duct burner) with dry low NOx combustors, selective catalytic reduction (SCR), and catalytic oxidizer. Throughputs and limits are for single turbine except as noted. | Particulate matter, total < 2.5 Âµ (TPM2.5) | Good combustion controls and low sulfur fuel | 15.2 | LB/H | WITH DUCT BURNER. SEE NOTES. |
| OREGON ENERGY CENTER | OREGON ENERGY CENTER | LUCAS | OH | 9/27/2017 | Combined cycle gas turbine (CCGT) facility | Installation of natural gas-fired combined cycle combustion turbine power plant. | Combined Cycle Combustion Turbines (two, identical) (P001 and P002) | 15.21 | Natural gas | 3055 | MMBTU/H | Combined cycle combustion turbine (3,055 mmBtu/hr heat input turbine at ISO conditions and 221.3 mmBtu/hr heat input duct burner) with dry low NOX combustors, selective catalytic reduction (SCR), and catalytic oxidation. All heat values are on a HHV basis.<br><br>Throughputs and limits are for single turbine except as noted. | Particulate matter, total < 10 Âµ (TPM10) | good combustion practices and pipeline quality natural gas | 15.4 | LB/H | WITH DUCT BURNER. SEE NOTES. |

**Table D-2. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - PM**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OREGON ENERGY CENTER | OREGON ENERGY CENTER | LUCAS | OH | 9/27/2017 | Combined cycle gas turbine (CCGT) facility | Installation of natural gas-fired combined cycle combustion turbine power plant. | Combined Cycle Combustion Turbines (two, identical) (P001 and P002) | 15.21 | Natural gas | 3055 | MMBTU/H | Combined cycle combustion turbine (3,055 mmBtu/hr heat input turbine at ISO conditions and 221.3 mmBtu/hr heat input duct burner) with dry low NOX combustors, selective catalytic reduction (SCR), and catalytic oxidation. All heat values are on a HHV basis.□<br>□<br>Throughputs and limits are for single turbine except as noted. | Particulate matter, total < 2.5 Âµ (TPM2.5) | good combustion practices and pipeline quality natural gas | 15.4 | LB/H | WITH DUCT BURNER. SEE NOTES. |
| GUERNSEY POWER STATION LLC | GUERNSEY POWER STATION LLC | GUERNSEY | OH | 10/23/2017 | 1,650 MW combined cycle combustion turbine electrical generating facility | Installation PTI for a new 1,650 MW combined cycle natural-gas fired turbine plant and associated auxiliary boiler, firewater pumps, emergency generators and fuel gas heaters | Combined Cycle Combustion Turbines (3, identical) (P001 to P003) | 15.21 | Natural gas | 3516 | MMBTU/H | Three identical Combustion Turbines; GE 7HA.02 natural gas-fired lean pre-mix combined cycle combustion turbine generator equipped with dry low-NOx (DLN) burners nominally rated at 3,516 MMBtu/hr HHV at 100% load and -18Â° F exhausting through a heat recovery steam generator (HRSG) with supplemental natural gas-fired duct burners nominally rated at 997 MMBtu/hr HHV controlled with catalytic oxidation and selective catalytic reduction (SCR) and cooled with an air-cooled condenser (ACC) used to generate electricity. Throughputs and limits are for a single turbine except as noted. | Particulate matter, total (TPM) | pipeline quality natural gas | 0.0073 | LB/MMBTU | SEE NOTES. |
| GUERNSEY POWER STATION LLC | GUERNSEY POWER STATION LLC | GUERNSEY | OH | 10/23/2017 | 1,650 MW combined cycle combustion turbine electrical generating facility | Installation PTI for a new 1,650 MW combined cycle natural-gas fired turbine plant and associated auxiliary boiler, firewater pumps, emergency generators and fuel gas heaters | Combined Cycle Combustion Turbines (3, identical) (P001 to P003) | 15.21 | Natural gas | 3516 | MMBTU/H | Three identical Combustion Turbines; GE 7HA.02 natural gas-fired lean pre-mix combined cycle combustion turbine generator equipped with dry low-NOx (DLN) burners nominally rated at 3,516 MMBtu/hr HHV at 100% load and -18Â° F exhausting through a heat recovery steam generator (HRSG) with supplemental natural gas-fired duct burners nominally rated at 997 MMBtu/hr HHV controlled with catalytic oxidation and selective catalytic reduction (SCR) and cooled with an air-cooled condenser (ACC) used to generate electricity. Throughputs and limits are for a single turbine except as noted. | Particulate matter, total < 10 Âµ (TPM10) | pipeline quality natural gas | 0.0073 | LB/MMBTU | SEE NOTES. |
| GUERNSEY POWER STATION LLC | GUERNSEY POWER STATION LLC | GUERNSEY | OH | 10/23/2017 | 1,650 MW combined cycle combustion turbine electrical generating facility | Installation PTI for a new 1,650 MW combined cycle natural-gas fired turbine plant and associated auxiliary boiler, firewater pumps, emergency generators and fuel gas heaters | Combined Cycle Combustion Turbines (3, identical) (P001 to P003) | 15.21 | Natural gas | 3516 | MMBTU/H | Three identical Combustion Turbines; GE 7HA.02 natural gas-fired lean pre-mix combined cycle combustion turbine generator equipped with dry low-NOx (DLN) burners nominally rated at 3,516 MMBtu/hr HHV at 100% load and -18Â° F exhausting through a heat recovery steam generator (HRSG) with supplemental natural gas-fired duct burners nominally rated at 997 MMBtu/hr HHV controlled with catalytic oxidation and selective catalytic reduction (SCR) and cooled with an air-cooled condenser (ACC) used to generate electricity. Throughputs and limits are for a single turbine except as noted. | Particulate matter, total < 2.5 Âµ (TPM2.5) | pipeline quality natural gas | 0.0073 | LB/MMBTU | SEE NOTES. |
| LONG RIDGE ENERGY GENERATION LLC - HANNIBAL POWER | LONG RIDGE ENERGY GENERATION LLC - HANNIBAL POWER | MONROE | OH | 11/7/2017 | Combined cycle combustion turbine power generation facility | Initial installation permit for a 485 MW combined cycle electric generating facility in Monroe County. The emissions units include a combustion turbine with a heat recovery stream generator (HRSG) and duct burners, auxiliary boiler, emergency diesel generator engine, emergency fire pump engine, and an eight-cell mechanical draft low-mist wet cooling tower.□<br>□<br>The Project will use either a GE Model 7HA.02 (P004), Mitsubishi Model 501JAC (P005) or Siemens Model SCC6-8000H (P006) combustion turbine (CT) with duct firing in the HRSG to increase steam generation in the steam turbine. Only one turbine will be built but each of these turbines are included in this RBLC entry. | General Electric Combustion Turbine (P004) | 15.21 | Natural gas | 3544 | MMBTU/H | General Electric model 7HA.02 natural gas or natural gas+ethane fired combined cycle combustion turbine generator equipped with dry low-NOx (DLN) burners nominally rated at 3,544 MMBtu/hr at 100% load and -5Â° F exhausting through a heat recovery steam generator (HRSG) controlled with catalytic oxidation and selective catalytic reduction (SCR) used to generate additional electricity.□<br>□<br>The Project will use either a GE Model 7HA.02 (P004), Mitsubishi Model 501JAC (P005) or Siemens Model SCC6-8000H (P006) combustion turbine (CT) with duct firing in the HRSG to increase steam generation in the steam turbine. Only one turbine will be built but each of these turbines are included in this RBLC entry. | Particulate matter, filterable (FPM) | natural gas or a natural gas and ethane mixture only | 0.0036 | LB/MMBTU | |

**Table D-2. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - PM**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LONG RIDGE ENERGY GENERATION LLC - HANNIBAL POWER | LONG RIDGE ENERGY GENERATION LLC - HANNIBAL POWER | MONROE | OH | 11/7/2017 | Combined cycle combustion turbine power generation facility | Initial installation permit for a 485 MW combined cycle electric generating facility in Monroe County. The emissions units include a combustion turbine with a heat recovery stream generator (HRSG) and duct burners, auxiliary boiler, emergency diesel generator engine, emergency fire pump engine, and an eight-cell mechanical draft low-mist wet cooling tower.□<br>□<br>The Project will use either a GE Model 7HA.02 (P004), Mitsubishi Model 501JAC (P005) or Siemens Model SCC6-8000H (P006) combustion turbine (CT) with duct firing in the HRSG to increase steam generation in the steam turbine. Only one turbine will be built but each of these turbines are included in this RBLC entry. | General Electric Combustion Turbine (P004) | 15.21 | Natural gas | 3544 | MMBTU/H | General Electric model 7HA.02 natural gas or natural gas+ethane fired combined cycle combustion turbine generator equipped with dry low-NOx (DLN) burners nominally rated at 3,544 MMBtu/hr at 100% load and -5Â° F exhausting through a heat recovery steam generator (HRSG) controlled with catalytic oxidation and selective catalytic reduction (SCR) used to generate additional electricity.□<br>□<br>The Project will use either a GE Model 7HA.02 (P004), Mitsubishi Model 501JAC (P005) or Siemens Model SCC6-8000H (P006) combustion turbine (CT) with duct firing in the HRSG to increase steam generation in the steam turbine. Only one turbine will be built but each of these turbines are included in this RBLC entry. | Particulate matter, total < 10 Âµ (TPM10) | natural gas or a natural gas and ethane mixture only | 0.0036 | LB/MMBTU | |
| LONG RIDGE ENERGY GENERATION LLC - HANNIBAL POWER | LONG RIDGE ENERGY GENERATION LLC - HANNIBAL POWER | MONROE | OH | 11/7/2017 | Combined cycle combustion turbine power generation facility | Initial installation permit for a 485 MW combined cycle electric generating facility in Monroe County. The emissions units include a combustion turbine with a heat recovery stream generator (HRSG) and duct burners, auxiliary boiler, emergency diesel generator engine, emergency fire pump engine, and an eight-cell mechanical draft low-mist wet cooling tower.□<br>□<br>The Project will use either a GE Model 7HA.02 (P004), Mitsubishi Model 501JAC (P005) or Siemens Model SCC6-8000H (P006) combustion turbine (CT) with duct firing in the HRSG to increase steam generation in the steam turbine. Only one turbine will be built but each of these turbines are included in this RBLC entry. | General Electric Combustion Turbine (P004) | 15.21 | Natural gas | 3544 | MMBTU/H | General Electric model 7HA.02 natural gas or natural gas+ethane fired combined cycle combustion turbine generator equipped with dry low-NOx (DLN) burners nominally rated at 3,544 MMBtu/hr at 100% load and -5Â° F exhausting through a heat recovery steam generator (HRSG) controlled with catalytic oxidation and selective catalytic reduction (SCR) used to generate additional electricity.□<br>□<br>The Project will use either a GE Model 7HA.02 (P004), Mitsubishi Model 501JAC (P005) or Siemens Model SCC6-8000H (P006) combustion turbine (CT) with duct firing in the HRSG to increase steam generation in the steam turbine. Only one turbine will be built but each of these turbines are included in this RBLC entry. | Particulate matter, total < 2.5 Âµ (TPM2.5) | natural gas or a natural gas and ethane mixture only | 0.0036 | LB/MMBTU | |
| LONG RIDGE ENERGY GENERATION LLC - HANNIBAL POWER | LONG RIDGE ENERGY GENERATION LLC - HANNIBAL POWER | MONROE | OH | 11/7/2017 | Combined cycle combustion turbine power generation facility | Initial installation permit for a 485 MW combined cycle electric generating facility in Monroe County. The emissions units include a combustion turbine with a heat recovery stream generator (HRSG) and duct burners, auxiliary boiler, emergency diesel generator engine, emergency fire pump engine, and an eight-cell mechanical draft low-mist wet cooling tower.□<br>□<br>The Project will use either a GE Model 7HA.02 (P004), Mitsubishi Model 501JAC (P005) or Siemens Model SCC6-8000H (P006) combustion turbine (CT) with duct firing in the HRSG to increase steam generation in the steam turbine. Only one turbine will be built but each of these turbines are included in this RBLC entry. | Mitsubishi Combustion Turbine (P005) | 15.21 | Natural gas | 3320 | MMBTU/H | Mitsubishi Model 501JAC natural gas or natural gas+ethane fired combined cycle combustion turbine generator equipped with dry low-NOx (DLN) burners nominally rated at 3,320 MMBtu/hr at 100% load and -5Â° F exhausting through a heat recovery steam generator (HRSG) with supplemental natural gas-fired duct burners nominally rated at 108 MMBtu/hr controlled with catalytic oxidation and selective catalytic reduction (SCR) used to generate electricity.□<br>□<br>The Project will use either a GE Model 7HA.02 (P004), Mitsubishi Model 501JAC (P005) or Siemens Model SCC6-8000H (P006) combustion turbine (CT) with duct firing in the HRSG to increase steam generation in the steam turbine. Only one turbine will be built but each of these turbines are included in this RBLC entry. | Particulate matter, filterable (FPM) | natural gas or a natural gas and ethane mixture only | 0.004 | LB/MMBTU | WITH DUCT BURNER. SEE NOTES. |
| LONG RIDGE ENERGY GENERATION LLC - HANNIBAL POWER | LONG RIDGE ENERGY GENERATION LLC - HANNIBAL POWER | MONROE | OH | 11/7/2017 | Combined cycle combustion turbine power generation facility | Initial installation permit for a 485 MW combined cycle electric generating facility in Monroe County. The emissions units include a combustion turbine with a heat recovery stream generator (HRSG) and duct burners, auxiliary boiler, emergency diesel generator engine, emergency fire pump engine, and an eight-cell mechanical draft low-mist wet cooling tower.□<br>□<br>The Project will use either a GE Model 7HA.02 (P004), Mitsubishi Model 501JAC (P005) or Siemens Model SCC6-8000H (P006) combustion turbine (CT) with duct firing in the HRSG to increase steam generation in the steam turbine. Only one turbine will be built but each of these turbines are included in this RBLC entry. | Mitsubishi Combustion Turbine (P005) | 15.21 | Natural gas | 3320 | MMBTU/H | Mitsubishi Model 501JAC natural gas or natural gas+ethane fired combined cycle combustion turbine generator equipped with dry low-NOx (DLN) burners nominally rated at 3,320 MMBtu/hr at 100% load and -5Â° F exhausting through a heat recovery steam generator (HRSG) with supplemental natural gas-fired duct burners nominally rated at 108 MMBtu/hr controlled with catalytic oxidation and selective catalytic reduction (SCR) used to generate electricity.□<br>□<br>The Project will use either a GE Model 7HA.02 (P004), Mitsubishi Model 501JAC (P005) or Siemens Model SCC6-8000H (P006) combustion turbine (CT) with duct firing in the HRSG to increase steam generation in the steam turbine. Only one turbine will be built but each of these turbines are included in this RBLC entry. | Particulate matter, total < 10 Âµ (TPM10) | natural gas or a natural gas and ethane mixture only | 0.004 | LB/MMBTU | WITH DUCT BURNER. SEE NOTES. |

**Table D-2. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - PM**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LONG RIDGE ENERGY GENERATION LLC - HANNIBAL POWER | LONG RIDGE ENERGY GENERATION LLC - HANNIBAL POWER | MONROE | OH | 11/7/2017 | Combined cycle combustion turbine power generation facility | Initial installation permit for a 485 MW combined cycle electric generating facility in Monroe County. The emissions units include a combustion turbine with a heat recovery stream generator (HRSG) and duct burners, auxiliary boiler, emergency diesel generator engine, emergency fire pump engine, and an eight-cell mechanical draft low-mist wet cooling tower.□<br>□<br>The Project will use either a GE Model 7HA.02 (P004), Mitsubishi Model 501JAC (P005) or Siemens Model SCC6-8000H (P006) combustion turbine (CT) with duct firing in the HRSG to increase steam generation in the steam turbine. Only one turbine will be built but each of these turbines are included in this RBLC entry. | Mitsubishi Combustion Turbine (P005) | 15.21 | Natural gas | 3320 | MMBTU/H | Mitsubishi Model 501JAC natural gas or natural gas+ethane fired combined cycle combustion turbine generator equipped with dry low-NOx (DLN) burners nominally rated at 3,320 MMBtu/hr at 100% load and -5Â° F exhausting through a heat recovery steam generator (HRSG) with supplemental natural gas-fired duct burners nominally rated at 108 MMBtu/hr controlled with catalytic oxidation and selective catalytic reduction (SCR) used to generate electricity.□<br>□<br>The Project will use either a GE Model 7HA.02 (P004), Mitsubishi Model 501JAC (P005) or Siemens Model SCC6-8000H (P006) combustion turbine (CT) with duct firing in the HRSG to increase steam generation in the steam turbine. Only one turbine will be built but each of these turbines are included in this RBLC entry. | Particulate matter, total < 2.5 Âµ (TPM2.5) | natural gas or a natural gas and ethane mixture only | 0.004 | LB/MMBTU | WITH DUCT BURNER. SEE NOTES. |
| LONG RIDGE ENERGY GENERATION LLC - HANNIBAL POWER | LONG RIDGE ENERGY GENERATION LLC - HANNIBAL POWER | MONROE | OH | 11/7/2017 | Combined cycle combustion turbine power generation facility | Initial installation permit for a 485 MW combined cycle electric generating facility in Monroe County. The emissions units include a combustion turbine with a heat recovery stream generator (HRSG) and duct burners, auxiliary boiler, emergency diesel generator engine, emergency fire pump engine, and an eight-cell mechanical draft low-mist wet cooling tower.□<br>□<br>The Project will use either a GE Model 7HA.02 (P004), Mitsubishi Model 501JAC (P005) or Siemens Model SCC6-8000H (P006) combustion turbine (CT) with duct firing in the HRSG to increase steam generation in the steam turbine. Only one turbine will be built but each of these turbines are included in this RBLC entry. | Siemens Combustion Turbine (P006) | 15.21 | Natural gas | 3602 | MMBTU/H | Siemens Model SCC6-8000H natural gas or natural gas+ethane fired combined cycle combustion turbine generator equipped with dry low-NOx (DLN) burners nominally rated at 3,602 MMBtu/hr at 100% load and -5Â° F exhausting through a heat recovery steam generator (HRSG) with supplemental natural gas-fired duct burners nominally rated at 667 MMBtu/hr controlled with catalytic oxidation and selective catalytic reduction (SCR) used to generate electricity.□<br>□<br>The Project will use either a GE Model 7HA.02 (P004), Mitsubishi Model 501JAC (P005) or Siemens Model SCC6-8000H (P006) combustion turbine (CT) with duct firing in the HRSG to increase steam generation in the steam turbine. Only one turbine will be built but each of these turbines are included in this RBLC entry. | Particulate matter, filterable (FPM) | natural gas or a natural gas and ethane mixture only | 0.0057 | LB/MMBTU | WITH DUCT BURNER. SEE NOTES. |
| LONG RIDGE ENERGY GENERATION LLC - HANNIBAL POWER | LONG RIDGE ENERGY GENERATION LLC - HANNIBAL POWER | MONROE | OH | 11/7/2017 | Combined cycle combustion turbine power generation facility | Initial installation permit for a 485 MW combined cycle electric generating facility in Monroe County. The emissions units include a combustion turbine with a heat recovery stream generator (HRSG) and duct burners, auxiliary boiler, emergency diesel generator engine, emergency fire pump engine, and an eight-cell mechanical draft low-mist wet cooling tower.□<br>□<br>The Project will use either a GE Model 7HA.02 (P004), Mitsubishi Model 501JAC (P005) or Siemens Model SCC6-8000H (P006) combustion turbine (CT) with duct firing in the HRSG to increase steam generation in the steam turbine. Only one turbine will be built but each of these turbines are included in this RBLC entry. | Siemens Combustion Turbine (P006) | 15.21 | Natural gas | 3602 | MMBTU/H | Siemens Model SCC6-8000H natural gas or natural gas+ethane fired combined cycle combustion turbine generator equipped with dry low-NOx (DLN) burners nominally rated at 3,602 MMBtu/hr at 100% load and -5Â° F exhausting through a heat recovery steam generator (HRSG) with supplemental natural gas-fired duct burners nominally rated at 667 MMBtu/hr controlled with catalytic oxidation and selective catalytic reduction (SCR) used to generate electricity.□<br>□<br>The Project will use either a GE Model 7HA.02 (P004), Mitsubishi Model 501JAC (P005) or Siemens Model SCC6-8000H (P006) combustion turbine (CT) with duct firing in the HRSG to increase steam generation in the steam turbine. Only one turbine will be built but each of these turbines are included in this RBLC entry. | Particulate matter, total < 10 Âµ (TPM10) | natural gas or a natural gas and ethane mixture only | 0.0057 | LB/MMBTU | WITH DUCT BURNER. SEE NOTES. |
| LONG RIDGE ENERGY GENERATION LLC - HANNIBAL POWER | LONG RIDGE ENERGY GENERATION LLC - HANNIBAL POWER | MONROE | OH | 11/7/2017 | Combined cycle combustion turbine power generation facility | Initial installation permit for a 485 MW combined cycle electric generating facility in Monroe County. The emissions units include a combustion turbine with a heat recovery stream generator (HRSG) and duct burners, auxiliary boiler, emergency diesel generator engine, emergency fire pump engine, and an eight-cell mechanical draft low-mist wet cooling tower.□<br>□<br>The Project will use either a GE Model 7HA.02 (P004), Mitsubishi Model 501JAC (P005) or Siemens Model SCC6-8000H (P006) combustion turbine (CT) with duct firing in the HRSG to increase steam generation in the steam turbine. Only one turbine will be built but each of these turbines are included in this RBLC entry. | Siemens Combustion Turbine (P006) | 15.21 | Natural gas | 3602 | MMBTU/H | Siemens Model SCC6-8000H natural gas or natural gas+ethane fired combined cycle combustion turbine generator equipped with dry low-NOx (DLN) burners nominally rated at 3,602 MMBtu/hr at 100% load and -5Â° F exhausting through a heat recovery steam generator (HRSG) with supplemental natural gas-fired duct burners nominally rated at 667 MMBtu/hr controlled with catalytic oxidation and selective catalytic reduction (SCR) used to generate electricity.□<br>□<br>The Project will use either a GE Model 7HA.02 (P004), Mitsubishi Model 501JAC (P005) or Siemens Model SCC6-8000H (P006) combustion turbine (CT) with duct firing in the HRSG to increase steam generation in the steam turbine. Only one turbine will be built but each of these turbines are included in this RBLC entry. | Particulate matter, total < 2.5 Âµ (TPM2.5) | natural gas or a natural gas and ethane mixture only | 0.0057 | LB/MMBTU | WITH DUCT BURNER. SEE NOTES. |

**Table D-2. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - PM**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FILER CITY STATION | FILER CITY STATION LIMITED PARTNERSHIP | MANISTEE | MI | 11/17/2017 | New natural gas combined heat and power plant proposed at existing cogenerating power plant permitted to burn wood, coal and tire derived fuel. | | EUCCT (Combined cycle CTG with unfired HRSG) | 15.21 | Natural gas | 1934.7 | MMBTU/H | A 1,934.7 MMBTU/H natural gas fired heavy frame industrial combustion turbine. The turbine operates in combined-cycle with an unfired heat recovery steam generator (HRSG). | Particulate matter, filterable (FPM) | Good combustion practices and the use of pipeline quality natural gas, combustion inlet air filter. | 0.0025 | LB/MMBTU | |
| FILER CITY STATION | FILER CITY STATION LIMITED PARTNERSHIP | MANISTEE | MI | 11/17/2017 | New natural gas combined heat and power plant proposed at existing cogenerating power plant permitted to burn wood, coal and tire derived fuel. | | EUCCT (Combined cycle CTG with unfired HRSG) | 15.21 | Natural gas | 1934.7 | MMBTU/H | A 1,934.7 MMBTU/H natural gas fired heavy frame industrial combustion turbine. The turbine operates in combined-cycle with an unfired heat recovery steam generator (HRSG). | Particulate matter, total < 10 Âµ (TPM10) | Good combustion practices and the use of pipeline quality natural gas, combustion inlet air filter. | 0.0066 | LB/MMBTU | |

**Table D-2. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - PM**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FILER CITY STATION | FILER CITY STATION LIMITED PARTNERSHIP | MANISTEE | MI | 11/17/2017 | New natural gas combined heat and power plant proposed at existing cogenerating power plant permitted to burn wood, coal and tire derived fuel. | | EUCCT (Combined cycle CTG with unfired HRSG) | 15.21 | Natural gas | 1934.7 | MMBTU/H | A 1,934.7 MMBTU/H natural gas fired heavy frame industrial combustion turbine. The turbine operates in combined-cycle with an unfired heat recovery steam generator (HRSG). | Particulate matter, total < 2.5 Âµ (TPM2.5) | Good combustion practices and the use of pipeline quality natural gas, combustion inlet air filter. | 0.0066 | LB/MMBTU | |
| DANIA BEACH ENERGY CENTER | FLORIDA POWER AND LIGHT COMPANY | BROWARD | FL | 12/4/2017 | 1200 megawatt 2-on-1 combined cycle facility, natural gas-fired, with limited ULSD use. GE 7HA turbines | Technical evaluation available at https://arm-permit2k.dep.state.fl.us/nontv/0110037.017.AC.D.ZIP | 2-on-1 combined cycle unit (GE 7HA) | 15.21 | Natural gas | 4000 | MMBtu/hr | Two nominal 430 MW combustion turbines, coupled to a steam turbine generator | Particulate matter, filterable (FPM) | Clean fuels | 0 | | |
| DANIA BEACH ENERGY CENTER | FLORIDA POWER AND LIGHT COMPANY | BROWARD | FL | 12/4/2017 | 1200 megawatt 2-on-1 combined cycle facility, natural gas-fired, with limited ULSD use. GE 7HA turbines | Technical evaluation available at https://arm-permit2k.dep.state.fl.us/nontv/0110037.017.AC.D.ZIP | 2-on-1 combined cycle unit (GE 7HA) | 15.21 | Natural gas | 4000 | MMBtu/hr | Two nominal 430 MW combustion turbines, coupled to a steam turbine generator | Particulate matter, total < 10 Âµ (TPM10) | Clean fuels | 0 | | |
| DANIA BEACH ENERGY CENTER | FLORIDA POWER AND LIGHT COMPANY | BROWARD | FL | 12/4/2017 | 1200 megawatt 2-on-1 combined cycle facility, natural gas-fired, with limited ULSD use. GE 7HA turbines | Technical evaluation available at https://arm-permit2k.dep.state.fl.us/nontv/0110037.017.AC.D.ZIP | 2-on-1 combined cycle unit (GE 7HA) | 15.21 | Natural gas | 4000 | MMBtu/hr | Two nominal 430 MW combustion turbines, coupled to a steam turbine generator | Particulate matter, total < 2.5 Âµ (TPM2.5) | Clean fuels | 0 | | |
| TVA - JOHNSONVILLE COGENERATION | TENNESSEE VALLEY AUTHORITY | HUMPHREYS | TN | 2/1/2018 | Combustion turbines and combined cycle plant | Permit 972969 adds startup and shutdown limits to the requirements established in PSD permit 970816F. | Dual-fuel CT and HRSG with duct burner | 15.21 | Natural Gas | 1020 | MMBtu/hr | Rated input capacity is 1020 MMBtu/hr (CT) and 319 MMBtu/hr (duct burner) when burning natural gas and 1084 MMBtu/hr when burning #2 oil. | Particulate matter, filterable (FPM) | Good combustion design & practice | 0.005 | LB/MMBTU | WHEN BURNING NATURAL GAS |
| HARRISON COUNTY POWER PLANT | ESC HARRISON COUNTY POWER, LLC | HARRISON | WV | 3/27/2018 | Nominal 640 mWe natural gas-fired combined-cycle power plant.<br><br>Small sources: Emergency Generator, Fire Water Pump, Fuel Gas Heater not included in RBLC - may request info or see permit for details. | | GE 7HA.02 Turbine | 15.21 | Natural Gas | 3496.2 | mmBtu/hr | Nominal 640 mWe<br>All emission limits steady-state and include 1000 mmBtu/hr Duct Burner in operation<br>Short Term startup and shutdown limits in lb/event given in permit. | Particulate matter, total (TPM) | Air Filter, Use of Natural Gas, Good Combustion Practices | 18.2 | LB/HR | |

**Table D-2. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - PM**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MONTGOMERY COUNTY POWER STATIOIN | ENTERGY TEXAS INC | MONTGOMERY | TX | 3/30/2018 | | | Combined Cycle Turbine | 15.21 | NATURAL GAS | 2635 | MMBTU/HR/UNIT | Two Mitsubishi M501GAC turbines (without fast start) | Particulate matter, total (TPM) | PIPELINE NATURAL GAS, GOOD COMBUSTION | 125.7 | TON/YR | |
| MONTGOMERY COUNTY POWER STATIOIN | ENTERGY TEXAS INC | MONTGOMERY | TX | 3/30/2018 | | | Combined Cycle Turbine | 15.21 | NATURAL GAS | 2635 | MMBTU/HR/UNIT | Two Mitsubishi M501GAC turbines (without fast start) | Particulate matter, total < 10 Âµ (TPM10) | PIPELINE NATURAL GAS, GOOD COMBUSTION | 125.7 | TON/YR | |
| MONTGOMERY COUNTY POWER STATIOIN | ENTERGY TEXAS INC | MONTGOMERY | TX | 3/30/2018 | | | Combined Cycle Turbine | 15.21 | NATURAL GAS | 2635 | MMBTU/HR/UNIT | Two Mitsubishi M501GAC turbines (without fast start) | Particulate matter, total < 2.5 Âµ (TPM2.5) | PIPELINE NATURAL GAS, GOOD COMBUSTION | 125.7 | TON/YR | |
| HARRISON POWER | HARRISON POWER | HARRISON | OH | 4/19/2018 | 1000 MW natural gas-fired combined cycle combustion turbine plant | Initial installation permit for a 1000 MW combined cycle electric generating facility in Harrison County that includes two (2) combustion turbines with a heat recovery stream generator (HRSG) and duct burners, auxiliary boiler, emergency diesel generator engine, and emergency fire pump engine.□<br>□<br>The permit includes the option to install either General Electric turbines (with 80 MMBTU aux boiler B002) or Mitsubishi turbines (with 44.55 MMBTU aux boiler B001). The facility-wide pollutants table below is for the GE turbines. The Mitsubishi emissions are as follows: PM10/2.5 155.2, SO2 59.2, NOx 249.9, CO 219.7, VOC 169.5 | General Electric (GE) Combustion Turbines (P005 & P006) | 15.21 | Natural gas | 3459.6 | MMBTU/H | Two identical GE Combustion Turbines 1 and 2; GE model 7HA.02 natural gas-fired combined cycle combustion turbine generator equipped with dry low-NOx (DLN) burners nominally rated at 3,459.6 MMBtu/hr (HHV) at 100% load and -2Â° F exhausting through a heat recovery steam generator (HRSG) with supplemental natural gas-fired duct burners nominally rated at 570.45 MMBtu/hr (HHV) controlled with catalytic oxidation and selective catalytic reduction (SCR) used to generate additional electricity.□<br>□<br>The permit includes the option to install either General Electric turbines (with 80 MMBTU aux boiler B002) or Mitsubishi turbines (with 44.55 MMBTU aux boiler B001).□<br>□<br>Limits and throughputs are for single turbine except as noted. | Particulate matter, total < 10 Âµ (TPM10) | Good combustion practices and pipeline quality natural gas | 0.0052 | LB/MMBTU | WITH DUCT BURNER. SEE NOTES. |
| HARRISON POWER | HARRISON POWER | HARRISON | OH | 4/19/2018 | 1000 MW natural gas-fired combined cycle combustion turbine plant | Initial installation permit for a 1000 MW combined cycle electric generating facility in Harrison County that includes two (2) combustion turbines with a heat recovery stream generator (HRSG) and duct burners, auxiliary boiler, emergency diesel generator engine, and emergency fire pump engine.□<br>□<br>The permit includes the option to install either General Electric turbines (with 80 MMBTU aux boiler B002) or Mitsubishi turbines (with 44.55 MMBTU aux boiler B001). The facility-wide pollutants table below is for the GE turbines. The Mitsubishi emissions are as follows: PM10/2.5 155.2, SO2 59.2, NOx 249.9, CO 219.7, VOC 169.5 | General Electric (GE) Combustion Turbines (P005 & P006) | 15.21 | Natural gas | 3459.6 | MMBTU/H | Two identical GE Combustion Turbines 1 and 2; GE model 7HA.02 natural gas-fired combined cycle combustion turbine generator equipped with dry low-NOx (DLN) burners nominally rated at 3,459.6 MMBtu/hr (HHV) at 100% load and -2Â° F exhausting through a heat recovery steam generator (HRSG) with supplemental natural gas-fired duct burners nominally rated at 570.45 MMBtu/hr (HHV) controlled with catalytic oxidation and selective catalytic reduction (SCR) used to generate additional electricity.□<br>□<br>The permit includes the option to install either General Electric turbines (with 80 MMBTU aux boiler B002) or Mitsubishi turbines (with 44.55 MMBTU aux boiler B001).□<br>□<br>Limits and throughputs are for single turbine except as noted. | Particulate matter, total < 2.5 Âµ (TPM2.5) | Good combustion practices and pipeline quality natural gas | 0.0052 | LB/MMBTU | WITH DUCT BURNER. SEE NOTES. |

**Table D-2. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - PM**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HARRISON POWER | HARRISON POWER | HARRISON | OH | 4/19/2018 | 1000 MW natural gas-fired combined cycle combustion turbine plant | Initial installation permit for a 1000 MW combined cycle electric generating facility in Harrison County that includes two (2) combustion turbines with a heat recovery stream generator (HRSG) and duct burners, auxiliary boiler, emergency diesel generator engine, and emergency fire pump engine.□<br>□<br>The permit includes the option to install either General Electric turbines (with 80 MMBTU aux boiler B002) or Mitsubishi turbines (with 44.55 MMBTU aux boiler B001). The facility-wide pollutants table below is for the GE turbines. The Mitsubishi emissions are as follows: PM10/2.5 155.2, SO2 59.2, NOx 249.9, CO 219.7, VOC 169.5 | General Electric (GE) Combustion Turbines (P005 & P006) | 15.21 | Natural gas | 3459.6 | MMBTU/H | Two identical GE Combustion Turbines 1 and 2; GE model 7HA.02 natural gas-fired combined cycle combustion turbine generator equipped with dry low-NOx (DLN) burners nominally rated at 3,459.6 MMBtu/hr (HHV) at 100% load and -2Â° F exhausting through a heat recovery steam generator (HRSG) with supplemental natural gas-fired duct burners nominally rated at 570.45 MMBtu/hr (HHV) controlled with catalytic oxidation and selective catalytic reduction (SCR) used to generate additional electricity.□<br>□<br>The permit includes the option to install either General Electric turbines (with 80 MMBTU aux boiler B002) or Mitsubishi turbines (with 44.55 MMBTU aux boiler B001).□<br>□<br>Limits and throughputs are for single turbine except as noted. | Particulate matter, total (TPM) | Good combustion practices and pipeline quality natural gas | 0.0052 | LB/MMBTU | WITH DUCT BURNER. SEE NOTES. |
| HARRISON POWER | HARRISON POWER | HARRISON | OH | 4/19/2018 | 1000 MW natural gas-fired combined cycle combustion turbine plant | Initial installation permit for a 1000 MW combined cycle electric generating facility in Harrison County that includes two (2) combustion turbines with a heat recovery stream generator (HRSG) and duct burners, auxiliary boiler, emergency diesel generator engine, and emergency fire pump engine.□<br>□<br>The permit includes the option to install either General Electric turbines (with 80 MMBTU aux boiler B002) or Mitsubishi turbines (with 44.55 MMBTU aux boiler B001). The facility-wide pollutants table below is for the GE turbines. The Mitsubishi emissions are as follows: PM10/2.5 155.2, SO2 59.2, NOx 249.9, CO 219.7, VOC 169.5 | Mitsubishi Hitachi Power Systems (MHPS) Combustion Turbines (P007 & P008) | 15.21 | Natural gas | 3231 | MMBTU/H | Two identical MHPS Combustion Turbines 1 and 2; Mitsubishi Model M501JAC natural gas-fired combined cycle combustion turbine generator equipped with dry low-NOx (DLN) burners nominally rated at 3,231 MMBtu/hr (HHV) at 100% load and 51Â° F exhausting through a heat recovery steam generator (HRSG) with supplemental natural gas-fired duct burners nominally rated at 306 MMBtu/hr (HHV) controlled with catalytic oxidation and selective catalytic reduction (SCR) used to generate electricity.□<br>□<br>The permit includes the option to install either General Electric turbines (with 80 MMBTU aux boiler B002) or Mitsubishi turbines (with 44.55 MMBTU aux boiler B001).□<br>□<br>Limits and throughputs are for single turbine except as noted. | Particulate matter, total (TPM) | Good combustion practices and pipeline quality natural gas | 0.005 | LB/MMBTU | WITH DUCT BURNER. SEE NOTES. |
| HARRISON POWER | HARRISON POWER | HARRISON | OH | 4/19/2018 | 1000 MW natural gas-fired combined cycle combustion turbine plant | Initial installation permit for a 1000 MW combined cycle electric generating facility in Harrison County that includes two (2) combustion turbines with a heat recovery stream generator (HRSG) and duct burners, auxiliary boiler, emergency diesel generator engine, and emergency fire pump engine.□<br>□<br>The permit includes the option to install either General Electric turbines (with 80 MMBTU aux boiler B002) or Mitsubishi turbines (with 44.55 MMBTU aux boiler B001). The facility-wide pollutants table below is for the GE turbines. The Mitsubishi emissions are as follows: PM10/2.5 155.2, SO2 59.2, NOx 249.9, CO 219.7, VOC 169.5 | Mitsubishi Hitachi Power Systems (MHPS) Combustion Turbines (P007 & P008) | 15.21 | Natural gas | 3231 | MMBTU/H | Two identical MHPS Combustion Turbines 1 and 2; Mitsubishi Model M501JAC natural gas-fired combined cycle combustion turbine generator equipped with dry low-NOx (DLN) burners nominally rated at 3,231 MMBtu/hr (HHV) at 100% load and 51Â° F exhausting through a heat recovery steam generator (HRSG) with supplemental natural gas-fired duct burners nominally rated at 306 MMBtu/hr (HHV) controlled with catalytic oxidation and selective catalytic reduction (SCR) used to generate electricity.□<br>□<br>The permit includes the option to install either General Electric turbines (with 80 MMBTU aux boiler B002) or Mitsubishi turbines (with 44.55 MMBTU aux boiler B001).□<br>□<br>Limits and throughputs are for single turbine except as noted. | Particulate matter, total < 10 Âµ (TPM10) | Good combustion practices and pipeline quality natural gas | 0.005 | LB/MMBTU | WITH DUCT BURNER. SEE NOTES. |

**Table D-2. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - PM**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HARRISON POWER | HARRISON POWER | HARRISON | OH | 4/19/2018 | 1000 MW natural gas-fired combined cycle combustion turbine plant | Initial installation permit for a 1000 MW combined cycle electric generating facility in Harrison County that includes two (2) combustion turbines with a heat recovery stream generator (HRSG) and duct burners, auxiliary boiler, emergency diesel generator engine, and emergency fire pump engine.□<br>□<br>The permit includes the option to install either General Electric turbines (with 80 MMBTU aux boiler B002) or Mitsubishi turbines (with 44.55 MMBTU aux boiler B001). The facility-wide pollutants table below is for the GE turbines. The Mitsubishi emissions are as follows: PM10/2.5 155.2, SO2 59.2, NOx 249.9, CO 219.7, VOC 169.5 | Mitsubishi Hitachi Power Systems (MHPS) Combustion Turbines (P007 & P008) | 15.21 | Natural gas | 3231 | MMBTU/H | Two identical MHPS Combustion Turbines 1 and 2; Mitsubishi Model M501JAC natural gas-fired combined cycle combustion turbine generator equipped with dry low-NOx (DLN) burners nominally rated at 3,231 MMBtu/hr (HHV) at 100% load and 51Â° F exhausting through a heat recovery steam generator (HRSG) with supplemental natural gas-fired duct burners nominally rated at 306 MMBtu/hr (HHV) controlled with catalytic oxidation and selective catalytic reduction (SCR) used to generate electricity.□<br>□<br>The permit includes the option to install either General Electric turbines (with 80 MMBTU aux boiler B002) or Mitsubishi turbines (with 44.55 MMBTU aux boiler B001).□<br>□<br>Limits and throughputs are for single turbine except as noted. | Particulate matter, total < 2.5 Âµ (TPM2.5) | Good combustion practices and pipeline quality natural gas | 0.005 | LB/MMBTU | WITH DUCT BURNER. SEE NOTES. |
| PALMDALE ENERGY PROJECT | PALMDALE ENERGY, LLC | LOS ANGELES | CA | 4/25/2018 | 645 MW (nominal) Natural Gas-fired Combined Cycle Power Plant, 2 x 1 configuration, auxiliary boiler for faster startup | See also docket: https://www.regulations.gov/docket?D=EPA-R09-OAR-2017-0473. □<br>□<br>Permit decision was appealed to EPA's Environmental Appeals Board. Board denied review on October 23, 2018. Information available through www.epa.gov/eab and https://yosemite.epa.gov/oa/EAB_Web_Docket.nsf/f22b4b245fab46c6852570e6004df1bd/ad735c0b822500258525829d004217eb!OpenDocument. □<br>□<br>1/31/20 -- SYS MGR -- Link to permit is □ <https://www.regulations.gov/document?D=EPA-R09-OAR-2017-0473-0028> | Combustion Turbines (GEN1 and GEN2) | 15.21 | Natural Gas | 2217 | MMBTU/H | Each combustion turbine rated at 214 MW, with a□<br>maximum heat input rate of 2,217 MMBtu/H (HHV, at ISO□<br>conditions); natural gas-fired Siemens SGT6-5000F; each vents to □<br>dedicated Heat Recovery Steam Generator and a shared 276□<br>MW Steam Turbine Generator; 160-ft□<br>stack height; 22-ft stack diameter | Particulate matter, filterable (FPM) | Clean fuel and good combustion practices | 0.0048 | LB/MMBTU | TEST AVERAGE |
| PALMDALE ENERGY PROJECT | PALMDALE ENERGY, LLC | LOS ANGELES | CA | 4/25/2018 | 645 MW (nominal) Natural Gas-fired Combined Cycle Power Plant, 2 x 1 configuration, auxiliary boiler for faster startup | See also docket: https://www.regulations.gov/docket?D=EPA-R09-OAR-2017-0473. □<br>□<br>Permit decision was appealed to EPA's Environmental Appeals Board. Board denied review on October 23, 2018. Information available through www.epa.gov/eab and https://yosemite.epa.gov/oa/EAB_Web_Docket.nsf/f22b4b245fab46c6852570e6004df1bd/ad735c0b822500258525829d004217eb!OpenDocument. □<br>□<br>1/31/20 -- SYS MGR -- Link to permit is □ <https://www.regulations.gov/document?D=EPA-R09-OAR-2017-0473-0028> | Combustion Turbines (GEN1 and GEN2) | 15.21 | Natural Gas | 2217 | MMBTU/H | Each combustion turbine rated at 214 MW, with a□<br>maximum heat input rate of 2,217 MMBtu/H (HHV, at ISO□<br>conditions); natural gas-fired Siemens SGT6-5000F; each vents to □<br>dedicated Heat Recovery Steam Generator and a shared 276□<br>MW Steam Turbine Generator; 160-ft□<br>stack height; 22-ft stack diameter | Particulate matter, total < 10 Âµ (TPM10) | Clean fuel and good combustion practices | 0.0048 | LB/MMBTU | TEST AVERAGE |
| PALMDALE ENERGY PROJECT | PALMDALE ENERGY, LLC | LOS ANGELES | CA | 4/25/2018 | 645 MW (nominal) Natural Gas-fired Combined Cycle Power Plant, 2 x 1 configuration, auxiliary boiler for faster startup | See also docket: https://www.regulations.gov/docket?D=EPA-R09-OAR-2017-0473. □<br>□<br>Permit decision was appealed to EPA's Environmental Appeals Board. Board denied review on October 23, 2018. Information available through www.epa.gov/eab and https://yosemite.epa.gov/oa/EAB_Web_Docket.nsf/f22b4b245fab46c6852570e6004df1bd/ad735c0b822500258525829d004217eb!OpenDocument. □<br>□<br>1/31/20 -- SYS MGR -- Link to permit is □ <https://www.regulations.gov/document?D=EPA-R09-OAR-2017-0473-0028> | Combustion Turbines (GEN1 and GEN2) | 15.21 | Natural Gas | 2217 | MMBTU/H | Each combustion turbine rated at 214 MW, with a□<br>maximum heat input rate of 2,217 MMBtu/H (HHV, at ISO□<br>conditions); natural gas-fired Siemens SGT6-5000F; each vents to □<br>dedicated Heat Recovery Steam Generator and a shared 276□<br>MW Steam Turbine Generator; 160-ft□<br>stack height; 22-ft stack diameter | Particulate matter, total < 2.5 Âµ (TPM2.5) | Clean fuel and good combustion practices | 0.0048 | LB/MMBTU | TEST AVERAGE |
| C4GT, LLC | NOVI ENERGY | USA | VA | 4/26/2018 | Natural gas-fired combined cycle power plant | The permit was written with two options for the turbines: □<br>Option 1 - GE 7HA.02□<br>Option 2 - Siemens SGT6-8000H□<br>Facility Wide Pollutants for Siemens: □<br>CO: 293.5□<br>NOx: 295.8□<br>PM: 253.8□<br>SOx: 39.3□<br>VOC: 113.7 | GE Combustion Turbine - Option 1 - Normal Operation | 15.21 | natural gas | 34000 | MMCF/YR | Option 1: □<br>Two on one configuration: 3,482 MMBtu/hr combustion turbine with 475 MMBtu/hr duct-fired HRSG. Emission limits reflect the operation of one turbine with or without duct firing. | Particulate matter, total < 10 Âµ (TPM10) | good combustion practices and the use of pipeline quality natural gas with a maximum sulfur content of 0.4 gr/100 scf on a 12-month rolling average. | 0.0069 | LB/MMBTU WITHOUT DUC | AV OF 3 TEST RUNS |

**Table D-2. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - PM**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C4GT, LLC | NOVI ENERGY | USA | VA | 4/26/2018 | Natural gas-fired combined cycle power plant | The permit was written with two options for the turbines:□<br>Option 1 - GE 7HA.02□<br>Option 2 - Siemens SGT6-8000H□<br>Facility Wide Pollutants for Siemens: □<br>CO: 293.5□<br>NOx: 295.8□<br>PM: 253.8□<br>SOx: 39.3□<br>VOC: 113.7 | GE Combustion Turbine - Option 1 - Normal Operation | 15.21 | natural gas | 34000 | MMCF/YR | Option 1: □<br>Two on one configuration: 3,482 MMBtu/hr combustion turbine with 475 MMBtu/hr duct-fired HRSG. Emission limits reflect the operation of one turbine with or without duct firing. | Particulate matter, total < 2.5 Âµ (TPM2.5) | good combustion practices and the use of pipeline quality natural gas with a maximum sulfur content of 0.4 gr/100 scf on a 12-month rolling average. | 0.0069 | LB/MMBTU WITHOUT DUC | AV OF 3 TEST RUNS |
| C4GT, LLC | NOVI ENERGY | USA | VA | 4/26/2018 | Natural gas-fired combined cycle power plant | The permit was written with two options for the turbines:□<br>Option 1 - GE 7HA.02□<br>Option 2 - Siemens SGT6-8000H□<br>Facility Wide Pollutants for Siemens: □<br>CO: 293.5□<br>NOx: 295.8□<br>PM: 253.8□<br>SOx: 39.3□<br>VOC: 113.7 | Siemens Combusion Turbine - Option 2 - Normal Operation | 15.21 | Natural Gas | 35000 | MMCF/YR | Option 2: □<br>Two on one configuration: 3,116 MMBtu/hr combustion turbine with 991 MMBtu/hr duct-fired HRSG. Emission limits reflect the operation of one turbine with or without duct firing. | Particulate matter, total < 10 Âµ (TPM10) | good combustion practices and the use of pipeline quality natural gas with a maximum sulfur content of 0.4 gr/100 scf on a 12 mo rolling av. | 0.0065 | LB/MMBTU | AV OF 3 TEST RUNS/WITHOUT DUCT BURNING |
| C4GT, LLC | NOVI ENERGY | USA | VA | 4/26/2018 | Natural gas-fired combined cycle power plant | The permit was written with two options for the turbines:□<br>Option 1 - GE 7HA.02□<br>Option 2 - Siemens SGT6-8000H□<br>Facility Wide Pollutants for Siemens: □<br>CO: 293.5□<br>NOx: 295.8□<br>PM: 253.8□<br>SOx: 39.3□<br>VOC: 113.7 | Siemens Combusion Turbine - Option 2 - Normal Operation | 15.21 | Natural Gas | 35000 | MMCF/YR | Option 2: □<br>Two on one configuration: 3,116 MMBtu/hr combustion turbine with 991 MMBtu/hr duct-fired HRSG. Emission limits reflect the operation of one turbine with or without duct firing. | Particulate matter, total < 2.5 Âµ (TPM2.5) | good combustion practices and the use of pipeline quality natural gas with a maximum sulfur content of 0.4 gr/100 scf on a 12-month rolling average. | 0.0065 | LB/MMBTU | AV OF 3 TEST RUNS/WITHOUT DUCT BURNING |
| MEC NORTH, LLC AND MEC SOUTH LLC | MARSHALL ENERGY CENTER LLC | CALHOUN | MI | 6/29/2018 | Natural gas combined cycle power plant (two plants: north and south) | There are two plants that will operate as separate entities and each received a separate Air Permit to Install, but they are considered one stationary source and were reviewed as one project. | EUCTGHRSG (South Plant): A combined cycle natural gas-fired combustion turbine generator with heat recovery steam generator. | 15.21 | Natural gas | 500 | MW | A combined-cycle natural gas-fired combustion turbine generator (CTG) with heat recovery steam generator (HRSG) in a 1x1 configuration with a steam turbine generator (STG) for a nominal 500 MW electricity production. The CTG is a H-class turbine with a rating of 3,080 MMBTU/H (HHV). The HRSG is equipped with a natural gas-fired duct burner rated at 755 MMBTU/H (HHV) at ISO conditions to provide heat for additional steam production. The HRSG is not capable of operating independently from the CTG. The CTG/HRSG is equipped with dry low NOx burner (DLNB), SCR and an oxidation catalyst. | Particulate matter, filterable (FPM) | Good combustion practices, inlet air conditioning, and the use of pipeline quality natural gas. | 5.8 | LB/H | HOURLY |

**Table D-2. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - PM**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MEC NORTH, LLC AND MEC SOUTH LLC | MARSHALL ENERGY CENTER LLC | CALHOUN | MI | 6/29/2018 | Natural gas combined cycle power plant (two plants: north and south) | There are two plants that will operate as separate entities and each received a separate Air Permit to Install, but they are considered one stationary source and were reviewed as one project. | EUCTGHRSG (South Plant): A combined cycle natural gas-fired combustion turbine generator with heat recovery steam generator. | 15.21 | Natural gas | 500 | MW | A combined-cycle natural gas-fired combustion turbine generator (CTG) with heat recovery steam generator (HRSG) in a 1x1 configuration with a steam turbine generator (STG) for a nominal 500 MW electricity production. The CTG is a H-class turbine with a rating of 3,080 MMBTU/H (HHV). The HRSG is equipped with a natural gas-fired duct burner rated at 755 MMBTU/H (HHV) at ISO conditions to provide heat for additional steam production. The HRSG is not capable of operating independently from the CTG. The CTG/HRSG is equipped with dry low NOx burner (DLNB), SCR and an oxidation catalyst. | Particulate matter, total < 2.5 Âµ (TPM2.5) | Good combustion practices, inlet air conditioning, and the use of pipeline quality natural gas. | 19.1 | LB/H | HOURLY |
| MEC NORTH, LLC AND MEC SOUTH LLC | MARSHALL ENERGY CENTER LLC | CALHOUN | MI | 6/29/2018 | Natural gas combined cycle power plant (two plants: north and south) | There are two plants that will operate as separate entities and each received a separate Air Permit to Install, but they are considered one stationary source and were reviewed as one project. | EUCTGHRSG (South Plant): A combined cycle natural gas-fired combustion turbine generator with heat recovery steam generator. | 15.21 | Natural gas | 500 | MW | A combined-cycle natural gas-fired combustion turbine generator (CTG) with heat recovery steam generator (HRSG) in a 1x1 configuration with a steam turbine generator (STG) for a nominal 500 MW electricity production. The CTG is a H-class turbine with a rating of 3,080 MMBTU/H (HHV). The HRSG is equipped with a natural gas-fired duct burner rated at 755 MMBTU/H (HHV) at ISO conditions to provide heat for additional steam production. The HRSG is not capable of operating independently from the CTG. The CTG/HRSG is equipped with dry low NOx burner (DLNB), SCR and an oxidation catalyst. | Particulate matter, total < 10 Âµ (TPM10) | Good combustion practices, inlet air conditioning and the use of pipeline quality natural gas. | 19.1 | LB/H | HOURLY |

**Table D-2. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - PM**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MEC NORTH, LLC AND MEC SOUTH LLC | MARSHALL ENERGY CENTER LLC | CALHOUN | MI | 6/29/2018 | Natural gas combined cycle power plant (two plants: north and south) | There are two plants that will operate as separate entities and each received a separate Air Permit to Install, but they are considered one stationary source and were reviewed as one project. | EUCTGHRSG (North Plant): A combined-cycle natural gas-fired combustion turbine generator with heat recovery steam generator. | 15.21 | Natural gas | 500 | MW | Nominal 500 MW electricity production. Turbine rating of 3,080 MMBTU/hr (HHV) and HRSG duct burner rating of 755 MMBTU/hr (HHV).□<br>□<br>A combined-cycle natural gas-fired combustion turbine generator (CTG) with heat recovery steam generator (HRSG) in a 1x1 configuration with a steam turbine generator (STG) for a nominal 500 MW electricity production. The CTG is a H-class turbine with a rating of 3,080 MMBTU/hr (HHV). The HRSG is equipped with a natural gas-fired duct burner rated at 755 MMBTU/hr (HHV) at ISO conditions to provide heat for additional steam production. The HRSG is not capable of operating independently from the CTG. The CTG/HRSG is equipped with dry low NOx burner (DLNB), SCR, and an oxidation catalyst. | Particulate matter, filterable (FPM) | Good combustion practices, inlet air conditioning, and the use of pipeline quality natural gas. | 5.8 | LB/H | HOURLY |
| MEC NORTH, LLC AND MEC SOUTH LLC | MARSHALL ENERGY CENTER LLC | CALHOUN | MI | 6/29/2018 | Natural gas combined cycle power plant (two plants: north and south) | There are two plants that will operate as separate entities and each received a separate Air Permit to Install, but they are considered one stationary source and were reviewed as one project. | EUCTGHRSG (North Plant): A combined-cycle natural gas-fired combustion turbine generator with heat recovery steam generator. | 15.21 | Natural gas | 500 | MW | Nominal 500 MW electricity production. Turbine rating of 3,080 MMBTU/hr (HHV) and HRSG duct burner rating of 755 MMBTU/hr (HHV).□<br>□<br>A combined-cycle natural gas-fired combustion turbine generator (CTG) with heat recovery steam generator (HRSG) in a 1x1 configuration with a steam turbine generator (STG) for a nominal 500 MW electricity production. The CTG is a H-class turbine with a rating of 3,080 MMBTU/hr (HHV). The HRSG is equipped with a natural gas-fired duct burner rated at 755 MMBTU/hr (HHV) at ISO conditions to provide heat for additional steam production. The HRSG is not capable of operating independently from the CTG. The CTG/HRSG is equipped with dry low NOx burner (DLNB), SCR, and an oxidation catalyst. | Particulate matter, total < 10 Âµ (TPM10) | Good combustion practices, inlet air conditioning, and the use of pipeline quality natural gas. | 19.1 | LB/H | HOURLY |

**Table D-2. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - PM**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MEC NORTH, LLC AND MEC SOUTH LLC | MARSHALL ENERGY CENTER LLC | CALHOUN | MI | 6/29/2018 | Natural gas combined cycle power plant (two plants: north and south) | There are two plants that will operate as separate entities and each received a separate Air Permit to Install, but they are considered one stationary source and were reviewed as one project. | EUCTGHRSG (North Plant): A combined-cycle natural gas-fired combustion turbine generator with heat recovery steam generator. | 15.21 | Natural gas | 500 | MW | Nominal 500 MW electricity production. Turbine rating of 3,080 MMBTU/hr (HHV) and HRSG duct burner rating of 755 MMBTU/hr (HHV).□<br>□<br>A combined-cycle natural gas-fired combustion turbine generator (CTG) with heat recovery steam generator (HRSG) in a 1x1 configuration with a steam turbine generator (STG) for a nominal 500 MW electricity production. The CTG is a H-class turbine with a rating of 3,080 MMBTU/hr (HHV). The HRSG is equipped with a natural gas-fired duct burner rated at 755 MMBTU/hr (HHV) at ISO conditions to provide heat for additional steam production. The HRSG is not capable of operating independently from the CTG. The CTG/HRSG is equipped with dry low NOx burner (DLNB), SCR, and an oxidation catalyst. | Particulate matter, total < 2.5 Âµ (TPM2.5) | Good combustion practices, inlet air conditioning, and the use of pipeline quality natural gas. | 19.1 | LB/H | HOURLY |
| BELLE RIVER COMBINED CYCLE POWER PLANT | DTE ELECTRIC COMPANY | ST. CLAIR | MI | 7/16/2018 | Natural gas combined-cycle power plant | The new combined cycle plant is proposed to be located near DTE's existing Belle River and St. Clair coal fired power plants. The three plants will be considered a single stationary source. It will have a capacity of 1,150 megawatts. | FGCTGHRSG (EUCTGHRSG1 & EUCTGHRSG2) | 15.21 | Natural gas | 0 | | Two (2) combined-cycle natural gas-fired combustion turbine generators, each with a heat recovery steam generator (CTGHRSG).□<br>□<br>Plant nominal 1,150 MW electricity production. Turbines are each rated at 3,658 MMBTU/H and HRSG duct burners are each rated at 800 MMBTU/H. □<br>□<br>The HRSGs are not capable of operating independently from the CTGs. | Particulate matter, filterable (FPM) | Good combustion practices, inlet air conditioning, and the use of pipeline quality natural gas. | 16 | LB/H | HOURLY; EACH UNIT |
| BELLE RIVER COMBINED CYCLE POWER PLANT | DTE ELECTRIC COMPANY | ST. CLAIR | MI | 7/16/2018 | Natural gas combined-cycle power plant | The new combined cycle plant is proposed to be located near DTE's existing Belle River and St. Clair coal fired power plants. The three plants will be considered a single stationary source. It will have a capacity of 1,150 megawatts. | FGCTGHRSG (EUCTGHRSG1 & EUCTGHRSG2) | 15.21 | Natural gas | 0 | | Two (2) combined-cycle natural gas-fired combustion turbine generators, each with a heat recovery steam generator (CTGHRSG).□<br>□<br>Plant nominal 1,150 MW electricity production. Turbines are each rated at 3,658 MMBTU/H and HRSG duct burners are each rated at 800 MMBTU/H. □<br>□<br>The HRSGs are not capable of operating independently from the CTGs. | Particulate matter, total < 10 Âµ (TPM10) | Good combustion practices, inlet air conditioning, and the use of pipeline quality natural gas. | 16 | LB/H | HOURLY; EACH UNIT |

**Table D-2. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - PM**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BELLE RIVER COMBINED CYCLE POWER PLANT | DTE ELECTRIC COMPANY | ST. CLAIR | MI | 7/16/2018 | Natural gas combined-cycle power plant | The new combined cycle plant is proposed to be located near DTE's existing Belle River and St. Clair coal fired power plants. The three plants will be considered a single stationary source. It will have a capacity of 1,150 megawatts. | FGCTGHRSG (EUCTGHRSG1 & EUCTGHRSG2) | 15.21 | Natural gas | 0 | | Two (2) combined-cycle natural gas-fired combustion turbine generators, each with a heat recovery steam generator (CTGHRSG).□<br>□<br>Plant nominal 1,150 MW electricity production. Turbines are each rated at 3,658 MMBTU/H and HRSG duct burners are each rated at 800 MMBTU/H. □<br>□<br>The HRSGs are not capable of operating independently from the CTGs. | Particulate matter, total < 2.5 Âµ (TPM2.5) | Good combustion practices, inlet air conditioning and the use of pipeline quality natural gas. | 16 | LB/H | HOURLY; EACH UNIT |
| SHADY HILLS COMBINED CYCLE FACILITY | SHADY HILLS ENERGY CENTER, LLC | PASCO | FL | 7/27/2018 | A 573-megawatt (MW) (winter) 1-on-1 combined cycle plant which includes a heat recovery steam generator with duct firing, along with supporting equipment. Natural gas is the only permitted fuel for the combined cycle unit. | THIS PROJECT WAS SUPERSEDED BY PERMIT NO. 1010524-003-AC UNDER RBLC ID FL-0371 | 1-on-1 combined cycle unit (GE 7HA) | 15.21 | Natural Gas | 3266.9 | MMBtu/hour | One nominal 385 MW GE 7HA.02 CTG and one HRSG with duct firing [approximately 210 MMBtu/hour], and one nominal 210 MW steam turbine generator (STG) | Particulate matter, filterable (FPM) | Clean fuels | 0 | | |
| SHADY HILLS COMBINED CYCLE FACILITY | SHADY HILLS ENERGY CENTER, LLC | PASCO | FL | 7/27/2018 | A 573-megawatt (MW) (winter) 1-on-1 combined cycle plant which includes a heat recovery steam generator with duct firing, along with supporting equipment. Natural gas is the only permitted fuel for the combined cycle unit. | THIS PROJECT WAS SUPERSEDED BY PERMIT NO. 1010524-003-AC UNDER RBLC ID FL-0371 | 1-on-1 combined cycle unit (GE 7HA) | 15.21 | Natural Gas | 3266.9 | MMBtu/hour | One nominal 385 MW GE 7HA.02 CTG and one HRSG with duct firing [approximately 210 MMBtu/hour], and one nominal 210 MW steam turbine generator (STG) | Particulate matter, total < 10 Âµ (TPM10) | Clean fuels | 0 | | |
| SHADY HILLS COMBINED CYCLE FACILITY | SHADY HILLS ENERGY CENTER, LLC | PASCO | FL | 7/27/2018 | A 573-megawatt (MW) (winter) 1-on-1 combined cycle plant which includes a heat recovery steam generator with duct firing, along with supporting equipment. Natural gas is the only permitted fuel for the combined cycle unit. | THIS PROJECT WAS SUPERSEDED BY PERMIT NO. 1010524-003-AC UNDER RBLC ID FL-0371 | 1-on-1 combined cycle unit (GE 7HA) | 15.21 | Natural Gas | 3266.9 | MMBtu/hour | One nominal 385 MW GE 7HA.02 CTG and one HRSG with duct firing [approximately 210 MMBtu/hour], and one nominal 210 MW steam turbine generator (STG) | Particulate matter, total < 2.5 Âµ (TPM2.5) | Clean fuels | 0 | | |
| CPV THREE RIVERS ENERGY CENTER | CPV THREE RIVERS, LLC | GRUNDY | IL | 7/30/2018 | The proposed facility is designed to generate baseload power. It will consist of two combined-cycle generating units, each with a combustion turbine and associated heat recovery steam generator (HRSG). The turbines would burn natural gas and ultra-low sulfur diesel (ULSD) as a backup fuel. Other units include an auxiliary boiler, fuel heater, engines, natural gas piping and components, circuit breakers and roadways. | | Combined Cycle Combustion Turbines | 15.21 | Natural Gas | 3474 | mmBtu/hr | Throughput of ultra-low sulfur diesel (ULSD) is 3798 mmBtu/hr.□<br>□<br>Combined cycle combustion turbines w/ heat recovery steam generator (HRSG). Turbine inlets will have inlet evaporative cooling systems to cool inlet air during warm weather to increase power output. | Particulate matter, filterable (FPM) | Good combustion practices | 0.0037 | LB/MMBTU | 3-HOUR BLOCK AVERAGE |
| CPV THREE RIVERS ENERGY CENTER | CPV THREE RIVERS, LLC | GRUNDY | IL | 7/30/2018 | The proposed facility is designed to generate baseload power. It will consist of two combined-cycle generating units, each with a combustion turbine and associated heat recovery steam generator (HRSG). The turbines would burn natural gas and ultra-low sulfur diesel (ULSD) as a backup fuel. Other units include an auxiliary boiler, fuel heater, engines, natural gas piping and components, circuit breakers and roadways. | | Combined Cycle Combustion Turbines | 15.21 | Natural Gas | 3474 | mmBtu/hr | Throughput of ultra-low sulfur diesel (ULSD) is 3798 mmBtu/hr.□<br>□<br>Combined cycle combustion turbines w/ heat recovery steam generator (HRSG). Turbine inlets will have inlet evaporative cooling systems to cool inlet air during warm weather to increase power output. | Particulate matter, total < 10 Âµ (TPM10) | Good combustion practice | 0.0069 | LB/MMBTU | 3-HOUR BLOCK AVERAGE |

**Table D-2. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - PM**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NEW COVERT GENERATING FACILITY | NEW COVERT GENERATING COMPANY, LLC | VAN BUREN | MI | 7/30/2018 | Power plant | The equipment consists of three advanced firing temperature Mitsubishi 501G combustion turbines, three heat recovery steam generators supplemented with gas-fired duct burners each with a max firing rate of 256 million British thermal units per hour (MMBtu/hr), three steam turbine generators. Auxiliary equipment includes three mechanical draft evaporative cooling towers, one natural gas auxiliary boiler, one diesel emergency generator, one diesel fire water pump, one aqueous parts cleaner, and one gas heater. | FG-TURB/DB1-3 (3 combined cycle combustion turbine and heat recovery steam generator trains) | 15.21 | Natural gas | 1230 | MW | Three (3) combined-cycle combustion turbine (CT) / heat recovery steam generator (HRSG) trains. Each CT is a natural gas fired Mitsubishi model 501G, equipped with dry low NOx combustor and inlet air evaporative cooling. Each HRSG includes a natural gas fired duct burner with a 256 MMBtu/hr heat input capacity and a dry low NOx burner. | Particulate matter, total < 10 Âµ (TPM10) | Use clean fuel (natural gas) and good combustion practices. | 10.7 | LB/H | HOURLY; EACH CT/HRSG TRAIN |
| NEW COVERT GENERATING FACILITY | NEW COVERT GENERATING COMPANY, LLC | VAN BUREN | MI | 7/30/2018 | Power plant | The equipment consists of three advanced firing temperature Mitsubishi 501G combustion turbines, three heat recovery steam generators supplemented with gas-fired duct burners each with a max firing rate of 256 million British thermal units per hour (MMBtu/hr), three steam turbine generators. Auxiliary equipment includes three mechanical draft evaporative cooling towers, one natural gas auxiliary boiler, one diesel emergency generator, one diesel fire water pump, one aqueous parts cleaner, and one gas heater. | FG-TURB/DB1-3 (3 combined cycle combustion turbine and heat recovery steam generator trains) | 15.21 | Natural gas | 1230 | MW | Three (3) combined-cycle combustion turbine (CT) / heat recovery steam generator (HRSG) trains. Each CT is a natural gas fired Mitsubishi model 501G, equipped with dry low NOx combustor and inlet air evaporative cooling. Each HRSG includes a natural gas fired duct burner with a 256 MMBtu/hr heat input capacity and a dry low NOx burner. | Particulate matter, total < 2.5 Âµ (TPM2.5) | Use clean fuel (natural gas) and good combustion practices. | 10.7 | LB/H | HOURLY; EACH CT/HRSG TRAIN |
| RENAISSANCE ENERGY CENTER | APV RENAISSANCE PARTNERS | GREENE | PA | 8/27/2018 | This Plan Approval is to allow the construction and temporary operation of a natural gas-fired combined cycle power plant to be located in Monongahela Township, Greene County. with<br><br>Two (2) Siemens, SGT6-8000H (or equivalent), natural gas-fired combustion turbines 3,580 MMBtu/hr heat input rating (LHV) each (controlled with low NOx burners), including natural gas-fired duct burners, 914.1 MMBtu/hr heat input rating each; controlled by Ultra-low NOx combustors, SCR, and oxidation catalysts; 1,127 MW total net generating capacity.<br>One (1) natural gas-fired auxiliary boiler, 90 MMBtu/hr heat input rating.<br>One (1) Cummins model #CFP15E-F20 (or equivalent), diesel-fired fire pump engine, 411 bhp rating; including<br>One (1) diesel fuel storage tank, 2,175 gallons<br>One (1) Caterpillar 3516 (or equivalent), diesel-fired emergency generator engine rated at 2000 kW.<br>Miscellaneous components in natural gas service, and circuit breakers; controlled by leak detection and repair (â€œLDARâ€□<br>One (1) aqueous ammonia (19%) storage vessel rated at 19,000 gallons (or as determined during final design). | | COMBUSTION TURBINE UNIT w/o DUCT BURNERS UNIT | 15.21 | Natural Gas | 2665.9 | MMBtu/hr | | Particulate matter, total (TPM) | | 0.0043 | LB/MMBTU | |

**Table D-2. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - PM**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RENAISSANCE ENERGY CENTER | APV RENAISSANCE PARTNERS | GREENE | PA | 8/27/2018 | This Plan Approval is to allow the construction and temporary operation of a natural gas-fired combined cycle power plant to be located in Monongahela Township, Greene County. with<br><br>Two (2) Siemens, SGT6-8000H (or equivalent), natural gas-fired combustion turbines 3,580 MMBtu/hr heat input rating (LHV) each (controlled with low NOx burners), including natural gas-fired duct burners, 914.1 MMBtu/hr heat input rating each; controlled by Ultra-low NOx combustors, SCR, and oxidation catalysts; 1,127 MW total net generating capacity.<br>One (1) natural gas-fired auxiliary boiler, 90 MMBtu/hr heat input rating.<br>One (1) Cummins model #CFP15E-F20 (or equivalent), diesel-fired fire pump engine, 411 bhp rating; including One (1) diesel fuel storage tank, 2,175 gallons<br>One (1) Caterpillar 3516 (or equivalent), diesel-fired emergency generator engine rated at 2000 kW.<br>Miscellaneous components in natural gas service, and circuit breakers; controlled by leak detection and repair (â€œLDARâ€□<br>One (1) aqueous ammonia (19%) storage vessel rated at 19,000 gallons (or as determined during final design). | | COMBUSTION TURBINE UNIT w/o DUCT BURNERS UNIT | 15.21 | Natural Gas | 2665.9 | MMBtu/hr | | Particulate matter, total < 10 Âµ (TPM10) | | 0.0043 | LB/MMBTU | HR |
| RENAISSANCE ENERGY CENTER | APV RENAISSANCE PARTNERS | GREENE | PA | 8/27/2018 | This Plan Approval is to allow the construction and temporary operation of a natural gas-fired combined cycle power plant to be located in Monongahela Township, Greene County. with<br><br>Two (2) Siemens, SGT6-8000H (or equivalent), natural gas-fired combustion turbines 3,580 MMBtu/hr heat input rating (LHV) each (controlled with low NOx burners), including natural gas-fired duct burners, 914.1 MMBtu/hr heat input rating each; controlled by Ultra-low NOx combustors, SCR, and oxidation catalysts; 1,127 MW total net generating capacity.<br>One (1) natural gas-fired auxiliary boiler, 90 MMBtu/hr heat input rating.<br>One (1) Cummins model #CFP15E-F20 (or equivalent), diesel-fired fire pump engine, 411 bhp rating; including One (1) diesel fuel storage tank, 2,175 gallons<br>One (1) Caterpillar 3516 (or equivalent), diesel-fired emergency generator engine rated at 2000 kW.<br>Miscellaneous components in natural gas service, and circuit breakers; controlled by leak detection and repair (â€œLDARâ€□<br>One (1) aqueous ammonia (19%) storage vessel rated at 19,000 gallons (or as determined during final design). | | COMBUSTION TURBINE UNIT w/o DUCT BURNERS UNIT | 15.21 | Natural Gas | 2665.9 | MMBtu/hr | | Particulate matter, total < 2.5 Âµ (TPM2.5) | | 0.0043 | LB/MMBTU | HR |
| BROOKE COUNTY POWER PLANT | ESC BROOKE COUNTY POWER I, LLC | BROOKE | WV | 9/18/2018 | Nominal 925 mWe natural gas-fired combined-cycle power plant. Small sources: Emergency Generator, Fire Water Pump, Fuel Gas Heater not included in RBLC - may request info or see permit for details. | | GE 7HA.01 Turbine | 15.21 | Natural Gas/Ethane | 2737.7 | mmBtu/hr | Facility has 2 identical units, only 1 entry in RBLC. Nominal 462.5 mWe. All emission limits steady-state and include 424 mmBtu/hr Duct Burner in operation. Short Term startup and shutdown limits in lb/event given in permit. | Particulate matter, total (TPM) | Air Filter, Use of Natural Gas, Good Combustion Practices | 16.9 | LB/HR | |
| CALCASIEU PASS LNG PROJECT | VENTURE GLOBAL CALCASIEU PASS, LLC | CAMERON | LA | 9/21/2018 | New Liquefied Natural Gas (LNG) production, storage, and export terminal. | Application Received September 2, 2015. | Combined Cycle Combustion Turbines (CCCT1 to CCCT5) | 15.21 | Natural Gas | 921 | MM BTU/h | | Particulate matter, total < 10 Âµ (TPM10) | Exclusive Combustion of Fuel Gas and Good Combustion Practices. | 9.53 | LB/H | 3 HOUR AVERAGE |
| CALCASIEU PASS LNG PROJECT | VENTURE GLOBAL CALCASIEU PASS, LLC | CAMERON | LA | 9/21/2018 | New Liquefied Natural Gas (LNG) production, storage, and export terminal. | Application Received September 2, 2015. | Combined Cycle Combustion Turbines (CCCT1 to CCCT5) | 15.21 | Natural Gas | 921 | MM BTU/h | | Particulate matter, total < 2.5 Âµ (TPM2.5) | Exclusive Combustion of Fuel Gas and Good Combustion Practices. | 9.53 | LB/H | 3 HOUR AVERAGE |

**Table D-2. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - PM**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LBWL--ERICKSON STATION | LANSING BOARD OF WATER AND LIGHT | EATON | MI | 12/21/2018 | Natural gas combined-cycle power plant. | The proposed new plant will be replacing the electrical generating capacity of both BWL's existing coal-fired power plants. BWL intends to retire those coal-fired power plants from service by 2025. However, before they can be retired, the new natural gas power plant must be operational. Emissions in the area will increase for a short period if the new combined-cycle plant is built. However, there will be overall reductions in emissions when the existing coal fired power plants are taken out of service. | EUCTGHRSG2--A 667 MMBTU/H natural gas fired CTG with a HRSG. | 15.21 | Natural gas | 667 | MMBTU/H | EUCTGHRSG2 is a nominally rated 667 MMBTU/H natural gas fired CTG coupled with a HRSG. The HRSG is equipped with a natural gas fired duct burner rated at 204 MMBTU/h to provide heat for additional steam production. The CTG is capable of operating in combined-cycle mode where the exhaust is routed to the HRSG or in simple-cycle mode where the HRSG is bypassed. The HRSG is not capable of operating independently from the CTG. The CTG/HRSG is equipped with a DLNB, SCR and oxidation catalyst. | Particulate matter, total < 10 Âµ (TPM10) | Pipeline quality natural gas, inlet air conditioning, and good combustion practices. | 6.02 | LB/H | HOURLY |
| LBWL--ERICKSON STATION | LANSING BOARD OF WATER AND LIGHT | EATON | MI | 12/21/2018 | Natural gas combined-cycle power plant. | The proposed new plant will be replacing the electrical generating capacity of both BWL's existing coal-fired power plants. BWL intends to retire those coal-fired power plants from service by 2025. However, before they can be retired, the new natural gas power plant must be operational. Emissions in the area will increase for a short period if the new combined-cycle plant is built. However, there will be overall reductions in emissions when the existing coal fired power plants are taken out of service. | EUCTGHRSG2--A 667 MMBTU/H natural gas fired CTG with a HRSG. | 15.21 | Natural gas | 667 | MMBTU/H | EUCTGHRSG2 is a nominally rated 667 MMBTU/H natural gas fired CTG coupled with a HRSG. The HRSG is equipped with a natural gas fired duct burner rated at 204 MMBTU/h to provide heat for additional steam production. The CTG is capable of operating in combined-cycle mode where the exhaust is routed to the HRSG or in simple-cycle mode where the HRSG is bypassed. The HRSG is not capable of operating independently from the CTG. The CTG/HRSG is equipped with a DLNB, SCR and oxidation catalyst. | Particulate matter, total < 2.5 Âµ (TPM2.5) | Pipeline quality natural gas, inlet air conditioning, and good combustion practices. | 6.02 | LB/H | HOURLY |
| LBWL--ERICKSON STATION | LANSING BOARD OF WATER AND LIGHT | EATON | MI | 12/21/2018 | Natural gas combined-cycle power plant. | The proposed new plant will be replacing the electrical generating capacity of both BWL's existing coal-fired power plants. BWL intends to retire those coal-fired power plants from service by 2025. However, before they can be retired, the new natural gas power plant must be operational. Emissions in the area will increase for a short period if the new combined-cycle plant is built. However, there will be overall reductions in emissions when the existing coal fired power plants are taken out of service. | EUCTGHRSG1--A 667 MMBTU/H NG fired combustion turbine generator coupled with a heat recovery steam generator (HRSG) | 15.21 | Natural gas | 667 | MMBTU/H | A nominally rated 667 MMBTU/hr natural gas-fired combustion turbine generator (CTG) coupled with a heat recovery steam generator (HRSG). The HRSG is equipped with a natural gas-fired duct burner rated at 204 MMBTU/hr to provide heat for additional steam production. The CTG is capable of operating in combined-cycle mode where the exhaust is routed to the HRSG or in simple-cycle mode where the HRSG is bypassed. The HRSG is not capable of operating independently from the CTG. The CTG/HRSG is equipped with a dry low NOx burner (DLNB), selective catalytic reduction (SCR) and oxidation catalyst. | Particulate matter, total < 10 Âµ (TPM10) | Pipeline quality natural gas, inlet air conditioning, and good combustion practices. | 6.02 | LB/H | HOURLY |

**Table D-2. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - PM**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LBWL--ERICKSON STATION | LANSING BOARD OF WATER AND LIGHT | EATON | MI | 12/21/2018 | Natural gas combined-cycle power plant. | The proposed new plant will be replacing the electrical generating capacity of both BWL's existing coal-fired power plants. BWL intends to retire those coal-fired power plants from service by 2025. However, before they can be retired, the new natural gas power plant must be operational. Emissions in the area will increase for a short period if the new combined-cycle plant is built. However, there will be overall reductions in emissions when the existing coal fired power plants are taken out of service. | EUCTGHRSG1--A 667 MMBTU/H NG fired combustion turbine generator coupled with a heat recovery steam generator (HRSG) | 15.21 | Natural gas | 667 | MMBTU/H | A nominally rated 667 MMBTU/hr natural gas-fired combustion turbine generator (CTG) coupled with a heat recovery steam generator (HRSG). The HRSG is equipped with a natural gas-fired duct burner rated at 204 MMBTU/hr to provide heat for additional steam production. The CTG is capable of operating in combined-cycle mode where the exhaust is routed to the HRSG or in simple-cycle mode where the HRSG is bypassed. The HRSG is not capable of operating independently from the CTG. The CTG/HRSG is equipped with a dry low NOx burner (DLNB), selective catalytic reduction (SCR) and oxidation catalyst. | Particulate matter, total < 2.5 Âµ (TPM2.5) | Pipeline quality natural gas, inlet air conditioning and good combustion practices. | 6.02 | LB/H | HOURLY |
| JACKSON ENERGY CENTER | JACKSON GENERATION, LLC | WILL | IL | 12/31/2018 | The proposed facility is designed to generate baseload power. It will consist of two combined-cycle generating units, each with a combustion turbine and associated heat recovery steam generator (HRSG). The turbines would only burn natural gas. Other units include an auxiliary boiler, fuel heater, emergency engines, natural gas piping and components, circuit breakers and roadways | Additional pollutants: Sulfuric Acid Mist: 48 tons/year; GHG as CO2e: 4,752,085 tons/year | Combined-Cycle Combustion Turbine | 15.21 | Natural Gas | 3864 | mmBtu/hr | Combined-cycle combustion turbines with heat recovery steam generator (HRSG). Turbines will have inlet evaporative cooling systems to cool inlet air during warm weather to increase power output. | Particulate matter, total (TPM) | Good combustion practices | 0.0026 | LB/MMBTU | 3-HR BLOCK AVERAGE |
| JACKSON GENERATING STATION | CONSUMERS ENERGY COMPANY | JACKSON | MI | 4/2/2019 | Natural gas combined-cycle power plant | | FGLMDB1-6 (6 combined cycle natural gas fired CTG each equipped with a HRSG) | 15.21 | natural gas | 420 | MW | FGLMDB1-6 is 6 combined cycle natural gas fired combustion turbine generators (CTG) each equipped with a heat recovery steam generator (HRSG).□<br>□<br>Nominal rating 420 MW. Each combustion turbine (CT) is a GE LM6000 with a rating of 440 MMBTU/HR (HHV) and a duct burner rating of 222 MMBTU/HR (HHV). A combined cycle natural gas fired combustion turbine generator (CTG) with heat recovery steam generator (HRSG) in a 1x1 configuration with a steam turbine generator (STG) for a nominal 420 MW electricity production. The HRSG is not capable of operating independently from the CTG. | Particulate matter, total < 2.5 Âµ (TPM2.5) | Combustion inlet air filters, good combustion practices and only combust natural gas. | 4.9 | LB/HR | 24 HR AVG DET.EACH OPERATING HR; EACH |
| JACKSON GENERATING STATION | CONSUMERS ENERGY COMPANY | JACKSON | MI | 4/2/2019 | Natural gas combined-cycle power plant | | FGLMDB1-6 (6 combined cycle natural gas fired CTG each equipped with a HRSG) | 15.21 | natural gas | 420 | MW | FGLMDB1-6 is 6 combined cycle natural gas fired combustion turbine generators (CTG) each equipped with a heat recovery steam generator (HRSG).□<br>□<br>Nominal rating 420 MW. Each combustion turbine (CT) is a GE LM6000 with a rating of 440 MMBTU/HR (HHV) and a duct burner rating of 222 MMBTU/HR (HHV). A combined cycle natural gas fired combustion turbine generator (CTG) with heat recovery steam generator (HRSG) in a 1x1 configuration with a steam turbine generator (STG) for a nominal 420 MW electricity production. The HRSG is not capable of operating independently from the CTG. | Particulate matter, total < 10 Âµ (TPM10) | Combustion inlet air filters, good combustion practices and only combust natural gas. | 4.9 | LB/H | 24-HR AVG, EACH HR UNIT OPERATES, EACH |

**Table D-2. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - PM**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHICKAHOMINY POWER LLC | CHICKAHOMINY POWER LLC | CHARLES CITY | VA | 6/24/2019 | Natural gas-fired combined cycle power plant, three 1 x1 configuration, 310 MW each, no duct firing, air cooled with two 84 MMBtu/H natural gas-fired auxiliary boilers, three fuel gas heaters, an emergency generator, fire water pump, and circuit breakers. | The proposed project will be a new combined-cycle electrical power generating facility utilizing three power blocks consisting of a combustion turbine with a heat recovery steam generator (HRSG) and a reheat condensing steam turbine generator (three 1 x 1 configuration). The turbine model proposed is a MHPS M501JAC turbine. The project will have a nominal net generating capacity of 1,650 MW. The proposed fuel for the turbines is pipeline-quality natural gas. Emissions from the turbines will be controlled by the use of low carbon fuels and high efficiency design (for GHG), clean fuels and GCPs (for PM, PM10 and PM2.5), SCR and dry low NOx burners (for NOx), and oxidation catalyst (for CO and VOC). Other equipment at the site, including two natural gas-fired auxiliary boilers, three fuel gas heaters, a diesel-fired emergency fire water pump, and a diesel-fired emergency generator, are also proposed and will be subject to emission controls. Natural gas piping components and electrical circuit breakers potentially emit GHG pollutants (expressed as carbon dioxide equivalents, or CO2e) and they will also be covered in the permit.□<br>□<br>This facility is not proposing duct firing in the HRSGs and is proposing air-cooled turbines that will not require cooling towers. | Three (3) Mitsubishi Hitachi Power Systems combustion turbine generators | 15.21 | natural gas | 35000 | MMCF/YR | One on one configuration: 4,066 MMBtu/H combustion turbine. Emission limits reflect the operation of each of the three turbines. | Particulate matter, filterable (FPM) | Controlled by good combustion practices (e.g. controlled fuel/air mixing, adequate temperature, and gas residence time) and the use of pipeline-quality natural gas with a maximum sulfur content of 0.4 grains per 100 scf, on a 12-month rolling average. | 0.0052 | LB/MMBTU | AVG. OF 3 TEST RUNS |
| CHICKAHOMINY POWER LLC | CHICKAHOMINY POWER LLC | CHARLES CITY | VA | 6/24/2019 | Natural gas-fired combined cycle power plant, three 1 x1 configuration, 310 MW each, no duct firing, air cooled with two 84 MMBtu/H natural gas-fired auxiliary boilers, three fuel gas heaters, an emergency generator, fire water pump, and circuit breakers. | The proposed project will be a new combined-cycle electrical power generating facility utilizing three power blocks consisting of a combustion turbine with a heat recovery steam generator (HRSG) and a reheat condensing steam turbine generator (three 1 x 1 configuration). The turbine model proposed is a MHPS M501JAC turbine. The project will have a nominal net generating capacity of 1,650 MW. The proposed fuel for the turbines is pipeline-quality natural gas. Emissions from the turbines will be controlled by the use of low carbon fuels and high efficiency design (for GHG), clean fuels and GCPs (for PM, PM10 and PM2.5), SCR and dry low NOx burners (for NOx), and oxidation catalyst (for CO and VOC). Other equipment at the site, including two natural gas-fired auxiliary boilers, three fuel gas heaters, a diesel-fired emergency fire water pump, and a diesel-fired emergency generator, are also proposed and will be subject to emission controls. Natural gas piping components and electrical circuit breakers potentially emit GHG pollutants (expressed as carbon dioxide equivalents, or CO2e) and they will also be covered in the permit.□<br>□<br>This facility is not proposing duct firing in the HRSGs and is proposing air-cooled turbines that will not require cooling towers. | Three (3) Mitsubishi Hitachi Power Systems combustion turbine generators | 15.21 | natural gas | 35000 | MMCF/YR | One on one configuration: 4,066 MMBtu/H combustion turbine. Emission limits reflect the operation of each of the three turbines. | Particulate matter, total < 10 Âµ (TPM10) | Controlled by good combustion practices (e.g. controlled fuel/air mixing, adequate temperature, and gas residence time) and the use of pipeline-quality natural gas with a maximum sulfur content of 0.4 grains per 100 scf, on a 12-month rolling average. | 0.0052 | LB/MMBTU | AVG OF 3 TEST RUNS |
| CHICKAHOMINY POWER LLC | CHICKAHOMINY POWER LLC | CHARLES CITY | VA | 6/24/2019 | Natural gas-fired combined cycle power plant, three 1 x1 configuration, 310 MW each, no duct firing, air cooled with two 84 MMBtu/H natural gas-fired auxiliary boilers, three fuel gas heaters, an emergency generator, fire water pump, and circuit breakers. | The proposed project will be a new combined-cycle electrical power generating facility utilizing three power blocks consisting of a combustion turbine with a heat recovery steam generator (HRSG) and a reheat condensing steam turbine generator (three 1 x 1 configuration). The turbine model proposed is a MHPS M501JAC turbine. The project will have a nominal net generating capacity of 1,650 MW. The proposed fuel for the turbines is pipeline-quality natural gas. Emissions from the turbines will be controlled by the use of low carbon fuels and high efficiency design (for GHG), clean fuels and GCPs (for PM, PM10 and PM2.5), SCR and dry low NOx burners (for NOx), and oxidation catalyst (for CO and VOC). Other equipment at the site, including two natural gas-fired auxiliary boilers, three fuel gas heaters, a diesel-fired emergency fire water pump, and a diesel-fired emergency generator, are also proposed and will be subject to emission controls. Natural gas piping components and electrical circuit breakers potentially emit GHG pollutants (expressed as carbon dioxide equivalents, or CO2e) and they will also be covered in the permit.□<br>□<br>This facility is not proposing duct firing in the HRSGs and is proposing air-cooled turbines that will not require cooling towers. | Three (3) Mitsubishi Hitachi Power Systems combustion turbine generators | 15.21 | natural gas | 35000 | MMCF/YR | One on one configuration: 4,066 MMBtu/H combustion turbine. Emission limits reflect the operation of each of the three turbines. | Particulate matter, total < 2.5 Âµ (TPM2.5) | Controlled by good combustion practices (e.g. controlled fuel/air mixing, adequate temperature, and gas residence time) and the use of pipeline-quality natural gas with a maximum sulfur content of 0.4 grains per 100 scf, on a 12-month rolling average. | 0.0052 | LB/MMBTU | AVG OF 3 TEST RUNS |

**Table D-2. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - PM**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BIG CAJUN I POWER PLANT | LOUISIANA GENERATING, LLC | POINTE COUPEE | LA | 6/27/2019 | Electric power generating station using two natural gas fed turbines (120 MW each) | | Combustion Turbine #1 (EQT0002, CTG-1) | 15.21 | Natural Gas | 1679 | MM BTU/hr | | Particulate matter, total < 10 Âµ (TPM10) | Good Combustion Controls | 19 | LB/HR | HOURLY MAXIMUM |
| BIG CAJUN I POWER PLANT | LOUISIANA GENERATING, LLC | POINTE COUPEE | LA | 6/27/2019 | Electric power generating station using two natural gas fed turbines (120 MW each) | | Combustion Turbine #2 (EQT0003, CTG-2) | 15.21 | Natural Gas | 1679 | MM BTU/hr | | Particulate matter, total < 10 Âµ (TPM10) | Good Combustion Controls | 19 | LB/HR | HOURLY MAXIMUM |
| COGEN TECH LINDEN VENTURE LP | COGEN TECH LINDEN VENTURE LP | UNION | NJ | 7/30/2019 | 1182 megawatts (MW) electric and steam generating plant | New 250 MW General Electric (GE) 7F.05 CCCT with unfired heat recovery steam generator combusting natural gas (primary fuel) and back up ULSD equivalent to 800 hours per year. | 250 MW COMBINED CYCLE COMBUSTION TURBINE FIRING NATURAL GAS | 15.21 | Natural Gas | 21042 | MMCubic ft/yr | One New 250 MW General Electric 7F.05 Combined cycle combustion turbine with a Maximum heat Input rate of Size: 2517 MMBtu/hr (HHV) at 10 degrees F, equipped with add-on controls and SCR and Oxidation Catalyst. | Particulate matter, filterable (FPM) | USE OF CLEAN NATURAL GAS AND ULSD CLEAN BURNING FUELS | 9.3 | LB/H | AV OF THREE ONE H STACK TESTS EVERY 5 YR |
| COGEN TECH LINDEN VENTURE LP | COGEN TECH LINDEN VENTURE LP | UNION | NJ | 7/30/2019 | 1182 megawatts (MW) electric and steam generating plant | New 250 MW General Electric (GE) 7F.05 CCCT with unfired heat recovery steam generator combusting natural gas (primary fuel) and back up ULSD equivalent to 800 hours per year. | 250 MW COMBINED CYCLE COMBUSTION TURBINE FIRING NATURAL GAS | 15.21 | Natural Gas | 21042 | MMCubic ft/yr | One New 250 MW General Electric 7F.05 Combined cycle combustion turbine with a Maximum heat Input rate of Size: 2517 MMBtu/hr (HHV) at 10 degrees F, equipped with add-on controls and SCR and Oxidation Catalyst. | Particulate matter, total < 10 Âµ (TPM10) | USE OF NATURAL GAS AND ULSD; BOTH CLEAN BURNING FUELS | 11.58 | LB/H | AV OF THREE ONE H STACK TESTS EVERY 5 YR |
| COGEN TECH LINDEN VENTURE LP | COGEN TECH LINDEN VENTURE LP | UNION | NJ | 7/30/2019 | 1182 megawatts (MW) electric and steam generating plant | New 250 MW General Electric (GE) 7F.05 CCCT with unfired heat recovery steam generator combusting natural gas (primary fuel) and back up ULSD equivalent to 800 hours per year. | 250 MW COMBINED CYCLE COMBUSTION TURBINE FIRING NATURAL GAS | 15.21 | Natural Gas | 21042 | MMCubic ft/yr | One New 250 MW General Electric 7F.05 Combined cycle combustion turbine with a Maximum heat Input rate of Size: 2517 MMBtu/hr (HHV) at 10 degrees F, equipped with add-on controls and SCR and Oxidation Catalyst. | Particulate matter, total < 2.5 Âµ (TPM2.5) | USE OF NATURAL GAS AND ULSD; BOTH CLEAN BURNING FUELS | 11.58 | LB/H | AV OF THREE ONE H STACK TESTS EVERY 5 YR |

**Table D-2. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - PM**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| THOMAS TOWNSHIP ENERGY, LLC | THOMAS TOWNSHIP ENERGY, LLC | SAGINAW | MI | 8/21/2019 | New power plant | Thomas Township Energy is proposing to install two combustion turbine generators (CTG). Each CTG is connected to a heat recovery steam generator (HRSG), together referred to as a CTGHRSG. To reduce emissions of nitrogen oxides (NOx), the high-efficiency CTGHRSGs will be equipped with dry low-NOx burners and selective catalytic reduction (SCR). To reduce the emissions of carbon monoxide (CO) and volatile organic compounds (VOCs), each CTGHRSG will be equipped with an oxidation catalyst. | FGCTGHRSG | 15.21 | Natural gas | 625 | MW | Two (2) combined-cycle natural gas-fired combustion turbine generators (CTGs), each with a heat recovery steam generator (HRSG) in a 1x1 configuration with a steam turbine generator (STG). Each CTGHRSG has a combined nominal 625 MW electricity production (ISO) and a maximum combined heat input rating of 4,200 MMBTU/hr (HHV). Each HRSG is equipped with a natural gas-fired duct burner with a maximum rating of 560 MMBTU/hr (HHV) (ISO) to provide heat for additional steam production. | Particulate matter, total (TPM) | Low sulfur fuel and good combustion practices. | 0.0034 | LB/MMBTU | HOURLY; EACH UNIT |
| THOMAS TOWNSHIP ENERGY, LLC | THOMAS TOWNSHIP ENERGY, LLC | SAGINAW | MI | 8/21/2019 | New power plant | Thomas Township Energy is proposing to install two combustion turbine generators (CTG). Each CTG is connected to a heat recovery steam generator (HRSG), together referred to as a CTGHRSG. To reduce emissions of nitrogen oxides (NOx), the high-efficiency CTGHRSGs will be equipped with dry low-NOx burners and selective catalytic reduction (SCR). To reduce the emissions of carbon monoxide (CO) and volatile organic compounds (VOCs), each CTGHRSG will be equipped with an oxidation catalyst. | FGCTGHRSG | 15.21 | Natural gas | 625 | MW | Two (2) combined-cycle natural gas-fired combustion turbine generators (CTGs), each with a heat recovery steam generator (HRSG) in a 1x1 configuration with a steam turbine generator (STG). Each CTGHRSG has a combined nominal 625 MW electricity production (ISO) and a maximum combined heat input rating of 4,200 MMBTU/hr (HHV). Each HRSG is equipped with a natural gas-fired duct burner with a maximum rating of 560 MMBTU/hr (HHV) (ISO) to provide heat for additional steam production. | Particulate matter, total < 10 Âµ (TPM10) | Low sulfur fuel and good combustion practices. | 0.006 | LB/MMBTU | HOURLY; EACH UNIT |
| THOMAS TOWNSHIP ENERGY, LLC | THOMAS TOWNSHIP ENERGY, LLC | SAGINAW | MI | 8/21/2019 | New power plant | Thomas Township Energy is proposing to install two combustion turbine generators (CTG). Each CTG is connected to a heat recovery steam generator (HRSG), together referred to as a CTGHRSG. To reduce emissions of nitrogen oxides (NOx), the high-efficiency CTGHRSGs will be equipped with dry low-NOx burners and selective catalytic reduction (SCR). To reduce the emissions of carbon monoxide (CO) and volatile organic compounds (VOCs), each CTGHRSG will be equipped with an oxidation catalyst. | FGCTGHRSG | 15.21 | Natural gas | 625 | MW | Two (2) combined-cycle natural gas-fired combustion turbine generators (CTGs), each with a heat recovery steam generator (HRSG) in a 1x1 configuration with a steam turbine generator (STG). Each CTGHRSG has a combined nominal 625 MW electricity production (ISO) and a maximum combined heat input rating of 4,200 MMBTU/hr (HHV). Each HRSG is equipped with a natural gas-fired duct burner with a maximum rating of 560 MMBTU/hr (HHV) (ISO) to provide heat for additional steam production. | Particulate matter, total < 2.5 Âµ (TPM2.5) | Low sulfur fuel and good combustion practices. | 0.006 | LB/MMBTU | HOURLY; EACH UNIT |
| INDECK NILES, LLC | INDECK NILES, LLC | CASS | MI | 11/26/2019 | Natural gas combined cycle power plant | | FGCTGHRSG | 15.21 | Natural gas | 3421<br>740<br>8322<br><br>3421 | MMBTU/H<br>MMBTU/H<br>MMBTU/H<br><br>MMBTU/H | 3421 MMBTU/H for each turbine□<br>740 MMBTU/H for each duct burner for a combined throughput of 4161 MMBTU/H or 8322 MMBTU/H for both trains.□<br>□<br>Two combined-cycle natural gas-fired combustion turbine generators (CTGs) with Heat Recovery Steam Generators (HRSG) (EUCTGHRSG1 & EUCTGHRSG2 in FGCTGHRSG). The total hours for startup and shutdown for each train shall not exceed 500 hours per 12-month rolling time period. | Particulate matter, filterable (FPM) | Good combustion practices, inlet air conditioning, and the use of pipeline quality natural gas. | 9.9 | LB/H | HOURLY; EACH CTGHRSG |

**Table D-2. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - PM**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| INDECK NILES, LLC | INDECK NILES, LLC | CASS | MI | 11/26/2019 | Natural gas combined cycle power plant | | FGCTGHRSG | 15.21 | Natural gas | 3421 | MMBTU/H | 3421 MMBTU/H for each turbine□ 740 MMBTU/H for each duct burner for a combined throughput of 4161 MMBTU/H or 8322 MMBTU/H for both trains.□ □ Two combined-cycle natural gas-fired combustion turbine generators (CTGs) with Heat Recovery Steam Generators (HRSG) (EUCTGHRSG1 & EUCTGHRSG2 in FGCTGHRSG). The total hours for startup and shutdown for each train shall not exceed 500 hours per 12-month rolling time period. | Particulate matter, total < 10 Âµ (TPM10) | Good combustion practices, inlet air conditioning, and the use of pipeline quality natural gas. | 19.8 | LB/H | HOURLY; EACH CTGHRSG |
| INDECK NILES, LLC | INDECK NILES, LLC | CASS | MI | 11/26/2019 | Natural gas combined cycle power plant | | FGCTGHRSG | 15.21 | Natural gas | 3421 | MMBTU/H | 3421 MMBTU/H for each turbine□ 740 MMBTU/H for each duct burner for a combined throughput of 4161 MMBTU/H or 8322 MMBTU/H for both trains.□ □ Two combined-cycle natural gas-fired combustion turbine generators (CTGs) with Heat Recovery Steam Generators (HRSG) (EUCTGHRSG1 & EUCTGHRSG2 in FGCTGHRSG). The total hours for startup and shutdown for each train shall not exceed 500 hours per 12-month rolling time period. | Particulate matter, total < 2.5 Âµ (TPM2.5) | Good combustion practices, inlet air conditioning, and the use of pipeline quality natural gas. | 19.8 | LB/H | HOURLY; EACH CTGHRSG |
| NEMADJI TRAIL ENERGY CENTER | NEMADJI TRAIL ENERGY CENTER | DOUGLAS | WI | 9/1/2020 | Natural gas-fired power plant | | Natural-Gas-Fired Combined-Cycle Turbine (P01) | 15.21 | Natural Gas | 4671 | MMBTU/H | One Natural-Gas-Fired Siemens SGT6-8000 H Combined-Cycle Turbine with Natural Gas-Fired Duct Burner and Diesel Fuel Oil Back-Up [Maximum continuous rating: 4,671 MMBtu/hr higher heating value (HHV) when combusting natural gas, 4,027 MMBtu/hr, HHV when combusting diesel fuel oil], Selective Catalytic Reduction (SCR) (C01a) and Oxidation Catalyst (C01b) | Particulate matter, total (TPM) | Only combust pipeline quality natural gas and diesel fuel oil and use good combustion control according to the manufacturerâ€™s recommendations. | 36.3 | LB/H | NATURAL GAS, DUCT FIRING |
| NEMADJI TRAIL ENERGY CENTER | NEMADJI TRAIL ENERGY CENTER | DOUGLAS | WI | 9/1/2020 | Natural gas-fired power plant | | Natural-Gas-Fired Combined-Cycle Turbine (P01) | 15.21 | Natural Gas | 4671 | MMBTU/H | One Natural-Gas-Fired Siemens SGT6-8000 H Combined-Cycle Turbine with Natural Gas-Fired Duct Burner and Diesel Fuel Oil Back-Up [Maximum continuous rating: 4,671 MMBtu/hr higher heating value (HHV) when combusting natural gas, 4,027 MMBtu/hr, HHV when combusting diesel fuel oil], Selective Catalytic Reduction (SCR) (C01a) and Oxidation Catalyst (C01b) | Particulate matter, total < 10 Âµ (TPM10) | Only pipeline quality natural gas and diesel fuel oil may be combusted and use good combustion control according to the manufacturerâ€™s recommendations. | 36.3 | LB/H | NATURAL GAS, DUCT FIRING |
| NEMADJI TRAIL ENERGY CENTER | NEMADJI TRAIL ENERGY CENTER | DOUGLAS | WI | 9/1/2020 | Natural gas-fired power plant | | Natural-Gas-Fired Combined-Cycle Turbine (P01) | 15.21 | Natural Gas | 4671 | MMBTU/H | One Natural-Gas-Fired Siemens SGT6-8000 H Combined-Cycle Turbine with Natural Gas-Fired Duct Burner and Diesel Fuel Oil Back-Up [Maximum continuous rating: 4,671 MMBtu/hr higher heating value (HHV) when combusting natural gas, 4,027 MMBtu/hr, HHV when combusting diesel fuel oil], Selective Catalytic Reduction (SCR) (C01a) and Oxidation Catalyst (C01b) | Particulate matter, total < 2.5 Âµ (TPM2.5) | Only combust pipeline quality natural gas and diesel fuel oil and use good combustion control according to the manufacturerâ€™s recommendations. | 36.3 | LB/H | NATURAL GAS, DUCT FIRING |
| NEMADJI TRAIL ENERGY CENTER | NEMADJI TRAIL ENERGY CENTER | DOUGLAS | WI | 9/1/2020 | Natural gas-fired power plant | | Natural Gas-Fired Combined-Cycle Turbine (P01) Start-up and Shutdown (Natural Gas) | 15.21 | Natural Gas | 0 | | One Natural-Gas-Fired Siemens SGT6-8000H Combined-Cycle Turbine with Natural Gas-Fired Duct Burner and Diesel Fuel Oil Back-Up [Maximum continuous rating: 4,671 MMBtu/hr higher heating value (HHV) when combusting natural gas, 4,027 MMBtu/hr, HHV when combusting diesel fuel oil | Particulate matter, total (TPM) | | 43.6 | LB/START-UP | |

**Table D-2. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - PM**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NEMADJI TRAIL ENERGY CENTER | NEMADJI TRAIL ENERGY CENTER | DOUGLAS | WI | 9/1/2020 | Natural gas-fired power plant | | Natural Gas-Fired Combined-Cycle Turbine (P01) Start-up and Shutdown (Natural Gas) | 15.21 | Natural Gas | 0 | | One Natural-Gas-Fired Siemens SGT6-8000H Combined-Cycle Turbine with Natural Gas-Fired Duct Burner and Diesel Fuel Oil Back-Up [Maximum continuous rating: 4,671 MMBtu/hr higher heating value (HHV) when combusting natural gas, 4,027 MMBtu/hr, HHV when combusting diesel fuel oil | Particulate matter, total < 10 Âµ (TPM10) | | 43.6 | LB/START-UP | |
| NEMADJI TRAIL ENERGY CENTER | NEMADJI TRAIL ENERGY CENTER | DOUGLAS | WI | 9/1/2020 | Natural gas-fired power plant | | Natural Gas-Fired Combined-Cycle Turbine (P01) Start-up and Shutdown (Natural Gas) | 15.21 | Natural Gas | 0 | | One Natural-Gas-Fired Siemens SGT6-8000H Combined-Cycle Turbine with Natural Gas-Fired Duct Burner and Diesel Fuel Oil Back-Up [Maximum continuous rating: 4,671 MMBtu/hr higher heating value (HHV) when combusting natural gas, 4,027 MMBtu/hr, HHV when combusting diesel fuel oil | Particulate matter, total < 2.5 Âµ (TPM2.5) | | 43.6 | LB/START-UP | |
| NEMADJI TRAIL ENERGY CENTER | NEMADJI TRAIL ENERGY CENTER | DOUGLAS | WI | 9/1/2020 | Natural gas-fired power plant | | Natural-Gas-Fired Combined-Cycle Turbine (P01) Start-Up and Shutdown (diesel) | 15.21 | Natural Gas | 0 | | One Natural-Gas-Fired Siemens SGT6-8000H Combined-Cycle Turbine with Natural Gas-Fired Duct Burner and Diesel Fuel Oil Back-Up [Maximum continuous rating: 4,671 MMBtu/hr higher heating value (HHV) when combusting natural gas, 4,027 MMBtu/hr, HHV when combusting diesel fuel oil], | Particulate matter, total (TPM) | | 78.9 | LB/START-UP | |
| NEMADJI TRAIL ENERGY CENTER | NEMADJI TRAIL ENERGY CENTER | DOUGLAS | WI | 9/1/2020 | Natural gas-fired power plant | | Natural-Gas-Fired Combined-Cycle Turbine (P01) Start-Up and Shutdown (diesel) | 15.21 | Natural Gas | 0 | | One Natural-Gas-Fired Siemens SGT6-8000H Combined-Cycle Turbine with Natural Gas-Fired Duct Burner and Diesel Fuel Oil Back-Up [Maximum continuous rating: 4,671 MMBtu/hr higher heating value (HHV) when combusting natural gas, 4,027 MMBtu/hr, HHV when combusting diesel fuel oil], | Particulate matter, total < 10 Âµ (TPM10) | | 78.9 | LB/START-UP | |
| NEMADJI TRAIL ENERGY CENTER | NEMADJI TRAIL ENERGY CENTER | DOUGLAS | WI | 9/1/2020 | Natural gas-fired power plant | | Natural-Gas-Fired Combined-Cycle Turbine (P01) Start-Up and Shutdown (diesel) | 15.21 | Natural Gas | 0 | | One Natural-Gas-Fired Siemens SGT6-8000H Combined-Cycle Turbine with Natural Gas-Fired Duct Burner and Diesel Fuel Oil Back-Up [Maximum continuous rating: 4,671 MMBtu/hr higher heating value (HHV) when combusting natural gas, 4,027 MMBtu/hr, HHV when combusting diesel fuel oil], | Particulate matter, total < 2.5 Âµ (TPM2.5) | | 78.9 | LB/START-UP | |
| PLANT BARRY | ALABAMA POWER COMPANY | MOBILE | AL | 11/9/2020 | | | Two 744 MW Combined Cycle Units | 15.21 | Natural Gas | 744 | MW | | Particulate matter, total < 10 Âµ (TPM10) | | 0.004 | LB/MMBTU | 3 HOUR AVG |
| PLANT BARRY | ALABAMA POWER COMPANY | MOBILE | AL | 11/9/2020 | | | Two 744 MW Combined Cycle Units | 15.21 | Natural Gas | 744 | MW | | Particulate matter, filterable < 2.5 Âµ (FPM2.5) | | 0.004 | LB/MMBTU | 3 HOUR AVG |
| LBWL--ERICKSON STATION | LANSING BOARD OF WATER AND LIGHT | EATON | MI | 1/7/2021 | Natural gas combined-cycle power plant | The proposed new plant will be replacing the electrical generating capacity of both BWL's existing coal-fired power plants. BWL intends to retire those coal-fired power plants from service by 2025. However, before they can be retired, the new natural gas power plant must be operational. Emissions in the area will increase for a short period if the new combined-cycle plant is built. However, there will be overall reductions in emissions when the existing coal fired power plants are taken out of service. | EUCTGHRSG1 | 15.21 | Natural gas | 667 | MMBTU/H | EUCTGHRSG1--A nominally rated 667 MMBTU/hr natural gas-fired combustion turbine generator (CTG) coupled with a heat recovery steam generator (HRSG). The HRSG is equipped with a natural gas-fired duct burner rated at 204 MMBTU/hr to provide heat for additional steam production. The CTG is capable of operating in combined-cycle mode where the exhaust is routed to the HRSG or in simple-cycle mode where the HRSG is bypassed. The HRSG is not capable of operating independently from the CTG. The CTG/HRSG is equipped with a dry low NOx burner (DLNB), selective catalytic reduction (SCR), and oxidation catalyst. | Particulate matter, total < 10 Âµ (TPM10) | Pipeline quality natural gas, inlet air conditioning, and good combustion practices. | 6.02 | LB/H | HOURLY; APPLIES DURING ALL OPERAT. MODES |

**Table D-2. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - PM**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LBWL--ERICKSON STATION | LANSING BOARD OF WATER AND LIGHT | EATON | MI | 1/7/2021 | Natural gas combined-cycle power plant | The proposed new plant will be replacing the electrical generating capacity of both BWL's existing coal-fired power plants. BWL intends to retire those coal-fired power plants from service by 2025. However, before they can be retired, the new natural gas power plant must be operational. Emissions in the area will increase for a short period if the new combined-cycle plant is built. However, there will be overall reductions in emissions when the existing coal fired power plants are taken out of service. | EUCTGHRSG1 | 15.21 | Natural gas | 667 | MMBTU/H | EUCTGHRSG1--A nominally rated 667 MMBTU/hr natural gas-fired combustion turbine generator (CTG) coupled with a heat recovery steam generator (HRSG). The HRSG is equipped with a natural gas-fired duct burner rated at 204 MMBTU/hr to provide heat for additional steam production. The CTG is capable of operating in combined-cycle mode where the exhaust is routed to the HRSG or in simple-cycle mode where the HRSG is bypassed. The HRSG is not capable of operating independently from the CTG. The CTG/HRSG is equipped with a dry low NOx burner (DLNB), selective catalytic reduction (SCR), and oxidation catalyst. | Particulate matter, total < 2.5 Âµ (TPM2.5) | Pipeline quality natural gas, inlet air conditioning, and good combustion practices. | 6.02 | LB/H | HOURLY; APPLIES DURING ALL OPERAT. MODES |
| LBWL--ERICKSON STATION | LANSING BOARD OF WATER AND LIGHT | EATON | MI | 1/7/2021 | Natural gas combined-cycle power plant | The proposed new plant will be replacing the electrical generating capacity of both BWL's existing coal-fired power plants. BWL intends to retire those coal-fired power plants from service by 2025. However, before they can be retired, the new natural gas power plant must be operational. Emissions in the area will increase for a short period if the new combined-cycle plant is built. However, there will be overall reductions in emissions when the existing coal fired power plants are taken out of service. | EUCTGHRSG2 | 15.21 | Natural gas | 667 | MMBTU/H | EUCTGHRSG2--A nominally rated 667 MMBTU/hr natural gas-fired CTG coupled with a HRSG. The HRSG is equipped with a natural gas-fired duct burner rated at 204 MMBTU/hr to provide heat for additional steam production. The CTG is capable of operating in combined-cycle mode where the exhaust is routed to the HRSG or in simple-cycle mode where the HRSG is bypassed. The HRSG is not capable of operating independently from the CTG. The CTG/HRSG is equipped with a DLNB, SCR, and oxidation catalyst. | Particulate matter, total < 10 Âµ (TPM10) | Pipeline quality natural gas, inlet air conditioning, and good combustion practices. | 6.02 | LB/H | HOURLY; APPLIES DURING ALL OPERAT. MODES |
| LBWL--ERICKSON STATION | LANSING BOARD OF WATER AND LIGHT | EATON | MI | 1/7/2021 | Natural gas combined-cycle power plant | The proposed new plant will be replacing the electrical generating capacity of both BWL's existing coal-fired power plants. BWL intends to retire those coal-fired power plants from service by 2025. However, before they can be retired, the new natural gas power plant must be operational. Emissions in the area will increase for a short period if the new combined-cycle plant is built. However, there will be overall reductions in emissions when the existing coal fired power plants are taken out of service. | EUCTGHRSG2 | 15.21 | Natural gas | 667 | MMBTU/H | EUCTGHRSG2--A nominally rated 667 MMBTU/hr natural gas-fired CTG coupled with a HRSG. The HRSG is equipped with a natural gas-fired duct burner rated at 204 MMBTU/hr to provide heat for additional steam production. The CTG is capable of operating in combined-cycle mode where the exhaust is routed to the HRSG or in simple-cycle mode where the HRSG is bypassed. The HRSG is not capable of operating independently from the CTG. The CTG/HRSG is equipped with a DLNB, SCR, and oxidation catalyst. | Particulate matter, total < 2.5 Âµ (TPM2.5) | Pipeline quality natural gas, inlet air conditioning, and good combustion practices. | 6.02 | LB/H | HOURLY; APPLIES DURING ALL OPERAT. MODES |
| UNIT 5 | NRG CEDAR BAYOU LLC | CHAMBERS | TX | 3/17/2021 | UNIT 5 | | COMBINED CYCLE TURBINE | 15.21 | NATURAL GAS | 0 | | | Particulate matter, filterable (FPM) | Low sulfur natural gas fuel | 0 | | |
| UNIT 5 | NRG CEDAR BAYOU LLC | CHAMBERS | TX | 3/17/2021 | UNIT 5 | | COMBINED CYCLE TURBINE | 15.21 | NATURAL GAS | 0 | | | Particulate matter, filterable < 10 Âµ (FPM10) | Low sulfur natural gas fuel | 0 | | |

**Table D-2. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - PM**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UNIT 5 | NRG CEDAR BAYOU LLC | CHAMBERS | TX | 3/17/2021 | UNIT 5 | | COMBINED CYCLE TURBINE | 15.21 | NATURAL GAS | 0 | | | Particulate matter, filterable < 2.5 Âµ (FPM2.5) | Low sulfur natural gas fuel | 0 | | |
| RENOVO ENERGY CENTER LLC/RENOVO PLT | RENOVO ENERGY CENTER LLC | CLINTON | PA | 4/29/2021 | | This plan approval is for the construction and operation of a 1,240-Megawatt natural gas/ultra-low sulfur diesel-fired combustion turbine, combined-cycle power plant with ancillary equipment. | COMBUSTION TURBINE w DUCT BURNER #2 (Natural Gas) | 15.21 | Natural Gas | 4546 | MMBtu/Hr | The air contaminants from each power block will be controlled by a selective catalytic reduction (SCR) system and an oxidation catalyst. | Particulate matter, total (TPM) | SCR, CATALYTIC OXIDIZER | 0.005 | LB/MMBTU | |
| RENOVO ENERGY CENTER LLC/RENOVO PLT | RENOVO ENERGY CENTER LLC | CLINTON | PA | 4/29/2021 | | This plan approval is for the construction and operation of a 1,240-Megawatt natural gas/ultra-low sulfur diesel-fired combustion turbine, combined-cycle power plant with ancillary equipment. | COMBUSTION TURBINE w DUCT BURNER #1 (Natural Gas) | 15.21 | Natural Gas | 4546 | MMBtu/Hr | The air contaminants from each power block will be controlled by a selective catalytic reduction (SCR) system and an oxidation catalyst. | Particulate matter, total (TPM) | SCR, Catalytic Oxidizer | 0.005 | LB/MMBTU | |
| SHADY HILLS COMBINED CYCLE FACILITY | SHADY HILLS ENERGY CENTER, LLC | PASCO | FL | 6/7/2021 | The Shady Hills Combined Cycle Facility (SHCCF), a new 573-megawatt (MW) (winter) 1-on-1 combined cycle electrical generating facility to be owned and operated by Shady Hills Energy Center, LLC, which will be located at 14350 Merchant Energy Way, Spring Hill, Florida. The proposed work will be conducted on an approximately 14-acre parcel east of and located adjacent to the existing Shady Hills Generating Station (SHGS) power plant, which is owned and operated by Shady Hills Power Company, L.L.C. | | GE 7HA.02 Combustion Turbine and HRSG with Duct Firing | 15.21 | Natural Gas | 3622.1 | MMBtu/hour | Throughput based on a compressor inlet air temperature of 59Â° F, the higher heating value (HHV) of natural gas, and 100% load | Particulate matter, filterable (FPM) | Low sulfur fuel | 1.4 | GR. S/100 SCF NG | |

**Table D-2. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - PM**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SHADY HILLS COMBINED CYCLE FACILITY | SHADY HILLS ENERGY CENTER, LLC | PASCO | FL | 6/7/2021 | The Shady Hills Combined Cycle Facility (SHCCF), a new 573-megawatt (MW) (winter) 1-on-1 combined cycle electrical generating facility to be owned and operated by Shady Hills Energy Center, LLC, which will be located at 14350 Merchant Energy Way, Spring Hill, Florida. The proposed work will be conducted on an approximately 14-acre parcel east of and located adjacent to the existing Shady Hills Generating Station (SHGS) power plant, which is owned and operated by Shady Hills Power Company, L.L.C. | | GE 7HA.02 Combustion Turbine and HRSG with Duct Firing | 15.21 | Natural Gas | 3622.1 | MMBtu/hour | Throughput based on a compressor inlet air temperature of 59Â° F, the higher heating value (HHV) of natural gas, and 100% load | Particulate matter, total < 10 Âµ (TPM10) | Clean fuels | 1.4 | GR. S/100 SCF NG | |
| SHADY HILLS COMBINED CYCLE FACILITY | SHADY HILLS ENERGY CENTER, LLC | PASCO | FL | 6/7/2021 | The Shady Hills Combined Cycle Facility (SHCCF), a new 573-megawatt (MW) (winter) 1-on-1 combined cycle electrical generating facility to be owned and operated by Shady Hills Energy Center, LLC, which will be located at 14350 Merchant Energy Way, Spring Hill, Florida. The proposed work will be conducted on an approximately 14-acre parcel east of and located adjacent to the existing Shady Hills Generating Station (SHGS) power plant, which is owned and operated by Shady Hills Power Company, L.L.C. | | GE 7HA.02 Combustion Turbine and HRSG with Duct Firing | 15.21 | Natural Gas | 3622.1 | MMBtu/hour | Throughput based on a compressor inlet air temperature of 59Â° F, the higher heating value (HHV) of natural gas, and 100% load | Particulate matter, total < 2.5 Âµ (TPM2.5) | Clean fuels | 1.4 | GR. S/100 SCF NG | |
| MAIDSVILLE | MOUNTAIN STATE CLEAN ENERGY, LLC | MONONGALIA | WV | 1/5/2022 | This project consist of constructing two combined cycle combustion turbine with duct burners, two fuel gas heaters, two emergency engines (emergency generator and fire water pump), and cooling tower. The configuration of these combustion turbines with heat recovery steam generators will be a 2X1. This facility will be co-located next to existing EGU (Longview Power LLC). The CCCTs with duct burners and fuel gas heaters will operate only on natural gas. Both emergency engines will be diesel fired units. | A bi-direction steam line between the Mountain State Clean Energy and Longview Power will be use to provide startup steam in lieu of a auxiliary boiler.□<br>No limits on operating hours or fuel use for the duct burners.□<br>Applicant proposed two different model combustion turbine (GE 7HA.03 and MHPS M501JAC).□<br>Gross Generation for the facility is 1275 MWh. | Combustion Turbine & Duct Burner (CT-01/HRSG1 & CT-02/HRSG2) | 15.21 | Pipeline Natural Gas | 1275 | mw | CT - 3,875 MMBtu/hr DB - 586 MMBtu/hr Gross Generation - 1275 MW | Particulate matter, total (TPM) | Clean Fuels and Good Combustion Practice | 0.006 | LB/MMBTU | AVG OF 3 4-HR TEST RUNS |
| MAIDSVILLE | MOUNTAIN STATE CLEAN ENERGY, LLC | MONONGALIA | WV | 1/5/2022 | This project consist of constructing two combined cycle combustion turbine with duct burners, two fuel gas heaters, two emergency engines (emergency generator and fire water pump), and cooling tower. The configuration of these combustion turbines with heat recovery steam generators will be a 2X1. This facility will be co-located next to existing EGU (Longview Power LLC). The CCCTs with duct burners and fuel gas heaters will operate only on natural gas. Both emergency engines will be diesel fired units. | A bi-direction steam line between the Mountain State Clean Energy and Longview Power will be use to provide startup steam in lieu of a auxiliary boiler.□<br>No limits on operating hours or fuel use for the duct burners.□<br>Applicant proposed two different model combustion turbine (GE 7HA.03 and MHPS M501JAC).□<br>Gross Generation for the facility is 1275 MWh. | Combustion Turbine & Duct Burner (CT-01/HRSG1 & CT-02/HRSG2) | 15.21 | Pipeline Natural Gas | 1275 | mw | CT - 3,875 MMBtu/hr DB - 586 MMBtu/hr Gross Generation - 1275 MW | Particulate matter, total (TPM) | Good Combustion Practice and Clean Fuel | 0.006 | LB/MMBTU | AVG OF 3 4-HR TEST RUNS |

**Table D-2. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - PM**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MAGNOLIA POWER GENERATING STATION UNIT 1 | MAGNOLIA POWER LLC | IBERVILLE | LA | 6/3/2022 | Magnolia Power LLC (Magnolia Power) is proposing to construct and operate a power plant, Magnolia Power Generating Station Unit 1, consisting of a natural gas-fired combined cycle gas turbine (CCGT Unit) in Iberville Parish, Louisiana. The CCGT Unit (EQT001), which includes a heat recovery steam generator (HRSG) equipped with duct burners, will have a predicted net nominal output of 730 megawatts (MW) | | Combined Cycle Gas Turbine w/ Duct Burners and HRSG | 15.21 | Natural Gas | 5081 | mm BTU/h | Normal operating rate is 4930 MMBTU/h. | Particulate matter, total < 10 Âµ (TPM10) | Use of gaseous fuel (pipeline-quality natural gas) and good combustion practices. | 0.008 | LB/MM BTU | 3 ONE-HOUR TEST AVERAGE |
| MAGNOLIA POWER GENERATING STATION UNIT 1 | MAGNOLIA POWER LLC | IBERVILLE | LA | 6/3/2022 | Magnolia Power LLC (Magnolia Power) is proposing to construct and operate a power plant, Magnolia Power Generating Station Unit 1, consisting of a natural gas-fired combined cycle gas turbine (CCGT Unit) in Iberville Parish, Louisiana. The CCGT Unit (EQT001), which includes a heat recovery steam generator (HRSG) equipped with duct burners, will have a predicted net nominal output of 730 megawatts (MW) | | Combined Cycle Gas Turbine w/ Duct Burners and HRSG | 15.21 | Natural Gas | 5081 | mm BTU/h | Normal operating rate is 4930 MMBTU/h. | Particulate matter, total < 2.5 Âµ (TPM2.5) | Use of gaseous fuel (pipeline-quality natural gas) and good combustion practices. | 0.008 | LB/MM BTU | 3 ONE-HOUR TEST AVERAGE |
| MAGNOLIA POWER GENERATING STATION UNIT 1 | MAGNOLIA POWER LLC | IBERVILLE | LA | 6/3/2022 | Magnolia Power LLC (Magnolia Power) is proposing to construct and operate a power plant, Magnolia Power Generating Station Unit 1, consisting of a natural gas-fired combined cycle gas turbine (CCGT Unit) in Iberville Parish, Louisiana. The CCGT Unit (EQT001), which includes a heat recovery steam generator (HRSG) equipped with duct burners, will have a predicted net nominal output of 730 megawatts (MW) | | Combined Cycle Gas Turbine Startup and Shutdown | 15.21 | Natural Gas | 5081 | mm BTU/h | Startup and shutdown emissions from the combined cycle gas turbine. | Particulate matter, total < 10 Âµ (TPM10) | Good combustion practices. | 18 | LB/HR | |
| MAGNOLIA POWER GENERATING STATION UNIT 1 | MAGNOLIA POWER LLC | IBERVILLE | LA | 6/3/2022 | Magnolia Power LLC (Magnolia Power) is proposing to construct and operate a power plant, Magnolia Power Generating Station Unit 1, consisting of a natural gas-fired combined cycle gas turbine (CCGT Unit) in Iberville Parish, Louisiana. The CCGT Unit (EQT001), which includes a heat recovery steam generator (HRSG) equipped with duct burners, will have a predicted net nominal output of 730 megawatts (MW) | | Combined Cycle Gas Turbine Startup and Shutdown | 15.21 | Natural Gas | 5081 | mm BTU/h | Startup and shutdown emissions from the combined cycle gas turbine. | Particulate matter, total < 2.5 Âµ (TPM2.5) | Good combustion practices | 18 | LB/HR | |
| MEC NORTH, LLC | MARSHALL ENERGY CENTER, LLC | CALHOUN | MI | 6/23/2022 | Natural gas combined-cycle power plant (two plants: north and south). | The two plants (MEC North, LLC and MEC South, LLC) will operate as separate entities but they are considered a single stationary source and the installation of the two new plants was reviewed as a single project. | EUCTGHRSG (North Plant): A combined cycle natural gas fired combustion turbine generator with heat recovery steam generator | 15.21 | Natural gas | 3064 | MMBTU/H | Throughput Information: Nominal 500 MW electricity production. Turbine rating of 3,064 MMBTU/hr (HHV) and HRSG duct burner rating of 889 MMBTU/Hr (HHV).□ □ A combined-cycle natural gas-fired combustion turbine generator (CTG) with heat recovery steam generator (HRSG) in a 1x1 configuration with a steam turbine generator (STG) for a nominal 500 MW electricity production. The CTG is a H-class turbine with a rating of 3,064 MMBTU/hr (HHV). The HRSG is equipped with a natural gas fired duct burner, with a maximum heat input rating of 889 MMBTU/hr (HHV) and rated at 874 MMBTU/hr (HHV) at ISO conditions to provide heat for additional steam production. The HRSG is not capable of operating independently from the CTG. The CTG/HRSG is equipped with dry low NOx burner (DLNB), SCR, and an oxidation catalyst. | Particulate matter, filterable (FPM) | Good combustion practices, inlet air conditioning, and the use of pipeline quality natural gas. | 5.7 | LB/H | HOURLY |
| MEC NORTH, LLC | MARSHALL ENERGY CENTER, LLC | CALHOUN | MI | 6/23/2022 | Natural gas combined-cycle power plant (two plants: north and south). | The two plants (MEC North, LLC and MEC South, LLC) will operate as separate entities but they are considered a single stationary source and the installation of the two new plants was reviewed as a single project. | EUCTGHRSG (North Plant): A combined cycle natural gas fired combustion turbine generator with heat recovery steam generator | 15.21 | Natural gas | 3064 | MMBTU/H | Throughput Information: Nominal 500 MW electricity production. Turbine rating of 3,064 MMBTU/hr (HHV) and HRSG duct burner rating of 889 MMBTU/Hr (HHV).□ □ A combined-cycle natural gas-fired combustion turbine generator (CTG) with heat recovery steam generator (HRSG) in a 1x1 configuration with a steam turbine generator (STG) for a nominal 500 MW electricity production. The CTG is a H-class turbine with a rating of 3,064 MMBTU/hr (HHV). The HRSG is equipped with a natural gas fired duct burner, with a maximum heat input rating of 889 MMBTU/hr (HHV) and rated at 874 MMBTU/hr (HHV) at ISO conditions to provide heat for additional steam production. The HRSG is not capable of operating independently from the CTG. The CTG/HRSG is equipped with dry low NOx burner (DLNB), SCR, and an oxidation catalyst. | Particulate matter, total < 10 Âµ (TPM10) | Good combustion practices, inlet air conditioning and the use of pipeline quality natural gas. | 19.1 | LB/H | HOURLY |

**Table D-2. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - PM**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MEC NORTH, LLC | MARSHALL ENERGY CENTER, LLC | CALHOUN | MI | 6/23/2022 | Natural gas combined-cycle power plant (two plants: north and south). | The two plants (MEC North, LLC and MEC South, LLC) will operate as separate entities but they are considered a single stationary source and the installation of the two new plants was reviewed as a single project. | EUCTGHRSG (North Plant): A combined cycle natural gas fired combustion turbine generator with heat recovery steam generator | 15.21 | Natural gas | 3064 | MMBTU/H | Throughput Information: Nominal 500 MW electricity production. Turbine rating of 3,064 MMBTU/hr (HHV) and HRSG duct burner rating of 889 MMBTU/Hr (HHV).□<br>□<br>A combined-cycle natural gas-fired combustion turbine generator (CTG) with heat recovery steam generator (HRSG) in a 1x1 configuration with a steam turbine generator (STG) for a nominal 500 MW electricity production. The CTG is a H-class turbine with a rating of 3,064 MMBTU/hr (HHV). The HRSG is equipped with a natural gas fired duct burner, with a maximum heat input rating of 889 MMBTU/hr (HHV) and rated at 874 MMBTU/hr (HHV) at ISO conditions to provide heat for additional steam production. The HRSG is not capable of operating independently from the CTG. The CTG/HRSG is equipped with dry low NOx burner (DLNB), SCR, and an oxidation catalyst. | Particulate matter, total < 2.5 Âµ (TPM2.5) | Good combustion practices, inlet air conditioning, and the use of pipeline quality natural gas. | 19.1 | LB/H | HOURLY |
| MEC SOUTH, LLC | MARSHALL ENERGY CENTER, LLC | CALHOUN | MI | 6/23/2022 | Natural gas combined cycle power plant (Two Plants: North and South) | The two plants (MEC North, LLC and MEC South, LLC) will operate as separate entities but they are considered a single stationary source and the installation of the two new plants was reviewed as a single project. | EUCTGHRSG (South Plant): A combined-cycle natural gas-fired combustion turbine generator with heat recovery steam generator. | 15.21 | Natural gas | 3064 | MMBTU/H | Nominal 500 MW electricity production. Turbine rating of 3064 MMBTU/H (HHV) and HRSG duct burner rating of 889 MMBTU/H (HHV).□<br>□<br>A combined-cycle natural gas-fired combustion turbine generator (CTG) with heat recovery steam generator (HRSG) in a 1x1 configuration with a steam turbine generator (STG) for a nominal 500 MW electricity production. The CTG is a H-class turbine with a rating of 3,064 MMBTU/hr (HHV). The HRSG is equipped with a natural gas fired duct burner, with a maximum heat input rating of 889 MMBTU/hr (HHV) and rated at 874 MMBTU/hr (HHV) at ISO conditions to provide heat for additional steam production. The HRSG is not capable of operating independently from the CTG. The CTG/HRSG is equipped with dry low NOx burner (DLNB), SCR, and an oxidation catalyst. | Particulate matter, filterable (FPM) | Good Combustion Practices, inlet air conditioning, and the use of pipeline quality natural gas | 5.7 | LB/H | HOURLY |
| MEC SOUTH, LLC | MARSHALL ENERGY CENTER, LLC | CALHOUN | MI | 6/23/2022 | Natural gas combined cycle power plant (Two Plants: North and South) | The two plants (MEC North, LLC and MEC South, LLC) will operate as separate entities but they are considered a single stationary source and the installation of the two new plants was reviewed as a single project. | EUCTGHRSG (South Plant): A combined-cycle natural gas-fired combustion turbine generator with heat recovery steam generator. | 15.21 | Natural gas | 3064 | MMBTU/H | Nominal 500 MW electricity production. Turbine rating of 3064 MMBTU/H (HHV) and HRSG duct burner rating of 889 MMBTU/H (HHV).□<br>□<br>A combined-cycle natural gas-fired combustion turbine generator (CTG) with heat recovery steam generator (HRSG) in a 1x1 configuration with a steam turbine generator (STG) for a nominal 500 MW electricity production. The CTG is a H-class turbine with a rating of 3,064 MMBTU/hr (HHV). The HRSG is equipped with a natural gas fired duct burner, with a maximum heat input rating of 889 MMBTU/hr (HHV) and rated at 874 MMBTU/hr (HHV) at ISO conditions to provide heat for additional steam production. The HRSG is not capable of operating independently from the CTG. The CTG/HRSG is equipped with dry low NOx burner (DLNB), SCR, and an oxidation catalyst. | Particulate matter, total < 10 Âµ (TPM10) | Good Combustion Practices, inlet air conditioning, and the use of pipeline quality natural gas | 19.1 | LB/H | HOURLY |

**Table D-2. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - PM**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MEC SOUTH, LLC | MARSHALL ENERGY CENTER, LLC | CALHOUN | MI | 6/23/2022 | Natural gas combined cycle power plant (Two Plants: North and South) | The two plants (MEC North, LLC and MEC South, LLC) will operate as separate entities but they are considered a single stationary source and the installation of the two new plants was reviewed as a single project. | EUCTGHRSG (South Plant): A combined-cycle natural gas-fired combustion turbine generator with heat recovery steam generator. | 15.21 | Natural gas | 3064 | MMBTU/H | Nominal 500 MW electricity production. Turbine rating of 3064 MMBTU/H (HHV) and HRSG duct burner rating of 889 MMBTU/H (HHV).□<br>□<br>A combined-cycle natural gas-fired combustion turbine generator (CTG) with heat recovery steam generator (HRSG) in a 1x1 configuration with a steam turbine generator (STG) for a nominal 500 MW electricity production. The CTG is a H-class turbine with a rating of 3,064 MMBTU/hr (HHV). The HRSG is equipped with a natural gas fired duct burner, with a maximum heat input rating of 889 MMBTU/hr (HHV) and rated at 874 MMBTU/hr (HHV) at ISO conditions to provide heat for additional steam production. The HRSG is not capable of operating independently from the CTG. The CTG/HRSG is equipped with dry low NOx burner (DLNB), SCR, and an oxidation catalyst. | Particulate matter, total < 2.5 Âµ (TPM2.5) | Good Combustion Practices, inlet air conditioning, and the use of pipeline quality natural gas | 19.1 | LB/H | HOURLY |
| LIQUEFACTION PLANT | ALASKA GASLINE DEVELOPMENT CORPORATION | KENAI PENNINSULA BOROUGH | AK | 7/7/2022 | The Liquefaction Plant is planned to encompass 921 acres, including 901 acres onshore for the liquefied natural gas (LNG) Plant as well as 20 acres offshore for the Marine Terminal. The Liquefaction Plant will be the terminus of an approximately 807-mile gas pipeline, allowing natural gas from Alaskaâ€™s North Slope to be shipped to outside markets. The stationary source will consist of structures and equipment associated with processing, storage, and loading of LNG. There will be three liquefaction trains combining to process up to approximately 20 million metric tons per annun of LNG. | | Four Combined Cycle Gas-Fired Turbines | 15.21 | Natural Gas | 384 | MMBtu/hr | EUs 7 - 10 are combined cycle gas turbines used for power generation at LNG facility | Particulate matter, total < 10 Âµ (TPM10) | Good combustion practices and burning clean fuel (natural gas) | 0.007 | LB/MMBTU | 3-HOURS |
| LIQUEFACTION PLANT | ALASKA GASLINE DEVELOPMENT CORPORATION | KENAI PENNINSULA BOROUGH | AK | 7/7/2022 | The Liquefaction Plant is planned to encompass 921 acres, including 901 acres onshore for the liquefied natural gas (LNG) Plant as well as 20 acres offshore for the Marine Terminal. The Liquefaction Plant will be the terminus of an approximately 807-mile gas pipeline, allowing natural gas from Alaskaâ€™s North Slope to be shipped to outside markets. The stationary source will consist of structures and equipment associated with processing, storage, and loading of LNG. There will be three liquefaction trains combining to process up to approximately 20 million metric tons per annun of LNG. | | Four Combined Cycle Gas-Fired Turbines | 15.21 | Natural Gas | 384 | MMBtu/hr | EUs 7 - 10 are combined cycle gas turbines used for power generation at LNG facility | Particulate matter, total < 2.5 Âµ (TPM2.5) | Good combustion practices and burning clean fuel (natural gas) | 0.007 | LB/MMBTU | 3-HOURS |
| LIQUEFACTION PLANT | ALASKA GASLINE DEVELOPMENT CORPORATION | KENAI PENNINSULA BOROUGH | AK | 7/7/2022 | The Liquefaction Plant is planned to encompass 921 acres, including 901 acres onshore for the liquefied natural gas (LNG) Plant as well as 20 acres offshore for the Marine Terminal. The Liquefaction Plant will be the terminus of an approximately 807-mile gas pipeline, allowing natural gas from Alaskaâ€™s North Slope to be shipped to outside markets. The stationary source will consist of structures and equipment associated with processing, storage, and loading of LNG. There will be three liquefaction trains combining to process up to approximately 20 million metric tons per annun of LNG. | | Four Combined Cycle Gas-Fired Turbines | 15.21 | Natural Gas | 384 | MMBtu/hr | EUs 7 - 10 are combined cycle gas turbines used for power generation at LNG facility | Particulate matter, total (TPM) | Good combustion practices and burning clean fuel (natural gas) | 0.007 | LB/MMBTU | 3-HOURS |
| LINCOLN LAND ENERGY CENTER | LINCOLN LAND ENERGY CENTER (A/K/A EMBERCLEAR) | SANGAMON | IL | 7/29/2022 | The proposed facility is designed to generate baseload power. It will consist of two combined-cycle generating units, with each a Siemens combustion turbine (3,647 mmBtu/hr) and a heat recovery steam generator (HRSG) with duct burners (35 mmBtu/hr); fired by natural gas only. Other units at the facility include an auxiliary boiler, engines, piping and piping components, circuit breakers and roadways. | Additional facility-wide pollutants, in tons/year: PM10/PM 2.5: 131.7 and 131.6 (respectively); sulfuric acid mist (SAM): 17.2; greenhouse gasses (GHG): 3,586,918 | Combined-Cycle Combustion Turbines | 15.21 | Natural Gas | 3647 | mmBtu/hour | Combined-cycle comustion turbines and heat recovery steam generators (HRSG) with a 35 mmBtu/hr duct burner. Turbine inlets would have evaporative cooling systems to cool the inlet air during warm weather to increase power output. | Particulate matter, total (TPM) | Good combustion practices | 0.0032 | POUNDS/MM BTU | WITH DUCT BURNER; ROLLING 3-OPERATING HR |
| LINCOLN LAND ENERGY CENTER | LINCOLN LAND ENERGY CENTER (A/K/A EMBERCLEAR) | SANGAMON | IL | 7/29/2022 | The proposed facility is designed to generate baseload power. It will consist of two combined-cycle generating units, with each a Siemens combustion turbine (3,647 mmBtu/hr) and a heat recovery steam generator (HRSG) with duct burners (35 mmBtu/hr); fired by natural gas only. Other units at the facility include an auxiliary boiler, engines, piping and piping components, circuit breakers and roadways. | Additional facility-wide pollutants, in tons/year: PM10/PM 2.5: 131.7 and 131.6 (respectively); sulfuric acid mist (SAM): 17.2; greenhouse gasses (GHG): 3,586,918 | Combined-Cycle Combustion Turbines | 15.21 | Natural Gas | 3647 | mmBtu/hour | Combined-cycle comustion turbines and heat recovery steam generators (HRSG) with a 35 mmBtu/hr duct burner. Turbine inlets would have evaporative cooling systems to cool the inlet air during warm weather to increase power output. | Particulate matter, total < 10 Âµ (TPM10) | Good combustion practices. | 0.0041 | POUNDS/MM BTU | ROLLING 3-OPERATING HOUR |

**Table D-2. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - PM**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LBWL-ERICKSON STATION | LANSING BOARD OF WATER AND LIGHT | EATON | MI | 12/20/2022 | Natural gas combined-cycle power plant | The proposed new plant will be replacing the electrical generating capacity of both BWLâ€™s existing coal-fired power plants. BWL intends to retire those coal-fired power plants from service by 2025. However, before they can be retired, the new natural gas power plant must be operational. Emissions in the area will increase for a short period if the new combined-cycle plant is built. However, there will be overall reductions in emissions when the existing coal fired power plants are taken out of service. | EUCTGHRSG1 | 15.21 | Natural gas | 667 | MMBTU/H | EUCTGHRSG1- A nominally rated 667 MMBtu/hr natural gas-fired combustion turbine generator (CTG) coupled with a heat recovery steam generator (HRSG). The HRSG is equipped with a natural gas-fired duct burner rated at 204 MMBtu/hr to provide heat for additional steam production. The CTG is capable of operating in combined-cycle mode where the exhaust is routed to the HRSG or in simple-cycle mode where the HRSG is bypassed. The HRSG is not capable of operating independently from the CTG. The CTG/HRSG is equipped with a dry low NOx burner (DLNB), selective catalytic reduction (SCR), and oxidation catalyst. | Particulate matter, total < 10 Âµ (TPM10) | Pipeline quality natural gas, inlet air conditioning, and good combustion practices. | 6.02 | LB/H | HOURLY; APPLIES DURING ALL OPER. MODES |
| LBWL-ERICKSON STATION | LANSING BOARD OF WATER AND LIGHT | EATON | MI | 12/20/2022 | Natural gas combined-cycle power plant | The proposed new plant will be replacing the electrical generating capacity of both BWLâ€™s existing coal-fired power plants. BWL intends to retire those coal-fired power plants from service by 2025. However, before they can be retired, the new natural gas power plant must be operational. Emissions in the area will increase for a short period if the new combined-cycle plant is built. However, there will be overall reductions in emissions when the existing coal fired power plants are taken out of service. | EUCTGHRSG1 | 15.21 | Natural gas | 667 | MMBTU/H | EUCTGHRSG1- A nominally rated 667 MMBtu/hr natural gas-fired combustion turbine generator (CTG) coupled with a heat recovery steam generator (HRSG). The HRSG is equipped with a natural gas-fired duct burner rated at 204 MMBtu/hr to provide heat for additional steam production. The CTG is capable of operating in combined-cycle mode where the exhaust is routed to the HRSG or in simple-cycle mode where the HRSG is bypassed. The HRSG is not capable of operating independently from the CTG. The CTG/HRSG is equipped with a dry low NOx burner (DLNB), selective catalytic reduction (SCR), and oxidation catalyst. | Particulate matter, total < 2.5 Âµ (TPM2.5) | Pipeline quality natural gas, inlet air conditioning, and good combustion practices. | 6.02 | LB/H | HOURLY; APPLIES DURING ALL OPERAT. MODES |
| LBWL-ERICKSON STATION | LANSING BOARD OF WATER AND LIGHT | EATON | MI | 12/20/2022 | Natural gas combined-cycle power plant | The proposed new plant will be replacing the electrical generating capacity of both BWLâ€™s existing coal-fired power plants. BWL intends to retire those coal-fired power plants from service by 2025. However, before they can be retired, the new natural gas power plant must be operational. Emissions in the area will increase for a short period if the new combined-cycle plant is built. However, there will be overall reductions in emissions when the existing coal fired power plants are taken out of service. | EUCTGHRSG2 | 15.21 | Natural gas | 667 | MMBTU/H | EUCTGHRSG2- A nominally rated 667 MMBtu/hr natural gas-fired CTG coupled with a HRSG. The HRSG is equipped with a natural gas-fired duct burner rated at 204 MMBtu/hr to provide heat for additional steam production. The CTG is capable of operating in combined-cycle mode where the exhaust is routed to the HRSG or in simple-cycle mode where the HRSG is bypassed. The HRSG is not capable of operating independently from the CTG. The CTG/HRSG is equipped with a DLNB, SCR, and oxidation catalyst. | Particulate matter, total < 10 Âµ (TPM10) | Pipeline quality natural gas, inlet air conditioning, and good combustion practices. | 6.02 | LB/H | HOURLY; APPLIES DURING ALL MODES |

**Table D-2. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - PM**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LBWL-ERICKSON STATION | LANSING BOARD OF WATER AND LIGHT | EATON | MI | 12/20/2022 | Natural gas combined-cycle power plant | The proposed new plant will be replacing the electrical generating capacity of both BWLâ€™s existing coal-fired power plants. BWL intends to retire those coal-fired power plants from service by 2025. However, before they can be retired, the new natural gas power plant must be operational. Emissions in the area will increase for a short period if the new combined-cycle plant is built. However, there will be overall reductions in emissions when the existing coal fired power plants are taken out of service. | EUCTGHRSG2 | 15.21 | Natural gas | 667 | MMBTU/H | EUCTGHRSG2- A nominally rated 667 MMBtu/hr natural gas-fired CTG coupled with a HRSG. The HRSG is equipped with a natural gas-fired duct burner rated at 204 MMBtu/hr to provide heat for additional steam production. The CTG is capable of operating in combined-cycle mode where the exhaust is routed to the HRSG or in simple-cycle mode where the HRSG is bypassed. The HRSG is not capable of operating independently from the CTG. The CTG/HRSG is equipped with a DLNB, SCR, and oxidation catalyst. | Particulate matter, total < 2.5 Âµ (TPM2.5) | Pipeline quality natural gas, inlet air conditioning, and good combustion practices. | 6.02 | LB/H | HOURLY, APPLY DURING ALL OPERATING MODES |
| MIDLAND COGENERATION VENTURE LIMITED PARTNERSHIP | MIDLAND COGENERATION VENTURE LIMITED PARTNERSHIP | MIDLAND | MI | 2/1/2023 | Electric and steam generation | | EUCTGHRSG1 | 15.21 | Natural gas | 4197.6 | MMBTU/H | | Particulate matter, filterable (FPM) | Use of pipeline quality natural gas and good combustion practices. | 34.4 | LB/H | HOURLY |
| MIDLAND COGENERATION VENTURE LIMITED PARTNERSHIP | MIDLAND COGENERATION VENTURE LIMITED PARTNERSHIP | MIDLAND | MI | 2/1/2023 | Electric and steam generation | | EUCTGHRSG1 | 15.21 | Natural gas | 4197.6 | MMBTU/H | | Particulate matter, total < 10 Âµ (TPM10) | Use of pipeline quality natural gas and good combustion practices. | 34.4 | LB/H | HOURLY |

**Table D-2. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - PM**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MIDLAND COGENERATION VENTURE LIMITED PARTNERSHIP | MIDLAND COGENERATION VENTURE LIMITED PARTNERSHIP | MIDLAND | MI | 2/1/2023 | Electric and steam generation | | EUCTGHRSG1 | 15.21 | Natural gas | 4197.6 | MMBTU/H | | Particulate matter, total < 2.5 Âµ (TPM2.5) | Use of pipeline quality natural gas and good combustion practices. | 34.4 | LB/H | HOURLY |
| ORANGE COUNTY ADVANCED POWER STATION | ENTERGY TEXAS, INC. | ORANGE | TX | 3/13/2023 | Entergy Texas, Inc. proposes construction of a power plant consisting of two natural gas-fired combined cycle turbines with a maximum total nominal output of 1,215 MW. The turbines can also be fired with up to 30% volume hydrogen co-firing (blended fuel). Emergency engines, a cooling tower, storage tanks, and maintenance activities support operation of the turbines. | | Combined Cycle Turbines | 15.21 | NATURAL GAS | 1215 | MW | 2 Mitsubishi M501JAC combustion turbines 1,215 MW (in a 2x1 configuration) output and 6,762 Btu/kW-hr (with a 9% degradation) gross heat rate. | Particulate matter, filterable (FPM) | good combustion practices | 0.005 | LB/MMBTU | |
| ORANGE COUNTY ADVANCED POWER STATION | ENTERGY TEXAS, INC. | ORANGE | TX | 3/13/2023 | Entergy Texas, Inc. proposes construction of a power plant consisting of two natural gas-fired combined cycle turbines with a maximum total nominal output of 1,215 MW. The turbines can also be fired with up to 30% volume hydrogen co-firing (blended fuel). Emergency engines, a cooling tower, storage tanks, and maintenance activities support operation of the turbines. | | Combined Cycle Turbines | 15.21 | NATURAL GAS | 1215 | MW | 2 Mitsubishi M501JAC combustion turbines 1,215 MW (in a 2x1 configuration) output and 6,762 Btu/kW-hr (with a 9% degradation) gross heat rate. | Particulate matter, filterable < 10 Âµ (FPM10) | good combustion practices | 0.005 | LB/MMBTU | |
| ORANGE COUNTY ADVANCED POWER STATION | ENTERGY TEXAS, INC. | ORANGE | TX | 3/13/2023 | Entergy Texas, Inc. proposes construction of a power plant consisting of two natural gas-fired combined cycle turbines with a maximum total nominal output of 1,215 MW. The turbines can also be fired with up to 30% volume hydrogen co-firing (blended fuel). Emergency engines, a cooling tower, storage tanks, and maintenance activities support operation of the turbines. | | Combined Cycle Turbines | 15.21 | NATURAL GAS | 1215 | MW | 2 Mitsubishi M501JAC combustion turbines 1,215 MW (in a 2x1 configuration) output and 6,762 Btu/kW-hr (with a 9% degradation) gross heat rate. | Particulate matter, filterable < 2.5 Âµ (FPM2.5) | good combustion practices | 0.005 | LB/MMBTU | |
| MAPLE CREEK ENERGY LLC | | SULLIVAN | IN | 6/19/2023 | | | Combined Cycle Turbine CTGB | 15.21 | natural gas | 4200 | MMBtu per hour | Option 2 GE Model 7HA.03 Turbine - natural gas-fired combined cycle system with a maximum heat input capacity of 4,200 MMBtu per hour, equipped with a GE combustion turbine generator (CTG) exhausting to a heat recovery steam generator (HRSG) which will feed steam to one steam turbine generator (STG), using dry-low-NOx (DLN) combustors and selective catalytic reduction (SCR) for control of NOx emissions, and an oxidation catalyst as VOC and CO control, and exhausting to stack CTG with continuous emissions monitors for NOx and CO.□<br>□<br>Facility will install only one turbine, but at the time of permitting had not decided which turbine would be used. | Particulate matter, total < 10 Âµ (TPM10) | | 0.0074 | LB PER MMBTU | |

**Table D-2. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - PM**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MAPLE CREEK ENERGY LLC | | SULLIVAN | IN | 6/19/2023 | | | Combined Cycle Turbine CTGB | 15.21 | natural gas | 4200 | MMBtu per hour | Option 2 GE Model 7HA.03 Turbine - natural gas-fired combined cycle system with a maximum heat input capacity of 4,200 MMBtu per hour, equipped with a GE combustion turbine generator (CTG) exhausting to a heat recovery steam generator (HRSG) which will feed steam to one steam turbine generator (STG), using dry-low-NOx (DLN) combustors and selective catalytic reduction (SCR) for control of NOx emissions, and an oxidation catalyst as VOC and CO control, and exhausting to stack CTG with continuous emissions monitors for NOx and CO.□<br>□<br>Facility will install only one turbine, but at the time of permitting had not decided which turbine would be used. | Particulate matter, total < 2.5 Âµ (TPM2.5) | | 0.0074 | LB PER MMBTU | |
| MAPLE CREEK ENERGY LLC | | SULLIVAN | IN | 6/19/2023 | | | Combined Cycle Turbine CTGB | 15.21 | natural gas | 4200 | MMBtu per hour | Option 2 GE Model 7HA.03 Turbine - natural gas-fired combined cycle system with a maximum heat input capacity of 4,200 MMBtu per hour, equipped with a GE combustion turbine generator (CTG) exhausting to a heat recovery steam generator (HRSG) which will feed steam to one steam turbine generator (STG), using dry-low-NOx (DLN) combustors and selective catalytic reduction (SCR) for control of NOx emissions, and an oxidation catalyst as VOC and CO control, and exhausting to stack CTG with continuous emissions monitors for NOx and CO.□<br>□<br>Facility will install only one turbine, but at the time of permitting had not decided which turbine would be used. | Particulate matter, total (TPM) | | 0.0074 | POUND PER MMBTU | |
| MAPLE CREEK ENERGY LLC | | SULLIVAN | IN | 6/19/2023 | | | Combined Cycle Turbine CTGA SU/SD | 15.21 | Natural gas | 3800 | MMBtu per hour | Startup and Shutdown Limitations for Combustion Turbine Option 1: Siemens Model SCC6-9000HL Turbine. | Particulate matter, total < 10 Âµ (TPM10) | | 5.3 | LB/EVENT | |
| MAPLE CREEK ENERGY LLC | | SULLIVAN | IN | 6/19/2023 | | | Combined Cycle Turbine CTGA SU/SD | 15.21 | Natural gas | 3800 | MMBtu per hour | Startup and Shutdown Limitations for Combustion Turbine Option 1: Siemens Model SCC6-9000HL Turbine. | Particulate matter, total < 2.5 Âµ (TPM2.5) | | 5.3 | LB/EVENT | |
| MAPLE CREEK ENERGY LLC | | SULLIVAN | IN | 6/19/2023 | | | Combined Cycle Turbine CTGA | 15.21 | Natural Gas | 3800 | MMBtu per hour | Option 1 Siemens Model SCC6-9000HL Turbine - natural gas-fired combined cycle system with a maximum heat input capacity of 3,800 MMBtu per hour, equipped with a Siemens combustion turbine generator (CTG) exhausting to a heat recovery steam generator (HRSG) which will feed steam to one steam turbine generator (STG), using dry-low-NOx (DLN) combustors and selective catalytic reduction (SCR) for control of NOx emissions, and an oxidation catalyst as VOC and CO control, and exhausting to stack CTG with continuous emissions monitors for NOx and CO.□<br>□<br>Facility will install only one turbine, but at the time of permitting had not decided which turbine would be used. | Particulate matter, total (TPM) | | 0.0049 | POUND PER MMBTU | |
| MAPLE CREEK ENERGY LLC | | SULLIVAN | IN | 6/19/2023 | | | Combined Cycle Turbine CTGA | 15.21 | Natural Gas | 3800 | MMBtu per hour | Option 1 Siemens Model SCC6-9000HL Turbine - natural gas-fired combined cycle system with a maximum heat input capacity of 3,800 MMBtu per hour, equipped with a Siemens combustion turbine generator (CTG) exhausting to a heat recovery steam generator (HRSG) which will feed steam to one steam turbine generator (STG), using dry-low-NOx (DLN) combustors and selective catalytic reduction (SCR) for control of NOx emissions, and an oxidation catalyst as VOC and CO control, and exhausting to stack CTG with continuous emissions monitors for NOx and CO.□<br>□<br>Facility will install only one turbine, but at the time of permitting had not decided which turbine would be used. | Particulate matter, total < 10 Âµ (TPM10) | | 0.0049 | LB PER MMBTU | |

**Table D-2. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - PM**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MAPLE CREEK ENERGY LLC | | SULLIVAN | IN | 6/19/2023 | | | Combined Cycle Turbine CTGA | 15.21 | Natural Gas | 3800 | MMBtu per hour | Option 1 Siemens Model SCC6-9000HL Turbine - natural gas-fired combined cycle system with a maximum heat input capacity of 3,800 MMBtu per hour, equipped with a Siemens combustion turbine generator (CTG) exhausting to a heat recovery steam generator (HRSG) which will feed steam to one steam turbine generator (STG), using dry-low-NOx (DLN) combustors and selective catalytic reduction (SCR) for control of NOx emissions, and an oxidation catalyst as VOC and CO control, and exhausting to stack CTG with continuous emissions monitors for NOx and CO.□<br>□<br>Facility will install only one turbine, but at the time of permitting had not decided which turbine would be used. | Particulate matter, total < 2.5 Âµ (TPM2.5) | | 0.0049 | LB PER MMBTU | |

**Table D-3. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - CO**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CEDAR BAYOU ELECTRIC GENERATING STATION | NRG TEXAS POWER LLC | CHAMBERS COUNTY | TX | 3/31/2015 | NRG operates the Cedar Bayou 4 Electric Generating Station in Chambers County, consisting of two natural gas-fired combustion turbines, Emission Point Numbers (EPNs) CBY41 and CBY42, and associated ancillary equipment. NRGâ€™s amendment application requests an increase in the annual carbon monoxide (CO) and a small increase in the volatile organic compounds (VOC) emission rates for both turbines, due to an increase in the number of startups per year. NRG requests to install oxidation catalysts to each unit. | | Combined cycle turbines | 15.21 | Natural Gas | 187 | MW/turbine | | Carbon Monoxide | Oxidation catalysts | 15 | PPMVD | 15%O2 |
| COLORADO BEND ENERGY CENTER | COLORADO BEND II POWER, LLC | WHARTON | TX | 4/1/2015 | Combined cycle combustion turbine electric generating facility. These will be the first two General Electric (GE) Model 7HA.02 Combustion Turbines in a combined cycle power plant that uses two combustion turbines and one steam turbine using air-cooled condensers and controlled with Selective catalytic reduction (SCR) and oxidation catalyst. | | Combined-cycle gas turbine electric generating facility | 15.21 | natural gas | 1100 | MW | combined cycle power plant that uses two combustion turbines and one steam turbine, model GE 7HA.02 | Carbon Monoxide | SCR and oxidation catalyst | 4 | PPMVD @ 15% O2 | 3-HR AVERAGE |
| ROLLING HILLS GENERATING, LLC | | VINTON | OH | 5/20/2015 | Electrical services | Note: The proposed modification was not installed.□<br>□<br>Chapter 31 major modification to convert four of the existing five simple cycle peaking units, SW501F turbines nominally rated at 209 megawatts (MW) each, to combined cycle configuration consisting of two 2x1 combined cycle blocks, the addition of four heat recovery steam generators (HRSGs), each of which will be equipped with duct burners, and two steam turbine generators.□<br>□<br>Permit includes 2 options for the units. Siemens Westinghouse Power Corp. SW501F, (Scenario 1: 200 MW, with 2022 MMBtu/hr input & 550 MMBtu/hr duct burner. Scenario 2: 207.5 MW with 2144 MMbtu/hr input & 550 MMBtu/hr duct burner.) combined cycle natural gas fired turbine with Dry Low-NOX combusters, SCR and duct burner. Emissions increase noted below is for scenario 1.□<br>Scenario 2 = 5101.7 CO, 449.31 NOx, 346.8 PM and 600.62 VOC. | Combustion Turbines, Scenario 1 (4, identical) (P001, P002, P004, P005) | 15.21 | Natural gas | 2022 | MMBTU/H | Scenario 1 only. Other scenario added as separate process. Siemens Westinghouse Power Corp. SW501F, (Scenario 1: 200 MW, with 2022 MMBtu/hr input & 550 MMBtu/hr duct burner. Scenario 2: 207.5 MW with 2144 MMbtu/hr input & 550 MMBtu/hr duct burner.) combined cycle natural gas fired turbine with Dry Low-NOX combusters, SCR and duct burner. | Carbon Monoxide | Oxidation catalyst | 10.4 | LB/H | WITHOUT DUCT BURNERS. SEE NOTES. |
| ROLLING HILLS GENERATING, LLC | | VINTON | OH | 5/20/2015 | Electrical services | Note: The proposed modification was not installed.□<br>□<br>Chapter 31 major modification to convert four of the existing five simple cycle peaking units, SW501F turbines nominally rated at 209 megawatts (MW) each, to combined cycle configuration consisting of two 2x1 combined cycle blocks, the addition of four heat recovery steam generators (HRSGs), each of which will be equipped with duct burners, and two steam turbine generators.□<br>□<br>Permit includes 2 options for the units. Siemens Westinghouse Power Corp. SW501F, (Scenario 1: 200 MW, with 2022 MMBtu/hr input & 550 MMBtu/hr duct burner. Scenario 2: 207.5 MW with 2144 MMbtu/hr input & 550 MMBtu/hr duct burner.) combined cycle natural gas fired turbine with Dry Low-NOX combusters, SCR and duct burner. Emissions increase noted below is for scenario 1.□<br>Scenario 2 = 5101.7 CO, 449.31 NOx, 346.8 PM and 600.62 VOC. | Combustion Turbines, Scenario 2 (4, identical) (P001, P002, P004, P005) | 15.21 | Natural gas | 2144 | MMBTU/H | Scenario 1 only. Other scenario added as separate process. Siemens Westinghouse Power Corp. SW501F, (Scenario 1: 200 MW, with 2022 MMBtu/hr input & 550 MMBtu/hr duct burner. Scenario 2: 207.5 MW with 2144 MMbtu/hr input & 550 MMBtu/hr duct burner.) combined cycle natural gas fired turbine with Dry Low-NOX combusters, SCR and duct burner. | Carbon Monoxide | Oxidation catalyst | 12 | LB/H | WITH DUCT BURNER. SEE NOTES. |
| YORK ENERGY CENTER BLOCK 2 ELECTRICITY GENERATION PROJECT | CALPINE MID-MERIT, LLC | YORK | PA | 6/15/2015 | Calpine Mid-Merit, LLC. currently operates Block 1 of the York Energy Center under Title V operating permit 67-05083 with a rated capacity of 565 MW. This plan approval is for the construction and temporary operation of Block 2 Electricity Generation Project having a nominal generating capacity of 835 MW. Block 2 consists of two combined cycle NG/USLD fuel fired combustion turbines, one NG-fired auxiliary boiler, one cooling tower, NG piping componets, circuit breaker upgrades, five NG condensate tanks, and additional ULSD fuel oil storage tank. Each CT will be limited to 4500 hr/yr with duct firing; 480 hr/yr of ULSD | | Two Combine Cycle Combustion Turbine with Duct Burner | 15.21 | Natural Gas | 3001.57 | MCF/hr | Two (2) Combustion Turbine, 235 MW / 2512.5 MMBtu/hr, will fire NG and with the design having no bypasss from the CT to HRSG the CT will always be in combined cycle mode the HRSG with NG-fired Duct Burner maximum rated heat input capacity 722 MMBtu/hr. CT will employ dry low NOx burner technology (NG firing), controled by SCR and oxidation catalyst. . (Operational limits are for each CCCT NG-fired with duct burner) | Carbon Monoxide | Oxidation catalyst and good combustion practices | 2 | PPMDV @ 15% O2 | |
| EAGLE MOUNTAIN STEAM ELECTRIC STATION | EAGLE MOUNTAIN POWER COMPANY LLC | TARRANT | TX | 6/18/2015 | Eagle is proposing to construct two new combined cycle combustion turbines (CTG) which will generate electric power for sale on the wholesale electric market. The ancillary equipment includes an auxiliary boiler, a firewater pump, an emergency generator, a steam turbine, and various support facilities. | | Combined Cycle Turbines (>25 MW) â€“ natural gas | 15.21 | natural gas | 210 | MW | Two power configuration options authorized□<br>Siemens â€“ 231 MW + 500 million British thermal units per hour (MMBtu/hr) duct burner□<br>GE â€“ 210 MW + 349.2 MMBtu/hr duct burner | Carbon Monoxide | Oxidation catalyst | 2 | PPM | ROLLING 24-HR AVERAGE |

**Table D-3. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - CO**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CLEAN ENERGY FUTURE - LORDSTOWN, LLC | CLEAN ENERGY FUTURE - LORDSTOWN, LLC | TRUMBULL | OH | 8/25/2015 | 962 MW (gross winter output) combined cycle gas turbine (CCGT) facility | Initial installation permit for the construction of the Lordstown Energy Center - a nominal 940 MW combined cycle gas turbine (CCGT) facility. | Combined Cycle Combustion Turbines (two, identical) (P001 and P002) | 15.21 | Natural gas | 2725 | MMBTU/H | Combined cycle combustion turbine (2,725 MMBtu/hr heat input turbine at ISO conditions and 179 MMBtu/hr heat input duct burner) with dry low NOx combustors, selective catalytic reduction (SCR), and catalytic oxidizer. □<br>Limits and throughputs are for single turbine. | Carbon Monoxide | Good combustion controls and oxidation catalyst | 14.3 | LB/H | WITH DUCT BURNER. SEE NOTES. |
| MOXIE FREEDOM GENERATION PLANT | MOXIE FREEDOM LLC | LUZERNE | PA | 9/1/2015 | The Project is for the construction and operation of two identical 1 x 1 power blocks, each consisting of a combustion gas turbine (CGT or CT) and a steam turbine (ST) configured in single shaft alignment, where each CT and ST train share one common electric generator. The turbines to be used for this project are Two General Electric (GE) 7HA.02 CTs, each in 1 x 1 single shaft combined- cycle power islands.<br>Each CT and duct burner will exclusively fire pipeline-quality natural gas. The HRSGs will be equipped with selective catalytic reduction (SCR) to minimize nitrogen oxide (NOx) emissions and oxidation catalysts to minimize carbon monoxide (CO) and volatile organic compound (VOC) emissions from the CTs and DBâ€™s. The Project will also include several pieces of ancillary equipment. The list of equipment includes:<br>One fuel gas dew-point heater - natural gas fired, common for all CTs<br>Two CT inlet evaporative coolers - one for each CT (not emissions sources)<br>Two air-cooled condensers (ACCs) - one for each HRSG (not emissions sources)<br>One auxiliary boiler, natural gas-fired<br>One diesel engine powered emergency generator<br>One diesel engine powered fire water pump<br>Diesel fuel, lubricating oil, and aqueous ammonia storage tanks<br>The project once operational will produce 1050 MW Electric Generation | | Combustion Turbine With Duct Burner | 15.21 | Natural Gas | 3727 | MMBtu/hr | DLN burner, SCR, Oxidation Catalyst and shall maintain and operate the sources and associated air cleaning devices in accordance with good engineering practice. shall install, certify, maintain and operate continuous emission monitoring systems (CEMS) for nitrogen oxides, carbon monoxide, carbon dioxide, and ammonia emissions on the exhaust of each combined-cycle powerblock.□<br>Emissions limits are for each combustion turbine/duct burner block. | Carbon Monoxide | Oxidation catalyst and good combustion practices | 2 | PPMDV @ 15% O2 | |
| MOXIE FREEDOM GENERATION PLANT | MOXIE FREEDOM LLC | LUZERNE | PA | 9/1/2015 | The Project is for the construction and operation of two identical 1 x 1 power blocks, each consisting of a combustion gas turbine (CGT or CT) and a steam turbine (ST) configured in single shaft alignment, where each CT and ST train share one common electric generator. The turbines to be used for this project are Two General Electric (GE) 7HA.02 CTs, each in 1 x 1 single shaft combined- cycle power islands.<br>Each CT and duct burner will exclusively fire pipeline-quality natural gas. The HRSGs will be equipped with selective catalytic reduction (SCR) to minimize nitrogen oxide (NOx) emissions and oxidation catalysts to minimize carbon monoxide (CO) and volatile organic compound (VOC) emissions from the CTs and DBâ€™s. The Project will also include several pieces of ancillary equipment. The list of equipment includes:<br>One fuel gas dew-point heater - natural gas fired, common for all CTs<br>Two CT inlet evaporative coolers - one for each CT (not emissions sources)<br>Two air-cooled condensers (ACCs) - one for each HRSG (not emissions sources)<br>One auxiliary boiler, natural gas-fired<br>One diesel engine powered emergency generator<br>One diesel engine powered fire water pump<br>Diesel fuel, lubricating oil, and aqueous ammonia storage tanks<br>The project once operational will produce 1050 MW Electric Generation | | Combustion Turbine without Duct Burner | 15.21 | | 0 | | | Carbon Monoxide | Oxidation catalyst, good engineering practice | 2 | PPMDV @ 15% O2 | |
| LON C. HILL POWER STATION | LON C. HILL, L.P. | NUECES | TX | 10/2/2015 | The Lon C. Hill Power Station (LCHP) will include two natural gas-fired combined cycle combustion turbines (CTGs) equipped with dry low NOx burners (DLNs), heat recovery steam generators (HRSG), and natural gas-fired duct burners (DBs). Ancillary equipment includes evaporative coolers or inlet chillers, a single steam turbine (ST), auxiliary boiler, emergency generator, firewater pump, two cooling towers, oil water separator, degreaser, two diesel storage tanks, gasoline storage tank, selective catalytic reduction (SCR) and ammonia (NH3) handling systems including an NH3 storage tank, and two water tanks. The LCHP will be a 2x1 combined cycle power plant consisting of two CTGs, two HRSGs and one ST. The CTGs and ST will be one of two options: two Siemens SCC6-5000 CTGs and a SST6-5000 ST, or two General Electric 7FA CTGs and a D-11 ST. | | Combined Cycle Turbines (>25 MW) | 15.21 | natural gas | 195 | MW | Two power configuration options authorized□<br>Siemens â€“ 240 MW + 250 million British thermal units per hour (MMBtu/hr) duct burner□<br>GE â€“ 195 MW + 670 MMBtu/hr duct burner | Carbon Monoxide | Oxidation Catalyst | 2 | PPM | ROLLING 24-HR AVERAGE |

**Table D-3. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - CO**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PSO COMANCHE POWER STATION | PUBLIC SERVICE COMPANY OF OKLAHOMA | COMANCHE | OK | 10/8/2015 | The facility is an electric utility plant, which burns natural gas to generate electricity. The Comanche Power Plant was constructed in 1971 and has operated continuously since that time without significant modification. The facility produces power using two Westinghouse gas combustion turbines(94 MW), Model W-501B, to supply a single steam turbine(120 MW). The turbines are fueled by Natural Gas and operate continuously. | American Electric Power (AEP) has requested a construction permit for their Comanche Power Station (SIC 4911, NAIC Code 221112) to install Dry Low-NOX burners (DLNB) to Units No. 1 and No. 2 to reduce emissions of NOX for the purpose of meeting Best Available Retrofit Technology (BART) requirements and Regional Haze Rule. | COMBINED CYCLE COMBUSTION TURBINE | 15.21 | NATURAL GAS | 1250 | MMBTUH | Two (2) turbines without duct burner that support one (1) steam turbine. | Carbon Monoxide | Controlled Startup and Shutdown procedures with respect to Dry Low NOx Burners. | 0.0785 | LB/MMBTU | 3-HR AVG NORMAL OPERATION |
| FGE EAGLE PINES PROJECT | FGE EAGLE PINES, LLC | CHEROKEE | TX | 11/4/2015 | The FGEEP Project will include three natural gas-fired combined cycle (NGCC) power blocks, each block comprised of two gas-fired combustion turbines, two supplemental fired duct burners (DBs) heat recovery steam generators (HRSGs), and one steam turbine. FGEEP selected Alstom GT36 combustion turbines (CTs), each nominally rated at 321 megawatts (MW). Each HRSG is equipped with DBs that will have a maximum design heat input capacity of 799 million British thermal units per hour (MMBtu/hr). The CTs and DBs are fueled with pipeline quality natural gas. Each power block will also have a steam turbine generator designed to produce approximately 502 MW with the additional duct firing. Each of the three blocks will include the following ancillary equipment: one multi-cell condenser/cooling tower, one emergency generator, one firewater pump, two diesel storage tanks, and pressurized aqueous ammonia storage tanks. | | Combined Cycle Turbines (>25 MW) | 15.21 | natural gas | 321 | MW | Alstom GT36 combustion turbines (321 MW)+ 799 million British thermal units per hour (MMBtu/hr) duct burner | Carbon Monoxide | Oxidation Catalyst | 2 | PPM | 3-HR AVERAGE |
| MATTAWOMAN ENERGY CENTER | MATTAWOMAN ENERGY, LLC | PRINCE GEORGE'S | MD | 11/13/2015 | 990 MW COMBINED-CYCLE NATURAL GAS-FIRED POWER PLANTNOTE: PARTICULATE MATTER FACILITYWIDE EMISSIONS ARE PARTICULATE MATTER (FILTERABLE) | NOTE: PARTICULATE MATTER FACILITYWIDE EMISSIONS ARE PARTICULATE MATTER (FILTERABLE). THE FACILITY INCLUDES A WET MECHANICAL DRAFT COOLING TOWER (12 CELL) with 0.0005% RECIRCULATING WATER FLOW. | 2 COMBINED-CYCLE COMBUSTION TURBINES - COLD STARTUP | 15.21 | NATURAL GAS | 286 | MW | TWO SIEMENS H-CLASS (SGT-8000H VERSION 1.4-OPTIMIZED) COMBINED CYCLE COMBUSTION TURBINES (CTS) WITH A NOMINAL GENERATING CAPACITY OF 286 MW (EACH), COUPLED WITH A HEAT RECOVERY STEAM GENERATOR (HRSG) EQUIPPED WITH DUCT BURNERS, DRY LOW-NOX BURNERS, SCR, OXIDATION CATALYST | Carbon Monoxide | GOOD COMBUSTION PRACTICES AND OXIDATION CATALYST | 1772 | LB/EVENT | COLD STARTUP |
| MATTAWOMAN ENERGY CENTER | MATTAWOMAN ENERGY, LLC | PRINCE GEORGE'S | MD | 11/13/2015 | 990 MW COMBINED-CYCLE NATURAL GAS-FIRED POWER PLANTNOTE: PARTICULATE MATTER FACILITYWIDE EMISSIONS ARE PARTICULATE MATTER (FILTERABLE) | NOTE: PARTICULATE MATTER FACILITYWIDE EMISSIONS ARE PARTICULATE MATTER (FILTERABLE). THE FACILITY INCLUDES A WET MECHANICAL DRAFT COOLING TOWER (12 CELL) with 0.0005% RECIRCULATING WATER FLOW. | 2 COMBINED-CYCLE COMBUSTION TURBINES | 15.21 | NATURAL GAS | 286 | MW | TWO SIEMENS H-CLASS (SGT-8000H VERSION 1.4-OPTIMIZED) COMBINED CYCLE COMBUSTION TURBINES (CTS) WITH A NOMINAL GENERATING CAPACITY OF 286 MW (EACH), COUPLED WITH A HEAT RECOVERY STEAM GENERATOR (HRSG) EQUIPPED WITH DUCT BURNERS, DRY LOW-NOX BURNERS, SCR, OXIDATION CATALYST.□<br>□<br>HEAT RATE LIMITED TO 6,793 BTU/KWH (NET) AT ALL TIMES WHEN THE CTS/HRSGS ARE OPERATING (LHV). INITIAL COMPLIANCE WITH THE HEAT RATE LIMITATION SHALL BE DEMONSTRATED USING ASME PTC-46 TEST METHOD. ANNUAL THERMAL EFFICIENCY TEST CONDUCTED ACCORDING TO ASME PTC-46, OR ANOTHER METHODOLOGY APPROVED BY MDE-ARMA, AND COMPARE RESULTS TO DESIGN THERMAL EFFICIENCY VALUE. AN EXCEEDANCE OF THE HEAT RATE LIMIT IS NOT CONSIDERED A VIOLATION OF THIS PERMIT, BUT TRIGGERS A REQUIREMENT FOR MATTAWOMAN TO SUBMIT A MAINTENANCE PLAN TO MDE-ARMA WHICH SPECIFIES THE ACTIONS MATTAWOMAN PLANS TO TAKE IN ORDER TO ACHIEVE THE HEAT RATE LIMIT. THE PLAN SHALL INCLUDE A TIMEFRAME THAT THE HEAT | Carbon Monoxide | GOOD COMBUSTION PRACTICES AND OXIDATION CATALYST | 2 | PPMVD @ 15% O2 | 3-HOUR BLOCK AVERAGE (EXCLUDING SU/SD) |
| MATTAWOMAN ENERGY CENTER | MATTAWOMAN ENERGY, LLC | PRINCE GEORGE'S | MD | 11/13/2015 | 990 MW COMBINED-CYCLE NATURAL GAS-FIRED POWER PLANTNOTE: PARTICULATE MATTER FACILITYWIDE EMISSIONS ARE PARTICULATE MATTER (FILTERABLE) | NOTE: PARTICULATE MATTER FACILITYWIDE EMISSIONS ARE PARTICULATE MATTER (FILTERABLE). THE FACILITY INCLUDES A WET MECHANICAL DRAFT COOLING TOWER (12 CELL) with 0.0005% RECIRCULATING WATER FLOW. | 2 COMBINED-CYCLE COMBUSTION TURBINES - WARM STARTUP | 15.21 | NATURAL GAS | 286 | MW | TWO SIEMENS H-CLASS (SGT-8000H VERSION 1.4-OPTIMIZED) COMBINED CYCLE COMBUSTION TURBINES (CTS) WITH A NOMINAL GENERATING CAPACITY OF 286 MW (EACH), COUPLED WITH A HEAT RECOVERY STEAM GENERATOR (HRSG) EQUIPPED WITH DUCT BURNERS, DRY LOW-NOX BURNERS, SCR, OXIDATION CATALYST | Carbon Monoxide | GOOD COMBUSTION PRACTICES AND OXIDATION CATALYST | 1461 | LB/EVENT | WARM STARTUP |
| MATTAWOMAN ENERGY CENTER | MATTAWOMAN ENERGY, LLC | PRINCE GEORGE'S | MD | 11/13/2015 | 990 MW COMBINED-CYCLE NATURAL GAS-FIRED POWER PLANTNOTE: PARTICULATE MATTER FACILITYWIDE EMISSIONS ARE PARTICULATE MATTER (FILTERABLE) | NOTE: PARTICULATE MATTER FACILITYWIDE EMISSIONS ARE PARTICULATE MATTER (FILTERABLE). THE FACILITY INCLUDES A WET MECHANICAL DRAFT COOLING TOWER (12 CELL) with 0.0005% RECIRCULATING WATER FLOW. | 2 COMBINED-CYCLE COMBUSTION TURBINES - HOT STARTUP | 15.21 | NATURAL GAS | 286 | MW | TWO SIEMENS H-CLASS (SGT-8000H VERSION 1.4-OPTIMIZED) COMBINED CYCLE COMBUSTION TURBINES (CTS) WITH A NOMINAL GENERATING CAPACITY OF 286 MW (EACH), COUPLED WITH A HEAT RECOVERY STEAM GENERATOR (HRSG) EQUIPPED WITH DUCT BURNERS, DRY LOW-NOX BURNERS, SCR, OXIDATION CATALYST | Carbon Monoxide | GOOD COMBUSTION PRACTICES AND OXIDATION CATALYST | 1216 | LB/EVENT | HOT STARTUP |

**Table D-3. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - CO**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MATTAWOMAN ENERGY CENTER | MATTAWOMAN ENERGY, LLC | PRINCE GEORGE'S | MD | 11/13/2015 | 990 MW COMBINED-CYCLE NATURAL GAS-FIRED POWER PLANTNOTE: PARTICULATE MATTER FACILITYWIDE EMISSIONS ARE PARTICULATE MATTER (FILTERABLE) | NOTE: PARTICULATE MATTER FACILITYWIDE EMISSIONS ARE PARTICULATE MATTER (FILTERABLE). THE FACILITY INCLUDES A WET MECHANICAL DRAFT COOLING TOWER (12 CELL) with 0.0005% RECIRCULATING WATER FLOW. | 2 COMBINED-CYCLE COMBUSTION TURBINES - SHUTDOWN | 15.21 | NATURAL GAS | 286 | MW | TWO SIEMENS H-CLASS (SGT-8000H VERSION 1.4-OPTIMIZED) COMBINED CYCLE COMBUSTION TURBINES (CTS) WITH A NOMINAL GENERATING CAPACITY OF 286 MW (EACH), COUPLED WITH A HEAT RECOVERY STEAM GENERATOR (HRSG) EQUIPPED WITH DUCT BURNERS, DRY LOW-NOX BURNERS, SCR, OXIDATION CATALYST | Carbon Monoxide | GOOD COMBUSTION PRACTICES AND OXIDATION CATALYST | 156 | LB/EVENT | SHUTDOWN |
| CPV TOWANTIC, LLC | CPV TOWANTIC, LLC | NEW HAVEN | CT | 11/30/2015 | 805 MW Combined Cycle Power Plant | | Combined Cycle Power Plant | 15.21 | Natural Gas | 21200000 | MMBtu/12 months | | Carbon Monoxide | Oxidation Catalyst | 0.9 | PPMVD @15% O2 | 1 HR BLOCK |
| CPV TOWANTIC, LLC | CPV TOWANTIC, LLC | NEW HAVEN | CT | 11/30/2015 | 805 MW Combined Cycle Plant | | Combined Cycle Power Plant | 15.21 | Natural Gas | 21200000 | MMBtu/yr | | Carbon Monoxide | Oxidation Catalyst | 0.9 | PPMVD @15% O2 | 1 HR BLOCK |
| LACKAWANNA ENERGY CTR/JESSUP | LACKAWANNA ENERGY CENTER, LLC | LACKAWANNA | PA | 12/23/2015 | This plan approval is for the construction and temporary operation of three (3) identical General Electric Model 7HA.02 natural gas fired combustion turbines and heat recovery steam generator with duct burners (CT/HRSG). Each CT/HRSG combined-cycle process block includes one (1) combustion gas turbine and one (1) heat recovery steam generator with duct burners with all three (3) CT/HRSG sharing one (1) steam turbine. The entire power block is rated at 1,500 MW.<br>Additional equipment includes:<br>one (1) 2,000 kW diesel-fired emergency generator<br>one (1) 315 HP diesel-fired emergency fire water pump<br>one (1) 184.8 MM BTU/hr natural gas fired boiler<br>one (1) 12 MMBTU/hr natural gas fuel gas heater<br>two (2) Diesel fuel storage tanks<br>four (4) lubricating oil tanks<br>one (1) aqueous ammonia storage tank | | Combustion turbine with duct burner | 15.21 | Natural gas | 3304.3 | MMBtu/hr | Limits are for each CCCT and yearly limits are for cumulative turbine and duct burner. Duct burner throughput is 637.9 MMBtu/hr. | Carbon Monoxide | Oxidation catalyst, combustion controls, exclusive natural gas | 2 | PPMDV @ 15 % O2 | |
| TENASKA PA PARTNERS/WESTMORELAND GEN FAC | TENASKA PA PARTNERS LLC | WESTMORELAND | PA | 2/12/2016 | The plan approval will allow construction and temporary operation of a power plant is a single 2 on 1 combined cycle turbine configuration with 2 combustion turbines serving a single steam turbine generator equipped with heat recovery steam generator with supplemental 400MMBtu/hr natural gas fired duct burners. The approximate maximum plant nominal generating capacity is 930-1065 MW. Additional facilities will include 245 MMBtu/hr Auxiliary Boiler, one cooling tower, one diesel-fired emergency generator, and one diesel-fired emergency fire pump engine. | Application for plan approval 65-00990E received on 12/10/2015 from Tenaska to reduce the facility wide PTE authorized under plan approval 65-00990C based on revised emission information for startup and shutdown from the manufacturer. | Large combustion turbine | 15.21 | Natural Gas | 0 | | This process entry is for operations with the duct burner. Limits entered are for each turbine. | Carbon Monoxide | Oxidation Catalyst and good combustion practice | 15.9 | LB/HR | 3 HR AVERAGE |
| DECORDOVA STEAM ELECTRIC STATION | DECORDOVA II POWER COMPANY LLC | HOOD | TX | 3/8/2016 | The DeCordova Station will consist of two combustion turbine generators (CTGs) operating in simple cycle or combined cycle modes. The gas turbines will be one of two options: Siemens or General Electric. | | Combined Cycle & Cogeneration | 15.21 | natural gas | 231 | MW | 2 CTGs to operate in simple cycle & combined cycle modes. 231 MW (Siemens) or 210 MW (GE). Simple cycle operations limited to 2,500 hr/yr. | Carbon Monoxide | OXIDATION CATALYST | 4 | PPM | |
| OKEECHOBEE CLEAN ENERGY CENTER | FLORIDA POWER & LIGHT | OKEECHOBEE | FL | 3/9/2016 | Fossil-fueled power plant, consisting of a 3-on-1 combined cycle unit and auxiliary equipment. The combined cycle unit consists of three GE 7HA.02 turbines, each with nominal generating capacity of 350 MW. The total generating capacity for the combined cycle unit is 1,600 MW. | Technical evaluation of project available at□ http://depedms.dep.state.fl.us/Oculus/servlet/shell?command=getEntity&[guid=75.89000.1]&[profile=Permitting_Authorization] | Combined-cycle electric generating unit | 15.21 | Natural gas | 3096 | MMBtu/hr per turbine | 3-on-1 combined cycle unit. GE 7HA.02 turbines, approximately 350 MW per turbine. Total unit generating capacity is approximately 1,600 MW. Primarily fueled with natural gas. Permitted to burn the base-load equivalent of 500 hr/yr per turbine on ULSD. | Carbon Monoxide | Clean burners that prevent CO formation | 4.3 | PPMVD@15% O2 | 3-HR AVERAGE, NATURAL GAS OPERATION |

**Table D-3. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - CO**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NECHES STATION | APEX TEXAS POWER LLC | CHEROKEE | TX | 3/24/2016 | either 4 simple cycle combustion turbine generators (CTGs) or two CTGs operating in simple cycle or combined cycle modes. The CTGs will be one of two options: Siemens or General Electric. | | Combined Cycle & Cogeneration | 15.21 | natural gas | 231 | MW | 2 CTGs to operate in simple cycle & combined cycle modes. 231 MW (Siemens) or 210 MW (GE) Simple cycle operations limited to 2,500 hr/yr. | Carbon Monoxide | OXIDATION CATALYST | 4 | PPM | HOURLY |
| JOHNSONVILLE COGENERATION | TENNESSEE VALLEY AUTHORITY | HUMPHREYS | TN | 4/19/2016 | Existing gas-fired combustion turbine with new heat recovery steam generator (HRSG) with duct burner and two new gas-fired auxiliary boilers. | Facility-wide emissions increases do not include decreases due to shutdown of coal-fired units. | Natural Gas-Fired Combustion Turbine with HRSG | 15.21 | Natural Gas | 1339 | MMBtu/hr | Turbine throughput is 1019.7 MMBtu/hr when burning natural gas and 1083.7 MMBtu/hr when burning No. 2 oil. Duct burner throughput is 319.3 MMBtu/hr. Duct burner firing will occur during natural gas combustion only. | Carbon Monoxide | Good combustion design and practices, oxidation catalyst | 2 | PPMVD @ 15% O2 | 30 UNIT-OPERATING-DAY MOVING AVERAGE |
| GREENSVILLE POWER STATION | VIRGINIA ELECTRIC AND POWER COMPANY | GREENSVILLE | VA | 6/17/2016 | The proposed project will be a new, nominal 1,600 MW combined-cycle electrical power generating facility utilizing three combustion turbines each with a duct-fired heat recovery steam generator (HRSG) with a common reheat condensing steam turbine generator (3 on 1 configuration). The proposed fuel for the turbines and duct burners is pipeline-quality natural gas. | | COMBUSTION TURBINE GENERATOR WITH DUCT-FIRED HEAT RECOVERY STEAM GENERATORS (3) | 15.21 | natural gas | 3227 | MMBTU/HR | 3227 MMBTU/HR CT with 500 MMBTU/HR Duct Burner, 3 on 1 configuration. | Carbon Monoxide | Oxidation Catalyst | 1.6 | PPMVD | 3 HR AVG |
| MIDDLESEX ENERGY CENTER, LLC | STONEGATE POWER, LLC | MIDDLESEX | NJ | 7/19/2016 | NEW 633 MEGAWATT (MW) GROSS FACILITY CONSISTING OF<br>1.ONE GENERAL ELECTRIC (GE) 7HA.02 CCCT NOMINALLY RATED AT 380 MW AT ISO CONDITIONS WITHOUT DUCT FIRING WITH A MAXIMUM HEAT INPUT RATE OF:<br>O:3,462 MMBTU/HR(HHV) AT (0) DEGREES F, 100% LOAD COMBUSTING NATURAL GAS<br>O:3,613 MMBTU/HR(HHV) AT (0) DEGREES F, 100% LOAD COMBUSTING ULSD WHICH WILL BE THE BACKUP FUEL<br>OTHER EQUIPMENT INCLUDES:<br>2.ONE NATURAL GAS-FIRED DUCT BURNER (MAXIMUM HEAT INPUT OF 599 MMBTU/HR(HHV)) FOR SUPPLEMENTAL FIRING.<br>3.ONE 97.5 MMBTU/HR(HHV) NATURAL GAS FIRED AUXILIARY BOILER, EQUIPPED WITH LOW NOX BURNERS AND FLUE GAS RECIRCULATION FOR CONTROL OF NOX EMISSIONS;<br>4.ONE 2.25 MMBTU/HR(HHV), 327 BRAKE HORSEPOWER, ULSD FIRED EMERGENCY FIRE PUMP;<br>5.ONE 14.4 MMBTU/HR(HHV), APPROXIMATELY 1,500 KW ULSD FIRED EMERGENCY GENERATOR; AND<br>6.ONE 8-CELL, 124,800 GALLON PER MINUTE (GPM) MECHANICAL INDUCED DRAFT COOLING TOWER. | | Combined Cycle Combustion Turbine firing Natural Gas with Duct Burner | 15.21 | natural gas | 4000 | h/yr | | Carbon Monoxide | Oxidation Catalyst and good combustion practices | 2 | PPMVD@15% O2 | 3 H ROLLING AV BASED ON ONE H BLOCK AV |

**Table D-3. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - CO**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MIDDLESEX ENERGY CENTER, LLC | STONEGATE POWER, LLC | MIDDLESEX | NJ | 7/19/2016 | NEW 633 MEGAWATT (MW) GROSS FACILITY CONSISTING OF 1.ONE GENERAL ELECTRIC (GE) 7HA.02 CCCT NOMINALLY RATED AT 380 MW AT ISO CONDITIONS WITHOUT DUCT FIRING WITH A MAXIMUM HEAT INPUT RATE OF: O:3,462 MMBTU/HR(HHV) AT (0) DEGREES F, 100% LOAD COMBUSTING NATURAL GAS O:3,613 MMBTU/HR(HHV) AT (0) DEGREES F, 100% LOAD COMBUSTING ULSD WHICH WILL BE THE BACKUP FUEL OTHER EQUIPMENT INCLUDES: 2.ONE NATURAL GAS-FIRED DUCT BURNER (MAXIMUM HEAT INPUT OF 599 MMBTU/HR(HHV)) FOR SUPPLEMENTAL FIRING. 3.ONE 97.5 MMBTU/HR(HHV) NATURAL GAS FIRED AUXILIARY BOILER, EQUIPPED WITH LOW NOX BURNERS AND FLUE GAS RECIRCULATION FOR CONTROL OF NOX EMISSIONS; 4.ONE 2.25 MMBTU/HR(HHV), 327 BRAKE HORSEPOWER, ULSD FIRED EMERGENCY FIRE PUMP; 5.ONE 14.4 MMBTU/HR(HHV), APPROXIMATELY 1,500 KW ULSD FIRED EMERGENCY GENERATOR; AND 6.ONE 8-CELL, 124,800 GALLON PER MINUTE (GPM) MECHANICAL INDUCED DRAFT COOLING TOWER. | | Combined Cycle Combustion Turbine firing Natural Gas without Duct Burner | 15.21 | Natural Gas | 8040 | H/YR | | Carbon Monoxide | OXIDATION CATALYST AND GOOD COMBUSTION PRACTICES | 2 | PPMVD@15% O2 | 3 H ROLLING AV BASED ON ONE H BLOCK AV |
| ST. CHARLES POWER STATION | ENTERGY LOUISIANA, LLC | ST. CHARLES | LA | 8/31/2016 | The St. Charles Power Station (SCPS) is a new electric power generating facility consisting of two (2) natural gas-fired combined cycle gas turbines, each with a heat recovery stem generator unit equipped with duct burners, and one (1) steam generator turbine. The SCPS will will have a predicted net nominal output of 980 MW at ISO conditions with supplemental duct firing. | | SCPS Combined Cycle Unit 1A | 15.21 | Natural Gas | 3625 | MMBTU/hr | | Carbon Monoxide | Catalytic Oxidation and good combustion practices during normal operations, and good combustion practices during startup/shutdown operations. | 125.21 | LB/H | HOURLY MAXIMUM |
| ST. CHARLES POWER STATION | ENTERGY LOUISIANA, LLC | ST. CHARLES | LA | 8/31/2016 | The St. Charles Power Station (SCPS) is a new electric power generating facility consisting of two (2) natural gas-fired combined cycle gas turbines, each with a heat recovery stem generator unit equipped with duct burners, and one (1) steam generator turbine. The SCPS will will have a predicted net nominal output of 980 MW at ISO conditions with supplemental duct firing. | | SCPS Combined Cycle Unit 1B | 15.21 | Natural Gas | 3625 | MMBTU/hr | | Carbon Monoxide | Catalytic oxidation and good combustion practices during normal operations, and good combustion practices during startup/shutdown operations. | 125.21 | LB/H | HOURLY MAXIMUM |
| CPV FAIRVIEW ENERGY CENTER | CPV FAIRVIEW, LLC | CAMBRIA | PA | 9/2/2016 | This plan approval authorizes CPV Fairview, LLC to construct and temporarily operate the Fairview Energy Center. Air contamination sources and air cleaning devices authorized for construction and temporary operation under this plan approval include: A combined cycle electric generating unit consisting of two (2) General Electric ("GE") 7HA.02 "H"-class combustion turbines each with maximum fuel type-based heat input of 3,338-MMBtu/hr (natural gas), 3,274-MMBtu/hr (ULSD), 3,199 MMBtu/hr (ethane blend), and equipped with dry low-NOx combustors and evaporative turbine intake cooling; two (2) heat recovery steam generators (HRSGs) each equipped with a low-NOx duct burner with maximum heat input of 425-MMBtu/hr, and a common steam turbine generator. Exhaust emissions from each combined cycle electric generating unit will be controlled by oxidation catalyst and selective catalytic reduction (SCR). - One (1) up to 12-cell mechanical draft wet cooling tower with high-efficiency drift eliminator. - One (1) natural gas-fired auxiliary boiler with maximum heat input of 92.4 MMBtu/hr. - One (1) natural gas-fired dew point heater with maximum heat input of 12.8 MMBtu/hr. - One (1) natural gas-fired dew point heater with maximum heat input of 3.2 MMBtu/hr. - Two (2) 1,500-ekW diesel-fired emergency genset engines. - One (1) 422-bhp diesel-fired fire water pump engine | | Combustion turbine and HRSG with duct burner NG only | 15.21 | Natural Gas | 3338 | MMBtu/hr | Emission limits are for each turbine operating with duct burner and do not include startup/shutdown emissions. Tons per year limits is a cumulative value for all three CCCT. CEMS for NOx, CO, and O2.□ Each CCCT and duct burner have 5 operational scenarios:□ 1 CCCT with duct burner fired - fueled by NG only□ 2 CCCT with duct burner fired - fueled by NG blend with ethane□ 3 CCCT without duct burner fired - fueled by NG only□ 4 CCCT without duct burner fired - fueled by NG blend with ethane□ 5 CCCT without duct burner fired - fueled by ULSD (Limited to emergency use only) | Carbon Monoxide | Oxidation catalyst operated at all steady state operating loads and good combustion practices | 2 | PPMDV @ 15% O2 | |

**Table D-3. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - CO**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SOUTH FIELD ENERGY LLC | SOUTH FIELD ENERGY LLC | COLUMBIANA | OH | 9/23/2016 | 1150 MW combined-cycle gas turbine (CCGT) facility | Permit-to-install for the construction of the South Field Energy facility, a nominal 1,150 megawatt (MW) combined cycle gas turbine (CCGT) facility to be located in Wellsville, Ohio. | Combined Cycle Combustion Turbines (two, identical) (P001 and P002) | 15.21 | Natural gas | 3131 | MMBTU/H | Two identical combined cycle combustion turbine (3,131 MMBtu/hr heat input turbine at ISO conditions, natural gas firing with evaporative cooler on and 800 MMBtu/hr maximum heat input natural gas-fired duct burner) with dry low NOx combustors, selective catalytic reduction (SCR), catalytic oxidizer, and wet injection for ULSD firing. Heat input for ULSD firing at ISO conditions, with evaporative cooler on is 3,173 MMBtu/hr.□<br>□<br>Throughputs and limits are for single turbine except as noted. | Carbon Monoxide | Good combustion controls and oxidation catalyst | 18.57 | LB/H | WITH DUCT BURNER. SEE NOTES. |
| HOLLAND BOARD OF PUBLIC WORKS - EAST 5TH STREET | HOLLAND BOARD OF PUBLIC WORKS | OTTAWA | MI | 12/5/2016 | Natural gas combined heat and power plant. | Permit Number 107-13E revised Permit 107-13C as follows:□<br>□<br>1) All ppmdv limits were changed to ppmvd in the CTGHRSG section for NOx, CO and VOC. □<br>Also, □<br>2) The process notes for the natural gas emergency engine and the diesel fire pump emergency engine were revised as well. No other changes were made. As such, this RBLC entry includes the updated information as identified above.□<br>□<br>Additionally, this is an updated determination for this facility, which is still under construction and has not yet operated. The original RBLC determination for the facility is identified as MI-0412. | FGCTGHRSG (2 Combined cycle CTGs with HRSGs; EUCTGHRSG10 & EUCTGHRSG11) | 15.21 | Natural gas | 554 | MMBTU/H, each | Two combined cycle natural gas fired combustion turbine generators (CTGs) with heat recovery steam generators (HRSG) (EUCTGHRSG10 & EUCTGHRSG11 in FGCTGHRSG). The total hours for both units combined for startup and shutdown shall not exceed 635 hours per 12-month rolling time period. | Carbon Monoxide | Oxidation catalyst technology and good combustion practices. | 4 | PPM | EACH EU; 24-H ROLL AVG EXCEPT |
| HOLLAND BOARD OF PUBLIC WORKS - EAST 5TH STREET | HOLLAND BOARD OF PUBLIC WORKS | OTTAWA | MI | 12/5/2016 | Natural gas combined heat and power plant. | Permit Number 107-13E revised Permit 107-13C as follows:□<br>□<br>1) All ppmdv limits were changed to ppmvd in the CTGHRSG section for NOx, CO and VOC. □<br>Also, □<br>2) The process notes for the natural gas emergency engine and the diesel fire pump emergency engine were revised as well. No other changes were made. As such, this RBLC entry includes the updated information as identified above.□<br>□<br>Additionally, this is an updated determination for this facility, which is still under construction and has not yet operated. The original RBLC determination for the facility is identified as MI-0412. | FGCTGHRSG--Startup/Shutdown (2 combined cycle CTGs with HRSGs; EUCTGHRSG10 & EUCTGHRSG11) | 15.21 | Natural gas | 554 | MMBTU/H; EACH | Two combined cycle natural gas-fired combustion turbine generators (CTGs) with heat recovery steam generators (HRSG) (EUCTGHRSG10 & EUCTGHRSG11 in FGCTGHRSG). The total hours for both units combined for startup and shutdown shall not exceed 635 hours per 12-month rolling time period. □<br>□<br>This process group is to identify emission limits during startup and shutdown. | Carbon Monoxide | Oxidation catalyst technology and good combustion practices. | 247.3 | LB/H | OPERATING HOUR DURING STARTUP |

**Table D-3. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - CO**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| INDECK NILES, LLC | INDECK NILES, LLC | CASS | MI | 1/4/2017 | Natural gas combined cycle power plant. | The permit includes equipment not entered into the RBLC due to a lack of emission limits or material limits; these include a cold cleaner, a number of space heaters, and two fuel tanks. | FGCTGHRSG (2 Combined Cycle CTGs with HRSGs) | 15.21 | Natural gas | 8322 | MMBTU/H | There are 2 combined cycle natural gas-fired combustion turbine generators (CTGs) with heat recovery steam generators (HRSG) identified as EUCTGHRSG1 & EUCTGHRSG2 in the flexible group FGCTGHRSG. The total hours for startup and shutdown for each train shall not exceed 500 hours per 12-month rolling time period. □<br>□<br>The throughput capacity is 3421 MMBTU/H for each turbine, and 740 MMBTU/H for each duct burner for a combined throughput of 4161 MMBTU/H or 8322 MMBTU/H for both trains. | Carbon Monoxide | Oxidation catalyst technology and good combustion practices. | 24.7 | LB/H | 24-H ROLLING AVG |
| HILLTOP ENERGY CENTER, LLC | HILLTOP ENERGY CENTER, LLC | GREENE | PA | 4/12/2017 | The project consists of a single power block in a one-on-one (1x1), combined cycle, single shaft configuration, including a combustion turbine (CT) and heat recovery steam generator (HRSG) with a steam turbine (ST).<br>â€¢ One (1) 3,509 MMBtu/hr General Electric International, Inc. (GE) model no. GE 7HA.02 natural gas-fired combined cycle combustion turbine equipped with a heat recovery steam generator (HRSG) with supplemental 981.4 MMBtu/hr natural gas fired duct burners; controlled by selective catalytic reduction and oxidation catalyst.<br>â€¢ One (1) 42 MMBtu/hr natural gas-fired auxiliary boiler.<br>â€¢ One (1) 6.4 MMBtu/hr natural gas-fired fuel gas heater.<br>â€¢ One (1) 2.95 MMBtu/hr, 422 hp diesel-fired emergency firewater pump engine.<br>â€¢ One (1) 18.77 MMBtu/hr, 2,682 hp diesel-fired emergency generator engine.<br>â€¢ Eight-cell, mechanical draft, evaporative cooling tower controlled by drift eliminators.<br>â€¢ One (1) 3,000 gallon emergency generator diesel storage tank.<br>â€¢ One (1) 500 gallon firewater pump diesel storage tank.<br>â€¢ One (1) 35,000 gallon 19% aqueous ammonia storage tank.<br>â€¢ Lubricating oil storage tanks.<br>â€¢ Miscellaneous components in natural gas service, and SF6 containing circuit breakers; controlled by leak detection and repair (LDAR) | The project consists of a single power block in a one-on-one (1x1), combined cycle, single shaft configuration, including a combustion turbine (CT) and heat recovery steam generator (HRSG) with a steam turbine (ST).□<br>â€¢ One (1) 3,509 MMBtu/hr General Electric International, Inc. (GE) model no. GE 7HA.02 natural gas-fired combined cycle combustion turbine equipped with a heat recovery steam generator (HRSG) with supplemental 981.4 MMBtu/hr natural gas fired duct burners; controlled by selective catalytic reduction and oxidation catalyst.□<br>â€¢ One (1) 42 MMBtu/hr natural gas-fired auxiliary boiler.□<br>â€¢ One (1) 6.4 MMBtu/hr natural gas-fired fuel gas heater.□<br>â€¢ One (1) 2.95 MMBtu/hr, 422 hp diesel-fired emergency firewater pump engine. □<br>â€¢ One (1) 18.77 MMBtu/hr, 2,682 hp diesel-fired emergency generator engine. □<br>â€¢ Eight-cell, mechanical draft, evaporative cooling tower controlled by drift eliminators.□<br>â€¢ One (1) 3,000 gallon emergency generator diesel storage tank.□<br>â€¢ One (1) 500 gallon firewater pump diesel storage tank.□<br>â€¢ One (1) 35,000 gallon 19% aqueous ammonia storage tank.□<br>â€¢ Lubricating oil storage tanks.□<br>â€¢ Miscellaneous components in natural gas service, and SF6 containing circuit breakers; controlled by leak detection and repair (LDAR) □ | Combustion Turbine without Duct Burner | 15.21 | Natural Gas | 3509 | MMBtu/hr | | Carbon Monoxide | Oxidation Catalyst | 2 | PPMDV | CORRECTED TO 15% O2 |
| GAINES COUNTY POWER PLANT | SOUTHWESTERN PUBLIC SERVICE COMPANY | | TX | 4/28/2017 | constructed in phases, with natural gas-fired simple cycle combustion turbines (SCCTs) with dry low nitrogen oxide (NOx) burners (DLN) to be converted into 2-on-1 combined cycle combustion turbines (CCCTs) with selective catalytic reduction (SCRs), heat recovery steam generators (HRSGs, one per combustion turbine) and one steam turbine per two CCCTs. Federal control review only applies to the turbines and HRSGs. | | Combined Cycle Turbine with Heat Recovery Steam Generator, fired Duct Burners, and Steam Turbine Generator | 15.21 | NATURAL GAS | 426 | MW | Four Siemens SGT6-5000F5 natural gas fired combustion turbines with HRSGs and Steam Turbine Generators | Carbon Monoxide | Selective Catalytic Reduction (SCR) and Dry Low NOx burners | 2 | PPMVD | 15% O2 3-H AVG |
| KILLINGLY ENERGY CENTER | NTE CONNECTICUT, LLC | WINDHAM | CT | 6/30/2017 | 550 MW Combined Cycle Plant | | Natural Gas w/o Duct Firing | 15.21 | Natural Gas | 2969 | MMBtu/hr | Throughput is for turbine only | Carbon Monoxide | Oxidation Catalyst | 0.9 | PPMVD @15% O2 | 1 HOUR BLOCK |
| KILLINGLY ENERGY CENTER | NTE CONNECTICUT, LLC | WINDHAM | CT | 6/30/2017 | 550 MW Combined Cycle Plant | | Natural Gas w/Duct Firing | 15.21 | Natural Gas | 2639 | MMBtu/hr | Duct burner MRC is 946 MMbtu/hr | Carbon Monoxide | Oxidation Catalyst | 1.7 | LB/MMBTU | 1 HOUR BLOCK |

**Table D-3. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - CO**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TRUMBULL ENERGY CENTER | TRUMBULL ENERGY CENTER | TRUMBULL | OH | 9/7/2017 | 940 MW combined cycle gas turbine (CCGT) facility | Permit-to-install for the construction of the Trumbull Energy Center, a nominal 940 megawatt (MW) combined cycle gas turbine (CCGT) facility to be located in the Village of Lordstown, Ohio. | Combined Cycle Combustion Turbines (two, identical) (P001 and P002) | 15.21 | Natural gas | 3025 | MMBTU/H | Two identical combined cycle combustion turbine (3,025 mmBtu/hr heat input turbine at ISO conditions and 237 mmBtu/hr heat input duct burner) with dry low NOx combustors, selective catalytic reduction (SCR), and catalytic oxidizer. Throughputs and limits are for single turbine except as noted. | Carbon Monoxide | Good combustion controls and oxidation catalyst | 15.5 | LB/H | WITH DUCT BURNER. SEE NOTES. |
| OREGON ENERGY CENTER | OREGON ENERGY CENTER | LUCAS | OH | 9/27/2017 | Combined cycle gas turbine (CCGT) facility | Installation of natural gas-fired combined cycle combustion turbine power plant. | Combined Cycle Combustion Turbines (two, identical) (P001 and P002) | 15.21 | Natural gas | 3055 | MMBTU/H | Combined cycle combustion turbine (3,055 mmBtu/hr heat input turbine at ISO conditions and 221.3 mmBtu/hr heat input duct burner) with dry low NOX combustors, selective catalytic reduction (SCR), and catalytic oxidation. All heat values are on a HHV basis.□<br>□<br>Throughputs and limits are for single turbine except as noted. | Carbon Monoxide | oxidation catalyst and good combustion control | 15.5 | LB/H | WITH DUCT BURNER. SEE NOTES. |
| GUERNSEY POWER STATION LLC | GUERNSEY POWER STATION LLC | GUERNSEY | OH | 10/23/2017 | 1,650 MW combined cycle combustion turbine electrical generating facility | Installation PTI for a new 1,650 MW combined cycle natural-gas fired turbine plant and associated auxiliary boiler, firewater pumps, emergency generators and fuel gas heaters | Combined Cycle Combustion Turbines (3, identical) (P001 to P003) | 15.21 | Natural gas | 3516 | MMBTU/H | Three identical Combustion Turbines; GE 7HA.02 natural gas-fired lean pre-mix combined cycle combustion turbine generator equipped with dry low-NOx (DLN) burners nominally rated at 3,516 MMBtu/hr HHV at 100% load and -18Â° F exhausting through a heat recovery steam generator (HRSG) with supplemental natural gas-fired duct burners nominally rated at 997 MMBtu/hr HHV controlled with catalytic oxidation and selective catalytic reduction (SCR) and cooled with an air-cooled condenser (ACC) used to generate electricity. Throughputs and limits are for a single turbine except as noted. | Carbon Monoxide | oxidation catalyst and good combustion practices as recommended by the manufacturer | 20.76 | LB/H | WITH DUCT BURNER. SEE NOTES. |
| LONG RIDGE ENERGY GENERATION LLC - HANNIBAL POWER | LONG RIDGE ENERGY GENERATION LLC - HANNIBAL POWER | MONROE | OH | 11/7/2017 | Combined cycle combustion turbine power generation facility | Initial installation permit for a 485 MW combined cycle electric generating facility in Monroe County. The emissions units include a combustion turbine with a heat recovery stream generator (HRSG) and duct burners, auxiliary boiler, emergency diesel generator engine, emergency fire pump engine, and an eight-cell mechanical draft low-mist wet cooling tower.□<br>□<br>The Project will use either a GE Model 7HA.02 (P004), Mitsubishi Model 501JAC (P005) or Siemens Model SCC6-8000H (P006) combustion turbine (CT) with duct firing in the HRSG to increase steam generation in the steam turbine. Only one turbine will be built but each of these turbines are included in this RBLC entry. | General Electric Combustion Turbine (P004) | 15.21 | Natural gas | 3544 | MMBTU/H | General Electric model 7HA.02 natural gas or natural gas+ethane fired combined cycle combustion turbine generator equipped with dry low-NOx (DLN) burners nominally rated at 3,544 MMBtu/hr at 100% load and -5Â° F exhausting through a heat recovery steam generator (HRSG) controlled with catalytic oxidation and selective catalytic reduction (SCR) used to generate additional electricity.□<br>□<br>The Project will use either a GE Model 7HA.02 (P004), Mitsubishi Model 501JAC (P005) or Siemens Model SCC6-8000H (P006) combustion turbine (CT) with duct firing in the HRSG to increase steam generation in the steam turbine. Only one turbine will be built but each of these turbines are included in this RBLC entry. | Carbon Monoxide | Oxidation catalyst and good combustion practices as recommended by the manufacturer. | 15.9 | LB/H | EXCEPT STARTUP AND SHUTDOWN. SEE NOTES |
| LONG RIDGE ENERGY GENERATION LLC - HANNIBAL POWER | LONG RIDGE ENERGY GENERATION LLC - HANNIBAL POWER | MONROE | OH | 11/7/2017 | Combined cycle combustion turbine power generation facility | Initial installation permit for a 485 MW combined cycle electric generating facility in Monroe County. The emissions units include a combustion turbine with a heat recovery stream generator (HRSG) and duct burners, auxiliary boiler, emergency diesel generator engine, emergency fire pump engine, and an eight-cell mechanical draft low-mist wet cooling tower.□<br>□<br>The Project will use either a GE Model 7HA.02 (P004), Mitsubishi Model 501JAC (P005) or Siemens Model SCC6-8000H (P006) combustion turbine (CT) with duct firing in the HRSG to increase steam generation in the steam turbine. Only one turbine will be built but each of these turbines are included in this RBLC entry. | Mitsubishi Combustion Turbine (P005) | 15.21 | Natural gas | 3320 | MMBTU/H | Mitsubishi Model 501JAC natural gas or natural gas+ethane fired combined cycle combustion turbine generator equipped with dry low-NOx (DLN) burners nominally rated at 3,320 MMBtu/hr at 100% load and -5Â° F exhausting through a heat recovery steam generator (HRSG) with supplemental natural gas-fired duct burners nominally rated at 108 MMBtu/hr controlled with catalytic oxidation and selective catalytic reduction (SCR) used to generate electricity.□<br>□<br>The Project will use either a GE Model 7HA.02 (P004), Mitsubishi Model 501JAC (P005) or Siemens Model SCC6-8000H (P006) combustion turbine (CT) with duct firing in the HRSG to increase steam generation in the steam turbine. Only one turbine will be built but each of these turbines are included in this RBLC entry. | Carbon Monoxide | oxidation catalyst and shall operate the emissions unit in accordance with good combustion practices as recommended by the manufacturer | 15.3 | LB/H | WITH DUCT BURNER. SEE NOTES. |

**Table D-3. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - CO**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LONG RIDGE ENERGY GENERATION LLC - HANNIBAL POWER | LONG RIDGE ENERGY GENERATION LLC - HANNIBAL POWER | MONROE | OH | 11/7/2017 | Combined cycle combustion turbine power generation facility | Initial installation permit for a 485 MW combined cycle electric generating facility in Monroe County. The emissions units include a combustion turbine with a heat recovery stream generator (HRSG) and duct burners, auxiliary boiler, emergency diesel generator engine, emergency fire pump engine, and an eight-cell mechanical draft low-mist wet cooling tower.□<br>□<br>The Project will use either a GE Model 7HA.02 (P004), Mitsubishi Model 501JAC (P005) or Siemens Model SCC6-8000H (P006) combustion turbine (CT) with duct firing in the HRSG to increase steam generation in the steam turbine. Only one turbine will be built but each of these turbines are included in this RBLC entry. | Siemens Combustion Turbine (P006) | 15.21 | Natural gas | 3602 | MMBTU/H | Siemens Model SCC6-8000H natural gas or natural gas+ethane fired combined cycle combustion turbine generator equipped with dry low-NOx (DLN) burners nominally rated at 3,602 MMBtu/hr at 100% load and -5Â° F exhausting through a heat recovery steam generator (HRSG) with supplemental natural gas-fired duct burners nominally rated at 667 MMBtu/hr controlled with catalytic oxidation and selective catalytic reduction (SCR) used to generate electricity.□<br>□<br>The Project will use either a GE Model 7HA.02 (P004), Mitsubishi Model 501JAC (P005) or Siemens Model SCC6-8000H (P006) combustion turbine (CT) with duct firing in the HRSG to increase steam generation in the steam turbine. Only one turbine will be built but each of these turbines are included in this RBLC entry. | Carbon Monoxide | oxidation catalyst and shall operate the emissions unit in accordance with good combustion practices as recommended by the manufacturer | 16.5 | LB/H | WITH DUCT BURNER. SEE NOTES. |
| FILER CITY STATION | FILER CITY STATION LIMITED PARTNERSHIP | MANISTEE | MI | 11/17/2017 | New natural gas combined heat and power plant proposed at existing cogenerating power plant permitted to burn wood, coal and tire derived fuel. | | EUCCT (Combined cycle CTG with unfired HRSG) | 15.21 | Natural gas | 1934.7 | MMBTU/H | A 1,934.7 MMBTU/H natural gas fired heavy frame industrial combustion turbine. The turbine operates in combined-cycle with an unfired heat recovery steam generator (HRSG). | Carbon Monoxide | Oxidation catalyst technology and good combustion practices. | 4 | PPM | 24-H ROLL.AVG., EXCEPT STARTUP/SHUTDOWN |
| FILER CITY STATION | FILER CITY STATION LIMITED PARTNERSHIP | MANISTEE | MI | 11/17/2017 | New natural gas combined heat and power plant proposed at existing cogenerating power plant permitted to burn wood, coal and tire derived fuel. | | EUCCT (Startup/Shutdown) | 15.21 | Natural gas | 1934.7 | MMBTU/H | This emission unit is being entered as a separate process to account for the emission limits associated with startup/shutdown events, which could not be included within the previous EUCCT original process name.□<br>□<br>□<br>A 1,934.7 MMBTU/H natural gas fired heavy frame industrial combustion turbine. The turbine operates in combined-cycle with an unfired heat recovery steam generator (HRSG). | Carbon Monoxide | Oxidation catalyst technology and good combustion practices. | 1580 | POUNDS | POUNDS PER EVENT |

**Table D-3. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - CO**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DANIA BEACH ENERGY CENTER | FLORIDA POWER AND LIGHT COMPANY | BROWARD | FL | 12/4/2017 | 1200 megawatt 2-on-1 combined cycle facility, natural gas-fired, with limited ULSD use. GE 7HA turbines | Technical evaluation available at□ https://arm-permit2k.dep.state.fl.us/nontv/0110037.017.AC.D.ZIP | 2-on-1 combined cycle unit (GE 7HA) | 15.21 | Natural gas | 4000 | MMBtu/hr | Two nominal 430 MW combustion turbines, coupled to a steam turbine generator | Carbon Monoxide | Clean burning fuel with lean pre-mix turbines | 4.3 | PPMVD@15% O2 | AT LOADS > 90% |
| TVA - JOHNSONVILLE COGENERATION | TENNESSEE VALLEY AUTHORITY | HUMPHREYS | TN | 2/1/2018 | Combustion turbines and combined cycle plant | Permit 972969 adds startup and shutdown limits to the requirements established in PSD permit 970816F. | Dual-fuel CT and HRSG with duct burner | 15.21 | Natural Gas | 1020 | MMBtu/hr | Rated input capacity is 1020 MMBtu/hr (CT) and 319 MMBtu/hr (duct burner) when burning natural gas and 1084 MMBtu/hr when burning #2 oil. | Carbon Monoxide | Oxidation catalyst, good combustion design & practice | 2 | PPMVD @ 15% O2 | 30-DAY AVG WHEN BURNING NATURAL GAS |
| HARRISON COUNTY POWER PLANT | ESC HARRISON COUNTY POWER, LLC | HARRISON | WV | 3/27/2018 | Nominal 640 mWe natural gas-fired combined-cycle power plant.<br><br>Small sources: Emergency Generator, Fire Water Pump, Fuel Gas Heater not included in RBLC - may request info or see permit for details. | | GE 7HA.02 Turbine | 15.21 | Natural Gas | 3496.2 | mmBtu/hr | Nominal 640 mWe□<br>All emission limits steady-state and include 1000 mmBtu/hr Duct Burner in operation□<br>Short Term startup and shutdown limits in lb/event given in permit. | Carbon Monoxide | Oxidation Catalyst, Good Combustion Practices | 20 | LB/HR | 1-HOUR AVERAGE |
| MONTGOMERY COUNTY POWER STATIOIN | ENTERGY TEXAS INC | MONTGOMERY | TX | 3/30/2018 | | | Combined Cycle Turbine | 15.21 | NATURAL GAS | 2635 | MMBTU/HR/UNIT | Two Mitsubishi M501GAC turbines (without fast start) | Carbon Monoxide | OXIDATION CATALYST | 2 | PPMVD | 15% O2 3 HOUR AVERAGE |
| MONTGOMERY COUNTY POWER STATIOIN | ENTERGY TEXAS INC | MONTGOMERY | TX | 3/30/2018 | | | COMBINED CYCLE TURBINE MSS REDUCED LOAD | 15.21 | NATURAL GAS | 0 | | 9 HOURS STARTUP, 1 HOUR SHUTDOWN | Carbon Monoxide | minimizing duration of startup / shutdown events, engaging the pollution control equipment as soon as practicable (based on vendor recommendations and guarantees), and meeting the emissions limits on the MAERT | 8000 | LB/H | |
| HARRISON POWER | HARRISON POWER | HARRISON | OH | 4/19/2018 | 1000 MW natural gas-fired combined cycle combustion turbine plant | Initial installation permit for a 1000 MW combined cycle electric generating facility in Harrison County that includes two (2) combustion turbines with a heat recovery stream generator (HRSG) and duct burners, auxiliary boiler, emergency diesel generator engine, and emergency fire pump engine.□<br>□<br>The permit includes the option to install either General Electric turbines (with 80 MMBTU aux boiler B002) or Mitsubishi turbines (with 44.55 MMBTU aux boiler B001). The facility-wide pollutants table below is for the GE turbines. The Mitsubishi emissions are as follows: PM10/2.5 155.2, SO2 59.2, NOx 249.9, CO 219.7, VOC 169.5 | General Electric (GE) Combustion Turbines (P005 & P006) | 15.21 | Natural gas | 3459.6 | MMBTU/H | Two identical GE Combustion Turbines 1 and 2; GE model 7HA.02 natural gas-fired combined cycle combustion turbine generator equipped with dry low-NOx (DLN) burners nominally rated at 3,459.6 MMBtu/hr (HHV) at 100% load and -2Â° F exhausting through a heat recovery steam generator (HRSG) with supplemental natural gas-fired duct burners nominally rated at 570.45 MMBtu/hr (HHV) controlled with catalytic oxidation and selective catalytic reduction (SCR) used to generate additional electricity.□<br>□<br>The permit includes the option to install either General Electric turbines (with 80 MMBTU aux boiler B002) or Mitsubishi turbines (with 44.55 MMBTU aux boiler B001).□<br>□<br>Limits and throughputs are for single turbine except as noted. | Carbon Monoxide | Good combustion practices and oxidation catalyst | 17.9 | LB/H | WITH DUCT BURNER. SEE NOTES. |

**Table D-3. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - CO**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HARRISON POWER | HARRISON POWER | HARRISON | OH | 4/19/2018 | 1000 MW natural gas-fired combined cycle combustion turbine plant | Initial installation permit for a 1000 MW combined cycle electric generating facility in Harrison County that includes two (2) combustion turbines with a heat recovery stream generator (HRSG) and duct burners, auxiliary boiler, emergency diesel generator engine, and emergency fire pump engine.□<br>□<br>The permit includes the option to install either General Electric turbines (with 80 MMBTU aux boiler B002) or Mitsubishi turbines (with 44.55 MMBTU aux boiler B001). The facility-wide pollutants table below is for the GE turbines. The Mitsubishi emissions are as follows: PM10/2.5 155.2, SO2 59.2, NOx 249.9, CO 219.7, VOC 169.5 | Mitsubishi Hitachi Power Systems (MHPS) Combustion Turbines (P007 & P008) | 15.21 | Natural gas | 3231 | MMBTU/H | Two identical MHPS Combustion Turbines 1 and 2; Mitsubishi Model M501JAC natural gas-fired combined cycle combustion turbine generator equipped with dry low-NOx (DLN) burners nominally rated at 3,231 MMBtu/hr (HHV) at 100% load and 51Â° F exhausting through a heat recovery steam generator (HRSG) with supplemental natural gas-fired duct burners nominally rated at 306 MMBtu/hr (HHV) controlled with catalytic oxidation and selective catalytic reduction (SCR) used to generate electricity.□<br>□<br>The permit includes the option to install either General Electric turbines (with 80 MMBTU aux boiler B002) or Mitsubishi turbines (with 44.55 MMBTU aux boiler B001).□<br>□<br>Limits and throughputs are for single turbine except as noted. | Carbon Monoxide | Good combustion practices and oxidation catalyst | 17.1 | LB/H | WITH DUCT BURNER. SEE NOTES. |
| PALMDALE ENERGY PROJECT | PALMDALE ENERGY, LLC | LOS ANGELES | CA | 4/25/2018 | 645 MW (nominal) Natural Gas-fired Combined Cycle Power Plant, 2 x 1 configuration, auxiliary boiler for faster startup | See also docket: https://www.regulations.gov/docket?D=EPA-R09-OAR-2017-0473. □<br>□<br>Permit decision was appealed to EPA's Environmental Appeals Board. Board denied review on October 23, 2018. Information available through www.epa.gov/eab and https://yosemite.epa.gov/oa/EAB_Web_Docket.nsf/f22b4b245fab46c6852570e6004df1bd/ad735c0b822500258525829d004217eb!OpenDocument. □<br>□<br>1/31/20 -- SYS MGR -- Link to permit is □ <https://www.regulations.gov/document?D=EPA-R09-OAR-2017-0473-0028> | Combustion Turbines (GEN1 and GEN2) | 15.21 | Natural Gas | 2217 | MMBTU/H | Each combustion turbine rated at 214 MW, with a□<br>maximum heat input rate of 2,217 MMBtu/H (HHV, at ISO□<br>conditions); natural gas-fired Siemens SGT6-5000F, each vents to □<br>dedicated Heat Recovery Steam Generator and a shared 276□<br>MW Steam Turbine Generator; 160-ft□<br>stack height; 22-ft stack diameter | Carbon Monoxide | Oxidation Catalyst | 1.5 | PPM @ 15% O2 | 1-HR, DEMO LIMIT, W/O DUCT FIRING |
| C4GT, LLC | NOVI ENERGY | USA | VA | 4/26/2018 | Natural gas-fired combined cycle power plant | The permit was written with two options for the turbines:□<br>Option 1 - GE 7HA.02□<br>Option 2 - Siemens SGT6-8000H□<br>Facility Wide Pollutants for Siemens: □<br>CO: 293.5□<br>NOx: 295.8□<br>PM: 253.8□<br>SOx: 39.3□<br>VOC: 113.7 | GE Combustion Turbine - Option 1 - Normal Operation | 15.21 | natural gas | 34000 | MMCF/YR | Option 1: □<br>Two on one configuration: 3,482 MMBtu/hr combustion turbine with 475 MMBtu/hr duct-fired HRSG. Emission limits reflect the operation of one turbine with or without duct firing. | Carbon Monoxide | Oxidation catalyst and good combustion practices | 1 | PPMVD@ 15% O2 | 3 HR AV/WITHOUT DB |
| C4GT, LLC | NOVI ENERGY | USA | VA | 4/26/2018 | Natural gas-fired combined cycle power plant | The permit was written with two options for the turbines:□<br>Option 1 - GE 7HA.02□<br>Option 2 - Siemens SGT6-8000H□<br>Facility Wide Pollutants for Siemens: □<br>CO: 293.5□<br>NOx: 295.8□<br>PM: 253.8□<br>SOx: 39.3□<br>VOC: 113.7 | Siemens Combusion Turbine - Option 2 - Normal Operation | 15.21 | Natural Gas | 35000 | MMCF/YR | Option 2: □<br>Two on one configuration: 3,116 MMBtu/hr combustion turbine with 991 MMBtu/hr duct-fired HRSG. Emission limits reflect the operation of one turbine with or without duct firing. | Carbon Monoxide | Oxidation catalyst & good combustion practice | 1.8 | PPMVD @ 15% O2 | 3 H AV/WITH OR WITHOUT DB |
| C4GT, LLC | NOVI ENERGY | USA | VA | 4/26/2018 | Natural gas-fired combined cycle power plant | The permit was written with two options for the turbines:□<br>Option 1 - GE 7HA.02□<br>Option 2 - Siemens SGT6-8000H□<br>Facility Wide Pollutants for Siemens: □<br>CO: 293.5□<br>NOx: 295.8□<br>PM: 253.8□<br>SOx: 39.3□<br>VOC: 113.7 | GE Combustion Turbine - Tuning & Water Washing | 15.21 | natural gas | 34000 | MMCF/YR | Alternative operating scenario: during periods of tuning and water washing | Carbon Monoxide | Oxidation catalyst and good combustion practices | 194 | LB/TURBINE/ DAY | 24 HR AV |

**Table D-3. RBLC Search Results for Large Natural Gas Fired Turbines (Combined-Cycle) - CO**

| Facility Name | Corporate or Company Name | Facility County | Facility State | Permit Issuance Date | Facility Description | Permit Notes | Process Name | Process Type | Primary Fuel | Throughput | Throughput Units | Process Notes | Pollutant | Control Method Description | Emission Limit | Emission Limit Unit | Emission Limit 1 Average Time Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C4GT, LLC | NOVI ENERGY | USA | VA | 4/26/2018 | Natural gas-fired combined cycle power plant | The permit was written with two options for the turbines:□<br>Option 1 - GE 7HA.02□<br>Option 2 - Siemens SGT6-8000H□<br>Facility Wide Pollutants for Siemens: □<br>CO: 293.5□<br>NOx: 295.8□<br>PM: 253.8□<br>SOx: 39.3□<br>VOC: 113.7 | GE Combustion Turbine - Startup and Shutdown | 15.21 | natural gas | 34000 | MMCF/YR | Startup and Shutdown | Carbon Monoxide | Oxidation catalyst and good combustion practice | 840 | LB/TURBINE/ EVENT | COLD START 60 MIN OR LESS |
| C4GT, LLC | NOVI ENERGY | USA | VA | 4/26/2018 | Natural gas-fired combined cycle power plant | The permit was written with two options for the turbines:□<br>Option 1 - GE 7HA.02□<br>Option 2 - Siemens SGT6-8000H□<br>Facility Wide Pollutants for Siemens: □<br>CO: 293.5□<br>NOx: 295.8□<br>PM: 253.8□<br>SOx: 39.3□<br>VOC: 113.7 | Siemens Combustion Turbine - Tuning & Water Washing | 15.21 | Natural Gas | 35000 | MMCF/YR | Alternative operating scenario: during periods of tuning and water washing | Carbon Monoxide | Oxidation catalyst and good combustion practices | 309 | LB/TURBINE/ DAY | 24 HR AV |
| C4GT, LLC | NOVI ENERGY | USA | VA | 4/26/2018 | Natural gas-fired combined cycle power plant | The permit was written with two options for the turbines:□<br>Option 1 - GE 7HA.02□<br>Option 2 - Siemens SGT6-8000H□<br>Facility Wide Pollutants for Siemens: □<br>CO: 293.5□<br>NOx: 295.8□<br>PM: 253.8□<br>SOx: 39.3□<br>VOC: 113.7 | Siemens Combustion Turbine - Startup & Shutdown | 15.21 | Natural Gas | 35000 | MMCF/YR | Startup and Shutdown | Carbon Monoxide | Oxidation catalyst and good combustion practices | 434 | LB/TURBINE/ EVENT | COLD START 55 MIN OR LESS |
| MEC NORTH, LLC AND MEC SOUTH LLC | MARSHALL ENERGY CENTER LLC | CALHOUN | MI | 6/29/2018 | Natural gas combined cycle power plant (two plants: north and south) | There are two plants that will operate as separate entities and each received a separate Air Permit to Install, but they are considered one stationary source and were reviewed as one project. | EUCTGHRSG (South Plant): A combined cycle natural gas-fired combustion turbine generator with heat recovery steam generator. | 15.21 | Natural gas | 500 | MW | A combined-cycle natural gas-fired combustion turbine generator (CTG) with heat recovery steam generator (HRSG) in a 1x1 configuration with a steam turbine generator (STG) for a nominal 500 MW electricity production. The CTG is a H-class turbine with a rating of 3,080 MMBTU/H (HHV). The HRSG is equipped with a natural gas-fired duct burner rated at 755 MMBTU/H (HHV) at ISO conditions to provide heat for additional steam production. The HRSG is not capable of operating independently from the CTG. The CTG/HRSG is equipped with dry low NOx burner (DLNB), SCR and an oxidation catalyst. | Carbon Monoxide | Oxidation catalyst technology and good combustion practices. | 4 | PPMV | AT 15%O2; 240HR ROLL AVG; NOT S.S. |