

COMPREHENSIVE REPORT
Report Date:08/04/2010

Facility Information

RBLC ID:	CT-0151 (final)	Date Determination	
		Last Updated:	05/12/2008
Corporate/Company Name:	KLEEN ENERGY SYSTEMS, LLC	Permit Number:	104-0131 AND 104-0133
Facility Name:	KLEEN ENERGY SYSTEMS, LLC	Permit Date:	02/25/2008 (actual)
Facility Contact:	MR. WILLIAM CORVO 8606321044	FRS Number:	UNKNOWN
Facility Description:	580 MW NOMINAL (620 MW PEAK) BASE LOAD NATURAL GAS FIRED POWER PLANT WITH NO.2 OIL BACKUP. TWO SIEMENS SGT6-5000F COMBUSTION TURBINE TRAINS WITH HRSG AND NATURAL GAS DUCT BURNER.	SIC Code:	4911
Permit Type:	A: New/Greenfield Facility	NAICS Code:	221210
Permit URL:		COUNTRY:	USA
EPA Region:	1		
Facility County:	MIDDLESEX		
Facility State:	CT		
Facility ZIP Code:	06457		
Permit Issued By:	CONNECTICUT DEP, BUREAU OF AIR MANAGEMENT (Agency Name) MR. ERNIE BOUFFARD(Agency Contact) (860)424-4152 ernest.bouffard@po.state.ct.us		
Other Agency Contact Info:	CASE CONTACT: MR. LOUIS CORSINO, CT DEP, 79 ELM STREET, HARTFORD, CT 06106		
Permit Notes:	FACILITY CONSISTS OF TWO TURBINE TRAINS. EACH TURBINE TRAIN CONSISTS OF A SIEMENS SGT6-5000F COMBUSTION TURBINE WITH NATURAL GAS AS PRIMARY AND OIL AS BACKUP, A 445 MMBTU/HR NATURAL GAS ONLY DUCT BURNER AND AN HRSG. CONTROL EQUIPMENT ON EACH TRAIN CONSISTS OF AN SCR AND CO CATALYST. EMISSION RATES PRESENTED WITHIN ARE FOR EACH TURBINE TRAIN INDIVIDUALLY. SHORT-TERM EMISSION RATES ARE REPRESENTATIVE OF STEADY STATE OPERATION. TRANSIENT OPERATION (START-UP, SHUT DOWN, ETC) SHORT-TERM EMISSION RATES ARE INCLUDED IN THE PERMITS FACILITY-WIDE EMISSIONS ARE REPRESENTATIVE OF EMISSIONS FROM EACH TURBINE TRAIN ONLY AND INCLUDE EMISSIONS FROM TRANSIENT OPERATIONS.		

Process/Pollutant Information

PROCESS NAME:	SIEMENS SGT6-5000F COMBUSTION TURBINE #1 AND #2 (NATURAL GAS FIRED) WITH 445 MMBTU/HR NATURAL GAS DUCT BURNER
Process Type:	15.210 (Natural Gas (includes propane & liquified petroleum gas))
Primary Fuel:	NATURAL GAS
Throughput:	2.10 MMCF/H
Process Notes:	THROUGHPUT IS FOR TURBINE ONLY WHEN FIRING NATURAL GAS TURBINE: 2136 MMBTU/HR (2.095 MMCF/HR) DUCT BURNER: 445 MMBTU/HR (0.436 MMCF/HR) EMISSION RATES ARE FOR EACH COMBUSTION TURBINE FIRING NATURAL GAS, NOT COMBINED.
POLLUTANT NAME:	Volatile Organic Compounds (VOC)
CAS Number:	VOC
Test Method:	Unspecified
Pollutant Group(s):	(Volatile Organic Compounds (VOC))
Emission Limit 1:	10.0000 LB/H W/OUT DUCT BURNER
Emission Limit 2:	10.8000 LB/H W/DUCT BURNER
Standard Emission:	5.0000 PPMVD @ 15% O2 1-HR BLOCK
Did factors, other than air pollution technology considerations influence the BACT decisions:	Unknown
Case-by-Case Basis:	BACT-PSD
Other Applicable Requirements:	OPERATING PERMIT
Control Method:	(N) SOME REDUCTIONS OF VOC ARE GAINED FROM CO CATALYST BUT ARE NOT GUARANTEED. EMISSION RATES DO NOT INCORPORATE THIS POTENTIAL REDUCTION.
Est. % Efficiency:	
Compliance Verified:	Unknown
Pollutant/Compliance Notes:	EMISSIONS ARE FOR EACH TURBINE TRAIN, NOT COMBINED.

POLLUTANT NAME: Carbon Monoxide
CAS Number: 630-08-0
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds)
Emission Limit 1: 4.3000 LB/H W/OUT DUCT BURNER
Emission Limit 2: 8.4000 LB/H W/DUCT BURNER
Standard Emission: 0.9000 PPMVD @ 15 % O2 1 HR-BLOCK (W/OUT DUCT BURNER)
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements: OPERATING PERMIT
Control Method: (A) CO CATLYST
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: CO STANDARDIZED LIMIT WITH DUCT BURNING IS 1.7 PPMVD @ 15 % O2 1 HR-BLOCK EMISSIONS ARE FOR EACH TURBINE TRAIN, NOT COMBINED.

POLLUTANT NAME: Ammonia (NH3)
CAS Number: 7664-41-7
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds)
Emission Limit 1: 2.0000 PPM @ 15 % O2 NATURAL GAS, STEADY STATE OPERATION
Emission Limit 2: 5.0000 PPM @ 15 % O2 NATURAL GAS, ALL OTHER TIMES
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements: OPERATING PERMIT
Control Method: (N) AMMONIA SLIP EMISSIONS AS A RESULT OF INSTALLATION OF SCR FOR NOX CONTROL
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: AVG TIME FOR EACH ARE 1-HOUR BLOCK. AMMONIA SLIP LIMIT IS 2.0 PPM WHEN BURNING NATURAL GAS AT STEADY STATE. AMMONIA SLIP LIMIT IS 5.0 PPM WHEN BURNING NATURAL GAS AT ALL OTHER TIMES (I.E. TRANSIENT OPERATION)

POLLUTANT NAME: Particulate matter, filterable < 10 µ (FPM10)
CAS Number: PM
Test Method: Unspecified
Pollutant Group(s): (Particulate Matter (PM))
Emission Limit 1: 11.0000 LB/H W/OUT DUCT BURNER
Emission Limit 2: 15.2000 LB/H W/ DUCT BURNER
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements: OPERATING PERMIT
Control Method: (N)
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: EMISSIONS ARE FOR EACH TURBINE TRAIN, NOT COMBINED.

POLLUTANT NAME: Sulfur Oxides (SOx)
CAS Number: 7446
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Sulfur (SOx))
Emission Limit 1: 4.9000 LB/H W/OUT DUCT BURNING

Emission Limit 2: 5.1000 LB/H W/ DUCT BURNING
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements: OPERATING PERMIT
Control Method: (N)
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: EMISSIONS ARE FOR EACH TURBINE TRAIN, NOT COMBINED.

POLLUTANT NAME: Nitrogen Oxides (NOx)
CAS Number: 10102
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))
Emission Limit 1: 15.5000 LB/H W/OUT DUCT BURNER
Emission Limit 2: 16.2000 LB/H W/DUCT BURNER
Standard Emission: 2.0000 PPM @ 15% O2 1-HR BLOCK
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: LAER
Other Applicable Requirements: NSPS , OPERATING PERMIT
Control Method: (A) LOW NOX BURNER AND SELECTIVE CATALYTIC REDUCTION
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: EMISSIONS ARE FOR EACH TURBINE TRAIN, NOT COMBINED.

Process/Pollutant Information

PROCESS NAME: SIEMENS SGT6-5000F COMBUSTION TURBINE #1 AND #2 (OIL FIRED) WITH 445 MMBTU/HR NATURAL GAS DUCT BURNER
Process Type: 15.290 (Liquid Fuel & Liquid Fuel Mixtures)
Primary Fuel: NO.2 FUEL OIL
Throughput: 15119.00 GAL/H
Process Notes: THROUGHPUT ABOVE IS FOR TURBINE ONLY WHEN BURNING OIL TURBINE: 2117 MMBTU/HR (15119 GAL/HR) DUCT BURNER (NG ONLY): 445 MMBTU (.436 MMCF/HR) EMISSION RATES ARE FOR EACH COMBUSTION TURBINE TRAIN FIRING OIL, NOT COMBINED.

POLLUTANT NAME: Nitrogen Oxides (NOx)
CAS Number: 10102
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))
Emission Limit 1: 48.4000 LB/H W/OUT DUCT BURNING
Emission Limit 2: 50.5000 LB/H W/ DUCT BURNING
Standard Emission: 5.9000 PPMVD @ 15% O2 1-HOUR BLOCK
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: LAER
Other Applicable Requirements: NSPS , OPERATING PERMIT
Control Method: (A) WATER INJECTION AND SELECTIVE CATALYTIC REDUCTION
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: EMISSION RATES ARE FOR EACH TURBINE TRAIN, NOT COMBINED.

POLLUTANT NAME: Volatile Organic Compounds (VOC)
CAS Number: VOC
Test Method: Unspecified

Pollutant Group(s): (Volatile Organic Compounds (VOC))
Emission Limit 1: 9.0000 LB/H W/OUT DUCT BURNER
Emission Limit 2: 11.3000 LB/H W/ DUCT BURNER
Standard Emission: 3.6000 PPMVD @ 15% O2 1-HOUR BLOCK
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements: OPERATING PERMIT
Control Method: (N) SOME VOC REDUCTIONS ARE ACHIEVED THROUGH CO CATALYST BUT ARE NOT GUARANTEED. EMISSIONS DO NOT INCLUDE THESE POTENTIAL REDUCTIONS.
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: EMISSION RATES ARE FOR EACH TURBINE TRAIN, NOT COMBINED.

POLLUTANT NAME: Carbon Monoxide
CAS Number: 630-08-0
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds)
Emission Limit 1: 7.3000 LB/H W/OUT DUCT BURNER
Emission Limit 2: 9.4000 LB/H W/ DUCT BURNER
Standard Emission: 1.8000 PPMVD @ 15% O2 1-HOUR BLOCK
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements: OPERATING PERMIT
Control Method: (A) CO CATALYST
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: EMISSION RATES ARE FOR EACH TURBINE TRAIN, NOT COMBINED.

POLLUTANT NAME: Ammonia (NH3)
CAS Number: 7664-41-7
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds)
Emission Limit 1: 5.0000 PPM @ 15 % O2 1-HOUR BLOCK
Emission Limit 2:
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements: OPERATING PERMIT
Control Method: (N) AMMONIA SLIP EMISSIONS ARE FROM SCR INSTALLED FOR NOX CONTROL
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: AMMONIA SLIP LIMIT OF 5.0 PPM APPLIES AT ALL TIMES WHEN BURNING OIL. EMISSION RATES ARE FOR EACH TURBINE TRAIN, NOT COMBINED.

POLLUTANT NAME: Particulate matter, filterable < 10 µ (FPM10)
CAS Number: PM
Test Method: Unspecified
Pollutant Group(s): (Particulate Matter (PM))
Emission Limit 1: 57.0000 LB/H W/OUT DUCT BURNING
Emission Limit 2: 57.0000 LB/H W/ DUCT BURNING
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements: OPERATING PERMIT

Control Method: (N)
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: EMISSION RATES ARE FOR EACH TURBINE TRAIN, NOT COMBINED.

POLLUTANT NAME: Sulfur Oxides (SOx)
CAS Number: 7446
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Sulfur (SOx))
Emission Limit 1: 3.2000 LB/H W/OUT DUCT BURNER
Emission Limit 2: 3.7000 LB/H W/DUCT BURNER

Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD
Other Applicable Requirements: OPERATING PERMIT
Control Method: (N) ULTRA LOW SULFUR FUEL (0.0015 % SULFUR BY WEIGHT)
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: EMISSION RATES ARE FOR EACH TURBINE TRAIN, NOT COMBINED.

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Facility Information

RBLC ID:	VA-0308 (final)	Date Determination	
		Last Updated:	09/21/2009
Corporate/Company Name:	VIRGINIA ELECTRIC AND POWER COMPANY	Permit Number:	81391
Facility Name:	WARREN COUNTY FACILITY	Permit Date:	01/14/2008 (actual)
Facility Contact:	ANDY GATES 8042732950	FRS Number:	110012168475
Facility Description:	THE OWNERSHIP OF THIS SOURCE WAS TRANSFERRED TO VIRGINIA ELECTRIC AND POWER COMPANY (VIRGINIA POWER) ON MARCH 5, 2008. IN A LETTER DATED MARCH 3, 2009, VIRGINIA POWER HAS REQUESTED AN ADDITIONAL EXTENSION OF THE PERMIT.	SIC Code:	4911
Permit Type:	A: New/Greenfield Facility	NAICS Code:	221112
Permit URL:		COUNTRY:	USA
EPA Region:	3		
Facility County:	WARREN		
Facility State:	VA		
Facility ZIP Code:			
Permit Issued By:	VIRGINIA ENVIRONMENTAL QUALITY AIR DIV. (Agency Name) MS. MONICA A. HARVEY(Agency Contact) (804)698-4300 MAHARVEY@DEQ.VIRGINIA.GOV		
Other Agency Contact Info:	PLEASE DIRECT ALL TECHNICAL QUESTIONS ABOUT THIS SOURCE TO PERMIT WRITER, JANARDAN PANDEY AT 540-574-7817 OR E-MAIL TO JRPANDEY@DEQ.VIRGINIA.GOV		
Permit Notes:	THIS PERMIT AUTHORIZES ONE OF THREE POSSIBLE SCENARIOS FOR THE FINAL CONFIGURATION OF THE ELECTRICAL POWER GENERATION FACILITY: SCENARIO 1 CONSISTS OF A ONE-ON-ONE COMBUSTION TURBINE (CT) GENERATOR CONFIGURATION WITH TWO GENERAL ELECTRIC CT GENERATORS, MODEL 7FA, TWO HEAT RECOVERY STEAM GENERATORS, AND TWO STEAM TURBINES. SCENARIO 2 CONSISTS OF A TWO-ON-ONE CT GENERATOR CONFIGURATION WITH TWO GENERAL ELECTRIC CT GENERATORS, MODEL 207FA, TWO HEAT RECOVERY STEAM GENERATORS, ONE STEAM TURBINE, AND ONE AUXILIARY BOILER. SCENARIO 3 CONSISTS OF A TWO-ON-ONE CT GENERATOR CONFIGURATION WITH TWO SIEMENS CT GENERATORS, MODEL SGT6-5000F, TWO HEAT RECOVERY STEAM GENERATORS, ONE STEAM TURBINE, AND ONE AUXILIARY BOILER.		

Process/Pollutant Information

PROCESS NAME: ELECTRIC GENERATION - SCENARIO 1

Process Type: 15.210 (Natural Gas (includes propane & liquified petroleum gas))
Primary Fuel: NATURAL GAS
Throughput: 1717.00 MMBTU/H
Process Notes: THE EMISSION LIMITS AND THROUGHPUT ARE FOR ONE OF 2 UNITS. (2) GE MODEL 7FA NATURAL GAS COMBINED-CYCLE EACH RATED AT 180,000 KW EACH WITH A HEAT RECOVERY STEAM GENERATOR HAVING A DUCT BURNER RATED AT 500 M.

POLLUTANT NAME: Carbon Monoxide
CAS Number: 630-08-0
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds)
Emission Limit 1: 12.8000 LB/H WITH DUCT BURNER
Emission Limit 2: 7.2000 LB/H WITHOUT DUCT BURNER
Standard Emission: 1.3000 PPMVD WITHOUT POWER AUGMENTATION
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements: OPERATING PERMIT
Control Method: (B) NG ONLY. GOOD COMBUSTION PRACTICES. CEM SYSTEM OXIDATION CATALYST.
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: EMISSION ARE FOR ONE OF TWO UNITS

POLLUTANT NAME: Nitrogen Oxides (NOx)
CAS Number: 10102
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))
Emission Limit 1: 2.0000 PPM
Emission Limit 2: 17.9000 LB/H
Standard Emission: 2.0000 PPM
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements: NSPS , SIP , OPERATING PERMIT
Control Method: (B) 2 STAGE PREMIX NOX COMBUSTION AND SCR CEMS SYSTEM
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: EMISSIONS ARE FOR ONE OF TWO UNITS

POLLUTANT NAME: Particulate matter, filterable < 10 µ (FPM10)
CAS Number: PM
Test Method: Unspecified
Pollutant Group(s): (Particulate Matter (PM))
Emission Limit 1: 0.0130 LB/MMBTU
Emission Limit 2: 0.0130 LB/MMBTU
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: N/A
Other Applicable Requirements: OPERATING PERMIT
Control Method: (P) GOOD COMBUSTION PRACTICES
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: EMISSIONS FOR ONE OF TWO UNITS

POLLUTANT NAME: Sulfur Dioxide (SO2)
CAS Number: 7446-09-5

Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Sulfur (SOx))
Emission Limit 1: 0.0003 LB/MMBTU
Emission Limit 2: 0.0003 LB/MMBTU
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: N/A
Other Applicable Requirements: OPERATING PERMIT
Control Method: (P) GOOD COMBUSTION PRACTICES
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: EMISSIONS ARE FOR ONE OF TWO UNITS.

POLLUTANT NAME: Sulfuric Acid (mist, vapors, etc)
CAS Number: 7664-93-9
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Particulate Matter (PM))
Emission Limit 1: 0.0001 MMBTU
Emission Limit 2: 0.0001 MMBTU
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: N/A
Other Applicable Requirements: OPERATING PERMIT
Control Method: (P) GOOD COMBUSTION PRACTICES
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: EMISSIONS ARE FOR ONE OF TWO UNITSL

POLLUTANT NAME: Volatile Organic Compounds (VOC)
CAS Number: VOC
Test Method: Unspecified
Pollutant Group(s): (Volatile Organic Compounds (VOC))
Emission Limit 1: 0.7000 PPMVD WITHOUT DUCT BURNER
Emission Limit 2: 1.0000 PPMVD WITH DUCT BURNER
Standard Emission: 1.4000 PPMVD WITH DUCT BURNER AND POWER AUGMENTATION
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: N/A
Other Applicable Requirements: OPERATING PERMIT
Control Method: (B) GOOD COMBUSTION PRACTICES AND OXIDATION CATALYST.
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: EMISSIONS ARE FOR ONE OF TWO UNITS.

Process/Pollutant Information

PROCESS ELECTRIC GENERATION - SCENARIO 2

NAME:

Process Type: 15.210 (Natural Gas (includes propane & liquified petroleum gas))

Primary Fuel: NATURAL GAS

Throughput: 1944.00 MMBTU

Process Notes: THROUGHPUT IS FOR ONE OF TWO UNITS. (2) GE MODEL 207FA NATURL GAS COMBINED-CYCLE COMBUSTION TURBINES, EACH 286,200 KW AND EQUIPPED WITH A HEAT RECOVERY STEAM GENERATOR HAVING A DUCT BURNER RATED AT 500M

POLLUTANT NAME: Volatile Organic Compounds (VOC)
CAS Number: VOC
Test Method: Unspecified
Pollutant Group(s): (Volatile Organic Compounds (VOC))
Emission Limit 1: 0.7000 PPMVD WITH DUCT BURNER FIRING
Emission Limit 2: 1.0000 PPMVD WITHOUT DUCT BURNER FIRING
Standard Emission: 0.7000 PPMVD
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: N/A
Other Applicable Requirements: OPERATING PERMIT
Control Method: (B) GOOD COMBUSTION PRACTICES AND OXIDATION CATALYST.
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: EMISSIONS ARE FOR ONE OF TWO UNITS

POLLUTANT NAME: Nitrogen Dioxide (NO₂)
CAS Number: 10102-44-0
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NO_x))
Emission Limit 1: 2.0000 PPMVD WITH/WITHOUT BURNER FIRING
Emission Limit 2: 17.9000 LB/H WITH BURNER FIRING
Standard Emission: 2.0000 PPMVD
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements: NSPS , SIP , OPERATING PERMIT
Control Method: (B) CEM SYSTEMS AND GOOD COMBUSTION PRACTICES. 2 STAGE LEAN PREMIX AND SCR.
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: EMISSIONS A FOR ONE OF TWO UNITS.

POLLUTANT NAME: Particulate matter, filterable < 10 μ (FPM10)
CAS Number: PM
Test Method: Unspecified
Pollutant Group(s): (Particulate Matter (PM))
Emission Limit 1: 12.5000 LB/H WITHOUT DUCT FIRING
Emission Limit 2: 17.5600 LB/H WITH DUCT FIRING
Standard Emission: 12.5000 LB/H WITHOUT DUCT FIRING
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: N/A
Other Applicable Requirements: OPERATING PERMIT
Control Method: (P) GOOD COMBUSTION PRACTICES
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: EMISSION LIMITS ARE FOR ONE OF TWO UNITS.

POLLUTANT NAME: Carbon Monoxide
CAS Number: 630-08-0
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds)
Emission Limit 1: 1.2000 PPMVD WITH DUCT BURNER FIRING
Emission Limit 2: 1.3000 PPMVD WITHOUT DUCT BURNER FIRING
Standard Emission: 1.2000 PPMVD WITH DUCT BURNER FIRING
Did factors, other than air pollution technology considerations influence the BACT decisions: U

Case-by-Case Basis: BACT-PSD
Other Applicable Requirements: OPERATING PERMIT
Control Method: (B) CEM SYSTEM. GOOD COMBUSTION PRACTICES AND OXIDATION CATALYST.
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: EMISSION LIMITS ARE FOR ONE OF TWO UNITS

POLLUTANT NAME: Sulfur Dioxide (SO2)
CAS Number: 7446-09-5
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Sulfur (SOx))
Emission Limit 1: 0.0002 LB/MMBTU
Emission Limit 2: 0.0002 LB/MMBTU
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: U

Case-by-Case Basis: N/A
Other Applicable Requirements: OPERATING PERMIT
Control Method: (P) GOOD COMBUSTION PRACTICES.
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: EMISSIONS ARE FOR ONE OF TWO UNITS

POLLUTANT NAME: Sulfuric Acid (mist, vapors, etc)
CAS Number: 7664-93-9
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Particulate Matter (PM))
Emission Limit 1: 0.0002 LB/MMBTU
Emission Limit 2: 0.0002 LB/MMBTU
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: U

Case-by-Case Basis: N/A
Other Applicable Requirements: OPERATING PERMIT
Control Method: (P) GOOD COMBUSTION PRACTICES.
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: EMISSIONS ARE FOR ONE OF TWO UNITS

Process/Pollutant Information

PROCESS ELECTRIC GENERATION SECNARIO 3

NAME:

Process Type: 15.210 (Natural Gas (includes propane & liquified petroleum gas))

Primary Fuel: NATURAL GAS

Throughput: 2204.00 MMBTU/H

Process Notes: EMISSIONS AND THROUGHPUT ARE FOR ONE OF TWO UNITS. (2) SIEMENS MODEL SGT6-5000 GAS-FIRED COMBINED-CYCLE COMBUSTION TURBINES RATED AT 311,800 KW EACH EQUIPPED WITH A DUCT BURNER RATE OF 210 MMBTU/HR

POLLUTANT NAME: Nitrogen Oxides (NOx)
CAS Number: 10102
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))
Emission Limit 1: 2.0000 PPMVD
Emission Limit 2: 16.5000 LB/H WITH DUCT BURNER FIRING

Standard Emission: 2.0000 PPMVD
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements: NSPS , OPERATING PERMIT
Control Method: (B) 2 STAGE LEAN PREMIX AND GOOD COMBUSTION PRACTICES. SCR AND CEM SYSTEM.
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: EMISSIONS ARE FOR ONE OF TWO UNITS.

POLLUTANT NAME: Particulate matter, filterable < 10 µ (FPM10)
CAS Number: PM
Test Method: Unspecified
Pollutant Group(s): (Particulate Matter (PM))
Emission Limit 1: 9.9000 LB/H WITHOUT DUCT BURNER FIRING
Emission Limit 2: 11.3000 LB/H WITH DUCT BURNER FIRING
Standard Emission: 9.9000 LB/H
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: N/A
Other Applicable Requirements: OPERATING PERMIT
Control Method: (P) GOOD COMBUSTION PRACTICES.
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: EMISSIONS ARE FOR ONE OF TWO UNITS.

POLLUTANT NAME: Carbon Monoxide
CAS Number: 630-08-0
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds)
Emission Limit 1: 1.8000 PPMVD WITHOUT DUCT BURNER FIRING
Emission Limit 2: 2.5000 PPMVD WITH DUCT BURNER FIRING
Standard Emission: 1.8000 PPMVD
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements: OPERATING PERMIT
Control Method: (B) CEM SYSTEM. GOOD COMBUSTION PRACTICES AND OXIDATION CATALYST.
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: EMISSIONS ARE FOR ONE OF TWO UNITS.

POLLUTANT NAME: Sulfuric Acid (mist, vapors, etc)
CAS Number: 7664-93-9
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Particulate Matter (PM))
Emission Limit 1: 0.0001 LB/MMBTU WITHOUT DUCT BURNER FIRING
Emission Limit 2: 0.0001 LB/MMBTU WITH DUCT BURNER FIRING
Standard Emission: 0.0001 LB/MMBTU
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: N/A
Other Applicable Requirements: OPERATING PERMIT
Control Method: (P) GOOD COMBUSTION PRACTICES.
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: EMISSIONS ARE FOR ONE OF TWO UNITS.

POLLUTANT NAME: Sulfur Dioxide (SO2)
CAS Number: 7446-09-5
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Sulfur (SOx))
Emission Limit 1: 0.0003 LB/MMBTU WITHOUT DUCT BURNER FIRING
Emission Limit 2: 0.0003 LB/MMBTU WITH DUCT BURNER FIRING
Standard Emission: 0.0003 LB/MMBTU
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: N/A
Other Applicable Requirements: OPERATING PERMIT
Control Method: (P) GOOD COMBUSTION PRACTICES.
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: EMISSIONS ARE FOR ONE OF TWO BURNERS.

POLLUTANT NAME: Volatile Organic Compounds (VOC)
CAS Number: VOC
Test Method: Unspecified
Pollutant Group(s): (Volatile Organic Compounds (VOC))
Emission Limit 1: 0.7000 PPMVD WITHOUT DUCT BURNER FIRING
Emission Limit 2: 1.0000 PPMVD WITH DUCT BURNER FIRING
Standard Emission: 0.7000 PPMVD
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: N/A
Other Applicable Requirements: OPERATING PERMIT
Control Method: (B) GOOD COMBUSTION PRACTICES AND OXIDATION CATALYST
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: EMISSIONS ARE FOR ONE OF TWO UNITS.

Process/Pollutant Information

PROCESS AUXILIARY BOILER - SCENARIO 2

NAME:

Process Type: 13.310 (Natural Gas (includes propane and liquefied petroleum gas))

Primary Fuel: NATURAL GAS

Throughput: 97.00 MMBTU/H

Process Notes: THE APPROVED FUEL FOR THE AUXILIARY BOILER IS PIPELINE NATURAL GAS WITH A MAXIMUM SULFUR CONTENT OF 0.0003% BY WEIGHT (IE 0.1 GRAIN OR LESS OF TOTAL SULFUR PER 100 STANDARD CUBIC FEET). A STANDARD CUBIC FOOT OF GAS IS DEFINED AS A CUBIC FOOT OF GAS AT STANDARD CONDITIONS AS SPECIFIED IN 40 CFR 72.2 (68°F AND 29.92 IN HG).

POLLUTANT NAME: Nitrogen Dioxide (NO2)
CAS Number: 10102-44-0
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx))
Emission Limit 1: 0.0110 LB/MMBTU
Emission Limit 2: 1.8200 T/YR
Standard Emission: 0.0110 LB/MMBTU
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: N/A
Other Applicable Requirements: OPERATING PERMIT
Control Method: (A) CEM SYSTEM

Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Carbon Monoxide
CAS Number: 630-08-0
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds)
Emission Limit 1: 0.0360 LB/MMBTU
Emission Limit 2: 5.9600 T/YR
Standard Emission: 0.0360 LB/MMBTU

Did factors, other than air pollution technology considerations influence the BACT decisions: U

Case-by-Case Basis: N/A
Other Applicable Requirements: OPERATING PERMIT
Control Method: (A) CEM SYSTEM
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Sulfur Dioxide (SO2)
CAS Number: 7446-09-5
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Sulfur (SOx))
Emission Limit 1: 0.3200 LB/H
Emission Limit 2: 0.5500 T/YR
Standard Emission: 0.3200 LB/H

Did factors, other than air pollution technology considerations influence the BACT decisions: U

Case-by-Case Basis: N/A
Other Applicable Requirements: OPERATING PERMIT
Control Method: (A) CEM SYSTEM
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Volatile Organic Compounds (VOC)
CAS Number: VOC
Test Method: Unspecified
Pollutant Group(s): (Volatile Organic Compounds (VOC))
Emission Limit 1: 0.5800 LB/H
Emission Limit 2: 0.9900 T/YR
Standard Emission: 0.9900 T/YR

Did factors, other than air pollution technology considerations influence the BACT decisions: U

Case-by-Case Basis: N/A
Other Applicable Requirements: OPERATING PERMIT
Control Method: (A) CEM SYSTEM
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

Process/Pollutant Information

PROCESS AUXILIARY BOILER - SCENARIO 3
NAME:

Process Type: 13.310 (Natural Gas (includes propane and liquefied petroleum gas))
Primary Fuel: NATURAL GAS
Throughput: 62.00 MMBTU/H
Process Notes: THE APPROVED FUEL FOR THE AUXILIARY BOILER IS PIPELINE NATURAL GAS WITH A MAXIMUM SULFUR CONTENT OF 0.0003% BY WEIGHT (IE 0.1 GRAIN OR LESS OF TOTAL SULFUR PER 100 STANDARD CUBIC FEET). A STANDARD CUBIC FOOT OF GAS IS DEFINED AS A CUBIC FOOT OF GAS AT STANDARD CONDITIONS AS SPECIFIED IN 40 CFR 72.2 (68°F AND 29.92 IN HG).

POLLUTANT NAME: Nitrogen Dioxide (NO2)
CAS Number: 10102-44-0
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx))
Emission Limit 1: 0.0110 LB/MMBTU
Emission Limit 2: 1.1600 T/YR
Standard Emission: 0.0110 LB/MMBTU
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: N/A
Other Applicable Requirements: OPERATING PERMIT
Control Method: (A) CEM SYSTEM
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Carbon Monoxide
CAS Number: 630-08-0
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds)
Emission Limit 1: 0.0360 LB/MMBTU
Emission Limit 2: 3.7800 T/YR
Standard Emission: 0.0360 LB/MMBTU
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: N/A
Other Applicable Requirements: OPERATING PERMIT
Control Method: (A) CEM SYSTEM
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Sulfur Dioxide (SO2)
CAS Number: 7446-09-5
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Sulfur (SOx))
Emission Limit 1: 0.2000 LB/H
Emission Limit 2: 0.3500 T/YR
Standard Emission: 0.2000 LB/H
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: N/A
Other Applicable Requirements: OPERATING PERMIT
Control Method: (A) CEM SYSTEM
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Volatile Organic Compounds (VOC)

CAS Number: VOC
Test Method: Unspecified
Pollutant Group(s): (Volatile Organic Compounds (VOC))
Emission Limit 1: 0.3700 LB/H
Emission Limit 2: 0.6300 T/YR
Standard Emission: 0.3700 LB/H
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: N/A
Other Applicable Requirements: OPERATING PERMIT
Control Method: (A) CEM SYSTEM
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

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Facility Information

RBL ID:	NY-0098 (final)	Date Determination	
		Last Updated:	08/12/2008
Corporate/Company Name:	NEW ATHENS GENERATING CO. LLC	Permit Number:	4192200055
Facility Name:	ATHENS GENERATING PLANT	Permit Date:	01/19/2007 (actual)
Facility Contact:	NED KLEINSCHMIDT	FRS Number:	110019468057
Facility Description:	NATURAL GAS FIRED COMBINED CYCLE FACILITY RATED AT 1080 MW. THE FACILITY CONSISTS OF 3 WESTINGHOUSE MODEL 501G GAS TURBINES (245 MW BASE LOAD), HEAT RECOVERY STEAM GENERATORS, AND STEAM TURBINE GENERATORS (115 MW) WITH SELECTIVE CATALYTIC REDUCTION (SCR) FOR NOX EMISSION CONTROL. THE ALTERNATE FUEL IS DISTILLATE FUEL OIL WITH A LIMIT OF 1080 HRS/YR FOR EACH TURBINE. THE FACILITY HAS A 4 MILLION GALLON DISTILLATE OIL TANK, THREE AQUEOUS AMMONIA TANKS (20,000 GALLONS EACH) AND AN EMERGENCY DIESEL GENERATOR AND DIESEL FIRE PUMP.	SIC Code:	4911
Permit Type:	A: New/Greenfield Facility	NAICS Code:	221112
Permit URL:		COUNTRY:	USA
EPA Region:	2		
Facility County:	GREENE		
Facility State:	NY		
Facility ZIP Code:	12015		
Permit Issued By:	NEW YORK DEC, DIV OF AIR RESOURCES (Agency Name) MR. JOHN HENKES(Agency Contact) (518)402-8403 JLHENKES@GW.DEC.STATE.NY.US		
Other Agency Contact Info:	625 BROADWAY ALBANY NY 12233-3254 (518)402-8403 JLHENKES@GW.DEC.STATE.NY.US		
Permit Notes:			

Process/Pollutant Information

PROCESS FUEL COMBUSTION (GAS)
NAME:
Process Type: 15.210 (Natural Gas (includes propane & liquified petroleum gas))
Primary Fuel: NATURAL GAS
Throughput: 3100.00 MMBTU/H

Process Notes: THE FACILITY CONSISTS OF 3 WESTINGHOUSE MODEL 501G GAS COMBINED CYCLE TURBINES (245 MW BASE LOAD), HEAT RECOVERY STEAM GENERATORS, AND STEAM TURBINE GENERATORS (115 MW) WITH SELECTIVE CATALYTIC REDUCTION (SCR) FOR NOX EMISSION CONTROL. NOX EMISSIONS FROM THE TURBINES ARE ADDITIONALLY CONTROLLED BY AMMONIUM HYDROXIDE INJECTION.

POLLUTANT NAME: Nitrogen Oxides (NOx)
CAS Number: 10102
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))
Emission Limit 1: 2.0000 PPMVD @ 15% O2 3 HOUR BLOCK AVERAGE/STEADY STATE
Emission Limit 2: 23.4000 LB/H 3 HOUR BLOCK AVERAGE/STEADY STATE
Standard Emission: 2.0000 PPMVD @ 15% O2 3 HOUR BLOCK AVERAGE/STEADY STATE
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: LAER
Other Applicable Requirements: NSPS , OPERATING PERMIT
Control Method: (A) THE TURBINES EMPLOY DRY LOW NOX TECHNOLOGY AND NORMALLY OPERATE ON GAS. NOX EMISSIONS ARE ADDITIONALLY CONTROLLED BY SELECTIVE CATALYTIC REDUCTION WITH AMMONIUM HYDROXIDE INJECTION.
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Volatile Organic Compounds (VOC)
CAS Number: VOC
Test Method: Unspecified
Pollutant Group(s): (Volatile Organic Compounds (VOC))
Emission Limit 1: 4.0000 PPMVD @ 15% O2 3 HOUR BLOCK AVERAGE/ STEADY STATE
Emission Limit 2: 16.8000 LB/H 3 HOUR BLOCK AVERAGE/ STEADY STATE
Standard Emission: 4.0000 PPMVD @ 15% O2 3 HOUR BLOCK AVERAGE/ STEADY STATE
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: LAER
Other Applicable Requirements: NSPS , SIP , OPERATING PERMIT
Control Method: (N) GOOD COMBUSTION CONTROL
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

Process/Pollutant Information

PROCESS FUEL COMBUSTION (OIL)

NAME:

Process Type: 15.290 (Liquid Fuel & Liquid Fuel Mixtures)

Primary Fuel: DISTA

Throughput: 2940.00 MMBTU/H

Process Notes: DISTILLATE OIL OPERATION IS LIMITED TO 1080 HRS/YEAR. STEAM (OR WATER INJECTION) IS USED DURING OIL FIRING TO REDUCE NOX EMISSIONS. NOX EMISSIONS FROM THE TURBINES ARE ADDITIONALLY CONTROLLED BY SELECTIVE CATALYTIC REDUCTION WITH AMMONIUM HYDROXIDE INJECTION.

POLLUTANT NAME: Volatile Organic Compounds (VOC)
CAS Number: VOC
Test Method: Unspecified
Pollutant Group(s): (Volatile Organic Compounds (VOC))
Emission Limit 1: 13.0000 PPMDV @15% O2 1 HOUR AVE./ STEADY STATE
Emission Limit 2: 39.2000 LB/H 1 HOUR AVE./ STEADY STATE
Standard Emission: 13.0000 PPMDV @15% O2 1 HOUR AVE./ STEADY STATE
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: LAER

Other Applicable Requirements: NSPS , SIP , OPERATING PERMIT
Control Method: (N) GOOD COMBUSTION CONTROL
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Nitrogen Oxides (NOx)
CAS Number: 10102
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))
Emission Limit 1: 9.0000 PPMVD @ 15% O2 3 HOUR BLOCK AVAEAGE/STEADY STATE
Emission Limit 2: 101.9000 LB/H 3 HOUR BLOCK AVAEAGE/STEADY STATE
Standard Emission: 9.0000 PPMVD @ 15% O2 3 HOUR BLOCK AVAEAGE/STEADY STATE
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: LAER
Other Applicable Requirements: NSPS , SIP , OPERATING PERMIT
Control Method: (A) THE TURBINE EMPLOYS DRY LOW NOX TECHNOLOGY AND NORMALLY OPERATES ON GAS. DISTILLATE OIL OPERATION IS LIMITED TO 1080 HRS/YEAR. STEAM (OR WATER INJECTION) IS USED DURING OIL FIRING TO REDUCE NOX EMISSIONS. NOX EMISSIONS
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

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Facility Information

RBLC ID:	NV-0035 (final)	Date Determination	
		Last Updated:	06/26/2008
Corporate/Company Name:	SIERRA PACIFIC POWER COMPANY	Permit Number:	AP4911-1504
Facility Name:	TRACY SUBSTATION EXPANSION PROJECT	Permit Date:	08/16/2005 (actual)
Facility Contact:		FRS Number:	110000853345
Facility Description:	2 - NATURAL GAS FIRED COMBINED CYCLE COMBUSTION TURBINE GENERATORS WITH HRSG'S AND DUCT BURNERS. 2 - NATURAL GAS FIRED FUEL PREHEATERS. 1 - NATURAL GAS FIRED AUXILIARY BOILER	SIC Code:	4911
Permit Type:	A: New/Greenfield Facility	NAICS Code:	221112
Permit URL:		COUNTRY:	USA
EPA Region:	9		
Facility County:	STOREY COUNTY		
Facility State:	NV		
Facility ZIP Code:	89434		
Permit Issued By:	NV DIV OF ENVIRONMENTAL PROTECTION, BR OF AIR POLLUTION CONTROL (Agency Name) MR. MATTHEW A. DEBURLE, P.E.(Agency Contact) (775)687-9391 MDEBURLE@NDEP.NV.GOV		
Permit Notes:			

Process/Pollutant Information

PROCESS TURBINE, COMBINED CYCLE COMBUSTION #1 WITH HRSG AND DUCT BURNER.
NAME:
Process Type: 15.210 (Natural Gas (includes propane & liquified petroleum gas))
Primary Fuel: NATURAL GAS
Throughput: 306.00 MW

Process Notes:

POLLUTANT NAME: Sulfuric Acid (mist, vapors, etc)
CAS Number: 7664-93-9
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Particulate Matter (PM))
Emission Limit 1: 1.0000 LB/H SULFURIC ACID MIST
Emission Limit 2:
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements: OPERATING PERMIT
Control Method: (P) BEST COMBUSTION PRACTICES.
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Carbon Monoxide
CAS Number: 630-08-0
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds)
Emission Limit 1: 3.5000 PPM @ 15% O2 3-HOUR ROLLING
Emission Limit 2:
Standard Emission: 3.5000 PPM @ 15% O2
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements: OPERATING PERMIT
Control Method: (A) OXIDATION CATALYST
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: INCREMENTAL COST EFFECTIVENESS (\$/TON) : 5,472.00

POLLUTANT NAME: Volatile Organic Compounds (VOC)
CAS Number: VOC
Test Method: Unspecified
Pollutant Group(s): (Volatile Organic Compounds (VOC))
Emission Limit 1: 4.0000 PPM @ 15% O2 3-HOUR ROLLING
Emission Limit 2:
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements: OPERATING PERMIT
Control Method: (A) OXIDATION CATALYST FOR CO ALSO MINIMIZES VOC EMISSIONS.
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Particulate matter, filterable < 10 µ (FPM10)
CAS Number: PM
Test Method: Unspecified
Pollutant Group(s): (Particulate Matter (PM))
Emission Limit 1: 0.0110 LB/MMBTU 3-HOUR ROLLING
Emission Limit 2:
Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: U

Case-by-Case Basis: BACT-PSD
Other Applicable Requirements: NSPS , SIP , OPERATING PERMIT
Control Method: (P) BEST COMBUSTION PRACTICES.
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Nitrogen Oxides (NOx)
CAS Number: 10102
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))
Emission Limit 1: 2.0000 PPM @ 15% O2 3-HOUR ROLLING
Emission Limit 2:
Standard Emission: 2.0000 PPM @ 15% O2

Did factors, other than air pollution technology considerations influence the BACT decisions: U

Case-by-Case Basis: BACT-PSD
Other Applicable Requirements: OPERATING PERMIT , NSPS
Control Method: (B) SELECTIVE CATALYST REDUCTION W/ AMMONIA INJECTION
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: INCREMENTAL COST EFFECTIVENESS (\$/TON) : 30,387.00

Process/Pollutant Information

PROCESS BOILER, AUXILIARY

NAME:

Process Type: 11.310 (Natural Gas (includes propane and liquefied petroleum gas))
Primary Fuel: NATURAL GAS
Throughput: 37.70 MMBTU/H

Process Notes: ORIGINAL PERMIT HAD 159 MMBTU/HR AUX BOILER. PERMITTEE INSTALLED A 37.7 MMBTU/HR BOILER. A REVISED BACT ANALYSIS CONCLUDED THERE IS NO CHANGE IN THE PERFORMANCE EMISSION RATES BETWEEN THESE TWO SIZES.

POLLUTANT NAME: Particulate matter, filterable < 10 µ (FPM10)
CAS Number: PM
Test Method: Unspecified
Pollutant Group(s): (Particulate Matter (PM))
Emission Limit 1: 0.0040 LB/MMBTU 3-HOUR ROLLING
Emission Limit 2:
Standard Emission: 0.0040 LB/MMBTU

Did factors, other than air pollution technology considerations influence the BACT decisions: U

Case-by-Case Basis: BACT-PSD
Other Applicable Requirements: SIP , OPERATING PERMIT
Control Method: (P) BEST COMBUSTION PRACTICES.
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Nitrogen Oxides (NOx)
CAS Number: 10102
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))
Emission Limit 1: 0.0370 LB/MMBTU 3-HOUR ROLLING

Emission Limit 2:**Standard Emission:** 0.0370 LB/MMBTU**Did factors, other than air pollution technology considerations influence the BACT decisions:** U**Case-by-Case Basis:** BACT-PSD**Other Applicable Requirements:** OPERATING PERMIT , NSPS**Control Method:** (P) BEST COMBUSTION PRACTICES.**Est. % Efficiency:****Compliance Verified:** Unknown**Pollutant/Compliance Notes:****POLLUTANT NAME:** Carbon Monoxide**CAS Number:** 630-08-0**Test Method:** Unspecified**Pollutant Group(s):** (InOrganic Compounds)**Emission Limit 1:** 0.0360 LB/MMBTU 3-HOUR ROLLING**Emission Limit 2:****Standard Emission:** 0.0360 LB/MMBTU**Did factors, other than air pollution technology considerations influence the BACT decisions:** U**Case-by-Case Basis:** BACT-PSD**Other Applicable Requirements:** OPERATING PERMIT**Control Method:** (P) BEST COMBUSTION PRACTICES**Est. % Efficiency:****Compliance Verified:** Unknown**Pollutant/Compliance Notes:****POLLUTANT NAME:** Volatile Organic Compounds (VOC)**CAS Number:** VOC**Test Method:** Unspecified**Pollutant Group(s):** (Volatile Organic Compounds (VOC))**Emission Limit 1:** 0.0050 LB/MMBTU 3-HOUR ROLLING**Emission Limit 2:****Standard Emission:****Did factors, other than air pollution technology considerations influence the BACT decisions:** U**Case-by-Case Basis:** BACT-PSD**Other Applicable Requirements:** OPERATING PERMIT**Control Method:** (P) BEST COMBUSTION PRACTICES.**Est. % Efficiency:****Compliance Verified:** Unknown**Pollutant/Compliance Notes:****Process/Pollutant Information****PROCESS** TURBINE, COMBINED CYCLE COMBUSTION #2 WITH HRSG AND DUCT BURNER.**NAME:****Process Type:** 15.210 (Natural Gas (includes propane & liquified petroleum gas))**Primary Fuel:** NATURAL GAS**Throughput:** 306.00 MW**Process Notes:****POLLUTANT NAME:** Carbon Monoxide**CAS Number:** 630-08-0**Test Method:** Unspecified**Pollutant Group(s):** (InOrganic Compounds)**Emission Limit 1:** 3.5000 PPM @ 15% O2 3-HOUR ROLLING

Emission Limit 2:
Standard Emission: 3.5000 PPM @ 15% O2
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements: OPERATING PERMIT
Control Method: (A) OXIDATION CATALYST SYSTEM
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: INCREMENTAL COST EFFECTIVENESS (\$/TON) : 5,472.00

POLLUTANT NAME: Volatile Organic Compounds (VOC)
CAS Number: VOC
Test Method: Unspecified
Pollutant Group(s): (Volatile Organic Compounds (VOC))
Emission Limit 1: 4.0000 PPM @ 15% O2 3-HOUR ROLLING
Emission Limit 2:
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements: OPERATING PERMIT
Control Method: (A) OXIDATION CATALYST FOR CO ALSO MINIMIZES VOC EMISSIONS.
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Sulfuric Acid (mist, vapors, etc)
CAS Number: 7664-93-9
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Particulate Matter (PM))
Emission Limit 1: 1.0000 LB/H SULFURIC ACID MIST
Emission Limit 2:
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements: OPERATING PERMIT
Control Method: (P) BEST COMBUSTION PRACTICES.
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Particulate matter, filterable < 10 µ (FPM10)
CAS Number: PM
Test Method: Unspecified
Pollutant Group(s): (Particulate Matter (PM))
Emission Limit 1: 0.0110 LB/MMBTU 3-HOUR ROLLING
Emission Limit 2:
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements: SIP , OPERATING PERMIT , NSPS
Control Method: (P) BEST COMBUSTION PRACTICES.
Est. % Efficiency:
Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT NAME: Nitrogen Oxides (NOx)
CAS Number: 10102
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))
Emission Limit 1: 2.0000 PPM @ 15% O2 3-HOUR ROLLING
Emission Limit 2:
Standard Emission: 2.0000 PPM @ 15% O2
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements: NSPS , OPERATING PERMIT
Control Method: (A) SELECTIVE CATALYTIC REDUCTION WITH AMMONIA INJECTION
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: INCREMENTAL COST EFFECTIVENESS (\$/TON) : 30,387.00

Process/Pollutant Information

PROCESS FUEL PREHEATER #2

NAME:

Process Type: 19.600 (Misc. Boilers, Furnaces, Heaters)

Primary Fuel: NATURAL GAS

Throughput: 4.00 MMBTU/H

Process Notes: FUEL PREHEATERS WERE REMOVED FROM THE PERMIT AS THEY WERE NEVER CONSTRUCTED.

POLLUTANT NAME: Particulate matter, filterable < 10 µ (FPM10)
CAS Number: PM
Test Method: Unspecified
Pollutant Group(s): (Particulate Matter (PM))
Emission Limit 1: 0.0200 LB/MMBTU 3-HOUR ROLLING
Emission Limit 2:
Standard Emission: 0.0200 LB/MMBTU
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements: SIP
Control Method: (P) BEST COMBUSTION PRACTICES.
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Nitrogen Oxides (NOx)
CAS Number: 10102
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))
Emission Limit 1: 0.1400 LB/MMBTU 3-HOUR ROLLING
Emission Limit 2:
Standard Emission: 0.1400 LB/MMBTU
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (P) BEST COMBUSTION PRACTICES
Est. % Efficiency:
Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT NAME: Carbon Monoxide
CAS Number: 630-08-0
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds)
Emission Limit 1: 0.0300 LB/MMBTU 3-HOUR ROLLING
Emission Limit 2:
Standard Emission: 0.0300 LB/MMBTU
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (P) BEST COMBUSTION PRACTICES
Est. % Efficiency:
Compliance Verified: No
Pollutant/Compliance Notes:

POLLUTANT NAME: Volatile Organic Compounds (VOC)
CAS Number: VOC
Test Method: Unspecified
Pollutant Group(s): (Volatile Organic Compounds (VOC))
Emission Limit 1: 0.0800 LB/MMBTU 3-HOUR ROLLING
Emission Limit 2:
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (P) BEST COMBUSTION PRACTICES
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

Process/Pollutant Information

PROCESS NAME: FUEL PREHEATER #1
Process Type: 19.600 (Misc. Boilers, Furnaces, Heaters)
Primary Fuel: NATURAL GAS
Throughput: 4.00 MMBTU/H
Process Notes: FUEL PREHEATERS WERE REMOVED FROM THE PERMIT AS THEY WERE NEVER CONSTRUCTED.

POLLUTANT NAME: Particulate matter, filterable < 10 µ (FPM10)
CAS Number: PM
Test Method: Unspecified
Pollutant Group(s): (Particulate Matter (PM))
Emission Limit 1: 0.0200 LB/MMBTU 3-HOUR ROLLING
Emission Limit 2:
Standard Emission: 0.0200 LB/MMBTU
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements: SIP
Control Method: (P) BEST COMBUSTION PRACTICES
Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT NAME: Carbon Monoxide

CAS Number: 630-08-0

Test Method: Unspecified

Pollutant Group(s): (InOrganic Compounds)

Emission Limit 1: 0.0300 LB/MMBTU 3-HOUR ROLLING

Emission Limit 2:

Standard Emission: 0.0300 LB/MMBTU

Did factors, other than air pollution technology considerations influence the BACT decisions: U

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements:

Control Method: (P) BEST COMBUSTION PRACTICES

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT NAME: Nitrogen Oxides (NOx)

CAS Number: 10102

Test Method: Unspecified

Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))

Emission Limit 1: 0.1400 LB/MMBTU 3-HOUR ROLLING

Emission Limit 2:

Standard Emission: 0.1400 LB/MMBTU

Did factors, other than air pollution technology considerations influence the BACT decisions: U

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements:

Control Method: (P) BEST COMBUSTION PRACTICES

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT NAME: Volatile Organic Compounds (VOC)

CAS Number: VOC

Test Method: Unspecified

Pollutant Group(s): (Volatile Organic Compounds (VOC))

Emission Limit 1: 0.0800 LB/MMBTU 3-HOUR AVERAGE

Emission Limit 2:

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: U

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements:

Control Method: (P) BEST COMBUSTION PRACTICES

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

Previous Page

RBLC ID:	NY-0100 (final)	Date Determination	
		Last Updated:	08/12/2008
Corporate/Company Name:	EMPIRE GENERATING CO. LLC	Permit Number:	4381400052
Facility Name:	EMPIRE POWER PLANT	Permit Date:	06/23/2005 (actual)
Facility Contact:	DICK CLARK 8453387700	FRS Number:	110020996083
Facility Description:	THE BESICORP-EMPIRE POWER GENERATING FACILITY (PGF), WILL BE A NOMINAL 505 MW COMBINED CYCLE POWER PLANT, AND WILL SERVE AS A COGENERATION FACILITY BY PROVIDING STEAM TO AN ADJACENT RECYCLED NEWSPRINT MANUFACTURING PLANT. THE PGF IS CONFIGURED WITH TWO GE FRAME 7FA COMBUSTION TURBINES, HEAT RECOVERY STEAM GENERATORS (HRSG'S), AND A STEAM TURBINE. WITH ALL OF THESE COMPONENTS THE MAXIMUM ELECTRICAL OUTPUT OF THE FACILITY WILL BE APPROXIMATELY 670 MW. THE PGF WILL USE NATURAL GAS AS THE PRIMARY FUEL AND LOW SULFUR (0.5%) DISTILLATE AS THE SECONDARY FUEL IN THE COMBUSTION TURBINES AND DUCT BURNERS WITHIN THE HRSGS.	SIC Code:	4931
Permit Type:	A: New/Greenfield Facility	NAICS Code:	221112
Permit URL:			
EPA Region:	2	COUNTRY:	USA
Facility County:	RENSELAER		
Facility State:	NY		
Facility ZIP Code:			
Permit Issued By:	NEW YORK DEC, DIV OF AIR RESOURCES (Agency Name) MR. JOHN HENKES(Agency Contact) (518)402-8403 JLHENKES@GW.DEC.STATE.NY.US		
Other Agency Contact Info:	625 BROADWAY ALBANY NY 12233-3254 (518)402-8403 JLHENKES@GW.DEC.STATE.NY.US ED PELLEGRINI, PERMIT WRITER (518)402-8403		
Permit Notes:			

Process/Pollutant Information

PROCESS FUEL COMBUSTION (NATURAL GAS)

NAME:

Process Type: 15.210 (Natural Gas (includes propane & liquified petroleum gas))

Primary Fuel: NATURAL GAS

Throughput: 2099.00 MMBTU/H

Process Notes:

POLLUTANT NAME: Nitrogen Oxides (NOx)

CAS Number: 10102

Test Method: Unspecified

Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))

Emission Limit 1: 2.0000 PPMVD AT 15% O2 3-HOUR BLOCK AVE./ STEADY STATE

Emission Limit 2: 14.5900 LB/H 3-HOUR BLOCK AVE./ STEADY STATE

Standard Emission: 2.0000 PPMVD AT 15% O2 3-HOUR BLOCK AVE./ STEADY STATE

Did factors, other than air pollution technology considerations influence the BACT decisions: U

Case-by-Case Basis: LAER

Other Applicable Requirements: NSPS , SIP , OPERATING PERMIT

Control Method: (A) DRY LOW NOX COMBUSTION TECHNOLOGY IN COMBINATION WITH SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT NAME: Volatile Organic Compounds (VOC)

CAS Number: VOC
Test Method: Unspecified
Pollutant Group(s): (Volatile Organic Compounds (VOC))
Emission Limit 1: 1.0000 PPMVD AT 15% O2 AS PER EPA METHOD 25A
Emission Limit 2: 1.0000 PPMVD AT 15% O2 AS PER EPA METHOD 25A
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: LAER
Other Applicable Requirements: NSPS , SIP , OPERATING PERMIT
Control Method: (A) OXIDATION CATALYST
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

Process/Pollutant Information

PROCESS FUEL COMBUSTION (DISTILLATE OIL)

NAME:

Process Type: 15.290 (Liquid Fuel & Liquid Fuel Mixtures)

Primary Fuel:

Throughput: 2099.00 MMBTU/H

Process Notes:

POLLUTANT NAME: Nitrogen Oxides (NOx)
CAS Number: 10102
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))
Emission Limit 1: 9.0000 PPMVD AT 15% O2 3-HOUR BLOCK AVE./ STEADY STATE
Emission Limit 2: 74.0400 LB/H 3-HOUR BLOCK AVE./ STEADY STATE
Standard Emission: 9.0000 PPMVD AT 15% O2 3-HOUR BLOCK AVE./ STEADY STATE
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: LAER
Other Applicable Requirements: NSPS , SIP , OPERATING PERMIT
Control Method: (A) WATER INJECTION WITH SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Volatile Organic Compounds (VOC)
CAS Number: VOC
Test Method: Unspecified
Pollutant Group(s): (Volatile Organic Compounds (VOC))
Emission Limit 1: 2.0000 PPMVD AT 15%O2 AS PER EPA METHOD 25A
Emission Limit 2: 2.0000 PPMVD AT 15%O AS PER EPA METHOD 25A
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: LAER
Other Applicable Requirements: NSPS , SIP , OPERATING PERMIT
Control Method: (A) OXIDATION CATALYST
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

Process/Pollutant Information

PROCESS FUEL COMBUSTION (DISTILLATE OIL) DUCT BURNING

NAME:

Process Type: 15.290 (Liquid Fuel & Liquid Fuel Mixtures)

Primary Fuel: DISTILLATE OIL

Throughput: 646.00 MMBTU/H

Process Notes:

POLLUTANT NAME: Nitrogen Oxides (NOx)
CAS Number: 10102
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))
Emission Limit 1: 10.0000 PPMVD AT 15% O2 3-HOUR BLOCK AVE./ STEADY STATE
Emission Limit 2: 106.8300 LB/H 3-HOUR BLOCK AVE./ STEADY STATE
Standard Emission: 10.0000 PPMVD AT 15% O2 3-HOUR BLOCK AVE./ STEADY STATE
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: LAER
Other Applicable Requirements: NSPS , SIP , OPERATING PERMIT
Control Method: (A) WATER INJECTION WITH SCR
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Volatile Organic Compounds (VOC)
CAS Number: VOC
Test Method: Unspecified
Pollutant Group(s): (Volatile Organic Compounds (VOC))
Emission Limit 1: 12.0000 PPMVD AT 15 % O2 AS PER EPA METHOD 25A
Emission Limit 2: 12.0000 PPMVD AT 15 % O2 AS PER EPA METHOD 25A
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: LAER
Other Applicable Requirements: NSPS , SIP , OPERATING PERMIT
Control Method: (A) OXYIDATION CATALYST
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

Process/Pollutant Information

PROCESS FUEL COMBUSTION (NATURAL GAS) DUCT BURNING

NAME:

Process Type: 15.210 (Natural Gas (includes propane & liquified petroleum gas))

Primary Fuel: NATURAL GAS

Throughput: 646.00 MMBTU/H

Process Notes:

POLLUTANT NAME: Nitrogen Oxides (NOx)
CAS Number: 10102
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))
Emission Limit 1: 3.0000 PPMVD AT 15% O2 3-HOUR BLOCK AVE./ STEADY STATE
Emission Limit 2: 28.9000 LB/H 3-HOUR BLOCK AVE./ STEADY STATE

Standard Emission: 3.0000 PPMVD AT 15% O2 3-HOUR BLOCK AVE./ STEADY STATE
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: LAER
Other Applicable Requirements: NSPS , SIP , OPERATING PERMIT
Control Method: (A) DRY LOW NOX COMBUSTION TECHNOLOGY IN COMBINATION WITH SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Volatile Organic Compounds (VOC)
CAS Number: VOC
Test Method: Unspecified
Pollutant Group(s): (Volatile Organic Compounds (VOC))
Emission Limit 1: 7.0000 PPMVD AT 15 % O2 AS PER EPA METHOD 25A
Emission Limit 2: 7.0000 PPMVD AT 15 % O2 AS PER EPA METHOD 25A
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: LAER
Other Applicable Requirements: NSPS , SIP , OPERATING PERMIT
Control Method: (A) OXIDATION CATALYST
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

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Facility Information

RBLC ID:	FL-0263 (final)	Date Determination	
		Last Updated:	01/12/2006
Corporate/Company Name:	FLORIDA POWER AND LIGHT	Permit Number:	PSD-FL-338
Facility Name:	FPL TURKEY POINT POWER PLANT	Permit Date:	02/08/2005 (actual)
Facility Contact:		FRS Number:	110000914832
Facility Description:	THE PROPOSED A "4 ON 1" COMBINED CYCLE UNIT 5, WHICH WILL CONSIST OF FOUR GE MODEL FA GAS TURBINES (170 MW EACH), FOUR HEAT RECOVERY STEAM GENERATORS, A SINGLE STEAM TURBINE-ELECTRICAL GENERATOR (470 MW), AND A MECHANICAL DRAFT COOLING TOWER. NEW COMBINED CYCLE UNIT 5 WILL HAVE A TOTAL GENERATING CAPACITY OF APPROXIMATELY 1150 MW. THE EXISTING TURKEY POINT FOSSIL PLANT CURRENTLY CONSISTS OF TWO FOSSIL FUEL-FIRED STEAM ELECTRICAL GENERATING UNITS AND FIVE BLACK START DIESEL FIRED PEAKING GENERATORS. FOSSIL FUEL-FIRED STEAM ELECTRIC GENERATING UNITS 1 AND 2 (440 MW EACH) BEGAN OPERATION IN 1967 AND 1968, RESPECTIVELY.	SIC Code:	4911
Permit Type:	B: Add new process to existing facility	NAICS Code:	22112
Permit URL:		COUNTRY:	USA
EPA Region:	4		
Facility County:	DADE		
Facility State:	FL		
Facility ZIP Code:	33035		
Permit Issued By:	FLORIDA DEPT. OF ENVIRONMENTAL PROTECTION (Agency Name) MS. TERESA HERON(Agency Contact) (850)921-9529 teresa.heron@dep.state.fl.us		

Other Agency Contact Info: AL LINERO, PE
PROJECT ENGINEER
PERMITTING SOUTH ADMINISTRATOR
PHONE 850-921-9523
ALVARO.LINERO@DEP.STATE.FL.US

Permit Notes: THE PLANT IS LOCATED EAST OF THE CLASS I EVERGLADES NATIONAL PARK AND IS APPROXIMATELY 20 KM NORTHEAST OF THE NEAREST BOUNDARY TO THE PARK. BISCAYNE NATIONAL PARK ENCOMPASSES THE GENERAL AREA TO THE EAST OF THE PLANT.

Process/Pollutant Information

PROCESS 170 MW COMBUSTION TURBINE, 4 UNITS

NAME:

Process Type: 15.210 (Natural Gas (includes propane & liquified petroleum gas))

Primary Fuel: NATURAL GAS

Throughput: 170.00 MW

Process Notes: GENERATING CAPACITY: EACH OF THE FOUR GAS TURBINES HAS A NOMINAL GENERATING CAPACITY OF 170 MW FOR GAS FIRING (180 MW FOR OIL FIRING). EACH OF THE FOUR HEAT RECOVERY STEAM GENERATORS (HRSGS) PROVIDES STEAM TO THE SINGLE STEAM TURBINE ELECTRICAL GENERATOR, WHICH HAS A NOMINAL CAPACITY OF 470 MW. THE TOTAL NOMINAL GENERATING CAPACITY OF THE 4-ON-1 COMBINED CYCLE UNIT IS 1150 MW. FUELS: EACH GAS TURBINE WILL FIRE NATURAL GAS AS THE PRIMARY FUEL AND ULTRA LOW SULFUR (0.0015% SULFUR) DISTILLATE OIL AS A RESTRICTED ALTERNATE FUEL. EMISSIONS OF ALL POLLUTANTS INCREASE WITH THE FIRING OF OIL. THE APPLICANT REQUESTS 500 HOURS PER YEAR PER GAS TURBINE (OR EQUIVALENT) FOR OIL FIRING. MODES OF OPERATION: STANDARD NORMAL OPERATION, WITH DUCT BURNER, POWER AUGMENTATION AND PEAKING.

POLLUTANT NAME: Volatile Organic Compounds (VOC)

CAS Number: VOC

Test Method: Unspecified

Pollutant Group(s): (Volatile Organic Compounds (VOC))

Emission Limit 1: 1.3000 PPMVD @ 15 % O2 STACK TEST (CT NORMAL) GAS

Emission Limit 2: 1.9000 PPMVD @ 15 % O2 STACK TEST (DUCT BURNER) GAS

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: U

Case-by-Case Basis:

Other Applicable Requirements:

Control Method: (P) VOC EMISSIONS WILL BE MINIMIZED BY THE EFFICIENT COMBUSTION OF NATURAL GAS AND DISTILLATE OIL AT HIGH TEMPERATURES.

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes: COMPLIANCE WITH THE VOC STANDARDS SHALL BE DEMONSTRATED BY CONDUCTING TESTS IN ACCORDANCE WITH EPA METHOD 25A. OPTIONALLY, EPA METHOD 18 MAY ALSO BE PERFORMED TO DEDUCT EMISSIONS OF METHANE AND ETHANE. THE EMISSION STANDARDS ARE BASED ON VOC MEASURED AS METHANE.

POLLUTANT NAME: Carbon Monoxide

CAS Number: 630-08-0

Test Method: Unspecified

Pollutant Group(s): (InOrganic Compounds)

Emission Limit 1: 8.0000 PPMVD @ 15 % O2 24-HR AVG. TIME (CT & DUCT BURNER)

Emission Limit 2: 4.1000 PPMVD @ 15 % O2 STACK TEST (CT NORMAL OPERATION)

Standard Emission: 7.6000 PPM @ 15 % O2 STACK TEST (CT & DUCT BURNER)

Did factors, other than air pollution technology considerations influence the BACT decisions: U

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements: SIP , OPERATING PERMIT

Control Method: (P) CO WILL BE MINIMIZED BY THE EFFICIENT COMBUSTION OF NATURAL GAS AND DISTILLATE OIL AT HIGH TEMPERATURES

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes: CO GAS EMISSION LIMITS: OPERATING MODE: COMBUSTION TURBINE, DUCT BURNER AND POWER AUGMENTATION: 14.1 PPMVD @ 15%O2 ON A 24-HR AVERAGING TIME. FUEL OIL EMISSION LIMIT: 8 PPMVD @ 15 % O2 ON A 24-HR AVERAGING TIME (NORMAL OPERATING MODE). STACK TEST: 8 PPMVD @ 15 % O2. ALL MODES OF OPERATION: OIL AND GAS LIMIT: 6 PPMVD @ 15%O2 ON A 12 MONTH AVERAGING TIME. CONTINUOUS MONITORS: EACH GAS TURBINE IS REQUIRED TO CONTINUOUSLY MONITOR NOX EMISSIONS IN ACCORDANCE WITH THE ACID RAIN PROVISIONS. THE SAME MONITORS AS WELL AS CO MONITORS ARE EMPLOYED FOR DEMONSTRATION OF CONTINUOUS COMPLIANCE WITH CERTAIN BEST AVAILABLE CONTROL TECHNOLOGY (BACT) DETERMINATIONS. FLUE GAS OXYGEN CONTENT OR CARBON DIOXIDE CONTENT WILL BE MONITORED AS A DILUENT GAS. CONTINUOUS COMPLIANCE WITH THE CONTINUOUS 24-HOUR CO STANDARDS SHALL BE DEMONSTRATED BASED ON DATA COLLECTED BY THE REQUIRED CEMS. THE INITIAL AND ANNUAL EPA METHOD 10 TESTS ASSOCIATED WITH THE CERTIFICATION OF THE CEMS INSTRUMENTS SHALL ALSO BE USED TO DEMONSTRATE COMPLIANCE WITH THE INDIVIDUAL STANDARDS FOR NATURAL GAS, FUEL OIL, AND BASIC DUCT BURNER MODE. COMPLIANCE WITH THE 24-HOUR CO CEMS STANDARDS SHALL BE DETERMINED SEPARATELY FOR THE DUCT BURNER/POWER AUGMENTATION MODE AND ALL OTHER MODES BASED ON THE HOURS OF OPERATION FOR EACH MODE.

POLLUTANT NAME: Particulate Matter (PM)

CAS Number: PM

Test Method: Unspecified

Pollutant Group(s): (Particulate Matter (PM))

Emission Limit 1: SEE NOTE

Emission Limit 2:

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: U

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements: SIP , OPERATING PERMIT

Control Method: (P) PM/PM10 WILL BE MINIMIZED BY THE EFFICIENT COMBUSTION OF NATURAL GAS AND DISTILLATE OIL AT HIGH TEMPERATURES.

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes: THE SULFUR FUEL SPECIFICATIONS COMBINED WITH THE EFFICIENT COMBUSTION DESIGN AND OPERATION OF EACH GAS TURBINE REPRESENTS (BACT) FOR PM/PM10 EMISSIONS. COMPLIANCE WITH THE FUEL SPECIFICATIONS, CO STANDARDS, AND VISIBLE EMISSIONS STANDARDS SHALL SERVE AS INDICATORS OF GOOD COMBUSTION. COMPLIANCE WITH THE FUEL SPECIFICATIONS SHALL BE DEMONSTRATED BY KEEPING RECORDS OF THE FUEL SULFUR CONTENT. COMPLIANCE WITH THE VISIBLE EMISSIONS STANDARD SHALL BE DEMONSTRATED BY CONDUCTING TESTS IN ACCORDANCE WITH EPA METHOD 9. ESTIMATED ANNUAL EMISSIONS: PM 420 TPY ; PM10 229 TPY

POLLUTANT NAME: Sulfur Dioxide (SO2)

CAS Number: 7446-09-5

Test Method: Unspecified

Pollutant Group(s): (InOrganic Compounds , Oxides of Sulfur (SOx))

Emission Limit 1: 2.0000 GR S/100 SCF GAS

Emission Limit 2: 0.0015 % SULFUR OIL

Standard Emission: NOT AVAILABLE

Did factors, other than air pollution technology considerations influence the BACT decisions: U

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements: SIP , OPERATING PERMIT

Control Method: (P) EMISSIONS OF SAM AND SO2 WILL BE MINIMIZED BY FIRING NATURAL GAS AND RESTRICTING THE AMOUNTS OF ULTRA LOW SULFUR DISTILLATE OIL.

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes: THE FUEL SULFUR SPECIFICATIONS EFFECTIVELY LIMIT THE POTENTIAL EMISSIONS OF SAM AND SO2 FROM THE GAS TURBINES AND REPRESENT BACT FOR THESE POLLUTANTS. COMPLIANCE WITH THE FUEL SULFUR SPECIFICATIONS SHALL BE DETERMINED BY THE ASTM METHODS FOR DETERMINATION OF FUEL SULFUR AS DETAILED IN THE DRAFT PERMIT.

POLLUTANT NAME: Ammonia (NH3)

CAS Number: 7664-41-7
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds)
Emission Limit 1: 5.0000 PPMVD @ 15% O2
Emission Limit 2:
Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: U

Case-by-Case Basis: BACT-PSD
Other Applicable Requirements: OPERATING PERMIT
Control Method: (N)
Est. % Efficiency:
Compliance Verified: Unknown

Pollutant/Compliance Notes: COMPLIANCE WITH THE AMMONIA SLIP STANDARD SHALL BE DEMONSTRATED BY CONDUCTING TESTS IN ACCORDANCE WITH EPA METHOD CTM-027.

POLLUTANT NAME: Nitrogen Oxides (NOx)

CAS Number: 10102
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))
Emission Limit 1: 2.0000 PPMVD@ 15 % O2 24-HR (ALL MODES OF OPERATION)
Emission Limit 2: 2.0000 PPMVD@ 15 % O2 STACK TEST NORMAL OPERATION
Standard Emission: 2.0000 PPM @ 15 % O2 STACK TEST (CT & DUCT BURNER)

Did factors, other than air pollution technology considerations influence the BACT decisions: U

Case-by-Case Basis: BACT-PSD
Other Applicable Requirements: NSPS , NESHAP , SIP , OPERATING PERMIT

Control Method: (B) NOX EMISSIONS WILL BE REDUCED WITH DRY LOW-NOX (DLN) COMBUSTION TECHNOLOGY FOR GAS FIRING AND WATER INJECTION FOR OIL FIRING. IN COMBINATION WITH THESE NOX CONTROLS, A SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM FURTHER REDUC

Est. % Efficiency: 98.000

Compliance Verified: Unknown

Pollutant/Compliance Notes: FUEL OIL EMISSION LIMIT: 8 PPMVD AT 15 % O2 ON A 24-HR AVERAGING TIME (92% REDUCTION). CONTINUOUS MONITORS: EACH GAS TURBINE IS REQUIRED TO CONTINUOUSLY MONITOR NOX EMISSIONS IN ACCORDANCE WITH THE ACID RAIN PROVISIONS. THE SAME MONITORS AS WELL AS CO MONITORS ARE EMPLOYED FOR DEMONSTRATION OF CONTINUOUS COMPLIANCE WITH CERTAIN BEST AVAILABLE CONTROL TECHNOLOGY (BACT) DETERMINATIONS. FLUE GAS OXYGEN CONTENT OR CARBON DIOXIDE CONTENT WILL BE MONITORED AS A DILUENT GAS. CONTINUOUS COMPLIANCE WITH THE NOX STANDARDS SHALL BE DEMONSTRATED BASED ON DATA COLLECTED BY THE REQUIRED CEMS. THE INITIAL AND ANNUAL EPA METHOD 7E OR METHOD 20 TESTS ASSOCIATED WITH DEMONSTRATION OF COMPLIANCE WITH 40 CFR 60, SUBPART GG OR CERTIFICATION OF THE CEMS INSTRUMENTS SHALL ALSO BE USED TO DEMONSTRATE COMPLIANCE WITH THE INDIVIDUAL STANDARDS FOR NATURAL GAS, FUEL OIL, AND DUCT BURNER MODES DURING THE TIME OF THOSE TESTS. NOX MASS EMISSION RATES ARE DEFINED AS OXIDES OF NITROGEN EXPRESSED AS NO2.

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Facility Information

RBLC ID:	AZ-0047 (final)	Date Determination	
		Last Updated:	01/31/2006
Corporate/Company Name:	DOME VALLEY ENERGY PARTNERS	Permit Number:	1001653
Facility Name:	WELLTON MOHAWK GENERATING STATION	Permit Date:	12/01/2004 (actual)
Facility Contact:	BRUCE WERTZ 8032178868 BWERTZ@SCANA.COM	FRS Number:	110014463856
Facility Description:	COMBINED CYCLE GAS-FIRED ELECTRICITY GENERATING STATION	SIC Code:	4911
Permit Type:	A: New/Greenfield Facility	NAICS Code:	221120

Permit URL:

EPA Region: 9
Facility County: YUMA
Facility State: AZ
Facility ZIP Code: 85356

COUNTRY: USA

Permit Issued By: ARIZONA DEPT OF ENV QUAL, OFC OF AIR QUA (Agency Name)
TREVOR BAGGIORE(Agency Contact) (602) 771-2321 TB4@AZDEQ.GOV

Other Agency Contact Info: TREVOR BAGGIORE
(602) 771-2321
TB4@AZDEQ.GOV

Permit Notes:

Process/Pollutant Information

PROCESS NAME: COMBUSTION TURBINE GENERATORS AND HEAT RECOVERY STEAM GENERATORS - GE7FA TURBINES OPTION

Process Type: 15.210 (Natural Gas (includes propane & liquified petroleum gas))

Primary Fuel: NATURAL GAS

Throughput: 170.00 MW

Process Notes: THIS IS ONE OF TWO OPERATING SCENARIOS THAT ARE WRITTEN INTO THE FACILITY'S PERMIT. THE COMPANY CAN CHOOSE BETWEEN GE TURBINES OR SIEMENS WESTINGHOUSE TURBINES. THE THROUGHPUT OF THE HEAT RECOVERY STEAM GENERATORS IS 346 MMBTU/HR (WITH SUPPLEMENTAL FIRING)

POLLUTANT NAME: Nitrogen Oxides (NOx)

CAS Number: 10102

Test Method: Unspecified

Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))

Emission Limit 1: 2.0000 PPM AT 15% O2 THREE-HOUR

Emission Limit 2: 16.0000 LB/H

Standard Emission: 2.0000 PPM AT 15% O2

Did factors, other than air pollution technology considerations influence the BACT decisions: U

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements: NSPS

Control Method: (A) LOW NOX BURNERS AND SELECTIVE CATALYTIC REDUCTION

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes: AFTER 18 MONTHS, THE 2.0 PPM LIMITS CHANGES TO A 1-HOUR AVERAGE UNLESS THE DIRECTOR AND ADMINISTRATOR DETERMINE THE LIMIT IS UNABLE TO BE MET, BASED UPON A DEMONSTRATION BY THE COMPANY. THE FACILITY ALSO HAS A STARTUP/SHUTDOWN LIMIT FOR THE GE7FA TURBINES - EMISSIONS OF NOX FROM EACH UNIT MAY NOT EXCEED 166.7 LB/HR AVERAGED OVER THE PERIOD OF EACH STARTUP OR SHUTDOWN EVENT.

POLLUTANT NAME: Carbon Monoxide

CAS Number: 630-08-0

Test Method: Unspecified

Pollutant Group(s): (InOrganic Compounds)

Emission Limit 1: 3.0000 PPM @ 15% O2 3-HOUR AVERAGE

Emission Limit 2:

Standard Emission: 3.0000 PPM @ 15% O2

Did factors, other than air pollution technology considerations influence the BACT decisions: U

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements:

Control Method: (A) OXIDATION CATALYST

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT NAME: Particulate matter, filterable < 10 µ (FPM10)
CAS Number: PM
Test Method: Unspecified
Pollutant Group(s): (Particulate Matter (PM))
Emission Limit 1: 29.8000 LB/H 3-HOUR AVERAGE
Emission Limit 2:
Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: U

Case-by-Case Basis: BACT-PSD
Other Applicable Requirements: NSPS
Control Method: (N)
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Sulfur Dioxide (SO2)
CAS Number: 7446-09-5
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Sulfur (SOx))
Emission Limit 1: 0.0023 LB/MMBTU 3-HOUR AVERAGE
Emission Limit 2: 4.7000 LB/H 3-HOUR AVERAGE
Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: U

Case-by-Case Basis: BACT-PSD
Other Applicable Requirements: NSPS
Control Method: (N)
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Volatile Organic Compounds (VOC)
CAS Number: VOC
Test Method: Unspecified
Pollutant Group(s): (Volatile Organic Compounds (VOC))
Emission Limit 1: 3.0000 PPM @ 15% O2 3-HOUR AVERAGE
Emission Limit 2: 8.4000 LB/H 3-HOUR AVERAGE
Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: U

Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (A) OXIDATION CATALYST
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Visible Emissions (VE)
CAS Number: VE
Test Method: Unspecified
Pollutant Group(s):
Emission Limit 1: 10.0000 % OPACITY 6-MINUTE AVERAGE
Emission Limit 2:
Standard Emission: 10.0000 % OPACITY

Did factors, other than air pollution technology considerations influence the BACT decisions: U

Case-by-Case Basis: BACT-PSD
Other Applicable Requirements: NSPS
Control Method: (N)
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

Process/Pollutant Information

PROCESS NAME: COMBUSTION TURBINE GENERATORS AND HEAT RECOVERY STEAM GENERATORS - SW501F TURBINES OPTION
Process Type: 15.210 (Natural Gas (includes propane & liquified petroleum gas))
Primary Fuel: NATURAL GAS
Throughput: 180.00 MW
Process Notes: THIS IS ONE OF TWO OPERATING SCENARIOS THAT ARE WRITTEN INTO THE FACILITY'S PERMIT. THE COMPANY CAN CHOOSE BETWEEN GE TURBINES OR SIEMENS WESTINGHOUSE TURBINES. THE THROUGHPUT OF THE HEAT RECOVERY STEAM GENERATORS IS 383 MMBTU/HR (WITH SUPPLEMENTAL FIRING)

POLLUTANT NAME: Nitrogen Oxides (NOx)
CAS Number: 10102
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))
Emission Limit 1: 2.0000 PPM @ 15% O2 3-HOUR AVERAGE
Emission Limit 2: 18.3000 LB/H 3-HOUR AVERAGE
Standard Emission: 2.0000 PPM @ 15% O2

Did factors, other than air pollution technology considerations influence the BACT decisions: U

Case-by-Case Basis: BACT-PSD
Other Applicable Requirements: NSPS
Control Method: (A) LOW NOX BURNERS AND SELECTIVE CATALYTIC REDUCTION
Est. % Efficiency:
Compliance Verified: Unknown

Pollutant/Compliance Notes: AFTER 18 MONTHS, THE 2.0 PPM LIMITS CHANGES TO A 1-HOUR AVERAGE UNLESS THE DIRECTOR AND ADMINISTRATOR DETERMINE THE LIMIT IS UNABLE TO BE MET, BASED UPON A DEMONSTRATION BY THE COMPANY. THE FACILITY ALSO HAS A STARTUP/SHUTDOWN LIMIT FOR THE SW501F TURBINES - EMISSIONS OF NOX FROM EACH UNIT MAY NOT EXCEED 166.7 LB/HR AVERAGED OVER THE PERIOD OF EACH STARTUP OR SHUTDOWN EVENT.

POLLUTANT NAME: Carbon Monoxide
CAS Number: 630-08-0
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds)
Emission Limit 1: 3.0000 PPM @ 15% O2 3-HOUR AVERAGE
Emission Limit 2: 16.7000 LB/H 3-HOUR AVERAGE
Standard Emission: 3.0000 PPM @ 15% O2

Did factors, other than air pollution technology considerations influence the BACT decisions: U

Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (A) OXIDATION CATALYST
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Particulate matter, filterable < 10 μ (FPM10)
CAS Number: PM

Test Method: Unspecified
Pollutant Group(s): (Particulate Matter (PM))
Emission Limit 1: 33.1000 LB/H 3-HOUR AVERAGE
Emission Limit 2:
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements: NSPS
Control Method: (N)
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Sulfur Dioxide (SO2)
CAS Number: 7446-09-5
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Sulfur (SOx))
Emission Limit 1: 0.0023 LB/MMBTU 3-HOUR AVERAGE
Emission Limit 2: 5.3000 LB/H 3-HOUR AVERAGE
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements: NSPS
Control Method: (N)
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Volatile Organic Compounds (VOC)
CAS Number: VOC
Test Method: Unspecified
Pollutant Group(s): (Volatile Organic Compounds (VOC))
Emission Limit 1: 3.0000 PPM @ 15% O2 3-HOUR AVERAGE
Emission Limit 2: 9.5000 LB/H 3-HOUR AVERAGE
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (A) OXIDATION CATALYST
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Visible Emissions (VE)
CAS Number: VE
Test Method: Unspecified
Pollutant Group(s):
Emission Limit 1: 10.0000 % OPACITY 6-MINUTE AVERAGE
Emission Limit 2:
Standard Emission: 10.0000 % OPACITY
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements: NSPS
Control Method: (N)

Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

Process/Pollutant Information

PROCESS MECHANICAL DRAFT COOLING TOWERS

NAME:

Process Type: 99.009 (Industrial Process Cooling Towers)

Primary Fuel:

Throughput: 170000.00 Gal/Min

Process Notes: 6-CELL COOLING TOWER

POLLUTANT NAME: Particulate matter, filterable < 10 µ (FPM10)

CAS Number: PM

Test Method: Unspecified

Pollutant Group(s): (Particulate Matter (PM))

Emission Limit 1: 3.0000 LB/H

Emission Limit 2:

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: U

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements:

Control Method: (P) DRIFT ELIMINATORS (NOT TO EXCEED A TOTAL DRIFT RATE OF 0.0005 PERCENT OF CIRCULATING WATER FLOW)

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT NAME: Visible Emissions (VE)

CAS Number: VE

Test Method: Unspecified

Pollutant Group(s):

Emission Limit 1: 5.0000 % OPACITY 6-MINUTE AVERAGE

Emission Limit 2:

Standard Emission: 5.0000 % OPACITY 6-MINUTE AVERAGE

Did factors, other than air pollution technology considerations influence the BACT decisions: U

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements:

Control Method: (P) DRIFT ELIMINATORS (NOT TO EXCEED A TOTAL DRIFT RATE OF 0.0005 PERCENT OF CIRCULATING WATER FLOW)

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

Process/Pollutant Information

PROCESS AUXILIARY BOILER

NAME:

Process Type: 13.310 (Natural Gas (includes propane and liquefied petroleum gas))

Primary Fuel: NATURAL GAS

Throughput: 38.00 MMBTU/H

Process Notes:

POLLUTANT NAME: Nitrogen Oxides (NOx)
CAS Number: 10102
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))
Emission Limit 1: 0.3700 LB/MMBTU BASED ON HIGHER HEATING VALUE OF FUEL
Emission Limit 2:
Standard Emission: 0.3700 LB/MMBTU
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (A) LOW NOX BURNERS
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Carbon Monoxide
CAS Number: 630-08-0
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds)
Emission Limit 1: 0.0800 LB/MMBTU BASED ON HIGHER HEATING VALUE OF FUEL
Emission Limit 2:
Standard Emission: 0.0800 LB/MMBTU
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (N)
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Particulate matter, filterable < 10 µ (FPM10)
CAS Number: PM
Test Method: Unspecified
Pollutant Group(s): (Particulate Matter (PM))
Emission Limit 1: 0.0033 LB/MMBTU BASED ON HIGHER HEATING VALUE OF FUEL
Emission Limit 2:
Standard Emission: 0.0033 LB/MMBTU
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements: NSPS
Control Method: (N)
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Visible Emissions (VE)
CAS Number: VE
Test Method: Unspecified
Pollutant Group(s):
Emission Limit 1: 10.0000 % OPACITY 6-MINUTE AVERAGE
Emission Limit 2:
Standard Emission: 10.0000 % OPACITY
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: BACT-PSD

Other Applicable Requirements: NSPS
Control Method: (N)
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Volatile Organic Compounds (VOC)
CAS Number: VOC
Test Method: Unspecified
Pollutant Group(s): (Volatile Organic Compounds (VOC))
Emission Limit 1: 0.0033 LB/MMBTU BASED ON HIGHER HEATING VALUE OF FUEL
Emission Limit 2:
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: U

Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (N)
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Sulfur Dioxide (SO2)
CAS Number: 7446-09-5
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Sulfur (SOx))
Emission Limit 1: 0.0023 LB/MMBTU BASED ON HIGHER HEATING VALUE OF FUEL
Emission Limit 2:
Standard Emission: 0.0023 LB/MMBTU
Did factors, other than air pollution technology considerations influence the BACT decisions: U

Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (N)
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

Process/Pollutant Information

PROCESS BLACK START GENERATORS
NAME:
Process Type: 17.130 (Natural Gas (includes propane & liquified petroleum gas))
Primary Fuel: NATURAL GAS
Throughput: 6.00 MW
Process Notes:

POLLUTANT NAME: Nitrogen Oxides (NOx)
CAS Number: 10102
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))
Emission Limit 1: 1.5000 G/B-HP-H AT 100% LOAD
Emission Limit 2:
Standard Emission: 1.5000 G/B-HP-H
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: BACT-PSD

Other Applicable Requirements:

Control Method: (N)

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT NAME: Carbon Monoxide
CAS Number: 630-08-0
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds)
Emission Limit 1: 2.3000 G/B-HP-H AT 100% LOAD
Emission Limit 2:
Standard Emission: 2.3000 G/B-HP-H

Did factors, other than air pollution technology considerations influence the BACT decisions: U

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements:

Control Method: (N)

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

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Facility Information

RBLC ID:	VA-0291 (final)	Date Determination
		Last Updated: 09/21/2009
Corporate/Company Name:	CPV WARREN LLC	Permit Number: 81391
Facility Name:	CPV WARREN LLC	Permit Date: 07/30/2004 (actual)
Facility Contact:	THOMAS EIDEN 5406359966	FRS Number: 110012168475
Facility Description:	COMBINED CYCLE POWER GENERATION	SIC Code: 4911
Permit Type:	A: New/Greenfield Facility	NAICS Code: 221112
Permit URL:		
EPA Region:	3	COUNTRY: USA
Facility County:	WARREN	
Facility State:	VA	
Facility ZIP Code:	22630	
Permit Issued By:	VIRGINIA ENVIRONMENTAL QUALITY AIR DIV. (Agency Name) MS. MONICA A. HARVEY(Agency Contact) (804)698-4300 MAHARVEY@DEQ.VIRGINIA.GOV	
Other Agency Contact Info:	THE REGIONAL CONTACT FOR THIS FACILILTY IS LAURA JUSTIN. SHE CAN BE REACHED AT (540)574-7857. HER EMAIL ADDRESS IS LRJUSTIN@DEQ.VIRGINIA.GOV	
Permit Notes:	EQUIPMENT TO BE CONSTRUCTED AT THIS FACILITY CONSIST OF: 2 GE MODEL 7FA NATURAL GAS-FIRED COMBINED-CYCLE COMBUSTION TURBINES EACH RATED AT 180,000 KW (1,717 MMBTU/HR) AND EACH EQUIPPED WITH A HEAT RECOVERY STEAM GENERATOR HAVING A DUCT BURNER RATED AT 500 MMBTU/HR. TOTAL FACILITY GENERATING CAPACITY:580MW	

Process/Pollutant Information

PROCESS TURBINE, COMBINED CYCLE (2)
NAME:
Process Type: 15.210 (Natural Gas (includes propane & liquified petroleum gas))
Primary Fuel: NATURAL GAS
Throughput: 1717.00 MMBTU/H

Process Notes: THROUGHPUT FOR EACH, ALSO EACH RATED AT 180 MW

POLLUTANT NAME: Sulfuric Acid (mist, vapors, etc)
CAS Number: 7664-93-9
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Particulate Matter (PM))
Emission Limit 1: 0.0005 LB/MMBTU SULFURIC ACID MIST
Emission Limit 2:
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: Other Case-by-Case
Other Applicable Requirements: NSPS
Control Method: (P) MAX. 0.002% BY WT MAX S CONTENT
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: EMISSION LIMITS ARE FOR ONE OF TWO UNITS

POLLUTANT NAME: Volatile Organic Compounds (VOC)
CAS Number: VOC
Test Method: Unspecified
Pollutant Group(s): (Volatile Organic Compounds (VOC))
Emission Limit 1: 0.7000 PPMVD
Emission Limit 2:
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: Other Case-by-Case
Other Applicable Requirements: NSPS
Control Method: (P) OXIDATION CATALYST AND GOOD COMBUSTION PRACTICES
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: EMISSION LIMITS ARE FOR ONE OF TWO LIMITS.

POLLUTANT NAME: Nitrogen Oxides (NOx)
CAS Number: 10102
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))
Emission Limit 1: 2.0000 PPM AS A ONE HOUR AVERAGE
Emission Limit 2: 17.9000 LB/H EACH
Standard Emission: 2.0000 PPM @ 15% O2
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: Other Case-by-Case
Other Applicable Requirements: NSPS
Control Method: (B) TWO STAGE LEAN PERMIX DRY LOW NOX COMBUSTION SCR AND GOOD COMBUSTION PRACTICES.
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Particulate matter, filterable < 10 μ (FPM10)
CAS Number: PM
Test Method: Unspecified
Pollutant Group(s): (Particulate Matter (PM))
Emission Limit 1: 0.0130 LB/MMBTU
Emission Limit 2:

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: U

Case-by-Case Basis: Other Case-by-Case

Other Applicable Requirements: NSPS

Control Method: (P) CLEAN BURNING FUEL NATURAL GAS ONLY. GOOD COMBUSTION PRACTICES. FUEL HAS MAXIMUM .002% BY WEIGHT SULFUR CONTENT

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes: EMISSIONS ARE FOR ONE OF 2 UNITS

POLLUTANT NAME: Carbon Monoxide

CAS Number: 630-08-0

Test Method: Unspecified

Pollutant Group(s): (InOrganic Compounds)

Emission Limit 1: 1.3000 PPMVD W/O POWER AUGMENTATION

Emission Limit 2:

Standard Emission: 1.3000 PPM @ 15% O2

Did factors, other than air pollution technology considerations influence the BACT decisions: U

Case-by-Case Basis: N/A

Other Applicable Requirements: NSPS

Control Method: (B) OXIDATION CATALYST. GOOD COMBUSTION PRACTICES.

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes: EMISSIONS ARE FOR ONE OF TWO UNITS

Process/Pollutant Information

PROCESS NAME: TURBINE, COMBINED CYCLE AND DUCT BURNER (2)

NAME:

Process Type: 15.210 (Natural Gas (includes propane & liquified petroleum gas))

Primary Fuel: NATURAL GAS

Throughput: 1717.00 MMBTU/H

Process Notes: THROUGHPUT FOR EACH. ADDITIONAL THROUGHPUT: 180 MW EACH. HRSG EQUIPPED WITH DUCT BURNER RATED AT 500 MMBTU/H. LIMITS FOR THIS PROCESS ARE INCLUDED ONLY IF THEY ARE DIFFERENT FROM THOSE FOR NO DUCT BURNER FIRING.

POLLUTANT NAME: Carbon Monoxide

CAS Number: 630-08-0

Test Method: Unspecified

Pollutant Group(s): (InOrganic Compounds)

Emission Limit 1: 1.8000 PPMVD POWER AUGMENTATION DUCT BURNING

Emission Limit 2:

Standard Emission: 1.8000 PPM @ 15% O2

Did factors, other than air pollution technology considerations influence the BACT decisions: U

Case-by-Case Basis: Other Case-by-Case

Other Applicable Requirements: NSPS

Control Method: (B) OXIDATION CATALYST, AND GOOD COMBUSTION PRACTICES.

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT NAME: Volatile Organic Compounds (VOC)

CAS Number: VOC

Test Method: Unspecified

Pollutant Group(s): (Volatile Organic Compounds (VOC))
Emission Limit 1: 1.0000 PPMVD
Emission Limit 2: 1.4000 PPMVD DUCT BURNER AND POWER AUGMENTATION
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: Other Case-by-Case
Other Applicable Requirements: NSPS
Control Method: (B) OXIDATION CATALYST AND GOOD COMBUSTION PRACTICES
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

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Facility Information

RBLC ID:	NV-0037 (final)	Date Determination	
		Last Updated:	12/20/2005
Corporate/Company Name:	SEMPRA ENERGY RESOURCES	Permit Number:	15347
Facility Name:	COPPER MOUNTAIN POWER	Permit Date:	05/14/2004 (actual)
Facility Contact:	RAYMOND KELLY 6196962954 RKELLY@SEMPRA-RES.COM	FRS Number:	110012512799
Facility Description:	A 600 MW COMBINED CYCLE ELECTRICAL GENERATION FACILITY CONSISTING OF TWO COMBUSTION TURBINE GENERATORS WITH HEAT RECOVERY STEAM GENERATORS, ONE STEAM TURBINE GENERATOR, AND ONE AUXILIARY BOILER.	SIC Code:	4911
Permit Type:	A: New/Greenfield Facility	NAICS Code:	221112
Permit URL:		COUNTRY:	USA
EPA Region:	9		
Facility County:	CLARK		
Facility State:	NV		
Facility ZIP Code:	890062470		
Permit Issued By:	CLARK CO. DEPT. OF AIR QUALITY AND ENVIRONMENTAL MANAGEMENT (Agency Name) MR. DAVID LEE(Agency Contact) (702) 455-1673 LEE@CO.CLARK.NV.US		
Other Agency Contact Info:	DAVID C. LEE TEL: (702) 455-1673 FAX: (702) 383-9994		
Permit Notes:	THE FACILITY WAS INITIALLY PERMITTED ON AUGUST 31, 2001, UNDER THE OLD PERMIT NUMBER 1560. CONSTRUCTION OF THE FACILITY DID NOT COMMENCE BEFORE THE AUTHORITY TO CONSTRUCT EXPIRED ON FEBRUARY 28, 2003. THE NEW PERMIT UNDER PERMIT NUMBER 15347 INCLUDES A PROVISIONAL OPERATING PERMIT.		

Process/Pollutant Information

PROCESS LARGE COMBUSTION TURBINES, COMBINED CYCLE & COGENERATION
NAME:
Process Type: 15.210 (Natural Gas (includes propane & liquified petroleum gas))
Primary Fuel: NATURAL GAS
Throughput: 600.00 MW
Process Notes: THE PRINCIPAL PROCESS EQUIPMENT CONSISTS OF TWO GE 172 MW COMBUSTION TURBINE GENERATORS, TWO 695 MMBTU/HR SUPPLEMENTARY FIRED HEAT RECOVERY STEAM GENERATORS, AND ONE 315 MW STEAM TURBINE GENERATOR.

POLLUTANT NAME: Carbon Monoxide
CAS Number: 630-08-0
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds)

Emission Limit 1: 3.0000 PPMVD 15% OXYGEN, THREE-HOUR AVERAGE
Emission Limit 2: 16.4000 LB/H
Standard Emission: 3.0000 PPM @ 15% O2
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: LAER
Other Applicable Requirements: OPERATING PERMIT , SIP
Control Method: (B) GOOD COMBUSTOR DESIGN AND AN OXIDATION CATALYST
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: EMISSION LIMIT 1 APPLIES WITH OR WITHOUT DUCT FIRING. EMISSION LIMIT 2 IS FOR EACH COMBUSTION TURBINE GENERATOR WITH DUCT BURNER.

POLLUTANT NAME: Particulate matter, filterable < 10 µ (FPM10)
CAS Number: PM
Test Method: Unspecified
Pollutant Group(s): (Particulate Matter (PM))
Emission Limit 1: 21.3000 LB/H
Emission Limit 2:
Standard Emission: 21.3000 LB/H
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: LAER
Other Applicable Requirements: SIP , OPERATING PERMIT
Control Method: (P) USE OF LOW-SULFUR NATURAL GAS
Est. % Efficiency:
Compliance Verified: No
Pollutant/Compliance Notes: EMISSION LIMIT 1 IS FOR EACH TURBINE/DUCT BURNER PAIR BASED ON 67 DEGREE F, PEAK LOAD, DUCT FIRING, AND STEAM INJECTION.

POLLUTANT NAME: Nitrogen Oxides (NOx)
CAS Number: 10102
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))
Emission Limit 1: 2.0000 PPMVD 15% OXYGEN, 3-HR AVERAGE
Emission Limit 2: 17.9200 LB/H
Standard Emission: 2.0000 PPM @ 15% O2 15% OXYGEN, 3-HR AVERAGE
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements: NSPS , SIP , OPERATING PERMIT
Control Method: (B) DRY LOW-NOX COMBUSTOR, STEAM INJECTION, AND SELECTIVE CATALYTIC REDUCTION
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: EMISSION LIMIT 2 IS FOR EACH TURBINE/DUCT PAIR BASED ON 67 DGREE F, PEAK LOAD, DUCT FIRING, AND STEAM INJECTION.

POLLUTANT NAME: Volatile Organic Compounds (VOC)
CAS Number: VOC
Test Method: Unspecified
Pollutant Group(s): (Volatile Organic Compounds (VOC))
Emission Limit 1: 4.0000 PPMVD 15% OXYGEN, 3-HR AVE. WITH DUCT FIRING
Emission Limit 2: 1.9000 PPMVD 15% OXYGEN, 3-HR AVE. W/O DUCT FIRING
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: LAER
Other Applicable Requirements: SIP , OPERATING PERMIT

Control Method: (B) GOOD COMBUSTION CONTROL AND OXIDATION CATALYST
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: EMISSION LIMIT 1 APPLIES WHEN THE DUCT BURNER IS ON. EMISSION LIMIT 2 APPLIES WHEN THE DUCT BURNER IS OFF.

POLLUTANT NAME: Sulfur Dioxide (SO₂)
CAS Number: 7446-09-5
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Sulfur (SO_x))
Emission Limit 1: 5.1000 LB/H
Emission Limit 2:
Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD
Other Applicable Requirements: NSPS , SIP , OPERATING PERMIT
Control Method: (P) USE OF CLEAN-BURNING, LOW-SULFUR, PIPELINE-QUALITY NATURAL GAS
Est. % Efficiency:
Compliance Verified: No
Pollutant/Compliance Notes: EMISSION LIMIT 1 IS FOR EACH TURBINE/DUCT BURNER PAIR.

POLLUTANT NAME: Ammonia (NH₃)
CAS Number: 7664-41-7
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds)
Emission Limit 1: 10.0000 PPMVD 15% OXYGEN, 3-HR AVERAGE
Emission Limit 2: 33.2000 LB/H
Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: Other Case-by-Case
Other Applicable Requirements: SIP , OPERATING PERMIT
Control Method: (P) LIMITING AMMONIA SLIP
Est. % Efficiency:
Compliance Verified: No
Pollutant/Compliance Notes: EMISSION LIMIT 2 IS FOR EACH TURBINE/DUCT BURNER PAIR BASED ON 67 DEGREE F, PEAK LOAD, DUCT FIRING, AND STEAM INJECTION.

Process/Pollutant Information

PROCESS AUXILIARY BOILER

NAME:

Process Type: 13.310 (Natural Gas (includes propane and liquefied petroleum gas))

Primary Fuel: NATURAL GAS

Throughput: 60.00 MMBTU/H

Process Notes:

POLLUTANT NAME: Nitrogen Oxides (NO_x)
CAS Number: 10102
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NO_x) , Particulate Matter (PM))
Emission Limit 1: 0.0350 LB/MMBTU
Emission Limit 2: 9.6000 TONS/YR
Standard Emission: 0.0350 LB/MMBTU

Did factors, other than air pollution technology considerations influence the BACT decisions: U

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements: SIP , OPERATING PERMIT
Control Method: (P) LOW NOX BURNER (WITH EITHER INTERNAL OR EXTERNAL FLUE GAS RECIRCULATION)
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Volatile Organic Compounds (VOC)
CAS Number: VOC
Test Method: Unspecified
Pollutant Group(s): (Volatile Organic Compounds (VOC))
Emission Limit 1: 0.4000 LB/H
Emission Limit 2:
Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: LAER
Other Applicable Requirements: SIP , OPERATING PERMIT
Control Method: (B) EFFECTIVE COMBUSTION SYSTEM DESIGN, 10:1 TURNDOWN CAPABILITY AND LOW NOX BURNER TECHNOLOGY
Est. % Efficiency:
Compliance Verified: No
Pollutant/Compliance Notes:

POLLUTANT NAME: Sulfur Dioxide (SO2)
CAS Number: 7446-09-5
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Sulfur (SOx))
Emission Limit 1: 0.0400 LB/H
Emission Limit 2:
Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD
Other Applicable Requirements: SIP , OPERATING PERMIT
Control Method: (P) USE OF LOW-SULFUR NATURAL GAS
Est. % Efficiency:
Compliance Verified: No
Pollutant/Compliance Notes:

POLLUTANT NAME: Carbon Monoxide
CAS Number: 630-08-0
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds)
Emission Limit 1: 0.0800 LB/MMBTU
Emission Limit 2: 4.8000 LB/H
Standard Emission: 0.0800 LB/MMBTU

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: LAER
Other Applicable Requirements: SIP , OPERATING PERMIT
Control Method: (P) EFFECTIVE COMBUSTION SYSTEM DESIGN, 10:1 TURNDOWN CAPABILITY, AND LNB TECHNOLOGY
Est. % Efficiency:
Compliance Verified: No
Pollutant/Compliance Notes:

POLLUTANT NAME: Particulate matter, filterable < 10 µ (FPM10)
CAS Number: PM
Test Method: Unspecified
Pollutant Group(s): (Particulate Matter (PM))
Emission Limit 1: 0.5000 LB/H
Emission Limit 2:
Standard Emission: NOT AVAILABLE
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: LAER
Other Applicable Requirements: SIP , OPERATING PERMIT
Control Method: (P) RESTRICTION OF OPERATION TO NATURAL GAS
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

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Facility Information

RBLC ID:	OR-0039 (final)	Date Determination	
		Last Updated:	06/21/2004
Corporate/Company Name:	Peoples Energy Resources	Permit Number:	18-0029
Facility Name:	COB ENERGY FACILITY, LLC	Permit Date:	12/30/2003 (actual)
Facility Contact:	MIKE JOURAS 312-762-1617 M.JOURAS@PECORP.COM	FRS Number:	110017421930
Facility Description:	POWER GENERATION FACILITY	SIC Code:	4911
Permit Type:	A: New/Greenfield Facility	NAICS Code:	221112
Permit URL:		COUNTRY:	USA
EPA Region:	10		
Facility County:	KLAMATH		
Facility State:	OR		
Facility ZIP Code:	60601		
Permit Issued By:	OREGON DEPT OF ENVIRONMENTAL QUALITY (Agency Name) MR. DAVE KAUTH(Agency Contact) (503)229-5655 kauth.dave@deq.state.or.us		
Other Agency Contact Info:	PETER BREWER OR (541) 388-6146		
Permit Notes:	Project based on advanced industrial gas turbine design, will use 4 nat gas CTs with HRSGs. Nominal electric generating capacity of approx. 1150 MW		

Process/Pollutant Information

PROCESS NAME: TURBINE, COMBINED CYCLE, DUCT BURNER, NAT GAS, (4)
Process Type: 15.210 (Natural Gas (includes propane & liquified petroleum gas))
Primary Fuel: NATURAL GAS
Throughput: 1150.00 MW
Process Notes: Throughput is net generating capacity. Turbines are GE 7FA or similar.

POLLUTANT NAME: Nitrogen Oxides (NOx)
CAS Number: 10102
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))
Emission Limit 1: 2.5000 PPMVD @ 15% O2 4-h rolling avg
Emission Limit 2: 22.8000 LB/H 8-h rolling avg

Standard Emission: 2.5000 PPM @ 15% O2
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (B) DLN COMBUSTORS, AND SCR
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: Above limits do not apply during startup or shut down.

POLLUTANT NAME: Carbon Monoxide
CAS Number: 630-08-0
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds)
Emission Limit 1: 2.0000 PPMVD @ 15% O2 4-h rolling avg
Emission Limit 2: 19.0000 LB/H 8-h rolling avg
Standard Emission: 2.0000 PPM @ 15% O2
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (A) CATALYTIC OXIDATION
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Ammonia (NH3)
CAS Number: 7664-41-7
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds)
Emission Limit 1: 5.0000 PPMVD @ 15% O2 3-h avg
Emission Limit 2:
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (N)
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Particulate matter, filterable < 10 µ (FPM10)
CAS Number: PM
Test Method: Unspecified
Pollutant Group(s): (Particulate Matter (PM))
Emission Limit 1: 14.0000 LB/H
Emission Limit 2:
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (P) GOOD COMBUSTION AND FIRING NATURAL GAS
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Sulfur Oxides (SOx)
CAS Number: 7446
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Sulfur (SOx))
Emission Limit 1: see note
Emission Limit 2:
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: N/A
Other Applicable Requirements: NSPS
Control Method: (P) LOW SULFUR FUEL: < 0.8 % S BY WT.
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: Limit is low sulfur fuel. No emission rate limit.

POLLUTANT NAME: Volatile Organic Compounds (VOC)
CAS Number: VOC
Test Method: Unspecified
Pollutant Group(s): (Volatile Organic Compounds (VOC))
Emission Limit 1: 7.1000 LB/H as methane, 3-h avg
Emission Limit 2:
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (B) CATALYTIC OXIDATION AND GOOD COMBUSTION CONTROLS
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: Limit does not apply during startup and shut down

POLLUTANT NAME: Visible Emissions (VE)
CAS Number: VE
Test Method: Unspecified
Pollutant Group(s):
Emission Limit 1: 20.0000 % OPACITY 3 min
Emission Limit 2:
Standard Emission: 20.0000 % OPACITY
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (N)
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

Process/Pollutant Information

PROCESS NAME: DUCT BURNERS, NATURAL GAS, (4)
Process Type: 11.310 (Natural Gas (includes propane and liquefied petroleum gas))
Primary Fuel: NATURAL GAS
Throughput: 654.00 MMBTU/H

Process Notes: Throughput for each.

POLLUTANT NAME: Particulate Matter (PM)
CAS Number: PM
Test Method: Unspecified
Pollutant Group(s): (Particulate Matter (PM))
Emission Limit 1: 0.0300 LB/MMBTU
Emission Limit 2:
Standard Emission: 0.0300 LB/MMBTU
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: N/A
Other Applicable Requirements: NSPS
Control Method: (P) CLEAN FUEL
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: Limit does not apply during startup, shut down or malfunction.

POLLUTANT NAME: Sulfur Dioxide (SO2)
CAS Number: 7446-09-5
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Sulfur (SOx))
Emission Limit 1: 0.2000 LB/MMBTU
Emission Limit 2:
Standard Emission: 0.2000 LB/MMBTU
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: N/A
Other Applicable Requirements: NSPS
Control Method: (P) CLEAN FUEL
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: Limit does not apply during startup, shut down, or emergency conditions

POLLUTANT NAME: Nitrogen Dioxide (NO2)
CAS Number: 10102-44-0
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx))
Emission Limit 1: 200.0000 NG/J
Emission Limit 2:
Standard Emission: 0.4700 LB/MMBTU calculated
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: N/A
Other Applicable Requirements: NSPS
Control Method: (B) DLN COMBUSTORS AND SCR
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Visible Emissions (VE)
CAS Number: VE
Test Method: Unspecified
Pollutant Group(s):
Emission Limit 1: 20.0000 % OPACITY 6-min avg
Emission Limit 2:
Standard Emission: 20.0000 % OPACITY

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: N/A
Other Applicable Requirements: SIP
Control Method: (N)
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

Process/Pollutant Information

PROCESS NAME: BOILERS, AUXILIARY, NATURAL GAS, (2)

NAME:

Process Type: 13.310 (Natural Gas (includes propane and liquefied petroleum gas))
Primary Fuel: NATURAL GAS
Throughput: 80.00 MMBTU/H
Process Notes: Throughput for each. Provide auxiliary steam for standby and startup conditions.

POLLUTANT NAME: Nitrogen Oxides (NOx)
CAS Number: 10102
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))
Emission Limit 1: 0.0350 LB/MMBTU 3-h avg
Emission Limit 2:
Standard Emission: 0.0350 LB/MMBTU

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (P) LOW NOX BURNERS AND FLUE GAS RECIRCULATION
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: Limit does not apply during startup and shut down.

POLLUTANT NAME: Carbon Monoxide
CAS Number: 630-08-0
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds)
Emission Limit 1: 0.0370 LB/MMBTU
Emission Limit 2:
Standard Emission: 0.0370 LB/MMBTU

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (P) GOOD COMBUSTION
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

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Facility Information

RBLC ID:	NV-0038 (final)	Date Determination	
Corporate/Company Name:	IVANPAH ENERGY CENTER, L.P.	Last Updated:	12/21/2005
Facility Name:	IVANPAH ENERGY CENTER, L.P.	Permit Number:	1616
Facility Contact:	WILLIAM DAVIS 2134730086 W.DAVIS@DGC-US.COM	Permit Date:	12/29/2003 (actual)
Facility Description:	A 500 MW ELECTRICAL GENERATING PLANT CONSISTING OF TWO COMBUSTION TURBINE GENERATORS, TWO HEAT RECOVERY STEAM GENERATORS, ONE STEAM TURBINE GENERATOR. THE PROPOSED PLANT IS SURROUNDED BY UNOCCUPIED LAND FOR A DISTANCE OF AT LEAST TWO MILES IN ALL DIRECTIONS. THE UN-IMPROVED ACCESS ROAD TO THE PROPOSED PLANT SITE IS ABOUT 1.6 MILES IN LENGTH.	FRS Number:	NEW, NOT FOUND
Permit Type:	A: New/Greenfield Facility	SIC Code:	4911
Permit URL:		NAICS Code:	221112
EPA Region:	9	COUNTRY:	USA
Facility County:	CLARK		
Facility State:	NV		
Facility ZIP Code:	89019		
Permit Issued By:	CLARK CO. DEPT. OF AIR QUALITY AND ENVIRONMENTAL MANAGEMENT (Agency Name) MR. DAVID LEE(Agency Contact) (702) 455-1673 LEE@CO.CLARK.NV.US		
Other Agency Contact Info:	DAVID C. LEE TEL: (702) 455-1673 FAX: (702) 383-9994 E-MAIL: LEE@CO.CLARK.NV.US		
Permit Notes:	THE AUTHORITY TO CONSTRUCT (ATC) WAS RENEWED ON JUNE 28, 2005. BASED ON THE CURRENT AIR QUALITY REGULATIONS, THE FIRST EXTENSION OF THE ATC DOES NOT REQUIRE A RE-ANALYSIS OF BACT/LAER. FOR THE RENEWED ATC DATED JUNE 28, 2005, THERE WAS NO NEW BACT/LAER DETERMINATION.		

Process/Pollutant Information

PROCESS NAME: LARGE COMBUSTION TURBINES, COMBINED CYCLE & COGENERATION

Process Type: 15.210 (Natural Gas (includes propane & liquified petroleum gas))

Primary Fuel: NATURAL GAS

Throughput: 500.00 MW

Process Notes: THE PRINCIPAL PROCESS EQUIPMENT CONSISTS OF TWO WESTINGHOUSE 501 FD COMBUSTION TURBINE GENERATORS, TWO HEAT RECOVERY STEAM GENERATORS, AND ONE STEAM TURBINE GENERATOR.

POLLUTANT NAME: Particulate matter, filterable < 10 μ (FPM10)

CAS Number: PM

Test Method: Unspecified

Pollutant Group(s): (Particulate Matter (PM))

Emission Limit 1: 11.2500 LB/H

Emission Limit 2: 49.3000 T/YR

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Y

Case-by-Case Basis: LAER

Other Applicable Requirements: SIP , OPERATING PERMIT

Control Method: (B) GOOD COMBUSTION CONTROL AND USE OF PIPELINE-QUALITY NATURAL GAS

Est. % Efficiency:

Compliance Verified: No

Pollutant/Compliance Notes: THE EMISSION LIMITS LISTED ABOVE APPLY TO EACH COMBUSTION TURBINE GENERATOR WITH THE DUCT BURNER ON.

POLLUTANT NAME: Volatile Organic Compounds (VOC)

CAS Number: VOC

Test Method: Unspecified

Pollutant Group(s): (Volatile Organic Compounds (VOC))

Emission Limit 1: 2.3000 PPMVD 15% OXYGEN, ONE HOUR AVERAGE

Emission Limit 2: 5.6000 LB/H
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: N
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements: SIP , OPERATING PERMIT
Control Method: (B) GOOD COMBUSTION CONTROL AND CATALYTIC OXIDATION
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: EMISSION LIMIT 2 APPLIES TO EACH COMBUSTION TURBINE GENERATOR WITH THE DUCT BURNER ON.

POLLUTANT NAME: Sulfur Dioxide (SO₂)
CAS Number: 7446-09-5
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Sulfur (SO_x))
Emission Limit 1: 1.5500 LB/H
Emission Limit 2: 6.7500 T/YR
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: N

Case-by-Case Basis: BACT-PSD
Other Applicable Requirements: NSPS , SIP
Control Method: (P) USE OF PIPELINE-QUALITY NATURAL GAS
Est. % Efficiency:
Compliance Verified: No
Pollutant/Compliance Notes: THE EMISSION LIMITS APPLY TO EACH COMBUSTION TURBINE GENERATOR WITH THE DUCT BURNER ON.

POLLUTANT NAME: Ammonia (NH₃)
CAS Number: 7664-41-7
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds)
Emission Limit 1: 10.0000 PPMVD 15% OXYGEN, ONE HOUR AVERAGE
Emission Limit 2: 25.8000 LB/H
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: N

Case-by-Case Basis: Other Case-by-Case
Other Applicable Requirements: SIP
Control Method: (P) GOOD SCR REAGENT INJECTION CONTROL
Est. % Efficiency:
Compliance Verified: No
Pollutant/Compliance Notes: EMISSION LIMIT 2 APPLIES TO EACH COMBUSTION TURBINE GENERATOR WITH THE DUCT BURNER ON.

POLLUTANT NAME: Nitrogen Oxides (NO_x)
CAS Number: 10102
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NO_x) , Particulate Matter (PM))
Emission Limit 1: 2.0000 PPMVD 15% OXYGEN, ONE HOUR AVERAGE
Emission Limit 2: 13.9600 LB/H
Standard Emission: 2.0000 PPM@ 15% O₂ 15% OXYGEN, ONE HOUR AVERAGE
Did factors, other than air pollution technology considerations influence the BACT decisions: U

Case-by-Case Basis: BACT-PSD
Other Applicable Requirements: NSPS , SIP , OPERATING PERMIT
Control Method: (B) DRY LOW NOX COMBUSTION CONTROL IN COMBINATION WITH SELECTIVE CATALYTIC REDUCTION

Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: EMISSION LIMIT 2 APPLIES TO EACH COMBUSTION TURBINE GENERATOR WITH THE DUCT BURNER ON.

POLLUTANT NAME: Carbon Monoxide
CAS Number: 630-08-0
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds)
Emission Limit 1: 4.0000 PPMVD 15% OXYGEN, ONE HOUR AVERAGE
Emission Limit 2: 17.0000 LB/H
Standard Emission: 4.0000 PPM @ 15% O2 15% OXYGEN, ONE HOUR AVERAGE
Did factors, other than air pollution technology considerations influence the BACT decisions: Y
Case-by-Case Basis: LAER
Other Applicable Requirements: SIP , OPERATING PERMIT
Control Method: (B) GOOD COMBUSTION CONTROL AND CATALYTIC OXIDATION
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: EMISSION LIMIT 2 APPLIES TO EACH COMBUSTION TURBINE GENERATOR WITH THE DUCT BURNER ON.

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Facility Information

RBLC ID:	AZ-0043 (final)	Date Determination	
		Last Updated:	01/29/2004
Corporate/Company Name:	DUKE ENERGY ARLINGTON VALLEY	Permit Number:	S01-004
Facility Name:	DUKE ENERGY ARLINGTON VALLEY (AVEFII)	Permit Date:	11/12/2003 (actual)
Facility Contact:	RUFUS KELLAM 623-882-2223	FRS Number:	110017420398
Facility Description:	POWER PLANT	SIC Code:	4911
Permit Type:	D: Both B (Add new process to existing facility) & C (Modify process at existing facility)	NAICS Code:	221112
Permit URL:			
EPA Region:	9	COUNTRY:	USA
Facility County:	MARICOPA		
Facility State:	AZ		
Facility ZIP Code:	85322		
Permit Issued By:	MARICOPA CO AIR POLLUTION CONTROL, AZ (Agency Name) MR. ROBERT KARD(Agency Contact) (602) 506-6701 RKARD@MARICOPA.GOV		
Other Agency Contact Info:	DALE A. LIEB AZ (602) 506-6738		
Permit Notes:			

Process/Pollutant Information

PROCESS TURBINE, COMBINED CYCLE & DUCT BURNER
NAME:
Process Type: 15.210 (Natural Gas (includes propane & liquified petroleum gas))
Primary Fuel: NATURAL GAS
Throughput: 325.00 MW
Process Notes:

POLLUTANT NAME: Particulate matter, filterable < 10 µ (FPM10)
CAS Number: PM
Test Method: Unspecified
Pollutant Group(s): (Particulate Matter (PM))
Emission Limit 1: 25.0000 LB/H
Emission Limit 2:
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (N)
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Carbon Monoxide
CAS Number: 630-08-0
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds)
Emission Limit 1: 3.0000 PPM @ 15% O2 3 hr avg
Emission Limit 2:
Standard Emission: 3.0000 PPM @ 15% O2
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (A) CATALYTIC OXIDIZER
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Volatile Organic Compounds (VOC)
CAS Number: VOC
Test Method: Unspecified
Pollutant Group(s): (Volatile Organic Compounds (VOC))
Emission Limit 1: 4.0000 PPM 3 hr avg
Emission Limit 2:
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (N)
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Nitrogen Oxides (NOx)
CAS Number: 10102
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))
Emission Limit 1: 2.0000 PPM @ 15% O2 1 hr avg
Emission Limit 2:
Standard Emission: 2.0000 PPM @ 15% O2
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD

Other Applicable Requirements:

Control Method: (A) SCR
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: Limit achieved after 2 yr demonstration period

Process/Pollutant Information

PROCESS NAME: TURBINE, COMBINED CYCLE

Process Type: 15.210 (Natural Gas (includes propane & liquified petroleum gas))

Primary Fuel: NATURAL GAS

Throughput: 325.00 MW

Process Notes: This process entry provides emission limits for the combined cycle turbine without the duct burner.

POLLUTANT NAME: Carbon Monoxide

CAS Number: 630-08-0

Test Method: Unspecified

Pollutant Group(s): (InOrganic Compounds)

Emission Limit 1: 2.0000 PPM @ 15% O2 3 hr avg

Emission Limit 2:

Standard Emission: 2.0000 PPM @ 15% O2

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements:

Control Method: (A) CATALYTIC OXIDIZER

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT NAME: Nitrogen Oxides (NOx)

CAS Number: 10102

Test Method: Unspecified

Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))

Emission Limit 1: 2.0000 PPM @ 15% O2 1 hr avg

Emission Limit 2:

Standard Emission: 2.0000 PPM @ 15% O2

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements:

Control Method: (A) SCR

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes: Limit achieved after 2 yr demonstration period

POLLUTANT NAME: Particulate matter, filterable < 10 μ (FPM10)

CAS Number: PM

Test Method: Unspecified

Pollutant Group(s): (Particulate Matter (PM))

Emission Limit 1: 18.0000 LB/H

Emission Limit 2:

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements:

Control Method: (N)

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT NAME: Volatile Organic Compounds (VOC)

CAS Number: VOC

Test Method: Unspecified

Pollutant Group(s): (Volatile Organic Compounds (VOC))

Emission Limit 1: 1.0000 PPM 3 hr avg

Emission Limit 2:

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements:

Control Method: (N)

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

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Facility Information

RBLC ID:	AZ-0049 (final)	Date Determination	
Corporate/Company Name:	ALLEGHENY ENERGY SUPPLY LLC	Last Updated:	07/24/2007
Facility Name:	LA PAZ GENERATING FACILITY	Permit Number:	1001743
Facility Contact:	DAVID BENSON 4128581325	Permit Date:	09/04/2003 (actual)
Facility Description:	NATURAL GAS FIRED, COMBINED CYCLE GENERATING STATION	FRS Number:	110013388459
Permit Type:	A: New/Greenfield Facility	SIC Code:	4911
Permit URL:		NAICS Code:	221112
EPA Region:	9	COUNTRY:	USA
Facility County:	LA PAZ		
Facility State:	AZ		
Facility ZIP Code:	85338		
Permit Issued By:	ARIZONA DEPT OF ENV QUAL, OFC OF AIR QUA (Agency Name) TREVOR BAGGIORE(Agency Contact) (602) 771-2321 TB4@AZDEQ.GOV		
Permit Notes:			

Process/Pollutant Information

PROCESS NAME:	SIEMENS WESTINGHOUSE COMBUSTION TURBINES AND HEAT RECOVERY STEAM GENERATORS
Process Type:	15.110 (Natural Gas (includes propane & liquified petroleum gas))
Primary Fuel:	NATURAL GAS
Throughput:	1080.00 MW
Process Notes:	THE COMPANY HAS THE OPTION OF EITHER CHOOSING THIS EQUIPMENT SETUP, OR THE OTHER LISTED SETUP. THIS SET UP IS 2 SIEMENS WESTINGHOUSE COMBUSTION TURBINES AND TWO HEAT RECOVERY STEAM GENERATORS WITH SUPPLEMENTAL DUCT FIRING

POLLUTANT NAME: Nitrogen Oxides (NOx)
CAS Number: 10102
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))
Emission Limit 1: 2.0000 PPMVD THREE HOUR AVERAGE AT 15% OXYGEN
Emission Limit 2: 16.0000 LB/H
Standard Emission: 2.0000 PPM @ 15% O2 THREE HOUR AVERAGE AT 15% OXYGEN
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements: NSPS
Control Method: (B) LOW NOX BURNERS AND SELECTIVE CATALYTIC REDUCTION
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: AFTER 18 MONTHS, THE NOX PPMVD LIMIT IS CHANGED TO A 1-HOUR AVERAGE UNLESS THE COMPANY CAN DEMONSTRATE THAT 2.0 IS NOT ACHEIVABLE. IF THIS DEMONSTRATION IS MADE, A NEW LIMIT WILL BE ESTABLISHED, NOT TO EXCEED 2.0 ON A 3-HOUR AVERAGE THE FACILITY IS LIMITED TO 100 POUNDS PER HOUR AVERAGED OVER EACH STARTUP AND SHUTDOWN EVENT DURING STARTUP AND SHUTDOWN CONDITIONS.

POLLUTANT NAME: Carbon Monoxide
CAS Number: 630-08-0
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds)
Emission Limit 1: 3.0000 PPMVD THREE HOUR AVERAGE AT 15% OXYGEN
Emission Limit 2: 14.2500 LB/H
Standard Emission: 3.0000 PPM @ 15% O2 THREE HOUR AVERAGE AT 15% OXYGEN
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (A) OXIDATION CATALYST
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: THE PERMITTEE IS LIMITED TO 1131 POUNDS PER HOUR AVERAGED OVER EACH 1 HOUR PERIOD DURING STATUP AND SHUTDOWN CONDITIONS.

POLLUTANT NAME: Particulate matter, filterable < 10 µ (FPM10)
CAS Number: PM
Test Method: Unspecified
Pollutant Group(s): (Particulate Matter (PM))
Emission Limit 1: 30.3000 LB/H
Emission Limit 2: 0.0148 LB/MMBTU THREE HOUR AVERAGE
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (N)
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Sulfur Dioxide (SO2)
CAS Number: 7446-09-5
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Sulfur (SOx))
Emission Limit 1: 0.0021 LB/MMBTU 3-HOUR AVERAGE

Emission Limit 2: 4.6000 LB/H
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (N)
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Volatile Organic Compounds (VOC)
CAS Number: VOC
Test Method: Unspecified
Pollutant Group(s): (Volatile Organic Compounds (VOC))
Emission Limit 1: 2.5000 LB/MMBTU THREE HOUR AVERAGE AT 15% OXYGEN
Emission Limit 2: 6.1000 LB/H
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (A) OXIDATION CATALYST
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

Process/Pollutant Information

PROCESS NAME: GE COMBUSTION TURBINES AND HEAT RECOVERY STEAM GENERATORS
Process Type: 15.210 (Natural Gas (includes propane & liquified petroleum gas))
Primary Fuel: NATURAL GAS
Throughput: 1040.00 MW
Process Notes: THE COMPANY HAS THE OPTION OF EITHER CHOOSING THIS EQUIPMENT SETUP, OR THE OTHER LISTED SETUP. THIS SET UP IS 2 GE COMBUSTION TURBINES AND TWO HEAT RECOVERY STEAM GENERATORS WITH SUPPLEMENTAL DUCT FIRING.

POLLUTANT NAME: Volatile Organic Compounds (VOC)
CAS Number: VOC
Test Method: Unspecified
Pollutant Group(s): (Volatile Organic Compounds (VOC))
Emission Limit 1: 4.5000 PPMVD 3-HR AVERAGE AT 15% OXYGEN
Emission Limit 2: 12.6000 LB/H
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (A) OXIDATION CATALYST
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Nitrogen Oxides (NOx)
CAS Number: 10102
Test Method: Unspecified

Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))
Emission Limit 1: 2.0000 PPMVD THREE HOUR AVERAGE AT 15% OXYGEN
Emission Limit 2: 17.8000 LB/H
Standard Emission: 2.0000 PPM @ 15 O2 THREE HOUR AVERAGE AT 15% OXYGEN
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements: NSPS
Control Method: (B) LOW NOX BURNERS WITH SELECTIVE CATALYTIC REDUCTION
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: AFTER 18 MONTHS, THE NOX PPMVD LIMIT IS CHANGED TO A 1-HOUR AVERAGE UNLESS THE COMPANY CAN DEMONSTRATE THAT 2.0 IS NOT ACHEIVABLE. IF THIS DEMONSTRATION IS MADE, A NEW LIMIT WILL BE ESTABLISHED, NOT TO EXCEED 2.0 ON A 3-HOUR AVERAGE THE FACILITY IS LIMITED TO 116 POUNDS PER HOUR AVERAGED OVER EACH STARTUP AND SHUTDOWN EVENT DURING STARTUP AND SHUTDOWN CONDITIONS.

POLLUTANT NAME: Carbon Monoxide
CAS Number: 630-08-0
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds)
Emission Limit 1: 3.0000 PPMVD 3-HOUR AVERAGE AT 15% OXYGEN
Emission Limit 2: 15.9000 LB/H
Standard Emission: 3.0000 PPM @ 15% O2 3-HOUR AVERAGE AT 15% OXYGEN
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (A) OXIDATION CATALYST
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: THE PERMITTEE IS LIMITED TO 1764 POUNDS PER HOUR AVERAGED OVER EACH 1 HOUR PERIOD DURING STATUP AND SHUTDOWN CONDITIONS.

POLLUTANT NAME: Particulate matter, filterable < 10 µ (FPM10)
CAS Number: PM
Test Method: Unspecified
Pollutant Group(s): (Particulate Matter (PM))
Emission Limit 1: 45.5000 LB/H
Emission Limit 2: 0.0188 LB/MMBTU THREE HOUR AVERAGE
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (N)
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Sulfur Dioxide (SO2)
CAS Number: 7446-09-5
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Sulfur (SOx))
Emission Limit 1: 0.0021 LB/MMBTU 3-HR AVERAGE
Emission Limit 2: 5.1000 LB/H
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: U

Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (N)
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

Process/Pollutant Information

PROCESS NAME: MECHANICAL DRAFT COOLING TOWERS FOR GE TURBINES
Process Type: 99.009 (Industrial Process Cooling Towers)
Primary Fuel:
Throughput: 173870.00 GAL/MIN
Process Notes: TEN CELL COOLING TOWER TO BE USED IF GE TURBINES ARE SELECTED

POLLUTANT NAME: Particulate matter, filterable < 10 µ (FPM10)
CAS Number: PM
Test Method: Unspecified
Pollutant Group(s): (Particulate Matter (PM))
Emission Limit 1: 0.0005 % BY VOL TOTAL DRIFT RATE
Emission Limit 2: 6.5000 LB/H
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (P) DRIFT ELIMINATORS
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

Process/Pollutant Information

PROCESS NAME: MECHANICAL DRAFT COOLING TOWERS FOR SIEMENS TURBINES
Process Type: 99.009 (Industrial Process Cooling Towers)
Primary Fuel:
Throughput: 141400.00 GAL/MIN
Process Notes: TEN CELL COOLING TOWER - TO BE USED IF SIEMENS TURBINES ARE SELECTED.

POLLUTANT NAME: Particulate matter, filterable < 10 µ (FPM10)
CAS Number: PM
Test Method: Unspecified
Pollutant Group(s): (Particulate Matter (PM))
Emission Limit 1: 0.0005 % BY VOL TOTAL DRIFT RATE
Emission Limit 2: 5.3000 LB/H
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (P) DRIFT ELIMINATORS
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

Process/Pollutant Information

PROCESS AUXILIARY BOILER FOR GE TURBINE

NAME:

Process Type: 13.310 (Natural Gas (includes propane and liquefied petroleum gas))

Primary Fuel: NATURAL GAS

Throughput: 41.00 MMBTU/H

Process Notes: THIS BOILER IS TO BE USED IF THE GE TURBINE SETUP IS SELECTED.

POLLUTANT NAME: Carbon Monoxide

CAS Number: 630-08-0

Test Method: Unspecified

Pollutant Group(s): (InOrganic Compounds)

Emission Limit 1: 0.0900 LB/MMBTU

Emission Limit 2:

Standard Emission: 0.0900 LB/MMBTU

Did factors, other than air pollution technology considerations influence the BACT decisions: U

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements:

Control Method: (N)

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT NAME: Particulate matter, filterable < 10 µ (FPM10)

CAS Number: PM

Test Method: Unspecified

Pollutant Group(s): (Particulate Matter (PM))

Emission Limit 1: 0.0150 LB/MMBTU

Emission Limit 2:

Standard Emission: 0.0150 LB/MMBTU

Did factors, other than air pollution technology considerations influence the BACT decisions: U

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements:

Control Method: (N)

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT NAME: Sulfur Dioxide (SO₂)

CAS Number: 7446-09-5

Test Method: Unspecified

Pollutant Group(s): (InOrganic Compounds , Oxides of Sulfur (SO_x))

Emission Limit 1: 0.0025 LB/MMBTU

Emission Limit 2:

Standard Emission: 0.0025 LB/MMBTU

Did factors, other than air pollution technology considerations influence the BACT decisions: U

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements:

Control Method: (N)

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT NAME: Volatile Organic Compounds (VOC)
CAS Number: VOC
Test Method: Unspecified
Pollutant Group(s): (Volatile Organic Compounds (VOC))
Emission Limit 1: 0.0100 LB/MMBTU
Emission Limit 2:
Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: U

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements:

Control Method: (N)

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT NAME: Nitrogen Oxides (NOx)
CAS Number: 10102
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))
Emission Limit 1: 0.0270 LB/MMBTU
Emission Limit 2:
Standard Emission: 0.0270 LB/MMBTU

Did factors, other than air pollution technology considerations influence the BACT decisions: U

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements: NSPS

Control Method: (P) LOW NOX BURNERS

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

Process/Pollutant Information

PROCESS AUXILIARY BOILER FOR SIEMENS TURBINES

NAME:

Process Type: 13.310 (Natural Gas (includes propane and liquefied petroleum gas))

Primary Fuel: NATURAL GAS

Throughput: 55.34 MMBTU/H

Process Notes: THIS BOILER IS FOR USE WHEN THE SIEMENS TURBINE SYSTEM IS SELECTED.

POLLUTANT NAME: Nitrogen Oxides (NOx)
CAS Number: 10102
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))
Emission Limit 1: 0.0360 LB/MMBTU
Emission Limit 2:
Standard Emission: 0.0360 LB/MMBTU

Did factors, other than air pollution technology considerations influence the BACT decisions: U

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements: NSPS

Control Method: (P) LOW NOX BURNERS

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT NAME: Carbon Monoxide
CAS Number: 630-08-0
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds)
Emission Limit 1: 0.1400 LB/MMBTU
Emission Limit 2:
Standard Emission: 0.1400 LB/MMBTU
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (N)
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Particulate matter, filterable < 10 µ (FPM10)
CAS Number: PM
Test Method: Unspecified
Pollutant Group(s): (Particulate Matter (PM))
Emission Limit 1: 0.0150 LB/MMBTU
Emission Limit 2:
Standard Emission: 0.0150 LB/MMBTU
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (N)
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Volatile Organic Compounds (VOC)
CAS Number: VOC
Test Method: Unspecified
Pollutant Group(s): (Volatile Organic Compounds (VOC))
Emission Limit 1: 0.0100 LB/MMBTU
Emission Limit 2:
Standard Emission: 0.0100 LB/MMBTU
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (N)
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Sulfur Dioxide (SO2)
CAS Number: 7446-09-5
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Sulfur (SOx))
Emission Limit 1: 0.0025 LB/MMBTU
Emission Limit 2:
Standard Emission: 0.0025 LB/MMBTU

Did factors, other than air pollution technology considerations influence the BACT decisions: U

Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (N)
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

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Facility Information

RBLC ID:	CA-0997 (final)	Date Determination	
Corporate/Company Name:	SACRAMENTO MUNICIPAL UTILITY DISTRICT	Last Updated:	03/09/2004
Facility Name:	SACRAMENTO MUNICIPAL UTILITY DISTRICT	Permit Number:	16006
Facility Contact:	STUART HUSBAND 916-732-6246	Permit Date:	09/01/2003 (estimated)
Facility Description:	COMBUSTION GAS TURBINE GE 7FA	FRS Number:	110011658278
Permit Type:	A: New/Greenfield Facility	SIC Code:	4911
Permit URL:		NAICS Code:	221112
EPA Region:	9	COUNTRY:	USA
Facility County:	SACRAMENTO COUNTY		
Facility State:	CA		
Facility ZIP Code:			
Permit Issued By:	SACRAMENTO METROPOLITAN AQMD, CA (Agency Name) MR. JORGE DEGUZMAN(Agency Contact) (916)874-4860		
Other Agency Contact Info:	BRIAN KREBS CA (916) 386-6628		
Permit Notes:	DOC ISSUED, BUT PERMIT NOT ISSUED YET.		

Process/Pollutant Information

PROCESS NAME: GAS TURBINES, (2)
Process Type: 15.210 (Natural Gas (includes propane & liquified petroleum gas))
Primary Fuel: NATURAL GAS
Throughput: 1611.00 MMBTU/H
Process Notes: COMBUSTION GAS TURBINE GE 7FA

POLLUTANT NAME: Volatile Organic Compounds (VOC)
CAS Number: VOC
Test Method: Unspecified
Pollutant Group(s): (Volatile Organic Compounds (VOC))
Emission Limit 1: 1.4000 PPM @ 15% O2
Emission Limit 2: 30.0000 T/YR
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: LAER
Other Applicable Requirements:
Control Method: (N)
Est. % Efficiency:

Compliance Verified: Unknown
Pollutant/Compliance Notes: BACT DETERMINATION: 15% OXYGEN AT 3-HR AVERAGE

POLLUTANT NAME: Nitrogen Oxides (NOx)
CAS Number: 10102
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))
Emission Limit 1: 2.0000 PPM @ 15% O2
Emission Limit 2: 125.6000 T/YR
Standard Emission: 2.0000 PPM @ 15% O2

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: LAER
Other Applicable Requirements:
Control Method: (A) SCR
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: BACT DETERMINATION: 2.0 PPM @ 15% OXYGEN AT 1-HR AVERAGE W/EXCURSION LANG

POLLUTANT NAME: Sulfur Oxides (SOx)
CAS Number: 7446
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Sulfur (SOx))
Emission Limit 1: 1.0000 GR/100 SCF FUEL SPECIFICATION
Emission Limit 2: 11.0000 T/YR
Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: LAER
Other Applicable Requirements:
Control Method: (P) LOW SULFUR NATURAL GAS
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Particulate matter, filterable < 10 µ (FPM10)
CAS Number: PM
Test Method: Unspecified
Pollutant Group(s): (Particulate Matter (PM))
Emission Limit 1: 9.0000 LB/H
Emission Limit 2: 79.5000 T/YR
Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: LAER
Other Applicable Requirements:
Control Method: (P) GOOD COMBUSTION CONTROL
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Carbon Monoxide
CAS Number: 630-08-0
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds)
Emission Limit 1: 4.0000 PPM @ 15% O2
Emission Limit 2: 297.8000 T/YR

Standard Emission: 4.0000 PPM @ 15% O2
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: LAER
Other Applicable Requirements:
Control Method: (P) GOOD COMBUSTION CONTROL
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: BACT DETERMINATION AT 15% OXYGEN 3-HR AVERAGE

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Facility Information

RBLC ID:	CA-1096 (final)	Date Determination	
		Last Updated:	12/05/2005
Corporate/Company Name:	VERNON CITY LIGHT & POWER	Permit Number:	394164
Facility Name:	VERNON CITY LIGHT & POWER	Permit Date:	05/27/2003 (actual)
Facility Contact:		FRS Number:	NEW, NOT FOUND
Facility Description:		SIC Code:	4911
Permit Type:	A: New/Greenfield Facility	NAICS Code:	221111
Permit URL:		COUNTRY:	USA
EPA Region:	9		
Facility County:	LOS ANGELES		
Facility State:	CA		
Facility ZIP Code:	90058		
Permit Issued By:	SOUTH COAST AQMD, CA (Agency Name) MR. MARTIN KAY(Agency Contact) (909)396-3115 mkay@aqmd.gov		
Other Agency Contact Info:	SOUTH COAST AQMD, MARTIN KAY, (909) 396-3115, MKAY@AQMD.GOV		
Permit Notes:	CARB ID: 799.0, OPERATING PERMIT DATE: , STARTUP DATE: 09-01-2004 NEW CONSTR MODIFICATION: NEW CONSTRUCTION TECH STATUS: BACT DETERMINATION NO SOURCE TEST AVAILABLE		

Process/Pollutant Information

PROCESS NAME: GAS TURBINE: COMBINED CYCLE < 50 MW
Process Type: 15.210 (Natural Gas (includes propane & liquified petroleum gas))
Primary Fuel: NATURAL GAS
Throughput: 43.00 MW GAS TURBINE, 55 M
Process Notes: EQUIP: , MFR: ALSTOM, TYPE: COMBINED CYCLEWITH DUCT BURNER, MODEL: GTX100, FUNC EQUIP: POWER GENERATION, FUEL_TYPE: , SCHEDULE: CONTINUOUS, H/D: 24, D/W: 7, W/Y: 52, NOTES: PRIOR BACT DETERMINATION WAS BASED ON CARBS GUIDANCE DOCUMENT FOR POWER PLANT SITINGS, DATED SEPTEMBER 1999 AND THE ANP BLACKSTONE COMBINED-CYCLE POWER PLANT IN MASSACHUSETTS (AQMD PUBLIC NOTICE 1/16/2003). THE MORE STRINGENT LIMIT FOR CO WAS PROPOSED BY THE APPLICANT TO REDUCE THE OFFSET REQUIREMENTS. MAGNOLIA POWER PROJECT (A/N 386305) HAS SIMILAR CONCENTRATION LIMITS OF NOX, CO, VOC AND NH3 EXCEPT FOR DIFFERENCES IN AVERAGING TIMES (3-HR FOR NOX AND 1-HR FOR VOC). SOURCE TEST RESULTS: TO BE TESTED WITHIN 180 DAYS AFTER STARTUP.

POLLUTANT NAME: Nitrogen Oxides (NOx)
CAS Number: 10102
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))
Emission Limit 1: 2.0000 PPMVD @ 15% O2 1H
Emission Limit 2:
Standard Emission: 2.0000 PPM @ 15% O2
Did factors, other than air pollution technology considerations influence the BACT decisions: U

Case-by-Case Basis: BACT-PSD
Other Applicable Requirements: N/A
Control Method: (A) SCR SYSTEM, AND OXIDATION CATALYST
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Carbon Monoxide
CAS Number: 630-08-0
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds)
Emission Limit 1: 2.0000 PPMVD @ 15% O2 3H
Emission Limit 2:
Standard Emission: 2.0000 PPM @ 15% O2
Did factors, other than air pollution technology considerations influence the BACT decisions: U

Case-by-Case Basis: BACT-PSD
Other Applicable Requirements: N/A
Control Method: (A) SCR SYSTEM, AND OXIDATION CATALYST
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Volatile Organic Compounds (VOC)
CAS Number: VOC
Test Method: Unspecified
Pollutant Group(s): (Volatile Organic Compounds (VOC))
Emission Limit 1: 2.0000 PPMVD @ 15% O2 1H
Emission Limit 2:
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: U

Case-by-Case Basis: BACT-PSD
Other Applicable Requirements: N/A
Control Method: (A) SCR SYSTEM, AND OXIDATION CATALYST
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Particulate Matter (PM)
CAS Number: PM
Test Method: Unspecified
Pollutant Group(s): (Particulate Matter (PM))
Emission Limit 1: 0.0100 G/SCF
Emission Limit 2:
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: U

Case-by-Case Basis: BACT-PSD
Other Applicable Requirements: N/A
Control Method: (N)
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Ammonia (NH3)

CAS Number: 7664-41-7
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds)
Emission Limit 1: 5.0000 PPMVD@15%O2 1 H
Emission Limit 2:
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements: N/A
Control Method: (N)
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

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Facility Information

RBLC ID:	CA-1097 (final)	Date Determination	
		Last Updated:	12/06/2005
Corporate/Company Name:	MAGNOLIA POWER PROJECT, SCPPA	Permit Number:	386305
Facility Name:	MAGNOLIA POWER PROJECT, SCPPA	Permit Date:	05/27/2003 (actual)
Facility Contact:		FRS Number:	110000325030
Facility Description:		SIC Code:	4911
Permit Type:	A: New/Greenfield Facility	NAICS Code:	221111
Permit URL:		COUNTRY:	USA
EPA Region:	9		
Facility County:	LOS ANGELES		
Facility State:	CA		
Facility ZIP Code:	91502		
Permit Issued By:	SOUTH COAST AQMD, CA (Agency Name) MR. MARTIN KAY(Agency Contact) (909)396-3115 mkay@aqmd.gov		
Other Agency Contact Info:	SOUTH COAST AQMD, MARTIN KAY, (909)- 396-3115, MKAY@AQMD.GOV		
Permit Notes:	CARB ID: 800.0, NEW CONSTR MODIFICATION: NEW CONSTRUCTION TECH STATUS: BACT DETERMINATION NO SOURCE TEST AVAILABLE		

Process/Pollutant Information

PROCESS NAME: GAS TURBINE: COMBINED CYCLE >= 50 MW
Process Type: 15.210 (Natural Gas (includes propane & liquified petroleum gas))
Primary Fuel: NATURAL GAS
Throughput: 181.00 NET MW (GAS TURBINE)
Process Notes: EQUIP: INCLUDES INLET AIR EVAPORATIVE COOLING AND STEAM INJECTION, MFR: GENERAL ELECTRIC, TYPE: COMBINED CYCLE, MODEL: PG7241FA, FUNC EQUIP: POWER GENERATION, FUEL_TYPE: , SCHEDULE: CONTINUOUS, H/D: 24, D/W: 7, W/Y: 52, NOTES: PRIOR BACT WAS BASED ON CARBS GUIDANCE DOCUMENT FOR POWER PLANT SITINGS, DATED SEPTEMBER 1999 AND AQMD PART D BACT. OTHER SIMILAR RECENTLY AQMD PERMITTED COMBINED CYCLE POWERPLANTS INCLUDE LADWP VALLEY, LADWP HAYNES, AND MOUNTAINVIEW POWER PLANT. THESE PLANTS WERE PERMITTED WITH THE SAME OR SIMILAR EMISSION CONCENTRATION LIMITS FOR NOX, CO, VOC, AND NH3 HOWEVER, THEY WERE NOT CONSIDERED ACHIEVED IN PRACTICE AT THE TIME OF BACT DETERMINATION. THE MORE STRINGENT LIMIT ON CO WAS PROPOSED BY THE APPLICANT. SOURCE TEST RESULTS: TO BE TESTED.

POLLUTANT NAME: Carbon Monoxide
CAS Number: 630-08-0
Test Method: Unspecified

Pollutant Group(s): (InOrganic Compounds)
Emission Limit 1: 2.0000 PPMVD @ 15% O2 1H
Emission Limit 2:
Standard Emission: 2.0000 PPM @ 15% O2
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements: N/A
Control Method: (A) SCR SYSTEM AND OXIDATION CATALYST
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Volatile Organic Compounds (VOC)
CAS Number: VOC
Test Method: Unspecified
Pollutant Group(s): (Volatile Organic Compounds (VOC))
Emission Limit 1: 2.0000 PPMVD @ 15% O2 1 H
Emission Limit 2:
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements: N/A
Control Method: (A) SCR SYSTEM AND OXIDATION CATALYST
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Particulate Matter (PM)
CAS Number: PM
Test Method: Unspecified
Pollutant Group(s): (Particulate Matter (PM))
Emission Limit 1: 0.0100 G/SCF
Emission Limit 2:
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements: N/A
Control Method: (N)
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Ammonia (NH3)
CAS Number: 7664-41-7
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds)
Emission Limit 1: 5.0000 PPMVD@15%O2 1 H
Emission Limit 2:
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements: N/A
Control Method: (N)
Est. % Efficiency:

Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Nitrogen Oxides (NOx)
CAS Number: 10102
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))
Emission Limit 1: 2.0000 PPMVD @ 15% O2 3 H AVG. TIME
Emission Limit 2:
Standard Emission: 2.0000 PPM @ 15% O2 3 H AVG. TIME
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements: N/A
Control Method: (A) SCR SYSTEM AND OXIDATION CATALYST
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: PRIOR BACT WAS BASED ON CARB'S GUIDANCE DOCUMENT FOR POWER PLANT SITINGS, DATED SEPTEMBER 1999 AND AQMD PART D BACT. OTHER SIMILAR RECENTLY AQMD PERMITTED COMBINED CYCLE POWERPLANTS INCLUDE LADWP VALLEY, LADWP HAYNES, AND MOUNTAINVIEW POWER PLANT. THESE PLANTS WERE PERMITTED WITH THE SAME OR SIMILAR EMISSION CONCENTRATION LIMITS FOR NOX, CO, VOC, AND NH3 HOWEVER, THEY WERE NOT CONSIDERED ACHIEVED IN PRACTICE AT THE TIME OF BACT DETERMINATION. THE MORE STRINGENT LIMIT ON CO WAS PROPOSED BY THE APPLICANT.

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Facility Information

RBLC ID:	GA-0105 (final)	Date Determination	
		Last Updated:	01/24/2005
Corporate/Company Name:	SAVANNAH ELECTRIC AND POWER CO	Permit Number:	4911-103-0014-V-01-0
Facility Name:	MCINTOSH COMBINED CYCLE FACILITY	Permit Date:	04/17/2003 (actual)
Facility Contact:		FRS Number:	110000516273
Facility Description:	ELECTRIC GENERATING FACILITY	SIC Code:	4911
Permit Type:	D: Both B (Add new process to existing facility) & C (Modify process at existing facility)	NAICS Code:	221112
Permit URL:			
EPA Region:	4	COUNTRY:	USA
Facility County:	EFFINGHAM		
Facility State:	GA		
Facility ZIP Code:	31326		
Permit Issued By:	GEORGIA DEPARTMENT OF NATURAL RESOURCES (Agency Name) MR. JOHN YNTEMA(Agency Contact) (404)363-7117 john_yntema@dnr.state.ga.us		
Other Agency Contact Info:	JAMES JOHNSTON GA (404) 362-4864		
Permit Notes:	MODIFICATION FOR INSTALLATION OF 2 COMBINED CYCLE POWER BLOCKS, WITH EACH POWER BLOCK CONSISTING OF 2 COMBUSTION TURBINES, DUCT BURNERS AND HRSG.		

Process/Pollutant Information

PROCESS NAME: TURBINE, COMBINED CYCLE, NATURAL GAS, (4)
Process Type: 15.210 (Natural Gas (includes propane & liquified petroleum gas))
Primary Fuel: NATURAL GAS

Throughput: 140.00 MW

Process Notes: TURBINES ARE GENERAL ELECTRIC 7FA TURBINES W/ 541.7 MMBTU/H DUCT BURNERS.

POLLUTANT NAME: Visible Emissions (VE)
CAS Number: VE
Test Method: Unspecified
Pollutant Group(s):
Emission Limit 1: 10.0000 % OPACITY
Emission Limit 2:
Standard Emission: 10.0000 % OPACITY
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: Other Case-by-Case
Other Applicable Requirements:
Control Method: (P) LOW SULFUR FUEL, GOOD COMBUSTION PRACTICE
Est. % Efficiency:
Compliance Verified: Yes
Pollutant/Compliance Notes:

POLLUTANT NAME: Nitrogen Oxides (NOx)
CAS Number: 10102
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))
Emission Limit 1: 2.5000 PPM @ 15% O2
Emission Limit 2:
Standard Emission: 2.5000 PPM @ 15% O2
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (B) DRY LOW NOX COMBUSTORS, SCR
Est. % Efficiency:
Compliance Verified: Yes
Pollutant/Compliance Notes:

POLLUTANT NAME: Carbon Monoxide
CAS Number: 630-08-0
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds)
Emission Limit 1: 2.0000 PPM @ 15% O2
Emission Limit 2:
Standard Emission: 2.0000 PPM @ 15% O2
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (A) CATALYTIC OXIDATION
Est. % Efficiency:
Compliance Verified: Yes
Pollutant/Compliance Notes:

POLLUTANT NAME: Volatile Organic Compounds (VOC)
CAS Number: VOC
Test Method: Unspecified
Pollutant Group(s): (Volatile Organic Compounds (VOC))
Emission Limit 1: 2.0000 PPM @ 15% O2
Emission Limit 2:

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements:

Control Method: (A) CATALYTIC OXIDATION

Est. % Efficiency:

Compliance Verified: Yes

Pollutant/Compliance Notes:

POLLUTANT NAME: Particulate Matter (PM)

CAS Number: PM

Test Method: Unspecified

Pollutant Group(s): (Particulate Matter (PM))

Emission Limit 1: 0.0090 LB/MMBTU HHV BASIS

Emission Limit 2: 21.5000 LB/H FULL LOAD

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements:

Control Method: (P) CLEAN FUEL, GOOD COMBUSTION PRACTICE

Est. % Efficiency:

Compliance Verified: Yes

Pollutant/Compliance Notes:

Process/Pollutant Information

PROCESS NAME: TURBINE, COMBINED CYCLE, FUEL OIL, (4)

Process Type: 15.290 (Liquid Fuel & Liquid Fuel Mixtures)

Primary Fuel: FUEL OIL

Throughput: 140.00 MW

Process Notes: TURBINES ARE GENERAL ELECTRIC 7FA TURBINES W/ 541.7 MMBTU/H DUCT BURNERS.

POLLUTANT NAME: Carbon Monoxide

CAS Number: 630-08-0

Test Method: Unspecified

Pollutant Group(s): (InOrganic Compounds)

Emission Limit 1: 2.0000 PPM @ 15% O2

Emission Limit 2:

Standard Emission: 2.0000 PPM @ 15% O2

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements:

Control Method: (A) CATALYTIC OXIDATION

Est. % Efficiency:

Compliance Verified: Yes

Pollutant/Compliance Notes:

POLLUTANT NAME: Volatile Organic Compounds (VOC)

CAS Number: VOC

Test Method: Unspecified

Pollutant Group(s): (Volatile Organic Compounds (VOC))

Emission Limit 1: 2.0000 PPM @ 15% O2

Emission Limit 2:

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements:

Control Method: (A) CATALYTIC OXIDATION

Est. % Efficiency:

Compliance Verified: Yes

Pollutant/Compliance Notes:

POLLUTANT NAME: Particulate Matter (PM)

CAS Number: PM

Test Method: Unspecified

Pollutant Group(s): (Particulate Matter (PM))

Emission Limit 1: 0.0160 LB/MMBTU HHV BASIS

Emission Limit 2: 33.9000 LB/H FULL LOAD

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: Other Case-by-Case

Other Applicable Requirements:

Control Method: (P) LOW SULFUR FUEL, GOOD COMBUSTION PRACTICE

Est. % Efficiency:

Compliance Verified: Yes

Pollutant/Compliance Notes:

POLLUTANT NAME: Visible Emissions (VE)

CAS Number: VE

Test Method: Unspecified

Pollutant Group(s):

Emission Limit 1: 10.0000 % OPACITY

Emission Limit 2: 10.0000 % OPACITY

Standard Emission: 10.0000 % OPACITY

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: Other Case-by-Case

Other Applicable Requirements:

Control Method: (P) LOW SULFUR FUEL, GOOD COMBUSTION PRACTICE

Est. % Efficiency:

Compliance Verified: Yes

Pollutant/Compliance Notes:

POLLUTANT NAME: Nitrogen Oxides (NOx)

CAS Number: 10102

Test Method: Unspecified

Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))

Emission Limit 1: 6.0000 PPM @ 15% O2

Emission Limit 2:

Standard Emission: 6.0000 PPM @ 15% O2

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements:

Control Method: (A) SCR

Est. % Efficiency:

Compliance Verified: Yes

Pollutant/Compliance Notes:

Process/Pollutant Information

PROCESS NAME: FUEL GAS HEATER

NAME:

Process Type: 13.310 (Natural Gas (includes propane and liquefied petroleum gas))

Primary Fuel: NATURAL GAS

Throughput: 5.00 MMBTU/H

Process Notes:

POLLUTANT NAME: Nitrogen Oxides (NOx)
CAS Number: 10102
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))
Emission Limit 1: 99.0000 PPM @ 15% O2
Emission Limit 2:
Standard Emission: 0.3700 LB/MMBTU CALCULATED
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (N)
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Carbon Monoxide
CAS Number: 630-08-0
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds)
Emission Limit 1: 37.0000 PPM @ 15% O2
Emission Limit 2:
Standard Emission: 0.0830 LB/MMBTU
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (N)
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

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Facility Information

RBL ID:	WA-0315 (final)	Date Determination	
Corporate/Company Name:	SUMAS ENERGY 2 GENERATION FACILITY	Last Updated:	08/31/2006
Facility Name:	SUMAS ENERGY 2 GENERATION FACILITY	Permit Number:	EFSEC 2001-02
Facility Contact:		Permit Date:	04/17/2003 (actual)
Facility Description:		FRS Number:	110017421832
Permit Type:	D: Both B (Add new process to existing facility) & C (Modify process at existing facility)	SIC Code:	4911
		NAICS Code:	221112

Permit URL:

EPA Region: 10
Facility County: WHATCOM
Facility State: WA
Facility ZIP Code:

COUNTRY: USA

Permit Issued By: WASHINGTON STATE DEPARTMENT OF ECOLOGY (Agency Name)
MR. BERNARD BRADY(Agency Contact) (360)407-6803 bbra461@ecy.wa.gov

Other Agency Contact Info: BRADY, BERNARD
P.O. BOX 47600
OLYMPIA, WA 98504-7600
(360) 407-6803

Permit Notes: MODIFICATION OF ORIGINAL PERMIT, RBLC ENTRY WA-0299. EQUIPMENT THE SAME, LIMITS ALTERED SLIGHTLY.

Process/Pollutant Information

PROCESS TURBINES, COMBINED CYCLE, (2)
NAME:
Process Type: 15.210 (Natural Gas (includes propane & liquified petroleum gas))
Primary Fuel: NATURAL GAS
Throughput: 660.00 MW
Process Notes: Throughput is total. Natural gas fuel with 2 gr/100 CF max S content, 7 day avg basis, 1.1 gr/100 cf 12 mo avg basis.

POLLUTANT NAME: Sulfur Dioxide (SO2)
CAS Number: 7446-09-5
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Sulfur (SOx))
Emission Limit 1: 1.0000 PPMVD 1 h avg
Emission Limit 2: 189.0000 LB/D each
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (P) LOW SULFUR FUEL: < 2 GR/100 CF, 7 DAY AVG, 1.1 GR/100 CF, 12 MO AVG
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: Emission limit 1 does not apply during startup and shut down. Emission limit 2 applies at all times, including startup and shut down.

POLLUTANT NAME: Visible Emissions (VE)
CAS Number: VE
Test Method: Unspecified
Pollutant Group(s):
Emission Limit 1: 10.0000 % OPACITY
Emission Limit 2:
Standard Emission: 10.0000 % OPACITY
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (P) GOOD COMBUSTION PRACTICE
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Nitrogen Oxides (NOx)
CAS Number: 10102

Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))
Emission Limit 1: 2.0000 PPMVD 3 h avg
Emission Limit 2: 395.0000 LB/D each
Standard Emission: 2.0000 PPM @ 15% O2
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (B) DRY LOW NOX BURNERS, SCR
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: Additional limit: 72 t/yr each turbine.

POLLUTANT NAME: Carbon Monoxide
CAS Number: 630-08-0
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds)
Emission Limit 1: 2.0000 PPMVD 1 h avg
Emission Limit 2: 44.0000 T/YR each turbine
Standard Emission: 2.0000 PPM @ 15% O2
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (A) OXIDATION CATALYST
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: The limits above are relieved during startup and shutdown. During startup and shut down, the limit 2000 lb/h applies.

POLLUTANT NAME: Particulate matter, filterable (FPM)
CAS Number: PM
Test Method: Unspecified
Pollutant Group(s): (Particulate Matter (PM))
Emission Limit 1: 194.0000 LB/D each
Emission Limit 2:
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (P) GOOD COMBUSTION PRACTICE, LOW SULFUR FUEL
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: Limit for filterable PM10. Limit relieved at startup and shut down.

POLLUTANT NAME: Particulate Matter (PM)
CAS Number: PM
Test Method: Unspecified
Pollutant Group(s): (Particulate Matter (PM))
Emission Limit 1: 377.0000 LB/D each
Emission Limit 2:
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:

Control Method: (P) GOOD COMBUSTION PRACTICE, CLEAN FUEL
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: This limit is for condensible PM10, and is relieved during startup and shut down. Total PM10 limit during startup and shut down is 573 lb/d.

POLLUTANT NAME: Volatile Organic Compounds (VOC)
CAS Number: VOC
Test Method: Unspecified
Pollutant Group(s): (Volatile Organic Compounds (VOC))
Emission Limit 1: 420.0000 LB/D as methane, each
Emission Limit 2:
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (P) GOOD COMBUSTION PRACTICE
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Sulfuric Acid (mist, vapors, etc)
CAS Number: 7664-93-9
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Particulate Matter (PM))
Emission Limit 1: 39.0000 LB/D EACH
Emission Limit 2:
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: U

Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (P) LOW SULFUR FUEL: < 2 GR/100 CF 7 DAY AVG, 1.1 GR/100 CF 12 MO AVG
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: REGULATED POLLUTANT IS SULFURIC ACID MIST.

POLLUTANT NAME: Ammonia (NH3)
CAS Number: 7664-41-7
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds)
Emission Limit 1: 5.0000 PPMVD 1 h avg
Emission Limit 2: 382.0000 LB/D each
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (N)
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

Facility Information

RBLC ID:	AZ-0039 (final)	Date Determination	
Corporate/Company Name:	SALT RIVER PROJECT/SANTAN GEN. PLANT	Last Updated:	05/24/2005
Facility Name:	SALT RIVER PROJECT/SANTAN GEN. PLANT	Permit Number:	V95-008 S01-014
Facility Contact:	CHRIS JANICK (602) 236-5374	Permit Date:	03/07/2003 (actual)
Facility Description:	POWER PLANT	FRS Number:	110002575712
Permit Type:	D: Both B (Add new process to existing facility) & C (Modify process at existing facility)	SIC Code:	4911
Permit URL:		NAICS Code:	221112
EPA Region:	9	COUNTRY:	USA
Facility County:	MARICOPA		
Facility State:	AZ		
Facility ZIP Code:	85072		
Permit Issued By:	MARICOPA CO AIR POLLUTION CONTROL, AZ (Agency Name) MR. ROBERT KARD(Agency Contact) (602) 506-6701 RKARD@MARICOPA.GOV		
Other Agency Contact Info:	DALE A LIEB AZ (602) 506-6738		
Permit Notes:	CLASS 1 AREAS LISTED AS BEING 50 KM FROM FACILITY ARE > 50 KM.		

Process/Pollutant Information

PROCESS TURBINE, COMBINED CYCLE, DUCT BURNER, NATURAL GAS

NAME:

Process Type: 15.210 (Natural Gas (includes propane & liquified petroleum gas))

Primary Fuel: NATURAL GAS

Throughput: 175.00 MW

Process Notes:

POLLUTANT NAME: Carbon Monoxide

CAS Number: 630-08-0

Test Method: Unspecified

Pollutant Group(s): (InOrganic Compounds)

Emission Limit 1: 3.0000 PPM @ 15% O2 3 h avg

Emission Limit 2:

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: LAER

Other Applicable Requirements:

Control Method: (A) CATALYTIC OXIDIZER

Est. % Efficiency:

Compliance Verified: Yes

Pollutant/Compliance Notes:

POLLUTANT NAME: Nitrogen Oxides (NOx)

CAS Number: 10102

Test Method: Unspecified

Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))

Emission Limit 1: 2.0000 PPM @ 15% O2 1 h avg

Emission Limit 2:

Standard Emission: 2.0000 PPM @ 15% O2
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: LAER
Other Applicable Requirements:
Control Method: (A) SCR
Est. % Efficiency:
Compliance Verified: Yes
Pollutant/Compliance Notes:

POLLUTANT NAME: Volatile Organic Compounds (VOC)
CAS Number: VOC
Test Method: Unspecified
Pollutant Group(s): (Volatile Organic Compounds (VOC))
Emission Limit 1: 4.0000 PPM @ 15% O2 3 h avg
Emission Limit 2:
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: LAER
Other Applicable Requirements:
Control Method: (A) CATALYTIC OXIDIZER
Est. % Efficiency:
Compliance Verified: Yes
Pollutant/Compliance Notes:

POLLUTANT NAME: Particulate matter, filterable < 10 µ (FPM10)
CAS Number: PM
Test Method: Unspecified
Pollutant Group(s): (Particulate Matter (PM))
Emission Limit 1: 0.0100 LB/MMBTU 3 h avg
Emission Limit 2:
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: LAER
Other Applicable Requirements:
Control Method: (N)
Est. % Efficiency:
Compliance Verified: Yes
Pollutant/Compliance Notes:

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Facility Information

RBLC ID:	WA-0291 (final)	Date Determination
Corporate/Company Name:	WALLULA GENERATION, LLC	Last Updated: 08/31/2006
Facility Name:	WALLULA POWER PLANT	Permit Number: EFSEC/2001-03
Facility Contact:	SCOTT NOLL SNOLL@NEWPORTGEN.COM	Permit Date: 01/03/2003 (estimated)
Facility Description:	WALLULA GENERATION, LLC, PROPOSES TO CONSTRUCT AND OPERATE A 1,300 MW COMBINED CYCLE ELECTRIC POWER PLANT. THE PROJECT WILL CONSIST OF TWO INDEPENDENT POWER BLOCKS WITH CRITICAL BACK-UP SYSTEMS TO MAINTAIN OVERALL PLANT RELIABILITY AND AVAILABILITY.	FRS Number: 110017418882
		SIC Code: 4911

Permit Type: A: New/Greenfield Facility **NAICS Code:** 221112
Permit URL:
EPA Region: 10 **COUNTRY:** USA
Facility County: WALLA WALLA
Facility State: WA
Facility ZIP Code: 92660
Permit Issued By: WASHINGTON STATE DEPARTMENT OF ECOLOGY (Agency Name)
 MR. BERNARD BRADY(Agency Contact) (360)407-6803 bbra461@ecy.wa.gov
Other Agency Contact Info: BRADY, BERNARD
 P.O. BOX 47600
 OLYMPIA, WA 98504-7600
 (360) 407-6803

Permit Notes: WALLULA GENERATION, LLC, WAS CREATED AS A DELAWARE LIMITED LIABILITY COMPANY FOR THE PURPOSE OF CONSTRUCTING AND OPERATING THE WALLULA POWER PROJECT. THE WALLULA POWER PROJECT IS PROPOSED ON A 175-ACRE SITE IN RURAL WALLA WALLA COUNTY WASHINGTON APPROXIMATELY 8 MILES SOUTH OF THE CITY OF PASCO, 2 MILES NORTH OF THE UNINCORPORATED COMMUNITY OF WALLULA, AND 7 MILES EAST OF THE UNINCORPORATED COMMUNITY OF BURBANK. THE PROPOSED PROJECT SITE IS WITHIN THE SOUTHERN HALF OF SECTION 34, TOWNSHIP 8N, RANGE 31E AND IS BORDERED ON THE WEST SIDE BY US HIGHWAY 12, WITH THE UNION PACIFIC RAILROAD BORDERING IT TO THE EAST. LAKE WALLULA (THE MCNARY POOL REACH OF THE COLUMBIA RIVER) IS LOCATED APPROXIMATELY 800 FEET TO THE WEST. WALLULA GENERATION, LLC, PLANS TO USE APPROXIMATELY 64.2 ACRES OF THE PROJECT SITE FOR POWER PLANT STRUCTURES AND RELATED FACILITIES. THE SITE HAS BEEN DESIGNATED HEAVY INDUSTRIAL IN THE EXISTING LAND USE PLAN FOR WESTERN WALLA WALLA COUNTY. THE PROJECT SITE IS CURRENTLY DEVELOPED FOR IRRIGATED AGRICULTURE AND HAS MOST RECENTLY BEEN USED FOR THE PRODUCTION OF ALFALFA. SURROUNDING LAND USES INCLUDE THE HIGHWAY RIGHT-OF-WAY, THE IOWA BEEF PROCESSORS INCORPORATED SLAUGHTERHOUSE, THE J.R. SIMPLOT COMPANY CATTLE FEEDLOTS, THE PONDEROSA FIBER OF WASHINGTON DE-INKING PLANT, AND THE BOISE CASCADE CORPORATION WALLULA MILL.

Process/Pollutant Information

PROCESS NAME: TURBINE, COMBINED CYCLE, NATURAL GAS (4)
Process Type: 15.210 (Natural Gas (includes propane & liquified petroleum gas))
Primary Fuel: NATURAL GAS
Throughput: 1300.00 MW
Process Notes: Throughput is total for 2 power blocks of 2 turbines each (4 turbines).

POLLUTANT NAME: Ammonia (NH3)
CAS Number: 7664-41-7
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds)
Emission Limit 1: 5.0000 PPM DV @ 15% O2 24 hr ave
Emission Limit 2: 68.5000 LB/H
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: Other Case-by-Case
Other Applicable Requirements:
Control Method: (N)
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Nitrogen Oxides (NOx)
CAS Number: 10102
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))
Emission Limit 1: 2.5000 PPM DV @15%O2 3 HR AVG
Emission Limit 2: 23.3000 LB/H 3 HR AVG
Standard Emission: 2.5000 PPM @ 15% O2

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: Other Case-by-Case

Other Applicable Requirements:

Control Method: (A) SCR

Est. % Efficiency: 90.000

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT NAME: Carbon Monoxide

CAS Number: 630-08-0

Test Method: Unspecified

Pollutant Group(s): (InOrganic Compounds)

Emission Limit 1: 2.0000 PPMDV @ 15% O₂ 3 HR AVG

Emission Limit 2: 11.3000 LB/H 3 HR AVG

Standard Emission: 2.0000 PPM @ 15% O₂

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: Other Case-by-Case

Other Applicable Requirements:

Control Method: (A) OXIDATION CATALYST

Est. % Efficiency: 80.000

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT NAME: Particulate Matter (PM)

CAS Number: PM

Test Method: Unspecified

Pollutant Group(s): (Particulate Matter (PM))

Emission Limit 1: 0.0029 GR/DSCF

Emission Limit 2: 20.8000 LB/H 24 HR AVG

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: Other Case-by-Case

Other Applicable Requirements:

Control Method: (N)

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT NAME: Particulate matter, filterable < 10 μ (FPM10)

CAS Number: PM

Test Method: Unspecified

Pollutant Group(s): (Particulate Matter (PM))

Emission Limit 1: 0.0029 GR/DSCF 1 hr ave

Emission Limit 2: 20.8000 LB/H 24 HR AVG

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: LAER

Other Applicable Requirements:

Control Method: (N) EXCLUSIVE USE OF NATURAL GAS HAS BEEN SELECTED TO BE THE LOWEST AVAILABLE EMISSION RATE (LAER) FOR THE CONTROL OF PM10 EMISSIONS FROM EACH PGU.

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT NAME: Volatile Organic Compounds (VOC)
CAS Number: VOC
Test Method: Unspecified
Pollutant Group(s): (Volatile Organic Compounds (VOC))
Emission Limit 1: 5.0000 PPM DV @ 15% O2 1 hr ave
Emission Limit 2: 16.2000 LB/H 24 HR AVG
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: Other Case-by-Case
Other Applicable Requirements:
Control Method: (P) GOOD COMBUSTION PRACTICES
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Sulfuric Acid (mist, vapors, etc)
CAS Number: 7664-93-9
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Particulate Matter (PM))
Emission Limit 1: 0.0002 GR/DSCF 1 HR AVE
Emission Limit 2: 1.9100 LB/H 24 HR AVG
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: Other Case-by-Case
Other Applicable Requirements:
Control Method: (P) EXCLUSIVE USE OF NATURAL GAS
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: REGULATED POLLUTANT IS SULFURIC ACID MIST.

POLLUTANT NAME: Visible Emissions (VE)
CAS Number: VE
Test Method: Unspecified
Pollutant Group(s):
Emission Limit 1: 5.0000 % OPACITY 6 MIN AVG
Emission Limit 2:
Standard Emission: 5.0000 % OPACITY
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: Other Case-by-Case
Other Applicable Requirements:
Control Method: (N)
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Sulfur Dioxide (SO2)
CAS Number: 7446-09-5
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Sulfur (SOx))
Emission Limit 1: 0.3500 PPM DV @ 15% O2 1 hr ave
Emission Limit 2: 4.5000 LB/H 24 hr ave
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: Other Case-by-Case
Other Applicable Requirements:
Control Method: (P) LOW - SULFUR FUEL: NATURAL GAS
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

Process/Pollutant Information

PROCESS COOLING TOWER

NAME:

Process Type: 99.003 (Comfort Cooling Towers)

Primary Fuel:

Throughput:

Process Notes:

POLLUTANT NAME: Particulate matter, filterable < 10 µ (FPM10)

CAS Number: PM

Test Method: Unspecified

Pollutant Group(s): (Particulate Matter (PM))

Emission Limit 1: 3.7000 LB/H each, 24 hr ave

Emission Limit 2: 13.9000 T/YR avg of two cooling towers

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: LAER

Other Applicable Requirements:

Control Method: (N) WATER TREATMENT PLUS A 0.0005% DRIFT RATE HAS BEEN SELECTED TO BE LAER FOR THE CONTROL OF PM10 EMISSIONS FROM THE COOLING TOWERS.

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT NAME: Particulate Matter (PM)

CAS Number: PM

Test Method: Unspecified

Pollutant Group(s): (Particulate Matter (PM))

Emission Limit 1: 3.7000 LB/H each, 24 hr ave

Emission Limit 2: 14.5000 T/YR combined 2 towers

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: Other Case-by-Case

Other Applicable Requirements:

Control Method: (N) WATER PRETREATMENT PLUS A 0.0005% DRIFT RATE

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

Process/Pollutant Information

PROCESS BOILER, AUXILIARY

NAME:

Process Type: 13.310 (Natural Gas (includes propane and liquefied petroleum gas))

Primary Fuel: NATURAL GAS

Throughput: 55.30 MMBTU/H

Process Notes: Operational limit of 4,000 hr per year

POLLUTANT NAME: Nitrogen Oxides (NOx)
CAS Number: 10102
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))
Emission Limit 1: 30.0000 PPMDV @ 3% O2 3 hr ave
Emission Limit 2: 12.7000 LB/H 3 hr ave
Standard Emission: 0.2300 LB/MMBTU
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: Other Case-by-Case
Other Applicable Requirements:
Control Method: (N) LNB PLUS FGR
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Carbon Monoxide
CAS Number: 630-08-0
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds)
Emission Limit 1: 111.0000 PPMDV @ 3% O2 3 hr ave
Emission Limit 2: 4.6000 LB/H 3 hr ave
Standard Emission: 0.0830 LB/MMBTU
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: Other Case-by-Case
Other Applicable Requirements:
Control Method: (N)
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Visible Emissions (VE)
CAS Number: VE
Test Method: Unspecified
Pollutant Group(s):
Emission Limit 1: 10.0000 % OPACITY 6 min ave
Emission Limit 2:
Standard Emission: 10.0000 % OPACITY
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: Other Case-by-Case
Other Applicable Requirements:
Control Method: (N)
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

Process/Pollutant Information

PROCESS NAME: IC GENERATOR, EMERGENCY DIESEL
Process Type: 17.210 (Fuel Oil (ASTM # 1,2, includes kerosene, aviation, diesel fuel))
Primary Fuel: DIESEL

Throughput:

Process Notes: The emergency diesel generator shall be limited to 200 hours of operation per calendar year

POLLUTANT NAME: Nitrogen Oxides (NOx)
CAS Number: 10102
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))
Emission Limit 1: 568.0000 PPMDV @ 15% O2 3 hr ave
Emission Limit 2: 31.6000 LB/H 3 hr ave
Standard Emission: see notes
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: Other Case-by-Case
Other Applicable Requirements:
Control Method: (N)
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: No BACT analysis for NOx. Unit operates < 200 h/yr. Permit does not include an emission limit in standardized emission units.

POLLUTANT NAME: Visible Emissions (VE)
CAS Number: VE
Test Method: Unspecified
Pollutant Group(s):
Emission Limit 1: 15.0000 % OPACITY 6 min ave
Emission Limit 2:
Standard Emission: 15.0000 % OPACITY
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: Other Case-by-Case
Other Applicable Requirements:
Control Method: (N)
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

Process/Pollutant Information

PROCESS IC ENGINE, FIRE PUMP, DIESEL

NAME:

Process Type: 17.210 (Fuel Oil (ASTM # 1,2, includes kerosene, aviation, diesel fuel))

Primary Fuel: DIESEL

Throughput:

Process Notes: The diesel fire pump shall be limited to 100 hours of operation per calendar year. EFSEC selected reduced operating hours as BACT for this unit for CO, NOx, and PM10. Bact for SO2 is low sulfur fuel.

POLLUTANT NAME: Sulfur Dioxide (SO2)
CAS Number: 7446-09-5
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Sulfur (SOx))
Emission Limit 1: see Pollutant note
Emission Limit 2:
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: Other Case-by-Case
Other Applicable Requirements:

Control Method: (P) LOW SULFUR FUEL. < 0.05 % BY WT (#2 DIESEL)
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: BACT is low sulfur fuel. Fire pump is limited to no more than 100 hours of operation per year

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Facility Information

RBLC ID:	OH-0248 (final)	Date Determination	
		Last Updated:	05/22/2003
Corporate/Company Name:	CALPINE CORPORATION	Permit Number:	07-00505
Facility Name:	LAWRENCE ENERGY	Permit Date:	09/24/2002 (actual)
Facility Contact:	MARK CHRISOS 617-557-5338	FRS Number:	110013675512
Facility Description:	THREE 180 MW GAS-FIRED COMBUSTION TURBINES, COMBINED CYCLE, WITH DLN, SCR AND OXIDATION CATALYST	SIC Code:	4911
Permit Type:	A: New/Greenfield Facility	NAICS Code:	221112
Permit URL:			
EPA Region:	5	COUNTRY:	USA
Facility County:	LAWRENCE		
Facility State:	OH		
Facility ZIP Code:	02110		
Permit Issued By:	OHIO ENVIRONMENTAL PROTECTION AGENCY (Agency Name) MS. CHERYL SUTTMAN(Agency Contact) (614)644-3617 CHERYL.SUTTMAN@EPA.STATE.OH.US		
Other Agency Contact Info:	CHERYL E. SUTTMAN 122 S. FRONT ST. COLUMBUS, OH 43215 614-644-3617		
Permit Notes:	Combined-cycle electric generating facility, w/ 3 CTGs and 3 HRSGs, and auxiliary steam boiler, all using natural gas. Back-up diesel-fired emergency generator and fire pump. Turbines can run in two modes; 100% with duct burners and 70% without duct burners. There are separate limit for each mode.		

Process/Pollutant Information

PROCESS NAME: TURBINES (3), COMBINED CYCLE, DUCT BURNERS ON
Process Type: 15.210 (Natural Gas (includes propane & liquified petroleum gas))
Primary Fuel: NATURAL GAS
Throughput: 180.00 MW
Process Notes: 3 Turbines 180 MW each, combined cycle w/ DLN and SCR and oxidation catalyst. All pollutant limits are for individual units.

POLLUTANT NAME: Sulfur Oxides (SOx)
CAS Number: 7446
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Sulfur (SOx))
Emission Limit 1: 16.1000 LB/H with duct burner
Emission Limit 2: 0.0057 LB/MMBTU with or without duct burners
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (N) BURNING NATURAL GAS
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: Limits are for one turbine. Additional limit: 11.9 lbs/hr without duct burner

POLLUTANT NAME: Particulate matter, filterable < 10 µ (FPM10)
CAS Number: PM
Test Method: Unspecified
Pollutant Group(s): (Particulate Matter (PM))
Emission Limit 1: 0.0101 LB/MMBTU
Emission Limit 2: 25.3000 LB/H
Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (N) BURNING NATURAL GAS
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: Limits are for one turbine. Other limits: 10 % Opacity as a 6 minute average.

POLLUTANT NAME: Volatile Organic Compounds (VOC)
CAS Number: VOC
Test Method: Unspecified
Pollutant Group(s): (Volatile Organic Compounds (VOC))
Emission Limit 1: 30.7000 LB/H
Emission Limit 2: 0.0120 LB/MMBTU
Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (B) COMBUSTION CONTROLS AND OXIDATION CATALYST
Est. % Efficiency: 25.000
Compliance Verified: Unknown
Pollutant/Compliance Notes: Limits are for one turbine. The oxidation catalyst control was installed for control of CO, but it also controls ~25% of the VOC. Cost analysis is considered in CO control.

POLLUTANT NAME: Sulfuric Acid (mist, vapors, etc)
CAS Number: 7664-93-9
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Particulate Matter (PM))
Emission Limit 1: 3.7100 LB/H with duct burners
Emission Limit 2: 0.0013 LB/MMBTU with and w/o duct burner
Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (N)
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: Limits are for one turbine.

POLLUTANT NAME: Formaldehyde
CAS Number: 50-00-0
Test Method: Unspecified
Pollutant Group(s): (Hazardous Air Pollutants (HAP) , Organic Compounds (all) , Volatile Organic Compounds (VOC))
Emission Limit 1: 1.0200 LB/H
Emission Limit 2:
Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: N/A
Other Applicable Requirements: SIP
Control Method: (N)
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: Limits are for each turbine.

POLLUTANT NAME: Nitrogen Oxides (NOx)
CAS Number: 10102
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))
Emission Limit 1: 30.5000 LB/H
Emission Limit 2:
Standard Emission: 3.0000 PPM @ 15% O2

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (B) DRY LOW NOX BURNERS (DLN)& LOW NOX BURNERS(LNB)& SELECTIVE CATALYTIC REDUCTION (SCR)
Est. % Efficiency: 85.000
Compliance Verified: Unknown
Pollutant/Compliance Notes: Limits are for one turbine. Cost analysis is for 3 systems.

POLLUTANT NAME: Carbon Monoxide
CAS Number: 630-08-0
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds)
Emission Limit 1: 61.9000 LB/H w/ duct burner and/or power augmentation
Emission Limit 2:
Standard Emission: 10.0000 PPM @ 15% O2

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (B) GOOD COMBUSTION PRACTICES (GCP) AND OXIDATION CATALYST
Est. % Efficiency: 65.000
Compliance Verified: Unknown
Pollutant/Compliance Notes: Limits are for one turbine. Additional limits: below 75% power 32.4lbs/hr. Cost analysis is for 3 systems.

Process/Pollutant Information

PROCESS BOILER

NAME:

Process Type: 13.310 (Natural Gas (includes propane and liquefied petroleum gas))

Primary Fuel: NATURAL GAS

Throughput: 99.00 MMBTU/H

Process Notes:

POLLUTANT NAME: Sulfur Dioxide (SO2)
CAS Number: 7446-09-5
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Sulfur (SOx))
Emission Limit 1: 0.5600 LB/H
Emission Limit 2: 0.0057 LB/MMBTU

Standard Emission: 0.0057 LB/MMBTU
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (N)
Est. % Efficiency:
Compliance Verified: Yes
Pollutant/Compliance Notes: Limits are for each boiler.

POLLUTANT NAME: Particulate matter, filterable < 10 µ (FPM10)
CAS Number: PM
Test Method: Unspecified
Pollutant Group(s): (Particulate Matter (PM))
Emission Limit 1: 0.7600 LB/H
Emission Limit 2: 0.0076 LB/MMBTU
Standard Emission: 0.0076 LB/MMBTU
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (N)
Est. % Efficiency:
Compliance Verified: Yes
Pollutant/Compliance Notes: Limits are for each boiler. Additional limit: 10% Opacity as a 6 minute average.

POLLUTANT NAME: Carbon Monoxide
CAS Number: 630-08-0
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds)
Emission Limit 1: 8.3200 LB/H
Emission Limit 2: 0.0840 LB/MMBTU
Standard Emission: 0.0840 LB/MMBTU
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (N)
Est. % Efficiency:
Compliance Verified: Yes
Pollutant/Compliance Notes: Limits are for each boiler.

POLLUTANT NAME: Volatile Organic Compounds (VOC)
CAS Number: VOC
Test Method: Unspecified
Pollutant Group(s): (Volatile Organic Compounds (VOC))
Emission Limit 1: 0.5450 LB/H
Emission Limit 2: 0.0055 LB/MMBTU
Standard Emission: 0.0055 LB/MMBTU
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (N)
Est. % Efficiency:
Compliance Verified: Yes
Pollutant/Compliance Notes: Limits are for each boiler.

POLLUTANT NAME: Nitrogen Oxides (NOx)
CAS Number: 10102
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))
Emission Limit 1: 4.9500 LB/H
Emission Limit 2: 0.0500 LB/MMBTU
Standard Emission: 0.0500 LB/MMBTU
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (P) LOW NOX BURNERS
Est. % Efficiency:
Compliance Verified: Yes
Pollutant/Compliance Notes: Limits are for each boiler.

Process/Pollutant Information

PROCESS 22 CELL MECHANICAL DRAFT COOLING TOWER

NAME:

Process Type: 99.009 (Industrial Process Cooling Towers)

Primary Fuel:

Throughput:

Process Notes:

POLLUTANT NAME: Visible Emissions (VE)
CAS Number: VE
Test Method: Unspecified
Pollutant Group(s):
Emission Limit 1: 20.0000 % OPACITY as a 6 minute average
Emission Limit 2:
Standard Emission: 20.0000 % OPACITY
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: N/A
Other Applicable Requirements: SIP
Control Method: (A) HIGH EFFICIENCY DRIFT ELIMINATORS
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Particulate matter, filterable < 10 μ (FPM10)
CAS Number: PM
Test Method: Unspecified
Pollutant Group(s): (Particulate Matter (PM))
Emission Limit 1: 1.6900 LB/H
Emission Limit 2:
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: N/A
Other Applicable Requirements: SIP
Control Method: (A) HIGH EFFICIENCY DRIFT ELIMINATORS
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

Process/Pollutant Information

PROCESS TURBINES (3), COMBINED CYCLE, DUCT BURNERS OFF

NAME:

Process Type: 15.210 (Natural Gas (includes propane & liquified petroleum gas))

Primary Fuel: NATURAL GAS

Throughput: 180.00 MW

Process Notes: 3 Turbines at 180 MW each, combined cycle w/DLN, SCR, and oxidation catalyst. All pollutant limits are for individual turbine units.

POLLUTANT NAME: Sulfuric Acid (mist, vapors, etc)

CAS Number: 7664-93-9

Test Method: Unspecified

Pollutant Group(s): (InOrganic Compounds , Particulate Matter (PM))

Emission Limit 1: 1.8200 LB/H

Emission Limit 2: 0.0013 LB/MMBTU

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements:

Control Method: (N)

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes: Limits for each turbine.

POLLUTANT NAME: Nitrogen Oxides (NOx)

CAS Number: 10102

Test Method: Unspecified

Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))

Emission Limit 1: 24.1000 LB/H

Emission Limit 2:

Standard Emission: 3.0000 PPM @ 15% O2

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements:

Control Method: (B) DRY LOW NOX BURNERS (DLN) & LOW NOX BURNERS (LNB) & SELECTIVE CATALYTIC REDUCTION (SCR).

Est. % Efficiency: 85.000

Compliance Verified: Unknown

Pollutant/Compliance Notes: Limits are for each turbine. Cost analysis is for 3 systems.

POLLUTANT NAME: Carbon Monoxide

CAS Number: 630-08-0

Test Method: Unspecified

Pollutant Group(s): (InOrganic Compounds)

Emission Limit 1: 9.8000 LB/H

Emission Limit 2:

Standard Emission: 2.0000 PPM @ 15% O2

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements:

Control Method: (B) GOOD COMBUSTION PRACTICES (GCP) AND OXIDATION CATALYST

Est. % Efficiency: 65.000

Compliance Verified: Unknown

Pollutant/Compliance Notes: Limits are for each turbine. Cost analysis for 3 systems.

POLLUTANT NAME: Sulfur Oxides (SOx)
CAS Number: 7446
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Sulfur (SOx))
Emission Limit 1: 11.9000 LB/H
Emission Limit 2: 0.0057 LB/MMBTU
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (P) BURNING NATURAL GAS
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: Limits for each turbine.

POLLUTANT NAME: Particulate matter, filterable < 10 µ (FPM10)
CAS Number: PM
Test Method: Unspecified
Pollutant Group(s): (Particulate Matter (PM))
Emission Limit 1: 12.7000 LB/H
Emission Limit 2: 0.0096 LB/MMBTU
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (P) BURNING NATURAL GAS
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: Limits for each turbine. Other limit: 10% Opacity as a 6 minute average.

POLLUTANT NAME: Volatile Organic Compounds (VOC)
CAS Number: VOC
Test Method: Unspecified
Pollutant Group(s): (Volatile Organic Compounds (VOC))
Emission Limit 1: 4.2000 LB/H
Emission Limit 2: 0.0030 LB/MMBTU
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (B) COMBUSTION CONTROL AND OXIDATION CATALYST
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: Limits for each turbine. The oxidation catalyst control was installed for control of CO, but it also controls ~25% of VOC. Cost analysis is considered in CO control.

POLLUTANT NAME: Formaldehyde
CAS Number: 50-00-0
Test Method: Unspecified
Pollutant Group(s): (Hazardous Air Pollutants (HAP) , Organic Compounds (all) , Volatile Organic Compounds (VOC))
Emission Limit 1: 0.7500 LB/H
Emission Limit 2:

Standard Emission:**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown**Case-by-Case Basis:** N/A**Other Applicable Requirements:** SIP**Control Method:** (N)**Est. % Efficiency:****Compliance Verified:** Unknown**Pollutant/Compliance Notes:** Limits for each turbine[Previous Page](#)**Facility Information**

RBLC ID:	WA-0299 (final)	Date Determination	
		Last Updated:	11/26/2003
Corporate/Company Name:	SUMAS ENERGY 2, INC.	Permit Number:	EFSEC/2001-02
Facility Name:	SUMAS ENERGY 2 GENERATION FACILITY	Permit Date:	09/06/2002 (actual)
Facility Contact:	CHUCK MARTIN 425 889 1000	FRS Number:	110017418454
Facility Description:	POWER PLANT	SIC Code:	4911
Permit Type:	A: New/Greenfield Facility	NAICS Code:	221112
Permit URL:			
EPA Region:	10	COUNTRY:	USA
Facility County:	WHATCOM		
Facility State:	WA		
Facility ZIP Code:			
Permit Issued By:	WASHINGTON, OTHER (Agency Name)		
Other Agency Contact Info:	BRADY, BERNARD P.O. BOX 47600 OLYMPIA, WA 98504-7600 (360) 407-6803		
Permit Notes:	660 MW COGEN.		

Process/Pollutant Information

PROCESS NAME: TURBINES, COMBINED CYCLE, (2)

Process Type: 15.210 (Natural Gas (includes propane & liquified petroleum gas))

Primary Fuel: NATURAL GAS

Throughput: 334.50 MW

Process Notes: Throughput for each combustion turbine and steam turbine set. Additional throughput: 4150 mmBtu/h total both combustion and steam turbine sets. Natural gas fuel with 2 gr/100 CF max s content.

POLLUTANT NAME: Particulate matter, filterable (FPM)**CAS Number:** PM**Test Method:** Unspecified**Pollutant Group(s):** (Particulate Matter (PM))**Emission Limit 1:** 0.0039 LB/MMBTU 24 h avg**Emission Limit 2:****Standard Emission:****Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown**Case-by-Case Basis:** BACT-PSD**Other Applicable Requirements:****Control Method:** (P) CLEAN FUEL -- NATURAL GAS ONLY

Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: pollutant is filterable PM/PM10. Limit relieved during startup and shutdown.

POLLUTANT NAME: Particulate matter, filterable < 10 µ (FPM10)
CAS Number: PM
Test Method: Unspecified
Pollutant Group(s): (Particulate Matter (PM))
Emission Limit 1: 0.0115 LB/MMBTU 24 h avg
Emission Limit 2:
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (P) CLEAN FUEL -- NATURAL GAS ONLY
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: Pollutant is total PM/PM10.

POLLUTANT NAME: Sulfuric Acid (mist, vapors, etc)
CAS Number: 7664-93-9
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Particulate Matter (PM))
Emission Limit 1: 0.0008 LB/MMBTU 24 h avg
Emission Limit 2:
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (P) LOW SULFUR FUEL -- NATURAL GAS ONLY
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Carbon Monoxide
CAS Number: 630-08-0
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds)
Emission Limit 1: 0.0110 LB/MMBTU
Emission Limit 2: 98.8000 T/YR
Standard Emission: 2.0000 PPM @ 15% O2
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (A) COMBUSTION CATALYSIS
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: at startup and shutdown, 2000 lb/h limit

POLLUTANT NAME: Ammonia (NH3)
CAS Number: 7664-41-7
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds)
Emission Limit 1: 0.0077 LB/MMBTU

Emission Limit 2: 5.0000 PPM @ 15% O2 1 h avg
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (A) SCR, SLIP CONTROL
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Nitrogen Oxides (NOx)
CAS Number: 10102
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))
Emission Limit 1: 0.0080 LB/MMBTU 24 h avg
Emission Limit 2: 144.0000 T/YR
Standard Emission: 27.0000 PPM @ 15% O2 3 h avg
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (A) SCR
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: concentration limit relieved during startup and shutdown

POLLUTANT NAME: Sulfur Dioxide (SO2)
CAS Number: 7446-09-5
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Sulfur (SOx))
Emission Limit 1: 1.0000 PPM @ 15% O2 1 h avg
Emission Limit 2: 0.0038 LB/MMBTU 24 h avg
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (P) FUEL SULFUR CONTENT
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: concentration limit relieved during startup and shutdown

POLLUTANT NAME: Volatile Organic Compounds (VOC)
CAS Number: VOC
Test Method: Unspecified
Pollutant Group(s): (Volatile Organic Compounds (VOC))
Emission Limit 1: 0.0085 LB/MMBTU 24 h avg
Emission Limit 2:
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (P) CLEAN FUEL -- NATURAL GAS ONLY
Est. % Efficiency:
Compliance Verified: Unknown

Pollutant/Compliance Notes:

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Facility Information

RBLC ID:	AZ-0038 (final)	Date Determination	
Corporate/Company Name:	GILA BEND POWER GENERATING STATION	Last Updated:	12/06/2004
Facility Name:	GILA BEND POWER GENERATING STATION	Permit Number:	V00-001
Facility Contact:	JOHN WASHBURN 2142105000	Permit Date:	05/15/2002 (actual)
Facility Description:	POWER PLANT	FRS Number:	110017420986
Permit Type:	A: New/Greenfield Facility	SIC Code:	4911
Permit URL:		NAICS Code:	221112
EPA Region:	9	COUNTRY:	USA
Facility County:	MARICOPA		
Facility State:	AZ		
Facility ZIP Code:	75225		
Permit Issued By:	ARIZONA DEPT OF ENV QUAL, OFC OF AIR QUA (Agency Name) TREVOR BAGGIORE(Agency Contact) (602) 771-2321 TB4@AZDEQ.GOV		
Other Agency Contact Info:	DALE A. LIEB AZ (602) 506-6738		
Permit Notes:			

Process/Pollutant Information

PROCESS TURBINE, COMBINED CYCLE, DUCT BURNER, NATURAL GAS
NAME:
Process Type: 15.210 (Natural Gas (includes propane & liquified petroleum gas))
Primary Fuel: NATURAL GAS
Throughput: 170.00 MW
Process Notes:

POLLUTANT NAME: Nitrogen Oxides (NOx)
CAS Number: 10102
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))
Emission Limit 1: 2.0000 PPM @ 15% O2 1-hr avg
Emission Limit 2:
Standard Emission: 2.0000 PPM @ 15% O2
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (B) SCR AND LOW NOX COMBUSTORS
Est. % Efficiency: 78.000
Compliance Verified: Yes
Pollutant/Compliance Notes:

POLLUTANT NAME: Volatile Organic Compounds (VOC)
CAS Number: VOC
Test Method: Unspecified
Pollutant Group(s): (Volatile Organic Compounds (VOC))

Emission Limit 1: 1.4000 PPM @ 15% O2
Emission Limit 2:
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (B) OXIDATION CATALYST AND GOOD COMBUSTION PRACTICE
Est. % Efficiency: 50.000
Compliance Verified: Yes
Pollutant/Compliance Notes:

POLLUTANT NAME: Carbon Monoxide
CAS Number: 630-08-0
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds)
Emission Limit 1: 4.0000 PPM @ 15% O2 3 h avg
Emission Limit 2:
Standard Emission: 4.0000 PPM @ 15% O2
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (A) OXIDATION CATALYST
Est. % Efficiency: 67.000
Compliance Verified: Yes
Pollutant/Compliance Notes:

POLLUTANT NAME: Particulate matter, filterable < 10 µ (FPM10)
CAS Number: PM
Test Method: Unspecified
Pollutant Group(s): (Particulate Matter (PM))
Emission Limit 1: 0.0140 LB/MMBTU 3 h avg
Emission Limit 2: 26.0200 LB/H 3 h avg
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (N)
Est. % Efficiency:
Compliance Verified: Yes
Pollutant/Compliance Notes:

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Facility Information

RBLC ID:	PA-0226 (final)	Date Determination	
		Last Updated:	05/05/2008
Corporate/Company Name:	LIMERICK PARTNERS, LLC	Permit Number:	PA-46-0203
Facility Name:	LIMERICK POWER STATION	Permit Date:	04/09/2002 (actual)
Facility Contact:	TIM BAUER	FRS Number:	110012511843
Facility Description:	FACILITY WOULD HAVE BEEN LAER FOR VOC AND NOX AND PSD FOR CO AND PM-10. - THIS PLAN APPROVAL WAS REVOKED -	SIC Code:	4911

Permit Type: A: New/Greenfield Facility **NAICS Code:** 221112
Permit URL:
EPA Region: 3 **COUNTRY:** USA
Facility County: MONTGOMERY
Facility State: PA
Facility ZIP Code: 33498
Permit Issued By: PENNSYLVANIA DEP, BUR OF AIR QUAL CTRL (Agency Name)
 MR. DAVID WEYANDT(Agency Contact) (717)772-3375 DAWAYARDT@STATE.PA.US
Other Agency Contact Info: THOMAS MCGINLEY
 PA
 (484)250-5920
Permit Notes: PA IS FOR CONSTRUCTION OF 550 MW COMBINED CYCLE POWER PLANT. THE APPLICATION WAS LATER REVOKED.

Process/Pollutant Information

PROCESS TURBINE, COMBINED CYCLE

NAME:

Process Type: 15.210 (Natural Gas (includes propane & liquified petroleum gas))

Primary Fuel: NATURAL GAS

Throughput: 550.00 MW

Process Notes: THROUGHPUT IS TOTAL POWER PRODUCED FROM TURBINES, HRSG, AND STEAM GENERATOR.

POLLUTANT NAME: Carbon Monoxide

CAS Number: 630-08-0

Test Method: Unspecified

Pollutant Group(s): (InOrganic Compounds)

Emission Limit 1: 10.0000 PPM @ 15% O2

Emission Limit 2:

Standard Emission: 10.0000 PPM @ 15% O2

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements:

Control Method: (N)

Est. % Efficiency:

Compliance Verified: Yes

Pollutant/Compliance Notes:

POLLUTANT NAME: Particulate matter, filterable < 10 μ (FPM10)

CAS Number: PM

Test Method: Unspecified

Pollutant Group(s): (Particulate Matter (PM))

Emission Limit 1: 0.0140 LB/MMBTU

Emission Limit 2:

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: Other Case-by-Case

Other Applicable Requirements:

Control Method: (N)

Est. % Efficiency:

Compliance Verified: Yes

Pollutant/Compliance Notes:

POLLUTANT NAME: Nitrogen Oxides (NOx)

CAS Number: 10102

Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))
Emission Limit 1: 2.0000 PPM @15% O2
Emission Limit 2:
Standard Emission: 2.0000 PPM @ 15% O2
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: LAER
Other Applicable Requirements:
Control Method: (P) LOW NOX BURNERS
Est. % Efficiency:
Compliance Verified: Yes
Pollutant/Compliance Notes:

POLLUTANT NAME: Volatile Organic Compounds (VOC)
CAS Number: VOC
Test Method: Unspecified
Pollutant Group(s): (Volatile Organic Compounds (VOC))
Emission Limit 1: 2.4000 PPM @ 15% O2
Emission Limit 2:
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: LAER
Other Applicable Requirements:
Control Method: (N)
Est. % Efficiency:
Compliance Verified: Yes
Pollutant/Compliance Notes:

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Facility Information

RBLC ID:	NJ-0043 (final)	Date Determination
		Last Updated: 08/31/2006
Corporate/Company Name:	LIBERTY GENERATING STATION	Permit Number: BOP990001
Facility Name:	LIBERTY GENERATING STATION	Permit Date: 03/28/2002 (actual)
Facility Contact:	STEPHEN LEMONT	FRS Number: 110015134861
Facility Description:	ELECTRICITY GENERATION	SIC Code: 4911
Permit Type:	A: New/Greenfield Facility	NAICS Code: 221111
Permit URL:		
EPA Region:	2	COUNTRY: USA
Facility County:	UNION	
Facility State:	NJ	
Facility ZIP Code:	07036	
Permit Issued By:	NEW JERSEY DEPT OF ENV PROTECTION (Agency Name) ALIYA KHAN(Agency Contact) (609) 292-2169 ALIYA.KHAN@DEP.STATE.NJ.US	
Other Agency Contact Info:	DR I. ATAY NJ (609) 984-0491	
Permit Notes:	ADDITIONAL AGENCY CONTACT: ALIYA M. KHAN, PH: 609-292-2169, FX: 609-984-6369, E-MAIL: AKHAN@DEP.STATE.NJ.US, AD: AIR QUALITY ENGINEERING, PO BOX 027, 401 E. STATE STREET, SECOND FLOOR, TRENTON, NJ 08625 1- FACILITY MUT OFFSET 464 TONS NOX AND 142 TONS VOC THAT MEET CRITERIA ESTABLISHED IN NJAC 7:27- 18.12- FACILITY MUST OFFSET AT LEAST 400 TONS CO PER YEAR ACCORDING TO NJAC 7:27-18.3(C)1. ADDITIONAL PLANTWIDE EMISSION LIMITS (T/YR): NH3, 505.8; TSP, 162.7; PM10, 446.6; SO2, 139; H2SO4 MIST, 84.6; FORMALDEHYDE, 65.6.	

Process/Pollutant Information

PROCESS COMBINED CYCLE TURBINE (3)

NAME:

Process Type: 15.210 (Natural Gas (includes propane & liquified petroleum gas))

Primary Fuel: NATURAL GAS

Throughput: 2964.00 MMBTU/H

Process Notes: ONLY USE NATURAL GAS WITH SULFUR CONTENT 0.8%. THROUGHPUT IS FOR EACH TURBINE, WITHOUT DUCT BURNER.

POLLUTANT NAME: Sulfur Dioxide (SO₂)

CAS Number: 7446-09-5

Test Method: Unspecified

Pollutant Group(s): (InOrganic Compounds , Oxides of Sulfur (SO_x))

Emission Limit 1: 0.0040 LB/MMBTU

Emission Limit 2: 11.7000 LB/H

Standard Emission: 0.8000 PPM @ 15% O₂

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: Other Case-by-Case

Other Applicable Requirements:

Control Method: (P) ONLY USE NATURAL GAS WITH SULFUR CONTENT 0.8%

Est. % Efficiency:

Compliance Verified: Yes

Pollutant/Compliance Notes: BASIS OF LIMIT IS STATE

POLLUTANT NAME: Carbon Monoxide

CAS Number: 630-08-0

Test Method: Unspecified

Pollutant Group(s): (InOrganic Compounds)

Emission Limit 1: 2.0000 PPMVD @ 15% O₂

Emission Limit 2: 14.2000 LB/H

Standard Emission: 2.0000 PPMVD @ 15% O₂

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: Other Case-by-Case

Other Applicable Requirements:

Control Method: (A) CO CATALYST

Est. % Efficiency: 80.000

Compliance Verified: Yes

Pollutant/Compliance Notes: BASIS OF LIMIT IS STATE

POLLUTANT NAME: Nitrogen Oxides (NO_x)

CAS Number: 10102

Test Method: Unspecified

Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NO_x) , Particulate Matter (PM))

Emission Limit 1: 2.5000 PPMVD @ 15 % O₂

Emission Limit 2: 0.0110 LB/MMBTU

Standard Emission: 2.5000 PPMVD @ 15% O₂

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: Other Case-by-Case

Other Applicable Requirements:

Control Method: (A) SCR- AMMONIA FLOW RTE AT 11.46 GAL/H

Est. % Efficiency:

Compliance Verified: Yes

Pollutant/Compliance Notes: BASIS OF LIMIT IS STATE. ADDITIONAL EMISSION LIMIT IS 29.2 LB/H.

POLLUTANT NAME: Particulate matter, filterable < 10 µ (FPM10)

CAS Number: PM

Test Method: Unspecified

Pollutant Group(s): (Particulate Matter (PM))

Emission Limit 1: 35.8000 LB/H

Emission Limit 2: 0.0150 LB/MMBTU

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements:

Control Method: (A) NONE LISTED

Est. % Efficiency:

Compliance Verified: Yes

Pollutant/Compliance Notes:

POLLUTANT NAME: Total Suspended Particulates

CAS Number: PM

Test Method: Unspecified

Pollutant Group(s): (Particulate Matter (PM))

Emission Limit 1: 8.6000 LB/H

Emission Limit 2: 0.0030 LB/MMBTU

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements:

Control Method: (N) NONE LISTED

Est. % Efficiency:

Compliance Verified: Yes

Pollutant/Compliance Notes:

POLLUTANT NAME: Ammonia (NH3)

CAS Number: 7664-41-7

Test Method: Unspecified

Pollutant Group(s): (InOrganic Compounds)

Emission Limit 1: 10.0000 PPMVD @ 15% O2

Emission Limit 2: 43.0000 LB/H

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: Other Case-by-Case

Other Applicable Requirements:

Control Method: (N) NONE LISTED- SCR CONJUNCTION

Est. % Efficiency:

Compliance Verified: Yes

Pollutant/Compliance Notes:

POLLUTANT NAME: Volatile Organic Compounds (VOC)

CAS Number: VOC

Test Method: Unspecified

Pollutant Group(s): (Volatile Organic Compounds (VOC))

Emission Limit 1: 1.0000 PPMVD @ 15% O2

Emission Limit 2: 4.1000 LB/H

Standard Emission: 1.0000 PPMVD @ 15% O2

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: Other Case-by-Case
Other Applicable Requirements:
Control Method: (A) CO CATALYST
Est. % Efficiency: 80.000
Compliance Verified: Yes
Pollutant/Compliance Notes: BASIS OF LIMIT IS STATE

POLLUTANT NAME: Sulfuric Acid (mist, vapors, etc)
CAS Number: 7664-93-9
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Particulate Matter (PM))
Emission Limit 1: 7.2000 LB/H SULFURIC ACID MIST
Emission Limit 2:
Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: U

Case-by-Case Basis: Other Case-by-Case
Other Applicable Requirements:
Control Method: (N) NONE LISTED
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Formaldehyde
CAS Number: 50-00-0
Test Method: Unspecified
Pollutant Group(s): (Hazardous Air Pollutants (HAP) , Organic Compounds (all) , Volatile Organic Compounds (VOC))
Emission Limit 1: 4.1000 LB/H
Emission Limit 2:
Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: Other Case-by-Case
Other Applicable Requirements:
Control Method: (N) NONE LISTED
Est. % Efficiency:
Compliance Verified: Yes
Pollutant/Compliance Notes:

Process/Pollutant Information

PROCESS COMBINED CYCLE TURBINE WITH DUCT BURNER

NAME:

Process Type: 15.210 (Natural Gas (includes propane & liquified petroleum gas))

Primary Fuel: NATURAL GAS

Throughput: 3202.00 MMBTU/H

Process Notes:

POLLUTANT NAME: Particulate matter, filterable < 10 µ (FPM10)
CAS Number: PM
Test Method: Unspecified
Pollutant Group(s): (Particulate Matter (PM))
Emission Limit 1: 38.8000 LB/H
Emission Limit 2: 0.0170 LB/MMBTU
Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: Other Case-by-Case
Other Applicable Requirements:
Control Method: (N) NONE LISTED
Est. % Efficiency:
Compliance Verified: Yes
Pollutant/Compliance Notes: BASIS OF LIMIT IS STATE.

POLLUTANT NAME: Sulfur Dioxide (SO₂)
CAS Number: 7446-09-5
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Sulfur (SO_x))
Emission Limit 1: 0.0040 LB/MMBTU
Emission Limit 2: 12.7000 LB/H
Standard Emission: 0.8000 PPM @ 15% O₂
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: Other Case-by-Case
Other Applicable Requirements:
Control Method: (N) NONE LISTED
Est. % Efficiency:
Compliance Verified: Yes
Pollutant/Compliance Notes:

POLLUTANT NAME: Total Suspended Particulates
CAS Number: PM
Test Method: Unspecified
Pollutant Group(s): (Particulate Matter (PM))
Emission Limit 1: 14.6000 LB/H
Emission Limit 2: 0.0050 LB/MMBTU
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: Other Case-by-Case
Other Applicable Requirements:
Control Method: (N) NONE LISTED
Est. % Efficiency:
Compliance Verified: Yes
Pollutant/Compliance Notes: BASIS OF LIMIT IS STATE.

POLLUTANT NAME: Carbon Monoxide
CAS Number: 630-08-0
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds)
Emission Limit 1: 15.4000 LB/H
Emission Limit 2: 2.0000 PPMVD @ 15% O₂
Standard Emission: 2.0000 PPMVD @ 15% O₂
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: Other Case-by-Case
Other Applicable Requirements:
Control Method: (A) CO CATALYST
Est. % Efficiency: 80.000
Compliance Verified: Yes
Pollutant/Compliance Notes: BASIS OF LIMIT IS STATE. ADDITIONAL EMISSION LIMIT IS 0.0053 LB/MMBTU.

POLLUTANT NAME: Formaldehyde
CAS Number: 50-00-0
Test Method: Unspecified
Pollutant Group(s): (Hazardous Air Pollutants (HAP) , Organic Compounds (all) , Volatile Organic Compounds (VOC))
Emission Limit 1: 7.5000 LB/H
Emission Limit 2:
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: Other Case-by-Case
Other Applicable Requirements:
Control Method: (N) NONE
Est. % Efficiency:
Compliance Verified: Yes
Pollutant/Compliance Notes:

POLLUTANT NAME: Sulfuric Acid (mist, vapors, etc)
CAS Number: 7664-93-9
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Particulate Matter (PM))
Emission Limit 1: 7.8000 LB/H SULFURIC ACID MIST
Emission Limit 2:
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: Other Case-by-Case
Other Applicable Requirements:
Control Method: (N) NONE
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: BASIS OF LIMIT IS STATE.

POLLUTANT NAME: Ammonia (NH3)
CAS Number: 7664-41-7
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds)
Emission Limit 1: 10.0000 PPMVD @ 15% O2
Emission Limit 2: 46.8000 LB/H
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: Other Case-by-Case
Other Applicable Requirements:
Control Method: (N) NONE- SCR RELATED
Est. % Efficiency:
Compliance Verified: Yes
Pollutant/Compliance Notes: BASIS OF LIMIT IS STATE.

POLLUTANT NAME: Nitrogen Oxides (NOx)
CAS Number: 10102
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))
Emission Limit 1: 0.0110 LB/MMBTU
Emission Limit 2: 2.5000 PPMVD @ 15% O2
Standard Emission: 2.5000 PPMVD @ 15% O2
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: Other Case-by-Case

Other Applicable Requirements:

Control Method: (A) SCR
Est. % Efficiency:
Compliance Verified: Yes
Pollutant/Compliance Notes: BASIS OF LIMIT IS STATE. ADDITIONAL EMISSION LIMIT IS 31.7 LB/H.

POLLUTANT NAME: Volatile Organic Compounds (VOC)
CAS Number: VOC
Test Method: Unspecified
Pollutant Group(s): (Volatile Organic Compounds (VOC))
Emission Limit 1: 1.7000 PPMVD @ 15% O2
Emission Limit 2: 7.5000 LB/H
Standard Emission: 1.7000 PPMVD @ 15% O2
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: Other Case-by-Case
Other Applicable Requirements:
Control Method: (A) CO CATALYST
Est. % Efficiency: 80.000
Compliance Verified: Yes
Pollutant/Compliance Notes: BASIS OF LIMIT IS STATE.

Process/Pollutant Information

PROCESS EMERGENCY GENERATOR

NAME:

Process Type: 17.210 (Fuel Oil (ASTM # 1,2, includes kerosene, aviation, diesel fuel))
Primary Fuel: DISTILLATE OIL
Throughput: 14.10 MMBTU/H
Process Notes: MAX HOURS OF OPERATION= 55 H/YR, SULFUR IN OIL

POLLUTANT NAME: Volatile Organic Compounds (VOC)
CAS Number: VOC
Test Method: Unspecified
Pollutant Group(s): (Volatile Organic Compounds (VOC))
Emission Limit 1: 1.4000 LB/H
Emission Limit 2:
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: Other Case-by-Case
Other Applicable Requirements:
Control Method: (N) NONE
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Visible Emissions (VE)
CAS Number: VE
Test Method: Unspecified
Pollutant Group(s):
Emission Limit 1: 20.0000 % OPACITY
Emission Limit 2:
Standard Emission: 20.0000 % OPACITY
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: Other Case-by-Case

Other Applicable Requirements:

Control Method: (N)

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT NAME: Particulate matter, filterable < 10 µ (FPM10)

CAS Number: PM

Test Method: Unspecified

Pollutant Group(s): (Particulate Matter (PM))

Emission Limit 1: 1.4000 LB/H

Emission Limit 2:

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: Other Case-by-Case

Other Applicable Requirements:

Control Method: (N) NONE

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT NAME: Sulfur Dioxide (SO2)

CAS Number: 7446-09-5

Test Method: Unspecified

Pollutant Group(s): (InOrganic Compounds , Oxides of Sulfur (SOx))

Emission Limit 1: 0.8000 LB/H

Emission Limit 2:

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: Other Case-by-Case

Other Applicable Requirements:

Control Method: (P) SULFUR IN OIL LIMITED TO 0.05% BY WEIGHT.

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT NAME: Total Suspended Particulates

CAS Number: PM

Test Method: Unspecified

Pollutant Group(s): (Particulate Matter (PM))

Emission Limit 1: 1.4000 LB/H

Emission Limit 2:

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: Other Case-by-Case

Other Applicable Requirements:

Control Method: (N) NONE

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT NAME: Carbon Monoxide

CAS Number: 630-08-0

Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds)
Emission Limit 1: 11.1000 LB/H
Emission Limit 2:
Standard Emission: Not Available
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: Other Case-by-Case
Other Applicable Requirements:
Control Method: (N) NONE
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Nitrogen Oxides (NOx)
CAS Number: 10102
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))
Emission Limit 1: 26.2000 LB/H
Emission Limit 2:
Standard Emission: Not Available
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: Other Case-by-Case
Other Applicable Requirements:
Control Method: (N) NONE
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

Process/Pollutant Information

PROCESS NAME: DIESEL FIRE PUMP
Process Type: 17.210 (Fuel Oil (ASTM # 1,2, includes kerosene, aviation, diesel fuel))
Primary Fuel: DISTILLATE OIL
Throughput: 3.50 MMBTU/H
Process Notes: OIL MUST HAVE

POLLUTANT NAME: Carbon Monoxide
CAS Number: 630-08-0
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds)
Emission Limit 1: 3.3000 LB/H
Emission Limit 2:
Standard Emission: Not Available
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: Other Case-by-Case
Other Applicable Requirements:
Control Method: (N) NONE
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: BASIS OF LIMIT IS STATE.

POLLUTANT NAME: Nitrogen Oxides (NOx)
CAS Number: 10102

Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))
Emission Limit 1: 15.5000 LB/H
Emission Limit 2:
Standard Emission: Not Available
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: Other Case-by-Case
Other Applicable Requirements:
Control Method: (N) NONE
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: BASIS OF LIMIT IS STATE.

POLLUTANT NAME: Particulate matter, filterable < 10 µ (FPM10)
CAS Number: PM
Test Method: Unspecified
Pollutant Group(s): (Particulate Matter (PM))
Emission Limit 1: 1.1000 LB/H
Emission Limit 2:
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: Other Case-by-Case
Other Applicable Requirements:
Control Method: (N) NONE
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: BASIS OF LIMIT IS STATE.

POLLUTANT NAME: Sulfur Dioxide (SO2)
CAS Number: 7446-09-5
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Sulfur (SOx))
Emission Limit 1: 1.0000 LB/H
Emission Limit 2:
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: Other Case-by-Case
Other Applicable Requirements:
Control Method: (N) NONE
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Total Suspended Particulates
CAS Number: PM
Test Method: Unspecified
Pollutant Group(s): (Particulate Matter (PM))
Emission Limit 1: 1.1000 LB/H
Emission Limit 2: 0.3100 LB/MMBTU Calculated
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: Other Case-by-Case
Other Applicable Requirements:

Control Method: (N) NONE
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: BASIS OF LIMIT IS STATE.

POLLUTANT NAME: Volatile Organic Compounds (VOC)
CAS Number: VOC
Test Method: Unspecified
Pollutant Group(s): (Volatile Organic Compounds (VOC))
Emission Limit 1: 1.2000 LB/H
Emission Limit 2:
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: Other Case-by-Case
Other Applicable Requirements:
Control Method: (N) NONE
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: BASIS OF LIMIT IS STATE.

Process/Pollutant Information

PROCESS NAME: AUXILIARY BOILER
Process Type: 12.310 (Natural Gas (includes propane and liquefied petroleum gas))
Primary Fuel: NATURAL GAS
Throughput: 200.00 MMBTU/H
Process Notes: NATURAL GAS USAGE RESTRICTED TO 181.0 MILLION SCF/YR (EQUIVALENT TO A 10% ANNUAL CAPACITY FACTOR)

POLLUTANT NAME: Carbon Monoxide
CAS Number: 630-08-0
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds)
Emission Limit 1: 100.0000 PPMVD @7% O2
Emission Limit 2: 17.4000 LB/H
Standard Emission: 0.0870 LB/MMBTU
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: Other Case-by-Case
Other Applicable Requirements:
Control Method: (A) CO CATALYST
Est. % Efficiency: 80.000
Compliance Verified: Yes
Pollutant/Compliance Notes: BASIS OF LIMIT IS STATE.

POLLUTANT NAME: Nitrogen Oxides (NOx)
CAS Number: 10102
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))
Emission Limit 1: 0.2000 LB/MMBTU
Emission Limit 2: 7.2000 LB/H
Standard Emission: 0.0360 LB/MMBTU
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: Other Case-by-Case
Other Applicable Requirements:

Control Method: (A) SCR
Est. % Efficiency:
Compliance Verified: Yes
Pollutant/Compliance Notes: BASIS OF LIMIT IS STATE.

POLLUTANT NAME: Particulate matter, filterable < 10 µ (FPM10)
CAS Number: PM
Test Method: Unspecified
Pollutant Group(s): (Particulate Matter (PM))
Emission Limit 1: 1.6000 LB/H
Emission Limit 2:
Standard Emission: 0.0080 LB/MMBTU
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: Other Case-by-Case
Other Applicable Requirements:
Control Method: (N)
Est. % Efficiency:
Compliance Verified: Yes
Pollutant/Compliance Notes: BASIS OF LIMIT IS STATE.

POLLUTANT NAME: Total Suspended Particulates
CAS Number: PM
Test Method: Unspecified
Pollutant Group(s): (Particulate Matter (PM))
Emission Limit 1: 1.6000 LB/H
Emission Limit 2:
Standard Emission: 0.0080 LB/MMBTU
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: Other Case-by-Case
Other Applicable Requirements:
Control Method: (N)
Est. % Efficiency:
Compliance Verified: Yes
Pollutant/Compliance Notes: BASIS OF LIMIT IS STATE.

POLLUTANT NAME: Volatile Organic Compounds (VOC)
CAS Number: VOC
Test Method: Unspecified
Pollutant Group(s): (Volatile Organic Compounds (VOC))
Emission Limit 1: 50.0000 PPMVD @ 7% O2
Emission Limit 2: 1.6000 LB/H
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: Other Case-by-Case
Other Applicable Requirements:
Control Method: (A) CO CATALYST
Est. % Efficiency: 80.000
Compliance Verified: Yes
Pollutant/Compliance Notes: BASIS OF LIMIT IS STATE. Calculated emission rate 0.008 LB/MMBTU

POLLUTANT NAME: Sulfur Dioxide (SO2)
CAS Number: 7446-09-5
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Sulfur (SOx))

Emission Limit 1: 0.8000 LB/H
Emission Limit 2:
Standard Emission: 0.0040 LB/MMBTU
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: Other Case-by-Case
Other Applicable Requirements:
Control Method: (N) NONE
Est. % Efficiency:
Compliance Verified: Yes
Pollutant/Compliance Notes: BASIS OF LIMIT IS STATE.

Process/Pollutant Information

PROCESS DUCT BURNER (3)

NAME:

Process Type: 11.310 (Natural Gas (includes propane and liquefied petroleum gas))

Primary Fuel: NATURAL GAS

Throughput: 256.00 MMBTU/H

Process Notes:

POLLUTANT NAME: Carbon Monoxide
CAS Number: 630-08-0
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds)
Emission Limit 1: 100.0000 PPMVD @ 7% O2
Emission Limit 2:
Standard Emission: 0.0956 LB/MMBTU
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: Other Case-by-Case
Other Applicable Requirements:
Control Method: (A) CO CATALYST
Est. % Efficiency: 80.000
Compliance Verified: Yes
Pollutant/Compliance Notes: BASIS OF LIMIT IS STATE.

POLLUTANT NAME: Nitrogen Oxides (NOx)
CAS Number: 10102
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))
Emission Limit 1: 0.2000 LB/MMBTU
Emission Limit 2:
Standard Emission: 0.2000 LB/MMBTU
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: Other Case-by-Case
Other Applicable Requirements:
Control Method: (A) SCR
Est. % Efficiency:
Compliance Verified: Yes
Pollutant/Compliance Notes: BASIS OF LIMIT IS STATE.

POLLUTANT NAME: Sulfur Dioxide (SO2)
CAS Number: 7446-09-5
Test Method: Unspecified

Pollutant Group(s): (InOrganic Compounds , Oxides of Sulfur (SOx))
Emission Limit 1: 0.2000 LB/MMBTU
Emission Limit 2:
Standard Emission: 0.2000 LB/MMBTU
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (N) NONE LISTED
Est. % Efficiency:
Compliance Verified: Yes
Pollutant/Compliance Notes:

POLLUTANT NAME: Volatile Organic Compounds (VOC)
CAS Number: VOC
Test Method: Unspecified
Pollutant Group(s): (Volatile Organic Compounds (VOC))
Emission Limit 1: 50.0000 PPMVD @ 7% O2
Emission Limit 2:
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: Other Case-by-Case
Other Applicable Requirements:
Control Method: (A) CO CATALYST
Est. % Efficiency:
Compliance Verified: Yes
Pollutant/Compliance Notes: BASIS OF LIMIT IS STATE

POLLUTANT NAME: Particulate Matter (PM)
CAS Number: PM
Test Method: Unspecified
Pollutant Group(s): (Particulate Matter (PM))
Emission Limit 1: 0.0300 LB/MMBTU
Emission Limit 2:
Standard Emission: 0.0300 LB/MMBTU
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (N) NONE LISTED
Est. % Efficiency:
Compliance Verified: Yes
Pollutant/Compliance Notes:

Process/Pollutant Information

PROCESS COOLING TOWER (3)- MECHANICAL DRAFT

NAME:

Process Type: 99.009 (Industrial Process Cooling Towers)

Primary Fuel: N/A

Throughput:

Process Notes: 1- TOTAL SOLIDS IN COOLING TOWER

POLLUTANT NAME: Particulate matter, filterable < 10 µ (FPM10)
CAS Number: PM
Test Method: Unspecified

Pollutant Group(s): (Particulate Matter (PM))
Emission Limit 1: 7.9300 T/YR
Emission Limit 2: 1.8100 LB/H
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: Other Case-by-Case
Other Applicable Requirements:
Control Method: (N) NONE
Est. % Efficiency:
Compliance Verified: Yes
Pollutant/Compliance Notes: BASIS OF LIMIT IS STATE.

POLLUTANT NAME: Total Suspended Particulates
CAS Number: PM
Test Method: Unspecified
Pollutant Group(s): (Particulate Matter (PM))
Emission Limit 1: 7.9300 T/YR
Emission Limit 2: 1.8100 LB/H
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: Other Case-by-Case
Other Applicable Requirements:
Control Method: (N) NONE
Est. % Efficiency:
Compliance Verified: Yes
Pollutant/Compliance Notes: BASIS OF LIMIT IS STATE.

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Facility Information

RBLC ID:	GA-0102 (final)	Date Determination	
		Last Updated:	01/21/2005
Corporate/Company Name:	OGLETHORPE POWER CORPORATION	Permit Number:	4911-149-0006-V-01-0
Facility Name:	WANSLEY COMBINED CYCLE ENERGY FACILITY	Permit Date:	01/15/2002 (actual)
Facility Contact:		FRS Number:	110014375345
Facility Description:	ELECTRIC GENERATING FACILITY	SIC Code:	4911
Permit Type:	A: New/Greenfield Facility	NAICS Code:	221112
Permit URL:		COUNTRY:	USA
EPA Region:	4		
Facility County:	HEARD		
Facility State:	GA		
Facility ZIP Code:	30170		
Permit Issued By:	GEORGIA DEPARTMENT OF NATURAL RESOURCES (Agency Name) MR. JOHN YNTEMA(Agency Contact) (404)363-7117 john_yntema@dnr.state.ga.us		
Other Agency Contact Info:	ANNA APONTE 4244 INTERNATIONAL PARKWAY SUITE 120 FULTON, GA 30354 404-362-4841		
Permit Notes:	PERMIT FOR CONSTRUCTION AND OPERATION OF A "2-ON-1" POWER BLOCK. THE BLOCK CONSISTS OF 2 COMBINED CYCLE COMBUSTION TURBINES, EACH WITH DUCT BURNER AND HEAT RECOVERY STEAM GENERATOR AND 1 STEAM TURBINE.		

Process/Pollutant Information

PROCESS TURBINE, COMBINED CYCLE, (2)

NAME:

Process Type: 15.210 (Natural Gas (includes propane & liquified petroleum gas))

Primary Fuel: NATURAL GAS

Throughput: 167.00 MW

Process Notes: TURBINES ARE SIEMENS-WESTINGHOUSE MODEL V84.3A2. EACH TURBINE IS EQUIPPED WITH DUCT BURNER AND HEAT RECOVERY STEAM GENERATOR.

POLLUTANT NAME: Nitrogen Oxides (NOx)

CAS Number: 10102

Test Method: Unspecified

Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))

Emission Limit 1: 3.0000 PPM @ 15% O2

Emission Limit 2:

Standard Emission: 3.0000 PPM @ 15% O2

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements:

Control Method: (B) DRY LOW NOX COMBUSTORS, SELECTIVE CATALYTIC REDUCTION

Est. % Efficiency:

Compliance Verified: Yes

Pollutant/Compliance Notes:

POLLUTANT NAME: Carbon Monoxide

CAS Number: 630-08-0

Test Method: Unspecified

Pollutant Group(s): (InOrganic Compounds)

Emission Limit 1: 2.0000 PPM @ 15% O2

Emission Limit 2:

Standard Emission: 2.0000 PPM @ 15% O2

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements:

Control Method: (P) GOOD COMBUSTION PRACTICE

Est. % Efficiency:

Compliance Verified: Yes

Pollutant/Compliance Notes:

POLLUTANT NAME: Particulate Matter (PM)

CAS Number: PM

Test Method: Unspecified

Pollutant Group(s): (Particulate Matter (PM))

Emission Limit 1: 0.0110 LB/MMBTU LHV BASIS

Emission Limit 2: 18.0000 LB/H FULL LOAD

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements:

Control Method: (P) GOOD COMBUSTION PRACTICE, LOW SULFUR FUEL

Est. % Efficiency:

Compliance Verified: Yes

Pollutant/Compliance Notes:

POLLUTANT NAME: Volatile Organic Compounds (VOC)
CAS Number: VOC
Test Method: Unspecified
Pollutant Group(s): (Volatile Organic Compounds (VOC))
Emission Limit 1: 2.0000 PPM @ 15% O2
Emission Limit 2:
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (P) GOOD COMBUSTION PRACTICE
Est. % Efficiency:
Compliance Verified: Yes
Pollutant/Compliance Notes:

POLLUTANT NAME: Visible Emissions (VE)
CAS Number: VE
Test Method: Unspecified
Pollutant Group(s):
Emission Limit 1: 10.0000 % OPACITY
Emission Limit 2:
Standard Emission: 10.0000 % OPACITY
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (P) GOOD COMBUSTION PRACTICE
Est. % Efficiency:
Compliance Verified: Yes
Pollutant/Compliance Notes:

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Facility Information

RBLC ID:	GA-0093 (final)	Date Determination	
		Last Updated:	09/26/2003
Corporate/Company Name:	AUGUSTA ENERGY CENTER	Permit Number:	4911-245-0168-P-01-0
Facility Name:	AUGUSTA ENERGY CENTER	Permit Date:	10/28/2001 (actual)
Facility Contact:	KENT J. MONTON 847-504-3346	FRS Number:	110017420520
Facility Description:	POWER GENERATOR	SIC Code:	4911
Permit Type:	D: Both B (Add new process to existing facility) & C (Modify process at existing facility)	NAICS Code:	221112
Permit URL:			
EPA Region:	4	COUNTRY:	USA
Facility County:	RICHMOND		
Facility State:	GA		
Facility ZIP Code:	60062		
Permit Issued By:	GEORGIA DEPARTMENT OF NATURAL RESOURCES (Agency Name) MR. JOHN YNTEMA(Agency Contact) (404)363-7117 john_yntema@dnr.state.ga.us		

Other Agency Contact Info: ANNA APONTE
4244 INTERNATIONAL PARKWAY SUITE 120
FULTON, GA 30354
404-362-4841

Permit Notes:

Process/Pollutant Information

PROCESS TURBINE, COMBINED CYCLE, (3)

NAME:

Process Type: 15.210 (Natural Gas (includes propane & liquified petroleum gas))

Primary Fuel: NATURAL GAS

Throughput: 750.00 MW

Process Notes: three turbines, throughput is total

POLLUTANT NAME: Nitrogen Oxides (NOx)

CAS Number: 10102

Test Method: Unspecified

Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))

Emission Limit 1: 3.0000 PPM @ 15% O2

Emission Limit 2:

Standard Emission: 3.0000 PPM @ 15% O2

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements:

Control Method: (A) SCR

Est. % Efficiency: 85.000

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT NAME: Carbon Monoxide

CAS Number: 630-08-0

Test Method: Unspecified

Pollutant Group(s): (InOrganic Compounds)

Emission Limit 1: 2.0000 PPM @ 15% O2

Emission Limit 2:

Standard Emission: 2.0000 PPM @ 15% O2

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements:

Control Method: (A) CATALYTIC OXIDATION

Est. % Efficiency: 87.500

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT NAME: Volatile Organic Compounds (VOC)

CAS Number: VOC

Test Method: Unspecified

Pollutant Group(s): (Volatile Organic Compounds (VOC))

Emission Limit 1: 2.0000 PPM @ 15% O2

Emission Limit 2:

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements:

Control Method: (A) CATALYTIC OXIDATION
Est. % Efficiency: 62.300
Compliance Verified: Unknown
Pollutant/Compliance Notes:

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Facility Information

RBLC ID:	ID-0010 (final)	Date Determination	
Corporate/Company Name:	GARNET ENERGY LLC	Last Updated:	11/10/2004
Facility Name:	MIDDLETON FACILITY	Permit Number:	027-00081
Facility Contact:	MICHAEL ELLIOTT 2083958930	Permit Date:	10/19/2001 (actual)
Facility Description:	COMBINED-CYCLE GAS TURBINE ELECTRIC POWER GENERATION FACILITY. TWO GAS TURBINES RUNNING WITH THREE DIFFERENT SCHEMES. SCHEME ONE WITH DUCT BURNERS, USING NATURAL GAS FUEL. SCHEME TWO WITHOUT DUCT BURNERS USING NATURAL GAS FUEL. SCHEME THREE WITHOUT DUCT BURNERS USING DISTILLATE FUEL OIL.	FRS Number:	110012152151
Permit Type:	A: New/Greenfield Facility	SIC Code:	4911
Permit URL:		NAICS Code:	221112
EPA Region:	10	COUNTRY:	USA
Facility County:	CANYON		
Facility State:	ID		
Facility ZIP Code:	83706		
Permit Issued By:	IDAHO, OTHER (Agency Name)		
Other Agency Contact Info:	DAN SALGADO ID 208-373-0431		
Permit Notes:			

Process/Pollutant Information

PROCESS (2) GAS TURBINES WITH DUCT BURNERS, NAT GAS
NAME:

Process Type: 15.210 (Natural Gas (includes propane & liquified petroleum gas))
Primary Fuel: NATURAL GAS
Throughput: 2097.00 MMBTU/H
Process Notes: THE TWO GAS TURBINES CAN BE OPERATED UNDER 3 DIFFERENT SCENARIOS. THE INFORMATION PROVIDED HERE IS FOR THE FIRST SCENARIO- GAS TURBINE WITH DUCT BURNING AT BASE LOAD WHEN FIRED WITH NATURAL GAS.

POLLUTANT NAME: Visible Emissions (VE)
CAS Number: VE
Test Method: Unspecified
Pollutant Group(s):
Emission Limit 1: 20.0000 % OPACITY 3 MIN/ H
Emission Limit 2:
Standard Emission: 20.0000 % OPACITY 3 MIN/H
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: N/A
Other Applicable Requirements: SIP
Control Method: (N) NONE INDICATED

Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Particulate matter, filterable < 10 µ (FPM10)
CAS Number: PM
Test Method: Unspecified
Pollutant Group(s): (Particulate Matter (PM))
Emission Limit 1: 19.7000 LB/H EA
Emission Limit 2:
Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (P) REASONABLE POLLUTION PREVENTION PRECAUTIONS
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: ADDITIONAL EMISSION LIMIT BASED ON SIP: 0.015 GR/DSCF @ 3% O2, EACH.

POLLUTANT NAME: Sulfur Oxides (SOx)
CAS Number: 7446
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Sulfur (SOx))
Emission Limit 1: 6.6000 LB/H EA
Emission Limit 2:
Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (P) THE NATURAL GAS BURNED IN ANY TURBINE OR DUCT BURNER SHALL NOT CONTAIN SULFUR IN EXCESS OF 1 GR/100 SCF.
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Nitrogen Oxides (NOx)
CAS Number: 10102
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))
Emission Limit 1: 17.7000 LB/H EA
Emission Limit 2: 3.5000 PPM @ 15% O2 24 H AV, EA
Standard Emission: 2.5000 PPM @ 15% O2 CONSECUTIVE 12 MO AV, EACH

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (B) DUCT BURNER, SELECTIVE CATALYTIC REDUCTION, CATALYTIC OXIDATION
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Carbon Monoxide
CAS Number: 630-08-0
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds)

Emission Limit 1: 17.1000 LB/H EA
Emission Limit 2: 5.0000 PPM @ 15% O2 EA, 1 H AV
Standard Emission: 2.0000 PPM @ 15% O2 EA, CONSECUTIVE 12 MO AV
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (N) NONE INDICATED
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Volatile Organic Compounds (VOC)
CAS Number: VOC
Test Method: Unspecified
Pollutant Group(s): (Volatile Organic Compounds (VOC))
Emission Limit 1: 10.2000 LB/H EA
Emission Limit 2:
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (N) NONE INDICATED
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Ammonia (NH3)
CAS Number: 7664-41-7
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds)
Emission Limit 1: 10.0000 PPM @ 10% O2 EA, 24 H AV
Emission Limit 2: 21.5000 LB/H EA
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: N/A
Other Applicable Requirements: SIP
Control Method: (N)
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

Process/Pollutant Information

PROCESS (2) GAS TURBINES WITHOUT DUCT BURNERS, NAT GAS

NAME:

Process Type: 15.110 (Natural Gas (includes propane & liquified petroleum gas))

Primary Fuel: NATURAL GAS

Throughput:

Process Notes: THE TWO TURBINES CAN BE OPERATED UNDER 3 SEPARATE SCENARIOS. THE INFORMATION PROVIDED HERE IS FOR THE THIRD SCENARIO- GAS TURBINE WITHOUT DUCT BURNING AT BASE LOAD WHEN FIRED WITH NATURAL GAS.

POLLUTANT NAME: Nitrogen Oxides (NOx)
CAS Number: 10102
Test Method: Unspecified

Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))
Emission Limit 1: 15.0000 LB/H EA
Emission Limit 2: 3.0000 PPM @ 15% O2 EA, 24 H AV
Standard Emission: 2.5000 PPM @ 15% O2 EA, CONSECUTIVE 12 MO AV
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (B) SELECTIVE CATALYTIC REDUCTION, CATALYTIC OXIDATION
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Carbon Monoxide
CAS Number: 630-08-0
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds)
Emission Limit 1: 9.9000 LB/H EA
Emission Limit 2: 5.0000 PPM @ 15% O2 EA, 1 H AV
Standard Emission: 2.0000 PPM @ 15% O2 EA, CONSECUTIVE 12 MO AV
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (N) NONE INDICATED
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Volatile Organic Compounds (VOC)
CAS Number: VOC
Test Method: Unspecified
Pollutant Group(s): (Volatile Organic Compounds (VOC))
Emission Limit 1: 4.0000 LB/H EA
Emission Limit 2:
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (N) NONE INDICATED
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Particulate matter, filterable < 10 µ (FPM10)
CAS Number: PM
Test Method: Unspecified
Pollutant Group(s): (Particulate Matter (PM))
Emission Limit 1: 15.8000 LB/H EA
Emission Limit 2:
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (P) REASONABLE POLLUTION PREVENTION PRECAUTIONS
Est. % Efficiency:

Compliance Verified: Unknown
Pollutant/Compliance Notes: ADDITIONAL EMISSION LIMIT ACCORDING TO SIP: 0.015 GR/DSCF OF EFFLUENT GAS CORRECTED TO 3% O2

POLLUTANT NAME: Ammonia (NH3)
CAS Number: 7664-41-7
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds)
Emission Limit 1: 18.3000 LB/H EA
Emission Limit 2: 10.0000 PPM @ 15% O2 24 H AV
Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: N/A
Other Applicable Requirements: SIP
Control Method: (N)
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Visible Emissions (VE)
CAS Number: VE
Test Method: Unspecified
Pollutant Group(s):
Emission Limit 1: 20.0000 % OPACITY 3 MIN/H
Emission Limit 2:
Standard Emission: 20.0000 % OPACITY 3 MIN/H

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: N/A
Other Applicable Requirements: SIP
Control Method: (N) NONE INDICATED
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Sulfur Oxides (SOx)
CAS Number: 7446
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Sulfur (SOx))
Emission Limit 1: 5.4000 LB/H EA
Emission Limit 2:
Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (P) THE NATURAL GAS BURNED IN ANY TURBINE OR DUCT BURNER SHALL NOT CONTAIN SULFUR IN EXCESS OF 1 GR/100 SCF.
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

Process/Pollutant Information

PROCESS NAME: (2) GAS TURBINES WITHOUT DUCT BURNERS, DIST

Process Type: 15.190 (Liquid Fuel & Liquid Fuel Mixtures)
Primary Fuel: DISTILLATE FUEL
Throughput: 1699.00 MMBTU/H
Process Notes: TWO TURBINES CAN BE OPERATED UNDER 3 DIFFERENT SCENARIOS. THE INFORMATION PROVIDED HERE IS FOR THE SECOND SCENARIO- GAS TURBINES WITHOUT DUCT BURNING AT BASE LOAD WHEN FIRED WITH DISTILLATE FUEL OIL. THROUGHPUT IS LIMITED TO 720 H/YR COMBINED OPERATION FOR BOTH TURBINES.

POLLUTANT NAME: Visible Emissions (VE)
CAS Number: VE
Test Method: Unspecified
Pollutant Group(s):
Emission Limit 1: 20.0000 % OPACITY 3 MIN/H
Emission Limit 2:
Standard Emission: 20.0000 % OPACITY 3 MIN/H
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: N/A
Other Applicable Requirements: SIP
Control Method: (N) NONE INDICATED
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Nitrogen Oxides (NOx)
CAS Number: 10102
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))
Emission Limit 1: 26.0000 LB/H EA
Emission Limit 2:
Standard Emission: 6.0000 PPM @ 15% O2 24 H AV, EA
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (B) SELECTIVE CATALYTIC REDUCTION, CATALYTIC OXIDATION
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Carbon Monoxide
CAS Number: 630-08-0
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds)
Emission Limit 1: 30.6000 LB/H EA
Emission Limit 2:
Standard Emission: 6.0000 PPM @ 15% O2 1 H AV
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (N) NONE INDICATED
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Volatile Organic Compounds (VOC)
CAS Number: VOC

Test Method: Unspecified
Pollutant Group(s): (Volatile Organic Compounds (VOC))
Emission Limit 1: 20.2000 LB/H EA
Emission Limit 2:
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (N) NONE INDICATED
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Particulate matter, filterable < 10 μ (FPM10)
CAS Number: PM
Test Method: Unspecified
Pollutant Group(s): (Particulate Matter (PM))
Emission Limit 1: 52.4000 LB/H EA
Emission Limit 2:
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (P) REASONABLE POLLUTION PREVENTION PRECAUTIONS
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: ADDITIONAL EMISSION LIMIT ACCORDING TO SIP: 0.050 GR/DSCF OF EFFLUENT GAS CORRECTED TO 3% O2

POLLUTANT NAME: Sulfur Oxides (SOx)
CAS Number: 7446
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Sulfur (SOx))
Emission Limit 1: 92.9000 LB/H EA
Emission Limit 2:
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (P) DISTILLATE FUEL OIL BURNED IN ANY TURBINE SHALL NOT CONTAIN SULFUR IN EXCESS OF 0.05% BY WEIGHT.
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Ammonia (NH3)
CAS Number: 7664-41-7
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds)
Emission Limit 1: 21.9000 LB/H EA
Emission Limit 2: 10.0000 PPM @ 15% O2 EA, 24 H AV
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: N/A

Other Applicable Requirements: SIP
Control Method: (N) NONE INDICATED
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

Process/Pollutant Information

PROCESS NAME: (2) GAS TURBINES ANNUAL EMISSION LIMITS, BOTH FUEL

Process Type: 19.700 (Misc. Combustion Turbines)

Primary Fuel: NATURAL GAS

Throughput:

Process Notes: TWO TURBINES CAN BE OPERATED UNDER 3 SEPARATE SCENARIOS. THE TOTAL ANNUAL EMISSION LIMITS FOR THE TURBINES ARE PROVIDED HERE.

POLLUTANT NAME: Visible Emissions (VE)

CAS Number: VE

Test Method: Unspecified

Pollutant Group(s):

Emission Limit 1: 20.0000 % OPACITY 3 MIN/H

Emission Limit 2:

Standard Emission: 20.0000 % OPACITY 3 MIN/H

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: N/A

Other Applicable Requirements: SIP

Control Method: (N) NONE INDICATED

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT NAME: Sulfur Oxides (SOx)

CAS Number: 7446

Test Method: Unspecified

Pollutant Group(s): (InOrganic Compounds , Oxides of Sulfur (SOx))

Emission Limit 1: 36.4000 T/YR COMBINED ANNUAL LIMITS

Emission Limit 2:

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements:

Control Method: (P) THE DISTILLATE FUEL OIL BURNED IN ANY TURBINE SHALL NOT CONTAIN SULFUR IN EXCESS OF 0.05% BY WEIGHT. THE NATURAL GAS BURNED IN ANY TURBINE OR DUCT BURNER SHALL NOT EXCEED 1 GR/100 SCF.

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT NAME: Ammonia (NH3)

CAS Number: 7664-41-7

Test Method: Unspecified

Pollutant Group(s): (InOrganic Compounds)

Emission Limit 1: 94.2000 T/YR COMBINED ANNUAL LIMITS

Emission Limit 2:

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: N/A
Other Applicable Requirements: SIP
Control Method: (N) NONE INDICATED
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Nitrogen Oxides (NOx)
CAS Number: 10102
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))
Emission Limit 1: 73.0000 T/YR COMBINED ANNUAL LIMIT
Emission Limit 2: 6.0000 PPM @ 15% O2 BURNING DISTILLATE FUEL
Standard Emission: 2.5000 PPM @ 15% O2 BURNING NATURAL GAS
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (B) DUCT BURNER, SELECTIVE CATALYTIC REDUCTION, CATALYTIC OXIDATION
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Carbon Monoxide
CAS Number: 630-08-0
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds)
Emission Limit 1: 97.9000 T/YR COMBINED ANNUAL LIMIT
Emission Limit 2: 6.0000 PPM @ 15% O2 BURNING DISTILLATE FUEL
Standard Emission: 2.0000 PPM @ 15% O2 BURNING NATURAL GAS
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (N) NONE INDICATED
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Volatile Organic Compounds (VOC)
CAS Number: VOC
Test Method: Unspecified
Pollutant Group(s): (Volatile Organic Compounds (VOC))
Emission Limit 1: 47.3000 T/YR COMBINED ANNUAL LIMIT
Emission Limit 2:
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (N) NONE INDICATED
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Particulate matter, filterable < 10 μ (FPM10)
CAS Number: PM
Test Method: Unspecified
Pollutant Group(s): (Particulate Matter (PM))
Emission Limit 1: 87.4000 T/YR COMBINED ANNUAL LIMIT
Emission Limit 2:
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (P) REASONABLE POLLUTION PREVENTION PRECAUTIONS
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

Process/Pollutant Information

PROCESS (2) DUCT BURNERS
NAME:
Process Type: 19.600 (Misc. Boilers, Furnaces, Heaters)
Primary Fuel: NATURAL GAS
Throughput: 390.00 MMBTU/H
Process Notes: DUCT BURNERS MAY ONLY OPERATE WHEN A TURBINE IS FIRED WITH NATURAL GAS AT BASE LOAD.

POLLUTANT NAME: Visible Emissions (VE)
CAS Number: VE
Test Method: Unspecified
Pollutant Group(s):
Emission Limit 1: 20.0000 % OPACITY 6 MIN AV
Emission Limit 2: 27.0000 % OPACITY 1 6-MIN PERIOD/H
Standard Emission: 20.0000 % OPACITY 6 MIN AV
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: N/A
Other Applicable Requirements: NSPS
Control Method: (N)
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Sulfur Dioxide (SO2)
CAS Number: 7446-09-5
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Sulfur (SOx))
Emission Limit 1: 0.2000 LB/MMBTU EA
Emission Limit 2:
Standard Emission: 0.2000 LB/MMBTU EA
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: N/A
Other Applicable Requirements: NSPS
Control Method: (P) THE NATURAL GAS BURNED IN ANY DUCT BURNER SHALL NOT CONTAIN SULFUR IN EXCESS OF 1 GR/100 SCF.
Est. % Efficiency:
Compliance Verified: Unknown

Pollutant/Compliance Notes: THE PERMITTEE SHALL NOT DISCHARGE ANY GASES FROM COMBUSTION OF LIQUID OR GASEOUS FUELS WHICH CONTAIN SO2 IN EXCESS OF 100% OF THE POTENTIAL COMBUSTION CONCENTRATION WHEN EMISSIONS ARE LESS THAN 0.20 LB/MMBTU HEAT INPUT.

POLLUTANT NAME: Nitrogen Oxides (NOx)
CAS Number: 10102
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))
Emission Limit 1: 200.0000 NG/J
Emission Limit 2:
Standard Emission: 0.0200 LB/MMBTU CALCULATED
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: N/A
Other Applicable Requirements: NSPS
Control Method: (N)
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Particulate Matter (PM)
CAS Number: PM
Test Method: Unspecified
Pollutant Group(s): (Particulate Matter (PM))
Emission Limit 1: 0.0300 LB/MMBTU
Emission Limit 2:
Standard Emission: 0.0300 LB/MMBTU
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: N/A
Other Applicable Requirements: NSPS
Control Method: (P) REASONABLE POLLUTION PREVENTION PRECAUTIONS.
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

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Facility Information

RBLC ID:	WA-0288 (final)	Date Determination
Corporate/Company Name:	LONGVIEW ENERGY DEVELOPMENT	Last Updated: 04/24/2002
Facility Name:	LONGVIEW ENERGY DEVELOPMENT	Permit Number: 01-2347R1
Facility Contact:		Permit Date: 09/04/2001 (actual)
Facility Description:		FRS Number: 110012144679
Permit Type:	A: New/Greenfield Facility	SIC Code: 4911
Permit URL:		NAICS Code: 221111
EPA Region:	10	COUNTRY: USA
Facility County:	COWLITZ	
Facility State:	WA	
Facility ZIP Code:	98632	
Permit Issued By:	SOUTHWEST AIR POLL CTRL AUTHORITY, WA (Agency Name) MR. CLINT LAMOREAUX(Agency Contact) (360)574-3058 clint@swcleanair.org	

Other Agency Contact Info: CLINT LAMOREAUX
1308 NE 134TH STREET
VANCOUVER, WA 98685-2747
360-574-3058 x 31

Permit Notes: FACILITY HAS NOT BEEN BUILT YET, NO START UP OR COMPLIANCE DATES. 290 MW COMBINED-CYCLE POWER PLANT. NOX LIMITED TO 2.5 PPM (ANNUAL AVERAGE) WHILE FIRING NATURAL GAS AND 6.0 PPM (WHILE FIRING FUEL OIL. CO LIMITED TO 2.0 PPM (ANNUAL AVERAGE) WHILE FIRING NATURAL GAS AND 6.0 PPM (1-HOUR AVERAGE) WHILE FIRING FUEL OIL.

Process/Pollutant Information

PROCESS COMBUSTION TURBINE, COMBINED CYCLE (DIESEL)

NAME:

Process Type: 15.290 (Liquid Fuel & Liquid Fuel Mixtures)

Primary Fuel: NATURAL GAS

Throughput: 290.00 MW

Process Notes: TURBINE FIRES EITHER NATURAL GAS OR ULTRA LOW SULFUR DIESEL. DIESEL USE LIMITED TO NO MORE THAN 1400 HR/YR. SEE "COMBUSTION TURBINE, COMBINED CYCLE (NG)" FOR POLLTANT LIMITS WHEN FIRING NATURAL GAS

POLLUTANT NAME: Sulfur Dioxide (SO2)

CAS Number: 7446-09-5

Test Method: Unspecified

Pollutant Group(s): (InOrganic Compounds , Oxides of Sulfur (SOx))

Emission Limit 1: 2.9000 PPM

Emission Limit 2:

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: Other Case-by-Case

Other Applicable Requirements:

Control Method: (P) ULTRA LOW SULFUR DIESEL FUEL (< 15 PPM S CONTENT). DIESEL USE LIMITED TO NO MORE THAN 1400 HR/YR. PRIMARY FUEL IS NATURAL GAS.

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT NAME: Particulate matter, filterable (FPM)

CAS Number: PM

Test Method: Unspecified

Pollutant Group(s): (Particulate Matter (PM))

Emission Limit 1: 17.0000 LB/H

Emission Limit 2:

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: Other Case-by-Case

Other Applicable Requirements:

Control Method: (P) GOOD COMBUSTION AND CLEAN FUELS. DIESEL USE LIMITED TO NO MORE THAN 1400 HR/YR. PRIMARY FUEL IS NATURAL GAS

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT NAME: Ammonia (NH3)

CAS Number: 7664-41-7

Test Method: Unspecified

Pollutant Group(s): (InOrganic Compounds)

Emission Limit 1: 10.0000 PPM 24 HOUR AVG

Emission Limit 2: 30.0000 LB/H 1 HOUR AVG

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: Other Case-by-Case

Other Applicable Requirements:

Control Method: (N) PART OF SCR DESIGN

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT NAME: Volatile Organic Compounds (VOC)

CAS Number: VOC

Test Method: Unspecified

Pollutant Group(s): (Volatile Organic Compounds (VOC))

Emission Limit 1: 5.7000 LB/H 1 HOUR AVG

Emission Limit 2:

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: Other Case-by-Case

Other Applicable Requirements:

Control Method: (P) GOOD COMBUSTION. CLEAN FUELS.

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT NAME: Carbon Monoxide

CAS Number: 630-08-0

Test Method: Unspecified

Pollutant Group(s): (InOrganic Compounds)

Emission Limit 1: 6.0000 PPM 1 HOUR AVG

Emission Limit 2: 33.0000 LB/H 1 HOUR AVG

Standard Emission: 6.0000 PPM @ 15% 02 1 HOUR AVG

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: Other Case-by-Case

Other Applicable Requirements:

Control Method: (A) OXIDATION CATALYST.

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT NAME: Nitrogen Oxides (NOx)

CAS Number: 10102

Test Method: Unspecified

Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))

Emission Limit 1: 6.0000 PPM 24 HOUR AVG

Emission Limit 2: 54.0000 LB/H 1 HR AVG

Standard Emission: 6.0000 PPM @ 15% 02 24 HR AVG

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: Other Case-by-Case

Other Applicable Requirements:

Control Method: (B) SELECTIVE CATALYTIC REDUCTION (SCR). DIESEL USE LIMITED TO NO MORE THAN 1400 HR/YR. PRIMARY FUEL IS NATURAL GAS.

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

Process/Pollutant Information

PROCESS COMBUSTION TURBINE, COMBINEDCYCLE (NG)

NAME:

Process Type: 15.210 (Natural Gas (includes propane & liquified petroleum gas))

Primary Fuel: NATURAL GAS

Throughput: 290.00 MW

Process Notes: TURBINE FIRES EITHER NATURAL GAS OR ULTRA LOW SULFUR DIESEL. DIESEL USE LIMITED TO NO MORE THAN 1400 HR/YR. SEE "COMBUSTION TURBINE, COMBINED CYCLE (DIESEL)" FOR EMISSION LIMITS FOR DIESEL FUEL.

POLLUTANT NAME: Particulate matter, filterable (FPM)

CAS Number: PM

Test Method: Unspecified

Pollutant Group(s): (Particulate Matter (PM))

Emission Limit 1: 10.0000 LB/H

Emission Limit 2:

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: Other Case-by-Case

Other Applicable Requirements:

Control Method: (P) GOOD COMBUSTION AND CLEAN FUELS.

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT NAME: Sulfur Dioxide (SO2)

CAS Number: 7446-09-5

Test Method: Unspecified

Pollutant Group(s): (InOrganic Compounds , Oxides of Sulfur (SOx))

Emission Limit 1: 1.4000 LB/H

Emission Limit 2:

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: Other Case-by-Case

Other Applicable Requirements:

Control Method: (P) LOW SULFUR FUELS.

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT NAME: Ammonia (NH3)

CAS Number: 7664-41-7

Test Method: Unspecified

Pollutant Group(s): (InOrganic Compounds)

Emission Limit 1: 10.0000 PPM 24 HOUR AVG

Emission Limit 2: 30.0000 LB/H 1 HOUR AVG

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: Other Case-by-Case

Other Applicable Requirements:

Control Method: (N) PART OF SCR DESIGN.

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT NAME: Volatile Organic Compounds (VOC)
CAS Number: VOC
Test Method: Unspecified
Pollutant Group(s): (Volatile Organic Compounds (VOC))
Emission Limit 1: 5.7000 LB/H 1 HOUR AVG
Emission Limit 2:
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: Other Case-by-Case
Other Applicable Requirements:
Control Method: (P) GOOD COMBUSTION, CLEAN FUELS.
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Carbon Monoxide
CAS Number: 630-08-0
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds)
Emission Limit 1: 2.0000 PPMVD 365 DAY AVG
Emission Limit 2: 6.0000 PPMVD 1 HOUR AVG
Standard Emission: 2.0000 PPM @ 15% O2 365 DAY AVG
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: Other Case-by-Case
Other Applicable Requirements:
Control Method: (A) OXIDATION CATALYST.
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: ADDITIONAL LIMIT: 25 LB/H, 1 HR AVG.

POLLUTANT NAME: Nitrogen Oxides (NOx)
CAS Number: 10102
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))
Emission Limit 1: 2.5000 PPMVD 365 DAY AVG
Emission Limit 2: 3.0000 PPMVD 24 HOUR AVG
Standard Emission: 2.5000 PPM @ 15% O2 365 DAY AVG
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: Other Case-by-Case
Other Applicable Requirements:
Control Method: (A) SELECTIVE CATALYTIC REDUCTION (SCR).
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: ADDITIONAL LIMIT: NAT GAS, 25 LB/H, 1 HR AVG.

Process/Pollutant Information

PROCESS FIRE PUMP ENGINE
NAME:
Process Type: 17.210 (Fuel Oil (ASTM # 1,2, includes kerosene, aviation, diesel fuel))
Primary Fuel: DIESEL

Throughput: 368.00 HP

Process Notes: USE LIMITED TO MAINTENANCE AND FOR EMERGENCIES. ALLOWED TO OPERATE 50 H/YR. ONLY LIMIT ON OPACITY FOR THIS PROCESS.

POLLUTANT NAME: Visible Emissions (VE)
CAS Number: VE
Test Method: Unspecified
Pollutant Group(s):
Emission Limit 1: 10.0000 % OPACITY
Emission Limit 2:
Standard Emission: 10.0000 % OPACITY
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: Other Case-by-Case
Other Applicable Requirements:
Control Method: (P) GOOD COMBUSTION, CLEAN FUEL
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

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Facility Information

RBLC ID:	NJ-0058 (final)	Date Determination	
		Last Updated:	05/15/2006
Corporate/Company Name:	PSEG FOSSIL LLC LINDEN GENERATING STATION	Permit Number:	PCPC 000001
Facility Name:	PSEG FOSSIL LLC LINDEN GENERATING STATION	Permit Date:	08/24/2001 (actual)
Facility Contact:	JON PERRY 9734305275 JON.PERRY@PSEG.COM	FRS Number:	110000869105
Facility Description:	COMBUSTION GAS TURBINES (GE 7FA): COMBINED CYCLE (4 UNITS) WITH DUCT FIRED HEAT RECOVERY STEAM GENERATORS(HRSG).	SIC Code:	4911
Permit Type:	A: New/Greenfield Facility	NAICS Code:	221112
Permit URL:		COUNTRY:	USA
EPA Region:	2		
Facility County:	UNION		
Facility State:	NJ		
Facility ZIP Code:	07036		
Permit Issued By:	NEW JERSEY DEPT OF ENV PROTECTION (Agency Name) ALIYA KHAN(Agency Contact) (609) 292-2169 ALIYA.KHAN@DEP.STATE.NJ.US		
Other Agency Contact Info:	NEGIB HARFOUCHE 609-292-2137		
Permit Notes:	FACILITY ID: 40011		

Process/Pollutant Information

PROCESS NAME: COMBUSTION GAS TURBINES(GE 7FA) (4 UNITS): COMBINED CYCLE

Process Type: 15.290 (Liquid Fuel & Liquid Fuel Mixtures)

Primary Fuel: DISTILLATE FUEL OIL

Throughput: 1925.00 MMBTU/H

Process Notes: COMBUSTION GAS TURBINES(GE 7 FA) (4 UNITS): COMBINED CYCLE & 600 MW EACH. A SEPARATELY LISTED PROCESS SHOWS EMISSIONS LIMITS WHEN FIRING NATURAL GAS. EMISSIONS CONTROLLED BY: SELECTIVE CATALYTIC REDUCTION(SCR), OXIDATION CATALYST(CO) AND WATER INJECTION.

POLLUTANT NAME: Nitrogen Oxides (NOx)

CAS Number: 10102
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))
Emission Limit 1: 6.0000 PPMVD@15%O2
Emission Limit 2: 30.7000 LB/H
Standard Emission: 6.0000 PPM @ 15% O2
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (A) SELECTIVE CATALYTIC REDUCTION (SCR) AND WATER INJECTION.
Est. % Efficiency: 75.000
Compliance Verified: Unknown
Pollutant/Compliance Notes: NOX EMISSION LIMIT REPRESENTS BOTH: BACT & LAER.

POLLUTANT NAME: Carbon Monoxide
CAS Number: 630-08-0
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds)
Emission Limit 1: 4.0000 PPMVD@15%O2
Emission Limit 2: 13.4000 LB/H
Standard Emission: 4.0000 PPM @ 15% O2
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (A) OXIDATION CATALYST(CO)
Est. % Efficiency: 70.000
Compliance Verified: Unknown
Pollutant/Compliance Notes: CO EMISSION LIMIT REPRESENT BOTH:BACT & LAER

POLLUTANT NAME: Volatile Organic Compounds (VOC)
CAS Number: VOC
Test Method: Unspecified
Pollutant Group(s): (Volatile Organic Compounds (VOC))
Emission Limit 1: 3.5000 LB/H
Emission Limit 2:
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: LAER
Other Applicable Requirements:
Control Method: (A) OXIDATION CATALYST(CO).
Est. % Efficiency: 35.000
Compliance Verified: Yes
Pollutant/Compliance Notes:

POLLUTANT NAME: Particulate matter, filterable < 10 µ (FPM10)
CAS Number: PM
Test Method: Unspecified
Pollutant Group(s): (Particulate Matter (PM))
Emission Limit 1: 47.0000 LB/H
Emission Limit 2:
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:

Control Method: (N)
Est. % Efficiency:
Compliance Verified: Yes
Pollutant/Compliance Notes:

POLLUTANT NAME: Total Suspended Particulates
CAS Number: PM
Test Method: Unspecified
Pollutant Group(s): (Particulate Matter (PM))
Emission Limit 1: 24.0000 LB/H
Emission Limit 2:
Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements:

Control Method: (N)

Est. % Efficiency:

Compliance Verified: Yes

Pollutant/Compliance Notes:

POLLUTANT NAME: Sulfur Dioxide (SO2)
CAS Number: 7446-09-5
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Sulfur (SOx))
Emission Limit 1: 107.3000 LB/H BASE LOAD
Emission Limit 2: 69.9000 LB/H MINIMUM LOAD
Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: U

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements:

Control Method: (P) LOW SULFUR DISTILLATE FUEL OIL.

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

Process/Pollutant Information

PROCESS NAME: COMBUSTION GAS TURBINES(GE 7FA)(4 UNITS): COMBINED CYCLE

Process Type: 15.210 (Natural Gas (includes propane & liquified petroleum gas))

Primary Fuel: NATURAL GAS

Throughput: 1651.00 MMBTU/H

Process Notes: COBUSTION GAS TURBINE(GE 7FA)(4 UNITS): COMBINED CYCLE@ 600 MW EACH. A SEPARATELY LISTED PROCESS SHOWS EMISSION LIMITS WHEN FIRING DISTILLATE FUEL OIL. EMISSIONS CONTROLLED BY: SELECTIVE CATALYTIC REDUCTION(SCR), OXIDATION CATALYST(CO) AND DRY LOW NOX COMBUSTOR.

POLLUTANT NAME: Nitrogen Oxides (NOx)
CAS Number: 10102
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))
Emission Limit 1: 2.0000 PPMVD@15%O2
Emission Limit 2: 14.2000 LB/H
Standard Emission: 2.0000 PPM @ 15% O2

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements:

Control Method: (A) SELECTIVE CATALYTIC REDUCTION(SCR) AND DRY LOW NOX COMBUSTOR.
Est. % Efficiency: 75.000
Compliance Verified: Unknown
Pollutant/Compliance Notes: NOX EMISSION LIMIT REPRESENTS BOTH: BACT & LAER.

POLLUTANT NAME: Carbon Monoxide
CAS Number: 630-08-0
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds)
Emission Limit 1: 2.0000 PPMVD@15%O2
Emission Limit 2: 7.0000 LB/H
Standard Emission: 2.0000 PPM @ 15% O2
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements:

Control Method: (A) OXIDATION CATALYST(CO).
Est. % Efficiency: 70.000
Compliance Verified: Unknown
Pollutant/Compliance Notes: CO EMISSION LIMIT REPRESENTS BOTH: BACT & LAER

POLLUTANT NAME: Volatile Organic Compounds (VOC)
CAS Number: VOC
Test Method: Unspecified
Pollutant Group(s): (Volatile Organic Compounds (VOC))
Emission Limit 1: 2.1000 LB/H
Emission Limit 2:
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: LAER

Other Applicable Requirements:

Control Method: (A) OXIDATION CATALYST(CO).
Est. % Efficiency: 35.000
Compliance Verified: Yes
Pollutant/Compliance Notes:

POLLUTANT NAME: Particulate matter, filterable < 10 µ (FPM10)
CAS Number: PM
Test Method: Unspecified
Pollutant Group(s): (Particulate Matter (PM))
Emission Limit 1: 21.0000 LB/H
Emission Limit 2:
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements:

Control Method: (N)
Est. % Efficiency:
Compliance Verified: Yes
Pollutant/Compliance Notes:

POLLUTANT NAME: Total Suspended Particulates
CAS Number: PM

Test Method: Unspecified
Pollutant Group(s): (Particulate Matter (PM))
Emission Limit 1: 11.0000 LB/H
Emission Limit 2:
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (N)
Est. % Efficiency:
Compliance Verified: No
Pollutant/Compliance Notes:

POLLUTANT NAME: Sulfur Dioxide (SO2)
CAS Number: 7446-09-5
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Sulfur (SOx))
Emission Limit 1: 2.0000 LB/H
Emission Limit 2:
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (N)
Est. % Efficiency:
Compliance Verified: Yes
Pollutant/Compliance Notes:

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Facility Information

RBLC ID:	NJ-0059 (final)	Date Determination	
Corporate/Company Name:	LINDEN COGENERATION TECHNOLOGY	Last Updated:	12/07/2005
Facility Name:	COGEN TECHNOLOGIES LINDEN VENTURE, L.P	Permit Number:	PCP 000002
Facility Contact:	ROBERT LICATO 7134207012 ROBERT.LICATO@ELPASO.COM	Permit Date:	05/09/2001 (actual)
Facility Description:	COMBUSTION GAS TURBINES(GE): COMBINED CYCLE(6 UNITS)	FRS Number:	110009723111
Permit Type:	A: New/Greenfield Facility	SIC Code:	4911
Permit URL:		NAICS Code:	221112
EPA Region:	2	COUNTRY:	USA
Facility County:	UNION		
Facility State:	NJ		
Facility ZIP Code:	07036		
Permit Issued By:	NEW JERSEY DEPT OF ENV PROTECTION (Agency Name) ALIYA KHAN(Agency Contact) (609) 292-2169 ALIYA.KHAN@DEP.STATE.NJ.US		
Other Agency Contact Info:	KETAN BHANDUTIA 609-984-6356		
Permit Notes:	FACILITY ID: 40955 PERMIT # : PCP 990001 ISSUED ON 12/07/1999 FOR THE INSTALLATION OF THE 6TH UNIT COMBUSTION GAS TURBINE(GE): COMBINED CYCLE. LAST MODIFICATION OF THE PERMIT: 12/30/2003		

Process/Pollutant Information

PROCESS COMBUSTION GAS TURBINE(GE): COMBINED CYCLE(THE 6TH UNIT)

NAME:

Process Type: 15.210 (Natural Gas (includes propane & liquified petroleum gas))

Primary Fuel: NATURAL GAS

Throughput: 1928.20 MMBTU/H

Process Notes: COMBUSTION GAS TURBINE(GE) COMBINED CYCLE @ 180 MW. A SEPARATELY LISTED PROCESS SHOWS EMISSION LIMITS WHEN FIRING DISTILLATE FUEL OIL. EMISSIONS CONTROLLED BY: SLECTIVE CATALYTIC REDUCTION(SCR), OXIDATION CATALYST(CO) AND DRY LOW NOX COMBUSTOR.

POLLUTANT NAME: Sulfur Dioxide (SO2)

CAS Number: 7446-09-5

Test Method: Unspecified

Pollutant Group(s): (InOrganic Compounds , Oxides of Sulfur (SOx))

Emission Limit 1: 0.0010 LB/MMBTU

Emission Limit 2: 1.4400 LB/H

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: Other Case-by-Case

Other Applicable Requirements: OPERATING PERMIT

Control Method: (N)

Est. % Efficiency:

Compliance Verified: No

Pollutant/Compliance Notes:

POLLUTANT NAME: Particulate matter, filterable < 10 μ (FPM10)

CAS Number: PM

Test Method: Unspecified

Pollutant Group(s): (Particulate Matter (PM))

Emission Limit 1: 0.0260 LB/MMBTU

Emission Limit 2: 51.7600 LB/H

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements:

Control Method: (N)

Est. % Efficiency:

Compliance Verified: Yes

Pollutant/Compliance Notes:

POLLUTANT NAME: Total Suspended Particulates

CAS Number: PM

Test Method: Unspecified

Pollutant Group(s): (Particulate Matter (PM))

Emission Limit 1: 0.0060 LB/MMBTU

Emission Limit 2: 7.0000 LB/H

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements:

Control Method: (N)

Est. % Efficiency:

Compliance Verified: Yes

Pollutant/Compliance Notes:

POLLUTANT NAME: Nitrogen Oxides (NOx)
CAS Number: 10102
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))
Emission Limit 1: 2.5000 PPMVD% 15O2
Emission Limit 2: 0.0093 LB/MMBTU
Standard Emission: 2.5000 PPM @ 15% O2
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (A) SELECTIVE CATALYTIC REDUCTION(SCR) WITH AMMONIA INJECTION, STEAM INJECTION AND DRY LOW NOX COMBUSTOR
Est. % Efficiency: 90.000
Compliance Verified: Unknown
Pollutant/Compliance Notes: NOX EMISSION LIMIT REPRESENTS BOTH LAER AND BACT.

POLLUTANT NAME: Carbon Monoxide
CAS Number: 630-08-0
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds)
Emission Limit 1: 2.0000 PPMVD@15%O2
Emission Limit 2: 0.0046 LB/MMBTU
Standard Emission: 2.0000 PPM @ 15% O2
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: Other Case-by-Case
Other Applicable Requirements: OPERATING PERMIT
Control Method: (A) OXIDATION CATALYST.
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Volatile Organic Compounds (VOC)
CAS Number: VOC
Test Method: Unspecified
Pollutant Group(s): (Volatile Organic Compounds (VOC))
Emission Limit 1: 1.2000 PPMVD@15%O2
Emission Limit 2: 0.0020 LB/MMBTU
Standard Emission: 3.0000 LB/H
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: Other Case-by-Case
Other Applicable Requirements: OPERATING PERMIT
Control Method: (N)
Est. % Efficiency:
Compliance Verified: Yes
Pollutant/Compliance Notes:

Process/Pollutant Information

PROCESS NAME: COMBUSTION GAS TURBINE(GE): COMBINED CYCLE(THE 6 TH UNIT)
Process Type: 15.290 (Liquid Fuel & Liquid Fuel Mixtures)
Primary Fuel: DISTILLATE FUEL OIL
Throughput: 2115.00 MMBTU/H

Process Notes: COMBUSTION GAS TURBINE(GE): COMBINED CYCLE@ 180 MW. A SEPARATELY LISTED PROCESS SHOWS EMISSION LIMITS WHEN FIRING NATURAL GAS. EMISSIONS CONTROLLED BY: SELECTIVE CATALYTIC REDUCTION(SCR), OXIDATION CATALYST(CO) AND STEAM INJECTION.

POLLUTANT NAME: Volatile Organic Compounds (VOC)
CAS Number: VOC
Test Method: Unspecified
Pollutant Group(s): (Volatile Organic Compounds (VOC))
Emission Limit 1: 1.2000 PPMVD@15%O2
Emission Limit 2: 0.0016 LB/MMBTU
Standard Emission: 3.3800 LB/H

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: Other Case-by-Case
Other Applicable Requirements: OTHER
Control Method: (N)
Est. % Efficiency:
Compliance Verified: Yes
Pollutant/Compliance Notes:

POLLUTANT NAME: Sulfur Dioxide (SO2)
CAS Number: 7446-09-5
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Sulfur (SOx))
Emission Limit 1: 0.0380 LB/MMBTU
Emission Limit 2: 82.0000 LB/H
Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: Other Case-by-Case
Other Applicable Requirements: OPERATING PERMIT
Control Method: (N)
Est. % Efficiency:
Compliance Verified: No
Pollutant/Compliance Notes:

POLLUTANT NAME: Particulate matter, filterable < 10 µ (FPM10)
CAS Number: PM
Test Method: Unspecified
Pollutant Group(s): (Particulate Matter (PM))
Emission Limit 1: 0.0433 LB/MMBTU
Emission Limit 2: 66.8200 LB/H
Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (N)
Est. % Efficiency:
Compliance Verified: No
Pollutant/Compliance Notes:

POLLUTANT NAME: Total Suspended Particulates
CAS Number: PM
Test Method: Unspecified
Pollutant Group(s): (Particulate Matter (PM))
Emission Limit 1: 0.0142 LB/MMBTU
Emission Limit 2: 17.0000 LB/H

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements:

Control Method: (N)

Est. % Efficiency:

Compliance Verified: Yes

Pollutant/Compliance Notes:

POLLUTANT NAME: Acid Mist / Gases

CAS Number:

Test Method: Unspecified

Pollutant Group(s): (Acid Gasses/Mist , Particulate Matter (PM))

Emission Limit 1: 24.8900 LB/H

Emission Limit 2: 6.4400 LB/MMBTU

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: Other Case-by-Case

Other Applicable Requirements: OPERATING PERMIT

Control Method: (N)

Est. % Efficiency:

Compliance Verified: Yes

Pollutant/Compliance Notes: THIS IS SULFURIC ACID MIST.

POLLUTANT NAME: Nitrogen Oxides (NOx)

CAS Number: 10102

Test Method: Unspecified

Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))

Emission Limit 1: 6.0000 PPMVD@15%O2

Emission Limit 2: 0.0230 LB/MMBTU

Standard Emission: 6.0000 PPM @ 15% O2

Did factors, other than air pollution technology considerations influence the BACT decisions: U

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements:

Control Method: (A) SELECTIVE CATALYTIC REDUCTION (SCR) WITH AMMONIA INJECTION, STEAM INJECTION AND DRY LOW NOX COMBUSTOR

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes: NOX EMISSION LIMIT REPRESENTS BOTH LAER AND BACT.

POLLUTANT NAME: Carbon Monoxide

CAS Number: 630-08-0

Test Method: Unspecified

Pollutant Group(s): (InOrganic Compounds)

Emission Limit 1: 6.0000 PPMVD@15%O2

Emission Limit 2: 0.0140 LB/MMBTU

Standard Emission: 6.0000 PPM @ 15% O2

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: Other Case-by-Case

Other Applicable Requirements: OPERATING PERMIT

Control Method: (A) OXIDATION CATALYST(CO)

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

Facility Information

RBLC ID:	WA-0302 (final)	Date Determination	
Corporate/Company Name:	GOLDENDALE ENERGY, INC.	Last Updated:	08/31/2006
Facility Name:	GOLDENDALE ENERGY PROJECT	Permit Number:	01AQCR-2037
Facility Contact:		Permit Date:	02/23/2001 (actual)
Facility Description:	THE GOLDENDALE ENERGY PROJECT (GEP) WILL CONSIST OF A COMBUSTION GAS TURBINE-DRIVEN GENERATOR AND A STEAM TURBINE DRIVEN GENERATOR. THE COMBUSTION TURBINE AND SUPPLEMENTAL DUCT BURNERS WILL BURN NATURAL GAS. THE EXHAUST HEAT FROM THE COMBUSTION TURBINE FLOWS TO A HEAT RECOVERY STEAM GENERATOR (HRSG) TO PRODUCE STEAM. STEAM IS DIRECTED TO THE STEAM TURBINE, WHICH TURNS A STEAM TURBINE GENERATOR. STEAM EXHAUSTED BY THE STEAM TURBINE GENERATOR FLOWS TO A COOLING TOWER AND/OR AIR COOLED CONDENSER, IS CONDENSED, AND RETURNED TO THE HRSG. THE HRSG WILL BE EQUIPPED WITH A 323 MMBTU/H DUCT BURNER THAT WILL PRODUCE UP TO 40 MW OF THE TOTAL POWER PRODUCTION OF 248.7 MW. THE MAX DUCT BURNER CONTRIBUTION OF 40 MW WILL OCCUR WHEN THE AMBIENT SITE TEMP REACHES ITS MAX (ABOUT 110 F).	FRS Number:	110017417455
Permit Type:	A: New/Greenfield Facility	SIC Code:	4911
Permit URL:		NAICS Code:	221112
EPA Region:	10	COUNTRY:	USA
Facility County:	KLICKITAT		
Facility State:	WA		
Facility ZIP Code:	98033		
Permit Issued By:	WASHINGTON STATE DEPARTMENT OF ECOLOGY (Agency Name) MR. BERNARD BRADY(Agency Contact) (360)407-6803 bbra461@ecy.wa.gov		
Other Agency Contact Info:	HALLER, LYNNETTE PO BOX 47600 OLYMPIA, WA 98504-7600 (509) 457-7126		
Permit Notes:	ELECTRIC GENERATION FACILITY. USE OF THE DUCT BURNERS (AT PEAK LOAD) SHALL BE NO MORE THAN 5250 H PER ROLLING 12-MO PERIOD. START-UPS SHALL BE LIMITED TO 50 TIMES PER ROLLING 12-MO PERIOD. PIPELINE QUALITY NAT GAS SHALL BE THE ONLY FUEL COMBUSTED IN THE TURBINE AND DUCT BURNERS. TURBINE SHALL ONLY OPERATE WHEN THE SCR IS IN GOOD WORKING CONDITION. BACKUP GENERATOR AND FIREWATER DIESEL PUMP SHALL EACH BE LIMITED TO 500 H PER ROLLING 12-MO PERIOD OF OPERATION. ADDITIONAL EMISSION LIMITS FOR 300-HP DIESEL ENGINE FOR FIRE WATER SUPPRESSION PUMP, AND 536 HP DIESEL BACKUP GENERATOR NOT SPECIFIED IN PERMIT.		

Process/Pollutant Information

PROCESS NAME:	COMBINED CYCLE UNIT (TURBINE/HRSG)
Process Type:	15.210 (Natural Gas (includes propane & liquified petroleum gas))
Primary Fuel:	NAT GAS
Throughput:	248.70 MW
Process Notes:	EMISSION LIMITS FOR ACETALDEHYDE (C2H4O) LISTED IN PERMIT AS 0.3182 LB/H BASE LOAD AND 0.3756 LB/H PEAK LOAD ARE SUBJECT TO T-BACT AND POLLUTION PREVENTION STANDARDS INCLUDING; EXCLUSIVE USE OF PIPELINE QUALITY NATURAL GAS AND GOOD COMBUSTION PRACTICE.
POLLUTANT NAME:	Benzene
CAS Number:	71-43-2
Test Method:	Unspecified
Pollutant Group(s):	(Hazardous Air Pollutants (HAP) , Organic Compounds (all) , Organic Non-HAP Compounds , Volatile Organic Compounds (VOC))

Emission Limit 1: 0.0328 LB/H BASE LOAD

Emission Limit 2: 0.0388 LB/H PEAK LOAD

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: Other Case-by-Case

Other Applicable Requirements:

Control Method: (P) EXCLUSIVE USE OF PIPELINE QUALITY NATURAL GAS AND GOOD COMBUSTION PRACTICES.

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes: SUBJECT TO T-BACT UNDER WAC 173-460-080(2)(E)

POLLUTANT NAME: Formaldehyde

CAS Number: 50-00-0

Test Method: Unspecified

Pollutant Group(s): (Hazardous Air Pollutants (HAP) , Organic Compounds (all) , Volatile Organic Compounds (VOC))

Emission Limit 1: 0.4072 LB/H BASE LOAD

Emission Limit 2: 0.4806 LB/H PEAK LOAD

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: Other Case-by-Case

Other Applicable Requirements:

Control Method: (B) FORMALDEHYDE IS CONTROLLED BY USE OF AN OXIDATION CATALYST IN THE HRSG, EXCLUSIVE USE OF PIPELINE QUALITY NATURAL GAS AND GOOD COMBUSTION PRACTICES.

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT NAME: Nickel

CAS Number: 7440-02-0

Test Method: Unspecified

Pollutant Group(s): (Hazardous Air Pollutants (HAP) , Heavy Metals , InOrganic Compounds , Particulate Matter (PM))

Emission Limit 1: 0.0036 LB/H BASE LOAD

Emission Limit 2: 0.0043 LB/H PEAK LOAD

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: Other Case-by-Case

Other Applicable Requirements:

Control Method: (P) EXCLUSIVE USE OF PIPELINE QUALITY NATURAL GAS AND GOOD COMBUSTION PRACTICES.

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT NAME: Propylene Oxide

CAS Number: 75-56-9

Test Method: Unspecified

Pollutant Group(s): (Hazardous Air Pollutants (HAP) , Organic Compounds (all) , Volatile Organic Compounds (VOC))

Emission Limit 1: 0.0496 LB/H BASE LOAD

Emission Limit 2: 0.0586 LB/H PEAK LOAD

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: Other Case-by-Case

Other Applicable Requirements:

Control Method: (P) EXCLUSIVE USE OF PIPELINE QUALITY NATURAL GAS AND GOOD COMBUSTION PRACTICES.

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT NAME: Nitrogen Oxides (NOx)

CAS Number: 10102

Test Method: Unspecified

Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))

Emission Limit 1: 316.8000 LB/D BASE-LOAD, EXCEPT STARTUP

Emission Limit 2: 357.6000 LB/D PEAK LOAD, EXCEPT STARTUP

Standard Emission: 2.0000 PPM @ 15% O2 3-H AV, EXCEPT STARTUP

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements:

Control Method: (B) LOW NOX BURNERS, SCR, AND GOOD COMBUSTION PRACTICE

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT NAME: Carbon Monoxide

CAS Number: 630-08-0

Test Method: Unspecified

Pollutant Group(s): (InOrganic Compounds)

Emission Limit 1: 8.0000 LB/H BASE LOAD, EXCEPT STARTUP

Emission Limit 2: 9.1000 LB/H PEAK LOAD, EXCEPT STARTUP

Standard Emission: 2.0000 PPM @ 15% O2 1-H AV, EXCEPT STARTUP

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements:

Control Method: (A) OXIDATION CATALYST

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT NAME: Sulfur Dioxide (SO2)

CAS Number: 7446-09-5

Test Method: Unspecified

Pollutant Group(s): (InOrganic Compounds , Oxides of Sulfur (SOx))

Emission Limit 1: 1.0000 LB/H BASE & PEAK LOADS

Emission Limit 2: 1.0000 PPM AT 15% O2 1-H AV, BASE & PEAK LOADS

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements:

Control Method: (P) PIPELINE QUALITY NAT GAS AND GOOD COMBUSTION PRACTICES

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT NAME: Volatile Organic Compounds (VOC)

CAS Number: VOC

Test Method: Unspecified

Pollutant Group(s): (Volatile Organic Compounds (VOC))
Emission Limit 1: 2.8000 LB/H BASE LOAD, EXCEPT START UP
Emission Limit 2: 13.3000 LB/H PEAK LOAD, EXCEPT STARTUP
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (B) OXIDATION CATALYST AND GOOD COMBUSTION PRACTICES
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: VOC: ADDITIONAL EMISSION LIMITS 6.0 PPM AT 15% O2, 1-H AV, BASE & PEAK LOADS, EXCEPT DURING STARTUP

POLLUTANT NAME: Particulate matter, filterable < 10 µ (FPM10)
CAS Number: PM
Test Method: Unspecified
Pollutant Group(s): (Particulate Matter (PM))
Emission Limit 1: 19.0000 LB/H BASE LOAD
Emission Limit 2: 22.3000 LB/H PEAK LOAD
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (P) PIPELINE QUALITY NATURAL GAS AND GOOD COMBUSTION PRACTICES
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Ammonia (NH3)
CAS Number: 7664-41-7
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds)
Emission Limit 1: 12.2000 LB/H BASE LOAD, FIRST 12 MO
Emission Limit 2: 13.7500 LB/H PEAK LOAD, FIRST 12 MO
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: Other Case-by-Case
Other Applicable Requirements:
Control Method: (P) EXCLUSIVE USE OF PIPELINE QUALITY NATURAL GAS AND GOOD COMBUSTION PRACTICES.
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: NH3: ADDITIONAL EMISSION LIMITS: 7.32 LB/H BASE LOAD AFTER FIRST 12 MO, 8.25 LB/H PEAK LOAD AFTER FIRST 12 MO, 5.0 PPM AT 15% O2 BASE & PEAK LOAD DURING FIRST 12 MO, 3.0 PPM AT 15% O2 1-H AV BASE & PEAK LOAD AFTER FIRST 12 MO

POLLUTANT NAME: Polynuclear/Polycyclic Aromatic Hydrocarbons
CAS Number: 130498-29-2
Test Method: Unspecified
Pollutant Group(s): (Organic Compounds (all) , Organic Non-HAP Compounds)
Emission Limit 1: 0.0014 LB/H BASE LOAD
Emission Limit 2: 0.0016 LB/H PEAK LOAD
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown
Case-by-Case Basis: Other Case-by-Case

Other Applicable Requirements:

Control Method: (P) EXCLUSIVE USE OF PIPELINE QUALITY NATURAL GAS AND GOOD COMBUSTION PRACTICES.

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT NAME: Sulfuric Acid (mist, vapors, etc)

CAS Number: 7664-93-9

Test Method: Unspecified

Pollutant Group(s): (InOrganic Compounds , Particulate Matter (PM))

Emission Limit 1: 0.2070 LB/H BASE LOAD

Emission Limit 2: 0.2070 LB/H PEAK LOAD

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: U

Case-by-Case Basis: Other Case-by-Case

Other Applicable Requirements:

Control Method: (P) EXCLUSIVE USE OF PIPELINE QUALITY NATURAL GAS AND GOOD COMBUSTION PRACTICES.

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes: REGULATED POLLUTANT IS SULFURIC ACID MIST.

POLLUTANT NAME: Visible Emissions (VE)

CAS Number: VE

Test Method: Unspecified

Pollutant Group(s):

Emission Limit 1: 5.0000 % OPACITY

Emission Limit 2:

Standard Emission: 5.0000 % OPACITY

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: Other Case-by-Case

Other Applicable Requirements:

Control Method: (N)

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

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Facility Information

RBLC ID:	NV-0034 (final)	Date Determination
Corporate/Company Name:	LAS VEGAS COGENERATION, LP	Last Updated: 04/12/2005
Facility Name:	LAS VEGAS COGENERATION FACILITY	Permit Number: 329
Facility Contact:	DAVID M. ROBB 7026420331	Permit Date: 11/13/2000 (actual)
Facility Description:	THIS IS A UTILITY POWER GENERATING PLANT OPERATING IN COMBINED CYCLE WITH A NOMINAL POWER OUTPUT OF 240 MW AFTER THE MODIFICATION.	FRS Number: 110006175575
Permit Type:	D: Both B (Add new process to existing facility) & C (Modify process at existing facility)	SIC Code: 4911
Permit URL:		NAICS Code: 221112

EPA Region: 9 **COUNTRY:** USA
Facility County: CLARK
Facility State: NV
Facility ZIP Code: 89030
Permit Issued By: CLARK CO. DEPT. OF AIR QUALITY AND ENVIRONMENTAL MANAGEMENT (Agency Name)
 MR. DAVID LEE(Agency Contact) (702) 455-1673 LEE@CO.CLARK.NV.US
Other Agency Contact Info: CLARK CO. DAQM: (702) 455-5942
Permit Notes: THE MODIFICATION CONSISTS OF THE CONSTRUCTION OF FOUR GE LM-6000 COMBUSTION TURBINE GENERATORS, TWO HEAT RECOVERY STEAM GENERATORS, AND THE ANCILLARY EQUIPMENT. A REPORT OF THE BACT DETERMINATION FOR THE EXISTING UNIT #1 TURBINE GENERATOR WAS SUBMITTED IN DECEMBER 1990. THIS REPORT PERTAINS TO THE BACT DETERMINATION FOR THE MODIFICATION IN 2000.

Process/Pollutant Information

PROCESS TURBINE, COMBINED CYCLE
NAME:
Process Type: 15.210 (Natural Gas (includes propane & liquified petroleum gas))
Primary Fuel: NATURAL GAS
Throughput: 176.00 MW
Process Notes: UNIT #3 HAD TO BE REPLACED AND COMPLIANCE TEST IS YET TO BE COMPLETED AS OF JANUARY 2005. COMPLIANCE FOR THE REMAINING THREE NEW UNITS HAS BEEN VERIFIED.

POLLUTANT NAME: Carbon Monoxide
CAS Number: 630-08-0
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds)
Emission Limit 1: 2.0000 PPMVD @ 15% O2 ONE-HOUR AVERAGE, FOR EACH
Emission Limit 2: 1.9200 LB/H FOR EACH COMBUSTION TURBINE
Standard Emission: 2.0000 PPM @ 15% O2
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (B) GOOD COMUSTION DESIGN TO MINIMIZE CO FORMATION AND USE OF THE OXIDATION CATALYST TO CONVERT CO INTO CARBON DIOXIDE
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: THE SAME EMISSION LIMITS APPLY TO EACH OF THE FOUR COMBUSTION TURBINES, WHICH ARE OF THE SAME MODEL, GE LM-6000-PC.

POLLUTANT NAME: Nitrogen Oxides (NOx)
CAS Number: 10102
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))
Emission Limit 1: 2.0000 PPMVD @ 15% O2 THREE-HOUR AVERAGE
Emission Limit 2: 3.2000 LB/H THREE-HOUR AVERAGE, EACH
Standard Emission: 2.0000 PPM @ 15% O2
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (B) WATER INJECTION AND SCR USING AQUEOUS AMMONIA
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: THE SAME EMISSION LIMITS APPLY TO EACH OF THE FOUR NEW COMBUSTION TURBINES, WHICH ARE OF THE SAME MODEL, GE LM-6000 PC.

POLLUTANT NAME: Volatile Organic Compounds (VOC)

CAS Number: VOC
Test Method: Unspecified
Pollutant Group(s): (Volatile Organic Compounds (VOC))
Emission Limit 1: 2.0000 LB/H EACH
Emission Limit 2: 7.9200 T/YR
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (B) USE OF NATURAL GAS AS THE FUEL PLUS THE OXIDATION CATALYST
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: THE SAME EMISSION LIMITS APPLY TO EACH OF THE FOUR NEW COMBUSTION TURBINES, WHICH ARE OF THE SAME MODEL, GE LM-6000 PC.

POLLUTANT NAME: Sulfur Oxides (SOx)
CAS Number: 7446
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Sulfur (SOx))
Emission Limit 1: 0.3000 LB/H EACH
Emission Limit 2: 1.1900 T/YR
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (P) NATURAL GAS WITH LOW SULFUR CONTENT
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: THE SAME EMISSION LIMITS APPLY TO EACH OF THE FOUR NEW COMBUSTION TURBINES, WHICH ARE OF THE SAME MODEL, GE LM-6000 PC.

POLLUTANT NAME: Ammonia (NH3)
CAS Number: 7664-41-7
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds)
Emission Limit 1: 5.8300 LB/H THREE-HOUR AVERAGE, EACH
Emission Limit 2: 21.9500 T/YR
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: Other Case-by-Case
Other Applicable Requirements:
Control Method: (P) INJECTION RATE OF AMMONIA IS OPTIMIZED TO MINIMIZE SLIP.
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: THE SAME EMISSION LIMITS APPLY TO EACH OF THE FOUR NEW COMBUSTION TURBINES, WHICH ARE OF THE SAME MODEL, GE LM-6000 PC.

POLLUTANT NAME: Particulate matter, filterable < 10 μ (FPM10)
CAS Number: PM
Test Method: Unspecified
Pollutant Group(s): (Particulate Matter (PM))
Emission Limit 1: 2.5000 LB/H EACH
Emission Limit 2: 9.9000 T/YR
Standard Emission:
Did factors, other than air pollution technology considerations influence the BACT decisions: U

Case-by-Case Basis: Other Case-by-Case
Other Applicable Requirements:
Control Method: (P) USE OF NATURAL GAS, A CLEAN FUEL FOR WHICH PM EMISSION IS LITTLE.
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes: THE EMISSION LIMITS APPLY TO EACH OF THE FOUR NEW COMBUSTION TURBINES, WHICH ARE OF THE SAME MODEL, GE LM-6000 PC.

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Facility Information

RBLC ID:	CA-1050 (final)	Date Determination	
		Last Updated:	11/04/2005
Corporate/Company Name:	IDC BELLINGHAM, LLC	Permit Number:	ASPIDC
Facility Name:	IDC BELLINGHAM, LLC	Permit Date:	09/11/2000 (actual)
Facility Contact:		FRS Number:	NEW, NOT FOUND
Facility Description:		SIC Code:	351
Permit Type:	A: New/Greenfield Facility	NAICS Code:	333611
Permit URL:			
EPA Region:	9	COUNTRY:	USA
Facility County:			
Facility State:	CA		
Facility ZIP Code:			
Permit Issued By:	CALIFORNIA AIR RESOURCES BOARD (Agency Name) MR. TODD WONG(Agency Contact) (916)324-8031 twong@arb.ca.gov		
Other Agency Contact Info:	NON-DISTRICT, GARY ROSCOE, (508) 792-7650,		
Permit Notes:	CARB ID: 655.0, OPERATING PERMIT DATE: , STARTUP DATE: NEW CONSTR MODIFICATION: NEW CONSTRUCTION TECH STATUS: BACT DETERMINATION NO SOURCE TEST AVAILABLE		

Process/Pollutant Information

PROCESS GAS TURBINE: COMBINED CYCLE >= 50 MW
NAME:
Process Type: 15.210 (Natural Gas (includes propane & liquified petroleum gas))
Primary Fuel: NATURAL GAS
Throughput: 0 GAS TURBINE, 170 MW;
Process Notes: EQUIP: , MFR: GENERAL ELECTRIC, TYPE: COMBINED CYCLE, MODEL: 7FA, FUNC EQUIP: TO GENERATE POWER, FUEL_TYPE: , SCHEDULE: CONTINUOUS, H/D: 24, D/W: 7, W/Y: 52, NOTES: THESE LIMITS ON NOX, CO,VOC AND NH3 ARE AS STRINGENT OR MORE STRINGENT THAN PRIOR EXISTING SCAQMD BACT FOR THIS SOURCE CATEGORY. THESE LIMITS HAVE NOT BEEN VERIFIED BY PERFORMANCE DATA. THESE LIMITS WERE NEGOTIATED WITH THE APPLICANT AND ARE PRESUMABLY BASED ON VENDOR GUARANTEES. SOURCE TEST RESULTS:

POLLUTANT NAME: Carbon Monoxide
CAS Number: 630-08-0
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds)
Emission Limit 1: 2.0000 PPMVD @ 15% O2 1H
Emission Limit 2:
Standard Emission: 2.0000 PPM @ 15% O2
Did factors, other than air pollution technology considerations influence the BACT decisions: U
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements: N/A
Control Method: (A) SCR SYSTEM AND OXIDATION CATALYST

Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Volatile Organic Compounds (VOC)
CAS Number: VOC
Test Method: Unspecified
Pollutant Group(s): (Volatile Organic Compounds (VOC))
Emission Limit 1: 1.0000 PPMVD @ 15% O2 1H
Emission Limit 2:
Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: U

Case-by-Case Basis: BACT-PSD
Other Applicable Requirements: N/A
Control Method: (A) SCR SYSTEM AND OXIDATION CATALYST
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Particulate Matter (PM)
CAS Number: PM
Test Method: Unspecified
Pollutant Group(s): (Particulate Matter (PM))
Emission Limit 1: 0.0080 LB/MMBTU
Emission Limit 2:
Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: U

Case-by-Case Basis: BACT-PSD
Other Applicable Requirements: N/A
Control Method: (N)
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Sulfur Oxides (SOx)
CAS Number: 7446
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Sulfur (SOx))
Emission Limit 1: 0.0020 LB/MMBTU
Emission Limit 2:
Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: U

Case-by-Case Basis: BACT-PSD
Other Applicable Requirements: N/A
Control Method: (P)
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

POLLUTANT NAME: Nitrogen Oxides (NOx)
CAS Number: 10102
Test Method: Unspecified
Pollutant Group(s): (InOrganic Compounds , Oxides of Nitrogen (NOx) , Particulate Matter (PM))
Emission Limit 1: 1.5000 PPMVD @ 15% O2 1H

Emission Limit 2:

Standard Emission: 1.5000 PPM @ 15% O2

Did factors, other than air pollution technology considerations influence the BACT decisions: U

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements: N/A

Control Method: (A) SCR SYSTEM, AND OXIDATION CATALYST

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes: THESE LIMITS ON NOX, CO,VOC AND NH3 ARE AS STRINGENT OR MORE STRINGENT THAN PRIOR EXISTING SCAQMD BACT FOR THIS SOURCE CATEGORY. THESE LIMITS HAVE NOT BEEN VERIFIED BY PERFORMANCE DATA. THESE LIMITS WERE NEGOTIATED WITH THE APPLICANT AND ARE PRESUMABLY BASED ON VENDOR GUARANTEES.

POLLUTANT NAME: Ammonia (NH3)

CAS Number: 7664-41-7

Test Method: Unspecified

Pollutant Group(s): (InOrganic Compounds)

Emission Limit 1: 2.0000 PPMVD @ 15% O2 1H

Emission Limit 2:

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: U

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements: N/A

Control Method: (N)

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

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