Malcolm Montoya
Governor

E. Scott Paisano
Lt. Governor

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August 30, 2012

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AIR PERMITS SECTION
6PD-R

Bonnie Braganza
Federal Minor NSR Permit Coordinator (PDR)
U.S. ENVIRONMENTAL PROTECTION AGENCY REGION 6
1445 Ross Avenue Suite 1200
Dallas, Texas 75202-2733

Dear Ms. Braganza:

The Pueblo of Sandia is submitting for your review the Federal Minor Source Review application under EPA's New Source Review (NSR) Program in Indian Country. This is in regards to the sources at the Sandia Resort and Casino located at 30 Rainbow Road NE, Albuquerque, New Mexico. On July 13, 2009, a notification was submitted to EPA pursuant to the Transition Memorandum entitled "Potential to Emit (PTE) Transition Policy for Part 71 Implementation in Indian Country. Since the new minor NSR program adopts and implements a mechanism that can be used to limit PTE, the transition policy has been terminated by EPA. For sources such as Sandia Resort and Casino, that are currently operating under the Transition Memo, synthetic minor permits are now required. The Pueblo appreciates your review of the application and future issuance of this synthetic minor permit.

If you have any questions or concerns, please contact Scott Bulgrin, Water Quality Manager at (505) 771-5081 or Tom Thal, Facility Manager at (505) 796-7750.

Sincerely,

Avila w.c.
Malcolm Montoya
Governor

SJB/

Cc: Boyce J. Huey CEM, EnerNOC Inc.
Don DiCristofaro, Blue Sky Environmental LLC
Genevieve McGeisey, Eight Northern Indian Pueblo Council Environmental Specialist
Frank Chaves, Pueblo of Sandia Environment Director
Joseph M. Rodriquez, Sandia Resort and Casino Facility Superintendent
Tom Thal, Sandia Resort and Casino Facility Department
Scott Bulgrin, Pueblo of Sandia Environment Department
File

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Narrative Description

On July 13, 2009 the Sandia Resort and Casino (the "Casino"), an instrumentality of a federally recognized Indian tribe submitted a notification regarding three electrical generators at the Casino located at 30 Rainbow Road NE in Albuquerque, New Mexico (See Attachment 1) at the Pueblo of Sandia Indian land. The notification was submitted pursuant to the EPA Memorandum entitled *Potential to Emit (PTE) Transition Policy for Part 71 Implementation in Indian Country* from John S. Seitz, Director, Office of Air Quality Planning and Standards, and Eric V. Schaeffer, Director, Office of Regulatory Enforcement, dated March 7, 1999 ("EPA Transition Memo"). As per the EPA Transition Memo, the EPA treated a source as non-major for the purposes of the Federal Operating Permits Program (Part 71) if its actual emissions are and remain below 50 percent of the PTE thresholds for major source status, for every consecutive 12-month period (beginning with the 12 months immediately preceding March, 1999) and it maintains adequate records to demonstrate that its actual emissions are kept below these levels. On July 1, 2011, the EPA promulgated the final rule for New Source Review ("NSR") in Indian Country. The final rule became effective on August 30, 2011. The EPA Transition Memo specifies that the PTE transition policy terminates when EPA adopts and implements a mechanism that can be used to limit PTE or EPA explicitly provides such a mechanism. Since this new minor NSR program for Indian Country adopts and implements a mechanism that can be used to limit PTE the PTE transition policy has been terminated by EPA. For sources, such as the Casino, that are currently operating under the EPA Transition Memo, synthetic minor permit applications are required by EPA by September 4, 2012.

The facility operates the following emission sources:

- Two Detroit Diesel Model DDC 16V-4000 rated diesel stand-by generators, 2935 hp each
- One Detroit Deisel Model MTV 1000 rated diesel stand-by generator, 1,676 hp
- Thirteen 2.07 mmBtu/hr natural gas fired boilers
- Four 0.99 mmBtu/hr natural gas fired boilers

The three Detroit Diesel generators are existing units and are currently used solely for emergency power during periods when electrical power from the local utilities is not available and for non-emergency demand response ("DR"). The generators are driven by diesel-fueled reciprocating internal combustion engines ("RICE") which are sources of emissions of regulated air pollutants and hazardous air pollutants ("HAPs"). The HAP emissions of the engines are insignificant as defined by 40 CFR 71.5(11)(ii)(B)[1].

[1] Potential to emit of any HAP from any single emission unit shall not exceed 1,000 lb per year or the de minimis level established under section 112(g) of the Act, whichever is less.

The Casino has entered the three generators in a DR program that could be called a maximum of 100 hours per year. In addition, the generators continue to operate for emergencies when electrical power is not available from the local utility and for testing/maintenance. All electrical generation is used onsite; electrical power is not sent to the grid. The generators are owned and operated by the Casino; however, participation in the DR program is managed by EnerNOC, Inc.

Bernalillo County, New Mexico falls is currently designated as an unclassified/attainment area with a major source threshold for oxides of nitrogen ("NO_x") of 100 tons per year ("tpy").

Attached (see Attachment 2) is a facility emissions analysis that includes all fuel burning sources onsite. Both criteria pollutant and greenhouse gas emissions are provided. In addition the proposed worst-case rates are included. The emissions from the generators are derived from the attached (see Attachment 3) Exhaust Emission Data Sheets as provided by the engine manufacturer for generators #1 and 2 and from EPA AP-42 for generator #3. In addition to the three generators, there are seventeen natural gas-fired boilers. No emission controls are used. The allowable emissions are based on 500 hours per year for all generators and a convervative 8.760 hours per year of operation for the natural gas fired units. Using this assumption the worst-case annual NO_x emissions from the facility are 45.6 tpy, well below the 100 tpy major source threshold. Since the engines do not operate at 100% load, fuel usage from the three engines will be tracked to ensure that the 12-month rolling average does not exceed 183,211.8 gallons (see Attachement 2, Operating and Firing Rates for details). Also, shown in the attached emissions analysis, the potential HAP emissions are insignificant as per 40 CFR 71.5(11)(ii)(B) since the PTE is less than 1,000 lbs/year. The Casino will keep records onsite to demonstrate that emissions are below these thresholds. These records will include hours of operation and fuel usage for each generator.

Criteria Pollutant Emissions Estimates

The criteria pollutant emissions estimates (allowable and PTE) along with the source of the emission factors are presented in Attachment 2. Greenhouse gas emission estimates are also provided in Attachment 2. The emission factors used for the engines and other fuel burning equipment are included. The engine specification data sheets for the two Detroit Diesel Model DDC 16V-4000 engines are presented in Attachment 3.

Operating and Firing Rates

The proposed operating and firing rates are provided in Attachment 2.

Modeling Analysis

An air quality modeling analysis is not provided since (1) these are existing sources and (2) it is not believed that these sources cause adverse air quality effects.

Endangered Species Act

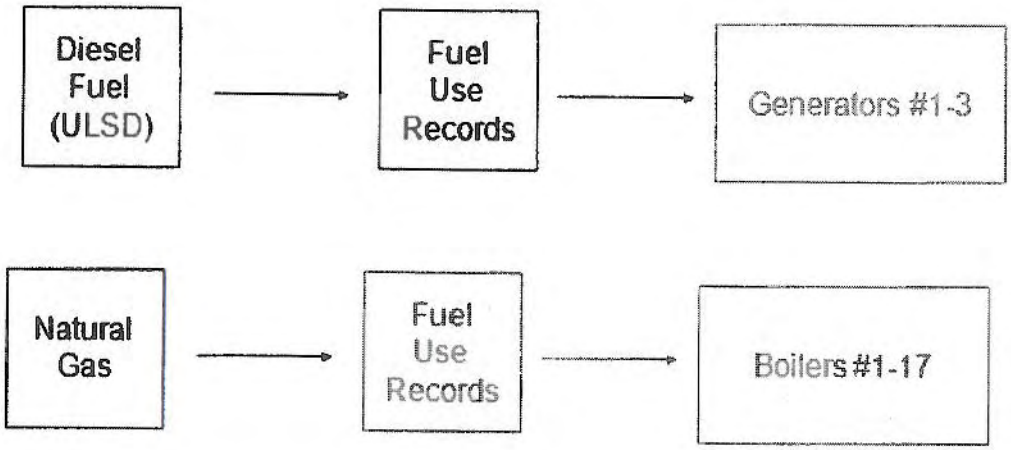
Since these are existing sources, there will be no jeopardization to the continued existence of any listed species or result in the destruction or adverse modification of designated critical habitat of such species.

National Historic Preservation Act

Since these are existing sources, there will be no effect on cultural resources.

Process Flow Diagrams

The Process Flow Diagrams for the facility's fuel burning equipment is as follows:



The three generators use ultra low sulfur diesel fuel only (sulfur content 0.0015% or less). Each generator has its own 500 gallon storage fuel tank. All three generators were installed prior to June 12, 2006. Thus, the three generators operate under the EPA RICE NESHAP (40 CFR 63 Subpart ZZZZ). The boilers use natural gas only.

Forms

The EPA Application for Synthetic Minor Limit (Form SYNMIN) is included in Attachment 4 and the Application for New Construction (Form NEW) is included in Attachment 5. Although these are existing sources, Form NEW is supplied since this is the first time EPA will be reviewing these sources for a permit.

Facility Emissions Analysis - Allowable

Sandia Resort and Casino
30 Rainbow Road NE
Albuquerque, NM 87113-2156

Source	Make	Model	Size (hp)	Size (kW)		Fuel	Fuel Use (gph or scfh)	Heat Input (mmBtu/hr)	Emissions (lb/hr)							Hours	Proposed Allowable Emissions (tpy)									
									NOx	CO	SO2	PM	PM2.5	PM10	VOC	Pb		NOx	CO	SO2	PM	PM2.5	PM10	VOC	Pb	Fluorides	H2SO4	H2S	TRS
Generator #1	Detroit Diesel	DDC 16V-4000	2935	2190	Diesel	133.2	17.98	44.85	55.00	0.03	2.59	2.59	2.59	6.28	0	500	11.16	13.75	6.81E-03	0.65	0.65	0.65	1.57	0	0	0	0	0
Generator #2	Detroit Diesel	DDC 16V-4000	2935	2190	Diesel	133.2	17.98	44.85	55.00	0.03	2.59	2.59	2.59	6.28	0	500	11.16	13.75	6.81E-03	0.65	0.65	0.65	1.57	0	0	0	0	0
Generator #3	Detroit Diesel	MTV 1000	1678	1250	Diesel	100.0	13.50	40.22	9.22	0.02	1.17	1.17	1.17	1.18	0	500	10.06	2.30	5.11E-03	0.29	0.29	0.29	0.30	0	0	0	0	0
Boiler #1						Natural Gas	2029.4	2.07	0.20	0.17	1.22E-03	1.54E-02	1.54E-02	1.54E-02	1.12E-02	1.01E-06	8760	0.89	0.75	5.39E-03	0.07	0.07	0.07	0.05	4.44E-06	0	0	0	0
Boiler #2						Natural Gas	2029.4	2.07	0.20	0.17	1.22E-03	1.54E-02	1.54E-02	1.54E-02	1.12E-02	1.01E-06	8760	0.89	0.75	5.39E-03	0.07	0.07	0.07	0.05	4.44E-06	0	0	0	0
Boiler #3						Natural Gas	2029.4	2.07	0.20	0.17	1.22E-03	1.54E-02	1.54E-02	1.54E-02	1.12E-02	1.01E-06	8760	0.89	0.75	5.39E-03	0.07	0.07	0.07	0.05	4.44E-06	0	0	0	0
Boiler #4						Natural Gas	2029.4	2.07	0.20	0.17	1.22E-03	1.54E-02	1.54E-02	1.54E-02	1.12E-02	1.01E-06	8760	0.89	0.75	5.39E-03	0.07	0.07	0.07	0.05	4.44E-06	0	0	0	0
Boiler #5						Natural Gas	2029.4	2.07	0.20	0.17	1.22E-03	1.54E-02	1.54E-02	1.54E-02	1.12E-02	1.01E-06	8760	0.89	0.75	5.39E-03	0.07	0.07	0.07	0.05	4.44E-06	0	0	0	0
Boiler #6						Natural Gas	2029.4	2.07	0.20	0.17	1.22E-03	1.54E-02	1.54E-02	1.54E-02	1.12E-02	1.01E-06	8760	0.89	0.75	5.39E-03	0.07	0.07	0.07	0.05	4.44E-06	0	0	0	0
Boiler #7						Natural Gas	2029.4	2.07	0.20	0.17	1.22E-03	1.54E-02	1.54E-02	1.54E-02	1.12E-02	1.01E-06	8760	0.89	0.75	5.39E-03	0.07	0.07	0.07	0.05	4.44E-06	0	0	0	0
Boiler #8						Natural Gas	2029.4	2.07	0.20	0.17	1.22E-03	1.54E-02	1.54E-02	1.54E-02	1.12E-02	1.01E-06	8760	0.89	0.75	5.39E-03	0.07	0.07	0.07	0.05	4.44E-06	0	0	0	0
Boiler #9						Natural Gas	2029.4	2.07	0.20	0.17	1.22E-03	1.54E-02	1.54E-02	1.54E-02	1.12E-02	1.01E-06	8760	0.89	0.75	5.39E-03	0.07	0.07	0.07	0.05	4.44E-06	0	0	0	0
Boiler #10						Natural Gas	2029.4	2.07	0.20	0.17	1.22E-03	1.54E-02	1.54E-02	1.54E-02	1.12E-02	1.01E-06	8760	0.89	0.75	5.39E-03	0.07	0.07	0.07	0.05	4.44E-06	0	0	0	0
Boiler #11						Natural Gas	2029.4	2.07	0.20	0.17	1.22E-03	1.54E-02	1.54E-02	1.54E-02	1.12E-02	1.01E-06	8760	0.89	0.75	5.39E-03	0.07	0.07	0.07	0.05	4.44E-06	0	0	0	0
Boiler #12						Natural Gas	2029.4	2.07	0.20	0.17	1.22E-03	1.54E-02	1.54E-02	1.54E-02	1.12E-02	1.01E-06	8760	0.89	0.75	5.39E-03	0.07	0.07	0.07	0.05	4.44E-06	0	0	0	0
Boiler #13						Natural Gas	2029.4	2.07	0.20	0.17	1.22E-03	1.54E-02	1.54E-02	1.54E-02	1.12E-02	1.01E-06	8760	0.89	0.75	5.39E-03	0.07	0.07	0.07	0.05	4.44E-06	0	0	0	0
Boiler #14						Natural Gas	2029.4	2.07	0.20	0.17	1.22E-03	1.54E-02	1.54E-02	1.54E-02	1.12E-02	1.01E-06	8760	0.89	0.75	5.39E-03	0.07	0.07	0.07	0.05	4.44E-06	0	0	0	0
Boiler #15						Natural Gas	970.8	0.99	0.10	0.08	5.82E-04	1.54E-02	1.54E-02	1.54E-02	5.34E-03	4.85E-07	8760	0.43	0.36	2.56E-03	0.07	0.07	0.07	0.02	2.13E-06	0	0	0	0
Boiler #16						Natural Gas	970.8	0.99	0.10	0.08	5.82E-04	1.54E-02	1.54E-02	1.54E-02	5.34E-03	4.85E-07	8760	0.43	0.36	2.56E-03	0.07	0.07	0.07	0.02	2.13E-06	0	0	0	0
Boiler #17						Natural Gas	970.8	0.99	0.10	0.08	5.82E-04	1.54E-02	1.54E-02	1.54E-02	5.34E-03	4.85E-07	8760	0.43	0.36	2.56E-03	0.07	0.07	0.07	0.02	2.13E-06	0	0	0	0
TOTAL																		45.84	40.64	0.10	2.74	2.74	2.74	4.16	6.83E-06	0.00	0.00	0.00	0.00

Notes
Fuel Use for Generators #1 and 2 from manufacturer's data sheet. Fuel Use for Generator #3 estimated as 0.08*bhp. Estimated Heat Input = gal/hr * 135,000 Btu/gal
Engine rating conservatively assumes 100% load

Emission Factors

Emergency Generators

Generators #1-2
Source: Manufacturer
Detroit Diesel DDC 16V-4000
T1/ST/Tier-0/Uncontrolled

	g/hp-hr
NOx	6.9
VOC	0.87
CO	8.5
PM, PM2.5, PM10	0.4

Generator #3
Source: EPA AP-42, Fifth Edition, October 1996

Diesel > 600 hp	lb/hp-hr
	0.024
	7.05E-04
	5.50E-03
	0.0007
	lb/mmBtu
SOx	0.001515 Assumes 0.0015% sulfur
Pb	0
Flourides	0
H2SO4	0
H2S	0
TRS	0

Boilers
Source: EPA AP-42, Fifth Edition, October 1996, Tables 1.4-1 and 1.4-2 for Small Boilers (< 100 mmBtu/hr)

	lb/10^6 scf
NOx	100
VOC	5.5
CO	84
PM, PM2.5, PM10	7.6
SOx	0.6
Pb	0.0005
Flourides	0
H2SO4	0
H2S	0
TRS	0

Hazardous Air Pollutant (HAP) Analysis for One Engine
Source: EPA AP-42, Tables 3.4-3 and 3.4-4, Engines > 600 hp

	lb/mmBtu	lb/hr	PTE (8,760 hours) tpy
Benzene	7.76E-04	1.40E-02	123.2
Toluene	2.81E-04	5.05E-03	44.3
Xylenes	1.93E-04	3.47E-03	30.4
Propylene	2.79E-03	5.02E-02	439.5
Formaldehyde	7.89E-05	1.42E-03	12.4
Acetaldehyde	2.52E-05	4.53E-04	4.0
Acrolein	7.88E-06	1.42E-04	1.2
Total PAH	2.12E-04	3.81E-03	33.4

Facility Emissions Analysis - Potential

Sandia Resort and Casino
30 Rainbow Road NE
Albuquerque, NM 87113-2156

Source	Make	Model	Size (hp)	Size (MW)	Fuel	Fuel Use (gph or scfh)	Heat Input (mmBtu/hr)	Emissions (lb/hr)								Hours	Potential Emissions (tpy)									
								NOx	CO	SO2	PM	PM2.5	PM10	VOC	Pb		NOx	CO	SO2	PM	PM2.5	PM10	VOC	Pb	Fluorides	H2SO4	H2S	TRS
Generator #1	Detroit Diesel	DDC 16V-4000	2935	2190	Diesel	133.2	17.98	44.85	55.00	0.03	2.59	2.59	2.59	8.28	0	8760	196.55	240.90	1.19E-01	11.34	11.34	11.34	27.49	0	0	0	0	0
Generator #2	Detroit Diesel	DDC 16V-4000	2935	2190	Diesel	133.2	17.98	44.85	55.00	0.03	2.59	2.59	2.59	8.28	0	8760	196.55	240.90	1.19E-01	11.34	11.34	11.34	27.49	0	0	0	0	0
Generator #3	Detroit Diesel	MTV 1000	1676	1250	Diesel	100.0	13.50	40.22	9.22	0.02	1.17	1.17	1.17	1.18	0	8760	176.18	40.37	8.95E-02	5.14	5.14	5.14	5.18	0	0	0	0	0
Boiler #1					Natural Gas	2029.4	2.07	0.20	0.17	1.22E-03	1.54E-02	1.54E-02	1.54E-02	1.12E-02	1.01E-06	8760	0.89	0.75	5.33E-03	0.07	0.07	0.07	0.05	4.44E-06	0	0	0	0
Boiler #2					Natural Gas	2029.4	2.07	0.20	0.17	1.22E-03	1.54E-02	1.54E-02	1.54E-02	1.12E-02	1.01E-06	8760	0.89	0.75	5.33E-03	0.07	0.07	0.07	0.05	4.44E-06	0	0	0	0
Boiler #3					Natural Gas	2029.4	2.07	0.20	0.17	1.22E-03	1.54E-02	1.54E-02	1.54E-02	1.12E-02	1.01E-06	8760	0.89	0.75	5.33E-03	0.07	0.07	0.07	0.05	4.44E-06	0	0	0	0
Boiler #4					Natural Gas	2029.4	2.07	0.20	0.17	1.22E-03	1.54E-02	1.54E-02	1.54E-02	1.12E-02	1.01E-06	8760	0.89	0.75	5.33E-03	0.07	0.07	0.07	0.05	4.44E-06	0	0	0	0
Boiler #5					Natural Gas	2029.4	2.07	0.20	0.17	1.22E-03	1.54E-02	1.54E-02	1.54E-02	1.12E-02	1.01E-06	8760	0.89	0.75	5.33E-03	0.07	0.07	0.07	0.05	4.44E-06	0	0	0	0
Boiler #6					Natural Gas	2029.4	2.07	0.20	0.17	1.22E-03	1.54E-02	1.54E-02	1.54E-02	1.12E-02	1.01E-06	8760	0.89	0.75	5.33E-03	0.07	0.07	0.07	0.05	4.44E-06	0	0	0	0
Boiler #7					Natural Gas	2029.4	2.07	0.20	0.17	1.22E-03	1.54E-02	1.54E-02	1.54E-02	1.12E-02	1.01E-06	8760	0.89	0.75	5.33E-03	0.07	0.07	0.07	0.05	4.44E-06	0	0	0	0
Boiler #8					Natural Gas	2029.4	2.07	0.20	0.17	1.22E-03	1.54E-02	1.54E-02	1.54E-02	1.12E-02	1.01E-06	8760	0.89	0.75	5.33E-03	0.07	0.07	0.07	0.05	4.44E-06	0	0	0	0
Boiler #9					Natural Gas	2029.4	2.07	0.20	0.17	1.22E-03	1.54E-02	1.54E-02	1.54E-02	1.12E-02	1.01E-06	8760	0.89	0.75	5.33E-03	0.07	0.07	0.07	0.05	4.44E-06	0	0	0	0
Boiler #10					Natural Gas	2029.4	2.07	0.20	0.17	1.22E-03	1.54E-02	1.54E-02	1.54E-02	1.12E-02	1.01E-06	8760	0.89	0.75	5.33E-03	0.07	0.07	0.07	0.05	4.44E-06	0	0	0	0
Boiler #11					Natural Gas	2029.4	2.07	0.20	0.17	1.22E-03	1.54E-02	1.54E-02	1.54E-02	1.12E-02	1.01E-06	8760	0.89	0.75	5.33E-03	0.07	0.07	0.07	0.05	4.44E-06	0	0	0	0
Boiler #12					Natural Gas	2029.4	2.07	0.20	0.17	1.22E-03	1.54E-02	1.54E-02	1.54E-02	1.12E-02	1.01E-06	8760	0.89	0.75	5.33E-03	0.07	0.07	0.07	0.05	4.44E-06	0	0	0	0
Boiler #13					Natural Gas	2029.4	2.07	0.20	0.17	1.22E-03	1.54E-02	1.54E-02	1.54E-02	1.12E-02	1.01E-06	8760	0.89	0.75	5.33E-03	0.07	0.07	0.07	0.05	4.44E-06	0	0	0	0
Boiler #14					Natural Gas	2029.4	2.07	0.20	0.17	1.22E-03	1.54E-02	1.54E-02	1.54E-02	1.12E-02	1.01E-06	8760	0.89	0.75	5.33E-03	0.07	0.07	0.07	0.05	4.44E-06	0	0	0	0
Boiler #15					Natural Gas	970.6	0.99	0.10	0.08	5.82E-04	1.54E-02	1.54E-02	1.54E-02	5.34E-03	4.85E-07	8760	0.43	0.36	2.55E-03	0.07	0.07	0.07	0.02	2.13E-06	0	0	0	0
Boiler #16					Natural Gas	970.6	0.99	0.10	0.08	5.82E-04	1.54E-02	1.54E-02	1.54E-02	5.34E-03	4.85E-07	8760	0.43	0.36	2.55E-03	0.07	0.07	0.07	0.02	2.13E-06	0	0	0	0
Boiler #17					Natural Gas	970.6	0.99	0.10	0.08	5.82E-04	1.54E-02	1.54E-02	1.54E-02	5.34E-03	4.85E-07	8760	0.43	0.36	2.55E-03	0.07	0.07	0.07	0.02	2.13E-06	0	0	0	0
TOTAL																	580.56	533.31	0.41	28.96	28.96	28.96	80.89	6.82E-06	0.00	0.00	0.00	0.00

Notes
Fuel Use for Generators #1 and 2 from manufacturer's data sheet. Fuel Use for Generator #3 estimated as 0.08*kW. Estimated Heat Input = gal/hr * 135,000 Btu/gal
Engine rating conservatively assumes 100% load

Emission Factors

Emergency Generators — Generators #1,2 — Source: Manufacturer — Detroit Diesel DDC 16V-4000 T160 7039-0380

	g/hp-hr
NOx	6.9
VOC	0.97
CO	8.5
PM, PM2.5, PM10	0.4

Generator #3 — Source: EPA AP-42, Fifth Edition, October, 1996

Diesel > 600 hp	lb/hp-hr
	0.004
	7.05E-04
	5.50E-03
	0.0007
	lb/mmBtu
SOx	0.001515 Assumes 0.0015% sulfur
Pb	0
Flourides	0
H2SO4	0
H2S	0
TRS	0

Boilers
Source: EPA AP-42, Fifth Edition, October, 1996, Tables 1.4-1 and 1.4-2 for Small Boilers (< 100 mmBtu/hr)

	lb/10^6 scf
NOx	100
VOC	5.5
CO	84
PM, PM2.5, PM10	7.6
SOx	0.6
Pb	0.0005
Flourides	0
H2SO4	0
H2S	0
TRS	0

Hazardous Air Pollutant (HAP) Analysis for One Engine
Source: EPA AP-42, Tables 3.4-3 and 3.4-4, Engines > 600 hp

	lb/mmBtu	lb/hr	PTE (8,760 hours) lbs
Benzene	7.78E-04	1.40E-02	122.2
Toluene	2.81E-04	5.05E-03	44.3
Xylenes	1.93E-04	3.47E-03	30.4
Propylene	2.79E-03	5.02E-02	439.5
Formaldehyde	7.89E-05	1.42E-03	12.4
Acetaldehyde	2.52E-05	4.53E-04	4.0
Acrolein	7.88E-06	1.42E-04	1.2
Total PAH	2.12E-04	3.81E-03	33.4

Facility Emissions Analysis - Greenhouse Gas Emissions

Sandia Resort and Casino
30 Rainbow Road NE
Albuquerque, NM 87113-2156

Source	Make	Model	Size (kW)	Size (bhp)	Fuel	Fuel Use (gph or scfh)	Heat Input (mmBtu/hr)	Hours	CO2	CH4	N2O	HFCs	PFCs	SF6	CO2e
												(metric tons)			
Generator #1	Detroit Diesel	DDC 16V-4000	2935	2190	Diesel	133.2	17.98	500	679.75	0.03	0.01	0.00	0.00	0.00	682.04
Generator #2	Detroit Diesel	DDC 16V-4000	2935	2190	Diesel	133.2	17.98	500	679.75	0.03	0.01	0.00	0.00	0.00	682.04
Generator #3	Detroit Diesel	MTV 1000	1676	1250	Diesel	100.0	13.50	500	510.44	0.02	0.00	0.00	0.00	0.00	512.16
Boiler #1					Natural Gas	2029.4	2.07	8760	968.96	0.02	0.00	0.00	0.00	0.00	969.91
Boiler #2					Natural Gas	2029.4	2.07	8760	968.96	0.02	0.00	0.00	0.00	0.00	969.91
Boiler #3					Natural Gas	2029.4	2.07	8760	968.96	0.02	0.00	0.00	0.00	0.00	969.91
Boiler #4					Natural Gas	2029.4	2.07	8760	968.96	0.02	0.00	0.00	0.00	0.00	969.91
Boiler #5					Natural Gas	2029.4	2.07	8760	968.96	0.02	0.00	0.00	0.00	0.00	969.91
Boiler #6					Natural Gas	2029.4	2.07	8760	968.96	0.02	0.00	0.00	0.00	0.00	969.91
Boiler #7					Natural Gas	2029.4	2.07	8760	968.96	0.02	0.00	0.00	0.00	0.00	969.91
Boiler #8					Natural Gas	2029.4	2.07	8760	968.96	0.02	0.00	0.00	0.00	0.00	969.91
Boiler #9					Natural Gas	2029.4	2.07	8760	968.96	0.02	0.00	0.00	0.00	0.00	969.91
Boiler #10					Natural Gas	2029.4	2.07	8760	968.96	0.02	0.00	0.00	0.00	0.00	969.91
Boiler #11					Natural Gas	2029.4	2.07	8760	968.96	0.02	0.00	0.00	0.00	0.00	969.91
Boiler #12					Natural Gas	2029.4	2.07	8760	968.96	0.02	0.00	0.00	0.00	0.00	969.91
Boiler #13					Natural Gas	2029.4	2.07	8760	968.96	0.02	0.00	0.00	0.00	0.00	969.91
Boiler #14					Natural Gas	2029.4	2.07	8760	968.96	0.02	0.00	0.00	0.00	0.00	969.91
Boiler #15					Natural Gas	970.6	0.99	8760	463.42	0.01	0.00	0.00	0.00	0.00	463.87
Boiler #16					Natural Gas	970.6	0.99	8760	463.42	0.01	0.00	0.00	0.00	0.00	463.87
Boiler #17					Natural Gas	970.6	0.99	8760	463.42	0.01	0.00	0.00	0.00	0.00	463.87
TOTAL									16320.13	0.35	0.04	0.00	0.00	0.00	16340.60

Operating and Firing Rates

Sandia Resort and Casino
30 Rainbow Road NE
Albuquerque, NM 87113-2156

Source	Make	Model	Size (kW)	Size (bhp)	Fuel		Fuel Use	Heat Input	Proposed Operating Schedule			Operating Rates (Hours)			Max Firing Rates (gals or scf)		
					Type	%S	(gph or scfh)	(mmBtu/hr)	Daily (Hrs)	Hrs/Week	Weeks/Yr	Hourly	Daily	Annual	Hourly	Daily	Annual
Generator #1	Detroit Diesel	DDC 16V-4000	2935	2190	Diesel	0.0015	133.2	17.98	24	168	52	1	24	500	133.2	3,196.8	66,600.0
Generator #2	Detroit Diesel	DDC 16V-4000	2935	2190	Diesel	0.0015	133.2	17.98	24	168	52	1	24	500	133.2	3,196.8	66,600.0
Generator #3	Detroit Diesel	MTV 1000	1676	1250	Diesel	0.0015	100.0	13.50	24	168	52	1	24	500	100.0	2,400.6	50,011.8
Boiler #1					Natural Gas		2029.4	2.1	24	168	52	1	24	8760	2,029.4	48,705.9	17,777,647.1

Attachment 1

July 13, 2009 Submittal to EPA

Joe M. Lujan
Governor

E. Scott Paisano
Lt. Governor

(505) 867-3317
Fax (505) 867-9235

www.sandiapueblo.nsn.us

July 13, 2009

COPY

Part 71 Permit Contact
AIR, PESTICIDES AND TOXICS DIVISION, MC 6PD-R
1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733

RE: Notification of the Sandia Resort and Casino Emergency Power and Peak Saving Program Electrical Generators Startup

Dear Madam or Sir:

On behalf of Sandia Pueblo, a sovereign nation located near Albuquerque, New Mexico, we submit this notification regarding three electrical generators at the Sandia Resort and Casino (Casino). The Casino is located on Sandia Pueblo land.

We submit this notification pursuant to the EPA Memorandum, *"Potential to Emit (PTE) Transition Policy for Part 71 Implementation in Indian Country"* from John S. Seitz, Director, Office of Air Quality Planning and Standards and Eric V. Schaeffer, Director, Office of Regulatory Enforcement, March 7, 1999 (EPA Transition Memo).

The generators are existing units and are currently used solely for emergency power during periods when electrical power from the local utilities is not available. The generators are driven by diesel fueled reciprocating internal combustion engines (RICE) of varying power. These engines are sources of regulated air pollutants and hazardous air pollutants. The emissions of the latter are insignificant as defined in 71.5(11)(ii)(B) CFR.

The Casino has initiated a dual use mode for the generators. In the Emergency Power mode, the generators will provide power when electrical power is not available from the local utility. Based on the operating history of the generators, the estimated usage of the generators in emergency mode will be not more than 100 hours per year per generator. In Peak Saver mode, the generators will provide electrical power back to the grid during periods of high demand by participating in the PNM Peak Saving Program. By contract, operation in peak saving mode will not exceed 100 hours per year per generator.

The generators are owned and operated by the Casino. However, participation in the Peak Saving Program will be managed by EnerNOC, Inc. The Peak Saving Program season is the period from June 1 to September 30 of each year.

Based on the operating hours stated above, and using emission factors from the manufacturer, the total facility predicted actual emissions for any criteria pollutant will be less than 50% of the threshold for a major source. Pursuant to the EPA Transition Memo, we are submitting this notification within 12 months of commencing operation of these sources in the dual modes of emergency power and peak saving operation. Emission calculations and supporting data for the emission factors are included with this notification.

The Casino understands that in order for these sources to qualify under the policy articulated in the EPA Transition Memo, in addition to this notification, actual emissions from the facility for any consecutive 12-month period (beginning with the commencement of dual-mode operation) must never exceed 50% of an applicable threshold for major source status. Also, the Casino will keep records on site to demonstrate that emissions are below these thresholds for the entire transition period. These records will include hours of operation and fuel usage for each generator.

If there are questions regarding this notification, please contact Frank Chaves at (505) 771-5085 or frchaves@sandiapueblo.nsn.us, or Paul Collins facilities superintendant of my staff at (505) 796-7752 or pcollins@sandiacasino.com.

Sincerely,

Joe M. Lujan
Governor

PC\

Enclosures

cc: Steve Kiziuk, EnerNOC, Inc.
Douglas Wolf, Esquire, Sonosky Law Firm
Frank Chaves, Pueblo of Sandia Environment Department
Paul Collins, Sandia Resort and Casino Facilities
File

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Attachment 2

Facility Emissions: Proposed Allowable, Potential, and GHG; Operating and Firing Rates

Attachment 3

Equipment Specification Sheets

TECHNICAL DATA SHEET
MTU 2000

GEN SET MODEL	MTU 2000		
FREQUENCY:	60 HZ		
P.R.P. KVA:	2323		
P.R.P. KW:	1858,4		
STAND-BY KVA:	2555		
STAND-BY KW:	2044		
VOLTAGE:	480/ 277		
COSφ:	0,8		
FUEL TANK CAPACITY LT.:	N/A		
CONTROL PANEL TYPE:	AUTO		
CONTROL PANEL MODEL:	EVOLUTION		
TYPE OF ENCLOSURE:	COVER	SILENT	S.SILENT
SIZE OF ENCLOSURE:	N.A.	N.A.	N.A.

DIMENSIONS AND WEIGHTS

LENGTH: mm	WIDTH: mm	HEIGHT: mm	WEIGHT: Kg.
N/A	N/A	N/A	N/A

Note: Standard reference conditions 25°C temperature, 100.0 mt. A.S.L., R. humidity 30%, fuel caloric power 10.200 Kcal/Kg. The mentioned power values are according to ISO8528 standards.
All ratings certified within ±5%

ENGINE MOD.:	MTU-DDC 16V4000G60
NR. OF CYLINDERS:	16
CUBIC CAPACITY: LT.	NA
ASPIRATION:	TURBOCHARGED
ELECTRONIC REG. / CLASS:	ELECTRONIC
FREQUENCY:	60 HZ
ENGINE SPEED:	1800 RPM
MAX. CONT. KW POWER AT THE FLYWHEEL :	NA
BMEP: kPA	NA
*FUEL CONSUMP. LT/H:	NA
HEAT TO WATER AND LUBRICATING OIL IN KW:	NA
HEAT TO EXHAUST IN KW:	NA
HEAT TO RADIATION IN KW:	NA
EXHAUST TEMP. IN °C:	NA
COOLING AIR FLOW m³/MIN:	NA
COMBUS. AIR FLOW m³/MIN:	NA
EXHAUST GAS FLOW m³/MIN:	NA
EMISSION CONTROL TA-LUFT / E.P.A.:	Y / Y

BRIEF DESCRIPTION OF THE ENGINE:

MTU water-cooled diesel engine suitable for generating set purposes.

STANDARD REF. CONDITIONS:
All data included in the present data sheet, refer to specific ambient conditions that can be found out in the original technical data sheet of the engine (to which you can enter directly from the CD-rom).
Fuel consumption data at full load with diesel fuel with a specific gravity of 0,85 and conforming to BS2869: 1988, Class A2.
All data based on operation under BS 5514: 1982, ISO 3046/1. 1982 and DIN 6271.

All engine values are referred to in stand-by power, except where noted.

*At 100% load in stand-by power

BRIEF DESCRIPTION OF STAMFORD ALTERNATOR:

STANDARDS:
Newage Stamford industrial generators meet the requirements of BS EN 60034 and the relevant section of other international standards such as BS5000, VDE 0530, NEMA MG1-22, IEC34, CSA C22.2-100, AS 1359.

CHARACTERISTICS:
The insulation system is class H. THF (as defined by BS EN 60034) is better than 2%. TIF (as defined by NEMA MG1 pt 22) is better than 50. The absence of brushgear and the high quality AVR ensure low levels of interference with radio transmissions. Additional RFI suppression may be supplied if required.
IP22 (NEMA 1) is the standard protection for all industrial alternators. Protection to IP23 (60° from the vertical) is available as an option at reduced ratings IP23 is standard on marine alternators.
Different type of excitation systems to satisfy every need are available on request.

MX3/X/010ED2E - 2001

ALTERNATOR MOD.:	STAMFORD HCI7H
NOTES:	INDUSTRIAL SINGLE BEARING, BRUSHLESS
FREQUENCY:	60 HZ
KVA POWER:	2323
KW POWER:	1858,4
VOLTAGE:	480/ 277
COSφ:	0,8
INSULATION CLASS:	H
AMBIENT TEMPERATURE °C:	40 C
ALTITUDE:	1000 MT. A.S.L. A.S.L.
STANDARD IP PROTECTION:	IP 22
ELECTRONIC REGULATOR:	MX321
PRECISION:	±0,5%

All the information contained in this CD-ROM is correct and true at the time of recording, but may be changed subsequently by the Company without any notice.

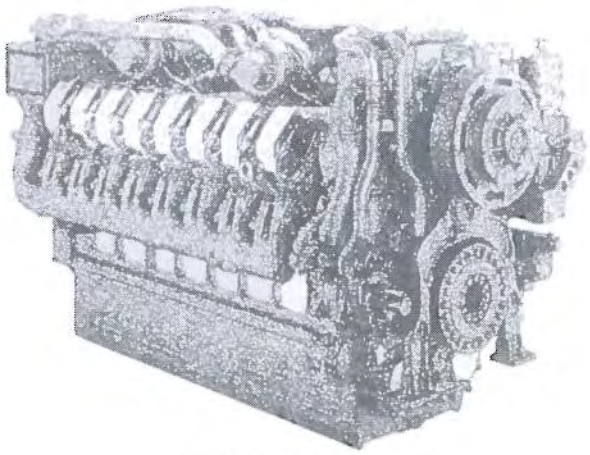
Export Department

VISA S.p.A.
Via Vallonto, 53 – 31043 Fontanelle (TV) – Italy – Tel. +39 0422 809100 Fax. +39 0422 809109
Web Site: www.visa.it or www.onis-visa.com E-mail: visa@visa.it or visa@onis-visa.com

Published July 2001
Issue nr. 01/2001

DETROIT DIESEL

DDC 16V-4000 Generator Set Power



(Shown with optional equipment)

Specifications

Engine	16V-4000
Description	Turbocharged - Aftercooled
Number of Cylinders	16
Bore and Stroke	6.50 in x 7.50 in (165 mm x 190 mm)
Displacement	3967 CID (65 L)
Compression Ratio	13.7:1
Fluid Capacity, Coolant	160 qts (150 L)
Lube Oil	264 qts (250 L)
Engine Control	DDEC
Dimensions	
Length	113.3 in (2879 mm)
Width	55.1 in (1400 mm)
Height	68.3 in (1735 mm)
Weight (dry)	14558 lbs (6603 kg)

Performance

Quad turbocharging provides optimum block loading capability

DDEC electronic control system manages the fuel system for maximum output, low smoke and precise speed control

Separate circuit charge cooling provides maximum charge air cooling for optimum performance

Common rail fuel system for exceptional fuel economy and low emission characteristics

All 1800 RPM engines meet EPA Year 2000 non-road mobile emissions standards

Four valve cylinder heads for optimum air flow and engine performance

Powertuned performance - All Series 4000 engines produce their rated power. The power you buy is the power you get.

Reliability and Durability

Individual cylinder heads reduce thermal stress and ensure long compression seal life

Rillenlager main bearings provide a combination of long life and durability

High capacity oil pump for maximum piston cooling and bearing life

No hose clamps - only ISO 6149 sealing techniques used for oil and water connections

Endurance tested in heavy duty industrial applications

One year limited warranty

Built and tested in Detroit, MI USA

Three hour dynamometer testing and oil analysis on every engine

Ceramic chrome piston rings with offset barrel design for long life to overhaul

Plateau honed cylinder liners for low oil consumption and long ring life

Features and Benefits

Separate circuit charge air cooling for low emissions and outstanding fuel economy

Optimized injection provides a significant reduction in peak cylinder pressure and engine noise

Common rail fuel system requires no mechanical adjustments

Operates at fuel temperatures up to 140°F without power deration

Operates on DF-1, DF-2, K-1, Jet A, or JP-8 with no changes to the fuel system

Designed for 500 hour or one year oil change interval – whichever occurs first

Same inexpensive diagnostic tool used on all DDEC electronic engines

True worldwide parts and service support

Optional extended warranty

Fully Supported by the Detroit Diesel Professional Network

16V-4000 Performance Chart

Model	T1637K38-G21		T1637K36-C41		T1637K38-G60			T1637K36-G80		
RPM	1500	1500	1800	1800	1500	1500	1500	1800	1800	1800
Rating HP (BKW)	2260(1686)	2055(1533)	2550(1900)	2320(1730)	2600(1940)	2360(1760)	1945(1450)	2935(2190)	2670(1990)	2000(1495)
Charge Air Cooling	SCCC	SCCC	SCCC	SCCC	SCCC	SCCC	SCCC	SCCC	SCCC	SCCC
Duty Cycle	Standby	Prime	Standby	Prime	Standby	Prime	Continuous	Standby	Prime	Continuous
Fuel Consumption										
@ 50% load (gal/hr)	52.70	48.70	62.60	56.10	58.90	54.00	46.10	67.20	62.60	49.10
(l/min)	3.32	3.07	3.83	3.54	3.72	3.41	2.91	4.24	3.91	3.10
@ 75% load (gal/hr)	75.80	69.20	86.50	79.40	86.20	78.20	65.50	96.70	88.90	68.50
(l/min)	4.78	4.36	5.46	5.01	5.44	4.93	4.13	6.10	5.61	4.32
@100% load (gal/hr)	102.60	92.40	114.90	104.10	118.90	106.70	85.90	133.20	119.10	88.90
(l/min)	6.48	5.83	7.25	6.57	7.50	6.73	5.42	8.40	7.51	5.61

All Detroit Diesel Series 4000 engines operating at 1800rpm have been certified to meet the US EPA Year 2000 Non-road Mobile Emission Requirements, which are as follows:

NOx	HC	CO	PM
6.9 g/bhp/hr	0.97 g/bhp/hr	8.5 g/bhp/hr	0.40 g/bhp/hr

Rated power output shown represents engine performance capabilities at ambient conditions equivalent to ISO 3046, BS5514: 100 kPa total barometric pressure, 25°C air inlet temperature, 30% relative humidity.

Standby Power Rating: This rating is applicable to heavy duty diesel generator sets and is subject to varying load factors used in the event of a utility power failure. In this and other emergency applications, the generator set may be operated at rated power until normal power is restored. Power loss may be experienced at elevated ambient temperature and high altitude. The generator set in standby applications will operate an average of less than 5% of the time over the course of a year and at an average load factor not to exceed 70% of the Standby Rating.

Prime Power Rating: This rating is applicable to heavy duty diesel generator sets when used as a utility type power source and is subject to varying load conditions, with an intermittent overload (of 10%) up to the standby power rating, for no more than one hour in every 12 hours of operation. When averaged over a 24 hour period, this load factor will not exceed 70% of the Prime Power Rating. Under these conditions, the generator set may be operated continuously for an unlimited number of hours. Power loss may be experienced at elevated ambient temperature and high altitude.

Continuous Power Rating: This rating is applicable to heavy duty diesel generator sets when used as a utility type power source. The engine is expected to be operated with non-varying load factors of up to 100% of the continuous power rating and/or constant dedicated loads. Under these conditions it may be operated for an unlimited number of hours per year. Power loss may be experienced at elevated temperatures and high altitude.

Standard Equipment

Main Engine – One piece engine block; SAE #00 flywheel and housing; Inspection plates for con rod inspection; oil pressure fed vibration damper

Fuel System – Common rail high pressure fuel system, secondary fuel filters mounted on the RH side of the engine

Engine Lube System – Engine mounted oil filters; positive crankcase ventilation system; integral oil cooler

Cooling System – Engine driven water pump and auxiliary (SCCC) water pump

Air Inlet System – Direct mounted turbochargers; separate circuit charge cooling for aftercooler

Electrical – 24VDC starter; 100A alternator

Mounting – Front and rear mounting pads

Exhaust System – Dry exhaust manifold

Optional Equipment

Fuel System – Remote mounted fuel filters

Engine Lube System – Centrifugal lube oil filter for prime power application; Maintenance Alert System to provide oil filter change notification

Starting System – Air starter

Electrical System – 70A, 220A, 24VDC alternator

Mounting System – Front trunnion mount

For a complete listing of standard and optional equipment, consult your authorized Detroit Diesel Corporation representative.

DETROIT DIESEL CORPORATION

13400 Outer Drive, West, Detroit, Michigan 48239-4001
Telephone 313-592-5000
www.detroitdiesel.com

Distributor:

DETROIT DIESEL QS CERTIFIED ORGANIZATION 9000 CORPORATION

© Copyright 2000 Detroit Diesel Corporation. All rights reserved. Detroit Diesel®, DDC®, spinning arrows design and DDEC® are registered trademarks of Detroit Diesel Corporation. Series 4000™ is a trademark of Detroit Diesel Corporation.
6SA432 0002 As technical advancements continue, specifications will change. Printed in U.S.A.

Attachment 4

Form SYNMIN

United States Environmental Protection Agency
Region 6

FEDERAL MINOR NEW SOURCE REVIEW PROGRAM IN INDIAN COUNTRY

Application For Synthetic Minor Limit
(Form SYNMIN)

Please submit information to:

Federal Minor NSR Permit Coordinator
U.S. EPA, Region 6 PDR
1445 Ross Ave
Dallas, TX 75202
http://yosemite.epa.gov/r6/Apermit.nsf/AirP

The Tribal Environmental Contact for Region 6
http://www.epa.gov/region06/6dra/opta/index.html

For more information, visit
http://www.epa.gov/air/tribal/tribalnsr.html

A. GENERAL INFORMATION

Company Name	**Source Name**	
Sandia Resort & Casino	Sandia Resort & Casino	
Company Contact or Owner Name Joseph M. Rodriguez		Title Superintendent of Facilities
Mailing Address 30 Rainbow Road NE; Albuquerque, NM 87113-2156		
Email Address jmrodriguez@sandiacasino.com		
Telephone Number 505-796-7752	Facsimile Number 505-796-7617	

B. ATTACHMENTS

For each criteria air pollutant, hazardous air pollutant and for all emission units and air pollutant-generating activities to be covered by a limitation, include the following:

X Item 1 - The proposed limitation and a description of its effect on current actual, allowable and the potential to emit. **See Attachment 2.**
X Item 2 - The proposed testing, monitoring, recordkeeping, and reporting requirements to be used to demonstrate and assure compliance with the proposed limitation. **See Attachment 2 and Narrative.**
X Item 3 - The type and quantity of fuels and/or raw materials used. **See Attachment 2.**
X Item 4 - A description of estimated efficiency of air pollution control equipment under present or anticipated operating conditions, including documentation of the manufacturer specifications and guarantees. **N/A**
X Item 5 - Estimates of the Current Actual Emissions, Current Allowable Emissions including all calculations for the estimates, where applicable. **See Attachment 2.**
X Item 6 - Estimates of the Post-Change Allowable Emissions that would result from compliance with the proposed limitation, including all calculations for the estimates. **N/A**
X Item 7 – Estimates of the potential emissions of Greenhouse Gas (GHG) pollutants. **See Attachment 2.**

Attachment 5

Form NEW

United States Environmental Protection Agency Region 6

FEDERAL MINOR NEW SOURCE REVIEW PROGRAM IN INDIAN COUNTRY

Application for New Construction
(Form NEW)

Please check all that apply to show how you are using this form:

- ☐ **Proposed Construction of a New Source**
- ☐ **Proposed Construction of New Equipment at an Existing Source**
- ☐ **Proposed Modification of an Existing Source**
- X **Other – Please Explain** Formerly Operating Under EPA Transition Memo as Synthetic Minor Source

Please submit information to following:

Federal Minor NSR Permit Coordinator
U S EPA, Region 6 PDR
1445 Ross Ave
Dallas, TX 75202
http://yosemite.epa.gov/r6/Apermit.nsf/AirP

The Tribal Environmental Contact for Region 6
http://www.epa.gov/region06/6dra/oejta/index.html

For more information, visit
http://www.epa.gov/air/tribal/tribalnsr.html

A. GENERAL SOURCE INFORMATION

1. (a) **Company Name** Sandia Resort & Casino (b) **Operator Name** Facility Department of Sandia Resort & Casino		2. **Source Name** Sandia Resort & Casino	
3. Type of Operation Casino		4. Portable Source? Yes X No 5. Temporary Source? Yes X No	
6. NAICS Code 713210		7. SIC Code 7993	
8. Physical Address (home base for portable sources) 30 Rainbow Road NE; Albuquerque, NM 87113-2156			
9. Reservation* Pueblo of Sandia	10. County* Bernalillo	11a. Latitude* 35°12'23.32"N	11b. Longitude* 106°33'59.04"W
12a. Quarter Quarter Section* 6 and 7	12b. Section* 1	12c. Township* 11 North	12d. Range* 3 East

*Provide all proposed locations of operation for portable sources

B. PREVIOUS PERMIT ACTIONS (Provide information in this format for each permit that has been issued to this source. Provide as an attachment if additional space is necessary)

Source Name on the Permit NO PERMITS ISSUED
Permit Number (xx-xxx-xxxxx-xxxx.xx)
Date of the Permit Action

Source Name on the Permit
Permit Number (xx-xxx-xxxxx-xxxx.xx)
Date of the Permit Action

Source Name on the Permit
Permit Number (xx-xxx-xxxxx-xxxx.xx)
Date of the Permit Action

Source Name on the Permit
Permit Number (xx-xxx-xxxxx-xxxx.xx)
Date of the Permit Action

Source Name on the Permit
Permit Number (xx-xxx-xxxxx-xxxx.xx)
Date of the Permit Action

C. CONTACT INFORMATION

Company Contact Joseph M. Rodriguez	Title Superintendent of Facilities
Mailing Address 30 Rainbow Road NE; Albuquerque, NM 87113-2156	
Email Address jmrodriguez@sandiacasino.com	
Telephone Number 505-796-7750	Facsimile Number 505-796-7617
Operator Contact (if different from company contact) Paul Bitner	Title Electrical Supervisor
Mailing Address 30 Rainbow Road NE; Albuquerque, NM 87113-2156	
Email Address PBitner@sandiacasino.com	
Telephone Number 505-796-7750	Facsimile Number 505-796-7617
Source Contact Same as Company Contact	Title
Mailing Address	
Email Address	
Telephone Number	Facsimile Number
Compliance Contact Frank Chaves	Title Pueblo of Sandia Environment Director
Mailing Address 30 Rainbow Road NE; Albuquerque, NM 87113-2156	
Email Address frchaves@sandiapueblo.nsn.us	
Telephone Number 505-771-5086	Facsimile Number 505-771 5086

D. ATTACHMENTS

Include all of the following information (see the attached instructions)

X **FORM SYNMIN** - New Source Review Synthetic Minor Limit Request Form, if synthetic minor limits are being requested.

X Narrative description of the proposed production processes. This description should follow the flow of the process flow diagram to be submitted with this application.

X Process flow chart identifying all proposed processing, combustion, handling, storage, and emission control equipment.

X A list and descriptions of all proposed emission units and air pollution-generating activities.

X Type and quantity of fuels, including sulfur content of fuels, proposed to be used on a daily, annual and maximum hourly basis.

X Type and quantity of raw materials used or final product produced proposed to be used on a daily, annual and maximum hourly basis.

X Proposed operating schedule, including number of hours per day, number of days per week and number of weeks per year.

X A list and description of all proposed emission controls, control efficiencies, emission limits, and monitoring for each emission unit and air pollution generating activity.

X **Criteria Pollutant Emissions** - Estimates of Current Actual Emissions, Current Allowable Emissions, Post-Change Uncontrolled Emissions, and Post-Change Allowable Emissions for the following air pollutants: particulate matter, PM_{10}, $PM_{2.5}$, sulfur oxides (SOx), nitrogen oxides (NOx), carbon monoxide (CO), volatile organic compound (VOC), lead (Pb) and lead compounds, ammonia (NH_3), fluorides (gaseous and particulate), sulfuric acid mist (H_2SO_4), hydrogen sulfide (H_2S), total reduced sulfur (TRS) and reduced sulfur compounds, including all calculations for the estimates.

These estimates are to be made for each emission unit, emission generating activity, and the project/source in total.

X **Modeling – Air Quality Impact Analysis (AQIA)** – See Attached Discussion

X **ESA (Endangered Species Act)** – See Attached Discussion

X **NHPA (National Historic Preservation Act)** – See Attached Discussion

E. TABLE OF ESTIMATED EMISSIONS

The following tables provide the total emissions in tons/year for all pollutants from the calculations required in Section D of this form, as appropriate for the use specified at the top of the form.

E(i) – Proposed New Source

Pollutant	Potential Emissions (tpy)	Proposed Allowable Emissions (tpy)
PM	28.96	2.74
PM_{10}	28.96	2.74
$PM_{2.5}$	28.96	2.74
SO_x	0.41	0.10
NO_x	580.55	45.64
CO	533.31	40.94
VOC	60.89	4.16
Pb	6.63E-5	6.63E-5
NH_3	0.00	0.00
Fluorides	0.00	0.00
H_2SO_4	0.00	0.00
H_2S	0.00	0.00
TRS	0.00	0.00
RSC	0.00	0.00

PM - Particulate Matter
PM_{10} - Particulate Matter less than 10 microns in size
$PM_{2.5}$ - Particulate Matter less than 2.5 microns in size
SOx - Sulfur Oxides
NOx - Nitrogen Oxides
CO - Carbon Monoxide
VOC - Volatile Organic Compound
Pb - Lead and lead compounds
NH_3 - Ammonia
Fluorides - Gaseous and particulates
H_2SO_4 - Sulfuric Acid Mist
H_2S - Hydrogen Sulfide
TRS - Total Reduced Sulfur
RSC - Reduced Sulfur Compounds

Emissions calculations must include fugitive emissions if the source is one the following listed sources, pursuant to CAA Section 302(j):

(a) Coal cleaning plants (with thermal dryers);
(b) Kraft pulp mills;
(c) Portland cement plants;
(d) Primary zinc smelters;
(e) Iron and steel mills;
(f) Primary aluminum ore reduction plants;
(g) Primary copper smelters;
(h) Municipal incinerators capable of charging more than 250 tons of refuse per day;
(i) Hydrofluoric, sulfuric, or nitric acid plants;
(j) Petroleum refineries;
(k) Lime plants;
(l) Phosphate rock processing plants;
(m) Coke oven batteries;
(n) Sulfur recovery plants;
(o) Carbon black plants (furnace process);
(p) Primary lead smelters;
(q) Fuel conversion plants;
(r) Sintering plants;
(s) Secondary metal production plants;
(t) Chemical process plants
(u) Fossil-fuel boilers (or combination thereof) totaling more than 250 million British thermal units per hour heat input;
(v) Petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels;
(w) Taconite ore processing plants;
(x) Glass fiber processing plants;
(y) Charcoal production plants;
(z) Fossil fuel-fired steam electric plants of more that 250 million British thermal units per hour heat input, and
(aa) Any other stationary source category which, as of August 7, 1980, is being regulated under section 111 or 112 of the Act.

E(ii) – Proposed New Construction at an Existing Source or Modification of an Existing Source

Pollutant	Current Actual Emissions (tpy)	Current Allowable Emissions (tpy)	Post-Change Potential Emissions (tpy)	Post-Change Allowable Emissions (tpy)
PM				
PM_{10}				
$PM_{2.5}$				
SO_x				
NO_x				
CO				
VOC				
Pb				
NH_3				
Fluorides				
H_2SO_4				
H_2S				
TRS				
RSC				

PM - Particulate Matter
PM_{10} - Particulate Matter less than 10 microns in size
$PM_{2.5}$ - Particulate Matter less than 2.5 microns in size
SOx - Sulfur Oxides
NOx - Nitrogen Oxides
CO - Carbon Monoxide
VOC - Volatile Organic Compound
Pb - Lead and lead compounds
NH_3 - Ammonia
Fluorides - Gaseous and particulates
H_2SO_4 - Sulfuric Acid Mist
H_2S - Hydrogen Sulfide
TRS - Total Reduced Sulfur
RSC - Reduced Sulfur Compounds

[Disclaimers] The public reporting and recordkeeping burden for this collection of information is estimated to average 20 hours per response, unless a modeling analysis is required. If a modeling analysis is required, the public reporting and recordkeeping burden for this collection of information is estimated to average 60 hours per response .Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed form to this address.

Instructions

Use of This Form

- Proposed new construction or modifications should first be evaluated to determine if the change is major under the major NSR program using the procedures at 40 CFR 52.21 (i.e., baseline actual to projected actual applicability test). If the proposed construction does not qualify as a major under that test, then it may be subject to the requirements of the minor NSR rule at 40 CFR 49.151.

Helpful Definitions from the Federal Minor NSR Rule (40 CFR 49) – This is not a comprehensive list.

- *40 CFR 49.152(d) - Modification* means any physical or operational change at a source that would cause an increase in the allowable emissions of the affected emissions units for any regulated NSR pollutant or that would cause the emission of any regulated NSR pollutant not previously emitted.

  The following exemptions apply:

  (1) A physical or operational change does not include routine maintenance, repair, or replacement.

  (2) An increase in the hours of operation or in the production rate is not considered an operational change unless such increase is prohibited under any federally-enforceable permit condition or other permit condition that is enforceable as a practical matter.

  (3) A change in ownership at a source is not considered a modification.

- *40 CFR 49.152(d) - Allowable emissions* means ''allowable emissions'' as defined in §52.21(b)(16), except that the allowable emissions for any emissions unit are calculated considering any emission limitations that are enforceable as a practical matter on the emissions unit's potential to emit.

- *52.21(b)(16) - Allowable emissions* means the emissions rate of a stationary source calculated using the maximum rated capacity of the source (unless the source is subject to federally enforceable limits which restrict the operating rate, or hours of operation, or both) and the most stringent of the following:

  (i) The applicable standards as set forth in 40 CFR parts 60 and 61;

  (ii) The applicable State Implementation Plan emissions limitation, including those with a future compliance date; or

  (iii) The emissions rate specified as a federally enforceable permit condition, including those with a future compliance date.

A. General Source Information

1. Company Name & Operator Name (if different): Provide the complete company and operator names. For corporations, include divisions or subsidiary name, if any.

2. Source Name: Provide the source name. Please note that a source is a site, place, location, etc., that may contain one or more air pollution emitting units.

3. Type of Operation: Indicate the generally accepted name for the operation (i.e., asphalt plant, gas station, dry cleaner, sand & gravel mining, oil and gas wellsite, tank battery, etc.).

4. Portable Source: Does the source operate in more than one location? Some examples of portable sources include asphalt batch plants and concrete batch plants.

5. Temporary Source: A temporary source, in general, would have emissions that are expected last less than 2 years. Do you expect to cease operations within the next 2 years?

6. NAICS Code: North American Industry Classification System. The NAICS Code for your source can be found at the following link → North American Industry Classification System (http://www.census.gov/epcd/naics/naicsindx.htm#S1).

7. SIC Code: Standard Industrial Classification Code. Although the new North American Industry Classification System (NAICS) has replaced the SIC codes, much of the Clean Air Act permitting processes continue to use these codes. The SIC Code for your source can be found at the following link → Standard Industrial Classification Code (http://www.osha.gov/pls/imis/sic_manual.html).

8. Physical Address: Provide the actual address of where the source is operating, not the mailing address. Include the State and the ZIP Code.

9. Reservation: Provide the name of the Indian reservation within which the source is operating.

10. County: Provide the County within which the source is operating.

11a & 11b. Latitude & Longitude: These are GPS (global positioning system) coordinates. This information can be provided in decimal format or degree-minute-second format.

12a – 12d. Section-Township-Range: Please provide these coordinates in 1/4 Section/Section/Township/Range. (e.g., SW ¼, NE ¼ /S36/T10N/R21E).

B. Current Permit Information

Provide a list of all permits that have been issued to your source. This should include any Federal Minor New Source Review (MNSR), Prevention of Significant Deterioration (PSD) or Non-Attainment New Source Review (NA NSR) permits, in addition to the most recent Part 71 permit. The permit number must be included with each permit identified.

C. Contact Information

Please provide the information requested in full.

1. Company Contact: List the full name (last, middle initial, first) of the owners of the source or the company contact.

2. Operator Contact: Provide the name of the operator of the source if it is different from the company contact.

3. Source Contact: The source contact must be the local contact authorized to receive requests for data and information.

4. Compliance Contact: The compliance contact must be the local contact responsible for the source's compliance with this rule. If this is the same as the Source Contact please note this on the form.

D. Attachments

This section lists the information needed to complete the requested approval. This information should be accompanied by the supporting information listed on the form and described below. The information should be presented in enough detail to document how the source is currently operating and/or how it is proposed to operate.

X **FORM SYNMIN**

If synthetic minor limits are being requested, we recommend that the information from checklist tiled Form SYNMIN be included with this application.

X Narrative description of the proposed production processes.

1. The narrative description should follow the flow of the process flow diagram to be submitted with this application. This needs to be as comprehensive as possible to help in understanding the proposed source and how it will be operated. For example:

What are the raw materials?
What are the properties of the raw materials?
Does the production process include heating, drying, the application of chemicals, etc?
How will the raw materials be affected by this process?
What are the out puts from each step of the process (i.e., crushed ore, dry gas, water, etc...)'
Etc....

2. The proposed operating schedule presented in terms of hours per day, days per week, and weeks per year.
3. A list of the type and quantity of fuels and/or raw materials used. Each fuel and raw material should be described in enough detail to indicate its basic chemical components.

X A process flow chart identifying all proposed processing, combustion, handling, storage, and emission control equipment (include the unit identification # or code). This flow chart should illustrate the detailed narrative description requested above.

X List and describe all proposed units, emission units and air pollution-generating activities. At a minimum, provide the following:

1. The hourly, daily and annual maximum operating rates for each operating unit, production process, and activity.
2. The hourly, daily and annual maximum firing rates for each fuel and combustion equipment.
3. The capacity for storage units and the hourly, daily and annual maximum throughput of material in the storage units.
4. Material and product handling equipment and the hourly, daily and annual maximum throughput of material and product.
5. Tank designs, tank storage capacities, hourly, daily and annual maximum throughput of material and product.

X Type and quantity of fuels, including sulfur content of fuels, proposed to be used on a daily, annual and maximum hourly basis.

X Type and quantity of raw materials used or final product produced proposed to be used on a daily, annual and maximum hourly basis.

X Proposed operating schedule, including number of hours per day, number of days per week and number of weeks per year.

☐ A list and description of all proposed emission controls, control efficiencies, emission limits, and monitoring for each emission unit and air pollution generating activity.

1. Include manufacturer specifications and guarantees for each control device.

Criteria Pollutant Emissions Estimates

X Estimates of Current Actual Emissions, Current Allowable Emissions, Post-Change Uncontrolled Emissions, and Post-Change Allowable Emissions for the following air pollutants: particulate matter, PM_{10}, $PM_{2.5}$, sulfur oxides (SOx), nitrogen oxides (NOx), carbon monoxide (CO), volatile organic compound (VOC), lead (Pb) and lead compounds, ammonia (NH_3), fluorides (gaseous and particulate), sulfuric acid mist (H_2SO_4), hydrogen sulfide (H_2S), total reduced sulfur (TRS) and reduced sulfur compounds, including all calculations for the estimates.

1. These estimates are to be made for each emission unit, emission generating activity, in addition to total emissions.

2. The information should include all of the supporting calculations, assumptions and references. Emission estimates must address all emission units and pollutants proposed and/or affected by the limitation and be presented in short term (e.g. pounds per hour) as well as annual (tons per year) units.

3. Any emission estimates submitted to the Regional Administrator must be verifiable using currently accepted engineering criteria. The following procedures are generally acceptable for estimating emissions from air pollution sources:

   - Source-specific emission tests;
   - Mass balance calculations;
   - Published, verifiable emission factors that are applicable to the source. (i.e. manufacturer specifications)
   - Other engineering calculations; or
   - Other procedures to estimate emissions specifically approved by the Regional Administrator.

4. Guidance for estimating emissions can be found at http://www.epa.gov/ttn/chief/efpac/index.html.

Current Actual Emissions: Current actual emissions for a pollutant is expressed in tpy and generally is calculated by multiplying the actual hourly emissions rate in pounds per hour (lbs/hr) times actual hours operated (which is the number of hours in a year) and dividing by 2,000 (which is the number of pounds in a ton).

1. For an **existing air pollution source (permitted and unpermitted)** that operated prior to the application submittal, the current actual emissions are the actual rate of emissions for the preceding calendar year and must be calculated using the actual operating hours, production rates, in-place control equipment, and types of materials processed, stored, or combusted during the preceding calendar year. The emission estimates must be based upon actual test data or, in the absence of such data, upon procedures acceptable to the Regional Administrator.

Current Allowable Emissions: Current allowable emissions for a pollutant is expressed in tpy and generally is calculated by multiplying the allowed hourly emissions rate in pounds per hour (lbs/hr) times allowed hours (which is the number of hours in a year) and dividing by 2,000 (which is the number of pounds in a ton).

1. "Allowed" means the source is restricted by permit conditions that limit its emissions and are enforceable as a practical matter (i.e., allowable emissions). The allowable emissions for any

emissions unit are calculated considering any emissions limitations that are enforceable as a practical matter on the unit's PTE.

2. For an **existing permitted air pollution source** that operated prior to the application submittal, the current allowable emissions are the allowable rate of emissions for the preceding calendar year and must be calculated using the permitted operating hours, production rates, in-place control equipment, and types of materials processed, stored, or combusted during the preceding calendar year.

3. For an **existing air pollution source** that does not have an established allowable emissions level prior to the modification must report the pre-change uncontrolled emissions.

Post-Change Potential Emissions (Potential uncontrolled emissions from proposed project): This is the maximum capacity of a source to emit a pollutant under its physical and operational design. This is expressed in tpy and generally is calculated by multiplying the maximum hourly emissions rate in pounds per hour (lbs/hr) times 8,760 hours (which is the number of hours in a year) and dividing by 2,000 (which is the number of pounds in a ton).

Post-Change Allowable Emissions: A source's allowable emissions for a pollutant is expressed in tpy and generally is calculated by multiplying the allowed hourly emissions rate in pounds per hour (lbs/hr) times allowed hours (which is the number of hours in a year) and dividing by 2,000 (which is the number of pounds in a ton).

1. Unless the source is restricted by permit conditions or other requirements that are enforceable as a practical matter, the post-change allowable emissions would be equivalent to post-change uncontrolled emissions. For the post-change allowable emissions a lower level of allowable emissions may be proposed.

2. For physical or operational changes at minor sources and for minor physical or operational changes at major sources, the total increase in allowable emissions resulting from your proposed change would be the sum of following:

   - For each new emissions unit that is to be added, the emissions increase would be the potential to emit of each unit.
   - For each emissions unit with an allowable emissions limit that is to be changed or replaced, the emissions increase would be the allowable emissions of the emissions unit after the change or replacement minus the allowable emissions prior to the change or replacement. However, this may not be a negative value. If the allowable emissions of an emissions unit would be reduced as a result of the change or replacement, use zero in the calculation.
   - For each unpermitted emissions unit (i.e., a unit without any emissions limitations before the change) that is to be changed or replaced, the emissions increase would be the allowable emissions of the unit after the change or replacement minus the potential to emit prior to the change or replacement. However, this may not be a negative value. If the allowable emissions of an emissions unit would be reduced as a result of the change or replacement, use zero in the calculation.

X Modeling Analysis – See Narrative Discussion

Do I need to do a modeling analysis?

The Federal Minor New Source Review Regulations at 40 CFR 49.159(d) requires that a modeling analysis (AQIA) of proposed emissions be performed if there is reason to be concerned that new construction would cause or contribute to a National Ambient Air Quality Standard (NAAQS) or Prevention of Significant Deterioration (PSD) increment violation.

In addition, if the AQIA reveals that the new construction could cause or contribute to a NAAQS or PSD increment violation; such impacts must be reduced before a pre-construction permit can be issued.

To facilitate the protection of the NAAQS and PSD Increment, EPA requests that those proposed activities that meet the following criteria perform an AQIA:

1. The proposed activity's PTE of criteria pollutants is greater than 250 tpy prior to receiving a synthetic minor limit;

2. The proposed activity is a modification to a source that is an existing major source; or

3. The proposed activity has air emissions that the Reviewing Authority determines has the potential to cause adverse air quality effects for which an air quality impact analysis is necessary for an accurate assessment of the environmental impact of the activities proposed.

4. Modeling of proposed emissions is usually warranted, even though the proposed activity does not meet the modeling requirements, above, if it is reasonable to believe the new activity may cause or contribute to a violation of applicable ambient air quality standards or increments in circumstances such as:

   (a) A substantial portion of the new or modified emissions have poor dispersion characteristics (e.g., rain caps, horizontal stacks, fugitive releases, or ***building downwash***) in close proximity to ***ambient air*** at the site boundary;

   (b) The new or modified emissions are located in ***complex terrain*** (e.g., terrain above stack height in close proximity to the source); or

   (c) The new or modified emissions are located in areas with existing air quality concerns.

   (d) If you have questions about whether modeling may be necessary based on the 4th criteria above, please contact the Reviewing Authority:

   [Reviewing Authority
   Address
   Phone]

What Kind of Air Quality Modeling Analysis Is Needed?

1. EPA considers a stepped or phased approach to modeling to be appropriate, as follows:

   Step 1: Screening Analysis
   Step 2: Preliminary Modeling Analysis (refined modeling)
   Step 3: Full Impact Modeling Analysis (refined modeling)
   Step 4: PSD Increment and NAAQS Analysis
   Step 5: Additional Impact Analysis

2. Step 1: Screening Analysis

   For proposed new or modified sources that meet the modeling requirement criteria identified above, protection of air quality from proposed emissions may be shown by using a simple screening technique (e.g., SCREEN3 or AERSCREEN). Screening models are available for download at the EPA SCRAM website: http://www.epa.gov/ttn/scram/dispersion_screening.htm. A pre-approved modeling protocol is not necessary prior to conducting a Screening Analysis.

3. If the proposed new or modified emission increases do not increase ambient concentrations of a pollutant by more than the significant impact levels, as compared to the SILs identified below, no further modeling is necessary.

Significant Impact Levels

Pollutant	Averaging Period	Class II Area SIL (ug/m^3)	Class I Area SIL (ug/m^3)
SO_2	1 hr	3 ppb or 7.8 ug/m^3 (interim)	----
	3 hr	25	1.0
	24 hr	5	0.2
	Annual	1	0.08
$PM_{2.5}$	24 hr	0.07	1.2
	Annual	0.06	0.3
PM_{10}	24 hr	5	0.2
	Annual	1	0.08
NO_2	1 hr	4 ppb or 7.5 ug/m^3 (interim)	----
	Annual	1	0.08
CO	1 hr	2,000 ppb	
	8 hr	500 ppb	

Note: The Class I area SILs are provided as guidance and have not been formalized by EPA

4. Sources that cannot demonstrate protection of air quality using a screening technique should continue to the modeling requirements in ***Step 2*** through ***Step 5***. Modeling in Steps 2 through 5 should be performed based an approved protocol.

5. Applicants are encouraged to contact the Reviewing Authority prior to conducting any refined modeling analysis (Step 2 through Step 5) to obtain an approved protocol.

What Should I Include In My Application If Modeling Is Necessary?

1. Approved Modeling Protocol

   In order to expedite the permitting process, it is recommended that you include a protocol that has already been approved. An application will not be deemed complete until the protocol has been approved.

2. Modeling Results

   In all cases, the modeling results should include the name of the model used, all input parameters, and the resulting output. Electronic copies of the modeling input/output files should be provided to the Reviewing Authority.

X ESA – See Narrative Discussion

The Endangered Species Act requires us, in consultation with the U.S. Fish and Wildlife Service and/or the NOAA Fisheries Service, to ensure that actions we authorize are not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of designated critical habitat of such species.

To expedite the approval of your proposed construction, we encourage you to identify any listed species that you may be readily aware of that could be affected by your proposal. The following website has been provided to assist you:

http://www.fws.gov/endangered/

Simply enter the State and County in which you propose to construct to obtain a general listing.

X NHPA – See Narrative Discussion

The National Historic Preservation Act requires us, in consultation with State and/or Tribal Historic Preservation Officers to ensure that actions we authorize are not likely to affect cultural resources.

To expedite the approval of your proposed construction, we encourage you to identify any cultural resources that you may be readily aware of that could be affected by your proposal. The following website has been provided to assist you:

http://nrhp.focus.nps.gov/natreghome.do?searchtype=natreghome

Simply enter the State and County in which you propose to construct to obtain a general listing.