NSR SIGNIFICANT REVISION TO PERMIT PSD-5041R1

Public Service Company of New Mexico
La Luz Energy Station

Prepared By:

Adam Erenstein
Managing Consultant

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August 2016

Trinity Project 163201.0156

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August 9, 2016

Mr. Ted Schooley
Permit Programs Manager
NMED Air Quality Bureau
525 Camino de los Marquez Suite 1
Santa Fe, NM 87505-1816

RE: NSR Application for Significant Revision to Permit PSD-5041R1
Public Service Company of New Mexico – La Luz Energy Center

Dear Mr. Schooley:

On behalf of Public Service Company of New Mexico (PNM), we are submitting an application for a Significant Revision (pursuant to 20.2.72.219.D.(1)(a) NMAC) to its current Air Quality NSR Permit No. PSD-5041R1 for La Luz Energy Center.

The primary purpose of this application will be to change the permit to a minor source from a major source because the facility is no longer PSD, modify the record-keeping requirements for NH_3, modify the NO_X emissions standards to correctly reflect the requirements of 40 CFR 60 Subpart KKKK, and to add turbine malfunction emissions for all applicable pollutants.

The format and content of this application are consistent with the Bureau's current policy regarding Significant Revisions; it is a complete application package using the latest Universal Application Form set.

Enclosed are two hard copies of the application (the original and a photocopy) and two disks containing the electronic files. Please feel free to contact me at (505) 266-6611 or Ms. Robin DeLapp from PNM at (505) 241-2016 if you have any questions regarding this application.

Sincerely,

Adam Erenstein
Managing Consultant

Cc: Ms. Robin DeLapp (Public Service Company of New Mexico)
Trinity Project File 163201.0156

631025

TRINITY CONSULTANTS, INC.
12770 MERIT DR
SUITE 900
DALLAS, TX 75251-1296
(972) 661-8100

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AMOUNT 500.00

TO New Mexico Environmental Department
Air Quality Bureau
525 Camino de los Marquez
Suite 1
Santa Fe, NM 87505-1816

AUTHORIZED SIGNATURE

Security features. Details on back.

⑈631025⑈ ⑆111300880⑆ 9319954724⑈

TRINITY CONSULTANTS, INC. 631025

Check Date: 8/2/2016

Invoice Number	Date	Voucher	Amount	Discounts	Previous Pay	Net Amount
07292016	7/29/2016	0050365	500.00			500.00
New Mexico Environmental Department		TOTAL	500.00			500.00
CHASE BANK- 1 6134						

Mail Application To:		**For Department use only:**
New Mexico Environment Department Air Quality Bureau Permits Section 525 Camino de los Marquez, Suite 1 Santa Fe, New Mexico, 87505 Phone: (505) 476-4300 Fax: (505) 476-4375 www.env.nm.gov/aqb		AIRS No.:

Universal Air Quality Permit Application

Use this application for NOI, NSR, or Title V sources.

Use this application for: the initial application, modifications, technical revisions, and renewals. For technical revisions, complete Sections, 1-A, 1-B, 2-E, 3, 9 and any other sections that are relevant to the requested action; coordination with the Air Quality Bureau permit staff prior to submittal is encouraged to clarify submittal requirements and to determine if more or less than these sections of the application are needed. Use this application for streamline permits as well. For NOI applications, submit the entire UA1, UA2, and UA3 applications on a single CD (no copies are needed). For NOIs, hard copies of UA1, Tables 2A, 2D & 2F, Section 3 and the signed Certification Page are required.

This application is submitted as (check all that apply)**:** ☐ Request for a No Permit Required Determination (no fee)
☐ **Updating** an application currently under NMED review. Include this page and all pages that are being updated (no fee required).
Construction Status: ☐ Not Constructed ☑ Existing Permitted (or NOI) Facility ☐ Existing Non-permitted (or NOI) Facility
Minor Source: ☐ a NOI 20.2.73 NMAC ☑ 20.2.72 NMAC application or revision ☐ 20.2.72.300 NMAC Streamline application
Title V Source: ☐ Title V (new) ☐ Title V renewal ☐ TV minor mod. ☐ TV significant mod. TV Acid Rain: ☐ New ☐ Renewal
PSD Major Source: ☐ PSD major source (new) ☐ minor modification to a PSD source ☐ a PSD major modification

Acknowledgements:

☑ I acknowledge that a pre-application meeting is available to me upon request. ☐ Title V Operating, Title IV Acid Rain, and NPR applications have no fees.

☑ $500 NSR application Filing Fee enclosed OR ☐ The full permit fee associated with 10 fee points (required w/ streamline applications).

☑ Check No.: 631025 in the amount of $500.00

☐ This facility qualifies to receive assistance from the Small Business Environmental Assistance program (SBEAP) and qualifies for 50% of the normal application and permit fees. Enclosed is a check for 50% of the normal application fee which will be verified with the Small Business Certification Form for your company.

☐ This facility qualifies to receive assistance from the Small Business Environmental Assistance Program (SBEAP) but does not qualify for 50% of the normal application and permit fees. To see if you qualify for SBEAP assistance and for the small business certification form go to https://www.env.nm.gov/aqb/sbap/small_business_criteria.html).

Citation: Please provide the **low level citation** under which this application is being submitted: **20.2.72.219.D.(1)(a) NMAC**
(e.g. application for a new minor source would be 20.2.72.200.A NMAC, one example for a Technical Permit Revision is 20.2.72.219.B.1.b NMAC, a Title V acid rain application would be: 20.2.70.200.C NMAC)

Section 1 – Facility Information

Section 1-A: Company Information

		AI # if known (see 1st 3 to 5 #s of permit IDEA ID No.): 32274	Updating Permit/NOI #: PSD-5041R1
1	Facility Name: La Luz Energy Center	Plant primary SIC Code (4 digits): 4911	
a	Facility Street Address (If no facility street address, provide directions from a prominent landmark): 3.9 miles southwest of the intersection of State Route 314 and 309 in the City of Belen in Valencia County		
2	Plant Operator Company Name: Public Service Company of New Mexico	Phone/Fax: (505) 241-2016 / (505) 241-4306	
a	Plant Operator Address: 2401 Aztec Road, NE, MS Z100 Albuquerque, NM 87107		
b	Plant Operator's New Mexico Corporate ID or Tax ID: 85-0019030		

3	Plant Owner(s) name(s): Public Service Company of New Mexico	Phone/Fax: (505) 241-2016 / (505) 241-2384
a	Plant Owner(s) Mailing Address(s): 2401 Aztec Road, NE, MS Z100 Albuquerque, NM 87107	
4	Bill To (Company): Public Service Company of New Mexico	Phone/Fax: (505) 241-2016 / (505) 241-4306
a	Mailing Address: 2401 Aztec Road, NE, MS Z100 Albuquerque, NM 87107	E-mail: Robin.DeLapp@pnmresources.com
5	☑Preparer: Trinity Consultants, Inc. ☑ Consultant: Adam Erenstein	Phone/Fax: 505-266-6611 / 505-266-7738
a	Mailing Address: 9400 Holly Ave NE, Bldg 3, Suite 300, Albuquerque, NM 87122	E-mail: aerenstein@trinityconsultants.com
6	Plant Operator Contact: Robin DeLapp	Phone/Fax: (505) 241-2016 / (505) 241-2384
a	Address: 2401 Aztec Road, NE, MS Z100 Albuquerque, NM 87107	E-mail: Robin.DeLapp@pnmresources.com
7	Air Permit Contact: Robin DeLapp	Title:
a	E-mail: Robin.DeLapp@pnmresources.com	Phone/Fax: (505) 241-2016 / (505) 241-2384
b	Mailing Address: 2401 Aztec Road, NE, MS Z100 Albuquerque, NM 87107	

Section 1-B: Current Facility Status

1.a	Has this facility already been constructed? ☑ Yes ☐ No	1.b If yes to question 1.a, is it currently operating in New Mexico? ☑ Yes ☐ No
2	If yes to question 1.a, was the existing facility subject to a Notice of Intent (NOI) (20.2.73 NMAC) before submittal of this application? ☐ Yes ☑ No	If yes to question 1.a, was the existing facility subject to a construction permit (20.2.72 NMAC) before submittal of this application? ☑ Yes ☐ No
3	Is the facility currently shut down? ☐ Yes ☑ No	If yes, give month and year of shut down (MM/YY): N/A
4	Was this facility constructed before 8/31/1972 and continuously operated since 1972? ☐ Yes ☑ No	
5	If Yes to question 3, has this facility been modified (see 20.2.72.7.P NMAC) or the capacity increased since 8/31/1972? ☐Yes ☐No ☑ N/A	
6	Does this facility have a Title V operating permit (20.2.70 NMAC)? ☐ Yes ☑ No	If yes, the permit No. is:
7	Has this facility been issued a No Permit Required (NPR)? ☐ Yes ☑ No	If yes, the NPR No. is: N/A
8	Has this facility been issued a Notice of Intent (NOI)? ☐ Yes ☑ No	If yes, the NOI No. is: N/A
9	Does this facility have a construction permit (20.2.72/20.2.74 NMAC)? ☑ Yes ☐ No	If yes, the permit No. is: PSD-5041R1
10	Is this facility registered under a General permit (GCP-1, GCP-2, etc.)? ☐ Yes ☑ No	If yes, the register No. is: N/A

Section 1-C: Facility Input Capacity & Production Rate

1	What is the facility's maximum input capacity, specify units (reference here and list capacities in Section 20, if more room is required)			
a	Current	Hourly: 791 MMBtu	Daily: 18,984 MMBtu	Annually: 6,929,160 MMBtu
b	Proposed	Hourly: 791 MMBtu	Daily: 18,984 MMBtu	Annually: 6,929,160 MMBtu
2	What is the facility's maximum production rate, specify units (reference here and list capacities in Section 20, if more room is required)			
a	Current	Hourly: 84 MW	Daily: 84 MW	Annually: 84 MW
b	Proposed	Hourly: 84 MW	Daily: 84 MW	Annually: 84 MW

Section 1-D: Facility Location Information

1	Section: 35	Range: 1E	Township: 5N	County: Valencia	Elevation (ft): 5,175
2	UTM Zone: ☐ 12 or ☑ 13			Datum: ☐ NAD 27 ☐ NAD 83 ☑ WGS 84	
a	UTM E (in meters, to nearest 10 meters): 333,600 m E			UTM N (in meters, to nearest 10 meters): 3,831,980 m N	
b	**AND** Latitude (deg., min., sec.): 34°,36',58.3"N			Longitude (deg., min., sec.): 106°,48',54.0"W	
3	Name and zip code of nearest New Mexico town: Belen 87002				
4	Detailed Driving Instructions from nearest NM town (attach a road map if necessary): From the intersection of I-25 and Camino Del Llano (exit 191), go west along Camino Del Llano 1.5 miles, turn left (south) onto Harrison Rd. Continue on Harrison Rd 2.2 miles, turn left (east) towards existing substation along unnamed dirt road 0.2 miles to gate.				
5	The facility is 3.9 miles southwest of Belen, NM.				
6	Status of land at facility (check one): ☑ Private ☐ Indian/Pueblo ☐ Federal BLM ☐ Federal Forest Service ☐ Other (specify)				
7	List all municipalities, Indian tribes, and counties within a ten (10) mile radius (20.2.72.203.B.2 NMAC) of the property on which the facility is proposed to be constructed or operated: Municipalities: Belen, Counties: Valencia County, Socorro County, Tribes: None.				
8	**20.2.72** NMAC applications **only**: Will the property on which the facility is proposed to be constructed or operated be closer than 50 km (31 miles) to other states, Bernalillo County, or a Class I area (see www.env.nm.gov/aqb/modeling/class1areas.html)? ☑ Yes ☐ No (20.2.72.206.A.7 NMAC) If yes, list all with corresponding distances in kilometers: Bernalillo County, 17.6 miles (28.3 km)				
9	Name nearest Class I area: Bosque del Apache				
10	Shortest distance (in km) from facility boundary to the boundary of the nearest Class I area (to the nearest 10 meters): 82.50 km				
11	Distance (meters) from the perimeter of the Area of Operations (AO is defined as the plant site inclusive of all disturbed lands, including mining overburden removal areas) to nearest residence, school or occupied structure: 200 meters				
12	Method(s) used to delineate the Restricted Area: Fencing "**Restricted Area**" is an area to which public entry is effectively precluded. Effective barriers include continuous fencing, continuous walls, or other continuous barriers approved by the Department, such as rugged physical terrain with steep grade that would require special equipment to traverse. If a large property is completely enclosed by fencing, a restricted area within the property may be identified with signage only. Public roads cannot be part of a Restricted Area.				
13	Does the owner/operator intend to operate this source as a portable stationary source as defined in 20.2.72.7.X NMAC? ☐ Yes ☑ No A portable stationary source is not a mobile source, such as an automobile, but a source that can be installed permanently at one location or that can be re-installed at various locations, such as a hot mix asphalt plant that is moved to different job sites.				
14	Will this facility operate in conjunction with other air regulated parties on the same property? ☒ No ☐ Yes If yes, what is the name and permit number (if known) of the other facility?				

Section 1-E: Proposed Operating Schedule (The 1-E.1 & 1-E.2 operating schedules may become conditions in the permit.)

1	Facility **maximum** operating ($\frac{\text{hours}}{\text{day}}$): 24	($\frac{\text{days}}{\text{week}}$): 7	($\frac{\text{weeks}}{\text{year}}$): 52	($\frac{\text{hours}}{\text{year}}$): 8760		
2	Facility's maximum daily operating schedule (if less than 24 $\frac{\text{hours}}{\text{day}}$)? Start: N/A	☐AM ☐PM	End: N/A	☐AM ☐PM		
3	Month and year of anticipated start of construction: N/A – No construction proposed in this application.					
4	Month and year of anticipated construction completion: N/A – No construction proposed in this application.					
5	Month and year of anticipated startup of new or modified facility: N/A – No construction proposed in this application.					
6	Will this facility operate at this site for more than one year? ☑ Yes ☐ No					

Section 1-F: Other Facility Information

1	Are there any current Notice of Violations (NOV), compliance orders, or any other compliance or enforcement issues related to this facility? ☐ Yes ☑ No If yes, specify: N/A		
a	If yes, NOV date or description of issue: N/A		NOV Tracking No: N/A
b	Is this application in response to any issue listed in 1-F, 1 or 1a above? ☐ Yes ☑ No If Yes, provide the 1c & 1d info below:		
c	Document Title: N/A	Date: N/A	Requirement # (or page # and paragraph #): N/A
d	Provide the required text to be inserted in this permit: N/A		
2	Is air quality dispersion modeling or modeling waiver being submitted with this application? ☑ Yes ☐ No		
3	Does this facility require an "Air Toxics" permit under 20.2.72.400 NMAC & 20.2.72.502, Tables A and/or B? ☐ Yes ☑ No		
4	Will this facility be a source of federal Hazardous Air Pollutants (HAP)? ☑ Yes ☐ No		
a	If Yes, what type of source? ☐ **Major** (☐ ≥10 tpy of any single HAP **OR** ☐ ≥25 tpy of any combination of HAPS) **OR** ☑ **Minor** (☑ <10 tpy of any single HAP **AND** ☑ <25 tpy of any combination of HAPS)		
5	Is any unit exempt under 20.2.72.202.B.3 NMAC? ☐ Yes ☑ No		
a	If yes, include the name of company providing commercial electric power to the facility: _____ Commercial power is purchased from a commercial utility company, which specifically does not include power generated on site for the sole purpose of the user.		

Section 1-G: Streamline Application

(This section applies to 20.2.72.300 NMAC Streamline applications only)

1	☐ I have filled out Section 18, "Addendum for Streamline Applications." ☑ N/A (This is not a Streamline application.)

Section 1-H: Current Title V Information - Required for all applications from TV Sources

(Title V-source required information for all applications submitted pursuant to 20.2.72 NMAC (Minor Construction Permits), or 20.2.74/20.2.79 NMAC (Major PSD/NNSR applications), and/or 20.2.70 NMAC (Title V))

1	Responsible Official (R.O.) (20.2.70.300.D.2 NMAC): Richard Threet	Phone: (505) 241-4723
a	R.O. Title: Plant Manager	R.O. e-mail: Richard.Threet@pnm.com
b	R. O. Address: 4400 Paseo Del Norte, NE, Albuquerque, NM 87109	
2	Alternate Responsible Official (20.2.70.300.D.2 NMAC): N/A	Phone: N/A
a	A. R.O. Title: N/A	A. R.O. e-mail: N/A
b	A. R. O. Address: N/A	
3	Company's Corporate or Partnership Relationship to any other Air Quality Permittee (List the names of any companies that have operating (20.2.70 NMAC) permits and with whom the applicant for this permit has a corporate or partnership relationship): none	
4	Name of Parent Company ("Parent Company" means the primary name of the organization that owns the company to be permitted wholly or in part.): PNM Resources	
a	Address of Parent Company: Corporate Headquarters, Albuquerque, NM 87158	
5	Names of Subsidiary Companies ("Subsidiary Companies" means organizations, branches, divisions or subsidiaries, which are owned, wholly or in part, by the company to be permitted.): Public Service Company of New Mexico (PNM) and Texas-New Mexico Power (TNMP)	
6	Telephone numbers & names of the owners' agents and site contacts familiar with plant operations: Robin DeLapp, (505) 241-2016	

7	Affected Programs to include Other States, local air pollution control programs (i.e. Bernalillo) and Indian tribes: Will the property on which the facility is proposed to be constructed or operated be closer than 80 km (50 miles) from other states, local pollution control programs, and Indian tribes and pueblos (20.2.70.402.A.2 and 20.2.70.7.B)? If yes, state which ones and provide the distances in kilometers: N/A

Section 1-I – Submittal Requirements

Each 20.2.73 NMAC (**NOI**), a 20.2.70 NMAC (**Title V**), a 20.2.72 NMAC (**NSR** minor source), or 20.2.74 NMAC (**PSD**) application package shall consist of the following:

Hard Copy Submittal Requirements:

1) One hard copy **original signed and notarized application package printed double sided 'head-to-toe' 2-hole punched** as we bind the document on top, not on the side; except Section 2 (landscape tables), which should be head-to-head. If 'head-to-toe printing' is not possible, print single sided. Please use **numbered tab separators** in the hard copy submittal(s) as this facilitates the review process. For NOI submittals only, hard copies of UA1, Tables 2A, 2D & 2F, Section 3 and the signed Certification Page are required.

2) If the application is for a minor NSR, PSD, NNSR, or Title V application, include one working hard **copy** for Department use. This copy does not need to be 2-hole punched. Minor NSR Technical Permit revisions (20.2.72.219.B NMAC) only need to fill out Sections 1-A, 1-B, 3, and should fill out those portions of other Section(s) relevant to the technical permit revision. TV Minor Modifications need only fill out Sections 1-A, 1-B, 1-H, 3, and those portions of other Section(s) relevant to the minor modification. NMED may require additional portions of the application to be submitted, as needed.

3) The entire NOI or Permit application package, including the full modeling study, should be submitted electronically on compact disk(s) (CD). For permit application submittals, **two** CD copies are required (in sleeves, not crystal cases, please), with additional CD copies as specified below. NOI applications require only a single CD submittal.

4) If **air dispersion modeling** is required by the application type, include the **NMED Modeling Waiver OR** one additional electronic copy of the air dispersion modeling including the input and output files. The dispersion modeling ***summary report only*** should be submitted as hard copy(ies) unless otherwise indicated by the Bureau. The complete dispersion modeling study, including all input/output files, should be submitted electronically as part of the electronic submittal.

5) If subject to PSD review under 20.2.74 NMAC (PSD) or NNSR under 20.2.79 NMC include,
   a. one additional CD copy for US EPA,
   b. one additional CD copy for each federal land manager affected (NPS, USFS, FWS, USDI) and,
   c. one additional CD copy for each affected regulatory agency other than the Air Quality Bureau.

Electronic Submittal Requirements [in addition to the required hard copy(ies)]:

1) All required electronic documents shall be submitted in duplicate (2 separate CDs). A single PDF document of the entire application as submitted and the individual documents comprising the application.

2) The documents should also be submitted in Microsoft Office compatible file format (Word, Excel, etc.) allowing us to access the text and formulas in the documents (copy & paste). Any documents that cannot be submitted in a Microsoft Office compatible format shall be saved as a PDF file from within the electronic document that created the file. If you are unable to provide Microsoft office compatible electronic files or internally generated PDF files of files (items that were not created electronically: i.e. brochures, maps, graphics, etc,), submit these items in hard copy format with the number of additional hard copies corresponding to the number of CD copies required. We must be able to review the formulas and inputs that calculated the emissions.

3) It is preferred that this application form be submitted as 3 electronic files (2 MSWord docs: Universal Application section 1 and Universal Application section 3-19) and 1 Excel file of the tables (Universal Application section 2) on the CD(s). Please include as many of the 3-19 Sections as practical in a single MS Word electronic document. Create separate electronic file(s) if a single file becomes too large or if portions must be saved in a file format other than MS Word.

4) The electronic file names shall be a maximum of 25 characters long (including spaces, if any). The format of the electronic Universal Application shall be in the format: "A-3423-FacilityName". The "A" distinguishes the file as an application submittal, as opposed to other documents the Department itself puts into the database. Thus, all electronic application submittals should begin with "A-". Modifications to existing facilities should use the core permit number (i.e. '3423') the Department assigned to the facility as the next 4 digits. Use 'XXXX' for new facility applications. The format of any separate electronic submittals (additional submittals such as non-Word attachments, re-submittals, application updates) and Section document shall be in the format: "A-3423-9-description", where "9" stands for the section # (in this case Section 9-Public Notice). Please refrain, as much

as possible, from submitting any scanned documents as this file format is extremely large, which uses up too much storage capacity in our database. Please take the time to fill out the header information throughout all submittals as this will identify any loose pages, including the Application Date (date submitted) & Revision # (0 for original, 1, 2, etc.; which will help keep track of subsequent partial update(s) to the original submittal. The footer information should not be modified by the applicant.

Table of Contents

Table 2-A: Regulated Emission Sources

Unit and stack numbering must correspond throughout the application package. If applying for a NOI under 20.2.73 NMAC, equipment exemptions under 2.72.202 NMAC do not apply.

Unit Number[1]	Source Description	Manufacturer	Model #	Serial #	Maximum or Rated Capacity[3] (Specify Units)	Requested Permitted Capacity[3] (Specify Units)	Date of Manufacture or Reconstruction[2] / Date of Installation /Construction[2]	Controlled by Unit # / Emissions vented to Stack #	Source Classification Code (SCC)	For Each Piece of Equipment, Check One	RICE Ignition Type (CI, SI, 4SLB, 4SRB, 2SLB)[4]	Replacing Unit No.
1	Combustion Turbine	General Electric	LM6000 Sprint	191-770	42MW	42MW	2013 Oct-15	1 1	20100201	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
2	Combustion Turbine	General Electric	LM6000 Sprint	TBD	42MW	42MW	TBD TBD	2 2	20100201	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
SSM 1- Startup	Startup Turbine #1	N/A	N/A	N/A	N/A	N/A	N/A N/A	N/A 1	20100201	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
SSM 2 - Startup	Startup Turbine #2	N/A	N/A	N/A	N/A	N/A	N/A N/A	N/A 2	20100201	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
SSM 1 - Shutdown	Shutdown Turbine #1	N/A	N/A	N/A	N/A	N/A	N/A N/A	N/A 1	20100201	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
SSM 2 - Shutdown	Shutdown Turbine #2	N/A	N/A	N/A	N/A	N/A	N/A N/A	N/A 2	20100201	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
Malfunction 1	Malfunction #1	N/A	N/A	N/A	N/A	N/A	N/A N/A	N/A 1	20100201	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
Malfunction 2	Malfunction #2	N/A	N/A	N/A	N/A	N/A	N/A N/A	N/A 2	20100201	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
CB-1	Circuit Breaker #1	Unknown	Unknown	Unknown	Unknown	Unknown	N/A N/A	N/A N/A	N/A	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
CB-2	Circuit Breaker #2	Unknown	Unknown	Unknown	Unknown	Unknown	N/A N/A	N/A N/A	N/A	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
										☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
										☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		

[1] Unit numbers must correspond to unit numbers in the previous permit unless a complete cross reference table of all units in both permits is provided.

[2] Specify dates required to determine regulatory applicability.

[3] To properly account for power conversion efficiencies, generator set rated capacity shall be reported as the rated capacity of the engine in horsepower, not the kilowatt capacity of the generator set.

[4] "4SLB" means four stroke lean burn engine, "4SRB" means four stroke rich burn engine, "2SLB" means two stroke lean burn engine, "CI" means compression ignition, and "SI" means spark ignition

Table 2-B: Insignificant Activities[1] (20.2.70 NMAC) OR Exempted Equipment (20.2.72 NMAC)

All 20.2.70 NMAC (Title V) applications must list all Insignificant Activities in this table. All 20.2.72 NMAC applications must list Exempted Equipment in this table. If equipment listed on this table is exempt under 20.2.72.202.B.5, include emissions calculations and emissions totals for 202.B.5 "similar functions" units, operations, and activities in Section 6, Calculations. Equipment and activities exempted under 20.2.72.202 NMAC may not necessarily be Insignificant under 20.2.70 NMAC (and vice versa). Unit & stack numbering must be consistent throughout the application package. Per Exemptions Policy 02-012.00 (see http://www.env.nm.gov/aqb/permit/aqb_pol.html), 20.2.72.202.B NMAC Exemptions do not apply, but 20.2.72.202.A NMAC exemptions do apply to NOI facilities under 20.2.73 NMAC. List 20.2.72.301.D.4 NMAC Auxiliary Equipment for Streamline applications in Table 2-A. The List of Insignificant Activities (for TV) can be found online at http://www.env.nm.gov/aqb/forms/InsignificantListTitleV.pdf . TV sources may elect to enter both TV Insignificant Activities and Part 72 Exemptions on this form.

Unit Number	Source Description	Manufacturer	Model No.	Max Capacity	List Specific 20.2.72.202 NMAC Exemption (e.g. 20.2.72.202.B.5)	Date of Manufacture /Reconstruction[2]	For Each Piece of Equipment, Check Onc
			Serial No.	Capacity Units	Insignificant Activity citation (e.g. IA List Item #1.a)	Date of Installation /Construction[2]	
Haul	Ammonia Delivery Truck Travel	N/A	N/A	N/A	20.2.72.202.B.5	N/A	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	N/A	N/A	N/A	
TK-1	Ammonia Storage Tank	Steel Structures, Inc.	2012	4962	20.2.72.202.B.5	2015	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			3221	gal	N/A	15-Oct	
TK-2	Ammonia Storage Tank	TBD	N/A	N/A	20.2.72.202.B.5	N/A	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			N/A	N/A	N/A	N/A	
							☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
							☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
							☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
							☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
							☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
							☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
							☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
							☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
							☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
							☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced

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[1] Insignificant activities exempted due to size or production rate are defined in 20.2.70.300.D.6, 20.2.70.7.Q NMAC, and the NMED/AQB List of Insignificant Activities, dated September 15, 2008. Emissions from these insignificant activities do not need to be reported, unless specifically requested.

[2] Specify date(s) required to determine regulatory applicability.

Table 2-C: Emissions Control Equipment

Unit and stack numbering must correspond throughout the application package. Only list control equipment for TAPs if the TAP's maximum uncontrolled emissions rate is over its respective threshold as listed in 20.2.72 NMAC, Subpart V, Tables A and B. In accordance with 20.2.72.203.A(3) and (8) NMAC, 20.2.70.300.D(5)(b) and (e) NMAC, and 20.2.73.200.B(7) NMAC, the permittee shall report all control devices and list each pollutant controlled by the control device regardless if the applicant takes credit for the reduction in emissions.

Control Equipment Unit No.	Control Equipment Description	Date Installed	Controlled Pollutant(s)	Controlling Emissions for Unit Number(s)[1]	Efficiency (% Control by Weight)	Method used to Estimate Efficiency
1A	SCR Unit to control NO_x emissions	Oct-15	NO_x	1	90%	Industry Standard
2A	SCR Unit to control NO_x emissions	TBD	NO_x	2	90%	Industry Standard
1B	Oxidation catalyst to control CO emissions	Oct-15	CO	1	85%	Industry Standard
2B	Oxidation catalyst to control CO emissions	TBD	CO	2	85%	Industry Standard

[1] List each control device on a separate line. For each control device, list all emission units controlled by the control device.

Table 2-D: Maximum Emissions (under normal operating conditions)

☐ **This Table was intentionally left blank because it would be identical to Table 2-E.**

Maximum Emissions are the emissions at maximum capacity and prior to (in the absence of) pollution control, emission-reducing process equipment, or any other emission reduction. Calculate the hourly emissions using the worst case hourly emissions for each pollutant. For each pollutant, calculate the annual emissions as if the facility were operating at maximum plant capacity without pollution controls for 8760 hours per year, unless otherwise approved by the Department. List Hazardous Air Pollutants (HAP) & Toxic Air Pollutants (TAPs) in Table 2-I. Unit & stack numbering must be consistent throughout the application package. Fill all cells in this table with the emission numbers or a "-" symbol. A "-" symbol indicates that emissions of this pollutant are not expected. Numbers shall be expressed to at least 2 decimal points (e.g. 0.41, 1.41, or 1.41E-4).

Unit No.	NOx		CO		VOC		SOx		TSP[2]		PM10[2]		PM2.5[2]		H_2S		Lead	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
1	36.4	123.1	35.5	119.9	2.0	6.9	0.40	1.4	4.0	13.5	4.0	13.5	4.0	13.5	-	-	-	-
2	36.4	123.1	35.5	119.9	2.0	6.9	0.40	1.4	4.0	13.5	4.0	13.5	4.0	13.5	-	-	-	-
Totals	72.8	246.2	70.9	239.8	4.1	13.7	0.81	2.7	8.0	27.0	8.0	27.0	8.0	27.0	-	-	-	-

[1] **Condensable Particulate Matter:** Include condensable particulate matter emissions for PM10 and PM2.5 if the source is a combustion source. Do not include condensable particulate matter for TSP unless TSP is set equal to PM10 and PM2.5.

"-" Indicates that emissions are not expected for that pollutant from that unit.

Table 2-E: Requested Allowable Emissions

Unit & stack numbering must be consistent throughout the application package. Fill all cells in this table with the emission numbers or a "-" symbol. A "-" symbol indicates that emissions of this pollutant are not expected. Numbers shall be expressed to at least 2 decimal points (e.g. 0.41, 1.41, or $1.41E^{-4}$).

Unit No.	NOx		CO		VOC		SOx		TSP[1]		PM10[1]		PM2.5[1]		H_2S		Lead	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
1	3.6	12.3	5.3	18.0	1.0	3.4	0.40	1.4	4.0	13.5	4.0	13.5	4.0	13.5	-	-	-	-
2	3.6	12.3	5.3	18.0	1.0	3.4	0.40	1.4	4.0	13.5	4.0	13.5	4.0	13.5	-	-	-	-
Totals	7.3	24.6	10.6	36.0	2.0	6.9	0.81	2.7	8.0	27.0	8.0	27.0	8.0	27.0	-	-	-	-

[1] **Condensable Particulate Matter:** Include condensable particulate matter emissions for PM10 and PM2.5 if the source is a combustion source. Do not include condensable particulate matter for TSP unless TSP is set equal to PM10 and PM2.5.

"-" Indicates that emissions are not expected for that pollutant from that unit.

Table 2-F: Additional Emissions during Startup, Shutdown, and Routine Maintenance (SSM)

☐ This table is intentionally left blank since all emissions at this facility due to routine or predictable startup, shutdown, or scehduled maintenance are no higher than those listed in Table 2-E and a malfunction emission limit is not already permitted or requested. If you are required to report GHG emissions as described in Section 6a, include any GHG emissions during Startup, Shutdown, and/or Scheduled Maintenance (SSM) in Table 2-P. Provide an explanations of SSM emissions in Section 6 and 6a.

All applications for facilities that have emissions during routine our predictable startup, shutdown or scheduled maintenance (SSM)[1], including NOI applications, must include in this table the Maximum Emissions during routine or predictable startup, shutdown and scheduled maintenance (20.2.7 NMAC, 20.2.72.203.A.3 NMAC, 20.2.73.200.D.2 NMAC). In Section 6 and 6a, provide emissions calculations for all SSM emissions reported in this table. Refer to "Guidance for Submittal of Startup, Shutdown, Maintenance Emissions in Permit Applications (https://www.env.nm.gov/aqb/permit/aqb_pol.html) for more detailed instructions. Numbers shall be expressed to at least 2 decimal points (e.g. 0.41, 1.41, or 1.41E-4).

Unit No.	NOx		CO		VOC		SOx		TSP[2]		PM10[2]		PM2.5[2]		H_2S		Lead	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
1-Startup	20.0	10.0	20.4	10.2	1.5	0.76	0.40	0.20	4.0	2.0	4.0	2.0	4.0	2.0	-	-	-	-
2-Startup	20.0	10.0	20.4	10.2	1.5	0.76	0.40	0.20	4.0	2.0	4.0	2.0	4.0	2.0	-	-	-	-
1-Shutdown	9.1	4.6	10.3	5.2	1.2	0.59	0.40	0.20	4.0	2.0	4.0	2.0	4.0	2.0	-	-	-	-
2-Shutdown	9.1	4.6	10.3	5.2	1.2	0.59	0.40	0.20	4.0	2.0	4.0	2.0	4.0	2.0	-	-	-	-
1-Malfunction	20.0	5.0	20.4	5.0	1.5	5.0	0.40	1.8	4.0	5.0	4.0	5.0	4.0	5.0	-	-	-	-
2-Malfunction	20.0	5.0	20.4	5.0	1.5	5.0	0.40	1.8	4.0	5.0	4.0	5.0	4.0	5.0	-	-	-	-
Totals	40.1	39.1	40.8	40.7	3.0	12.7	0.81	4.4	8.0	18.0	8.0	18.0	8.0	18.0	-	-	-	-

[1] **For instance**, if the short term steady-state Table 2-E emissions are 5 lb/hr and the SSM rate is 12 lb/hr, enter 7 lb/hr in this table. If the annual steady-state Table 2-E emissions are 21.9 TPY, and the number of scheduled SSM events result in annual emissions of 31.9 TPY, enter 10.0 TPY in the table below.

[1] **Condensable Particulate Matter:** Include condensable particulate matter emissions for PM10 and PM2.5 if the source is a combustion source. Do not include condensable particulate matter for TSP unless TSP is set equal to PM10 and PM2.5.

"-" Indicates that emissions are not expected for that pollutant from that unit.

Table 2-G: Stack Exit and Fugitive Emission Rates for Special Stacks

☒ I have elected to leave this table blank because this facility does not have any stacks/vents that split emissions from a single source or combine emissions from more than one source listed in table 2-A. Additionally, the emission rates of all stacks match the Requested allowable emission rates stated in Table 2-E.

Use this table to list stack emissions (requested allowable) from split and combined stacks. List Toxic Air Pollutants (TAPs) and Hazardous Air Pollutants (HAPs) in Table 2-I. List all fugitives that are associated with the normal, routine, and non-emergency operation of the facility. Unit and stack numbering must correspond throughout the application package. Refer to Table 2-E for instructions on use of the "-" symbol and on significant figures.

Stack No.	Serving Unit Number(s) from Table 2-A	NOx		CO		VOC		SOx		TSP		PM10		PM2.5		□ H_2S or □ Lead	
		lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
Totals:																	

Table 2-H: Stack Exit Conditions

Unit and stack numbering must correspond throughout the application package. Include the stack exit conditions for each unit that emits from a stack, including blowdown venting parameters and tank emissions. If the facility has multiple operating scenarios, complete a separate Table 2-H for each scenario and, for each, type scenario name here:

Stack Number	Serving Unit Number(s) from Table 2-A	Orientation (H-Horizontal V=Vertical)	Rain Caps (Yes or No)	Height Above Ground (ft)	Temp. (F)	Flow Rate		Moisture by Volume (%)	Velocity (ft/sec)	Inside Diameter or L x W (ft)
						(acfs)	(dscfs)			
1	1	V	N	45	851	9,392	-	-	119.6	10.0
2	2	V	N	45	851	9,392	-	-	119.6	10.0

Table 2-I: Stack Exit and Fugitive Emission Rates for HAPs and TAPs

In the table below, report the Potential to Emit for each HAP from each regulated emission unit listed in Table 2-A, only if the entire facility emits the HAP at a rate greater than or equal to one (1) ton per year For each such emission unit, HAPs shall be reported to the nearest 0.1 tpy. Each facility-wide Individual HAP total and the facility-wide Total HAPs shall be the sum of all HAP sources calculated to the nearest 0.1 ton per year. Per 20.2.72.403.A.1 NMAC, facilities not exempt [see 20.2.72.402.C NMAC] from TAP permitting shall report each TAP that has an uncontrolled emission rate in excess of its pounds per hour screening level specified in 20.2.72.502 NMAC. TAPs shall be reported using one more significant figure than the number of significant figures shown in the pound per hour threshold corresponding to the substance. Use the HAP nomenclature as it appears in Section 112 (b) of the 1990 CAAA and the TAP nomenclature as it listed in 20.2.72.502 NMAC. Include tank-flashing emissions estimates of HAPs in this table. For each HAP or TAP listed, fill all cells in this table with the emission numbers or a "-" symbol. A "-" symbol indicates that emissions of this pollutant are not expected or the pollutant is emitted in a quantity less than the threshold amounts described above.

Stack No.	Unit No.(s)	Total HAPs		Pollutant: Ammonia ☐ HAP or ☒ TAP		Pollutant: Formaldehyde ☒ HAP or ☐ TAP		Provide Pollutant Name Here ☐ HAP or ☐ TAP		Provide Pollutant Name Here ☐ HAP or ☐ TAP		Provide Pollutant Name Here ☐ HAP or ☐ TAP		Provide Pollutant Name Here ☐ HAP or ☐ TAP		Provide Pollutant Name Here ☐ HAP or ☐ TAP		Provide Pollutant Name Here ☐ HAP or ☐ TAP	
		lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
1	1	0.41	1.4	5.4	18.2	0.28	0.95												
2	2	0.41	1.4	5.4	18.2	0.28	0.95												
1	SSM 1 - Startup	0.41	0.20	5.4	2.7	0.28	0.14												
2	SSM 2 - Startup	0.41	0.20	5.4	2.7	0.28	0.14												
1	SSM 1 - Shutdown	0.41	0.20	5.4	2.7	0.28	0.14												
2	SSM 2 - Shutdown	0.41	0.20	5.4	2.7	0.28	0.14												
1	Malfunction 1	0.41	1.8	5.4	2.7	-	-												
2	Malfunction 2	0.41	1.8	5.4	2.7	-	-												
Totals:		0.81	7.1	10.8	52.5	0.56	2.5												

"-" Indicates that emissions are not expected for that pollutant from that unit.

Table 2-J: Fuel

Specify fuel characteristics and usage. Unit and stack numbering must correspond throughout the application package.

Unit No.	Fuel Type (No. 2 Diesel, Natural Gas, Coal, …)	Specify Units				
		Lower Heating Value	Hourly Usage	Annual Usage	% Sulfur	% Ash
1	Natural Gas	1047 BTU/scf	395.5 MMBTU/hr (HHV)	3,639.0	0.75 grains/100 dscf	0.0
2	Natural Gas	1047 BTU/scf	395.5 MMBTU/hr (HHV)	3,639.0	0.75 grains/100 dscf	0.0

Table 2-K: Liquid Data for Tanks Listed in Table 2-L

For each tank, list the liquid(s) to be stored in each tank. If it is expected that a tank may store a variety of hydrocarbon liquids, enter "mixed hydrocarbons" in the Composition column for that tank and enter the corresponding data of the most volatile liquid to be stored in the tank. If tank is to be used for storage of different materials, list all the materials in the "All Calculations" attachment, run the newest version of TANKS on each, and use the material with the highest emission rate to determine maximum uncontrolled and requested allowable emissions rate. The permit will specify the most volatile category of liquids that may be stored in each tank. Include appropriate tank-flashing modeling input data. Use additional sheets if necessary. Unit and stack numbering must correspond throughout the application package.

Tank No.	SCC Code	Material Name	Composition	Liquid Density (lb/gal)	Vapor Molecular Weight (lb/lb*mol)	Average Storage Conditions		Max Storage Conditions	
						Temperature (°F)	True Vapor Pressure (psia)	Temperature (°F)	True Vapor Pressure (psia)
N/A - There are no regulated storage tanks at this facility.									

Table 2-L: Tank Data

Include appropriate tank-flashing modeling input data. Use an addendum to this table for unlisted data categories. Unit and stack numbering must correspond throughout the application package. Use additional sheets if necessary. See reference Table 2-L2. Note: 1.00 bbl = 10.159 M3 = 42.0 gal

Tank No.	Date Installed	Materials Stored	Seal Type (refer to Table 2-LR below)	Roof Type (refer to Table 2-LR below)	Capacity		Diameter (M)	Vapor Space (M)	Color (from Table VI-C)		Paint Condition (from Table VI-C)	Annual Throughput (gal/yr)	Turn-overs (per year)
					(bbl)	(M^3)			Roof	Shell			
N/A - There are no regulated storage tanks at this facility.													

Table 2-L2: Liquid Storage Tank Data Codes Reference Table

Roof Type	Seal Type, Welded Tank Seal Type		Seal Type, Riveted Tank Seal Type		Roof, Shell Color	Paint Condition
FX: Fixed Roof	**Mechanical Shoe Seal**	**Liquid-mounted resilient seal**	**Vapor-mounted resilient seal**	**Seal Type**	**WH**: White	Good
IF: Internal Floating Roof	**A**: Primary only	**A**: Primary only	**A**: Primary only	**A**: Mechanical shoe, primary only	**AS**: Aluminum (specular)	Poor
EF: External Floating Roof	**B**: Shoe-mounted secondary	**B**: Weather shield	**B**: Weather shield	**B**: Shoe-mounted secondary	**AD**: Aluminum (diffuse)	
P: Pressure	**C**: Rim-mounted secondary	**C**: Rim-mounted secondary	**C**: Rim-mounted secondary	**C**: Rim-mounted secondary	**LG**: Light Gray	
					MG: Medium Gray	
					BL: Black	
					OT: Other (specify)	

Note: 1.00 bbl = 0.159 M^3 = 42.0 gal

Table 2-M: Materials Processed and Produced (Use additional sheets as necessary.)

Material Processed				Material Produced			
Description	**Chemical Composition**	**Phase (Gas, Liquid, or Solid)**	**Quantity (specify units)**	**Description**	**Chemical Composition**	**Phase**	**Quantity (specify units)**
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table 2-N: CEM Equipment

Enter Continuous Emissions Measurement (CEM) Data in this table. If CEM data will be used as part of a federally enforceable permit condition, or used to satisfy the requirements of a state or federal regulation, include a copy of the CEM's manufacturer specification sheet in the Information Used to Determine Emissions attachment. Unit and stack numbering must correspond throughout the application package. Use additional sheets if necessary.

Stack No.	Pollutant(s)	Manufacturer	Model No.	Serial No.	Sample Frequency	Averaging Time	Range	Sensitivity	Accuracy
1	NO_x, CO, O_2	Teledyne	T200M	447	10 secs	1 hr	low	10 ppm	-
1	NO_x, CO, O_2	Teledyne	T200M	447	10 secs	1 hr	high	150 ppm	-
1	CO	Teledyne	T300M	245	10 secs	1 hr	low	10 ppm	-
1	CO	Teledyne	T300M	245	10 secs	1 hr	high	2000 ppm	-
1	O_2	Teledyne	T200M	447	10 secs	1 hr	single	25%	-
1	Fuel	Yokogawa	YEWFLO	U1S200291	10 secs	1 hr	single	0-100 %	-
2	NO_x, CO, O_2, Fuel	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD

Table 2-O: Parametric Emissions Measurement Equipment

Unit and stack numbering must correspond throughout the application package. Use additional sheets if necessary.

Unit No.	Parameter/Pollutant Measured	Location of Measurement	Unit of Measure	Acceptable Range	Frequency of Maintenance	Nature of Maintenance	Method of Recording	Averaging Time
N/A - No Parametric Emissions Measurement Equipment is associated with this facility.								

Table 2-P: Greenhouse Gas Emissions

Applications submitted under 20.2.70, 20.2.72, & 20.2.74 NMAC are required to complete this Table. Power plants, Title V major sources, and PSD major sources must report and calculate all GHG emissions for each unit. Applicants must report potential emission rates in short tons per year (see Section 6.a for assistance). Include GHG emissions during Startup, Shutdown, and Scheduled Maintenance in this table. For minor source facilities that are not power plants, are not Title V, or are not PSD, there are three options for reporting GHGs 1) report GHGs for each individual piece of equipment; 2) report all GHGs from a group of unit types, for example report all combustion source GHGs as a single unit and all venting GHG as a second separate unit; OR 3) check the following box ☐ By checking this box, the applicant acknowledges the total CO2e emissions are less than 75,000 tons per year.

		CO_2 ton/yr	N_2O ton/yr	CH_4 ton/yr	SF_6 ton/yr	PFC/HFC ton/yr[2]										Total GHG Mass Basis ton/yr[4]	Total CO_2e ton/yr[5]
Unit No.	**GWPs [1]**	**1**	**298**	**25**	**22,800**	**footnote 3**											
1	**mass GHG**	156,373.9	0.29	2.9	-	-										156,377.1	
	CO_2e	156,373.9	87.8	73.7	-	-											156,535.4
2	**mass GHG**	156,373.9	0.29	2.9	-	-										156377.1	
	CO_2e	156,373.9	87.8	73.7	-	-											156535.4
SSM 1 - Startup	**mass GHG**	23132.2	0.044	0.44	-	-										23132.7	
	CO_2e	23132.2	13.0	10.9	-	-											23156.1
SSM 2 - Startup	**mass GHG**	23132.2	0.044	0.44	-	-										23132.7	
	CO_2e	23132.2	13.0	10.9	-	-											23156.1
SSM 1 - Shutdown	**mass GHG**	23132.2	0.044	0.44	-	-										23132.7	
	CO_2e	23132.2	13.0	10.9	-	-											23156.1
SSM 2 - Shutdown	**mass GHG**	23132.2	0.044	0.44	-	-										23132.7	
	CO_2e	23132.2	13.0	10.9	-	-											23156.1
CB-1	**mass GHG**	-	-	-	0.00043	-										0.000425	
	CO_2e	-	-	-	9.7	-											9.69
CB-2	**mass GHG**	-	-	-	0.00043	-										0.000425	
	CO_2e	-	-	-	9.7	-											9.69
	mass GHG																
	CO_2e																
	mass GHG																
	CO_2e																
	mass GHG																
	CO_2e																
	mass GHG																
	CO_2e																
	mass GHG																
	CO_2e																
	mass GHG																
	CO2e																
Total	**mass GHG**	359,012.2	0.68	6.8	0.00085	-										405,285.1	
	CO_2e	359,012.2	201.6	169.2	19.4	-											405,714.6

[1] **GWP** (Global Warming Potential): Applicants must use the most current GWPs codified in Table A-1 of 40 CFR part 98. GWPs are subject to change, therefore, applicants need to check 40 CFR 98 to confirm GWP values.

[2] For **HFCs** or **PFCs** describe the specific HFC or PFC compound and use a separate column for each individual compound.

[3] For each new compound, enter the appropriate GWP for each HFC or PFC compound from Table A-1 in 40 CFR 98.

[4] Green house gas emissions on a **mass basis** is the ton per year green house gas emission before adjustment with its GWP.

[5] **CO_2e** means Carbon Dioxide Equivalent and is calculated by multiplying the TPY mass emissions of the green house gas by its GWP.

"-" Indicates that emissions are not expected for that pollutant from that unit.

Section 3

Application Summary

The **Application Summary** shall include a brief description of the facility and its process, the type of permit application, the applicable regulation (i.e. 20.2.72.200.A.X, or 20.2.73 NMAC) under which the application is being submitted, and any air quality permit numbers associated with this site. If this facility is to be collocated with another facility, provide details of the other facility including permit number(s). In case of a revision or modification to a facility, provide the lowest level regulatory citation (i.e. 20.2.72.219.B.1.d NMAC) under which the revision or modification is being requested. Also describe the proposed changes from the original permit, how the proposed modification will affect the facility's operations and emissions, de-bottlenecking impacts, and changes to the facility's major/minor status (both PSD & Title V).

Routine or predictable emissions during Startup, Shutdown, and Maintenance (SSM): Provide an overview of how SSM emissions are accounted for in this application. Refer to "Guidance for Submittal of Startup, Shutdown, Maintenance Emissions in Permit Applications (http://www.env.nm.gov/aqb/permit/app_form.html) for more detailed instructions on SSM emissions.

Current Permit

Public Service Company of New Mexico (PNM) is submitting this minor source NSR permit significant revision application pursuant to 20.2.72.219.D.(1)(a) "Construction Permits" New Mexico Administrative Code (NMAC) in order to revise its NSR Permit No. PSD-5041R1 for La Luz Energy Center (La Luz). La Luz is a power generating facility owned and operated by PNM and located approximately 3.9 miles southwest of Belen in Valencia County. The facility is currently permitted for the following equipment:

- Two General Electric (GE) LM6000 PC Sprint simple cycle turbine, natural gas fire
- Water injection system, one per turbine
- Selective catalytic reduction system (SCR), one per turbine
- Oxidation catalyst system, one per turbine
- Inlet air filter, one per turbine
- Atmospheric vertical storage tank (for aqueous ammonia, NH_3), one per turbine
- Pumps
- Water tanks
- Wastewater tanks
- Air compressors
- Fin fan coolers

The facility is located at latitude 34°, 36', 58.3" N and longitude 106°, 48', 54.0" W. The facility Universal Transverse Mercator (UTM) coordinates are 333,600 Easting, 3,831,980 Northing, Zone 13, WGS84, at an elevation of 5,175 feet. The approximate location of this facility is 3.9 miles southwest of the intersection of State Route 314 and State Route 309 in the city of Belen in Valencia County.

Requested Changes

PNM proposes four changes to the permit:

- Change the permit to a minor source from a major source because the facility is no longer PSD
- Modify the record-keeping requirements for NH_3
- Modify the NO_x emissions standards to correctly reflect the requirements of 40 CFR 60 Subpart KKKK
- Add turbine malfunction emissions for all applicable pollutants

A redline version of the original permit is included in Section 20 and the changes are summarized below.
One of the turbines, Unit 1, was installed in October of 2015 and began operation in December of 2015. It was stated in the initial NSR permit application that the expected construction completion date for Unit 2 would be at the latest sometime in 2019. However, PNM requests that the anticipated construction date for Unit 2 to be determined at a later date.

La Luz was originally permitted as a PSD major source (PSD-5041R1) due to the facility's calculated greenhouse gas (GHG) emission rates exceeding 100,000 tpy of CO_2e. However, the Supreme Court in *Utility Air Regulatory Group v. Environmental Protection Agency et al.* has vacated the GHG Tailoring rule and ordered the Environmental Protection Agency (EPA) to take steps to rescind previously applicable GHG provisions. EPA followed the court order with a direct final action that delegated federal authority to the state level to rescind PSD permits within their jurisdiction under 40 CFR §52.21 (u). Therefore, PNM requests that the EPA and the NMED rescind PSD-5041R1 and replace it with a minor source NSR permit removing all respective GHG BACT requirements found in Parts A100.B; A106.D, E, G, H and M; and A107 (C)(3). In addition, as a minor source, BACT requirements for non-GHG pollutants would not be required and should be replaced by acceptable permit conditions outside the limitations required through the PSD BACT analysis.

Second, PNM requests that the recordkeeping requirements (A105.B) for NH_3 be modified to be similar to the requirements in PNM's Afton Generating NSR Permit PSD2466-M4. To ensure the correct operations of the catalyst, the control system is setup to only allow ammonia injection at certain temperatures. Ammonia cannot be injected unless the catalyst is at the proper temperature. In this way, the most efficient ammonia-NO_x reaction is achieved to control the emissions of NO_x and ammonia. Part A105.B of the NSR permit would read:

> **Recordkeeping:**
>
> Delete item (2) and replace with:
>
> (2) The permittee shall maintain a manufacture's specification sheet, equipment manual, or equivalent documentation detailing the control system on the SCR unit which details the recommended unit temperature range to minimize ammonia slip.

Third, PNM requests that the NO_x emissions standards be modified to correctly reflect 40 CFR Part 60 Subpart KKKK, 60.4380(b)(3), as well as Table 1. Specifically, 60.4380(b)(3) states,

> For operating periods during which multiple emissions standards apply, the applicable standard is the average of the applicable standards during each hour. For hours with multiple emissions standards, the applicable limit for that hour is determined based on the condition that corresponded to the highest emissions standard.

Table 1 gives the standard for "turbines operating at less than 75 percent of peak load… and turbine(sic) operating at temperatures less than 0 °F" and with "> 30 MW Output" as "96 ppm at 15 percent O_2 or 590 ng/J of useful output (4.7 lb/MWh)." Further, this guidance given by Christian Fellner of the EPA was shared with PNM:

> …during 4 hour periods that include startup and shutdown events, the NOx standard used for reporting excess emissions is a calculated "blended" 4-hour average. For example, during any hour when either the turbine is operated below 75% of the base load rating or the temperature is below 0 °F the alternate part load standard would apply for that hour.

Thus, during an operating period, the standard for a given hour during which multiple standards might apply is the least restrictive of those standards, and the standard for a 4-hour period is the average of the least restrictive standards for each hour.

Fourth, PNM requests the addition of turbine malfunction emissions to the permit. The hourly emission rates PNM is requesting for turbine malfunction emissions are equal to the startup emission rates currently permitted for the turbines. PNM is requesting up to 5.0 tpy NO_x, CO, TSP, $PM_{2.5}$, PM_{10}, 2.7 tpy of NH_3, and 1.8 tpy of SO_x and HAPs per turbine. This is in accordance with the NMED's *Implementation Guidance for Permitting SSM Emissions and Excess Emissions*, June 2012.

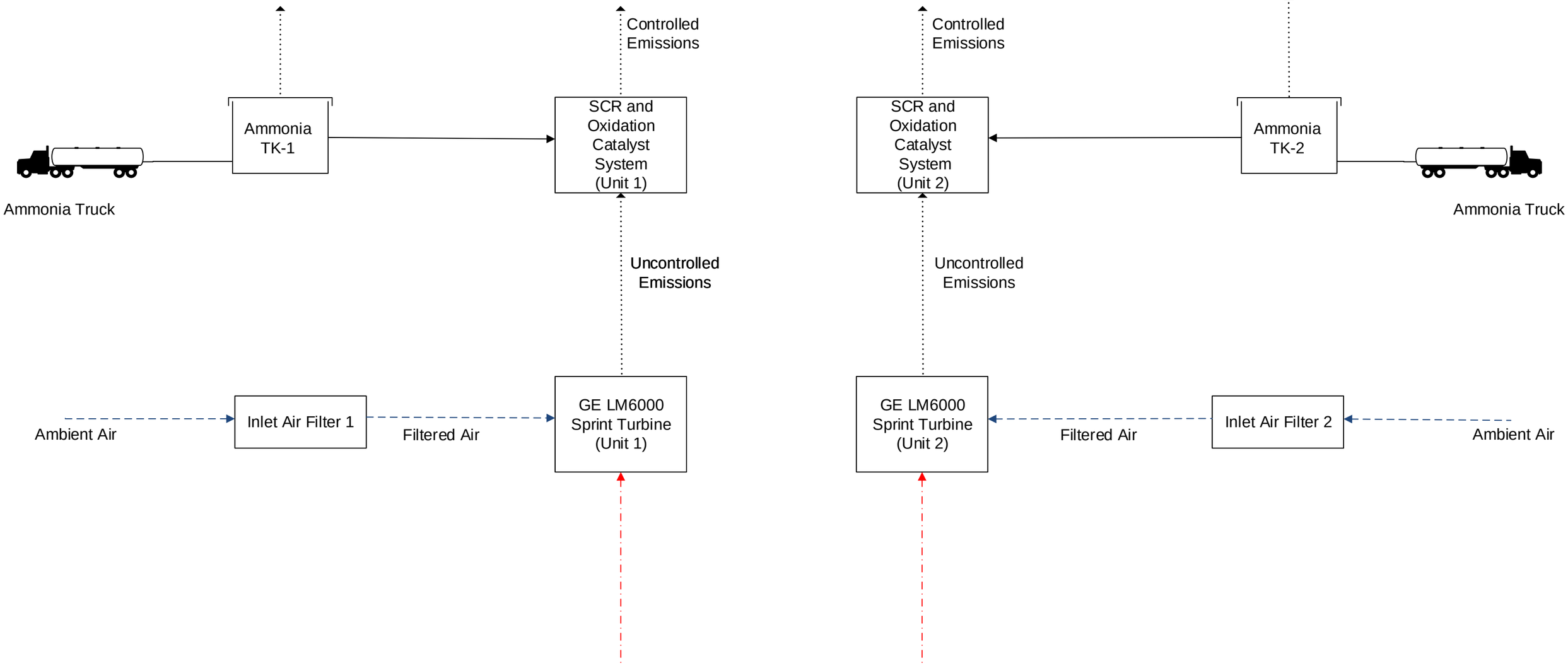
The equipment, operating conditions, and the emissions, with the exception of the additional malfunction emissions, are unchanged from the initial NSR permit application.

Section 4

Process Flow Sheet

A **process flow sheet** and/or block diagram indicating the individual equipment, all emission points and types of control applied to those points. The unit numbering system should be consistent throughout this application.

Process flow diagram is enclosed.



Key

Natural Gas | Air | Emission | Ammonia

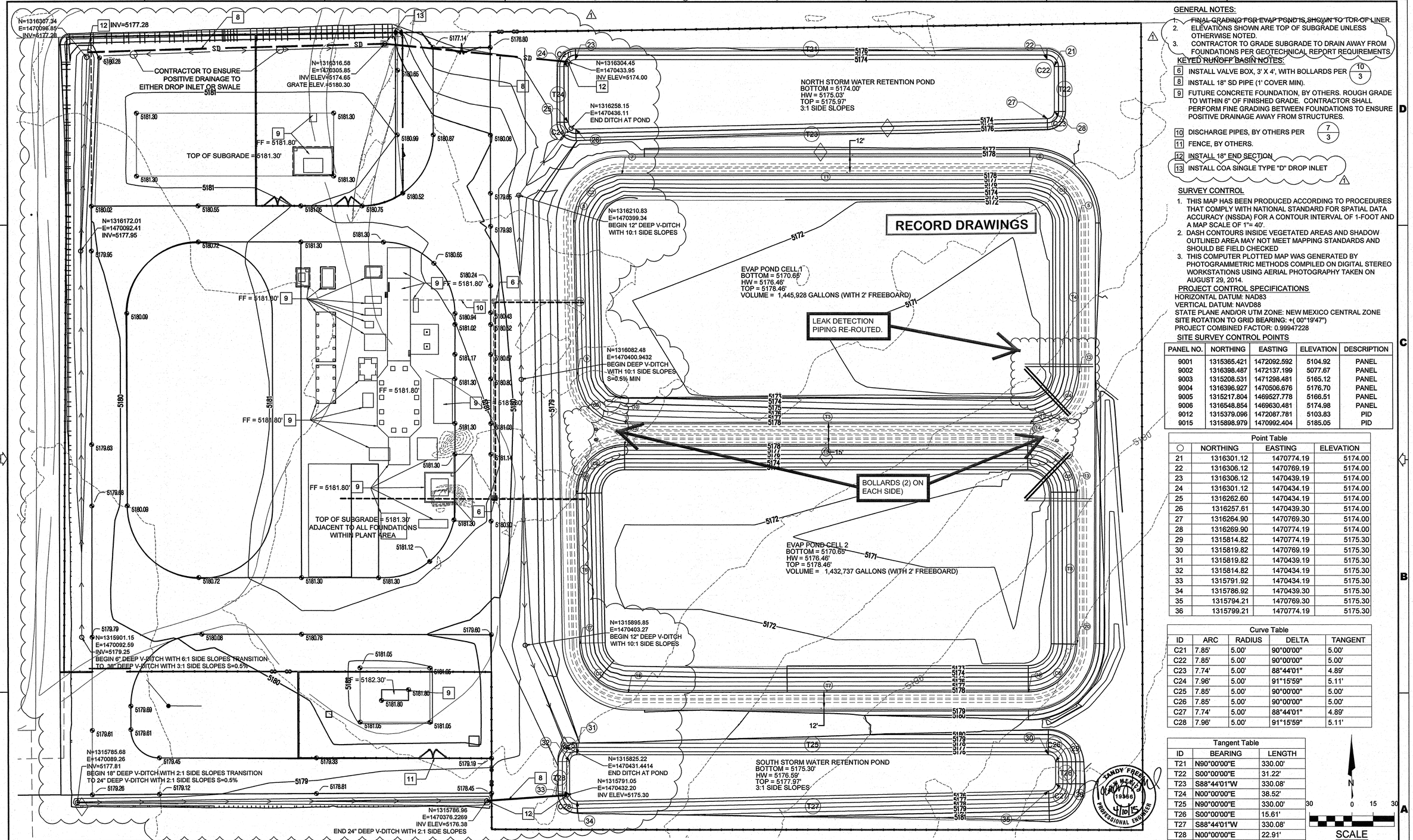
Public Service Company of New Mexico
La Luz Energy Center
Process Flow Diagram
Trinity Consultants

Section 5

Plot Plan Drawn To Scale

A **plot plan drawn to scale** showing emissions points, roads, structures, tanks, and fences of property owned, leased, or under direct control of the applicant. This plot plan must clearly designate the restricted area as defined in UA1, Section 1-D.12. The unit numbering system should be consistent throughout this application.

Plot plan is enclosed.



GENERAL NOTES:

1. FINAL GRADING FOR EVAP POND IS SHOWN TO TOP OF LINER.
2. ELEVATIONS SHOWN ARE TOP OF SUBGRADE UNLESS OTHERWISE NOTED.
3. CONTRACTOR TO GRADE SUBGRADE TO DRAIN AWAY FROM FOUNDATIONS PER GEOTECHNICAL REPORT REQUIREMENTS.

KEYED RUNOFF BASIN NOTES:

6 INSTALL VALVE BOX, 3' X 4', WITH BOLLARDS PER (10/3)

8 INSTALL 18" SD PIPE (1' COVER MIN).

9 FUTURE CONCRETE FOUNDATION, BY OTHERS. ROUGH GRADE TO WITHIN 6" OF FINISHED GRADE. CONTRACTOR SHALL PERFORM FINE GRADING BETWEEN FOUNDATIONS TO ENSURE POSITIVE DRAINAGE AWAY FROM STRUCTURES.

10 DISCHARGE PIPES, BY OTHERS PER (7/3)

11 FENCE, BY OTHERS.

12 INSTALL 18" END SECTION

13 INSTALL COA SINGLE TYPE "D" DROP INLET (1)

SURVEY CONTROL

1. THIS MAP HAS BEEN PRODUCED ACCORDING TO PROCEDURES THAT COMPLY WITH NATIONAL STANDARD FOR SPATIAL DATA ACCURACY (NSSDA) FOR A CONTOUR INTERVAL OF 1-FOOT AND A MAP SCALE OF 1"= 40'.
2. DASH CONTOURS INSIDE VEGETATED AREAS AND SHADOW OUTLINED AREA MAY NOT MEET MAPPING STANDARDS AND SHOULD BE FIELD CHECKED
3. THIS COMPUTER PLOTTED MAP WAS GENERATED BY PHOTOGRAMMETRIC METHODS COMPILED ON DIGITAL STEREO WORKSTATIONS USING AERIAL PHOTOGRAPHY TAKEN ON AUGUST 29, 2014.

PROJECT CONTROL SPECIFICATIONS

HORIZONTAL DATUM: NAD83
VERTICAL DATUM: NAVD88
STATE PLANE AND/OR UTM ZONE: NEW MEXICO CENTRAL ZONE
SITE ROTATION TO GRID BEARING: +(00°19'47")
PROJECT COMBINED FACTOR: 0.99947228

SITE SURVEY CONTROL POINTS

PANEL NO.	NORTHING	EASTING	ELEVATION	DESCRIPTION
9001	1315365.421	1472092.592	5104.92	PANEL
9002	1316398.487	1472137.199	5077.67	PANEL
9003	1315208.531	1471298.481	5165.12	PANEL
9004	1316396.927	1470506.676	5176.70	PANEL
9005	1315217.804	1469527.778	5166.51	PANEL
9006	1316548.854	1469630.481	5174.98	PANEL
9012	1315379.096	1472087.781	5103.83	PID
9015	1315898.979	1470992.404	5185.05	PID

Point Table			
○	NORTHING	EASTING	ELEVATION
21	1316301.12	1470774.19	5174.00
22	1316306.12	1470769.19	5174.00
23	1316306.12	1470439.19	5174.00
24	1316301.12	1470434.19	5174.00
25	1316262.60	1470434.19	5174.00
26	1316257.61	1470439.30	5174.00
27	1316264.90	1470769.30	5174.00
28	1316269.90	1470774.19	5174.00
29	1315814.82	1470774.19	5175.30
30	1315819.82	1470769.19	5175.30
31	1315819.82	1470439.19	5175.30
32	1315814.82	1470434.19	5175.30
33	1315791.92	1470434.19	5175.30
34	1315786.92	1470439.30	5175.30
35	1315794.21	1470769.30	5175.30
36	1315799.21	1470774.19	5175.30

Curve Table				
ID	ARC	RADIUS	DELTA	TANGENT
C21	7.85'	5.00'	90°00'00"	5.00'
C22	7.85'	5.00'	90°00'00"	5.00'
C23	7.74'	5.00'	88°44'01"	4.89'
C24	7.96'	5.00'	91°15'59"	5.11'
C25	7.85'	5.00'	90°00'00"	5.00'
C26	7.85'	5.00'	90°00'00"	5.00'
C27	7.74'	5.00'	88°44'01"	4.89'
C28	7.96'	5.00'	91°15'59"	5.11'

Tangent Table		
ID	BEARING	LENGTH
T21	N90°00'00"E	330.00'
T22	S00°00'00"E	31.22'
T23	S88°44'01"W	330.08'
T24	N00°00'00"E	38.52'
T25	N90°00'00"E	330.00'
T26	S00°00'00"E	15.61'
T27	S88°44'01"W	330.08'
T28	N00°00'00"E	22.91'

N 30 0 15 30

SCALE

NOTES:

Bohannan Huston
www.bhinc.com 800.877.5332

REV	DATE	DESCRIPTION	DRAWN
1	4/10/2015	SITE GRADING UPDATED	TMF

LA LUZ ENERGY CENTER
11 La Luz Energy Center Road - *Belen, NM 87002*

Public Service Company New Mexico
414 Silver Ave. SW
Albuquerque, NM 87102
Phone:(505) 246-5700

TTS CONSTRUCTION 1220 East Pine Street, Lodi, CA 95240 Phone (209) 333-7788

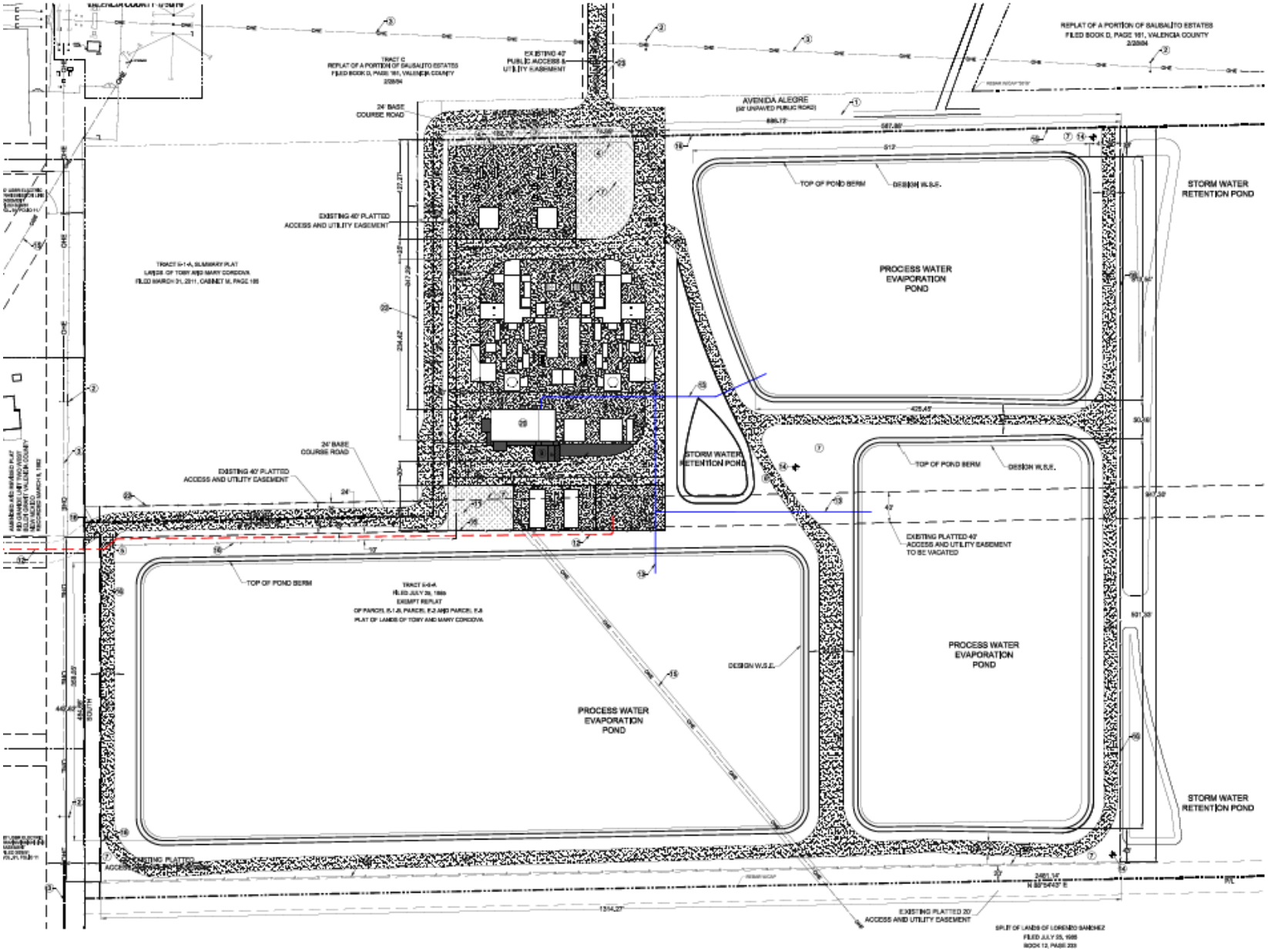
Integrated Engineers & Contractors Corporation
8795 Folsom Blvd, Suite 205 Sacramento, CA 95826
Phone (916) 383-6000 Fax (916) 383-6010

Wellhead Construction, Inc.
650 Bercut Dr, Suite C - Sacramento, CA 95814
Phone: 916-447-5171 Fax: 916-447-7602

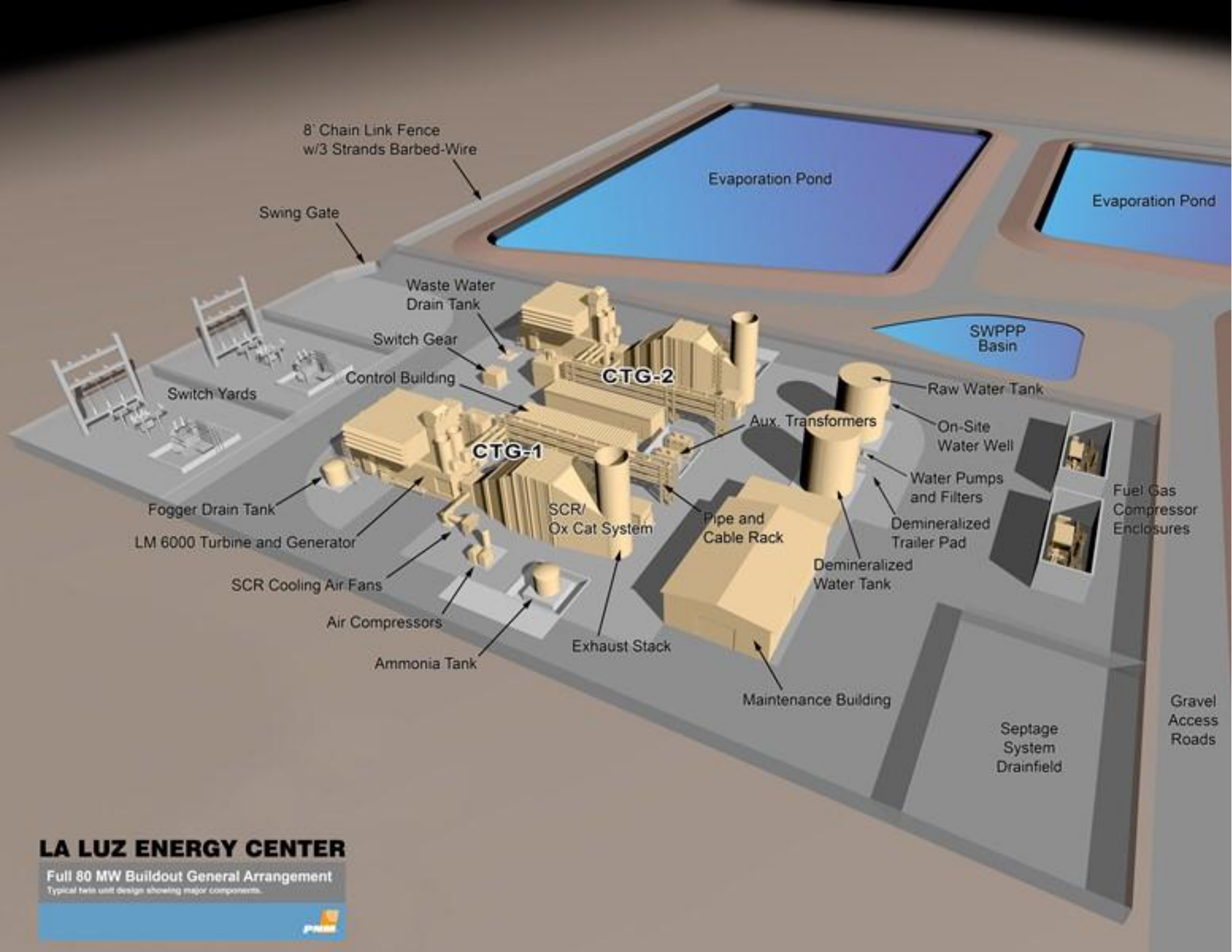
DRAWN: CAFFREY, A DATE: 03/18/2015
ENG. APPROVAL: — DATE: —

DRAWING TITLE: SITE GRADING

SIZE: D | FSCM NO. | DWG NO.: LLEC-C-301 | REV: —
SCALE: NONE | PROJECT: LA LUZ ENERGY CNTR | SHEET: 1



Site Facility Plot Plan
La Luz Energy Facility
Public Service Company of New Mexico



LA LUZ ENERGY CENTER

Full 80 MW Buildout General Arrangement

Typical twin unit design showing major components.

Section 6

All Calculations

Show all calculations used to determine both the hourly and annual controlled and uncontrolled emission rates. All calculations shall be performed keeping a minimum of three significant figures. Document the source of each emission factor used (if an emission rate is carried forward and not revised, then a statement to that effect is required). If identical units are being permitted and will be subject to the same operating conditions, submit calculations for only one unit and a note specifying what other units to which the calculations apply. All formulas and calculations used to calculate emissions must be submitted. The "Calculations" tab in the UA2 has been provided to allow calculations to be linked to the emissions tables. Add additional "Calc" tabs as needed. If the UA2 or other spread sheets are used, all calculation spread sheet(s) shall be submitted electronically in Microsoft Excel compatible format so that formulas and input values can be checked. Format all spread sheets and calculations such that the reviewer can follow the logic and verify the input values. Define all variables. If calculation spread sheets are not used, provide the original formulas with defined variables. Additionally, provide subsequent formulas showing the input values for each variable in the formula. All calculations, including those calculations are imbedded in the Calc tab of the UA2 portion of the application, the printed Calc tab(s), should be submitted under this section.

Tank Flashing Calculations: The information provided to the AQB shall include a discussion of the method used to estimate tank-flashing emissions, relative thresholds (i.e., NOI, permit, or major source (NSPS, PSD or Title V)), accuracy of the model, the input and output from simulation models and software, all calculations, documentation of any assumptions used, descriptions of sampling methods and conditions, copies of any lab sample analysis. If Hysis is used, all relevant input parameters shall be reported, including separator pressure, gas throughput, and all other relevant parameters necessary for flashing calculation.

SSM Calculations: It is the applicant's responsibility to provide an estimate of SSM emissions or to provide justification for not doing so. In this Section, provide emissions calculations for Startup, Shutdown, and Routine Maintenance (SSM) emissions listed in the Section 2 SSM and/or Section 22 GHG Tables and the rational for why the others are reported as zero (or left blank in the SSM/GHG Tables). Refer to "Guidance for Submittal of Startup, Shutdown, Maintenance Emissions in Permit Applications (http://www.env.nm.gov/aqb/permit/app_form.html) for more detailed instructions on calculating SSM emissions. If SSM emissions are greater than those reported in the Section 2, Requested Allowables Table, modeling may be required to ensure compliance with the standards whether the application is NSR or Title V. Refer to the Modeling Section of this application for more guidance on modeling requirements.

Glycol Dehydrator Calculations: The information provided to the AQB shall include the manufacturer's maximum design recirculation rate for the glycol pump. If GRI-Glycalc is used, the full input summary report shall be included as well as a copy of the gas analysis that was used.

Road Calculations: Calculate fugitive particulate emissions and enter haul road fugitives in Tables 2-A, 2-D and 2-E for:

1. If you transport raw material, process material and/or product into or out of or within the facility and have PER emissions greater than 0.5 tpy.
2. If you transport raw material, process material and/or product into or out of the facility more frequently than one round trip per day.

Significant Figures:

A. All emissions standards are deemed to have at least two significant figures, but not more than three significant figures.

B. At least 5 significant figures shall be retained in all intermediate calculations.

C. In calculating emissions to determine compliance with an emission standard, the following rounding off procedures shall be used:

(1) If the first digit to be discarded is less than the number 5, the last digit retained shall not be changed;

(2) If the first digit discarded is greater than the number 5, or if it is the number 5 followed by at least one digit other than the number zero, the last figure retained shall be increased by one unit; **and**

(3) If the first digit discarded is exactly the number 5, followed only by zeros, the last digit retained shall be rounded upward if it is an odd number, but no adjustment shall be made if it is an even number.

(4) The final result of the calculation shall be expressed in the units of the standard.

Control Devices: In accordance with 20.2.72.203.A(3) and (8) NMAC, 20.2.70.300.D(5)(b) and (e) NMAC, and 20.2.73.200.B(7) NMAC, the permittee shall report all control devices and list each pollutant controlled by the control device

regardless if the applicant takes credit for the reduction in emissions. The applicant can indicate in this section of the application if they chose to not take credit for the reduction in emission rates. For notices of intent submitted under 20.2.73 NMAC, only uncontrolled emission rates can be considered to determine applicability unless the state or federal Acts require the control. This information is necessary to determine if federally enforceable conditions are necessary for the control device, and/or if the control device produces its own regulated pollutants or increases emission rates of other pollutants.

Emissions from the two 42 megawatt (MW) GE LM6000 PC Sprint simple-cycle gas turbines, with control by the selective catalytic reduction (SCR) and oxidation catalyst systems, have been estimated for steady state operations and Startup, Shutdown and Maintenance and Malfunction (SSM and Malfunction). Emissions for criteria pollutants (total suspended particulates (TSP), particulate matter less than 10 microns in diameter (PM_{10}), particulate matter less than 2.5 microns in diameter ($PM_{2.5}$), sulfur dioxide (SO_2), nitrogen oxides (NO_X), carbon monoxide (CO)), volatile organic compounds (VOC), toxic air pollutants (TAP), hazardous air pollutants (HAP), and greenhouse gases (GHG) on a mass basis, as well as GHG converted to carbon dioxide equivalents (CO_2e) have been calculated. Working and breathing emissions from the two 6,000 gallon ammonia tanks, the emissions from the haul road used by the ammonia delivery trucks and the GHG emissions of the circuit breakers have also been calculated. Emission calculation methodologies are described below and detailed emission calculations are included.

Turbine 1 and 2

Calculations for the hourly and annual controlled and uncontrolled emissions of NO_x, CO, VOC, TSP, PM_{10}, $PM_{2.5}$, and SO_x for the turbines are divided into Steady State emissions and Startup, Shutdown, and Maintenance and Malfunction emissions.

Steady State

Hourly uncontrolled emissions of NO_x, CO, and VOC are calculated using the uncontrolled emission rates of 25 parts per million (ppm) at 15 percent oxygen for NO_x, 40 ppm at 15 percent oxygen for CO, and 4 ppm at 15 percent oxygen for VOC per Equation 1 below. Hourly controlled emission factors of NO_x, CO, and VOC are based on SCR data. They are calculated using the emission rates of 2.5 ppm at 15 percent oxygen for NO_x, 6 ppm at 15 percent oxygen for CO, and 2 ppm at 15 percent oxygen for VOC. Hourly controlled emissions are calculated using Equation 1 below.

Equation 1

$$\text{Emissions}\left(\frac{\text{lb}}{\text{hr}}\right) = \frac{\text{ppm}}{1{,}000{,}000} * \left(\frac{20.9}{20.9 - 15}\right) * \text{F factor} * \text{MW} * \left(\frac{1}{379.5}\right) * \text{HIHHV}\left(\frac{\text{MMBtu}}{\text{hr}}\right)$$

Where:
ppm = parts per million (varies by pollutant for uncontrolled and controlled)
MW = molecular weight (lb/lb-mole) (NO_x = 46; CO = 28; VOC = 16)
H.I. HHV = heat input higher heating value = 395.5 MMBtu/hr
F factor at 60˚ Fahrenheit (F) = 8,578 dscf/MMBtu
Conversion factor = (1/(379.5 scf/lb-mol)) at 60˚ F
Correction factor to 15 percent oxygen = (20.9/(20.9-15))

Emission factors for TSP, PM_{10}, and $PM_{2.5}$ were obtained from the manufacturer guarantee from GE for the combustion turbine. The hourly controlled and uncontrolled emission rate is 4 pounds per hour (lb/hr) for TSP, PM_{10}, and $PM_{2.5}$. Note that for calculation purposes TSP includes both filterable and condensable PM and therefore TSP = PM_{10} = $PM_{2.5}$.

The SO_x controlled and uncontrolled hourly emissions are calculated based on the sulfur limit of natural gas of 0.75 grains/100 dry standard cubic feet (dscf). The emission factor was converted to the hourly emission rate using Equation 2 below.

Equation 2

$$\text{Emissions}\left(\frac{\text{lb}}{\text{hr}}\right) = \frac{\text{E. F.}\left(\frac{\text{grains}}{\text{dscf}}\right)}{7{,}000\left(\frac{\text{grains}}{\text{lb}}\right)} * 1{,}000{,}000 * \frac{\text{HIHHV}\left(\frac{\text{MMBtu}}{\text{hr}}\right)}{\text{HC}\left(\frac{\text{Btu}}{\text{scf}}\right)}$$

Where:
E.F. = emission factor = 0.0075 grains/dscf
HIHHV = heat input higher heating value = 395.5 MMBtu (million British thermal units)/hr
HC = heat content = 1,047 Btu (British thermal units)/scf
Conversion factor = 7,000 grains/lb
Conversion factor = 1,000,000 Btu/MMBtu

The HAP emissions associated with the turbines have been calculated. The emission factors for stationary gas turbines were obtained from U.S. Environmental Protection Agency (USEPA) AP-42 Section 3.1 "Stationary Gas Turbines"(April 2000) Table 3.1-3 for pollutants on the USEPA HAP list.

Hourly emissions were calculated by multiplying the AP-42 emission factors by the heat input of the CTG per Equation 3 below. Annual emissions are calculated by multiplying hourly emissions by 8,760 hours per year, as Startup and Shutdown HAP emissions are assumed to be the same as normal operational emissions.

Equation 3

$$\text{Hourly emissions}\left(\frac{\text{lb}}{\text{hr}}\right) = \text{EF}\left(\frac{\text{lb}}{\text{MMBtu}}\right) * \text{HIHHV}\left(\frac{\text{MMBtu}}{\text{hr}}\right)$$

Where:
EF = AP-42 HAP emission factor (lb/MMBtu)
HIHHV = Heat input higher heating value= 395.5 MMBtu/hr

Neither the 10 tpy for a single HAP nor the 25 tpy for total HAP major source thresholds are exceeded. Therefore, the facility is not a major source of HAP. Only the emissions for formaldehyde are greater than one ton per year, and it is therefore included in section 2-I of this application.

New Mexico Administrative Code (NMAC) 20.2.72.502 lists ammonia as a TAP. Ammonia emissions from the turbines have been calculated using the proposed ammonia slip permit limit of 10 ppm (at 15 percent oxygen). Hourly emissions are calculated per Equation 2 above using the ammonia molecular weight of 17.

Calculated ammonia hourly emissions were compared to the permitting levels provided in NMAC 20.2.72.502. As provided in NMAC 20.2.72.502, a correction factor was applied to the emission permitting level for the purpose of determining whether a permit is necessary. The correction factor of 5 was chosen based on the proposed exhaust stack height of 13.7 meters.

The potential ammonia emissions of 10.77 lb/hr from both turbines together exceeds the corrected permitting screening level of 6.0 lb/hr. The previous modeling results indicated that a formal health risk assessment is not required.

The GHG emissions associated with the facility have been estimated using the emission factors and calculation methodology provided in USEPA 40 Code of Federal Regulations (CFR) Part 98 Subpart C for natural gas combustion. The GHG pollutants associated with natural gas combustion are CO_2, methane (CH_4), and nitrous oxide (N_2O). The CO_2 emission factor was obtained from Table C-1 and the CH_4 and N_2O emission factors were obtained from Table C-2 of Subpart C.

Annual emissions in metric tonnes (MT) per year (MT/yr) were calculated by multiplying the Subpart C emission factor by the annual heat input per Equation 4 below.

Equation 4

$$\text{Annual GHG emissions}\left(\frac{\text{MT}}{\text{yr}}\right) = \text{EF}\left(\frac{\text{kg}}{\text{MMBtu}}\right) * \frac{\text{HIHHV}\left(\frac{\text{MMBtu}}{\text{yr}}\right)}{1{,}000\left(\frac{\text{kg}}{\text{MT}}\right)}$$

Where:
EF, emission factor: CO_2 = 53.02, CH_4 = 0.001, N_2O = 0.0001 (kilograms (kg)/MMBtu)(EFs have been updated from the initial permit application)
HIHHV = heat input higher heating value = 395.5 MMBtu/hr
Conversion factor = 1,000 kg/MT

The annual GHG values in MT/yr were converted to short tons (ST) per year (ST/yr) for ease in comparison to relevant significant thresholds. The conversion factor from MT to ST is to multiply by 1.10231.

The annual GHG emissions in ST were multiplied by the global warming potentials (GWP) provided in 40 CFR Part 98 Subpart C for each of CO_2, CH_4, and N_2O to calculate the CO_2e values using Equation 5.

Equation 5

$$\text{Annual } CO_2e\left(\frac{ST}{yr}\right) = \sum(\text{Annual GHG}\left(\frac{ST}{yr}\right) * GWP)_{pollutant}$$

Where:
Annual GHG (ST/yr) = Annual GHG (MT/yr) * 1.10231
GWP: CO_2 = 1, CH_4 = 25, N_2O = 298 (GWPs have been updated from the initial permit application)

Annual steady state emissions from the turbines are calculated based on 6,760 hours per year at normal operational emission levels.

Startup, Shutdown, and Maintenance and Malfunction (SSM and Malfunction)

SSM and Malfunction emissions are presented on a lb/hr basis. Malfunction tpy is calculated for 8760 hrs/yr, with a maximum of 5 tpy per turbine. Startup is defined as the time from first firing the turbine to the time when normal operation (greater than 50 percent load) is achieved with the control equipment (SCR and oxidation catalyst) fully functional. Based on information provided by the equipment vendor, turbine startups typically last 10 to 20 minutes, but may require up to 30 minutes. For calculation purposes, the 30-minute duration was applied as a conservative measure. Shutdowns typically last 10 minutes; and the 10 minute duration was used to estimate shutdown emissions.

To estimate startup emissions on a lb/hr basis for NO_x, CO, and VOC, uncontrolled hourly emissions were multiplied by (30/60) minutes and summed with the pound per hour emission rate during normal operations multiplied by (30/60) minutes as shown in Equation 6 below.

Equation 6

$$\text{Startup hourly emissions}\left(\frac{lb}{hr}\right) = UE * \left(\frac{30}{60}\right) + CE * \left(\frac{30}{60}\right)$$

Where:
UE = uncontrolled hourly emissions (lb/hr)
CE = controlled hourly emissions (lb/hr)
Portion of hourly emission that is 30 minutes = (30/60)

To estimate shutdown emissions on a lb/hr basis for NO_x, CO, and VOC, uncontrolled hourly emissions were multiplied by (10/60) minutes and summed with the pound per hour emission rate during normal operations multiplied by (50/60) minutes as shown in Equation 7 below.

Equation 7

$$\text{Shutdown hourly emissions}\left(\frac{lb}{hr}\right) = UE * \left(\frac{10}{60}\right) + CE * \left(\frac{50}{60}\right)$$

Where:
UE = uncontrolled hourly emissions (lb/hr)
CE = controlled hourly emissions (lb/hr)
Portion of hourly emission that is 10 minutes = (10/60)
Portion of hourly emission that is 50 minutes = (50/60)

The TSP, PM_{10}, $PM_{2.5}$, HAPs, NH_3, and SO_x startup and shutdown emissions on a lb/hr basis are assumed to be the same as the hourly emission rates for normal operation.

Circuit Breakers

The GHG emissions from circuit breakers, which are in the form of sulfur hexafluoride (SF_6), associated with the facility have been calculated using vendor information. The vendor indicated that a 120 kilovolt (KV) circuit breaker includes 85 lbs of SF_6 and the vendor guarantees an annual leakage rate of 1 percent or less. GHG emissions are calculated using Equation 13 below. It was assumed that each turbine would be equipped with one circuit breaker.

Equation 8

$$\text{Annual GHG emissions}\left(\frac{\text{ST}}{\text{yr}}\right) = \text{Quantity} * \text{Leak Rate} * 2{,}000\left(\frac{\text{lb}}{\text{ton}}\right) * 2$$

Where:
Quantity (lb/breaker) = pounds of SF_6 per circuit breaker = 85 pounds
Leak Rate (%/year) = percent leak rate per year = 1%
Conversion = 2,000 pounds per ton

CO_2e is calculated using Equation 5 above with a GWP for SF_6 of 23,900. The resulting value is 20.3 ST/yr for the facility with two circuit breakers.

Exempt Sources

Haul Roads

Haul Road emissions are calculated for the aqueous ammonia truck deliveries using the calculation methodology provided in AP-42 Section 13.2.2 "Unpaved Roads" (November 2006) Equation 1a for Industrial Roads. The AP-42 equation to calculate the size specific emission factor in pounds per vehicle mile traveled is presented here as Equation 8.

Equation 9

$$\text{Emission factor}\left(\frac{\text{lb}}{\text{VMT}}\right) = \text{k} * \left(\frac{\text{s}}{12}\right)^{\text{a}} * \left(\frac{\text{W}}{3}\right)^{\text{b}}$$

Where:
k = constant (TSP = 4.9, PM_{10} = 1.5, $PM_{2.5}$ = 0.15)
s = surface material mean silt content (%) = 4.8 for plant road
W = mean vehicle weight (tons) = 20
a = constant (TSP = 0.7, PM_{10} = 0.9, $PM_{2.5}$ = 0.9)
b = constant (TSP = 0.45, PM_{10} = 0.45, $PM_{2.5}$ = 0.45)

The resulting TSP, PM_{10}, and $PM_{2.5}$ emission factors in pounds per vehicle mile traveled were multiplied by the estimated 0.38 mile of travel (1,000 feet to the tank and 1,000 feet to leave the property) on unpaved roads within the property boundary to estimate emissions on a pound per trip basis for each of TSP, PM_{10}, and $PM_{2.5}$.

The facility's maximum annual ammonia usage is estimated at one truck delivery per week. Therefore, annual emissions are based on up to 52 deliveries per year. The resulting estimated annual emissions are 0.06 tons per year (tpy) for TSP, 0.015 tpy for PM_{10}, and 0.002 tpy for $PM_{2.5}$.

Ammonia Tanks

There are ammonia emissions from the storage tanks. Losses from atmospheric ammonia storage tanks are a combination of working losses and breathing losses. Working losses occur when vapor in the tank is displaced due to the addition of liquid during tank filling. These losses are dependent on the amount of material pumped in, the frequency of filling, the vapor pressure of the material stored, and the ambient temperature. Breathing losses occur due to ambient temperature fluctuations that affect the vapor space inside the tank. When temperatures rise during the day,

pressure increases inside the tank and air is expelled. As temperatures fall at night, pressure decreases and fresh air flows into the tank.

The working losses were calculated using Equation 9 below.

Equation 10

$$L_W = Q_w * \left(\frac{1}{359}\right) * \left(\frac{273.15}{T}\right) * \left(\frac{VP}{760}\right) * MW * K_N * K_P$$

Where:
L_W = working losses (lb/yr)
Q_W = annual throughout of liquid (ft^3) = 37,537 ft^3/year
T = ambient temperature (degrees K) = 286.2 K
VP = vapor pressure of liquid at ambient temperature (mmHg)
MW = molecular weight of liquid
VT = tank capacity (ft^3) = 802.1 ft^3 based on 6,000 gallons
N = QW/VT = 46.8
K_N = annual turnover factor (dimensionless) = (180 + N)/6N = 0.81
K_P = working loss product factor (dimensionless) = 1

Conversions:
1 gallon = 0.1337 ft^3
1 kilopascal = 7.5 mmHg

Annual throughput, Q_W, was calculated as the volume of liquid that is used to fill the storage tank each year and was calculated by multiplying the tank size of 6,000 gallons by an assumed 90 percent capacity factor and an estimated refill rate of once per week.

The annual throughput was calculated to be 37,537 ft^3/year. The number of turnovers per year, N, was then calculated to be 46.8, and the annual turnover factor, K_N, was calculated to be 0.81.

The ambient temperature was estimated by averaging the annual average high (73.8 °F) and the annual average low (38.9 °F) for Belen, NM. This resulted in 56.4 °F, or 286.2 K. The molecular weight of aqueous ammonia was calculated using the molecular weights of ammonia and water in combination with their weight percentages per Equation 10.

Equation 11

$$\frac{1}{MW} = \left(\frac{w_A}{MW_A}\right) + \left(\frac{w_W}{MW_W}\right)$$

Where:
w_A = weight percent of ammonia = 0.195
MW_A = molecular weight of ammonia = 17.03 lb/lb-mole
w_W = weight percent of water = 0.805
MW_W = molecular weight of water = 18 lb/lb-mole

The resultant molecular weight for the aqueous ammonia is 17.80 lb/lb-mole.

The aqueous ammonia was assumed to be ideal and the vapor pressure was calculated using Raoult's Law. Published data was used to determine that the partial pressures for ammonia and water mixed in this proportion at this ambient temperature were approximately 177 mmHg and 9.34 mmHg, respectively. Thus Raoult's Law is provided as Equation 11.

Equation 12

$$VP = (P_A * X_A) + (P_W * X_W)$$

Where:
P_A = partial pressure of ammonia (mmHg) = 177
X_A = molal percent of ammonia = 0.204
P_W = partial pressure of water (mmHg) = 9.34

X_W = molal percent of water = 0.796

The resultant partial pressure for aqueous ammonia at 286 K is 97.4 mmHg.

The breathing losses were calculated using Equation 12 below.

Equation 13

$$L_B = 365 * M_{air} * \left(\frac{VP}{760}\right) * MW$$

Where:
L_B = breathing losses (lb/yr)
VP = vapor pressure of liquid at ambient temperature (mmHg) = 43.5 mmHg
MW = molecular weight of liquid = 17.8
M_{air} = air displaced from tank due to expansion (lb-mole/day) = (V_v) * (1/359) * (K_E) * (273.15/T) = 0.014 lb-mole/day
V_v = vapor space in tank (scf) = 80.2 ft^3 based on 600 gallons
K_E = vapor space expansion factor (dimensionless) = T_R/T = 0.07
T_R = day-night temperature fluctuation (K) = 19.4 K
T = ambient temperature (K) = 286.2 K

The day-night temperature fluctuation was determined by subtracting the average annual low from the annual average high in Belen, NM, the resulting difference being 34.9 °F or 19.4 K. The vapor space expansion factor, KE, was then calculated to be 0.07. The vapor space of the tank was taken as the 10% that is assumed not be filled, which is 600 gallons or 80.2 scf. Using these parameters M_{air} was then calculated to be 0.014 pound moles per day.

Annual working and breathing losses of ammonia were summed and determined to be 17.0 pounds per year per tank, or 0.017 tons per year for both tanks together.

PNM - La Luz Energy Center

Emissions Summary

Emission Unit: All

Maximum Uncontrolled Emissions

Unit	NO_x		CO		VOCs		SO_x		TSP		PM_{10}		$PM_{2.5}$		Total HAPs		Ammonia		CO_2e	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
1	36.4	123.1	35.5	119.9	2.0	6.9	0.40	1.4	4.0	13.5	4.0	13.5	4.0	13.5	0.41	1.4	-	-	46,312.2	156,535.4
2	36.4	123.1	35.5	119.9	2.0	6.9	0.40	1.4	4.0	13.5	4.0	13.5	4.0	13.5	0.41	1.4	-	-	46,312.2	156,535.4
SSM 1 - Startup	36.4	18.2	35.5	17.7	2.0	1.0	0.40	0.20	4.0	2.0	4.0	2.0	4.0	2.0	0.41	0.20	-	-	46,312.2	23,156.1
SSM 2 - Startup	36.4	18.2	35.5	17.7	2.0	1.0	0.40	0.20	4.0	2.0	4.0	2.0	4.0	2.0	0.41	0.20	-	-	46,312.2	23,156.1
SSM 1 - Shutdown	36.4	18.2	35.5	17.7	2.0	1.0	0.40	0.20	4.0	2.0	4.0	2.0	4.0	2.0	0.41	0.20	-	-	46,312.2	23,156.1
SSM 2 - Shutdown	36.4	18.2	35.5	17.7	2.0	1.0	0.40	0.20	4.0	2.0	4.0	2.0	4.0	2.0	0.41	0.20	-	-	46,312.2	23,156.1
Malfunction 1	36.4	5.0	35.5	5.0	2.0	5.0	0.40	1.8	4.0	5.0	4.0	5.0	4.0	5.0	0.41	1.8	-	-	-	-
Malfunction 2	36.4	5.0	35.5	5.0	2.0	5.0	0.40	1.8	4.0	5.0	4.0	5.0	4.0	5.0	0.41	1.8	-	-	-	-
CB-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.2	9.7
CB-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.2	9.7
Total Steady State	*72.8*	*246.2*	*70.9*	*239.8*	*4.1*	*13.7*	*0.81*	*2.7*	*8.0*	*27.0*	*8.0*	*27.0*	*8.0*	*27.0*	*0.81*	*2.7*	-	-	*92,624.5*	*313,070.7*
Total Startup	*72.8*	*36.4*	*70.9*	*35.5*	*4.1*	*2.0*	*0.81*	*0.40*	*8.0*	*4.0*	*8.0*	*4.0*	*8.0*	*4.0*	*0.81*	*0.41*	-	-	*92,624.5*	*46,312.2*
Total Shutdown	*72.8*	*36.4*	*70.9*	*35.5*	*4.1*	*2.0*	*0.81*	*0.40*	*8.0*	*4.0*	*8.0*	*4.0*	*8.0*	*4.0*	*0.81*	*0.41*	-	-	*92,624.5*	*46,312.2*
Total Malfunction	*72.8*	*10.0*	*70.9*	*10.0*	*4.1*	*10.0*	*0.8*	*3.5*	*8.0*	*10.0*	*8.0*	*10.0*	*8.0*	*10.0*	*0.81*	*3.6*	-	-	*92,624.5*	*46,312.2*
Maximum Totals	***72.8***	***329.0***	***70.9***	***320.7***	***4.1***	***27.8***	***0.81***	***7.1***	***8.0***	***45.0***	***8.0***	***45.0***	***8.0***	***45.0***	***0.81***	***7.1***	**-**	**-**	***92,628.9***	***405,714.6***

Maximum Controlled Emissions

Unit	NO_x		CO		VOCs		SO_x		TSP		PM_{10}		$PM_{2.5}$		Total HAPs		Ammonia		CO_2e	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
1	3.6	12.3	5.3	18.0	1.0	3.4	0.40	1.4	4.0	13.5	4.0	13.5	4.0	13.5	0.41	1.4	5.4	18.2	46,312.2	156,535.4
2	3.6	12.3	5.3	18.0	1.0	3.4	0.40	1.4	4.0	13.5	4.0	13.5	4.0	13.5	0.41	1.4	5.4	18.2	46,312.2	156,535.4
SSM 1 - Startup	20.0	10.0	20.4	10.2	1.5	0.76	0.40	0.20	4.0	2.0	4.0	2.0	4.0	2.0	0.41	0.20	5.4	2.7	46,312.2	23,156.1
SSM 2 - Startup	20.0	10.0	20.4	10.2	1.5	0.76	0.40	0.20	4.0	2.0	4.0	2.0	4.0	2.0	0.41	0.20	5.4	2.7	46,312.2	23,156.1
SSM 1 - Shutdown	9.1	4.6	10.3	5.2	1.2	0.59	0.40	0.20	4.0	2.0	4.0	2.0	4.0	2.0	0.41	0.20	5.4	2.7	46,312.2	23,156.1
SSM 2 - Shutdown	9.1	4.6	10.3	5.2	1.2	0.59	0.40	0.20	4.0	2.0	4.0	2.0	4.0	2.0	0.41	0.20	5.4	2.7	46,312.2	23,156.1
Malfunction 1	20.0	5.0	20.4	5.0	1.5	5.0	0.40	1.8	4.0	5.0	4.0	5.0	4.0	5.0	0.41	1.8	5.4	2.7	-	-
Malfunction 2	20.0	5.0	20.4	5.0	1.5	5.0	0.40	1.8	4.0	5.0	4.0	5.0	4.0	5.0	0.41	1.8	5.4	2.7	-	-
CB-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.2	9.7
CB-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.2	9.7
Total Steady State	*7.3*	*24.6*	*10.6*	*36.0*	*2.0*	*6.9*	*0.81*	*2.7*	*8.0*	*27.0*	*8.0*	*27.0*	*8.0*	*27.0*	*0.81*	*2.7*	*10.8*	*36.4*	*92,624.5*	*313,070.7*
Total Startup	*40.1*	*20.0*	*40.8*	*20.4*	*3.0*	*1.5*	*0.81*	*0.40*	*8.0*	*4.0*	*8.0*	*4.0*	*8.0*	*4.0*	*0.81*	*0.41*	*10.8*	*5.4*	*92,624.5*	*46,312.2*
Total Shutdown	*18.2*	*9.1*	*20.7*	*10.3*	*2.4*	*1.2*	*0.81*	*0.40*	*8.0*	*4.0*	*8.0*	*4.0*	*8.0*	*4.0*	*0.81*	*0.41*	*10.8*	*5.4*	*92,624.5*	*46,312.2*
Total Malfunction	*40.1*	*10.0*	*40.8*	*10.0*	*3.0*	*10.0*	*0.81*	*3.5*	*8.0*	*10.0*	*8.0*	*10.0*	*8.0*	*10.0*	*0.81*	*3.6*	*10.8*	*5.4*	-	-
Totals	***40.1***	***63.8***	***40.8***	***76.7***	***3.0***	***19.6***	***0.81***	***7.1***	***8.0***	***45.0***	***8.0***	***45.0***	***8.0***	***45.0***	***0.81***	***7.1***	***10.8***	***52.5***	***92,628.9***	***405,714.6***

Maximum Individual HAPs Uncontrolled Emissions and Controlled Emissions

Unit	1,3-Butadiene		Acetaldehyde		Acrolein		Benzene		Ethylbenzene		Formaldehyde		Naphthalene		PAH		Propylene Oxide		Toluene		Xylenes	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy				
1	0.00017	0.00057	0.016	0.053	0.0025	0.0086	0.0047	0.016	0.013	0.043	0.28	0.95	0.00051	0.0017	0.00087	0.0029	0.011	0.039	0.051	0.17	0.025	0.086
2	0.00017	0.00057	0.016	0.053	0.0025	0.0086	0.0047	0.016	0.013	0.043	0.28	0.95	0.00051	0.0017	0.00087	0.0029	0.011	0.039	0.051	0.17	0.025	0.086
SSM 1 - Startup	0.00017	0.000085	0.016	0.0079	0.0025	0.0013	0.0047	0.0024	0.013	0.0063	0.28	0.14	0.00051	0.00026	0.00087	0.00044	0.011	0.0057	0.051	0.026	0.025	0.013
SSM 1 - Shutdown	0.00017	0.000085	0.016	0.0079	0.0025	0.0013	0.0047	0.0024	0.013	0.0063	0.28	0.14	0.00051	0.00026	0.00087	0.00044	0.011	0.0057	0.051	0.026	0.025	0.013
SSM 2 - Startup	0.00017	0.000085	0.016	0.0079	0.0025	0.0013	0.0047	0.0024	0.013	0.0063	0.28	0.14	0.00051	0.00026	0.00087	0.00044	0.011	0.0057	0.051	0.026	0.025	0.013
SSM 2 - Shutdown	0.00017	0.000085	0.016	0.0079	0.0025	0.0013	0.0047	0.0024	0.013	0.0063	0.28	0.14	0.00051	0.00026	0.00087	0.00044	0.011	0.0057	0.051	0.026	0.025	0.013
Total Steady State	*0.00034*	*0.0011*	*0.032*	*0.11*	*0.0051*	*0.017*	*0.0095*	*0.032*	*0.025*	*0.086*	*0.56*	*1.9*	*0.0010*	*0.0035*	*0.0017*	*0.0059*	*0.023*	*0.078*	*0.10*	*0.35*	*0.051*	*0.17*
Total Startup	*0.00034*	*0.00017*	*0.032*	*0.016*	*0.0051*	*0.0025*	*0.0095*	*0.0047*	*0.025*	*0.013*	*0.56*	*0.28*	*0.0010*	*0.00051*	*0.0017*	*0.00087*	*0.023*	*0.011*	*0.10*	*0.051*	*0.051*	*0.025*
Total Shutdown	*0.00034*	*0.00017*	*0.032*	*0.016*	*0.0051*	*0.0025*	*0.0095*	*0.0047*	*0.025*	*0.013*	*0.56*	*0.28*	*0.0010*	*0.00051*	*0.0017*	*0.00087*	*0.023*	*0.011*	*0.10*	*0.051*	*0.051*	*0.025*
Totals	***0.00034***	***0.0015***	***0.032***	***0.14***	***0.0051***	***0.022***	***0.0095***	***0.042***	***0.025***	***0.11***	***0.56***	***2.5***	***0.0010***	***0.0045***	***0.0017***	***0.0076***	***0.023***	***0.10***	***0.10***	***0.45***	***0.051***	***0.22***

"*" Indicates that an hourly limit is not appropriate for this operating situation and is not being requested.

"-" Indicates emissions of this pollutant are not expected.

PNM - La Luz Energy Center
Turbine Steady State Emission Calculations

Make/Model	General Electric LM6000 Sprint	
ID Number	1	2
Serial Number	191-770	TBD
Manufacture Date	2013	TBD
Install Date	Oct-15	TBD
Type	Natural Gas Turbine	

Engine Parameters

Specification	Value	Units	Notes
Hours of Normal Operation	6,760	hr/yr	-
Maximum Power Rating	43,850	kW	1
Maximum Horsepower	58,802.9	hp	Calculated
Total Mass Flow of Exhaust	898,310	lb/hr	1
Fuel Heating Value	1,047	Btu/scf	Gas Analysis
Heat Input, Btu	395,500,000	Btu/hr	1
Heat Input, MMBtu	395.5	MMBtu/hr	Calculated
Hourly Fuel Usage	377.7	Mscf/hr	Calculated
Annual Fuel Usage	2,553.6	MMscf/yr	Calculated
Stack Temp	851.0	deg F	1
Stack Height	45.0	ft	Estimate
Stack Diameter	10.0	ft	Estimate
Stack Velocity	119.6	ft/s	Estimate

Steady State Uncontrolled Emissions

Pollutant	EF ppm @ 15% O_2	Emissions (lb/hr)	Emissions (tpy)	Notes
NO_x	25	36.4	123.1	1
CO	40	35.5	119.9	1
VOC	4	2.0	6.9	1
$PM/PM_{10}/PM_{2.5}$	-	4.0	13.5	2
SO_2	-	0.4	1.4	3

Steady State Controlled Emissions

Pollutant	EF ppm @ 15% O_2	Emissions (lb/hr)	Emissions (tpy)	Notes
NO_x	2.5	3.6	12.3	4
CO	6	5.3	18.0	4
VOC	2	1.0	3.4	4
$PM/PM_{10}/PM_{2.5}$	-	4.0	13.5	2
SO_2	-	0.4	1.4	3

F factor @ 60° F	8578	dscf/MMBtu
Standard Volume @ 60° F	379.5	scf/lb-mol
MW of NOx	46	lb/lb-mol
MW of CO	28	lb/lb-mol
MW of VOC	16	lb/lb-mol
Correction factor to 15% oxygen	3.5	dimensionless
Sulfur limit of natural gas	0.0075	grains/dscf

HAP Emissions

Pollutant	EF lb/MMBtu	Emissions (lb/hr)	Emissions (tpy)	Notes
1,3-Butadiene	4.3E-07	1.7E-04	5.7E-04	5
Acetaldehyde	4.0E-05	1.6E-02	5.3E-02	5
Acrolein	6.4E-06	2.5E-03	8.6E-03	5
Benzene	1.2E-05	4.7E-03	1.6E-02	5
Ethylbenzene	3.2E-05	1.3E-02	4.3E-02	5
Formaldehyde	7.1E-04	2.8E-01	9.5E-01	5
Naphthalene	1.3E-06	5.1E-04	1.7E-03	5
PAH	2.2E-06	8.7E-04	2.9E-03	5
Propylene Oxide	2.9E-05	1.1E-02	3.9E-02	5
Toluene	1.3E-04	5.1E-02	1.7E-01	5
Xylenes	6.4E-05	2.5E-02	8.6E-02	5
Total		4.1E-01	1.4E+00	

TAP Emissions

Pollutant	EF lb/MMBtu	Emissions (lb/hr)	Emissions (tpy)	Notes
Ammonia	0.014	5.4	18.2	6

GHG Emissions, per turbine

Pollutant	EF kg/MMBtu	Emissions (lb/hr)	Emissions (tpy)	Notes
CO_2	53.06	46,264.5	156,373.9	7
CH_4	1.0E-03	0.87	2.9	7
N_2O	1.0E-04	0.087	0.29	7
CO_2e	-	46,312.2	156,535.4	8

[1] Based on manufacturer's data sheet. CO emission factor has safety factor: it's maximum emission estimate is 34, with a 17.65% safety factor applied yields a safety factor of 40.0 ppm

[2] Based on manufacturer's guarantee for GE LM6000

[3] SO2 emissions calculated based on the max allowable gas sulfur content of 0.75 gr/100 scf and hourly emissions = EF(grains/dscf) / 7000 grains/lb * 1,000,000 * Heat input (MMBtu/hr) / Fuel Heating Value (Btu/scf)

[4] Based on SCR data

[5] AP-42 Table 3.1-3, operating at 6760 hr/yr

[6] Ammonia emission factor based on ammonia slip of 10 ppm at 15% oxygen

[7] 40 CFR Part 98, Subpart C, Tables C-1 and C-2

[8] 40 CFR Part 98, Subpart A, Table A-1: GWP for CO_2 = 1, CH_4 = 25, N_20 = 298

PNM - La Luz Energy Center
Turbine Startup Shutdown Maintenance
and Malfunction Emission Calculations

Make/Model	General Electric LM6000 Sprint	
ID Number	1	2
Serial Number	191-770	TBD
Manufacture Date	2013	TBD
Install Date	Oct-15	TBD
Type	Natural Gas Turbine	

Engine Parameters

Specification	Value	Units	Notes
Startup Hours	1,000	hr/yr	-
Shutdown Hours	1,000	hr/yr	-
Maximum Power Rating	43,850	kW	1
Maximum Horsepower	58,803	hp	Calculated
Total Mass Flow of Exhau	898,310	lb/hr	1
Fuel Heating Value	1,047	Btu/scf	Gas Analysis
Fuel Usage	395,500,000	BTU/hr	1
Hourly Fuel Usage	378	Mscf/hr	Calculated
Annual Fuel Usage	2,554	MMscf/yr	Calculated
Heat Input	395.5	MMBtu/hr	Calculated
Stack Temp	851	deg F	1
Stack Height	45	ft	Estimate
Stack Diameter	10	ft	Estimate
Stack Velocity	120	ft/s	Estimate

Uncontrolled Emissions

Startup

Pollutant	EF	Emissions		Notes
	ppm @ 15% O_2	(lb/hr)	(tpy)	
NO_x	25	36.4	18.2	1
CO	40	35.5	17.7	1
VOC	4	2.0	1.0	1
$PM/PM_{10}/PM_{2.5}$	-	4.0	2.0	2
SO_2	-	0.40	0.20	3

Shutdown

Pollutant	EF	Emissions		Notes
	ppm @ 15% O_2	(lb/hr)	(tpy)	
NO_x	25	36.4	18.2	1
CO	40	35.5	17.7	1
VOC	4	2.0	1.0	1
$PM/PM_{10}/PM_{2.5}$	-	4.0	2.0	2
SO_2	-	0.40	0.20	3

Malfunction

Pollutant	Emissions		Notes
	(lb/hr)	(tpy)	
NO_x	36.4	5.0	4
CO	35.5	5.0	4
VOC	2.0	5.0	4
$PM/PM_{10}/PM_{2.5}$	4.0	5.0	4
SO_2	0.40	1.8	4
Total HAPs	0.41	1.8	4
Ammonia	5.4	2.7	4

Controlled Emissions

Startup

Pollutant	Emissions		Notes
	(lb/hr)	(tpy)	
NO_x	20.0	10.0	5
CO	20.4	10.2	5
VOC	1.5	0.76	5
$PM/PM_{10}/PM_{2.5}$	4.0	2.0	6
SO_2	0.40	0.20	6

HAP Emissions

Pollutant	EF	Emissions		Notes
	lb/MMBtu	(lb/hr)	(tpy)	
1,3-Butadiene	4.3E-07	1.7E-04	8.5E-05	7
Acetaldehyde	4.0E-05	1.6E-02	7.9E-03	7
Acrolein	6.4E-06	2.5E-03	1.3E-03	7
Benzene	1.2E-05	4.7E-03	2.4E-03	7
Ethylbenzene	3.2E-05	1.3E-02	6.3E-03	7
Formaldehyde	7.1E-04	2.8E-01	1.4E-01	7
Naphthalene	1.3E-06	5.1E-04	2.6E-04	7
PAH	2.2E-06	8.7E-04	4.4E-04	7
Propylene Oxide	2.9E-05	1.1E-02	5.7E-03	7
Toluene	1.3E-04	5.1E-02	2.6E-02	7
Xylenes	6.4E-05	2.5E-02	1.3E-02	7
Total		4.1E-01	2.0E-01	

TAP Emissions

Pollutant	EF lb/MMBtu	Emissions (lb/hr)	Emissions (tpy)	Notes
Ammonia	0.014	5.4	2.7	8

GHG Emissions

Pollutant	EF kg/MMBtu	Emissions (lb/hr)	Emissions (tpy)	Notes
CO_2	53.06	46,264.5	23,132.2	9
CH_4	1.0E-03	0.87	0.44	9
N_2O	1.0E-04	0.087	0.044	9
CO_2e	-	46,312.2	23,156.1	10

Shutdown

Pollutant	Emissions (lb/hr)	Emissions (tpy)	Notes
NO_x	9.1	4.6	11
CO	10.3	5.2	11
VOC	1.2	0.59	11
$PM/PM_{10}/PM_{2.5}$	4.0	2.0	6
SO_2	0.40	0.20	6

HAP Emissions

Pollutant	EF lb/MMBtu	Emissions (lb/hr)	Emissions (tpy)	Notes
1,3-Butadiene	4.3E-07	1.7E-04	8.5E-05	7
Acetaldehyde	4.0E-05	1.6E-02	7.9E-03	7
Acrolein	6.4E-06	2.5E-03	1.3E-03	7
Benzene	1.2E-05	4.7E-03	2.4E-03	7
Ethylbenzene	3.2E-05	1.3E-02	6.3E-03	7
Formaldehyde	7.1E-04	2.8E-01	1.4E-01	7
Naphthalene	1.3E-06	5.1E-04	2.6E-04	7
PAH	2.2E-06	8.7E-04	4.4E-04	7
Propylene Oxide	2.9E-05	1.1E-02	5.7E-03	7
Toluene	1.3E-04	5.1E-02	2.6E-02	7
Xylenes	6.4E-05	2.5E-02	1.3E-02	7
Total		4.1E-01	2.0E-01	

TAP Emissions

Pollutant	EF lb/MMBtu	Emissions (lb/hr)	Emissions (tpy)	Notes
Ammonia	0.014	5.4	2.7	8

GHG Emissions

Pollutant	EF kg/MMBtu	Emissions (lb/hr)	Emissions (tpy)	Notes
CO_2	53.06	46,264.5	23,132.2	9
CH_4	1.0E-03	0.87	0.44	9
N_2O	1.0E-04	0.087	0.044	9
CO_2e	-	46,312.2	23,156.1	10

Malfunction

Pollutant	Emissions (lb/hr)	Emissions (tpy)	Notes
NO_x	20.0	5.0	4
CO	20.4	5.0	4
VOC	1.5	5.0	4
$PM/PM_{10}/PM_{2.5}$	4.0	5.0	4
SO_2	0.40	1.8	4
Total HAPs	0.41	1.8	4
Ammonia	5.4	2.7	4

[1] Based on manufacturer's data sheet. CO emission factor has safety factor: it's maximum emission estimate is 34, with a 17.65% safety factor applied yields a safety factor of 40.0 ppm

[2] Based on manufacturer's guarantee for GE LM6000

[3] SO2 emissions calculated based on the max allowable gas sulfur content of 0.75 gr/100 scf and hourly emissions = EF(grains/dscf) / 7000 grains/lb * 1,000,000 * Heat input (MMBtu/hr) / Fuel Heating Value (Btu/scf)

[4] Malfunction emissions (lb/hr) equal the startup emissions; and malfunction emissions (tpy) equal the hourly emissions * 8760/2000 or 5.0, whichever is less

[5] Startup emissions for NO_x, CO and VOC are: (the uncontrolled emissions) * 30/60 minutes + (the controlled emissions) * 30/60 minutes

[6] TSP, PM_{10}, $PM_{2.5}$, SO_2 startup and shutdown emission rates per hour are the same as steady state operation. The tpy rate is based on 1000 hrs/yr

[7] AP-42 Table 3.1-3, operating at 6760 hr/yr

[8] Ammonia emission factor based on ammonia slip of 10 ppm at 15% oxygen

[9] 40 CFR Part 98, Subpart C, Tables C-1 and C-2

[10] 40 CFR Part 98, Subpart A, Table A-1: GWP for CO_2 = 1, CH_4 = 25, N_20 = 298

[11] Shutdown emissions for NO_x, CO and VOC are: (the uncontrolled emissions) * 10/60 minutes + (the controlled emissions) * 50/60 minutes

PNM - La Luz Energy Center
Circuit Breaker Emission Calculations

Unit(s):	Circuit Breakers	
Description:	Fugitive emissions from circuit breakers	
Component Count	2	
Unit Number:	CB-1	CB-2

Emission Calculations

Pollutant	Quantity (lb SF6/circuit breaker)	Leak Rate (%/yr)	Emissions (lb/yr)[1]	Emissions (tons/yr)	Global Warming Potential[2]	CO_2e (tons/yr)
SF6	85	1%	0.85	0.00043	22,800	9.7
total	170	1%	1.7	0.00085	22,800	19.4

[1] Based on Siemens 120 kV Circuit Breaker leakage rate guarantee
[2] 40 CFR Part 98, Subpart A, Table A-1

PNM - La Luz Energy Center
Tanks Emission Calculations

Description:	6000 gallon ammonia storage tanks	
Unit(s):	TK-1	TK-2
Installation date:	Oct-15	TBD

Tank Parameters

Specifications	values	units
Number of Tanks:	2	tanks
Tank Volume	6000	gallons
Tank Capacity at 90%	5400	gallons
Frequency Filled	1	per week
Frequency Filled	52	per year

Uncontrolled Working and Breathing Emissions

Parameters	per tank	total	equations
Total working and breathing losses (lb/yr)	87.4	174.9	$L_w + L_B$
Emissions of ammonia (lb/yr)	17.0	34.1	$(L_w + L_B) * W_A$
Emissions of ammonia (lb/hr)	0.0019	0.0039	$((L_w + L_B) * W_A)/8760$
Emissions of ammonia (tons/yr)	0.0085	0.017	$((L_w + L_B) * W_A)/ 8760/2000$

Working Losses

Parameters	values	units	equations
Annual throughput (Q_W)	37537.5	ft^3/yr	V_T/wk = 6000, 90% capacity
Tank capacity (V_T)	802.1	ft^3	
Ambient temperature (T)	286.7	degrees K	avg high 73.8 °F, avg low 38.9 °F
Vapor pressure of liquid at ambient temperature (VP)	43.5	mmHg	$(P_A*X_A)+(P_W*X_W)$
Partial pressure of ammonia (P_A)	177	mmHg	
Molal percent of ammonia (X_A)	20.4%	%	
Partial pressure of water (P_W)	9.3	mmHg	
Molal percent of water (X_W)	79.6%	%	
Molecular weight of liquid (MW)	17.8	lb/lb-mole	$1/(W_A/MW_A+W_W/MW_W)$
Weight percent of ammonia (W_A)	19.5%	%	
Molecular weight of ammonia (MW_A)	17.0	lb/lb-mole	
Weight percent of water (W_W)	80.5%	%	
Molecular weight of water (MW_W)	18	lb/lb-mole	
N	46.8	dimensionless	$N = Q_W/V_T$
Annual turnover factor (K_N)	0.81	dimensionless	(180+N)/6N
Working loss product factor (K_P)	1	dimensionless	
Working Losses (L_W)	82.1	lb/yr	$Q_W*(1/359)*(273.15/T)*(VP/760)*(MW)*(K_N)*(K_P)$

Breathing losses

Parameters	values	units	equations
Air displaced from tank due to expansion (M_{air})	0.014	lb-mole/day	$V_V*(1/359)*K_E*(273.15/T)$
Vapor space in tank (V_V)	80.2	scf	10% of V_T
Vapor space expansion factor (K_E)	0.068	dimensionless	T_R/T
Day-night temperature fluctuation (T_R)	19.4	degrees K	avg high - avg low
Breathing losses (L_B)	5.4	lb/yr	$365*M_{air}*(VP/760)*MW$

PNM - La Luz Energy Center
Haul Road Emission Calculations

Unit(s):	Haul
Description:	Haul Road Calculations

Parameters

Mean vehicle weight	20.0	tons
Trip frequency	52	trips/yr
Surface silt content[1]	4.8	%
Annual wet days[2]	60	days/yr
VMT (Vehicle miles traveled)[3]	0.38	miles/delivery

Emission Factors and Constants

Parameter	PM_{30}	PM_{10}	$PM_{2.5}$
k, lb/VMT[4]	4.9	1.5	0.15
a, lb/VMT[4]	0.70	0.90	0.90
b, lb/VMT[4]	0.45	0.45	0.45
Annual EF, lb/VMT[5]	6.1	1.5	0.15
Annual EF, nat. mitig., lb/VMT[6]	5.1	1.3	0.13

Emission Calculations

PM_{30}	PM_{10}	$PM_{2.5}$	
1.9	0.49	0.049	lb/delivery[7]
0.050	0.013	0.0013	ton/yr[8]

[1] AP-42 Table 13.2.2-1
[2] AP-42 Figure 13.2.2-1
[3] VMT/delivery = Vehicle Miles Traveled per delivery
[4] Table 13.2.2-2, Industrial Roads
[5] AP-42 13.2.2, Equation 1a
[6] AP-42 13.2.2, Equation 2
[7] lb/delivery = Annual EF, nat. mitig. (lb/VMT) * VMT (mile/delivery)
[8] ton/yr = Annual EF, nat. mitig., (lb/VMT) * VMT (miles/delivery)* 52 (deliveries/yr) / 2000 (tons/lb)

Section 6.a

Green House Gas Emissions

(Submitting under 20.2.70, 20.2.72 20.2.74 NMAC)

Title V (20.2.70 NMAC), Minor NSR (20.2.72 NMAC), and PSD (20.2.74 NMAC) applicants must estimate and report greenhouse gas (GHG) emissions to verify the emission rates reported in the public notice, determine applicability to 40 CFR 60 Subparts, and to evaluate Prevention of Significant Deterioration (PSD) applicability. GHG emissions that are subject to air permit regulations consist of the sum of an aggregate group of these six greenhouse gases: carbon dioxide (CO_2), nitrous oxide (N_2O), methane (CH_4), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6).

Calculating GHG Emissions:

1. Calculate the ton per year (tpy) GHG mass emissions and GHG CO_2e emissions from your facility.
2. GHG mass emissions are the sum of the total annual tons of greenhouse gases without adjusting with the global warming potentials (GWPs). GHG CO_2e emissions are the sum of the mass emissions of each individual GHG multiplied by its GWP found in Table A-1 in 40 CFR 98 Mandatory Greenhouse Gas Reporting.
3. Emissions from routine or predictable start up, shut down, and maintenance must be included.
4. Report GHG mass and GHG CO_2e emissions in Table 2-P of this application. Emissions are reported in **short** tons per year and represent each emission unit's Potential to Emit (PTE).
5. All Title V major sources, PSD major sources, and all power plants, whether major or not, must calculate and report GHG mass and CO_2e emissions for each unit in Table 2-P.
6. For minor source facilities that are not power plants, are not Title V, and are not PSD there are three options for reporting GHGs in Table 2-P: 1) report GHGs for each individual piece of equipment; 2) report all GHGs from a group of unit types, for example report all combustion source GHGs as a single unit and all venting GHGs as a second separate unit; 3) or check the following ☐ By checking this box, the applicant acknowledges the total CO_2e emissions are less than 75,000 tons per year.

Sources for Calculating GHG Emissions:

- Manufacturer's Data
- AP-42 Compilation of Air Pollutant Emission Factors at http://www.epa.gov/ttn/chief/ap42/index.html
- EPA's Internet emission factor database WebFIRE at http://cfpub.epa.gov/webfire/
- 40 CFR 98 Mandatory Green House Gas Reporting except that tons should be reported in short tons rather than in metric tons for the purpose of PSD applicability.
- API Compendium of Greenhouse Gas Emissions Methodologies for the Oil and Natural Gas Industry. August 2009 or most recent version.
- Sources listed on EPA's NSR Resources for Estimating GHG Emissions at http://www.epa.gov/nsr/clean-air-act-permitting-greenhouse-gases:

Global Warming Potentials (GWP):
Applicants must use the Global Warming Potentials codified in Table A-1 of the most recent version of 40 CFR 98 Mandatory Greenhouse Gas Reporting. The GWP for a particular GHG is the ratio of heat trapped by one unit mass of the GHG to that of one unit mass of CO_2 over a specified time period.

"Greenhouse gas" for the purpose of air permit regulations is defined as the aggregate group of the following six gases: carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. **(20.2.70.7 NMAC, 20.2.74.7 NMAC).** You may also find GHGs defined in 40 CFR 86.1818-12(a).

Metric to Short Ton Conversion:
Short tons for GHGs and other regulated pollutants are the standard unit of measure for PSD and title V permitting programs. 40 CFR 98 Mandatory Greenhouse Reporting requires metric tons.
1 metric ton = 1.10231 short tons (per Table A-2 to Subpart A of Part 98 – Units of Measure Conversions)

See Section 6, Turbine 1 and 2 and Circuit Breakers for GHG emissions.

Section 7

Information Used To Determine Emissions

Information Used to Determine Emissions shall include the following:

- ☑ If manufacturer data are used, include specifications for emissions units and control equipment, including control efficiencies specifications and sufficient engineering data for verification of control equipment operation, including design drawings, test reports, and design parameters that affect normal operation.
- ☐ If test data are used, include a copy of the complete test report. If the test data are for an emissions unit other than the one being permitted, the emission units must be identical. Test data may not be used if any difference in operating conditions of the unit being permitted and the unit represented in the test report significantly affect emission rates.
- ☑ If the most current copy of AP-42 is used, reference the section and date located at the bottom of the page. Include a copy of the page containing the emissions factors, and clearly mark the factors used in the calculations.
- ☐ If an older version of AP-42 is used, include a complete copy of the section.
- ☐ If an EPA document or other material is referenced, include a complete copy.
- ☐ Fuel specifications sheet.
- ☐ If computer models are used to estimate emissions, include an input summary (if available) and a detailed report, and a disk containing the input file(s) used to run the model. For tank-flashing emissions, include a discussion of the method used to estimate tank-flashing emissions, relative thresholds (i.e., permit or major source (NSPS, PSD or Title V)), accuracy of the model, the input and output from simulation models and software, all calculations, documentation of any assumptions used, descriptions of sampling methods and conditions, copies of any lab sample analysis.

The following information used to determine emissions is attached:

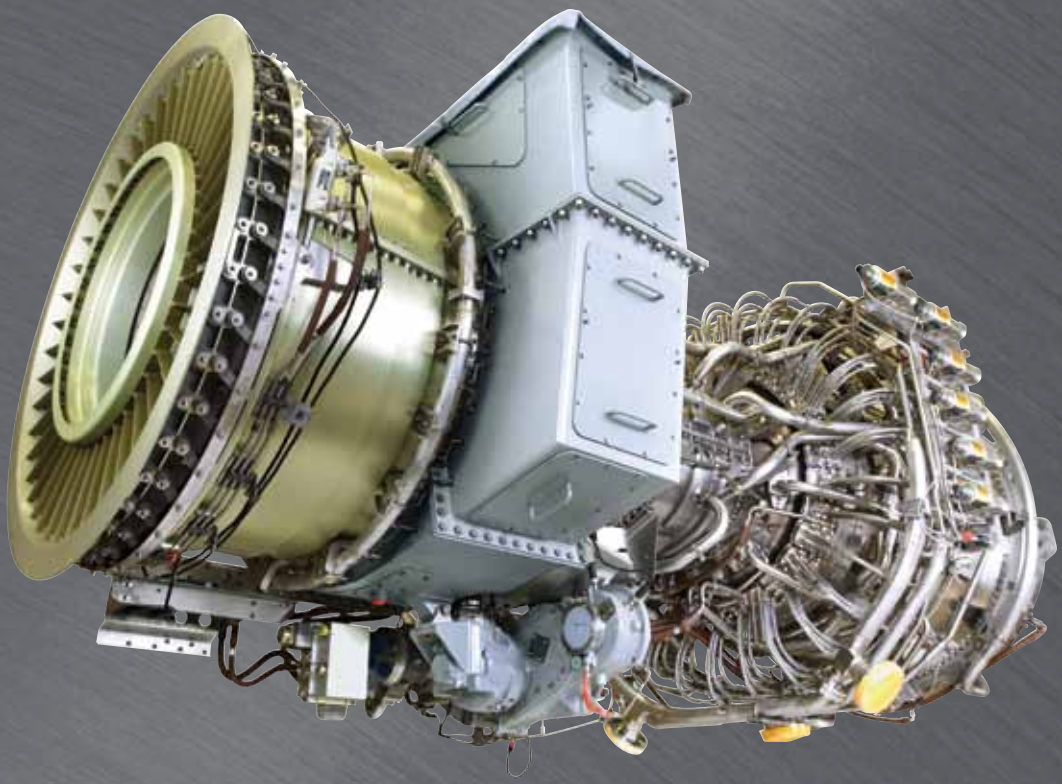
- **Turbine 1 and 2 (Unit 1 and Unit 2)**
  - Manufacturer's data
  - AP-42 Table 3.1-3
  - 40 CFR Part 98, Subpart A, Table A-1
  - 40 CFR Part 98, Subpart C, Tables C-1 and C-2
- **Haul Roads (Unit Haul)**
  - AP-42 13.2.2: Tables 13.2.2-1 and 13.2.2-2, Figure 13.2.2-1, and Equations 1a and 2
- **Circuit Breakers (Units CB-1 and CB-2)**
  - Siemens 120 kV Circuit Breaker leakage guarantee
  - 40 CFR Part 98, Subpart A, Table A-1

GE Oil & Gas

A STRUCTURED PRODUCT

LM6000 Aeroderivative Gas Turbine

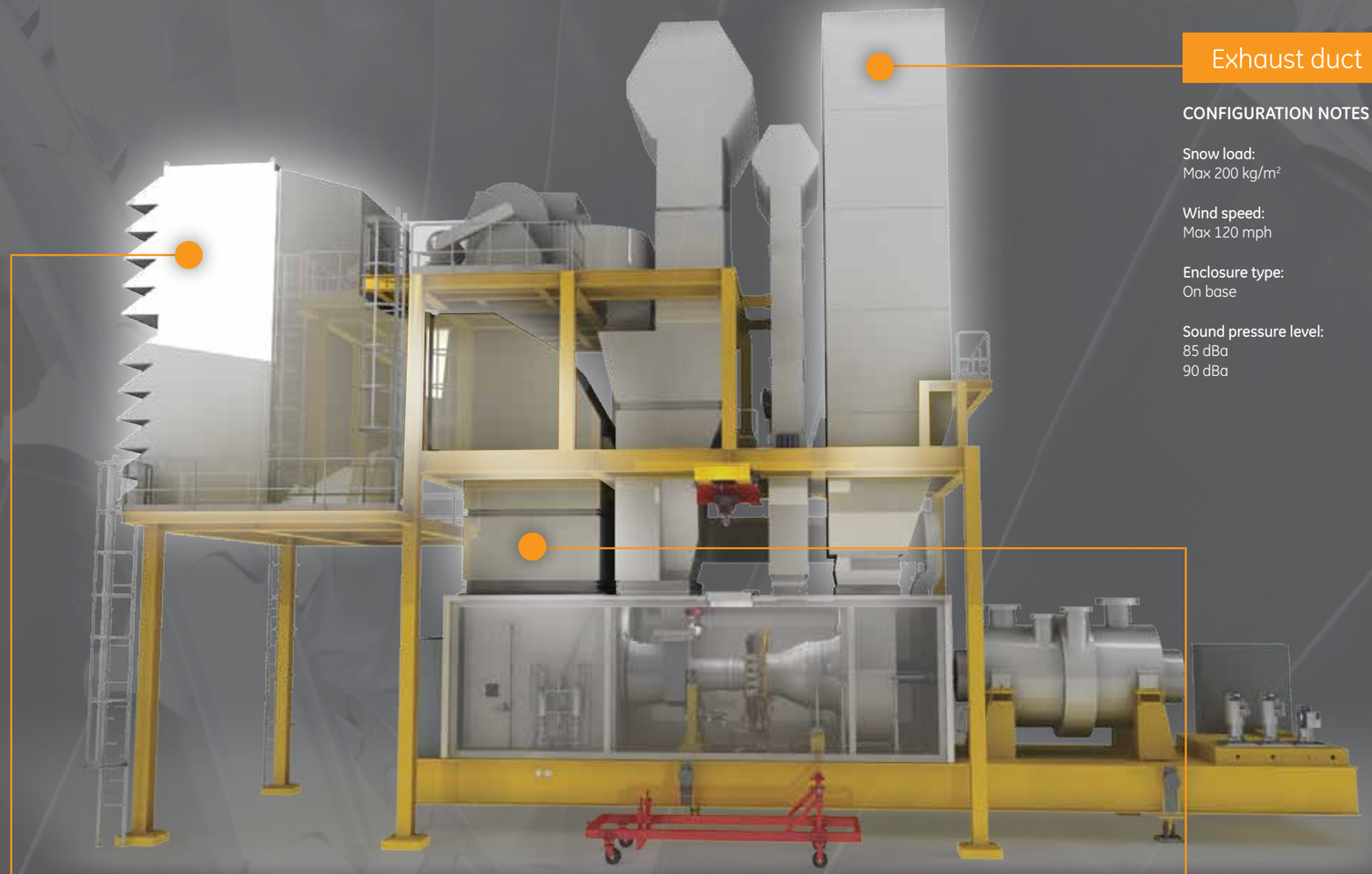
More than 1,000 of our LM6000 dual-rotor, direct-drive gas turbines have accumulated over 21 million operating hours worldwide. The model is well known for high reliability and availability in power generation for combined cycle or peak power, as well as combined heat and power for industrial and independent power producers. It offers up to 42% thermal efficiency in simple cycle (over 52% in combined cycle) with high part-power efficiency.



The perfect mix of
Standardization & customization

General Performance Data

	50/60 Hz Power generation
Output	43,850 KW
Heat rate	8,468 Kj/kwh (5,985 Btu/hph)
Pressure ratio	28.5:1
Mass flow	275 lb/sec (125 kg/sec)
Turbine speed	3,600 rpm
Exhaust temperature	851°F (455°C)
Model designation	LM6000



Exhaust duct

CONFIGURATION NOTES

Snow load:
Max 200 kg/m²

Wind speed:
Max 120 mph

Enclosure type:
On base

Sound pressure level:
85 dBa
90 dBa

TECHNICAL OPTIONS

Exhaust plenum arrangement:
VERTICAL

Exhaust system height:
VERTICAL 15 m

Exhaust system material:
C.S. OUTER + AISI409 INNER

Bolts and nuts:
ANSI B1.1
ISO std

Exhaust system stack insulation:
Internal

Filter house

CONFIGURATION NOTES

Inlet duct UP and FRONT
Ventilation system pressurized
Ventilation take-off segregated
ON BASE enclosure

Altitude and max ambient temperature:
Desert and seaside environment:
300 m @ 50°C
1,000 m @ 47°C
1,500 m @ 45°C

Snow load:
Max 200 kg/m²

Wind speed:
Max 120 mph

TECHNICAL OPTIONS

Static multistage:
Prefilter stage F5/interm. stage F9 (not required for ventilation air)/final stage H12 (F9 for ventilation air)
Prefilter stage F5/interm. stage not required/final stage F9
Prefilter stage F6/interm. stage not required/final stage F9

Environment:
Offshore, onshore coastal, tropical

Chiller:
Yes
No

Pre-assembly:
Yes
No

Transmitters:
Rosemount
Honeywell

Painting/surface treatment:
SS painted
SS not painted

Material:
Carbon steel
AISI316L

Tubing fittings:
Parker
Swagelock

Welding:
ASME IX
AWS

Inlet duct

CONFIGURATION NOTES

Inlet duct UP and FRONT
Ventilation system pressurized
Ventilation take-off segregated
ON BASE enclosure

Snow load:
Max 200 kg/m²

Wind speed:
Max 120 mph

TECHNICAL OPTIONS

Material:
Carbon steel
AISI316L

Silencer material:
AISI304
AISI316L

Enclosure type:
On base

Sound pressure level:
85 dBa

Insulation:
Internal
External

Bolts and nuts:
ANSI B1.1
ISO std

Rugged & Reliable

Our latest generation LM6000 offers a 25% simple-cycle power increase and an 18% boost in exhaust energy for cogeneration applications.

The lightweight LM6000 has a small footprint with a modular package designed for easy maintenance to further improve availability. Inlet and exhaust designs can be optimized for sand, salt, and noise requirements at the site.

Capabilities include fast start to 100% load in just 10 minutes; cycling without impact on maintenance intervals; and compatibility with a wide range of fuels, both gas and liquid, including low Modified Wobbe Index (MWI).

Two configurations are available: the LM6000-PG with single annular combustor (SAC), and the LM6000-PH with dry low emissions (DLE) technology capable of dual fuel operation to 15 ppm NOx for gas fuels.

GE Oil & Gas

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please refer to our website.

ge.com/oilandgas

GE imagination at work

GE_ProductStructuring_LM6000_FS_012512

GUARANTEE

PROJECT: PNM FALL 2011 RFP
LOCATION: NEW MEXICO, USA

KW AT GEN TERMS	39191
BTU/KW-HR, LHV	8775
(KJ/KW-HR, LHV)	9258

Adesoji Dairo
Performance Engineer
Date: 11/13/12

EMISSIONS ARE VALID FOR T2 WITHIN 0°F-100°F AND A GTG LOAD DOWN TO 50% AS DEFINED IN STEADY STATE CONDITIONS FOR EMISSIONS GUARANTEE

NOX: 25 PPMVD AT 15% O2
(51 mg/Nm3)
CO: 110 PPMVD AT 15% O2
(138 mg/Nm3)
VOC: 6.3 PPMVD AT 15% O2
(5 mg/Nm3)
PM10: 4 LB/HR
(2 kg/hr)

Start Up Time to Base Load, 10 Minutes
(See conditions for 10-minute start)

NOT VALID WITHOUT SIGNATURE

VALID UNTIL 02/11/13

BASIS OF GUARANTEE:	BASE LOAD, GAS FUEL NOZZLE SYSTEM NO BLEED OR EXTRACTED POWER
ENGINE:	(1) GE LM6000PC-SPRINT W/ FIGV AT -5 DEGREES GAS TURBINE
FUEL:	19000Btu/lb / (44194 kJ/kg) LHV, GAS FUEL (#10-1)
FUEL SPEC:	MID-TD-0000-1 LATEST REVISION
FUEL TEMP:	SITE FUEL TEMPERATURE OF 77.0°F(25.0°C)
FUEL PRESS:	675 PSIG+/-20 PSIG (4654 KPAG+/-138 KPAG)
GENERATOR:	BDAX 7-290ERJT
GENERATOR OUTPUT	13.8kV, 60 Hz
POWER FACTOR:	0.85
AMBIENT TEMP:	90.0°F / (32.2°C)
AMBIENT RH:	18.0%
INLET CONDITIONING:	EVAP TO 64.5°F / (18.1°C) AT 78.8% RH
ALTITUDE:	5100.0ft / (1554.5m)
INLET FILTER LOSS:	5.00 inH_2O / (127.0 mmH_2O)
EXHAUST LOSS:	12.00 inH_2O / (304.8 mmH_2O)
SPRINT WATER FLOW:	NOT TO EXCEED 10505 lb/hr
NOX CONTROL:	WATER
INJECTION RATE:	13398 lb/hr / (6077kg/hr) ±20% FLOW
INJECTION TEMP:	100 °F/(37.8 °C)
ENGINE CONDITION:	NEW AND CLEAN ≤ 200 SITE FIRED HOURS
FIELD TEST METHODS	
PERFORMANCE:	GE POWER & WATER SGTGPTM
NOX:	EPA METHOD 20
CO:	EPA METHOD 10
VOC:	EPA METHOD 25A/18
PM10:	EPA METHOD 5 / 202

BASIS OF GUARANTEE IS NOT FOR DESIGN, REFER TO PROJECT DRAWINGS FOR DESIGN REQUIREMENTS.
SI VALUES ARE FOR REFERENCE PURPOSES ONLY.

THIS GUARANTEE SUPERSEDES ANY
PREVIOUS GUARANTEES PRESENTED

GUARANTEE

PROJECT: PNM FALL 2011 RFP
LOCATION: NEW MEXICO, USA

KW AT GEN TERMS	39191
BTU/KW-HR, LHV	8775
(KJ/KW-HR, LHV)	9258

Adesoji Dairo
Performance Engineer
Date: 11/13/12

NEAR FIELD NOISE:

85 DB(A) ARITHMETIC AVERAGE SOUND PRESSURE LEVEL (dB REF 20 MICROPASCALS, RMS) OF LOCATIONS AROUND THE PACKAGE (VERTICAL DISTANCE OF 5FT. (1.5M) ABOVE PACKAGE BASE AT A HORIZONTAL DISTANCE OF 3FT. (1M) FROM THE EXTERIOR PLANE OF EQUIPMENT AS TESTED IN A FREE-FIELD CONDITION OVER A HARD REFLECTING GROUND PLANE, OPERATING AT BASE LOAD)

Start Up Time to Base Load, 10 Minutes
(See conditions for 10-minute start)

NOT VALID WITHOUT SIGNATURE

VALID UNTIL 02/11/13

BASIS OF GUARANTEE:	BASE LOAD, GAS FUEL NOZZLE SYSTEM NO BLEED OR EXTRACTED POWER
ENGINE:	(1) GE LM6000PC-SPRINT W/ FIGV AT -5 DEGREES GAS TURBINE
FUEL:	19000Btu/lb / (44194 kJ/kg) LHV, GAS FUEL (#10-1)
FUEL SPEC:	MID-TD-0000-1 LATEST REVISION
FUEL TEMP:	SITE FUEL TEMPERATURE OF 77.0°F(25.0°C)
FUEL PRESS:	675 PSIG+/-20 PSIG (4654 KPAG+/-138 KPAG)
GENERATOR:	BDAX 7-290ERJT
GENERATOR OUTPUT	13.8kV, 60 Hz
POWER FACTOR:	0.85
AMBIENT TEMP:	90.0°F / (32.2°C)
AMBIENT RH:	18.0%
INLET CONDITIONING:	EVAP TO 64.5°F / (18.1°C) AT 78.8% RH
ALTITUDE:	5100.0ft / (1554.5m)
INLET FILTER LOSS:	5.00 inH_2O / (127.0 mmH_2O)
EXHAUST LOSS:	12.00 inH_2O / (304.8 mmH_2O)
SPRINT WATER FLOW:	NOT TO EXCEED 10505 lb/hr
NOX CONTROL:	WATER
INJECTION RATE:	13398 lb/hr / (6077kg/hr) ±20% FLOW
INJECTION TEMP:	100 °F/(37.8 °C)
ENGINE CONDITION:	NEW AND CLEAN ≤ 200 SITE FIRED HOURS
NEAR FIELD NOISE:	GE ACOUSTIC TESTING PROCEDURE AND ASME PTC-36-2004

BASIS OF GUARANTEE IS NOT FOR DESIGN, REFER TO PROJECT DRAWINGS FOR DESIGN REQUIREMENTS.
SI VALUES ARE FOR REFERENCE PURPOSES ONLY.

THIS GUARANTEE SUPERSEDES ANY
PREVIOUS GUARANTEES PRESENTED

Conditions for Near Field Noise Guarantee

1. Based on arithmetic average of sound pressure levels at locations around the package.
2. Water Injection Skid, Sprint Skid, and Liquid Fuel Boost Pump Skid shall be supplied with full-weather enclosures.
3. Ancillary skids of the package must be located less than 6-ft of each other, and less than 6-ft of the main unit, measuring nearest edge-to-edge. If the package configuration requires the ancillary skids to be placed 6-ft or more from each other, then the ancillary skids must be located at least 10-ft apart.
4. If Fin Fan Cooler is to be located broadside to the main unit, then its location must be at least 25-ft away from the main unit, measuring nearest edge-to-edge. GE Power & Water is to advise best location.
5. If Fin Fan Cooler is to be located behind the generator end of the main unit, then its location must be at least 10-ft behind the generator end of the package, and off to one side, measuring nearest edge-to-edge, to avoid infringement on the rotor removal area. GE Power & Water is to advise best location.
6. Ancillary skids of the package must be located at least 10-ft away from Fin Fan Cooler, measuring nearest edge-to-edge.
7. Per unit basis.
8. Base-load operation only.
9. GE Power & Water GTG package scope of supply only, customer supplied equipment is not included.
10. GE Power & Water GTG package scope of supply only, GE Power & Water supplied BOP equipment is not included.
11. If GE Power & Water supplies BOP equipment, then GE Power & Water is to advise best location.

Conditions for VOC Emissions Guarantee

1. Fuel must meet GE specification MID-TD-000-01.
2. The timing of test to coincide with lowest site ambient VOCs levels.
3. Gas turbine must run for a minimum of 300 total fired hours at base load prior to testing.
4. Gas turbine inlet and exhaust system must be free of any dirt,sand,mud,rust,oil or any other contaminates.
5. Re-testing (at purchaser's expense) must be allowed, if required.
6. GE receives a copy of the final test results.
7. A compressor wash prior to testing is highly recommended.

Conditions for PM10 Emissions Guarantee

1. Fuel must meet GE specification MID-TD-000-01.
2. The timing of test to coincide with lowest site ambient particulate levels.
3. Gas turbine must run for a minimum of 300 total fired hours at base load prior to testing.
4. Combustion turbine must be run for a minimum of 300 total fired hours prior to any particulate testing; combustion turbine must be operating a minimum of 3 - 4 hours at base load prior to PM / PM10 test run.
5. Gas turbine inlet and exhaust system must be free of any dirt,sand,mud,rust,oil or any other contaminates.
6. Sampling probe internal surfaces must be made of chemically inert and non-catalytic material such as quartz.
7. The filter material shall be quartz.
8. Probe wash shall be high purity acetone per EPA Method 5.
9. Re-testing (at purchaser's expense) must be allowed, if required.
10. GE receives a copy of the final test results.
11. A compressor wash prior to testing is highly recommended.
12. The area around the turbine is to be treated (e.g.sprayed down with water) to minimize airborne dust.

GE POWER & WATER

Conditions for 10-Minute Start Up Guarantee

1. The conditions in GE Position Papers PP08, PP07, and PP17 apply and must be satisfied. Any deviations will require an adjustment to the 10-minute start evaluation.
2. The engine/stack purge times in the 10-minute start apply to exhaust systems that terminate with a standard exhaust stack of 9' diameter and 60' length, or to systems with a (SCR) Selective Catalytic Reduction Unit or Heat Recovery Steam Generator (HRSG) that is continually purged by a forced air purging system.
3. If SCR or HRSG are not continually purged, then proper purging of SCR or HRSG will be required prior to the beginning of Startup Test. **SCR or HRSG purge time is to be excluded from 10-minute start**.
4. 10-Minute Start is for Simple Cycle Operation only. If HRSG has a bypass exhaust stack, then the Damper to HRSG must be closed to allow exhaust flow through bypass stack only.
5. Generator Lube Oil Pump must be running to maintain a "Ready to Start Condition" as defined in PP08.
6. Start sequence is for 60 or 50 Hz applications.
7. Per unit basis.
8. Emission guarantee not in effect.
9. Valid over ambient temperature range of -39°F (39.4°C) to 100°F (37.8°C). However, the unit must be out of an icing condition as defined by PP17 before ramping to full load. **This "warm up period" is to be excluded from the 10-minute start.**

Steady State Conditions for Emissions Guarantee

1.	Power Output (electrical)	±10.0% / Min
2.	T2 Compressor Inlet air temperature	± 2.5°F / 5.0 Min
3.	Heat Value - gaseous fuel per unit volume	±0.25% / Min
4.	Pressure - gaseous fuel as supplied to engine	± 10 PSIG / 5.0 Min

Estimated Average Engine Performance NOT FOR GUARANTEE, REFER TO PROJECT F&ID FOR DESIGN

GE Energy

Performance By:
Project Info: **PNM LM6000 PC Sprint**

Engine: **LM6000 PC-SPRINT w/ FIGV at -5 Degrees**
Deck Info: **G0125P - 8fk.scp**
Generator: **BDAX 290ERT 60Hz, 13.8kV, 0.9PF (14839)**
Fuel: **Gas Fuel #10-1, 19000 Btu/lb,LHV**

Date: **11/15/2011**
Time: **2:24:04 PM**
Version: **3.9.0**

Case #	**100%**	**75%**	**50%**
Ambient Conditions			
Dry Bulb, °F	59.0	59.0	59.0
Wet Bulb, °F	45.5	45.5	45.5
RH, %	37.0	37.0	37.0
Altitude, ft	5100.0	5100.0	5100.0
Ambient Pressure, psia	12.182	12.182	12.182
Engine Inlet			
Comp Inlet Temp, °F	45.5	47.5	47.5
RH, %	100.0	87.2	87.2
Conditioning	EVAP	EVAP	EVAP
Tons or kBtu/hr	0	0	0
Pressure Losses			
Inlet Loss, inH20	4.50	4.50	4.50
Volute Loss, inH20	4.00	4.00	4.00
Exhaust Loss, inH20	6.00	6.00	6.00
Partload %	**100**	**75**	**50**
kW, Gen Terms	**42286**	**31721**	**21156**
Est. Btu/kW-hr, LHV	**8488**	**8964**	**10094**
Fuel Flow			
MMBtu/hr, LHV	358.9	284.4	213.6
lb/hr	18891	14966	11240
NOx Control	**Water**	**Water**	**Water**
Water Injection			
lb/hr	15608	10016	8019
Temperature, °F	100.0	100.0	100.0
SPRINT	**LPC**	**LPC**	**OFF**
lb/hr	6932	7099	0
Control Parameters			
HP Speed, RPM	10419	10003	9742
LP Speed, RPM	3600	3600	3600
PS3 - CDP, psia	384.2	334.8	281.3
T25 - HPC Inlet Temp, °F	189.4	194.2	224.1
T3CRF - CDT, °F	963	885	884
T48IN, °R	2038	1894	1787
T48IN, °F	1578	1434	1328
Exhaust Parameters			
Temperature, °F	838.3	769.2	735.3
lb/sec	249.5	226.6	197.0
lb/hr	898310	815597	709158
Energy, Btu/s- Ref 0 °R	83895	71265	59488
Energy, Btu/s- Ref T2 °F	52169	42551	34772
Cp, Btu/lb-R	0.2770	0.2717	0.2671
Emissions (ESTIMATED, NOT FOR GUARANTEE)			
NOx ppmvd Ref 15% O2	25	25	25
NOx as NO2, lb/hr	36	29	22
CO ppmvd Ref 15% O2	13	14	19
CO, lb/hr	11.70	9.84	9.85
CO2, lb/hr	47739.72	37868.76	28495.10
HC ppmvd Ref 15% O2	2	2	2
HC, lb/hr	1.13	0.90	0.67
SOX as SO2, lb/hr	0.00	0.00	0.00

Estimated Average Engine Performance NOT FOR GUARANTEE, REFER TO PROJECT F&ID FOR DESIGN

GE Energy

Performance By:
Project Info: **PNM LM6000 PC Sprint**

Engine: **LM6000 PC-SPRINT w/ FIGV at -5 Degrees**
Deck Info: **G0125P - 8fk.scp**
Generator: **BDAX 290ERT 60Hz, 13.8kV, 0.9PF (14839)**
Fuel: **Gas Fuel #10-1, 19000 Btu/lb,LHV**

Date: **11/15/2011**
Time: **2:24:04 PM**
Version: **3.9.0**

Case #	**100%**	**75%**	**50%**
Exh Wght % Wet (NOT FOR USE IN ENVIRONMENTAL PERMITS)			
AR	1.2187	1.2288	1.2440
N2	71.6436	72.2101	73.0780
O2	14.5256	15.6460	16.7931
CO2	5.3144	4.6431	4.0182
H20	7.2935	6.2684	4.8632
SO2	0.0000	0.0000	0.0000
CO	0.0013	0.0012	0.0014
HC	0.0001	0.0001	0.0001
NOX	0.0028	0.0024	0.0021
Exh Mole % Dry (NOT FOR USE IN ENVIRONMENTAL PERMITS)			
AR	0.9646	0.9603	0.9564
N2	80.8599	80.4759	80.1173
O2	14.3530	15.2659	16.1184
CO2	3.8181	3.2939	2.8041
H20	0.0000	0.0000	0.0000
SO2	0.0000	0.0000	0.0000
CO	0.0015	0.0013	0.0015
HC	0.0003	0.0002	0.0002
NOX	0.0028	0.0024	0.0020
Exh Mole % Wet (NOT FOR USE IN ENVIRONMENTAL PERMITS)			
AR	0.8551	0.8662	0.8831
N2	71.6839	72.5902	73.9834
O2	12.7242	13.7700	14.8844
CO2	3.3848	2.9711	2.5895
H20	11.3480	9.7989	7.6562
SO2	0.0000	0.0000	0.0000
CO	0.0013	0.0012	0.0014
HC	0.0002	0.0002	0.0002
NOX	0.0025	0.0022	0.0019
Aero Energy Fuel Number	**10-1 (GEDEF)**		
	Volume %	**Weight %**	
Hydrogen	0.0000	0.0000	
Methane	84.5000	71.8447	
Ethane	5.5800	8.8924	
Ethylene	0.0000	0.0000	
Propane	2.0500	4.7909	
Propylene	0.0000	0.0000	
Butane	0.7800	2.4027	
Butylene	0.0000	0.0000	
Butadiene	0.0000	0.0000	
Pentane	0.1800	0.6883	
Cyclopentane	0.0000	0.0000	
Hexane	0.1700	0.7764	
Heptane	0.0000	0.0000	
Carbon Monoxide	0.0000	0.0000	
Carbon Dioxide	0.6700	1.5628	
Nitrogen	5.9300	8.8044	
Water Vapor	0.0000	0.0000	
Oxygen	0.1400	0.2374	
Hydrogen Sulfide	0.0000	0.0000	
Ammonia	0.0000	0.0000	
Btu/lb, LHV	19000		
Btu/scf, LHV	946.0		
Btu/scf, HHV	1047.0		
Btu/lb, HHV	20996		
Fuel Temp, °F	77.0		
NOx Scalar	0.998		
Specific Gravity	0.65		
Wobbe	50.657	50.657	50.657

Estimated Average Engine Performance NOT FOR GUARANTEE, REFER TO PROJECT F&ID FOR DESIGN

GE Energy

Performance By:
Project Info: **PNM LM6000 PC Sprint**

Engine: **LM6000 PC-SPRINT w/ FIGV at -5 Degrees**
Deck Info: **G0125P - 8fk.scp**
Generator: **BDAX 290ERT 60Hz, 13.8kV, 0.9PF (14839)**
Fuel: **Gas Fuel #10-1, 19000 Btu/lb,LHV**

Date: **11/15/2011**
Time: **2:24:04 PM**
Version: **3.9.0**

Case #	**100%**	**75%**	**50%**
Engine Exhaust			
Exhaust Avg. Mol. Wt., Wet Basis	28.0	28.2	28.4
Inlet Flow Wet, pps	241.1	239.2	229.9
Inlet Flow Dry, pps	239.3	237.5	228.3
Shaft HP	57746	43442	29164
Generator Information			
Capacity kW	76917	64115	64115
Efficiency	0.9790	0.9792	0.9728
Inlet Temp, °F	59.0	59.0	59.0
Gear Box Loss	N/A	N/A	N/A
TRQ48, Torque Limit Cold End	103098	82463	62673
Correct Control Parameters			
PS3JQA, psia	389.397	339.329	285.105
XN25R3, rpm	6299	6210	6045
8th Stage Bleed			
Flow, pps	0.0	0.0	0.0
Pressure, psia	0.000	0.000	0.000
Temperature, °R	0	0	0
CDP Bleed			
Flow, pps	0.0	0.0	0.0
Pressure, psia	0.000	0.000	0.000
Est. Gas Pressure at Baseplate, psig	**538.6**	**450.8**	**362.5**
WAR36 - Combustor Water to Air Ratio	0.0412	0.0336	0.0232
P3, psia	388.22	338.68	284.99
WAR3	0.0163	0.0161	0.0073
CardPack	**8fk**	**8fk**	**8fk**
Exhaust CardPack	**7f5**	**7f5**	**7f5**
NSI	**304**	**0**	**439**
NSI	**0**	**0**	**0**
NSI	**0**	**0**	**0**

Estimated Average Engine Performance NOT FOR GUARANTEE, REFER TO PROJECT F&ID FOR DESIGN

GE Energy

Performance By:
Project Info: **PNM LM6000 PC Sprint**

Engine: **LM6000 PC-SPRINT w/ FIGV at -5 Degrees**
Deck Info: **G0125P - 8fk.scp**
Generator: **BDAX 290ERT 60Hz, 13.8kV, 0.9PF (14839)**
Fuel: **Gas Fuel #10-1, 19000 Btu/lb,LHV**

Date: **11/15/2011**
Time: **2:24:04 PM**
Version: **3.9.0**

Case #	**100%**	**75%**	**50%**
Ambient Conditions			
Dry Bulb, °F	38.0	38.0	38.0
Wet Bulb, °F	30.7	30.7	30.7
RH, %	46.0	46.0	46.0
Altitude, ft	5100.0	5100.0	5100.0
Ambient Pressure, psia	12.182	12.182	12.182
Engine Inlet			
Comp Inlet Temp, °F	38.0	38.0	38.0
RH, %	46.0	46.0	46.0
Conditioning	NONE	NONE	NONE
Tons or kBtu/hr	0	0	0
Pressure Losses			
Inlet Loss, inH20	4.00	4.00	4.00
Volute Loss, inH20	4.00	4.00	4.00
Exhaust Loss, inH20	6.00	6.00	6.00
Partload %	**100**	**75**	**50**
kW, Gen Terms	**42378**	**31794**	**21200**
Est. Btu/kW-hr, LHV	**8482**	**8931**	**10119**
Fuel Flow			
MMBtu/hr, LHV	359.5	284.0	214.5
lb/hr	18919	14945	11291
NOx Control	**Water**	**Water**	**Water**
Water Injection			
lb/hr	18584	13452	8401
Temperature, °F	100.0	100.0	100.0
SPRINT	**HPC**	**OFF**	**OFF**
lb/hr	3150	0	0
Control Parameters			
HP Speed, RPM	10444	10016	9660
LP Speed, RPM	3600	3600	3600
PS3 - CDP, psia	386.6	337.4	284.9
T25 - HPC Inlet Temp, °F	198.7	207.8	213.4
T3CRF - CDT, °F	988	937	866
T48IN, °R	2038	1907	1764
T48IN, °F	1578	1447	1304
Exhaust Parameters			
Temperature, °F	835.3	774.1	715.4
lb/sec	251.8	228.6	201.1
lb/hr	906394	822788	723789
Energy, Btu/s- Ref 0 °R	84007	71681	59419
Energy, Btu/s- Ref T2 °F	52630	43459	34761
Cp, Btu/lb-R	0.2753	0.2698	0.2653
Emissions (ESTIMATED, NOT FOR GUARANTEE)			
NOx ppmvd Ref 15% O2	25	25	25
NOx as NO2, lb/hr	36	29	22
CO ppmvd Ref 15% O2	27	34	30
CO, lb/hr	24.10	23.43	15.92
CO2, lb/hr	47802.09	37814.43	28621.12
HC ppmvd Ref 15% O2	3	4	3
HC, lb/hr	1.50	1.49	1.00
SOX as SO2, lb/hr	0.00	0.00	0.00

Exh Wght % Wet (NOT FOR USE IN ENVIRONMENTAL PERMITS)			
AR	1.2267	1.2403	1.2497
N2	72.1119	72.8819	73.4099
O2	14.7244	15.9162	16.9837
CO2	5.2739	4.5959	3.9543
H20	6.6575	5.3603	4.3981
SO2	0.0000	0.0000	0.0000
CO	0.0027	0.0028	0.0022
HC	0.0002	0.0002	0.0001
NOX	0.0028	0.0024	0.0021

Exh Mole % Dry (NOT FOR USE IN ENVIRONMENTAL PERMITS)			
AR	0.9641	0.9598	0.9559
N2	80.8196	80.4285	80.0747
O2	14.4478	15.3774	16.2190
CO2	3.7625	3.2284	2.7457
H20	0.0000	0.0000	0.0000
SO2	0.0000	0.0000	0.0000
CO	0.0030	0.0031	0.0024
HC	0.0003	0.0004	0.0003
NOX	0.0027	0.0023	0.0020

Exh Mole % Wet (NOT FOR USE IN ENVIRONMENTAL PERMITS)			
AR	0.8639	0.8790	0.8895
N2	72.4171	73.6535	74.5158
O2	12.9457	14.0821	15.0931
CO2	3.3713	2.9565	2.5551
H20	10.3966	8.4236	6.9422
SO2	0.0000	0.0000	0.0000
CO	0.0027	0.0029	0.0022
HC	0.0003	0.0003	0.0002
NOX	0.0024	0.0021	0.0018

Aero Energy Fuel Number	**10-1 (GEDEF)**		
	Volume %	**Weight %**	
Hydrogen	0.0000	0.0000	
Methane	84.5000	71.8447	
Ethane	5.5800	8.8924	
Ethylene	0.0000	0.0000	
Propane	2.0500	4.7909	
Propylene	0.0000	0.0000	
Butane	0.7800	2.4027	
Butylene	0.0000	0.0000	
Butadiene	0.0000	0.0000	
Pentane	0.1800	0.6883	
Cyclopentane	0.0000	0.0000	
Hexane	0.1700	0.7764	
Heptane	0.0000	0.0000	
Carbon Monoxide	0.0000	0.0000	
Carbon Dioxide	0.6700	1.5628	
Nitrogen	5.9300	8.8044	
Water Vapor	0.0000	0.0000	
Oxygen	0.1400	0.2374	
Hydrogen Sulfide	0.0000	0.0000	
Ammonia	0.0000	0.0000	
Btu/lb, LHV	19000		
Btu/scf, LHV	946.0		
Btu/scf, HHV	1047.0		
Btu/lb, HHV	20996		
Fuel Temp, °F	77.0		
NOx Scalar	0.998		
Specific Gravity	0.65		
Wobbe	50.657	50.657	50.657

Engine Exhaust			
Exhaust Avg. Mol. Wt., Wet Basis	28.1	28.3	28.4
Inlet Flow Wet, pps	243.6	240.7	237.8
Inlet Flow Dry, pps	243.0	240.1	237.2
Shaft HP	57872	43537	29224
Generator Information			
Capacity kW	76917	69366	69366
Efficiency	0.9790	0.9793	0.9728
Inlet Temp, °F	38.0	38.0	38.0
Gear Box Loss	N/A	N/A	N/A
TRQ48, Torque Limit Cold End	103913	83665	63231
Correct Control Parameters			
PS3JQA, psia	391.241	341.451	288.320
XN25R3, rpm	6264	6113	6032
8th Stage Bleed			
Flow, pps	0.0	0.0	0.0
Pressure, psia	0.000	0.000	0.000
Temperature, °R	0	0	0
CDP Bleed			
Flow, pps	0.0	0.0	0.0
Pressure, psia	0.000	0.000	0.000
Est. Gas Pressure at Baseplate, psig	**540.9**	**452.8**	**366.3**
WAR36 - Combustor Water to Air Ratio	0.0357	0.0257	0.0189
P3, psia	390.83	341.66	288.70
WAR3	0.0065	0.0026	0.0026
CardPack	**8fk**	**8fk**	**8fk**
Exhaust CardPack	**7f5**	**7f5**	**7f5**
NSI	**304**	**439**	**439**
NSI	**0**	**0**	**0**
NSI	**0**	**0**	**0**

Estimated Average Engine Performance NOT FOR GUARANTEE, REFER TO PROJECT F&ID FOR DESIGN

GE Energy

Performance By:
Project Info: **PNM LM6000 PC Sprint**

Engine: **LM6000 PC-SPRINT w/ FIGV at -5 Degrees**
Deck Info: **G0125P - 8fk.scp**
Generator: **BDAX 290ERT 60Hz, 13.8kV, 0.9PF (14839)**
Fuel: **Gas Fuel #10-1, 19000 Btu/lb,LHV**

Date: **11/15/2011**
Time: **2:24:04 PM**
Version: **3.9.0**

Case #	**100%**	**75%**	**50%**
Ambient Conditions			
Dry Bulb, °F	90.0	90.0	90.0
Wet Bulb, °F	60.0	60.0	60.0
RH, %	18.0	18.0	18.0
Altitude, ft	5100.0	5100.0	5100.0
Ambient Pressure, psia	12.182	12.182	12.182
Engine Inlet			
Comp Inlet Temp, °F	60.0	64.5	64.5
RH, %	100.0	78.8	78.8
Conditioning	EVAP	EVAP	EVAP
Tons or kBtu/hr	0	0	0
Pressure Losses			
Inlet Loss, inH20	4.50	4.50	4.50
Volute Loss, inH20	4.00	4.00	4.00
Exhaust Loss, inH20	6.00	6.00	6.00
Partload %	**100**	**75**	**50**
kW, Gen Terms	**40219**	**30173**	**20124**
Est. Btu/kW-hr, LHV	**8538**	**9075**	**10289**
Fuel Flow			
MMBtu/hr, LHV	343.4	273.8	207.1
lb/hr	18074	14411	10897
NOx Control	**Water**	**Water**	**Water**
Water Injection			
lb/hr	13253	8672	7399
Temperature, °F	100.0	100.0	100.0
SPRINT	**LPC**	**LPC**	**OFF**
lb/hr	7942	7846	0
Control Parameters			
HP Speed, RPM	10471	10091	9841
LP Speed, RPM	3600	3600	3600
PS3 - CDP, psia	370.2	322.0	268.8
T25 - HPC Inlet Temp, °F	201.0	208.8	236.1
T3CRF - CDT, °F	968	901	908
T48IN, °R	2038	1910	1822
T48IN, °F	1578	1450	1363
Exhaust Parameters			
Temperature, °F	848.0	791.4	771.2
lb/sec	240.0	216.6	186.2
lb/hr	864144	779780	670437
Energy, Btu/s- Ref 0 °R	81650	69737	58287
Energy, Btu/s- Ref T2 °F	50134	41243	34032
Cp, Btu/lb-R	0.2784	0.2737	0.2697
Emissions (ESTIMATED, NOT FOR GUARANTEE)			
NOx ppmvd Ref 15% O2	25	25	25
NOx as NO2, lb/hr	35	28	21
CO ppmvd Ref 15% O2	7	7	11
CO, lb/hr	5.70	4.81	5.38
CO2, lb/hr	45681.03	36465.95	27624.72
HC ppmvd Ref 15% O2	2	2	2
HC, lb/hr	1.08	0.86	0.65
SOX as SO2, lb/hr	0.00	0.00	0.00

Exh Wght % Wet (NOT FOR USE IN ENVIRONMENTAL PERMITS)			
AR	1.2128	1.2224	1.2376
N2	71.2939	71.8342	72.7112
O2	14.4588	15.4844	16.5372
CO2	5.2863	4.6764	4.1204
H20	7.7447	6.7794	5.3905
SO2	0.0000	0.0000	0.0000
CO	0.0007	0.0006	0.0008
HC	0.0001	0.0001	0.0001
NOX	0.0028	0.0024	0.0021

Exh Mole % Dry (NOT FOR USE IN ENVIRONMENTAL PERMITS)			
AR	0.9646	0.9607	0.9571
N2	80.8584	80.5067	80.1817
O2	14.3568	15.1931	15.9657
CO2	3.8164	3.3362	2.8923
H20	0.0000	0.0000	0.0000
SO2	0.0000	0.0000	0.0000
CO	0.0007	0.0007	0.0009
HC	0.0003	0.0002	0.0002
NOX	0.0028	0.0024	0.0021

Exh Mole % Wet (NOT FOR USE IN ENVIRONMENTAL PERMITS)			
AR	0.8486	0.8592	0.8761
N2	71.1412	71.9999	73.3971
O2	12.6315	13.5877	14.6148
CO2	3.3578	2.9837	2.6476
H20	12.0175	10.5666	8.4616
SO2	0.0000	0.0000	0.0000
CO	0.0007	0.0006	0.0008
HC	0.0002	0.0002	0.0002
NOX	0.0024	0.0022	0.0019

Aero Energy Fuel Number	**10-1 (GEDEF)**	
	Volume %	**Weight %**
Hydrogen	0.0000	0.0000
Methane	84.5000	71.8447
Ethane	5.5800	8.8924
Ethylene	0.0000	0.0000
Propane	2.0500	4.7909
Propylene	0.0000	0.0000
Butane	0.7800	2.4027
Butylene	0.0000	0.0000
Butadiene	0.0000	0.0000
Pentane	0.1800	0.6883
Cyclopentane	0.0000	0.0000
Hexane	0.1700	0.7764
Heptane	0.0000	0.0000
Carbon Monoxide	0.0000	0.0000
Carbon Dioxide	0.6700	1.5628
Nitrogen	5.9300	8.8044
Water Vapor	0.0000	0.0000
Oxygen	0.1400	0.2374
Hydrogen Sulfide	0.0000	0.0000
Ammonia	0.0000	0.0000
Btu/lb, LHV	19000	
Btu/scf, LHV	946.0	
Btu/scf, HHV	1047.0	
Btu/lb, HHV	20996	
Fuel Temp, °F	77.0	
NOx Scalar	0.998	
Specific Gravity	0.65	
Wobbe	50.657	50.657

Engine Exhaust			
Exhaust Avg. Mol. Wt., Wet Basis	28.0	28.1	28.3
Inlet Flow Wet, pps	232.1	228.9	221.7
Inlet Flow Dry, pps	229.0	226.0	218.9
Shaft HP	54946	41348	27770
Generator Information			
Capacity kW	76917	55225	55225
Efficiency	0.9783	0.9786	0.9718
Inlet Temp, °F	90.0	90.0	90.0
Gear Box Loss	N/A	N/A	N/A
TRQ48, Torque Limit Cold End	98254	78569	59461
Correct Control Parameters			
PS3JQA, psia	375.208	326.356	272.436
XN25R3, rpm	6327	6235	6059
8th Stage Bleed			
Flow, pps	0.0	0.0	0.0
Pressure, psia	0.000	0.000	0.000
Temperature, °R	0	0	0
CDP Bleed			
Flow, pps	0.0	0.0	0.0
Pressure, psia	0.000	0.000	0.000
Est. Gas Pressure at Baseplate, psig	**517.1**	**433.5**	**347.7**
WAR36 - Combustor Water to Air Ratio	0.0456	0.0384	0.0279
P3, psia	374.08	325.66	272.15
WAR3	0.0235	0.0225	0.0123
CardPack	**8fk**	**8fk**	**8fk**
Exhaust CardPack	**7f5**	**7f5**	**7f5**
NSI	**304**	**0**	**439**
NSI	**0**	**0**	**0**
NSI	**0**	**0**	**0**

Table 3.1-3. EMISSION FACTORS FOR HAZARDOUS AIR POLLUTANTS FROM NATURAL GAS-FIRED STATIONARY GAS TURBINES[a]

Emission Factors[b] - Uncontrolled		
Pollutant	Emission Factor (lb/MMBtu)[c]	Emission Factor Rating
1,3-Butadiene[d]	< 4.3 E-07	D
Acetaldehyde	4.0 E-05	C
Acrolein	6.4 E-06	C
Benzene[e]	1.2 E-05	A
Ethylbenzene	3.2 E-05	C
Formaldehyde[f]	7.1 E-04	A
Naphthalene	1.3 E-06	C
PAH	2.2 E-06	C
Propylene Oxide[d]	< 2.9 E-05	D
Toluene	1.3 E-04	C
Xylenes	6.4 E-05	C

[a] SCC for natural gas-fired turbines include 2-01-002-01, 2-02-002-01, 2-02-002-03, 2-03-002-02, and 2-03-002-03. Hazardous Air Pollutants as defined in Section 112 (b) of the *Clean Air Act*.

[b] Factors are derived from units operating at high loads (≥ 80 percent load) only. For information on units operating at other loads, consult the background report for this chapter (Reference 16), available at "www.epa.gov/ttn/chief".

[c] Emission factors based on an average natural gas heating value (HHV) of 1020 Btu/scf at 60°F. To convert from (lb/MMBtu) to (lb/10^6 scf), multiply by 1020. These emission factors can be converted to other natural gas heating values by multiplying the given emission factor by the ratio of the specified heating value to this heating value.

[d] Compound was not detected. The presented emission value is based on one-half of the detection limit.

[e] Benzene with SCONOX catalyst is 9.1 E-07, rating of D.

[f] Formaldehyde with SCONOX catalyst is 2.0 E-05, rating of D.

Federal Environment and Safety Codified Regulations
TITLE 40—Protection of Environment
PART 98—MANDATORY GREENHOUSE GAS REPORTING
SUBPART A—General Provision

Table A-1 to Subpart A of Part 98 —Global Warming Potentials

[100-Year Time Horizon]

Name	CAS No.	Chemical formula	Global warming potential (100 yr.)
Chemical-Specific GWPs			
Carbon dioxide	124-38-9	CO_2	1
Methane	74-82-8	CH_4	[a] 25
Nitrous oxide	10024-97-2	N_2O	[a] 298
Fully Fluorinated GHGs			
Sulfur hexafluoride	2551-62-4	SF_6	[a] 22,800
Trifluoromethyl sulphur pentafluoride	373-80-8	$SF_5\ CF_3$	17,700
Nitrogen trifluoride	7783-54-2	NF_3	17,200
PFC-14 (Perfluoromethane)	75-73-0	CF_4	[a] 7,390
PFC-116 (Perfluoroethane)	76-16-4	C_2F_6	[a] 12,200
PFC-218 (Perfluoropropane)	76-19-7	C_3F_8	[a] 8,830
Perfluorocyclopropane	931-91-9	$C\text{-}C_3F_6$	17,340
PFC-3-1-10 (Perfluorobutane)	355-25-9	C_4F_{10}	[a] 8,860
PFC-318 (Perfluorocyclobutane)	115-25-3	$C\text{-}C_4F_8$	[a] 10,300
PFC-4-1-12 (Perfluoropentane)	678-26-2	C_5F_{12}	[a] 9,160
PFC-5-1-14 (Perfluorohexane, FC-72)	355-42-0	C_6F_{14}	[a] 9,300
PFC-6-1-12	335-57-9	C_7F_{16}; $CF_3(CF_2)_5CF_3$	[b] 7,820
PFC-7-1-18	307-34-6	C_8F_{18}; $CF_3(CF_2)_6CF_3$	[b] 7,620
PFC-9-1-18	306-94-5	$C_{10}F_{18}$	7,500
PFPMIE (HT-70)	NA	$CF_3OCF(CF_3)CF_2OCF_2OCF_3$	10,300
Perfluorodecalin (cis)	60433-11-6	$Z\text{-}C_{10}F_{18}$	[b] 7,236
Perfluorodecalin (trans)	60433-12-7	$E\text{-}C_{10}F_{18}$	[b] 6,288
Saturated Hydrofluorocarbons (HFCs) With Two or Fewer Carbon-Hydrogen Bonds			
HFC-23	75-46-7	CHF_3	[a] 14,800
HFC-32	75-10-5	CH_2F_2	[a] 675
HFC-125	354-33-6	C_2HF_5	[a] 3,500
HFC-134	359-35-3	$C_2H_2F_4$	[a] 1,100
HFC-134a	811-97-2	CH_2FCF_3	[a] 1,430
HFC-227ca	2252-84-8	$CF_3CF_2CHF_2$	[b] 2640
HFC-227ea	431-89-0	C_3HF_7	[a] 3,220
HFC-236cb	677-56-5	$CH_2FCF_2CF_3$	1,340
HFC-236ea	431-63-0	CHF_2CHFCF_3	1,370
HFC-236fa	690-39-1		

		$C_3H_2F_6$	[a] 9,810
HFC-329p	375-17-7	$CHF_2CF_2CF_2CF_3$	[b] 2360
HFC-43-10mee	138495-42-8	$CF_3CFHCFHCF_2CF_3$	[a] 1,640
Saturated Hydrofluorocarbons (HFCs) With Three or More Carbon-Hydrogen Bonds			
HFC-41	593-53-3	CH_3F	[a] 92
HFC-143	430-66-0	$C_2H_3F_3$	[a] 353
HFC-143a	420-46-2	$C_2H_3F_3$	[a] 4,470
HFC-152	624-72-6	CH_2FCH_2F	53
HFC-152a	75-37-6	CH_3CHF_2	[a] 124
HFC-161	353-36-6	CH_3CH_2F	12
HFC-245ca	679-86-7	$C_3H_3F_5$	[a] 693
HFC-245cb	1814-88-6	$CF_3CF_2CH_3$	[b] 4620
HFC-245ea	24270-66-4	$CHF_2CHFCHF_2$	[b] 235
HFC-245eb	431-31-2	$CH_2FCHFCF_3$	[b] 290
HFC-245fa	460-73-1	$CHF_2CH_2CF_3$	1,030
HFC-263fb	421-07-8	$CH_3CH_2CF_3$	[b] 76
HFC-272ca	420-45-1	$CH_3CF_2CH_3$	[b] 144
HFC-365mfc	406-58-6	$CH_3CF_2CH_2CF_3$	794
Saturated Hydrofluoroethers (HFEs) and Hydrochlorofluoroethers (HCFEs) With One Carbon-Hydrogen Bond			
HFE-125	3822-68-2	CHF_2OCF_3	14,900
HFE-227ea	2356-62-9	$CF_3CHFOCF_3$	1,540
HFE-329mcc2	134769-21-4	$CF_3CF_2OCF_2CHF_2$	919
HFE-329me3	428454-68-6	$CF_3CFHCF_2OCF_3$	[b] 4,550
1,1,1,2,2,3,3-Heptafluoro-3-(1,2,2,2-tetrafluoroethoxy)-propane	3330-15-2	$CF_3CF_2CF_2OCHFCF_3$	[b] 6,490
Saturated HFEs and HCFEs With Two Carbon-Hydrogen Bonds			
HFE-134 (HG-00)	1691-17-4	CHF_2OCHF_2	6,320
HFE-236ca	32778-11-3	$CHF_2OCF_2CHF_2$	[b] 4,240
HFE-236ca12 (HG-10)	78522-47-1	$CHF_2OCF_2OCHF_2$	2,800
HFE-236ea2 (Desflurane)	57041-67-5	$CHF_2OCHFCF_3$	989
HFE-236fa	20193-67-3	$CF_3CH_2OCF_3$	487
HFE-338mcf2	156053-88-2	$CF_3CF_2OCH_2CF_3$	552
HFE-338mmz1	26103-08-2	$CHF_2OCH(CF_3)_2$	380
HFE-338pcc13 (HG-01)	188690-78-0	$CHF_2OCF_2CF_2OCHF_2$	1,500
HFE-43-10pccc (H-Galden 1040x, HG-11)	E1730133	$CHF_2OCF_2OC_2F_4OCHF_2$	1,870
HCFE-235ca2 (Enflurane)	13838-16-9	CHF_2OCF_2CHFCl	[b] 583
HCFE-235da2 (Isoflurane)	26675-46-7	$CHF_2OCHClCF_3$	350
HG-02	205367-61-9	$HF_2C-(OCF_2CF_2)$	[b] 3,825
HG-03	173350-37-3	$HF_2C-(OCF_2CF_2)$	[b] 3,670
HG-20	249932-25-0	$HF_2C-(OCF_2)$	[b] 5,300
HG-21	249932-26-1	$HF_2C-OCF_2CF_2OCF_2OCF_2O-CF_2H$	[b] 3,890
HG-30	188690-77-9	$HF_2C-(OCF_2)$	[b] 7,330
1,1,3,3,4,4,6,6,7,7,9,9,10,10,12,12,13,13,15,15-eicosafluoro-2,5,8,11,14-Pentaoxapentadecane	173350-38-4	$HCF_2O(CF_2CF_2O)_4CF_2H$	[b] 3,630
1,1,2-Trifluoro-2-(trifluoromethoxy)-ethane	84011-06-3	$CHF_2CHFOCF_3$	[b] 1,240
Trifluoro(fluoromethoxy)methane	2261-01-0	CH_2FOCF_3	[b] 751
Saturated HFEs and HCFEs With Three or More Carbon-Hydrogen Bonds			

HFE-143a	421-14-7	CH_3OCF_3	756
HFE-245cb2	22410-44-2	$CH_3OCF_2CF_3$	708
HFE-245fa1	84011-15-4	$CHF_2CH_2OCF_3$	286
HFE-245fa2	1885-48-9	$CHF_2OCH_2CF_3$	659
HFE-254cb2	425-88-7	$CH_3OCF_2CHF_2$	359
HFE-263fb2	460-43-5	$CF_3CH_2OCH_3$	11
HFE-263m1; R-E-143a	690-22-2	$CF_3OCH_2CH_3$	[b] 29
HFE-347mcc3 (HFE-7000)	375-03-1	$CH_3OCF_2CF_2CF_3$	575
HFE-347mcf2	171182-95-9	$CF_3CF_2OCH_2CHF_2$	374
HFE-347mmy1	22052-84-2	$CH_3OCF(CF_3)_2$	343
HFE-347mmz1 (Sevoflurane)	28523-86-6	$(CF_3)_2CHOCH_2F$	[c] 216
HFE-347pcf2	406-78-0	$CHF_2CF_2OCH_2CF_3$	580
HFE-356mec3	382-34-3	$CH_3OCF_2CHFCF_3$	101
HFE-356mff2	333-36-8	$CF_3CH_2OCH_2CF_3$	[b] 17
HFE-356mmz1	13171-18-1	(CF_3)	27
HFE-356pcc3	160620-20-2	$CH_3OCF_2CF_2CHF_2$	110
HFE-356pcf2	50807-77-7	$CHF_2CH_2OCF_2CHF_2$	265
HFE-356pcf3	35042-99-0	CHF_2OCH	502
HFE-365mcf2	22052-81-9	$CF_3CF_2OCH_2CH_3$	[b] 58
HFE-365mcf3	378-16-5	$CF_3CF_2CH_2OCH_3$	11
HFE-374pc2	512-51-6	$CH_3CH_2OCF_2CHF_2$	557
HFE-449s1 (HFE-7100) Chemical blend	163702-07-6	C_4F	297
	163702-08-7	(CF_3)	
HFE-569sf2 (HFE-7200) Chemical blend	163702-05-4	$C_4F_9OC_2H_5$	59
	163702-06-5	$(CF_3)_2CFCF_2OC_2H_5$	
HG'-01	73287-23-7	$CH_3OCF_2CF_2OCH_3$	[b] 222
HG'-02	485399-46-0	$CH_3O(CF_2CF_2O)_2CH_3$	[b] 236
HG'-03	485399-48-2	$CH_3O(CF_2CF_2O)$	[b] 221
Difluoro(methoxy)methane	359-15-9	CH_3OCHF_2	[b] 144
2-Chloro-1,1,2-trifluoro-1-methoxyethane	425-87-6	CH_3OCF_2CHFCl	[b] 122
1-Ethoxy-1,1,2,2,3,3,3-heptafluoropropane	22052-86-4	$CF_3CF_2CF_2OCH_2CH_3$	[b] 61
2-Ethoxy-3,3,4,4,5-pentafluorotetrahydro-2,5-bis[1,2,2,2-tetrafluoro-1-(trifluoromethyl) ethyl]-furan	920979-28-8	$C_{12}H_5F_{19}O_2$	[b] 56
1-Ethoxy-1,1,2,3,3,3-hexafluoropropane	380-34-7	CF_3CHFCF	[b] 23
Fluoro(methoxy)methane	460-22-0	CH_3OCH_2F	[b] 13
1,1,2,2-Tetrafluoro-3-methoxy-propane; Methyl 2,2,3,3-tetrafluoropropyl ether	60598-17-6	$CHF_2CF_2CH_2OCH_3$	[b] 0.5
1,1,2,2-Tetrafluoro-1-(fluoromethoxy)ethane	37031-31-5	$CH_2FOCF_2CF_2H$	[b] 871
Difluoro(fluoromethoxy)methane	461-63-2	CH_2FOCHF_2	[b] 617
Fluoro(fluoromethoxy)methane	462-51-1	CH_2FOCH_2F	[b] 130
Fluorinated Formates			
Trifluoromethyl formate	85358-65-2	$HCOOCF_3$	[b] 588
Perfluoroethyl formate	313064-40-3	$HCOOCF_2CF_3$	[b] 580
1,2,2,2-Tetrafluoroethyl formate	481631-19-0	$HCOOCHFCF_3$	[b] 470
Perfluorobutyl formate	197218-56-7	$HCOOCF_2CF_2CF_2CF_3$	[b] 392
Perfluoropropyl formate	271257-42-2	$HCOOCF_2CF_2CF_3$	[b] 376
1,1,1,3,3,3-Hexafluoropropan-2-yl formate	856766-70-6	$HCOOCH(CF_3)$	[b] 333
2,2,2-Trifluoroethyl formate	32042-38-9	$HCOOCH_2CF_3$	[b] 33

3,3,3-Trifluoropropyl formate	1344118-09-7	$HCOOCH_2CH_2CF_3$	[b] 17
Fluorinated Acetates			
Methyl 2,2,2-trifluoroacetate	431-47-0	CF_3COOCH_3	[b] 52
1,1-Difluoroethyl 2,2,2-trifluoroacetate	1344118-13-3	$CF_3COOCF_2CH_3$	[b] 31
Difluoromethyl 2,2,2-trifluoroacetate	2024-86-4	$CF_3COOCHF_2$	[b] 27
2,2,2-Trifluoroethyl 2,2,2-trifluoroacetate	407-38-5	$CF_3COOCH_2CF_3$	[b] 7
Methyl 2,2-difluoroacetate	433-53-4	HCF_2COOCH_3	[b] 3
Perfluoroethyl acetate	343269-97-6	$CH_3COOCF_2CF_3$	[b] 2.1
Trifluoromethyl acetate	74123-20-9	CH_3COOCF_3	[b] 2.0
Perfluoropropyl acetate	1344118-10-0	$CH_3COOCF_2CF_2CF_3$	[b] 1.8
Perfluorobutyl acetate	209597-28-4	$CH_3COOCF_2CF_2CF_2$ CF_3	[b] 1.6
Ethyl 2,2,2-trifluoroacetate	383-63-1	$CF_3COOCH_2CH_3$	[b] 1.3
Carbonofluoridates			
Methyl carbonofluoridate	1538-06-3	$FCOOCH_3$	[b] 95
1,1-Difluoroethyl carbonofluoridate	1344118-11-1	$FCOOCF_2CH_3$	[b] 27
Fluorinated Alcohols Other Than Fluorotelomer Alcohols			
Bis(trifluoromethyl)-methanol	920-66-1	$(CF_3)_2CHOH$	195
(Octafluorotetramethy-lene) hydroxymethyl group	NA	X-$(CF_2)_4CH(OH)$-X	73
2,2,3,3,3-Pentafluoropropanol	422-05-9	$CF_3CF_2CH_2OH$	42
2,2,3,3,4,4,4-Heptafluorobutan-1-ol	375-01-9	C_3F_7CH2OH	[b] 25
2,2,2-Trifluoroethanol	75-89-8	CF_3CH_2OH	[b] 20
2,2,3,4,4,4-Hexafluoro-1-butanol	382-31-0	$CF_3CHFCF_2CH_2OH$	[b] 17
2,2,3,3-Tetrafluoro-1-propanol	76-37-9	$CHF_2CF_2CH_2OH$	[b] 13
2,2-Difluoroethanol	359-13-7	CHF_2CH2OH	[b] 3
2-Fluoroethanol	371-62-0	CH_2FCH_2OH	[b] 1.1
4,4,4-Trifluorobutan-1-ol	461-18-7	$CF_3(CH_2)$	[b] 0.05
Unsaturated Perfluorocarbons (PFCs)			
PFC-1114; TFE	116-14-3	$CF_2=CF_2$; C_2F_4	[b] 0.004
PFC-1216; Dyneon HFP	116-15-4	C_3F_6; $CF_3CF=CF_2$	[b] 0.05
PFC C-1418	559-40-0	c-C_5F_8	[b] 1.97
Perfluorobut-2-ene	360-89-4	$CF_3CF=CFCF_3$	[b] 1.82
Perfluorobut-1-ene	357-26-6	$CF_3CF_2CF=CF_2$	[b] 0.10
Perfluorobuta-1,3-diene	685-63-2	$CF_2=CFCF=CF_2$	[b] 0.003
Unsaturated Hydrofluorocarbons (HFCs) and Hydrochlorofluorocarbons (HCFCs)			
HFC-1132a; VF2	75-38-7	C_2H	[b] 0.04
HFC-1141; VF	75-02-5	C_2H	[b] 0.02
(E)-HFC-1225ye	5595-10-8	$CF_3CF=CHF(E)$	[b] 0.06
(Z)-HFC-1225ye	5528-43-8	$CF_3CF=CHF(Z)$	[b] 0.22
Solstice 1233zd(E)	102687-65-0	$C_3H_2ClF_3$; $CHCl=CHCF_3$	[b] 1.34
HFC-1234yf; HFO-1234yf	754-12-1	$C_3H_2F_4$; $CF_3CF=CH_2$	[b] 0.31
HFC-1234ze(E)	1645-83-6	$C_3H_2F_4$; trans-$CF_3CH=CHF$	[b] 0.97
HFC-1234ze(Z)	29118-25-0	$C_3H_2F_4$cis-$CF_3CH=CHF$; $CF_3CH=CHF$	[b] 0.29
HFC-1243zf; TFP	677-21-4	$C_3H_3F_3$, $CF_3CH=CH_2$	[b] 0.12
(Z)-HFC-1336	692-49-9	$CF_3CH=CHCF_3(Z)$	[b] 1.58
HFC-1345zfc	374-27-6		

		$C_2F_5CH=CH_2$	[b] 0.09
Capstone 42-U	19430-93-4	$C_6H_3F_9$, $CF_3(CF_2)$	[b] 0.16
Capstone 62-U	25291-17-2	$C_8H_3F_{13}$, $CF_3(CF_2)_5CH=CH_2$	[b] 0.11
Capstone 82-U	21652-58-4	$C_{10}H_3F_{17}$, $CF_3(CF_2)_7CH=CH_2$	[b] 0.09
Unsaturated Halogenated Ethers			
PMVE; HFE-216	1187-93-5	$CF_3OCF=CF_2$	[b] 0.17
Fluoroxene	406-90-6	$CF_3CH_2OCH=CH_2$	[b] 0.05
Fluorinated Aldehydes			
3,3,3-Trifluoro-propanal	460-40-2	CF_3CH_2CHO	[b] 0.01
Fluorinated Ketones			
Novec 1230 (perfluoro (2-methyl-3-pentanone))	756-13-8	$CF_3CF_2C(O)CF$ $(CF3)_2$	[b] 0.1
Fluorotelomer Alcohols			
3,3,4,4,5,5,6,6,7,7,7-Undecafluoroheptan-1-ol	185689-57-0	CF	[b] 0.43
3,3,3-Trifluoropropan-1-ol	2240-88-2	$CF_3CH_2CH_2OH$	[b] 0.35
3,3,4,4,5,5,6,6,7,7,8,8,9,9,9-Pentadecafluorononan-1-ol	755-02-2	$CF_3(CF_2)_6CH_2CH_2OH$	[b] 0.33
3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,11-Nonadecafluoroundecan-1-ol	87017-97-8	$CF_3(CF_2)_8CH_2CH_2OH$	[b] 0.19
Fluorinated GHGs With Carbon-Iodine Bond(s)			
Trifluoroiodomethane	2314-97-8	CF_3I	[b] 0.4
Other Fluorinated Compounds			
Dibromodifluoromethane (Halon 1202)	75-61-6	CBR_2F_2	[b] 231
2-Bromo-2-chloro-1,1,1-trifluoroethane (Halon-2311/Halothane)	151-67-7	$CHBrClCF_3$	[b] 41

Fluorinated GHG Group [d]	**Global warming potential (100 yr.)**
Default GWPs for Compounds for Which Chemical-Specific GWPs Are Not Listed Above	
Fully fluorinated GHGs	10,000
Saturated hydrofluorocarbons (HFCs) with 2 or fewer carbon-hydrogen bonds	3,700
Saturated HFCs with 3 or more carbon-hydrogen bonds	930
Saturated hydrofluoroethers (HFEs) and hydrochlorofluoroethers (HCFEs) with 1 carbon-hydrogen bond	5,700
Saturated HFEs and HCFEs with 2 carbon-hydrogen bonds	2,600
Saturated HFEs and HCFEs with 3 or more carbon-hydrogen bonds	270
Fluorinated formates	350
Fluorinated acetates, carbonofluoridates, and fluorinated alcohols other than fluorotelomer alcohols	30
Unsaturated perfluorocarbons (PFCs), unsaturated HFCs, unsaturated hydrochlorofluorocarbons (HCFCs), unsaturated halogenated ethers, unsaturated halogenated esters, fluorinated aldehydes, and fluorinated ketones	1
Fluorotelomer alcohols	1
Fluorinated GHGs with carbon-iodine bond(s)	1
Other fluorinated GHGs	2,000

[a] The GWP for this compound was updated in the final rule published on November 29, 2013 [78 FR 71904] and effective on January 1, 2014.

[b] This compound was added to Table A-1 in the final rule published on December 11, 2014, and effective on January 1, 2015.

[c] The GWP for this compound was updated in the final rule published on December 11, 2014, and effective on January 1, 2015 .

[d] For electronics manufacturing (as defined in § 98.90), the term "fluorinated GHGs" in the definition of each fluorinated GHG group in § 98.6 shall include fluorinated heat transfer fluids (as defined in § 98.98), whether or not they are also fluorinated GHGs.

[78 FR page 71948, Nov. 29, 2013; 79 FR page 73779, Dec. 11, 2014]

ISSN 2167-8065

Federal Environment and Safety Codified Regulations
TITLE 40—Protection of Environment
PART 98—MANDATORY GREENHOUSE GAS REPORTING
SUBPART C—General Stationary Fuel Combustion Sources

Table C-1 to Subpart C of Part 98 —Default CO_2 Emission Factors and High Heat Values for Various Types of Fuel

Fuel type	Default high heat value	Default CO_2 emission factor
Coal and coke	mmBtu/short ton	kg CO_2/mmBtu
Anthracite	25.09	103.69
Bituminous	24.93	93.28
Subbituminous	17.25	97.17
Lignite	14.21	97.72
Coal Coke	24.80	113.67
Mixed (Commercial sector)	21.39	94.27
Mixed (Industrial coking)	26.28	93.90
Mixed (Industrial sector)	22.35	94.67
Mixed (Electric Power sector)	19.73	95.52
Natural gas	mmBtu/scf	kg CO_2/mmBtu
(Weighted U.S. Average)	1.026×10^{-3}	53.06
Petroleum products	mmBtu/gallon	kg CO_2/mmBtu
Distillate Fuel Oil No. 1	0.139	73.25
Distillate Fuel Oil No. 2	0.138	73.96
Distillate Fuel Oil No. 4	0.146	75.04
Residual Fuel Oil No. 5	0.140	72.93
Residual Fuel Oil No. 6	0.150	75.10
Used Oil	0.138	74.00
Kerosene	0.135	75.20
Liquefied petroleum gases (LPG) [1]	0.092	61.71
Propane [1]	0.091	62.87
Propylene [2]	0.091	67.77
Ethane [1]	0.068	59.60
Ethanol	0.084	68.44
Ethylene [2]	0.058	65.96
Isobutane [1]	0.099	64.94
Isobutylene [1]	0.103	68.86
Butane [1]	0.103	64.77
Butylene [1]	0.105	68.72
Naphtha (<401 deg F)	0.125	68.02
Natural Gasoline	0.110	66.88
Other Oil (>401 deg F)	0.139	76.22
Pentanes Plus	0.110	70.02
Petrochemical Feedstocks	0.125	71.02
Petroleum Coke	0.143	102.41
Special Naphtha	0.125	72.34

Unfinished Oils	0.139	74.54
Heavy Gas Oils	0.148	74.92
Lubricants	0.144	74.27
Motor Gasoline	0.125	70.22
Aviation Gasoline	0.120	69.25
Kerosene-Type Jet Fuel	0.135	72.22
Asphalt and Road Oil	0.158	75.36
Crude Oil	0.138	74.54
Other fuels—solid	mmBtu/short ton	kg CO_2/mmBtu
Municipal Solid Waste	9.95 [3]	90.7
Tires	28.00	85.97
Plastics	38.00	75.00
Petroleum Coke	30.00	102.41
Other fuels—gaseous	mmBtu/scf	kg CO_2/mmBtu
Blast Furnace Gas	0.092×10^{-3}	274.32
Coke Oven Gas	0.599×10^{-3}	46.85
Propane Gas	2.516×10^{-3}	61.46
Fuel Gas [4]	1.388×10^{-3}	59.00
Biomass fuels—solid	mmBtu/short ton	kg CO_2/mmBtu
Wood and Wood Residuals (dry basis) [5]	17.48	93.80
Agricultural Byproducts	8.25	118.17
Peat	8.00	111.84
Solid Byproducts	10.39	105.51
Biomass fuels—gaseous	mmBtu/scf	kg CO_2/mmBtu
Landfill Gas	0.485×10^{-3}	52.07
Other Biomass Gases	0.655×10^{-3}	52.07
Biomass Fuels—Liquid	mmBtu/gallon	kg CO_2/mmBtu
Ethanol	0.084	68.44
Biodiesel (100%)	0.128	73.84
Rendered Animal Fat	0.125	71.06
Vegetable Oil	0.120	81.55

[1] The HHV for components of LPG determined at 60 °F and saturation pressure with the exception of ethylene.

[2] Ethylene HHV determined at 41 °F (5 °C) and saturation pressure.

[3] Use of this default HHV is allowed only for: (a) Units that combust MSW, do not generate steam, and are allowed to use Tier 1; (b) units that derive no more than 10 percent of their annual heat input from MSW and/or tires; and (c) small batch incinerators that combust no more than 1,000 tons of MSW per year.

[4] Reporters subject to subpart X of this part that are complying with § 98.243(d) or subpart Y of this part may only use the default HHV and the default CO_2 emission factor for fuel gas combustion under the conditions prescribed in § 98.243(d)(2)(i) and (d)(2)(ii) and § 98.252(a)(1) and (a)(2), respectively. Otherwise, reporters subject to subpart X or subpart Y shall use either Tier 3 (Equation C-5) or Tier 4.

[5] Use the following formula to calculate a wet basis HHV for use in Equation C-1: $HHV_w = ((100 - M)/100)*HHV_d$ where HHV_w = wet basis HHV, M = moisture content (percent) and HHV_d = dry basis HHV from Table C-1.

[78 FR page 71950, Nov. 29, 2013]

Federal Environment and Safety Codified Regulations
TITLE 40—Protection of Environment
PART 98—MANDATORY GREENHOUSE GAS REPORTING
SUBPART C—General Stationary Fuel Combustion Sources

Table C-2 to Subpart C of Part 98 —Default CH_4 and N_2O Emission Factors for Various Types of Fuel

Fuel type	Default CH_4 emission factor (kg CH_4/mmBtu)	Default N_2O emission factor (kg N_2O/mmBtu)
Coal and Coke (All fuel types in Table C-1)	1.1×10^{-02}	1.6×10^{-03}
Natural Gas	1.0×10^{-03}	1.0×10^{-04}
Petroleum (All fuel types in Table C-1)	3.0×10^{-03}	6.0×10^{-04}
Fuel Gas	3.0×10^{-03}	6.0×10^{-04}
Municipal Solid Waste	3.2×10^{-02}	4.2×10^{-03}
Tires	3.2×10^{-02}	4.2×10^{-03}
Blast Furnace Gas	2.2×10^{-05}	1.0×10^{-04}
Coke Oven Gas	4.8×10^{-04}	1.0×10^{-04}
Biomass Fuels—Solid (All fuel types in Table C-1, except wood and wood residuals)	3.2×10^{-02}	4.2×10^{-03}
Wood and wood residuals	7.2×10^{-03}	3.6×10^{-03}
Biomass Fuels—Gaseous (All fuel types in Table C-1)	3.2×10^{-03}	6.3×10^{-04}
Biomass Fuels—Liquid (All fuel types in Table C-1)	1.1×10^{-03}	1.1×10^{-04}

Note: Those employing this table are assumed to fall under the IPCC definitions of the "Energy Industry" or "Manufacturing Industries and Construction". In all fuels except for coal the values for these two categories are identical. For coal combustion, those who fall within the IPCC "Energy Industry" category may employ a value of 1g of CH_4/mmBtu.

[75 FR page 79154, Dec. 17, 2010; 78 FR page 71952, Nov. 29, 2013]

ISSN 2167-8065

Table 13.2.2-1. TYPICAL SILT CONTENT VALUES OF SURFACE MATERIAL ON INDUSTRIAL UNPAVED ROADS[a]

Industry	Road Use Or Surface Material	Plant Sites	No. Of Samples	Silt Content (%)	
				Range	Mean
Copper smelting	Plant road	1	3	16 - 19	17
Iron and steel production	Plant road	19	135	0.2 - 19	6.0
Sand and gravel processing	Plant road	1	3	4.1 - 6.0	4.8
	Material storage area	1	1	-	7.1
Stone quarrying and processing	Plant road	2	10	2.4 - 16	10
	Haul road to/from pit	4	20	5.0-15	8.3
Taconite mining and processing	Service road	1	8	2.4 - 7.1	4.3
	Haul road to/from pit	1	12	3.9 - 9.7	5.8
Western surface coal mining	Haul road to/from pit	3	21	2.8 - 18	8.4
	Plant road	2	2	4.9 - 5.3	5.1
	Scraper route	3	10	7.2 - 25	17
	Haul road (freshly graded)	2	5	18 - 29	24
Construction sites	Scraper routes	7	20	0.56-23	8.5
Lumber sawmills	Log yards	2	2	4.8-12	8.4
Municipal solid waste landfills	Disposal routes	4	20	2.2 - 21	6.4

[a]References 1,5-15.

The following empirical expressions may be used to estimate the quantity in pounds (lb) of size-specific particulate emissions from an unpaved road, per vehicle mile traveled (VMT):

For vehicles traveling on unpaved surfaces at industrial sites, emissions are estimated from the following equation:

$$E = k\,(s/12)^a (W/3)^b \quad (1a)$$

and, for vehicles traveling on publicly accessible roads, dominated by light duty vehicles, emissions may be estimated from the following:

$$E = \frac{k\,(s/12)^a (S/30)^d}{(M/0.5)^c} - C \quad (1b)$$

where k, a, b, c and d are empirical constants (Reference 6) given below and

E = size-specific emission factor (lb/VMT)
s = surface material silt content (%)
W = mean vehicle weight (tons)
M = surface material moisture content (%)
S = mean vehicle speed (mph)
C = emission factor for 1980's vehicle fleet exhaust, brake wear and tire wear.

The source characteristics s, W and M are referred to as correction parameters for adjusting the emission estimates to local conditions. The metric conversion from lb/VMT to grams (g) per vehicle kilometer traveled (VKT) is as follows:

1 lb/VMT = 281.9 g/VKT

The constants for Equations 1a and 1b based on the stated aerodynamic particle sizes are shown in Tables 13.2.2-2 and 13.2.2-4. The PM-2.5 particle size multipliers (k-factors) are taken from Reference 27.

Table 13.2.2-2. CONSTANTS FOR EQUATIONS 1a AND 1b

Constant	Industrial Roads (Equation 1a)			Public Roads (Equation 1b)		
	PM-2.5	PM-10	PM-30*	PM-2.5	PM-10	PM-30*
k (lb/VMT)	0.15	1.5	4.9	0.18	1.8	6.0
a	0.9	0.9	0.7	1	1	1
b	0.45	0.45	0.45	-	-	-
c	-	-	-	0.2	0.2	0.3
d	-	-	-	0.5	0.5	0.3
Quality Rating	B	B	B	B	B	B

*Assumed equivalent to total suspended particulate matter (TSP)
"-" = not used in the emission factor equation

Table 13.2.2-2 also contains the quality ratings for the various size-specific versions of Equation 1a and 1b. The equation retains the assigned quality rating, if applied within the ranges of source conditions, shown in Table 13.2.2-3, that were tested in developing the equation:

Table 13.2.2-3. RANGE OF SOURCE CONDITIONS USED IN DEVELOPING EQUATION 1a AND 1b

Emission Factor	Surface Silt Content, %	Mean Vehicle Weight		Mean Vehicle Speed		Mean No. of Wheels	Surface Moisture Content, %
		Mg	ton	km/hr	mph		
Industrial Roads (Equation 1a)	1.8-25.2	1.8-260	2-290	8-69	5-43	4-17[a]	0.03-13
Public Roads (Equation 1b)	1.8-35	1.4-2.7	1.5-3	16-88	10-55	4-4.8	0.03-13

[a] See discussion in text.

As noted earlier, the models presented as Equations 1a and 1b were developed from tests of traffic on unpaved surfaces. Unpaved roads have a hard, generally nonporous surface that usually dries quickly after a rainfall or watering, because of traffic-enhanced natural evaporation. (Factors influencing how fast a road dries are discussed in Section 13.2.2.3, below.) The quality ratings given above pertain to the mid-range of the measured source conditions for the equation. A higher mean vehicle weight and a higher than normal traffic rate may be justified when performing a worst-case analysis of emissions from unpaved roads.

The emission factors for the exhaust, brake wear and tire wear of a 1980's vehicle fleet (*C*) was obtained from EPA's MOBILE6.2 model [23]. The emission factor also varies with aerodynamic size range

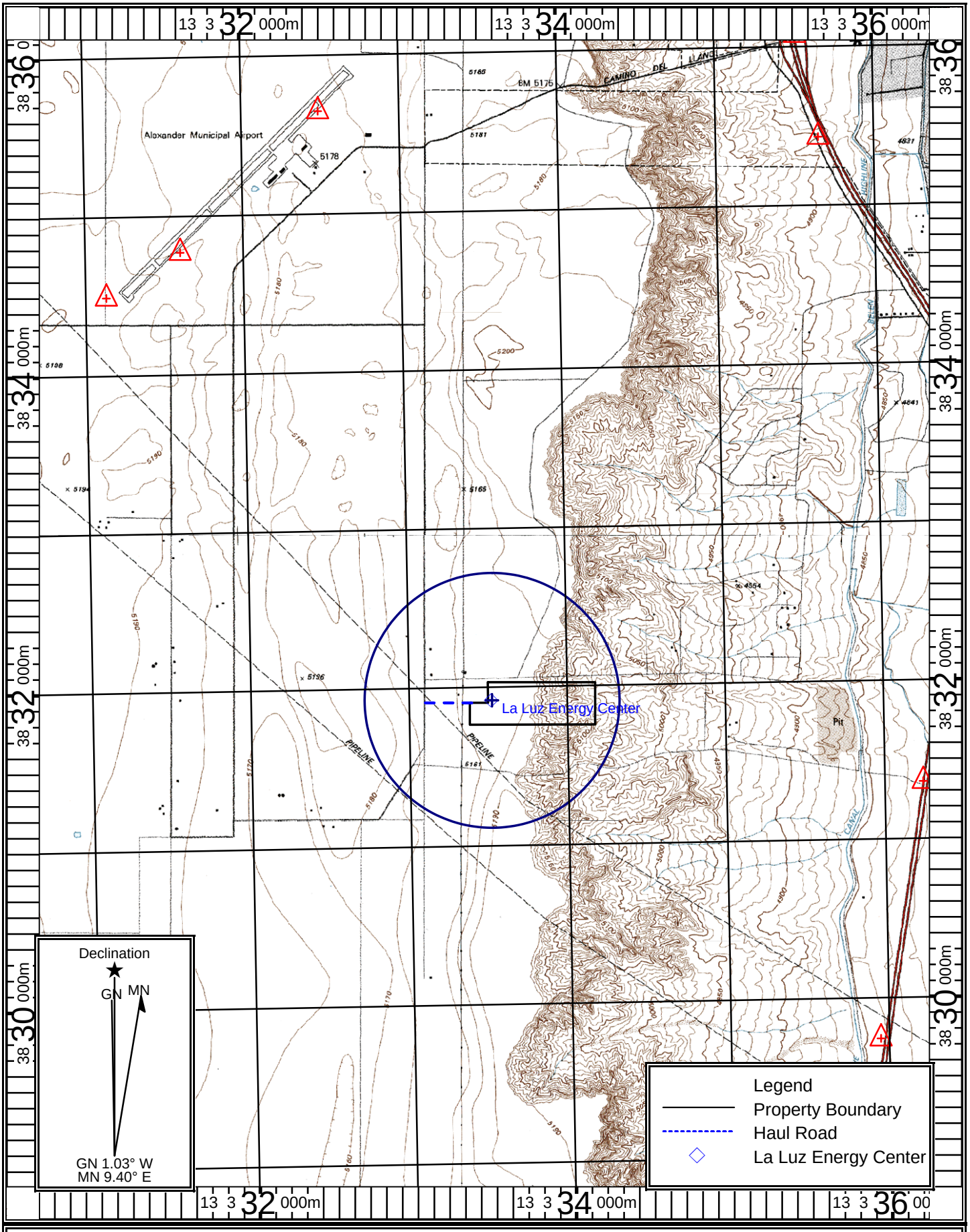
Section 8

Map(s)

A map such as a 7.5 minute topographic quadrangle showing the exact location of the source. The map shall also include the following:

The UTM or Longitudinal coordinate system on both axes	An indicator showing which direction is north
A minimum radius around the plant of 0.8km (0.5 miles)	Access and haul roads
Topographic features of the area	Facility property boundaries
The name of the map	The area which will be restricted to public access
A graphical scale	

Map is enclosed.



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Print Date: 06/10/16

Scale: 1 inch = 2,666 ft.
Map Center: 13 0333484 E 3832466 N

Horizontal Datum: WGS84

Section 9

Proof of Public Notice

(for NSR applications submitting under 20.2.72 or 20.2.74 NMAC)
(This proof is required by: 20.2.72.203.A.14 NMAC "Documentary Proof of applicant's public notice")

☑ **I have read the AQB "Guidelines for Public Notification for Air Quality Permit Applications"**
This document provides detailed instructions about public notice requirements for various permitting actions. It also provides public notice examples and certification forms. Material mistakes in the public notice will require a re-notice before issuance of the permit.

Unless otherwise allowed elsewhere in this document, the following items document proof of the applicant's Public Notification. Please include this page in your proof of public notice submittal with checkmarks indicating which documents are being submitted with the application.

New Permit and **Significant Permit Revision** public notices must include all items in this list.

Technical Revision public notices require only items 1, 5, 9, and 10.

Per the Guidelines for Public Notification document mentioned above, include:

1. ☑ A copy of the certified letter receipts with post marks (20.2.72.203.B NMAC)
2. ☑ A list of the places where the public notice has been posted in at least four publicly accessible and conspicuous places, including the proposed or existing facility entrance. (e.g: post office, library, grocery, etc.)
3. ☑ A copy of the property tax record (20.2.72.203.B NMAC).
4. ☑ A sample of the letters sent to the owners of record.
5. ☑ A sample of the letters sent to counties, municipalities, and Indian tribes.
6. ☑ A sample of the public notice posted and a verification of the local postings.
7. ☑ A table of the noticed citizens, counties, municipalities and tribes and to whom the notices were sent in each group.
8. ☑ A copy of the public service announcement (PSA) sent to a local radio station and documentary proof of submittal.
9. ☑ A copy of the classified or legal ad including the page header (date and newspaper title) or its affidavit of publication stating the ad date, and a copy of the ad. When appropriate, this ad shall be printed in both English and Spanish.
10. ☑ A copy of the display ad including the page header (date and newspaper title) or its affidavit of publication stating the ad date, and a copy of the ad. When appropriate, this ad shall be printed in both English and Spanish.
11. ☑ A map with a graphic scale showing the facility boundary and the surrounding area in which owners of record were notified by mail. This is necessary for verification that the correct facility boundary was used in determining distance for notifying land owners of record.

All of the applicable public notice is included in this section.

Section 9.1

Copy of Postmarked Certified Letter Receipts

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Attn: Rudy Jaramillo, Mayor
100 S. Main St.
Belen, NM 87002

PS Form 3800, July 2014 See Reverse for Instructions

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Socorro County Clerk
Attn: Rebecca Vega
PO BOX I
Socorro, NM 87801

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or PO Box
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Village of Los Lunas
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PO BOX 1209
Los Lunas, NM 87031

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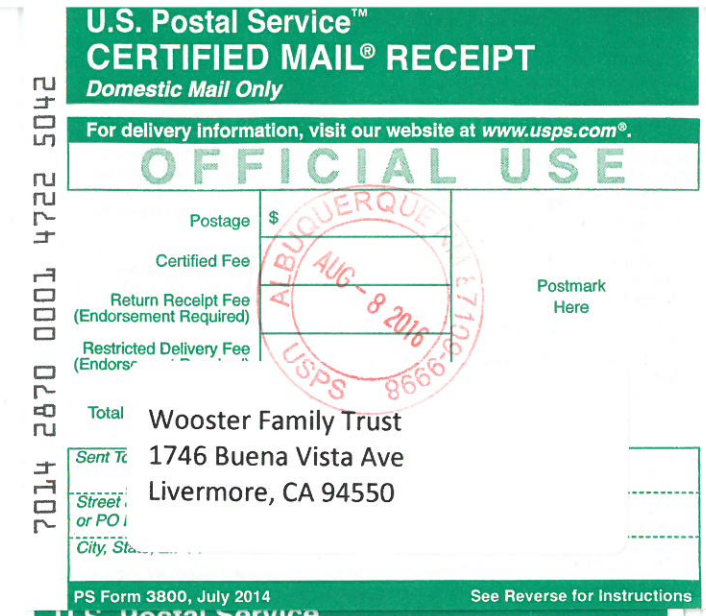
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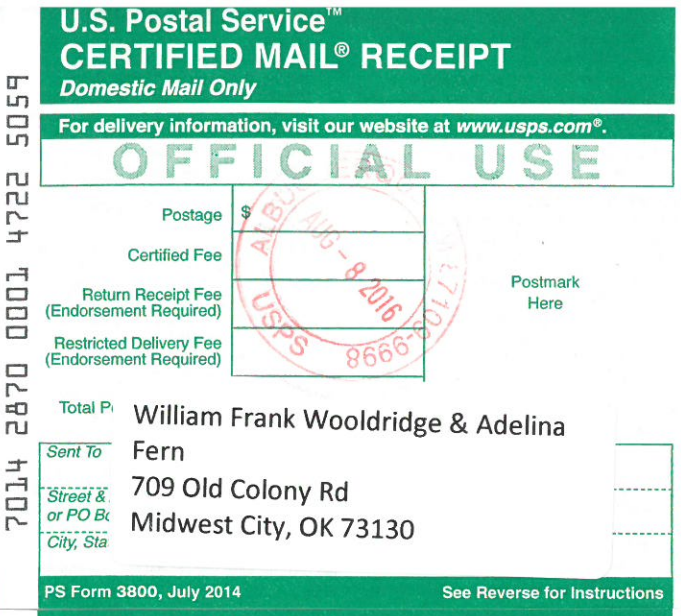
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William Frank Wooldridge & Adelina Fern
709 Old Colony Rd
Midwest City, OK 73130
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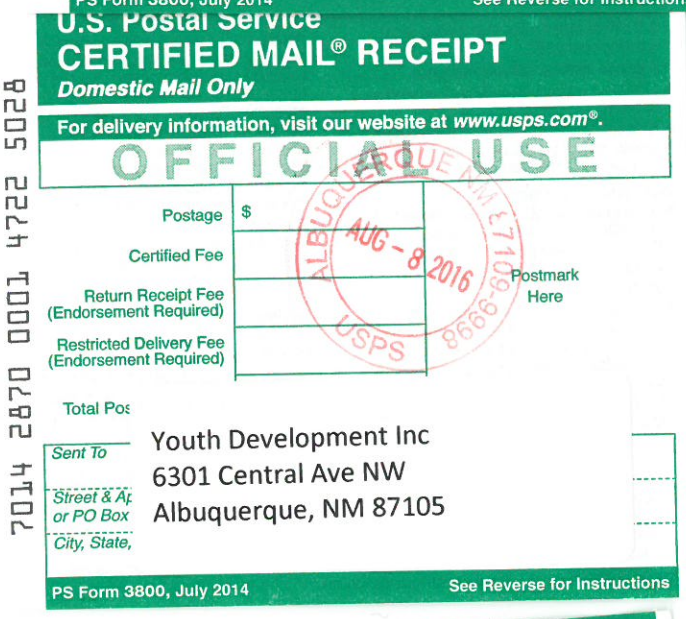
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Youth Development Inc
6301 Central Ave NW
Albuquerque, NM 87105
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Street & Apt. No., or PO Box
City, State, ZIP+4
Roberta A Yates
205 Harrison
Belen, NM 87002
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7014 2870 0001 4722 5035


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Valencia County Clerk
Attn: Sally Perea
PO BOX 969
Los Lunas, NM 87031
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7014 2870 0001 4723 0336


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Julia Zamarripa
37731 Nantucket Drive
Palmdale, CA 93550
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Harold E Vickers
10621 Prestwick NE
Albuquerque, NM 87111
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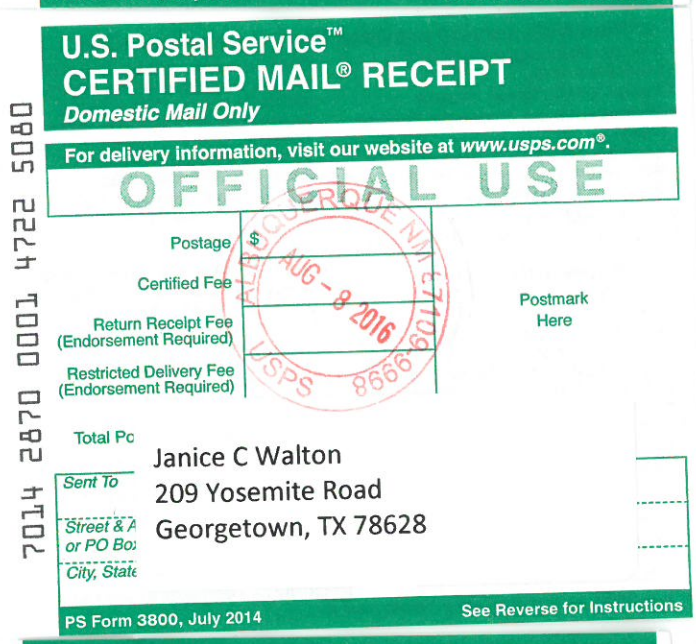
City, Stat
Venture Investments & Consulting
694 Brookhaven
Paradise, CA 95969
PS Form 3800, July 2014
See Reverse for Instructions
7014 2870 0001 4722 5110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City, State
Janice C Walton
209 Yosemite Road
Georgetown, TX 78628
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Sent To
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or PO Bo
City, Stat
David Lee Wales
PO BOX 304
Tome, NM 87060
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7014 2870 0001 4722 5097


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or PO Box
City, State,
James L Wood & Sandra L Wood
6796 Adel Rd
Spencer, IN 47460
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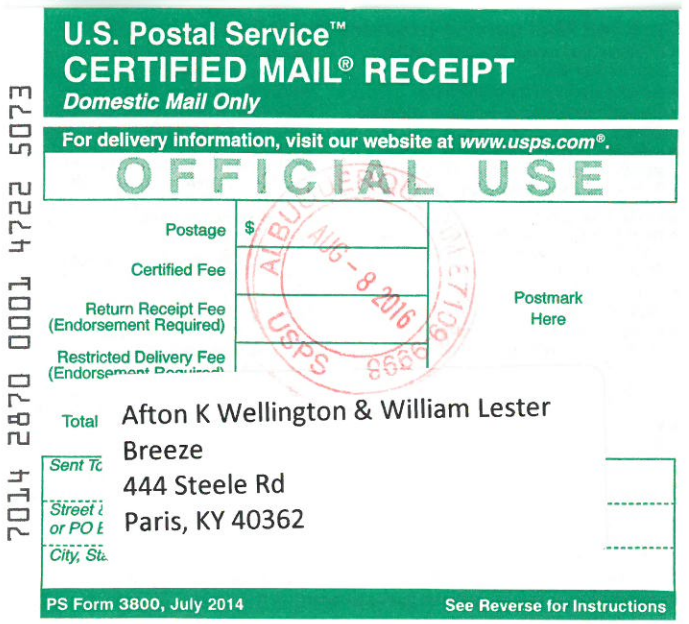
See Reverse for Instructions
7014 2870 0001 4722 5066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or PO E
City, Sta
Afton K Wellington & William Lester
Breeze
444 Steele Rd
Paris, KY 40362
PS Form 3800, July 2014
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7014 2870 0001 4722 5073

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7014 2870 0001 4722 5165

Sent To
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City, State,

Sotero G Trujillo & Rosalene Trujillo
3125 Nebulous Circle
N Las Vegas, NV 89032

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7014 2870 0001 4722 5172

Sent To
Street &
or PO Bo
City, Stat

Jeff D Trembly
1504 West Reinken Ave
Belen, NM 87002

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or PO Bo
City, State

Steve Upah
30 Turquoise Dr
Sandia Peak, NM 87047

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7014 2870 0001 4722 5158

Sent To
Street & Apt
or PO Box N
City, State, Z

Twining Land Corporation
1400 South Charles Street
Baltimore, MD 21230

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Street &
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City, St

Mary R Vener Trustee
839 Landon Dr
Bullhead City, AZ 86429

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Sent To
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City, State,

Shawn R Vandecar & Mary F Vandecar
225 Harrison Rd
Belen, NM 87002

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Street & Apt. or PO Box: 1300 Nakomis Dr NE
City, State, ZIP+4: Albuquerque, NM 87112

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Sent To: Sun Tien Chin & Lee Tien Hui
Street, Apt. or PO Box No.: 12408 Mountainside Way
City, State, ZIP+4: Albuquerque, NM 87111

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Sent To: Samantha Tate
Street & Apt. or PO Box: PO BOX 445
City, State, ZIP+4: Belen, NM 87002

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7014 2870 0001 4722 5219

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Street & Apt. No. or PO Box No.: C/O 1404 Twin Oaks
City, State, ZIP+4: Lakewood, NJ 8701

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Sent To: Matthew A Torres & Joyce M R Torres
Street & Apt. or PO Box: 553 Breech Dr SW
City, State, ZIP+4: Los Lunas, NM 87031

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Sent To: The Williams Companies Inc
Street & Apt. or PO Box: 12409 Chelwood Trail NE
City, State, ZIP+4: Albuquerque, NM 87112

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Sent To: Annette Schneider
Street, Apt. No. or PO Box No.: 422 Harris Rd
City, State, ZIP+4: Hartman, AR 72840

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Sent To: Hector M Sarinana & Emilia Sarinana
Street, Apt. No. or PO Box No.: 211 Harrison Rd
City, State, ZIP+4: Belen, NM 87002

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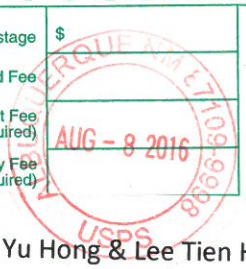

Postmark Here

Sent To: Shi Yu Hong & Lee Tien Hui
Street, Apt. No. or PO Box No.: 12408 Mountainside Way
City, State, ZIP+4: Albuquerque, NM 87111

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Sent To: Richard R & Dorothy Shaffer
Street, Apt. No. or PO Box No.: 4720 Storeyland Dr
City, State, ZIP+4: Alton, IL 62002

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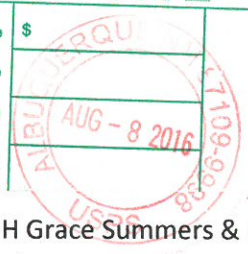

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Sent To: James H Grace Summers & Patricia Stockard
Street, Apt. No. or PO Box No.: 1622 E Hwy 12
City, State, ZIP+4: Valley Springs, CA 95252

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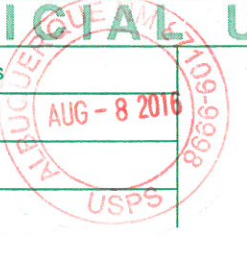

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Sent To: Duane Lee & Daw Stevenson
Street, Apt. No. or PO Box No.: 555 N. Pantano Road SP518
City, State, ZIP+4: Tucson, AZ 85710

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City, Sta 9204 Almond St
Rancho Cucamonga, CA 91737

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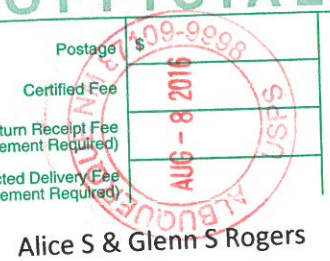

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Sent To Alice S & Glenn S Rogers
Street, or PO E Kenneth S
City, St 1411 Birch Road
Homewood, IL 60430

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City, S Chandler, AZ 85224

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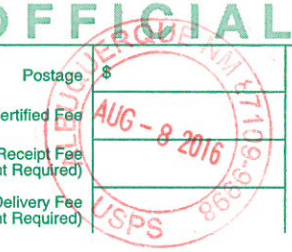

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Sent To Ernest R Rowe Co-Trustee
Street, or PO E Rowe Family Trust
City, St PO BOX 71
Tie Siding, WY 82084

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Street, Ap or PO Box 233 Hendrix Rd NW
City, State Albuquerque, NM 87107

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Street, Apt. N or PO Box N 14 Allen Drive
City, State, Z Los Lunas, NM 87031

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7014 1200 0001 1437 2908
Sent To
Street, Apt. No. or PO Box No.
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Public Service Company of NM
414 Silver Ave SW #4
Albuquerque, NM 87158
PS Form 3800, August 2006
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Public Service Company of NM
2401 Aztec Rd
Albuquerque, NM 87120
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7014 1200 0001 1437 2885
Sent To
Street, Apt. No. or PO Box No.
City, State, ZIP+4
George V & Geneva Rael (Trustees)
Rael Trust Agreement
1212 Stinson St SW
Albuquerque, NM 87121
PS Form 3800, August 2006
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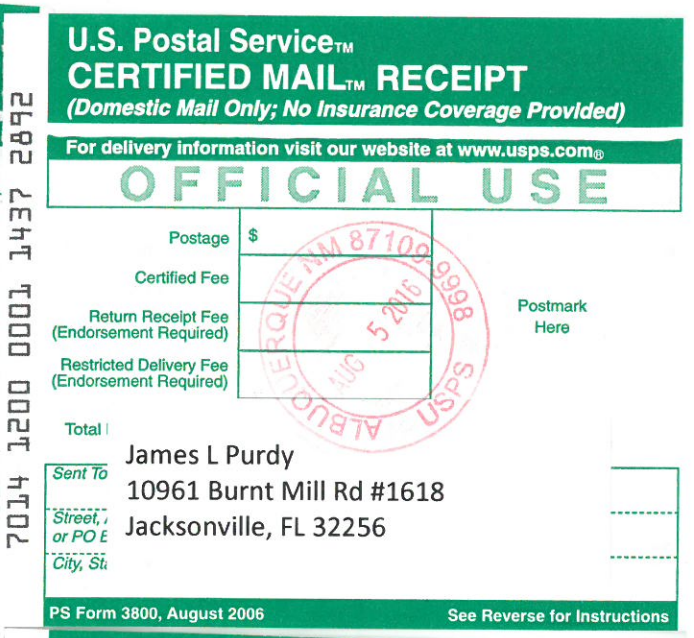

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City, State, ZIP+4
James L Purdy
10961 Burnt Mill Rd #1618
Jacksonville, FL 32256
PS Form 3800, August 2006
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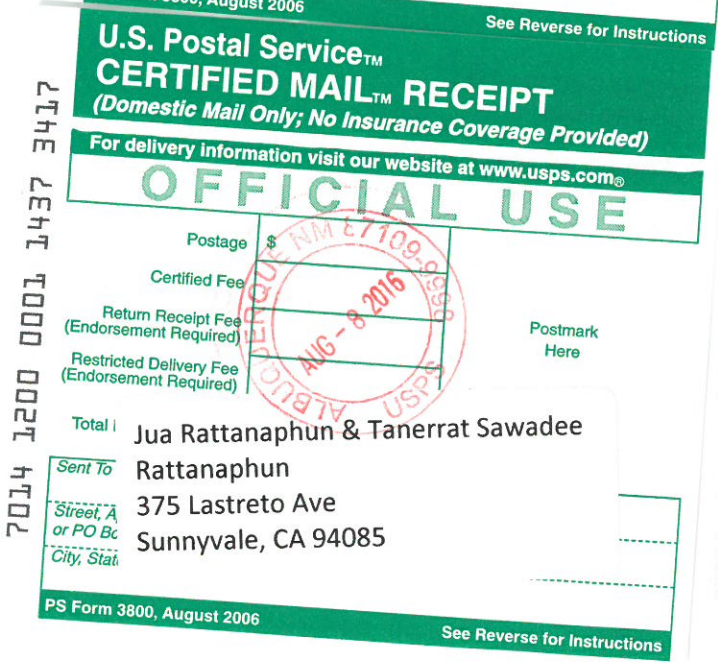

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7014 1200 0001 1437 3417
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Jua Rattanaphun & Tanerrat Sawadee
Rattanaphun
375 Lastreto Ave
Sunnyvale, CA 94085
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7014 1200 0001 1437 3424
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Street, Apt. No. or PO Box No.
City, State, ZIP+4
Prisciliano Ramos & Tania Ramos
208 B Harrison Rd
Belen, NM 87002
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7014 1200 0001 1437 2960

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Jaime Pena & Marina Pena
3309 SW 2nd Ave
Amarillo, TX 79106

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7014 1200 0001 1437 2977

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Linda C Peck
3227 Mohican Ave
San Diego, CA 92117

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Street, Apt. N
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Joy Pollack
5325 Canada Vista Pl NW
Albuquerque, NM 87120

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City, State,

Richard Pignatello
1717 Madero Drive
The Village, FL 32159

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7014 1200 0001 1437 2922

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City, State

Rochelle Pollack as Trustee & C/O
Harold J Payne
2112 Contreras Rd NE
Rio Rancho, NM 87144

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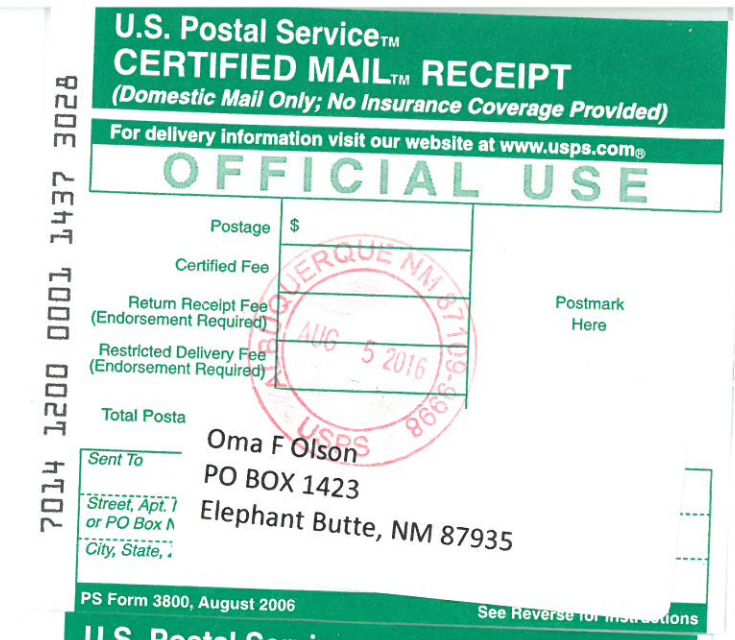
or PO Box N
City, State, Z

Rochelle Pollack & Simon Pollack
5325 Canada Vista NW
Albuquerque, NM 87120

PS Form 3800, August 2006 See Reverse for Instructions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City, State,
Oma F Olson
PO BOX 1423
Elephant Butte, NM 87935
PS Form 3800, August 2006
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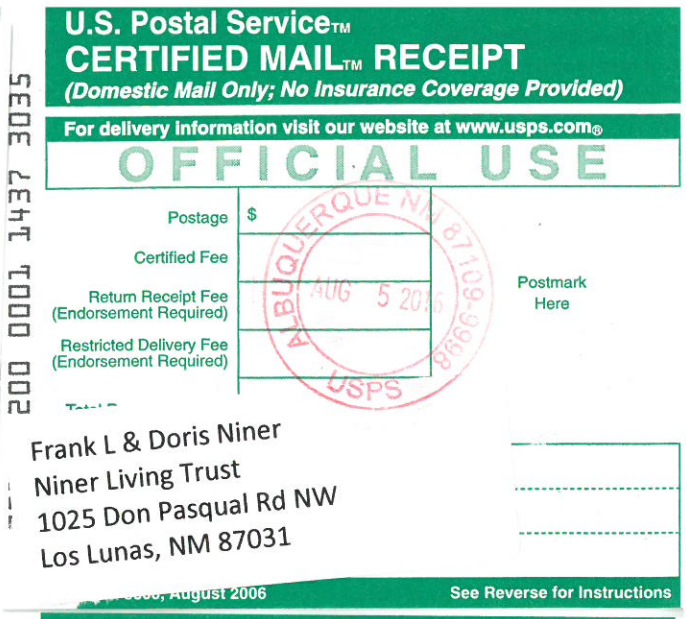
7014 1200 0001 1437 3028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Frank L & Doris Niner
Niner Living Trust
1025 Don Pasqual Rd NW
Los Lunas, NM 87031
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City, State
Pallottino-Rutherford Fredeswinda
Post Office 90008
Albuquerque, NM 87199
PS Form 3800, August 2006
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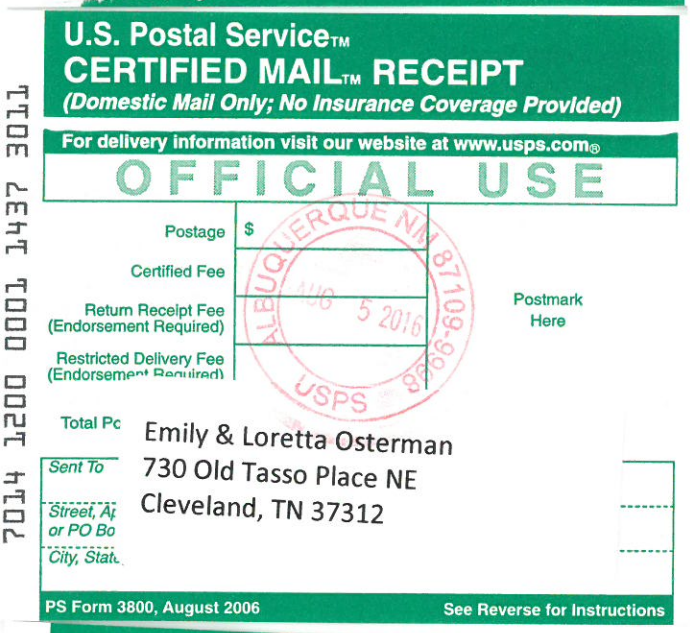
7014 1200 0001 1437 3004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Sent To
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City, Stat
Emily & Loretta Osterman
730 Old Tasso Place NE
Cleveland, TN 37312
PS Form 3800, August 2006
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7014 1200 0001 1437 3011


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Sent To
Street, Apt. N
or PO Box No
City, State, Zi
William R & Sara Palmer
1030 Inca St
Denver, CO 80204
PS Form 3800, August 2006
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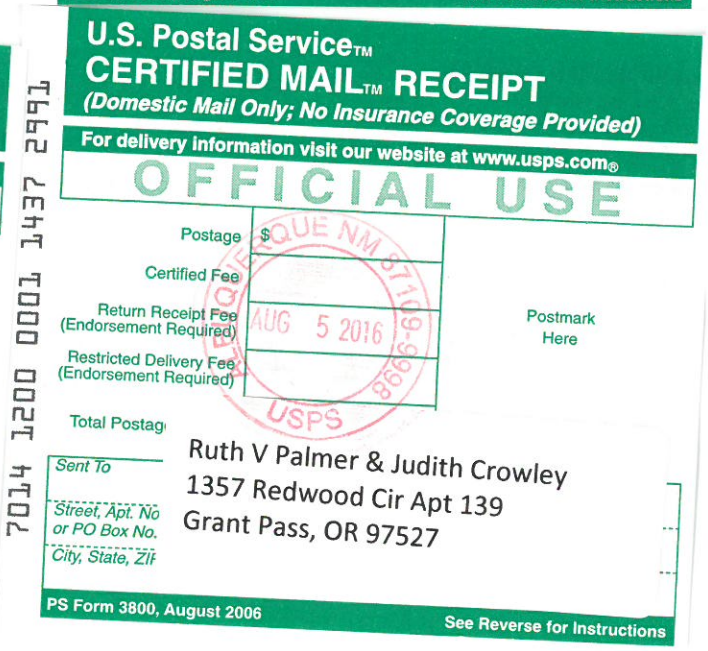
7014 1200 0001 1437 2984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ALBUQUERQUE NM 87109-9998
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USPS
Sent To
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City, State, Zi
Ruth V Palmer & Judith Crowley
1357 Redwood Cir Apt 139
Grant Pass, OR 97527
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7014 1200 0001 1437 2991

7014 1200 0001 1437 3080

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Sent To: Eloy J Montano
Street, Apt. No. or PO Box No.: 1218 Broadview Loop
City, State, ZIP: Los Lunas, NM 87031

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7014 1200 0001 1437 3103

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Sent To: James L Miller
Street, Apt. No. or PO Box No.: PO BOX 336
City, State, ZIP: Washington, MO 63090

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7014 1200 0001 1437 3066

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Sent To: Salomon Montano
Street, Apt. No. or PO Box No.: PO BOX 10
City, State, ZIP: Bosque, NM 87006

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7014 1200 0001 1437 3073

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Sent To: Lorinda R Montano
Street, Apt. No. or PO Box No.: 1224 No Gabaldon RD
City, State, ZIP: Belen, NM 87002

PS Form 3800, August 2006 See Reverse for Instructions

7014 1200 0001 1437 3042

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Sent To: Raja Catherina Nader & A Tafla
Street, Apt. No. or PO Box No.: 846 Finney Trail
City, State, ZIP: Cincinnati, OH 45224

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7014 1200 0001 1437 3059

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Sent To: Glenn E Morris & Ernest C & Jessica Trujillo
Street, Apt. No. or PO Box No.: 08 Concha Ln
City, State, ZIP: Belen, NM 87002

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7014 1200 0001 1437 3141

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Sent To: Michael C Mcdonald & Lola M Mcdonald
Street, Apt. or PO Box No.: 15207 Colorado Ave
City, State, ZIP+: Woodbridge, VA 22191

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7014 1200 0001 1437 3158

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Sent To: Patricia Marquez
Street, Apt. or PO Box No.: 1478 Barcelona Rd SW
City, State, ZIP+: Albuquerque, NM 87105

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7014 1200 0001 1437 3127

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Sent To: Silvia G Mckinnon
Street, Apt or PO Box: 03 Sierra Linda Ct
City, State: Los Lunas, NM 87031

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Sent To: Garawyn Mcgill
Street, Apt. No. or PO Box No.: 5991 S. Hollyhock Way
City, State, ZIP+: Boise, ID 83716

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Sent To: Edward John Monjaras
Street, Apt. No.; or PO Box No.: PO BOX 93565
City, State, ZIP+: Albuquerque, NM 87199

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Sent To: Robert & Mary Bernadette Mclennan
Street, Apt. or PO Box No.: C/O Michael Mclennan 645 Griswold St Suite 1500
City, State, ZIP+: Detroit, MI 48226

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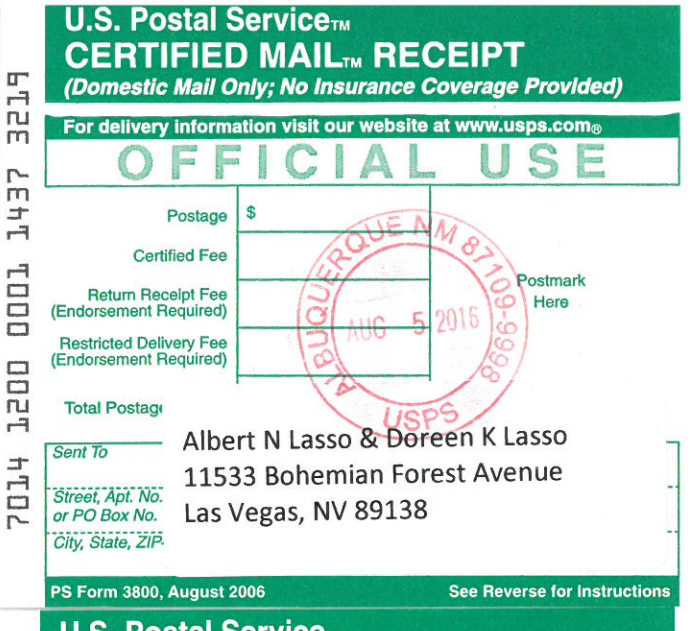
7014 1200 0001 1437 3202
Sent To
Street, Apt. or PO Box N
City, State,
Terry N Lauritsen & Nancy M Lauritsen
1312 Hertz Drive SE
Albuquerque, NM 87108
PS Form 3800, August 2006
See Reverse for Instructions



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ALBUQUERQUE NM 87109-9998 AUG 5 2016 USPS
7014 1200 0001 1437 3219
Sent To
Street, Apt. No. or PO Box No.
City, State, ZIP
Albert N Lasso & Doreen K Lasso
11533 Bohemian Forest Avenue
Las Vegas, NV 89138
PS Form 3800, August 2006
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7014 1200 0001 1437 3189
Sent To
Street, Apt. No or PO Box No.
City, State, ZIP
Frederick C Lillienkamp
32 Mayo Rd
Hubbbardston, MA 1452
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7014 1200 0001 1437 3196
Sent To
Street, Apt. No. or PO Box No.
City, State, ZIP
Lucille Lee
430 Sego Lily
Bosque Farms, NM 87068
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7014 1200 0001 1437 3165
Sent To
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City, State,
Mariano Chavez Family Limited
1932 Coors SW
Albuquerque, NM 87121
PS Form 3800, August 2006
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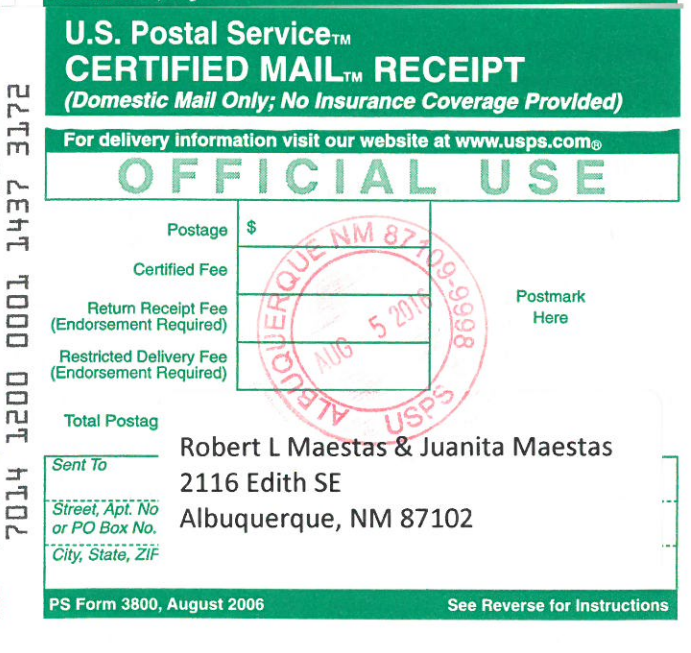

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7014 1200 0001 1437 3172
Sent To
Street, Apt. No or PO Box No.
City, State, ZIP
Robert L Maestas & Juanita Maestas
2116 Edith SE
Albuquerque, NM 87102
PS Form 3800, August 2006
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7014 1200 0001 1437 3257

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Sent To: John K Kammermeyer
Street, Apt. No. or PO Box No: 116 Ferson Avenue
City, State, ZIP: Iowa City, IA 52246

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7014 2870 0001 4723 0176

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Sent To: Pat R Jaramillo & Etal
Street & Apt. or PO Box No: 908 E River Rd
City, State, ZIP: Belen, NM 87002

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7014 1200 0001 1437 3240

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Sent To: Alfred Kotula
Street, Apt. No. or PO Box No: 724 N Dixie Fwy US1
City, State, ZIP: New Smyrna Beach, FL 32168

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7014 1200 0001 1437 3264

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Sent To: Clare L Karbowski
Street, Apt. No. or PO Box No: As Trustees of the Karbowski 2005
City, State, ZIP: 748 South Cloverdale Ave
Los Angeles, CA 90036

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7014 1200 0001 1437 3226

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Sent To: Sean G Landry & Shelvy Landry
Street, Apt. No. or PO Box No: 608 Brookside Dr
City, State, ZIP: Albertville, AL 35950

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Sent To: Terry M Lancey
Street, Apt. No. or PO Box No: 1809 Cypress Street
City, State, ZIP: Highland, IL 62249

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Sent To
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Frederick B Howden
PO BOX 762
Grants, NM 87020

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8600 B Jaffa NE
Albuquerque, NM 87112

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Carrie Tindell
Erica Jaramillo
104 El Cielo Blvd
Belen, NM 87002

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Street, Apt. N or PO Box Nc: 2045 E Apple Ton St #10
City, State, Zi: Long Beach, CA 90803

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Street, or PO: 3655 W Anthem Way #A109-417
City, St: Anthem, AZ 85086

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City, State, ZIP: 6928 Briar Cove Dr, Dallas, TX 75254

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City, Sta: Belen, NM 87002

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Street, Apt. No.; or PO Box No.: 9337 S Shadowglen Ct
City, State, ZIP+: Highlands Ranch, CO 80126

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City, Stat: Fairacres, NM 88033

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Street, Apt. N or PO Box Nc: Gallegos Family Trust
City, State, Zl: 06 Gallegos Road Belen, NM 87002

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City, State, : Chico, CA 95928

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City, State, ZIP: Honolulu, HI 96821

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Street, Apt. N or PO Box No.: 3670 Glendon Ave #233
City, State, ZI: Los Angeles, CA 90034

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City, Stat: Silver Spring, MD 20906

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City, State, Zi: Belen, NM 87002

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Mr Cheng-I Chen & Mrs Wen Chyou-Chu Chen
4F 10 Lane 135 Shi-Ta Rd
Taipei Taiwan, OC Taiwan

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Potomac, MD 20854

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Barbara H Chilcoat Trustee
2914 Junction St
Durango, CO 81301

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Vienna, VA 22182

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Toby Cordova and Mary Ann Cordova
1100 Parkview Dr SW
Los Lunas, NM 87031

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Erika L Cooper
7414 Berryleaf Drivve
Laurel, MD 20707

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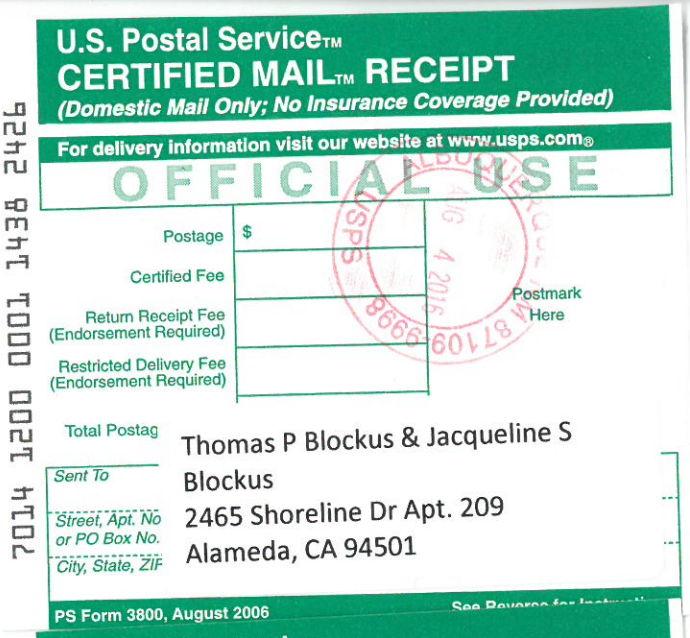

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Thomas P Blockus & Jacqueline S Blockus
2465 Shoreline Dr Apt. 209
Alameda, CA 94501
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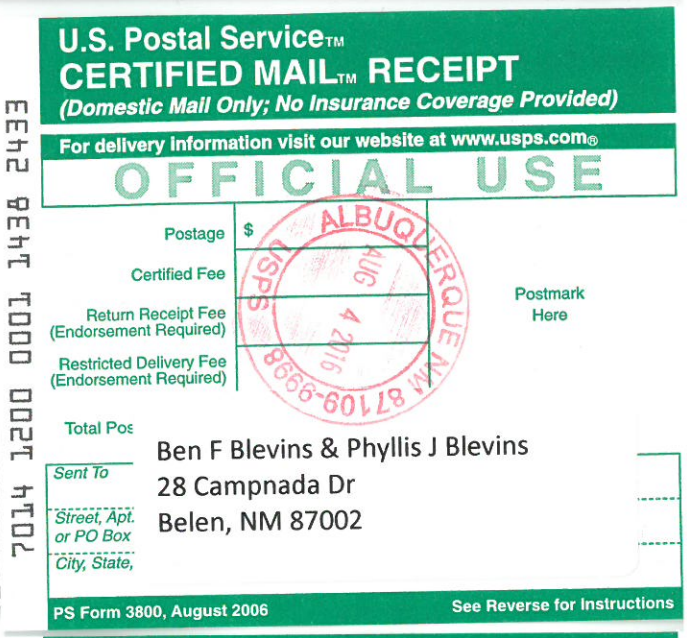

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ALBUQUERQUE NM 87109-9998 USPS AUG 4 2015
7014 1200 0001 1438 2488
Sent To
Street, Apt. or PO Box
City, State,
Arturo Barroso & Elma Barroso
1066 8th St
Banning, CA 92220
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ALBUQUERQUE NM 87109-9998 USPS AUG 4 2015
7014 1200 0001 1438 2495
Sent To
Street, Ap
or PO Box
City, State
Allen S Barol
9926 Blue Jay Rd
Newark, OH 43056
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ALBUQUERQUE NM 87109-9998 USPS AUG 4 2015
7014 1200 0001 1438 2464
Sent To
Street, Apt. N
or PO Box No
City, State, Z
David C Baumann & Anna M Baumann
8851 Eagle Rock NE
Albuquerque, NM 87122
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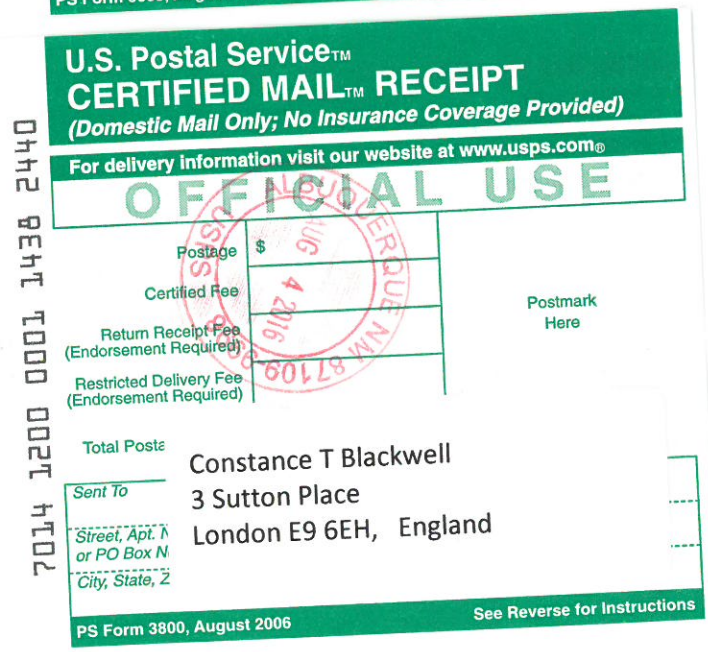
ALBUQUERQUE NM 87109-9998 USPS AUG 4 2015
7014 1200 0001 1438 2471
Sent To
Street, Apt. N
or PO Box N
City, State, Z
Luis N Basso & Helen Basso
41700 Vargas Rd
Fremont, CA 94539
PS Form 3800, August 2006
See Reverse for Instructions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Postmark Here
ALBUQUERQUE NM 87109-9998 USPS AUG 4 2015
7014 1200 0001 1438 2440
Sent To
Street, Apt. N
or PO Box No
City, State, Z
Constance T Blackwell
3 Sutton Place
London E9 6EH, England
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Total Postag
Postmark Here
ALBUQUERQUE NM 87109-9998 USPS AUG 4 2015
7014 1200 0001 1438 2457
Sent To
Street, Apt. No
or PO Box No.
City, State, ZIF
Raul Bejarano Sr & Raul Bejarano Jr
208 Harrison Rd
Belen, NM 87002
PS Form 3800, August 2006
See Reverse for Instructior

7014 1200 0001 1437 2809

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Total Postag

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Sent To
Street, Apt. No. or PO Box No.
City, State, ZIP

Abraham Baca & Nora C Baca
6504 Cardinal Dr.
Flower Mound, TX 75022

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7014 1200 0001 1437 2816

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Sent To
Street, Apt. or PO Box
City, State,

Jacqueline Arviso
PO BOX 301
Belen, NM 87002

PS Form 3800, August 2006 See Reverse for Instructions

7014 1200 0001 1437 2786

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Sent To
Street, Apt. or PO Box
City, State,

Libby A Baca & Etal
4763 Hwy 314 SW
Los Lunas, NM 87031

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Sent To
Street, Apt. or PO Box
City, State,

Leroy O Baca & Sylvia Baca
1301 South Main
Belen, NM 87002

PS Form 3800, August 2006 See Reverse for Instructions

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Sent To
Street, Ap
or PO Box
City, State

Paul Baker
10920 Fort Point Ln
Albuquerque, NM 87123

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7014 1200 0001 1437 2779

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Sent To
Street, Apt
or PO Box
City, State

Sylvia Baca & Joe Garcia
2621 Valencia Dr NE
Albuquerque, NM 87110

PS Form 3800, August 2006 See Reverse for Instructions

7014 1200 0001 1437 2861

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Sent To: Maude P Aragon
Street, Apt. or PO Box: 5030 Rexton
City, State, Dallas, TC 75214

PS Form 3800, August 2006 — See Reverse for Instructions

7014 1200 0001 1437 2878

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Postmark Here

Sent To: Enide Allison
Street, Apt. No or PO Box No: Enide Allison Living Trust
City, State, Zip: PO Box 7172 #166 Stateline, NV 89449

PS Form 3800, August 2006 — See Reverse for Instructions

7014 1200 0001 1437 2854

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Total Pos

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Sent To: Archdiocese of Santa Fe
Street, Apt. or PO Box: 4000 St Josephs Place NW
City, State, Albuquerque, NM 87120

PS Form 3800, August 2006 — See Reverse for Instructions

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Return Receipt Fee (Endorsement Required)
Restricted Delivery Fee (Endorsement Required)
Total Pos

Postmark Here

Sent To: Arroyo Ranch Development
Street, Apt. or PO Box: PO BOX 948
City, State, Belen, NM 87002

PS Form 3800, August 2006 — See Reverse for Instructions

7014 1200 0001 1437 2823

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Return Receipt Fee (Endorsement Required)
Restricted Delivery Fee (Endorsement Required)
Total Pos

Postmark Here

Sent To: Joan M. Artiaga & Armijo Pasqual
Street, Apt. or PO Box: 22 Palomar Drive
City, State, Belen, NM 87002

PS Form 3800, August 2006 — See Reverse for Instructions

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Total Pos

Postmark Here

Sent To: Chris Archuleta
Street, Apt. or PO Box: 530 Calle De Demitrio
City, State, Los Lunas, NM 87031

PS Form 3800, August 2006 — See Reverse for Instructions

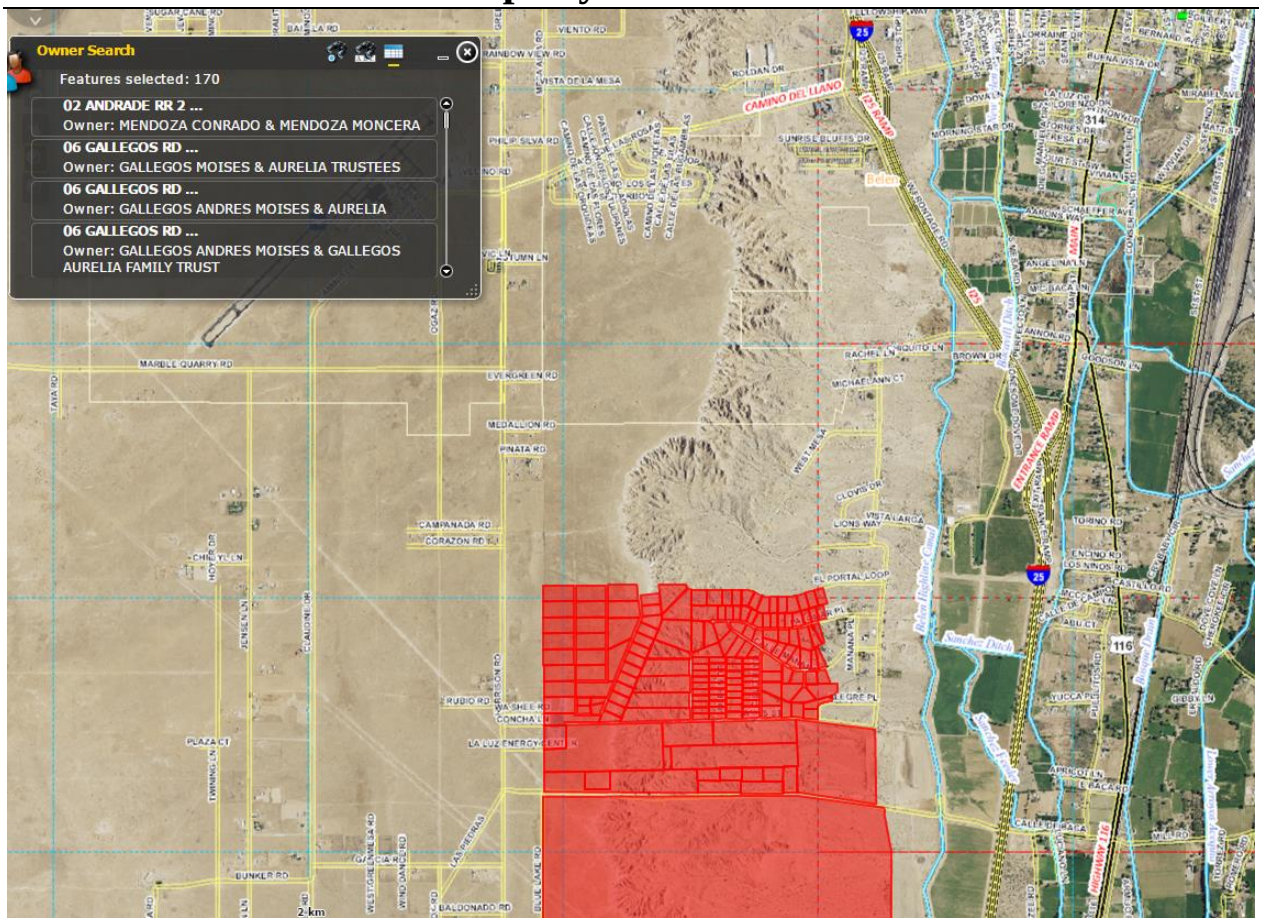
Section 9.2

Public Notice Posting Locations

This information is provided in *Section 9.6: General Public Notice Posting – Certification*.

Section 9.3

Property Tax Record



Section 9.4 & 9.5

Letter sent to owners of record and Letter sent to counties, municipalities, and Indian tribes

The letter provided on the following page was sent to the following owners of record:

Land Owner	Care of	Street Address	City	State	Country	Zip
Enide Allison	Enide Allison Living Trust	PO Box 7172 #166	Stateline	NV		89449
Maude P Aragon		5030 Rexton	Dallas	TC		75214
Archdiocese of Santa Fe		4000 St Josephs Place NW	Albuquerque	NM		87120
Chris Archuleta		530 Calle De Demitrio	Los Lunas	NM		87031
Arroyo Ranch Development		PO BOX 948	Belen	NM		87002
Joan M. Artiaga & Armijo Pasqual		22 Palomar Drive	Belen	NM		87002
Jacqueline Arviso		PO BOX 301	Belen	NM		87002
Abraham Baca & Nora C Baca		6504 Cardinal Dr.	Flower Mound	TX		75022
Leroy O Baca & Sylvia Baca		1301 South Main	Belen	NM		87002
Libby A Baca & Etal		4763 Hwy 314 SW	Los Lunas	NM		87031
Sylvia Baca & Joe Garcia		2621 Valencia Dr NE	Albuquerque	NM		87110
Paul Baker		10920 Fort Point Ln	Albuquerque	NM		87123
Allen S Barol		9926 Blue Jay Rd	Newark	OH		43056
Arturo Barroso & Elma Barroso		1066 8th St	Banning	CA		92220
Luis N Basso & Helen Basso		41700 Vargas Rd	Fremont	CA		94539
David C Baumann & Anna M Baumann		8851 Eagle Rock NE	Albuquerque	NM		87122
Raul Bejarano Sr & Raul Bejarano Jr		208 Harrison Rd	Belen	NM		87002
Constance T Blackwell		3 Sutton Place	London E9 6EH		England	
Ben F Blevins & Phyllis J Blevins		28 Campnada Dr	Belen	NM		87002
Thomas P Blockus & Jacqueline S Blockus		2465 Shoreline Dr Apt. 209	Alameda	CA		94501
Robert L Bottoms		270 Cardinal Dr	Waynesville	NC		28786
Faustino E Carrete		1309 ½ 5th Street	Albuquerque	NM		87102
James M Carrillo & Brenda Carrillo		06 Concha Lake	Belen	NM		87002

Michael D Casciero & Carol L Casciero		7606 Queen Anne Dr	Baltimore	MD		21234
Dr Pin Yu Chang & Frances M Chang Trustees		12320 Rivers Edge Drive	Potomac	MD		20854
Mr Cheng-I Chen & Mrs Wen Chyou-Chu Chen		4F 10 Lane 135 Shi-Ta Rd	Taipei Taiwan	OC	Taiwan	
Scott Change Ngan Chen & Ngan Ying Chen		10301 Dunn Meadow Rd	Vienna	VA		22182
Barbara H Chilcoat Trustee		2914 Junction St	Durango	CO		81301
Erika L Cooper		7414 Berryleaf Drivve	Laurel	MD		20707
Toby Cordova and Mary Ann Cordova		1100 Parkview Dr SW	Los Lunas	NM		87031
Margaret F Davis		3670 Glendon Ave #233	Los Angeles	CA		90034
Theodore De Werd		130 Wailupe Circle	Honolulu	HI		96821
Zinaida Dubrovsky		15311 Beaverbrook Ct Apt 28	Silver Spring	MD		20906
Mary Dunbar		3780 Porter Ave	Ogden	UT		84403
Timothy Scott Edeal & Andrew Griffith		11 Rubio Rd	Belen	NM		87002
The Esken Group Inc		PO BOX 11547	Albuquerque	NM		87192
Rudy M Espinoza & Rhona R Espinoza		844 C Baca Ln	Belen	NM		87002
Jason Fastnacht & Leslie M Fastnacht		PO BOX 66	Estancia	NM		87016
Frank Flores & Roxann Flores		PO BOX 1312	Fairacres	NM		88033
Gregory J Forge & Dianne K Forge		9337 S Shadowglen Ct	Highlands Ranch	CO		80126
James J Frament		6 Cloud Ct	Chico	CA		95928
Moises & Aurelia Gallegos Trustees	Gallegos Family Trust	06 Gallegos Road	Belen	NM		87002
Anthony M Gallegos Ponce De Leon		82 Bank St Apt 3	New York	NY		10014
John P & Gianna Gargan	Attorney and Counselor at Law	6928 Briar Cove Dr	Dallas	TX		75254
Anthony A George & Felicia B George		35 Farrand Park	Highland Park	MI		48203
Robert & Marilyn Gerle	C/O Andrew Gerle	2728 Thomson Ave #514	Long Island City	NY		11101
Seward Golden & Kelley Golden		PO BOX 97	Roswell	NM		88202
Golphenee Family Trust		1526 Alta Vista Court	Seaside	CA		93955
Adam L. Goodman & Magalys Goodman Trustees		3655 W Anthem Way #A109-417	Anthem	AZ		85086
Lynette Gutierrez & Aaron Davis		2045 E Apple Ton St #10	Long Beach	CA		90803
Cathy C Hanes		18096 Highway 99	Welsh	LA		70591

Catherine M Havrilla		1902 Altavue Road	Baltimore	MD		21228
Clark D Hill & Patricia A		12400 Wilshire Blvd Suite 700	Los Angeles	CA		90025
William C Hill & Grace E Hill		11749 Corliss Ave	N Seattle	WA		98133
Mary F Holmes		13 Rubio Road	Belen	NM		87002
Frederick B Howden		PO BOX 762	Grants	NM		87020
David Humphries & Roberta Humphries		8600 B Jaffa NE	Albuquerque	NM		87112
Judy M Iwaoka		840 W End Ave Apt 4-F	New York	NY		10025
Carrie Tindell	Erica Jaramillo	104 El Cielo Blvd	Belen	NM		87002
Henry A Jaramillo & Etal		PO BOX 44	Jarales	NM		87023
Pat R Jaramillo & Etal		908 E River Rd	Belen	NM		87002
John K Kammermeyer		116 Ferson Avenue	Iowa City	IA		52246
Clare L Karbowski	As Trustees of the Karbowski 2005	748 South Cloverdale Ave	Los Angeles	CA		90036
Alfred Kotula		724 N Dixie Fwy US1	New Smyrna Beach	FL		32168
Terry M Lancey		1809 Cypress Street	Highland	IL		62249
Sean G Landry & Shelvy Landry		608 Brookside Dr	Albertville	AL		35950
Albert N Lasso & Doreen K Lasso		11533 Bohemian Forest Avenue	Las Vegas	NV		89138
Terry N Lauritsen & Nancy M Lauritsen		1312 Hertz Drive SE	Albuquerque	NM		87108
Lucille Lee		430 Sego Lily	Bosque Farms	NM		87068
Frederick C Lillienkamp		32 Mayo Rd	Hubbbardston	MA		01452
Robert L Maestas & Juanita Maestas		2116 Edith SE	Albuquerque	NM		87102
Mariano Chavez Family Limited		1932 Coors SW	Albuquerque	NM		87121
Patricia Marquez		1478 Barcelona Rd SW	Albuquerque	NM		87105
Michael C Mcdonald & Lola M Mcdonald		15207 Colorado Ave	Woodbridge	VA		22191
Garawyn Mcgill		5991 S. Hollyhock Way	Boise	ID		83716
Silvia G Mckinnon		03 Sierra Linda Ct	Los Lunas	NM		87031
Robert & Mary Bernadette Mclennan	C/O Michael Mclennan	645 Griswold St Suite 1500	Detroit	MI		48226
James L Miller		PO BOX 336	Washington	MO		63090
Edward John Monjaras		PO BOX 93565	Albuquerque	NM		87199
Eloy J Montano		1218 Broadview Loop	Los Lunas	NM		87031
Lorinda R Montano		1224 No Gabaldon RD	Belen	NM		87002
Salomon Montano		PO BOX 10	Bosque	NM		87006

Glenn E Morris & Ernest C & Jessica Trujillo		08 Concha Ln	Belen	NM		87002
Raja Catherina Nader & A Tafla		846 Finney Trail	Cincinnati	OH		45224
Frank L & Doris Niner	Niner Living Trust	1025 Don Pasqual Rd NW	Los Lunas	NM		87031
Oma F Olson		PO BOX 1423	Elephant Butte	NM		87935
Emily & Loretta Osterman		730 Old Tasso Place NE	Cleveland	TN		37312
Pallottino-Rutherford Fredeswinda		Post Office 90008	Albuquerque	NM		87199
Ruth V Palmer & Judith Crowley		1357 Redwood Cir Apt 139	Grant Pass	OR		97527
William R & Sara Palmer		1030 Inca St	Denver	CO		80204
Linda C Peck		3227 Mohican Ave	San Diego	CA		92117
Jaime Pena & Marina Pena		3309 SW 2nd Ave	Amarillo	TX		79106
Richard Pignatello		1717 Madero Drive	The Village	FL		32159
Joy Pollack		5325 Canada Vista Pl NW	Albuquerque	NM		87120
Rochelle Pollack & Simon Pollack		5325 Canada Vista NW	Albuquerque	NM		87120
Rochelle Pollack as Trustee & C/O Harold J Payne		2112 Contreras Rd NE	Rio Rancho	NM		87144
Public Service Company of NM		2401 Aztec Rd	Albuquerque	NM		87120
Public Service Company of NM		414 Silver Ave SW #4	Albuquerque	NM		87158
James L Purdy		10961 Burnt Mill Rd #1618	Jacksonville	FL		32256
George V & Geneva Rael (Trustees)	Rael Trust Agreement	1212 Stinson St SW	Albuquerque	NM		87121
Prisciliano Ramos & Tania Ramos		208 B Harrison Rd	Belen	NM		87002
Jua Rattanaphun & Tanerrat Sawadee Rattanaphun		375 Lastreto Ave	Sunnyvale	CA		94085
Alice S & Glenn S Rogers	Kenneth S	1411 Birch Road	Homewood	IL		60430
Athorn & Rongkavilit	Hathaiwan	9204 Almond St	Rancho Cucamonga	CA		91737
Ernest R Rowe Co-Trustee	Rowe Family Trust	PO BOX 71	Tie Siding	WY		82084
Greg Salazar & Julie		2803 W Ivanhoe St	Chandler	AZ		85224
Martha J Sanchez		14 Allen Drive	Los Lunas	NM		87031
Steven Sanchez		233 Hendrix Rd NW	Albuquerque	NM		87107
Hector M Sarinana & Emilia Sarinana		211 Harrison Rd	Belen	NM		87002
Annette Schneider		422 Harris Rd	Hartman	AR		72840

Richard R & Dorothy Shaffer		4720 Storeyland Dr	Alton	IL		62002
Shi Yu Hong & Lee Tien Hui		12408 Mountainside Way	Albuquerque	NM		87111
Duane Lee & Daw Stevenson		555 N. Pantano Road SP518	Tucson	AZ		85710
James H Grace Summers & Patricia Stockard		1622 E Hwy 12	Valley Springs	CA		95252
Sun Tien Chin & Lee Tien Hui		12408 Mountainside Way	Albuquerque	NM		87111
Sunwest Trust Inc		1300 Nakomis Dr NE	Albuquerque	NM		87112
Suwan Reudee Trust		C/O 1404 Twin Oaks	Lakewood	NJ		08701
Samantha Tate		PO BOX 445	Belen	NM		87002
The Williams Companies Inc		12409 Chelwood Trail NE	Albuquerque	NM		87112
Matthew A Torres & Joyce M R Torres		553 Breech Dr SW	Los Lunas	NM		87031
Jeff D Trembly		1504 West Reinken Ave	Belen	NM		87002
Sotero G Trujillo & Rosalene Trujillo		3125 Nebulous Circle	N Las Vegas	NV		89032
Twining Land Corporation		1400 South Charles Street	Baltimore	MD		21230
Steve Upah		30 Turquoise Dr	Sandia Peak	NM		87047
Shawn R Vandecar & Mary F Vandecar		225 Harrison Rd	Belen	NM		87002
Mary R Vener Trustee		839 Landon Dr	Bullhead City	AZ		86429
Venture Investments & Consulting		694 Brookhaven	Paradise	CA		95969
Harold E Vickers		10621 Prestwick NE	Albuquerque	NM		87111
David Lee Wales		PO BOX 304	Tome	NM		87060
Janice C Walton		209 Yosemite Road	Georgetown	TX		78628
Afton K Wellington & William Lester Breeze		444 Steele Rd	Paris	KY		40362
James L Wood & Sandra L Wood		6796 Adel Rd	Spencer	IN		47460
William Frank Wooldridge & Adelina Fern		709 Old Colony Rd	Midwest City	OK		73130
Wooster Family Trust		1746 Buena Vista Ave	Livermore	CA		94550
Roberta A Yates		205 Harrison	Belen	NM		87002
Youth Development Inc		6301 Central Ave NW	Albuquerque	NM		87105
Julia Zamarripa		37731 Nantucket Drive	Palmdale	CA		93550

The letter provided on the following page was sent to the following counties, municipalities, and Indian tribes:

Land Owner	Care of	Street Address	City	State	Country	Zip
Valencia County Clerk	Sally Perea	PO BOX 969	Los Lunas	NM		87031
Socorro County Clerk	Rebecca Vega	PO BOX I	Socorro	NM		87801
City of Belen	Rudy Jaramillo, Mayor	100 S. Main St.	Belen	NM		87002
Village of Los Lunas	Robert Vialpando, Mayor	PO BOX 1209	Los Lunas	NM		87031

July 29, 2016

CERTIFIED MAIL XXXX XXXX XXXX XXXX
RETURN RECEIPT REQUESTED

To Whom It May Concern:

Public Service Company of New Mexico (PNM) announces its application submittal to the New Mexico Environment Department for a significant revision to NSR Permit No. PSD-5041R1 for the La Luz Energy Center. The expected date of application submittal to the Air Quality Bureau is August 1, 2016.

The exact location of the facility known as, La Luz Energy Center is at latitude 34°, 36', 58.3" N and longitude 106°, 48', 54.0" W. From the intersection of I-25 and Camino Del Llano (exit 191), go west along Camino Del Llano 1.5 miles, turn left (south) onto Harrison Rd. Continue on Harrison Rd 2.2 miles, turn left (east) towards existing substation along unnamed dirt road 0.2 miles to gate. The approximate location of this facility is 3.9 miles southwest of Belen in Valencia County, NM.

The proposed revision consists of designating the facility as a PSD minor source, updating permit conditions and adding turbine malfunction emissions to the permit. No physical changes are being requested with the revision.

The estimated maximum quantities of any regulated air contaminant will be as follows in pound per hour (pph) and tons per year (tpy) and may change slightly during the course of the Department's review:

Pollutant:	Pounds per hour	Tons per year
Total Suspended Particulates (TSP)	9 pph	50 tpy
PM_{10}	9 pph	50 tpy
$PM_{2.5}$	9 pph	50 tpy
Sulfur Dioxide (SO_2)	1 pph	8 tpy
Nitrogen Oxides (NO_x)	45 pph	70 tpy
Carbon Monoxide (CO)	45 pph	85 tpy
Volatile Organic Compounds (VOC)	4 pph	22 tpy
Total sum of all Hazardous Air Pollutants (HAPs)	1 pph	8 tpy
Toxic Air Pollutant (TAP)	12 pph	63 tpy
Green House Gas Emissions as Total CO_2e	n/a	445,000 tpy

The standard and maximum operating schedules of the facility is 24 hours a day, 7 days a week and a maximum of 52 weeks per year.

The owner and operator of the Facility is: Public Service Company of New Mexico; 2401 Aztec Road, NE, MS Z100, Albuquerque, NM 87107.

If you have any comments about the construction or operation of this facility, and you want your comments to be made as part of the permit review process, you must submit your comments in writing to this address: Permit Programs Manager; New Mexico Environment Department; Air Quality Bureau; 525 Camino de los Marquez, Suite 1; Santa Fe, New Mexico; 87505-1816; (505) 476-4300; 1 800 224-7009; https://www.env.nm.gov/aqb/permit/aqb_draft_permits.html. Other comments and questions may be submitted verbally.

Please refer to the company name and facility name, or send a copy of this notice along with your comments, since the Department may have not yet received the permit application. Please include a legible return mailing address with your comments. Once the Department has performed a preliminary review of the application and its air quality impacts, the Department's notice will be published in the legal section of a newspaper circulated near the facility location.

Attención

Este es un aviso de la Agencia de Calidad de Aire del Departamento de Medio Ambiente de Nuevo México, acerca de las emisiones producidas por un establecimiento en esta área. Si usted desea información en español, por favor de comunicarse con la oficina de Calidad de Aire al teléfono 505-476-5557.

Sincerely,
Public Service Company of New Mexico
2401 Aztec Road, NE, MS Z100, Albuquerque, NM 87107

Section 9.6

General Posting of Notices - Certification

General Posting of Notices – Certification can be found on the next page.

General Posting of Notices – Certification

I, _E.J. Anderson_____, the undersigned, certify that on **July 28, 2016,** posted a true and correct copy of the attached Public Notice in the following publicly accessible and conspicuous places in the City of Belen and Village of Los Lunas of Valencia County, State of New Mexico on the following dates:

1. Facility entrance on July 28, 2016
2. Valencia County Administrative Offices, Los Lunas, on July 28, 2016
3. City of Belen City Hall, Belen, on July 28, 2016
4. Belen Public Library, Belen, on July 28, 2016

Signed this __28___ day of __July_____, __2016_____,

_____ __July 28, 2016___
Signature Date

__E.J. Anderson_____
Printed Name

__Environmental Scientist_____
Title {APPLICANT OR RELATIONSHIP TO APPLICANT}


NOTICE

NOTICE

Public Service Company of New Mexico (PNM) announces its application submittal to the New Mexico Environment Department for a significant revision to NSR Permit No. PSD-5041R1 for the La Luz Energy Center. The expected date of application submittal to the Air Quality Bureau is August 1, 2016.

The exact location of the facility known as, La Luz Energy Center is at latitude 34°, 36', 58.3" N and longitude 106°, 48', 54.0" W. From the intersection of I-25 and Camino Del Llano (exit 191), go west along Camino Del Llano 1.5 miles, turn left (south) onto Harrison Rd. Continue on Harrison Rd 2.2 miles, turn left (east) towards existing substation along unnamed dirt road 0.2 miles to gate. The approximate location of this facility is 3.9 miles southwest of Belen in Valencia County, NM.

The proposed revision consists of designating the facility as a PSD minor source, updating permit conditions and adding turbine malfunction emissions to the permit. No physical changes are being requested with the revision.

The estimated maximum quantities of any regulated air contaminants will be as follows in pound per hour (pph) and tons per year (tpy). These reported emissions could change slightly during the course of the Department's review:

Pollutant:	Pounds per hour	Tons per year
Total Suspended Particulates (TSP)	9 pph	50 tpy
PM_{10}	9 pph	50 tpy
$PM_{2.5}$	9 pph	50 tpy
Sulfur Dioxide (SO_2)	1 pph	8 tpy
Nitrogen Oxides (NO_x)	45 pph	70 tpy
Carbon Monoxide (CO)	45 pph	85 tpy
Volatile Organic Compounds (VOC)	4 pph	22 tpy
Total sum of all Hazardous Air Pollutants (HAPs)	1 pph	8 tpy
Ammonia (NH_3)	12 pph	63 tpy
Green House Gas Emissions as Total CO_2e	n/a	445,000 tpy

The standard and maximum operating schedules of the facility is 24 hours a day, 7 days a week and a maximum of 52 weeks per year.

The owner and operator of the Facility is: **Public Service Company of New Mexico; 2401 Aztec Road, NE, MS Z100, Albuquerque, NM 87107.**

If you have any comments about the construction or operation of this facility, and you want your comments to be made as part of the permit review process, you must submit your comments in writing to this address: Permit Programs Manager; New Mexico Environment Department; Air Quality Bureau; 525 Camino de los Marquez, Suite 1; Santa Fe, New Mexico; 87505-1816; (505) 476-4300; 1 800 224-7009; https://www.env.nm.gov/aqb/permit/aqb_draft_permits.html. Other comments and questions may be submitted verbally.

With your comments, please refer to the company name and facility name, or send a copy of this notice along with your comments. This information is necessary since the Department may have not yet received the permit application. Please include a legible return mailing address. Once the Department has completed its preliminary review of the application and its air quality impacts, the Department's notice will be published in the legal section of a newspaper circulated near the facility location.

Attención

Este es un aviso de la Agencia de Calidad de Aire del Departamento de Medio Ambiente de Nuevo México, acerca de las emisiones producidas por un establecimiento en esta área. Si usted desea información en español, por favor de comunicarse con la oficina de Calidad de Aire al teléfono 505-476-5557.

Section 9.7

Notices Sent

Information provided in *Section 9.4: Letter sent to owners of record* and *9.5: Letter sent to counties, municipalities, and Indian tribes*.

Section 9.8

Submittal of Public Service Announcement – Certification

I, Kate Riffenburg, the undersigned, certify that on Friday, August 8, 2016, submitted a public announcement to KIOT 102.5 FM which the source is or is proposed to be located and KIOT 102.5 FM did not respond that it would or would not air the announcement.

Signed this 08th day of August, 2016.

Signature

08/082016

Date

Kaitlyn Riffenburg

Printed Name

Project and Business Development, Trinity Consultants

Title {APPLICANT OR RELATIONSHIP TO APPLICANT}

From: Kate Riffenburg
To: "snewton@univisionradio.com"
Subject: Radio Public Service Announcement Request for La Luz Energy Center
Date: Monday, August 08, 2016 11:25:34 AM
Attachments: image001.emz
image002.png
image003.png
image005.png
image007.png

VIA EMAIL

To:	KIOT 102.5	**From:**	Kate Riffenburg, Trinity Consultants
Phone:	505-254-7100	**Pages:**	1 – including cover
Fax:	n/a	**Phone:**	(505) 266-6611
Email:	snewton@univisionradio.com	**Email:**	kriffenburg@trinityconsultants.com
Subject:	PSA	**Date:**	***August 08, 2016***

☒ Urgent ☐ For Review ☐ Please Comment ☐ Please Reply ☐ Please Recycle

---

Comments:

As part of the air quality permit process, New Mexico requires applicants to submit a public service announcement identifying

the proposed permit action and providing information as to how the public can comment on this action.

Below is such an announcement. Would you air it as a PSA?

Thank you,
Kate

……

Kate Riffenburg
Southwest Region Project and Business Development Assistant

Trinity Consultants Inc.
9400 Holly Avenue | Bldg 3 Suite 300 | Albuquerque, NM 87122 | Office: (505) 266-6611x101
Email: kriffenburg@TrinityConsultants.com | Website: www.TrinityConsultants.com

Stay current on environmental issues. Subscribe today to receive Trinity's free *Environmental Quarterly*.

CLICK HERE TO EXPLORE OTHER TRAINING OPPORTUNITIES WITH TRINITY CONSULTANTS!

Section 9.9

Newspaper Classified/Legal Advertisement

Newspaper Classified/Legal Advertisement can be found on the next page.

NOTICE OF AIR QUALITY PERMIT APPLICATION

Public Service Company of New Mexico (PNM) announces its application submittal to the New Mexico Environment Department for a significant revision to NSR Permit No. PSD-5041R1 for the La Luz Energy Center. The expected date of application submittal to the Air Quality Bureau is August 1, 2016.

The exact location of the facility known as, La Luz Energy Center is at latitude 34°, 36', 58.3" N and longitude 106°, 48', 54.0" W. From the intersection of I-25 and Camino Del Llano (exit 191), go west along Camino Del Llano 1.5 miles, turn left (south) onto Harrison Rd. Continue on Harrison Rd 2.2 miles, turn left (east) towards existing substation along unnamed dirt road 0.2 miles to gate. The approximate location of this facility is 3.9 miles southwest of Belen in Valencia County, NM.

The proposed revision consists of designating the facility as a PSD minor source, updating permit conditions, and adding turbine malfunction emissions to the permit. No physical changes are being requested with the revision.

The estimated maximum quantities of any regulated air contaminant will be as follows in pound per hour (pph) and tons per year (tpy) and could change slightly during the course of the Department's review:

Pollutant:	Pounds per hour	Tons per year
Total Suspended Particulates (TSP)	9 pph	50 tpy
PM_{10}	9 pph	50 tpy
$PM_{2.5}$	9 pph	50 tpy
Sulfur Dioxide (SO_2)	1 pph	8 tpy
Nitrogen Oxides (NO_x)	45 pph	70 tpy
Carbon Monoxide (CO)	45 pph	85 tpy
Volatile Organic Compounds (VOC)	4 pph	22 tpy
Total sum of all Hazardous Air Pollutants (HAPs)	1 pph	8 tpy
Ammonia (NH_3)	12 pph	63 tpy
Green House Gas Emissions as Total CO_2e	n/a	445,000 tpy

The standard and maximum operating schedules of the facility is 24 hours a day, 7 days a week and a maximum of 52 weeks per year.

The owner and operator of the Facility is: Public Service Company of New Mexico; 2401 Aztec Road, NE, MS Z100, Albuquerque, NM 87107.

If you have any comments about the construction or operation of this facility, and you want your comments to be made as part of the permit review process, you must submit your comments in writing to this address: Permit Programs Manager; New Mexico Environment Department; Air Quality Bureau; 525 Camino de los Marquez, Suite 1; Santa Fe, New Mexico; 87505-1816; (505) 476-4300; 1 800 224-7009; https://www.env.nm.gov/aqb/permit/aqb_draft_permits.html. Other comments and questions may be submitted verbally.

Please refer to the company name and site name, or send a copy of this notice along with your comments, since the Department may have not yet received the permit application. Please include a legible return mailing address with your comments. Once the Department has performed a preliminary review of the application and its air quality impacts, the Department's notice will be published in the legal section of a newspaper circulated near the facility location.

General information about air quality and the permitting process can be found at the Air Quality Bureau's web site. The regulation dealing with public participation in the permit review process is 20.2.72.206 NMAC. This regulation can be found in the "Permits" section of this web site.

Attención

Este es un aviso de la Agencia de Calidad de Aire del Departamento de Medio Ambiente de Nuevo México, acerca de las emisiones producidas por un establecimiento en esta área. Si usted desea información en español, por favor de comunicarse con la oficina de Calidad de Aire al teléfono 505-476-5557.

Legals

GOVERNING BOARD
UNM – VALENCIA BRANCH COMMUNITY COLLEGE DISTRICT

Published in Valencia County News-Bulletin on August 4, 2016.

NOTICE OF INTENT TO ADOPT

NOTICE IS HEREBY GIVEN that the City of Belen Governing Body will conduct a public hearing and take action on the proposed Ordinance referenced:

AN ORDINANCE AMENDING CHAPTER 17.58 OF THE CITY OF BELEN CODE OF ORDINANCES RELATING TO SIGN REGULATIONS, REPEALING EXISTING PROVISIONS RELATING TO CAMPAIGN SIGNS AS TEMPORARY SIGNS, AND ADDING A NEW SECTION RELATING TO THE PERMITTING AND REGULATION OF CAMPAIGN SIGNS AND PROVIDING PENALTIES FOR VIOLATIONS THEREOF.

The Belen City Council will allow for public input and take action at a public hearing which will be held on September 6, 2016 at 6:00 PM in the Council Chambers at City Hall, 100 South Main Street, Belen, New Mexico 87002.
A copy of the proposed ordinance is available for inspection at Belen City Hall Monday through Friday, 8:00 A.M. to 5:00 P.M. in the office of the City Clerk, 100 South Main Street, Belen, New Mexico 87002.

Dated this 1st day of August 2016.

/s/ Leona Vigil
Leona Vigil, City Manager, CMC

Published in Valencia County News-Bulletin on August 4 & 18, 2016.

NOTICE OF PUBLIC HEARING

The Los Lunas Village Council will hold a public hearing at 6:00 p.m. on August 25, 2016 in the Village Council Chambers located at 660 Main St NW, Los Lunas, New Mexico to consider the following application:

ORDINANCE #415

ORDINANCE #276-2016-5 WAS FOUND TO HAVE A TEXT ERROR WHICH OMITTED THE ZONING DESIGNATIONS, SPECIFYING THAT THE ZONING FOR THE PROPERTY LOCATED IN SUBD: LAND OF J LIGHT, LLC, TRACT B, 1.26 AC, MAP 73, WITH A STREET ADDRESS OF 133 VALLEJOS RD. NE, AND SUBD: LAND OF J LIGHT, LLC, TRACT D, 0.99 AC, MAP 73, SHALL BE AMENDED FROM SPLIT R-1/C-1 TO C-1 ZONING, FROM THE BODY OF THE ORDINANCE. ORDINANCE #415 AMENDS THE ORIGINAL ZONING ORDINANCE TO ADD IN THE PREVIOUSLY OMITTED TEXT.

Anyone wishing to comment may attend the public hearing or write to the Village of Los Lunas Community Development Department at PO Box 1209, Los Lunas, NM 87031.

Published in Valencia County News-Bulletin on August 4, 2016.

NOTICE OF PUBLIC HEARING AND CONSIDERATION OF AMENDMENT TO 10-1 SECTION 11.F.11 ADDING LANGUAGE FOR SENIOR HOUSING DEVELOPMENT

As a part of its regular meeting on Thursday, August18, 2016 at 6:00 p.m. the Governing Body of the Village of Bosque Farms will consider amendment to 10-1 Section 1 1.F.11 adding language for Senior Housing Development

The meeting will be held in the Village Council Chambers at 1455 West Bosque Loop in Bosque Farms. Copies of the ordinance in its entirety are available at the Village Office at 1455 West Bosque Loop during regular office hours.

Published in Valencia County News-Bulletin on August 4, 2016.

NOTICE OF PUBLIC HEARING

The Los Lunas Village Council will hold a public hearing at 6:00 p.m. on August 25, 2016 in the Village Council Chambers located at 660 Main St NW, Los Lunas, New Mexico to consider the following application:

ORDINANCE #414

ORDINANCE #276-2016-4 WAS FOUND TO HAVE A TEXT ERROR WHICH OMITTED THE ZONING DESIGNATIONS, SPECIFYING THAT THE ZONING FOR THE PROPERTY LOCATED IN LAND OF MARTIN TAFOYA, TRACT: B1 1990 REV 0.48 AC, WITH A STREET ADDRESS OF 142 COURTHOUSE RD. SE, SHALL BE AMENDED FROM R-1 TO TOD-MU, FROM THE BODY OF THE ORDINANCE. ORDINANCE #414 AMENDS THE ORIGINAL ZONING ORDINANCE TO ADD IN THE PREVIOUSLY OMITTED TEXT.

Anyone wishing to comment may attend the public hearing or write to the Village of Los Lunas Community Development Department at PO Box 1209, Los Lunas, NM 87031.

Published in Valencia County News-Bulletin on August 4, 2016.

NOTICE OF REGULAR MEETING FOR THE MIDDLE RIO GRANDE CONSERVANCY DISTRICT BOARD OF DIRECTORS

A meeting of the MRGCD Board of Directors is scheduled for Monday, August 8, 2016 at 3:00 p.m. The meeting will be held at the Middle Rio Grande Conservancy District Board Room, 1931 Second Street, SW, Albuquerque, New Mexico. For questions, please call 505-247-0234. Public is welcome. An agenda of the meeting will be available on Friday, August 5, 2016, by calling our office or on the MRGCD website www.mrgcd.com.

If you are an individual with a disability who is in need of a reader, amplifier, qualified sign language interpreter, or any other form of auxiliary aid or service to attend or participate in the hearing or meeting, please contact the Administrative Secretary at (505) 247-0234 at least one week prior to the meeting or as soon as possible. Public documents, including the agenda and minutes can be provided in various accessible formats. Please contact me at (505) 247-0234 if a summary or other type of accessible format is needed.

Published in Valencia County News-Bulletin on August 4, 2016.

Request for Proposals Solicitation 1084-2017-2100 Solicitation 1084-2017-3100

The United States Probation Office for the District of New Mexico is seeking vendors to provide substance abuse and mental health treatment services and urinalysis collection and reporting services to Federal defendants and offenders encompassing the Valencia County, New Mexico catchment. Blanket Purchase Agreements (BPA) issued by the United States Probation Office will commence no later than October 1, 2016. Agencies must have experience in the evaluation and treatment in these specific areas and shall hold all proper licenses required by the State of New Mexico. Agencies interested in submitting proposals can download the solicitation information letter and RFPs from the United States Probation webpage at www.nmcourt.fed.us or by contacting Kathy Gonzales at kathy_gonzales@nmcourt.fed.us or (505) 348-2656.

Published in Valencia County News-Bulletin on July 28 & August 4, 2016.

VALENCIA COUNTY BOARD OF COUNTY COMMISSIONERS

MEETING NOTICE

The Board of County Commissioners will hold a Public Hearing Meeting at 5:00 P.M. on Wednesday, August 10, 2016, at the Valencia County Administration Building in the Commission Chambers at 444 Luna Ave, Los Lunas, New Mexico. Copies of the Agenda may be obtained online at www.co.valencia.nm.us, by calling (505) 866-2014 or at the Valencia County Administration Building. If you are an individual with a disability who is in need of a reader, amplifier, qualified sign language interpreter, or other form of auxiliary aid or service to attend or participate in the meeting, please contact the Valencia County Manager at 444 Luna Ave, Los Lunas, New Mexico 87031, phone 505-866-2014 at least one (1) week prior to the meeting or as soon as possible. Public documents, including the agenda and minutes, can be provided in various accessible formats. Please contact the Valencia County Manager's office if a summary or other type of accessible format is needed.

Published in Valencia County News-Bulletin on August 4, 2016.

Legals

NOTICE OF LOS LUNAS SCHOOLS BOARD OF EDUCATION MEETINGS FOR AUGUST 2016

The Los Lunas Schools Board of Education announces the following meetings for August 2016: August 9, 2016 - Finance Committee Meeting - CO Conference Room - 4:30 pm (Attendance by Invitation Only); and August 16, 2016 - Regular Board Meeting - CO Board Room - 6:00 pm (Only One Regular Meeting in August).

Unless otherwise noted, all board meetings will be held in the Board Room of the Los Lunas Schools Administration Building located at 119 Luna Avenue, Los Lunas, New Mexico. Agendas are available in the Superintendent's Office (119 Luna Ave.) 72 hours prior to the meeting, and are posted on the District's webpage at www.llschools.net. If you are an individual with a disability who is in need of a reader, amplifier, qualified sign language interpreter, or any other form of auxiliary aid or service, to attend or participate in the hearing or meeting, please contact the Superintendent's Office (865-9636) at least one week prior to the meeting or as soon as possible.

Published in Valencia County News-Bulletin on August 4, 2016.

NOTICE is hereby given that on June 9, 2016, the City of Rio Rancho ("City"), 3200 Civic Center Circle NE, Rio Rancho, NM 87144, and co-applicants Kenneth M. Tully and Deidre A. Hirschfeld, P. O. Box 1358, Tijeras, NM 87059, filed Application No. SD-09140-A into RG-6745 et al. with the STATE ENGINEER for Permit to Change Point of Diversion, Place, and Purpose of Use from Surface to Ground Water, and companion Application No. (RG-6745 et al. into SD-09140-A)-T with the STATE ENGINEER for Permit for Temporary Transfer within the Rio Grande Underground Water Basin of the State of New Mexico.

Under Application No. SD-09140-A into RG-6745 et al., the applicants propose to discontinue the use of a farm delivery requirement of 39 acre-feet of surface water per annum ("AFA"), inclusive of a consumptive irrigation requirement ("CIR") of 27.3 AFA, from the Luis Lopez ditch with a point of diversion located in the SW1/4 NE1/4 NE1/4 of Section 1, Township 1 South, Range 1 West, NMPM, at the San Acacia Diversion Works (SP-1690-4) of the MRGCD, located at a point where X=326,225 meters, Y=3,792,219 meters, UTM (NAD83), on land owned by the MRGCD, for the irrigation of 13 acres of land owned by Kenneth M. Tully and Deidre A. Hirschfeld, and described as Pt. Tract 18 (6 acres) and Pt. Tract 19B (7 acres), MRGCD Map 166, also described as being located within Section 31, Township 3 South, Range 1 East, NMPM. The move-from lands are generally located approximately ¾ mile northeast of the intersection of Camino Luis Lopez Rd. and Farm Market Rd., in Luis Lopez, Socorro County, New Mexico.

The applicants further propose to transfer the above-described 27.3 AFA CIR water right to vested and permitted wells under Permit RG-6745 et al., consisting of 35 system production wells, all located within the City metropolitan area within Sandoval County, for municipal and related purposes within the service area of the Rio Rancho municipal water system.

Diversion of water under City of Rio Rancho's permit RG-6745 et al. shall not exceed 24,020.16 acre-feet per annum for domestic, commercial, industrial, housing subdivision, and related purposes within the service area of the Rio Rancho Municipal Water System. No increase in diversion is contemplated by the transfer of water rights under this application. This application is made for the purpose of complying with the Conditions of Approval of Permit No. RG-6745 et al., which requires the City of Rio Rancho to offset the impacts of groundwater pumping on surface flows of the Rio Grande and its tributaries.

Under companion Application No. (RG-6745 et al. into SD-09140-A)-T, the City proposes to temporarily discontinue the diversion of the above-described 27.3 AFA CIR water right from the RG-6745 et al. system production wells, described above, and temporarily transfer said CIR in order to commence the farm delivery requirement of 39 AFA for the continued irrigation of the 13 acres of land described above.

The City further proposes to allow the landowners, Kenneth M. Tully and Deidre A. Hirschfeld, to exercise the water rights proposed for transfer under Application No. SD-09140-A into RG-6745 et al. for a period of five (5) years from the approval of the transfer by the State Engineer, to include an additional five (5) year term or longer as the parties may agree, subject to approval by the State Engineer. The City states that the reason for the temporary transfer is that it does not require the water rights for the period of the temporary transfer.

Any person, firm or corporation or other entity having standing to file objections or protests shall do so in writing (objection must be legible, signed, and include the writer's complete name, phone number and mailing address). The objection to the approval of the application must be based on: (1) Impairment; if impairment, you must specifically identify your water rights; and/or (2) Public Welfare/Conservation of Water; if public welfare or conservation of water within the state of New Mexico, you must show how you will be substantially and specifically affected. The written protest must be filed, in triplicate, with the State Engineer, 5550 San Antonio Drive NE, Albuquerque, NM 87109-4127, within ten (10) days after the date of the last publication of this Notice. Facsimiles (faxes) will be accepted as a valid protest as long as the hard copy is hand-delivered or mailed and postmarked within 24-hours of the facsimile. Mailing postmark will be used to validate the 24-hour period. Protests can be faxed to the Office of the State Engineer, (505) 383-4030. If no valid protest or objection is filed, the State Engineer will evaluate the application in accordance with the provisions of Chapter 72 NMSA 1978.

Published in Valencia County News-Bulletin on August 4, 11 & 18, 2016.

Notice is hereby given that on May 12, 2016 the City of Rio Rancho ("City") c/o R. Scott Sensanbaugher, PE, 3200 Civic Center Circle NE, Rio Rancho, New Mexico 87144 and co-applicant Chris Lopez, 180 Ramon Lopez Road, Bosque, NM 87006, filed with the STATE ENGINEER Application No. SD-09504 into RG-6745 et al. to Change Point of Diversion, Place, and Purpose of Use from Surface to Ground Water in the Rio Grande Underground Water Basin of the State of New Mexico.

The co-applicants propose to discontinue the use of 10.50 acre-feet per annum (AFA) Farm Delivery Requirement and 7.35 AFA Consumptive Irrigation Requirement (CIR), with a move-from point of diversion at the San Fransisco Acequia, with a point of diversion on the Rio Grande at the Isleta Diversion Works of the MRGCD, located on land owned by the Pueblo of Isleta in the NE ¼ NE ¼ SW ¼ of Section 24, Township 8 North, Range 2 East, NMPM, also described as being located at a point where X=346,037 meters and Y=3,863,880 meters intersect, UTM Zone 13 North, NAD83, Isleta Pueblo Grant, Valencia County, for the irrigation of 3.5 acres of land owned by Chris Lopez, described as Tract C, Lands of Ramona Lopez (1.76 acres), Tract 26 (0.72 acre), Tract 28 (0.52 acre), and Tract 29 (0.50 acre) all on MRGCD Map 136, further described as being within Section 16, Township 2 North, Range 1 East, NMPM, Socorro County, New Mexico. The move-from lands are generally located southeast of the intersection of the ATS&F Railway and Ramon Lopez Road, Bernardo, within Socorro County, New Mexico.

The co-applicants further propose to transfer the described 7.35 AFA CIR to the City's permitted wells under RG-6745 et al., consisting of 35 existing and proposed system production wells, all located within the City metropolitan area within Sandoval County, for municipal use within the service area of the Rio Rancho municipal water system.

Diversion of water under the City's permit RG-6745 et al. shall not exceed 24,020.16 AFA for domestic, commercial, industrial, housing subdivision, and related purposes within the service area of the City Municipal Water System. No increase in diversion is contemplated by the transfer of water rights under this application. This application is made for the purpose of complying with Permit RG-6745 et al., which requires the City to offset the impacts of groundwater pumping on surface flows of the Rio Grande and its tributaries.

Any person, firm or corporation or other entity having standing to file objections or protests shall do so in writing (objection must be legible, signed, and include the writer's complete name, phone number and mailing address). The objection to the approval of the application must be based on: (1) Impairment; if impairment, you must specifically identify your water rights; and/or (2) Public Welfare/Conservation of Water; if public welfare or conservation of water within the state of New Mexico, you must show how you will be substantially and specifically affected. The written protest must be filed, in triplicate, with the State Engineer, 5550 San Antonio Drive NE, Albuquerque, NM 87109-4127, within ten (10) days after the date of the last publication of this Notice. Facsimiles (faxes) will be accepted as a valid protest as long as the hard copy is hand-delivered or mailed and postmarked within 24-hours of the facsimile. Mailing postmark will be used to validate the 24-hour period. Protests can be faxed to the Office of the State Engineer, (505) 383-4030. If no valid protest or objection is filed, the State Engineer will evaluate the application in accordance with the provisions of Chapter 72 NMSA 1978.

Published in Valencia County News-Bulletin on August 4, 11 & 18, 2016.

NOTICE HEREBY GIVEN THAT THE FOLLOWING PROPERTY SHALL BE SOLD AT PUBLIC AUCTION ON **August 8, 2016**. Time: 10:00 AM: AT OUTBACK STORAGE LLC, LOCATED AT 3507 NM-47, Los Lunas, NM 87031 IN SATISFACTION OF LIEN IN ACCORDANCE WITH THE NEW MEXICO SELF STORAGE ACT [48-11-1 TO 48-11-9].
Unit D-21 and Unit D-22 Party in Default: Ronnie Barton; Ammo, Knife collection, Personal medical records, about 40 or 50 guns, Magazines, Coin collection, Baseball cards,Violin, 20 rifles, 20 to 30 pistols, Scopes, Hunting equipment, Radios, 2 crossbows,7 or 8 compound bows, 6 or 7 sets of fine china,4 to 6 TV sets, Recorders, CDs,Photos,8 to 10 flash drives,8 laptops, Lexington Dining Room Set, Packaged dry cat foods, winter and summer clothes,6 to 8 solar panels,3 Ibanez Guitars,1 Takatine Acoustic Guitar, passport, Birth Certificate, Furniture, Pictures, Exercise equipment ,Household and kitchen supplies, Rugs, Table top to dining table, Washer/dryer,4 or 5 ladders,5 work benches,3 cutting torches, One set of bottles for cutting torches, One large tool chest filled with tools, one small tool chest loaded with tools, DR Trimmer, Band saws, Compound saws, Welding equipment, Horse bits, Reins, Saddle blankets,3 or 4 chainsaws, Bistro Metal Table, Patio Metal Table, Cupress 5 foot and 6 foot swings, Wheelbarrows, Leather making tools and equipment, two satellite dishes affixed to the storage building and one chainsaw.
Firearms will be sold to qualified non-felon buyers only and will be subject to a Federal Firearms License; Gun Dealer Fees and approved federal documentation in accordance with Federal Law as necessary for transfer of any of the firearms to be auctioned. Potential Valuables in a Safe.

Published in Valencia County News-Bulletin on July 28 & August 4, 2016.

Notice is hereby given that on June 23, 2016 the City of Rio Rancho ("City") c/o R. Scott Sensanbaugher, PE, 3200 Civic Center Circle NE, Rio Rancho, New Mexico 87144 and co-applicants T. Scott Edeal and Patricia A. Welk, 147A Edeal Road, Los Lunas, NM 87031, filed with the STATE ENGINEER Application No. SD-09498 into RG-6745 et al. to Change Point of Diversion, Place, and Purpose of Use from Surface to Ground Water in the Rio Grande Underground Water Basin of the State of New Mexico.

The co-applicants propose to discontinue the use of 6.8565 acre-feet per annum (AFA) Farm Delivery Requirement and 4.7995 AFA Consumptive Irrigation Requirement (CIR), with a move-from point of diversion at the Los Lunas Acequia, with a point of diversion on the Rio Grande at the Isleta Diversion Works of the MRGCD, located on land owned by the Pueblo of Isleta in the NE ¼ NE ¼ SW ¼ of Section 24, Township 8 North, Range 2 East, NMPM, also described as being located at a point where X=346,037 meters and Y=3,863,880 meters intersect, UTM Zone 13 North, NAD83, Isleta Pueblo Grant, Valencia County, for the irrigation of 2.2855 acres of land owned by T. Scott Edeal and Patricia A. Welk, described as Tract 31A1 on MRGCD Map 69, further described as being within Section 21, Township 7 North, Range 2 East, NMPM, Valencia County, New Mexico. The move-from lands are generally located southeast of the intersection of Trujillo Rd. and the Los Lunas Acequia within Valencia County, New Mexico.

The co-applicants further propose to transfer the described 4.7995 AFA CIR to the City's permitted wells under RG-6745 et al., consisting of 35 existing and proposed system production wells, all located within the City metropolitan area within Sandoval County, for municipal use within the service area of the Rio Rancho municipal water system.

Diversion of water under the City's permit RG-6745 et al. shall not exceed 24,020.16 AFA for domestic, commercial, industrial, housing subdivision, and related purposes within the service area of the City Municipal Water System. No increase in diversion is contemplated by the transfer of water rights under this application. This application is made for the purpose of complying with Permit RG-6745 et al., which requires the City to offset the impacts of groundwater pumping on surface flows of the Rio Grande and its tributaries.

Any person, firm or corporation or other entity having standing to file objections or protests shall do so in writing (objection must be legible, signed, and include the writer's complete name, phone number and mailing address). The objection to the approval of the application must be based on: (1) Impairment; if impairment, you must specifically identify your water rights; and/or (2) Public Welfare/Conservation of Water; if public welfare or conservation of water within the state of New Mexico, you must show how you will be substantially and specifically affected. The written protest must be filed, in triplicate, with the State Engineer, 5550 San Antonio Drive NE, Albuquerque, NM 87109-4127, within ten (10) days after the date of the last publication of this Notice. Facsimiles (faxes) will be accepted as a valid protest as long as the hard copy is hand-delivered or mailed and postmarked within 24-hours of the facsimile. Mailing postmark will be used to validate the 24-hour period. Protests can be faxed to the Office of the State Engineer, (505) 383-4030. If no valid protest or objection is filed, the State Engineer will evaluate the application in accordance with the provisions of Chapter 72 NMSA 1978.

Published in Valencia County News-Bulletin on July 21, 28 & August 4, 2016.

NOTICE OF INTENT TO APPLY FOR PUBLIC TRANSPORTATION FUNDS

Be it known that La Vida Felicidad, Inc. 530 Sun Ranch Village Road, Los Lunas, NM intends to apply for financial assistance under the Federal Transit Administration's 5310 Program, New Mexico Department of Transportation Transit and Rail Division for the approximate amount of $00,000. If awarded, this grant will allow the purchase of two accessible passenger vehicles which in turn allows the provision of transportation for adults with disabilities to and from community events / services and increase mobility for seniors at risk. Transportation services will be offered to adult citizens with disabilities in Valencia County who participate in day services through La Vida Felicidad. Transportation services will be offered to senior citizens who are at risk in Socorro County who participate in the day services thought La Vida Felicidad.

Federal law and state administration procedures require that all transportation providers servicing the area be given a fair and timely opportunity to participate in the planning and provision of proposed transportation services. Comments on the proposed services will be received by August 11, 2016. Comments should be directed in writing to La Vida Felicidad, Inc., Attn: Kathey Phoenix-Doyle, Executive Director, P. O. Box 2040 Los Lunas, NM 87031. If you would like to request a public hearing on this matter, please contact Kathey Phoenix-Doyle at the address shown above, prior to August 11, 2016.

Published in Valencia County News-Bulletin on August 4, 2016.

Pursuant to the New Mexico Storage Lien Act of 1987, Secure Self Storage Inc., 801 Emilio Lopez Rd. NW, Los Lunas, NM 87031 will accept sealed bids August 9, 2016 from 10am to 11am to satisfy Lien on Unit:

F-47 Jessica Camacho & Mal Burson of 518 N. 2nd St., Belen, NM 87002
Contents: Household furniture

Auction may be withdrawn at any time and disposed of as required by law.

Published in Valencia County News-Bulletin on July 28 & August 4, 2016.

STATE OF INDIANA
COUNTY OF MARION

SS:

MARION COUNTY SUPERIOR COURT INDIANAPOLIS, INDIANA

IN THE MATTER OF THE TERMINATION OF THE PARENT-CHILD RELATIONSHIP OF: ISAIAH GRIEGO LOVATO aka ISAIAH LOVATO (Minor child)
And TANYA LOVATO and JUSTIN GRIEGO and Any Unknown Alleged Father (Parents)

Cause Number: 49D09-1604-JT-000260

SUMMONS FOR SERVICE BY PUBLICATION & NOTICE OF TERMINATION OF PARENTAL RIGHTS HEARING

TO: **TANYA LOVATO and Any Unknown Alleged Father**

NOTICE IS HEREBY GIVEN to **TANYA LOVATO**, whose whereabouts are unknown, and who is the alleged mother of **ISAIAH GRIEGO LOVATO aka ISAIAH LOVATO** (date of birth 1/4/2014), as well as Any Unknown Alleged Father whose whereabouts are also unknown, that a Petition for **Involuntary Termination of your Parental Rights** in the above named Child has been filed by the Indiana Department of Child Services, Marion County Office, in the Marion County Superior Court, and

YOU ARE HEREBY COMMANDED TO APPEAR before the Judge of said Court at the Courthouse, Room 12, at the Marion County Juvenile Court, 2451 N. Keystone Ave. in Indianapolis, Indiana, on **OCTOBER 6, 2016 at 1:45 PM** to attend an Initial hearing /Termination hearing and to answer the Petition for Termination of your Parental Rights in said Child and

YOU ARE FURTHER NOTIFIED that if the allegations in said petition are true, and/or if you fail to appear at the hearing, the Juvenile Court may terminate your parent-child relationship; and if the court terminates your parent-child relationship you will lose all parental rights, powers, privileges, immunities, duties and obligations including any rights to custody, control, visitation, or support in said Child; and if the court terminates your parent-child relationship, it will be permanently terminated, and thereafter you may not contest an adoption or other placement of said child, and

YOU ARE ENTITLED TO REPRESENTATION BY AN ATTORNEY, provided by the State if necessary, throughout this proceedings to terminate the parent-child relationship.
YOU MUST RESPOND by appearing in person or by attorney within thirty (30) days after the last publication of this notice, and in the event you fail to do so, an adjudication on said petition and termination of your parental rights may be entered against you without further notice.

THE ATTORNEY REPRESENTING THE INDIANA DEPARTMENT OF CHILD SERVICES is BRANDI-JANAI CARTER, 4150 Keystone Ave., Indianapolis, IN 46205; telephone (317) 968-4300.

Dated this 12th day of JULY 2016

Clerk of Marion County

Published in Valencia County News-Bulletin on July 28, August 4 & 11, 2016.

NOTICE OF AIR QUALITY PERMIT APPLICATION

Public Service Company of New Mexico (PNM) announces its application submittal to the New Mexico Environment Department for a significant revision to NSR Permit No. PSD-5041R1 for the La Luz Energy Center. The expected date of application submittal to the Air Quality Bureau is August 1, 2016.

The exact location of the facility known as, La Luz Energy Center is at latitude 34°, 36', 58.3" N and longitude 106°, 48', 54.0" W. From the intersection of I-25 and Camino Del Llano (exit 191), go west along Camino Del Llano 1.5 miles, turn left (south) onto Harrison Rd. Continue on Harrison Rd 2.2 miles, turn left (east) towards existing substation along unnamed dirt road 0.2 miles to gate. The approximate location of this facility is 3.9 miles southwest of Belen in Valencia County, NM.

The proposed revision consists of designating the facility as a PSD minor source, updating permit conditions, and adding turbine malfunction emissions to the permit. No physical changes are being requested with the revision.
The estimated maximum quantities of any regulated air contaminant will be as follows in pound per hour (pph) and tons per year (tpy) and could change slightly during the course of the Department's review:

Pollutant:	Pounds per hour	Tons per year
Total Suspended Particulates (TSP)	9 pph	50 tpy
PM 10	9 pph	50 tpy
PM 2.5	9 pph	50 tpy
Sulfur Dioxide (SO2)	1 pph	8 tpy
Nitrogen Oxides (NOx)	45 pph	70 tpy
Carbon Monoxide (CO)	45 pph	85 tpy
Volatile Organic Compounds (VOC)	4 pph	22 tpy
Total sum of all Hazardous Air Pollutants (HAPs)	1 pph	8 tpy
Ammonia (NH3)	12 pph	63 tpy
Green House Gas Emissions as Total CO2e	n/a	445,000 tpy

The standard and maximum operating schedules of the facility is 24 hours a day, 7 days a week and a maximum of 52 weeks per year.

The owner and operator of the Facility is: Public Service Company of New Mexico; 2401 Aztec Road, NE, MS Z100, Albuquerque, NM 87107.

If you have any comments about the construction or operation of this facility, and you want your comments to be made as part of the permit review process, you must submit your comments in writing to this address: Permit Programs Manager; New Mexico Environment Department; Air Quality Bureau; 525 Camino de los Marquez, Suite 1; Santa Fe, New Mexico; 87505-1816; (505) 476-4300; 1 800 224-7009; https://www.env.nm.gov/aqb/permit/aqb_draft_permits.html. Other comments and questions may be submitted verbally.

Please refer to the company name and site name, or send a copy of this notice along with your comments, since the Department may have not yet received the permit application. Please include a legible return mailing address with your comments. Once the Department has performed a preliminary review of the application and its air quality impacts, the Department's notice will be published in the legal section of a newspaper circulated near the facility location.

General information about air quality and the permitting process can be found at the Air Quality Bureau's web site. The regulation dealing with public participation in the permit review process is 20.2.72.206 NMAC. This regulation can be found in the "Permits" section of this web site.
Attención
Este es un aviso de la Agencia de Calidad de Aire del Departamento de Medio Ambiente de Nuevo México, acerca de las emisiones producidas por un establecimiento en esta área. Si usted desea información en español, por favor de comunicarse con la oficina de Calidad de Aire al teléfono 505-476-5557.

Section 9.10

Newspaper Display Advertisement

Newspaper Display Advertisement can be found on the next page.

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PM_{10}	9 pph	50 tpy
$PM_{2.5}$	9 pph	50 tpy
Sulfur Dioxide (SO_2)	1 pph	8 tpy
Nitrogen Oxides (NO_x)	45 pph	70 tpy
Carbon Monoxide (CO)	45 pph	85 tpy
Volatile Organic Compounds (VOC)	4 pph	22 tpy
Total sum of all Hazardous Air Pollutants (HAPs)	1 pph	8 tpy
Ammonia (NH_3)	12 pph	63 tpy
Green House Gas Emissions as Total CO_2e	n/a	445,000 tpy

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The owner and operator of the Facility is: Public Service Company of New Mexico; 2401 Aztec Road, NE, MS Z100, Albuquerque, NM 87107.

If you have any comments about the construction or operation of this facility, and you want your comments to be made as part of the permit review process, you must submit your comments in writing to this address: Permit Programs Manager; New Mexico Environment Department; Air Quality Bureau; 525 Camino de los Marquez, Suite 1; Santa Fe, New Mexico; 87505-1816; (505) 476-4300; 1 800 224-7009; https://www.env.nm.gov/aqb/permit/aqb_draft_permits.html. Other comments and questions may be submitted verbally.

Please refer to the company name and site name, or send a copy of this notice along with your comments, since the Department may have not yet received the permit application. Please include a legible return mailing address with your comments. Once the Department has performed a preliminary review of the application and its air quality impacts, the Department's notice will be published in the legal section of a newspaper circulated near the facility location.

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Este es un aviso de la Agencia de Calidad de Aire del Departamento de Medio Ambiente de Nuevo México, acerca de las emisiones producidas por un establecimiento en esta área. Si usted desea información en español, por favor de comunicarse con la oficina de Calidad de Aire al teléfono 505-476-5557.

Airport: Using new runway

from **PAGE 1A**

ment will pay the city in monthly installments of $123,647, for a total of $1,483,758 for a total of 10 years.

Mike Provine, with Mozlen Corbin, the city's engineering firm, said the city has been working with the 58th Special Operations Wing for several years on an agreement, but once the new crosswind runway was completed last year, the talks became more serious.

"We went back and forth a little bit (on the agreement) but the costs remained unchanged," Provine told the council on Monday. "They added clauses about the termination clause, which includes a six month notice."

The Air Force, at any time, can terminate the agreement by giving at least 180 days notice in writing to the city. Provine said there is also language in the agreement that each party can come back to the table and renegotiate.

The most expensive cost to the city, under the agreement, is the Aircraft Rescue and Fire Fighting, which will cost $1,068,500. The city would have to send out a request for proposals and contract out these specific services, which is required by the military. Provine said the 58th Special Operations Wing is currently applying for a waiver for the first year of operation.

Councilor Wayne Gallegos has sat in on meetings with the Air Force and said, "They're anxious to get in here."

Provine said Belen Fire Chief Manny Garcia has also spoken with the wing's commanders and are working on getting training for the local firefighters to help in case of an emergency.

"They offered to set up training with the city fire department to get them familiar with the aircraft they will be using here," Provine said. "There are important aspects of the aircraft and the training will be at no charge and is separate from this agreement."

Councilor David Carter questioned why the city wasn't going to be compensated for the cost of wear and tear of the runway over the next 10 years. Provine answered by saying they tried to add the cost into the agreement, but the Air Force would only pay for the use based on the number of operations they would be doing at the airport.

"We had to substantiate the cost and they were looked over at the Pentagon level," Provine explained. "They did go ahead with most of (the costs). They've added 3 percent for inflation. As maintenance costs go up, costs will go up and that's when you can renegotiate."

The agreement also calls for a regular audit by the Air Force regarding the airport financials in reference to the agreement.

Because an agreement between the city and the 58th Special Operations Wing has yet to be written, it's not clear how often the Air Force will be flying in and out of the airport. Provine did say there has been an environmental assessment completed and said he's under the impression they will be in the Hub City about five nights a week.

"The Air Force will be bringing millions dollars into Belen over the next decade, which gives our airport and the city a huge financial boost," the mayor said. "It creates a partnership between Belen and Kirtland Air Force Base that secures these jobs in New Mexico. It also highlights how critical it is for us to continue investing in our infrastructure.

"When you build for the future, you open up opportunities like this. There are lots of people who contributed to this project over the years, from past mayors and councils to our state legislators. They all deserve recognition for this achievement. Everyone worked together out of a deep respect for our military and a determination to help Belen. We're grateful."

WHITFIELD AWARDS

Submitted photos

THE 2016 WHITFIELD Wildlife Conservation Area Essay winners received their awards at the annual meeting of Friends of Whitfield. Pictured, from left, are Robin VerEecke, volunteer educator; Heaven Walker, third-place winner; Abby Overheim-Brown, second-place winner; and Evelyn Brower, volunteer educator. Not pictured are Giovanna Vanetsky, first-place winner, and honorable mentions, Chloe Blanton, Israel Jacobo Jr., Fabian Trujillo, Emma Martin and Xhaiden Martinez. All students attend Katherine Gallegos Elementary and participated in the fourth-grade environmental education program at Whitfield this year.

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Bosque Farms Community Fair Schedule of Events

Thursday, Aug. 4

6:30-8 p.m.: Pre-register inside exhibits (Cowboy Hall)

Friday, Aug. 5

8 a.m.-noon: Register and submit inside exhibits (Cowboy Hall)
Noon-4 p.m.: Building closed to public
1 p.m.: Judging of inside open exhibits and 4-H exhibits
3:30-5:30 p.m.: Check-in for poultry and rabbit entries (Patio)
4:30-6:30 p.m.: Enter toad races (Patio)
6 p.m.: Poultry and rabbit judging
7 p.m.: Toad races, classes by exhibitor's age or business
8 p.m.: Sheep riding following the toad races

Saturday, Aug. 6

7:30-9:30 a.m.: Car show registration
8 a.m.: Exhibit building open to public
8 a.m.-1 p.m.: Car show
8 a.m.: Parade line up on S. Bosque Loop at Margaret Drive
8:30 a.m.: Parade begins
10 a.m.: Money pit opens
10 a.m.: Fun youth goat shows and exhibits
10:30 a.m.: Foot races, rolling pin throw and other games (Arena)
11 a.m.: Greased pole clime (East of rodeo arena)
11:30 a.m.-1:30 p.m.: Accepting entries for chile contest
11:45 a.m.: Register for horseshoe pitching
Noon: Crowning of royalty (Arena), horseshoe pitching contest and auction (Patio)
12:30 p.m.: Register for dog show (Riley home, 690 Green Acres Lane)
1 p.m.: Judging of the dog show (Riley home, 690 Green Acres Lane)
1 p.m.: "Fair Fun" (Arena)
2 p.m.: Chile contest judging
4-6 p.m.: Building open to pick up entries
5 p.m.: Family awards forms due
6 p.m.: New Mexico Rodeo Association Timed Event Rodeo (Arena)
8-10 p.m.: Family Dance (Cowboy Hall)

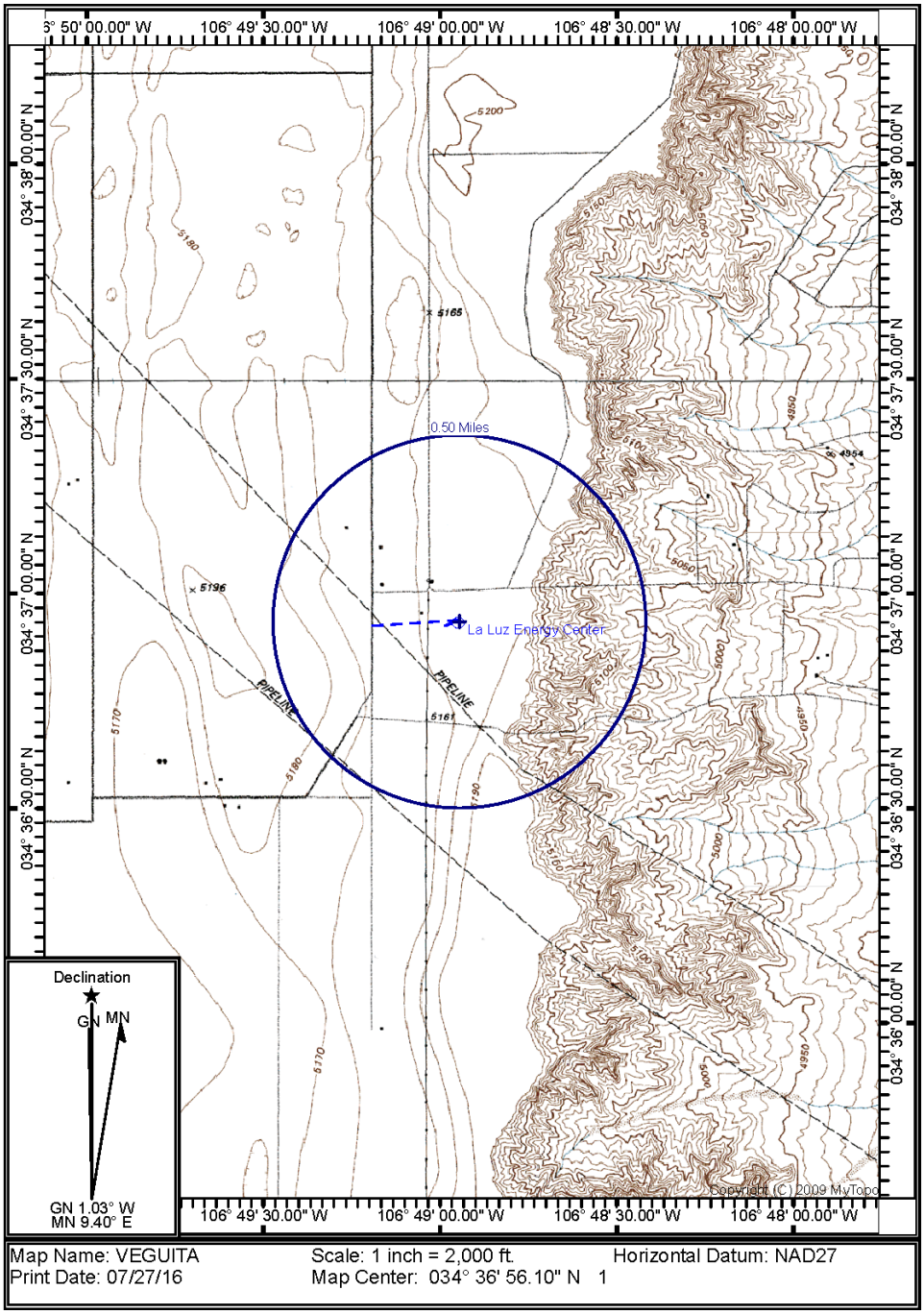
Sunday, Aug. 7

9 a.m.: Youth Timed Event Rodeo (Arena)
11 a.m.: Building open to pick up entries
1 p.m.: White elephant bingo
1 p.m.: Pet parade
2 p.m.: Bake walk
2 p.m.: New Mexico Rodeo Association Timed Event rodeo (Arena)

Section 9.11

Facility Boundary Map

Facility Boundary Map found on the next page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MN 9.40° E
Copyright (C) 2009 MyTopo
Map Name: VEGUITA
Print Date: 07/27/16
Scale: 1 inch = 2,000 ft.
Map Center: 034° 36' 56.10" N 1
Horizontal Datum: NAD27

Section 10

Written Description of the Routine Operations of the Facility

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A written description of the routine operations of the facility. Include a description of how each piece of equipment will be operated, how controls will be used, and the fate of both the products and waste generated. For modifications and/or revisions, explain how the changes will affect the existing process. In a separate paragraph describe the major process bottlenecks that limit production. The purpose of this description is to provide sufficient information about plant operations for the permit writer to determine appropriate emission sources.

The facility is comprised of two GE LM6000 PC Sprint simple-cycle gas turbines fired on Federal Energy Regulatory Commission (FERC) regulated natural gas and producing a nominal 42 megawatts of electricity each, as well as emission control equipment and ancillary equipment. Each turbine is permitted to operate up to 8,760 hours per year including up to 1,000 startups and 1,000 shutdowns per year.

It is conservatively estimated that each turbine needs to startup and shutdown 1,000 times per year. This number of startups and shutdowns is needed to provide morning and afternoon peak power, supplemental power during inclement weather events and to provide quick start capability to support variable electrical output from wind and solar generating stations. Use of these turbines allows decreased usage of other higher emitting resources such as coal-fired facilities.

Unlike most gas turbines, the GE LM6000 is primarily controlled by the compressor discharge temperature in lieu of the turbine inlet temperature. Some of the compressor discharge air is then used to cool high-pressure turbine components. Sprint — which stands for "Spray Inter-cooled Turbine" — reduces compressor discharge temperature, thereby allowing advancement of the throttle to significantly enhance power and improve thermal efficiency.

The GE LM6000 Sprint water injection system is composed of atomized water injection at both low-pressure compressor (LPC) and high-pressure compressor (HPC) inlet plenums. This is accomplished by using a high-pressure compressor, eighth stage bleed air to feed two air manifolds, water-injection manifolds and sets of spray nozzles, where the water droplets are sufficiently atomized before injection at both LPC and HPC inlet plenums.

The control technology for each turbine includes water injection and selective catalytic reduction (SCR) for NO_x emissions. This control technology achieves a 90 percent reduction in NO_x emissions. SCR is a means of converting NO_x, with the aid of a catalyst into diatomic nitrogen (N_2) and water. A gaseous reductant, in this case aqueous ammonia, is added to a stream of flue or exhaust gas and absorbed onto a catalyst. The minimum operating temperature is selected such that no ammonium salts can deposit on the catalyst surface and the maximum temperature is selected to prevent sintering, a process that destroys the pore structure of ceramic catalysts. Typically SCR operating temperatures are in the 800 degrees Fahrenheit (°F) to 1,000 °F range. Each SCR is operated using 19.5 percent aqueous ammonia supplied from a 6,000-gallon storage tank.

The control technology for each turbine also includes an oxidation catalyst for controlling carbon monoxide (CO) and volatile organic carbon (VOC) emissions. The oxidation catalyst promotes the oxidation of CO and hydrocarbon compounds to carbon dioxide and water as the exhaust stream passes through the catalyst bed. The oxidation process takes place spontaneously, so no reactants are required. The catalyst is usually made of a precious metal such as platinum, palladium, or rhodium. This control technology achieves an 85 percent reduction in CO emissions and a 50 percent reduction in VOC emissions.

Inlet air filters are used to clean the air that enters the combustion turbine generator (CTG) to provide the CTG with protection against the effects of contaminated air. Different types of contaminants in the air can cause several types of problems that negatively impact the reliability, availability, and time between overhauls of gas turbine internal components. Some of the consequences of poor inlet filtration are fouling, erosion, and corrosion. Therefore, an inlet air filtration system is used. As a conservative assumption, no reduction in PM emissions is applied as a result of the operation of the inlet air filter.

Aqueous ammonia is stored in two tanks which are supplied by weekly truck deliveries. The ancillary equipment includes pumps, water tanks, wastewater tanks, air compressors, and fin fan coolers. The equipment at the facility described in this application is considered a single stationary source.

Section 11
Source Determination

Source submitting under 20.2.70, 20.2.72, 20.2.73, and 20.2.74 NMAC

Sources applying for a construction permit, PSD permit, or operating permit shall evaluate surrounding and/or associated sources (including those sources directly connected to this source for business reasons) and complete this section. Responses to the following questions shall be consistent with the Air Quality Bureau's permitting guidance, Single Source Determination Guidance, which may be found on the Applications Page in the Permitting Section of the Air Quality Bureau website.

Typically, buildings, structures, installations, or facilities that have the same SIC code, that are under common ownership or control, and that are contiguous or adjacent constitute a single stationary source for 20.2.70, 20.2.72, 20.2.73, and 20.2.74 NMAC applicability purposes. Submission of your analysis of these factors in support of the responses below is optional, unless requested by NMED.

A. Identify the emission sources evaluated in this section (list and describe)**:**

All of the emission sources are listed in Table 2-A of this application.

B. Apply the 3 criteria for determining a single source:

SIC Code: Surrounding or associated sources belong to the same 2-digit industrial grouping (2-digit SIC code) as this facility, OR surrounding or associated sources that belong to different 2-digit SIC codes are support facilities for this source.

☑ **Yes** ☐ **No**

Common Ownership or Control: Surrounding or associated sources are under common ownership or control as this source.

☑ **Yes** ☐ **No**

Contiguous or Adjacent: Surrounding or associated sources are contiguous or adjacent with this source.

☑ **Yes** ☐ **No**

C. Make a determination:

☑ The source, as described in this application, constitutes the entire source for 20.2.70, 20.2.72, 20.2.73, or 20.2.74 NMAC applicability purposes. If in "A" above you evaluated only the source that is the subject of this application, all "**YES**" boxes should be checked. If in "A" above you evaluated other sources as well, you must check **AT LEAST ONE** of the boxes "**NO**" to conclude that the source, as described in the application, is the entire source for 20.2.70, 20.2.72, 20.2.73, and 20.2.74 NMAC applicability purposes.

☐ The source, as described in this application, **does not** constitute the entire source for 20.2.70, 20.2.72, 20.2.73, or 20.2.74 NMAC applicability purposes (A permit may be issued for a portion of a source). The entire source consists of the following facilities or emissions sources (list and describe):

Section 12

Section 12.A
PSD Applicability Determination for All Sources

(Submitting under 20.2.72, 20.2.74 NMAC)

A PSD applicability determination for all sources. For sources applying for a significant permit revision, apply the applicable requirements of 20.2.74.AG and 20.2.74.200 NMAC and to determine whether this facility is a major or minor PSD source, and whether this modification is a major or a minor PSD modification. It may be helpful to refer to the procedures for Determining the Net Emissions Change at a Source as specified by Table A-5 (Page A.45) of the EPA New Source Review Workshop Manual to determine if the revision is subject to PSD review.

A. This facility is:

- ☐ **a minor PSD source before and after this modification (if so, delete C and D below).**
- ☑ **a major PSD source before this modification. This modification will make this a PSD minor source.**
- ☐ **an existing PSD Major Source that has never had a major modification requiring a BACT analysis.**
- ☐ **an existing PSD Major Source that has had a major modification requiring a BACT analysis**
- ☐ **a new PSD Major Source after this modification.**

B. **This facility is not one of the listed 20.2.74.501 Table I – PSD Source Categories.**

La Luz was initially permitted as a PSD major source (PSD-5041R1) based on the facility's calculated GHG emission rates, however, the Supreme Court has vacated the GHG Tailoring rule and ordered the Environmental Protection Agency (EPA) to take steps to rescind previously applicable GHG provisions. EPA followed the court order with a direct final action that delegated federal authority to the state level to rescind PSD permits within their jurisdiction under 40 CFR §52.21 (u). Therefore, La Luz is a minor source for PSD purposes.

Section 13

Discussion Demonstrating Compliance with Each Applicable State & Federal Regulation

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Provide a discussion demonstrating compliance with applicable state & federal regulation. If there is a state or federal regulation (other than those listed here) for your facility's source category that does not apply to your facility, but seems on the surface that it should apply, add the regulation to the appropriate table below and provide the analysis. Examples of regulatory requirements that may or may not apply to your facility include 40 CFR 60 Subpart OOO (crushers), 40 CFR 63 Subpart HHH (HAPs), or 20.2.74 NMAC (PSD major sources). We don't want a discussion of every non-applicable regulation, but if there is questionable applicability, explain why it does not apply. All input cells should be filled in, even if the response is 'No' or 'N/A'.

In the "Justification" column, identify the criteria that are critical to the applicability determination, numbering each. For each unit listed in the "Applies to Unit No(s)" column, after each listed unit, include the number(s) of the criteria that made the regulation applicable. For example, TK-1 & TK-2 would be listed as: TK-1 (1, 3, 4), TK-2 (1, 2, 4). Doing so will provide the applicability criteria for each unit, while also minimizing the length of these tables.

As this table will become part of the SOB, please do not change the any formatting in the table, especially the width of the table.

If this application includes any proposed exemptions from otherwise applicable requirements, provide a narrative explanation of these proposed exemptions. These exemptions are from specific applicable requirements, which are spelled out in the requirements themselves, not exemptions from 20.2.70 NMAC or 20.2.72 NMAC.

Table of Applicable STATE REGULATIONS:

STATE REGU-LATIONS CITATION	Title	Applies to Entire Facility	Applies to Unit No(s).	Federally Enforce-able	Does Not Apply	JUSTIFICATION: Identify the applicability criteria, numbering each (i.e. 1. Post 7/23/84, 2. 75 m^3, 3. VOL)
20.2.1 NMAC	General Provisions	X		Yes		The provisions of this part apply to all parts of this chapter.
20.2.3 NMAC	Ambient Air Quality Standards NMAAQS	X		Yes		20.2.3 NMAC is a SIP approved regulation that limits the maximum allowable concentration of Total Suspended Particulates, Sulfur Compounds, Carbon Monoxide and Nitrogen Dioxide. The facility meets maximum allowable concentrations of the TSP, SO_2, H_2S, NOx, and CO under this regulation.
20.2.7 NMAC	Excess Emissions	X		Yes		This regulation establishes requirements for the facility if operations at the facility result in any excess emissions. The owner or operator will operate the source at the facility having an excess emission, to the extent practicable, including associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions. The facility will also notify the NMED of any excess emission per 20.2.7.110 NMAC.
20.2.33 NMAC	Gas Burning Equipment - Nitrogen Dioxide			Yes	X	This part regulates external combustion sources. This facility does not have an external combustion source, and therefore 20.2.33 NMAC does not apply. (See AQB Procedure Number: 02.005-01, May 31, 2002.)

STATE REGU-LATIONS CITATION	Title	Applies to Entire Facility	Applies to Unit No(s).	Federally Enforce-able	Does Not Apply	JUSTIFICATION: Identify the applicability criteria, numbering each (i.e. 1. Post 7/23/84, 2. 75 m^3, 3. VOL)
20.2.61.109 NMAC	Smoke & Visible Emissions		Units 1 and 2	No		The objective of this part is to establish controls on smoke and visible emissions from certain sources. Units 1 and 2 are stationary combustion equipment and subject to this regulation, specifically a 20% opacity limit for emissions.
20.2.70 NMAC	Operating Permits	X		Yes		This regulation establishes requirements for obtaining an operating permit. This facility is not a Title V major source for criteria pollutants or hazardous air pollutants. This regulation applies because Units 1 and 2 are acid rain sources under 40 CFR 72. PNM will submit a Title V application by December 18, 2016 (12 months after commencement of operation) for La Luz.
20.2.71 NMAC	Operating Permit Fees	X		Yes		This regulation establishes a schedule of operating permit emission fees. This facility is subject to 20.2.70 NMAC and is in turn subject to 20.2.71 NMAC.
20.2.72 NMAC	Construction Permits	X		Yes		The objective of this part is to establish the requirements for obtaining a construction permit. The facility is subject as emissions are greater than 10 lb/hr and 25 tpy of regulated air contaminants for which there are National or New Mexico Ambient Air Quality Standards. The facility is currently permitted under NSR Permit No. PSD-5041R1.
20.2.73 NMAC	NOI & Emissions Inventory Requirements	X		Yes		This regulation establishes emission inventory requirements. The facility meets the applicability requirements of 20.2.73.300 NMAC. The facility will meet any applicable reporting requirements under 20.2.73 NMAC.
20.2.74 NMAC	Permits – PSD			Yes	X	This regulation establishes requirements for obtaining a prevention of significant deterioration permit. This facility does not have emissions greater than the PSD major source thresholds. Accordingly, this regulation does not apply.
20.2.75 NMAC	Construction Permit Fees	X		Yes		This regulation establishes a schedule of operating permit emission fees. The facility is subject to 20.2.72 NMAC and is therefore subject to requirements of this regulation.
20.2.77 NMAC	New Source Performance		Units 1 and 2	Yes		The purpose of this regulation is to establish state authority to implement new source performance standards for stationary sources in New Mexico subject to 40 CFR Part 60. Units 1 and 2 are subject to subparts A, KKKK, and TTTT under 40 CFR Part 60 and are therefore subject to this regulation.
20.2.78 NMAC	Emission Standards for HAPS			Yes	X	The purpose of this regulation is to establish state authority to implement emission standards for hazardous air pollutants in New Mexico subject to 40 CFR Part 61. The facility is not subject to any subparts under 40 CFR Part 61, therefore this regulation does not apply.
20.2.79 NMAC	Permits – Nonattainment Areas			Yes	X	This regulation establishes the requirements for obtaining a nonattainment area permit. The facility is not located in a non-attainment area and therefore is not subject to this regulation.
20.2.80 NMAC	Stack Heights			Yes	X	This regulation establishes requirements for the evaluation of stack heights and other dispersion techniques. This regulation does not apply as all stacks at the facility follow good engineering practice.

STATE REGU-LATIONS CITATION	Title	Applies to Entire Facility	Applies to Unit No(s).	Federally Enforce-able	Does Not Apply	JUSTIFICATION: Identify the applicability criteria, numbering each (i.e. 1. Post 7/23/84, 2. 75 m^3, 3. VOL)
20.2.82 NMAC	MACT Standards for source categories of HAPS			Yes	X	This regulation applies to all sources emitting hazardous air pollutants, which are subject to the requirements of 40 CFR Part 63. The facility is not a major source of HAPs according to the requirements of 40 CFR Part 63 and is not subject to any subparts under 40 CFR Part 63.

Table of Applicable FEDERAL REGULATIONS:

FEDERAL REGU-LATIONS CITATION	Title	Applies to Entire Facility	Applies to Unit No(s).	Federally Enforce-able	Does Not Apply	JUSTIFICATION:
40 CFR 50	NAAQS	X		Yes		This regulation defines national ambient air quality standards. The facility meets all applicable national ambient air quality standards for NOx, CO, SO_2, H_2S, PM_{10}, and $PM_{2.5}$ under this regulation.
NSPS 40 CFR 60, Subpart A	General Provisions		Units 1 and 2	Yes		Applies if any other NSPS subpart applies. Units 1 and 2 are subject to Subparts KKKK and TTTT, therefore Subpart A applies to these units.
NSPS 40 CFR Part 60 Subpart KKKK	Stationary Gas Turbines		Units 1 and 2	Yes		This subpart establishes emission standards for stationary sources. It supersedes Subpart GG and applies to the facility because the units are greater than 10 MMBtu per hour. The facility will be in compliance with the applicable NO_x) and SO_x limits, as well as the monitoring and reporting requirements.
NSPS 40 CFR 60 Subpart TTTT	Standards of Performance for Greenhouse Gas Emissions for Electric Generating Units		Units 1 and 2	Yes		This subpart establishes emission standards for GHG for a stationary combustion turbine. The facility will be permitted to burn only uniform fuel that results in a consistent emission rate of less than 160 lb CO_2/MMBtu, and will maintain purchase records for permitted fuel.
MACT 40 CFR 63, Subpart A	General Provisions			Yes	X	Applies if any other subpart applies. No other Subpart applies, therefore Subpart A does not apply.
MACT 40 CFR 63 Subpart YYYY	National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines			Yes	X	This Subpart establishes emission and operating limitations for HAPs for stationary combustion turbines. These standards apply to stationary combustion turbines that are at a major source of any HAP. The facility is not a major source of any HAP and therefore Subpart YYYY does not apply.
40 CFR 64	**Compliance Assurance Monitoring**			Yes	X	This part regulates a pollutant-specific emissions unit at a major source. The facility is not a major source, therefore these provisions do not apply.

FEDERAL REGU-LATIONS CITATION	Title	Applies to Entire Facility	Applies to Unit No(s).	Federally Enforce-able	Does Not Apply	JUSTIFICATION:
40 CFR 68	**Chemical Accident Prevention**			Yes	X	This part sets forth the requirements concerning the prevention of accidental releases of regulated substances. The facility does not have more than a threshold quantity of a regulated substance in a process, as determined under §68.115, 40 CFR 68, therefore this part does not apply.
Title IV – Acid Rain 40 CFR 72	**Acid Rain**		Units 1 and 2	Yes		This part establishes general provisions and operating permit program requirements for affected sources. The facility is an affected source, therefore 40 CFR 72 applies and will be addressed in conjunction with the Title V application.
Title IV – Acid Rain 40 CFR 73	**Sulfur Dioxide** Allowance Emissions		Units 1 and 2	Yes		This part establishes requirements and procedures for allocation of SO_x emissions allowances. SO_x allowance provisions apply to the facility and will be addressed in conjunction with the Title V application.
40 CFR 75	**Continuous Emission Monitoring**		Units 1 and 2	Yes		This part establishes requirements for monitoring, recordkeeping, and reporting of SO_2, NO_x, and CO_2 emissions, volumetric flow, and opacity data from affected units under the Acid Rain Program. Acid rain provisions apply to the facility, therefore the facility will follow the monitoring, recordkeeping and reporting requirements.

Section 14

Operational Plan to Mitigate Emissions

(Submitting under 20.2.70, 20.2.72, 20.2.74 NMAC)

☐ **Title V Sources** (20.2.70 NMAC)**:** By checking this box and certifying this application the permittee certifies that it has developed an **Operational Plan to Mitigate Emissions During Startups, Shutdowns, and Emergencies** defining the measures to be taken to mitigate source emissions during startups, shutdowns, and emergencies as required by 20.2.70.300.D.5(f) and (g) NMAC. This plan shall be kept on site to be made available to the Department upon request. This plan should not be submitted with this application.

☑ **NSR** (20.2.72 NMAC)**, PSD** (20.2.74 NMAC) **& Nonattainment** (20.2.79 NMAC) **Sources:** By checking this box and certifying this application the permittee certifies that it has developed an **Operational Plan to Mitigate Source Emissions During Malfunction, Startup, or Shutdown** defining the measures to be taken to mitigate source emissions during malfunction, startup, or shutdown as required by 20.2.72.203.A.5 NMAC. This plan shall be kept on site to be made available to the Department upon request. This plan should not be submitted with this application.

☑ **Title V** (20.2.70 NMAC)**, NSR** (20.2.72 NMAC)**, PSD** (20.2.74 NMAC) **& Nonattainment** (20.2.79 NMAC) **Sources:** By checking this box and certifying this application the permittee certifies that it has established and implemented a Plan to Minimize Emissions During Routine or Predictable Startup, Shutdown, and Scheduled Maintenance through work practice standards and good air pollution control practices as required by 20.2.7.14.A and B NMAC. This plan shall be kept on site or at the nearest field office to be made available to the Department upon request. This plan should not be submitted with this application.

The operational plan to mitigate emissions during malfunction, startup, or shutdown, as well as the plan to minimize emissions during routine or predictable startup, shutdown, and scheduled maintenance, has been completed and is available to the Department upon request.

Section 15

Alternative Operating Scenarios

(Submitting under 20.2.70, 20.2.72, 20.2.74 NMAC)

Alternative Operating Scenarios: Provide all information required by the department to define alternative operating scenarios. This includes process, material and product changes; facility emissions information; air pollution control equipment requirements; any applicable requirements; monitoring, recordkeeping, and reporting requirements; and compliance certification requirements. Please ensure applicable Tables in this application are clearly marked to show alternative operating scenario.

No alternate operating scenarios are proposed at this time.

Section 16

Air Dispersion Modeling

1) Minor Source Construction (20.2.72 NMAC) and Prevention of Significant Deterioration (PSD) (20.2.74 NMAC) ambient impact analysis (modeling): Provide an ambient impact analysis as required at 20.2.72.203.A(4) and/or 20.2.74.303 NMAC and as outlined in the Air Quality Bureau's Dispersion Modeling Guidelines found on the Planning Section's modeling website. If air dispersion modeling has been waived for one or more pollutants, attach the AQB Modeling Section modeling waiver approval documentation.
2) SSM Modeling: Applicants must conduct dispersion modeling for the total short term emissions during routine or predictable startup, shutdown, or maintenance (SSM) using realistic worst case scenarios following guidance from the Air Quality Bureau's dispersion modeling section. Refer to "Guidance for Submittal of Startup, Shutdown, Maintenance Emissions in Permit Applications (http://www.env.nm.gov/aqb/permit/app_form.html) for more detailed instructions on SSM emissions modeling requirements.
3) Title V (20.2.70 NMAC) ambient impact analysis: Title V applications must specify the construction permit and/or Title V Permit number(s) for which air quality dispersion modeling was last approved. Facilities that have only a Title V permit, such as landfills and air curtain incinerators, are subject to the same modeling required for preconstruction permits required by 20.2.72 and 20.2.74 NMAC.

What is the purpose of this application?	Enter an X for each purpose that applies
New PSD major source or PSD major modification (20.2.74 NMAC). See #1 above.	
New Minor Source or significant permit revision under 20.2.72 NMAC (20.2.72.219.D NMAC). See #1 above. **Note:** Neither modeling nor a modeling waiver is required for VOC emissions.	X
Reporting existing pollutants that were not previously reported.	
Reporting existing pollutants where the ambient impact is being addressed for the first time.	
Title V application (new, renewal, significant, or minor modification. 20.2.70 NMAC). See #3 above.	
Relocation (20.2.72.202.B.4 or 72.202.D.3.c NMAC)	
Minor Source Technical Permit Revision 20.2.72.219.B.1.d.vi NMAC for like-kind unit replacements.	
Other: i.e. SSM modeling. See #2 above.	
This application does not require modeling since this is a No Permit Required (NPR) application.	
This application does not require modeling since this is a Notice of Intent (NOI) application (20.2.73 NMAC).	
This application does not require modeling according to 20.2.70.7.E(11), 20.2.72.203.A(4), 20.2.74.303, 20.2.79.109.D NMAC and in accordance with the Air Quality Bureau's Modeling Guidelines.	

Check each box that applies:

☑ See attached, approved modeling **waiver for all** pollutants from the facility.

☐ See attached, approved modeling **waiver for some** pollutants from the facility.

☐ Attached in Universal Application Form 4 (UA4) is a **modeling report for all** pollutants from the facility.

☐ Attached in UA4 is a **modeling report for some** pollutants from the facility.

☐ No modeling is required.

New Mexico Environment Department
Air Quality Bureau
Modeling Section
525 Camino de Los Marquez - Suite 1
Santa Fe, NM 87505

Phone: (505) 476-4300
Fax: (505) 476-4375
www.env.nm.gov/aqb/

For Department use only:

Approved by: Sufi Mustafa

Date: 7/20/16

Air Dispersion Modeling Waiver Request Form

This form must be completed and submitted with all air dispersion modeling waiver requests.

If an air permit application requires air dispersion modeling, in some cases the demonstration that ambient air quality standards and Prevention of Significant Deterioration (PSD) increments will not be violated can be satisfied with a discussion of previous modeling. The purpose of this form is to document and streamline requests to certify that previous modeling satisfies all or some of the current modeling requirements. The criteria for requesting and approving modeling waivers is found in the Air Quality Bureau Modeling Guidelines. Typically, only construction permit applications submitted per 20.2.72, 20.2.74, or 20.2.79 NMAC require air dispersion modeling. However, modeling is sometimes also required for a Title V permit application.

A waiver may be requested by e-mailing this completed form in MS Word format to the modeling manager, sufi.mustafa@state.nm.us.

This modeling waiver is not valid if the emission rates in the application are higher than those listed in the approved waiver request.

Section 1 and Table 1: Contact and facility information:

Contact name	Wesley Lyon
E-mail Address:	wlyon@trinityconsultants.com
Phone	505-266-6611
Facility Name	La Luz Energy Center
Air Quality Permit Number(s)	PSD-5041R1
Agency Interest Number (if known)	32274

General Comments: (Add introductory remarks or comments here, including the purpose of and type of permit application.)

Public Service Company of New Mexico (PNM) is submitting this minor source significant revision application pursuant to 20.2.72.219.D.(1)(a) "Construction Permits" New Mexico Administrative Code (NMAC) in order to revise its NSR Permit No. PSD-5041R1 for La Luz Energy Center (La Luz). La Luz is a power generating facility owned and operated by PNM and located approximately 3.9 miles southwest of Belen in Valencia County. The facility is currently permitted for the following equipment:

- Two General Electric (GE) LM6000 PC Sprint simple cycle turbine, natural gas fire
- Water injection system, one per turbine
- Selective catalytic reduction system (SCR), one per turbine
- Oxidation catalyst system, one per turbine
- Inlet air filter, one per turbine
- Atmospheric 6,000 gallon vertical storage tank (for aqueous ammonia, NH_3), one per turbine
- Pumps
- Water tanks

- Wastewater tanks
- Air compressors
- Fin fan coolers

The facility is located at latitude 34°, 36', 58.3" N and longitude -106°, 48', 54.0" W. The facility Universal Transverse Mercator (UTM) coordinates are 333,600 Easting, 3,831,980 Northing, Zone 13, North American Datum (NAD) 83, at an elevation of 5175 feet. The approximate location of this facility is 3.9 miles southwest of the intersection of State Route 314 and State Route 309 in the city of Belen in Valencia County.

PNM proposes four changes to the permit: first, to change the permit to a minor source permit from its incorrect designation as a PSD major source; second, to modify the monitoring and record-keeping requirements for NH_3; third, to modify the NO_x emissions standards; and lastly, to add turbine malfunction emissions for all applicable pollutants.

With the proposed changes, the emission rates of every pollutant at any possible time are not increasing. The additional turbine malfunction emission rates are equal to the currently permitted startup and shutdown emissions which we modeled previously in the applications for the facility's initial NSR Permit No. 5041R1. Malfunction emissions will not occur simultaneously with the permitted steady-state, startup, and or shutdown emissions.

PNM is requesting to waive modeling for all pollutants and averaging periods.

Section 2 – List All Regulated Pollutants from the Entire Facility - Required

In Table 2, below, list all regulated air pollutants emitted from your facility, except for New Mexico Toxic Air Pollutants, which are listed in Table 6 of this form. All pollutants emitted from the facility must be listed regardless if a modeling waiver is requested for that pollutant or if the pollutant emission rate is subject to the proposed permit changes.

Table 2: Air Pollutant summary table (Check all that apply. Include all pollutants emitted by the facility):

Pollutant	Pollutant is not emitted at the facility and modeling or waiver are not required.	Pollutant does not increase in emission rate at any emission unit (based on levels currently in the permit) and stack parameters are unchanged. Modeling or waiver are not required.	Stack parameters or stack location has changed.	Pollutant is new to the permit, but already emitted at the facility.	Pollutant is increased at any emission unit (based on levels currently in the permit).	A modeling waiver is being requested for this pollutant.	Modeling for this pollutant will be included in the permit application.
CO		X				X	
NO_2		X				X	
SO_2		X				X	
TSP		X				X	
PM10		X				X	
PM2.5		X				X	
H_2S	X						
Reduced S	X						
O_3 (PSD only)	X						
Pb	X						

Section 3: Facility wide pollutants, other than NMTAPs, with very low emission rates

The Air Quality Bureau has performed generic modeling to demonstrate that small sources, as listed in Appendix 2 of this form, do not need computer modeling. After comparing the facility's emission rates for various pollutants to Appendix 2, please list in Table 3 the pollutants that do not need to be modeled because of very low emission rates.

Section 3 Comments. (If you are not requesting a waiver for any pollutants based on their low emission rate, then note that here. You do not need to complete the rest of Section 3 or Table 3.)
We are not requesting a waiver for any pollutants based on their low emission rate.

Section 4: Pollutants that have previously been modeled at equal or higher emission rates
List the pollutants and averaging periods in Table 4 for which you are requesting a modeling waiver based on previous modeling for this facility. The previous modeling reports that apply to the pollutant must be submitted with the modeling waiver request. Request previous modeling reports from the Modeling Section of the Air Quality Bureau if you do not have them and believe they exist in the AQB modeling file archive or in the permit folder.

Section 4 Comments. (If you are not asking for a waiver based on previously modeled pollutants, note that here. You do not need to complete the rest of section 4 or table 4.)
All of the pollutants were modeled at equal emission rates to what is being requested with this application.

Table 4[1]: List of previously modeled pollutants (facility-wide emission rates)

Pollutant	Averaging period	Proposed emission rate (pounds/hour)	Previously modeled emission rate (pounds/hour)	Proposed minus modeled emissions (lb/hr)	Modeled percent of standard or increment	Year modeled
CO	1-hr NMAAQS	40.8	40.8	0.0	0.3%	2013
CO	8-hr NMAAQS	40.8	40.8	0.0	0.1%	2013
NO_2	1-hr NAAQS	40.0	40.0	0.0	68.9%	2013
NO_2	24-hr NAAQS	40.0	40.0	0.0	2.0%	2013
NO_2	Annual NMAAQS	40.0	40.0	0.0	18.5%	2013
NO_2	Annual PSD Class II	40.0	40.0	0.0	1.4%	2013
PM_{10}	24-hr NAAQS	8.0	8.0	0.0	18.8%	2013
PM_{10}	24-hr PSD Class II	8.0	8.0	0.0	2.4%	2013

PM_{10}	Annual PSD Class II	8.0	8.0	0.0	0.5%	2013
$PM_{2.5}$	24-hr NAAQS	8.0	8.0	0.0	42.0%	2013
$PM_{2.5}$	Annual NAAQS	8.0	8.0	0.0	45.9%	2013
$PM_{2.5}$	24-hr PSD Class II	8.0	8.0	0.0	56.7%	2013
$PM_{2.5}$	Annual PSD Class II	8.0	8.0	0.0	30.3%	2013
SO_2	1-hr NAAQS	0.8	0.8	0.0	0.3%	2013
SO_2	3-hr NAAQS	0.8	0.8	0.0	0.0%	2013
SO_2	24-hr NMAAQS	0.8	0.8	0.0	0.0%	2013
SO_2	Annual NMAAQS	0.8	0.8	0.0	0.0%	2013
TSP	24-hr NMAAQS	8.0	8.0	0.0	31.9%	2013
TSP	Annual NMAAQS	8.0	8.0	0.0	29.8%	2013

[1]All of the results presented in Table 4 were taken from the NMED's Air Dispersion Modeling Summary for Permit No. 5041, 9/3/2013.

Section 4, Table 5: Questions about previous modeling:

Question	Yes	No
Was AERMOD used to model the facility?	X	
Did previous modeling predict concentrations less than 95% of each air quality standard and PSD increment?	X	
Were all averaging periods modeled that apply to the pollutants listed above?	X	
Were all applicable startup/shutdown/maintenance scenarios modeled?	X	
Did modeling include all sources within 1000 meters of the facility fence line that now exist?	X	
Did modeling include background concentrations at least as high as current background concentrations?	X	
If a source is changing or being replaced, is the following equation true for all pollutants for which the waiver is requested? (Attach calculations if applicable.) $\frac{[(g) \times (h1)] + [(v1)^2/2] + [(c) \times (T1)]}{q1} <= \frac{[(g) \times (h2)] + [(v2)^2/2] + [(c) \times (T2)]}{q2}$ Where g = gravitational constant = 32.2 ft/sec^2 h1 = existing stack height, feet v1 = exhaust velocity, existing source, feet per second c = specific heat of exhaust, 0.28 BTU/lb-degree F T1 = absolute temperature of exhaust, existing source = degree F + 460 q1 = emission rate, existing source, lbs/hour h2 = replacement stack height, feet v2 = exhaust velocity, replacement source, feet per second T2 = absolute temperature of exhaust, replacement source = degree F + 460 q2 = emission rate, replacement source, lbs/hour	N/A	

If you checked "no" for any of the questions, provide an explanation for why you think the previous modeling may still be used to demonstrate compliance with current ambient air quality standards.

N/A

Section 5: Modeling waiver using scaled emission rates and scaled concentrations

We are not scaling previous results.

Section 6: New Mexico Toxic air pollutants – 20.2.72.400 NMAC

We are not requesting a waiver for any NMTAPs.

Section 7: Approval or Disapproval of Modeling Waiver

The AQB air dispersion modeler should list each pollutant for which the modeling waiver is approved, the reasons why, and any other relevant information. If not approved, this area may be used to document that decision.

The facility has been modeled to demonstrate compliance with the ambient air quality standards for the pollutants emitted at the facility Since emission rates increase is not requested for gaseous pollutants, SO2, NO2 and CO; particulate pollutants PM2.5, PM10 and TSP a modeling waiver can be issued.

Appendix 1: Stack Height Release Correction Factor (adapted from 20.2.72.502 NMAC)

Release Height in Meters	Correction Factor
0 to 9.9	1
10 to 19.9	5
20 to 29.9	19
30 to 39.9	41
40 to 49.9	71
50 to 59.9	108
60 to 69.9	152
70 to 79.9	202
80 to 89.9	255
90 to 99.9	317
100 to 109.9	378
110 to 119.9	451
120 to 129.9	533
130 to 139.9	617
140 to 149.9	690
150 to 159.9	781
160 to 169.9	837
170 to 179.9	902
180 to 189.9	1002
190 to 199.9	1066
200 or greater	1161

Appendix 2. Very small emission rate modeling waiver requirements

Modeling is waived if emissions of a pollutant for the entire facility (including haul roads) are below the amount:

Pollutant	If all emissions come from stacks 20 feet or greater in height and there are no horizontal stacks or raincaps (lb/hr)	If not all emissions come from stacks 20 feet or greater in height, or there are horizontal stacks, raincaps, volume, or area sources (lb/hr)
CO	50	2
H_2S (Pecos-Permian Basin)	0.1	0.02
H_2S (Not in Pecos-Permian Basin)	0.01	0.002
Lead	No waiver	No waiver
NO_2	2	0.025
PM2.5	0.3	0.015
PM10	1.0	0.05
TSP	5	0.25
SO_2	2	0.025
Reduced sulfur (Pecos-Permian Basin)	0.033	No waiver
Reduced sulfur (Not in Pecos-Permian Basin)	No waiver	No waiver

Section 17

Compliance Test History

(Submitting under 20.2.70, 20.2.72, 20.2.74 NMAC)

Compliance Test History Table

Unit No.	Test Description	Test Date
1	Tested in accordance with EPA test method 7E for NO_x, EPA test method 10 for CO, and EPA test method 320 for NH_3 as required by NSR permit PSD5041.	11/10/2015

Section 20

Other Relevant Information

Other relevant information. Use this attachment to clarify any part in the application that you think needs explaining. Reference the section, table, column, and/or field. Include any additional text, tables, calculations or clarifying information.

Additionally, the applicant may propose specific permit language for AQB consideration. In the case of a revision to an existing permit, the applicant should provide the old language and the new language in track changes format to highlight the proposed changes. If proposing language for a new facility or language for a new unit, submit the proposed operating condition(s), along with the associated monitoring, recordkeeping, and reporting conditions. In either case, please limit the proposed language to the affected portion of the permit.

A redline version of the original permit is included.

New Mexico
ENVIRONMENT DEPARTMENT

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DEPUTY SECRETARY

AIR QUALITY BUREAU
NEW SOURCE REVIEW PERMIT
Issued under 20.2.72 NMAC

Certified Mail No: ~~7013 2630 0000 9050 9485~~XXXX XXXX XXXX XXXX XXXX
Return Receipt Requested

NSR Permit No:	PSD-5041~~R1~~R2
Facility Name:	La Luz Energy Center
Permittee Name:	Public Service Company of New Mexico (PNM)
Mailing Address:	2401 Aztec Rd NE MS Z100 Albuquerque, NM 87107
TEMPO/IDEA ID No:	32274 - PRN20150001
AIRS No:	350610039
Permitting Action:	~~Administrative~~ Significant Permit Revision
Source Classification:	PSD
Facility Location:	34°36’58.3” N and -106°48’54” W
County:	Valencia
Air Quality Bureau Contact	Joseph Kimbrell
Main AQB Phone No.	(505) 476-4300

Richard L. Goodyear, PE
Bureau Chief
Air Quality Bureau

Date

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PART A FACILITY SPECIFIC REQUIREMENTS

A100 Introduction

A. Public Service Company of New Mexico (PNM) is submitting this minor source NSR permit significant revision application pursuant to 20.2.72.219.D.(1)(a) "Construction Permits" New Mexico Administrative Code (NMAC) in order to revise its NSR Permit No. PSD-5041R1 for La Luz Energy Center (La Luz). La Luz is a power generating facility owned and operated by PNM and located approximately 3.9 miles southwest of Belen in Valencia County.

The facility is located at latitude 34°, 36', 58.3" N and longitude 106°, 48', 54.0" W. The facility Universal Transverse Mercator (UTM) coordinates are 333,600 Easting, 3,831,980 Northing, Zone 13, WGS84, at an elevation of 5,175 feet.

PNM proposes four changes to the permit:

- Change the permit to a minor source from a major source because the facility is no longer PSD
- Modify the record-keeping requirements for NH_3
- Modify the NO_x emissions standards to correctly reflect the requirements of 40 CFR 60 Subpart KKKK
- Add turbine malfunction emissions for all applicable pollutants

~~A. This is a new permit.~~

~~B. The permit is based on a BACT determination, and any change or revision of these limits listed below must be applied for and accompanied by a corresponding re-evaluation of the original BACT determination, meeting all requirements under PSD, including public notice.~~

~~(1) NOx BACT during steady state operations is the use of Selective Catalytic Reduction (SCR) with water injection with an emission limit of 2.5 ppmvd at 15 percent oxygen on a 3-hour average basis.~~

~~(a) Ammonia (NH3) is used in the SCR and ammonia slip emissions are limited to 10 ppm.~~

~~(2) NOx BACT during startups and shutdowns is the limitation of 1,000 startups events and 1,000 shutdown events for each turbine per year. A turbine trip that occurs during startup shall not count against the allowable number of startups, but does~~

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~~count towards annual hours. A trip is normally a sudden unplanned shutdown in this case during startup of the turbine because a startup parameter is outside its operating range.~~

~~(3) BACT analyses for PM, PM_{10}, and $PM_{2.5}$ have been combined since it is assumed that all PM emissions from the turbines are $PM_{2.5}$. BACT is the use of pipeline quality natural gas with a sulfur content limit of 0.75 grains per 100 dscf, good combustion practices including use of an air inlet filter, and a PM, PM_{10}, and $PM_{2.5}$ limit of 4.0 lb/hr based on a 3-hour average basis.~~

~~(4) GHG BACT for the Turbines is the use of new thermally efficient simple-cycle gas turbines combined with good combustion and maintenance practices to maintain optimum efficiency.~~

~~(a) The heat rate limit at full load of 9,750 Btu/kWh HHV gross and the long-term emission limit of 1,403 lbs CO_2/MWh (gross generation) (one-year average) satisfies BACT. The heat rate of 9,750 Btu/kWh HHV represents expected performance and should not be considered a permit limit.~~

~~(5) GHG BACT during startups and shutdowns is startups events are limited to 30 minutes. Shutdown events are limited to 10 minutes and requiring work place practices as described below during SSM events, and 1,000 startups events and 1,000 shutdown events for each turbine per year. The startup and shutdown duration limits constitute BACT for GHG emissions during these periods, because the short startup and shutdown times will increase the overall thermal efficiency of the facility.~~

~~(a) Work place practices to minimize emissions during SSM periods: Conduct startups in "auto mode" in accordance with the manufacturer's recommendations, which are programmed to protect equipment while minimizing emissions.~~

~~(b) Prepare and follow an "Operator's Guide for Minimizing Stack Emissions during Startup, Shutdown and Routine Maintenance" (SSM) based on the equipment manufacturer's recommendations. The facility will review and update the guide as necessary and provide operator training annually.~~

~~(c) Monitor continuously the operation of CTG-1 and -2 for abnormalities and if abnormalities are discovered, take the necessary corrective action.~~

~~(6) GHG BACT for the circuit breakers is the use of enclosed pressure SF_6 circuit breakers with a 10 percent by weight leak detection system.~~

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A101 Permit Duration (expiration)

A. The term of this permit is permanent unless withdrawn or cancelled by the Department.

~~A115~~A102 Facility: Description

A. The La Luz Energy Center will provide capacity for frequent and fast turbine startups needed to compensate for intermittent renewable generation such as wind and solar, as well as to satisfy critical future demand for peaking power, voltage regulation and load-shaping generation in the service area. The function of the facility is to provide power using two General Electric (GE) LM6000 PC Sprint^{TM} simple-cycle gas turbines fired on natural gas and producing a nominal 42 megawatts (MW) of electricity each, as well as control equipment and ancillary equipment. The control technology for each turbine will include water injection and selective catalytic reduction (SCR) with ammonia injection for nitrogen oxide (NOx) emissions; and an oxidation catalyst for carbon monoxide (CO) and volatile organic carbon (VOC) emissions control; and an inlet air filter for particulate matter (PM) emissions. The ancillary equipment will include two atmospheric 6,000-gallon vertical storage tanks for aqueous ammonia (i.e., one for each turbine), as well as pumps, water tanks, wastewater tanks, air compressors, and fin fan coolers. The two units are proposed to be built sequentially.

B. This facility is located approximately 3.9 miles southwest of the intersection of State Route 314 and 309 in the city of Belen in Valencia County.

C. ~~This administrative permit revision consists of correcting typographical errors to permit conditions A105.B, A106.M, A107.C, and A401.C in accordance with 20.2.72.219.A(1)a NMAC~~ This significant permit revision consists of changing the permit to a minor source because the facility is no longer PSD major, modifying the record-keeping requirements of NH_3, modifying the NO_x emissions standards to correctly reflect the requirements of 40 CFR Subpart KKKK, and adding turbine malfunction emissions for all applicable pollutants in accordance with 20.2.72.219.D.(1)(a) NMAC. The description of this modification is for informational purposes only and is not enforceable.

D. Table 102.A and Table 102.B show the total potential emissions from this facility for information only, not an enforceable condition, excluding exempt sources or activities.

Table 102.A: Total Potential Pollutant Emissions from Entire Facility

Pollutant	Emissions (tons per year)
Nitrogen Oxides (NOx)	~~53.7~~63.8
Carbon Monoxide (CO)	~~66.7~~76.7
Sulfur Dioxide (SO_2)	~~3.5~~7.1
Volatile Organic Compounds (VOC) *	~~9.6~~19.6
Total Suspended Particulates (TSP)	~~35.0~~45.0
Particulate Matter less than 10 microns (PM_{10})	~~35.0~~45.0
Particulate Matter less than 2.5 microns ($PM_{2.5}$)	~~35.0~~45.0

Pollutant	Emissions (tons per year)
Carbon Dioxide (equivalent) (CO2e)	~~405,337.3~~405,715

* VOC total includes emissions from combustion sources.
** Totals include emissions from Fugitives and SSM and Malfunction.

Table 102.B: Total Potential HAPS that exceed 1.0 ton per year

Pollutant	Emissions (tons per year)
Ammonia (NH3)(NM-TAP)	~~47.2~~~~57.1~~52.5
Formaldehyde *	~~2.4~~2.5
Total HAPs*,**	~~3.6~~7.1

* HAP emissions are already included in the VOC emission total.
** The total HAP emissions may not agree with the sum of individual HAPs because only individual HAPs greater than 1.0 tons per year are listed here.
*** ** Totals include emissions from Fugitives and SSM and Malfunction.

A103 Facility: Applicable Regulations

A. The permittee shall comply with all applicable sections of the requirements listed in Table 103.A.

Table 103.A: Applicable Requirements

Applicable Requirements	Federally Enforceable	Unit No.
20.2.1 NMAC General Provisions	X	Entire Facility
20.2.3 NMAC Ambient Air Quality Standards	X	Entire Facility
20.2.7 NMAC Excess Emissions	X	Entire Facility
20.2.61 NMAC Smoke and Visible Emissions	X	Turbines 1 and 2
20.2.70 NMAC Operating Permits	X	Entire Facility
20.2.71 NMAC Operating Permit Emission Fees	X	Entire Facility
20.2.72 NMAC Construction Permit	X	Entire Facility
20.2.73 NMAC Notice of Intent and Emissions Inventory Requirements	X	Entire Facility
~~20.2.74 NMAC Permits – Prevention of Significant Deterioration (PSD)~~	~~X~~	~~Entire Facility~~
20.2.75 NMAC Construction Permit Fees	X	Entire Facility
20.2.77 NMAC New Source Performance	X	Turbines 1 and 2
40 CFR 50 National Ambient Air Quality Standards	X	Entire Facility
40 CFR 60, Subpart A, General Provisions	X	Turbines 1 and 2
40 CFR 60, Subpart KKKK	X	Turbines 1 and 2
40 CFR 60, Subpart TTTT	X	Turbines 1 and 2
40 CFR 72, Subpart A Acid Rain Program	X	Turbines 1 and 2
40 CFR 73, Sulfur Dioxide Allowance Emissions	X	Turbines 1 and 2
40 CFR 75, Continuous Emission Monitoring	X	Turbines 1 and 2

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A104 Facility: Regulated Sources

A. Table 104 lists the emission units authorized for this facility. Emission units identified as exempt activities (as defined in 20.2.72.202 NMAC) and/or equipment not regulated pursuant to the Act are not included.

Table 104: Regulated Sources List

Unit No.	Source Description	Make Model	Serial No.	Capacity	Manufacture Date
0001	Turbine	General Electric/ LM6000 Sprint	~~TBD~~191-770	42 MW	~~TBD~~2013
0002	Turbine	General Electric/ LM6000 Sprint	TBD	42 MW	TBD

1. All TBD (to be determined) units must be evaluated for applicability to NSPS and NESHAP requirements.

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A105 Facility: Control Equipment

A. Table 105 lists all the pollution control equipment required for this facility. Each emission point is identified by the same number that was assigned to it in the permit application.

Table 105: Control Equipment List:

Control Equipment Unit No.	Control Description	Pollutant being controlled	Control for Unit Number(s)[1]
1	Water injection, SCR, Oxidation Catalyst, and Good Combustion Practices Including Air inlet Filter	NOx, CO, and PM	0001
2	Water injection, SCR, Oxidation Catalyst, and Good Combustion Practices Including Air inlet Filter	NOx, CO, and PM	0002

1. Control for unit number refers to a unit number from the Regulated Sources List

B. Selective Catalytic Reduction (SCR) System (Units 0001 and 0002)

Requirement: (1) The permittee shall demonstrate the proper operation of the SCR's ammonia injection system. The permittee shall demonstrate compliance with the NH3 emission limits at Condition A106. F and the NOx emission limit at Condition A106.D. (2) PNM must confirm as part of its initial compliance demonstration following the construction of the control equipment authorized by this permit that the controls are designed to meet the applicable ammonia slip limits (10 ppm for SCR).
Monitoring: (1) The permittee shall monitor the total ammonia consumed by the SCR system on an hourly basis. (2) The ammonia injection system shall be inspected on a monthly basis to insure proper operation. (3) The NOx CEMS will be used to demonstrate compliance with the NOx emission limit in Condition A106.D.
Recordkeeping: In accordance with Section B109, record any abnormalities of the ammonia injection System found during the monthly inspections. (1) Maintain a record of the total ammonia consumed on an hourly basis. ~~(2) To demonstrate compliance, records shall be kept of the total ppmv NH3 emissions per hour.~~ 2) The permittee shall maintain a manufacture's specification sheet, equipment manual, or equivalent documentation detailing the control system on the SCR unit which details the recommended unit temperature range to minimize ammonia slip. (3) PNM shall record the initial compliance demonstration.
Reporting: In accordance with Section B110, the permittee shall keep reports of any abnormalities of the ammonia injection system found during the monthly inspections and shall contain the amount of total ammonia consumed for the six-month period.

C. Oxidation Catalyst System (Units 0001 and 0002)

Requirement: The permittee shall demonstrate the proper operation of the Oxidation Catalyst system. The permittee shall demonstrate compliance with the CO emission limits at Condition A106.I. The permittee shall install and operate a CO CEMS.
Monitoring: The permittee shall perform monthly inspections of Oxidation Catalyst System.
Recordkeeping: In accordance with Section B109, record any abnormalities of the Oxidation Catalyst System found during the monthly inspections.
Reporting: In accordance with Section B110, the permittee shall keep reports of any abnormalities of the Oxidation Catalyst system found during the monthly inspections for the six-month period.

A106 Facility: Allowable Emissions

A. The following Section lists the emission units and their allowable emission limits. (40 CFR 50, 40 CFR 60, Subparts A and KKKK, 20.2.72.210.A and B.1 NMAC).

Table 106.A: Allowable Emissions

Unit No.	NO_x[1] pph	NO_x[1] tpy	CO pph	CO tpy	VOC pph	VOC tpy	SO_2 pph	SO_2 tpy	TSP pph	TSP tpy	PM_{10} pph	PM_{10} tpy	$PM_{2.5}$ pph	$PM_{2.5}$ tpy
0001	3.6	12.3	5.3	18.0	1.0	3.4	0.4	1.8	4.0	~~17.5~~1 3.5	4.0	~~17.5~~1 3.5	4.0	~~17.5~~1 3.5
0002	3.6	12.3	5.3	18.0	1.0	3.4	0.4	1.8	4.0	~~17.5~~1 3.5	4.0	~~17.5~~1 3.5	4.0	~~17.5~~1 3.5
[3]SSM 1-Startup	20.0	10.0	20.4	10.2	1.5	0.75	0.4	0.2	4.0	2.0	4.0	2.0	4.0	2.0
SSM 1-Shutdown	9.1	4.6	10.3	5.15	1.2	0.60	0.4	0.2	4.0	2.0	4.0	2.0	4.0	2.0
SSM 2-Startup	20.0	10.0	20.4	10.2	1.5	0.75	0.4	0.2	4.0	2.0	4.0	2.0	4.0	2.0
SSM 2-Shutdown	9.1	4.6	10.3	5.15	1.2	0.60	0.4	0.2	4.0	2.0	4.0	2.0	4.0	2.0
Malfunction 1	20.0	5.0	20.4	5.0	1.5	5.0	0.4	1.8	4.0	5.0	4.0	5.0	4.0	5.0
Malfunction 2	20.0	5.0	20.4	5.0	1.5	5.0	0.4	1.8	4.0	5.0	4.0	5.0	4.0	5.0
Total[2]		~~53.76~~ 3.8		~~66.76~~ 3.8		~~9.619~~ .6		~~3.57.~~ 1		~~35.04~~ 5.0		~~35.04~~ 5.0		~~45.03~~ 5.0

1 Nitrogen dioxide emissions include all oxides of nitrogen expressed as NO_2

2 Totals are for information and are not enforceable conditions.

3 The SSM values listed above are total emissions during the startup or shutdown hours. The TPY were calculated based on 1,000 startup events, 1,000 shutdown events, and 6,760 normal operating hours. The listed SSM lbs/hr values are the total expected for each startup or shutdown hour, NOT the "additional" SSM emissions. Maximum total facility annual emissions are the sum of the normal and SSM operations. Maximum lb/hr emission rates are different for normal and SSM periods. The NOx and CO SSM emissions shall be monitored using CEMS during the entire startup or shutdown hours

4 All tons per year limits are based on rolling 12-month totals. Maximum total facility annual emissions are the sum of the normal and SSM and Malfunction operations.

5 TSP includes both filterable and condensable PM and therefore TSP = PM_{10} = $PM_{2.5}$.

B. Units 0001 and 0002, sulfur dioxide emissions shall not exceed 0.06 lb/MMBtu, and the natural gas fuel burned shall not contain total sulfur in excess of 20 grains per 100 standard cubic feet to be exempt from the total sulfur content of fuel monitoring requirement. (40 CFR 60, Subpart KKKK)

~~C. Units 0001 and 0002, nitrogen dioxide emissions shall not exceed 25 ppmv at 15 percent oxygen and on a dry basis. (40 CFR 60, Subpart KKKK)~~

C. For purposes of 40 CFR, Subpart KKKK, NOx emissions from each turbine shall not exceed the following:

a. Except as provided for below, NOx emissions shall not exceed 25 ppm at 15% O2.

b. When operating at less than 75% of the peak load, NOx emissions shall not exceed 96 ppm at 15% O2.

c. When operating at temperatures less than 0 degrees F, NOx emissions shall not exceed 96 ppm at 15% O2.

d. For operating periods during which multiple emissions standards apply, the applicable standard is the average of the applicable standards during each hour. For hours with multiple emissions standards, the applicable limit for that hour is determined based on the condition that corresponded to the highest emissions standards (40 CFR 60, Subpart KKKK, 60.4380(b)(3)).

~~D. Units 0001 and 0002, during steady state operations, nitrogen dioxide emissions shall not exceed 2.5 ppmv at 15 percent oxygen and on a dry basis and on a 43-hour average. (BACT)~~

~~E.~~D. Units 0001 and 0002, during startup and shutdown operations, nitrogen dioxide emissions shall not exceed: Startup: 20.0 pounds of NOx per turbine per hour, and Shutdown: 9.1 pounds of NOx per turbine per hour. ~~(BACT)~~

~~F.~~E. Ammonia (NH3) is used in the SCR and ammonia slip emissions are limited to 10 ppm.

~~G.~~F. ~~GHG BACT~~ Control technology for the Turbines is the use of new thermally efficient simple-cycle gas turbines combined with good combustion and maintenance practices to maintain optimum efficiency.

a. The heat rate limit at full load ~~of~~ is ~~9,750~~ 3,413 Btu/kWh HHV gross and the long-term emission limit ~~of~~ is ~~1,403~~120 lb/MMBtu~~s~~ CO_2 ~~/MWh~~ (gross generation) (one-year average) ~~satisfies BACT~~. The heat rate of 3,413 ~~9,750~~ Btu/kWh HHV represents expected performance and should not be considered a permit limit.

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~~H.~~G. ~~GHG BACT for t~~The circuit breakers are ~~is the use of~~ enclosed-pressure SF_6 circuit breakers with a 10 percent by weight leak detection system.

~~I. Units 0001 and 0002, during normal operations, CO emissions shall not exceed 6 ppmv at 15 percent oxygen and on a dry basis.~~

~~J.~~H. CO CEMS and/or Test results that demonstrate compliance with the CO emission limits shall also be considered to demonstrate compliance with the VOC emission limits.

~~K.~~I. Units 0001 and 0002, during startup and shutdown operations, CO emissions shall not exceed Startup: 20.4 pounds of CO per turbine per hour and Shutdown: 10.3 pounds of CO per turbine per hour.

~~L.~~J. Units 0001 and 0002 shall combust only pipeline quality natural gas with a sulfur content limit of 0.75 grains per 100 dscf and be operated using good combustion practices including use of an air inlet filter.

~~M. Units 0001 and 0002, PM, PM_{10}, and $PM_{2.5}$ emissions shall not exceed 4.0 lb/hr based on a 3~~4 ~~hour average basis. This limit represents the expected PM emissions based on the engineering design of this specific model (GE LM6000) of natural gas fired turbine. (BACT)~~

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~~N.~~K. Startup event is defined as the period beginning with ignition and ending 30 minutes later when the SCR and Oxidation catalyst beds reach full operating temperature. A startup hour is any hour in which a startup event occurs.

~~O.~~L. Shutdown event is defined as the 10 minute period preceding the moment the automatic shutdown sequence in initiated until fuel flow to the turbine ceases. A shutdown hour is any hour in which a shutdown event occurs.

~~P.~~M. Normal operation is defined as any period when the turbine is in operation but not in startup or shutdown. A normal operation hour is defined as any hour in which the turbine is in operation but a startup or shutdown event is not occurring.

A107 Facility: Allowable Startup, Shutdown, & Maintenance (SSM)

A. The maximum allowable SSM emission limits for this facility are listed in Table 106.A and were relied upon by the Department to determine compliance with applicable regulations.

B. The authorization of emission limits for startup, shutdown, and maintenance, does not supersede the requirements to minimize emissions according to General Conditions B101.F and B107.A.

C. SSM Emissions

Requirement: (1) Startups and shutdowns will be limited to 1,000 startup events and 1,000 shutdown events per turbine per year. A turbine trip during startup shall not count against the number of allowable startups. (2) The permittee shall monitor and record the date, time, duration, and CEMS-generated emissions of NOx, CO, and O_2 percentage for each startup and shutdown hour. The record shall include the calculated hourly NOx and CO emissions rates in lb/hr, averaged over each startup and shutdown for compliance with the SSM emission limits in Table 106.A. (3) ~~For GHG BACT during~~ During startups and shutdowns: startups are limited to 30 minutes; shutdowns are limited to 10 minutes. ~~The startup and shutdown duration limits constitute BACT for GHG emissions during these periods, because t~~The short startup and shutdown times will increase the overall thermal efficiency of the facility.
Monitoring: The permittee shall monitor the permitted routine and predictable startups and shutdowns and scheduled maintenance events.
Recordkeeping: (1) To demonstrate compliance, records shall be kept of the monthly sum of total NOx and CO emissions during the first 12 months and, thereafter of the monthly rolling 12 month total of NOx and CO emissions. (2) To demonstrate compliance, records shall be kept of the monthly sum total time in hours for startups and shutdowns per turbine during the first 12 months and, thereafter of the monthly rolling 12 month total time in hours for startups and shutdowns per turbine. The permittee shall record the demonstrated compliance in accordance with Condition B109.
Reporting: The permittee shall report in accordance with Section B110.

A108 Facility: Allowable Operations

A. This facility is authorized for continuous operation. No monitoring, recordkeeping, and reporting are required to demonstrate compliance with continuous hours of operation.

A109 Facility: Reporting Schedules

A. Monitoring and Reporting schedules shall be based on the commencement of operations per the phased construction proposed in the application. This phased construction shall be in accordance with 20.2.74.300 NMAC.

(1) Unit 0001 projected date of commercial operation is March 2016.

(2) Unit 0002 projected date of commercial operation is April 2019.

A110 Facility: Fuel Sulfur Requirements –Not Required

A111 Facility: 20.2.61 NMAC Opacity

A. 20.2.61 NMAC Opacity Limit (Units 0001 and 0002)

Requirement: Visible emissions from all stationary combustion emission stacks shall not equal or exceed an opacity of 20 percent.
Monitoring: Use of natural gas fuel constitutes compliance with 20.2.61 NMAC unless opacity equals or exceeds 20% averaged over a 10-minute period. When any visible emissions are observed during steady state operation, opacity shall be measured over a 10-minute period, in accordance with the procedures at 40 CFR 60, Appendix A, Method 9 as required by 20.2.61.114 NMAC
Recordkeeping: The permittee shall record dates of any opacity measures and the corresponding opacity readings.
Reporting: The permittee shall report in accordance with Section B110.

A112 Facility: Haul Roads – Not Required

EQUIPMENT SPECIFIC REQUIREMENTS

OIL AND GAS INDUSTRY

A200 Oil and Gas Industry – Not Required

CONSTRUCTION INDUSTRY - NOT REQUIRED

A300 Construction Industry - Not required

POWER GENERATION INDUSTRY

A400 Power Generation Industry

A. This section has common equipment related to most Electric Service Operations (SIC-4911).

A401 Turbines

A. Initial Compliance Test (Units 0001 and 0002)

Requirement: The permittee shall demonstrate compliance with the allowable emission limits in Table 106.A.

Monitoring: The permittee shall perform an initial compliance test in accordance with the General Testing Requirements of Section B111. Emission testing is required for NOx, CO, VOC and O_2. Test results that demonstrate compliance with the CO emission limits shall also be considered to demonstrate compliance with the VOC emission limits. The monitoring exemptions of Section B108 do not apply to this requirement.
Recordkeeping: The permittee shall maintain records in accordance with applicable Sections in B109, B110, and B111.
Reporting: The permittee shall report in accordance with the applicable Sections in B109, B110, and B111.

B. 40 CFR 60, Subpart KKKK (Units 0001 and 0002)

Requirement The units are ~~is~~ subject to 40 CFR 60, Subpart KKKK and the permittee shall comply with the applicable requirements of 40 CFR 60, Subpart A and Subpart KKKK.
Monitoring: The permittee shall comply with all applicable monitoring and testing requirements, including but not limited to 40 CFR 60.4333.
Recordkeeping: The permittee shall comply with all applicable recordkeeping requirements, including but not limited to 40 CFR 60.7.
Reporting: The permittee shall comply with all applicable reporting requirements, including but not limited to 40 CFR 60.4375, 60.4395, and 60.7.

C. CEMS (Units 0001 and 0002)

Requirement: (1) The NO_x and O_2 or CO_2 CEMS shall be designed, installed and certified in accordance with 40 CFR 75. (2) A continuous emissions monitoring system (CEMS) meeting the requirements of 40 CFR 75 and 40 CFR 60.13, Monitoring Requirements shall be operated to periodically measure the oxides of nitrogen (NOx) and oxygen (O_2) or CO_2 concentrations (ppmv) in the exhaust gas of each turbine. The CEMS shall be located downstream of the SCR catalyst. A CEMS meeting the requirements of 40 CFR 75 will be presumed to meet the requirements of 40 CFR 60. In addition, the CEMS shall measure CO concentrations (ppmv) and temperature in the exhaust gas of the turbine downstream of the turbine and SCR catalyst.
Monitoring: (1) The CEMS shall obtain a reading of the NO_x, CO, and O_2 concentrations at least once every fifteen (15) minutes from the combustion turbine exhaust. For time periods outside of compliance testing, EPA Method 19 shall be used to determine exhaust flow. During compliance testing, a flow measurement device shall be in the turbine duct downstream of the turbine or SCR catalyst to accurately measure the exhaust flow at various load rates. This shall be achieved by: a pitot tube, or multiple pitot tubes as necessary, or an equivalent flow measurement device. (2) The output of the CEMS shall be (1) in ppmv of NO_x (dry standard conditions), CO (dry standard conditions), and O_2 or CO_2 at actual stack conditions, (2) in ppmv of NO_x and CO

corrected to 15% oxygen on a dry basis, and (3) in pph of NO_x and CO. (3) The permittee shall recalibrate any CEMS after any maintenance activity that could affect the system calibration and shall re-certify as required by and within the time periods specified by 40 CFR 75.20(b) whenever the permittee makes a replacement, modification, or change that may significantly affect the ability of the system to accurately measure or record emissions. (4) Per 40 CFR 60.47a(c)(2), the certification of the NO_X, and O_2 monitors shall be carried out in accordance with 40 CFR 75, Appendix A. The CO monitor in accordance with 40 CFR 60, Appendix B, Spec 4.
Recordkeeping: The permittee shall maintain records in accordance with 40 CFR 75 and 40 CFR 60.
Reporting: The permittee shall comply with the reporting requirements of 40 CFR 60.7. (1) All CEMS shall be subject to 40 CFR 60.7, notification and record keeping. (2) The NO_x (as NO_2) and CO readings from the CEMS identified in parts per million by volume (on a dry basis corrected to 15% O_2) and pounds per hour; and the rolling 365 day total for NO_x and CO emissions from each turbine (in tons per year).

D. CEMS Data Capture (Units 0001 and 0002)

Requirement: (1) Each turbine and the SCR system shall be equipped with a NO_x, CO, and O_2 or CO_2 CEMS. The CEMS shall be installed and maintained according to manufacturer's requirements. (2) The CO CEMS(s) shall be designed, installed and certified in accordance with the provisions of 40 CFR 60, Appendix B, Performance Specification 4A – Specification and Test Procedure for Carbon Monoxide Continuous Emissions Monitoring Systems in Stationary Sources. Following certification testing, the CO CEMS shall be operated in accordance with the provisions of 40 CFR 60, Subpart A, Section 60.13 and the provisions of 40 CFR 60, Appendix F – Quality Assurance Requirements for Continuous Emissions Monitoring Systems.
Monitoring: All required continuous emissions monitoring equipment shall have a minimum data capture rate of ninety percent (90%) per calendar month. The data capture rate is defined as the amount of time the equipment generates the required data divided by the time the unit is in operation. The 10% non-capture residual is intended for periods of malfunction, calibration, or adjustment.
Recordkeeping: In accordance with Section B109 of this permit, the permittee shall also maintain records of CEMS and performance test measurements, all CEMS performance evaluations, all CEMS calibration checks, and all adjustment and maintenance of the CEMS.
Reporting: In accordance with Section B110 the permittee shall keep summaries of any certifications, malfunctions, calibrations, and data capture records. Also include a summary table of the data capture rate of all required continuous monitoring equipment on each Combustion Turbine for each calendar month during the reporting period. If the data capture rate for the month is below the minimum level of 90%, the permittee shall identify in the summary table whether the data capture rate was influenced by low operating time and show that operating time.

E. Acid Rain Fuel Consumption Requirement (Units 0001 and 0002)

Requirement: A natural gas fuel flow monitor or equivalent measuring device, shall be installed on each turbine and meet the initial certification requirements of 40 CFR 75 Appendix D 2.1.5, and the quality assurance requirements of 40 CFR 75 Appendix D 2.1.6.
Monitoring: A fuel flow monitor shall be installed to monitor and record the fuel consumption of each turbine. The fuel flow monitor shall be certified as required by 40 CFR 75.
Recordkeeping: In accordance with Section B109, the permittee shall maintain records of the total volumetric flow of natural gas consumed by each turbine on daily, monthly, and 12-month rolling total basis (calculated once per month).
Reporting: In accordance with Section B110, the permittee shall keep reports of the fuel flow meter certification, the total volumetric flow of natural gas consumed by each turbine.

PART B GENERAL CONDITIONS

B100 Introduction

A. The Department has reviewed the permit application for the proposed construction/modification/revision and has determined that the provisions of the Act and ambient air quality standards will be met. Conditions have been imposed in this permit to assure continued compliance. 20.2.72.210.D NMAC, states that any term or condition imposed by the Department on a permit is enforceable to the same extent as a regulation of the Environmental Improvement Board.

B101 Legal

A. The contents of a permit application specifically identified by the Department shall become the terms and conditions of the permit or permit revision. Unless modified by conditions of this permit, the permittee shall construct or modify and operate the Facility in accordance with all representations of the application and supplemental submittals that the Department relied upon to determine compliance with applicable regulations and ambient air quality standards. If the Department relied on air quality modeling to issue this permit, any change in the parameters used for this modeling shall be submitted to the Department for review. Upon the Department's request, the permittee shall submit additional modeling for review by the Department. Results of that review may require a permit modification. (20.2.72.210.A NMAC)

B. Any future physical changes, changes in the method of operation or changes in the restricted area may constitute a modification as defined by 20.2.72 NMAC, Construction Permits. Unless the source or activity is exempt under 20.2.72.202 NMAC, no modification shall begin prior to issuance of a permit. (20.2.72 NMAC Sections 200.A.2 and E, and 210.B.4)

C. Changes in plans, specifications, and other representations stated in the application documents shall not be made if they cause a change in the method of control of emissions or in the character of emissions, will increase the discharge of emissions or affect modeling results. Any such proposed changes shall be submitted as a revision or modification. (20.2.72 NMAC Sections 200.A.2 and E, and 210.B.4)

D. The permittee shall establish and maintain the property's Restricted Area as identified in plot plan submitted with the application. (20.2.72 NMAC Sections 200.A.2 and E, and 210.B.4)

E. Applications for permit revisions and modifications shall be submitted to:

Program Manager, Permits Section
New Mexico Environment Department

Air Quality Bureau
525 Camino de los Marquez, Suite 1
Santa Fe, New Mexico 87505-1816

F. At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate the source including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. (20.2.7.109, 20.2.72.210.A, 20.2.72.210.B, 20.2.72.210.C, 20.2.72.210.E NMAC) The establishment of allowable malfunction emission limits does not supersede this requirement.

B102 Authority

A. This permit is issued pursuant to the Air Quality Control Act (Act) and regulations adopted pursuant to the Act including Title 20, Chapter 2, Part 72 of the New Mexico Administrative Code (NMAC), (20.2.72 NMAC), Construction Permits and is enforceable pursuant to the Act and the air quality control regulations applicable to this source.

B. The Department is the Administrator for 40 CFR Parts 60, 61, and 63 pursuant to the delegation and exceptions of Section 10 of 20.2.77 NMAC (NSPS), 20.2.78 NMAC (NESHAP), and 20.2.82 NMAC (MACT).

B103 Annual Fee

A. The Department will assess an annual fee for this Facility. The regulation 20.2.75 NMAC set the fee amount at $1,500 through 2004 and requires it to be adjusted annually for the Consumer Price Index on January 1. The current fee amount is available by contacting the Department or can be found on the Department's website. The AQB will invoice the permittee for the annual fee amount at the beginning of each calendar year. This fee does not apply to sources which are assessed an annual fee in accordance with 20.2.71 NMAC. For sources that satisfy the definition of "small business" in 20.2.75.7.F NMAC, this annual fee will be divided by two. (20.2.75.11 NMAC)

B. All fees shall be remitted in the form of a corporate check, certified check, or money order made payable to the "NM Environment Department, AQB" mailed to the address shown on the invoice and shall be accompanied by the remittance slip attached to the invoice.

B104 Appeal Procedures

A. Any person who participated in a permitting action before the Department and who is adversely affected by such permitting action, may file a petition for hearing before the Environmental Improvement Board. The petition shall be made in writing to the Environmental Improvement Board within thirty (30) days from the date notice is given of the Department's action and shall specify the portions of the permitting action to which the petitioner objects, certify that a copy of the petition has been mailed or hand-delivered and attach a copy of the permitting action for which review is sought. Unless a timely request for hearing is made, the decision of the Department shall be final. The petition shall be copied simultaneously to the Department upon receipt of the appeal notice. If the petitioner is not the applicant or permittee, the petitioner shall mail or hand-deliver a copy of the petition to the applicant or permittee. The Department shall certify the administrative record to the board. Petitions for a hearing shall be sent to: (20.2.72.207.F NMAC)

Secretary, New Mexico Environmental Improvement Board
1190 St. Francis Drive, Runnels Bldg. Rm. N2153
Santa Fe, New Mexico 87502

B105 Submittal of Reports and Certifications

A. Stack Test Protocols and Stack Test Reports shall be submitted electronically to Stacktest.AQB@state.nm.us or as directed by the Department.

B. Excess Emission Reports shall be submitted as directed by the Department. (20.2.7.110 NMAC)

C. Regularly scheduled reports shall be submitted to:

Manager, Compliance and Enforcement Section
New Mexico Environment Department
Air Quality Bureau
525 Camino de los Marquez, Suite 1
Santa Fe, New Mexico 87505-1816

B106 NSPS and/or MACT Startup, Shutdown, and Malfunction Operations

A. If a facility is subject to a NSPS standard in 40 CFR 60, each owner or operator that installs and operates a continuous monitoring device required by a NSPS regulation shall comply with the excess emissions reporting requirements in accordance with 40 CFR 60.7(c), unless specifically exempted in the applicable subpart.

B. If a facility is subject to a NSPS standard in 40 CFR 60, then in accordance with 40 CFR 60.8(c), emissions in excess of the level of the applicable emission limit during

periods of startup, shutdown, and malfunction shall not be considered a violation of the applicable emission limit unless otherwise specified in the applicable standard.

C. If a facility is subject to a MACT standard in 40 CFR 63, then the facility is subject to the requirement for a Startup, Shutdown and Malfunction Plan (SSM) under 40 CFR 63.6(e)(3), unless specifically exempted in the applicable subpart.

B107 Startup, Shutdown, and Maintenance Operations

A. The establishment of permitted startup, shutdown, and maintenance (SSM) emission limits does not supersede the requirements of 20.2.7.14.A NMAC. Except for operations or equipment subject to Condition B106, the permittee shall establish and implement a plan to minimize emissions during routine or predictable start up, shut down, and scheduled maintenance (SSM work practice plan) and shall operate in accordance with the procedures set forth in the plan. (SSM work practice plan) (20.2.7.14.A NMAC)

B108 General Monitoring Requirements

A. These requirements do not supersede or relax requirements of federal regulations.

B. The following monitoring requirements shall be used to determine compliance with applicable requirements and emission limits. Any sampling, whether by portable analyzer or EPA reference method, that measures an emission rate over the applicable averaging period greater than an emission limit in this permit constitutes noncompliance with this permit. The Department may require, at its discretion, additional tests pursuant to EPA Reference Methods at any time, including when sampling by portable analyzer measures an emission rate greater than an emission limit in this permit; but such requirement shall not be construed as a determination that the sampling by portable analyzer does not establish noncompliance with this permit and shall not stay enforcement of such noncompliance based on the sampling by portable analyzer.

C. If the emission unit is shutdown at the time when periodic monitoring is due to be accomplished, the permittee is not required to restart the unit for the sole purpose of performing the monitoring. Using electronic or written mail, the permittee shall notify the Department's Compliance and Enforcement Section of a delay in emission tests prior to the deadline for accomplishing the tests. Upon recommencing operation, the permittee shall submit any pertinent pre-test notification requirements set forth in the current version of the Department's Standard Operating Procedures For Use Of Portable Analyzers in Performance Test, and shall accomplish the monitoring.

D. The requirement for monitoring during any monitoring period is based on the percentage of time that the unit has operated. However, to invoke the monitoring period exemption at B108.D(2), hours of operation shall be monitored and recorded.

(1) If the emission unit has operated for more than 25% of a monitoring period, then the permittee shall conduct monitoring during that period.

(2) If the emission unit has operated for 25% or less of a monitoring period then the monitoring is not required. After two successive periods without monitoring, the permittee shall conduct monitoring during the next period regardless of the time operated during that period, except that for any monitoring period in which a unit has operated for less than 10% of the monitoring period, the period will not be considered as one of the two successive periods.

(3) If invoking the monitoring **period** exemption in B108.D(2), the actual operating time of a unit shall not exceed the monitoring period required by this permit before the required monitoring is performed. For example, if the monitoring period is annual, the operating hours of the unit shall not exceed 8760 hours before monitoring is conducted. Regardless of the time that a unit actually operates, a minimum of one of each type of monitoring activity shall be conducted during any five-year period.

E. For all periodic monitoring events, except when a federal or state regulation is more stringent, three test runs shall be conducted at 90% or greater of the unit's capacity as stated in this permit, or in the permit application if not in the permit, and at additional loads when requested by the Department. If the 90% capacity cannot be achieved, the monitoring will be conducted at the maximum achievable load under prevailing operating conditions except when a federal or state regulation requires more restrictive test conditions. The load and the parameters used to calculate it shall be recorded to document operating conditions and shall be included with the monitoring report.

F. When requested by the Department, the permittee shall provide schedules of testing and monitoring activities. Compliance tests from previous NSR and Title V permits may be re-imposed if it is deemed necessary by the Department to determine whether the source is in compliance with applicable regulations or permit conditions.

G. If monitoring is new or is in addition to monitoring imposed by an existing applicable requirement, it shall become effective 120 days after the date of permit issuance. For emission units that have not commenced operation, the associated new or additional monitoring shall not apply until 120 days after the units commence operation. All pre-existing monitoring requirements incorporated in this permit shall continue to apply from the date of permit issuance.

B109 General Recordkeeping Requirements

A. The permittee shall maintain records to assure and verify compliance with the terms and conditions of this permit and any other applicable requirements that become effective after permit issuance. The minimum information to be included in these records is:

(1) equipment identification (include make, model and serial number for all tested equipment and emission controls);

(2) date(s) and time(s) of sampling or measurements;

(3) date(s) analyses were performed;

(4) the qualified entity that performed the analyses;

(5) analytical or test methods used;

(6) results of analyses or tests; and

(7) operating conditions existing at the time of sampling or measurement.

B. Except as provided in the Specific Conditions, records shall be maintained on-site or at the permittee's local business office for a minimum of two (2) years from the time of recording and shall be made available to Department personnel upon request. Sources subject to 20.2.70 NMAC "Operating Permits" shall maintain records on-site for a minimum of five (5) years from the time of recording.

C. Malfunction emissions and routine and predictable emissions during startup, shutdown, and scheduled maintenance (SSM):

(1) The permittee shall keep records of all events subject to the plan to minimize emissions during routine or predictable SSM. (20.2.7.14.A NMAC)

(2) If the facility has allowable SSM emission limits in this permit, the permittee shall record all SSM events, including the date, the start time, the end time, and a description of the event. This record also shall include a copy of the manufacturer's, or equivalent, documentation showing that any maintenance qualified as scheduled. Scheduled maintenance is an activity that occurs at an established frequency pursuant to a written protocol published by the manufacturer or other reliable source. The authorization of allowable SSM emissions does not supersede any applicable federal or state standard. The most stringent requirement applies.

(3) If the facility has allowable malfunction emission limits in this permit, the permittee shall record all malfunction events to be applied against these limits, including the date, the start time, the end time, and a description of the event. **Malfunction means** any sudden, infrequent, and not reasonably preventable failure of air pollution control and monitoring equipment, process equipment, or a process to operate in a normal or usual manner which causes, or has the potential to cause, the emission limitations in an applicable standard to be exceeded. Failures that are

caused in part by poor maintenance or careless operation are not malfunctions. (40 CFR 63.2, 20.2.7.7.E NMAC) The authorization of allowable malfunction emissions does not supersede any applicable federal or state standard. The most stringent requirement applies. This authorization only allows the permittee to avoid submitting reports under 20.2.7 NMAC for total annual emissions that are below the authorized limit.

B110 General Reporting Requirements
(20.2.72 NMAC Sections 210 and 212)

A. Records and reports shall be maintained on-site or at the permittee's local business office unless specifically required to be submitted to the Department or EPA by another condition of this permit or by a state or federal regulation. Records for unmanned sites may be kept at the nearest business office.

B. The permittee shall notify the Department's Compliance Reporting Section using the current Submittal Form posted to NMED's Air Quality web site under Compliance and Enforcement/Submittal Forms in writing of, or provide the Department with (20.2.72.212.A and B):

(1) the anticipated date of initial startup of each new or modified source not less than thirty (30) days prior to the date. Notification may occur prior to issuance of the permit, but actual startup shall not occur earlier than the permit issuance date;

(2) after receiving authority to construct, the equipment serial number as provided by the manufacturer or permanently affixed if shop-built and the actual date of initial startup of each new or modified source within fifteen (15) days after the startup date; and

(3) the date when each new or modified emission source reaches the maximum production rate at which it will operate within fifteen (15) days after that date.

C. The permittee shall notify the Department's Permitting Program Manager, in writing of, or provide the Department with (20.2.72.212.C and D):

(1) any change of operators or any equipment substitutions within fifteen (15) days of such change;

(2) any necessary update or correction no more than sixty (60) days after the operator knows or should have known of the condition necessitating the update or correction of the permit.

D. Results of emission tests and monitoring for each pollutant (except opacity) shall be reported in pounds per hour (unless otherwise specified) and tons per year. Opacity shall be reported in percent. The number of significant figures corresponding to the full accuracy inherent in the testing instrument or Method test used to obtain the data shall be used to calculate and report test results in accordance with 20.2.1.116.B and

C NMAC. Upon request by the Department, CEMS and other tabular data shall be submitted in editable, MS Excel format.

E. The permittee shall submit reports of excess emissions in accordance with 20.2.7.110.A NMAC.

B111 General Testing Requirements

A. Compliance Tests

(1) Compliance test requirements from previous permits (if any) are still in effect, unless the tests have been satisfactorily completed. Compliance tests may be re-imposed if it is deemed necessary by the Department to determine whether the source is in compliance with applicable regulations or permit conditions. (20.2.72 NMAC Sections 210.C and 213)

(2) Compliance tests shall be conducted within sixty (60) days after the unit(s) achieve the maximum normal production rate. If the maximum normal production rate does not occur within one hundred twenty (120) days of source startup, then the tests must be conducted no later than one hundred eighty (180) days after initial startup of the source.

(3) Unless otherwise indicated by Specific Conditions or regulatory requirements, the default time period for each test run shall be **at least** 60 minutes and each performance test shall consist of three separate runs using the applicable test method. For the purpose of determining compliance with an applicable emission limit, the arithmetic mean of results of the three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances, beyond the owner or operator's control, compliance may, upon the Department approval, be determined using the arithmetic mean of the results of the two other runs.

(4) Testing of emissions shall be conducted with the emissions unit operating at 90 to 100 percent of the maximum operating rate allowed by the permit. If it is not possible to test at that rate, the source may test at a lower operating rate, subject to the approval of the Department.

(5) Testing performed at less than 90 percent of permitted capacity will limit emission unit operation to 110 percent of the tested capacity until a new test is conducted.

(6) If conditions change such that unit operation above 110 percent of tested capacity is possible, the source must submit a protocol to the Department within 30 days of such change to conduct a new emissions test.

B. EPA Reference Method Tests

(1) All compliance tests required by this permit, unless otherwise specified by Specific Conditions of this permit, shall be conducted in accordance with the requirements of CFR Title 40, Part 60, Subpart A, General Provisions, and the following EPA Reference Methods as specified by CFR Title 40, Part 60, Appendix A:

(a) Methods 1 through 4 for stack gas flowrate

(b) Method 5 for TSP

(c) Method 6C and 19 for SO_2

(d) Method 7E for NO_X (test results shall be expressed as nitrogen dioxide (NO_2) using a molecular weight of 46 lb/lb-mol in all calculations (each ppm of NO/NO_2 is equivalent to 1.194 x 10-7 lb/SCF)

(e) Method 9 for opacity

(f) Method 10 for CO

(g) Method 19 may be used in lieu of Methods 1-4 for stack gas flowrate upon approval of the Department. A justification for this proposal must be provided along with a contemporaneous fuel gas analysis (preferably on the day of the test) and a recent fuel flow meter calibration certificate (within the most recent quarter).

(h) Method 7E or 20 for Turbines per 60.335 or 60.4400

(i) Method 29 for Metals

(j) Method 201A for filterable PM_{10} and $PM_{2.5}$

(k) Method 202 for condensable PM

(l) Method 320 for organic Hazardous Air Pollutants (HAPs)

(m) Method 25A for VOC reduction efficiency

(2) Alternative test method(s) may be used if the Department approves the change

C. Periodic Monitoring and Portable Analyzer Requirements

(1) Periodic emissions tests (periodic monitoring) may be conducted in accordance with EPA Reference Methods or by utilizing a portable analyzer. Periodic monitoring utilizing a portable analyzer shall be conducted in accordance with the requirements of ASTM D 6522-00. However, if a facility has met a previously approved Department criterion for portable analyzers, the analyzer may be operated in accordance with that criterion until it is replaced.

(2) Unless otherwise indicated by Specific Conditions or regulatory requirements, the default time period for each test run shall be **at least** 20 minutes.

Each performance test shall consist of three separate runs. The arithmetic mean of results of the three runs shall be used to determine compliance with the applicable emission limit.

(3) Testing of emissions shall be conducted in accordance with the requirements at Section B108.E.

(4) During emissions tests, pollutant, O_2 concentration and fuel flow rate shall be monitored and recorded. This information shall be included with the test report furnished to the Department.

(5) Pollutant emission rate shall be calculated in accordance with 40 CFR 60, Appendix A, Method 19 utilizing fuel flow rate (scf) and fuel heating value (Btu/scf) obtained during the test.

D. Test Procedures:

(1) The permittee shall notify the Department's Program Manager, Compliance and Enforcement Section at least thirty (30) days before the test date and allow a representative of the Department to be present at the test.

(2) Equipment shall be tested in the "as found" condition. Equipment may not be adjusted or tuned prior to any test for the purpose of lowering emissions, and then returned to previous settings or operating conditions after the test is complete.

(3) Contents of test notifications, protocols and test reports shall conform to the format specified by the Department's Universal Test Notification, Protocol and Report Form and Instructions. Current forms and instructions are posted to NMED's Air Quality web site under Compliance and Enforcement Testing.

(4) The permittee shall provide (a) sampling ports adequate for the test methods applicable to the facility, (b) safe sampling platforms, (c) safe access to sampling platforms and (d) utilities for sampling and testing equipment.

(5) The stack shall be of sufficient height and diameter and the sample ports shall be located so that a representative test of the emissions can be performed in accordance with the requirements of EPA Method 1 or ASTM D 6522-00 as applicable.

(6) Where necessary to prevent cyclonic flow in the stack, flow straighteners shall be installed

(7) Unless otherwise indicated by Specific Conditions or regulatory requirements, test reports shall be submitted to the Department no later than 30 days after completion of the test.

B112 Compliance

A. The Department shall be given the right to enter the facility at all reasonable times to verify the terms and conditions of this permit. Required records shall be organized by

date and subject matter and shall at all times be readily available for inspection. The permittee, upon verbal or written request from an authorized representative of the Department who appears at the facility, shall immediately produce for inspection or copying any records required to be maintained at the facility. Upon written request at other times, the permittee shall deliver to the Department paper or electronic copies of any and all required records maintained on site or at an off-site location. Requested records shall be copied and delivered at the permittee's expense within three business days from receipt of request unless the Department allows additional time. Required records may include records required by permit and other information necessary to demonstrate compliance with terms and conditions of this permit. (NMSA 1978, Section 74-2-13)

B. A copy of the most recent permit(s) issued by the Department shall be kept at the permitted facility or (for unmanned sites) at the nearest company office and shall be made available to Department personnel for inspection upon request. (20.2.72.210.B.4 NMAC)

C. Emissions limits associated with the energy input of a Unit, i.e. lb/MMBtu, shall apply at all times unless stated otherwise in a Specific Condition of this permit. The averaging time for each emissions limit, including those based on energy input of a Unit (i.e. lb/MMBtu) is one (1) hour unless stated otherwise in a Specific Condition of this permit or in the applicable requirement that establishes the limit.

B113 Permit Cancellation and Revocation

A. The Department may revoke this permit if the applicant or permittee has knowingly and willfully misrepresented a material fact in the application for the permit. Revocation will be made in writing, and an administrative appeal may be taken to the Secretary of the Department within thirty (30) days. Appeals will be handled in accordance with the Department's Rules Governing Appeals From Compliance Orders.

B. The Department shall automatically cancel any permit for any source which ceases operation for five (5) years or more, or permanently. Reactivation of any source after the five (5) year period shall require a new permit. (20.2.72 NMAC)

C. The Department may cancel a permit if the construction or modification is not commenced within two (2) years from the date of issuance or if, during the construction or modification, work is suspended for a total of one (1) year. (20.2.72 NMAC)

B114 Notification to Subsequent Owners

A. The permit and conditions apply in the event of any change in control or ownership of the Facility. No permit modification is required in such case. However, in the event of any such change in control or ownership, the permittee shall notify the succeeding

owner of the permit and conditions and shall notify the Department's Program Manager, Permits Section of the change in ownership within fifteen (15) days of that change. (20.2.72.212.C NMAC)

B. Any new owner or operator shall notify the Department's Program Manager, Permits Section, within thirty (30) days of assuming ownership, of the new owner's or operator's name and address. (20.2.73.200.E.3 NMAC)

B115 Asbestos Demolition

A. Before any asbestos demolition or renovation work, the permittee shall determine whether 40 CFR 61 Subpart M, National Emissions Standards for Asbestos applies. If required, the permittee shall notify the Department's Program Manager, Compliance and Enforcement Section using forms furnished by the Department.

B116 Short Term Engine Replacement

A. The following Alternative Operating Scenario (AOS) addresses engine breakdown or periodic maintenance and repair, which requires the use of a short term replacement engine. The following requirements do not apply to engines that are exempt per 20.2.72.202.B(3) NMAC. Changes to exempt engines must be reported in accordance with 20.2.72.202.B NMAC. A short term replacement engine may be substituted for any engine allowed by this permit for no more than 120 days in any rolling twelve month period per permitted engine. The compliance demonstrations required as part of this AOS are in addition to any other compliance demonstrations required by this permit.

(1) The permittee may temporarily replace an existing engine that is subject to the emission limits set forth in this permit with another engine regardless of manufacturer, model, and horsepower without modifying this permit. The permittee shall submit written notification to the Department within 15 days of the date of engine substitution according to condition B110.C(1).

(a) The potential emission rates of the replacement engine shall be determined using the replacement engine's manufacturer specifications and shall comply with the existing engine's permitted emission limits.

(b) The direction of the exhaust stack for the replacement engine shall be either vertical or the same direction as for the existing engine. The replacement engine's stack height and flow parameters shall be at least as effective in the dispersion of air pollutants as the modeled stack height and flow parameters for the existing permitted engine. The following equation may be used to show that the replacement engine disperses pollutants as well as the existing engine. The value calculated for the replacement engine on the right side of the equation shall be equal to or greater than the value for the

existing engine on the left side of the equation. The permitting page of the Air Quality Bureau website contains a spreadsheet that performs this calculation.

EXISTING ENGINE REPLACMENT ENGINE

$$\frac{[(g) \times (h1)] + [(v1)^2/2] + [(c) \times (T1)]}{q1} <= \frac{[(g) \times (h2)] + [(v2)^2/2] + [(c) \times (T2)]}{q2}$$

Where
g = gravitational constant = 32.2 ft/sec^2
h1 = existing stack height, feet
v1 = exhaust velocity, existing engine, feet per second
c = specific heat of exhaust, 0.28 BTU/lb-degree F
T1 = absolute temperature of exhaust, existing engine = degree F + 460
q1 = permitted allowable emission rate, existing engine, lbs/hour
h2 = replacement stack height, feet
v2 = exhaust velocity, replacement engine, feet per second
T2 = absolute temperature of exhaust, replacement engine = degree F + 460
q2 = manufacturer's potential emission rate, replacement engine, lbs/hour

The permittee shall keep records showing that the replacement engine is at least as effective in the dispersion of air pollutants as the existing engine.

(c) Test measurement of NOx and CO emissions from the temporary replacement engine shall be performed in accordance with Section B111 with the exception of Condition B111A(3) and B111B for EPA Reference Methods Tests or SectionB111C for portable analyzer test measurements. Compliance test(s) shall be conducted within fifteen (15) days after the unit begins operation, and records of the results shall be kept according to section B109.B. This test shall be performed even if the engine is removed prior to 15 days on site.

i. These compliance tests are not required for an engine certified under 40CFR60, subparts IIII, or JJJJ, or 40CFR63, subpart ZZZZ if the permittee demonstrates that one of these requirements causes such engine to comply with all emission limits of this permit. The permittee shall submit this demonstration to the Department within 48 hours of placing the new unit into operation. This submittal shall include documentation that the engine is certified, that the engine is within its useful life, as defined and specified in the applicable requirement, and shall include calculations showing that the applicable emissions standards result in compliance with the permit limits.

ii. These compliance tests are not required if a test was conducted by portable analyzer or by EPA Method test (including any required by 40CFR60, subparts IIII and JJJJ and 40CFR63, subpart ZZZZ) within the last 12 months. These previous tests are valid only if conducted at the same or lower elevation as the existing engine location prior to commencing operation as a temporary replacement. A copy of the test results shall be kept according to section B109.B.

(d) Compliance tests for NOx and CO shall be conducted if requested by the Department in writing to determine whether the replacement engine is in compliance with applicable regulations or permit conditions.

(e) Upon determining that emissions data developed according to B116.A.1(c) fail to indicate compliance with either the NOx or CO emission limits, the permittee shall notify the Department within 48 hours. Also within that time, the permittee shall implement one of the following corrective actions:

i. The engine shall be adjusted to reduce NOx and CO emissions and tested per B116.A.1(c) to demonstrate compliance with permit limits.

ii. The engine shall discontinue operation or be replaced with a different unit.

(2) Short term replacement engines, whether of the same manufacturer, model, and horsepower, or of a different manufacturer, model, or horsepower, are subject to all federal and state applicable requirements, regardless of whether they are set forth in this permit (including monitoring and recordkeeping), and shall be subject to any shield afforded by this permit.

(3) The permittee shall maintain a contemporaneous record documenting the unit number, manufacturer, model number, horsepower, emission factors, emission test results, and serial number of any existing engine that is replaced, and the replacement engine. Additionally, the record shall document the replacement duration in days, and the beginning and end dates of the short term engine replacement.

(4) The permittee shall maintain records of a regulatory applicability determination for each replacement engine (including 40CFR60, subparts IIII and JJJJ and 40CFR63, subpart ZZZZ) and shall comply with all associated regulatory requirements.

B. Additional requirements for replacement of engines at sources that are major as defined in regulation 20.2.74 NMAC, Permits – Prevention of Significant Deterioration, section 7.AF. For sources that are major under PSD, the total cumulative operating hours of the replacement engine shall be limited using the following procedure:

(1) Daily, the actual emissions from the replacement engine of each pollutant regulated by this permit for the existing engine shall be calculated and recorded.

(2) The sum of the total actual emissions since the commencement of operation of the replacement engine shall not exceed the significant emission rates in Table 2 of 20.2.74 NMAC, section 502 for the time that the replacement engine is located at the facility.

C. All records required by this section shall be kept according to section B109.

PART C MISCELLANEOUS

C100 Supporting On-Line Documents

A. Copies of the following documents can be downloaded from NMED's web site under Compliance and Enforcement or requested from the Bureau.

(1) Excess Emission Form (for reporting deviations and emergencies)

(2) Universal Stack Test Notification, Protocol and Report Form and Instructions

(3) SOP for Use of Portable Analyzers in Performance Tests

C101 Definitions

A. **"Daylight"** is defined as the time period between sunrise and sunset, as defined by the Astronomical Applications Department of the U.S. Naval Observatory. (Data for one day or a table of sunrise/sunset for an entire year can be obtained at http://aa.usno.navy.mil/. Alternatively, these times can be obtained from a Farmer's Almanac or from http://www.almanac.com/rise/).

B. **"Exempt Sources"** and **"Exempt Activities"** is defined as those sources or activities that are exempted in accordance with 20.2.72.202 NMAC. Note; exemptions are only valid for most 20.2.72 NMAC permitting actions.

C. **"Fugitive Emission"** means those emissions which could not reasonably pass through a stack, chimney, vent, or other functionally equivalent opening.

D. **"Insignificant Activities"** means those activities which have been listed by the department and approved by the administrator as insignificant on the basis of size, emissions or production rate. Note; insignificant activities are only valid for 20.2.70 NMAC permitting actions.

E. **"Natural Gas"** is defined as a naturally occurring fluid mixture of hydrocarbons that contains 20.0 grains or less of total sulfur per 100 standard cubic feet (SCF) and is

either composed of at least 70% methane by volume or has a gross calorific value of between 950 and 1100 Btu per standard cubic foot. (40 CFR 60.631)

F. **"Natural Gas Liquids"** means the hydrocarbons, such as ethane, propane, butane, and pentane, that are extracted from field gas. (40 CFR 60.631)

G. **"National Ambient air Quality Standards"** means, unless otherwise modified, the primary (health-related) and secondary (welfare-based) federal ambient air quality standards promulgated by the US EPA pursuant to Section 109 of the Federal Act.

H. **"Night"** is the time period between sunset and sunrise, as defined by the Astronomical Applications Department of the U.S. Naval Observatory. (Data for one day or a table of sunrise/sunset for an entire year can be obtained at http://aa.usno.navy.mil/. Alternatively, these times can be obtained from a Farmer's Almanac or from http://www.almanac.com/rise/).

I. **"Night Operation** or **Operation at Night"** is operating a source of emissions at night.

J. **"NO2"** or "Nitrogen dioxide" means the chemical compound containing one atom of nitrogen and two atoms of oxygen, for the purposes of ambient determinations. The term **"nitrogen dioxide,"** for the purposes of stack emissions monitoring, shall include nitrogen dioxide (the chemical compound containing one atom of nitrogen and two atoms of oxygen), nitric oxide (the chemical compound containing one atom of nitrogen and one atom of oxygen), and other oxides of nitrogen which may test as nitrogen dioxide and is sometimes referred to as NOx or NO_2. (20.2.2 NMAC)

K. "**NOx**" see NO_2

L. **"Potential Emission Rate"** means the emission rate of a source at its maximum capacity to emit a regulated air contaminant under its physical and operational design, provided any physical or operational limitation on the capacity of the source to emit a regulated air contaminant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored or processed, shall be treated as part of its physical and operational design only if the limitation or the effect it would have on emissions is enforceable by the department pursuant to the Air Quality Control Act or the federal Act.

M. "**Restricted Area**" is an area to which public entry is effectively precluded. Effective barriers include continuous fencing, continuous walls, or other continuous barriers approved by the Department, such as rugged physical terrain with a steep grade that would require special equipment to traverse. If a large property is completely enclosed by fencing, a restricted area within the property may be identified with signage only. Public roads cannot be part of a Restricted Area.

N. **"Shutdown"**, for requirements under 20.2.72 NMAC, means the cessation of operation of any air pollution control equipment, process equipment or process for any purpose, except routine phasing out of batch process units.

O. **"SSM"**, for requirements under 20.2.7 NMAC, means routine or predictable startup, shutdown, or scheduled maintenance.

(1) **"Shutdown"**, for requirements under 20.2.7 NMAC, means the cessation of operation of any air pollution control equipment or process equipment.

(2) **"Startup"**, for requirements under 20.2.7 NMAC, means the setting into operation of any air pollution control equipment or process equipment.

P. **"Startup"**, for requirements under 20.2.72 NMAC, means the setting into operation of any air pollution control equipment, process equipment or process for any purpose, except routine phasing in of batch process units.

C102 Acronyms

2SLB	2-stroke lean burn
4SLB	4-stroke lean burn
4SRB	4-stroke rich burn
acfm	actual cubic feet per minute
AFR	air fuel ratio
AP-42	EPA Air Pollutant Emission Factors
AQB	Air Quality Bureau
AQCR	Air Quality Control Region
ASTM	American Society for Testing and Materials
BTU	British ThermalUnit
CAA	Clean Air Act of 1970 and 1990 Amendments
CEM	continuous emissions monitoring
cfh	cubic feet per hour
cfm	cubic feet per minute
CFR	Code of Federal Regulation
CI	compression ignition
CO	carbon monoxides
COMS	continuous opacity monitoring system
EIB	Environmental Improvement Board
EPA	United States Environmental Protection Agency
gr./100 cf	grains per one hundred cubic feet
gr./dscf	grains per dry standard cubic foot
GRI	Gas Research Institute
HAP	hazardous air pollutant
hp	horsepower
H_2S	hydrogen sulfide

IC ..... internal combustion
KW/hr ..... kilowatts per hour
lb/hr ..... pounds per hour
lb/MMBtu ..... pounds per million British Thermal Unit
MACT ..... Maximum Achievable Control Technology
MMcf/hr ..... million cubic feet per hour
MMscf ..... million standard cubic feet
N/A ..... not applicable
NAAQS ..... National Ambient Air Quality Standards
NESHAP ..... National Emission Standards for Hazardous Air Pollutants
NG ..... natural gas
NGL ..... natural gas liquids
NMAAQS ..... New Mexico Ambient Air Quality Standards
NMAC ..... New Mexico Administrative Code
NMED ..... New Mexico Environment Department
NMSA ..... New Mexico Statues Annotated
NOx ..... nitrogen oxides
NSCR ..... non-selective catalytic reduction
NSPS ..... New Source Performance Standard
NSR ..... New Source Review
PEM ..... parametric emissions monitoring
PM ..... particulate matter (equivalent to TSP, total suspended particulate)
PM_{10} ..... particulate matter 10 microns and less in diameter
$PM_{2.5}$ ..... particulate matter 2.5 microns and less in diameter
pph ..... pounds per hour
ppmv ..... parts per million by volume
PSD ..... Prevention of Significant Deterioration
RATA ..... Relative Accuracy Test Assessment
RICE ..... reciprocating internal combustion engine
rpm ..... revolutions per minute
scfm ..... standard cubic feet per minute
SI ..... spark ignition
SO_2 ..... sulfur dioxide
SSM ..... Startup Shutdown Maintenance (see SSM definition)
TAP ..... Toxic Air Pollutant
TBD ..... to be determined
THC ..... total hydrocarbons
TSP ..... Total Suspended Particulates
tpy ..... tons per year
ULSD ..... ultra low sulfur diesel
USEPA ..... United States Environmental Protection Agency
UTM ..... Universal Transverse Mercator Coordinate system
UTMH ..... Universal Transverse Mercator Horizontal
UTMV ..... Universal Transverse Mercator Vertical

VHAP.....volatile hazardous air pollutant
VOC.....volatile organic compounds

Section 22: Certification

Company Name: Public Service Company of New Mexico

I, Richard Threet, hereby certify that the information and data submitted in this application are true and as accurate as possible, to the best of my knowledge and professional expertise and experience.

Signed this 8th day of August, 2016, upon my oath or affirmation, before a notary of the State of New Mexico.

*Signature

August 8, 2016
Date

Richard Threet
Printed Name

Director, Plant Management
Title

Scribed and sworn before me on this 8 day of August, 2016.

My authorization as a notary of the State of New Mexico expires on the

29th day of November, 2016.

Notary's Signature

8/8/16
Date

Dina A. Ortiz
Notary's Printed Name

OFFICIAL SEAL
DINA A. ORTIZ
Notary Public
State of New Mexico
My Commission Expires 11/29/16

*For Title V applications, the signature must be of the Responsible Official as defined in 20.2.70.7.AE NMAC.