

## Technical Support Document

Synthetic Minor Source Permit  
New Mexico Gas Company  
Redonda Compressor Station on Laguna Pueblo  
Permit Number: R6NSR-NM- 003  
SIC 4922, NACIS 486210  
September 2016

### I. SUMMARY

This document serves as the technical support document that provides an analyses of the application and provides the legal and factual basis for the draft permit conditions for the New Mexico Gas Company (NMGC) Redonda natural gas compressor facility on the Pueblo of Laguna in New Mexico. The draft permit conditions include references to the statutory or regulatory provisions applicable to this permit, including provisions under 40 CFR § 49.151-49.161 that would apply if the permit is finalized. This document is intended for use by all parties interested in the permit.

NGMC operates the Redonda Compressor Station (Redonda) located on the Pueblo of Laguna in Valencia County, New Mexico. The majority of emissions are from the two compressor engines with some minimal VOC emissions from three tanks and associated filters and separators. NMGC Redonda also has an emergency natural gas-fired generator designed to provide minimal backup power at the compressor station for lighting and instrumentation. NMGC acquired the Redonda Compressor Station in early 2009 as a part of the acquisition of all assets belonging to the Public Service Company of New Mexico (PNM) business.

This is an existing, unmanned remote compression station facility located on the Pueblo of Laguna. The facility registered the emissions in 2012 in compliance with the tribal NSR rule (49 CFR § 49.160), and in April 2013 applied for a synthetic minor permit. No changes to the operation of Redonda have been made since NMGC acquired the facility with the exception, in 2013, of adding the 50.8 hp emergency generator fueled by natural gas. This is a remotely operated station, that operates intermittently, and the emergency generator is needed for safety reasons in order to have continuous and reliable electric power for the lighting and instrumentation of Redonda. Redonda's compressor engines only operate when additional compression is needed to handle specific quantities of gas within the pipeline. The operation of the station is controlled from a main office location about 50 miles away. When notification is received that additional compression is needed on the pipeline, an operator is dispatched to the Redonda site who manually activates the startup of the compressor(s). The NMGC is a local utility distribution company that provides 19 tribal nations in New Mexico natural gas service. One compressor (Unit 2) operates with a catalytic converter to reduce the CO and NO<sub>x</sub> emissions below major source thresholds for both PSD and Title V (40 CFR 71) requirements. A synthetic minor NSR permit is necessary for practical enforceability of this catalytic converter to ensure the CO and NO<sub>x</sub> emissions are less than 100 tpy. The potential to emit emission calculations are based on operation of the compressors at their maximum rate for 8760 hours since it is critical that NMGC provide the maximum level of service possible to their pipeline customers. Startup and shutdown emissions are included in the estimate of emissions.

The NMGC's application was submitted pursuant to 40 CFR § 49.158. The application is deemed complete on receiving all necessary information for drafting of the permit, or at the time of public notice whichever comes first.

**Applicant:**

New Mexico Gas Company  
Redonda Compressor Station  
A TECO Energy Company  
7120 Wyoming Blvd., NE, Suite 20  
Albuquerque, New Mexico 87109

Facility contact:  
Marcelle Fiedler  
Senior Environmental Scientist  
505-697-3516  
[Marcelle.Fiedler@nmgc.com](mailto:Marcelle.Fiedler@nmgc.com)

**Permitting Authority:**

EPA, Region 6  
1445 Ross Avenue, Ste. 1200  
Dallas, TX 75202

The EPA Region 6 Permit Writer is:  
Bonnie Braganza  
Air Permitting Section (6MM-AP)  
(214) 665-7340  
[braganza.bonnie@epa.gov](mailto:braganza.bonnie@epa.gov)

**II. REGULATORY APPLICABILITY**

**1. Synthetic Minor Permit Requirements**

On July 1, 2011, the EPA promulgated a Federal Implementation Plan (FIP) under the Clean Air Act (CAA) for Indian Country. The FIP includes two New Source Review (NSR) regulations for the protection of air resources in Indian Country. The first rule applies to new and modified minor stationary sources (minor sources) and to minor modifications at existing major stationary sources (major sources) throughout Indian country. The second rule (nonattainment major NSR rule) applies to new and modified major sources in areas of Indian Country that are designated as not attaining the National Ambient Air Quality Standards (NAAQS). Currently, the EPA directly implements these rules on reservation lands within Region 6, which includes Pueblos and tribally-owned trust lands.

NMGC is applying for a synthetic minor source review permit to establish a synthetic minor source for purposes of the Clean Air Act Title V program. The permit will establish federally enforceable conditions using catalyst controls to reduce CO and NOx for one of its existing compressor engines.

Consistent with the original 2013 application from the NMGC, we find that absent any restrictions on its potential to emit (PTE), the source would have the potential to emit the regulated NSR pollutants of CO and NO<sub>x</sub> in amounts that are at or above those for major sources in the Title V program (40 CFR § 71.2) and the PSD permit program.

## 2. PTE Limitations

For the CO and NO<sub>x</sub> pollutants, the synthetic minor permit will contain an operational limit that will result in an annual allowable emissions limits lower than the major source levels (and lower than the unrestricted potential to emit of the emission units). PTE may be limited through “any physical or operational limitation on the capacity of the source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed<sup>1</sup>,” if the limitation is enforceable as a practical matter. The permit provisions in the draft permit meet requirements for practical enforceability, specifying: the emission units and activities subject to the limitation; the time period for the limitation; and the methods to determine compliance.

A subsequent memo to the EPA Regional Offices, dated January 25, 1995, from Kathie Stein, Director, Air Enforcement Division, OECA, titled “Guidance on Enforceability Requirements for Limiting Potential to Emit through SIP and Section 112 Rules and General Permits,” (available online at: <http://www.epa.gov/region07/air/title5/t5memos/potoem> ) explains that the averaging time for the emission limitation must readily allow for determination of compliance: “EPA policy expresses a preference toward short term limits, generally daily but not to exceed 1 month.” Independently enforceable applicable requirements, such as New Source Performance Standards (NSPS) and National Emissions Standards for Hazardous Air Pollutants (NESHAP) are considered enforceable to the extent that the source is in compliance with the standard. In addition, reductions in non-targeted pollutants resulting from compliance with an independently enforceable applicable requirement may be counted as restrictions on PTE, provided the emission reduction of the non-targeted pollutant is enforceable as a practical matter. The permit in this case will have the federally operational restriction for the use of a catalyst control system in Unit 2 compressor engine, whenever it is in an operating mode. The majority of the combustion emissions at the facility are from the operation of the two compressor engines (Units 1 and Unit 2) and the permit focuses its operational restrictions on those two engines in order to maintain the emissions below 100 TPY on the basis of a 12-month rolling average for both CO and NO<sub>x</sub> emissions. NMGC Redonda is an existing facility, operated intermittently and is a remote station, therefore shorter term emission limits is not practical. However, the permit specifies that Unit 2 must operate with the catalytic control to reduce CO and NO<sub>x</sub> emissions by 80%. The catalytic control will also incidentally reduce VOC emissions. Since the PTE of VOC, SO<sub>2</sub> and PM/PM<sub>10</sub>/PM<sub>2.5</sub> emissions is less than 20% of major source threshold (100 tpy), the only compliance testing requirements at NMGC Redonda will be for the CO and NO<sub>x</sub> pollutants.

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<sup>1</sup> “Guidance on Limiting Potential to Emit in New Source Permitting,” (NSR) dated June 13, 1989, to EPA Regional Offices, from Terrell F. Hunt, Associate Enforcement Counsel, Air Enforcement Division, Office of Enforcement and Compliance Monitoring (OECA), and from John Seitz, Director, Stationary Source Compliance Division, Office of Air Quality Planning & Standards (OAQPS) (available online at: [http://www.epa.gov/ttn/atw/pte/june13\\_89.pdf](http://www.epa.gov/ttn/atw/pte/june13_89.pdf))

Unit 3 is an emergency natural gas engine that will be used only to power the instrumentation and lights for the Redonda facility during an electric power grid outage. Since the electric grid power outages are unpredictable both in time and duration these emissions are unavoidable and cannot be prevented, therefore in keeping with recent state and EPA guidance<sup>2</sup> an estimate of 500 hours of operation has been considered in the PTE for this engine. As the guidance indicates any additional hours of operation can be considered as enforcement discretion on a case by case basis.

Since this synthetic minor permit for the NO<sub>x</sub> and CO emissions at Redonda, is to be below that of the Title V operating permit limits (100 tpy), the permit will also contain references to the applicable NSPS and MACT regulations for the engines and generator at the facility. (Unit 1, Unit 2, Unit 3).

All other criteria pollutants will require monitoring of fuel and operational time periods that will be used in the annual emission calculations. The annual permit limits are based on a 12-month rolling average.

40 CFR § 49.155(a) (1) through (7) specifies the required contents for a synthetic minor permit, all of which are addressed in the provisions of the draft permit. The draft permit includes emissions limitations and appropriate provisions for monitoring, recordkeeping and reporting.

### **3. Other EPA regulations.**

The natural gas fired compressor engines and storage vessels were constructed and operated prior to August 23, 2011, and therefore exempted from MACT OOOO (40 CFR§63.5365).

- a. NSPS 40 CFR §60.110(b), NSPS Kb applies to tanks that have a capacity of 75 m<sup>3</sup> (19,813 gallons). All the tanks that contain VOC have lower storage capacities. The largest 3-compartmentalized tank has a volume of 6000 gallons and contains VOC having a vapor pressure of less than 0.05 psia.
- b. The estimated hazardous air pollutants (**HAP**) emissions are < 6 tpy which is below the major source threshold of HAP (25/10 tpy). The facility is an area source of HAP.
- c. The compressor engines (Unit 1 and Unit 2) were manufactured prior to July 1, 2008, and therefore 40 CFR 40 § 60.4230(a)(4) does not apply. The Baldor emergency generator (Unit 3) will comply with 40 CFR§ 60.4243.
- d. As an area source of HAP, the compressor engines (Units 1-2 are subject to 40 CFR § 63.6585, (Subpart ZZZZ for RICE engines). These engines meet the definition of “remote stationary RICE” at 40 CFR § 63.6675(a)(2)(i-iii). This can be observed from Figures 1 and 2 below. The engines shall comply with 40 CFR § 63.6603(a) and the other applicable regulations as in the Section V. of the permit.
- e. The Baldor emergency generator (Unit 3) is exempt from permitting requirements as in 40 CFR § 49.153(c)(9)(ii), but applicable NSPS requirements are proposed in the draft permit.

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<sup>2</sup> June 12, 2006 memorandum of Steven Riva to NJDEP available at:  
<https://www.epa.gov/sites/production/files/2015-07/documents/generator.pdf>

- f. The facility does not store hazardous compounds in the threshold quantities and therefore is not subject to 40 CFR 68 § 115 (CAA 112(r)).
- g. Being a minor NSR source, the permit does not have any requirements for GHG emissions<sup>3</sup>.

#### 4. Attainment Designation

Valencia County, New Mexico is currently designated as an unclassified/attainment area. The synthetic minor source will restrict the emissions to below major PSD and title V source permitting thresholds. Additionally, there are no designated non-attainment areas in the regional vicinity of the facility. This location in Indian Country has no known air quality monitoring stations. The closest EPA approved monitoring stations are maintained by the City of Albuquerque-Bernalillo County as an air pollution control authority. A detailed evaluation of the air quality impact of this facility is given later in the TSD.

#### 5. Location:

6.

The NMGC Redonda compressor station is at: 34.8924 Latitude and -107.1066 Longitude outside of Rio Puerco, New Mexico, at an elevation of approximately 5390 ft.<sup>4</sup>

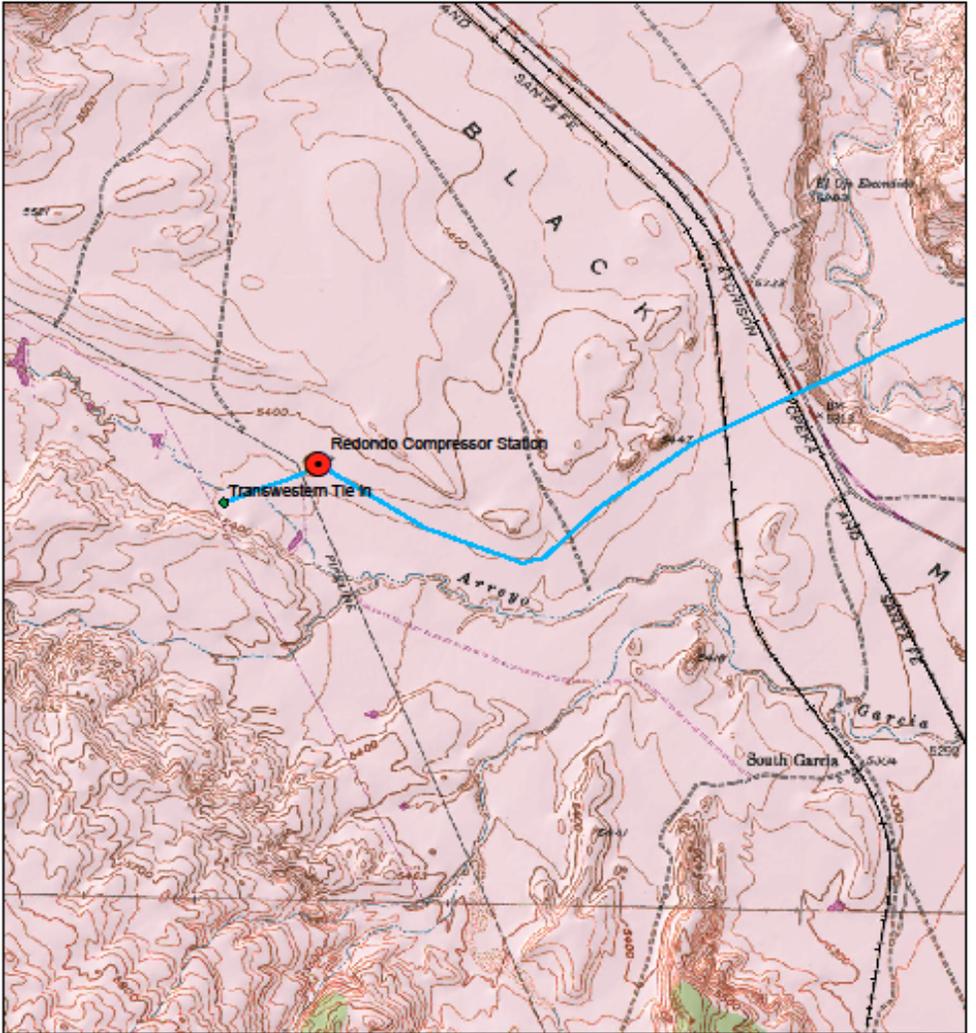
Figure 1



<sup>3</sup> Memorandum from Janet and Cynthia Giles to the Regional Administrators dated July 24, 2014 regarding Next Steps and Preliminary Views on the Application of Clean Air Act Permitting Programs to Greenhouse Gases Following the Supreme Court's Decision in *Utility Air Regulatory Group 1*. Environmental Protection Agency.

<sup>4</sup> "An Archaeological Survey" at <http://www.epa.gov/caa-permitting/tribal-nsr-permits-epas-south-central-region>

**Figure 2**  
NMGC Redonda Location

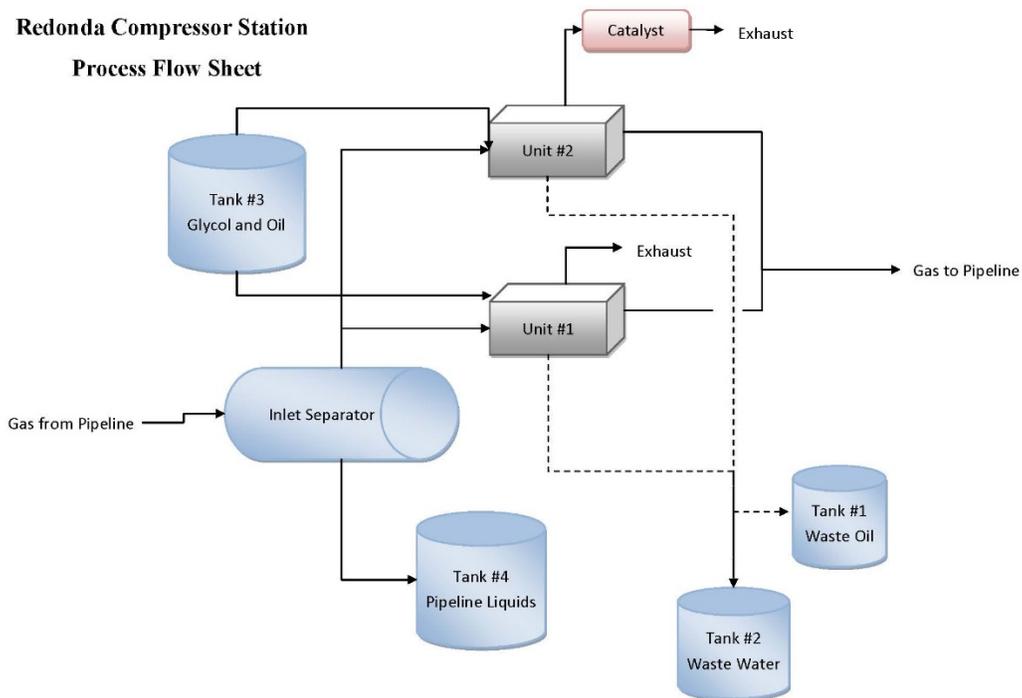


### III. SOURCE DESCRIPTION

The NMGC Redonda Compressor Station operates two gas-fired compressor engines, an emergency generator, tanks and associated equipment to provide service to the natural gas retail market by compressing the natural gas from the pipeline producers such as the Transwestern and El Paso pipeline companies. NMGC Redonda is located on the Pueblo of Laguna tribal land in Valencia County, New Mexico. The compressors are located on a remote unmanned station and only operate intermittently when additional compression is needed to handle specific quantities of gas in the pipeline. When additional compression is needed, an operator will be dispatched from the main 24-hour manned control station to this location immediately, to startup a compressor. Once in operation, the station is not manned and the compressor's operation (pressure and shut down) can be controlled remotely. Since there is no time lag for compressor engine Unit 1 for startup, this compressor is preferentially used initially. Additional flow and compression capabilities are supplied by Unit 2, which has catalytic controls that can operate only at engine exhaust temperatures of 1150°F. The flow diagram of the compressor station is given below.

Operations at NMGC Redonda also include some incidental liquids/oil removal from the natural gas and some odorizing (mercaptan) chemicals are also stored on-site in storage vessels.

Figure 3



5/24/2016

#### IV. EQUIPMENT COVERED BY PERMIT

**Table 1**

Equipment Type	Equipment Identification Number (EPN)	Construction Date/Serial Number(SN)	Capacity	Control Equipment
Natural gas fired Waukesha 7042 GL, 4SLB engine.	Unit 1	SN: 335791; Installed 1991	1478 BHP 10.3 MMBtu/hr	None
Natural gas fired Waukesha L7044 -GSI naturally aspirated, 4SRB engine utilizing MIRATECH catalytic control MCS-3618C.	Unit 2	SN: C-13018/2 Installed 2001	1680 BHP 12.3 MMBtu/hr	Catalytic control for NO <sub>x</sub> & CO
Baldor/GM emergency generator; 4SRB engine;	Unit 3	SN: 3903035 Installed 2013	50.8BHP 0.4MMbtu/hr	None
Pipeline Liquids tank	TK4	Vertical fixed roof tank	2000 gallons	None
143 bbl Ambitrol & Lube oil tank	TK3	3 compartmentalized fixed roof tank.	6000 gallons; 3000,2000,1000	None
Wastewater tank	TK2	Partially buried, steel double walled tank	2940 gallons	None
Used oil tank	TK1	Partially buried, steel double walled tank.	2940 gallons	None

#### V. CONTROL TECHNOLOGY EVALUATION

The facility has operated since 1998 and actual operating emissions data<sup>5</sup> indicates that the source currently emits less than 5% of major source (100 tpy) for NO<sub>x</sub> and CO emissions, with the maximum annual operation of 2300 hours/year. The MIRATECH catalyst control that is currently installed for Unit 2 uses an Air to Fuel Ratio (AFR) to maintain a constant emission level of CO and NO<sub>x</sub> from the catalyst. The AFR control self-regulates emissions by monitoring temperature and oxygen. The AFR control on the catalyst is set to maintain a voltage reading on the oxygen sensors that optimizes the performance of the engine and ensures that the catalyst is optimizing the reduction of both pollutants CO and NO<sub>x</sub>. The optimum ratio varies with operating conditions.

No BACT is required for a minor source. However, as in 40 CFR § 49.155 and §49.158, the EPA Region 6 evaluated the current technology in its database for similar compressor engines. Table 2 indicates the current control technology for reduction of NO<sub>x</sub> and CO emissions for similar processes and engines.

<sup>5</sup> See the registration data in the NMGC application at <https://www.epa.gov/caa-permitting/tribal-nsr-permits-epas-south-central-region> .

**Table 2**

Facility Name SIC	Unit	County/State	Permit No.	NOx G/BHP-hr	CO G/BHP-hr	Comment
Ramsey Gas plant 1321	Natural gas compressor	Reeves, TX	TX-0755	0.5	0.083	5-21-15
Clermont Compressor Station 1389	Natural gas 4SRB	ELK	PA-0302	0.02g/bhp-hr	0.30	Greenfield 4-16-2014
Carpenter Compressor Station 1321	Caterpillar G 3608 2370BHP	Washington	PA-0301	0.05	0.30	3-31-14
	Caterpillar G-3612 3550bhp			0.5	Oxidation catalyst 0.30	
Sonora Gas plant	Recompression engine	Uptown Texas	TX PSD 1316	0.50 ultra lean	0.250 oxidation catalyst	New 6/14/2013
Welling Compressor Station/1311	Caterpillar G-3516B	PA	PA 0287	0.50	MIRATECH 0.12	Minor NSR permit issued 2011. BAT requirement in PA
Welling Compressor Station/1311	Waukesha P9390 GSI 1980 bhp	PA	PA 0287	Johnson Mathey catalyst 0.20	0.26	Minor NSR permit issued 2011. BAT requirement in PA
NMGC	Waukesha 7042 GL 4SLB 1478 bhp			1.5	2.65	
NMGC	Waukesha L7044 GSI 4SRB 1680 bhp			MIRATECH catalyst 1.5	MIRATECH catalyst 1.95	

The CO and NOx emissions are higher for these existing compressor engines at Redonda, than for recently issued permits of 2014 and 2015, and for ozone non- attainment requirements in PA (Welling Compressor Station). This is an existing operation constructed and operated intermittently since 1991 to boost the natural gas pressure for their residential customers. No new additional control options were considered. The table above is just for informational purposes, should the applicant choose to modify the catalyst control of the existing Unit 2 engine. The applicant provided information on the usage of the compressors for the past 5 years, indicating that for the past two years (2013-2014) the maximum hours of operation was 421 hours per year which is a considerable decrease from previous years. However, if these compressors are reconstructed or replaced, we have included a condition in the permit requiring a PSD applicability analysis. See Permit condition Section III.2

## **VI. PERMIT STANDARDS AND LIMITS**

1. The emission limits are based on the calculations provided in the permittee's amended application received electronically on November 23, 2015. The amendment included revisions to the calculations and additional information on the equipment.
2. The emissions in Table 3 below are based on the 8760 operational hours for Unit 1 and Unit 2, since the compressor engines are needed to supplement the pressure of the natural gas in the pipeline and include startup and shutdown emissions for all three engines.
3. Only pipeline natural gas will be used in the compressors and the emergency generator.
4. The compressor engines for Unit 1 and Unit 2 will meet the applicable requirements in 40 CFR § 63.6585. See Section V. Special Conditions 11-12 of the draft permit requirements.
5. Readiness testing of the emergency generator (Unit 3) has been specified to be performed between the afternoon hours of 1:00 pm to 3:00pm to ensure that the NAAQS for NO<sub>2</sub> and ozone is not in jeopardy with potential other emission sources from other plants and facilities.
6. The facility wide emissions and operating permit limits are set below the Part 71/PSD major source threshold of 100/250 tpy for any criteria pollutant as they are set at 88 tpy for CO and 60 tpy for NO<sub>x</sub> and account for a greater than 10% safety/compliance margin of error in emission estimations/calculations and meter readings.
7. Work Practice and maintenance standards are specified in Section V of the permit for all the engines that meet the applicable EPA regulations for stationary combustion engines (40 CFR § 60 - Subpart JJJJ and 40 CFR § 63 - Subpart ZZZZ).
9. The Permittee shall install, operate, and maintain temperature-sensing devices (i.e. thermocouple or resistance temperature detectors) before the catalytic control system on Unit 2 to continuously monitor the exhaust temperature at the inlet of the catalyst bed. Each temperature-sensing device shall be calibrated and operated by the Permittee according to manufacturer specifications or equivalent specifications developed by the Permittee or vendor.
10. The draft permit requires Redonda to meet the standard and emission limits in Table 3.

**Table 3**  
Standards and Emission Limits.

Equipment Description	(EPN) <sup>1</sup>	Standard and Emission Limits	<sup>3</sup> Emissions in tpy (for all EPN)
Natural gas fired Waukesha 7042 GL, 4SLB engine.	Unit 1	<ol style="list-style-type: none"> <li>1. Work practice standards for maintenance and operation of the engines.</li> <li>2. Only pipeline quality natural gas will be used in the compressors.</li> <li>3. Annual natural gas fuel rate not to exceed 100.6 MMSCF on a 12-month rolling average.</li> <li>4. Emission limit for NOx is 6.23 lb/hr and CO is 9.11 lb/hr</li> </ol>	NO <sub>x</sub> = 27.31 SO <sub>2</sub> = 0.72 CO = 39.89 PM <sub>2.5</sub> = 0.45 VOC = 13.69 HAP = 5.47
Natural gas fired Waukesha L7044 - GSI naturally aspirated, 4SRB engine utilizing MIRATECH catalytic control MCS-363618	Unit 2	<ol style="list-style-type: none"> <li>1. Work practice standards for maintenance and operation of the engines.</li> <li>2. Catalyst will be used in the engine</li> <li>3. Only pipeline quality natural gas will be used in the compressors</li> <li>4. Annual natural gas fuel rate not to exceed 122.0 MMSCF on a 12-month rolling average.</li> <li>5. Emission limit for NOx is 7.09 lb/hr and CO is 10.73 lb/hr</li> </ol>	NO <sub>x</sub> = 32.09 SO <sub>2</sub> = 0.87 CO = 47.67 PM <sub>2.5</sub> = 1.59 VOC = 7.70 HAP = 1.52
Baldor/GM emergency generator/4SRB engine	Unit 3	<ol style="list-style-type: none"> <li>1. Use of pipeline natural gas for 500 hours/year.</li> <li>2. Annual fuel flow rate of 3.77 MMSCF on a 12-month rolling average.</li> <li>3. No visible emissions.</li> <li>4. Work practice standard for maintenance of the engine.</li> </ol>	NO <sub>x</sub> = 0.14 SO <sub>2</sub> = <0.01 CO = 0.59 PM <sub>2.5</sub> < 0.001 VOC < 0.001
Used oil tank	TK-1	Maintain integrity of tank by annual inspections and ensure no leaks while filling or removing liquids from the tank	VOC <0.001
Wastewater tank <sup>2</sup>	TK-2	Maintain integrity of tank by annual inspections of the exterior and all vents to ensure no leaks and no visible emissions.	VOC < 0.001
Lube oil and Ambritol tank <sup>2</sup>	TK-3	Maintain integrity of tank by annual inspections of the exterior and all vents to ensure no leaks and no visible emissions.	VOC < 0.001
Pipeline Liquids Tank <sup>2</sup>	TK-4	Maintain integrity of tank by annual inspections of the exterior and all vents to ensure no leaks and no visible emissions.	VOC ≤ 0.51
<b>Total</b>		<b>Practically enforceable limits based on a 12-month rolling average.</b>	<b>NO<sub>x</sub> = 59.54</b> <b>CO = 88.15</b>

1. Emission Point Number
2. These are insignificant emission units that do not require monitoring for individual tank operations.
3. Emission in tpy are provided for informational purposes unless specified as practically enforceable limits.

## VII. MONITORING REQUIREMENTS

Monitoring requirements of 40 CFR§ 49.155(a)(3) have been specified in the draft permit to ensure continuous compliance with the synthetic minor emission limits for CO and NOx for the engines (Units 1-3). In addition, specific operating and maintenance practices have been specified to ensure compliance with the synthetic minor permit limits, (Draft permit Section V). Initial and periodic compliance tests to ensure efficient operation of the catalytic controls have been specified in Section VI of the draft permit.

## VIII. RECORD KEEPING REQUIREMENTS

Recordkeeping requirements are in Section VIII of the permit documents to meet the synthetic minor permit limits, 40 CFR§49.155(a)(4) and the NSPS/MACT regulatory requirements of for all three engines.

## IX. REPORTING REQUIREMENTS

Reports should be sent electronically to the EPA Compliance Assurance and Enforcement Division at: [R6TribalNSRCompliance@epa.gov](mailto:R6TribalNSRCompliance@epa.gov) , and a copy to [R6AirPermits@epa.gov](mailto:R6AirPermits@epa.gov) .

1. The Permittee shall promptly submit to the EPA a written report of any deviations of emission or operational limits and a description of any corrective actions or preventative measures taken. A "prompt" deviation report is one that is emailed to: [R6TribalNSRCompliance@epa.gov](mailto:R6TribalNSRCompliance@epa.gov) .
  - i. Thirty (30) days from the discovery of a deviation that would cause the Permittee to exceed the facility-wide emission limits if left un-corrected for more than five (5) days after discovering the deviation; and
  - ii. Twelve (12) months from the discovery of a deviation of recordkeeping or other permit conditions that do not affect the permittee's ability to meet the facility-wide emission limits.
2. Unit 1 and Unit 2 shall comply with the reporting requirements in 40 CFR 63.6640 (a-b). Any major overhaul of the compressor engines shall be promptly reported to the EPA.
3. An annual report documenting the twelve (12) month annual emissions for each previous calendar year no later than April 1<sup>st</sup> is to be submitted to the EPA to the electronic addresses as indicated above. For the first calendar year the Permittee shall submit the cumulative facility wide limits. The report shall also document that no operational restriction (as noted in table 3) has been exceeded.
4. Annual emissions for Units 1-3 are to be calculated using the equation:  
$$E = EF * Hr * K \quad \text{Where:}$$

E = pollutant emissions in tons/year  
EF = emission factor from the manufacturer's data specifications (lbs/hr)  
Hr = No of hours of operation/year  
K = 1 ton/2000 lbs for conversion.

5. The Permittee shall submit records of emergency events utilizing the emergency generator. These events should include the date, time period, and emissions for each event, and be submitted with the annual report.
6. The Permittee shall submit any record or report required by this permit upon the EPA request.

## **X. AIR QUALITY REVIEW**

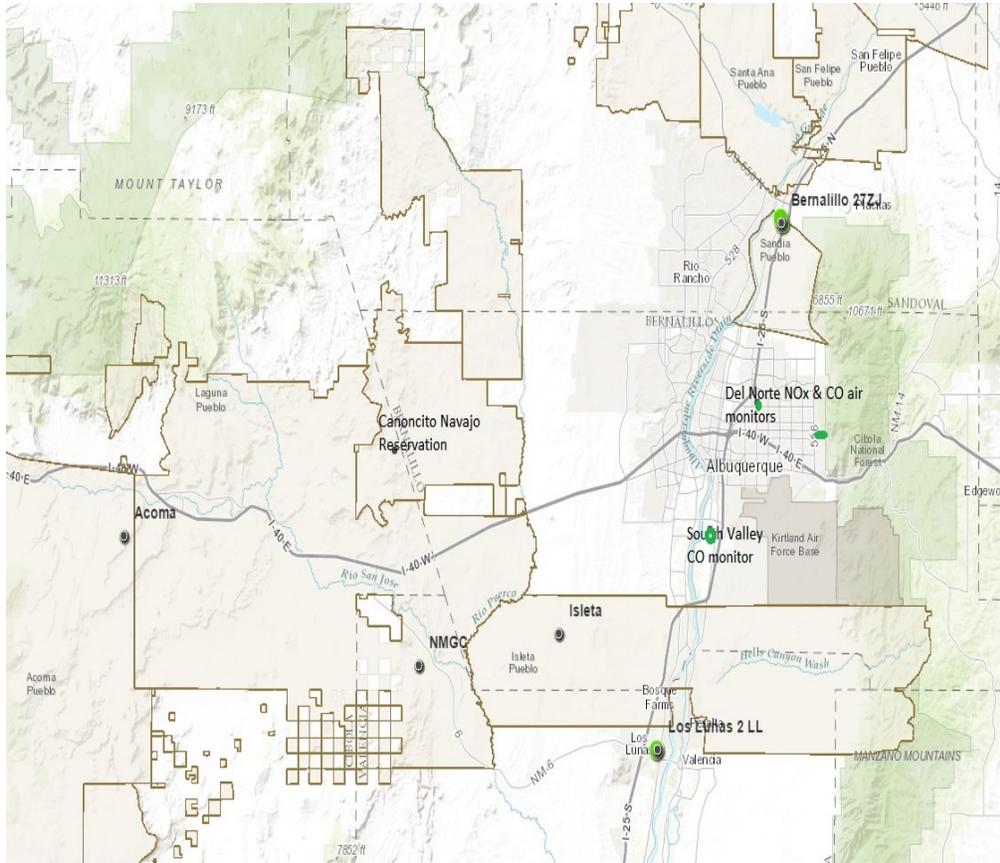
Since this is an existing operation, the NSR permitting requirements applicable to Indian Country do not specifically require an air quality impact analysis (AIQA) for sources constructed prior to the effective date of the Tribal NSR permitting program (September 2, 2014) that are seeking synthetic minor NSR permits. However, the EPA Region 6 evaluated the existing air quality monitoring data (Albuquerque Del Norte and Los Lunas and South Valley air monitoring locations) closest to the NMGC facility to characterize the current ambient air quality and to determine what impacts the emissions from the existing source may have. The EPA Region 6 reviewed the most recent ambient air quality data taken from nearby monitors located in both Albuquerque and Los Lunas stations. The current air quality data measured at the nearest monitors to the site do not show any monitored exceedances and the most recent design values for the pollutants of concern are well below the corresponding national ambient air quality standards (NAAQS)<sup>6</sup>. Therefore, the EPA Region 6 believes there is substantial evidence indicating that the current existing facility as designed and operated in conjunction with the synthetic minor limits established in the permit will not cause or contribute to a violation of the NAAQS since the currently monitored design values are significantly less than the applicable NAAQS thresholds and the expected contribution from this synthetic minor source is not significant. The EPA Region 6 evaluated the impacts as shown in the figures below.

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<sup>6</sup> 8-hour Ozone: NAAQS = 75 ppb; 1-hour NO<sub>2</sub>: NAAQS = 100 ppb. This is available at: <https://www.epa.gov/criteria-air-pollutants/naaqs-table>

1. Figure 4 below indicates the location of the facility along with the tribal boundaries and the closest air monitoring station locations which EPA is using to characterize air quality in the area.

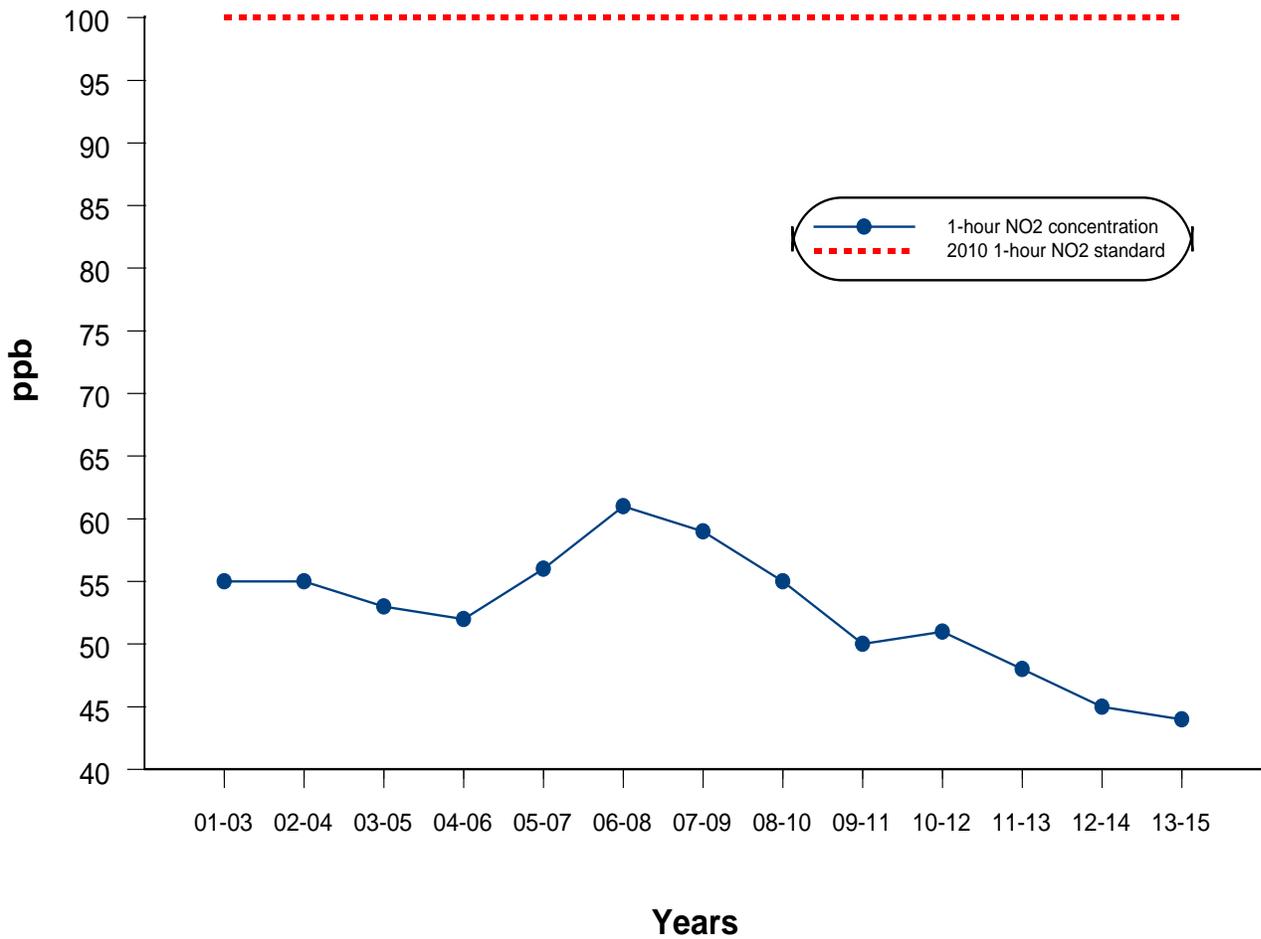
Figure 4



2. The EPA 1-hour standard for NO<sub>2</sub> is 100ppb. Figure 5 indicates levels much lower than the standard and shows a downward trend in NO<sub>2</sub> emissions.

**Figure 5**

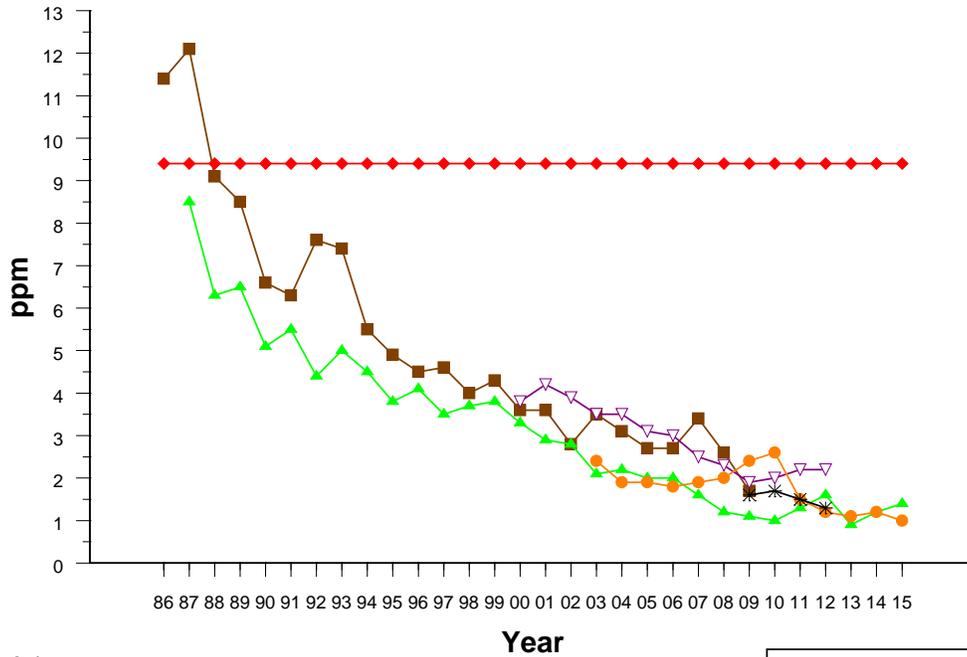
## 1-hour NO<sub>2</sub> Trends Albuquerque, New Mexico, Del Norte Site



3. The CO air monitoring data in the area for which NMGC is obtaining the MNSR permit to limits emissions of this pollutant shows a downward trend below the EPA 8- hour standard of 9 ppm as depicted in Figure 6 below.

**Figure 6**

**8-hour CO Concentration Trends  
Albuquerque, NM**

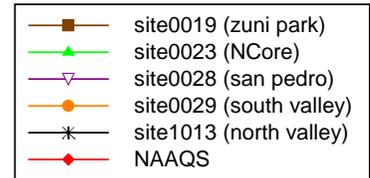


NAAQS = 9.4 ppm

8-hour CO concentration = annual 2nd highest value

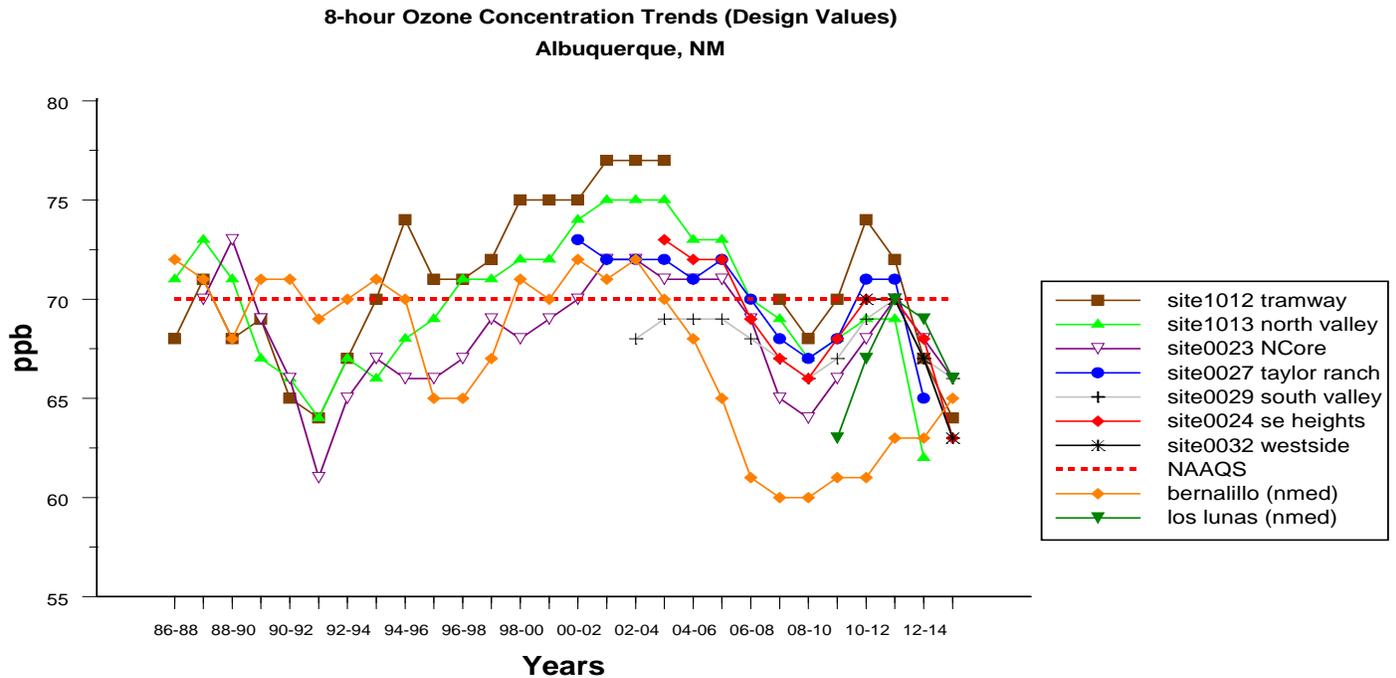
site0019 shut down during 2010; sites 0028 and 1013 shut down during 2012

site 0023 required NCore CO site



- Ozone formation takes place by a chemical reaction of volatile organic compounds (VOC) with  $\text{NO}_x$  in the presence of sunlight. The 2015 EPA ozone NAAQS standard is 70 ppb. Figure 7 shows the downward trend from the several air quality monitors located in the Albuquerque area.

**Figure 7**



2015 8-hour ozone National Ambient Air Quality Standard (NAAQS) = 70 ppb  
 Design Values = 3-year average of annual 4th highest 8-hour ozone daily maxima  
 In 2006 the Tramway site did not record enough data; hence no design values pictured for Tramway for 04-06, 05-07 and 06-08  
 taylor ranch and north valley sites shut down in 2014;  
 westside and se heights sites were shut down during 2015

**XI. TRIBAL AND STATE NOTIFICATIONS:**

In compliance with 49 CFR §49.157(b), the public notice will be sent to New Mexico Environment Department, the Albuquerque Department of Environmental Quality and the tribal nations, upon initiation of the public comment period of the draft permit. On September 21, 2016 the EPA notified seven tribes that may have had a historical interest in the area of NMGC of this permitting action. Additionally, on May 17, 2016, the EPA provided consultation opportunities regarding the permitting action to the adjacent tribal nations of Navajo, Isleta and Acoma.

**XII. ENDANGERED SPECIES ACT**

Pursuant to Section 7(a)(2) of the Endangered Species Act (ESA) (16 U.S.C. 1536) and its implementing regulations at 50 CFR Part 402, EPA is required to insure that any action authorized, funded, or carried out by the EPA is not likely to jeopardize the continued existence

of any federally-listed endangered or threatened species or result in the destruction or adverse modification of such species' designated critical habitat.

This is an existing facility that has been in operation since 1991. There will be no new construction as a result of the issuance of this permit. The purpose of this permit is to establish operating parameters for this facility under new applicable federal regulations pursuant to 40 CFR § 49.151-49.161. A permit was not previously required for the facility to construct, and this permit does not authorize an increase in emissions or new construction, rather it is permitting the current emissions at the facility. As such, the EPA Region 6 has concluded that issuance of the proposed synthetic minor NSR permit will have “no effect” on any of the six listed species within the county.

### **XIII. NATIONAL HISTORIC PRESERVATION ACT (NHPA)**

Section 106 of the NHPA requires the EPA to consider the effects of this permit action on properties listed on or eligible for inclusion in the National Register of Historic Places. The EPA has determined that issuance of this permit constitutes an “undertaking” as defined in 30 CFR 300.16(y). However, pursuant to 36 CFR § 800.3(a)(1), the EPA Region 6 has determined that the proposed action does not have the potential to cause effects on historic properties, assuming that such properties were present because the permit does not authorize any new construction or ground disturbances, nor has the applicant proposed such activities.

Further, the site has been subject to disturbances associated with previous construction and continued operational activities and any archeological resources would have been compromised many years ago. In support of its application, New Mexico Gas Company provided a 1990 Archaeological Survey prepared by Chambers Group Inc. for this area, prior to the construction of the existing facility. Chambers Group conducted a field survey of the property and desktop review of the area of potential effect (APE) in 1990. Based on the results of the field survey, two isolated occurrences were located that were believed to be sheet washed into the project area, and were removed by the archaeologists. The construction of the facility followed this Archaeological review, thus any artifacts that may have been undiscovered by the archaeological survey, are likely now gone or disturbed by the previous construction of the facility.

### **XIV. ENVIRONMENTAL JUSTICE CONSIDERATIONS**

Executive Order (EO) 12898 (59 FR 7629 (Feb. 16, 1994)) establishes federal executive policy on environmental justice. Its main provision directs federal agencies, to the greatest extent practicable and permitted by law, to make environmental justice part of their mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations in the United States.

At the time of the permit application and drafting of this permit, the Region 6 implementation plan required by the February 11, Presidential Executive Order 12898 was included in an EJ 2014 document and only requires an analyses only for major NSR permitting actions. The NMGC permit is an existing minor source and the modifications for this source constitutes a minor NSR action. The EPA's EJ 2020 Action Agenda is a strategy for advancing environmental justice.

The EPA maintains an ongoing commitment to ensure environmental justice for all people, regardless of race, color, national origin, or income. Ensuring environmental justice means not only protecting human health and the environment for everyone, but also ensuring that all people are treated fairly and are given the opportunity to participate meaningfully in the development, implementation, and enforcement of environmental laws, regulations, and policies.

EPA Region 6 did perform an EJSCREEN analysis on this project which suggested that environmental justice concerns are unlikely to be raised in connection with the permitting decision. EPA Region 6 selected a 5 mile buffer area for the analysis. The population within the 5 mile buffer is at 315 individuals. The facility is located on the Pueblo of Laguna and is remote to any municipality. EJSCREEN provides 12 environmental indicators for evaluation: air toxics cancer risk (NATA Cancer Risk); air toxics respiratory hazard index (NATA Respiratory HI); diesel particulate matter level in air (NATA Diesel PM); ozone level in air; PM<sub>2.5</sub> level in air; traffic proximity and volume; lead paint indicator (% pre-1960 housing); proximity to major direct discharges to water; proximity national priority list sites (NPL); proximity to risk management plan (RMP) facilities; and proximity to treatment storage and disposal facilities (TSDF). EJSCREEN evaluates these environmental indicators to 7 demographics: percent minority; percent low-income; percent less than high school education; percent in linguistic isolation; percent over age 64; percent under age 5; and demographic index. This data is then combined to develop an EJ index for each environmental indicator. All EJ index values were under the 80th percentile. The EJ index can help identify communities that may have a high combination of environmental burdens and vulnerable populations. Scores above the 80<sup>th</sup> percentile, would indicate the community is vulnerable. The demographic data showed a high minority population at 53%, which is expected since the facility is located in Indian country. This analysis has been added to the supporting file for this permit and may be revised as necessary before any final decision on the application.

#### **XV. PERMIT PROCESSING PROCEDURES:**

1. EPA provided the draft permit and technical support document to the Permittee for review on August 29, 2016.
2. Public Notice will be electronically posted on the EPA Region 6 webpage at: <https://www.epa.gov/aboutepa/epa-region-6-south-central> and on the Region 6 Air Permits website at: <https://www.epa.gov/caa-permitting/tribal-nsr-implementation-epas-south-central-region>. Public notice will also be posted at the Pueblo of Laguna Environmental Resource office
3. As indicated in Section XI, Tribal and State notification will be provided in compliance with 40 CFR § 49.157(b)(i).
4. An electronic version of the permit and all public documents associated with the permitting action is made available at: <https://www.epa.gov/caa-permitting/tribal-nsr-permits-epas-south-central-region-laguna-pueblo-redonda-compressor-station>, at the Pueblo of Laguna Library.