REGION 8
DENVER, CO 80202

United States Environmental Protection Agency
https://www.epa.gov/caa-permitting/caa-permitting-epas-mountains-and-plains-region
1595 Wynkoop Street
Denver, Colorado 80202

Technical Support Document

Federal Minor New Source Review Program in Indian Country – Proposed Permit

Permittee:	Red Cedar Gathering Company 125 Mercado Street, Suite 201 Durango, Colorado 80301
Source:	CO_2 Capture Facility
Location:	Southern Ute Indian Reservation La Plata County, Colorado SW ¼ SW 1/4, Section 36, Township 33N, Range 9 W Latitude 37.054865, Longitude -107.785088
Source Technical Contact:	Ethan W. Hinkley, Air Quality Compliance Manager (970) 764-6495 ehinkley@redcedargathering.com
Source ID #:	SU-000496
Permit #:	TMNSR-SU-000496-2023.001
Docket:	EPA-R08-OAR-2022-0404

Pursuant to the provisions of Clean Air Act (CAA) sections 110(a) and 301(d) and the Code of Federal Regulations (CFR) title 40, sections 49.151-161, the United States Environmental Protection Agency (EPA) Region 8 is issuing a proposed Federal Minor New Source Review Program in Indian Country (Tribal Minor NSR Program) to Red Cedar Gathering (Red Cedar or Permittee) for authorization to construct a new Carbon Dioxide (CO_2) capture and processing facility (CO_2 Capture Facility), located on Indian country lands within the Southern Ute Indian Reservation in La Plata County, Colorado. This proposed permit contains emission limits, monitoring, recordkeeping and reporting requirements for new activities designed to capture, treat and compress CO_2 from the adjacent amine plants at Red Cedar's existing Arkansas Loop and Simpson Treating Plants for transport off-site via pipeline. Absent this CO_2 Capture Facility, the CO_2 is otherwise vented to the atmosphere at the Arkansas Loop and Simpson Treating Plants.

This Technical Support Document (TSD) provides the EPA's analysis of the permit application. It describes the equipment that is proposed to be authorized for installation and operation and the permit conditions that are included in the proposed Tribal Minor NSR permit.

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1. Authority

The CAA provides the EPA with broad authority to protect air resources throughout the nation, including air resources in Indian country. Title 40 of the CFR, sections 49.151-165, established a Federal Minor New Source Review Program in Indian country (Tribal Minor NSR Program) that includes among other things: (a) a preconstruction permitting program for new and modified minor stationary sources and minor modifications at major sources to meet the requirements of section 110(a)(2)(C) of the CAA; (b) a mechanism for otherwise major sources (including major sources of hazardous air pollutants) to voluntarily accept restrictions on potential to emit to become synthetic minor sources; and (c) a mechanism for case-by-case maximum achievable control technology determinations for those major sources of hazardous air pollutants (HAP) subject to such determinations under section 112(g)(2) of the CAA. In 2011, the EPA established the Tribal Minor NSR Program as part of a Federal Implementation Plan (FIP) under the CAA for Indian country.[1] The EPA has followed the Tribal Minor NSR Program in this proposed permit action.

2. Tribal Minor NSR Program Requirements

The Tribal Minor NSR Program (40 CFR 49.151-165) is applicable to owners and operators of sources located, or planning to locate, in Indian reservations, and in other areas of Indian country where an Indian Tribe or the EPA has demonstrated that the Tribe has jurisdiction, and where no EPA-approved Tribal air permit program is in place.[2] The Southern Ute Indian Tribe was delegated partial authority by the EPA to implement the Tribal Minor NSR Program within the Tribe's reservation, effective on June 11, 2024. As part of the delegation, the EPA has retained responsibility as the reviewing authority to take action on minor source air permit applications submitted before the delegation was effective, and is, therefore, taking action on the application for this permit which was submitted on March 29, 2023.

The Tribal Minor NSR Program requires owners and operators of certain new and modified sources of air pollution in Indian country to obtain a minor NSR permit prior to constructing or modifying a source. This preconstruction permitting program is triggered for new or modified sources based on potential increases in air pollutants according to the applicability criteria in 40 CFR 49.153. Generally, source owners and operators first determine whether their new or modified source is subject to the CAA major NSR permitting program (pursuant to the Prevention of Significant Deterioration (PSD) Program at 40 CFR 52.21 for areas designated as attainment/unclassifiable for the National Ambient Air Quality Standards (NAAQS) and/or the Tribal Major Nonattainment NSR (NNSR) Program at 40 CFR 49.166 through 49.175 for areas designated as nonattainment for the NAAQS). The applicable permitting program is determined individually for each NSR-regulated pollutant. When a pollutant is not subject to a major NSR program, the owner and operator must evaluate whether the Tribal Minor

[1] 76 FR 38748 (July 1, 2011) (codified at 40 CFR part 49).
[2] See 40 CFR 49.151(c)(1). "Indian country" is defined at 49.152(d).

NSR Program applies. Additionally, the Tribal Minor NSR Program provides a mechanism for new and existing sources to establish a synthetic minor limit on their potential to emit (PTE). Synthetic minor permit limits are voluntary, enforceable restrictions on a source's operations that reduce the source's PTE. Such limits can then be used to avoid being subject to other CAA requirements such as a major NSR program or the title V operating permit program at 40 CFR part 71. *See* 40 CFR 49.158. Restrictions on the PTE of a synthetic minor source are required to be enforceable as a practicable matter, as defined in 40 CFR 49.152.

3. Source and Permit Information

3.1 Source and Area Description

49.154(a)(2)(i) – Identifying Information
CO_2 Capture Facility
Southern Ute Indian Reservation
La Plata County, Colorado
Latitude 37.054865, Longitude -107.785088

Facility Contact: Ethan W. Hinkley, Air Quality Compliance Manager
(832) 754-3833
ehinkley@redcedargathering.com

On March 29, 2023, the EPA received an application from Red Cedar for a permit to authorize construction of the proposed CO_2 Capture Facility as a minor modification of an existing major source per the Tribal Minor NSR Program in Indian country at 40 CFR Part 49. Following submittal of the initial application, Red Cedar indicated that, due to the unique nature of the proposed CO_2 Capture Facility, it believed that the proposed facility should be determined as a separate facility from Red Cedar's adjacent and existing permitted major source, Arkansas Loop and Simpson Treating Plants. On April 21, 2023, Red Cedar requested a formal source determination for the proposed facility. The source determination request concerned whether the Arkansas Loop and Simpson Treating Plants and the proposed CO_2 Capture Facility should be considered part of the same "major source" for the PSD Program at 40 CFR part 52 and the title V operating permit program at 40 CFR part 70 (Part 70).[3] The EPA commonly refers to these types of questions as "source determinations." On August 24, 2023, the EPA determined that the proposed CO_2 Capture Facility should be considered a separate source from the Arkansas Loop and Simpson Treating Plants. Additional details on the source determination are discussed in Section 7 of this TSD. On October 23, 2023, the EPA received a minor NSR application from Red Cedar for authorization to construct the proposed CO_2 Capture Facility as a new true minor source that Red Cedar requested replace the March 29, 2023, application.

[3] The title V operating permit program is implemented by the Southern Ute Indian Tribe via an EPA-approved Part 70 Permit Program.

3.2 Permit Action

The CO_2 Capture Facility ("project" or "source" or "facility") will consist of one gas-fired turbine for primary power, one gas-fired generator engine that will be used for backup power, one triethylene glycol (TEG) natural gas dehydrator, and ancillary equipment. Red Cedar estimates an annual reduction of approximately 200,000 – 400,000 metric tons of CO_2 emissions to the atmosphere from its operations as a result of the proposed facility. CO_2 currently vented to the atmosphere from the amine treating units at the Arkansas Loop and Simpson Treating Plants will be delivered to the facility inlet separator through a closed-vent system. The CO_2 will be compressed from atmospheric pressure to approximately 900 pounds per square inch gauge (psig), dehydrated in the TEG dehydrator to make it safe for pipeline transport, then further compressed to a discharge pressure of approximately 2,200 psig and injected to a pipeline for off-site sequestration. The TEG dehydrator still vent emissions will be routed to an overhead condenser and separator where the water vapor will be condensed and separated. A percentage of aqueous phase is refluxed back to the still for further stripping of liquid phase benzene, toluene, ethylbenzene and xylenes (BTEX), known as a reflux loop. The reflux loop ensures that most of the BTEX vapors are removed from the aqueous phase. The portion of the aqueous phase that is not refluxed will be sent to storage for offsite disposal. The vapor phase material leaving the overhead separator will be recycled back to the facility inlet separator through a closed-vent system.

The turbine will provide primary facility power for the CO_2 compression and dehydration operations. The generator engine will provide backup facility power when the primary power source, the turbine, is not operating. The generator engine will assist with starting the turbine and provide power to run lubrication pumps from when the turbine shuts down until it stops spinning (required to protect the turbine during shutdown), emergency lights, heating, building doors and other critical equipment. The generator engine would operate for approximately 10 minutes during each startup, and for at least four hours following a shutdown. The intent is to operate the primary turbine full time, so operation of the generator engine is expected to be minimal. While the generator engine is not certified or permitted as an emergency unit, Red Cedar has requested an operating limit of 500 hours on the engine on a 12-month rolling basis.

Through this permit action, the EPA is proposing to issue a permit with emission limits for the proposed new turbine, generator engine and TEG dehydrator, and associated testing, monitoring, recordkeeping and reporting requirements sufficient to demonstrate compliance with the emission limits.

3.3 Permit History

Table 1 - Permit Revision History

Permit No.	Issue Date	Description/Category	Docket Number
SMNSR-SU-000496-2023.001	TBD	Proposed True Minor NSR Permit	EPA-R08-OAR-2022-0404

4. Public Participation

4.1 Public Comment Period

In accordance with 40 CFR 49.157, the EPA must provide public notice and a 30-day public comment period to ensure that the affected community and the public have reasonable access to the application and draft permit information.

Electronic copies of the proposed permit, technical support document and supporting materials may be viewed at: http://www.epa.gov/caa-permitting/caa-permit-public-comment-opportunities-region-8. The proposed permit and supporting documentation are also available in the electronic docket at https://www.regulations.gov (Docket ID #EPA-R08-OAR-2022-0404). Notifications containing all relevant public comment information will be sent via email to EPA Region 8's public notice distribution list for CAA permit actions issued by EPA Region 8 on the Southern Ute Indian Reservation.

Please submit any written recommendations you may have concerning the terms and conditions of the proposed permit to Matthew Pollard through https://www.regulations.gov (Docket ID #EPA-R08-OAR-2022-0404 (preferred), or via email at R8AirPermitting@epa.gov (cc: pollard.matthew@epa.gov)).

Any person may submit written comments on the proposed permit or the EPA's analysis supporting the permit action in this TSD pursuant to section 106 of the National Historic Preservation Act during the public comment period. These comments must raise any reasonably ascertainable issues with supporting arguments by the close of the public comment period. Anyone may request a public hearing pursuant to 40 CFR 49.157(c) prior to the end of the public comment period. A request for public hearing must include the nature of the issues to be raised at the hearing. If you request a public hearing and require translation services or special accommodations for a disability or other assistance to effectively participate in this meeting, please identify the language, accommodation or assistance needed. The EPA will base its decision on whether a hearing will be held upon the showing of a significant degree of public interest. The EPA may also hold a public hearing at its discretion. The EPA will provide at least 30 days' notice prior to the date of the hearing. The public comment period will be extended to the close of any public hearing. The EPA accepts comments and requests for a public hearing by mail to the EPA address listed at the top of page 1 above (marked to the attention of Matthew Pollard, mail code 8ARD-AP-P), through https://www.regulations.gov (Docket ID #EPA-R08-OAR-2022-0404, and via email to R8AirPermitting@epa.gov. Please address comments with the subject "Comments on Proposed Minor NSR Permit for Red Cedar CO_2 Capture Facility."

4.2 Final Minor NSR Permit Action

In accordance with 40 CFR 49.159, a final permit becomes effective 30 days after the service of notice of the decision, unless: (1) a later effective date is specified in the permit; (2) appeal of the final permit is made as detailed in the next section; or (3) the permitting authority makes the permit effective

immediately upon issuance, which it can do only if no comments requested a change in the draft permit or a denial of the permit. The EPA will send notice of the final permit action to any individual who commented on the draft permit during the public comment period. As required in 40 CFR 49.159, the EPA will notify the Permittee in writing of the final decision and will provide adequate public notice of the final permit decision to ensure that the affected community, general public and any individuals who commented on the draft permit have reasonable access to the decision and supporting materials. In addition, anyone may request a copy of the final permit from the contact for this action or through the Tribal Minor NSR Program Lead listed on our website. See the contact information provided below.

4.3 Appeals to the Environmental Appeals Board (EAB)

In accordance with 40 CFR 49.159, within 30 days after a final permit decision has been issued, any person who filed comments on the proposed permit or participated in the public hearing may petition the EAB to review any condition of the permit decision. The 30-day period within which a person may request review under this section begins when the EPA has fulfilled the notice requirements for the final permit decision. A petition to the EAB for review of the final permit decision is, under section 307(b) of the CAA, a prerequisite to seeking judicial review of the final agency action. Any petition for review of a final permit decision must be filed in a timely manner with the United States Court of Appeals for the appropriate circuit in accordance with Section 307(b). For purposes of judicial review, final agency action occurs when the EPA denies or issues a final permit and agency review procedures are exhausted.

4.4 Contact Information

The contact for this action is:

Matthew Pollard
Email: R8AirPermitting@epa.gov (cc: pollard.matthew@epa.gov)
Phone: (303) 312-6878
EPA Region 8 toll-free general information line: (800) 227-8917

EPA Region 8 maintains lists of its pending and final Tribal Minor NSR permit actions on its website at: https://www.epa.gov/caa-permitting/caa-permit-actions-pending-epa-region-8 and https://www.epa.gov/caa-permitting/caa-permits-issued-epa-region-8.

You may also sign-up to be added to EPA Region 8's Reservation-specific public notice distribution lists for CAA permit actions issued by EPA Region 8 at: https://www.epa.gov/caa-permitting/forms/public-notice-distribution-list-caa-permits-mountains-and-plains-region-region.

5. Emission-Generating Units and Activities

49.154(a)(2)(iii) – Affected emission units related to the proposed Tribal Minor NSR permit for the new true minor source.

Table 2 – Summary of Proposed Emission Units

Emissions Unit Description	Maximum Power/ Output/Capacity	EPA Certification/Control Technology	Fuel Type, Quantity and Heating Value	Applicable Regulations and Standards
Solar Mars 100-16000S Turbine	9 MW	N/A	High pressure pipeline-quality natural gas, 1,005.1 MMscf/yr, 275 Mscf/d, 11,473 scf/hr, 97.74 MMBtu/hr	NSPS Subpart A and Subpart KKKK
Cummins C450N6 GTA 28E Generator Engine, 4-Stroke Rich Burn	701 bhp	N/A	Pipeline-quality natural gas, 56.5 MMscf/yr, 153 Mscf/d, 6,392 scf/hr, 905.0 Btu/scf	NSPS Subpart A and Subpart JJJJ (Including Emission Standards in Table 1 from Subpart JJJJ for Non-Emergency SI Natural Gas Engines ≥ 500 hp); Area Source NESHAP Subpart ZZZZ applicability only.

Emissions Unit Description	Maximum Power/ Output/Capacity	EPA Certification/Control Technology	Fuel Type, Quantity and Heating Value	Applicable Regulations and Standards
Triethylene glycol (TEG) Dehydration Unit consisting of: Dehydrator Still Vent TEG Reboiler	15 MMscf/d throughput 0.500 MMBtu/hr (reboiler) Still vent controlled by overhead condenser and separator with reflux loop (closed-vent)	N/A	Natural gas, 4.87 MMscf/yr, 13.3 Mscf/d, 556 scf/hr, based on 900 Btu/scf heat content	N/A
Dirty Water Storage Tank (vertical fixed roof)	21,000 gal	N/A	N/A	N/A
Two (2) - Compressor Oil Storage Tanks (horizontal)	500 gal each	N/A	N/A	N/A
Used Oil Storage Tank (vertical fixed roof)	3,780 gal	N/A	N/A	N/A
Fugitive Emissions	-	N/A	N/A	N/A

Note: bhp = brake horsepower; hr = hour; yr = year; d = day; MM = Million; M = thousand; Btu = British Thermal Units; 4SRB = 4-stroke rich burn; NSCR = non-selective catalytic reduction; AFR = air-to-fuel ratio; scf = standard cubic feet; gal = gallon

6. Summary of Emissions

6.1 Emission Inventory Basics

An emission inventory generally reflects either the "actual" or "potential" emissions from a source. As this facility is a new source, there are no actual emissions yet to report. Actual emissions generally represent a specific time period and are based on actual operation and controls. Potential emissions, referred to as PTE, generally represent the maximum capacity of a source to emit a pollutant under its physical and operational design, taking into consideration regulatory restrictions, including required control devices. PTE is often used to determine applicability for several EPA CAA programs, including title V, PSD and section 112 (National Emission Standards for Hazardous Air Pollutants). Emissions can be broken into two categories: point and fugitive. Fugitive emissions are those emissions which could not reasonably pass through a stack, chimney, vent, or other functionally equivalent opening (*See* 40

CFR 51.165(a)(1)(ix)). Examples of fugitive emissions are roads, piles that are not normally enclosed, windblown dust from open areas, and those activities that are normally performed outside buildings. Non-fugitive or point sources of emissions include any emissions that are not fugitive. The equation below represents the general technique for estimating emissions (in tons per year (tpy)) from each emission unit at the facility. Emissions are calculated by multiplying an emission factor (EF) by an operational parameter. To estimate actual emissions, the permittee will need to track the actual operational rates.

$$E = EF * OP * K$$

where:
E = pollutant emissions in tpy;
EF = emission factors (e.g., in units of lb/hr, lb/mmBtu, lb/gal)
OP = operational rate (or capacity for PTE);
K = 1 ton/2000 lb for conversion from lb/yr to tpy

6.2 PTE Emissions Inventory

The calculated PTE of all Tribal Minor NSR Program-regulated pollutants for the Red Cedar CO_2 Capture Facility are below the major source levels under the PSD Program at 40 CFR part 52 without the need to take an enforceable restriction to reduce the PTE to such levels. The PSD major source level is 250 tpy for each regulated NSR pollutant on a per-pollutant basis (*see* 40 CFR 52.21(b)(1)(i)). Therefore, the facility in its proposed configuration is estimated to be a *true minor source*, as defined at 40 CFR 49.152. This is shown in Table 3 below. The proposed Tribal Minor NSR Program permit for the facility contains permit terms for construction, operation, and maintenance of one (1) natural gas-fired 9331 kW turbine, one (1) natural gas-fired 701 bhp generator engine, one (1) TEG dehydrator and reboiler and ancillary equipment including one (1) dirty water storage tank,[4] two (2) compressor oil storage tanks and one (1) used oil storage tank. The proposed permit includes monitoring, recordkeeping and reporting requirements to ensure compliance with the emission limits. The Tribal Minor NSR Program rule at 40 CFR 49.152 defines *"allowable emissions"* as defined in 40 CFR 52.21(b)(16), except that the allowable emissions for any emissions unit are calculated considering any emission limits that are enforceable as a practical matter on the emission unit's PTE. This definition allows the EPA to include emission reductions achieved by complying with applicable emission standards for new units, such as New Source Performance Standards (NSPS) or National Emission Standards for Hazardous Air Pollutants (NESHAP) in calculating PTE and allowable emissions.

The turbine will be a stationary natural gas combustion turbine located at an affected facility with a heat input greater than 10 MMBtu per hour, based on the higher heating value, and that commenced construction, modification or reconstruction after February 18, 2005. As such, it will be subject to the

[4] The dirty water storage tank would contain trace amounts of TEG, amine, and lube oil entrained with the CO_2 routed to the facility from the Arkansas Loop and Simpson Treating Plants and from the CO_2 compression process.

applicable NSPS for Stationary Combustion Turbines at 40 CFR part 60, subpart KKKK (NSPS KKKK). NSPS KKKK does not require any emissions control for the proposed turbine. Therefore, the PTE reflects uncontrolled emissions of NSR-regulated pollutants. The turbine will not be located near a major source of HAP emissions. As such, the NESHAP for Stationary Combustion Turbines at CFR 40 part 63, subpart YYYY will not apply. Therefore, the PTE of HAP also reflects uncontrolled emissions for the turbine.

The natural gas-fired generator engine will be manufactured on or after July 1, 2007, with a maximum engine power greater than or equal to 500 hp, and, therefore, will be subject to the NSPS for Spark Ignition Internal Combustion Engines at 40 CFR part 60, subpart JJJJ (NSPS JJJJ)**.** The proposed source is estimated to be an area source for HAP and thus the generator engine, as a stationary reciprocating internal combustion engine that began construction after June 12, 2006, which has a maximum engine power greater than or equal to 500 hp, will also be subject to the area source requirements of the NESHAP for Reciprocating Internal Combustion Engines at 40 CFR part 63, subpart ZZZZ (NESHAP ZZZZ) that apply to new or reconstructed stationary engines greater than 500 hp. The applicable requirements for the proposed generator engine under NSPS JJJJ and the area source standards under NESHAP ZZZZ require compliance either by purchasing an engine certified by the manufacturer to comply with the requirements of NSPS JJJJ or by operating a non-certified engine according to the requirements of NSPS JJJJ. According to the information provided by Red Cedar, the generator engine is certified by the manufacturer to comply with the requirements of NSPS JJJJ and will operate with an oxidation catalyst control system, which is required by the manufacturer to meet certification. Red Cedar has chosen to limit the operation of the generator engine to 500 hours over any 12-month period. The PTE for NSR-regulated pollutants and HAP reflect the manufacturer-specified emission rates and 8,760 hours of operation, while the proposed allowable emissions apply the 500 hours of operation limit with those emission rates.

The TEG dehydration unit will be located at an area source of HAP. TEG dehydration units are not regulated under any NSPS but are regulated emission points under the NESHAP for Oil and Natural Gas Production Facilities at 40 CFR part 63, subpart HH (NESHAP HH), and the NESHAP for Natural Gas Transmission and Storage Facilities at 40 CFR part 63, subpart HHH (NESHAP HHH). However, the proposed CO_2 Capture Facility is not a natural gas production facility nor a natural gas transmission and storage facility. As such, the TEG dehydration unit will not be subject to the requirements of NESHAP HH or NESHAP HHH. Therefore, the PTE of both criteria pollutants and HAP for the TEG dehydration unit reflect uncontrolled emissions for the unit.

The four tanks at the facility will be constructed after July 23, 1984. Only the dirty water storage tank (TK-301) has a capacity greater than or equal to 75 cubic meters. That tank has a maximum true vapor pressure of 6.7 kPa, which is less than 15.0 kPa. As such, none of the tanks are subject to the NSPS for Volatile Organic Liquid Storage Vessels at 40 CFR part 60, subpart Kb (NSPS Kb).

The nitrogen oxide (NO_X), carbon monoxide (CO) and volatile organic compound (VOC) PTE for the turbine and generator engine are based on the manufacturer-specified emission rates for those pollutants. Formaldehyde PTE for the turbine is also based on the manufacturer-specified emission rate. All other NSR-regulated pollutants and HAP for the turbine and generator engine are based on a combination of EPA's AP-42 emission factors, GRI Field Test Data and GRI literature data. Generator engine HAP were calculated using GRI-HAPCalc version 3.01.

The PTE for the TEG dehydration unit was calculated using GRI-GLYCalc Version 4.0. Storage tank PTE for NSR-regulated pollutants and HAP were calculated using TankESP.

As shown in Table 3, the source-wide PTE for all NSR-regulated pollutants for the project are below the major source thresholds of 250 tpy for each regulated pollutant under the PSD Program. Emissions for NO_X, CO, VOC and particulate matter 2.5 microns or less in diameter ($PM_{2.5}$) are above the minor source thresholds of 10 tpy for NO_X and CO, 5 tpy for VOC and 3 tpy for $PM_{2.5}$ in Table 1 of 40 CFR 49.153. Therefore, the source is subject to review under the Tribal Minor NSR Program (40 CFR 49.151-165).

The PTE for the project is below the major source thresholds of the title V Operating Permit Program at 40 CFR part 71 (Part 71 Program), including 100 tpy for NO_X, CO, VOC and particulate matter (PM_{10} and $PM_{2.5}$).

The application and associated submittals, available in the electronic docket at https://www.regulations.gov (Docket ID #EPA-R08-OAR-2022-0404), contain detailed emission calculations, including the emission factors used in the calculations. Table 3 below, generated by the EPA, reflects the emission calculations in the Permittee's Tribal Minor NSR Program permit revision application and supporting documentation.

Table 3 – Estimated Source Emissions

Pollutant	Proposed Source-wide Potential Emissions (tpy)	Proposed Source-wide Allowable Emissions (tpy)	Minor NSR / Major NSR Thresholds for attainment areas (tpy) (Table 1 of 40 CFR 49.153 / 40 CFR 52.21(b)(1)(i)(b))	PM - Particulate Matter PM_{10} – Particulate Matter less than 10 microns in size $PM_{2.5}$ – Particulate Matter less than 2.5 microns in size SO_2 - Sulfur Dioxide NO_X - Nitrogen Oxides CO - Carbon Monoxide VOC - Volatile Organic Compound Pb - Lead and lead compounds Fluorides - Gaseous and particulates H_2SO_4 - Sulfuric Acid Mist H_2S - Hydrogen Sulfide TRS - Total Reduced Sulfur RSC - Reduced Sulfur Compounds tpy – Tons per year HAP – Hazardous Air Pollutants. NA - Not applicable
PM	3.3	3.3	10 / 250	
PM_{10}	3.3	3.3	5 / 250	
$PM_{2.5}$	3.3	3.3	3 / 250	
SO_2	-	-	10 / 250	
NO_X	32.9	26.5	10 / 250	
CO	40.8	28.1	10 / 250	
VOC	10.7	6.2	5 / 250	
Pb	-	-	0.1 / 250	
Fluorides	-	-	1.0 / 250	
H_2SO_4	-	-	2.0 / 250	
H_2S	-	-	2.0 / 250	
TRS	-	-	2.0 / 250	
RSC	-	-	2.0 / 250	
Largest Single HAP	0.6	0.6	NA	
Total HAP	3.7	3.7	NA	

6.3 Allowable Emissions by Unit

Table 4 reflects the EPA's calculation of the proposed allowable emissions based on Red Cedar's proposed true minor source configuration and emission limits. This table shows the maximum proposed allowable emissions of the emission units proposed to be installed and operated at the facility. As discussed in the Air Quality Impact Analysis (AQIA) in Section 9.0, the impacts of this true minor NSR permit action were analyzed to account for the proposed unit configuration and proposed allowable emissions.

Table 4 – Proposed Emissions Unit-Specific Allowable Emissions in tons per year (tpy).

Emission Unit Description	NO_X	CO	VOC	$PM/PM_{10}/PM_{2.5}$	SO_2	Acetaldehyde	Acrolein	CH_2O	Methanol	Total HAP
Natural Gas-Fired Turbine	25.9	27.1	3.1	2.8	-	0.02	0.00	0.09	-	0.2
Natural Gas-Fired Generator Engine	0.4	0.8	0.3	0.5	-	0.07	0.07	0.52	0.08	0.8
TEG Dehydrator	0.0	0.0	2.8	0.0	-	0.00	-	0.00	0.00	2.7
TEG Reboiler	0.23	0.19	0.01	0.02	-	-	-	-	-	0.00
Dirty Water Storage Tank	0.00	0.00	0.00	0.00	-	-	-	-	-	0.00
Compressor Oil Tanks (2)	0.00	0.00	0.00	0.00	-	-	-	-	-	0.00
Compressor Oil Tanks	0.00	0.00	0.00	0.00	-	-	-	-	-	0.00
Used Oil Tank	0.00	0.00	0.03	0.00	-	-	-	-	-	0.00
TOTAL	**26.5**	**28.1**	**6.2**	**3.3**	**-**	**0.0**	**0.0**	**0.6**	**0.0**	**3.7**

Notes: NO_X = nitrogen oxide; CO = carbon monoxide; VOC = volatile organic compound; PM = particulate matter; PM_{10} – Particulate Matter less than 10 microns in size; $PM_{2.5}$ – Particulate Matter less than 2.5 microns in size; SO_2 = sulfur dioxide; CH_2O = formaldehyde; HAP = hazardous air pollutants.

7. Source Determination

As mentioned earlier, the EPA conducted a formal source determination for the proposed CO_2 Capture Facility at Red Cedar's request. The EPA's August 24, 2023, source determination is available in the docket for this permit action and is summarized here, with some additional clarification after further review of the information in Red Cedar's application. Under the federal rules governing the NSR permitting programs, entities are considered part of the same "stationary source" if they (1) belong to the same industrial grouping (2-digit "Major Group" Standard Industrial Classification (SIC) code); (2) are located on one or more contiguous or adjacent properties; and (3) are under the control of the same person (or persons under common control). *See* 40 CFR 52.21(b)(5) and (6).

The proposed facility would share a fence line with the Simpson Treating Plants. Red Cedar indicated it intends to build the facility as the owner but plans to sell the facility to a third party in the future and then contract to operate the facility for the third party.

The proposed CO_2 Capture Facility would be contiguous or adjacent to the Arkansas Loop and Simpson Treating Plants, and both facilities would be owned and operated by Red Cedar and, therefore, under common control, per the definition of "building, structure, facility or installation" under the PSD Permit Program (40 CFR 52.21(b)(5) and (6)). The two facilities, as classified by Red Cedar, would not belong to the same industrial grouping. Red Cedar is classifying the proposed CO_2 Capture Facility under standard industrial code (SIC) code 281301 – Industrial Gases CO_2 (North American Industry Classification System (NAICS) code 325210 – Industrial Gas Manufacturing (CO_2)). In the EPA's preamble to the Final Rule for 40 CFR part 52 published in the Federal Register on August 7, 1980 , the EPA clarified that in its view a December 1979 opinion in *Alabama Power* "sets the following boundaries on the definition for PSD purposes of the component terms of "source": (1) it must carry out reasonably the purposes of PSD; (2) it must approximate a common sense notion of "plant"; and (3) it must avoid aggregating pollutant-emitting activities that as a group would not fit within the ordinary meaning of "building," "structure," "facility," or "installation."" It later states that "each source is to be classified according to its primary activity, which is determined by the principal product or group of products produced or distributed, or services rendered," and "one source classification encompasses both primary and support facilities, even when the latter includes units with a different two-digit SIC code." Further, support facilities are typically those which convey, store, or otherwise assist in the production of the principal product. Where a single unit is used to support two otherwise distinct sets of activities, the unit is to be included within the source which relies most heavily on its support." (45 FR 52694-52695).

It could be argued that the CO_2 Capture Facility might be considered a support facility to the Arkansas Loop and Simpson Treating Plants because the waste CO_2 gas from the treating plants that would otherwise be vented to the atmosphere would be processed by the CO_2 Capture Facility. The Arkansas Loop and Simpson Treating Plants do not in any way rely on the proposed CO_2 Capture Facility to continue operating. The current effective permits for the Arkansas Loop and Simpson Treating Plants do not prohibit venting of the waste CO_2 gas.

When considered inversely, it may be argued that the Arkansas Loop and Simpson Treating Plants will serve as a support facility to the CO_2 Capture Facility, because the plant would primarily, or even possibly solely, process CO_2 from the treating plants. However, considering the EPA's view that the component terms of "source" must carry out reasonably the purposes of PSD, approximate a common sense notion of a "plant," and must avoid aggregating pollutant-emitting activities that as a group would not fit within the ordinary meaning of "building," "structure," "facility," or "installation," it would not be reasonable to consider an existing source long-established with a primary activity that merely supplies a waste gas from that activity to be considered a support facility of a proposed new source, especially when the existing source would continue to operate regardless of the construction of the proposed new source.

After reviewing the information provided by Red Cedar in its application and in its request for a formal source determination, the EPA has concluded that the facts do not establish a support relationship of the proposed new CO_2 Capture Facility to the Arkansas Loop and Simpson Treating Plants, even with present plans that meet the common control and physical proximity criteria for single source determinations. Regarding the third criteria for a single source determination, the EPA has no cause to dispute the case-specific details that Red Cedar provided that the two-digit industrial codes attributed to each operation are different and that the Arkansas Loop and Simpson Treating Plants would not rely on the primary activity of the CO_2 Capture Facility to continue to operate and demonstrate compliance with its primary permitted activity. Therefore, the EPA has determined that the proposed CO_2 Capture Facility should be considered a separate source from the Arkansas Loop and Simpson Treating Plants.

8. Control Technology Review for Proposed Construction

Pursuant to 40 CFR 49.154(c), the EPA must conduct a case-by-case control technology review (CTR) under the Tribal Minor NSR Program to determine the appropriate level of control, if any, necessary to assure that the NAAQS are achieved. Through this case-by-case CTR, the EPA establishes emission limits for the affected emission units at the proposed source. An emission limit means a requirement established by the reviewing authority that limits the quantity, rate or concentration of emissions of air pollutants on a continuous basis, including any requirement relating to the operation or maintenance of a source to assure continuous emission reduction as well as any design standard, equipment standard, work practice, operational standard or pollution prevention technique.

As stated in 40 CFR 49.154(c)(1), the case-by-case CTR considers the following four factors:

- Local air quality conditions;
- Typical control technology or other emission reduction measures used by similar sources in surrounding areas;
- Anticipated economic growth in the area; and
- Cost-effective emission reduction alternatives.

For this permit, the EPA considered regulations that apply to the equipment proposed to be installed, operated and maintained at the Red Cedar CO_2 Capture Facility prior to the issuance of the pending Tribal Minor NSR permit. The EPA has also conferred with the Southern Ute Indian Tribe.

The area surrounding the proposed project and the broader area of the Southern Ute Indian Reservation is classified as attainment for all NAAQS pollutants.

As previously discussed in Section 6 of this TSD, the proposed natural gas-fired turbine, being a stationary gas turbine with a heat input at peak load equal to or greater than 10 MMBtu per hour that commenced construction, modification or reconstruction after February 18, 2005, would be subject to the enforceable emission standards in NSPS KKKK at 40 CFR 60.4333. NSPS KKKK does not require subject turbines to apply add-on controls to meet the standards. Applicable requirements include meeting NOx and SO_2 emission limits based on the specifics of the turbine and operating and maintaining the turbine and associated equipment with good air pollution control practices for minimizing emissions. The owner or operator must demonstrate compliance of operations and the fuel used (specifically as it relates to sulfur content) through reporting and must pass initial and periodic performance testing. To ensure the Permittee would be able to comply with the applicable requirements of NSPS KKKK, the proposed permit contains conditions consistent with those applicable requirements. The PTE for the turbine is relatively low and the results of the AQIA, discussed in Section 9 of this TSD, indicate that the emissions would not cause or contribute to local violations of the NAAQS; therefore, the EPA has determined that application of add-on emission controls is not necessary.

As previously discussed in Section 6 of this TSD, the proposed natural gas-fired generator engine, being a 4-stroke rich-burn reciprocating internal combustion engine manufactured on or after July 1, 2007, with maximum engine power greater than or equal to 500 hp, would be subject to standards in both NSPS JJJJ and NESHAP ZZZZ. NSPS JJJJ and NESHAP ZZZZ do not require subject engines to apply add-on controls to meet the standards. Red Cedar will operate the generator with an oxidation catalyst per the manufacturer guidelines. Since the engine is considered a new stationary RICE, it is subject to the requirements of NESHAP ZZZZ for a RICE with greater than 500 hp burning pipeline quality natural gas at an area source of HAP, which specifies that compliance must be demonstrated by meeting the requirements of NSPS JJJJ for a natural gas-fired spark ignition RICE with greater than or equal to 500 hp manufactured on or after July 1, 2007, and no further requirements under NESHAP ZZZZ apply (40 CFR 63.6590(c)(1)). Red Cedar intends to comply with those requirements by purchasing, installing and operating a certified engine. To ensure the Permittee would be able to comply with the applicable requirements of NSPS JJJJ, and thus NESHAP ZZZZ, the proposed permit contains conditions consistent with those applicable requirements. In addition, the proposed permit restricts the annual hours of operation to 500 hours.

As discussed in Section 6 of this TSD, the proposed source is an area source of HAP. TEG dehydration units are regulated as affected sources at oil and natural gas production facilities and natural gas

transmission and storage facilities under NESHAP HH and HHH, but the CO_2 Capture Facility is neither an oil and natural gas production facility nor a natural gas transmission and storage facility. As such, there are no enforceable requirements that apply to the proposed TEG dehydration unit. Red Cedar has proposed to reduce VOC and HAP emissions from the still vent of the unit by using a condenser, separator and reflux loop with storage for offsite disposal as described in Section 3.2. The EPA determined that this is a reasonable mechanism commonly used in the wider area surrounding the project location to control HAP emissions from TEG dehydration units. Therefore, the EPA has determined that further emission controls are not necessary.

The four storage tanks at the proposed facility, which will store dirty water, compressor oil and used oil will be constructed after July 23, 1984, and as such could be subject to the NSPS for Volatile Organic Liquid Storage Vessels at 40 CFR part 60, subpart Kb based on date of construction. However, the two compressor oil storage tanks and the used oil storage tank have capacities less than 75 cubic meters; therefore, NSPS Kb does not apply. The dirty water tank has a capacity greater than or equal to 75 cubic meters but less than 151 cubic meters and stores liquid with a maximum true vapor pressure less than 15.0 kPa. As such, pursuant to § 60.110b(b)(1), NSPS Kb does not apply.

The turbine-specific emission limits in the proposed permit were designed to be consistent with the applicable control requirements in NSPS KKKK, with the exception that the Permittee requested more stringent NO_X, CO and VOC emission limits that reflect the manufacturer-specified controlled emission rates. The engine-specific emission limits in the proposed permit were designed to be consistent with the applicable control requirements in NSPS JJJJ and NESHAP ZZZZ, with the exception that the Permittee requested NO_X, CO and VOC emission limits that reflect the manufacturer-specified controlled emission rates, which are more stringent than the applicable emission limits in Table 1 of NSPS JJJJ.

9. Air Quality Impacts Analysis

Under 40 CFR 49.151(e)(4) and 49.154(d)(1), for projects that trigger Tribal Minor NSR review, the reviewing authority may require the submission of an AQIA if it has reason to be concerned that the construction of the minor source or modification would cause or contribute to a NAAQS or PSD increment violation.[5] Red Cedar is proposing to install one natural gas-fired 9331 kW turbine and one natural gas-fired 701 bhp generator engine. The turbine will be used throughout the year for primary electricity generation. The generator engine is expected to only operate for approximately ten minutes each time the turbine is started up and then four hours after each turbine shutdown, and as needed for backup/emergency power. Red Cedar based allowable emission calculations on a maximum of 20

[5] The PSD increments for criteria pollutants are listed in 40 CFR 52.21(c) and 40 CFR 51.166(c) and are the maximum annual allowable increases in pollutant concentrations, in micrograms per cubic meter, over the baseline concentration for specific areas (designated Class I, such as national parks, wilderness areas, and certain Indian Reservations designated by the governing Tribe, and Class II or III. Most areas in the United States, including the Southern Ute Indian Reservation, are Class II areas.)

startup/shutdown events per year. Figure 1 shows the plot plan for the proposed project and illustrates the property boundary, fence line, equipment, and structures. The proposed project is estimated to result in net increases in NSR-regulated pollutants that exceed the minor source thresholds in Table 1 of 40 CFR 49.153. Therefore, the EPA required Red Cedar to conduct an AQIA to evaluate impacts from the new proposed source to demonstrate that the proposed project will not cause or contribute to a NAAQS violation.

Figure 1 below shows a map of the project location and the project's sources included in the AQIA. The project will be located on the Southern Ute Indian Reservation and in an attainment area for all criteria pollutants. Given that the proposed project will result in the emissions of NOx, CO, PM_{10} and $PM_{2.5}$, the air quality modeling assessed nitrogen dioxide (NO_2), CO, PM_{10} and $PM_{2.5}$ based on their respective emission rates. Each pollutant was modeled for each averaging period to demonstrate compliance with EPA's Significant Impact Levels (SIL) and NAAQS. Ozone and secondary $PM_{2.5}$ were also assessed through EPA's Modeled Emission Rates for Precursors (MERPs) as a Tier 1 Demonstration Tool to have a comprehensive and defensible AQIA.

Air Quality Impacts Analysis METHODOLOGY

EPA's AERSCREEN dispersion model was used for the AQIA. The AERSCREEN system programs and model versions used for this project included:

- AERSCREEN: Version 22112
- AERMAP: Version 18081
- MAKEMET: Version 16216
- BPIP-PRIME: Version 04274

AERSCREEN is the EPA-approved screening tool that is based on AERMOD, which is the EPA-approved refined air dispersion modeling tool. AERSCREEN is designed to address a single-source scenario. However, there are approaches that can be used on a case-by-case basis to address multi-source situations, such as this project. AERSCREEN is also designed to provide conservative estimates of concentrations because the screening assumptions produce worst-case, maximum concentrations of various pollutants. The assumptions used for the AERSCREEN analyses are outlined in Table 5 and Table 6 below. Given that AERSCREEN is designed for single sources, an AERSCREEN simulation was completed for each source. The modeled high, first high (H1H) concentration from each source for each pollutant was also summed together to determine the total predicted concentrations. The calculations also used the maximum predicted concentrations that were not paired in time or space for comparison to the air quality standards (i.e., used for both SIL and NAAQS). This approach is anticipated to produce conservative results because the approach does not account for realistic conditions, such as the space between sources and refined meteorology/dispersion for interacting or overlapping plumes. This approach is also considered conversative because the predicted concentrations did not account for the form of the standards in the cumulative impact analysis. As a result, this approach is anticipated to generate worst-case conditions. The maximum total predicted

concentrations were compared to the SIL for the source impact analysis and to the NAAQS for the cumulative impact analysis.

MODELING EMISSION INVENTORY AND RELEASE PARAMETERS

The single-source impact analysis considered the emissions associated with the proposed project to assess whether the project emissions could have a significant impact (i.e., exceedance of one or more SIL) upon the area surrounding the project. Table 6 below summarizes emission source units, the associated emission rates, and release parameters used in the modeling for this analysis.

A cumulative impact analysis that includes the project sources, nearby sources, and monitored background concentrations was completed for the criteria pollutants that exceeded the SIL. The general area around the project area is predominately rural with assorted oil and gas activities and undeveloped land. Given the location of these nearby sources and the availability of monitoring data in the area, these nearby sources were not explicitly included in the model. Instead, these nearby sources were accounted for using background concentrations. The background concentrations were based on 3-year design values averaged across monitor data collected between 2020 and 2022 at the UTE 1 (08-067-7001) and UTE 3 (08-067-7003) sites (Table 7). These background concentrations were added to the model results to determine compliance for this analysis.

SUMMARY OF AIR QUALITY MODEL RESULTS

The air quality analyses were conducted using EPA's AERSCREEN model to obtain estimates of maximum predicted short-term and long-term concentrations associated with the emissions generated from the proposed project. The modeled H1H concentration for each pollutant was compared to the SIL for the single-source impact analysis. If the maximum predicted concentrations for any specific pollutant and averaging period were below these levels, the emissions from the project will not be considered to cause or contribute to a significant air quality impact, and no further modeling related to that specific standard will need to be completed for the AQIA. The results from the modeling analysis only showed compliance with the 1-hour CO SIL, and all other SIL were exceeded (Table 8). Given these results, a cumulative impact analysis was completed for these air pollutants (i.e., CO, NO_2, PM_{10}, and $PM_{2.5}$) and averaging periods (1-hour, 8-hour, 24-hour, and annual). The cumulative impact analysis included all the project's emitting units and the applicable background concentrations. The sum of the modeled H1H concentrations and the appropriate background concentrations were then compared to the respective NAAQS to demonstrate whether the project will cause or contribute to NAAQS violations. The model results in Table 8 show compliance with all applicable NAAQS. Table 8 also presents the distances from the sources to the maximum predicted concentrations or the Radius of Impact (ROI).

Ozone and secondary $PM_{2.5}$ were also assessed through EPA's MERPs as a Tier 1 Demonstration Tool. Based on the location and conditions of the project, the MERPs analysis used information associated to

the Bent County, Colorado hypothetical source from EPA's MERPs database. The hypothetical source assumed emissions equivalent to 500 tpy and a 10-m surface release. Table 9 outlines the assumptions and model results from the MERPs analysis for ozone and secondary $PM_{2.5}$. The MERPs analysis shows that the emissions generated from the project are not expected to exceed the ozone SIL and secondary $PM_{2.5}$ NAAQS.

Overall, the proposed project will not cause or contribute to NAAQS violations based on the model results. The permit conditions will align with all the assumptions used in the air quality modeling analysis to ensure compliance with the ambient air standards.

All modeling input and output files are available for review at https://www.epa.gov/caa-permitting/proposed-minor-nsr-permit-red-cedar-gathering-company-co2-capture-facility. Further, additional air quality analyses and details of the air quality modeling assumptions provided by the applicant are provided in the project's application package (see Docket #EPA-R08-OAR-2022-0404 at https://www.regulations.gov).

FIGURES AND TABLES FOR AQIA

Figure 1. Area Map of Proposed Project on Colorado and Plot Plan.

Figure 2. Proposed Project Plot Plan.

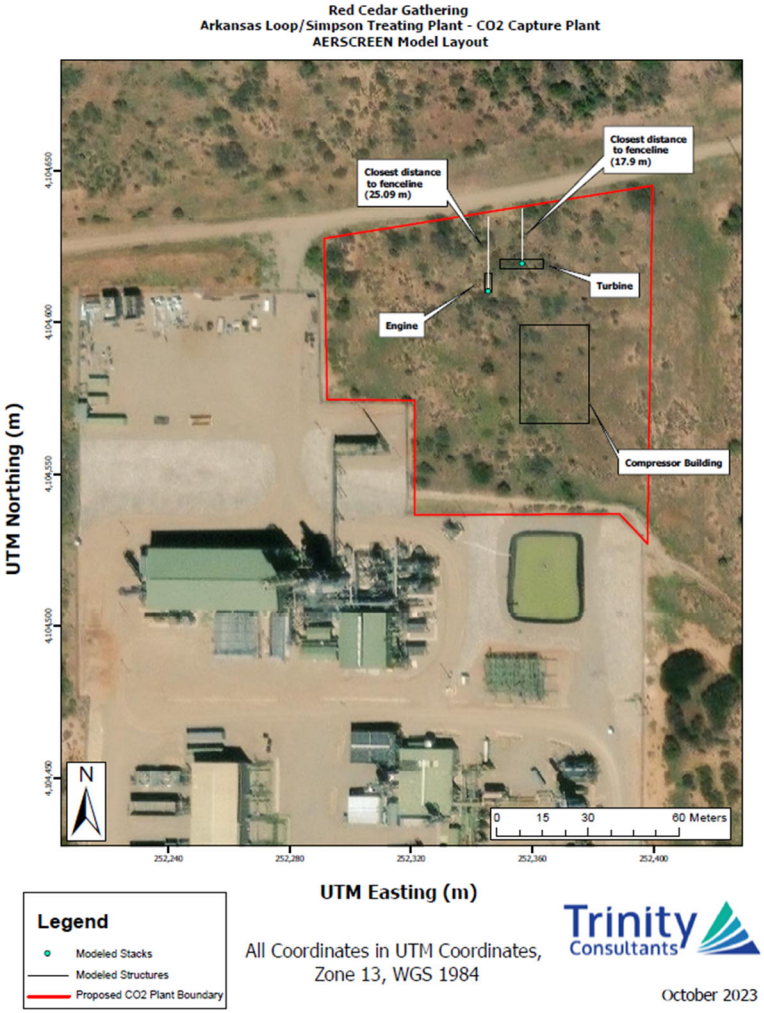

Table 5. AERSCREEN Modeling Parameters

Parameter	Engine Assumptions	Turbine Assumptions
AERSCREEN Version	21112	21112
MAKEMET Version	16216	16216
AERMAP Version	18081	18081
BPIPPRM Version	04272	04272
Source Type	Point	Point
Urban/Rural Option	Rural	Rural
Distance to the Ambient Air Boundary [m]	25.09	17.90
NO_2 Chemistry Option		
In-Stack NO2/NOx Ratio	0.4	0.3
Ozone Concentration [ppb]	66.5	66.5
Building Downwash	Yes	Yes
Building Height (m)	12.4	12.4
Maximum Horizontal Building Dimension (m)	39.7	39.7
Minimum Horizontal Building Dimension (m)	2.3	3.0
Terrain (Note Input File Information)	USGS_1_n37w107_converted.tif USGS_1_n37w108_converted.tif USGS_1_n37w109_converted.tif USGS_1_n38w107_converted.tif USGS_1_n38w108_converted.tif USGS_1_n38w109_converted.tif	USGS_1_n37w107_converted.tif USGS_1_n37w108_converted.tif USGS_1_n37w109_converted.tif USGS_1_n38w107_converted.tif USGS_1_n38w108_converted.tif USGS_1_n38w109_converted.tif
Receptor Spacing and Distance from Source	25m/5000m	25m/5000m
Flagpole Receptors	No	No
Source Elevation [m]	2234.49	7331.0
Source Coordinates [m]	252345. E, 4104610. N	252357. E, 4104619. N
UTM Zone	13	13
UTM NADA	4	4
Minimum Ambient Air Temp (K)	250	250
Maximum Ambient Air Temp (K)	310	310
Minimum Wind Speed (m/s)	0.5	0.5
Anemometer Height [m]	10	10
Surface Characteristics	AERMET Seasonal Tables	AERMET Seasonal Tables
Surface Profile	Desert Shrubland	Desert Shrubland
Climate Profile	Dry	Dry
Surface Friction Velocity (ADJ_U*)	Yes	Yes
Fumigation Option	No	No

Table 6. Project Emission Rates and Release Parameters used in AERSCREEN.

Unit	Description		Maximum Hourly Emission Rates					Release Parameters						
			NOx (g/s)	CO (g/s)	SO_2 (g/s)	PM_{10} (g/s)	$PM_{2.5}$ (g/s)	Easting X [m]	Northing Y [m]	Height [m]	Temp [K]	Velocity [m/s]	Diameter [m]	NO_2 ISR
Turbine	Natural gas-fired 9331 kW SOLAR MARS 100-16000S	Steady State	0.745	0.75	NA	0.08	0.08	252,356.6	4,104,619.3	13.89	727.04	18.75	2.58	0.3
		Start Up	0.747	5.67	NA	0.08	0.08							
		Shutdown	0.031	1.39	NA	0.08	0.08							
Engine	Natural gas-fired 701 bhp Cummins GTA 28E		0.0111	0.39	NA	0.0143	0.000815	252,345.4	4,104,610.2	3.0	893.0	47.28	0.2	0.4

Table 7. Background Concentrations.

Pollutant	Units	Site Name	Site ID	Latitude	Longitude	2020	2021	2022	3-Year Average DV	Average DV
1-hour NO2	µg/m³	UTE 1	08-067-7001	37.13678	-107.62863	30.08	30.27	30.08	30.15	33.41
		UTE 3	08-067-7003	37.10258	-107.870219	38.92	42.87	28.20	36.67	
Annual NO2	µg/m³	UTE 1	08-067-7001	37.13678	-107.62863	6.92	6.96	13.43	9.10	11.04
		UTE 3	08-067-7003	37.10258	-107.870219	9.76	9.63	19.54	12.97	
24-hour PM2.5	µg/m³	UTE 3	08-067-7003	37.10258	-107.870219	19.30	16.30	16.30	17.30	17.30
Annual PM2.5	µg/m³	UTE 3	08-067-7003	37.10258	-107.870219	5.60	5.80	5.80	5.73	5.73
24-hour PM10	µg/m³	UTE 3	08-067-7003	37.10258	-107.870219	80.90	136.80	136.80	118.17	118.17
8-hour Ozone	ppb	UTE 1	08-067-7001	37.13678	-107.62863	66.00	66.00	66.00	66.00	66.50
		UTE 3	08-067-7003	37.10258	-107.870219	65.00	68.00	68.00	67.00	
1-hour CO	µg/m³	Ute 1	08-067-7001	37.13678	-107.62863	457.97	457.97	137.39	351.11	351.11
8-hour CO	µg/m³	Ute 1	08-067-7001	37.13678	-107.62863	2404.33	1144.92	1717.38	1755.54	1755.54

Table 8. Model predicted concentrations for each pollutant and averaging period, along with the associated SIL and NAAQS thresholds. Red values represent predicted values above applicable air quality thresholds.

Pollutant	Standard	Model Concentration (µg/m³)		Background Concentration (µg/m³)	Total Predicted Concentration (µg/m³)	Value of Standard (µg/m³)	Percent of Standard [%]	Radius of Impact [m] [Engine/Turbine]
		Engine	Turbine					
1-hour CO	SIL	940.68	249.54	NA	1190.22	2000	59.5	25.09/78
1-hour CO	NAAQS	NA	NA	351.11	NA	40000	NA	NA
8-hour CO	SIL	846.69	224.59	NA	**1071.28**	500	169	25.09/78
8-hour CO	NAAQS	846.69	224.59	1755.54	2826.82	10000	28.3	NA
1-hour NO_2	SIL	24.1	29.56	NA	**53.66**	7.5	715.5	25.09/78
1-hour NO_2	NAAQS	24.1	29.56	33.41	87.07	188	46.3	NA
Annual NO_2	SIL	2.41	2.96	NA	**5.37**	1	536.6	25.09/78
Annual NO_2	NAAQS	2.41	2.96	11.04	16.41	100	8.7	NA
Primary 24-hour $PM_{2.5}$	SIL	1.18	2.11	NA	**3.29**	1.2	274.3	25.09/78
Primary 24-hour $PM_{2.5}$	NAAQS	1.18	2.11	17.3	20.59	35	58.8	NA
Primary Annual $PM_{2.5}$	SIL	0.2	0.35	NA	**0.55**	0.13	423.1	25.09/78
Primary Annual $PM_{2.5}$	NAAQS	0.2	0.35	5.73	6.28	9	69.8	NA
24-hour PM_{10}	SIL	20.69	2.11	NA	**22.8**	5	456.0	25.09/78
24-hour PM_{10}	NAAQS	20.69	2.11	118.17	140.9	150	93.9	NA
1-hour SO_2	SIL	NA	NA	NA	NA	7.8	NA	NA
1-hour SO_2	NAAQS	NA	NA	NA	NA	196	NA	NA

Table 9. MERPs Analysis: Assumptions and Results for Ozone and Secondary $PM_{2.5}$. Red values represent predicted values above applicable air quality thresholds.

Pollutant	Precursor	Predicted Concentration	Facility PTE (tpy)	NOx Contribution	VOC Contribution	SO_2 Contribution	AERMOD Primary Concentration	Monitor Design Value	Total Impact	Standard	% Standard
Ozone SIL Analysis (Equation 1)	VOC	0.057	6.24	0.001	0.001	NA			0.11	1 ppb	11.3
	NOx	2.12	26.5								
Secondary $PM_{2.5}$ SIL Analysis (Equation 2)	24-hour NOx	0.077	26.5	0.004	NA	0.00000	3.29	NA	3.29	1.2 µg/m³	274.5
	24-hour SO_2	0.255	0								
	Annual NOx	0.0019	26.5	0.0001	NA	0.00000	0.55	NA	0.55	0.13 µg/m³	423.2
	Annual SO_2	0.004	0								
Secondary $PM_{2.5}$ NAAQS Analysis (Equation 3)	24-hour NOx	0.077	26.5	0.004	NA	0.00000	3.29	17.3	20.59	35 µg/m³	58.8
	24-hour SO_2	0.255	0								
	Annual NOx	0.0019	26.5	0.0001	NA	0.000000	0.55	5.73	6.28	15 µg/m³	41.9
	Annual SO_2	0.004	0								

Equation 1: Project Single-Source Ozone Air Quality Impact (ppb) = $\left[\left[Project\ NOx\ Emission\ Rate\ x\ \frac{Modeled\ NOx\ Air\ Quality\ Impact\ from\ Hypothetical\ Source}{Modeled\ NOx\ Emission\ Rate\ from\ Hypothetical\ Source}\right] + \left[Project\ VOC\ Emission\ Rate\ x\ \frac{Modeled\ VOC\ Air\ Quality\ Impact\ from\ Hypothetical\ Source}{Modeled\ VOC\ Emission\ Rate\ from\ Hypothetical\ Source}\right]\right]$

Equation 2: Project Single-Source Secondary $PM_{2.5}$ Air Quality Impact (µg/m³) = $\left[\left[Project\ NOx\ Emission\ Rate\ x\ \frac{Modeled\ NOx\ Air\ Quality\ Impact\ from\ Hypothetical\ Source}{Modeled\ NOx\ Emission\ Rate\ from\ Hypothetical\ Source}\right] + \left[Project\ SO2\ Emission\ Rate\ x\ \frac{Modeled\ SO2\ Air\ Quality\ Impact\ from\ Hypothetical\ Source}{Modeled\ SO2\ Emission\ Rate\ from\ Hypothetical\ Source}\right] + AERMOD\ Primary\ PM2.5\ Concentration\right]$

Equation 3: Project Cumulative Secondary $PM_{2.5}$ Air Quality Impact (µg/m³) = $\left[\left[Project\ NOx\ Emission\ Rate\ x\ \frac{Modeled\ NOx\ Air\ Quality\ Impact\ from\ Hypothetical\ Source}{Modeled\ NOx\ Emission\ Rate\ from\ Hypothetical\ Source}\right] + \left[Project\ SO2\ Emission\ Rate\ x\ \frac{Modeled\ SO2\ Air\ Quality\ Impact\ from\ Hypothetical\ Source}{Modeled\ SO2\ Emission\ Rate\ from\ Hypothetical\ Source}\right] + Monitor\ DV + AERMOD\ Primary\ PM2.5\ Concentration\right]$

Equations from: Guidance on the Development of Modeled Emission Rates for Precursors (MERPs) as a Tier 1 Demonstration Tool for Ozone and PM2.5 under the PSD Permitting Program, Office of Air Quality Planning and Standards, April 30, 2019 and April 30, 2024: https://www.epa.gov/nsr/guidance-development-modeled-emission-rates-precursors-merps-tier-1-demonstration-tool-ozone-and

10. Listed Species-Related Requirements

Pursuant to section 7(a)(2) of the Endangered Species Act (ESA), 16 U.S.C. 1536(a)(2), and its implementing regulations at 50 CFR part 402, each federal agency, which includes the EPA, is required to ensure that any action authorized, funded, or carried out by the agency is not likely to jeopardize the continued existence of any federally endangered or federally threatened species listed under the ESA, or result in the destruction or adverse modification of such species' designated critical habitat.

The Southern Ute Growth Fund prepared a Biological Assessment (BA) for the U.S. Bureau of Indian Affairs (BIA) (Biological Assessment, Simpson Carbon Capture Facility Surface Lease Agreement #750-10-6019 (Feb. 2, 2022)). The BA describes the BIA's decision as follows, "Red Cedar is seeking approval of a surface lease agreement amendment for the sole purpose of constructing, operating, and maintaining a gas separation, compression and treating station. The surface use agreement amendment would expand the existing Simpson treating facility boundary by 2.03 acres, for a total of approximately 5.6 acres. The proposed project is located approximately 9 miles southwest of Ignacio in La Plata County, Colorado and within the exterior boundaries of the Southern Ute Reservation." (BA at 1). The BA identified nine federally listed threatened or endangered species that may occur within the project area and did not identify any designated critical habitat. The BA concluded that the BIA's action would have "no effect" on the listed species. The SUIT's Division of Wildlife Resource Management issued an Interoffice Memorandum concurring with the BA's "no effect" determination for all nine species. (Feb. 9, 2022). The BA did not evaluate the proposed action from an air emissions perspective, directly or indirectly. The EPA identified two additional federally listed threatened or endangered species that may occur within the project area through the Fish and Wildlife Information Planning and Consultation (IPaC) tool. The EPA concluded the BIA's action would have "no effect on the listed species.

The EPA has determined that this Tribal Minor NSR permit is subject to ESA section 7(a)(2) requirements. In complying with its duty under the ESA, the EPA is evaluating whether the action area for the project includes any federally listed species and/or designated critical habitat and, if so, whether the permit of the proposed project may potentially affect such species or habitat. The EPA will complete this evaluation before making a final permit decision and will document the evaluation in the administrative permit docket (Docket #EPA-R08-OAR-2022-0404 at https://www.regulations.gov).

11. Historic Properties-Related Requirements

Section 106 of the National Historic Preservation Act of 1966 (NHPA) requires federal agencies, including the EPA, to consider the effects of an undertaking on historic properties. The implementing regulations of the NHPA can be found at 36 CFR part 800. An "undertaking," as defined at 36 CFR 800.16(y), includes projects requiring a federal permit. Therefore, the issuance of this permit constitutes an undertaking.

In complying with its duty under the NHPA, the EPA is evaluating whether the action area for the project includes any historic properties listed or eligible for listing in the National Register of Historic Properties or any potentially significant cultural resources and, if so, whether permitting the proposed project may potentially affect such properties. The EPA submitted an NHPA Tribal Consultation Letter to ensure concerns of cultural sensitivity were accounted for and reviewed the National Register of Historic Places for La Plata County. SUIT reviewed and approved the Cultural Resource Survey, which reviewed the Area of Potential Effect (APE) of the project. This expressed no concerns over traditional, religious or cultural properties affected by the proposed activity. The EPA will conclude the NHPA Section 106 process before making a final permit decision and will document the evaluation in the administrative permit docket (Docket #EPA-R08-OAR-2022-0404 at https://www.regulations.gov).

12. Tribal Consultations and Communications

All minor source permit applications (synthetic minor, minor modifications to an existing facility, new true minor or general permit) are submitted to both EPA Region 8 and the Tribal Environmental Director per the application instructions (see https://www.epa.gov/caa-permitting/tribal-nsr-permits-region-8). The Tribal Environmental Office is asked to respond to the EPA within 10 business days with questions and comments on the application. In the event an AQIA is triggered, a copy of that document is emailed to the Tribe within 5 business days of receipt by EPA Region 8. Because the EPA required an AQIA for the permit action, the EPA ensured that the Southern Ute Indian Tribe's Environmental Programs Division received a copy of the AQIA. The EPA typically does not invite a Tribe to consult on true Tribal Minor NSR permit actions unless we have prior knowledge that the Tribe or the public has expressed interest in the particular source, action or project area. In this case, the EPA was made aware by Red Cedar that this project was a priority for the Tribe to support CO_2 emission reductions on the Reservation, so we invited the Southern Ute Indian Tribe to consult on the pending permit action via letter dated February 21, 2024. On April 3, 2024, the Tribe's Environmental Programs Division Head notified the EPA that the Tribe was not interested in consulting on this permit. However, according to the *EPA Policy on Consultation with Indian Tribes*, the EPA will always consider Tribal requests for consultation at any time for any matter should the Tribe later express a desire to consult on this action.

As part of the EPA's standard procedures for Tribal Consultations and coordination, the Tribe's Environmental Programs Division is notified of the public comment period for any proposed permit and provided copies of the notice of public comment opportunity to post in various locations on the Reservation that they deem fit. The EPA will notify the Tribe of the issuance of a final permit.

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13. Environmental Justice Analysis

Executive Order (EO) 14096[6] defines "environmental justice" as "the just treatment and meaningful involvement of all people, regardless of income, race, color, national origin, Tribal affiliation, or disability, in agency decision-making and other Federal activities that affect human health and the environment so that people: (i) are fully protected from disproportionate and adverse human health and environmental effects (including risks) and hazards, including those related to climate change, the cumulative impacts of environmental and other burdens, and the legacy of racism or other structural or systemic barriers; and (ii) have equitable access to a healthy, sustainable, and resilient environment in which to live, play, work, learn, grow, worship, and engage in cultural and subsistence practices." EO 14096 at 15253.

EO 14091,[7] *Further Advancing Racial Equity and Support for Underserved Communities Through the Federal Government*, defines the term "equity" as "the consistent and systematic treatment of all individuals in a fair, just, and impartial manner, including individuals who belong to communities that often have been denied such treatment, such as Black, Latino, Indigenous and Native American, Asian American, Native Hawaiian, and Pacific Islander persons and other persons of color; members of religious minorities; women and girls; LGBTQI+ persons; persons with disabilities; persons who live in rural areas; persons who live in United States Territories; persons otherwise adversely affected by persistent poverty or inequality; and individuals who belong to multiple such communities." It also defines the term "underserved communities" as "those populations as well as geographic communities that have been systematically denied the opportunity to participate fully in aspects of economic, social, and civic life, as defined in EOs 13985 and 14020." *Id*. at 10832.

EO 12898[8] directs federal agencies "to the greatest extent practicable and permitted by law," to "make achieving environmental justice part of its mission by identifying and addressing as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations." EO 14096, *Revitalizing Our Nation's Commitment to Environmental Justice for All,* supplements EO 12898 and reinforces the federal government's commitment to advancing environmental justice, equity, and civil rights, establishing a policy that "every person must have clean air to breathe; clean water to drink; safe and healthy foods to eat; and an environment that is healthy, sustainable, climate-resilient, and free from harmful pollution and chemical exposure." EO 14096 at 25251.It sets forth a government-wide approach to environmental justice that includes directives that each agency, as appropriate and consistent with applicable law: identify, analyze, and address disproportionate and adverse human health and environmental effects (including risks) and hazards of Federal activities, including those related to climate change and cumulative impacts of environmental and other burdens on

[6] Exec. Order No. 14096, 88 Fed. Reg. 25251 (Apr. 21, 2023) (hereinafter EO 14096).
[7] Exec. Order No. 14091, 88 Fed. Reg. 10825, 10831-32 (Feb. 16, 2023).
[8] 59 FR 7629 (Feb. 16, 1994).

communities with environmental justice concerns; evaluate relevant legal authorities and, as available and appropriate, take steps to address such effects; identify, analyze, and address historical inequities, systemic barriers, or actions related to any Federal regulation, policy, or practice that impair the ability of communities with environmental justice concerns to achieve or maintain a healthy and sustainable environment; identify, analyze, and address barriers related to Federal activities that impair the ability of communities with environmental justice concerns to receive equitable access to human health or environmental benefits, including benefits related to natural disaster recovery and climate mitigation, adaptation, and resilience; where available and appropriate, consider adopting or requiring measures to avoid, minimize, or mitigate disproportionate and adverse human health and environmental effects (including risks) and hazards of Federal activities on communities with environmental justice concerns, to the maximum extent practical; and provide opportunities for the meaningful engagement of persons and communities with environmental justice concerns who are potentially affected by Federal activities.

EO 14008[9] further directs federal agencies to "to address the disproportionately high and adverse human health, environmental, climate-related and other cumulative impacts on disadvantaged communities, as well as the accompanying economic challenges of such impacts." In addition, EO 13985[10] calls on each federal agency to "pursue a comprehensive approach to advancing equity for all, including people of color and others who have been historically underserved, marginalized, and adversely affected by persistent poverty and inequality." Accordingly, advancing environmental justice and equity is one of EPA's highest priorities as set forth in the Agency's FY22-26 Strategic Plan.[11]

In August 2022, the EPA's Office of General Counsel and Office of Policy issued an Interim Environmental Justice and Civil Rights in Permitting Frequently Asked Questions document,[12] and on December 22, 2022, the EPA's Office of Air and Radiation issued eight (8) principles to guide consideration of environmental justice in CAA permitting decisions.[13] The guidance and principles provide an interim operating framework for identifying, analyzing, and addressing environmental justice concerns in air permitting as EPA continues to build more tools and explore additional opportunities to advance environmental justice and equity with its co-regulatory partners, communities, and other stakeholders. The principles promote consistent use of best practices EPA and many of its co-regulatory partners have developed over time, including early identification of potential environmental justice concerns in specific locations, and early, ongoing engagement with affected communities throughout the permitting process. The principles also recognize the various types of CAA permits and the need to determine the appropriate scope of an environmental justice analysis and

[9] https://www.federalregister.gov/documents/2021/02/01/2021-02177/tackling-the-climate-crisis-at-home-and-abroad
[10] https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/20/executive-order-advancing-racial-equity-and-support-for-underserved-communities-through-the-federal-government/.
[11] https://www.epa.gov/planandbudget/strategicplan
[12] https://www.epa.gov/system/files/documents/2022-08/EJ%20and%20CR%20in%20PERMITTING%20FAQs%20508%20compliant.pdf
[13] https://www.epa.gov/caa-permitting/ej-air-permitting-principles-addressing-environmental-justice-concerns-air

appropriate permit terms and conditions on a case-by-case basis considering all available authorities. These principles were applied in analyzing environmental justice concerns for the proposed permit.

The EPA has developed an environmental justice mapping and screening tool called EJScreen[14] to assist in considering environmental justice in our work. It is based on nationally consistent data and an approach that combines environmental and demographic indicators in maps and reports. As part of the environmental justice analysis for this project, EPA conducted an EJScreen for this proposed MNSR permit revision.[15] The EPA evaluated a 2-mile radius report as part of the EJScreen for this action. Based on the EJScreen conducted for this proposed permit, the EPA believes that this action will not have disproportionate and adverse human health or environmental effects on any populations, including communities of color, low-income or Indigenous populations. The EPA's primary goal in developing the proposed Tribal Minor NSR permit is to ensure that air resources on the Southern Ute Indian Reservation will be protected in the manner intended by the CAA. As described in more detail below, the EPA believes that due to the emission controls in this proposed permit, the small source-wide allowable emission increases of NSR-regulated pollutants from the proposed permit, the modeling showing the proposed emissions profile of the source will not cause or contribute to violations of any air standards, and as explained further below, EPA did not identify communities with potential environmental justice concerns within the screened area, this action will not have high and adverse effects on the surrounding population.

This proposed permit will limit potentially adverse impacts by restricting operations and emissions from the new natural gas-fired electric generating equipment and the new TEG dehydration unit at the source. The proposed permit contains emissions and operational limits and associated testing, monitoring, recordkeeping, and reporting requirements for certain NSR-regulated pollutants of concern for the proposed operations to ensure air quality protection. The proposed project location is a rural area with few sensitive receptors, such as residential developments, schools, hospitals, etc. The area surrounding the source is used primarily for upstream oil and gas. The greater area has agricultural activities. The EPA reviewed the area around the source encompassing a 2-mile radius from the location in EJScreen, as a 1-mile radius did not yield sufficient demographic and socioeconomic data to generate EJ indexes.[16] EJScreen indicates that there are 20 persons who live within a 2-mile radius of the proposed Red Cedar CO_2 Capture Facility. The area encompassing a 2-mile radius from the source is completely on Indian country lands within the Southern Ute Indian Reservation. A 2-mile radius is deemed sufficient as EJScreen results show that EJ indexes reduce for a 3-mile radius and the most significant air quality impacts are in the immediate vicinity of the facility. The maximum AERSCREEN concentrations for the facility are within 0.05 miles of the source. A 2-mile radius allows

[14] EPA EJScreen: EPA's Environmental Justice Screening and Mapping Tool (Version 2.3) is available at https://ejscreen.epa.gov/mapper. Version 2.3 was released in June 2024.
[15] EJScreen Version 2.2 was used in the analysis, as it was the version available at the time of permit application processing.
[16] EJScreen report titled "EJScreen Community Report Red Cedar CO2 Capture Facility_2-mi_040724.pdf" is available in the docket for this permit in regulations.gov (Docket ID #EPA-R08-OAR-2023-0443).

for a large enough population sample size to evaluate environmental justice indexes and still be relevant for the local air quality impacts.

EJScreen evaluates a combination of environmental and socioeconomic information against thirteen environmental justice indexes and supplemental indexes. The indexes for a selected area are compared to those for all other locations in the state or nation. The environmental justice indexes and supplemental indexes help users screen for potential EJ concerns. To do this, the environmental justice index combines data on low-income and people of color populations with a single environmental indicator. The supplemental index combines data on percent low-income, percent linguistically isolated, percent less than high school education, percent unemployed, and low life expectancy in a single environmental indicator. According to the Interim Environmental Justice and Civil Rights in Permitting Frequently Asked Questions document,[17] the best practices for screening are to highlight environmental justice indices at the 80th percentile or higher as indicating the potential for disproportionate impacts relative to state and national averages. Results from EJScreen indicate that the areas within a 2-mile radius of the source do not exhibit any environmental justice indexes (primary or supplemental) [18] at or above the 80th percentile relative to Colorado or National averages. The highest environmental justice index was Risk Management Plan (RMP) Facility Proximity, in the 56th percentile relative to Colorado and the 50th percentile relative to the nation. As such, the EPA expects that there is a low potential for disproportionate human health and environmental impacts from facilities within a 2-mile radius of the source that are required to have an RMP to address chemical accident prevention. The EJScreen Socioeconomic Indicators data results indicate that selected variables for most pollution and sources (e.g. air toxics cancer risk) and socioeconomic indicators (e.g., incidence of people of color or low-income population) are generally on par with or lower than state of Colorado or national averages. The exception is that the incidence of population over the age of 64 is in 25% in the screened area as compared to 16% in the state and 17% in the U.S. Other environmental data indicate that the area within a 2-mile radius of the source has 23 regulated air pollution sites that report to the EPA and includes impaired waters. Regarding health indicators, climate indicators and critical service gap indicators, the highest indicators relative to Colorado and the U.S. for the area within a 2-mile radius of the source area are: the cancer value (6.9 in the screened area compared to 5.9 in the state and 6.1 in the U.S.); flood risk (8% in the screened area compared to 5% in the state); wildfire risk (73% in the screened area compared to 33% in the state and 14% in the U.S.); and access to broadband internet (23% in the screened area comparted to 10% in the state and 14% in the U.S.); and lack of health insurance (10% in the screened area compared to 8% in the state and 9% in the U.S.).

[17] In August 2022, the EPA issued Frequent Questions about Environmental Justice and Civil Rights in Permitting (Interim).pdf, available at https://www.epa.gov/external-civil-rights/ej-and-civil-rights-permitting-frequently-asked-questions, accessed July 22, 2024.

[18] The primary EJ Indexes combine data on low income and people of color populations with a single environmental indicator. The supplemental EJ Indexes combine data on percent low-income, percent linguistically isolated, percent less than high school education, percent unemployed, and low life expectancy with a single environmental indicator.

Issuance of the permit would authorize potential construction of a new turbine, a new generator engine and a new TEG dehydration unit at the source, along with ancillary equipment. The equipment to be covered by the permit emits ozone precursor pollutants, NO_X, VOC, CO, formaldehyde (CH_2O) and $PM_{2.5}$. The emissions and operational limits set by the proposed permit require common and reasonably available control or work practice standards of turbine and engine emissions that are at least as stringent as the requirements of the federal standards that apply to them, and common and reasonably available control of TEG dehydration unit emissions, with estimated increases in allowable emissions from affected emission units of less than 30 tpy NO_X and CO, less than 10 tpy VOC and $PM_{2.5}$, and less than 10 tpy of both CH_2O and total HAP.

This facility will reduce the CO_2 emissions in the area by capturing CO_2 that would otherwise be emitted by the adjacent Arkansas Loop and Simpson Treatment Plants. This has climate impact benefits because CO_2 is a greenhouse gas which is a gas that traps heat in the atmosphere. This facility will not have any noticeable impact on the flood or wildfire risk in the area.

EJScreen does not directly model criteria air pollutants (e.g., NO_X, CO, VOC, $PM_{2.5}$). Instead EJScreen uses a downscaling fusion model that relies on both air quality monitoring data from National Air Monitoring Stations and State and Local Air Monitoring Stations (NAMS/SLAMS) and numerical outputs from the Model-3 chemical/transport models and Community Multiscale Air Quality model (Models-3/CMAQ). EJScreen also relies on the most recently available data for both environmental and demographics indices. There is potential for considerable uncertainty in a screening analysis for pollutants of concern relying on EJScreen. However, as discussed in Section 9 of this TSD, the EPA AQIA provided in the permit application determined that the proposed permit would not result in an impact to any NAAQS, which are established to be protective of public health, including those of sensitive populations, such as children and the elderly, and public welfare. The EPA sets NAAQS for CO, Lead, NO_2, ground level ozone, PM_{10}, $PM_{2.5}$ and SO_2. The proposed permit is designed to be protective of the NAAQS and the EPA believes that the proposed permit is appropriately protective with respect to the source.

The Agency believes that based upon the emission control measures in the permit, the lack of modeled impacts in the AQIA, and the screening information that did not identify communities with potential environmental justice concerns within the screened area, the proposed source is unlikely to present disproportionate and adverse human health or environmental effects to any populations, including communities of color, low-income or Indigenous populations. As a result, we conclude that there is little potential for disproportionate or adverse human health effects on any communities in the vicinity of the source on the Southern Ute Indian Reservation due to issuance of the proposed permit.

14. Permit Content

49.154(a)(2)(viii) – Existing limits

- As previously discussed, the proposed turbine will be subject to the federally-enforceable emission control requirements of NSPS KKKK and the proposed generator engine will be subject to the federally enforceable emission control requirements of NSPS JJJJ and NESHAP ZZZZ for area sources. Therefore, this proposed true Tribal Minor NSR permit was designed to assure Red Cedar will be able to comply with those applicable federally-enforceable requirements.

The terms and conditions of the proposed true Tribal Minor NSR permit are based on the required permit content and analyses specified in the Tribal Minor NSR Program. The required permit content for Tribal Minor NSR permits is listed in 40 CFR 49.155 – *What information must my permit include?* Below we describe the basis for the permit conditions.

General Requirement

40 CFR 49.155(a)(1) specifies the following elements that each Tribal Minor NSR permit must include: the effective date of the permit and the date by which the owner/operator must commence construction for the permit to remain valid; the emission units subject to the permit and their associated emission limits; and monitoring, recordkeeping, and reporting requirements to assure compliance with the emission limits. The proposed permit includes these requirements.

Emission Limits

40 CFR 49.155(a)(2) specifies that the permit must include the emission limits determined by the reviewing authority under 40 CFR 49.154(c) for each affected emissions unit. 40 CFR 49.154(c) (2), (3), and (4) provides that the reviewing authority must require a numerical limit on the quantity, rate or concentration of emissions for each regulated NSR pollutant emitted by each affected emissions unit for which such a limit is technically and economically feasible. These emission limits may consist of numerical limits on the quantity, rate or concentration of emissions; pollution prevention techniques; design standards; equipment standards; work practices; operational standards; requirements relating to the operation or maintenance of the source; or any combination thereof. The emission limits must assure that each affected emission unit will comply with all requirements of 40 CFR parts 60, 61, and 63, as well as any federal or Tribal implementation plans that apply to the unit. The proposed permit contains emission limits and operational limits for the turbine, generator engine and TEG dehydration unit that the EPA determined were technically and economically feasible and assure the units will comply with all applicable requirements of NSPS KKKK, NSPS JJJJ and NESHAP ZZZZ.

Monitoring Requirements

40 CFR 49.155(a)(3) provides that each Tribal Minor NSR permit must include monitoring that is sufficient to ensure compliance with the emission limits that apply to the affected emission units at a source. The proposed permit includes monitoring requirements to ensure compliance with the emissions and operational limits for the new 9 MW natural gas-fired turbine and new 4SRB 701 bhp

natural gas fired generator engine, which, as previously explained, assure compliance with the applicable requirements of NSPS KKKK and JJJJ, and NESHAP ZZZZ, including the maintenance plan, records of maintenance, and initial and subsequent annual performance testing requirements.

Recordkeeping Requirements

40 CFR 49.155(a)(4) provides that each Tribal Minor NSR permit must include recordkeeping requirements sufficient to ensure compliance with the emission limits and monitoring requirements. Additionally, the Tribal Minor NSR permit must include the recordkeeping requirements in 40 CFR 49.155(a)(4)(i) and (ii), which require the source to keep records of certain information related to the monitoring requirements in the permit and to retain all required monitoring data and support information for at least 5 years. The proposed permit includes the recordkeeping requirements to ensure compliance with emissions and operational limits and monitoring requirements for the new 9 MW natural gas fired turbine and new 4SRB 701 bhp natural gas-fired generator engine.

Reporting Requirements

40 CFR 49.155(a)(5) requires that each Tribal Minor NSR permit include the reporting requirements listed in 40 CFR 49.155(a)(5)(i) and (ii) related to annual reports and reporting of deviations. The proposed permit includes the annual and permit deviation reporting requirements.

Severability Clause

40 CFR 49.155(a)(6) provides that each Tribal Minor NSR permit include a severability clause to ensure the continued validity of the other portions of the permit in the event of a challenge to a portion of the permit. The proposed permit includes the required severability clause.

Additional Provisions

40 CFR 49.155(a)(7) requires that each Tribal Minor NSR permit contain provisions stating the requirements in paragraphs (a)(7)(i) through (vii) of that section. 40 CFR 49.155(a)(7)(i) through (vii) document additional provisions, including details on compliance and noncompliance of a permit, conditions for permit revisions, reopening, revoking, reissuance, and revocation, communication with the reviewing authority, recordkeeping, reporting, inspection, and monitoring. The proposed permit contains the required provisions. These conditions are found in the General Provisions section of the proposed revised permit.