20.2.72 NMAC
AIR QUALITY
PERMIT
APPLICATION

For

VERNON HAMILTON
CONSTRUCTION COMPANY

KIRTLAND PIT
Kirtland, NM

PREPARED BY
MONTROSE ENVIRONMENTAL SOLUTIONS, INC.
ALBUQUERQUE, NM
DECEMBER 2024

Mail Application To:		**For Department use only:**
New Mexico Environment Department Air Quality Bureau Permits Section 525 Camino de los Marquez, Suite 1 Santa Fe, New Mexico, 87505 Phone: (505) 476-4300 Fax: (505) 476-4375 www.env.nm.gov/aqb		

Universal Air Quality Permit Application

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

Use this application for: the initial application, modifications, technical revisions, and renewals. For technical revisions, complete Sections, 1-A, 1-B, 2-E, 3, 9 and any other sections that are relevant to the requested action; coordination with the Air Quality Bureau permit staff prior to submittal is encouraged to clarify submittal requirements and to determine if more or less than these sections of the application are needed. Use this application for streamline permits as well.

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

Acknowledgements:

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

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

☒ Check No.: 4855 in the amount of $500

☒ I acknowledge the required submittal format for the hard copy application is printed double sided 'head-to-toe', 2-hole punched (except the Sect. 2 landscape tables is printed 'head-to-head'), numbered tab separators. Incl. a copy of the check on a separate page.

☒ I acknowledge there is an annual fee for permits in addition to the permit review fee: www.env.nm.gov/air-quality/permit-fees-2/.

☐ This facility qualifies for the small business fee reduction per 20.2.75.11.C. NMAC. The full $500.00 filing fee is included with this application and I understand the fee reduction will be calculated in the balance due invoice. The Small Business Certification Form has been previously submitted or is included with this application. (Small Business Environmental Assistance Program Information: www.env.nm.gov/air-quality/small-biz-eap-2/.)

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

Section 1 – Facility Information

Section 1-A: Company Information

		AI # if known: New	Updating Permit/NOI #: New
1	Facility Name: Kirtland Pit	Plant primary SIC Code (4 digits): 1429, 1442	
		Plant NAIC code (6 digits): 142901, 144202	
a	Facility Street Address (If no facility street address, provide directions from a prominent landmark): 32 Rd 6210, Kirtland NM 87417		
2	Plant Operator Company Name: Vernon Hamilton Construction Company (VHCC)	Phone/Fax: 505-722-7855	

a	Plant Operator Address: 32 Rd 6210, Kirtland NM 87417	
b	Plant Operator's New Mexico Corporate ID or Tax ID: 84-5022961	
3	Plant Owner(s) name(s): VHCC, LLC	Phone/Fax: 505-722-7855
a	Plant Owner(s) Mailing Address(s): P.O. Box 1110, Gallup, NM 87305	
4	Bill To (Company): VHCC, LLC	Phone/Fax: 505-722-7855
a	Mailing Address: P.O. Box 1110, Gallup, NM 87305	E-mail: Bern@vhccmaterial.com
5	☐ Preparer: ☒ Consultant: Paul Wade, Montrose Environmental Solutions, Inc.	Phone/Fax: 505-830-9680 x6/505-830-9678
a	Mailing Address: 9100 2nd Street NW, Suite 200, Albuquerque, NM 87114-1664	E-mail: pwade@montrose-env.com
6	Plant Operator Contact: Kevin Bradshaw	Phone/Fax:505-722-7855
a	Address: P.O. Box 1110, Gallup, NM 87305	E-mail: Kevin@vhccmaterial.com
7	Air Permit Contact: Kevin Bradshaw	Title: General Manager
a	E-mail: Kevin@vhccmaterial.com	Phone/Fax: 505-722-7855
b	Mailing Address: P.O. Box 1110, Gallup, NM 87305	
c	The designated Air permit Contact will receive all official correspondence (i.e. letters, permits) from the Air Quality Bureau.	

Section 1-B: Current Facility Status

1.a	Has this facility already been constructed? ☐ Yes ☒ No	1.b If yes to question 1.a, is it currently operating in New Mexico? ☐ Yes ☐ No ☒ N/A
2	If yes to question 1.a, was the existing facility subject to a Notice of Intent (NOI) (20.2.73 NMAC) before submittal of this application? ☐ Yes ☐ No ☒ N/A	If yes to question 1.a, was the existing facility subject to a construction permit (20.2.72 NMAC) before submittal of this application? ☐ Yes ☐ No ☒ N/A
3	Is the facility currently shut down? ☐ Yes ☐ No ☒ N/A	If yes, give month and year of shut down (MM/YY): N/A
4	Was this facility constructed before 8/31/1972 and continuously operated since 1972? ☐ Yes ☒ No	
5	If Yes to question 3, has this facility been modified (see 20.2.72.7.P NMAC) or the capacity increased since 8/31/1972? ☐ Yes ☐ No ☒ N/A	
6	Does this facility have a Title V operating permit (20.2.70 NMAC)? ☐ Yes ☒ No	If yes, the permit No. is: P-
7	Has this facility been issued a No Permit Required (NPR)? ☐ Yes ☒ No	If yes, the NPR No. is:
8	Has this facility been issued a Notice of Intent (NOI)? ☐ Yes ☒ No	If yes, the NOI No. is:
9	Does this facility have a construction permit (20.2.72/20.2.74 NMAC)? ☐ Yes ☒ No	If yes, the permit No. is:
10	Is this facility registered under a General permit (GCP-1, GCP-2, etc.)? ☒ Yes ☐ No	If yes, the register No. is: GCP-2-3034

Section 1-C: Facility Input Capacity & Production Rate

1	What is the facility's maximum input capacity, specify units (reference here and list capacities in Section 20, if more room is required)			
a	Current	Hourly:	Daily:	Annually:
b	Proposed	Hourly: 350 tons	Daily: 3500 tons	Annually: 350,000 tons
2	What is the facility's maximum production rate, specify units (reference here and list capacities in Section 20, if more room is required)			
a	Current	Hourly:	Daily:	Annually:
b	Proposed	Hourly: 350 tons	Daily: 3500 tons	Annually: 350,000 tons

Section 1-D: Facility Location Information

1	Latitude (decimal degrees): 36.743919	Longitude (decimal degrees): -108.333753	County: San Juan	Elevation (ft): 5270
2	UTM Zone: ☒ 12 or ☐ 13	Datum: ☒ NAD 83 ☐ WGS 84		
a	UTM E (in meters, to nearest 10 meters): 738,050	UTM N (in meters, to nearest 10 meters): 4,069,780		
3	Name and zip code of nearest New Mexico town: Kirtland, NM 87417			
4	Detailed Driving Instructions from nearest NM town (attach a road map if necessary): From the intersection of Highways 64 and County Road 6400 in Kirtland, NM, travel east on Highway 64 for 1.65 miles to County Road 6210. Turn north on County Road 6210 and travel 0.4 miles to the site entrance.			
5	The facility is 0.7 miles east-southeast of Kirtland.			
6	Land Status of facility (check one): ☒ Private ☐ Indian/Pueblo ☐ Government ☐ BLM ☐ Forest Service ☐ Military			
7	List all municipalities, Indian tribes, and counties within a ten (10) mile radius (20.2.72.203.B.2 NMAC) of the property on which the facility is proposed to be constructed or operated: San Juan County, Kirtland, Farmington, Navajo Nation			
8	**20.2.72** NMAC applications **only**: Will the property on which the facility is proposed to be constructed or operated be closer than 50 km (31 miles) to other states, Bernalillo County, or a Class I area (see www.env.nm.gov/air-quality/modeling-publications/)? ☒ Yes ☐ No (20.2.72.206.A.7 NMAC) If yes, list all with corresponding distances in kilometers: Colorado – 27.5 km			
9	Name nearest Class I area: Mesa Verde National Park			
10	Shortest distance (in km) from facility boundary to the boundary of the nearest Class I area (to the nearest 10 meters): 47.4			
11	Distance (meters) from the perimeter of the Area of Operations (AO is defined as the plant site inclusive of all disturbed lands, including mining overburden removal areas) to nearest residence, school or occupied structure: east, 200 meters			
12	Method(s) used to delineate the Restricted Area: Fencing and Rugged Terrain "**Restricted Area**" is an area to which public entry is effectively precluded. Effective barriers include continuous fencing, continuous walls, or other continuous barriers approved by the Department, such as rugged physical terrain with steep grade that would require special equipment to traverse. If a large property is completely enclosed by fencing, a restricted area within the property may be identified with signage only. Public roads cannot be part of a Restricted Area.			
13	Does the owner/operator intend to operate this source as a portable stationary source as defined in 20.2.72.7.X NMAC? ☒ Yes ☐ No A portable stationary source is not a mobile source, such as an automobile, but a source that can be installed permanently at one location or that can be re-installed at various locations, such as a hot mix asphalt plant that is moved to different job sites.			
14	Will this facility operate in conjunction with other air regulated parties on the same property? ☒ No ☐ Yes If yes, what is the name and permit number (if known) of the other facility?			

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

1	Facility **maximum** operating ($\frac{\text{hours}}{\text{day}}$): 14	($\frac{\text{days}}{\text{week}}$): 6	($\frac{\text{weeks}}{\text{year}}$): 52	($\frac{\text{hours}}{\text{year}}$): 4356		
2	Facility's maximum daily operating schedule (if less than 24 $\frac{\text{hours}}{\text{day}}$)? Start: 5		XAM ☐PM	End: 7	☒AM XPM	
3	Month and year of anticipated start of construction: Upon permit issuance					
4	Month and year of anticipated construction completion: Upon permit issuance					
5	Month and year of anticipated startup of new or modified facility: Upon permit issuance					
6	Will this facility operate at this site for more than one year? ☒ Yes ☐ No					

Section 1-F: Other Facility Information

1	Are there any current Notice of Violations (NOV), compliance orders, or any other compliance or enforcement issues related to this facility? ☐ Yes ☒ No If yes, specify:

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

Section 1-G: Streamline Application (This section applies to 20.2.72.300 NMAC Streamline applications only)

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

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

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

1	Responsible Official (R.O.) (20.2.70.300.D.2 NMAC):		Phone:
a	R.O. Title:	R.O. e-mail:	
b	R. O. Address:		
2	Alternate Responsible Official (20.2.70.300.D.2 NMAC):		Phone:
a	A. R.O. Title:	A. R.O. e-mail:	
b	A. R. O. Address:		
3	Company's Corporate or Partnership Relationship to any other Air Quality Permittee (List the names of any companies that have operating (20.2.70 NMAC) permits and with whom the applicant for this permit has a corporate or partnership relationship):		
4	Name of Parent Company ("Parent Company" means the primary name of the organization that owns the company to be permitted wholly or in part.):		
a	Address of Parent Company:		
5	Names of Subsidiary Companies ("Subsidiary Companies" means organizations, branches, divisions or subsidiaries, which are owned, wholly or in part, by the company to be permitted.):		
6	Telephone numbers & names of the owners' agents and site contacts familiar with plant operations:		
7	Affected Programs to include Other States, local air pollution control programs (i.e. Bernalillo) and Indian tribes: Will the property on which the facility is proposed to be constructed or operated be closer than 80 km (50 miles) from other states, local pollution control programs, and Indian tribes and pueblos (20.2.70.402.A.2 and 20.2.70.7.B)? If yes, state which ones and provide the distances in kilometers:		

Section 1-I – Submittal Requirements

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

Hard Copy Submittal Requirements:

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

2) If the application is for a minor NSR, PSD, NNSR, or Title V application, include one working hard **copy** for Department use. This copy should be printed in book form, 3-hole punched, and **must be double sided**. Note that this is in addition to the head-to-to 2-hole punched copy required in 1) above. Minor NSR Technical Permit revisions (20.2.72.219.B NMAC) only need to fill out Sections 1-A, 1-B, 3, and should fill out those portions of other Section(s) relevant to the technical permit revision. TV Minor Modifications need only fill out Sections 1-A, 1-B, 1-H, 3, and those portions of other Section(s) relevant to the minor modification. NMED may require additional portions of the application to be submitted, as needed.

3) The entire NOI or Permit application package, including the full modeling study, should be submitted electronically. Electronic files for applications for NOIs, any type of General Construction Permit (GCP), or technical revisions to NSRs must be submitted with compact disk (CD) or digital versatile disc (DVD). For these permit application submittals, **two** CD copies are required (in sleeves, not crystal cases, please), with additional CD copies as specified below. NOI applications require only a single CD submittal. Electronic files for other New Source Review (construction) permits/permit modifications or Title V permits/permit modifications can be submitted on CD/DVD or sent through AQB's secure file transfer service.

Electronic files sent by (check one):

☐ CD/DVD attached to paper application

☒ Secure electronic transfer. Air Permit Contact Name Paul Wade , Email pwade@montrose-env.com

Phone number 505-830-9680 x6.

a. If the file transfer service is chosen by the applicant, after receipt of the application, the Bureau will email the applicant with instructions for submitting the electronic files through a secure file transfer service. Submission of the electronic files through the file transfer service needs to be completed within 3 business days after the invitation is received, so the applicant should ensure that the files are ready when sending the hard copy of the application. The applicant will not need a password to complete the transfer. **Do not use the file transfer service for NOIs, any type of GCP, or technical revisions to NSR permits.**

4) Optionally, the applicant may submit the files with the application on compact disk (CD) or digital versatile disc (DVD) following the instructions above and the instructions in 5 for applications subject to PSD review.

5) If **air dispersion modeling** is required by the application type, include the **NMED Modeling Waiver** and/or electronic air dispersion modeling report, input, and output files. The dispersion modeling ***summary report only*** should be submitted as hard copy(ies) unless otherwise indicated by the Bureau.

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

   If the application is submitted electronically through the secure file transfer service, these extra CDs do not need to be submitted.

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

1) All required electronic documents shall be submitted as 2 separate CDs or submitted through the AQB secure file transfer service. Submit a single PDF document of the entire application as submitted and the individual documents comprising the

application.

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

3) It is preferred that this application form be submitted as 4 electronic files (3 MSWord docs: Universal Application section 1 [UA1], Universal Application section 3-19 [UA3], and Universal Application 4, the modeling report [UA4]) and 1 Excel file of the tables (Universal Application section 2 [UA2]). Please include as many of the 3-19 Sections as practical in a single MS Word electronic document. Create separate electronic file(s) if a single file becomes too large or if portions must be saved in a file format other than MS Word.

4) The electronic file names shall be a maximum of 25 characters long (including spaces, if any). The format of the electronic Universal Application shall be in the format: "A-3423-FacilityName". The "A" distinguishes the file as an application submittal, as opposed to other documents the Department itself puts into the database. Thus, all electronic application submittals should begin with "A-". Modifications to existing facilities should use the core permit number (i.e. '3423') the Department assigned to the facility as the next 4 digits. Use 'XXXX' for new facility applications. The format of any separate electronic submittals (additional submittals such as non-Word attachments, re-submittals, application updates) and Section document shall be in the format: "A-3423-9-description", where "9" stands for the section # (in this case Section 9-Public Notice). Please refrain, as much as possible, from submitting any scanned documents as this file format is extremely large, which uses up too much storage capacity in our database. Please take the time to fill out the header information throughout all submittals as this will identify any loose pages, including the Application Date (date submitted) & Revision number (0 for original, 1, 2, etc.; which will help keep track of subsequent partial update(s) to the original submittal. Do not use special symbols (#, @, etc.) in file names. The footer information should not be modified by the applicant.

Table of Contents

Section 1: **General Facility Information**
Section 2: **Tables**
Section 3: **Application Summary**
Section 4: **Process Flow Sheet**
Section 5: **Plot Plan Drawn to Scale**
Section 6: **All Calculations**
Section 7: **Information Used to Determine Emissions**
Section 8: **Map(s)**
Section 9: **Proof of Public Notice**
Section 10: **Written Description of the Routine Operations of the Facility**
Section 11: **Source Determination**
Section 12: **PSD Applicability Determination for All Sources & Special Requirements for a PSD Application**
Section 13: **Discussion Demonstrating Compliance with Each Applicable State & Federal Regulation**
Section 14: **Operational Plan to Mitigate Emissions**
Section 15: **Alternative Operating Scenarios**
Section 16: **Air Dispersion Modeling**
Section 17: **Compliance Test History**
Section 18: **Addendum for Streamline Applications (streamline applications only)**
Section 19: **Requirements for the Title V (20.2.70 NMAC) Program (Title V applications only)**
Section 20: **Other Relevant Information**
Section 21: **Addendum for Landfill Applications**
Section 22: **Certification Page**

Table 2-A: Regulated Emission Sources

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

Unit Number[1]	Source Description	Make	Model #	Serial #	Manufacturer's Rated Capacity[3] (Specify Units)	Requested Permitted Capacity[3] (Specify Units)	Date of Manufacture[2] / Date of Construction/ Reconstruction[2]	Controlled by Unit # / Emissions vented to Stack #	Source Classification Code (SCC)	For Each Piece of Equipment, Check One	RICE Ignition Type (CI, SI, 4SLB, 4SRB, 2SLB)[4]	Replacing Unit No.
PI_RAW	Quarry Material	N/A	N/A	N/A	N/A	350 tph	N/A N/A	N/A N/A	30502007	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	---	---
RR_RAW	RipRap Screening Plant Raw Material	N/A	N/A	N/A	N/A	350 tph	N/A N/A	N/A N/A	30502007	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	---	---
RR_1	RipRap Screening Plant Feeder	Simplicity	OFC140A	TXR5624179	56" x 24'	350 tph	12/20 2025	N/A N/A	30502031	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	---	---
RR_2	RipRap Screening Plant Screen (2-screen setup)	Simplicity	OFC140A	TXR5624179	56" x 24'	350 tph	12/2020 2025	C2 N/A	30502015	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	---	---
RR_3	RipRap Screening Plant Stacker Conveyor 1a	Simplicity	OFC140A	TXR5624179	56" x 24'	350 tph	12/2020 2025	C5 N/A	30502006	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	---	---
RR_4	RipRap Screening Plant Stacker Conveyor 1b	Simplicity	OFC140A	TXR5624179	56" x 24'	350 tph	12/2020 2025	C5 N/A	30502006	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	---	---
RR_5	RipRap Screening Plant Stacker Conveyor 1c	Simplicity	OFC140A	TXR5624179	56" x 24'	350 tph	12/2020 2025	C5 N/A	30502006	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	---	---
RR1PILE	RipRap Screening Plant Stacker Finish Pile	N/A	N/A	N/A	N/A	350 tph	N/A N/A	N/A N/A	30502007	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	---	---
RR2Pile	RipRap Screening Plant Stacker Finish Pile	N/A	N/A	N/A	N/A	350 tph	N/A N/A	N/A N/A	30502007	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	---	---
RR3PILE	RipRap Screening Plant Stacker Finish Pile	N/A	N/A	N/A	N/A	350 tph	N/A N/A	N/A N/A	30502007	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	---	---
RR_ENG	RipRap Screening Plant Engine	Volvo Penta	TAB871VE	TBD	140 kW, 188 hp	140 kW, 188 hp	12/2020 2025	N/A S1	30502099	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	CI	---
1a, 1b, 1c	Feeder/Jaw Crusher w/built in Discharge Conveyor	Cedar Rapids	47334	TBD	400 tph	350 tph	TBD 2025	1b - C3, 1c - C1 N/A	30502001	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	---	---
2, 2a	Cone Crusher w/built in Discharge Conveyor	Cedar Rapids	S1425	TBD	350 tph	350 tph	5/2002 2025	2 - C3, 2a - C1 N/A	30502002	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	---	---
3, 3a	Cone Crusher w/built in Discharge Conveyor	Cedar Rapids	54II	52221	350 tph	350 tph	2012 2025	3 - C3, 3a - C1 N/A	30502003	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	---	---

Unit Number[1]	Source Description	Make	Model #	Serial #	Manufacturer's Rated Capacity[3] (Specify Units)	Requested Permitted Capacity[3] (Specify Units)	Date of Manufacture[2] / Date of Construction/ Reconstruction[2]	Controlled by Unit # / Emissions vented to Stack #	Source Classification Code (SCC)	For Each Piece of Equipment, Check One	RICE Ignition Type (CI, SI, 4SLB, 4SRB, 2SLB)[4]	Replacing Unit No.
4, 4a	Screen w/Under Conveyor	Thunderbird	MP5163 DST	592	6' x 16'	350 tph	2012 2025	4 - C2, 4a - C1 N/A	30502002, 03, 04	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	---	---
5, 5a	Screen w/Under Conveyor	Cedar Rapids	S62003DB	TBD	6' x 20'	350 tph	2012 2025	5 - C2, 5a - C1 N/A	30502002, 03, 04	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	---	---
6	Conveyor	Peerless	CV15	N/A	30" x 60'	350 tph	N/A 2025	C1 N/A	30502006	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	---	---
7	Stacker Conveyor	LB Smith	N/A	N/A	24" x 60'	350 tph	N/A 2025	C5 N/A	30502006	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	---	---
8	Stacker Conveyor	Camaco	N/A	N/A	24" x 50'	350 tph	N/A 2025	C5 N/A	30502006	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	---	---
9	Stacker Shuttle	Shop Made	N/A	N/A	24" x 25'	350 tph	N/A 2025	C1 N/A	30502006	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	---	---
10	Stacker Conveyor	Shop Made	N/A	N/A	24" x 50'	350 tph	9/24/2010 2025	C5 N/A	30502006	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	---	---
11	Shuttle Conveyor	Shop Made	N/A	N/A	24" x 25'	350 tph	N/A 2025	C1 N/A	30502006	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	---	---
12	Shuttle Conveyor	Shop Made	N/A	N/A	24" x 13'	350 tph	N/A 2025	C1 N/A	30502006	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	---	---
13	Cone Oversized Return Conveyor	Shop Made	N/A	N/A	30" x 60'	350 tph	3/2005 2025	C1 N/A	30502006	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	---	---
14	Jaw Conveyor	Shop Made	N/A	N/A	36" x 30'	350 tph	N/A 2025	C1 N/A	30502006	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	---	---
15	Stacker Conveyor	Shop Made	N/A	N/A	24" x 40'	350 tph	10/15/1994 2025	C5 N/A	30502006	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	---	---
16	Shuttle Conveyor	Shop Made	N/A	N/A	24" x 15'	350 tph	9/26/2002 2025	C1 N/A	30502006	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	---	---
17	Shuttle Conveyor	Shop Made	N/A	N/A	24" x 16'	350 tph	9/17/2004 2025	C1 N/A	30502006	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	---	---
18	Cone feed conveyor	Excel	N/A	00407	30" x 60'	350 tph	N/A 2025	C1 N/A	30502006	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	---	---
19	Conveyor	Helmick	N/A	24-6519	24" x 65'	350 tph	N/A 2025	C1 N/A	30502006	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	---	---

Unit Number[1]	Source Description	Make	Model #	Serial #	Manufacturer's Rated Capacity[3] (Specify Units)	Requested Permitted Capacity[3] (Specify Units)	Date of Manufacture[2] / Date of Construction/ Reconstruction[2]	Controlled by Unit # / Emissions vented to Stack #	Source Classification Code (SCC)	For Each Piece of Equipment, Check One	RICE Ignition Type (CI, SI, 4SLB, 4SRB, 2SLB)[4]	Replacing Unit No.
20	Scalping Screen	Dyster	N/A	N/A	5' x 12'	350 tph	N/A 2025	C2 N/A	30502015	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	---	---
21	Generator Set	CAT	3412CDITA	BLG00329	725 kW, 1081 hp	725 kW, 1081 hp	7/11/2001 2025	N/A S2	30502099	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	CI	---
22	Stacker Conveyor	Shop Made	CV31	N/A	24" x 70'	350 tph	N/A 2025	C5 N/A	30502006	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	---	---
24	Stacker Conveyor	Shop Made	CV33	N/A	24" x 80'	350 tph	N/A 2025	C5 N/A	30502006	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	---	---
25	Stacker Conveyor	Ribble	N/A	N/A	24" x 65'	350 tph	N/A 2025	C5 N/A	30502006	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	---	---
26	Scalping Screen Conveyor	Shop Made	N/A	N/A	24" x 25'	350 tph	N/A 2025	C1 N/A	30502006	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	---	---
FPILE1, FPILE2, FPILE3	Finish Piles	N/A	N/A	N/A	N/A	350 tph	N/A N/A	N/A N/A	30502007	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	---	---
TL	Truck Loading	N/A	N/A	N/A	N/A	350 tph	N/A N/A	N/A N/A	30502033	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	---	---
W_PILE	Waste Pile	N/A	N/A	N/A	N/A	35 tph	N/A N/A	N/A N/A	30502007	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	---	---
ROAD	Haul Road	N/A	N/A	N/A	N/A	213 truck/day	N/A N/A	C4 N/A	30502011	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	---	---
										☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		

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

[2] Specify dates required to determine regulatory applicability.

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

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

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

All 20.2.70 NMAC (Title V) applications must list all Insignificant Activities in this table. All 20.2.72 NMAC applications must list Exempted Equipment in this table. If equipment listed on this table is exempt under 20.2.72.202.B.5, include emissions calculations and emissions totals for 202.B.5 "similar functions" units, operations, and activities in Section 6, Calculations. Equipment and activities exempted under 20.2.72.202 NMAC may not necessarily be Insignificant under 20.2.70 NMAC (and vice versa). Unit & stack numbering must be consistent throughout the application package. Per Exemptions Policy 02-012.00 (see http://www.env.nm.gov/aqb/permit/aqb_pol.html), 20.2.72.202.B NMAC Exemptions do not apply, but 20.2.72.202.A NMAC exemptions do apply to NOI facilities under 20.2.73 NMAC. List 20.2.72.301.D.4 NMAC Auxiliary Equipment for Streamline applications in Table 2-A. The List of Insignificant Activities (for TV) can be found online at https://www.env.nm.gov/wp-content/uploads/sites/2/2017/10/InsignificantListTitleV.pdf. TV sources may elect to enter both TV Insignificant Activities and Part 72 Exemptions on this form.

Unit Number	Source Description	Manufacturer	Model No.	Max Capacity	List Specific 20.2.72.202 NMAC Exemption (e.g. 20.2.72.202.B.5)	Date of Manufacture /Reconstruction[2]	For Each Piece of Equipment, Check Onc
			Serial No.	Capacity Units	Insignificant Activity citation (e.g. IA List Item #1.a)	Date of Installation /Construction[2]	
T1	Diesel-Fuel Storage Tank	N/A	N/A	4000	20.2.72.202.B.2	N/A	☐ Existing (unchanged) ☐ To Be Removed ☑ New/Additional ☐ Replacement Unit
			N/A	4000		2000	☐ To Be Modified ☐ To Be Replaced
T2	Water						☐ Existing (unchanged) ☐ To Be Removed ☑ New/Additional ☐ Replacement Unit
							☐ To Be Modified ☐ To Be Replaced
							☐ Existing (unchanged) ☐ To Be Removed ☐ New/Additional ☐ Replacement Unit
							☐ To Be Modified ☐ To Be Replaced
							☐ Existing (unchanged) ☐ To Be Removed ☐ New/Additional ☐ Replacement Unit
							☐ To Be Modified ☐ To Be Replaced
							☐ Existing (unchanged) ☐ To Be Removed ☐ New/Additional ☐ Replacement Unit
							☐ To Be Modified ☐ To Be Replaced
							☐ Existing (unchanged) ☐ To Be Removed ☐ New/Additional ☐ Replacement Unit
							☐ To Be Modified ☐ To Be Replaced
							☐ Existing (unchanged) ☐ To Be Removed ☐ New/Additional ☐ Replacement Unit
							☐ To Be Modified ☐ To Be Replaced
							☐ Existing (unchanged) ☐ To Be Removed ☐ New/Additional ☐ Replacement Unit
							☐ To Be Modified ☐ To Be Replaced
							☐ Existing (unchanged) ☐ To Be Removed ☐ New/Additional ☐ Replacement Unit
							☐ To Be Modified ☐ To Be Replaced
							☐ Existing (unchanged) ☐ To Be Removed ☐ New/Additional ☐ Replacement Unit
							☐ To Be Modified ☐ To Be Replaced
							☐ Existing (unchanged) ☐ To Be Removed ☐ New/Additional ☐ Replacement Unit
							☐ To Be Modified ☐ To Be Replaced
							☐ Existing (unchanged) ☐ To Be Removed ☐ New/Additional ☐ Replacement Unit
							☐ To Be Modified ☐ To Be Replaced
							☐ Existing (unchanged) ☐ To Be Removed ☐ New/Additional ☐ Replacement Unit
							☐ To Be Modified ☐ To Be Replaced

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

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

Table 2-C: Emissions Control Equipment

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

Control Equipment Unit No.	Control Equipment Description	Date Installed	Controlled Pollutant(s)	Controlling Emissions for Unit Number(s)[1]	Efficiency (% Control by Weight)	Method used to Estimate Efficiency
C1	Conveyor Transfer Points - Wet Dust Suppression System	2000	PM	1c, 2a, 3a, 4a, 5a, 6, 9, 11, 12, 13, 14, 16, 17, 18, 19, 26	95.33%	AP-42 11.19.2 Emission Factors
C2	Screen - Wet Dust Suppression System	2000	PM	4, 5, 20, RR_2	91.20%	AP-42 11.19.2 Emission Factors
C3	Crusher - Wet Dust Suppression System	2000	PM	1, 2, 3	77.78%	AP-42 11.19.2 Emission Factors
C4	Unpaved Roads - Base Course and Watering	2025	PM	ROAD	80.00%	NMED Policy
C5	Stacker Conveyor Drop to Pile - Wet Dust Suppression System	2000	PM	7, 8, 10, 15, 22, 24, 25, RR_3, RR_4, RR_5	60.00%	AP-42 13.2.4 Emission Factors

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

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

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

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

Unit No.	NOx		CO		VOC		SOx		PM[1]		PM10[1]		PM2.5[1]		H_2S		Lead	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
PIT_RAW	-	-	-	-	-	-	-	-	2.31	3.29	1.09	1.56	0.17	0.24	-	-	-	-
RAW	-	-	-	-	-	-	-	-	2.31	3.29	1.09	1.56	0.17	0.24	-	-	-	-
RR_RAW	-	-	-	-	-	-	-	-	2.31	3.29	1.09	1.56	0.17	0.24	-	-	-	-
RR_1	-	-	-	-	-	-	-	-	2.31	3.29	1.09	1.56	0.17	0.24	-	-	-	-
RR_2	-	-	-	-	-	-	-	-	8.75	19.16	3.05	6.67	0.21	0.45	-	-	-	-
RR_3	-	-	-	-	-	-	-	-	0.69	0.99	0.33	0.47	0.050	0.071	-	-	-	-
RR1PILE	-	-	-	-	-	-	-	-	0.69	0.99	0.33	0.47	0.050	0.071	-	-	-	-
RR_4	-	-	-	-	-	-	-	-	0.69	0.99	0.33	0.47	0.050	0.071	-	-	-	-
RR2PILE	-	-	-	-	-	-	-	-	0.69	0.99	0.33	0.47	0.050	0.071	-	-	-	-
RR_5	-	-	-	-	-	-	-	-	0.92	1.32	0.44	0.62	0.066	0.094	-	-	-	-
RR3PILE	-	-	-	-	-	-	-	-	0.92	1.32	0.44	0.62	0.066	0.094	-	-	-	-
RR_ENG	1.17	2.57	1.08	2.37	0.062	0.14	0.0020	0.0045	0.062	0.14	0.062	0.14	0.062	0.14	-	-	1.1E-05	2.4E-05
1a	-	-	-	-	-	-	-	-	2.31	3.29	1.09	1.56	0.17	0.24	-	-	-	-
1b	-	-	-	-	-	-	-	-	1.89	4.14	0.84	1.84	0.16	0.34	-	-	-	-
1c	-	-	-	-	-	-	-	-	1.05	2.30	0.39	0.84	0.11	0.25	-	-	-	-
2	-	-	-	-	-	-	-	-	1.13	2.48	0.50	1.10	0.093	0.20	-	-	-	-
2a	-	-	-	-	-	-	-	-	0.63	1.38	0.23	0.51	0.068	0.15	-	-	-	-
3	-	-	-	-	-	-	-	-	1.70	3.73	0.76	1.66	0.14	0.31	-	-	-	-
3a	-	-	-	-	-	-	-	-	0.95	2.07	0.35	0.76	0.10	0.22	-	-	-	-
4	-	-	-	-	-	-	-	-	7.88	17.25	2.74	6.00	0.19	0.41	-	-	-	-
4a	-	-	-	-	-	-	-	-	0.11	0.23	0.040	0.084	0.011	0.025	-	-	-	-
5	-	-	-	-	-	-	-	-	5.25	11.50	1.83	4.00	0.12	0.27	-	-	-	-
5a	-	-	-	-	-	-	-	-	0.21	0.46	0.08	0.17	0.023	0.050	-	-	-	-
6	-	-	-	-	-	-	-	-	0.95	2.07	0.35	0.76	0.10	0.22	-	-	-	-
7	-	-	-	-	-	-	-	-	0.23	0.33	0.11	0.16	0.017	0.024	-	-	-	-
8	-	-	-	-	-	-	-	-	0.23	0.33	0.11	0.16	0.017	0.024	-	-	-	-
9	-	-	-	-	-	-	-	-	0.11	0.23	0.039	0.084	0.011	0.025	-	-	-	-
10	-	-	-	-	-	-	-	-	0.23	0.33	0.11	0.16	0.017	0.024	-	-	-	-
11	-	-	-	-	-	-	-	-	0.21	0.46	0.080	0.17	0.023	0.050	-	-	-	-

Unit No.	NOx		CO		VOC		SOx		PM[1]		PM10[1]		PM2.5[1]		H_2S		Lead	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
12	-	-	-	-	-	-	-	-	0.32	0.69	0.12	0.25	0.034	0.075	-	-	-	-
13	-	-	-	-	-	-	-	-	0.32	0.69	0.12	0.25	0.034	0.075	-	-	-	-
14	-	-	-	-	-	-	-	-	1.05	2.30	0.39	0.84	0.11	0.25	-	-	-	-
15	-	-	-	-	-	-	-	-	0.23	0.33	0.11	0.16	0.017	0.024	-	-	-	-
16	-	-	-	-	-	-	-	-	0.11	0.23	0.04	0.084	0.011	0.025	-	-	-	-
17	-	-	-	-	-	-	-	-	0.11	0.23	0.039	0.084	0.011	0.025	-	-	-	-
18	-	-	-	-	-	-	-	-	0.63	1.38	0.23	0.51	0.068	0.15	-	-	-	-
19	-	-	-	-	-	-	-	-	0.63	1.38	0.23	0.51	0.068	0.15	-	-	-	-
20	-	-	-	-	-	-	-	-	8.75	19.16	3.05	6.67	0.21	0.45	-	-	-	-
21	14.70	32.20	18.22	39.90	2.08	4.55	0.011	0.024	0.86	1.89	0.86	1.89	0.86	1.89	-	-	6.1E-05	1.34E-04
22	-	-	-	-	-	-	-	-	0.69	0.99	0.33	0.47	0.050	0.071	-	-	-	-
24	-	-	-	-	-	-	-	-	0.46	0.66	0.22	0.31	0.033	0.047	-	-	-	-
25	-	-	-	-	-	-	-	-	0.46	0.66	0.22	0.31	0.033	0.047	-	-	-	-
26	-	-	-	-	-	-	-	-	0.11	0.23	0.039	0.084	0.011	0.025	-	-	-	-
FPILE1	-	-	-	-	-	-	-	-	0.46	0.66	0.22	0.31	0.033	0.047	-	-	-	-
FPILE2	-	-	-	-	-	-	-	-	0.69	0.99	0.33	0.47	0.050	0.071	-	-	-	-
FPILE3	-	-	-	-	-	-	-	-	0.92	1.32	0.44	0.62	0.066	0.094	-	-	-	-
TL	-	-	-	-	-	-	-	-	2.08	2.96	0.98	1.40	0.15	0.21	-	-	-	-
WPILE	-	-	-	-	-	-	-	-	0.23	0.33	0.11	0.16	0.017	0.024	-	-	-	-
ROAD	-	-	-	-	-	-	-	-	59.02	104.46	15.04	26.62	1.50	2.66	-	-	-	-
Totals	**15.88**	**34.78**	**19.30**	**42.27**	**2.14**	**4.69**	**0.013**	**0.029**	**125.8**	**233.1**	**42.38**	**78.13**	**6.00**	**11.24**	-	-	**7.2E-05**	**1.58E-04**

[1]**Condensable Particulate Matter:** Include condensable particulate matter emissions for PM10 and PM2.5 if the source is a combustion source. Do not include condensable particulate matter for PM unless PM is set equal to PM10 and PM2.5. Particulate matter (PM) is not subject to an ambient air quality standard, but PM is a regulated air pollutant under PSD (20.2.74 NMAC) and Title V (20.2.70 NMAC).

Table 2-E: Requested Allowable Emissions

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

Unit No.	NOx		CO		VOC		SOx		PM[1]		PM10[1]		PM2.5[1]		H_2S		Lead	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
PIT_RAW	-	-	-	-	-	-	-	-	2.31	0.75	1.09	0.36	0.17	0.054	-	-	-	-
RAW	-	-	-	-	-	-	-	-	2.31	0.75	1.09	0.36	0.17	0.054	-	-	-	-
RR_RAW	-	-	-	-	-	-	-	-	2.31	0.75	1.09	0.36	0.17	0.054	-	-	-	-
RR_1	-	-	-	-	-	-	-	-	2.31	0.75	1.09	0.36	0.17	0.054	-	-	-	-
RR_2	-	-	-	-	-	-	-	-	0.77	0.39	0.26	0.13	0.018	0.0088	-	-	-	-
RR_3	-	-	-	-	-	-	-	-	0.42	0.14	0.20	0.064	0.030	0.010	-	-	-	-
RR1PILE	-	-	-	-	-	-	-	-	0.69	0.23	0.33	0.11	0.050	0.016	-	-	-	-
RR_4	-	-	-	-	-	-	-	-	0.42	0.14	0.20	0.064	0.030	0.010	-	-	-	-
RR2PILE	-	-	-	-	-	-	-	-	0.69	0.23	0.33	0.11	0.050	0.016	-	-	-	-
RR_5	-	-	-	-	-	-	-	-	0.55	0.18	0.26	0.085	0.04	0.013	-	-	-	-
RR3PILE	-	-	-	-	-	-	-	-	0.92	0.30	0.44	0.14	0.066	0.022	-	-	-	-
RR_ENG	1.17	2.56	1.08	2.36	0.062	0.13	0.0020	0.0044	0.062	0.13	0.062	0.13	0.062	0.13	-	-	1.1E-05	2.4E-05
1a	-	-	-	-	-	-	-	-	2.31	0.75	1.09	0.36	0.17	0.054	-	-	-	-
1b	-	-	-	-	-	-	-	-	0.42	0.21	0.19	0.095	0.035	0.018	-	-	-	-
1c	-	-	-	-	-	-	-	-	0.049	0.025	0.016	0.0081	0.0046	0.0023	-	-	-	-
2	-	-	-	-	-	-	-	-	0.25	0.13	0.11	0.057	0.021	0.011	-	-	-	-
2a	-	-	-	-	-	-	-	-	0.029	0.015	0.0097	0.0048	0.0027	0.0014	-	-	-	-
3	-	-	-	-	-	-	-	-	0.38	0.19	0.17	0.085	0.032	0.016	-	-	-	-
3a	-	-	-	-	-	-	-	-	0.044	0.022	0.014	0.0072	0.0041	0.0020	-	-	-	-
4	-	-	-	-	-	-	-	-	0.69	0.35	0.23	0.12	0.016	0.0079	-	-	-	-
4a	-	-	-	-	-	-	-	-	0.0049	0.0025	0.0016	0.00081	0.00046	0.00023	-	-	-	-
5	-	-	-	-	-	-	-	-	0.46	0.23	0.16	0.078	0.011	0.0053	-	-	-	-
5a	-	-	-	-	-	-	-	-	0.010	0.0049	0.0032	0.0016	0.00091	0.00046	-	-	-	-
6	-	-	-	-	-	-	-	-	0.044	0.022	0.014	0.0072	0.0041	0.0020	-	-	-	-
7	-	-	-	-	-	-	-	-	0.14	0.045	0.066	0.021	0.010	0.0032	-	-	-	-
8	-	-	-	-	-	-	-	-	0.14	0.045	0.066	0.021	0.010	0.0032	-	-	-	-
9	-	-	-	-	-	-	-	-	0.0049	0.0025	0.0016	0.00081	0.00046	0.00023	-	-	-	-
10	-	-	-	-	-	-	-	-	0.14	0.045	0.066	0.021	0.010	0.0032	-	-	-	-
11	-	-	-	-	-	-	-	-	0.010	0.0049	0.0032	0.0016	0.00091	0.00046	-	-	-	-
12	-	-	-	-	-	-	-	-	0.015	0.0074	0.0048	0.0024	0.0014	0.00068	-	-	-	-
13	-	-	-	-	-	-	-	-	0.015	0.0074	0.0048	0.0024	0.0014	0.00068	-	-	-	-
14	-	-	-	-	-	-	-	-	0.049	0.025	0.016	0.0081	0.0046	0.0023	-	-	-	-
15	-	-	-	-	-	-	-	-	0.14	0.045	0.066	0.021	0.010	0.0032	-	-	-	-

Unit No.	NOx		CO		VOC		SOx		PM[1]		PM10[1]		PM2.5[1]		H_2S		Lead	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
16	-	-	-	-	-	-	-	-	0.0049	0.0025	0.0016	0.00081	0.00046	0.00023	-	-	-	-
17	-	-	-	-	-	-	-	-	0.0049	0.0025	0.0016	0.00081	0.00046	0.00023	-	-	-	-
18	-	-	-	-	-	-	-	-	0.029	0.015	0.0097	0.0048	0.0027	0.0014	-	-	-	-
19	-	-	-	-	-	-	-	-	0.029	0.015	0.0097	0.0048	0.0027	0.0014	-	-	-	-
20	-	-	-	-	-	-	-	-	0.77	0.39	0.26	0.13	0.018	0.0088	-	-	-	-
21	14.70	32.03	18.22	39.69	2.08	4.53	0.011	0.024	0.86	1.88	0.86	1.88	0.86	1.88	-	-	6.1E-05	1.33E-04
22	-	-	-	-	-	-	-	-	0.42	0.14	0.20	0.064	0.030	0.0097	-	-	-	-
24	-	-	-	-	-	-	-	-	0.28	0.090	0.13	0.043	0.020	0.0065	-	-	-	-
25	-	-	-	-	-	-	-	-	0.28	0.090	0.13	0.043	0.020	0.0065	-	-	-	-
26	-	-	-	-	-	-	-	-	0.0049	0.0025	0.0016	0.00081	0.00046	0.00023	-	-	-	-
FPILE1	-	-	-	-	-	-	-	-	0.46	0.15	0.22	0.071	0.033	0.011	-	-	-	-
FPILE2	-	-	-	-	-	-	-	-	0.69	0.23	0.33	0.11	0.050	0.016	-	-	-	-
FPILE3	-	-	-	-	-	-	-	-	0.92	0.30	0.44	0.14	0.066	0.022	-	-	-	-
TL	-	-	-	-	-	-	-	-	2.08	0.68	0.98	0.32	0.15	0.048	-	-	-	-
WPILE	-	-	-	-	-	-	-	-	0.23	0.075	0.11	0.036	0.017	0.0054	-	-	-	-
ROAD	-	-	-	-	-	-	-	-	11.8	4.77	3.01	1.22	0.30	0.12	-	-	-	-
Totals	**15.88**	**34.58**	**19.30**	**42.04**	**2.14**	**4.66**	**0.013**	**0.029**	**37.98**	**15.71**	**15.43**	**7.23**	**2.92**	**2.72**	-	-	**7.2E-05**	**1.57E-04**

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

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

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

Unit No.	NOx		CO		VOC		SOx		PM[2]		PM10[2]		PM2.5[2]		H_2S		Lead	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
Totals																		

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

[2] **Condensable Particulate Matter:** Include condensable particulate matter emissions for PM10 and PM2.5 if the source is a combustion source. Do not include condensable particulate matter for PM unless PM is set equal to PM10 and PM2.5. Particulate matter (PM) is not subject to an ambient air quality standard, but it is a regulated air pollutant under PSD (20.2.74 NMAC) and Title V (20.2.70 NMAC).

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

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

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

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

Table 2-H: Stack Exit Conditions

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

Stack Number	Serving Unit Number(s) from Table 2-A	Orientation (H-Horizontal V=Vertical)	Rain Caps (Yes or No)	Height Above Ground (ft)	Temp. (F)	Flow Rate		Moisture by Volume (%)	Velocity (ft/sec)	Inside Diameter (ft)
						(acfs)	(dscfs)			
S1	RR_ENG	H	No	8	750.00	785.4		NA	150.0	0.3333
S2	21	V	No	12	954.32	6251.2		NA	191.0	0.8333

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

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

Stack No.	Unit No.(s)	Total HAPs		Provide Pollutant Name Here ☐HAP or☐ TAP		Provide Pollutant Name Here ☐HAP or☐ TAP		Provide Pollutant Name Here ☐HAP or☐ TAP		Provide Pollutant Name Here ☐HAP or☐ TAP		Provide Pollutant Name Here ☐HAP or☐ TAP		Provide Pollutant Name Here ☐HAP or☐ TAP		Provide Pollutant Name Here ☐HAP or☐ TAP		Provide Pollutant Name Here ☐HAP or☐ TAP	
		lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
S1	RR_ENG	0.0081	0.018																
S2	21	0.044	0.096																
Totals:		0.052	0.11																

Table 2-J: Fuel

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

Unit No.	Fuel Type (low sulfur Diesel, ultra low sulfur diesel, Natural Gas, Coal, …)	Fuel Source: purchased commercial, pipeline quality natural gas, residue gas, raw/field natural gas, process gas (e.g. SRU tail gas) or other	Specify Units				
			Lower Heating Value	Hourly Usage	Annual Usage	% Sulfur	% Ash
RR_ENG	Ultra-Low sulfur diesel	Purchased Commercial	128,000 BTU/Gallon	9.7 gallons	40,006 gallons	0.0015	Neg.
21	Ultra-Low sulfur diesel	Purchased Commercial	128,000 BTU/Gallon	53.1 gallons	231,304 gallons	0.0015	Neg.

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

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

Tank No.	SCC Code	Material Name	Composition	Liquid Density (lb/gal)	Vapor Molecular Weight (lb/lb*mol)	Average Storage Conditions		Max Storage Conditions	
						Temperature (°F)	True Vapor Pressure (psia)	Temperature (°F)	True Vapor Pressure (psia)
T1	30500298	Diesel Fuel	Diesel Fuel	7.05	130	58.54	0.0062	65.66	0.0079

Table 2-L: Tank Data

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

Tank No.	Date Installed	Materials Stored	Seal Type (refer to Table 2-LR below)	Roof Type (refer to Table 2-LR below)	Capacity		Diameter (M)	Vapor Space (M)	Color (from Table VI-C)		Paint Condition (from Table VI-C)	Annual Throughput (gal/yr)	Turn-overs (per year)
					(bbl)	(M^3)			Roof	Shell			
T1	2000	Diesel Fuel	FX	FX	95.2	15.14	1.52		LG	LG	Good	271,300	68.00

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

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

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

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

Material Processed				Material Produced			
Description	**Chemical Composition**	**Phase (Gas, Liquid, or Solid)**	**Quantity (specify units)**	**Description**	**Chemical Composition**	**Phase**	**Quantity (specify units)**
Aggregate	Aggregate	Solid	350,000 tons	Construction Sand and Gravel	Aggregate	Solid	315,000 tons
				Waste	Aggregate	Solid	35,000 tons

Table 2-N: CEM Equipment

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

Stack No.	Pollutant(s)	Manufacturer	Model No.	Serial No.	Sample Frequency	Averaging Time	Range	Sensitivity	Accuracy
NA									

Table 2-O: Parametric Emissions Measurement Equipment

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

Unit No.	Parameter/Pollutant Measured	Location of Measurement	Unit of Measure	Acceptable Range	Frequency of Maintenance	Nature of Maintenance	Method of Recording	Averaging Time
NA								

Table 2-P: Greenhouse Gas Emissions

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

☐ By checking this box, the applicant acknowledges the total CO2e emissions are less than 75,000 tons per year.

		CO_2 ton/yr	N_2O ton/yr	CH_4 ton/yr	SF_6 ton/yr	PFC/HFC ton/yr[2]									Total GHG Mass Basis ton/yr[4]	Total CO_2e ton/yr[5]
Unit No.	**GWPs [1]**	1	298	25	22,800	footnote 3										
RR_ENG	mass GHG	475.5	0.0037	0.019											475.6	
	CO_2e	475.5	1.11	0.48												477.1
21	mass GHG	2603.2	0.020	0.10											2603.4	
	CO_2e	2603.2	6.08	2.61												2611.9
	mass GHG															
	CO_2e															
	mass GHG															
	CO_2e															
	mass GHG															
	CO_2e															
	mass GHG															
	CO_2e															
	mass GHG															
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	mass GHG															
	CO_2e															
	mass GHG															
	CO_2e															
	mass GHG															
	CO_2e															
	mass GHG															
	CO2e															
Total	mass GHG	3078.8	0.024	0.12											3078.9	
	CO_2e	3078.8	7.19	3.09												3089.1

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

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

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

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

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

Section 3

Application Summary

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

The **Process Summary** shall include a brief description of the facility and its processes.

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

Vernon Hamilton Construction Company, LLC (VHCC) is applying for a new 20.2.72 NMAC air quality permit for a 350 ton per hour (tph) aggregate crushing and screening plant to be operated within county of San Juan, state of New Mexico. Regulation governing this permit application is 20.2.72.200.A(1) NMAC.

VHCC has retained Montrose Environmental Solutions, LLC (Montrose) to assist with the permit application. The plant will be identified as Kirtland Pit and will be located at 32 Rd 6210, Kirtland NM 87417.

Aggregate Crushing and Screening Plant

The 350 tph aggregate quarry, and crushing and screening operations will include an aggregate quarry, feeder, primary jaw crusher, two (2) secondary cone crushers, two (2) 3-deck screens, one (1) scalping screen, one (1) RipRap plant, fifteen (15) transfer conveyors, and seven (7) stacker conveyors. The main crushing and screening plant will be powered by commercial line power unless relocated to a different location where is will be powered by an 725kW, 1081 horsepower (hp) engine/generator. The RipRap plant will be powered by a 140 kW, 188 hp engine. Aggregate from the quarry will first be processed through the RipRap plant and then the material will be stored in the Raw Material Pile. From the Raw Material Pile the material will be fed into the main plant feeder. Processed aggregate will be stored in Finish Storage Piles until transported from the aggregate crushing plant to off-site sales. Waste material is sent back to the quarry. The aggregate crushing plant will limit hourly processing rate to 350 tph and 350,000 tons per year (tpy). Aggregate processing hours will be limited to daylight hours only. The hours of operation are presented below in Table 3-1.

TABLE 3-1: Aggregate Crushing and Screening Plant Production Hours of Operation (MST)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	1	1	1	1	1	0.5	0	0	0
6:00 AM	0	0	1	1	1	1	1	1	1	1	0	0
7:00 AM	0	0	1	1	1	1	1	1	1	1	0	0
8:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
9:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
10:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
11:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
12:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
1:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
2:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
3:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
4:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
5:00 PM	0	0	1	1	1	1	1	1	1	1	0	0
6:00 PM	0	0	0	1	1	1	1	1	0.5	0	0	0
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
Total	**9**	**9**	**12**	**14**	**14**	**14**	**14**	**14**	**13**	**12**	**9**	**9**

Haul truck traffic entering the facility will be controlled with base course and road watering. Haul truck traffic involving the Kirtland Pit operation will be limited to a maximum of 212 trucks per day.

If you have any questions regarding this significant permit application please call Paul Wade of Montrose. at (505) 830-9680 ext 6 or Kevin Bradshaw of VHCC LLC. at (505) 722-7855.

Routine or predictable emissions during Startup, Shutdown, and Maintenance (SSM)

No SSM emissions are proposed or submitted for this facility. For material processing equipment at the Kirtland Pit, VHCC, LLC will follow normal industry practices in minimizing emissions during startup, shutdown, and maintenance to not exceed the maximum hourly or annual emission rates submitted in Table 2-E. All control equipment and methods will be functioning correctly prior to aggregate processing.

Section 4

Process Flow Sheet

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

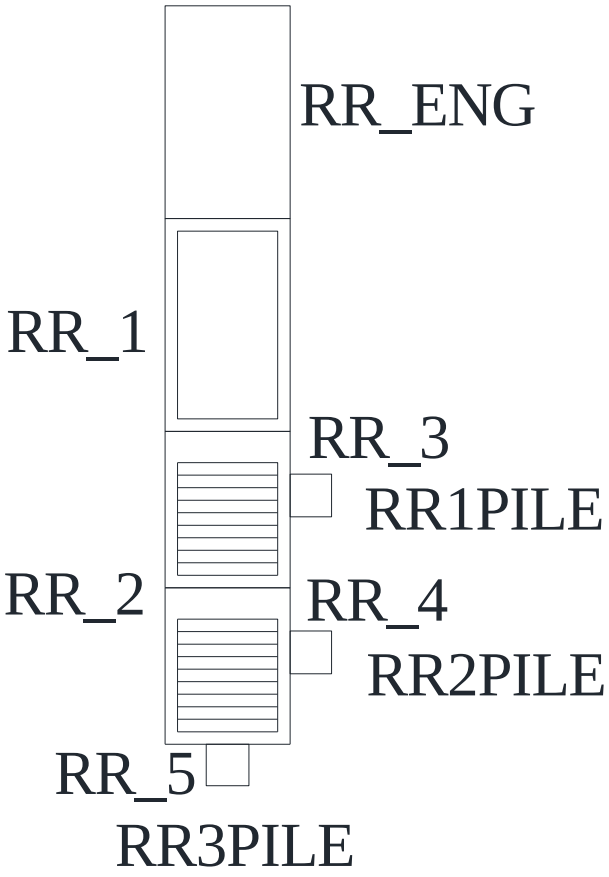

Figure 4-1: Process Flow RipRap Screening Plant

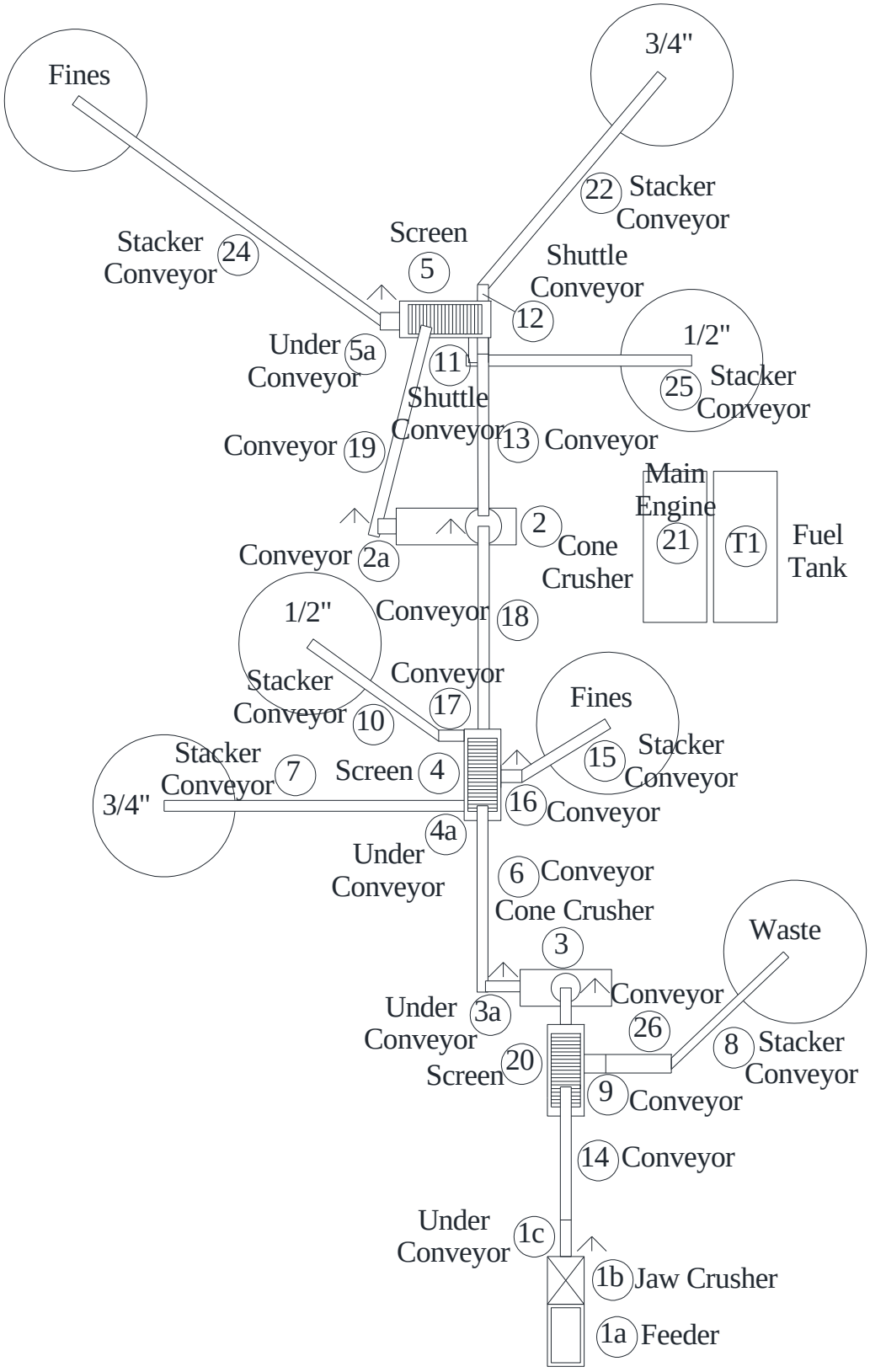

Figure 4-2: Process Flow Main Crushing and Screening Plant

Section 5

Plot Plan Drawn to Scale

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

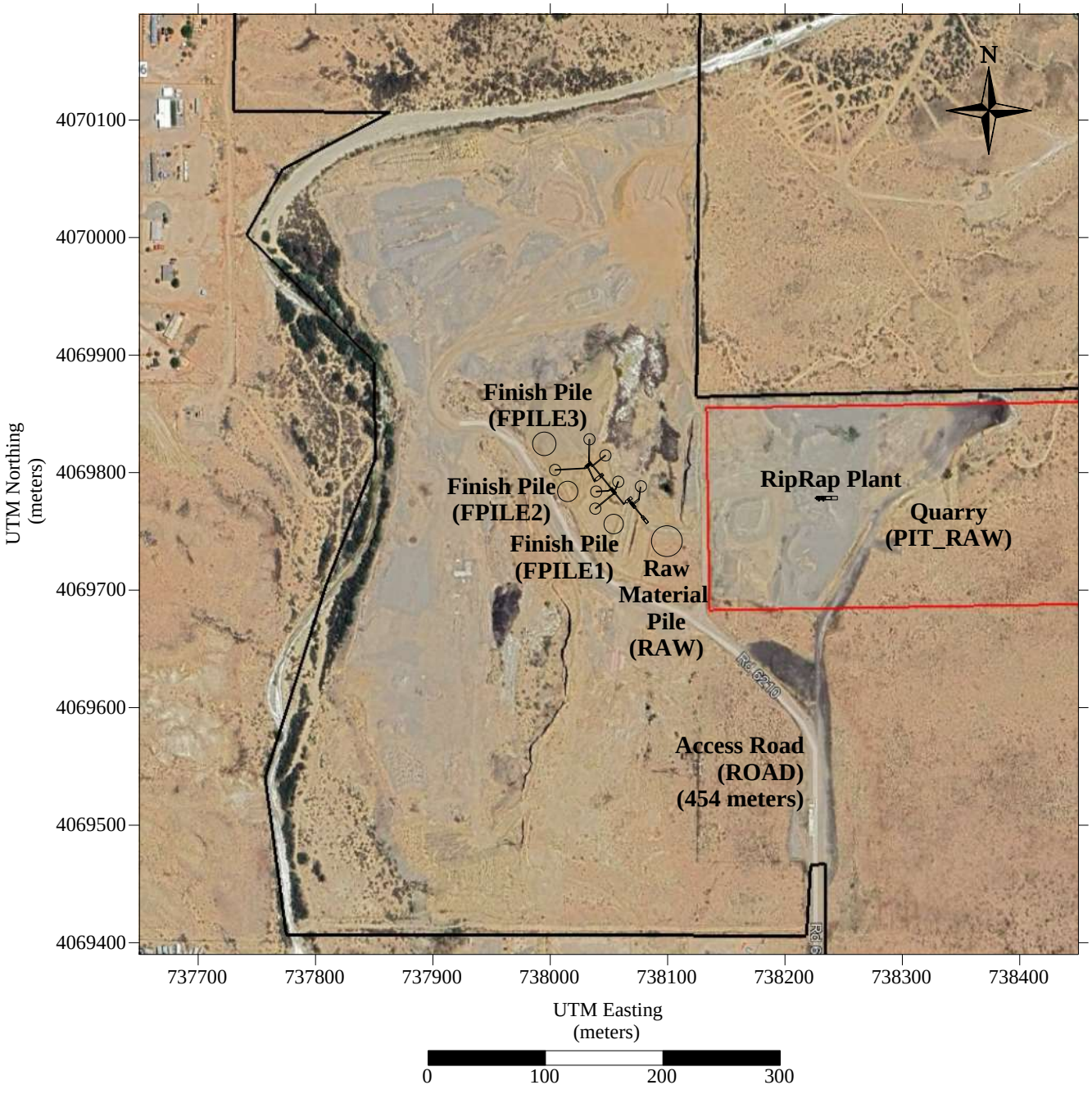

Figure 5-1: Location of VHCC Kirtland Pit Aggregate Crusher and Screening Plant and Surrounding Area

Section 6

All Calculations

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

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

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

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

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

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

Significant Figures:

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

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

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

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

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

(3) If the first digit discarded is exactly the number 5, followed only by zeros, the last digit retained shall be rounded upward if it is an odd number, but no adjustment shall be made if it is an even number.
(4) The final result of the calculation shall be expressed in the units of the standard.

Control Devices: In accordance with 20.2.72.203.A(3) and (8) NMAC, 20.2.70.300.D(5)(b) and (e) NMAC, and 20.2.73.200.B(7) NMAC, the permittee shall report all control devices and list each pollutant controlled by the control device regardless if the applicant takes credit for the reduction in emissions. The applicant can indicate in this section of the application if they chose to not take credit for the reduction in emission rates. For notices of intent submitted under 20.2.73 NMAC, only uncontrolled emission rates can be considered to determine applicability unless the state or federal Acts require the control. This information is necessary to determine if federally enforceable conditions are necessary for the control device, and/or if the control device produces its own regulated pollutants or increases emission rates of other pollutants.

Aggregate Crushing and Screening Plant

Pre-Control Particulate Emission Rates

Material Handling ($PM_{2.5}$, PM_{10}, and PM)

To estimate material handling pre-control particulate emissions rates for crushing, screening, and conveyor transfer operations, emission factors were obtained from EPA's Compilation of Air Pollutant Emission Factors, Volume I: Stationary Point and Area Sources, Aug. 2004, Section 11.19.2, Table 11.19.2-2. To determine missing $PM_{2.5}$ emission factors the ratio of 0.35/0.053 from $PM_{10}/PM_{2.5}$ *k* factors found in AP-42 Section 13.2.4 (11/2006) were used.

To estimate material handling particulate emission rates for aggregate handling operations (quarry mining/aggregate storage piles/stacker drop to storage pile/loading feed bins), an emission equation was obtained from EPA's Compilation of Air Pollutant Emission Factors, Volume I: Stationary Point and Area Sources, Fifth Edition, Section 13.2.4 (11/2004), where the k (TSP = 0.74, PM_{10} = 0.35, $PM_{2.5}$ = 0.053), wind speed for determining the maximum hourly emission rate is the NMED default of 11 MPH and for determining the annual emission rate is based on the average wind speed for Farmington Airport (1996 – 2006) of 7.4 mph (see Section 7) and the NMED default moisture content of 2 percent.

Uncontrolled annual emissions for tons per year (tpy) were calculated assuming daylight operation for 4380 hours per year. This limit is based on the natural limitation of daylight hours for the safety of personnel operating the aggregate plant.

Aggregate Material Handling – Quarry Mining, Storage Piles, Stacker drop to Storage Piles, and Feed Bin Loading Emission Equation:

Maximum Hour Emission Factor

E (lbs/ton) = k x 0.0032 x $(U/5)^{1.3}$ / $(M/2)^{1.4}$

E_{PM} (lbs/ton) = 0.74 x 0.0032 x $(11/5)^{1.3}$ / $(2/2)^{1.4}$

E_{PM10} (lbs/ton) = 0.35 x 0.0032 x $(11/5)^{1.3}$ / $(2/2)^{1.4}$

$E_{PM2.5}$ (lbs/ton) = 0.053 x 0.0032 x $(11/5)^{1.3}$ / $(2/2)^{1.4}$

E_{PM} (lbs/ton) = 0.00660 lbs/ton;

E_{PM10} (lbs/ton) = 0.00312 lbs/ton

$E_{PM2.5}$ (lbs/ton) = 0.00047 lbs/ton

Annual Emission Factor

E (lbs/ton) = k x 0.0032 x $(U/5)^{1.3}$ / $(M/2)^{1.4}$

E_{PM} (lbs/ton) = 0.74 x 0.0032 x $(9.4/5)^{1.3}$ / $(2/2)^{1.4}$

E_{PM10} (lbs/ton) = 0.35 x 0.0032 x $(9.4/5)^{1.3}$ / $(2/2)^{1.4}$

$E_{PM2.5}$ (lbs/ton) = 0.053 x 0.0032 x $(9.4/5)^{1.3}$ / $(2/2)^{1.4}$

E_{PM} (lbs/ton) = 0.00538 lbs/ton;

E_{PM10} (lbs/ton) = 0.00254 lbs/ton

$E_{PM2.5}$ (lbs/ton) = 0.00039 lbs/ton

AP-42 Section 11.19.2 Table 11.19.2-2 Emission Factors:

All Bin Unloading and Conveyor Transfers = Uncontrolled Conveyor Transfer Point Emission Factor
Crushing = Uncontrolled Tertiary Crushing Emission Factor
Screening = Uncontrolled Screening Emission Factor

Material Handling Emission Factors:

Process Unit	PM Emission Factor (lbs/ton)	PM_{10} Emission Factor (lbs/ton)	$PM_{2.5}$ Emission Factor (lbs/ton)
Uncontrolled Tertiary Crushing	0.00540	0.00240	0.00036
Uncontrolled Screening	0.02500	0.00870	0.00130
Feed Bin Unloading, and Conveyor Transfers	0.00300	0.00110	0.00017
Uncontrolled Max Hourly Aggregate Storage Piles, Aggregate Drop to Piles, Feeder Loading	0.00660	0.00312	0.00047
Uncontrolled Annual Aggregate Storage Piles, Aggregate Drop to Piles, Feeder Loading	0.00429	0.00203	0.00031

The following equation was used to calculate the hourly emission rate for each process unit:

Emission Rate (lbs/hour) = Process Rate (tons/hour) * Emission Factor (lbs/ton)

The following equation was used to calculate the annual emission rate for each process unit:

$$\text{Emission Rate (tons/year)} = \frac{\text{Emission Rate (lbs/hour)} * \text{Operating Hour (hrs/year)}}{\text{2000 lbs/ton}}$$

Table 6-1 Pre-Controlled Regulated Process Equipment Emission Rates

Unit #	Process Unit Description	Process Rate (tph)	PM Emission Rate (lbs/hr)	PM Emission Rate (tons/yr)	PM_{10} Emission Rate (lbs/hr)	PM_{10} Emission Rate (tons/yr)	$PM_{2.5}$ Emission Rate (lbs/hr)	$PM_{2.5}$ Emission Rate (tons/yr)
PIT_RAW	Quarry Material	350	2.31	3.29	1.09	1.56	0.17	0.24
RAW	Raw Material from Quarry	350	2.31	3.29	1.09	1.56	0.17	0.24
Main Plant								
1a	Feeder	350	2.31	3.29	1.09	1.56	0.17	0.24
1b	Jaw Crusher with under conveyor	350	1.89	4.14	0.84	1.84	0.16	0.34
1c	Jaw Crusher under conveyor	350	1.05	2.30	0.39	0.84	0.11	0.25
14	Conveyor	350	1.05	2.30	0.39	0.84	0.11	0.25
20	Scalping Screen w/ under conveyor	350	8.75	19.16	3.05	6.67	0.21	0.45
9	Scalping Screen Shuttle Conveyor	35	0.11	0.23	0.039	0.084	0.011	0.025
26	Conveyor	35	0.11	0.23	0.039	0.084	0.011	0.025
8	Stacker Conveyor drop to Waste	35	0.23	0.33	0.11	0.16	0.017	0.024
3	Cone Crusher with Under Conveyor	315	1.70	3.73	0.76	1.66	0.14	0.31
3a	Cone Crusher Under Conveyor	315	0.95	2.07	0.35	0.76	0.10	0.22
6	Conveyor	315	0.95	2.07	0.35	0.76	0.10	0.22
4	Screen w/ Under Conveyors	315	7.88	17.25	2.74	6.00	0.19	0.41
4a	Screen Under Conveyor	35	0.11	0.23	0.04	0.084	0.011	0.025
7	Stacker Conveyor	35	0.23	0.33	0.11	0.16	0.017	0.024
16	Screen Under Conveyor	35	0.11	0.23	0.04	0.084	0.011	0.025
15	Stacker Conveyor	35	0.23	0.33	0.11	0.16	0.017	0.024
17	Screen Under Conveyor	35	0.11	0.23	0.039	0.084	0.011	0.025
10	Stacker Conveyor	35	0.23	0.33	0.11	0.16	0.017	0.024
18	Screen Conveyor to Cone Crusher	210	0.63	1.38	0.23	0.51	0.068	0.15
2	Cone Crusher with Under Conveyor	210	1.13	2.48	0.50	1.10	0.093	0.20
2a	Cone Crusher Under Conveyor	210	0.63	1.38	0.23	0.51	0.068	0.15
19	Conveyor	210	0.63	1.38	0.23	0.51	0.068	0.15

Unit #	Process Unit Description	Process Rate (tph)	PM Emission Rate (lbs/hr)	PM Emission Rate (tons/yr)	PM_{10} Emission Rate (lbs/hr)	PM_{10} Emission Rate (tons/yr)	$PM_{2.5}$ Emission Rate (lbs/hr)	$PM_{2.5}$ Emission Rate (tons/yr)
5	Screen w/ Under Conveyors	210	5.25	11.50	1.83	4.00	0.12	0.27
5a	Screen Under Conveyor	70	0.21	0.46	0.08	0.17	0.023	0.050
24	Stacker Conveyor	70	0.46	0.66	0.22	0.31	0.033	0.047
12	Shuttle Conveyor	105	0.32	0.69	0.12	0.25	0.034	0.075
22	Stacker Conveyor	105	0.69	0.99	0.33	0.47	0.050	0.071
11	Shuttle Conveyor	70	0.21	0.46	0.08	0.17	0.023	0.050
25	Stacker Conveyor	70	0.46	0.66	0.22	0.31	0.033	0.047
13	Conveyor - return to crusher	105	0.32	0.69	0.12	0.25	0.034	0.075
Finish Piles								
FPILE1	FPILE Fines	70	0.46	0.66	0.22	0.31	0.033	0.047
FPILE2	FPILE 1/2"	105	0.69	0.99	0.33	0.47	0.050	0.071
FPILE3	FPILE 3/4"	140	0.92	1.32	0.44	0.62	0.066	0.094
Truck Loading								
TL	Truck Loading	315	2.08	2.96	0.98	1.40	0.15	0.21
Rip Rap Plant								
RR_RAW	RipRap Screening Plant Raw Material	350	2.31	3.29	1.09	1.56	0.17	0.24
RR_Feeder	RipRap Screening Plant Feeder	350	2.31	3.29	1.09	1.56	0.17	0.24
RR_Screen	RipRap Screening Plant Screen (2-screen setup)	350	8.75	19.16	3.05	6.67	0.21	0.45
RR_1a	RipRap Screening Plant Stacker Conveyor 1a	105	0.69	0.99	0.33	0.47	0.050	0.071
RR1PILE	RipRap Screening Plant Stacker Finish Pile	105	0.69	0.99	0.33	0.47	0.050	0.071
RR_1b	RipRap Screening Plant Stacker Conveyor 1b	105	0.69	0.99	0.33	0.47	0.050	0.071
RR2PILE	RipRap Screening Plant Stacker Finish Pile	105	0.69	0.99	0.33	0.47	0.050	0.071
RR_1c	RipRap Screening Plant Stacker Conveyor 1c	140	0.92	1.32	0.44	0.62	0.066	0.094

Unit #	Process Unit Description	Process Rate (tph)	PM Emission Rate (lbs/hr)	PM Emission Rate (tons/yr)	PM_{10} Emission Rate (lbs/hr)	PM_{10} Emission Rate (tons/yr)	$PM_{2.5}$ Emission Rate (lbs/hr)	$PM_{2.5}$ Emission Rate (tons/yr)
RR3PILE	RipRap Screening Plant Stacker Finish Pile	140	0.92	1.32	0.44	0.62	0.066	0.094
Waste Pile to Open Pit								
WPILE	Waste Pile (Dirt Removal to Open Pit)	35	0.23	0.33	0.11	0.16	0.017	0.024
		TOTALS	**65.90**	**126.64**	**26.42**	**49.48**	**3.57**	**6.55**

Controlled Particulate Emission Rates

No fugitive dust controls or emission reductions are proposed for the quarry mining, aggregate storage piles, or loading of the aggregate feed bin with the exception of limiting annual production rates.

A "Wet Suppression" system will control emissions of particulate matter during crushing and screening. Controlled sources (with wet suppression) are those that are part of the processing plant that employs current wet suppression technology similar to the study group found in AP-42 Section 11.19.2. The moisture content of the study group without wet suppression systems operating (uncontrolled) ranged from 0.21 to 1.3 percent, and the same facilities operating wet suppression systems (controlled) ranged from 0.55 to 2.88 percent. Due to carry over of the small amount of moisture required, it has been shown that each source, with the exception of crushers, does not need to employ direct water sprays. Although the moisture content was the only variable measured, other process features may have as much influence on emissions from a given source. No fugitive dust controls are proposed for loading the feeders (RR_1, 1a), and material handling at the raw material source (PIT_RAW, RAW, RR_RAW), storage storage pile (RR1PILE, RR2PILE, RR3PILE, FPILE1, FPILE2, FPILE3, WPILE) or truck loading (TL). Water sprays and moisture carryover will control fugitive dust for Units 1b, 1c, 14, 20, 9, 26, 8, 3, 3a, 6, 4, 4a, 7, 16, 15, 17, 10, 18, 2, 2a, 19, 5, 5a, 24, 12, 22, 11, 25, 13, RR_2, RR_3, RR_4, RR_5.

Fugitive dust control for unloading the aggregate feeder (Units RR_1, 1a) onto conveyors will be controlled, as needed, with enclosures and/or water sprays at the exit of the feed bins. Fugitive dust control for the transfer conveyors (Units 1b, 1c, 14, 9, 26, 3a, 6, 4a, 16, 17, 18, 2a, 19, 5a, 12, 11, 13, RR_2, RR_3, RR_4, RR_5) will be controlled with material moisture content and/or enclosure. It is estimated that these methods will control to an efficiency of 95.3 percent per AP42 Section 11.19.2, Table 11.19.2-2. Additional emission reductions include limiting annual production rates.

Fugitive dust control for the plant crushers (Units 1b, 3, 2) will be controlled, as needed, with enclosures and/or water sprays. It is estimated that these methods will control to an efficiency of 77.8 percent for crushing operations per AP42 Section 11.19.2, Table 11.19.2-2. Additional emission reductions include limiting annual production rates.

Fugitive dust control for the plant screens (Units 20, 4, 5) will be controlled, as needed, with enclosures and/or water sprays. It is estimated that these methods will control to an efficiency of 91.2 percent for screening operations per AP42 Section 11.19.2, Table 11.19.2-2. Additional emission reductions include limiting annual production rates.

Fugitive dust control for the stacker conveyor transfer to storage piles (Units 8, 7, 15, 10, 24, 22, 25) will be controlled with material moisture content and/or enclosure. It is estimated that the additional moisture during processing will increase the moisture content from the default of 2% to the high moisture content value found in footnote b of AP-42 Table 11.19.2-2, 2.88%. This will control fugitive emissions to an efficiency of 60 percent. Additional emission reductions include limiting annual production rates.

To estimate material handling control particulate emissions rates for crushing, screening, and conveyor transfer operations, emission factors were obtained from EPA's Compilation of Air Pollutant Emission Factors, Volume I: Stationary Point and Area Sources, Aug. 2004, Section 11.19.2, Table 11.19.2-2.

To estimate material handling particulate emission rates for aggregate handling operations (mining/aggregate storage piles/loading feed bins/stacker drop to piles), an emission equation was obtained from EPA's Compilation of Air Pollutant Emission Factors, Volume I: Stationary Point and Area Sources, Fifth Edition, Section 13.2.4 (11/2004), where the k (PM = 0.74, PM_{10} = 0.35, $PM_{2.5}$ = 0.053), wind speed for determining the maximum hourly emission rate is the

NMED default of 11 MPH and for determining annual emission rate is based on the average wind speed for Farmington for the years of 1996 through 2006 of 7.4 mph, and the NMED default moisture content of 2 percent.

Mining, Aggregate Storage Piles and Feed Bin Loading Emission Equation:

Maximum Hour Emission Factor

E (lbs/ton) = k x 0.0032 x $(U/5)^{1.3}$ / $(M/2)^{1.4}$

E_{PM} (lbs/ton) = 0.74 x 0.0032 x $(11/5)^{1.3}$ / $(2/2)^{1.4}$

E_{PM10} (lbs/ton) = 0.35 x 0.0032 x $(11/5)^{1.3}$ / $(2/2)^{1.4}$

$E_{PM2.5}$ (lbs/ton) = 0.053 x 0.0032 x $(11/5)^{1.3}$ / $(2/2)^{1.4}$

E_{PM} (lbs/ton) = 0.00660 lbs/ton;

E_{PM10} (lbs/ton) = 0.00312 lbs/ton

$E_{PM2.5}$ (lbs/ton) = 0.00047 lbs/ton

Aggregate Storage Pile Loading from Stacker Conveyor Emission Equation:

Maximum Hour Emission Factor

E (lbs/ton) = k x 0.0032 x $(U/5)^{1.3}$ / $(M/2)^{1.4}$

E_{PM} (lbs/ton) = 0.74 x 0.0032 x $(11/5)^{1.3}$ / $(2.88/2)^{1.4}$

E_{PM10} (lbs/ton) = 0.35 x 0.0032 x $(11/5)^{1.3}$ / $(2.88/2)^{1.4}$

$E_{PM2.5}$ (lbs/ton) = 0.053 x 0.0032 x $(11/5)^{1.3}$ / $(2.88/2)^{1.4}$

E_{PM} (lbs/ton) = 0.00396 lbs/ton;

E_{PM10} (lbs/ton) = 0.00187 lbs/ton

$E_{PM2.5}$ (lbs/ton) = 0.00028 lbs/ton

Mining, Aggregate Storage Piles and Feed Bin Loading Emission Equation:

Annual Emission Factor

E (lbs/ton) = k x 0.0032 x $(U/5)^{1.3}$ / $(M/2)^{1.4}$

E_{PM} (lbs/ton) = 0.74 x 0.0032 x $(7.4/5)^{1.3}$ / $(2/2)^{1.4}$

E_{PM10} (lbs/ton) = 0.35 x 0.0032 x $(7.4/5)^{1.3}$ / $(2/2)^{1.4}$

$E_{PM2.5}$ (lbs/ton) = 0.053 x 0.0032 x $(7.4/5)^{1.3}$ / $(2/2)^{1.4}$

E_{PM} (lbs/ton) = 0.00429 lbs/ton;

E_{PM10} (lbs/ton) = 0.00203 lbs/ton

$E_{PM2.5}$ (lbs/ton) = 0.00031 lbs/ton

Aggregate Storage Pile Loading from Stacker Conveyor Emission Equation:

Annual Emission Factor

E (lbs/ton) = k x 0.0032 x $(U/5)^{1.3}$ / $(M/2)^{1.4}$

E_{PM} (lbs/ton) = 0.74 x 0.0032 x $(7.4/5)^{1.3}$ / $(2.88/2)^{1.4}$

E_{PM10} (lbs/ton) = 0.35 x 0.0032 x $(7.4/5)^{1.3}$ / $(2.88/2)^{1.4}$

$E_{PM2.5}$ (lbs/ton) = 0.053 x 0.0032 x $(7.4/5)^{1.3}$ / $(2.88/2)^{1.4}$

E_{PM} (lbs/ton) = 0.00258 lbs/ton;

E_{PM10} (lbs/ton) = 0.00122 lbs/ton

$E_{PM2.5}$ (lbs/ton) = 0.00018 lbs/ton

AP-42 Emission Factors:

Feed Bin Unloading = Controlled Conveyor Transfer Point Emission Factor
Crusher = Controlled Tertiary Crusher Emission Factor
Screen = Controlled Screening Emission Factor
Transfer Conveyor = Controlled Conveyor Transfer Point Emission Factor

Material Handling Emission Factors:

Process Unit	PM Emission Factor (lbs/ton)	PM_{10} Emission Factor (lbs/ton)	$PM_{2.5}$ Emission Factor (lbs/ton)
Controlled Crushing	0.00120	0.00054	0.00010
Controlled Screening	0.00220	0.00074	0.00005
Controlled Feeder Unloading and Conveyor Transfers	0.00014	0.00005	0.000013
Mining, Aggregate Storage Piles, Feeder Loading Maximum Hourly	0.00660	0.00312	0.00047
Mining, Aggregate Storage Piles, Feeder Loading Annual Hourly	0.00429	0.00203	0.00031
Stacker Conveyor to Pile Maximum Hourly	0.00396	0.00187	0.00028
Stacker Conveyor to Pile Annual Hourly	0.00258	0.00122	0.00018

The following equation was used to calculate the hourly emission rate for each process unit:

Emission Rate (lbs/hour) = Process Rate (tons/hour) * Emission Factor (lbs/ton)

The following equation was used to calculate the annual emission rate for each process unit:

$$\text{Emission Rate (tons/year)} = \frac{\text{Hourly Emission Rate (lbs/ton)} * \text{Annual Throughput (tons/year)}}{\text{2000 lbs/ton}}$$

Table 6-2 Controlled Regulated Process Equipment Emission Rates

Unit #	Process Unit Description	Process Rate (tph)	PM Emission Rate (lbs/hr)	PM Emission Rate (tons/yr)	PM_{10} Emission Rate (lbs/hr)	PM_{10} Emission Rate (tons/yr)	$PM_{2.5}$ Emission Rate (lbs/hr)	$PM_{2.5}$ Emission Rate (tons/yr)
PIT_RAW	Quarry Material	350	2.31	0.75	1.09	0.36	0.17	0.054
RAW	Raw Material from Quarry	350	2.31	0.75	1.09	0.36	0.17	0.054
Main Plant								
1a	Feeder	350	2.31	0.75	1.09	0.36	0.17	0.054
1b	Jaw Crusher with under conveyor	350	0.42	0.21	0.19	0.095	0.035	0.018
1c	Jaw Crusher under conveyor	350	0.049	0.025	0.016	0.0081	0.0046	0.0023
14	Conveyor	350	0.049	0.025	0.016	0.0081	0.0046	0.0023
20	Scalping Screen w/ under conveyor	350	0.77	0.39	0.26	0.13	0.018	0.0088
9	Scalping Screen Shuttle Conveyor	35	0.0049	0.0025	0.0016	0.00081	0.00046	0.00023
26	Conveyor	35	0.0049	0.0025	0.0016	0.00081	0.00046	0.00023
8	Stacker Conveyor drop to Waste	35	0.14	0.045	0.066	0.021	0.010	0.0032
3	Cone Crusher with Under Conveyor	315	0.38	0.19	0.17	0.085	0.032	0.016
3a	Cone Crusher Under Conveyor	315	0.044	0.022	0.014	0.0072	0.0041	0.0020
6	Conveyor	315	0.044	0.022	0.014	0.0072	0.0041	0.0020
4	Screen w/ Under Conveyors	315	0.69	0.35	0.23	0.12	0.016	0.0079
4a	Screen Under Conveyor	35	0.0049	0.0025	0.0016	0.00081	0.00046	0.00023
7	Stacker Conveyor	35	0.14	0.045	0.066	0.021	0.010	0.0032
16	Screen Under Conveyor	35	0.0049	0.0025	0.0016	0.00081	0.00046	0.00023
15	Stacker Conveyor	35	0.14	0.045	0.066	0.021	0.010	0.0032
17	Screen Under Conveyor	35	0.0049	0.0025	0.0016	0.00081	0.00046	0.00023
10	Stacker Conveyor	35	0.14	0.045	0.066	0.021	0.010	0.0032
18	Screen Conveyor to Cone Crusher	210	0.029	0.015	0.0097	0.0048	0.0027	0.0014
2	Cone Crusher with Under Conveyor	210	0.25	0.13	0.11	0.057	0.021	0.011
2a	Cone Crusher Under Conveyor	210	0.029	0.015	0.0097	0.0048	0.0027	0.0014

Unit #	Process Unit Description	Process Rate (tph)	PM Emission Rate (lbs/hr)	PM Emission Rate (tons/yr)	PM_{10} Emission Rate (lbs/hr)	PM_{10} Emission Rate (tons/yr)	$PM_{2.5}$ Emission Rate (lbs/hr)	$PM_{2.5}$ Emission Rate (tons/yr)
19	Conveyor	210	0.029	0.015	0.0097	0.0048	0.0027	0.0014
5	Screen w/ Under Conveyors	210	0.46	0.23	0.16	0.078	0.011	0.0053
5a	Screen Under Conveyor	70	0.010	0.0049	0.0032	0.0016	0.00091	0.00046
24	Stacker Conveyor	70	0.28	0.090	0.13	0.043	0.020	0.0065
12	Shuttle Conveyor	105	0.015	0.0074	0.0048	0.0024	0.00137	0.00068
22	Stacker Conveyor	105	0.42	0.135	0.20	0.064	0.030	0.0097
11	Shuttle Conveyor	70	0.010	0.0049	0.0032	0.0016	0.00091	0.00046
25	Stacker Conveyor	70	0.28	0.090	0.13	0.043	0.020	0.0065
13	Conveyor - return to crusher	105	0.015	0.007	0.0048	0.0024	0.0014	0.00068
Finish Piles								
FPILE1	FPILE Fines	70	0.46	0.15	0.22	0.071	0.033	0.011
FPILE2	FPILE 1/2"	105	0.69	0.23	0.33	0.11	0.050	0.016
FPILE3	FPILE 3/4"	140	0.92	0.30	0.44	0.14	0.066	0.022
Truck Loading								
TL	Truck Loading	315	2.08	0.68	0.98	0.32	0.15	0.048
Rip Rap Plant								
RR_RAW	RipRap Screening Plant Raw Material	350	2.31	0.75	1.09	0.36	0.17	0.054
RR_Feeder	RipRap Screening Plant Feeder	350	2.31	0.75	1.09	0.36	0.17	0.054
RR_Screen	RipRap Screening Plant Screen (2-screen setup)	350	2.31	0.75	1.09	0.36	0.17	0.054
RR_1a	RipRap Screening Plant Stacker Conveyor 1a	105	0.77	0.39	0.26	0.13	0.018	0.0088
RR1PILE	RipRap Screening Plant Stacker Finish Pile	105	0.42	0.14	0.20	0.064	0.030	0.010
RR_1b	RipRap Screening Plant Stacker Conveyor 1b	105	0.69	0.23	0.33	0.11	0.050	0.016
RR2PILE	RipRap Screening Plant Stacker Finish Pile	105	0.42	0.14	0.20	0.064	0.030	0.010
RR_1c	RipRap Screening Plant Stacker Conveyor 1c	140	0.69	0.23	0.33	0.11	0.050	0.016

Unit #	Process Unit Description	Process Rate (tph)	PM Emission Rate (lbs/hr)	PM Emission Rate (tons/yr)	PM_{10} Emission Rate (lbs/hr)	PM_{10} Emission Rate (tons/yr)	$PM_{2.5}$ Emission Rate (lbs/hr)	$PM_{2.5}$ Emission Rate (tons/yr)
RR3PILE	RipRap Screening Plant Stacker Finish Pile	140	0.55	0.18	0.26	0.085	0.040	0.013
Waste Pile to Open Pit								
WPILE	Waste Pile (Dirt Removal to Open Pit)	35	0.23	0.075	0.11	0.036	0.017	0.0054
		TOTALS	**25.25**	**8.93**	**11.50**	**4.00**	**1.70**	**0.58**

Estimates for 1081 hp (725 kW) Main Crushing and Screening Plant Diesel-Fired Engine (21) (NO_X, CO, SO_2, VOC, PM, and CO_2)

A 1081 horsepower (hp), 725 kilowatt (kW) engine (Unit 21) provides power to the Main crushing and screening plant for relocations only. At the initial site the main plant is run by commercial line power. Emission rates for NO_X, CO, PM and NMHC are based on EPA Tier 2 emission factors (See Section 7). Sulfur dioxide (SO_2) emissions are estimated based on sulfur content of diesel fuel, not to exceed 15 ppm fuel content and a fuel usage rate of 53.1 gal/hr. CO_2 emission rates are found in EPA's "Emission Factors for Greenhouse Gas Inventories" (See Section 7). Uncontrolled annual emissions in tons per year (tpy) were calculated assuming daylight operation of 4380 hours per year. Controlled annual emissions in tons per year (tpy) were calculated assuming proposed operation of 4356 hours per year.

EPA Tier 2:

Pollutant	EPA Tier 2 Emission Factor (g-kW/hr)
Nitrogen Oxide (NOx)	9.20
Carbon Monoxides (CO)	11.40
Particulate (PM)	0.54
Hydrocarbons (VOC)	1.30

Sulfur dioxide emission rate was calculated using the fuel consumption rate for this engine of 53.1 gallons per hour, a fuel density of 7.0 pounds per gallon, a fuel sulfur content of 15 PPM, and a sulfur to sulfur dioxide conversion factor of two (2). The following equation calculates the emission rate for sulfur dioxide (SO_2).

Emission Rate (lbs/hr) = Fuel (gal/hr) * Density lbs/gal * % Sulfur Content * Factor

$$\text{Emission Rate (lbs/hr)} = \frac{53.1 \text{ gallons}}{\text{hr}} \mid \frac{7.0 \text{ lbs}}{\text{gallon}} \mid \frac{0.000015 \text{ lbs Sulfur}}{\text{lbs of fuel}} \mid \frac{2 \text{ lbs Sulfur Dioxide}}{1 \text{ lb Sulfur}}$$

Emission Rate (lbs/hr) = 0.012 lbs/hr

CO_2 emission rates are found in EPA's "Emission Factors for Greenhouse Gas Inventories" (February 13, 2024).

CO2 = 10.21 kg/gal (GWP = 1)
CH4 = 0.41 g/gal (GWP = 28)
N2O = 0.08 g/gal (GWP = 265)

The following equation was used to calculate the annual emission rate for each engine pollutant:

$$\text{Emission Rate (tons/year)} = \frac{\text{Emission Rate (lbs/hour)} * \text{Operating Hour (hrs/year)}}{\text{2000 lbs/ton}}$$

Table 6-3: Uncontrolled Combustion Emission Rates

Process Unit Number	Pollutant	Engine Rating (hp/kW)	Emission Rate (lbs/hr)	Emission Rate (tons/yr)
21	NO_X	1081/725	14.70	32.20
	CO	1081/725	18.22	39.90
	SO_2	1081/725	0.011	0.024
	VOC	1081/725	2.08	4.55
	PM	1081/725	0.86	1.89

Table 6-4: Controlled Combustion Emission Rates

Process Unit Number	Pollutant	Engine Rating (hp/kW)	Emission Rate (lbs/hr)	Emission Rate (tons/yr)
21	NO_X	1081/725	14.70	32.03
	CO	1081/725	18.22	39.69
	SO_2	1081/725	0.011	0.024
	VOC	1081/725	2.08	4.53
	PM	1081/725	0.86	1.88

GHG emission rate hourly (lbs/hr) = Emission Factor * gallon/hour * GWP * 2.20462 lbs/kg or 0.0020462 lbs/g
GHG emission rate annual (tons/yr) = lbs/hr * annual hours/2000 lbs/ton

Table 6-5: Uncontrolled GHG Combustion Emission Rates

Process Unit Number	Pollutant	Emission Factor	Gallons/Hour	GWP (lbs/hr)	GHG Emission Rate (lbs/hr)	GHG Emission Rate (tons/yr)
21	CO_2	10.21 kg/gal	53.1	1	1195.24	2617.57
	CH_4	0.41 g/gal	53.1	28	1.20	2.63
	N_2O	0.08 g/gal	53.1	265	2.79	6.11
	GHG				1199.2	2626.3

Table 6-6: Controlled GHG Combustion Emission Rates

Process Unit Number	Pollutant	Emission Factor	Gallons/Hour	GWP (lbs/hr)	GHG Emission Rate (lbs/hr)	GHG Emission Rate (tons/yr)
21	CO_2	10.21 kg/gal	53.1	1	1195.24	2603.23
	CH_4	0.41 g/gal	53.1	28	1.20	2.61
	N_2O	0.08 g/gal	53.1	265	2.79	6.08
	GHG				1199.2	2611.9

Estimates for 188 hp RipRap Screening Plant Diesel-Fired Engine (RR_ENG) (NO_X, CO, SO_2, VOC, PM, and CO_2)

A 188 horsepower (hp), 140 kilowatt (kW) engine (Unit RR_ENG) provides power to the RipRap screening plant. Emission rates for NO_X, CO, PM and NMHC are based on EPA Tier 4 emission factors (See Section 7). Tier 4 emission factors lists NMHC+NOx. NOx emission factor is 95% of the NMHC+NOx emission factor and Hydrocarbons (VOC) is 5% of the NMHC+NOx emission factor. Sulfur dioxide (SO_2) emissions are estimated based on sulfur content of diesel fuel, not to exceed 15 ppm fuel content and a fuel usage rate of 9.7 gal/hr. CO_2 emission rates are found in EPA's "Emission Factors for Greenhouse Gas Inventories" (See Section 7). Uncontrolled annual emissions in tons per year (tpy) were calculated assuming daylight operation of 4380 hours per year. Controlled annual emissions in tons per year (tpy) were calculated assuming proposed operation of 4356 hours per year.

EPA Tier 4:

Pollutant	EPA Tier 4 Emission Factor (g-kW/hr)
NMHC+NOx	4.00
Nitrogen Oxide (NOx)	3.80
Carbon Monoxides (CO)	3.50
Particulate (PM)	0.20
Hydrocarbons (VOC)	0.20

Sulfur dioxide emission rate was calculated using the fuel consumption rate for this engine of 9.7 gallons per hour, a fuel density of 7.0 pounds per gallon, a fuel sulfur content of 15 PPM, and a sulfur to sulfur dioxide conversion factor of two (2). The following equation calculates the emission rate for sulfur dioxide (SO_2).

Emission Rate (lbs/hr) = Fuel (gal/hr) * Density lbs/gal * % Sulfur Content * Factor

$$\text{Emission Rate (lbs/hr)} = \frac{9.7 \text{ gallons}}{\text{hr}} \left| \frac{7.0 \text{ lbs}}{\text{gallon}} \right| \frac{0.000015 \text{ lbs Sulfur}}{\text{lbs of fuel}} \left| \frac{2 \text{ lbs Sulfur Dioxide}}{1 \text{ lb Sulfur}} \right.$$

Emission Rate (lbs/hr) = 0.0020 lbs/hr

CO_2 emission rates are found in EPA's "Emission Factors for Greenhouse Gas Inventories" (February 13, 2024).

CO2 = 10.21 kg/gal (GWP = 1)
CH4 = 0.41 g/gal (GWP = 28)
N2O = 0.08 g/gal (GWP = 265)

The following equation was used to calculate the annual emission rate for each engine pollutant:

$$\text{Emission Rate (tons/year)} = \frac{\text{Emission Rate (lbs/hour)} * \text{Operating Hour (hrs/year)}}{\text{2000 lbs/ton}}$$

Table 6-7: Uncontrolled Combustion Emission Rates

Process Unit Number	Pollutant	Engine Rating (hp/kW)	Emission Rate (lbs/hr)	Emission Rate (tons/yr)
RR_ENG	NO_X	188/140	1.17	2.57
	CO	188/140	1.08	2.37
	SO_2	188/140	0.0020	0.0045
	VOC	188/140	0.062	0.14
	PM	188/140	0.062	0.14

Table 6-8: Controlled Combustion Emission Rates

Process Unit Number	Pollutant	Engine Rating (hp/kW)	Emission Rate (lbs/hr)	Emission Rate (tons/yr)
RR_ENG	NO_X	188/140	1.17	2.56
	CO	188/140	1.08	2.36
	SO_2	188/140	0.0020	0.0044
	VOC	188/140	0.062	0.13
	PM	188/140	0.062	0.13

GHG emission rate hourly (lbs/hr) = Emission Factor * gallon/hour * GWP * 2.20462 lbs/kg or 0.0020462 lbs/g
GHG emission rate annual (tons/yr) = lbs/hr * annual hours/2000 lbs/ton

Table 6-9: Uncontrolled GHG Combustion Emission Rates

Process Unit Number	Pollutant	Emission Factor	Gallons/Hour	GWP (lbs/hr)	GHG Emission Rate (lbs/hr)	GHG Emission Rate (tons/yr)
RR_ENG	CO_2	10.21 kg/gal	9.7	1	218.34	478.16
	CH_4	0.41 g/gal	9.7	28	0.22	0.48
	N_2O	0.08 g/gal	9.7	265	0.51	1.12
	GHG				219.1	479.8

Table 6-10: Controlled GHG Combustion Emission Rates

Process Unit Number	Pollutant	Emission Factor	Gallons/Hour	GWP (lbs/hr)	GHG Emission Rate (lbs/hr)	GHG Emission Rate (tons/yr)
RR_ENG	CO_2	10.21 kg/gal	9.7	1	218.34	475.54
	CH_4	0.41 g/gal	9.7	28	0.22	0.48
	N_2O	0.08 g/gal	9.7	265	0.51	1.11
	GHG				219.1	477.1

Estimates for Truck Traffic ($PM_{2.5}$, PM_{10} and PM) (Unit 14)

Haul truck travel emissions were estimated using AP-42, Section 13.2.2 (ver.11/06) "Unpaved Roads" emission equation. Haul roads for the aggregate crushing and screening plant use base course and watering as the control method (80% control efficiency allowed). Maximum number of round trip haul trucks per day is 252, which is equivalent to 17.4 haul trucks per hour based on a 14.5 hour day. Tables 6-7 and 6-8 summarizes the emission rate for both the uncontrolled and control method.

$$E = k * (s/12)^a * (W/3)^b * [(365 - p)/365] * VMT$$

Where k = constant PM2.5 = 0.15
PM10 = 1.5
PM = 4.9
s = % silt content (Table 13.2.2-1, "Sand and Gravel" 4.8%)
W = mean vehicle weight (26.5 tons) (Truck Tare Weight - 15 tons; Load Weight - 23 tons)
p = number of days with at least 0.01 in of precip. (NMED Policy = 70 days)
a = Constant PM2.5 = 0.9
PM10 = 0.9
PM = 0.7
b = Constant PM2.5 = 0.45
PM10 = 0.45
PM = 0.45
VMT = Vehicle Miles Traveled (road length = 0.56394 miles round trip)
Trucks per hour = 15.2 trucks/hr
Maximum Trucks per day Uncontrolled = 66652 trucks/day
Maximum Trucks per day Controlled = 15217 trucks/day

Hourly Emission Rate Factor Uncontrolled
PM = 6.8769 lbs/VMT
PM10 = 1.7527 lbs/VMT
PM2.5 = 0.1753 lbs/VMT

Annual Emission Rate Factor Uncontrolled
PM = 5.5581 lbs/annual VMT
PM10 = 1.4165 lbs/annual VMT
PM2.5 = 0.1417 lbs/annual VMT

Table 6-11: Uncontrolled Haul Road Fugitive Dust Emission Rates

Process Unit Description	Miles Traveled	PM Emission Rate (lbs/hr)	PM Emission Rate (tons/yr)	PM_{10} Emission Rate (lbs/hr)	PM_{10} Emission Rate (tons/yr)	$PM_{2.5}$ Emission Rate (lbs/hr)	$PM_{2.5}$ Emission Rate (tons/yr)
Haul Truck Travel	8.581 miles/hr 37588 miles/yr	59.02	104.46	15.04	26.62	1.50	2.66

Fugitive dust control will include base course and watering for 80% control (NMED Policy). Reduction in emissions due to precipitation was only accounted for in the annual emission rate. Particulate emission rate per vehicle mile traveled for each particle size category is:

Hourly Emission Rate Factor with Base Course and Watering 80% Control
PM = 1.3754 lbs/VMT
PM10 = 0.3505 lbs/VMT
PM2.5 = 0.0351 lbs/VMT

Annual Emission Rate Factor with Base Course and Watering 80% Control
PM = 1.1116 lbs/annual VMT
PM10 = 0.2833 lbs/annual VMT
PM2.5 = 0.0283 lbs/annual VMT

Table 6-12: Controlled Haul Road Fugitive Dust Emission Rates

Process Unit Description	Miles Traveled	PM Emission Rate (lbs/hr)	PM Emission Rate (tons/yr)	PM_{10} Emission Rate (lbs/hr)	PM_{10} Emission Rate (tons/yr)	$PM_{2.5}$ Emission Rate (lbs/hr)	$PM_{2.5}$ Emission Rate (tons/yr)
Haul Truck Travel Base Course and Watering	8.581 miles/hr 8582 miles/yr	11.80	4.77	3.01	1.22	0.30	0.12

Table 6-13 Summary of Uncontrolled NOx, CO, SO2, VOC, and PM Emission Rates

Uncontrolled Emission Totals															
Unit #	Description	NOx		CO		SO_2		VOC		PM		PM_{10}		$PM_{2.5}$	
		lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr
PIT_RAW	Quarry Material	-	-	-	-	-	-	-	-	2.31	3.29	1.09	1.56	0.17	0.24
RAW	Raw Material from Quarry	-	-	-	-	-	-	-	-	2.31	3.29	1.09	1.56	0.17	0.24
Main Plant															
1a	Feeder	-	-	-	-	-	-	-	-	2.31	3.29	1.09	1.56	0.17	0.24
1b	Jaw Crusher	-	-	-	-	-	-	-	-	1.89	4.14	0.84	1.84	0.16	0.34
1c	Jaw Crusher Under Conveyor	-	-	-	-	-	-	-	-	1.05	2.30	0.39	0.84	0.11	0.25
14	Conveyor	-	-	-	-	-	-	-	-	1.05	2.30	0.39	0.84	0.11	0.25
20	Scalping Screen	-	-	-	-	-	-	-	-	8.75	19.16	3.05	6.67	0.21	0.45
9	Scalping Screen Shuttle Conveyor	-	-	-	-	-	-	-	-	0.11	0.23	0.039	0.084	0.011	0.025
26	Conveyor	-	-	-	-	-	-	-	-	0.11	0.23	0.039	0.084	0.011	0.025
8	Stacker Conveyor drop to Waste	-	-	-	-	-	-	-	-	0.23	0.33	0.11	0.16	0.017	0.024
3	Cone Crusher	-	-	-	-	-	-	-	-	1.70	3.73	0.76	1.66	0.14	0.31
3a	Cone Crusher Under Conveyor	-	-	-	-	-	-	-	-	0.95	2.07	0.35	0.76	0.10	0.22
6	Conveyor	-	-	-	-	-	-	-	-	0.95	2.07	0.35	0.76	0.10	0.22
4	Screen	-	-	-	-	-	-	-	-	7.88	17.25	2.74	6.00	0.19	0.41
4a	Screen Under Conveyor	-	-	-	-	-	-	-	-	0.11	0.23	0.04	0.084	0.011	0.025
7	Stacker Conveyor	-	-	-	-	-	-	-	-	0.23	0.33	0.11	0.16	0.017	0.024
16	Screen Under Conveyor	-	-	-	-	-	-	-	-	0.11	0.23	0.04	0.084	0.011	0.025

Table 6-13 Summary of Uncontrolled NOx, CO, SO2, VOC, and PM Emission Rates

Uncontrolled Emission Totals															
Unit #	Description	NOx		CO		SO_2		VOC		PM		PM_{10}		$PM_{2.5}$	
		lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr
15	Stacker Conveyor	-	-	-	-	-	-	-	-	0.23	0.33	0.11	0.16	0.017	0.024
17	Screen Under Conveyor	-	-	-	-	-	-	-	-	0.11	0.23	0.039	0.084	0.011	0.025
10	Stacker Conveyor	-	-	-	-	-	-	-	-	0.23	0.33	0.11	0.16	0.017	0.024
18	Screen Conveyor to Cone Crusher	-	-	-	-	-	-	-	-	0.63	1.38	0.23	0.51	0.068	0.15
2	Cone Crusher	-	-	-	-	-	-	-	-	1.13	2.48	0.50	1.10	0.093	0.20
2a	Cone Crusher Under Conveyor	-	-	-	-	-	-	-	-	0.63	1.38	0.23	0.51	0.068	0.15
19	Conveyor	-	-	-	-	-	-	-	-	0.63	1.38	0.23	0.51	0.068	0.15
5	Screen	-	-	-	-	-	-	-	-	5.25	11.50	1.83	4.00	0.12	0.27
5a	Screen Under Conveyor	-	-	-	-	-	-	-	-	0.21	0.46	0.08	0.17	0.023	0.050
24	Stacker Conveyor	-	-	-	-	-	-	-	-	0.46	0.66	0.22	0.31	0.033	0.047
12	Shuttle Conveyor	-	-	-	-	-	-	-	-	0.32	0.69	0.12	0.25	0.034	0.075
22	Stacker Conveyor	-	-	-	-	-	-	-	-	0.69	0.99	0.33	0.47	0.050	0.071
11	Shuttle Conveyor	-	-	-	-	-	-	-	-	0.21	0.46	0.08	0.17	0.023	0.050
25	Stacker Conveyor	-	-	-	-	-	-	-	-	0.46	0.66	0.22	0.31	0.033	0.047
13	Conveyor - return to crusher	-	-	-	-	-	-	-	-	0.32	0.69	0.12	0.25	0.034	0.075
21	Main Plant Engine	14.70	32.20	18.22	39.90	0.011	0.024	2.08	4.55	0.86	1.89	0.86	1.89	0.86	1.89
FPILE1	FPILE Fines	-	-	-	-	-	-	-	-	0.46	0.66	0.22	0.31	0.033	0.047
FPILE2	FPILE 1/2"	-	-	-	-	-	-	-	-	0.69	0.99	0.33	0.47	0.050	0.071
FPILE3	FPILE 3/4"	-	-	-	-	-	-	-	-	0.92	1.32	0.44	0.62	0.066	0.094

Table 6-13 Summary of Uncontrolled NOx, CO, SO2, VOC, and PM Emission Rates

Uncontrolled Emission Totals															
Unit #	Description	NOx		CO		SO_2		VOC		PM		PM_{10}		$PM_{2.5}$	
		lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr
TL	Truck Loading	-	-	-	-	-	-	-	-	2.08	2.96	0.98	1.40	0.15	0.21
RipRap Screening Plant															
RR_RAW	RipRap Screening Plant Raw Material	-	-	-	-	-	-	-	-	2.31	3.29	1.09	1.56	0.17	0.24
RR_1	RipRap Screening Plant Feeder	-	-	-	-	-	-	-	-	2.31	3.29	1.09	1.56	0.17	0.24
RR_2	RipRap Screening Plant Screen (2-screen setup)	-	-	-	-	-	-	-	-	8.75	19.16	3.05	6.67	0.21	0.45
RR_3	RipRap Screening Plant Stacker Conveyor 1a	-	-	-	-	-	-	-	-	0.69	0.99	0.33	0.47	0.050	0.071
RR1PILE	RipRap Screening Plant Stacker Finish Pile	-	-	-	-	-	-	-	-	0.69	0.99	0.33	0.47	0.050	0.071
RR_4	RipRap Screening Plant Stacker Conveyor 1b	-	-	-	-	-	-	-	-	0.69	0.99	0.33	0.47	0.050	0.071
RR2PILE	RipRap Screening Plant Stacker Finish Pile	-	-	-	-	-	-	-	-	0.69	0.99	0.33	0.47	0.050	0.071
RR_5	RipRap Screening Plant Stacker Conveyor 1c	-	-	-	-	-	-	-	-	0.92	1.32	0.44	0.62	0.066	0.094
RR3PILE	RipRap Screening Plant Stacker Finish Pile	-	-	-	-	-	-	-	-	0.92	1.32	0.44	0.62	0.066	0.094
RR_ENG	RipRap Screening Plant Engine	1.17	2.57	1.08	2.37	0.0020	0.0045	0.062	0.14	0.062	0.14	0.062	0.14	0.062	0.14
WPILE	Waste Pile (Dirt Removal to Open Pit)	-	-	-	-	-	-	-	-	0.23	0.33	0.11	0.16	0.017	0.024
ROAD	Haul Road	-	-	-	-	-	-	-	-	59.02	104.46	15.04	26.62	1.50	2.66
	Total	**15.88**	**34.78**	**19.30**	**42.27**	**0.013**	**0.029**	**2.14**	**4.69**	**125.8**	**233.1**	**42.38**	**78.13**	**6.00**	**11.24**

Table 6-14 Summary of Requested Allowable NOx, CO, SO2, VOC, and PM Emission Rates

Uncontrolled Emission Totals															
Unit #	Description	NOx		CO		SO_2		VOC		PM		PM_{10}		$PM_{2.5}$	
		lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr
PIT_RAW	Quarry Material	-	-	-	-	-	-	-	-	2.31	0.75	1.09	0.36	0.17	0.054
RAW	Raw Material from Quarry	-	-	-	-	-	-	-	-	2.31	0.75	1.09	0.36	0.17	0.054
Main Plant															
1a	Feeder	-	-	-	-	-	-	-	-	2.31	0.75	1.09	0.36	0.17	0.054
1b	Jaw Crusher	-	-	-	-	-	-	-	-	0.42	0.21	0.19	0.095	0.035	0.018
1c	Jaw Crusher Under Conveyor	-	-	-	-	-	-	-	-	0.049	0.025	0.016	0.0081	0.0046	0.0023
14	Conveyor	-	-	-	-	-	-	-	-	0.049	0.025	0.016	0.0081	0.0046	0.0023
20	Scalping Screen	-	-	-	-	-	-	-	-	0.77	0.39	0.26	0.13	0.018	0.0088
9	Scalping Screen Shuttle Conveyor	-	-	-	-	-	-	-	-	0.0049	0.0025	0.0016	0.00081	0.00046	0.00023
26	Conveyor	-	-	-	-	-	-	-	-	0.0049	0.0025	0.0016	0.00081	0.00046	0.00023
8	Stacker Conveyor drop to Waste	-	-	-	-	-	-	-	-	0.14	0.045	0.066	0.021	0.010	0.0032
3	Cone Crusher	-	-	-	-	-	-	-	-	0.38	0.19	0.17	0.085	0.032	0.016
3a	Cone Crusher Under Conveyor	-	-	-	-	-	-	-	-	0.044	0.022	0.014	0.0072	0.0041	0.0020
6	Conveyor	-	-	-	-	-	-	-	-	0.044	0.022	0.014	0.0072	0.0041	0.0020
4	Screen	-	-	-	-	-	-	-	-	0.69	0.35	0.23	0.12	0.016	0.0079
4a	Screen Under Conveyor	-	-	-	-	-	-	-	-	0.0049	0.0025	0.0016	0.00081	0.00046	0.00023
7	Stacker Conveyor	-	-	-	-	-	-	-	-	0.14	0.045	0.066	0.021	0.010	0.0032
16	Screen Under Conveyor	-	-	-	-	-	-	-	-	0.0049	0.0025	0.0016	0.00081	0.00046	0.00023

Table 6-14 Summary of Requested Allowable NOx, CO, SO2, VOC, and PM Emission Rates

Uncontrolled Emission Totals															
Unit #	Description	NOx		CO		SO_2		VOC		PM		PM_{10}		$PM_{2.5}$	
		lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr
15	Stacker Conveyor	-	-	-	-	-	-	-	-	0.14	0.045	0.066	0.021	0.010	0.0032
17	Screen Under Conveyor	-	-	-	-	-	-	-	-	0.0049	0.0025	0.0016	0.00081	0.00046	0.00023
10	Stacker Conveyor	-	-	-	-	-	-	-	-	0.14	0.045	0.066	0.021	0.010	0.0032
18	Screen Conveyor to Cone Crusher	-	-	-	-	-	-	-	-	0.029	0.015	0.0097	0.0048	0.0027	0.0014
2	Cone Crusher	-	-	-	-	-	-	-	-	0.25	0.13	0.11	0.057	0.021	0.011
2a	Cone Crusher Under Conveyor	-	-	-	-	-	-	-	-	0.029	0.015	0.0097	0.0048	0.0027	0.0014
19	Conveyor	-	-	-	-	-	-	-	-	0.029	0.015	0.0097	0.0048	0.0027	0.0014
5	Screen	-	-	-	-	-	-	-	-	0.46	0.23	0.16	0.078	0.011	0.0053
5a	Screen Under Conveyor	-	-	-	-	-	-	-	-	0.010	0.0049	0.0032	0.0016	0.00091	0.00046
24	Stacker Conveyor	-	-	-	-	-	-	-	-	0.28	0.090	0.13	0.043	0.020	0.0065
12	Shuttle Conveyor	-	-	-	-	-	-	-	-	0.015	0.0074	0.0048	0.0024	0.00137	0.00068
22	Stacker Conveyor	-	-	-	-	-	-	-	-	0.42	0.135	0.20	0.064	0.030	0.0097
11	Shuttle Conveyor	-	-	-	-	-	-	-	-	0.010	0.0049	0.0032	0.0016	0.00091	0.00046
25	Stacker Conveyor	-	-	-	-	-	-	-	-	0.28	0.090	0.13	0.043	0.020	0.0065
13	Conveyor - return to crusher	-	-	-	-	-	-	-	-	0.015	0.007	0.0048	0.0024	0.0014	0.00068
21	Main Plant Engine	14.70	32.03	18.22	39.69	0.011	0.024	2.08	4.53	0.86	1.88	0.86	1.88	0.86	1.88
FPILE1	FPILE Fines	-	-	-	-	-	-	-	-	0.46	0.15	0.22	0.071	0.033	0.011
FPILE2	FPILE 1/2"	-	-	-	-	-	-	-	-	0.69	0.23	0.33	0.11	0.050	0.016
FPILE3	FPILE 3/4"	-	-	-	-	-	-	-	-	0.92	0.30	0.44	0.14	0.066	0.022

Table 6-14 Summary of Requested Allowable NOx, CO, SO2, VOC, and PM Emission Rates

Uncontrolled Emission Totals															
Unit #	Description	NOx		CO		SO_2		VOC		PM		PM_{10}		$PM_{2.5}$	
		lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr
TL	Truck Loading	-	-	-	-	-	-	-	-	2.08	0.68	0.98	0.32	0.15	0.048
RipRap Screening Plant															
RR_RAW	RipRap Screening Plant Raw Material	-	-	-	-	-	-	-	-	2.31	0.75	1.09	0.36	0.17	0.054
RR_1	RipRap Screening Plant Feeder	-	-	-	-	-	-	-	-	2.31	0.75	1.09	0.36	0.17	0.054
RR_2	RipRap Screening Plant Screen (2-screen setup)	-	-	-	-	-	-	-	-	0.77	0.39	0.26	0.13	0.018	0.0088
RR_3	RipRap Screening Plant Stacker Conveyor 1a	-	-	-	-	-	-	-	-	0.42	0.14	0.20	0.064	0.030	0.010
RR1PILE	RipRap Screening Plant Stacker Finish Pile	-	-	-	-	-	-	-	-	0.69	0.23	0.33	0.11	0.050	0.016
RR_4	RipRap Screening Plant Stacker Conveyor 1b	-	-	-	-	-	-	-	-	0.42	0.14	0.20	0.064	0.030	0.010
RR2PILE	RipRap Screening Plant Stacker Finish Pile	-	-	-	-	-	-	-	-	0.69	0.23	0.33	0.11	0.050	0.016
RR_5	RipRap Screening Plant Stacker Conveyor 1c	-	-	-	-	-	-	-	-	0.55	0.18	0.26	0.085	0.040	0.013
RR3PILE	RipRap Screening Plant Stacker Finish Pile	-	-	-	-	-	-	-	-	0.92	0.30	0.44	0.14	0.066	0.022
RR_ENG	RipRap Screening Plant Engine	1.17	2.56	1.08	2.36	0.0020	0.0044	0.062	0.13	0.062	0.13	0.062	0.13	0.062	0.13
WPILE	Waste Pile (Dirt Removal to Open Pit)	-	-	-	-	-	-	-	-	0.23	0.075	0.11	0.036	0.017	0.0054
ROAD	Haul Road	-	-	-	-	-	-	-	-	11.80	4.77	3.01	1.22	0.30	0.12
	Total	**15.88**	**34.58**	**19.30**	**42.04**	**0.013**	**0.029**	**2.14**	**4.66**	**37.98**	**15.71**	**15.43**	**7.23**	**2.92**	**2.72**

Estimates for Federal HAPs Air Pollutants

The Main Plant engine (Unit 21) and RipRap screening plant engine (Unit RR_ENG) are source of HAPs as it appears in Section 112 (b) of the 1990 CAAA. Emissions of HAPs were determined for Unit 21 and Unit RR_ENG engines using AP-42 Section 3.3 and Section 1.3.

The following tables summarize the HAPs emission rates from the Main Plant engine (Unit 21) and RipRap screening plant engine (Unit RR_ENG). Combined totals for HAPs for the whole facility are 0.052 pounds per hour and 0.11 tons per year.

Table 6-15: HAPs Emission Rates from the Main Plant Engine (Unit RR_ENG)

Horsepower Rating:	1081	horsepower	
Fuel Usage:	53.1	gallons/hr	
MMBtu/hr:	6.7968	Btu	(based on 128000 Btu/gallon)
Btu x 10^-12/hr:	6.7968E-06	Btu x10^-12	(based on 128000 Btu/gallon)
Yearly Operating Hours:	4356	hours per year	

Type of Fuel: Diesel
Emission Factors AP-42 Section 3.3 and Section 1.3

Non-PAH HAPS	CAS#		Emission Factor (lbs/mmBtu)	Emission Rate (lbs/hr)	Emission Rate (ton/yr)
Acetaldehyde	75-07-0		7.67E-04	0.005213	0.011354
Acrolein	107-02-8		9.25E-05	0.000629	0.001369
Benzene	71-43-2		9.33E-04	0.006341	0.013812
1,3-Butadiene	106-99-0		3.91E-05	0.000266	0.000579
Formaldehyde	50-00-0		1.18E-03	0.008020	0.017468
Propylene	115-07-1		2.58E-03	0.017536	0.038193
Toluene	108-88-3		4.09E-04	0.002780	0.006055
Xylene	1330-20-7		2.85E-04	0.001937	0.004219
		Total Non-PAH HAPS	6.29E-03	0.042722	0.093048

PAH HAPS	CAS#		Emission Factor (lbs/mmBtu)	Emission Rate (lbs/hr)	Emission Rate (ton/yr)
Acenaphthene	83-32-9		1.42E-06	0.000010	0.000021
Acenaphthylene	208-96-8		5.06E-06	0.000034	0.000075
Anthracene	120-12-7		1.87E-06	0.000013	0.000028
Benzo(a)anthracene	56-55-3		1.68E-06	0.000011	0.000025
Benzo(a)pyrene	50-32-8		1.88E-07	0.000001	0.000003
Benzo(b)fluoranthene	205-99-2		9.91E-08	0.000001	0.000001
Benzo(a)pyrene	192-97-2		1.55E-07	0.000001	0.000002
Benzo(g,h,I)perylene	191-24-2		4.89E-07	0.000003	0.000007
Benzo(k)fluoranthene	207-08-9		1.55E-07	0.000001	0.000002
Dibenz(a,h)anthracene			5.83E-07	0.000004	0.000009
Chrysene	218-01-9		3.53E-07	0.000002	0.000005
Fluoranthene	206-44-0		7.61E-06	0.000052	0.000113
Fluorene	86-73-7		2.92E-05	0.000198	0.000432
Indeno(1,2,3-cd)pyrene	193-39-5		3.75E-07	0.000003	0.000006
Naphthalene	91-20-3		8.48E-05	0.000576	0.001255
Phenanthrene	85-01-8		2.94E-05	0.000200	0.000435
Pyrene	129-00-0		4.78E-06	0.000032	0.000071
		Total PAH HAPS	1.68E-04	0.001143	0.002490

HAPS Metals		Emission Factor (lbs/Btu^12)	Emission Rate (lbs/hr)	Emission Rate (ton/yr)
Arsenic		4	0.000027	0.000059
Beryllium		3	0.000020	0.000044
Cadmium		3	0.000020	0.000044
Chromium		3	0.000020	0.000044
Lead		9	0.000061	0.000133
Manganese		6	0.000041	0.000089
Mercury		3	0.000020	0.000044
Nickel		3	0.000020	0.000044
Selenium		15	0.000102	0.000222
	Total Metals HAPS	49	0.000333	0.000725
	Total HAPS		**0.04420**	**0.09626**

Table 6-16: HAPs Emission Rates from the RipRap Screening Plant Engine (Unit RR_ENG)

Horsepower Rating:	188	horsepower	
Fuel Usage:	9.7	gallons/hr	
MMBtu/hr:	1.2416	Btu	(based on 128000 Btu/gallon)
Btu x 10^-12/hr:	1.2416E-06	Btu x10^-12	(based on 128000 Btu/gallon)
Yearly Operating Hours:	4356	hours per year	

Type of Fuel: Diesel
Emission Factors AP-42 Section 3.3 and Section 1.3

Non-PAH HAPS	CAS#		Emission Factor (lbs/mmBtu)	Emission Rate (lbs/hr)	Emission Rate (ton/yr)
Acetaldehyde	75-07-0		7.67E-04	0.000952	0.002074
Acrolein	107-02-8		9.25E-05	0.000115	0.000250
Benzene	71-43-2		9.33E-04	0.001158	0.002523
1,3-Butadiene	106-99-0		3.91E-05	0.000049	0.000106
Formaldehyde	50-00-0		1.18E-03	0.001465	0.003191
Propylene	115-07-1		2.58E-03	0.003203	0.006977
Toluene	108-88-3		4.09E-04	0.000508	0.001106
Xylene	1330-20-7		2.85E-04	0.000354	0.000771
		Total Non-PAH HAPS	6.29E-03	0.007804	0.016998

PAH HAPS	CAS#		Emission Factor (lbs/mmBtu)	Emission Rate (lbs/hr)	Emission Rate (ton/yr)
Acenaphthene	83-32-9		1.42E-06	0.000002	0.000004
Acenaphthylene	208-96-8		5.06E-06	0.000006	0.000014
Anthracene	120-12-7		1.87E-06	0.000002	0.000005
Benzo(a)anthracene	56-55-3		1.68E-06	0.000002	0.000005
Benzo(a)pyrene	50-32-8		1.88E-07	0.000000	0.000001
Benzo(b)fluoranthene	205-99-2		9.91E-08	0.000000	0.000000
Benzo(a)pyrene	192-97-2		1.55E-07	0.000000	0.000000
Benzo(g,h,I)perylene	191-24-2		4.89E-07	0.000001	0.000001
Benzo(k)fluoranthene	207-08-9		1.55E-07	0.000000	0.000000
Dibenz(a,h)anthracene			5.83E-07	0.000001	0.000002
Chrysene	218-01-9		3.53E-07	0.000000	0.000001
Fluoranthene	206-44-0		7.61E-06	0.000009	0.000021
Fluorene	86-73-7		2.92E-05	0.000036	0.000079
Indeno(1,2,3-cd)pyrene	193-39-5		3.75E-07	0.000000	0.000001
Naphthalene	91-20-3		8.48E-05	0.000105	0.000229
Phenanthrene	85-01-8		2.94E-05	0.000037	0.000080
Pyrene	129-00-0		4.78E-06	0.000006	0.000013
		Total PAH HAPS	1.68E-04	0.000209	0.000455

HAPS Metals		Emission Factor (lbs/Btu^12)	Emission Rate (lbs/hr)	Emission Rate (ton/yr)
Arsenic		4	0.000005	0.000011
Beryllium		3	0.000004	0.000008
Cadmium		3	0.000004	0.000008
Chromium		3	0.000004	0.000008
Lead		9	0.000011	0.000024
Manganese		6	0.000007	0.000016
Mercury		3	0.000004	0.000008
Nickel		3	0.000004	0.000008
Selenium		15	0.000019	0.000041
	Total Metals HAPS	49	0.000061	0.000133
	Total HAPS		**0.00807**	**0.01758**

Section 6.a

Green House Gas Emissions

(Submitting under 20.2.70, 20.2.72 20.2.74 NMAC)

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

Calculating GHG Emissions:

1. Calculate the ton per year (tpy) GHG mass emissions and GHG CO_2e emissions from your facility.
2. GHG mass emissions are the sum of the total annual tons of greenhouse gases without adjusting with the global warming potentials (GWPs). GHG CO_2e emissions are the sum of the mass emissions of each individual GHG multiplied by its GWP found in Table A-1 in 40 CFR 98 Mandatory Greenhouse Gas Reporting.
3. Emissions from routine or predictable start up, shut down, and maintenance must be included.
4. Report GHG mass and GHG CO_2e emissions in Table 2-P of this application. Emissions are reported in **short** tons per year and represent each emission unit's Potential to Emit (PTE).
5. All Title V major sources, PSD major sources, and all power plants, whether major or not, must calculate and report GHG mass and CO2e emissions for each unit in Table 2-P.
6. For minor source facilities that are not power plants, are not Title V, and are not PSD there are three options for reporting GHGs in Table 2-P: 1) report GHGs for each individual piece of equipment; 2) report all GHGs from a group of unit types, for example report all combustion source GHGs as a single unit and all venting GHGs as a second separate unit; 3) or check the following **X** By checking this box, the applicant acknowledges the total CO2e emissions are less than 75,000 tons per year.

Sources for Calculating GHG Emissions:

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

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

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

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

Section 7

Information Used to Determine Emissions

Information Used to Determine Emissions shall include the following:

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

A-XXXX-7-AP42S1-3	Diesel-Fired Engine HAPs Emission Factors
A-XXXX-7-AP42S3-3	Diesel-Fired Engine HAPs Emission Factors
A-XXXX-7-AP42S11-19-2	Crusher, Screen and Transfer Point Emission Factors
A-XXXX-7-AP42S13-2-2	Unpaved Road Emission Factors
A-XXXX-7-AP42S13-2-4	Material Handling Emission Factors
A-XXXX-7-WindspeedFarmington	Farmington Airport Wind Speed Average
A-XXXX-7-Unit21	Unit 21: Main Crushing and Screening Plant Engine
A-XXXX-7-UnitRR_ENGTier4	Unit RR_ENG: RipRap Screening Plant Engine
A-XXXX-7-EPA_GHG	EPA's "Emission Factors for Greenhouse Gas Inventories" (February 13, 2024)
A-XXXX-7-CrusherEI.xls	VHCC Crusher Plant Emissions Spreadsheet (Electronic File)

1.3 Fuel Oil Combustion

1.3.1 General[1-3]

Two major categories of fuel oil are burned by combustion sources: distillate oils and residual oils. These oils are further distinguished by grade numbers, with Nos. 1 and 2 being distillate oils; Nos. 5 and 6 being residual oils; and No. 4 being either distillate oil or a mixture of distillate and residual oils. No. 6 fuel oil is sometimes referred to as Bunker C. Distillate oils are more volatile and less viscous than residual oils. They have negligible nitrogen and ash contents and usually contain less than 0.3 percent sulfur (by weight). Distillate oils are used mainly in domestic and small commercial applications, and include kerosene and diesel fuels. Being more viscous and less volatile than distillate oils, the heavier residual oils (Nos. 5 and 6) may need to be heated for ease of handling and to facilitate proper atomization. Because residual oils are produced from the residue remaining after the lighter fractions (gasoline, kerosene, and distillate oils) have been removed from the crude oil, they contain significant quantities of ash, nitrogen, and sulfur. Residual oils are used mainly in utility, industrial, and large commercial applications.

1.3.2 Firing Practices[4]

The major boiler configurations for fuel oil-fired combustors are watertube, firetube, cast iron, and tubeless design. Boilers are classified according to design and orientation of heat transfer surfaces, burner configuration, and size. These factors can all strongly influence emissions as well as the potential for controlling emissions.

Watertube boilers are used in a variety of applications ranging from supplying large amounts of process steam to providing space heat for industrial facilities. In a watertube boiler, combustion heat is transferred to water flowing through tubes which line the furnace walls and boiler passes. The tube surfaces in the furnace (which houses the burner flame) absorb heat primarily by radiation from the flames. The tube surfaces in the boiler passes (adjacent to the primary furnace) absorb heat primarily by convective heat transfer.

Firetube boilers are used primarily for heating systems, industrial process steam generators, and portable power boilers. In firetube boilers, the hot combustion gases flow through the tubes while the water being heated circulates outside of the tubes. At high pressures and when subjected to large variations in steam demand, firetube units are more susceptible to structural failure than watertube boilers. This is because the high-pressure steam in firetube units is contained by the boiler walls rather than by multiple small-diameter watertubes, which are inherently stronger. As a consequence, firetube boilers are typically small and are used primarily where boiler loads are relatively constant. Nearly all firetube boilers are sold as packaged units because of their relatively small size.

A cast iron boiler is one in which combustion gases rise through a vertical heat exchanger and out through an exhaust duct. Water in the heat exchanger tubes is heated as it moves upward through the tubes. Cast iron boilers produce low pressure steam or hot water, and generally burn oil or natural gas. They are used primarily in the residential and commercial sectors.

Another type of heat transfer configuration used on smaller boilers is the tubeless design. This design incorporates nested pressure vessels with water in between the shells. Combustion gases are fired into the inner pressure vessel and are then sometimes recirculated outside the second vessel.

Table 1.3-9. EMISSION FACTORS FOR SPECIATED ORGANIC COMPOUNDS FROM FUEL OIL COMBUSTION[a]

Organic Compound	Average Emission Factor[b] ($lb/10^3$ Gal)	EMISSION FACTOR RATING
Benzene	2.14E-04	C
Ethylbenzene	6.36E-05[c]	E
Formaldehyde[d]	3.30E-02	C
Naphthalene	1.13E-03	C
1,1,1-Trichloroethane	2.36E-04[c]	E
Toluene	6.20E-03	D
o-Xylene	1.09E-04[c]	E
Acenaphthene	2.11E-05	C
Acenaphthylene	2.53E-07	D
Anthracene	1.22E-06	C
Benz(a)anthracene	4.01E-06	C
Benzo(b,k)fluoranthene	1.48E-06	C
Benzo(g,h,i)perylene	2.26E-06	C
Chrysene	2.38E-06	C
Dibenzo(a,h) anthracene	1.67E-06	D
Fluoranthene	4.84E-06	C
Fluorene	4.47E-06	C
Indo(1,2,3-cd)pyrene	2.14E-06	C
Phenanthrene	1.05E-05	C
Pyrene	4.25E-06	C
OCDD	3.10E-09[c]	E

[a] Data are for residual oil fired boilers, Source Classification Codes (SCCs) 1-01-004-01/04.
[b] References 64-72. To convert from $lb/10^3$ gal to $kg/10^3$ L, multiply by 0.12.
[c] Based on data from one source test (Reference 67).
[d] The formaldehyde number presented here is based only on data from utilities using No. 6 oil. The number presented in Table 1.3-7 is based on utility, commercial, and industrial boilers.

Table 1.3-10. EMISSION FACTORS FOR TRACE ELEMENTS FROM DISTILLATE FUEL OIL COMBUSTION SOURCES[a]

EMISSION FACTOR RATING: E

Firing Configuration (SCC)	Emission Factor (lb/10^{12} Btu)										
	As	Be	Cd	Cr	Cu	Pb	Hg	Mn	Ni	Se	Zn
Distillate oil fired (1-01-005-01, 1-02-005-01, 1-03-005-01)	4	3	3	3	6	9	3	6	3	15	4

[a] Data are for distillate oil fired boilers, SCC codes 1-01-005-01, 1-02-005-01, and 1-03-005-01. References 29-32, 40-44 and 83. To convert from lb/10^{12} Btu to pg/J, multiply by 0.43.

Table 1.3-11. EMISSION FACTORS FOR METALS FROM UNCONTROLLED NO. 6 FUEL OIL COMBUSTION[a]

Metal	Average Emission Factor[b, d] ($lb/10^3$ Gal)	EMISSION FACTOR RATING
Antimony	5.25E-03[c]	E
Arsenic	1.32E-03	C
Barium	2.57E-03	D
Beryllium	2.78E-05	C
Cadmium	3.98E-04	C
Chloride	3.47E-01	D
Chromium	8.45E-04	C
Chromium VI	2.48E-04	C
Cobalt	6.02E-03	D
Copper	1.76E-03	C
Fluoride	3.73E-02	D
Lead	1.51E-03	C
Manganese	3.00E-03	C
Mercury	1.13E-04	C
Molybdenum	7.87E-04	D
Nickel	8.45E-02	C
Phosphorous	9.46E-03	D
Selenium	6.83E-04	C
Vanadium	3.18E-02	D
Zinc	2.91E-02	D

[a] Data are for residual oil fired boilers, Source Classification Codes (SCCs) 1-01-004-01/04.

[b] References 64-72. 18 of 19 sources were uncontrolled and 1 source was controlled with low efficiency ESP. To convert from $lb/10^3$ gal to $kg/10^3$ L, multiply by 0.12.

[c] References 29-32,40-44.

[d] For oil/water mixture, reduce factors in proportion to water content of the fuel (due to dilution). To adjust the listed values for water content, multiply the listed value by 1-decimal fraction of water (ex: For fuel with 9 percent water by volume, multiply by 1-0.9=.91).

Table 3.3-1. EMISSION FACTORS FOR UNCONTROLLED GASOLINE AND DIESEL INDUSTRIAL ENGINES[a]

Pollutant	Gasoline Fuel (SCC 2-02-003-01, 2-03-003-01)		Diesel Fuel (SCC 2-02-001-02, 2-03-001-01)		EMISSION FACTOR RATING
	Emission Factor (lb/hp-hr) (power output)	Emission Factor (lb/MMBtu) (fuel input)	Emission Factor (lb/hp-hr) (power output)	Emission Factor (lb/MMBtu) (fuel input)	
NO_x	0.011	1.63	0.031	4.41	D
CO	0.439	62.7	6.68 E-03	0.95	D
SO_x	5.91 E-04	0.084	2.05 E-03	0.29	D
PM-10[b]	7.21 E-04	0.10	2.20 E-03	0.31	D
CO_2[c]	1.08	154	1.15	164	B
Aldehydes	4.85 E-04	0.07	4.63 E-04	0.07	D
TOC					
Exhaust	0.015	2.10	2.47 E-03	0.35	D
Evaporative	6.61 E-04	0.09	0.00	0.00	E
Crankcase	4.85 E-03	0.69	4.41 E-05	0.01	E
Refueling	1.08 E-03	0.15	0.00	0.00	E

[a] References 2,5-6,9-14. When necessary, an average brake-specific fuel consumption (BSFC) of 7,000 Btu/hp-hr was used to convert from lb/MMBtu to lb/hp-hr. To convert from lb/hp-hr to kg/kw-hr, multiply by 0.608. To convert from lb/MMBtu to ng/J, multiply by 430. SCC = Source Classification Code. TOC = total organic compounds.

[b] PM-10 = particulate matter less than or equal to 10 μm aerodynamic diameter. All particulate is assumed to be ≤ 1 μm in size.

[c] Assumes 99% conversion of carbon in fuel to CO_2 with 87 weight % carbon in diesel, 86 weight % carbon in gasoline, average BSFC of 7,000 Btu/hp-hr, diesel heating value of 19,300 Btu/lb, and gasoline heating value of 20,300 Btu/lb.

11.19.2 Crushed Stone Processing and Pulverized Mineral Processing

11.19.2.1 Process Description [24, 25]

Crushed Stone Processing

Major rock types processed by the crushed stone industry include limestone, granite, dolomite, traprock, sandstone, quartz, and quartzite. Minor types include calcareous marl, marble, shell, and slate. Major mineral types processed by the pulverized minerals industry, a subset of the crushed stone processing industry, include calcium carbonate, talc, and barite. Industry classifications vary considerably and, in many cases, do not reflect actual geological definitions.

Rock and crushed stone products generally are loosened by drilling and blasting and then are loaded by power shovel or front-end loader into large haul trucks that transport the material to the processing operations. Techniques used for extraction vary with the nature and location of the deposit. Processing operations may include crushing, screening, size classification, material handling and storage operations. All of these processes can be significant sources of PM and PM-10 emissions if uncontrolled.

Quarried stone normally is delivered to the processing plant by truck and is dumped into a bin. A feeder is used as illustrated in Figure 11.19.2-1. The feeder or screens separate large boulders from finer rocks that do not require primary crushing, thus reducing the load to the primary crusher. Jaw, impactor, or gyratory crushers are usually used for initial reduction. The crusher product, normally 7.5 to 30 centimeters (3 to 12 inches) in diameter, and the grizzly throughs (undersize material) are discharged onto a belt conveyor and usually are conveyed to a surge pile for temporary storage or are sold as coarse aggregates.

The stone from the surge pile is conveyed to a vibrating inclined screen called the scalping screen. This unit separates oversized rock from the smaller stone. The undersized material from the scalping screen is considered to be a product stream and is transported to a storage pile and sold as base material. The stone that is too large to pass through the top deck of the scalping screen is processed in the secondary crusher. Cone crushers are commonly used for secondary crushing (although impact crushers are sometimes used), which typically reduces material to about 2.5 to 10 centimeters (1 to 4 inches). The material (throughs) from the second level of the screen bypasses the secondary crusher because it is sufficiently small for the last crushing step. The output from the secondary crusher and the throughs from the secondary screen are transported by conveyor to the tertiary circuit, which includes a sizing screen and a tertiary crusher.

Tertiary crushing is usually performed using cone crushers or other types of impactor crushers. Oversize material from the top deck of the sizing screen is fed to the tertiary crusher. The tertiary crusher output, which is typically about 0.50 to 2.5 centimeters (3/16th to 1 inch), is returned to the sizing screen. Various product streams with different size gradations are separated in the screening operation. The products are conveyed or trucked directly to finished product bins, to open area stock piles, or to other processing systems such as washing, air separators, and screens and classifiers (for the production of manufactured sand).

Some stone crushing plants produce manufactured sand. This is a small-sized rock product with a maximum size of 0.50 centimeters (3/16 th inch). Crushed stone from the tertiary sizing screen is sized in a vibrating inclined screen (fines screen) with relatively small mesh sizes.

Oversized material is processed in a cone crusher or a hammermill (fines crusher) adjusted to produce small diameter material. The output is returned to the fines screen for resizing.

In certain cases, stone washing is required to meet particulate end product specifications or demands.

Pulverized Mineral Processing

Pulverized minerals are produced at specialized processing plants. These plants supply mineral products ranging from sizes of approximately 1 micrometer to more than 75 micrometers aerodynamic diameter. Pharmaceutical, paint, plastics, pigment, rubber, and chemical industries use these products. Due to the specialized characteristics of the mineral products and the markets for these products, pulverized mineral processing plants have production rates that are less than 5% of the production capacities of conventional crushed stone plants. Two alternative processing systems for pulverized minerals are summarized in Figure 11-19.2-2.

In dry processing systems, the mineral aggregate material from conventional crushing and screening operations is subject to coarse and fine grinding primarily in roller mills and/or ball mills to reduce the material to the necessary product size range. A classifier is used to size the ground material and return oversized material that can be pulverized using either wet or dry processes. The classifier can either be associated with the grinding operation, or it can be a stand-alone process unit. Fabric filters control particulate matter emissions from the grinding operation and the classifier. The products are stored in silos and are shipped by truck or in bags.

In wet processing systems, the mineral aggregate material is processed in wet mode coarse and fine grinding operations. Beneficiation processes use flotation to separate mineral impurities. Finely ground material is concentrated and flash dried. Fabric filters are used to control particulate matter emissions from the flash dryer. The product is then stored in silos, bagged, and shipped.

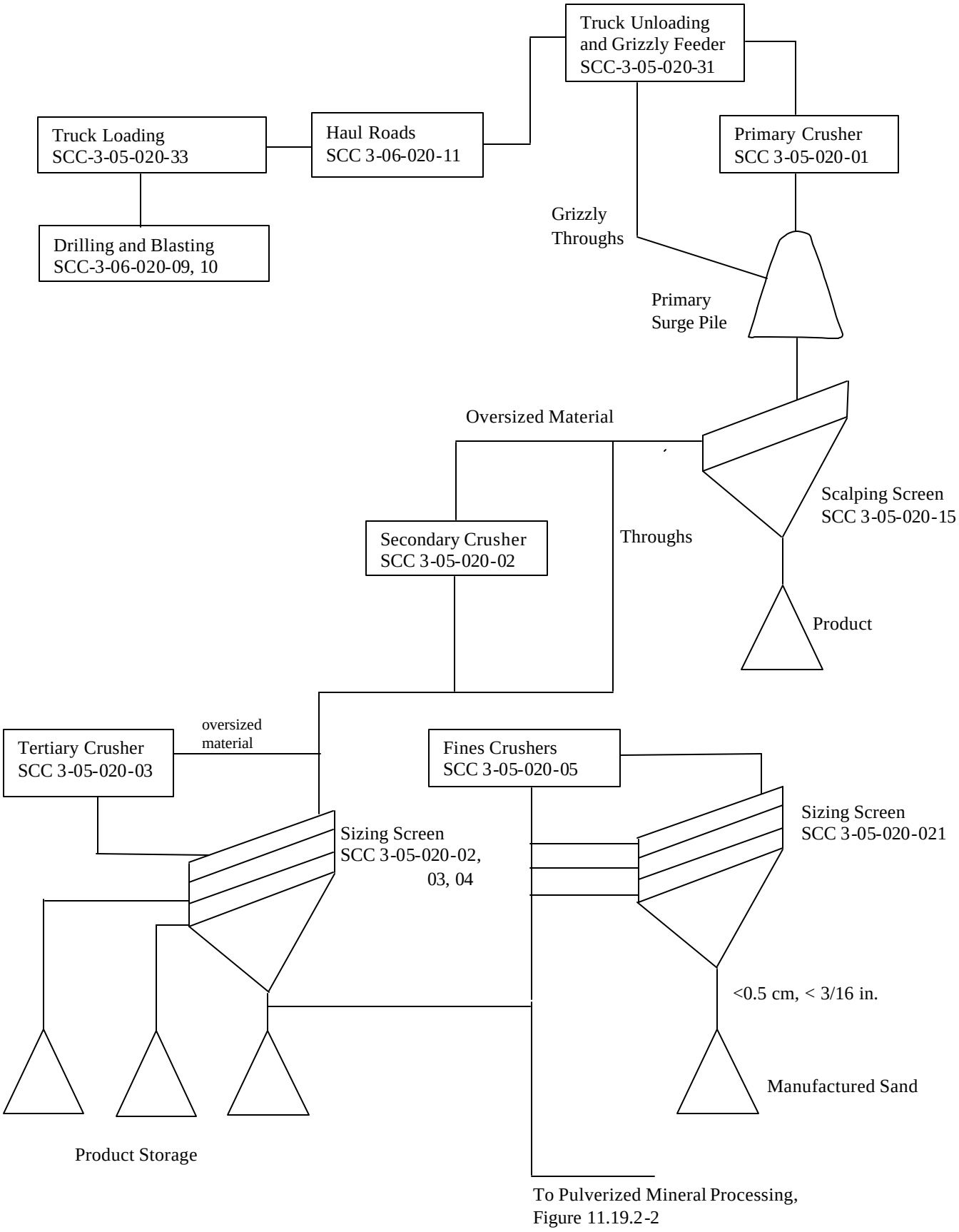

Figure 11.19.2-1. Typical stone processing plant

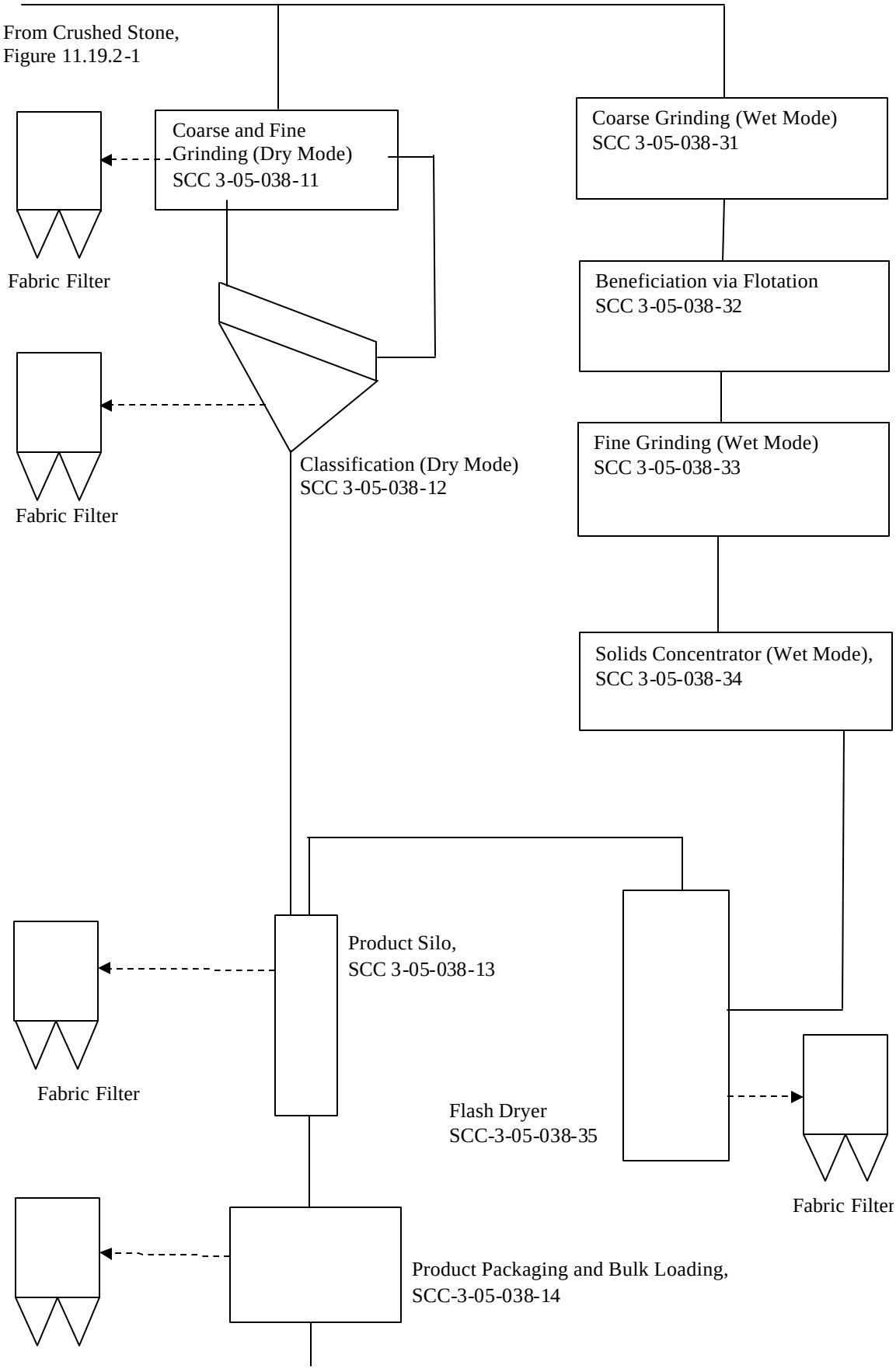

Figure 11.19.2-2 Flowchart for Pulverized Mineral Processing

11.19.2.2 Emissions and Controls [10, 11, 12, 13, 14, and 26]

Crushed Stone Processing

Emissions of PM, PM-10, and PM-2.5 occur from a number of operations in stone quarrying and processing. A substantial portion of these emissions consists of heavy particles that may settle out within the plant. As in other operations, crushed stone emission sources may be categorized as either process sources or fugitive dust sources. Process sources include those for which emissions are amenable to capture and subsequent control. Fugitive dust sources generally involve the reentrainment of settled dust by wind or machine movement. Emissions from process sources should be considered fugitive unless the sources are vented to a baghouse or are contained in an enclosure with a forced-air vent or stack. Factors affecting emissions from either source category include the stone size distribution and the surface moisture content of the stone processed, the process throughput rate, the type of equipment and operating practices used, and topographical and climatic factors.

Of graphical and seasonal factors, the primary variables affecting uncontrolled PM emissions are wind and material moisture content. Wind parameters vary with geographical location, season, and weather. It can be expected that the level of emissions from unenclosed sources (principally fugitive dust sources) will be greater during periods of high winds. The material moisture content also varies with geographical location, season, and weather. Therefore, the levels of uncontrolled emissions from both process emission sources and fugitive dust sources generally will be greater in arid regions of the country than in temperate ones and greater during the summer months because of a higher evaporation rate.

The moisture content of the material processed can have a substantial effect on emissions. This effect is evident throughout the processing operations. Surface wetness causes fine particles to agglomerate on or to adhere to the faces of larger stones, with a resulting dust suppression effect. However, as new fine particles are created by crushing and attrition and as the moisture content is reduced by evaporation, this suppressive effect diminishes and may disappear. Plants that use wet suppression systems (spray nozzles) to maintain relatively high material moisture contents can effectively control PM emissions throughout the process. Depending on the geographical and climatic conditions, the moisture content of mined rock can range from nearly zero to several percent. Because moisture content is usually expressed on a basis of overall weight percent, the actual moisture amount per unit area will vary with the size of the rock being handled. On a constant mass-fraction basis, the per-unit area moisture content varies inversely with the diameter of the rock. The suppressive effect of the moisture depends on both the absolute mass water content and the size of the rock product. Typically, wet material contains >1.5 percent water.

A variety of material, equipment, and operating factors can influence emissions from crushing. These factors include (1) stone type, (2) feed size and distribution, (3) moisture content, (4) throughput rate, (5) crusher type, (6) size reduction ratio, and (7) fines content. Insufficient data are available to present a matrix of rock crushing emission factors detailing the above classifications and variables. Available data indicate that PM-10 and PM-2.5 emissions from limestone and granite processing operations are similar. Therefore, the emission factors developed from the emissions data gathered at limestone and granite processing facilities are considered to be representative of typical crushed stone processing operations. Emission factors for filterable PM, PM-10, and PM-2.5 emissions from crushed stone processing operations are presented in Tables 11.19.2-1 (Metric units) and 11.19.2-2 (English units.)

Table 11.19.2-1 (Metric Units). EMISSION FACTORS FOR CRUSHED STONE PROCESSING OPERATIONS (kg/Mg)[a]

Source [b]	Total Particulate Matter [r,s]	EMISSION FACTOR RATING	Total PM-10	EMISSION FACTOR RATING	Total PM-2.5	EMISSION FACTOR RATING
Primary Crushing (SCC 3-05-020-01)	ND		ND[n]		ND[n]	
Primary Crushing (controlled) (SCC 3-05-020-01)	ND		ND[n]		ND[n]	
Secondary Crushing (SCC 3-05-020-02)	ND		ND[n]		ND[n]	
Secondary Crushing (controlled) (SCC 3-05-020-02)	ND		ND[n]		ND[n]	
Tertiary Crushing (SCC 3-050030-03)	0.0027[d]	E	0.0012[o]	C	ND[n]	
Tertiary Crushing (controlled) (SCC 3-05-020-03)	0.0006[d]	E	0.00027[p]	C	0.00005[q]	E
Fines Crushing (SCC 3-05-020-05)	0.0195[e]	E	0.0075[e]	E	ND	
Fines Crushing (controlled) (SCC 3-05-020-05)	0.0015[f]	E	0.0006[f]	E	0.000035[q]	E
Screening (SCC 3-05-020-02, 03)	0.0125[c]	E	0.0043[l]	C	ND	
Screening (controlled) (SCC 3-05-020-02, 03)	0.0011[d]	E	0.00037[m]	C	0.000025[q]	E
Fines Screening (SCC 3-05-020-21	0.15[g]	E	0.036[g]	E	ND	
Fines Screening (controlled) (SCC 3-05-020-21)	0.0018[g]	E	0.0011[g]	E	ND	
Conveyor Transfer Point (SCC 3-05-020-06)	0.0015[h]	E	0.00055[h]	D	ND	
Conveyor Transfer Point (controlled) (SCC 3-05-020-06)	0.00007[i]	E	2.3×10^{-5}[i]	D	6.5×10^{-6}[q]	E
Wet Drilling - Unfragmented Stone (SCC 3-05-020-10)	ND		4.0×10^{-5}[j]	E	ND	
Truck Unloading - Fragmented Stone (SCC 3-05-020-31)	ND		8.0×10^{-6}[j]	E	ND	
Truck Unloading - Conveyor, crushed stone (SCC 3-05-020-32)	ND		5.0×10^{-5}[k]	E	ND	

a. Emission factors represent uncontrolled emissions unless noted. Emission factors in kg/Mg of material throughput. SCC = Source Classification Code. ND = No data.

b. Controlled sources (with wet suppression) are those that are part of the processing plant that employs current wet suppression technology similar to the study group. The moisture content of the study group without wet suppression systems operating (uncontrolled) ranged from 0.21 to 1.3 percent, and the same facilities operating wet suppression systems (controlled) ranged from 0.55 to 2.88 percent. Due to carry over of the small amount of moisture required, it has been shown that each source, with the exception of crushers, does not need to employ direct water sprays. Although the moisture content was the only variable measured, other process features may have as much influence on emissions from a given source. Visual observations from each source under normal operating conditions are probably the best indicator of which emission factor is most appropriate. Plants that employ substandard control measures as indicated by visual observations should use the uncontrolled factor with appropriate control efficiency that best reflects the effectiveness of the controls employed.

c. References 1, 3, 7, and 8

d. References 3, 7, and 8

e. Reference 4

f. References 4 and 15

g. Reference 4

h. References 5 and 6

i. References 5, 6, and 15

j. Reference 11

k. Reference 12

l. References 1, 3, 7, and 8

m. References 1, 3, 7, 8, and 15

n. No data available, but emission factors for PM-10 for tertiary crushers can be used as an upper limit for primary or secondary crushing

o. References 2, 3, 7, 8

p. References 2, 3, 7, 8, and 15

q. Reference 15

r. PM emission factors are presented based on PM-100 data in the Background Support Document for Section 11.19.2

s. Emission factors for PM-30 and PM-50 are available in Figures 11.19.2-3 through 11.19.2-6.

Table 11.19.2-2 (English Units). EMISSION FACTORS FOR CRUSHED STONE PROCESSING OPERATIONS (lb/Ton)[a]

Source [b]	Total Particulate Matter [r,s]	EMISSION FACTOR RATING	Total PM-10	EMISSION FACTOR RATING	Total PM-2.5	EMISSION FACTOR RATING
Primary Crushing (SCC 3-05-020-01)	ND		ND[n]		ND[n]	
Primary Crushing (controlled) (SCC 3-05-020-01)	ND		ND[n]		ND[n]	
Secondary Crushing (SCC 3-05-020-02)	ND		ND[n]		ND[n]	
Secondary Crushing (controlled) (SCC 3-05-020-02)	ND		ND[n]		ND[n]	
Tertiary Crushing (SCC 3-050030-03)	0.0054[d]	E	0.0024[o]	C	ND[n]	
Tertiary Crushing (controlled) (SCC 3-05-020-03)	0.0012[d]	E	0.00054[p]	C	0.00010[q]	E
Fines Crushing (SCC 3-05-020-05)	0.0390[e]	E	0.0150[e]	E	ND	
Fines Crushing (controlled) (SCC 3-05-020-05)	0.0030[f]	E	0.0012[f]	E	0.000070[q]	E
Screening (SCC 3-05-020-02, 03)	0.025[c]	E	0.0087[l]	C	ND	
Screening (controlled) (SCC 3-05-020-02, 03)	0.0022[d]	E	0.00074[m]	C	0.000050[q]	E
Fines Screening (SCC 3-05-020-21)	0.30[g]	E	0.072[g]	E	ND	
Fines Screening (controlled) (SCC 3-05-020-21)	0.0036[g]	E	0.0022[g]	E	ND	
Conveyor Transfer Point (SCC 3-05-020-06)	0.0030[h]	E	0.00110[h]	D	ND	
Conveyor Transfer Point (controlled) (SCC 3-05-020-06)	0.00014[t]	E	4.6×10^{-5}[t]	D	1.3×10^{-5}[q]	E
Wet Drilling - Unfragmented Stone (SCC 3-05-020-10)	ND		8.0×10^{-5}[j]	E	ND	
Truck Unloading -Fragmented Stone (SCC 3-05-020-31)	ND		1.6×10^{-5}[j]	E	ND	
Truck Unloading - Conveyor, crushed stone (SCC 3-05-020-32)	ND		0.00010[k]	E	ND	

a. Emission factors represent uncontrolled emissions unless noted. Emission factors in lb/Ton of material of throughput. SCC = Source Classification Code. ND = No data.

b. Controlled sources (with wet suppression) are those that are part of the processing plant that employs current wet suppression technology similar to the study group. The moisture content of the study group without wet suppression systems operating (uncontrolled) ranged from 0.21 to 1.3 percent, and the same facilities operating wet suppression systems (controlled) ranged from 0.55 to 2.88 percent. Due to carry over of the small amount of moisture required, it has been shown that each source, with the exception of crushers, does not need to employ direct water sprays. Although the moisture content was the only variable measured, other process features may have as much influence on emissions from a given source. Visual observations from each source under normal operating conditions are probably the best indicator of which emission factor is most appropriate. Plants that employ substandard control measures as indicated by visual observations should use the uncontrolled factor with an appropriate control efficiency that best reflects the effectiveness of the controls employed.

c. References 1, 3, 7, and 8

d. References 3, 7, and 8

e. Reference 4

f. References 4 and 15

g. Reference 4

h. References 5 and 6

i. References 5, 6, and 15

j. Reference 11

k. Reference 12

l. References 1, 3, 7, and 8

m. References 1, 3, 7, 8, and 15

n. No data available, but emission factors for PM-10 for tertiary crushers can be used as an upper limit for primary or secondary crushing

o. References 2, 3, 7, 8

p. References 2, 3, 7, 8, and 15

q. Reference 15

r. PM emission factors are presented based on PM-100 data in the Background Support Document for Section 11.19.2

s. Emission factors for PM-30 and PM-50 are available in Figures 11.19.2-3 through 11.19.2-6.

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Emission factor estimates for stone quarry blasting operations are not presented because of the sparsity and unreliability of available tests. While a procedure for estimating blasting emissions is presented in Section 11.9, Western Surface Coal Mining, that procedure should not be applied to stone quarries because of dissimilarities in blasting techniques, material blasted, and size of blast areas. Emission factors for fugitive dust sources, including paved and unpaved roads, materials handling and transfer, and wind erosion of storage piles, can be determined using the predictive emission factor equations presented in AP-42 Section 13.2.

The data used in the preparation of the controlled PM calculations was derived from the individual A-rated tests for PM-2.5 and PM-10 summarized in the Background Support Document. For conveyor transfer points, the controlled PM value was derived from A-rated PM-2.5, PM-10, and PM data summarized in the Background Support Document.

The extrapolation line was drawn through the PM-2.5 value and the mean of the PM-10 values. PM emission factors were calculated for PM-30, PM-50, and PM-100. Each of these particle size limits is used by one or more regulatory agencies as the definition of total particulate matter. The graphical extrapolations used in calculating the emission factors are presented in Figures 11.19.2-3, -4, -5, and -6.

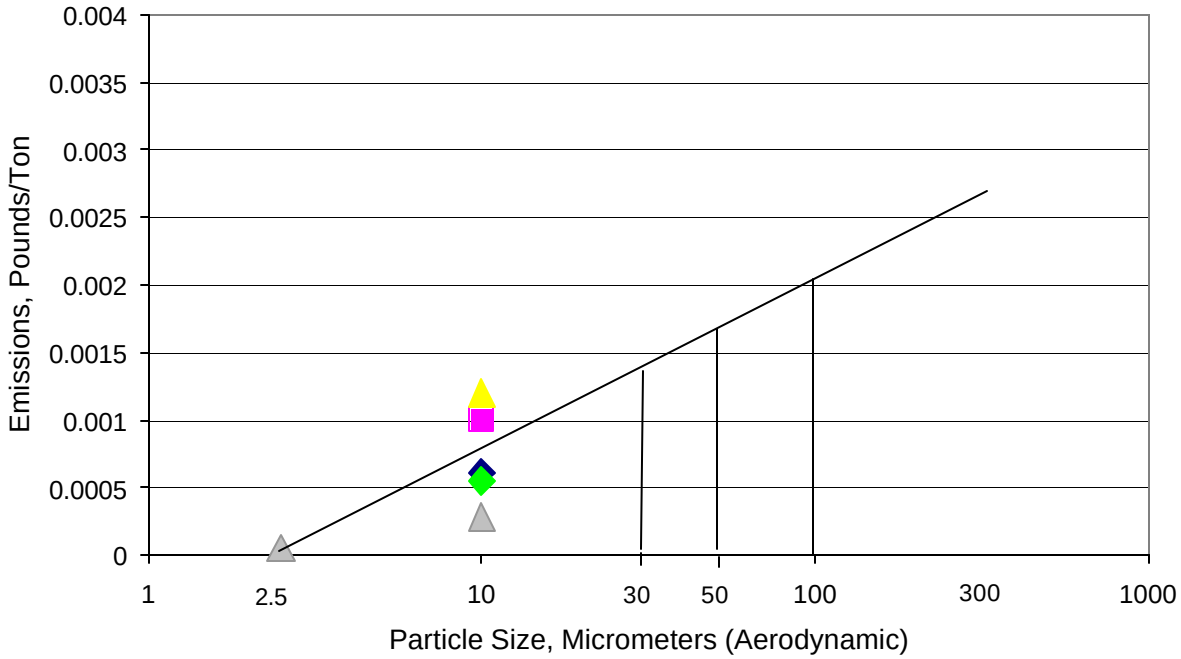

Figure 11-19-3. PM Emission Factor Calculation, Screening (Controlled)

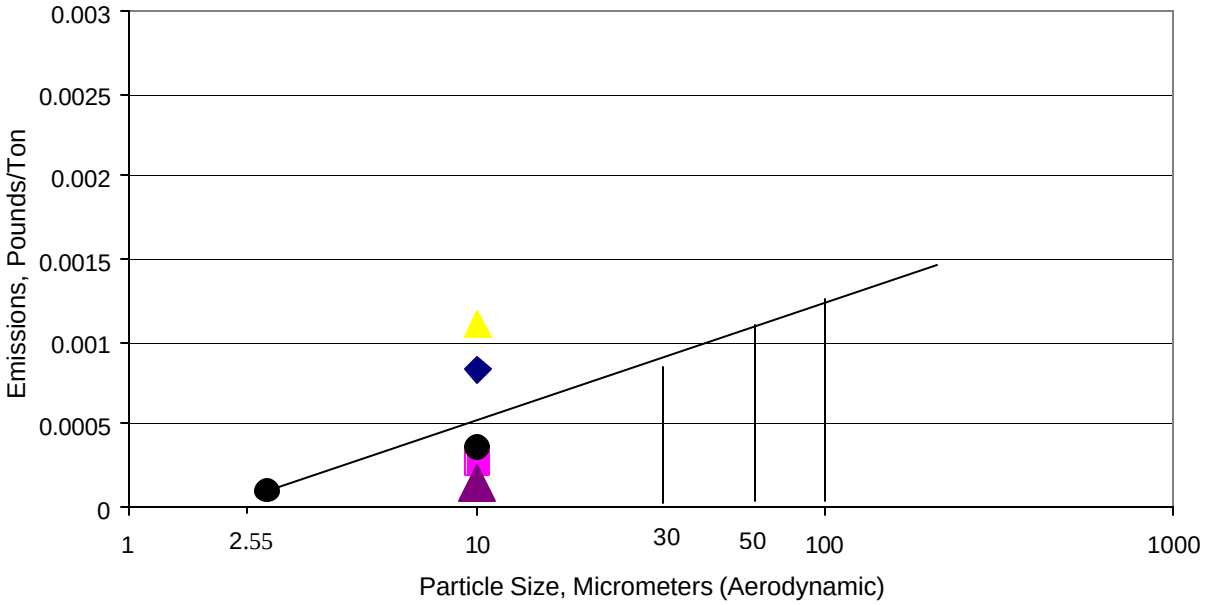

Figure 11.19-4. PM Emission Factor Calculation, Tertiary Crushing (Controlled)

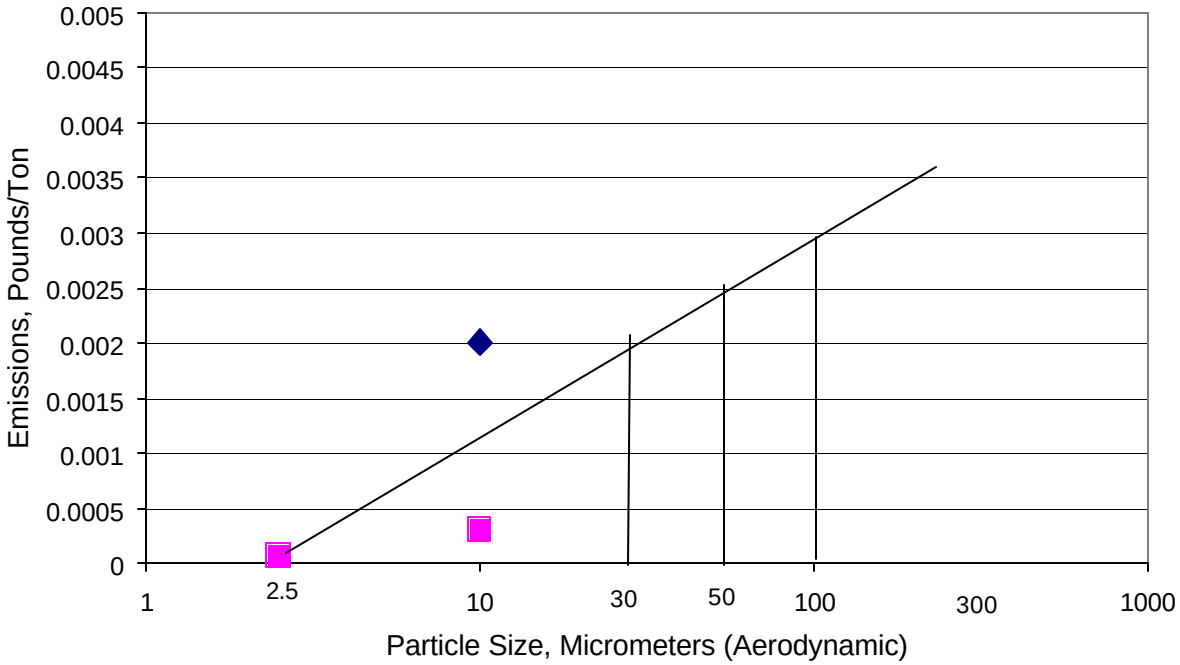

Figure 11-19.5. PM Emission Factor Calculation, Fines Crushing (Controlled)

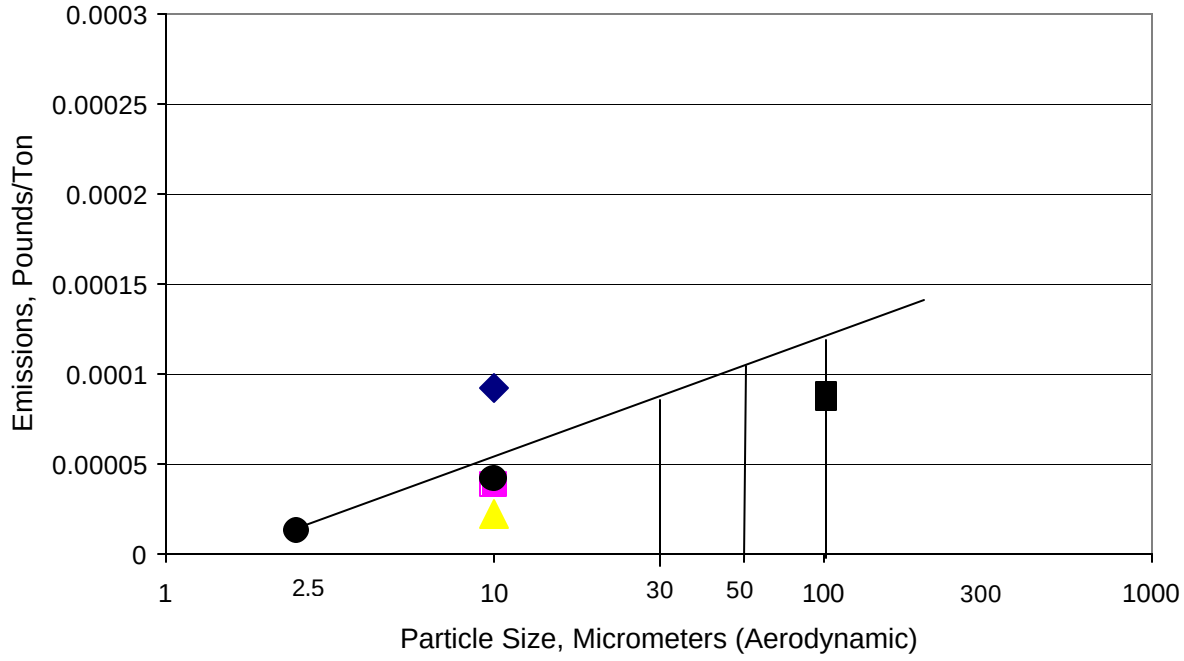

Figure 11.19-6. PM Emission Factor Calculation, Conveyor Transfer Points (Controlled)

The uncontrolled PM emission factors have been calculated from the controlled PM emission factors calculated in accordance with Figures 11.19.2-3 through 11.19.2-6. The PM-10 control efficiencies have been applied to the PM controlled emission factor data to calculate the uncontrolled PM emission rates.

Screening PM-10

Controlled = 0.00073 Lbs./Ton.

Uncontrolled = 0.00865 Lbs./Ton.

Efficiency = 91.6%

Tertiary Crushing PM-10

Controlled = 0.00054

Uncontrolled = 0.00243

Efficiency = 77.7%

Fines Crushing PM-10:

Controlled = 0.0012

Uncontrolled = 0.015

Efficiency = 92.0%

Conveyor Transfer Points PM-10

Controlled = 0.000045

Uncontrolled = 0.0011

Efficiency = 95.9%

The uncontrolled total particulate matter emission factor was calculated from the controlled total particulate matter using Equation 1:

$$\text{Uncontrolled emission factor} = \frac{\text{Controlled total particulate emission factor}}{(100\% - \text{PM-10 Efficiency }\%)/100\%}$$

Equation 1

The Total PM emission factors calculated using Figures 11.19.2-3 through 11.19.2-6 were developed because (1) there are more A-rated test data supporting the calculated values and (2) the extrapolated values provide the flexibility for agencies and source operators to select the most appropriate definition for Total PM. All of the Total PM emission factors have been rated as E due to the limited test data and the need to estimate emission factors using extrapolations of the PM-2.5 and PM-10 data.

13.2.2 Unpaved Roads

13.2.2.1 General

When a vehicle travels an unpaved road, the force of the wheels on the road surface causes pulverization of surface material. Particles are lifted and dropped from the rolling wheels, and the road surface is exposed to strong air currents in turbulent shear with the surface. The turbulent wake behind the vehicle continues to act on the road surface after the vehicle has passed.

The particulate emission factors presented in the previous draft version of this section of AP-42, dated October 2001, implicitly included the emissions from vehicles in the form of exhaust, brake wear, and tire wear as well as resuspended road surface material[25]. EPA included these sources in the emission factor equation for unpaved public roads (equation 1b in this section) since the field testing data used to develop the equation included both the direct emissions from vehicles and emissions from resuspension of road dust.

This version of the unpaved public road emission factor equation only estimates particulate emissions from resuspended road surface material [23, 26]. The particulate emissions from vehicle exhaust, brake wear, and tire wear are now estimated separately using EPA's MOBILE6.2 [24]. This approach eliminates the possibility of double counting emissions. Double counting results when employing the previous version of the emission factor equation in this section and MOBILE6.2 to estimate particulate emissions from vehicle traffic on unpaved public roads. It also incorporates the decrease in exhaust emissions that has occurred since the unpaved public road emission factor equation was developed. The previous version of the unpaved public road emission factor equation includes estimates of emissions from exhaust, brake wear, and tire wear based on emission rates for vehicles in the 1980 calendar year fleet. The amount of PM released from vehicle exhaust has decreased since 1980 due to lower new vehicle emission standards and changes in fuel characteristics.

13.2.2.2 Emissions Calculation And Correction Parameters[1-6]

The quantity of dust emissions from a given segment of unpaved road varies linearly with the volume of traffic. Field investigations also have shown that emissions depend on source parameters that characterize the condition of a particular road and the associated vehicle traffic. Characterization of these source parameters allow for "correction" of emission estimates to specific road and traffic conditions present on public and industrial roadways.

Dust emissions from unpaved roads have been found to vary directly with the fraction of silt (particles smaller than 75 micrometers [μm] in diameter) in the road surface materials.[1] The silt fraction is determined by measuring the proportion of loose dry surface dust that passes a 200-mesh screen, using the ASTM-C-136 method. A summary of this method is contained in Appendix C of AP-42. Table 13.2.2-1 summarizes measured silt values for industrial unpaved roads. Table 13.2.2-2 summarizes measured silt values for public unpaved roads. It should be noted that the ranges of silt content vary over two orders of magnitude. Therefore, the use of data from this table can potentially introduce considerable error. Use of this data is strongly discouraged when it is feasible to obtain locally gathered data.

Since the silt content of a rural dirt road will vary with geographic location, it should be measured for use in projecting emissions. As a conservative approximation, the silt content of the parent soil in the area can be used. Tests, however, show that road silt content is normally lower than in the surrounding parent soil, because the fines are continually removed by the vehicle traffic, leaving a higher percentage of coarse particles.

Other variables are important in addition to the silt content of the road surface material. For example, at industrial sites, where haul trucks and other heavy equipment are common, emissions are highly correlated with vehicle weight. On the other hand, there is far less variability in the weights of cars and pickup trucks that commonly travel publicly accessible unpaved roads throughout the United States. For those roads, the moisture content of the road surface material may be more dominant in determining differences in emission levels between, for example a hot, desert environment and a cool, moist location.

The PM-10 and TSP emission factors presented below are the outcomes from stepwise linear regressions of field emission test results of vehicles traveling over unpaved surfaces. Due to a limited amount of information available for PM-2.5, the expression for that particle size range has been scaled against the result for PM-10. Consequently, the quality rating for the PM-2.5 factor is lower than that for the PM-10 expression.

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

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

[a]References 1,5-15.

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

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

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

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

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

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

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

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

1 lb/VMT = 281.9 g/VKT

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

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

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

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

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

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

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

[a] See discussion in text.

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

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

13.2.4 Aggregate Handling And Storage Piles

13.2.4.1 General

Inherent in operations that use minerals in aggregate form is the maintenance of outdoor storage piles. Storage piles are usually left uncovered, partially because of the need for frequent material transfer into or out of storage.

Dust emissions occur at several points in the storage cycle, such as material loading onto the pile, disturbances by strong wind currents, and loadout from the pile. The movement of trucks and loading equipment in the storage pile area is also a substantial source of dust.

13.2.4.2 Emissions And Correction Parameters

The quantity of dust emissions from aggregate storage operations varies with the volume of aggregate passing through the storage cycle. Emissions also depend on 3 parameters of the condition of a particular storage pile: age of the pile, moisture content, and proportion of aggregate fines.

When freshly processed aggregate is loaded onto a storage pile, the potential for dust emissions is at a maximum. Fines are easily disaggregated and released to the atmosphere upon exposure to air currents, either from aggregate transfer itself or from high winds. As the aggregate pile weathers, however, potential for dust emissions is greatly reduced. Moisture causes aggregation and cementation of fines to the surfaces of larger particles. Any significant rainfall soaks the interior of the pile, and then the drying process is very slow.

Silt (particles equal to or less than 75 micrometers [μm] in diameter) content is determined by measuring the portion of dry aggregate material that passes through a 200-mesh screen, using ASTM-C-136 method.[1] Table 13.2.4-1 summarizes measured silt and moisture values for industrial aggregate materials.

Table 13.2.4-1. TYPICAL SILT AND MOISTURE CONTENTS OF MATERIALS AT VARIOUS INDUSTRIES[a]

Industry	No. Of Facilities	Material	Silt Content (%)			Moisture Content (%)		
			No. Of Samples	Range	Mean	No. Of Samples	Range	Mean
Iron and steel production	9	Pellet ore	13	1.3 - 13	4.3	11	0.64 - 4.0	2.2
		Lump ore	9	2.8 - 19	9.5	6	1.6 - 8.0	5.4
		Coal	12	2.0 - 7.7	4.6	11	2.8 - 11	4.8
		Slag	3	3.0 - 7.3	5.3	3	0.25 - 2.0	0.92
		Flue dust	3	2.7 - 23	13	1	—	7
		Coke breeze	2	4.4 - 5.4	4.9	2	6.4 - 9.2	7.8
		Blended ore	1	—	15	1	—	6.6
		Sinter	1	—	0.7	0	—	—
		Limestone	3	0.4 - 2.3	1.0	2	ND	0.2
Stone quarrying and processing	2	Crushed limestone	2	1.3 - 1.9	1.6	2	0.3 - 1.1	0.7
		Various limestone products	8	0.8 - 14	3.9	8	0.46 - 5.0	2.1
Taconite mining and processing	1	Pellets	9	2.2 - 5.4	3.4	7	0.05 - 2.0	0.9
		Tailings	2	ND	11	1	—	0.4
Western surface coal mining	4	Coal	15	3.4 - 16	6.2	7	2.8 - 20	6.9
		Overburden	15	3.8 - 15	7.5	0	—	—
		Exposed ground	3	5.1 - 21	15	3	0.8 - 6.4	3.4
Coal-fired power plant	1	Coal (as received)	60	0.6 - 4.8	2.2	59	2.7 - 7.4	4.5
Municipal solid waste landfills	4	Sand	1	—	2.6	1	—	7.4
		Slag	2	3.0 - 4.7	3.8	2	2.3 - 4.9	3.6
		Cover	5	5.0 - 16	9.0	5	8.9 - 16	12
		Clay/dirt mix	1	—	9.2	1	—	14
		Clay	2	4.5 - 7.4	6.0	2	8.9 - 11	10
		Fly ash	4	78 - 81	80	4	26 - 29	27
		Misc. fill materials	1	—	12	1	—	11

[a] References 1-10. ND = no data.

13.2.4.3 Predictive Emission Factor Equations

Total dust emissions from aggregate storage piles result from several distinct source activities within the storage cycle:

1. Loading of aggregate onto storage piles (batch or continuous drop operations).
2. Equipment traffic in storage area.
3. Wind erosion of pile surfaces and ground areas around piles.
4. Loadout of aggregate for shipment or for return to the process stream (batch or continuous drop operations).

Either adding aggregate material to a storage pile or removing it usually involves dropping the material onto a receiving surface. Truck dumping on the pile or loading out from the pile to a truck with a front-end loader are examples of batch drop operations. Adding material to the pile by a conveyor stacker is an example of a continuous drop operation.

The quantity of particulate emissions generated by either type of drop operation, per kilogram (kg) (ton) of material transferred, may be estimated, with a rating of A, using the following empirical expression:[11]

$$E = k(0.0016) \frac{\left(\frac{U}{2.2}\right)^{1.3}}{\left(\frac{M}{2}\right)^{1.4}} \text{ (kg/megagram [Mg])} \quad (1)$$

$$E = k(0.0032) \frac{\left(\frac{U}{5}\right)^{1.3}}{\left(\frac{M}{2}\right)^{1.4}} \text{ (pound [lb]/ton)}$$

where:

E = emission factor
k = particle size multiplier (dimensionless)
U = mean wind speed, meters per second (m/s) (miles per hour [mph])
M = material moisture content (%)

The particle size multiplier in the equation, k, varies with aerodynamic particle size range, as follows:

Aerodynamic Particle Size Multiplier (k) For Equation 1				
< 30 µm	< 15 µm	< 10 µm	< 5 µm	< 2.5 µm
0.74	0.48	0.35	0.20	0.053[a]

[a] Multiplier for < 2.5 µm taken from Reference 14.

The equation retains the assigned quality rating if applied within the ranges of source conditions that were tested in developing the equation, as follows. Note that silt content is included, even though silt content does not appear as a correction parameter in the equation. While it is reasonable to expect that silt content and emission factors are interrelated, no significant correlation between the 2 was found during the derivation of the equation, probably because most tests with high silt contents were conducted under lower winds, and vice versa. It is recommended that estimates from the equation be reduced 1 quality rating level if the silt content used in a particular application falls outside the range given:

Ranges Of Source Conditions For Equation 1			
Silt Content (%)	Moisture Content (%)	Wind Speed	
		m/s	mph
0.44 - 19	0.25 - 4.8	0.6 - 6.7	1.3 - 15

To retain the quality rating of the equation when it is applied to a specific facility, reliable correction parameters must be determined for specific sources of interest. The field and laboratory procedures for aggregate sampling are given in Reference 3. In the event that site-specific values for

correction parameters cannot be obtained, the appropriate mean from Table 13.2.4-1 may be used, but the quality rating of the equation is reduced by 1 letter.

For emissions from equipment traffic (trucks, front-end loaders, dozers, etc.) traveling between or on piles, it is recommended that the equations for vehicle traffic on unpaved surfaces be used (see Section 13.2.2). For vehicle travel between storage piles, the silt value(s) for the areas among the piles (which may differ from the silt values for the stored materials) should be used.

Worst-case emissions from storage pile areas occur under dry, windy conditions. Worst-case emissions from materials-handling operations may be calculated by substituting into the equation appropriate values for aggregate material moisture content and for anticipated wind speeds during the worst case averaging period, usually 24 hours. The treatment of dry conditions for Section 13.2.2, vehicle traffic, "Unpaved Roads", follows the methodology described in that section centering on parameter p. A separate set of nonclimatic correction parameters and source extent values corresponding to higher than normal storage pile activity also may be justified for the worst-case averaging period.

13.2.4.4 Controls[12-13]

Watering and the use of chemical wetting agents are the principal means for control of aggregate storage pile emissions. Enclosure or covering of inactive piles to reduce wind erosion can also reduce emissions. Watering is useful mainly to reduce emissions from vehicle traffic in the storage pile area. Watering of the storage piles themselves typically has only a very temporary slight effect on total emissions. A much more effective technique is to apply chemical agents (such as surfactants) that permit more extensive wetting. Continuous chemical treating of material loaded onto piles, coupled with watering or treatment of roadways, can reduce total particulate emissions from aggregate storage operations by up to 90 percent.[12]

References For Section 13.2.4

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2. R. Bohn, *et al., Fugitive Emissions From Integrated Iron And Steel Plants*, EPA-600/2-78-050, U. S. Environmental Protection Agency, Cincinnati, OH, March 1978.

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9. *PM-10 Emission Inventory Of Landfills In the Lake Calumet Area*, EPA Contract No. 68-02-3891, Midwest Research Institute, Kansas City, MO, September 1987.

NEW MEXICO

AVERAGE WIND SPEED - MPH

STATION	ID	Years	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
ALAMOGORDO AIRPORT ASOS	KALM	1996-2006	5.1	6.3	7.1	7.9	7.1	6.9	6.1	5.3	5.2	5.2	5.0	5.0	6.0
ALAMOGORDO-HOLLOMAN AFB	KHMN	1996-2006	8.5	9.7	10.6	11.8	10.8	10.6	9.8	9.1	8.8	8.5	8.1	8.3	9.6
ALBUQUERQUE AP ASOS	KABQ	1996-2006	7.0	8.2	9.3	11.1	10.0	10.0	8.7	8.3	8.0	7.9	7.2	6.9	8.5
ALBUQUERQUE-DBLE EAGLE	KAEG	1999-2006	7.1	7.9	9.0	10.6	9.5	8.6	7.0	6.2	7.0	6.5	6.5	6.1	7.7
ARTESIA AIRPORT ASOS	KATS	1997-2006	7.8	9.1	10.1	10.9	10.2	9.9	7.8	6.9	7.6	7.8	7.6	7.4	8.5
CARLSBAD AIRPORT ASOS	KCNM	1996-2006	9.2	9.8	10.9	11.4	10.4	9.9	8.5	7.7	8.2	8.5	8.4	8.8	9.3
CLAYTON MUNI AP ASOS	KCAO	1996-2006	11.9	12.7	13.4	14.6	13.4	13.0	11.7	10.8	11.8	12.1	12.1	12.0	12.4
CLINES CORNERS	KCQC	1998-2006	16.2	16.1	15.7	16.9	14.6	13.5	10.6	10.1	11.8	13.3	15.0	16.0	14.1
CLOVIS AIRPORT AWOS	KCVN	1996-2006	12.3	12.3	13.4	13.8	12.4	11.9	9.7	8.9	9.7	10.9	11.6	12.2	11.6
CLOVIS-CANNON AFB	KCVS	1996-2006	12.5	12.6	13.6	13.8	12.2	12.5	10.7	10.0	10.2	11.3	11.7	12.4	12.0
DEMING AIRPORT ASOS	KDMN	1996-2006	8.7	9.7	10.9	12.0	10.6	10.1	8.9	8.1	8.4	8.2	8.5	8.1	9.3
FARMINGTON AIRPORT ASOS	KFMN	1996-2006	7.3	8.3	9.0	9.8	9.4	9.4	8.7	8.2	8.0	7.8	7.6	7.3	8.4
GALLUP AIRPORT ASOS	KGUP	1996-2006	5.7	6.9	7.8	10.0	9.0	8.8	6.9	6.0	6.5	6.1	5.6	5.3	7.0
GRANTS-MILAN AP ASOS	KGNT	1997-2006	7.8	8.8	9.6	10.9	10.0	9.8	8.1	7.2	7.9	8.4	8.0	7.6	8.7
HOBBS AIRPORT AWOS	KHOB	1996-2006	11.3	11.9	12.6	13.4	12.5	12.3	11.0	10.0	10.2	10.6	10.7	11.1	11.4
LAS CRUCES AIRPORT AWOS	KLRU	2000-2006	6.4	7.5	8.8	10.1	8.7	8.2	6.8	6.0	6.2	6.1	6.4	6.0	7.3
LAS VEGAS AIRPORT ASOS	KLVS	1996-2006	10.9	12.2	12.5	14.3	12.4	11.8	10.0	9.2	10.9	10.8	11.0	10.9	11.4
LOS ALAMOS AP AWOS	KLAM	2005-2006	3.9	5.7	7.5	8.1	7.1	7.3	5.3	4.8	5.7	5.1	4.4	3.2	5.4
RATON AIRPORT ASOS	KRTN	1998-2006	8.9	9.4	10.4	12.2	10.8	10.2	8.4	8.1	8.6	9.0	8.6	8.5	9.4
ROSWELL AIRPORT ASOS	KROW	1996-2006	7.4	8.9	9.9	11.1	10.3	10.2	8.8	7.9	8.3	8.0	7.5	7.3	8.8
RUIDOSO AIRPORT AWOS	KSRR	1996-2006	8.8	9.6	10.0	11.6	10.0	8.4	5.9	5.3	6.4	7.4	7.9	8.7	8.3
SANTA FE AIRPORT ASOS	KSAF	1996-2006	8.9	9.5	9.9	11.2	10.6	10.5	9.2	8.8	8.8	9.1	8.7	8.5	9.5
SILVER CITY AP AWOS	KSVC	1999-2006	8.1	8.7	9.9	10.8	10.2	9.9	8.5	7.2	6.9	7.6	7.9	7.7	8.5
TAOS AIRPORT AWOS	KSKX	1996-2006	5.8	6.5	7.7	9.1	8.6	8.5	7.1	6.6	6.7	6.6	6.0	5.7	7.0
TRUTH OR CONSEQ AP ASOS	KTCS	1996-2006	7.4	8.7	9.9	11.1	10.4	9.8	8.1	7.4	7.7	8.0	7.7	7.3	8.6
TUCUMCARI AIRPORT ASOS	KTCC	1999-2006	10.0	11.2	11.9	13.6	11.9	11.6	9.9	9.3	10.0	10.0	10.4	10.2	10.8

CATERPILLAR®

GEN SET PACKAGE PERFORMANCE DATA [BLG00329]

NOVEMBER 18, 2024

(BLG00329)-ENGINE (AFR00201)-GENERATOR (BCW00403)-GENSET

For Help Desk Phone Numbers Click here

Performance Number: DM9135

Change Level: 01

Sales Model: 3412CDITA **Combustion:** DI **Aspr:** TA

Engine Power:

725 W/F EKW 758 W/O F EKW 1,081 HP

Speed: 1,800 RPM **After Cooler:** JWAC

Manifold Type: DRY **Governor Type:** PEEC **After Cooler Temp(F):** --

Turbo Quantity: 4 **Engine App:** GP **Turbo Arrangement:** Series

Hertz: 60 **Application Type:** PACKAGE-DIE **Engine Rating:** PGS **Strategy:**

Rating Type: PRIME **Certification:** STAT-USE EPA-T1 2006 - 2006

General Performance Data

GEN W/F EKW	PERCENT LOAD	ENGINE POWER BHP	ENGINE BMEP PSI	FUEL BSFC LB/BHP-HR	FUEL RATE GPH	INTAKE MFLD TEMP DEG F	INTAKE MFLD P IN-HG	INTAKE AIR FLOW CFM	EXH MFLD TEMP DEG F	EXH STACK TEMP DEG F	EXH GAS FLOW CFM
725	100	1081	288.34	0.34	53.05	205.16	68.11	2,246.01	1,250.06	954.32	6,250.7
652.5	90	968	258.32	0.34	47.37	198.5	56.95	2,005.88	1,215.5	942.98	5,540.88
580	80	861	229.6	0.34	42.08	193.1	47.29	1,786.92	1,182.56	931.46	4,894.62
543.8	75	809	215.67	0.34	39.55	190.94	42.91	1,691.57	1,165.46	924.44	4,608.57
507.5	70	757	201.9	0.34	37.06	188.96	38.79	1,599.76	1,147.82	916.16	4,333.11
435	60	656	175.06	0.34	32.31	185.18	31.24	1,430.25	1,110.92	896.9	3,817.52
362.5	50	557	148.52	0.35	27.98	181.76	24.58	1,274.86	1,067.36	870.98	3,340.77
290	40	460	122.56	0.36	23.75	178.52	18.66	1,133.6	1,014.62	835.34	2,881.68
217.5	30	360	96.02	0.37	19.21	175.46	13.18	988.81	939.38	780.44	2,408.46
181.3	25	309	82.38	0.38	16.85	174.02	10.66	921.71	890.06	742.64	2,168.32
145	20	257	68.6	0.39	14.48	172.76	8.29	854.62	833.18	698	1,928.18
72.5	10	152	40.61	0.46	9.91	171.86	4.21	752.2	686.48	578.3	1,515

MECHANICAL Sound Data: 49.21 FEET

GEN W/F EKW	PERCENT LOAD	OVERALL SOUND DB(A)	OBCF 63HZ DB	OBCF 125HZ DB	OBCF 250HZ DB	OBCF 500HZ DB	OBCF 1000HZ DB	OBCF 2000HZ DB	OBCF 4000HZ DB	OBCF 8000HZ DB
725	100	88	81	84	92	85	80	79	74	62
652.5	90	88	81	84	92	85	80	79	74	62
580	80	88	81	84	92	85	80	79	74	62
543.8	75	88	81	84	92	85	80	79	74	62
507.5	70	88	81	84	92	85	80	79	74	62
435	60	88	81	84	92	85	80	79	74	62
362.5	50	88	81	84	92	85	80	79	74	62
290	40	88	81	84	92	85	80	79	74	62
217.5	30	88	81	84	92	85	80	79	74	62
181.3	25	88	81	84	92	85	80	79	74	62
145	20	88	81	84	92	85	80	79	74	62
72.5	10	88	81	84	92	85	80	79	74	62

EMISSIONS DATA

STAT-USE EPA-T1 2006 - 2006 ********** P2
This engine meets EPA Tier 1 Equivalent Emission Levels for stationary use in 2006.

Gaseous emissions data measurements are consistent with those described in EPA 40 CFR PART 89 SUBPART D and ISO 8178 for measuring HC, CO, PM, and NOx.

Gaseous emissions values are WEIGHTED CYCLE AVERAGES and are capable of meeting the following non-road emission levels:

LOCALITY	AGENCY/LEVEL	MAX LIMITS - g/kW-hr
U. S. (incl Calif)	EPA/TIER-1	CO:11.4 HC:1.3 NOx:9.2 PM:0.5

REFERENCE EXHAUST STACK DIAMETER	8 IN
WET EXHAUST MASS	10,337.5 LB/HR
WET EXHAUST FLOW (953.60 F STACK TEMP)	6,254.23 CFM
WET EXHAUST FLOW RATE (32 DEG F AND 29.98 IN HG)	2,127.00 STD CFM
DRY EXHAUST FLOW RATE (32 DEG F AND 29.98 IN HG)	1,949.02 STD CFM
FUEL FLOW RATE	53 GAL/HR

RATED SPEED "Potential site variation"

GEN PWR EKW	PERCENT LOAD	ENGINE POWER BHP	TOTAL NOX (AS NO2) LB/HR	TOTAL CO LB/HR	TOTAL HC LB/HR	PART MATTER LB/HR	OXYGEN IN EXHAUST PERCENT	DRY SMOKE OPACITY PERCENT	BOSCH SMOKE NUMBER
725	100	1081	17.1100	3.0200	.5700	.4800	9.9000	1.4000	1.2800
543.8	75	809	12.8100	2.0800	.3300	.4000	10.0000	1.4000	1.2800
362.5	50	557	8.1800	1.6200	.2900	.3700	10.7000	2.0000	1.2800
181.3	25	309	4.1700	1.6800	.4100	.2800	12.4000	2.5000	1.2800
72.5	10	152	2.4000	1.8600	.9200	.2000	14.8000	2.0000	1.2800

RATED SPEED "Nominal Data"

GEN PWR EKW	PERCENT LOAD	ENGINE POWER BHP	TOTAL NOX (AS NO2) LB/HR	TOTAL CO LB/HR	TOTAL HC LB/HR	TOTAL CO2 LB/HR	PART MATTER LB/HR	OXYGEN IN EXHAUST PERCENT	DRY SMOKE OPACITY PERCENT	BOSCH SMOKE NUMBER
725	100	1081	14.1400	1.6100	.3000	1,184.1	.2400	9.9000	1.4000	1.2800
543.8	75	809	10.5800	1.1100	.1800	873.9	.2100	10.0000	1.4000	1.2800
362.5	50	557	6.7600	.8700	.1600	618.8	.1900	10.7000	2.0000	1.2800
181.3	25	309	3.4500	.9000	.2200	369.4	.1400	12.4000	2.5000	1.2800
72.5	10	152	1.9800	.9900	.4900	215.2	.1000	14.8000	2.0000	1.2800

Altitude Capability Data(Corrected Power Altitude Capability)

Ambient Operating Temp. / Altitude	50 F	68 F	86 F	104 F	122 F	NORMAL
0 FT	1,080.86 hp	1,080.86 hp	1,080.86 hp	1,080.86 hp	1,080.86 hp	1,080.86 hp
984.25 FT	1,080.86 hp	1,080.86 hp	1,080.86 hp	1,080.86 hp	1,080.86 hp	1,080.86 hp
1,640.42 FT	1,080.86 hp	1,080.86 hp	1,080.86 hp	1,080.86 hp	1,080.86 hp	1,080.86 hp
3,280.84 FT	1,080.86 hp	1,080.86 hp	1,080.86 hp	1,078.18 hp	1,044.65 hp	1,080.86 hp
4,921.26 FT	1,080.86 hp	1,080.86 hp	1,047.34 hp	1,013.81 hp	982.97 hp	1,080.86 hp
6,561.68 FT	1,055.38 hp	1,019.18 hp	985.65 hp	953.47 hp	923.96 hp	1,028.56 hp
8,202.1 FT	991.01 hp	957.49 hp	925.3 hp	895.8 hp	868.98 hp	976.26 hp
9,842.52 FT	930.67 hp	898.48 hp	868.98 hp	840.82 hp	815.34 hp	927.99 hp
11,482.94 FT	873 hp	843.5 hp	815.34 hp	789.86 hp	764.38 hp	879.71 hp
13,123.36 FT	818.02 hp	789.86 hp	764.38 hp	740.24 hp	717.45 hp	834.11 hp
14,763.78 FT	765.72 hp	740.24 hp	716.1 hp	693.31 hp	671.85 hp	791.2 hp

The powers listed above and all the Powers displayed are Corrected Powers

Identification Reference and Notes

Engine Arrangement:	2819205	**Lube Oil Press @ Rated Spd(PSI):**	61.6
Effective Serial No:	BLG02982	**Piston Speed @ Rated Eng SPD(FT/Min):**	1,773.6
Primary Engine Test Spec:	0K2179	**Max Operating Altitude(FT):**	4,921.3
Performance Parm Ref:	TM5739	**PEEC Elect Control Module Ref**	
Performance Data Ref:	DM9135	**PEEC Personality Cont Mod Ref**	
Aux Coolant Pump Perf Ref:			
Cooling System Perf Ref:		**Turbocharger Model**	TV9215-2.00
Certification Ref:	STAT USE EPA T1	**Fuel Injector**	
Certification Year:	2006	**Timing-Static (DEG):**	18.50
Compression Ratio:	13.0	**Timing-Static Advance (DEG):**	3.50
Combustion System:	DI	**Timing-Static (MM):**	0.00
Aftercooler Temperature (F):	--	**Unit Injector Timing (MM):**	--
Crankcase Blowby Rate(CFH):	--	**Torque Rise (percent)**	--
Fuel Rate (Rated RPM) No Load(Gal/HR):	--	**Peak Torque Speed RPM**	--
Lube Oil Press @ Low Idle Spd(PSI):	61.2	**Peak Torque (LB.FT):**	--

Nonroad Compression-Ignition Engines: Exhaust Emission Standards

	Rated Power (kW)	Tier	Model Year	NMHC (g/kW-hr)	NMHC + NOx (g/kW-hr)	NOx (g/kW-hr)	PM (g/kW-hr)	CO (g/kW-hr)	Smoke [a] (Percentage)	Useful Life (hours /years) [b]	Warranty Period (hours /years) [b]
Federal	kW < 8	1	2000-2004	-	10.5	-	1.0	8.0	20/15/50	3,000/5	1,500/2
		2	2005-2007	-	7.5	-	0.80	8.0			
		4	2008+	-	7.5	-	0.40 [c]	8.0			
	8 ≤ kW < 19	1	2000-2004	-	9.5	-	0.80	6.6		3,000/5	1,500/2
		2	2005-2007	-	7.5	-	0.80	6.6			
		4	2008+	-	7.5	-	0.40	6.6			
	19 ≤ kW < 37	1	1999-2003	-	9.5	-	0.80	5.5		5,000/7 [d]	3,000/5 [e]
		2	2004-2007	-	7.5	-	0.60	5.5			
		4	2008-2012	-	7.5	-	0.30	5.5			
			2013+	-	4.7	-	0.03	5.5			
	37 ≤ kW < 56	1	1998-2003	-	-	9.2	-	-		8,000/10	3,000/5
		2	2004-2007	-	7.5	-	0.40	5.0			
		3 [f]	2008-2011	-	4.7	-	0.40	5.0			
		4 (Option 1) [g]	2008-2012	-	4.7	-	0.30	5.0			
		4 (Option 2) [g]	2012	-	4.7	-	0.03	5.0			
		4	2013+	-	4.7	-	0.03	5.0			
	56 ≤ kW < 75	1	1998-2003	-	-	9.2	-	-			
		2	2004-2007	-	7.5	-	0.40	5.0			
		3	2008-2011	-	4.7	-	0.40	5.0			
		4	2012-2013 [h]	-	4.7	-	0.02	5.0			
			2014+ [i]	0.19	-	0.40	0.02	5.0			
	75 ≤ kW < 130	1	1997-2002	-	-	9.2	-	-			
		2	2003-2006	-	6.6	-	0.30	5.0			
		3	2007-2011	-	4.0	-	0.30	5.0			
		4	2012-2013 [h]	-	4.0	-	0.02	5.0			
			2014+	0.19	-	0.40	0.02	5.0			

Continued

	Rated Power (kW)	Tier	Model Year	NMHC (g/kW-hr)	NMHC + NOx (g/kW-hr	NOx (g/kW-hr	PM (g/kW-hr	CO (g/kW-hr)	Smoke [a] (Percentage)	Useful Life (hours /years) [b]	Warranty Period (hours /years) [b]
Federal	130 ≤ kW < 225	1	1996-2002	1.3 [j]	-	9.2	0.54	11.4	20/15/50	8,000/10	3,000/5
		2	2003-2005	-	6.6	-	0.20	3.5			
		3	2006-2010	-	4.0	-	0.20	3.5			
		4	2011-2013 [h]	-	4.0	-	0.02	3.5			
			2014+ [i]	0.19	-	0.40	0.02	3.5			
	225 ≤ kW < 450	1	1996-2000	1.3 [j]	-	9.2	0.54	11.4			
		2	2001-2005	-	6.4	-	0.20	3.5			
		3	2006-2010	-	4.0	-	0.20	3.5			
		4	2011-2013 [h]	-	4.0	-	0.02	3.5			
			2014+ [i]	0.19	-	0.40	0.02	3.5			
	450 ≤ kW < 560	1	1996-2001	1.3 [j]	-	9.2	0.54	11.4			
		2	2002-2005	-	6.4	-	0.20	3.5			
		3	2006-2010	-	4.0	-	0.20	3.5			
		4	2011-2013 [h]	-	4.0	-	0.02	3.5			
			2014+ [i]	0.19	-	0.40	0.02	3.5			
	560 ≤ kW < 900	1	2000-2005	1.3 [j]	-	9.2	0.54	11.4			
		2	2006-2010	-	6.4	-	0.20	3.5			
		4	2011-2014	0.40	-	3.5	0.10	3.5			
			2015+ [i]	0.19	-	3.5 [k]	0.04 [l]	3.5			
	kW > 900	1	2000-2005	1.3 [j]	-	9.2	0.54	11.4			
		2	2006-2010	-	6.4	-	0.20	3.5			
		4	2011-2014	0.40	-	3.5 [k]	0.10	3.5			
			2015+ [i]	0.19	-	3.5 [k]	0.04 [l]	3.5			

Notes on following page.

Notes:

- For Tier 1, 2, and 3 standards, exhaust emissions of nitrogen oxides (NOx), carbon monoxide (CO), hydrocarbons (HC), and non-methane hydrocarbons (NMHC) are measured using the procedures in 40 Code of Federal Regulations (CFR) Part 89 Subpart E. For Tier 1, 2, and 3 standards, particulate matter (PM) exhaust emissions are measured using the California Regulations for New 1996 and Later Heavy-Duty Off-Road Diesel Cycle Engines.
- For Tier 4 standards, engines are tested for transient and steady-state exhaust emissions using the procedures in 40 CFR Part 1039 Subpart F. Transient standards do not apply to engines below 37 kilowatts (kW) before the 2013 model year, constant-speed engines, engines certified to Option 1, and engines above 560 kW.
- Tier 2 and later model naturally aspirated nonroad engines shall not discharge crankcase emissions into the atmosphere unless these emissions are permanently routed into the exhaust. This prohibition does not apply to engines using turbochargers, pumps, blowers, or superchargers.
- In lieu of the Tier 1, 2, and 3 standards for NOX, NMHC + NOX, and PM, manufacturers may elect to participate in the averaging, banking, and trading (ABT) program described in 40 CFR Part 89 Subpart C.

a Smoke emissions may not exceed 20 percent during the acceleration mode, 15 percent during the lugging mode, and 50 percent during the peaks in either mode. Smoke emission standards do not apply to single-cylinder engines, constant-speed engines, or engines certified to a PM emission standard of 0.07 grams per kilowatt-hour (g/kW-hr) or lower. Smoke emissions are measured using procedures in 40 CFR Part 86 Subpart I.

b Useful life and warranty period are expressed hours and years, whichever comes first.

c Hand-startable air-cooled direct injection engines may optionally meet a PM standard of 0.60 g/kW-hr. These engines may optionally meet Tier 2 standards through the 2009 model years. In 2010 these engines are required to meet a PM standard of 0.60 g/kW-hr.

d Useful life for constant speed engines with rated speed 3,000 revolutions per minute (rpm) or higher is 5 years or 3,000 hours, whichever comes first.

e Warranty period for constant speed engines with rated speed 3,000 rpm or higher is 2 years or 1,500 hours, whichever comes first.

f These Tier 3 standards apply only to manufacturers selecting Tier 4 Option 2. Manufacturers selecting Tier 4 Option 1 will be meeting those standards in lieu of Tier 3 standards.

g A manufacturer may certify all their engines to either Option 1 or Option 2 sets of standards starting in the indicated model year. Manufacturers selecting Option 2 must meet Tier 3 standards in the 2008-2011 model years.

h These standards are phase-out standards. Not more than 50 percent of a manufacturer's engine production is allowed to meet these standards in each model year of the phase out period. Engines not meeting these standards must meet the final Tier 4 standards.

i These standards are phased in during the indicated years. At least 50 percent of a manufacturer's engine production must meet these standards during each year of the phase in. Engines not meeting these standards must meet the applicable phase-out standards.

j For Tier 1 engines the standard is for total hydrocarbons.

k The NOx standard for generator sets is 0.67 g/kW-hr.

l The PM standard for generator sets is 0.03 g/kW-hr.

Citations: Code of Federal Regulations (CFR) citations:

- 40 CFR 89.112 = Exhaust emission standards
- 40 CFR 1039.101 = Exhaust emission standards for after 2014 model year
- 40 CFR 1039.102 = Exhaust emission standards for model year 2014 and earlier
- 40 CFR 1039 Subpart F = Exhaust emissions transient and steady state test procedures
- 40 CFR 86 Subpart I = Smoke emission test procedures
- 40 CFR 1065 = Test equipment and emissions measurement procedures

Emission Factors for Greenhouse Gas Inventories

Last Modified: February 13, 2024

Blue text indicates an update from the 2023 version of this document.

Typically, greenhouse gas emissions are reported in units of carbon dioxide equivalent (CO_2e). Gases are converted to CO_2e by multiplying by their global warming potential (GWP). In most cases, the emission factors listed in this document generally have not been converted to CO_2e. To do so, multiply the emissions by the corresponding GWP listed in the table below.

Gas	100-Year GWP
CH_4	28
N_2O	265

Source: Intergovernmental Panel on Climate Change (IPCC), Fifth Assessment Report (AR5), 2013. See the source note to Table 11 for further explanation.

Notes:
These GWP values represent a change from the previous version of this document. In alignment with the U.S. Inventory of U.S. GHG Emissions and Sinks 1990-2021 Inventory Report, the recommended GWP values have been updated to Intergovernmental Panel on Climate Change (IPCC), Fifth Assessment Report (AR5) values.

Table 1 Stationary Combustion

Fuel Type	Heat Content (HHV)	CO_2 Factor	CH_4 Factor	N_2O Factor	CO_2 Factor	CH_4 Factor	N_2O Factor
	mmBtu per short ton	kg CO_2 per mmBtu	g CH_4 per mmBtu	g N_2O per mmBtu	kg CO_2 per short ton	g CH_4 per short ton	g N_2O per short
Coal and Coke							
Anthracite	25.09	103.69	11	1.6	2,602	276	40
Bituminous	24.93	93.28	11	1.6	2,325	274	40
Sub-bituminous	17.25	97.17	11	1.6	1,676	190	28
Lignite	14.21	97.72	11	1.6	1,389	156	23
Mixed (Commercial Sector)	21.39	94.27	11	1.6	2,016	235	34
Mixed (Electric Power Sector)	19.73	95.52	11	1.6	1,885	217	32
Mixed (Industrial Coking)	26.28	93.90	11	1.6	2,468	289	42
Mixed (Industrial Sector)	22.35	94.67	11	1.6	2,116	246	36
Coal Coke	24.80	113.67	11	1.6	2,819	273	40
Other Fuels - Solid							
Municipal Solid Waste	9.95	90.70	32	4.2	902	318	42
Petroleum Coke (Solid)	30.00	102.41	32	4.2	3,072	960	126
Plastics	38.00	75.00	32	4.2	2,850	1,216	160
Tires	28.00	85.97	32	4.2	2,407	896	118
Biomass Fuels - Solid							
Agricultural Byproducts	8.25	118.17	32	4.2	975	264	35
Peat	8.00	111.84	32	4.2	895	256	34
Solid Byproducts	10.39	105.51	32	4.2	1,096	332	44
Wood and Wood Residuals	17.48	93.80	7.2	3.6	1,640	126	63
	mmBtu per scf	kg CO_2 per mmBtu	g CH_4 per mmBtu	g N_2O per mmBtu	kg CO_2 per scf	g CH_4 per scf	g N_2O per scf
Natural Gas							
Natural Gas	0.001026	53.06	1.0	0.10	0.05444	0.00103	0.00010
Other Fuels - Gaseous							
Blast Furnace Gas	0.000092	274.32	0.022	0.10	0.02524	0.000002	0.000009
Coke Oven Gas	0.000599	46.85	0.48	0.10	0.02806	0.000288	0.000060
Fuel Gas	0.001388	59.00	3.0	0.60	0.08189	0.004164	0.000833
Propane Gas	0.002516	61.46	3.0	0.60	0.15463	0.007548	0.001510
Biomass Fuels - Gaseous							
Landfill Gas	0.000485	52.07	3.2	0.63	0.025254	0.001552	0.000306
Other Biomass Gases	0.000655	52.07	3.2	0.63	0.034106	0.002096	0.000413
	mmBtu per gallon	kg CO_2 per mmBtu	g CH_4 per mmBtu	g N_2O per mmBtu	kg CO_2 per gallon	g CH_4 per gallon	g N_2O per gallon
Petroleum Products							
Asphalt and Road Oil	0.158	75.36	3.0	0.60	11.91	0.47	0.09
Aviation Gasoline	0.120	69.25	3.0	0.60	8.31	0.36	0.07
Butane	0.103	64.77	3.0	0.60	6.67	0.31	0.06
Butylene	0.105	68.72	3.0	0.60	7.22	0.32	0.06
Crude Oil	0.138	74.54	3.0	0.60	10.29	0.41	0.08
Distillate Fuel Oil No. 1	0.139	73.25	3.0	0.60	10.18	0.42	0.08
Distillate Fuel Oil No. 2	0.138	73.96	3.0	0.60	10.21	0.41	0.08
Distillate Fuel Oil No. 4	0.146	75.04	3.0	0.60	10.96	0.44	0.09
Ethane	0.068	59.60	3.0	0.60	4.05	0.20	0.04
Ethylene	0.058	65.96	3.0	0.60	3.83	0.17	0.03
Heavy Gas Oils	0.148	74.92	3.0	0.60	11.09	0.44	0.09
Isobutane	0.099	64.94	3.0	0.60	6.43	0.30	0.06
Isobutylene	0.103	68.86	3.0	0.60	7.09	0.31	0.06
Kerosene	0.135	75.20	3.0	0.60	10.15	0.41	0.08
Kerosene-Type Jet Fuel	0.135	72.22	3.0	0.60	9.75	0.41	0.08
Liquefied Petroleum Gases (LPG)	0.092	61.71	3.0	0.60	5.68	0.28	0.06
Lubricants	0.144	74.27	3.0	0.60	10.69	0.43	0.09
Motor Gasoline	0.125	70.22	3.0	0.60	8.78	0.38	0.08
Naphtha (<401 deg F)	0.125	68.02	3.0	0.60	8.50	0.38	0.08
Natural Gasoline	0.110	66.88	3.0	0.60	7.36	0.33	0.07
Other Oil (>401 deg F)	0.139	76.22	3.0	0.60	10.59	0.42	0.08
Pentanes Plus	0.110	70.02	3.0	0.60	7.70	0.33	0.07
Petrochemical Feedstocks	0.125	71.02	3.0	0.60	8.88	0.38	0.08
Propane	0.091	62.87	3.0	0.60	5.72	0.27	0.05
Propylene	0.091	67.77	3.0	0.60	6.17	0.27	0.05
Residual Fuel Oil No. 5	0.140	72.93	3.0	0.60	10.21	0.42	0.08
Residual Fuel Oil No. 6	0.150	75.10	3.0	0.60	11.27	0.45	0.09
Special Naphtha	0.125	72.34	3.0	0.60	9.04	0.38	0.08
Unfinished Oils	0.139	74.54	3.0	0.60	10.36	0.42	0.08
Used Oil	0.138	74.00	3.0	0.60	10.21	0.41	0.08
Biomass Fuels - Liquid							
Biodiesel (100%)	0.128	73.84	1.1	0.11	9.45	0.14	0.01
Ethanol (100%)	0.084	68.44	1.1	0.11	5.75	0.09	0.01
Rendered Animal Fat	0.125	71.06	1.1	0.11	8.88	0.14	0.01
Vegetable Oil	0.120	81.55	1.1	0.11	9.79	0.13	0.01
Biomass Fuels - Kraft Pulping Liquor, by Wood Furnish							
North American Softwood		94.4	1.9	0.42			
North American Hardwood		93.7	1.9	0.42			
Bagasse		95.5	1.9	0.42			
Bamboo		93.7	1.9	0.42			
Straw		95.1	1.9	0.42			

Source:
Federal Register EPA; 40 CFR Part 98; e-CFR, (see link below). Table C-1 and Table C-2 (78 FR 71950, Nov. 29, 2013, as amended at 81 FR 89252, Dec. 9, 2016), Table AA-1 (78 FR 71965, Nov. 29, 2013).
https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-98

Notes:
Emission factors are per unit of heat content using higher heating values (HHV). If heat content is available from the fuel supplier, it is preferable to use that value. If not, default heat contents are provided.
All CO_2 emission factors assume that 100 percent of the carbon content of the fuel is oxidized to CO_2, as is recommended by the Intergovernmental Panel on Climate Change (IPCC).
The CH_4 and N_2O emission factors provided represent emissions in terms of fuel type and by end-use sector (i.e., residential, commercial, industrial, electricity generation).
The factors represented in the table above represent combustion emissions only and do not represent upstream emissions.

Section 8

Map(s)

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

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

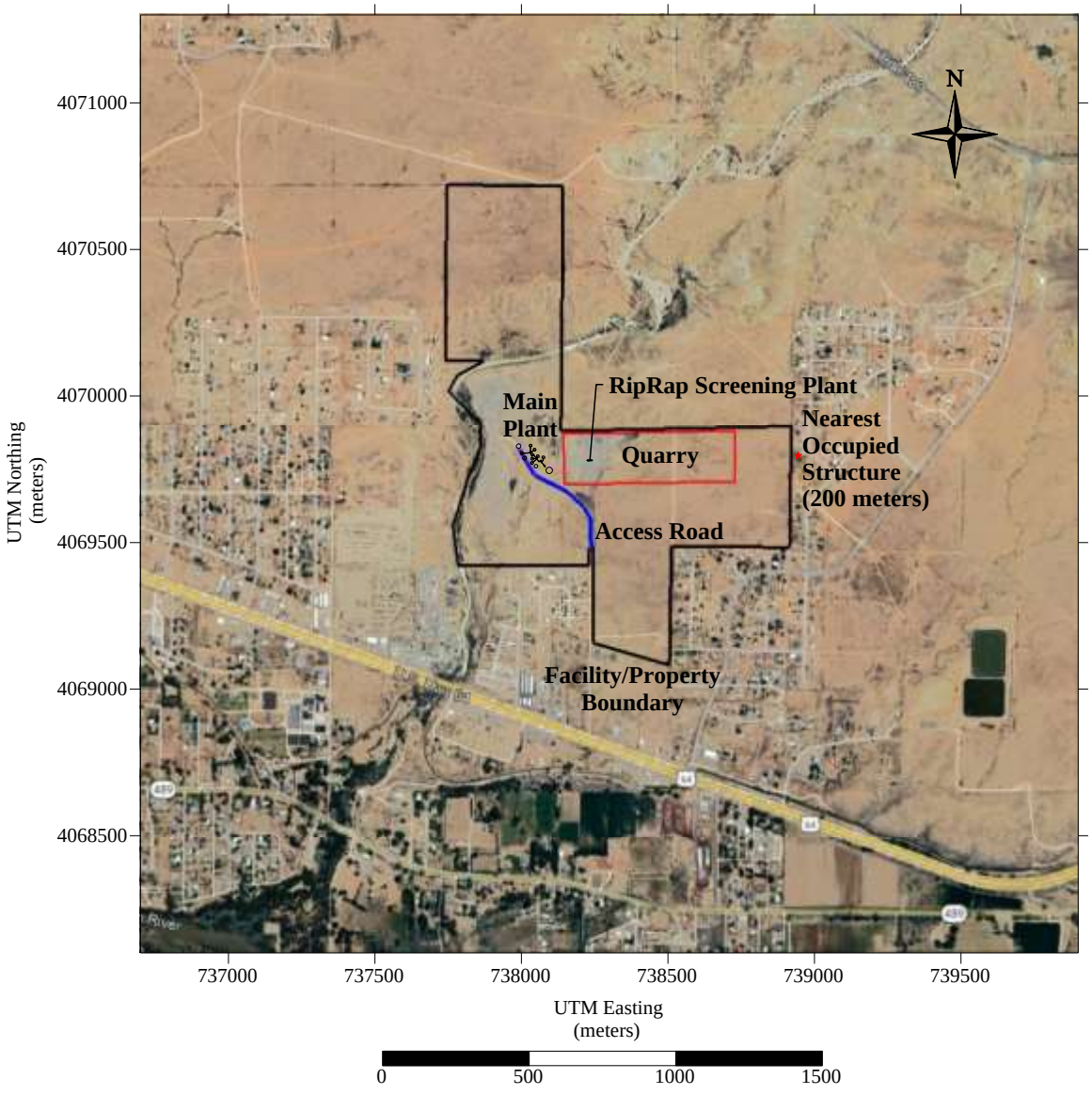


Figure 8-1: VHCC's Kirtland Pit Facility Map with Surrounding Area

Section 9

Proof of Public Notice

(for NSR applications submitting under 20.2.72 or 20.2.74 NMAC)

(This proof is required by: 20.2.72.203.A.14 NMAC "Documentary Proof of applicant's public notice")

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

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

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

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

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

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

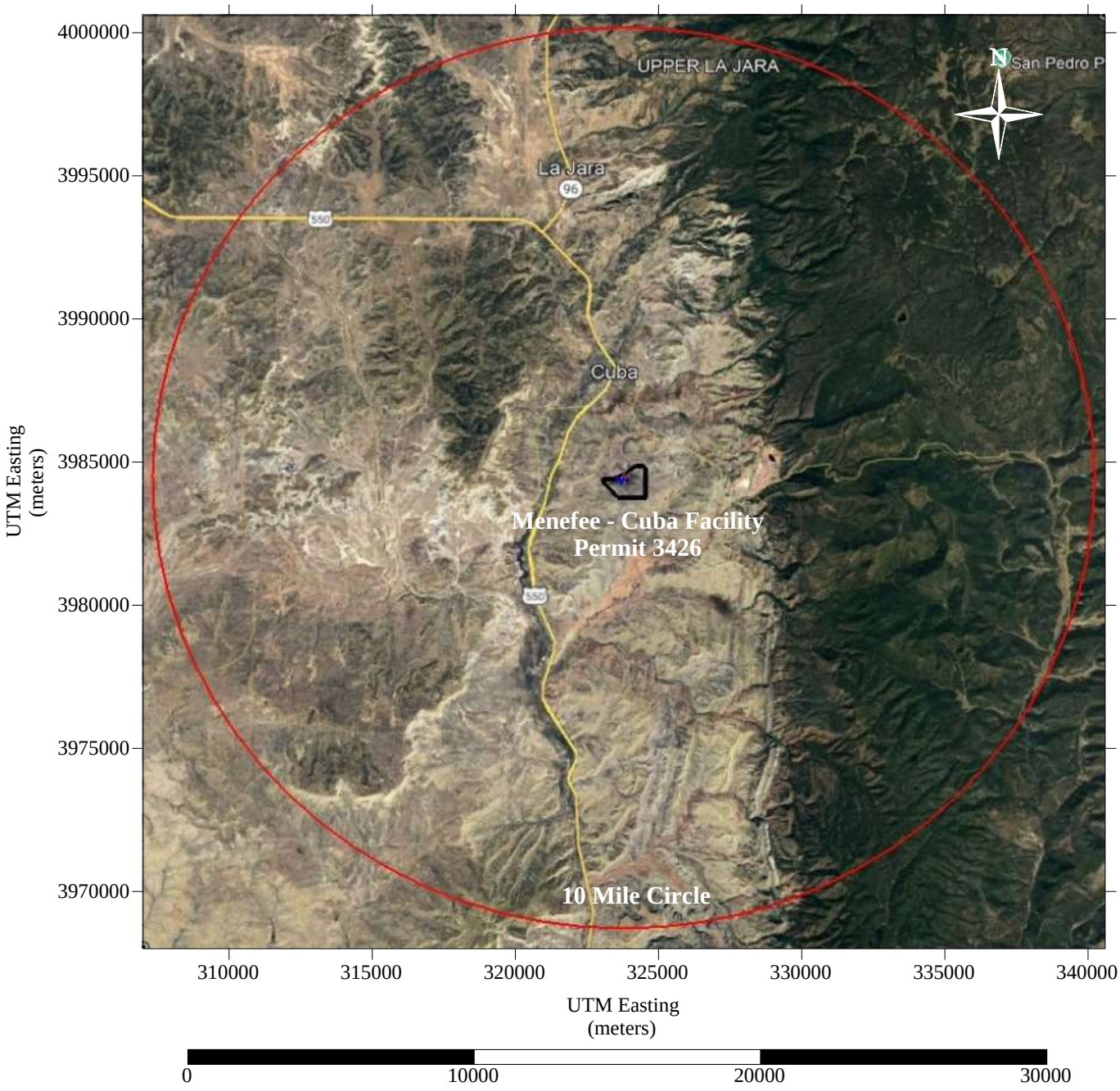


Figure 9-1: Ten-Mile Radius around Site

Government List within 10 Miles

GOVERNMENT ENTITY	GOVERNMENT REPRESENTATIVE	MAILADD	MCITY	STATE	ZIP
San Juan County	Tanya Shelby, County Clerk	PO Box 550	Aztec	NM	87410
City of Farmington	Andrea Jones, City Clerk	800 Municipal Drive	Farmington	NM	87401
Town of Kirtland	Jonathan LaMone, Town Clerk	47 Rd 6500	Kirtland	NM	87417
Navajo Nation EPA	Stephan B. Etsitty, Executive Director	PO Box 339	Window Rock	AZ	86515

Landowner List within 100 Feet (San Juan County - Class A county)

Acct_No	OWNNAME	MAILADD	MCITY	STATE	ZIP
R0083446	ANCHONDO JOEL	6 ROAD 6212	KIRTLAND	NM	87417
R0081697	ANDREWS DANNY	47 ROAD 6200	KIRTLAND	NM	87417
R4004873	BEGAY RENAE LEE	34 ROAD 6406	KIRTLAND	NM	87417
R0081967	BEGAY SHAYNE D	15 ROAD 6207	KIRTLAND	NM	87417
R4004870	BEGAY VIDA A	PO BOX 3206	INDIAN WELLS	AZ	86031
R0083444	BETONEY COURTNEY AMBER	10 ROAD 6212	KIRTLAND	NM	87417
R0081175	BOLACK TOMMY TRUST	3901 BLOOMFIELD HWY	FARMINGTON	NM	87401
R4006506	BOLACK TOMMY TRUST	3901 BLOOMFIELD HWY	FARMINGTON	NM	87401
R0080212	BOLACK TOMMY TRUST	3901 BLOOMFIELD HWY	FARMINGTON	NM	87401
R0081825	BOUGEANT CHRETIEN J	1 ROAD 6207	KIRTLAND	NM	87417
R0082214	BROWN LARRY AND MORRIS BROWN BONNIE JEAN	PO BOX 1034	FRUITLAND	NM	87416-1034
R0082213	BROWN LARRY AND MORRIS BROWN BONNIE JEAN	PO BOX 1034	FRUITLAND	NM	87416-1034
R0082212	CARLSTON PETER AND MAGGIE	13 ROAD 6193	KIRTLAND	NM	87417
R0082210	CHRISTIANSON DAVID AND MELISSA J	9 ROAD 6193	KIRTLAND	NM	75231-4466
R0081683	DAN LILLIE	PO BOX 2004	KIRTLAND	NM	87417-2004
R0083448	DELANEY WELDON V JR AND LOLITA	2305 E 14TH ST	FARMINGTON	NM	87401
R0081669	DENETCLAW JATONNA	PO BOX 1004	KIRTLAND	NM	87417
R4004872	DIAMOND D CONSTRUCTION CO INC	PO BOX 1841	KIRTLAND	NM	87417
R0082211	EATON BESSIE M ET AL	PO BOX 3493	SHIPROCK	NM	87027-0065
R0083445	EMERSON LUCINDA A REVOCABLE LIVING TRUST	8 ROAD 6212	KIRTLAND	NM	87417
R0081362	F AND D HOLDINGS LLC	5011 TAMPICO WAY	FARMINGTON	NM	87402
R0081487	GARLINGTON BILLY L III	41 ROAD 6200	KIRTLAND	NM	87417-0000
R0080022	HATATHLE ARNOLD AND DENISE	18 ROAD 6207	KIRTLAND	NM	87417
R0082509	HENDRIX BRADLEY D AND CATHY B TRUST	PO BOX 814	KIRTLAND	NM	87417-0000
R0080893	HORSLEY PATRICK B AND TRACY V	9 ROAD 6207	KIRTLAND	NM	87417-0000

Acct_No	OWNNAME	MAILADD	MCITY	STATE	ZIP
R6002383	HWY 64 TRUCK AND AUTO SALVAGE LLC	4551 US 64	FARMINGTON	NM	87401
R0082512	INGRAHAM RONALD	3480 LA PLATA HWY	FARMINGTON	NM	87401
R0082513	INVESTORS TRUST LC C/O1	31 ROAD 6195	KIRTLAND	NM	87417
R0082166	ISBELL DOROTHY L	6440 HAWKEYE ST	FARMINGTON	NM	87402
R0081172	JAKE EVANGELINE	7 ROAD 6207	KIRTLAND	NM	87417
R0081721	JARAMILLO STEVEN D AND DANA S	5 ROAD 6207	KIRTLAND	NM	87013
R0082209	KIDDIE TODD B	7 ROAD 6193	KIRTLAND	NM	87048-9104
R4004877	KIRTLAND 6406 LLC ATTN SCULLY RUBY D AND	10206 ARVILLA AVE NE	ALBUQUERQUE	NM	87111
R0080415	KRIEG ERIC W AND FREDRICA	3 ROAD 6207	KIRTLAND	NM	75231-4466
R0082501	KUECKS GEORGE J TRUSTEES	19 ROAD 6193	KIRTLAND	NM	87417-9329
R0082502	KUECKS GEORGE J TRUSTEES	19 ROAD 6193	KIRTLAND	NM	87417-9329
R0082526	KUECKS HOLLY	37 ROAD 6195	KIRTLAND	NM	87417
R0081351	LEE CALVIN	PO BOX 313	FRUITLAND	NM	87416-0313
R0083095	LINK THOMAS G	4346 US 64	KIRTLAND	NM	87417
R4004874	LOGG MELLISA	PO BOX 3301	KIRTLAND	NM	87417
R0083449	LUCERO OSCAR M ET AL	PO BOX 1412	FRUITLAND	NM	87013
R4004875	MOORE LEONARD BRYAN TRUST	PO BOX 1753	KIRTLAND	NM	87417
R0083442	REBELES TED AND DANIELLE	14 ROAD 6212	KIRTLAND	NM	87417
R0083447	RENDON REBECCA JEAN	2 ROAD 6212	KIRTLAND	NM	87417
R0082511	RIVERA DORIS AND SABINO	PO BOX 415	CANJILON	NM	87515
R0082508	ROOTS PROPERTIES LLC	2012 SAN JUAN BLVD	FARMINGTON	NM	87401
R6002384	ROSE LARSON ENTERPRISES LLC	PO BOX 3704	GLENDALE	AZ	85311
R0081759	SEYFERT DENNIS R	45 ROAD 6200	KIRTLAND	NM	87417
R4004871	SHORTY LINDA	40 ROAD 6406	KIRTLAND	NM	87417-9436
R0082510	SHORTY MICHAEL AND SHERRI A	21 ROAD 6195	KIRTLAND	NM	87417-9332
R6002344	SILVA JAMES R	PO BOX 403	KIRTLAND	NM	87417-0403
R0081784	SINGLETON SHERMANN SAMALA TRUST	2001 E MAIN ST	FARMINGTON	NM	87401-7713
R0080230	SMALLCANYON ALBERTA	13 ROAD 6207	KIRTLAND	NM	87417
R0081493	STEVENSON CALVIN AND LENA	PO BOX 504	FRUITLAND	NM	87416-0504
R0081507	TAPAHA JOHN DAVID AND ROSIE	4 ROAD 6209	KIRTLAND	NM	87417-9745
R0080235	TSO ROBERT J AND LAPRINCESS D	7 ROAD 6206	KIRTLAND	NM	87417
R0080935	VAN ARSDALE GERALD L AND MARY L	43 ROAD 6200	KIRTLAND	NM	87417
R0083443	VAZQUEZ KARLA JACELL AND VAZQUEZ DOMINQU	12 ROAD 6212	KIRTLAND	NM	87417
R0082208	WILLIS ALICE E	5 ROAD 6193	KIRTLAND	NM	87417-0000
R0080256	WILLIS BOBBY L AND CARRIE S	PO BOX 377	KIRTLAND	NM	87417
R0082525	YAZZIE JOE B AND NORMA	37 ROAD 6195	KIRTLAND	NM	87417-0000

NOTICE

Vernon Hamilton Construction Company (VHCC), LLC announces its application submittal to the New Mexico Environment Department for a new minor source NSR permit application for an Air Quality Permit. The permit is for the VHCC's Kirtland Pit which processes aggregate material. The expected date of application submittal to the Air Quality Bureau is December 2, 2024.

The address for the facility known as, VHCC's Kirtland Pit, is 32 Rd 6210, Kirtland, NM. The exact location of the VHCC's Kirtland Pit is at Latitude (decimal degrees): 36.743919 and Longitude (decimal degrees): -108.333753. The approximate location of this facility is 0.7 miles east-southeast of Kirtland in San Juan County.

The function of the facility is to crush and screen aggregate material from the on-site quarry into usable construction sand and gravel.

The 350 ton per hour and 350,000 ton per year aggregate quarry, and crushing and screening operations will include an aggregate quarry, feeder, primary jaw crusher, two (2) secondary cone crushers, two (2) 3-deck screens, one (1) scalping screen, one (1) RipRap plant, fifteen (15) transfer conveyors, and seven (7) stacker conveyors. The main crushing and screening plant will be powered by commercial line power unless relocated to a different location where is will be powered by an 725 kW, 1081 horsepower (hp) engine/generator. The RipRap plant will be powered by a 140 kW, 188 hp engine. Aggregate from the quarry will first be processed through the RipRap plant and then the material will be stored in the Raw Material Pile. From the Raw Material Pile the material will be fed into the main plant feeder. Processed aggregate will be stored in Finish Storage Piles until transported from the aggregate crushing plant to off-site sales.

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

Pollutant:	Maximum Pounds per hour	Maximum Tons per year
PM_{10}	15.4 pph	7.2 tpy
$PM_{2.5}$	2.9 pph	2.7 tpy
Sulfur Dioxide (SO_2)	0.013 pph	0.029 tpy
Nitrogen Oxides (NO_x)	15.9 pph	34.6 tpy
Carbon Monoxide (CO)	19.3 pph	42.0 tpy
Volatile Organic Compounds (VOC)	2.1 pph	4.7 tpy
Total sum of all Hazardous Air Pollutants (HAPs)	0.052 pph	0.11 tpy
Toxic Air Pollutant (TAP)	0.0003 pph	0.0008 tpy
Green House Gas Emissions as Total CO_2e	n/a	1676 tpy

The maximum operating schedule for material processing is 9 hours per day (8 am to 5 pm) for the months of November through February, and daylight hours (14 hours per day maximum) for the months of March through October, 6 days per week, and 52 weeks per year. The standard schedule for material processing is 10 hours per day.

The owner and/or operator mailing address for the Facility is:

Vernon Hamilton Construction Company, LLC
P.O. Box 1110
Gallup, NM 87305

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

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

Attención
Este es un aviso de la oficina de Calidad del Aire del Departamento del Medio Ambiente de Nuevo México, acerca de las emisiones producidas por un establecimiento en esta área. Si usted desea información en español, por favor comuníquese con esa oficina al teléfono 505-629-3395.

Notice of Non-Discrimination
NMED does not discriminate on the basis of race, color, national origin, disability, age or sex in the administration of its programs or activities, as required by applicable laws and regulations. NMED is responsible for coordination of compliance efforts and receipt of inquiries concerning non-discrimination requirements implemented by 40 C.F.R. Part 7, including Title VI of the Civil Rights Act of 1964, as amended; Section 504 of the Rehabilitation Act of 1973; the Age Discrimination Act of 1975, Title IX of the Education Amendments of 1972, and Section 13 of the Federal Water Pollution Control Act Amendments of 1972. If you have any questions about this notice or any of NMED's non-discrimination programs, policies or procedures, or if you believe that you have been discriminated against with respect to a NMED program or activity, you may contact: Non-Discrimination Coordinator, NMED, 1190 St. Francis Dr., Suite N4050, P.O. Box 5469, Santa Fe, NM 87502, (505) 827-2855, nd.coordinator@env.nm.gov. You may also visit our website at https://www.env.nm.gov/non-employee-discrimination-complaint-page/ to learn how and where to file a complaint of discrimination.

General Posting of Notices – Certification

I, Daniel Flack, the undersigned, certify that on November 19-20, 2024, posted a true and correct copy of the attached Public Notice in the following publicly accessible and conspicuous places in the Town of Kirtland San Juan County, State of New Mexico on the following dates:

1. Facility entrance 11-19-24
2. Town of Kirtland Town Hall 11-20-24
3. Kirtland Post Office 11-20-24
4. Lower Valley Water Users 11-20-24

Signed this 20 day of November, 2024.

Signature

November 20, 2024
Date

Daniel Flack
Printed Name

Engineer
Title {APPLICANT OR RELATIONSHIP TO APPLICANT}

Facility Entrance to the Kirtland Pit

32 Rd 6210, Kirtland, NM


NOTICE

Town of Kirtland Town Hall

47 Rd 6500, Kirtland, NM

NOTICE

Vernon Hamilton Construction Company (VHCC), LLC announces its application submittal to the New Mexico Environment Department for a new minor source NSR permit application for an Air Quality Permit. The permit is for the VHCC's Kirtland Pit which processes aggregate material. The expected date of application submittal to the Air Quality Bureau is December 2, 2024.

The address for the facility known as, VHCC's Kirtland Pit, is 32 Rd 6210, Kirtland, NM. The exact location of the VHCC's Kirtland Pit is at Latitude (decimal degrees): 36.742919 and Longitude (decimal degrees): -108.333753. The approximate location of this facility is 0.7 miles east-southeast of Kirtland in San Juan County.

The function of the facility is to crush and screen aggregate material from the on-site quarry into usable construction sand and gravel.

The 350 ton per hour and 350,000 ton per year aggregate quarry, and crushing and screening operations will include an aggregate quarry, feeder, primary jaw crusher, two (2) secondary cone crushers, two (2) 3-deck screens, one (1) scalping screen, one (1) RipRap plant, fifteen (15) transfer conveyors, and seven (7) stacker conveyors. The main crushing and screening plant will be powered by commercial line power unless relocated to a different location where is will be powered by an 725 kW, 1081 horsepower (hp) engine/generator. The RipRap plant will be powered by a 140 kW, 188 hp engine. Aggregate from the quarry will first be processed through the RipRap plant and then the material will be stored in the Raw Material Pile. From the Raw Material Pile the material will be fed into the main plant feeder. Processed aggregate will be stored in Finish Storage Piles until transported from the aggregate crushing plant to off-site sales.

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

Pollutant	Maximum Pounds per hour	Maximum Tons per year
PM ₋	15.8 pph	7.2 tpy
PM ₁₀	2.9 pph	2.7 tpy
Sulfur Dioxide (SO_2)	0.011 pph	0.029 tpy
Nitrogen Oxides (NO_x)	10.9 pph	34.6 tpy
Carbon Monoxide (CO)	19.3 pph	42.0 tpy
Volatile Organic Compounds (VOC)	2.1 pph	4.7 tpy
Total sum of all Hazardous Air Pollutants (HAPs)	0.032 pph	0.11 tpy
Toxic Air Pollutant (TAP)	0.0031 pph	0.0008 tpy
Green House Gas Emissions as Total CO_2e	n/a	1674 tpy

The maximum operating schedule for material processing is 9 hours per day (8 am to 5 pm) for the months of November through February, and daylight hours (14 hours per day maximum) for the months of March through October, 6 days per week, and 52 weeks per year. The standard schedule for material processing is 10 hours per day.

The owner and/or operator mailing address for the Facility is:
Vernon Hamilton Construction Company, LLC
P.O. Box 1110
Gallup, NM 87305

US Post Office

4211 US 64, Kirtland, NM

NOTICE

Vinton Hamilton Construction Company (VHCC), LLC announces its application submitted to the New Mexico Environment Department for a new minor source NSR permit application for an Air Quality Permit. The permit is for the VHCC's Kirkland Pit which processes aggregate materials. The requested date of application submittal to the Air Quality Bureau is December 2, 2024.

The address for the facility known as, VHCC's Kirkland Pit, Lc 11 for 42.01, Kirkland, NM. The exact location of the VHCC's Kirkland Pit is in Latitude (decimal degrees) 36.7419 and Longitude (decimal degrees) -108.332709. The approximate location of this facility is 0.7 miles east-southeast of Kirkland in San Juan County.

The function of the facility is to crush and screen aggregate material from the on-site quarry into usable construction sand and gravel.

The 350 tph jaw feed and 350,000 ton per year aggregate quarry, and crushing and screening operations will include: an aggregate quarry, feeder, primary jaw crusher, two (2) secondary cone crushers, two (2) vibrating screens, one (1) scalping screen, one (1) RAP/ag plant, fifteen (15) transfer conveyors, and seven (7) stacker conveyors. The main crushing and screening plant will be powered by commercial line power unless relocated to a different location where it will be powered by an 725 kW, 980 (horsepower) Tier engine/generator. The 40 tph/ag plant will be powered by a 165 kW, 240 hp engine. Aggregate from the quarry will need to processed through the RAP/ag plant and then the stockpile will be shared to the Pipe Memorial Pile. From the Pipe Memorial Pile the material will be fed into the main plant feeder. Processed aggregate will be stored in 6 main Storage Piles and 6 unprocessed Piles for aggregate crushing plant to off site sales.

The estimated maximum quantities of any regulated air contaminant will be as follows in pound per hour (lb/hr) and tons/year (tpy) per year 2025 and may change slightly during the course of the Department's review:

Pollutant	Maximum Hourly Rate	Maximum Tons per year
PM	11.9 pph	7.5 tpy
PM10	2.9 pph	2.1 tpy
Sulfur Dioxide (SO2)	0.11 pph	0.05 tpy
Nitrogen Oxides (NOx)	13.9 pph	10.0 tpy
Carbon Monoxide (CO)	19.1 pph	13.0 tpy
Volatile Organic Compounds (VOC)	2.3 pph	0.7 tpy
Total Sum of Hazardous Air Pollutants (HAPs)	0.002 pph	0.1 tpy
Worst Single HAP	0.0003 pph	0.0008 tpy
Carbon Dioxide Equivalent Emissions (CO2e)	n/a	1456 tpy

The maximum operating schedule for material processing is 9 hours per day (7:00 am to 5 pm.) for the months of November through February, and daylight hours (7 hours per day maximum) for the months of March through October, 6 days per week, and 52 weeks per year. The standard schedule for material processing is 8 hours per day.

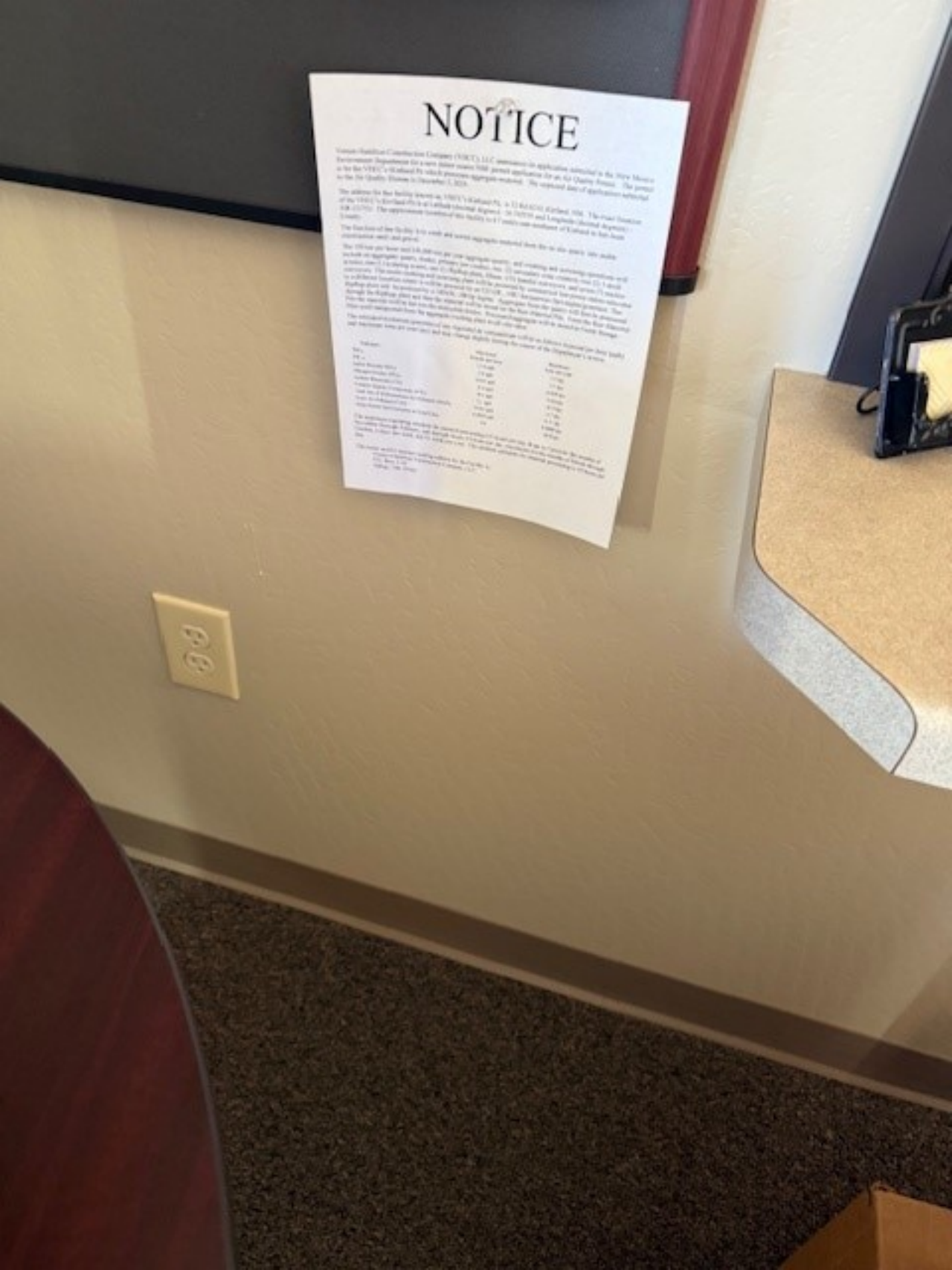
The owner and/or operator mailing address for the Facility is:
Vinton Hamilton Construction Company, LLC
P.O. Box 1210
Lindrith, NM 87029

RESOURCES

The Salvation Army Family Store & Donation Center (shelter, food/sharing, employment, clothing, food) — 116 W. Animas St., Farmington, N.M. 87401	505-325-4661
Lovelace Respiratory of NM (employment, Veterans) 1400 W. Maple Ave., Farmington, N.M. 87401	505-326-6383
The ARC of San Juan County (clothing) 705 W. Broadway, Farmington, N.M. 87401	505-326-6383
Oasis Church - The Lord's Pantry (food & clothing) Farmington, N.M. Pastors Randy & Debbie Aiello	505-325-1757
Restoration Church (clothing & household items) The Outpost Tent Farmington, N.M.	505-327-8363
The Path (emergency shelter, daily meals) - Farmington, N.M.	505-327-3141
The Salvation Center (social) (public showers) Farmington, N.M.	505-327-4296
San Juan Catholic Charities (emergency assistance, counseling, diaper assist.) - Farmington, N.M.	505-325-5754
San Juan United Way - Farmington, N.M. (rent, utilities, shelter, food, counseling, hygiene items, school supplies, transportation)	505-326-1190
Farmington Sha Ala' Ecclesia Farmington, N.M. 87499	OR 505-860-3145 505-402-3358
ECHO Food Bank (Holiday food boxes)	505-326-3779
MESA Housing (rapid emergency shelter — case by	505-368-3358

Lower Valley Water Users

4286 US 64, Kirtland, NM


NOTICE

NOTICE OF AIR QUALITY PERMIT APPLICATION

Vernon Hamilton Construction Company (VHCC), LLC announces its application submittal to the New Mexico Environment Department for a new minor source NSR permit application for an Air Quality Permit. The permit is for the VHCC's Kirtland Pit which processes aggregate material. The expected date of application submittal to the Air Quality Bureau is December 2, 2024.

The address for the facility known as, VHCC's Kirtland Pit, is 32 Rd 6210, Kirtland, NM. The exact location of the VHCC's Kirtland Pit is at Latitude (decimal degrees): 36.743919 and Longitude (decimal degrees): -108.333753. The approximate location of this facility is 0.7 miles east-southeast of Kirtland in San Juan County.

The function of the facility is to crush and screen aggregate material from the on-site quarry into usable construction sand and gravel.

The 350 ton per hour and 350,000 ton per year aggregate quarry, and crushing and screening operations will include an aggregate quarry, feeder, primary jaw crusher, two (2) secondary cone crushers, two (2) 3-deck screens, one (1) scalping screen, one (1) RipRap plant, fifteen (15) transfer conveyors, and seven (7) stacker conveyors. The main crushing and screening plant will be powered by commercial line power unless relocated to a different location where is will be powered by a 725 kW, 1081 horsepower (hp) engine/generator. The RipRap plant will be powered by a 140 kW, 188 hp engine. Aggregate from the quarry will first be processed through the RipRap plant and then the material will be stored in the Raw Material Pile. From the Raw Material Pile the material will be fed into the main plant feeder. Processed aggregate will be stored in Finish Storage Piles until transported from the aggregate crushing plant to off-site sales.

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

Pollutant:	Maximum Pounds per hour	Maximum Tons per year
PM_{10}	15.4 pph	7.2 tpy
$PM_{2.5}$	2.9 pph	2.7 tpy
Sulfur Dioxide (SO_2)	0.013 pph	0.029 tpy
Nitrogen Oxides (NO_x)	15.9 pph	34.6 tpy
Carbon Monoxide (CO)	19.3 pph	42.0 tpy
Volatile Organic Compounds (VOC)	2.1 pph	4.7 tpy
Total sum of all Hazardous Air Pollutants (HAPs)	0.052 pph	0.11 tpy
Toxic Air Pollutant (TAP)	0.0003 pph	0.0008 tpy
Green House Gas Emissions as Total CO_2e	n/a	1676 tpy

The maximum operating schedule for material processing is 9 hours per day (8 am to 5 pm) for the months of November through February, and daylight hours (14 hours per day maximum) for the months of March through October, 6 days per week, and 52 weeks per year. The standard schedule for material processing is 10 hours per day.

The owner and/or operator mailing address for the Facility is:

Vernon Hamilton Construction Company, LLC
P.O. Box 1110
Gallup, NM 87305

If you have any comments about the construction or operation of this facility, and you want your comments to be made as part of the permit review process, you must submit your comments in writing to this address: Permit Programs Manager; New Mexico Environment Department; Air Quality Bureau; 525 Camino de los Marquez,

Suite 1; Santa Fe, New Mexico; 87505-1816. Other comments and questions may be submitted verbally. (505) 476-4300; 1 800 224-7009.

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

Attención

Este es un aviso de la oficina de Calidad del Aire del Departamento del Medio Ambiente de Nuevo México, acerca de las emisiones producidas por un establecimiento en esta área. Si usted desea información en español, por favor comuníquese con esa oficina al teléfono 505-629-3395.

Notice of Non-Discrimination

NMED does not discriminate on the basis of race, color, national origin, disability, age or sex in the administration of its programs or activities, as required by applicable laws and regulations. NMED is responsible for coordination of compliance efforts and receipt of inquiries concerning non-discrimination requirements implemented by 40 C.F.R. Part 7, including Title VI of the Civil Rights Act of 1964, as amended; Section 504 of the Rehabilitation Act of 1973; the Age Discrimination Act of 1975, Title IX of the Education Amendments of 1972, and Section 13 of the Federal Water Pollution Control Act Amendments of 1972. If you have any questions about this notice or any of NMED's non-discrimination programs, policies or procedures, or if you believe that you have been discriminated against with respect to a NMED program or activity, you may contact: Non-Discrimination Coordinator, NMED, 1190 St. Francis Dr., Suite N4050, P.O. Box 5469, Santa Fe, NM 87502, (505) 827-2855, nd.coordinator@env.nm.gov. You may also visit our website at https://www.env.nm.gov/non-employee-discrimination-complaint-page/ to learn how and where to file a complaint of discrimination.

MARKETPLACE

★ ANNOUNCEMENTS

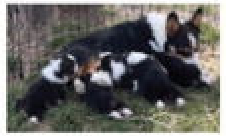
Notices

Durango's Cowboy Church
Christmas Bazaar
Saturday, December 7
9am - 3pm
1867 Hwy 172
Variety of vendors!

Lighted billboard at CO/NM state line available for lease.
Call 970-749-2297

LIVESTOCK & PETS

Pets



AKC corgi puppies
for sale
Contact (505) 330-4589

★ EMPLOYMENT

Help Wanted/ Full Time

EIGHT 14 SOLUTIONS

814 Solutions LLC. is advertising for laborers. *This is a Navajo Preference Advertising.* Previous experience is required in Rip Rap and Fencing and for the position to be applied for. Applicants shall request an application by calling 814 Solutions at 505 872-0846 M-F 7am-3pm. Drug-Free Workplace, EEO, NPEA

TRI-CITY RECORD

Ballantine Communications Inc. is seeking a **Multimedia Sales Representative** to join our team! As a Multi-Media Sales Representative, you will present advertising solutions to clients, consult with them about their business objectives, craft high commercial messages, and choose the appropriate marketing channels to connect to the correct demographic group. The likely candidate will be energetic, have a solid understanding of local markets, and proven ability to generate sales by providing creative solutions to clients that meet their business needs.
BCI is an equal opportunity employer. Apply at https://ballantinecommunicationsinc.com/

Help Wanted/ Full Time

In compliance with the Navajo Preference in Employment Act, Dickens Quality Demolition, LLC (a licensed contractor within the state of Arizona) would like to announce the start of a demolition project at the Many Farms Community School, in Many Farms, Arizona.

Qualified applicants are encouraged to apply via the following methods,

1. In person at 1111 N. 19th Ave Phoenix, AZ 85009
2. Email – nsutton@dickensquality.com

Mandatory qualifications include the following:

1. 10 Hour OSHA Card
2. 2 Years experience as a demo tech
3. DPS Fingerprint Card
4. Able to work night shift

The project is scheduled to start on Monday – December 2nd , 2024.
Interviews will be scheduled when evidence of qualifications are received.
Dickens Quality Demolition, LLC gives preference to eligible and qualified applicants in accordance with the Navajo Preference in Employment Act.

SOUTHERN UTE INDIAN TRIBE
JOB OPENINGS

Auto Mechanic I
Bus Driver (PT)
Community Health Representative
Controller
Custodial Team Leader
Custodian
Dentist (PT w/Benefits)
Director of Strategic Planning
Dispatcher
Dispatcher Trainee
Early Childhood Teacher
Economic Development Project Coordinator
Elementary Teacher
Gaming Investigator I
Grants Financial Analyst
Group Exercise Instructor
Heavy Equipment Operator
HVAC Technician
Lifeguard (FT)
Patrol Officer (I & II)
Patrol Officer Trainee
Project Aware Program Manager
Property Manager
Public Health Nurse
Scorekeeper
Security Officer
Umpire/Referee
Water Quality & Remediation Division Head

Apply online: https://careers.southernute.com/pfund
Human Resources
(970) 563-4750

TERO – Native American Preference

Help Wanted/ Full Time

Executive Director of the New Mexico Academy of Family Physicians Chapter. Full-time. Serve as chief administrative officer of the NMAFP, responsible to the BOD. Experience in organization leadership, fundraising; event planning. BA/Related job experience. Competitive, based on prior experience. More info/to apply: familydoctornm.org/join

Na' Nizhoozhi Center Inc. "A Bridge To Recovery" is hiring an Executive Director. A full job description may be requested or submit letter of interest, resume and writing sample to nci.gallup@gmail.com

Help Wanted/ Part Time

TRI-CITY RECORD

Independent Carrier, part-time, needed to early morning newspaper delivery. Great for Stay-At-Home moms, Students, Retirees, morning people, or anyone interested in making extra money. Delivery on Monday, Wednesday, and Friday. Vehicle and valid driver's license required. If interested apply at *http://ballantinecommunicationsinc.com/careers* or email scorwin@bcimedia.com

THE JOURNAL

Part-Time Sports Reporter: The Journal covering Cortez and Montezuma County is looking for an experienced reporter to cover area sports stories. This position requires some nights and weekends. Bachelor's degree in Journalism, Communications, or related fields preferred. 2 years of reporting experience is also preferred. BCI is an equal opportunity employer. Apply at *https://ballantinecommunicationsinc.com/*

★ TRANSPORTATION

RV's/Campers & Travel Trailers

2015 Coachman 2150 Class C Motorhome
Mercedes 3500 Chassis, 43806 miles. Drives Great, All 7 New Tires, comes with extras such as bedding, dishes, pots and pans, cast iron pans and dutch oven. Leveling blocks, water hoses, water filter, regulator, sewer hoses and fittings in a storage bin. Tool box with basic tools. A/C. Heat. Rear view camera in dash when in reverse. Tow hitch plus a raised bracket for bicycle rack. Tire monitoring system. Separate review camera installed will need monitor. Add food ready to go. On consignment at Ray Vickers Main St and Browning Parkway Farmington NM 505-320-3000 Asking 45,000.00 price negotiable.

★ LEGALS

Private Legals

25049
LEGAL NOTICE
FORT DEFIANCE – APACHE COUNTY ARIZONA

Fort Defiance Indian Hospital Board, Inc. is soliciting for sealed proposal bids from qualified Contractors to provide Construction services, for 12 new Staff Housing units near the Nahata'Dzil Health Center in Sanders, Arizona. Inquiries for proposal information and questions during the bid period should be directed to:

Ms. Chris Begay, Lead Buyer
(928) 729-3795
Email: Chris.Begay@fdihb.org

The proposal packet is available during regular business hours (MST) beginning November 10, 2024 through November 27, 2024 at Albuquerque Reprographics:

ARI Graphix & Signs
4716 McLeod NE
Albuquerque, New Mexico 87109
Phone: 1 (505) 884-0862
www.arigraphix.com

The cost of drawing sets will be as followed:

Hard Copy – $389.80 (Plus Tax, Shipping if applicable)
Electronic Copy – $194.90 (Plus Tax)

The proposal package shall be submitted in a sealed envelope and to clearly read "RFP# 25-001 Sanders: Nahata'Dzil Health Center Housing Project". Acceptance of sealed proposals bids for RFP 25-001 shall end on Monday, January 6, 2025 at 3:00 p.m. (MST). All incomplete packets will not be accepted and all late submissions of proposals will be disqualified.

Fort Defiance Indian Hospital Board Inc. reserves the right to reject any and all proposals submitted, to waive any informalities and irregulatories. The advertisement for proposals does not commit Fort Defiance Indian Hospital Board Inc. to award a contract nor to pay any costs for the preparation of the proposals.

Published in Tri-City Record November 11, 13, 15, 18, 20, 22, 25, 27, 2024

25087
STATE OF NEW MEXICO
COUNTY OF SAN JUAN
ELEVENTH JUDICIAL DISTRICT
No. D-1116-DM-2024-00162

April Rowland, Petitioner(s)
IN THE MATTER OF THE Divorce/Custody of XR, (a) Child(ren), and concerning Josh Rowland, Respondent(s).
NOTICE OF PENDENCY OF ACTION

Private Legals

STATE OF NEW MEXICO to Josh Rowland, Respondent(s).
Greetings:
You are hereby notified that April Rowland, Petitioner(s), filed a Petition to Appoint divorce/custody for XR 2012 against you in the above entitled court and cause.
Unless you enter your appearance and written response in this cause on or before thirty (30) days after the last date of publication, a judgment by default will be entered against you.

Name and address of Petitioner or Petitioner's attorney: April Rowland, 3 Rd 3192, Aztec, NM 87410

Published in Tri-City Record November 13, 20, 27, 2024

25251
Notice by Hilcorp Energy Company for Downhole Commingling, San Juan County, New Mexico. Pursuant to Paragraph (2) of Subsection C of 19.15.12.11 NMAC, Hilcorp Energy Company, as Operator, has filed form C-107A with the New Mexico Energy, Minerals and Natural Resources Department – Oil Conservation Division (NMOCD) seeking administrative approval to downhole commingle new production from the Basin-Fruitland Coal Pool (71629) and the Blanco Pictured Cliffs (72359) with existing production from the Blanco Mesaverde (72319) in the Moore LS 007A well (API No. 30-045-22826) located in Unit F, Section 25, Township 32 North, Range 12 West, NMPM, San Juan County, New Mexico. Commingling will not reduce the value of production. Allocation method to be determined upon completion of this project. This notice is intended for certain unlocatable royalty interest owners in the aforementioned well for which certified mail delivery is not possible. Should you (the interest owner for

Private Legals

hich this notice is intended) ave an objection, you are equired to respond within wenty (20) days from the date f this publication. Please mail our objection letter, eferencing the well details bove, to the New Mexico Oil onservation Division's Santa e office.

ublished in Tri-City Record lovember 27, 2024

5317
NOTICE OF AIR QUALITY PERMIT APPLICATION

ernon Hamilton Construction ompany (VHCC), LLC nnounces its application ubmittal to the New Mexico nvironment Department for a ew minor source NSR permit pplication for an Air Quality ermit. The permit is for the HCC's Kirtland Pit which rocesses aggregate material. he expected date of pplication submittal to the Air uality Bureau is December 2, 024.

he address for the facility nown as, VHCC's Kirtland Pit, 32 Rd 6210, Kirtland, NM. he exact location of the HCC's Kirtland Pit is at atitude (decimal degrees): 6.743919 and Longitude decimal degrees): 108.333753. The approximate ocation of this facility is 0.7 iles east-southeast of Kirtland San Juan County.
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PRO CONNECT

BASIN ROOF SYSTEMS
CONSTRUCTION CONTRACTORS, INC.

Private Legals

main crushing and screenin plant will be powered b commercial line power unles relocated to a different locatio where is will be powered by 725 kW, 1081 horsepower (hp engine/generator. The RipRa plant will be powered by a 14 kW, 188 hp engine. Aggregat from the quarry will first b processed through the RipRa plant and then the material w be stored in the Raw Materia Pile. From the Raw Materia Pile the material will be fed int the main plant feede Processed aggregate will b stored in Finish Storage Pile until transported from th aggregate crushing plant to of site sales.
The estimated maximur quantities of any regulated a contaminant will be as follow in pound per hour (pph) an maximum tons per year (tpy and may change slightly durin the course of the Department review:

Pollutant:
Maximum
Pounds per hour
Maximum
Tons per year
PM 10 15.4 pph 7.2 tpy
PM 2.5 2.9 pph 2.7 tpy
Sulfur Dioxide (SO_2) 0.013 pp 0.029 tpy
Nitrogen Oxides (NO_x) 15. pph 34.6 tpy
Carbon Monoxide (CO) 19. pph 42.0 tpy
Volatile Organic Compound (VOC) 2.1 pph 4.7 tpy
Total sum of all Hazardous A Pollutants (HAPs) 0.052 pp 0.11 tpy
Toxic Air Pollutant (TAP) 0.000 pph 0.0008 tpy
Green House Gas Emission as Total CO_2e n/a 1676 tpy

The maximum operatin schedule for materia processing is 9 hours per da (8 am to 5 pm) for the month of November through Februar and daylight hours (14 hour per day maximum) for th months of March throug October, 6 days per week, an 52 weeks per year. Th standard schedule for materia processing is 10 hours per day

The owner and/or operato mailing address for the Facili is:
Vernon Hamilton Constructio Company, LLC

Private Legals

P.O. Box 1110
Gallup, NM 87305

you have any comment bout the construction c peration of this facility, an ou want your comments to b ade as part of the perm eview process, you mus ubmit your comments i riting to this address: Perm rograms Manager; Ne Mexico Environmer epartment; Air Quality Bureau 25 Camino de los Marquez uite 1; Santa Fe, New Mexico 7505-1816. Other comment nd questions may b ubmitted verbally. (505) 476 300; 1 800 224-7009.

With your comments, pleas efer to the company name an acility name, or send a copy c his notice along with you omments. This information i ecessary since th epartment may have not ye eceived the permit applicatior lease include a legible retur ailing address. Once th epartment has completed it reliminary review of th pplication and its air qualit mpacts, the Department' otice will be published in th egal section of a newspape irculated near the facilit ocation.

Atención
Este es un aviso de la oficin e Calidad del Aire d epartamento del Medi mbiente de Nuevo México cerca de las emisione roducidas por u establecimiento en esta área i usted desea información e spañol, por favc omuníquese con esa oficina a eléfono 505-629-3395.

Notice of Non-Discrimination
NMED does not discriminate o he basis of race, color, nationa rigin, disability, age or sex i he administration of it rograms or activities, a equired by applicable laws an egulations. NMED i esponsible for coordination c ompliance efforts and receip f inquiries concerning nor iscrimination requirement mplemented by 40 C.F.R. Pa , including Title VI of the Civ ights Act of 1964, a mended; Section 504 of th ehabilitation Act of 1973; th ge Discrimination Act of 1975

Private Legals

Title IX of the Education Amendments of 1972, and Section 13 of the Federal Water Pollution Control Act Amendments of 1972. If you have any questions about this notice or any of NMED's non-discrimination programs, policies or procedures, or if you believe that you have been discriminated against with respect to a NMED program or activity, you may contact: Non-Discrimination Coordinator, NMED, 1190 St. Francis Dr., Suite N4050, P.O. Box 5469, Santa Fe, NM 87502, (505) 827-2855, nd.coordinator@env.nm.gov. You may also visit our website at https://www.env.nm.gov/non-employee-discrimination-complaint-page/ to learn how and where to file a complaint of discrimination.

Published in Tri-City Record November 27, 2024

25327
Notice by Hilcorp Energy Company for Downhole Commingling, San Juan County, New Mexico. Pursuant to Paragraph (2) of Subsection C of 19.15.12.11 NMAC, Hilcorp Energy Company, as Operator, has filed form C-107A with the New Mexico Energy, Minerals and Natural Resources Department – Oil Conservation Division (NMOCD) seeking administrative approval to downhole commingle new production from the Blanco Mesaverde (72319) with existing production from the Basin Dakota (71599) in the **Grenier 023** well (API No. 30-045-23021) located in Unit M, Section 31, Township 31 North, Range 11 West, NMPM, San Juan County, New Mexico. Commingling will not reduce the value of production. Allocation method to be determined upon completion of this project. This notice is intended for certain unlocatable royalty interest owners in the aforementioned well for which certified mail delivery is not possible. Should you (the interest owner for which this notice is intended) have an objection, you are required to respond within twenty (20) days from the date of this publication. Please mail your objection letter, referencing the well details above, to the New Mexico Oil Conservation Division's Santa Fe office.

Published in Tri-City Record November 27, 2024

25353

STATE OF NEW MEXICO
COUNTY OF SAN JUAN
11th JUDICIAL DISTRICT COURT

No. D-1116-DM-2024-00462

JOSSELYN YORIBETH DUARTE DUARTE
Petitioner,

v.

MARIA FELIX DUARTE SEQUEIRA
DONALD JOSE DUARTE MENDOZA,

Private Legals

NOTICE OF PENDENCY OF ACTION

TO: Respondent, **DONALD JOSE DUARTE MENTOZA:**

You are hereby notified tha JOSSELYN YORIBETH DUARTE DUARTE, Petitioner has filed *a Petition in the Matte of the Kinship Guardian o K.Y.D.D,* requesting to be appointed guardian of the Mino child, K.Y.D.D. You have thirty (30) days to enter a response with the Eleventh Judicia District Court at [COURT ADDRESS] and send the same to Petitioner's attorney regarding this petition, if you do not enter a response and end the same to the Petitioner's attorney, the Cour may enter a default judgment in our absence.

Attorney for Petitioner is Sharon . Strange Stepler, Post Office Box 656633, Albuquerque, New Mexico 87193-5633, 505-537-335.

Honorable Judge Brandford J Dalley, District Judge of the Eleventh Judicial District Cour of the State of New Mexico, and he seal of the District Court o San Juan County, this 22nd day f November, 2024.

Published in Tri-City Record November 27, December 4, 11 024

25356
Notice is given that Any Size Storage located at 5827 Hwy 4 intends to sell or donate the personal property described below to enforce a lien imposed on the property as provided under the Self-Service Storage Lien Act of New Mexico on o after 12-7-24 Jenifer Tso, 2 Road 5389 #19, Misti Smith, Road 3776, Aide Molina, Road 5777, all of Farmington NM 87401

Published in Tri-City Record Nov. 27 and Dec. 4, 2024

Public Legals

5331
The Aztec Board of Education Board Meeting has been changed from Thursday, December 12, 2024, to Wednesday, December 11, 2024.
Special Meeting @ 4:00 p.m.
Working Meeting @ 5:00 p.m.
Regular Board Meeting @ 6:00 p.m.
This Board Meeting will be held at Central Office

Published in Tri-City Record November 27, 2024

5332
Aztec Board of Education

SPECIAL MEETING
December 11, 2024
4:00 PM
Board Room
1118 W Aztec BLVD
Aztec, New Mexico 87410

1. Call To Order
2. Verification of Quorum/Roll Call
3. Approval of Agenda*
4. Executive Session - The Board of Education Will Convene In a Closed Executive

Public Legals

Session As Permitted Under Section 10-15-1(H)(2) for Interim Superintendent's Evaluation
5. Adjournment

* Indicates action item.

The Board invites the viewpoints of citizens throughout the District and considers the responsible presentation of these viewpoints vital to the efficient operation of the District.

Notice – Individuals with disabilities who need any form of auxiliary aid to attend or participate in this meeting please contact the Superintendent's Secretary at 334-9474 at least 48 hours prior to the meeting. Upon request, public documents will be provided in the accessible form necessary to the individual requesting the particular aid. This agenda is to be posted at each school and at the Central Office of the Aztec Municipal School District. If duplicate copies are requested, a minimal fee may be charged.

This meeting is for discussion of items on the agenda only. Please refer to the pamphlet titled Welcome to a Board of Education Meeting in the Aztec Municipal School District for more information regarding public input at Board Meetings.

Published in Tri-City Record November 27, 2024

25340
CITY OF FARMINGTON, NEW MEXICO
NOTICE TO BIDDERS
Three Phase Padmount Transformers, Bid #25-160529
Opening Date: December 17, 2024 @ 2:00 P.M.

Bid documents may be retrieved by accessing the Purchasing page of the City of Farmington website at www.farmingtonnm.gov or by visiting the Central Purchasing Office at 805 Municipal Drive, Farmington, New Mexico.

The above document has been issued by the City of Farmington for a competitive solicitation.

Publication Date: November 27, 2024

25346
-NOTICE-

Invitation to Bid: 25-02600

TITLE: Cosmetology Student Kits

COMMODITY CODES: 095-00
PURPOSE: San Juan College seeks to establish a pricing agreement for student kits for the College's Cosmetology Program.

GENERAL INFORMATION: All questions about the contents of the ITB document shall be directed to: Biddingo, San Juan College's online procurement system: www.biddingo.com/sjc

ISSUANCE: The ITB will be issued on November 27, 2024. Those interested in obtaining a copy of the documents may

Public Legals

access and download them from the Internet at the following address: www.biddingo.com/sjc

BID DUE DATE AND TIME: The due date and time is December 9, 2024 at 2:00 p.m. MT. Bids must be uploaded to Biddingo, the College's online Purchasing System, www.biddingo.com/sjc, as soon as possible but no later than the due date and time.

Bids uploaded after the due date and time will not be accepted.

Published in Tri-City Record November 27, 2024

25369
PLANNING & ZONING COMMISSION
NOTICE OF PUBLIC HEARING

Notice is hereby given that the following agenda items will be presented to the Planning & Zoning Commission of the City of Farmington, New Mexico.

Petition ZC 24-91 – A request for a Zone Change from General Commercial to Industrial. Located within lot 2 of the Macnat Subdivision.

Petition ZC 24-92 – A request for a Zone Change from Single Family 7 to Multi-Family Medium Density. Located at 613 N. Wall Ave.

Petition PP 24-95 – A request from Joe & Stan, LLC, represented by Robert Echols, Cheney-Walters-Echols, Inc. for a Preliminary Plan approval for an 18-lot subdivision located in the City of Farmington's Tier II Planning & Platting Jurisdiction. Located at lot R6002199 - Directly west of Little Creek Subdivision Phase VIII

Petition ZC 24-100 – A request for a Zone Change from Single Family 7 to General Commercial. Located at 6401 and 6405 E. Main St.

Petition ZC 24-101 – A request for a Zone Change from General Commercial to Mixed Use. Located at the SE corner of Locke St. and Animas St. (Parcel No. R0025384)

Pursuant to the provisions of Section 3-21-6, New Mexico Statutes Annotated, 1978 Compilation, notice is hereby given that items listed above will be considered at the regularly scheduled public hearing of the Planning & Zoning Commission of the City of Farmington on **Thursday, December 12, 2024 at 3:00 p.m.** in the City Council Chambers, City Hall, 800 Municipal Drive, Farmington, New Mexico. All persons of interest are invited to attend and shall have an opportunity to be heard.

Tami Spencer
Administrative Assistant
505-599-1301

Published in Tri-City Record November 27, 2024

BALLANTINE
COMMUNICATIONS

AFFIDAVIT OF PUBLICATION

STATE OF NEW MEXICO

County of San Juan

_____, the undersigned, authorized Representative of the Tri-City Record, on oath states that this newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Session Law of 1937, that payment therefore has been made of assessed as court cost; and that the notice, copy of which is hereto attached, was published in said paper in the regular daily edition, for ___ time(s) on the following date(s):

11/27/2024

Sworn and subscribed before me, a notary public in and for the county of La Plata and the State of Colorado, 11/27/2024.

Notary Public

PRICE: 1,706.12

Statement to come at the end of the month.

ACCOUNT NUMBER: 111170

CASSANDRA RAMIREZ
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID 20234009147
MY COMMISSION EXPIRES MARCH 09, 2027

COPY OF ADVERTISEMENT

25317

NOTICE OF AIR QUALITY PERMIT APPLICATION

Vernon Hamilton Construction Company (VHCC), LLC announces its application submittal to the New Mexico Environment Department for a new minor source NSR permit application for an Air Quality Permit. The permit is for the VHCC's Kirtland Pit which processes aggregate material. The expected date of application submittal to the Air Quality Bureau is December 2, 2024.

The address for the facility known as, VHCC's Kirtland Pit, is 32 Rd 6210, Kirtland, NM. The exact location of the VHCC's Kirtland Pit is at Latitude (decimal degrees): 36.743919 and Longitude (decimal degrees): -108.333753. The approximate location of this facility is 0.7 miles east-southeast of Kirtland in San Juan County.

The function of the facility is to crush and screen aggregate material from the on-site quarry into usable construction sand and gravel.

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Pollutant:
Maximum
Pounds per hour
Maximum

Tons per year
PM 10 15.4 pph 7.2 tpy
PM 2.5 2.9 pph 2.7 tpy
Sulfur Dioxide (SO2) 0.013 pph 0.029 tpy
Nitrogen Oxides (NOx) 15.9 pph 34.6 tpy
Carbon Monoxide (CO) 19.3 pph 42.0 tpy
Volatile Organic Compounds (VOC) 2.1 pph 4.7 tpy
Total sum of all Hazardous Air Pollutants (HAPs) 0.052 pph 0.11 tpy
Toxic Air Pollutant (TAP) 0.0003 pph 0.0008 tpy
Green House Gas Emissions as Total CO2e n/a 1676 tpy

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The owner and/or operator mailing address for the Facility is:
Vernon Hamilton Construction Company, LLC
P.O. Box 1110
Gallup, NM 87305

If you have any comments about the construction or operation of this facility, and you want your comments to be made as part of the permit

made as part of the permit review process, you must submit your comments in writing to this address: Permit Programs Manager; New Mexico Environment Department; Air Quality Bureau; 525 Camino de los Marquez, Suite 1; Santa Fe, New Mexico; 87505-1816. Other comments and questions may be submitted verbally. (505) 476-4300; 1 800 224-7009.

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

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Published in Tri-City Record
November 27, 2024

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The function of the facility is to crush and screen aggregate material from the on-site quarry into usable construction sand and gravel.

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Nitrogen Oxides (NO_x)	15.9 pph	34.6 tpy
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Volatile Organic Compounds (VOC)	2.1 pph	4.7 tpy
Total sum of all Hazardous Air Pollutants (HAPs)	0.052 pph	0.11 tpy
Toxic Air Pollutant (TAP)	0.0003 pph	0.008 tpy
Green House Gas Emissions as Total CO_2	N/A	1676 tpy

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ANNA PADILLA/Source New Mexico file

A solar panel is seen at Positive Energy Solar on Sept. 11, 2023.

Community solar developers still waiting on PRC to make decisions

The commission may issue an order this week, months after developers expected it to be made

BY HANNAH GROVER
NM POLITICAL REPORT

Before community solar developers can look for potential subscribers, they need to know exactly how receiving a portion or all of a customer's electricity from a community array will benefit that household or organization.

The New Mexico Public Regulation Commission has not reached an agreement on some of the key aspects to determining those benefits.

The commission may issue an order this week that could at least provide some new clarity, but developers expected an answer to those questions months ago and some are feeling frustrated by the delay. While developers hope for more clarity, the commission could also decide to take more time reviewing the issues, including opening a new rulemaking docket into bill credits.

The potential order that the PRC will consider during its Tuesday meeting comes after it punted on the decision in its last meeting.

During its last meeting, Commissioner James Ellison proposed a new rulemaking focused on the bill credits. Ellison said the current rule closely mirrors language in the Community Solar Act, but he argued that it does not "clarify or operationalize" the statute.

Kevin Cray with the Coalition for Community Solar Access said he was "a little caught off guard" when the commission began discussing closing the existing docket without any resolution and opening a new rulemaking to revisit the credit rate "which has already gone to the (New Mexico) Supreme Court for adjudication."

He said the state Supreme Court already affirmed that the rate credit aligned with state statute.

"I guess I'm unclear whether that subsequent docket would even come to a different conclusion, and then they'd still need to come back and make all the same decisions that are before right now," Cray said.

During the commission meeting, Commissioner Gabriel Aguilera expressed concerns that the commission could end up in a similar place after the potential rulemaking.

Cray said that a new rulemaking could "punt this

See SOLAR, 6A

BALLANTINE
COMMUNICATIONS

AFFIDAVIT OF PUBLICATION

STATE OF NEW MEXICO

County of San Juan

Odette Zorrizo, the undersigned, authorized Representative of the Tri-City Record, on oath states that this newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Session Law of 1937, that payment therefore has been made of assessed as court cost; and that the notice, copy of which is hereto attached, was published in said paper in the regular daily edition, for 1 time(s) on the following date(s):

11/27/2024

Sworn and subscribed before me, a notary public in and for the county of La Plata and the State of Colorado, 12/3/2024.

Notary Public

PRICE: 1,706.12

Statement to come at the end of the month.

ACCOUNT NUMBER: 111170

CASSANDRA RAMIREZ
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID 20234009147
MY COMMISSION EXPIRES MARCH 09, 2027

COPY OF ADVERTISEMENT

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November 20, 2024

CERTIFIED MAIL

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Sincerely,

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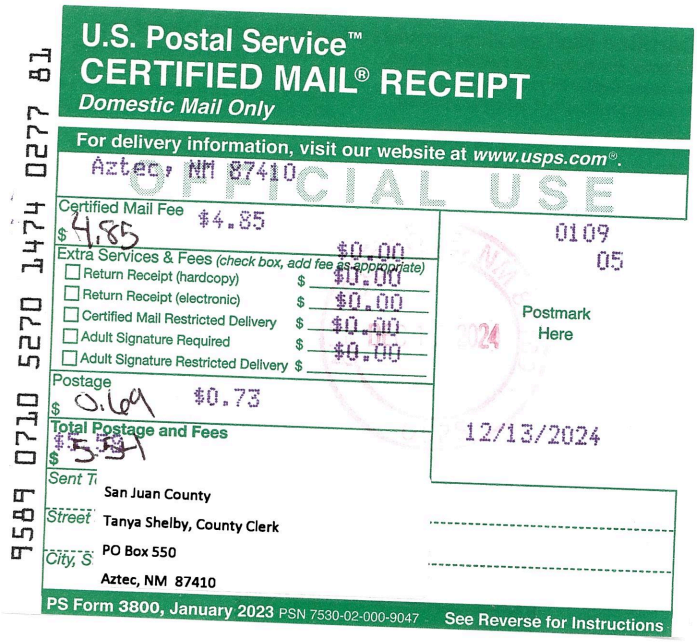
Government Entities within 10 Miles
November 2024

San Juan County	Tanya Shelby, County Clerk	PO Box 550	Aztec	NM	87410
City of Farmington	Andrea Jones, City Clerk	800 Municipal Drive	Farmington	NM	87401
Town of Kirtland	Jonathan LaMone, Town Clerk	47 Rd 6500	Kirtland	NM	87417
Navajo Nation EPA	Stephan B. Etsitty, Executive Directo	PO Box 339	Window Rock	AZ	86515



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Aztec, NM 87410

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Certified Mail Fee $4.85
$ 4.85

Extra Services & Fees (check box, add fee as appropriate)
- Return Receipt (hardcopy) $ $0.00
- Return Receipt (electronic) $ $0.00
- Certified Mail Restricted Delivery $ $0.00
- Adult Signature Required $ $0.00
- Adult Signature Restricted Delivery $

Postage $0.73
$ 0.69

Total Postage and Fees
$ 5.54

Sent To: San Juan County
Street: Tanya Shelby, County Clerk
City, S: PO Box 550
Aztec, NM 87410

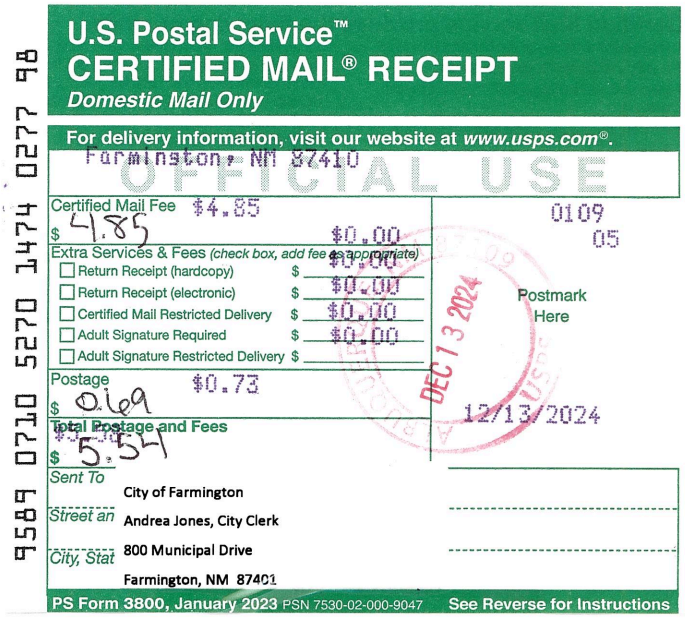
0109 05

Postmark Here

12/13/2024

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions

9589 0710 5270 1474 0277 81



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Farmington, NM 87410

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- Adult Signature Required $ $0.00
- Adult Signature Restricted Delivery $

Postage $0.73
$ 0.69

Total Postage and Fees
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Sent To: City of Farmington
Street an: Andrea Jones, City Clerk
City, Stat: 800 Municipal Drive
Farmington, NM 87401

0109 05

Postmark Here

DEC 13 2024

12/13/2024

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions

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Kirtland, NM 87417

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- Certified Mail Restricted Delivery $ $0.00
- Adult Signature Required $ $0.00
- Adult Signature Restricted Delivery $

Postage $0.73
$ 0.69

Total Postage and Fees
$ 5.54

Sent To: Town of Kirtland
Street ai: Jonathan LaMone, Town Clerk
City, Sta: 47 Rd 6500
Kirtland, NM 87417

0109 05

Postmark Here

DEC 13 2024

12/13/2024

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions

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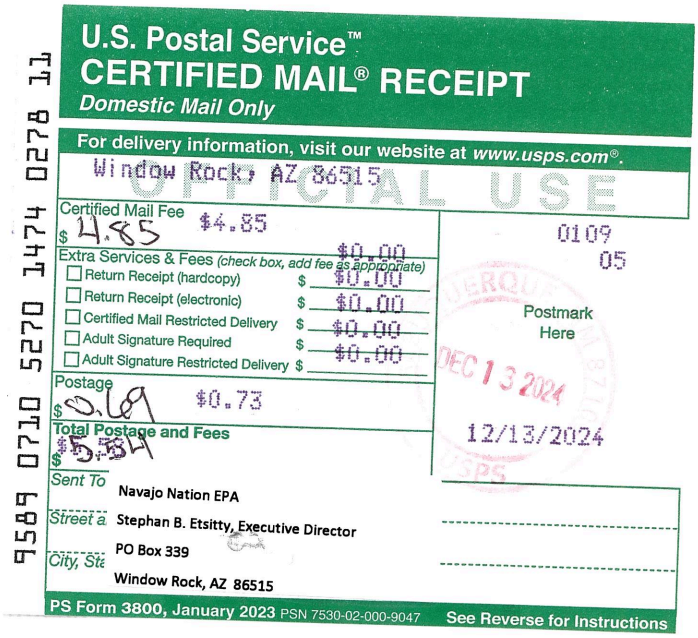

U.S. Postal Service™
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Window Rock, AZ 86515

OFFICIAL USE

Certified Mail Fee $4.85
$ 4.85

Extra Services & Fees (check box, add fee as appropriate)
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- Return Receipt (electronic) $ $0.00
- Certified Mail Restricted Delivery $ $0.00
- Adult Signature Required $ $0.00
- Adult Signature Restricted Delivery $

Postage $0.73
$ 0.69

Total Postage and Fees
$ 5.54

Sent To: Navajo Nation EPA
Street a: Stephan B. Etsitty, Executive Director
City, Sta: PO Box 339
Window Rock, AZ 86515

0109 05

Postmark Here

DEC 13 2024

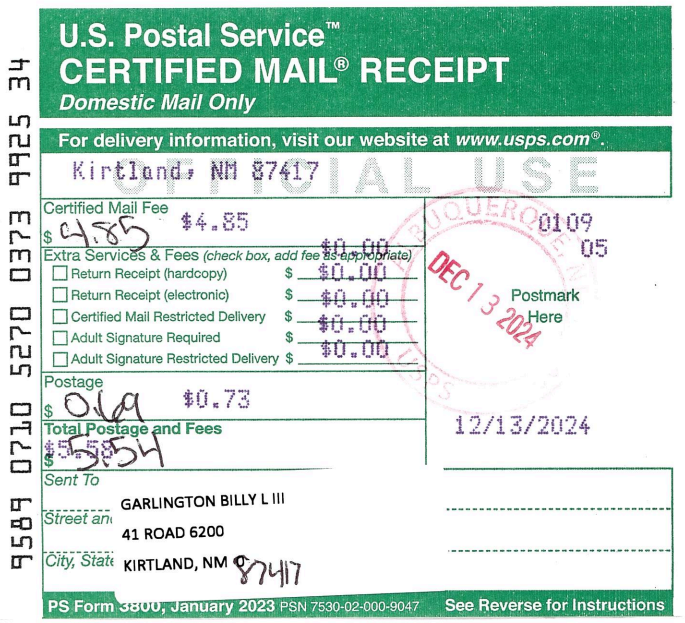
12/13/2024

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions

9589 0710 5270 1474 0278 11

Landowners within 100 FEET
November 2024

NAME	ADDRESS1	CITY	STATE	ZIPCODE
ANCHONDO JOEL	6 ROAD 6212	KIRTLAND	NM	87417
ANDREWS DANNY	47 ROAD 6200	KIRTLAND	NM	87417
BEGAY RENAE LEE	34 ROAD 6406	KIRTLAND	NM	87417
BEGAY SHAYNE D	15 ROAD 6207	KIRTLAND	NM	87417
BEGAY VIDA A	PO BOX 3206	INDIAN WELLS	AZ	86031
BETONEY COURTNEY AMBER	10 ROAD 6212	KIRTLAND	NM	87417
BOLACK TOMMY TRUST	3901 BLOOMFIELD HWY	FARMINGTON	NM	87401
BOUGEANT CHRETIEN J	1 ROAD 6207	KIRTLAND	NM	87417
BROWN LARRY AND MORRIS BROWN BONNIE JEAN	PO BOX 1034	FRUITLAND	NM	87416-1034
CARLSTON PETER AND MAGGIE	13 ROAD 6193	KIRTLAND	NM	87417
CHRISTIANSON DAVID AND MELISSA J	9 ROAD 6193	KIRTLAND	NM	75231-4466
DAN LILLIE	PO BOX 2004	KIRTLAND	NM	87417-2004
DELANEY WELDON V JR AND LOLITA	2305 E 14TH ST	FARMINGTON	NM	87401
DENETCLAW JATONNA	PO BOX 1004	KIRTLAND	NM	87417
DIAMOND D CONSTRUCTION CO INC	PO BOX 1841	KIRTLAND	NM	87417
EATON BESSIE M ET AL	PO BOX 3493	SHIPROCK	NM	87027-0065
EMERSON LUCINDA A REVOCABLE LIVING TRUST	8 ROAD 6212	KIRTLAND	NM	87417
F AND D HOLDINGS LLC	5011 TAMPICO WAY	FARMINGTON	NM	87402
GARLINGTON BILLY L III	41 ROAD 6200	KIRTLAND	NM	87417-0000
HATATHLE ARNOLD AND DENISE	18 ROAD 6207	KIRTLAND	NM	87417
HENDRIX BRADLEY D AND CATHY B TRUST	PO BOX 814	KIRTLAND	NM	87417-0000
HORSLEY PATRICK B AND TRACY V	9 ROAD 6207	KIRTLAND	NM	87417-0000
HWY 64 TRUCK AND AUTO SALVAGE LLC	4551 US 64	FARMINGTON	NM	87401
INGRAHAM RONALD	3480 LA PLATA HWY	FARMINGTON	NM	87401
INVESTORS TRUST LC C/O1	31 ROAD 6195	KIRTLAND	NM	87417
ISBELL DOROTHY L	6440 HAWKEYE ST	FARMINGTON	NM	87402
JAKE EVANGELINE	7 ROAD 6207	KIRTLAND	NM	87417
JARAMILLO STEVEN D AND DANA S	5 ROAD 6207	KIRTLAND	NM	87013
KIDDIE TODD B	7 ROAD 6193	KIRTLAND	NM	87048-9104
KIRTLAND 6406 LLC ATTN SCULLY RUBY D AND	10206 ARVILLA AVE NE	ALBUQUERQUE	NM	87111
KRIEG ERIC W AND FREDRICA	3 ROAD 6207	KIRTLAND	NM	75231-4466
KUECKS GEORGE J TRUSTEES	19 ROAD 6193	KIRTLAND	NM	87417-9329
KUECKS HOLLY	37 ROAD 6195	KIRTLAND	NM	87417
LEE CALVIN	PO BOX 313	FRUITLAND	NM	87416-0313
LINK THOMAS G	4346 US 64	KIRTLAND	NM	87417
LOGG MELLISA	PO BOX 3301	KIRTLAND	NM	87417
LUCERO OSCAR M ET AL	PO BOX 1412	FRUITLAND	NM	87013
MOORE LEONARD BRYAN TRUST	PO BOX 1753	KIRTLAND	NM	87417
REBELES TED AND DANIELLE	14 ROAD 6212	KIRTLAND	NM	87417
RENDON REBECCA JEAN	2 ROAD 6212	KIRTLAND	NM	87417
RIVERA DORIS AND SABINO	PO BOX 415	CANJILON	NM	87515
ROOTS PROPERTIES LLC	2012 SAN JUAN BLVD	FARMINGTON	NM	87401
ROSE LARSON ENTERPRISES LLC	PO BOX 3704	GLENDALE	AZ	85311
SEYFERT DENNIS R	45 ROAD 6200	KIRTLAND	NM	87417
SHORTY LINDA	40 ROAD 6406	KIRTLAND	NM	87417-9436
SHORTY MICHAEL AND SHERRI A	21 ROAD 6195	KIRTLAND	NM	87417-9332
SILVA JAMES R	PO BOX 403	KIRTLAND	NM	87417-0403
SINGLETON SHERMANN SAMALA TRUST	2001 E MAIN ST	FARMINGTON	NM	87401-7713
SMALLCANYON ALBERTA	13 ROAD 6207	KIRTLAND	NM	87417
STEVENSON CALVIN AND LENA	PO BOX 504	FRUITLAND	NM	87416-0504
TAPAHA JOHN DAVID AND ROSIE	4 ROAD 6209	KIRTLAND	NM	87417-9745
TSO ROBERT J AND LAPRINCESS D	7 ROAD 6206	KIRTLAND	NM	87417
VAN ARSDALE GERALD L AND MARY L	43 ROAD 6200	KIRTLAND	NM	87417
VAZQUEZ KARLA JACELL AND VAZQUEZ DOMINQU	12 ROAD 6212	KIRTLAND	NM	87417
WILLIS ALICE E	5 ROAD 6193	KIRTLAND	NM	87417-0000
WILLIS BOBBY L AND CARRIE S	PO BOX 377	KIRTLAND	NM	87417
YAZZIE JOE B AND NORMA	37 ROAD 6195	KIRTLAND	NM	87417-0000



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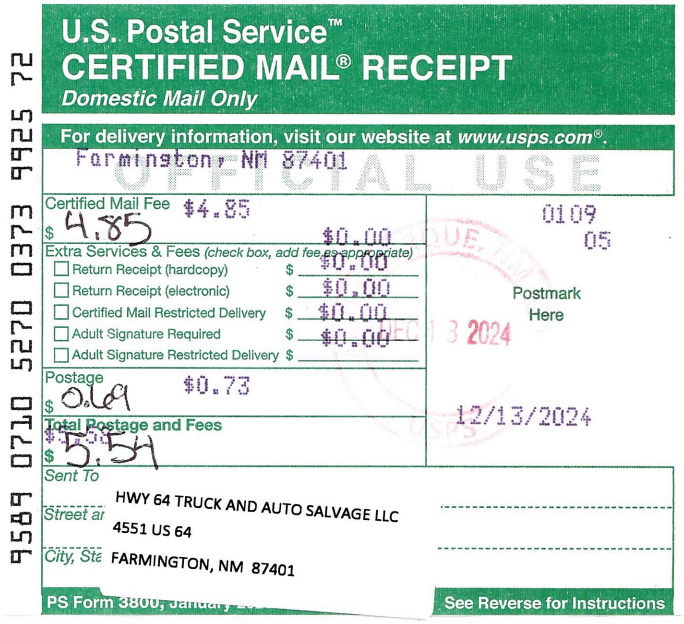
Sent To: GARLINGTON BILLY L III
Street and: 41 ROAD 6200
City, State: KIRTLAND, NM 87417

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions

9589 0710 5270 0373 9925 34



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Sent To: HWY 64 TRUCK AND AUTO SALVAGE LLC
Street and: 4551 US 64
City, State: FARMINGTON, NM 87401

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9589 0710 5270 0373 9925 72

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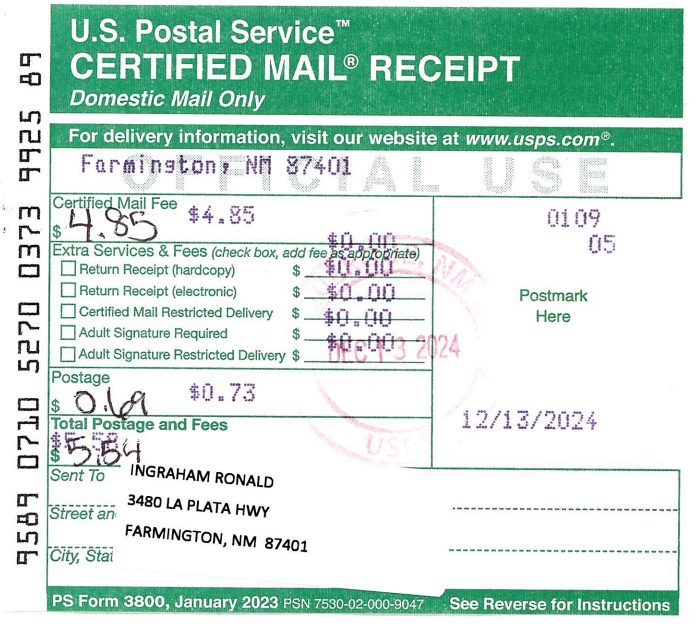
Sent To: HATATHLE ARNOLD AND DENISE
Street and: 18 ROAD 6207
City, State: KIRTLAND, NM 87417

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions

9589 0710 5270 0373 9925 41



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Sent To: INGRAHAM RONALD
Street and: 3480 LA PLATA HWY
City, State: FARMINGTON, NM 87401

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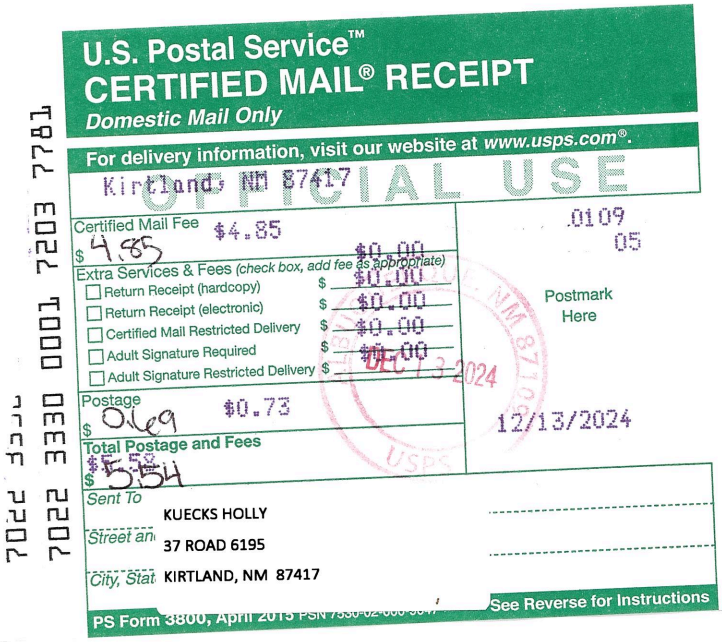
9589 0710 5270 0373 9925 89



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Sent To: KUECKS HOLLY
Street and: 37 ROAD 6195
City, State: KIRTLAND, NM 87417

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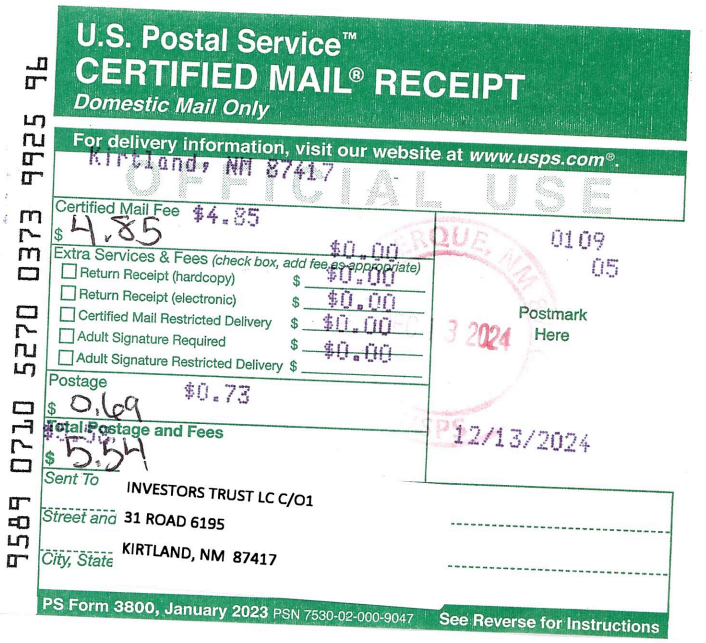
7022 3330 0001 7203 7781



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Sent To: INVESTORS TRUST LC C/O1
Street and: 31 ROAD 6195
City, State: KIRTLAND, NM 87417

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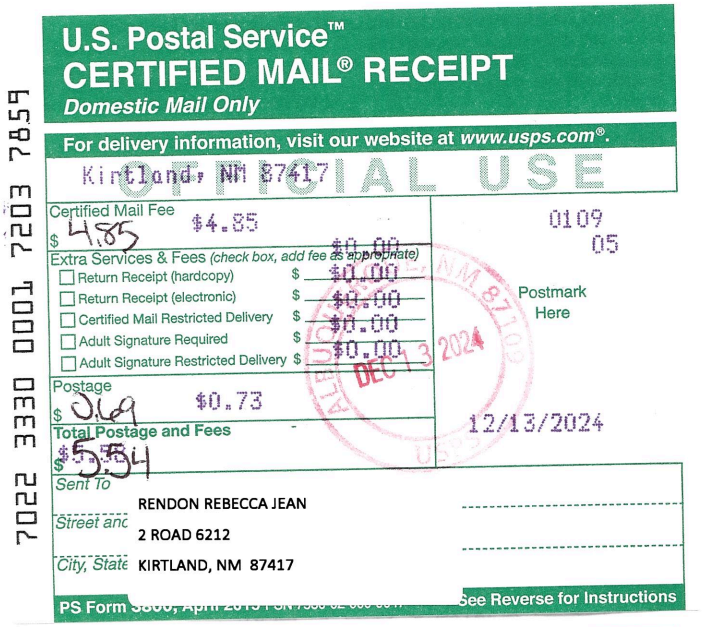
9589 0710 5270 0373 9925 96



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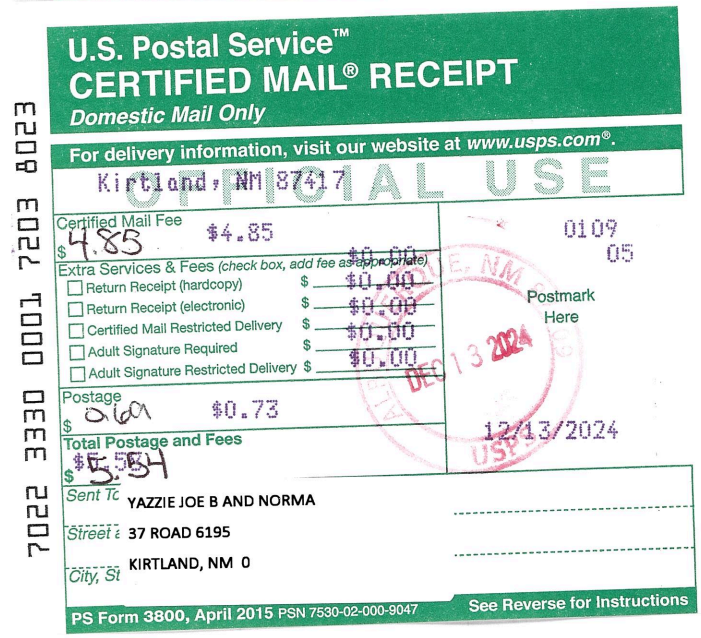
Sent To RENDON REBECCA JEAN
Street and 2 ROAD 6212
City, State KIRTLAND, NM 87417

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7022 3330 0001 7203 7859



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Postage $0.73
Total Postage and Fees $5.54

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Sent To YAZZIE JOE B AND NORMA
Street and 37 ROAD 6195
City, State KIRTLAND, NM 0

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7022 3330 0001 7203 8023

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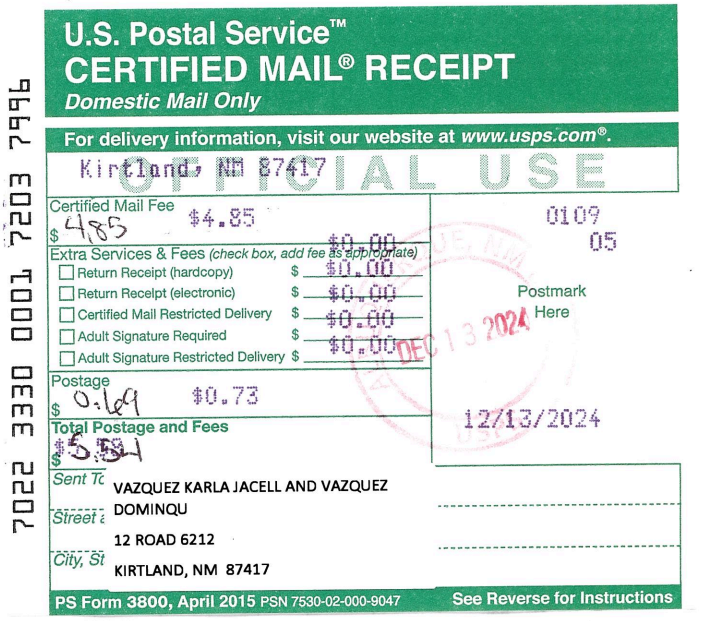
Sent To WILLIS ALICE E
Street and 5 ROAD 6193
City, State KIRTLAND, NM 87417

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7022 3330 0001 7203 8009



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- Adult Signature Restricted Delivery $

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Sent To VAZQUEZ KARLA JACELL AND VAZQUEZ DOMINQU
Street and 12 ROAD 6212
City, State KIRTLAND, NM 87417

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7022 3330 0001 7203 7996

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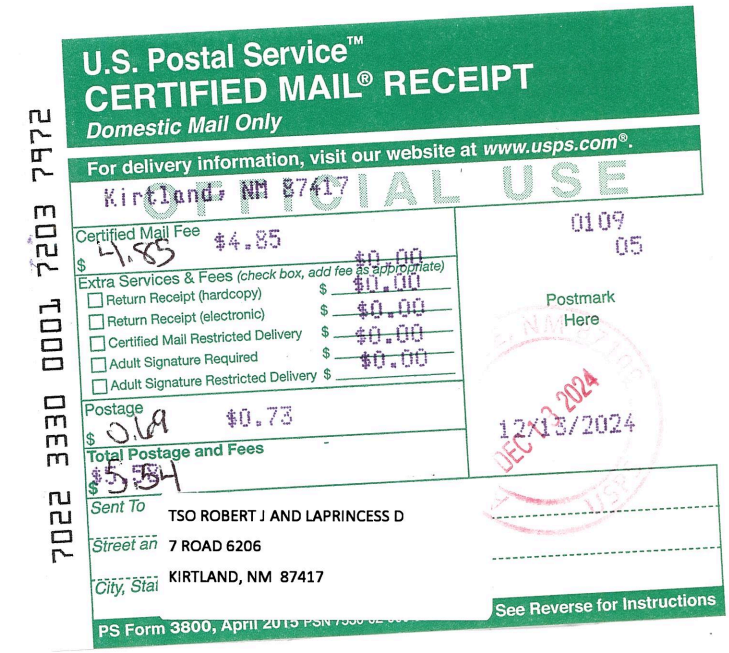
Sent To VAN ARSDALE GERALD L AND MARY L
Street and 43 ROAD 6200
City, State KIRTLAND, NM 87417

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7022 3330 0001 7203 7989



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- Adult Signature Restricted Delivery $

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DEC 13 2024
12/13/2024

Sent To TSO ROBERT J AND LAPRINCESS D
Street and 7 ROAD 6206
City, State KIRTLAND, NM 87417

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7022 3330 0001 7203 7972

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- Adult Signature Restricted Delivery $

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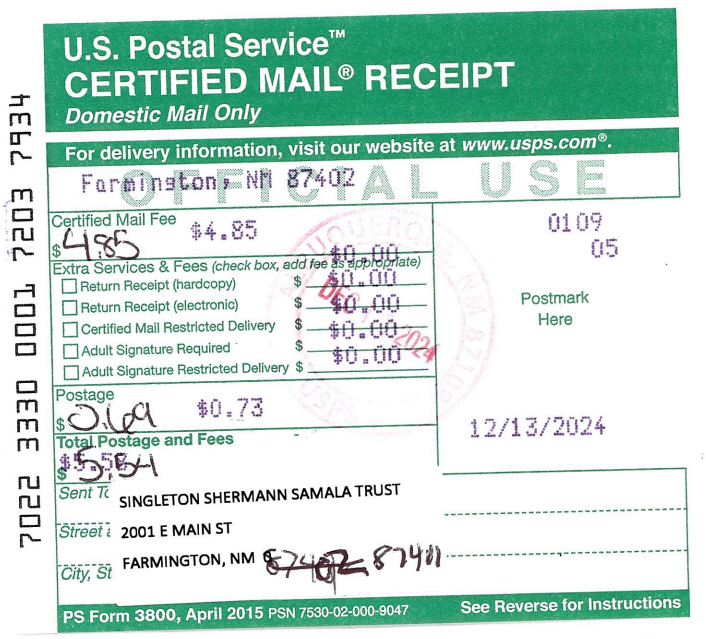
Sent To: TAPAHA JOHN DAVID AND ROSIE
Street: 4 ROAD 6209
City, St: KIRTLAND, NM 87417

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7022 3330 0001 7203 7965



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- Adult Signature Restricted Delivery $

Postage $0.73
Total Postage and Fees $5.54

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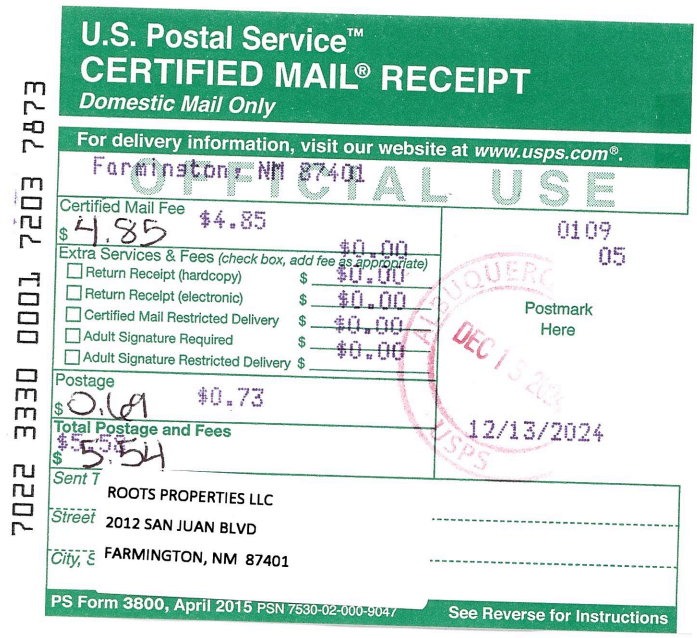
Sent To: SINGLETON SHERMANN SAMALA TRUST
Street: 2001 E MAIN ST
City, St: FARMINGTON, NM 87401

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7022 3330 0001 7203 7934



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- Adult Signature Required $0.00
- Adult Signature Restricted Delivery $

Postage $0.73
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Sent To: ROOTS PROPERTIES LLC
Street: 2012 SAN JUAN BLVD
City, St: FARMINGTON, NM 87401

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Sent To: EMERSON LUCINDA A REVOCABLE LIVING TRUST
Street and: 8 ROAD 6212
City, State: KIRTLAND, NM 87417

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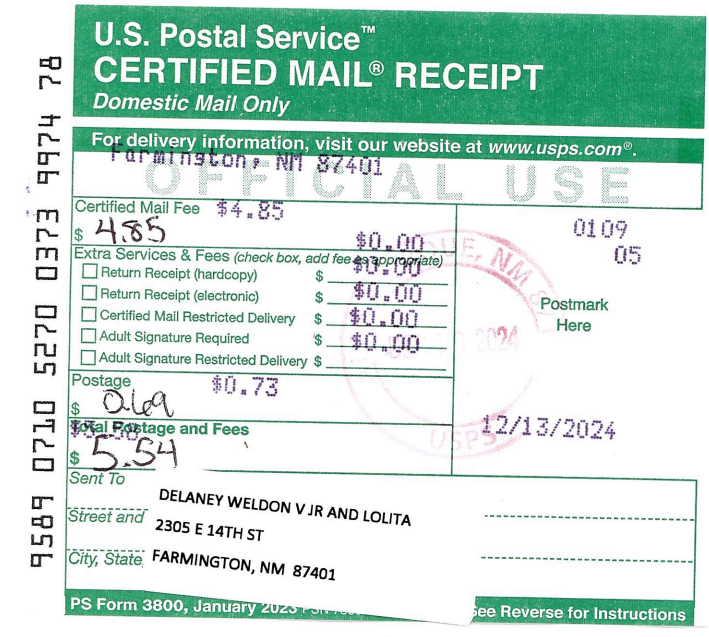
9589 0710 5270 0373 9925 10



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- Adult Signature Required $0.00
- Adult Signature Restricted Delivery $

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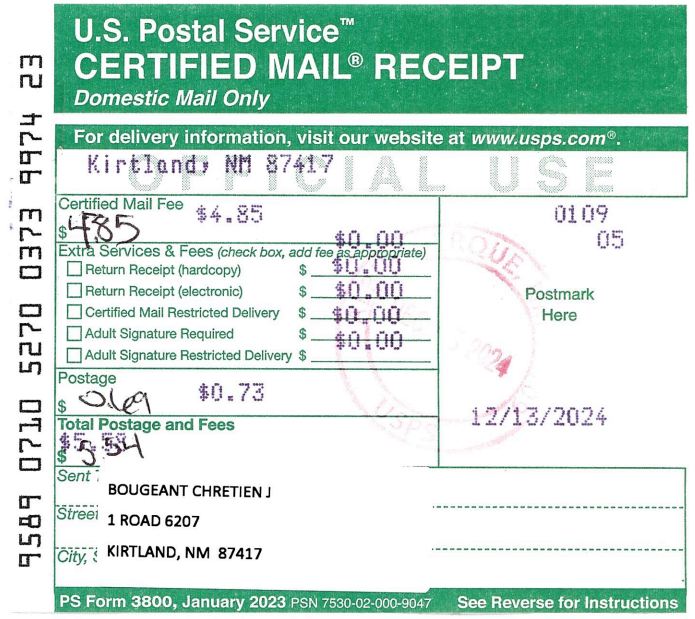
Sent To: DELANEY WELDON V JR AND LOLITA
Street and: 2305 E 14TH ST
City, State: FARMINGTON, NM 87401

PS Form 3800, January 2023 PSN [illegible] See Reverse for Instructions

9589 0710 5270 0373 9974 78



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- Certified Mail Restricted Delivery $0.00
- Adult Signature Required $0.00
- Adult Signature Restricted Delivery $

Postage $0.73
Total Postage and Fees $5.54

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12/13/2024

Sent To: BOUGEANT CHRETIEN J
Street: 1 ROAD 6207
City, St: KIRTLAND, NM 87417

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions

9589 0710 5270 0373 9974 23

9589 0710 5270 0373 9974 16

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☐ Adult Signature Required $ $0.00	
☐ Adult Signature Restricted Delivery $	
Postage $0.73	
$ 0.69	12/13/2024
Total Postage and Fees	
$ 5.54	

Sent To: BOLACK TOMMY TRUST
Street and Ap: 3901 BLOOMFIELD HWY
City, State, Zi: FARMINGTON, NM 87401

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions

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Certified Mail Fee $4.85	0109
$ 4.85 $0.00	05
Extra Services & Fees (check box, add fee as appropriate)	
☐ Return Receipt (hardcopy) $ $0.00	
☐ Return Receipt (electronic) $ $0.00	Postmark Here
☐ Certified Mail Restricted Delivery $ $0.00	
☐ Adult Signature Required $ $0.00	
☐ Adult Signature Restricted Delivery $	
Postage $0.73	
$ 0.69	12/13/2024
Total Postage and Fees	
$ 5.54	

Sent To: BEGAY RENAE LEE
Street a: 34 ROAD 6406
City, St: KIRTLAND, NM 87417

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions

9589 0710 5270 0373 9974 09

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$ 4.85 $0.00	05
Extra Services & Fees (check box, add fee as appropriate)	
☐ Return Receipt (hardcopy) $ $0.00	
☐ Return Receipt (electronic) $ $0.00	Postmark Here
☐ Certified Mail Restricted Delivery $ $0.00	
☐ Adult Signature Required $ $0.00	
☐ Adult Signature Restricted Delivery $	
Postage $0.73	
$ 0.69	12/13/2024
Total Postage and Fees	
$ 5.54	

Sent To: BETONEY COURTNEY AMBER
Street ar: 10 ROAD 6212
City, Sta: KIRTLAND, NM 87417

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions

9589 0710 5270 0373 9973 79

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$ 4.85 $0.00	05
Extra Services & Fees (check box, add fee as appropriate)	
☐ Return Receipt (hardcopy) $ $0.00	
☐ Return Receipt (electronic) $ $0.00	Postmark Here
☐ Certified Mail Restricted Delivery $ $0.00	
☐ Adult Signature Required $ $0.00	
☐ Adult Signature Restricted Delivery $	
Postage $0.73	
$ 0.69	12/13/2024
Total Postage and Fees	
$ 5.54	

Sent To: ANDREWS DANNY
Street an: 47 ROAD 6200
City, Stat: KIRTLAND, NM 87417

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions

9589 0710 5270 0373 9973 93

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Certified Mail Fee $4.85	0109
$ 4.85 $0.00	05
Extra Services & Fees (check box, add fee as appropriate)	
☐ Return Receipt (hardcopy) $ $0.00	
☐ Return Receipt (electronic) $ $0.00	Postmark Here
☐ Certified Mail Restricted Delivery $ $0.00	
☐ Adult Signature Required $ $0.00	
☐ Adult Signature Restricted Delivery $	
Postage $0.73	
$ 0.69	12/13/2024
Total Postage and Fees	
$ 5.54	

Sent To: BEGAY SHAYNE D
Street and A: 15 ROAD 6207
City, State, : KIRTLAND, NM 87417

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions

9589 0710 5270 0373 9974 47

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Certified Mail Fee $4.85	0109
$ 4.85 $0.00	05
Extra Services & Fees (check box, add fee as appropriate)	
☐ Return Receipt (hardcopy) $ $0.00	
☐ Return Receipt (electronic) $ $0.00	Postmark Here
☐ Certified Mail Restricted Delivery $ $0.00	
☐ Adult Signature Required $ $0.00	
☐ Adult Signature Restricted Delivery $	
Postage $0.73	
$ 0.69	12/13/2024
Total Postage and Fees	
$ 5.54	

Sent To: CARLSTON PETER AND MAGGIE
Street and: 13 ROAD 6193
City, Stat: KIRTLAND, NM 87417

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions

9589 0710 5270 0373 9973 55

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Certified Mail Fee $4.85	0109 05
Extra Services & Fees (check box, add fee as appropriate)	
☐ Return Receipt (hardcopy) $ $0.00	
☐ Return Receipt (electronic) $ $0.00	Postmark Here
☐ Certified Mail Restricted Delivery $ $0.00	
☐ Adult Signature Required $ $0.00	
☐ Adult Signature Restricted Delivery $	
Postage $0.73	
$ 0.69	
Total Postage and Fees	12/13/2024
$ 5.54	

Sent To: ANCHONDO JOEL
Street a: 6 ROAD 6212
City, Sta: KIRTLAND, NM 87417

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions

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7022 3330 0001 7203 7941

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Extra Services & Fees (check box, add fee as appropriate)	
☐ Return Receipt (hardcopy) $ $0.00	
☐ Return Receipt (electronic) $ $0.00	Postmark Here
☐ Certified Mail Restricted Delivery $ $0.00	
☐ Adult Signature Required $ $0.00	
☐ Adult Signature Restricted Delivery $	
Postage $0.73	
$ 0.69	
Total Postage and Fees	12/13/2024
$ 5.54	

Sent To: SMALLCANYON ALBERTA
Street and: 13 ROAD 6207
City, Stat: KIRTLAND, NM 87417

PS Form 3800, April [illegible] See Reverse for Instructions

9589 0710 5270 0373 9974 54

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Certified Mail Fee $4.85	0109 05
Extra Services & Fees (check box, add fee as appropriate)	
☐ Return Receipt (hardcopy) $ $0.00	
☐ Return Receipt (electronic) $ $0.00	Postmark Here
☐ Certified Mail Restricted Delivery $ $0.00	
☐ Adult Signature Required $ $0.00	
☐ Adult Signature Restricted Delivery $	
Postage $0.73	
$ 0.69	
Total Postage and Fees	12/13/2024
$ 5.54	

Sent To: CHRISTIANSON DAVID AND MELISSA J
Street an: 9 ROAD 6193
City, Sta: KIRTLAND, NM 87417

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions

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7022 3330 0001 7203 7903

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Certified Mail Fee $4.85	0109 05
Extra Services & Fees (check box, add fee as appropriate)	
☐ Return Receipt (hardcopy) $ $0.00	
☐ Return Receipt (electronic) $ $0.00	Postmark Here
☐ Certified Mail Restricted Delivery $ $0.00	
☐ Adult Signature Required $ $0.00	
☐ Adult Signature Restricted Delivery $	
Postage $0.73	
$ 0.69	
Total Postage and Fees	12/13/2024
$ 5.54	

Sent To: SHORTY LINDA
Street and: 40 ROAD 6406
City, State: KIRTLAND, NM 87417

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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7022 3330 0001 7203 7910

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Extra Services & Fees (check box, add fee as appropriate)	
☐ Return Receipt (hardcopy) $ $0.00	
☐ Return Receipt (electronic) $ $0.00	Postmark Here
☐ Certified Mail Restricted Delivery $ $0.00	
☐ Adult Signature Required $ $0.00	
☐ Adult Signature Restricted Delivery $	
Postage $0.73	
$ 0.69	
Total Postage and Fees	12/13/2024
$ 5.54	

Sent To: SHORTY MICHAEL AND SHERRI A
Street and: 21 ROAD 6195
City, State: KIRTLAND, NM 87417

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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7022 3330 0001 7203 7897

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Certified Mail Fee $4.85	0109 05
Extra Services & Fees (check box, add fee as appropriate)	
☐ Return Receipt (hardcopy) $ $0.00	
☐ Return Receipt (electronic) $ $0.00	Postmark Here
☐ Certified Mail Restricted Delivery $ $0.00	
☐ Adult Signature Required $ $0.00	
☐ Adult Signature Restricted Delivery $	
Postage $0.73	
$ 0.69	
Total Postage and Fees	12/13/2024
$ 5.54	

Sent To: SEYFERT DENNIS R
Street a: 45 ROAD 6200
City, Sta: KIRTLAND, NM 87417

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- Return Receipt (electronic) $0.00
- Certified Mail Restricted Delivery $0.00
- Adult Signature Required $0.00
- Adult Signature Restricted Delivery $

Postage $0.73
Total Postage and Fees $5.54

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12/13/2024

Sent To: SILVA JAMES R
Street and: PO BOX 403
City, State: KIRTLAND, NM 87417

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7022 3330 0001 7203 7927

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- Return Receipt (hardcopy) $0.00
- Return Receipt (electronic) $0.00
- Certified Mail Restricted Delivery $0.00
- Adult Signature Required $0.00
- Adult Signature Restricted Delivery $

Postage $0.73
Total Postage and Fees $5.54

0109 05

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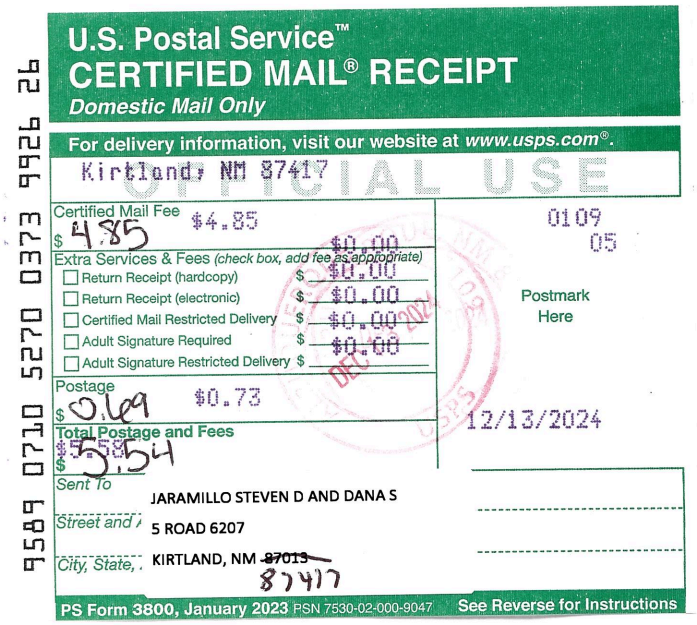
DEC 13 2024

12/13/2024

Sent To: KRIEG ERIC W AND FREDRICA
Street and: 3 ROAD 6207
City, State: KIRTLAND, NM 87417

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7022 3330 0001 7203 7767



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Extra Services & Fees (check box, add fee as appropriate)
- Return Receipt (hardcopy) $0.00
- Return Receipt (electronic) $0.00
- Certified Mail Restricted Delivery $0.00
- Adult Signature Required $0.00
- Adult Signature Restricted Delivery $

Postage $0.73
Total Postage and Fees $5.54

0109 05

Postmark Here

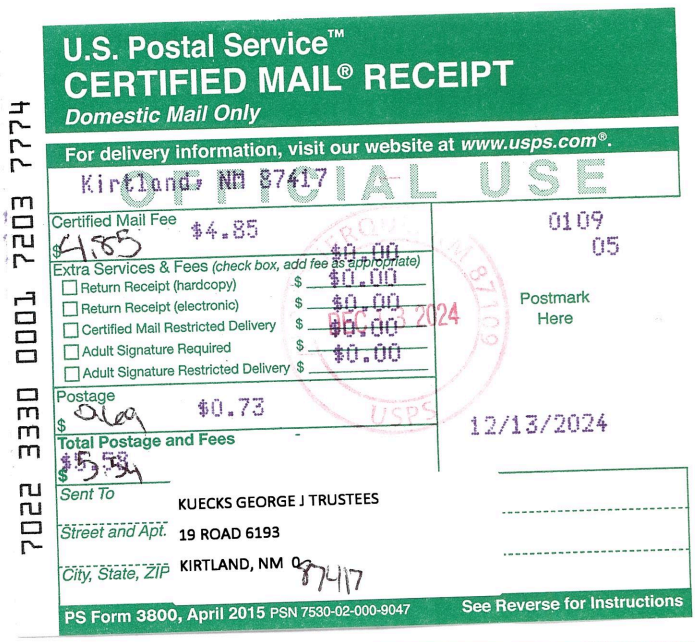
DEC 13 2024

12/13/2024

Sent To: JARAMILLO STEVEN D AND DANA S
Street and: 5 ROAD 6207
City, State: KIRTLAND, NM ~~87013~~ 87417

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions

9589 0710 5270 0373 9926 26



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OFFICIAL USE

Certified Mail Fee $4.85
Extra Services & Fees (check box, add fee as appropriate)
- Return Receipt (hardcopy) $0.00
- Return Receipt (electronic) $0.00
- Certified Mail Restricted Delivery $0.00
- Adult Signature Required $0.00
- Adult Signature Restricted Delivery $

Postage $0.73
Total Postage and Fees $5.54

0109 05

Postmark Here

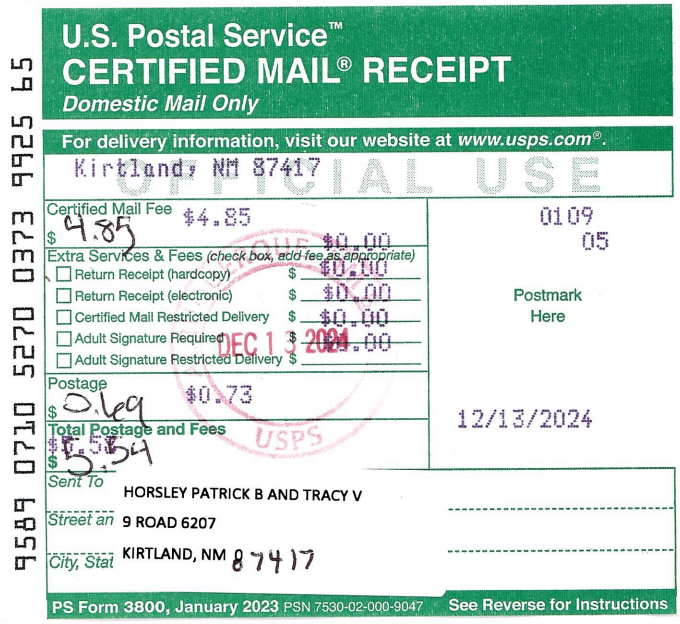
DEC 13 2024

12/13/2024

Sent To: KUECKS GEORGE J TRUSTEES
Street and Apt.: 19 ROAD 6193
City, State, ZIP: KIRTLAND, NM 87417

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7022 3330 0001 7203 7774



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Kirtland, NM 87417

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Certified Mail Fee $4.85
Extra Services & Fees (check box, add fee as appropriate)
- Return Receipt (hardcopy) $0.00
- Return Receipt (electronic) $0.00
- Certified Mail Restricted Delivery $0.00
- Adult Signature Required $0.00
- Adult Signature Restricted Delivery $

Postage $0.73
Total Postage and Fees $5.54

0109 05

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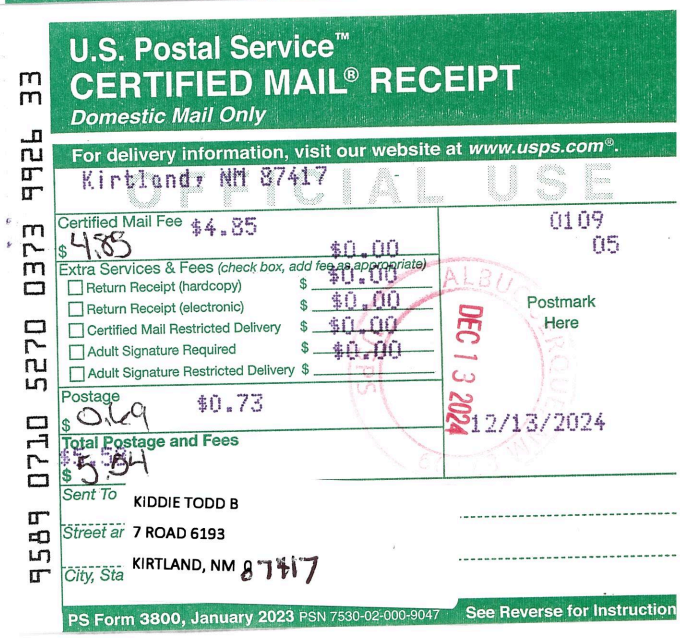
DEC 13 2024

12/13/2024

Sent To: HORSLEY PATRICK B AND TRACY V
Street and: 9 ROAD 6207
City, State: KIRTLAND, NM 87417

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions

9589 0710 5270 0373 9925 65



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Extra Services & Fees (check box, add fee as appropriate)
- Return Receipt (hardcopy) $0.00
- Return Receipt (electronic) $0.00
- Certified Mail Restricted Delivery $0.00
- Adult Signature Required $0.00
- Adult Signature Restricted Delivery $

Postage $0.73
Total Postage and Fees $5.54

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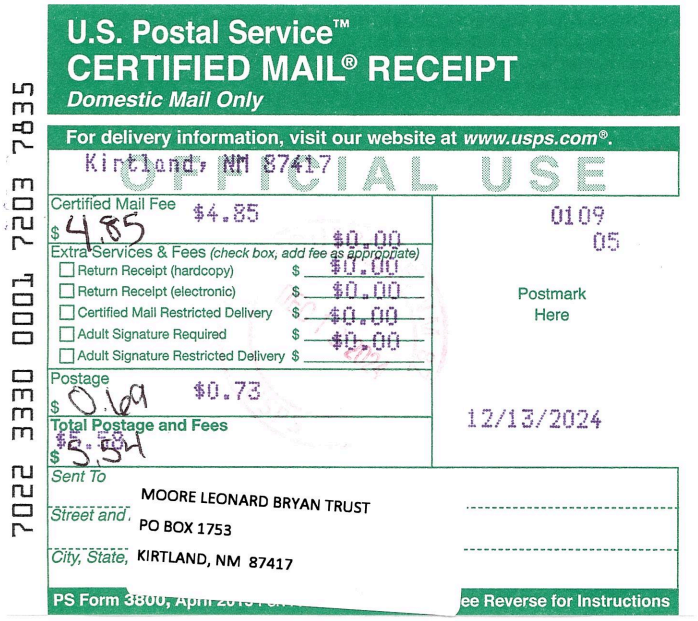
DEC 13 2024

12/13/2024

Sent To: KIDDIE TODD B
Street and: 7 ROAD 6193
City, State: KIRTLAND, NM 87417

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instruction

9589 0710 5270 0373 9926 33



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Extra Services & Fees (check box, add fee as appropriate)
- Return Receipt (hardcopy) $ $0.00
- Return Receipt (electronic) $ $0.00
- Certified Mail Restricted Delivery $ $0.00
- Adult Signature Required $ $0.00
- Adult Signature Restricted Delivery $

Postage $0.73 — $0.69

Total Postage and Fees $5.54 — $5.54

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12/13/2024

Sent To: MOORE LEONARD BRYAN TRUST
Street and: PO BOX 1753
City, State: KIRTLAND, NM 87417

PS Form 3800, April 2015 PSN 7530-02-000-9047 — See Reverse for Instructions

7022 3330 0001 7203 7835

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Canjilon, NM 87515

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Certified Mail Fee $4.85 — $4.85 — $0.00
Extra Services & Fees (check box, add fee as appropriate)
- Return Receipt (hardcopy) $ $0.00
- Return Receipt (electronic) $ $0.00
- Certified Mail Restricted Delivery $ $0.00
- Adult Signature Required $ $0.00
- Adult Signature Restricted Delivery $

Postage $0.73 — $0.69

Total Postage and Fees $5.54 — $5.54

0109 05

Postmark Here

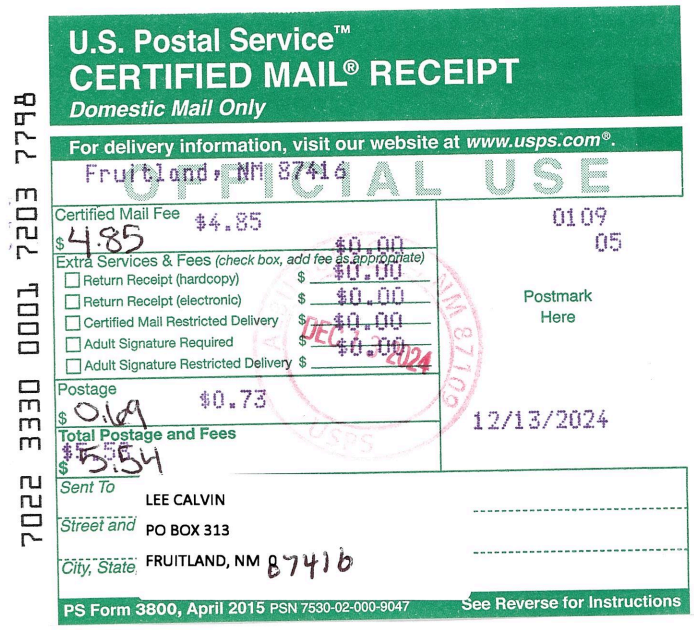
DEC 13 2024

12/13/2024

Sent To: RIVERA DORIS AND SABINO
Street an: PO BOX 415
City, Stai: CANJILON, NM 87515

PS Form 3800, April 2015 PSN 7530-02-000-9047 — See Reverse for Instructions

7022 3330 0001 7203 7866



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Fruitland, NM 87416

OFFICIAL USE

Certified Mail Fee $4.85 — $4.85 — $0.00
Extra Services & Fees (check box, add fee as appropriate)
- Return Receipt (hardcopy) $ $0.00
- Return Receipt (electronic) $ $0.00
- Certified Mail Restricted Delivery $ $0.00
- Adult Signature Required $ $0.00
- Adult Signature Restricted Delivery $

Postage $0.73 — $0.69

Total Postage and Fees $5.54 — $5.54

0109 05

Postmark Here

DEC 13 2024

12/13/2024

Sent To: LEE CALVIN
Street and: PO BOX 313
City, State: FRUITLAND, NM 87416

PS Form 3800, April 2015 PSN 7530-02-000-9047 — See Reverse for Instructions

7022 3330 0001 7203 7798

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Kirtland, NM 87417

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Certified Mail Fee $4.85 — $4.85 — $0.00
Extra Services & Fees (check box, add fee as appropriate)
- Return Receipt (hardcopy) $ $0.00
- Return Receipt (electronic) $ $0.00
- Certified Mail Restricted Delivery $ $0.00
- Adult Signature Required $ $0.00
- Adult Signature Restricted Delivery $

Postage $0.73 — $0.69

Total Postage and Fees $5.54 — $5.54

0109 05

Postmark Here

DEC 13 2024

12/13/2024

Sent To: DENETCLAW JATONNA
Street a: PO BOX 1004
City, St: KIRTLAND, NM 87417

PS Form 3800, January 2023 PSN 7530-02-000-9047 — See Reverse for Instructions

9589 0710 5270 0373 9974 85

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Certified Mail Fee $4.85 — $4.85 — $0.00
Extra Services & Fees (check box, add fee as appropriate)
- Return Receipt (hardcopy) $ $0.00
- Return Receipt (electronic) $ $0.00
- Certified Mail Restricted Delivery $ $0.00
- Adult Signature Required $ $0.00
- Adult Signature Restricted Delivery $

Postage $0.73 — $0.69

Total Postage and Fees $5.54 — $5.54

0109 05

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DEC 13 2024

12/13/2024

Sent To: DIAMOND D CONSTRUCTION CO INC
Street and A: PO BOX 1841
City, State, Z: KIRTLAND, NM 87417

PS Form 3800, January 2023 PSN 7530-02-000-9047 — See Reverse for Instructions

9589 0710 5270 0373 9974 92

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Certified Mail Fee $4.85 — $4.85 — $0.00
Extra Services & Fees (check box, add fee as appropriate)
- Return Receipt (hardcopy) $ $0.00
- Return Receipt (electronic) $ $0.00
- Certified Mail Restricted Delivery $ $0.00
- Adult Signature Required $ $0.00
- Adult Signature Restricted Delivery $

Postage $0.73 — $0.69

Total Postage and Fees $5.54 — $5.54

0109 05

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12/13/2024

Sent To: DAN LILLIE
Street and: PO BOX 2004
City, State: KIRTLAND, NM 87417

PS Form 3800, January 2023 PSN 7530-02-000-9047 — See Reverse for Instructions

9589 0710 5270 0373 9974 61

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Shiprock, NM 87420

OFFICIAL USE

Certified Mail Fee $4.85 — $4.85
Extra Services & Fees (check box, add fee as appropriate)
- Return Receipt (hardcopy) $0.00
- Return Receipt (electronic) $0.00
- Certified Mail Restricted Delivery $0.00
- Adult Signature Required $0.00
- Adult Signature Restricted Delivery $

Postage $0.73
Total Postage and Fees $5.54

0109 05

Postmark Here

DEC 13 2024

12/13/2024

Sent To: EATON BESSIE M ET AL
Street: PO BOX 3493
City, S: SHIPROCK, NM 87420

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions

9589 0710 5270 0373 9975 08

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Certified Mail Fee $4.85 — $4.85
Extra Services & Fees (check box, add fee as appropriate)
- Return Receipt (hardcopy) $0.00
- Return Receipt (electronic) $0.00
- Certified Mail Restricted Delivery $0.00
- Adult Signature Required $0.00
- Adult Signature Restricted Delivery $0.00

Postage $0.73
Total Postage and Fees $5.54

0109 05

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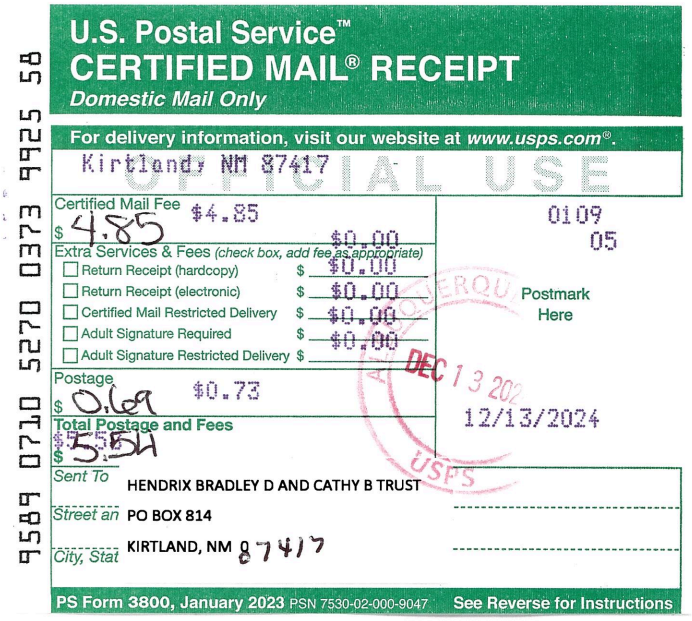
12/13/2024

Sent To: LOGG MELLISA
Street and: PO BOX 3301
City, State: KIRTLAND, NM 87417

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7022 3330 0001 7203 7811



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Certified Mail Fee $4.85 — $4.85
Extra Services & Fees (check box, add fee as appropriate)
- Return Receipt (hardcopy) $0.00
- Return Receipt (electronic) $0.00
- Certified Mail Restricted Delivery $0.00
- Adult Signature Required $0.00
- Adult Signature Restricted Delivery $

Postage $0.73
Total Postage and Fees $5.54

0109 05

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DEC 13 2024

12/13/2024

Sent To: HENDRIX BRADLEY D AND CATHY B TRUST
Street an: PO BOX 814
City, Stat: KIRTLAND, NM 87417

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions

9589 0710 5270 0373 9925 58

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Kirtland, NM 87417

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Extra Services & Fees (check box, add fee as appropriate)
- Return Receipt (hardcopy) $0.00
- Return Receipt (electronic) $0.00
- Certified Mail Restricted Delivery $0.00
- Adult Signature Required $0.00
- Adult Signature Restricted Delivery $

Postage $0.73
Total Postage and Fees $5.54

0109 05

Postmark Here

12/13/2024

Sent To: WILLIS BOBBY L AND CARRIE S
Street: PO BOX 377
City, S: KIRTLAND, NM 87417

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7022 3330 0001 7203 8016

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Certified Mail Fee $4.85 — $4.85
Extra Services & Fees (check box, add fee as appropriate)
- Return Receipt (hardcopy) $0.00
- Return Receipt (electronic) $0.00
- Certified Mail Restricted Delivery $0.00
- Adult Signature Required $0.00
- Adult Signature Restricted Delivery $

Postage $0.73
Total Postage and Fees $5.54

0109 05

Postmark Here

12/13/2024

Sent To: BROWN LARRY AND MORRIS BROWN BONNIE JEAN
Street a: PO BOX 1034
City, St: FRUITLAND, NM 87416

PS Form 3800, January 2023 See Reverse for Instructions

9589 0710 5270 0373 9974 30

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Glendale, AZ 85311

OFFICIAL USE

Certified Mail Fee $4.85 — $4.85
Extra Services & Fees (check box, add fee as appropriate)
- Return Receipt (hardcopy) $0.00
- Return Receipt (electronic) $0.00
- Certified Mail Restricted Delivery $0.00
- Adult Signature Required $0.00
- Adult Signature Restricted Delivery $0.00

Postage $0.73
Total Postage and Fees $5.54

0109 05

Postmark Here

12/13/2024

Sent To: ROSE LARSON ENTERPRISES LLC
Street an: PO BOX 3704
City, Stat: GLENDALE, AZ 85311

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7022 3330 0001 7203 7880

9589 0710 5270 0373 9926 40

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Kirtland, NM 87417

OFFICIAL USE

Certified Mail Fee	$4.85
Extra Services & Fees (check box, add fee as appropriate)	$4.10
☐ Return Receipt (hardcopy)	$0.00
☐ Return Receipt (electronic)	$0.00
☐ Certified Mail Restricted Delivery	$0.00
☐ Adult Signature Required	$0.00
☐ Adult Signature Restricted Delivery	$
Postage	$0.73
Total Postage and Fees	$5.54

0109 05

Postmark Here

DEC 13 2024

12/13/2024

Sent To: KIRTLAND 6406 LLC ATTN SCULLY RUBY D AND
Street and: 10206 ARVILLA AVE NE
City, State: ALBUQUERQUE, NM 87111

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions

9589 0710 5270 0373 9926 19

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OFFICIAL USE

Certified Mail Fee	$4.85
Extra Services & Fees (check box, add fee as appropriate)	$0.00
☐ Return Receipt (hardcopy)	$0.00
☐ Return Receipt (electronic)	$0.00
☐ Certified Mail Restricted Delivery	$0.00
☐ Adult Signature Required	$0.00
☐ Adult Signature Restricted Delivery	$
Postage	$0.73
Total Postage and Fees	$5.54

0109 05

Postmark Here

DEC 13 2024

12/13/2024

Sent To: JAKE EVANGELINE
Street and: 7 ROAD 6207
City, State: KIRTLAND, NM 87417

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions

7022 3330 0001 7203 7842

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OFFICIAL USE

Certified Mail Fee	$4.85
Extra Services & Fees (check box, add fee as appropriate)	$0.00
☐ Return Receipt (hardcopy)	$0.00
☐ Return Receipt (electronic)	$0.00
☐ Certified Mail Restricted Delivery	$0.00
☐ Adult Signature Required	$0.00
☐ Adult Signature Restricted Delivery	$
Postage	$0.73
Total Postage and Fees	$5.54

0109 05

Postmark Here

DEC 13 2024

12/13/2024

Sent To: REBELES TED AND DANIELLE
Street: 14 ROAD 6212
City, State: KIRTLAND, NM 87417

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

9589 0710 5270 0373 9926 02

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Farmington, NM 87402

OFFICIAL USE

Certified Mail Fee	$4.85
Extra Services & Fees (check box, add fee as appropriate)	$0.00
☐ Return Receipt (hardcopy)	$0.00
☐ Return Receipt (electronic)	$0.00
☐ Certified Mail Restricted Delivery	$0.00
☐ Adult Signature Required	$0.00
☐ Adult Signature Restricted Delivery	$
Postage	$0.73
Total Postage and Fees	$5.54

0109 05

Postmark Here

DEC 13 2024

12/13/2024

Sent To: ISBELL DOROTHY L
Street a: 6440 HAWKEYE ST
City, St: FARMINGTON, NM 87402

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7022 3330 0001 7203 7804

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Kirtland, NM 87417

OFFICIAL USE

Certified Mail Fee	$4.85
Extra Services & Fees (check box, add fee as appropriate)	$0.00
☐ Return Receipt (hardcopy)	$0.00
☐ Return Receipt (electronic)	$0.00
☐ Certified Mail Restricted Delivery	$0.00
☑ Adult Signature Required	$0.00
☐ Adult Signature Restricted Delivery	$
Postage	$0.73
Total Postage and Fees	$5.54

0109 05

Postmark Here

DEC 13 2024

12/13/2024

Sent To: LINK THOMAS G
Street and: 4346 US 64
City, State: KIRTLAND, NM 87417

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

9589 0710 5270 0373 9925 27

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Farmington, NM 87402

OFFICIAL USE

Certified Mail Fee	$4.85
Extra Services & Fees (check box, add fee as appropriate)	$0.00
☐ Return Receipt (hardcopy)	$0.00
☐ Return Receipt (electronic)	$0.00
☐ Certified Mail Restricted Delivery	$0.00
☐ Adult Signature Required	$0.00
☐ Adult Signature Restricted Delivery	$
Postage	$0.73
Total Postage and Fees	$5.54

0109 05

Postmark Here

12/13/2024

Sent To: F AND D HOLDINGS LLC
Street ai: 5011 TAMPICO WAY
City, Sta: FARMINGTON, NM 87402

PS Form 3800, January 2023 ... See Reverse for Instructions

9589 0710 5270 0373 9973 62

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Indian Wells, AZ 86031

OFFICIAL USE

Certified Mail Fee	$4.85	0109 05
Extra Services & Fees (check box, add fee as appropriate)		
☐ Return Receipt (hardcopy)	$0.00	
☐ Return Receipt (electronic)	$0.00	Postmark Here
☐ Certified Mail Restricted Delivery	$0.00	
☐ Adult Signature Required	$0.00	
☐ Adult Signature Restricted Delivery	$	
Postage	$0.73	12/13/2024
Total Postage and Fees	$5.58	

Sent To: BEGAY VIDA A
Street and: PO BOX 3206
City, State: INDIAN WELLS, AZ 86031

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions

7022 3330 0001 7203 7958

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Fruitland, NM 87416

OFFICIAL USE

Certified Mail Fee	$4.85	0109 05
Extra Services & Fees (check box, add fee as appropriate)		
☐ Return Receipt (hardcopy)	$0.00	
☐ Return Receipt (electronic)	$0.00	Postmark Here
☐ Certified Mail Restricted Delivery	$0.00	
☐ Adult Signature Required	$0.00	
☐ Adult Signature Restricted Delivery	$	
Postage	$0.73	12/13/2024
Total Postage and Fees	$5.58	

Sent To: STEVENSON CALVIN AND LENA
Street and: PO BOX 504
City, State: FRUITLAND, NM 87416

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7022 3330 0001 7203 7828

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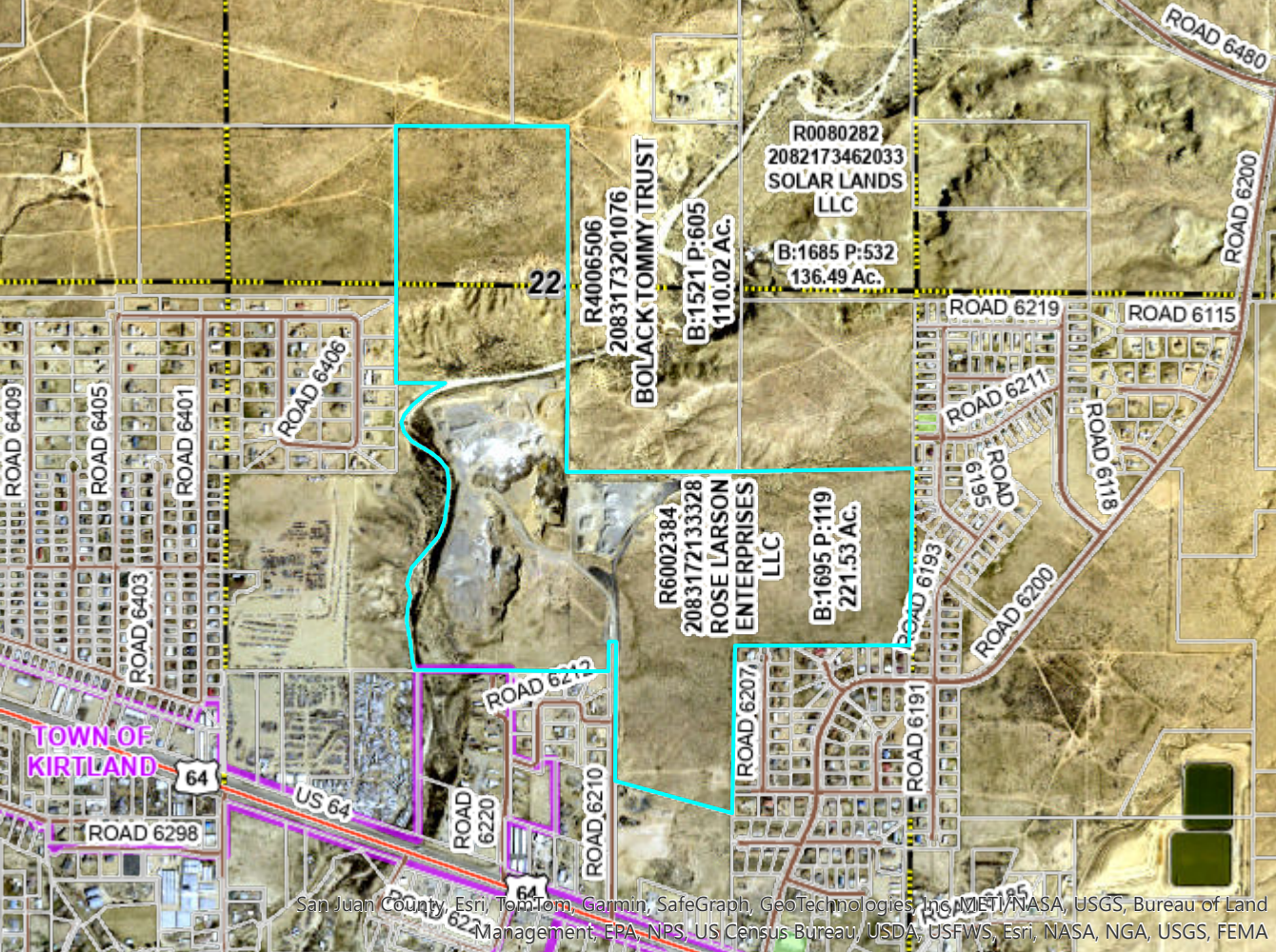
OFFICIAL USE

Certified Mail Fee	$4.85	0109 05
Extra Services & Fees (check box, add fee as appropriate)		
☐ Return Receipt (hardcopy)	$0.00	
☐ Return Receipt (electronic)	$0.00	Postmark Here
☐ Certified Mail Restricted Delivery	$0.00	
☐ Adult Signature Required	$0.00	
☐ Adult Signature Restricted Delivery	$	
Postage	$0.73	12/13/2024
Total Postage and Fees	$5.58	

Sent To: LUCERO OSCAR M ET AL
Street and: PO BOX 1412
City, State: FRUITLAND, NM 87013 87416

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions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BOLACK TOMMY TRUST
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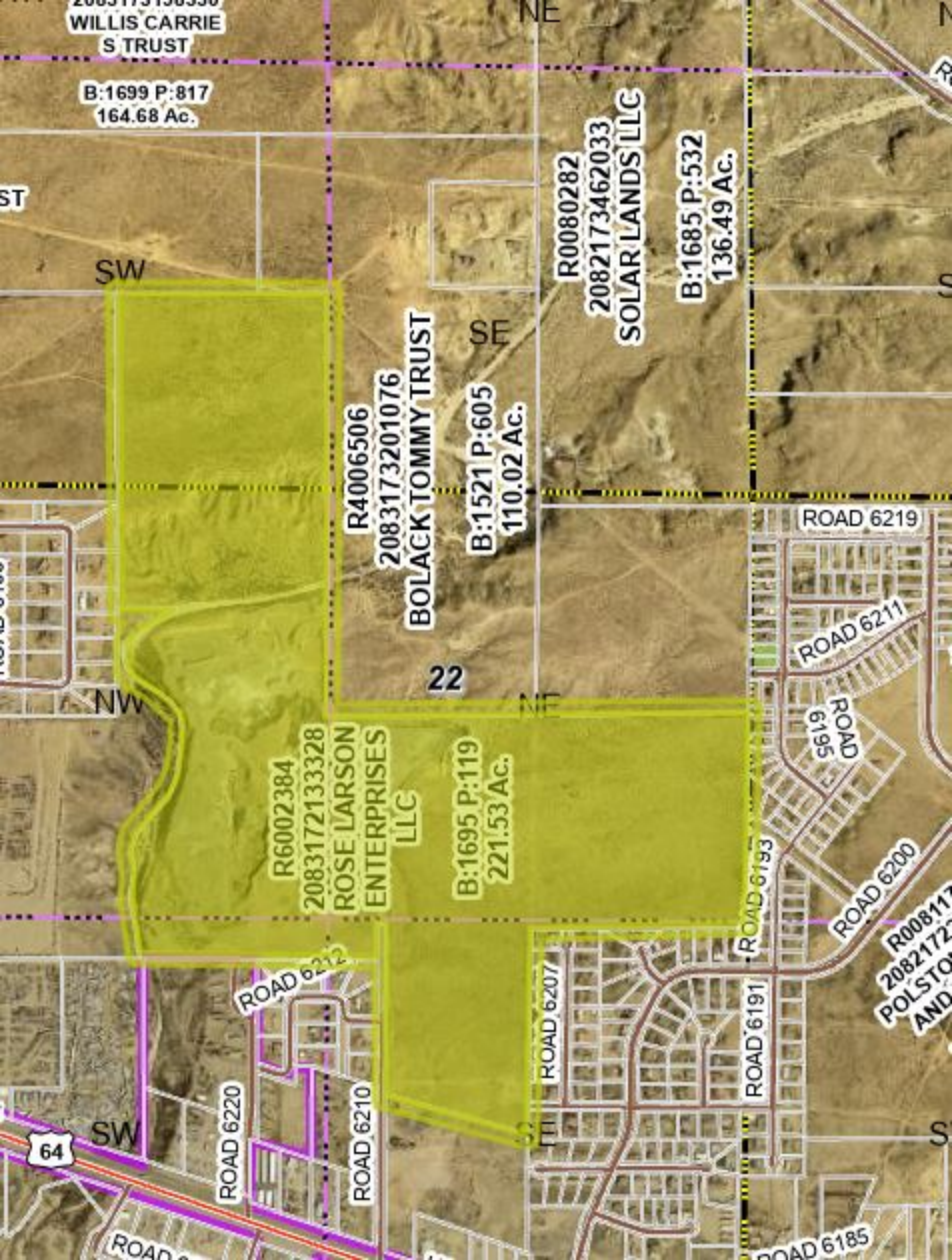
R0080282
2082173462033
SOLAR LANDS LLC
B:1685 P:532
136.49 Ac.
R6002384
2083172133328
ROSE LARSON ENTERPRISES LLC
B:1695 P:119
221.53 Ac.
TOWN OF KIRTLAND
64
US 64
ROAD 6480
ROAD 6200
ROAD 6219
ROAD 6115
ROAD 6211
ROAD 6118
ROAD 6195
ROAD 6193
ROAD 6207
ROAD 6191
ROAD 6213
ROAD 6210
ROAD 6220
ROAD 6298
ROAD 6406
ROAD 6409
ROAD 6405
ROAD 6401
ROAD 6403
San Juan County, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA, USFWS, Esri, NASA, NGA, USGS, FEMA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136.49 Ac.
SW
SE
R4006506
2083173201076
BOLACK TOMMY TRUST
B:1521 P:605
110.02 Ac.
ROAD 6219
ROAD 6211
ROAD 6195
22
NW
NE
R6002384
2083172133328
ROSE LARSON ENTERPRISES LLC
B:1695 P:119
221.53 Ac.
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ROAD 6207
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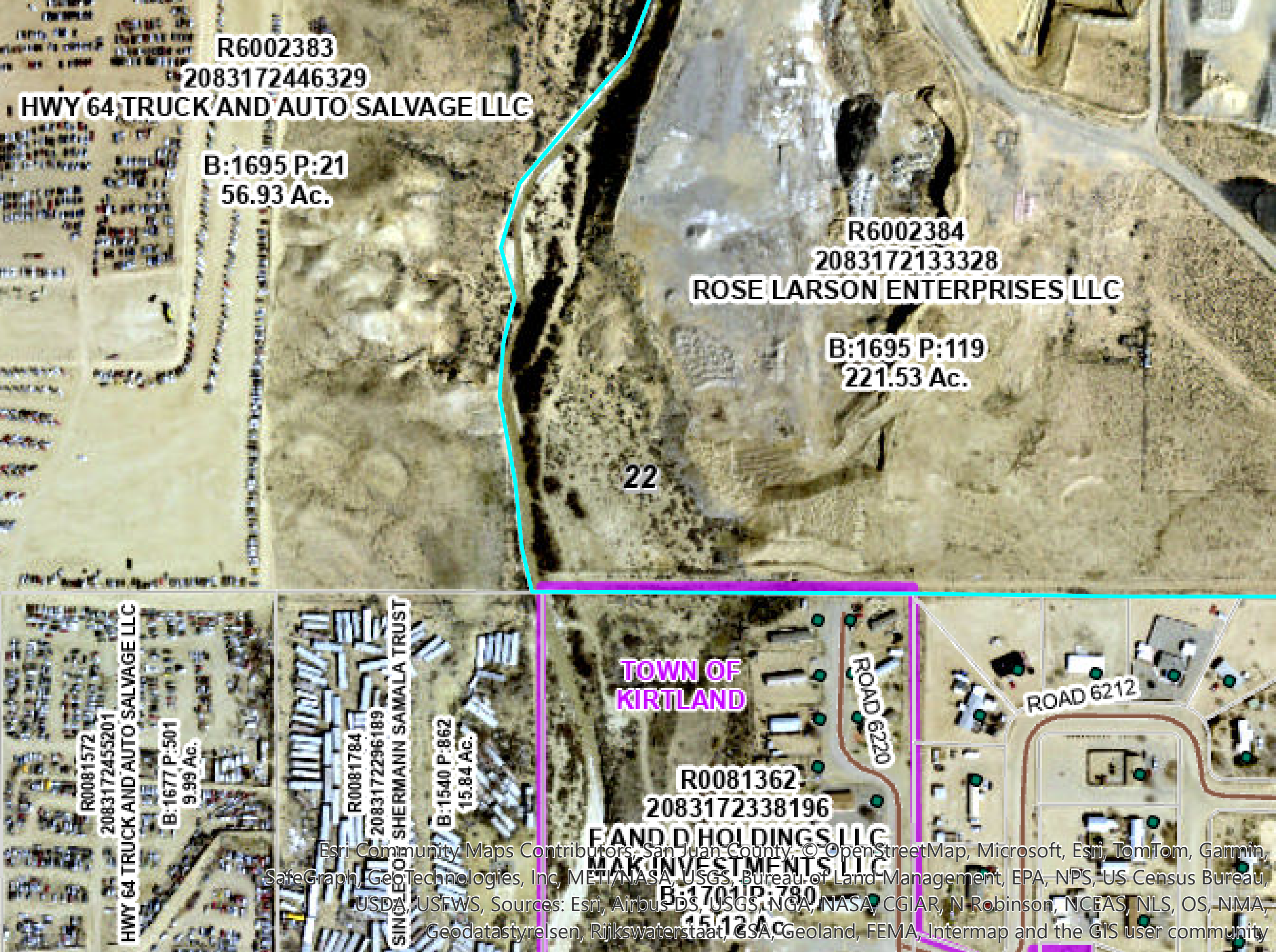
ROAD 6220
ROAD 6210
SW
64
ROAD 6185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R6002384
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ROSE LARSON ENTERPRISES LLC
B:1695 P:119
221.53 Ac.
22
TOWN OF
KIRTLAND
ROAD 6220
ROAD 6212
R0081572
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HWY 64 TRUCK AND AUTO SALVAGE LLC
B:1677 P:501
9.99 Ac.
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SHERMANN SAMALA TRUST
B:1540 P:862
15.84 Ac.
R0081362
2083172338196
E AND D HOLDINGS LLC
MAK INVESTMENTS LLC
B:1701 P:780
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R4004879
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KNOLL KAMERON
41
B:1635 P:1050
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SHORTY LINDA
40
40A
B:1669 P:597
0.96 Ac.
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R4004874
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LOGG MELLISA
38
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BEGAY RENAE LEE
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ROSE LARSON ENTERPRISES LLC
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FRANK WANDA ET AL
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BOYD YOUNZER AND PEGGY
B:1660 P:682
0.75 Ac.
R6002383
2083172446329
HWY 64 TRUCK AND AUTO SALVAGE LLC
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ROAD 6406
52
50
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49
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MITCHELL FABIAN AND PHILEOMENA
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48
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DIAMOND D CONSTRUCTION CO INC
YAZZIE JAMES J AND ROBERTA L
B:1542 P:649
1.45 Ac.
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JOHNSON DELBERT
B:1622 P:144
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43
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MOORE LEONARD BRYAN TRUST
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KNOLL KAMERON
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SHORTY LINDA
B:1669 P:597
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40 A
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SERNA RYAN S AND JOHNSON MICHELLE S
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R4004874
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LOPEZ MELISSA
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2083172133328
ROSE LARSON ENTERPRISES LLC
B:1695 P:119
221.53 Ac.
22
R6002383
2083172446329
HWY 64 TRUCK AND AUTO SALVAGE LLC
B:1695 P:21
56.93 Ac.
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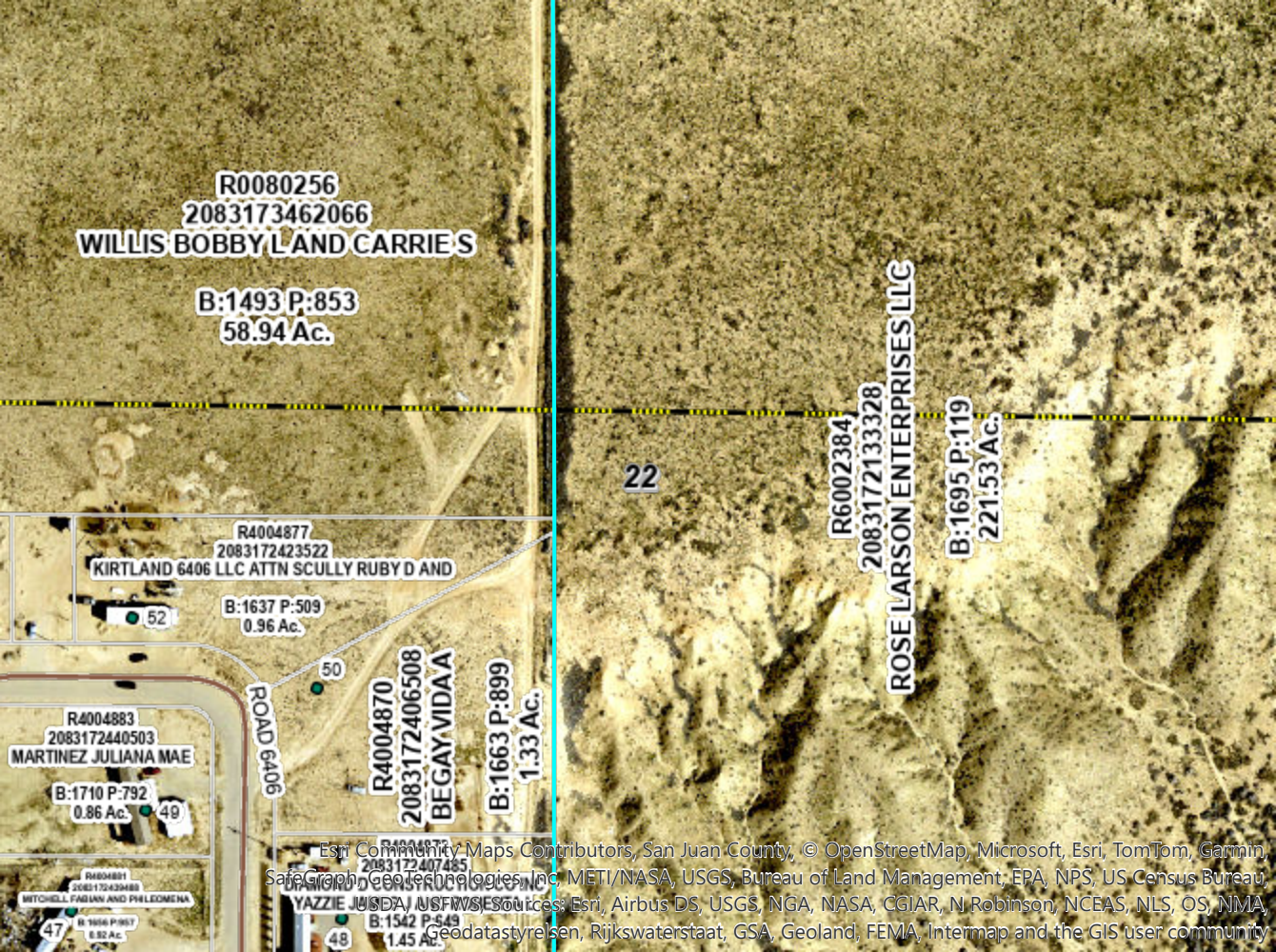
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WILLIS BOBBY L AND CARRIE S
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ROSE LARSON ENTERPRISES LLC
B:1695 P:119
221.53 Ac.
R4004877
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KIRTLAND 6406 LLC ATTN SCULLY RUBY D AND
B:1637 P:509
0.96 Ac.
52
50
ROAD 6406
R4004870
2083172406508
BEGAY VIDA A
B:1663 P:899
1.33 Ac.
R4004883
2083172440503
MARTINEZ JULIANA MAE
B:1710 P:792
0.86 Ac.
49
R4004881
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MITCHELL FABIAN AND PHILEOMENA
47
B:1656 P:957
6.92 Ac.
48
B:1542 P:649
1.45 Ac.
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R0082006
2083173198330
WILLIS CARRIE
S TRUST
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R0080212
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BOLACK TOMMY
TRUST
B:1521 P:606
103.07 Ac.
R0080282
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SOLAR LANDS LLC
B:1685 P:532
136.49 Ac.
R0080256
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WILLIS BOBBY
LAND CARRIE
S
B:1493 P:853
58.94 Ac.
22
R6002384
2083172133328
ROSE LARSON
ENTERPRISES
LLC
B:1695 P:119
221.53 Ac.
R4006506
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BOLACK TOMMY
TRUST
B:1521 P:605
110.02 Ac.
ROAD 6
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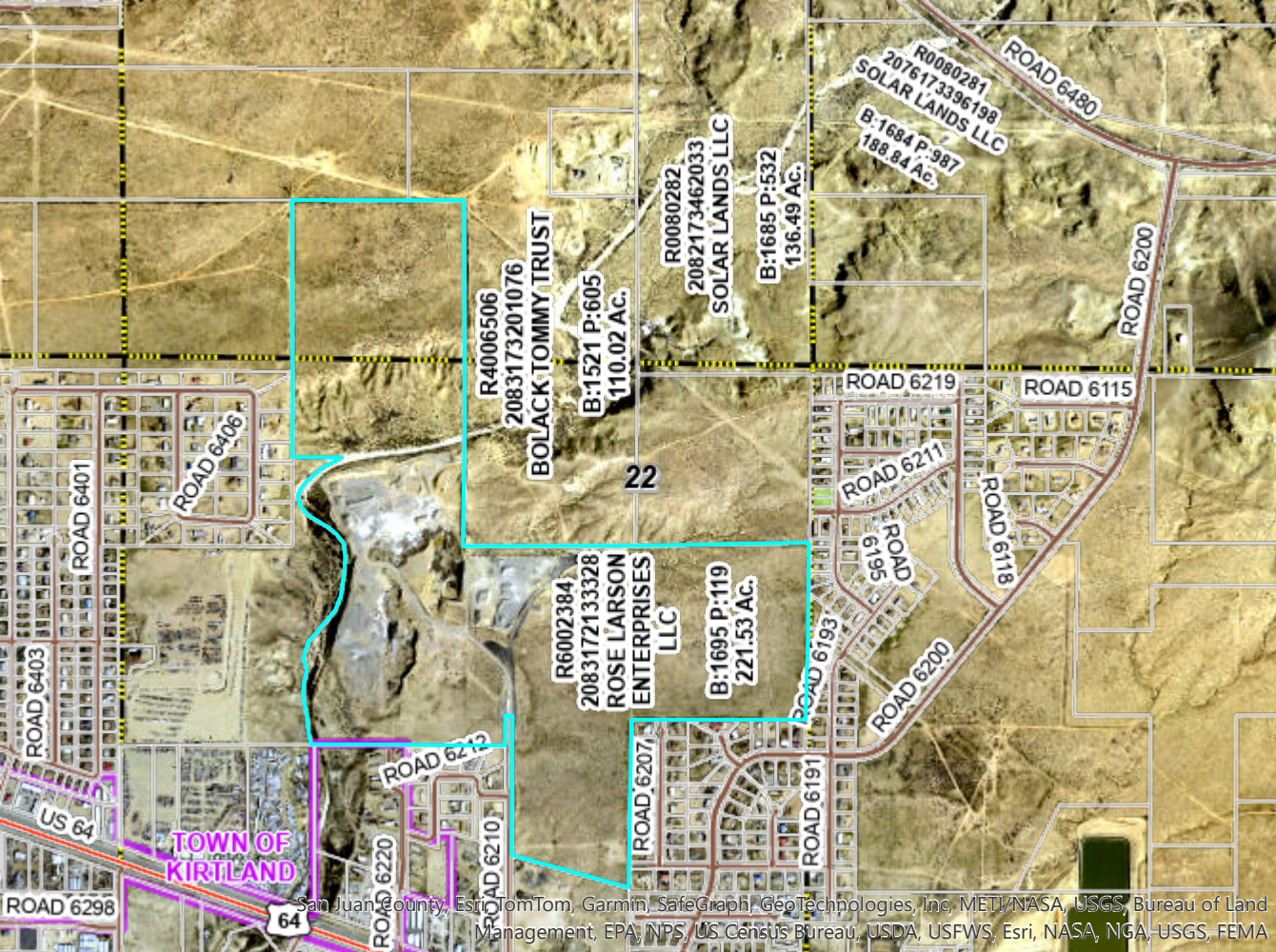
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136.49 Ac.
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ROSE LARSON
ENTERPRISES
LLC
B:1695 P:119
221.53 Ac.
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ROAD 6200
ROAD 6403
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ROAD 6207
ROAD 6191
US 64
TOWN OF
KIRTLAND
ROAD 6220
ROAD 6210
ROAD 6298
64
San Juan County, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA, USFWS, Esri, NASA, NGA, USGS, FEMA


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R0082525
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YAZZIE JOE B AND NORMA
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CHARLEY LESTER SR AND DOROTHY A
B:1478 P:763
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INVESTORS TRUST LC
GONZALES MARIA
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MOBLEY CURTIS LYNN
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KANNON VIRGINIA ELIZABETH
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ROSE LARSON ENTERPRISES LLC
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RIVERA DORIS AND SABINO
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R0082516
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BIEL THOMAS G AND JOY K
PARRISH MARY
B:1292 P:579
0.53 Ac.
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R0082512
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INGRAHAM RONALD
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R0082511
2082172520381
RIVERA DORIS AND SABINO
25
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SHORTY MICHAEL AND SHERRI A
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PARRISH MARY
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ZIE TERRY A
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YAZZIE TERRY A
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CHARLEY SHERRY R ET AL
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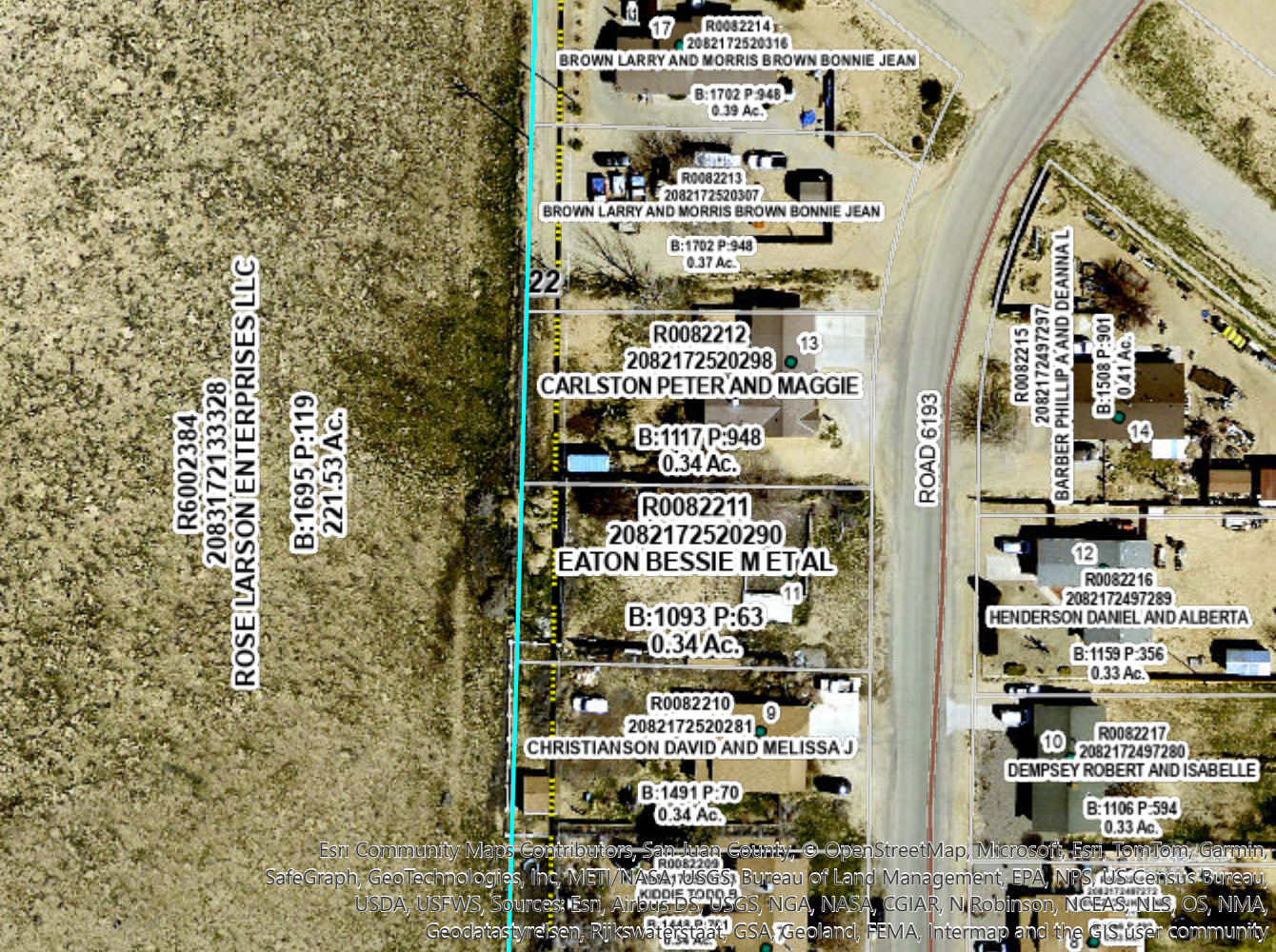
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DEMPSEY ROBERT AND ISABELLE
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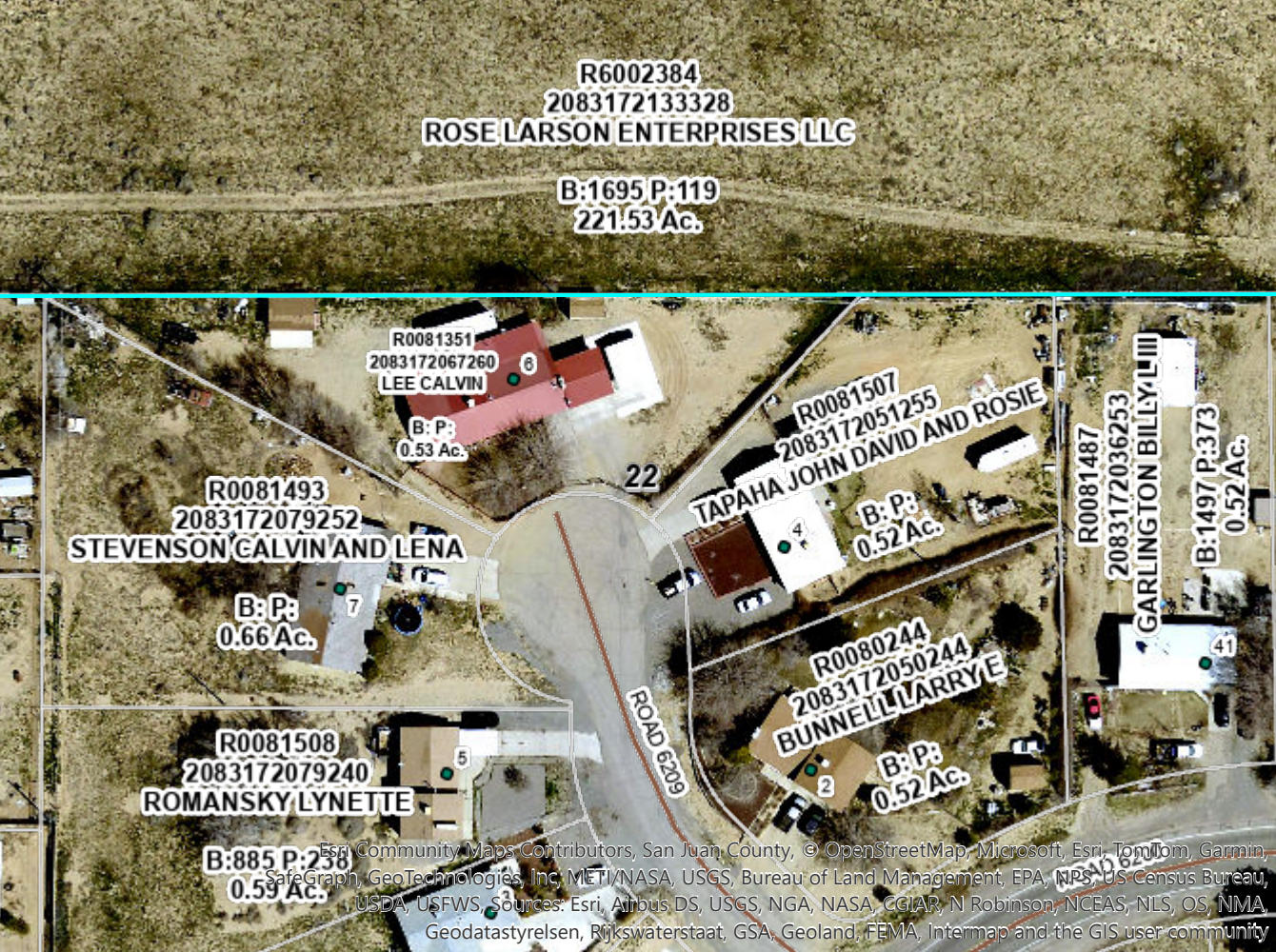
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ROMANSKY LYNETTE
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BEGAY SHAYNE D
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NOCKI NATHAN AND DEDRA DAWN
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DAYISH LEATHAN
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NOCKI NATHAN AND DEDRA DAWN
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NATANI FELICITA N
B:1586 P:639
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HORSLEY PATRICK B AND TRACY V
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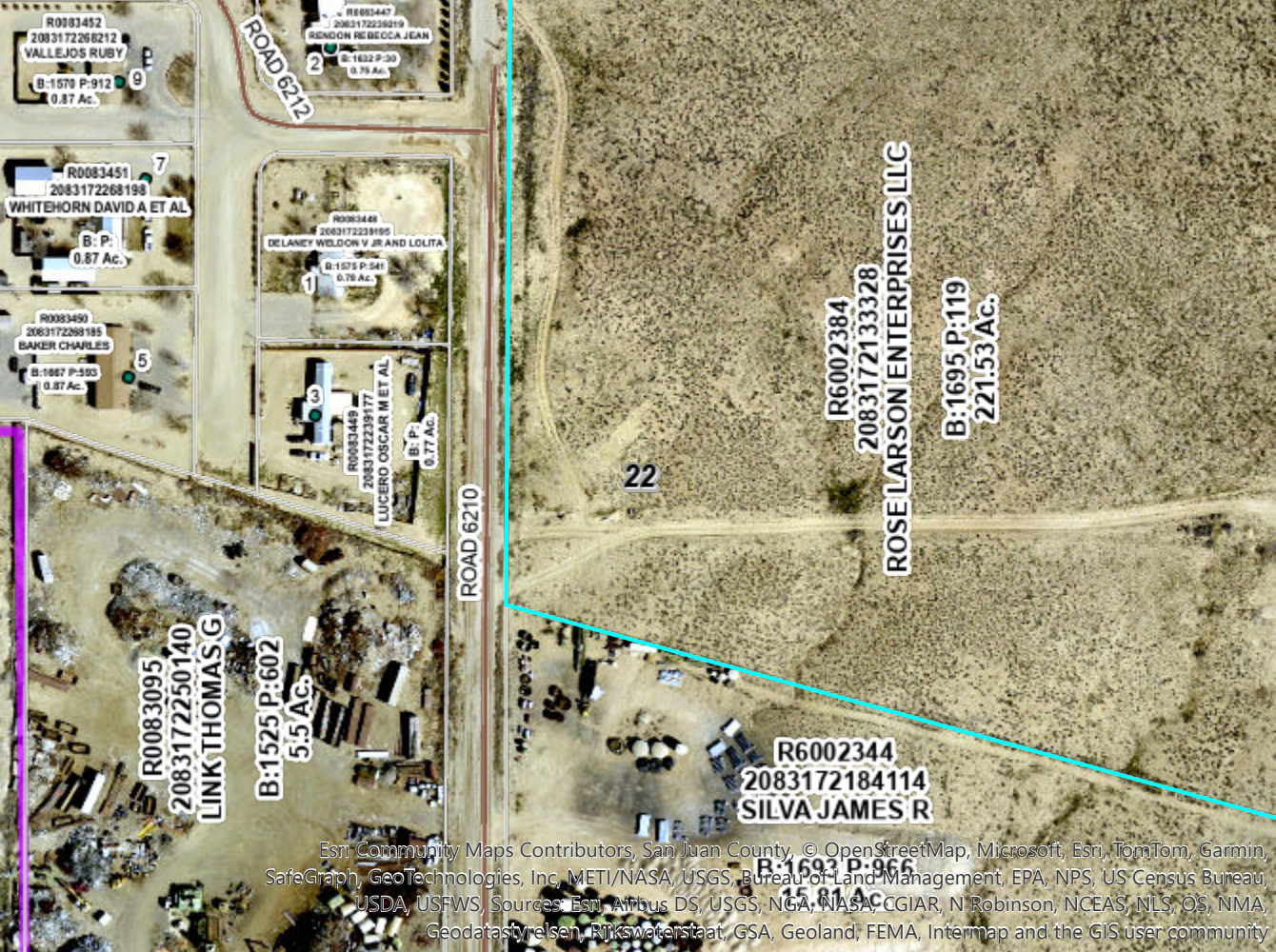

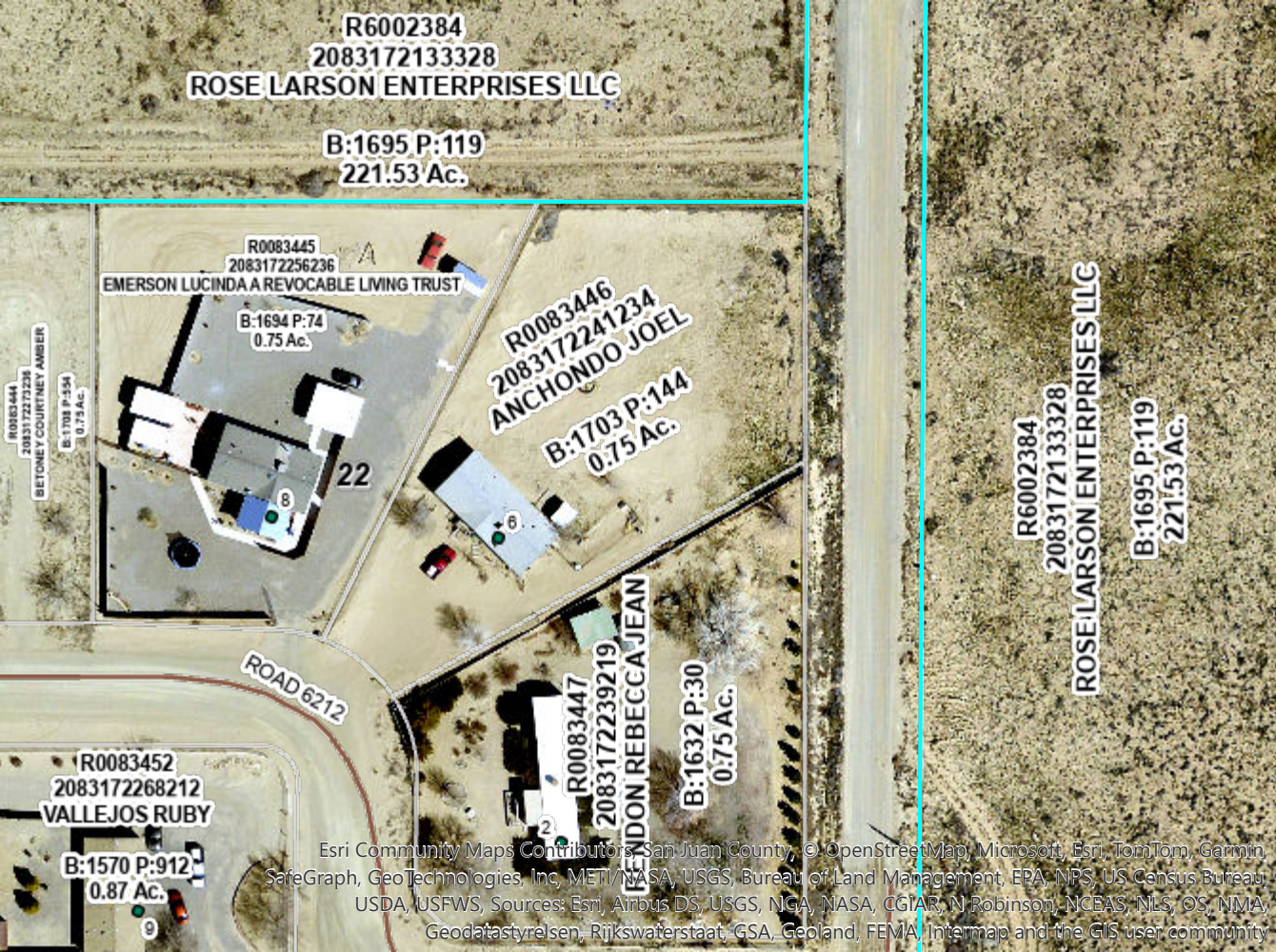

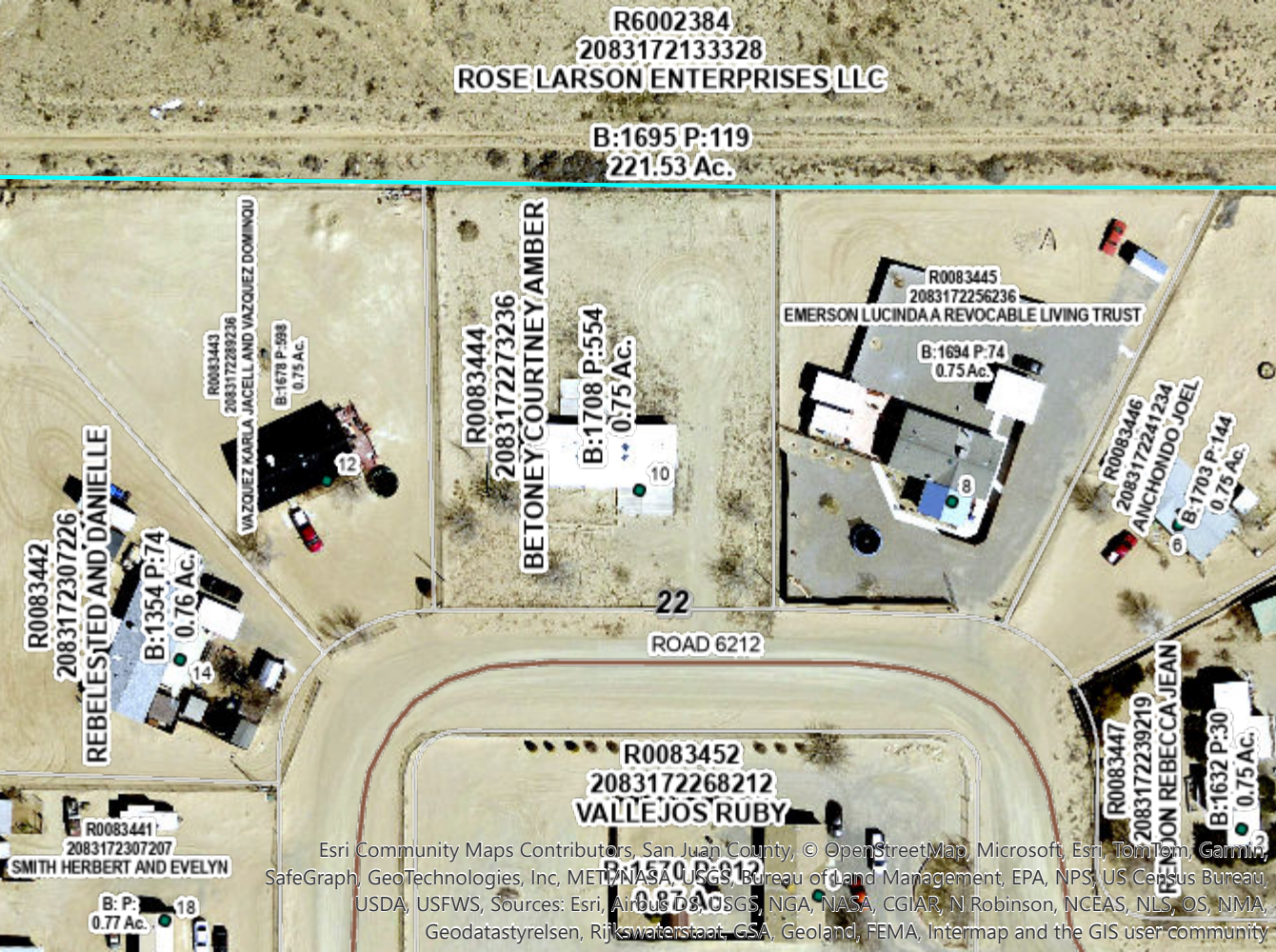

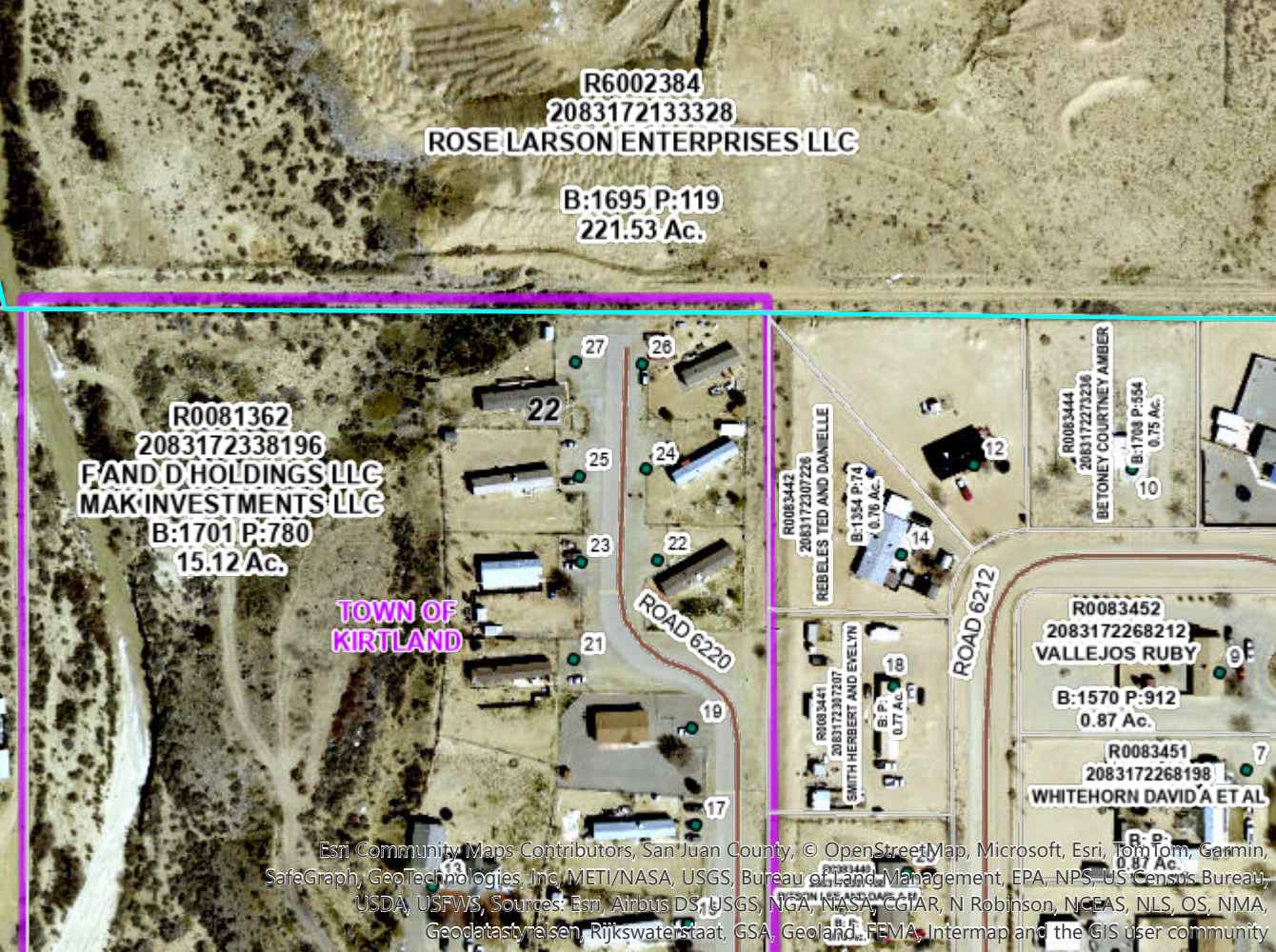
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PUBLIC SERVICE ANNOUNCEMENT

Vernon Hamilton Construction Company (VHCC), LLC announces its application submittal to the New Mexico Environment Department for a new minor source NSR permit application for an Air Quality Permit. The permit is for the VHCC's Kirtland Pit which processes aggregate material. The expected date of application submittal to the Air Quality Bureau is December 2, 2024.

The address for the facility known as, VHCC's Kirtland Pit, is 32 Rd 6210, Kirtland, NM. The exact location of the VHCC's Kirtland Pit is at Latitude (decimal degrees): 36.743919 and Longitude (decimal degrees): -108.333753. The approximate location of this facility is 0.7 miles east-southeast of Kirtland in San Juan County.

VHCC is proposing a new 350 ton per hour and 350,000 ton per year crushing and screening operations which will process aggregate out of the Kirtland Pit quarry.

Public notices have been posted in the following locations for review by the public:

1. Town Hall of Kirtland at 47 Rd 6500, Kirtland, NM;
2. US Post Office at 4211 US 64, Kirtland, NM;
3. Lower Valley Water Users at 4286 US 64, Kirtland, NM;
4. At the main entrance to the Kirtland Pit at 32 Rd 6210, Kirtland, NM.

The owner and/or operator mailing address for the Facility is:

Vernon Hamilton Construction Company, LLC
P.O. Box 1110
Gallup, NM 87305

If you have any comments about the construction or operation of this facility, and you want your comments to be made as part of the permit review process, you must submit your comments in writing to this address:

Permit Programs Manager
New Mexico Environment Department
Air Quality Bureau
525 Camino de los Marquez, Suite 1
Santa Fe, New Mexico; 87505-1816
Telephone Number (505) 476-4300 or 1 800 224-7009

November 25, 2024

KISS Radio
212 West Apache Street
Farmington, NM 87401

CERTIFIED MAIL

Dear KISS Radio:

SUBJECT: PSA Request - Proposed New Air Quality Construction Permit Vernon Hamilton Construction Company, LLC – Kirtland Pit at 32 Rd 6210, Kirtland, NM.

Attached is a copy of a public service announcement regarding a proposed new air quality construction permit application for Vernon Hamilton Construction Company, LLC – Kirtland Pit. This announcement is being submitted by Montrose Environmental Solutions, Inc., Albuquerque, NM on behalf of Vernon Hamilton Construction Company.

The announcement request is being made to fulfill the requirements of the New Mexico Environmental Department air quality permitting regulations. Please consider reading the attached announcement as a public service message.

If you have any questions or need additional information, please contact me at (505) 830-9680 ext 6 (voice), (505) 830-9678 (fax) or email at pwade@montrose-env.com.

Thank you.

Sincerely,

Paul Wade

Paul Wade
Principal/Senior Associate Engineer

Montrose Environmental Solutions, Inc.
9100 2nd St., Suite 200
Albuquerque, NM 87114-1664

T: 505.830.9680 ext. 6
F: 505.830.9678
Pwade@montrose-env.com
www.montrose-env.com

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Farmington, NM 87401

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Certified Mail Fee $4.85	$0.00
Extra Services & Fees *(check box, add fee as appropriate)*	$0.00
☐ Return Receipt (hardcopy)	$ $0.00
☐ Return Receipt (electronic)	$ $0.00
☐ Certified Mail Restricted Delivery	$ $0.00
☐ Adult Signature Required	$
☐ Adult Signature Restricted Delivery	$
Postage $0.73	$0.69
Total Postage and Fees	$5.54

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Postmark Here

ALBUQUERQUE, NM 87101
DEC 13 2024
USPS

12/13/2024

Sent To: Kiss Radio

Street and Apt: 212 West Apache Street

City, State, ZIP: Farmington, NM 87401

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions

Section 10

Written Description of the Routine Operations of the Facility

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

The VHCC LLC's Kirtland Pit plant consists of an aggregate quarry, feeder, primary jaw crusher, two (2) secondary cone crushers, two (2) 3-deck screens, one (1) scalping screen, one (1) RipRap plant, fifteen (15) transfer conveyors, and seven (7) stacker conveyors. At the initial site the main plant is powered by commercial line power. For relocations from the Kirtland Pit, the main plant is powered by a 725 kW, 1081 horsepower (hp) engine/generator. The RipRap plant will be powered by a 140 kW, 188 hp engine. No emission controls are proposed for the generator/engines.

From the aggregate quarry (Unit PIT_RAW), raw material is mined and stored in a stockpile (Unit RR_RAW) near the RipRap Screening Plant. A front-end loader transfers aggregate into the RipRap Screening Plant feeder (Unit RR_1). From the feeder, material is screened in a two phase system (Unit RR_2). Screened material is transferred to one of three screen under conveyors (Units RR_3, RR_4, RR_5) and dropped to one of three storage piles (Units RR1PILE, RR2PILE, RR3PILE). Material from the RipRap Screening Plant or Quarry will be loaded by front-end loader onto the main plant raw material pile (RAW).

A front-end loader will transport from the main plant raw material pile to the main plant feeder (Unit 1a). From the feeder, material is processed through the jaw crusher (Unit 1b) then transferred by the jaw crusher conveyor (Unit 1c) and transfer conveyor (Unit 14) to the scalping screen (Unit 20). At the scalping screen, waste material is removed by transfer conveyors (Units 9, 26) and stack conveyor (Unit 8) to the waste storage pile. Product material from the scalping screen is transferred by conveyor to the first cone crusher (Unit 3). From the first cone crusher, processed material is conveyed (Unit 3a, 6) to the first 3-deck screen (Unit 4). Screened 3/4" material is transferred to a stacker storage pile by a conveyor (Unit 4a) and stacker conveyor (Unit 7). Screened 1/2" material is transferred to a stacker storage pile by a conveyor (Unit 17) and stacker conveyor (Unit 10). Screened fine material is transferred to a stacker storage pile by a conveyor (Unit 16) and stacker conveyor (Unit 15). Oversized material is conveyed (Unit 18) to the second cone crusher (Unit 2). From the second cone crusher, processed material is conveyed (Unit 2a, 19) to the second 3-deck screen (Unit 5). Screened 1/2" material is transferred to a stacker storage pile by a conveyor (Unit 11) and stacker conveyor (Unit 25). Screened fine material is transferred to a stacker storage pile by a conveyor (Unit 5a) and stacker conveyor (Unit 24). Screened 3/4" material is transferred to a stacker storage pile by a shuttle conveyor (Unit 12) and stacker conveyor (Unit 22). Oversized screened material is sent back to the second cone crusher (Unit 2) by way of conveyor (Unit 13). Material is transported by front-end loader from the stacker storage piles to the finish storage piles (FPILE1, FPILE2, FPILE3).

Fugitive dust generated during aggregate processing will be controlled by the inherent moisture content of the material and a "Wet Dust Suppression System" to no more than 7% opacity at screening and conveyor transfer points and 12% opacity at crushing operations. No fugitive dust controls are proposed for the raw material storage piles (Units PIT_RAW, RR_RAW, RAW), feeder loading (Units RR_1, 1a) or finish storage piles (Units RR1PILE, RR2PILE, RR3PILE, FPILE1, FPILE2, FPILE3).

The VHCC LLC Las Vegas Aggregate Crushing & Screening plant will be permitted to co-located with a hot mix asphalt plant identified as VHCC LLC's Kirtland Pit. The Kirtland Pit has submitted a separate 20.2.72 NMAC permit application that is going through technical review.

Truck traffic (ROAD) will be limited to a maximum 213 trucks per day. Fugitive road dust will be controlled by basecourse and watering to reduce excess fugitive emissions.

A process flow diagram is presented as Figures 4-1 and 4-2 in Section 4. A facility layout is presented as Figure 5-1 in Section 5.

Section 11

Source Determination

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

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

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

A. Identify the emission sources evaluated in this section (list and describe)**:** Aggregate crushing and screening plant - produce construction aggregate and sand

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

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

X Yes **☐ No**

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

X Yes **☐ No**

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

X Yes **☐ No**

C. Make a determination:

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

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

Section 12

Section 12.A

PSD Applicability Determination for All Sources

(Submitting under 20.2.72, 20.2.74 NMAC)

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

A. This facility is:

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

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

a. **NOx: 34.6 TPY**
b. **CO: 42.0 TPY**
c. **VOC: 4.7 TPY**
d. **SOx: 0.029 TPY**
e. **PM: 15.7 TPY**
f. **PM10: 7.2 TPY**
g. **PM2.5: 2.7 TPY**
h. **Fluorides: 0.0 TPY**
i. **Lead: 0.00015 TPY**
j. **Sulfur compounds (listed in Table 2): 0.0 TPY**
k. **GHG: 1676 TPY**

Section 13

Determination of State & Federal Air Quality Regulations

This section lists each state and federal air quality regulation that may apply to your facility and/or equipment that are stationary sources of regulated air pollutants.

Not all state and federal air quality regulations are included in this list. Go to the Code of Federal Regulations (CFR) or to the Air Quality Bureau's regulation page to see the full set of air quality regulations.

Required Information for Specific Equipment:
For regulations that apply to specific source types, in the 'Justification' column **provide any information needed to determine if the regulation does or does not apply**. **For example**, to determine if emissions standards at 40 CFR 60, Subpart IIII apply to your three identical stationary engines, we need to know the construction date as defined in that regulation; the manufacturer date; the date of reconstruction or modification, if any; if they are or are not fire pump engines; if they are or are not emergency engines as defined in that regulation; their site ratings; and the cylinder displacement.

Required Information for Regulations that Apply to the Entire Facility:
See instructions in the 'Justification' column for the information that is needed to determine if an 'Entire Facility' type of regulation applies (e.g. 20.2.70 or 20.2.73 NMAC).

Regulatory Citations for Regulations That Do Not, but Could Apply:
If there is a state or federal air quality regulation that does not apply, but you have a piece of equipment in a source category for which a regulation has been promulgated, you must **provide the low level regulatory citation showing why your piece of equipment is not subject to or exempt from the regulation. For example** if you have a stationary internal combustion engine that is not subject to 40 CFR 63, Subpart ZZZZ because it is an existing 2 stroke lean burn stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, your citation would be 40 CFR 63.6590(b)(3)(i). **We don't want a discussion of every non-applicable regulation, but if it is possible a regulation could apply, explain why it does not. For example,** if your facility is a power plant, you do not need to include a citation to show that 40 CFR 60, Subpart OOO does not apply to your non-existent rock crusher.

Regulatory Citations for Emission Standards:
For each unit that is subject to an emission standard in a source specific regulation, such as 40 CFR 60, Subpart OOO or 40 CFR 63, Subpart HH, include the low level regulatory citation of that emission standard. Emission standards can be numerical emission limits, work practice standards, or other requirements such as maintenance. **Here are examples:** a glycol dehydrator is subject to the general standards at 63.764C(1)(i) through (iii); an engine is subject to 63.6601, Tables 2a and 2b; a crusher is subject to 60.672(b), Table 3 and all transfer points are subject to 60.672(e)(1)

Federally Enforceable Conditions:
All federal regulations are federally enforceable. All Air Quality Bureau State regulations are federally enforceable except for the following: affirmative defense portions at 20.2.7.6.B, 20.2.7.110(B)(15), 20.2.7.11 through 20.2.7.113, 20.2.7.115, and 20.2.7.116; 20.2.37; 20.2.42; 20.2.43; 20.2.62; 20.2.63; 20.2.86; 20.2.89; and 20.2.90 NMAC. Federally enforceable means that EPA can enforce the regulation as well as the Air Quality Bureau and federally enforceable regulations can count toward determining a facility's potential to emit (PTE) for the Title V, PSD, and nonattainment permit regulations.

INCLUDE ANY OTHER INFORMATION NEEDED TO COMPLETE AN APPLICABILITY DETERMINATION OR THAT IS RELEVENT TO YOUR FACILITY'S NOTICE OF INTENT OR PERMIT.

EPA Applicability Determination Index for 40 CFR 60, 61, 63, etc: http://cfpub.epa.gov/adi/

To save paper and to standardize the application format, delete this sentence, and begin your submittal for this attachment on this page.

Table for State Regulations:

State Regulation Citation	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification: (You may delete instructions or statements that do not apply in the justification column to shorten the document.)
20.2.1 NMAC	General Provisions	Yes	Facility	General Provisions apply to Notice of Intent, Construction, and Title V permit applications.
20.2.3 NMAC	Ambient Air Quality Standards NMAAQS	Yes	Facility	20.2.3 NMAC is a State Implementation Plan (SIP) approved regulation that limits the maximum allowable concentration of, Sulfur Compounds, Carbon Monoxide and Nitrogen Dioxide.
20.2.7 NMAC	Excess Emissions	Yes	Facility	This facility is subject to emissions limits in a permit or numerical emissions standards in a federal or state regulation.
20.2.61.109 NMAC	Smoke & Visible Emissions	Yes	21, RR_ENG	Units 21 and RR_ENG is limited to opacity of 20% per 20.2.61.109 NMAC.
20.2.70 NMAC	Operating Permits	No	Facility	The facility does not have potential to emit (PTE) of 100 tpy or more of any regulated air pollutant other than HAPs; and/or a HAPs PTE of 10 tpy or more for a single HAP or 25 or more tpy for combined HAPs
20.2.71 NMAC	Operating Permit Fees	No	Facility	If subject to 20.2.70 NMAC and your permit includes numerical ton per year emission limits, you are subject to 20.2.71 NMAC and normally applies to the entire facility.
20.2.72 NMAC	Construction Permits	Yes	Facility	VHCC is applicable to “Construction Permit” 20.2.72 NMAC.
20.2.73 NMAC	NOI & Emissions Inventory Requirements	Yes	Facility	The facility is applicable to the Emissions Inventory Reporting per 20.2.73.300 NMAC since the facility is subject to 20.2.72.
20.2.74 NMAC	Permits – Prevention of Significant Deterioration (PSD)	No	Facility	The facility is not a major PSD source
20.2.75 NMAC	Construction Permit Fees	Yes	Facility	This regulation applies to this facility since VHCC is applying for a permit pursuant to 20.2.72 NMAC.
20.2.77 NMAC	New Source Performance	Yes	1b, 1c, 14, 20, 9, 26, 8, 3, 3a, 6, 4, 4a, 7, 16, 15, 17, 10, 18, 2, 2a, 19, 5, 5a, 24, 12, 22, 11, 25, 13, 21, RR_2,	This is a stationary source which is subject to the requirements of 40 CFR Part 60, Subpart OOO or stationary sources subject to the requirements of 40 CFR Part 60, Subpart IIII.

State Regulation Citation	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification: (You may delete instructions or statements that do not apply in the justification column to shorten the document.)
			RR_3, RR_4, RR_5, RR_ENG	
20.2.78 NMAC	Emission Standards for HAPS	No	Units Subject to 40 CFR 61	This facility does not emit hazardous air pollutants which are subject to the requirements of 40 CFR Part 61.
20.2.80 NMAC	Stack Heights	No		No citation applicable.
20.2.82 NMAC	MACT Standards for source categories of HAPS	Yes	21, RR_ENG	This facility is potentially subject to the requirements of 40 CFR Part 63, Subpart ZZZZ.

Table for Applicable Federal Regulations:

Federal Regulation Citation	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification:
40 CFR 50	NAAQS	Yes	Facility	Defined as applicable at 20.2.72, Any national ambient air quality standard
NSPS 40 CFR 60, Subpart A	General Provisions	Yes	1b, 1c, 14, 20, 9, 26, 8, 3, 3a, 6, 4, 4a, 7, 16, 15, 17, 10, 18, 2, 2a, 19, 5, 5a, 24, 12, 22, 11, 25, 13, 21, RR_2, RR_3, RR_4, RR_5, RR_ENG	Subparts IIII and OOO in 40 CFR 60 apply to this facility.
NSPS 40 CFR 60, Subpart 000	Standards of Performance for Nonmetallic Mineral Processing Plants	Yes	1b, 1c, 14, 20, 9, 26, 8, 3, 3a, 6, 4, 4a, 7, 16, 15, 17, 10, 18, 2, 2a, 19, 5, 5a, 24, 12, 22, 11, 25, 13, RR_2, RR_3, RR_4, RR_5,	The provisions of this subpart are applicable to the following affected facilities in fixed or portable nonmetallic mineral processing plants: each crusher, grinding mill, screening operation, bucket elevator, belt conveyor, bagging operation, storage bin, enclosed truck or railcar loading station. Also, crushers and grinding mills at hot mix asphalt facilities that reduce the size of nonmetallic minerals embedded in recycled asphalt pavement and subsequent affected facilities up to, but not including, the first storage silo or bin are subject to the provisions of this subpart.
NSPS 40 CFR 60 Subpart IIII	Standards of performance for Stationary Compression Ignition Internal Combustion Engines	Yes	21, RR_ENG	If the plant is only located at the site for less than 12 months, the plant engine is defined by EPA as a “non-road” engine, and as such is not applicable to 40 CFR Part 60 Subpart IIII. If the plant operates at the site for more than 12 months, Unit RR_ENG would then be applicable to Subpart IIII.

Federal Regulation Citation	Title	Applies? Enter Yes or No	Unit(s) or Facility	Justification:
NESHAP 40 CFR 61 Subpart A	General Provisions	No	Units Subject to 40 CFR 61	Applies if any other Subpart in 40 CFR 61 applies.
MACT 40 CFR 63, Subpart A	General Provisions	Yes	21, RR_ENG	Applies if any other Subpart in 40 CFR 63 applies.
MACT 40 CFR 63 Subpart ZZZZ	National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (**RICE MACT**)	Yes	21, RR_ENG	If the plant is only located at the site for less than 12 months, the plant engine is defined by EPA as a "non-road" engine, and as such is not applicable to 40 CFR Part 63 Subpart ZZZZ. If the plant operates at the site for more than 12 months, Unit RR_ENG would then be applicable to Subpart ZZZZ. If Unit RR_ENG meets the requirement of Subpart IIII it also meets the requirement of Subpart ZZZZ.

Section 14

Operational Plan to Mitigate Emissions

(Submitting under 20.2.70, 20.2.72, 20.2.74 NMAC)

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

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

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

The preliminary operational plan defining the measures to be taken to mitigate source emissions during malfunction, startup, or shutdown are as follows:

STARTUP AND SHUTDOWN PROCEDURES

Water Truck

Startup

Check water supply, inspect nozzles and open all associated valves before startup.

Shutdown

Inspect nozzles and close all associated valves after shutdown.

Processing Plant Water Spray Dust Suppression System

Startup

Daily visual inspection of water spray operation prior to material processing. All plant water sprays, required to maintain opacity limits to required levels, will be operational prior to material processing.

Shutdown

No additional requirements are proposed.

OPERATIONS PLAN

Water Truck Operation

A water truck to be operated, as needed, at plant site disturbed areas, storage piles, and haul truck traffic areas to prevent excess visible emissions. These activities include; unpaved haul roads, storage piles and active disturbed

areas. Water spray application rate will be determined based on the occurrence of visible dust and may vary depending on existing road conditions, traffic, wind, temperature, and precipitation.

Processing Plant Water Spray Dust Suppression System

Water spray dust suppression will be operated at all times when pertinent equipment is operating to maintain equipment opacity limits.

MAINTENANCE PLAN

Water Truck Maintenance

A safety check and equipment check will be conducted daily. Normal vehicle maintenance will be performed regularly or as needed.

Processing Plant Water Spray Dust Suppression Maintenance

Visual inspections will be made monthly to verify proper functioning of control equipment. When emissions are suspected to approach compliance values, equipment will be checked for problems and repaired.

No startup/shutdown emission rates are expected to be greater than what is proposed for normal operations of the plant. All controls will be operating and functioning correctly prior to the start of production.

Section 15

Alternative Operating Scenarios

(Submitting under 20.2.70, 20.2.72, 20.2.74 NMAC)

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

Construction Scenarios: When a permit is modified authorizing new construction to an existing facility, NMED includes a condition to clearly address which permit condition(s) (from the previous permit and the new permit) govern during the interval between the date of issuance of the modification permit and the completion of construction of the modification(s). There are many possible variables that need to be addressed such as: Is simultaneous operation of the old and new units permitted and, if so for example, for how long and under what restraints? In general, these types of requirements will be addressed in Section A100 of the permit, but additional requirements may be added elsewhere. Look in A100 of our NSR and/or TV permit template for sample language dealing with these requirements. Find these permit templates at: www.env.nm.gov/air-quality/permitting-section-procedures-and-guidance/. Compliance with standards must be maintained during construction, which should not usually be a problem unless simultaneous operation of old and new equipment is requested.

In this section, under the bolded title “Construction Scenarios”, specify any information necessary to write these conditions, such as: conservative-realistic estimated time for completion of construction of the various units, whether simultaneous operation of old and new units is being requested (and, if so, modeled), whether the old units will be removed or decommissioned, any PSD ramifications, any temporary limits requested during phased construction, whether any increase in emissions is being requested as SSM emissions or will instead be handled as a separate Construction Scenario (with corresponding emission limits and conditions, etc.

NA

Section 16

Air Dispersion Modeling

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

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

Check each box that applies:

☐ See attached, approved modeling **waiver for all** pollutants from the facility.
☐ See attached, approved modeling **waiver for some** pollutants from the facility.
☒ Attached in Universal Application Form 4 (UA4) is a **modeling report for all** pollutants from the facility.
☐ Attached in UA4 is a **modeling report for some** pollutants from the facility.
☐ No modeling is required.

Universal Application 4

Air Dispersion Modeling Report

Refer to and complete Section 16 of the Universal Application form (UA3) to assist your determination as to whether modeling is required. If, after filling out Section 16, you are still unsure if modeling is required, e-mail the completed Section 16 to the AQB Modeling Manager for assistance in making this determination. If modeling is required, a modeling protocol would be submitted and approved prior to an application submittal. The protocol should be emailed to the modeling manager. A protocol is recommended but optional for minor sources and is required for new PSD sources or PSD major modifications. Fill out and submit this portion of the Universal Application form (UA4), the "Air Dispersion Modeling Report", only if air dispersion modeling is required for this application submittal. This serves as your modeling report submittal and should contain all the information needed to describe the modeling. No other modeling report or modeling protocol should be submitted with this permit application.

16-A: Identification

1	Name of facility:	Kirtland Pit
2	Name of company:	Vernon Hamilton Construction Company (VHCC), LLC
3	Current Permit number:	New Permit
4	Name of applicant's modeler:	Paul Wade
5	Phone number of modeler:	505 830-9680 x6
6	E-mail of modeler:	pwade@montrose-env.com

16-B: Brief

1	Was a modeling protocol submitted and approved? 12/04/2024 – Change in model protocol includes revise the Ozone background to Substation instead of Bloomfield. Substation is closer to site. Ozone background used is the season/hour format from Substation Years 2021-2023.	Yes☒	No☐
2	Why is the modeling being done?	New Facility	
3	Describe the permit changes relevant to the modeling.		
	New Facility		
4	What geodetic datum was used in the modeling?	NAD83	
5	How long will the facility be at this location?	1 Year, Relocation Allowed	
6	Is the facility a major source with respect to Prevention of Significant Deterioration (PSD)?	Yes☐	No☒

7	Identify the Air Quality Control Region (AQCR) in which the facility is located	014	
8	List the PSD baseline dates for this region (minor or major, as appropriate).		
	NO2	06/06/1989	
	SO2	08/07/1978	
	PM10	08/07/1978	
	PM2.5	N/A	
9	Provide the name and distance to Class I areas within 50 km of the facility (300 km for PSD permits).		
	Mesa Verde National Park – 47 km		
10	Is the facility located in a non-attainment area? If so describe below	Yes☐	No☒
11	Describe any special modeling requirements, such as streamline permit requirements.		

16-C: Modeling History of Facility

Describe the modeling history of the facility, including the air permit numbers, the pollutants modeled, the National Ambient Air Quality Standards (NAAQS), New Mexico AAQS (NMAAQS), and PSD increments modeled. (Do not include modeling waivers).

Pollutant	Latest permit and modification number that modeled the pollutant facility-wide.	Date of Permit	Comments
CO	New Permit		
NO_2	New Permit		
SO_2	New Permit		
H_2S	N/A		
PM2.5	New Permit		
PM10	New Permit		
Lead	New Permit		
Ozone (PSD only)	Not a PSD Source		
NM Toxic Air Pollutants (20.2.72.402 NMAC)	N/A		

16-D: Modeling performed for this application

For each pollutant, indicate the modeling performed and submitted with this application.
Choose the most complicated modeling applicable for that pollutant, i.e., culpability analysis assumes ROI and cumulative analysis were also performed.

Pollutant	ROI	Cumulative analysis	Culpability analysis	Waiver approved	Pollutant not emitted or not changed.
CO	☒	☐	☐	☐	☐

	NO_2	☒	☒	☐	☐	☐
	SO_2	☒	☐	☐	☐	☐
	H_2S	☐	☐	☐	☐	☒
	PM2.5	☒	☒	☐	☐	☐
	PM10	☒	☒	☒	☐	☐
	Lead	☒	☐	☐	☐	☐
	Ozone	☐	☐	☐	☒	☐
	State air toxic(s) (20.2.72.402 NMAC)	☐	☐	☐	☒	☐

16-E: New Mexico toxic air pollutants modeling

1 List any New Mexico toxic air pollutants (NMTAPs) from Tables A and B in 20.2.72.502 NMAC that are modeled for this application.

2 List any NMTAPs that are emitted but not modeled because stack height correction factor. Add additional rows to the table below, if required.

Pollutant	Emission Rate (pounds/hour)	Emission Rate Screening Level (pounds/hour)	Stack Height (meters)	Correction Factor	Emission Rate/ Correction Factor
N/A					

16-F: Modeling options

1	Was the latest version of AERMOD used with regulatory default options? If not explain below.	Yes☒	No☐
	Version 23132		

16-G: Surrounding source modeling

1	Date of surrounding source retrieval	11/06/2024

2 If the surrounding source inventory provided by the Air Quality Bureau was believed to be inaccurate, describe how the sources modeled differ from the inventory provided. If changes to the surrounding source inventory were made, use the table below to describe them. Add rows as needed.

PM10 and PM2.5 GCP emission sources were set to 71.25 tpy and 17.875 tpy, respectively.
GCP2 and GCP3 hours of operation were limited to daylight hours only.

AQB Source ID	Description of Corrections
26718@1	Location was changed from 784150.84E; 3949359N to 761654E; 4072417N

16-H: Building and structure downwash

1	How many buildings are present at the facility?	None		
2	How many above ground storage tanks are present at the facility?	1		
3	Was building downwash modeled for all buildings and tanks? If not explain why below.		Yes☐	No☒
	No buildings or tanks that would influence point source emissions			
4	Building comments			

16-I: Receptors and modeled property boundary

1	"Restricted Area" is an area to which public entry is effectively precluded. Effective barriers include continuous fencing, continuous walls, or other continuous barriers approved by the Department, such as rugged physical terrain with a steep grade that would require special equipment to traverse. If a large property is completely enclosed by fencing, a restricted area within the property may be identified with signage only. Public roads cannot be part of a Restricted Area. A Restricted Area is required in order to exclude receptors from the facility property. If the facility does not have a Restricted Area, then receptors shall be placed within the property boundaries of the facility. Describe the fence or other physical barrier at the facility that defines the restricted area.						
	Fencing and Rough Terrain						
2	Receptors must be placed along publicly accessible roads in the restricted area. Are there public roads passing through the restricted area?					Yes☐	No☒
3	Are restricted area boundary coordinates included in the modeling files?					Yes☒	No☐
4	Describe the receptor grids and their spacing. The table below may be used, adding rows as needed.						
	Grid Type	Shape	Spacing	Start distance from restricted area or center of facility	End distance from restricted area or center of facility	Comments	
	Very Fine	Cartesian	50 meters	Border	500 Meters		
	Very Fine	Cartesian	100 meters	500 Meters	1 Kilometers		
	Fine	Cartesian	250 meters	1 Kilometers	3 Kilometers		
	Course	Cartesian	500 meters	3 Kilometers	5 Kilometers		
	Course	Cartesian	1000 meters	10 Kilometers	50 Kilometers		
5	Describe receptor spacing along the fence line.						
	25 Meters						
6	Describe the PSD Class I area receptors.						
	100 meters on border and within boundary						

16-J: Modeling Scenarios

Identify, define, and describe all modeling scenarios. Examples of modeling scenarios include using different production rates, times of day, times of year, simultaneous or alternate operation of old and new equipment during transition periods, etc. Alternative operating scenarios should correspond to all parts of the Universal Application and should be fully described in Section 15 of the Universal Application (UA3).

1

The hours of operation are presented below in Table 1. They represent daylight hours for the months of March through October and 8 AM to 5 PM for the months of November through February. The aggregate crushing plant will limit the daily throughput per month to the values listed in Table 2. For combustion modeling hours of operation are found in Table 1.

TABLE 1: Aggregate Crusher Hours of Operation (MST)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	1	1	1	1	1	0.5	0	0	0
6:00 AM	0	0	1	1	1	1	1	1	1	1	0	0
7:00 AM	0	0	1	1	1	1	1	1	1	1	0	0
8:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
9:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
10:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
11:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
12:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
1:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
2:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
3:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
4:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
5:00 PM	0	0	1	1	1	1	1	1	1	1	0	0
6:00 PM	0	0	0	1	1	1	1	1	0.5	0	0	0
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
Total	9	9	12	14	14	14	14	14	13	12	9	9

TABLE 2: Aggregate Daily Production Rates

Month	Tons Per Day
November through February	2800
March through October	3500

Since the daily production rate is less than the proposed hours of operation running at maximum hourly production rate, two modeling scenarios will be performed, one for morning and one for afternoon hours. The model hours for particulate modeling are presented in Tables 3 and 4.

TABLE 3: Aggregate Crusher Morning Modeled Hours of Operation (MST)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	1	1	1	1	1	0.5	0	0	0
6:00 AM	0	0	1	1	1	1	1	1	1	1	0	0
7:00 AM	0	0	1	1	1	1	1	1	1	1	0	0
8:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
9:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
10:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
11:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
12:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
1:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
2:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
3:00 PM	1	1	1	0	0	0	0	0	0.5	1	1	1
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
Total	8	8	10	10	10	10	10	10	10	10	8	8

TABLE 4: Aggregate Crusher Afternoon Modeled Hours of Operation (MST)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	1	0	0	0	0	0	0.5	1	0	0

9:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
10:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
11:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
12:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
1:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
2:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
3:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
4:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
5:00 PM	0	0	1	1	1	1	1	1	1	1	0	0
6:00 PM	0	0	0	1	1	1	1	1	0.5	0	0	0
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
Total	8	8	10	10	10	10	10	10	10	10	8	8

2 Which scenario produces the highest concentrations? Why?

Both scenarios for particulate modeling gave similar results. Scenario 1 has early morning hours and Scenario 2 has early evening hours. These hours consist of low wind speeds and stable boundary layers.

3 Were emission factor sets used to limit emission rates or hours of operation?
(This question pertains to the "SEASON", "MONTH", "HROFDY" and related factor sets, not to the factors used for calculating the maximum emission rate.) Yes☐ No☒

4 If so, describe factors for each group of sources. List the sources in each group before the factor table for that group. (Modify or duplicate table as necessary. It's ok to put the table below section 16-K if it makes formatting easier.)
Sources:

5 If hourly, variable emission rates were used that were not described above, describe them below.

6 Were different emission rates used for short-term and annual modeling? If so describe below. Yes☒ No☐

For PM10 and PM2.5 annual modeling an hourly factor was used to account for the difference in hourly throughput and annual throughput. Based on the facility operating at 350 tons per hour and the daily throughput limits found in Table 2 above, this is equivalent to 3410 hours per year or 1,193,500 tons per year. Since the annual production limit is 350,000 tons per year and the production, based on maximum hourly production and hours based on daily throughput limits, an hourly factor of 0.2933 (350,000/1,193,500) was used in the annual PM10 and PM2.5 modeling.

16-K: NO_2 Modeling

1	Which types of NO_2 modeling were used? Check all that apply.	
	☒	ARM2 – Initial Site
	☐	100% NO_X to NO_2 conversion
	☒	PVMRM – Relocation Modeling
	☐	OLM
	☐	Other:
2	Describe the NO_2 modeling.	
	For initial site modeling only Unit RR_ENG was modeled using ARM2. For relocation modeling, both Units RR_ENG and 21 (Main Plant Generator/Engine) were modeled using PVMRM. The input for ozone into the PVMRM model was Substation 2021-2023 monitor data formatted into season/hour data following EPA guidance. Based on EPA's ISR databases, a proposed conservative NO_2/NO_X ISR ratio for Diesel-fired RICE is 0.15. For neighboring sources, since the ISR has a diminishing impact on ambient NO_2/NO_X ratios as a plume is transported farther downwind due to mixing and reaction towards background ambient NO_2/NO_X ratios, a default ISR of 0.30 based on the NMED Modeling Guidelines will be used. The ozone concentration for each hour of the day per season (winter, spring, summer, and fall) is the average over the three years, 2021-2023, of the average of the highest for each year for each season/hour.	
3	Were default NO_2/NO_X ratios (0.5 minimum, 0.9 maximum or equilibrium) used? If not describe and justify the ratios used below.	Yes☒ No☐
4	Describe the design value used for each averaging period modeled.	
	1-hour: 98th percentile as calculated by AERMOD Annual Highest Annual Average of Three Years:	

16-L: Ozone Analysis

1	NMED has performed a generic analysis that demonstrates sources that are minor with respect to PSD do not cause or contribute to any violations of ozone NAAQS. The analysis follows. The basis of the ozone SIL is documented in *Guidance on Significant Impact Levels for Ozone and Fine Particles in the Prevention of Significant Deterioration Permitting Program*, EPA, April 17, 2018 and associated documents. NMED accepts this SIL basis and incorporates it into this permit record by reference. Complete documentation of the ozone concentration analysis using MERPS is included in the New Mexico Air Quality Bureau Air Dispersion Modeling Guidelines.
2	The MERP values presented in Table 10 and Table 11 of the NM AQB Modeling Guidelines that produce the highest concentrations indicate that facilities emitting no more than 250 tons/year of NO_X and no more than 250 tons/year of VOCs will cause less formation of O_3 than the O_3 significance level. $$[O_3]_{8-hour} = \left(\frac{250 \frac{ton}{yr}}{340_{MERP_{NOX}}} + \frac{250 \frac{ton}{yr}}{4679_{MERP_{VOC}}} \right) \times 1.96\ \mu g/m^3$$ =1.546 µg/m^3, which is below the significance level of 1.96 µg/m^3. Sources that produce ozone concentrations below the ozone SIL do not cause or contribute to air contaminant levels exceeding the ozone NAAQS.

3	Does the facility emit at least 250 tons per year of NO_X or at least 250 tons per year of VOCs? Sources that emit at least 250 tons per year of NO_X or at least 250 tons per year of VOCs are covered by the analysis above and require an individual analysis.	Yes☐	No☒

5 For new PSD Major Sources or PSD major modifications, if MERPs were used to account for ozone fill out the information below. If another method was used describe below.

NO_X (ton/yr)	$MERP_{NOX}$	VOCs (ton/yr)	$MERP_{VOC}$	$[O_3]_{8\text{-hour}}$

16-M: Particulate Matter Modeling

1 Select the pollutants for which plume depletion modeling was used.

☐	PM2.5
☒	PM10
☐	None

2 Describe the particle size distributions used. Include the source of information.

PM_{10} emissions may be modeled using plume deposition. Plume deposition simulates the effect of gravity as particles "fall-out" from the plume to the ground as the plume travels downwind. Therefore, the farther the plume travels from the emission point to the receptor, the greater the effect of plume deposition and the greater the decrease in modeled impacts or concentrations. Particle size distribution, particle mass fraction, and particle density are required inputs to the model to perform this function.

Particle size distribution for fugitive road dust on unpaved roads; material handling fugitive emissions; and combustion will use the particle size distribution found in the NMED Modeling Section approved values.

The mass-mean particle diameters were calculated using the formula:

$$d = ((d^3_1 + d^2_1 d_2 + d_1 d^2_2 + d^3_2) / 4)^{1/3}$$

Where: d = mass-mean particle diameter
d_1 = low end of particle size category range
d_2 = high end of particle size category range

Representative average particle densities were obtained from NMED accepted values.

Material	Density (g/cm^3)	Reference
Road Dust	2.5	NMED Value
Combustion	1.5	NMED Value
Fugitive Dust	2.5	NMED Value

The size distribution for PM_{10} emission sources are presented below.

Road Vehicle Fugitive Dust Deposition Parameters

Particle Size Category (μm)	Mass Mean Particle Diameter (μm)	Mass Weighted Size Distribution (%)	Density (g/cm^3)
PM10			
0 – 2.5	1.57	25.0	2.5
2.5 – 10	6.91	75.0	2.5

Based on NMED Model Guideline – June 2024 (Vehicle Fugitive)

Combustion Source Deposition Parameters

Particle Size Category (μm)	Mass Mean Particle Diameter (μm)	Mass Weighted Size Distribution (%)	Density (g/cm^3)
PM10			
0 - 2.5	1.57	100.0	1.5

Based on NMED Model Guideline – June 2024 (Combustion)

Material Handling (Fugitive) Dust Source Deposition Parameters

Particle Size Category (μm)	Mass Mean Particle Diameter (μm)	Mass Weighted Size Distribution (%)	Density (g/cm^3)
PM10			
0 - 2.5	1.57	7.8	2.5
2.5 – 5	3.88	27.0	2.5
5 – 10	7.77	65.2	2.5

Based on NMED Model Guideline – June 2024 (Coal Handling)

3	Does the facility emit at least 40 tons per year of NO_X or at least 40 tons per year of SO_2? Sources that emit at least 40 tons per year of NO_X or at least 40 tons per year of SO_2 are considered to emit significant amounts of precursors and must account for secondary formation of PM2.5.	Yes☐	No☒
4	Was secondary PM modeled for PM2.5?	Yes☐	No☒

5 If MERPs were used to account for secondary PM2.5 fill out the information below. If another method was used describe below.

Pollutant	NO_X	SO_2		$[PM2.5]_{24\text{-hour}}$
$MERP_{annual}$				
$MERP_{24\text{-hour}}$				$[PM2.5]_{annual}$
Emission rate (ton/yr)				

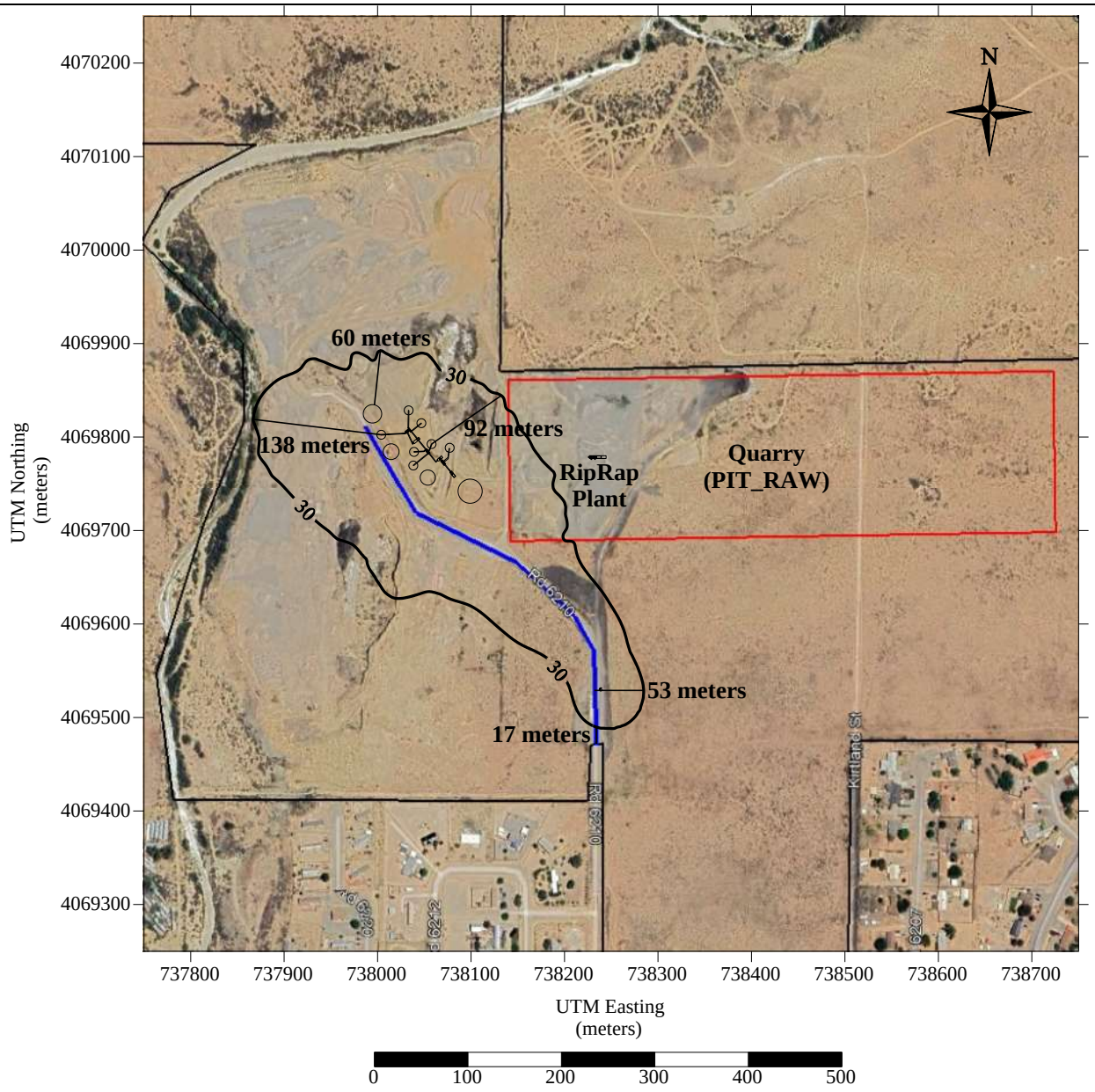
16-N: Setback Distances

Portable sources or sources that need flexibility in their site configuration requires that setback distances be determined between the emission sources and the restricted area boundary (e.g. fence line) for both the initial location and future locations. Describe the setback distances for the initial location.

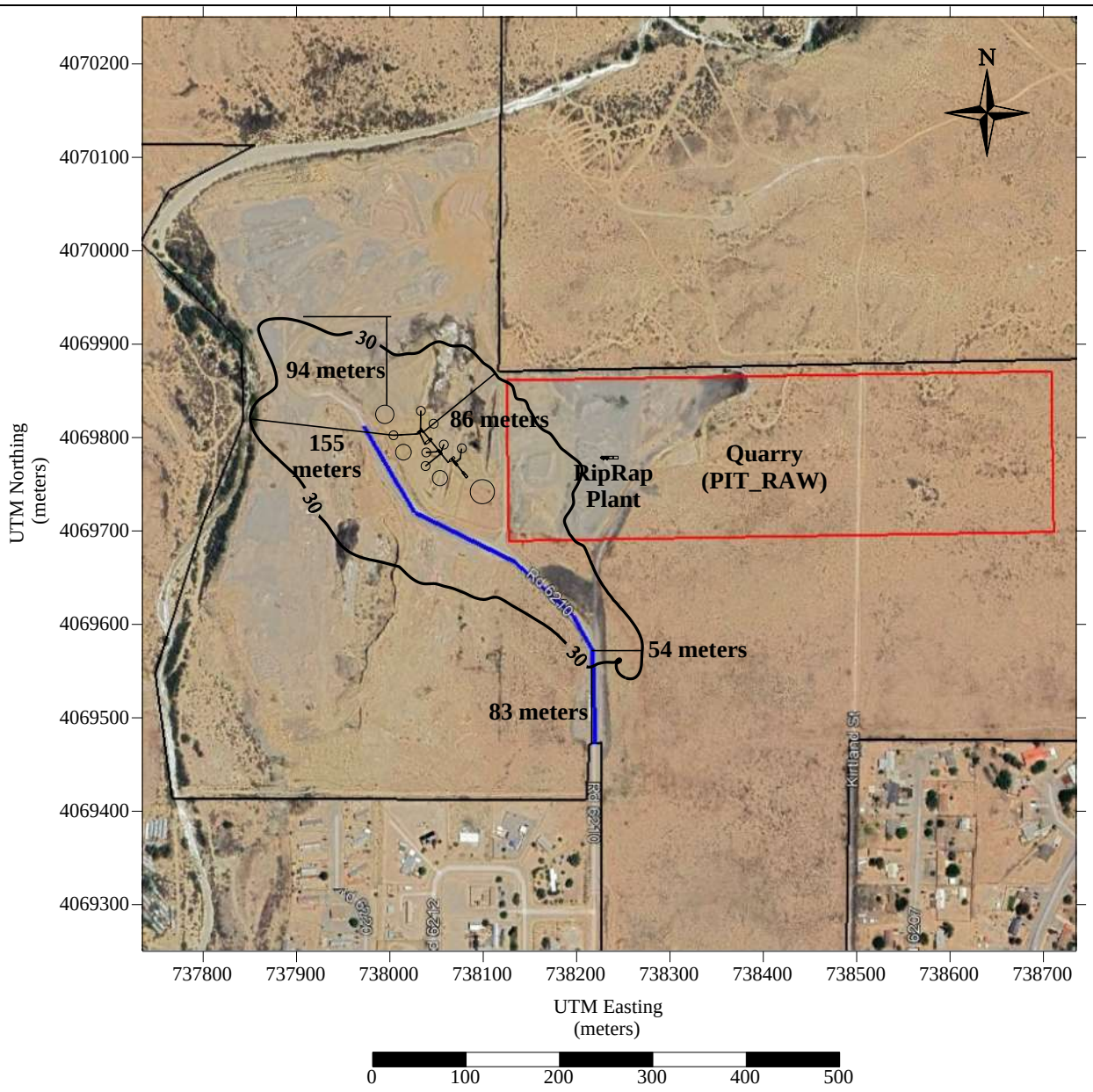
1

Initial Site modeling for NO2, PM10 NAAQS, PM10 Increment, and PM2.5 NAAQS shows that, with background and neighboring sources, the NO2 NAAQS, PM10 NAAQS, and PM2.5 NAAQS were not exceeded. The PM10 24 hour Increment setback distances are based on site operating scenarios 1 and 2. For initial site relocations, PM10 24-Hour Increment produced the largest setback distances.

Direction at Site	Meters	Max Pollutant
West	155	PM10 24-Hour Scenario 2
South	17	PM10 24-Hour Scenario 1
East	54	PM10 24-Hour Scenario 2
North	94	PM10 24-Hour Scenario 2
Northeast	92	PM10 24-Hour Scenario 2

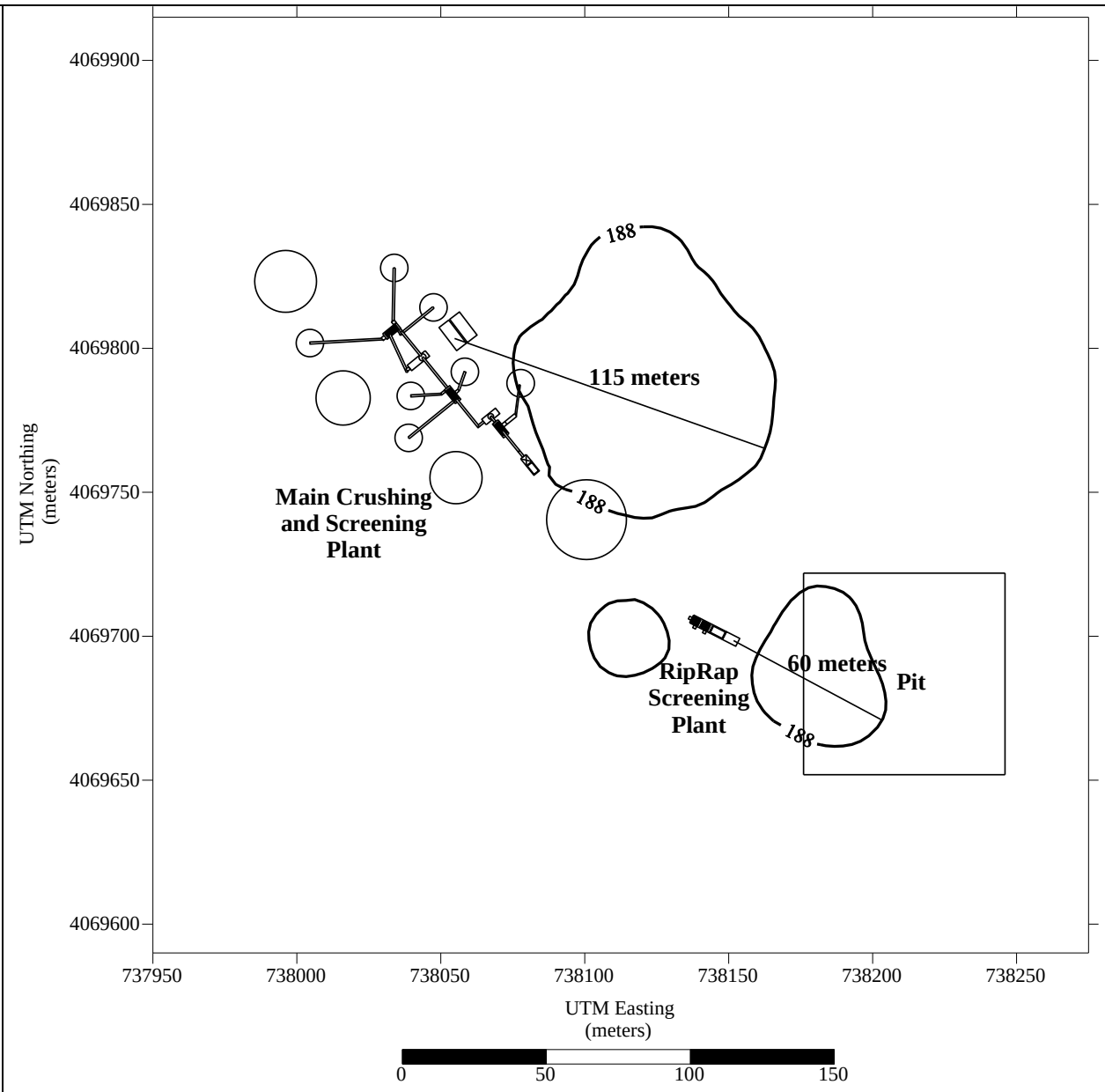


PM10 24 hour Increment Site Setback Modeling Scenario 1

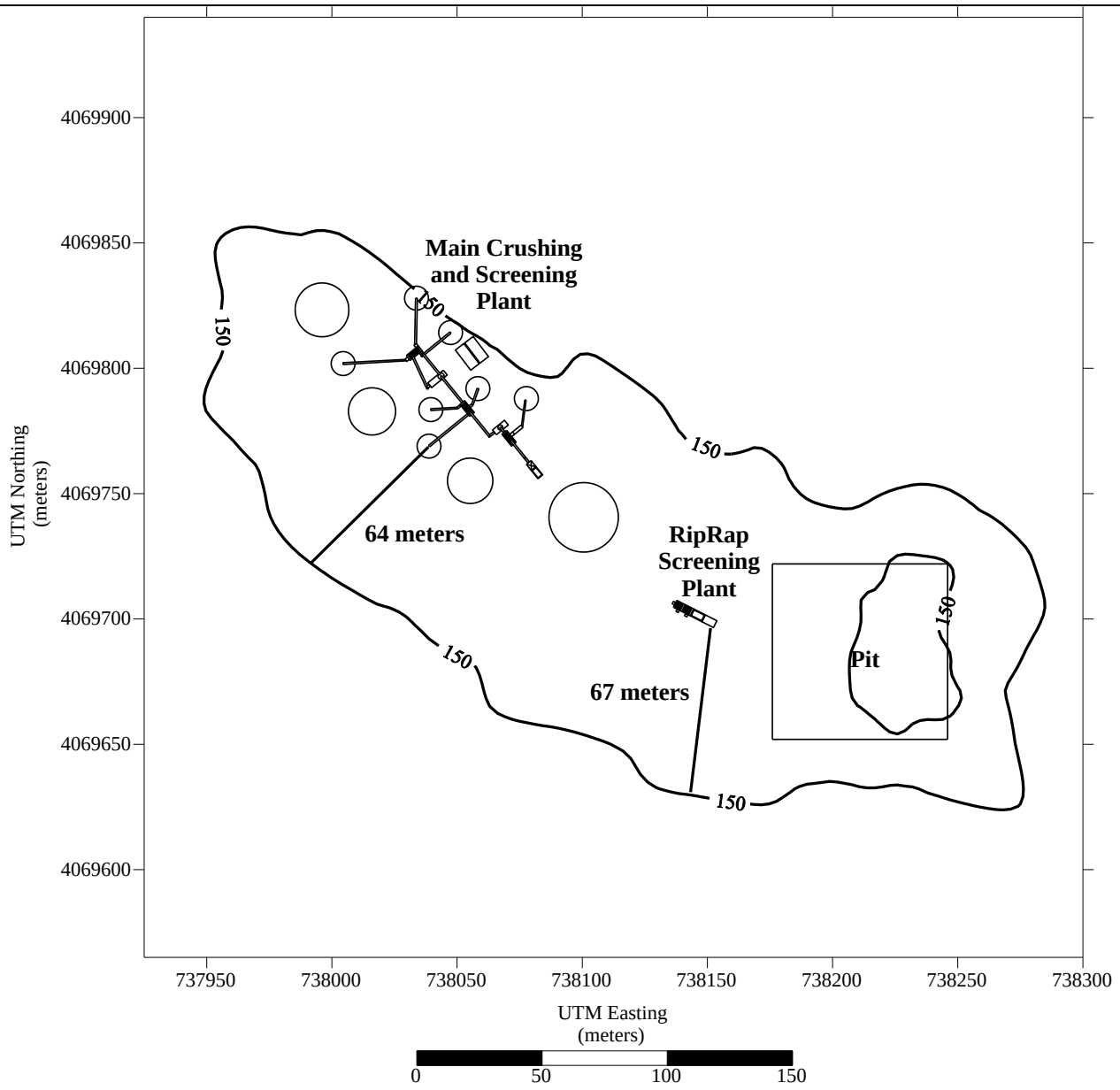


PM10 24 hour Increment Site Setback Modeling Scenario 2

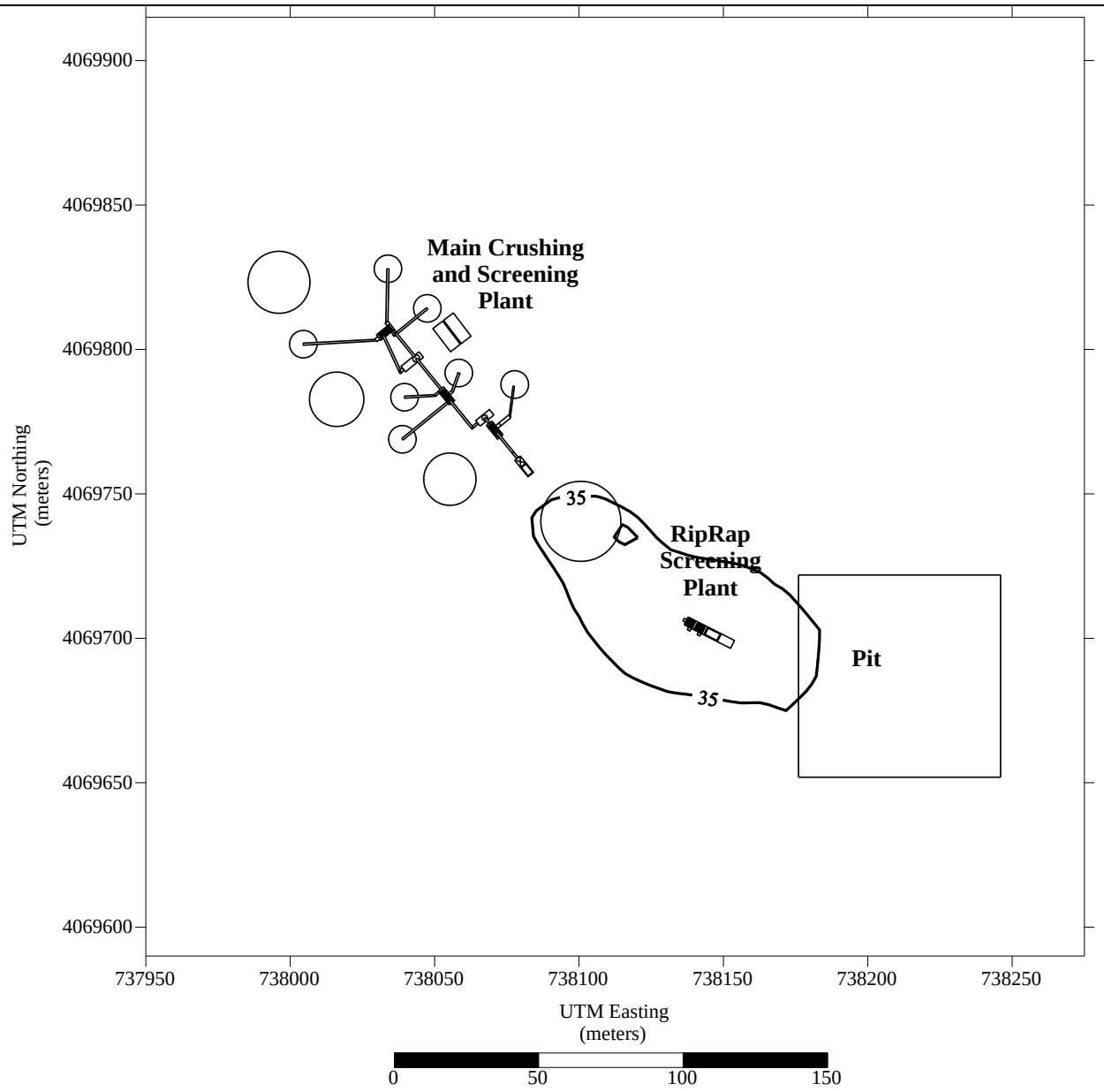
2	Describe the requested, modeled, setback distances for future locations, if this permit is for a portable stationary source. Include a haul road in the relocation modeling.
	The setback distances for relocation operating scenario includes a revised layout that consolidates equipment (PIT and RipRap Screening Plant) and includes the main plant engine, Unit 21. For PM_{10}, used backgrounds from the Shiprock Substation (Monitor ID 350451005). For $PM_{2.5}$, used backgrounds from the Farmington Environment Department Office (Monitor ID 350450019). For NO_2, used backgrounds from Bloomfield (Monitor ID 350450009).



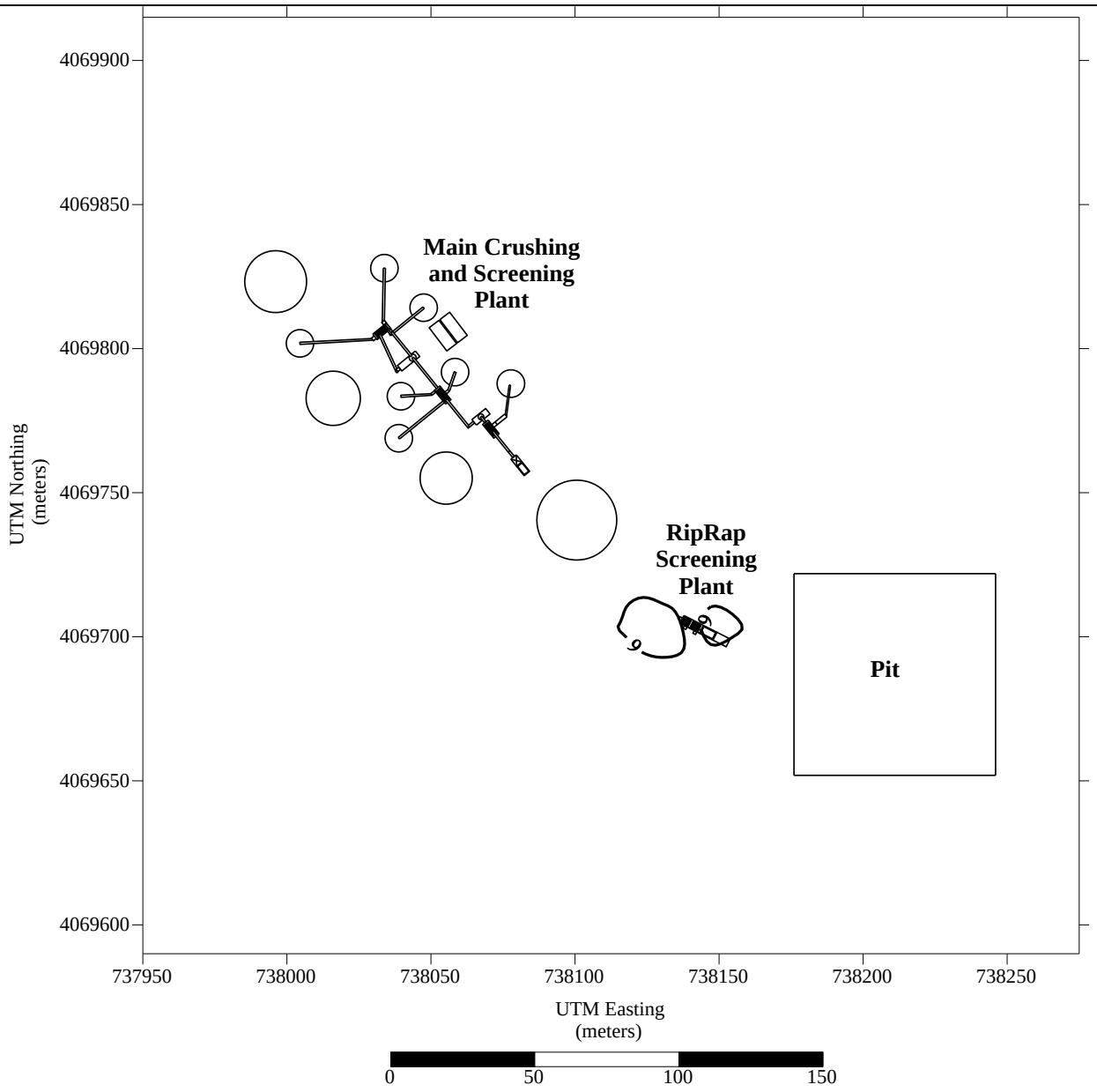
NO2 1 Hour Site Setback Modeling



PM10 24 Hour Site Setback Modeling



PM2.5 24 Hour Site Setback Modeling



PM2.5 Annual Site Setback Modeling

For new site relocations, NO2 1-Hour produced the largest setback distance. The largest relocation setback distance for NO2 1-Hour model is 115 meters from the main generator/engine (Unit 21) and 60 meters for the RipRap Screening Plant. For PM10 the largest setback distance is 64 meters from the main crushing and screening plant and 67 meters from the RipRap Screening Plant. For PM2.5, no setback distances are needed. For relocations, the RipRap Screening Plant needs to be 67 meters from the restricted boundary, the main crushing and screening plant needs to be 64 meters from the restricted boundary, and the main generator/engine (Unit 21) needs to be 115 meters from the restricted boundary.

16-O: PSD Increment and Source IDs

1 The unit numbers in the Tables 2-A, 2-B, 2-C, 2-E, 2-F, and 2-I should match the ones in the modeling files. Do these match? If not, provide a cross-reference table between unit numbers if they do not match below. Yes☐ No☒

Unit Number in UA-2	Unit Number in Modeling Files
ROAD	HR1-33

2 The emission rates in the Tables 2-E and 2-F should match the ones in the modeling files. Do these match? If not, explain why below. Yes☐ No☒

Hourly model emission rates for material handling sources (Emissions calculated using AP-42 Section 13.2.4) are calculated using annual average windspeed for Moriarty.

			Permit Emission Rate		Modeled Emission Rate	
Permit ID	**Model ID**	**Source Description**	**PM10 Lb/Hr**	**PM2.5 Lb/Hr**	**PM10 Lb/Hr**	**PM2.5 Lb/Hr**
PIT_RAW	PIT	Quarry Material	1.09254	0.16544	0.71046	0.10758
RR_RAW	PIT	RipRap Screening Plant Raw Material	1.09254	0.16544	0.71046	0.10758
RR_3	PIT	RipRap Screening Plant Stacker Conveyor 1a	0.19672	0.02979	0.12792	0.01937
RR_4	PIT	RipRap Screening Plant Stacker Conveyor 1b	0.19672	0.02979	0.12792	0.01937
RR_5	PIT	RipRap Screening Plant Stacker Conveyor 1c	0.26229	0.03972	0.17057	0.02583
RR1PILE	PIT	RipRap Screening Plant Stacker Finish Pile	0.32776	0.04963	0.21314	0.03228
RR2PILE	PIT	RipRap Screening Plant Stacker Finish Pile	0.32776	0.04963	0.21314	0.03228
RR3PILE	PIT	RipRap Screening Plant Stacker Finish Pile	0.43701	0.06618	0.28418	0.04303
WPILE	PIT	Waste Pile (Dirt Removal to Open Pit)	0.10925	0.01654	0.07105	0.01076
RAW	RAW	Raw Material from Quarry	1.09254	0.16544	0.71046	0.10758
8	8	Stacker Conveyor drop to Waste	0.06557	0.00993	0.04264	0.00646
7	7	Stacker Conveyor	0.06557	0.00993	0.04264	0.00646
15	15	Stacker Conveyor	0.06557	0.00993	0.04264	0.00646
10	10	Stacker Conveyor	0.06557	0.00993	0.08528	0.01291
24	24	Stacker Conveyor	0.13115	0.01986	0.12792	0.01937
22	22	Stacker Conveyor	0.19672	0.02979	0.15268	0.02312
25	25	Stacker Conveyor	0.13115	0.01986	0.08528	0.01291

3 Have the minor NSR exempt sources or Title V Insignificant Activities" (Table 2-B) sources been modeled? Yes☐ No☒

4 Which units consume increment for which pollutants?

Unit ID	NO_2	SO_2	PM10	PM2.5
21	X	X	X	
RRGEN	X	X	X	
RAW			X	
1a			X	

	1b			X	
	1c			X	
	14			X	
	20			X	
	9			X	
	26			X	
	8			X	
	3			X	
	3a			X	
	6			X	
	4			X	
	4a			X	
	7			X	
	16			X	
	15			X	
	17			X	
	10			X	
	18			X	
	2			X	
	2a			X	
	19			X	
	5			X	
	5a			X	
	24			X	
	12			X	
	22			X	
	11			X	
	25			X	
	13			X	
	FPILE1			X	
	FPILE2			X	
	FPILE3			X	
	TL1			X	
	TL2			X	
	TL3			X	
	PIT			X	
	HR1-33 (ROAD)			X	

5	PSD increment description for sources. (for unusual cases, i.e., baseline unit expanded emissions after baseline date).		
6	Are all the actual installation dates included in Table 2A of the application form, as required? This is necessary to verify the accuracy of PSD increment modeling. If not please explain how increment consumption status is determined for the missing installation dates below.	Yes☐	No☒
	New facility with installed dates to be 2025		

16-P: Flare Modeling

1	For each flare or flaring scenario, complete the following

	Flare ID (and scenario)	Average Molecular Weight	Gross Heat Release (cal/s)	Effective Flare Diameter (m)
	N/A			

16-Q: Volume and Related Sources

1	Were the dimensions of volume sources different from standard dimensions in the Air Quality Bureau (AQB) Modeling Guidelines? If not please explain how increment consumption status is determined for the missing installation dates below.	Yes☒	No☐
2	Describe the determination of sigma-Y and sigma-Z for fugitive sources.		
	For storage piles the model inputs were based on the size of the pile (50 feet)/4.3 (sigma-Y) and a release height of 8 feet or a sigma-Z of 8ft*2/2.15 for Unit RAW (Main Plant Raw Material Storage Pile), Unit FPILE1 (FPILE Fines Pile), Unit FPILE2 (FPILE ½" Pile) and Unit FPILE3 (FPILE ¾" Pile). All others followed standard dimensions from Air Quality Bureau (AQB) Modeling Guidelines.		
3	Describe how the volume sources are related to unit numbers. Or say they are the same.		
	Same		
4	Describe any open pits.		
	For the site quarry, fugitive dust operation emissions within the open pit will be combined and input into the open pit source. The open pit dimensions are input as 168 meters north, 600 meters east, with a depth of 10 meters for a volume of 1,008,000 meters^3. The release height will be zero. For the relocation quarry, fugitive dust operation emissions within the open pit will be combined and input into the open pit source. The open pit dimensions are input as 70 meters north, 70 meters east, with a depth of 10 meters for a volume of 49,000 meters^3. The release height will be zero.		
5	Describe emission units included in each open pit.		
	Model ID for Initial Site: PIT – Emission Sources; PIT_RAW, RR_RAW, RR_1, RR_2, RR_3, RR_4, RR_5, RR1PILE, RR2PILE, RR3PILE, WPILE Model ID for Relocation Site: PIT – Emission Sources; PIT_RAW, WPILE		

16-R: Background Concentrations

1	Were NMED provided background concentrations used? Identify the background station used below. If non-NMED provided background concentrations were used describe the data that was used.	Yes☒	No☐
	CO: Del Norte High School (350010023)		
	NO_2: Shiprock Substation (350451005)		
	PM2.5: Farmington Environment Department Office (350450019)		
	PM10: Shiprock Substation (350451005)		
	SO_2: Bloomfield(350450009)		
	Other:		

	Comments:	Backgrounds used for both the initial site and relocation sites.		
2	Were background concentrations refined to monthly or hourly values? If so describe below.		Yes☒	No☐
	Ozone background for PVMRM relocation modeling was refined to season/hour format. Ozone monitoring used in the background determination was 2021-2023 Shiprock Substation (350451005)			

16-S: Meteorological Data

1	Was NMED provided meteorological data used? If so select the station used. Four Corners (Farmington)	Yes☒	No☐
2	If NMED provided meteorological data was not used describe the data set(s) used below. Discuss how missing data were handled, how stability class was determined, and how the data were processed.		
	NA		

16-T: Terrain

1	Was complex terrain used in the modeling? If not, describe why below.	Yes☒	No☐
	Yes, for point sources only. For volume sources and openpit sources, model was run in source selected flat terrain mode.		
2	What was the source of the terrain data?		
	USGS National Elevation Data (NED)		

16-U: Modeling Files

1 Describe the modeling files:

File name (or folder and file name)	Pollutant(s)	Purpose (ROI/SIA, cumulative, culpability analysis, other)
VHCC ROI Combust	NO2, CO, SO2	ROI/SIA
VHCC ROI Lead	Lead	ROI/SIA
VHCC ROI PMS1	PM10, PM2.5 Scenario 1	ROI/SIA
VHCC ROI PMS2	PM10, PM2.5 Scenario 2	ROI/SIA
VHCC NO2 CIA	NO2 1 hour CIA	cumulative
VHCC PM10 CIA S1	PM10 NAAQS and Class 2 Increment Scenario 1	cumulative
VHCC PM10 CIA S2	PM10 NAAQS and Class 2 Increment Scenario 2	cumulative
VHCC PM25 24hr CIA S1	PM2.5 24 hour NAAQS Scenario 1	cumulative
VHCC PM25 24hr CIA S2	PM2.5 24 hour NAAQS Scenario 2	cumulative
VHCC PM25 24hr CIA S2	PM2.5 Annual NAAQS Scenario 1	cumulative
VHCC PM25 24hr CIA S2	PM2.5 Annual NAAQS Scenario 2	cumulative
VHCC PM10 CIA S1 CA	PM10 24 hour Increment Scenario 1	culpability analysis
VHCC PM10 CIA S2 CA	PM10 24 hour Increment Scenario 1	culpability analysis
VHCC Class 1 NOx	NO2 Annual Class 1 Increment	Class 1
VHCC Class 1 PMS2	PM10 Class 1 Increment Scenario 1	Class 1
VHCC Class 1 PMS2	PM10 Class 1 Increment Scenario 2	Class 1
VHCC Setback Combust	Relocation Combustion Setback	Relocation Setback
VHCC NO2 1hr Setback	Relocation NO2 1 hour Setback	Relocation Setback

	VHCC Setback PM10 S1	Relocation PM10 Setback Scenario 1	Relocation Setback
	VHCC Setback PM10 S2	Relocation PM10 Setback Scenario 2	Relocation Setback
	VHCC Setback PM25 S1	Relocation PM2.5 24 hour Setback Scenario 1	Relocation Setback
	VHCC Setback PM25 S2	Relocation PM2.5 24 hour Setback Scenario 2	Relocation Setback
	VHCC Setback PM25 Annual S1	Relocation PM2.5 Annual Setback Scenario 1	Relocation Setback
	VHCC Setback PM25 Annual S2	Relocation PM2.5 Annual Setback Scenario 2	Relocation Setback

16-V: PSD New or Major Modification Applications

1	A new PSD major source or a major modification to an existing PSD major source requires additional analysis. Was preconstruction monitoring done (see 20.2.74.306 NMAC and PSD Preapplication Guidance on the AQB website)?	Yes☐	No☒
2	If not, did AQB approve an exemption from preconstruction monitoring?	Yes☐	No☒
3	Describe how preconstruction monitoring has been addressed or attach the approved preconstruction monitoring or monitoring exemption.		
	N/A		
4	Describe the additional impacts analysis required at 20.2.74.304 NMAC.		
	N/A		
5	If required, have ozone and secondary PM2.5 ambient impacts analyses been completed? If so describe below.	Yes☐	No☒
	N/A		

16-W: Modeling Results

	If ambient standards are exceeded because of surrounding sources, a culpability analysis is required for the source to show that the contribution from this source is less than the significance levels for the specific pollutant. Was culpability analysis performed? If so describe below.	Yes☒	No☐

PM10 24 hour increment modeling was exceeded. When looking at the model inputs the exceedances were located south of the facility near "Valley Scrap Metal - Aluminum Sweat Furnace". Culpability modeling for the 4 receptors that showed exceedance for the dates of exceedance show that VHCC impacts are well below significant levels with the highest impacts from the VHCC facility being 1.8 µg/m^3.

Scenario 1

1

Year	Month	Day	Average Period	UTNE	UTMN	PSD ALL	VHCC
18	10	17	24	737350	4069150	46.871	0.036
18	3	11	24	737350	4069150	40.740	0.000
20	9	10	24	737350	4069150	39.405	0.021
17	10	3	24	737350	4069150	38.829	0.938
19	3	31	24	737350	4069150	37.585	0.000
17	2	12	24	737350	4069150	36.050	0.000
21	1	19	24	737350	4069150	31.047	0.008
19	3	20	24	737350	4069150	30.772	0.070
21	5	21	24	737450	4069200	51.086	0.006
20	3	18	24	737450	4069200	32.117	0.016
18	3	3	24	737500	4069200	54.906	0.016
17	9	21	24	737500	4069200	50.188	1.803
18	3	14	24	737500	4069200	49.583	0.489
19	5	26	24	737500	4069200	44.636	0.000
18	2	18	24	737500	4069200	42.101	0.000
19	2	4	24	737500	4069200	40.630	0.007
19	9	28	24	737500	4069200	37.104	0.018
21	10	18	24	737500	4069200	35.366	0.091
21	10	12	24	737500	4069200	33.378	0.007

19	9	30	24	737500	4069200	33.105	0.018
17	3	22	24	737500	4069200	31.761	0.040
21	4	15	24	737500	4069200	30.645	0.013
19	10	1	24	737500	4069200	30.355	0.611
18	3	3	24	737500	4069250	33.659	0.020
18	3	14	24	737500	4069250	30.152	0.748

Scenario 2

Year	Month	Day	Average Period	UTNE	UTMN	PSD ALL	VHCC
18	10	17	24	737350	4069150	46.840	0.005
18	3	11	24	737350	4069150	40.740	0.000
20	9	10	24	737350	4069150	39.407	0.023
17	10	3	24	737350	4069150	37.904	0.013
19	3	31	24	737350	4069150	37.585	0.000
17	2	12	24	737350	4069150	36.050	0.000
21	1	19	24	737350	4069150	31.050	0.010
19	3	20	24	737350	4069150	30.769	0.066
18	3	3	24	737500	4069200	54.900	0.010
18	3	14	24	737500	4069200	49.110	0.017
17	9	21	24	737500	4069200	48.400	0.014
19	5	26	24	737500	4069200	44.636	0.000
18	2	18	24	737500	4069200	42.101	0.000
19	2	4	24	737500	4069200	40.629	0.006
19	9	28	24	737500	4069200	37.099	0.012
21	10	18	24	737500	4069200	35.283	0.008
21	10	12	24	737500	4069200	34.521	1.150
19	9	30	24	737500	4069200	33.101	0.014
17	3	22	24	737500	4069200	31.755	0.034
21	4	15	24	737500	4069200	30.638	0.006

	21	5	21	24	737450	4069200	51.086	0.006
	20	3	18	24	737450	4069200	32.113	0.011
2	Identify the maximum concentrations from the modeling analysis. Rows may be modified, added and removed from the table below as necessary.							

Pollutant, Time Period and Standard	Modeled Facility Concentration (µg/m3)	Modeled Concentration with Surrounding Sources (µg/m3)	Secondary PM (µg/m3)	Background Concentration (µg/m3)	Cumulative Concentration (µg/m3)	Value of Standard (µg/m3)	Percent of Standard	Location		
								UTM E (m)	UTM N (m)	Elevation (ft)
CO 1hr	58.03	NA	NA	NA	NA	SIL – 2000	2.9	738221.8	4069868.7	1608.24
CO 8hr	14.88	NA	NA	NA	NA	SIL – 500	3.0	738270.7	4069871.1	1610.05
NO2 1hr	7.95	48.3	NA	45.7	101.95	188.0	54.2	738368.6	4069875.8	1612.35
NO2 Annual	0.61	NA	NA	NA	NA	SIL – 1.0	61.0	738270.7	4069871.1	1610.05
NO2 Yr Class 1	0.00003	NA	NA	NA	NA	SIL – 0.1	0.03	725768.0	4115250.3	Flat Terrain
PM10 24hr	24.1	25.1	NA	66.0	91.1	150.0	59.7	738124.0	4069864.0	1610.78
PM10 24hr Class 2	27.9	29.0	NA	NA	29.0	30.0	96.7	738124.0	4069864.0	1610.78
PM10 Yr Class 2	4.7	5.3	NA	NA	5.3	17.0	26.1	737844.0	4069804.0	1591.82
PM10 24hr Class 1	0.054	NA	NA	NA	NA	SIL – 0.3	18.0	732870.2	4122060.9	Flat Terrain
PM10 Yr Class 1	0.00028	NA	NA	NA	NA	SIL – 0.2	0.14	725171.6	4115234.3	Flat Terrain
PM2.5 24hr	1.84	3.66	NA	11.77	15.43	35.0	44.1	737124.0	4069864.0	1610.78
PM2.5 Yr	0.21	0.68	NA	4.19	5.06	9.0	56.2	737836.0	4069783.0	1592.01

Pollutant, Time Period and Standard	Modeled Facility Concentration (µg/m3)	Modeled Concentration with Surrounding Sources (µg/m3)	Secondary PM (µg/m3)	Background Concentration (µg/m3)	Cumulative Concentration (µg/m3)	Value of Standard (µg/m3)	Percent of Standard	Location		
								UTM E (m)	UTM N (m)	Elevation (ft)
SO2 1hr	0.11	NA	NA	NA	NA	SIL – 7.8	1.4	738270.7	4069871.1	1610.05
SO2 3hr	0.050	NA	NA	NA	NA	SIL – 25.0	0.2	738270.7	4069871.1	1610.05
SO2 24hr	0.017	NA	NA	NA	NA	SIL – 5.0	0.34	738246.3	4069869.9	1609.13
SO2 Annual	0.0012	NA	NA	NA	NA	SIL – 1.0	0.12	738270.7	4069871.1	1610.05
SO2 3hr Class 1	0.00006	NA	NA	NA	NA	SIL – 1.0	0.006	732770.6	4122058.2	Flat Terrain
SO2 24hr Class 1	0.00001	NA	NA	NA	NA	SIL – 0.2	0.005	725569.2	4115245.0	Flat Terrain
SO2 Yr Class 1	0.0	NA	NA	NA	NA	SIL – 0.1	0.0	725768.0	4115250.3	Flat Terrain
Lead Quarterly	0.0	NA	NA	NA	NA	SIL – 0.03	0.0	725768.0	4115250.3	Flat Terrain

16-X: Summary/conclusions

	A statement that modeling requirements have been satisfied and that the permit can be issued.
1	Dispersion modeling was performed for the new permit application for VHCC Kirtland Pit. All facility pollutants with ambient air quality standards and PSD Increment standards were modeled to show compliance with those standards. All results of this modeling showed the facility in compliance with applicable ambient air quality standards.

DISPERSION MODEL PROTOCOL
FOR KIRTLAND PIT
NSR MINOR SOURCE PERMIT APPLICATION

Kirtland, New Mexico

PREPARED FOR

Vernon Hamilton Construction Company, LLC

Dated November 19, 2024

Prepared by

Montrose Environmental Solutions, Inc.

MONTROSE
ENVIRONMENTAL

CONTENTS

TABLE OF CONTENTS **PAGE**

1.0 INTRODUCTION 2
1.1 FACILITY DESCRIPTION 2
1.1.1 Aggregate Crushing Plant 2
1.2 FACILITY IDENTIFICATION AND LOCATION 5
2.0 SIGNIFICANT MONITORING AIR QUALITY IMPACT ANALYSIS 7
2.1 DISPERSION MODEL SELECTION 9
2.2 BUILDING WAKE EFFEMONTROSE 9
2.3 METEOROLOGICAL DATA 9
2.4 RECEPTORS AND TOPOGRAPHY 11
2.5 MODELED EMISSION SOURCES INPUTS 11
2.5.1 Kirtland Sand and Gravel Road Vehicle Traffic Model Inputs 11
2.5.2 Kirtland Sand and Gravel Material Handling Volume Source Model Inputs 11
2.5.3 Kirtland Sand and Gravel Material Handling Point Source Model Inputs 11
2.5.4 Kirtland Sand and Gravel Material Open Pit Model Inputs 12
2.6 PARTICLE SIZE DISTRIBUTION 12
2.7 PM2.5 SECONDARY EMISSIONS MODELING 13
2.8 NO_2 Dispersion Modeling analysis 14
2.9 SIGNIFICANT NEIGHBORING BACKGROUND SOURCES 15
2.10 REGIONAL BACKGROUND CONCENTRATIONS 15

TABLE OF TABLES **PAGE**

TABLE 1 Aggregate Crusher Hours of Operation 3
TABLE 2 Aggregate Daily Production Throughput 3
TABLE 3 Modeled Hours of Operation – Morning 4
TABLE 4 Modeled Hours of Operation – Afternoon 4
TABLE 5 National and New Mexico Ambient Air Quality Standard Summary 8
TABLE 6 Standards for Which Modeling Is Not Required by NMED AQD 8
TABLE 7 Unpaved Road Fugitive Source Depletion Parameters 13
TABLE 8 Combustion Source Depletion Parameters 13
TABLE 9 Material Handling Fugitive Dust Depletion Parameters 13
TABLE 10 Summary of Selected ISR 15

TABLE OF FIGURES **PAGE**

FIGURE 1 VHCC's Kirtland Sand and Gravel Aerial View 6
FIGURE 2 Farmington 2017 – 2022 Windrose 10

1.0 INTRODUCTION

This dispersion modeling analysis will be conducted by Montrose Environmental Solutions, Inc. (Montrose) on behalf of Vernon Hamilton Construction Company, LLC (VHCC), to evaluate ambient air quality impacts from the Kirtland Pit, as part of a minor source NSR permitting action. This permit application is for a 350 tons per hour (tph) aggregate crushing and screening plant.

The objective of this modeling evaluation is to predict if, operating at requested maximums, the facility operations would result in ambient air concentrations for nitrogen dioxide, (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), and particulate matter; both 10 microns or less (PM_{10}) and 2.5 microns or less ($PM_{2.5}$); would exceed the New Mexico and federal ambient air quality standards, NMAAQS and NAAQS respectively. Since Kirtland Pit is a minor source for NSR permitting and is located in AQRC Region 014, where the minor source baseline date has been triggered for NO_2 (06/06/1989), SO_2 (08/07/1978), and PM_{10} (08/07/1978), a PSD Class I and II Increment analysis will be performed. The only Class I area located within 50 km of the site is Mesa Verde National Park at 47 kilometers.

The dispersion modeling will be conducted using the American Meteorological Society/Environmental Protection Agency Regulatory Model Improvement Committee Dispersion Model (AERMOD), Version 23132. This model is recommended by EPA for determining Class II impacts within 50 km of the source being assessed. Additionally, AERMOD was developed to handle complex terrain. The objective of this evaluation is to determine whether ambient air concentrations from the maximum operation of the facility for nitrogen dioxide, (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), and particulate matter; both 10 microns or less (PM_{10}) and 2.5 microns or less ($PM_{2.5}$); are below Class II federal and state ambient air quality standards (NAAQS and NMAAQS) found in 40 CFR part 50 and the state of New Mexico's air quality regulation 20.2.3 NMAC from Kirtland Pit emission sources.

1.1 FACILITY DESCRIPTION

VHCC's Kirtland Pit is a proposed site that will operate an aggregate quarry and crushing and screening operation. This pit previously consisted of a concrete plant, HMA plant, aggregate crushing and screening plant, and aggregate wash plant. At present no other permitted facilities are located within the site boundaries.

1.1.1 Aggregate Crushing Plant

The 350 tph aggregate quarry, and crushing and screening operations will include an aggregate quarry, feeder, primary jaw crusher, two (2) secondary cone crushers, two (2) 3-deck screens, one (1) scalping screen, one (1) RipRap plant, fifteen (15) transfer conveyors, and seven (7) stacker conveyors. The main crushing and screening plant will be powered by commercial line power unless relocated to a different location where is will be powered by an 725kW, 1081 horsepower (hp) engine/generator. The RipRap plant will be powered by a 140 kW, 188 hp engine. Aggregate

from the quarry will first be processed through the RipRap plant and then the material will be stored in the Raw Material Pile. From the Raw Material Pile the material will be fed into the main plant feeder. Processed aggregate will be stored in Finish Storage Piles until transported from the aggregate crushing plant to off-site sales. Waste material is sent back to the quarry. The aggregate crushing plant will limit hourly processing rate to 350 tph and 350,000 tons per year (tpy). The hours of operation is presented below in Table 1, but the aggregate crushing plant will limit the daily throughput per season to the values listed in Table 2.

TABLE 1: Aggregate Crusher Hours of Operation (MST)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	1	1	1	1	1	0.5	0	0	0
6:00 AM	0	0	1	1	1	1	1	1	1	1	0	0
7:00 AM	0	0	1	1	1	1	1	1	1	1	0	0
8:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
9:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
10:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
11:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
12:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
1:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
2:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
3:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
4:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
5:00 PM	0	0	1	1	1	1	1	1	1	1	0	0
6:00 PM	0	0	0	1	1	1	1	1	0.5	0	0	0
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
Total	9	9	12	14	14	14	14	14	13	12	9	9

TABLE 2: Aggregate Daily Production Rates

Season	Tons Per Day
Winter	2800
Spring	3500
Summer	3500
Fall	3500

Since the daily production rate is less than the proposed hours of operation running at maximum hourly production rate, two modeling scenarios will be performed, one for morning and one for afternoon hours. The model hours are presented in Tables 3 and 4.

TABLE 3: Aggregate Crusher Morning Modeled Hours of Operation (MST)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	1	1	1	1	1	0.5	0	0	0
6:00 AM	0	0	1	1	1	1	1	1	1	1	0	0
7:00 AM	0	0	1	1	1	1	1	1	1	1	0	0
8:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
9:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
10:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
11:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
12:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
1:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
2:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
3:00 PM	1	1	1	0	0	0	0	0	0.5	1	1	1
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
Total	8	8	10	10	10	10	10	10	10	10	8	8

TABLE 4: Aggregate Crusher Afternoon Modeled Hours of Operation (MST)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	1	0	0	0	0	0	0.5	1	0	0
9:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
10:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
11:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
12:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
1:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
2:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
3:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
4:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
5:00 PM	0	0	1	1	1	1	1	1	1	1	0	0
6:00 PM	0	0	0	1	1	1	1	1	0.5	0	0	0
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
Total	8	8	10	10	10	10	10	10	10	10	8	8

1.2 FACILITY IDENTIFICATION AND LOCATION

VHCC's Kirtland Sand and Gravel is located at 32 Road 6210 in Kirtland, San Juan County, New Mexico. This is approximately 0.7 miles east-southeast of Kirtland, New Mexico. The UTM Coordinates of the facility are 738,070 meters East and 4,069,800 meters North, Zone 12, with NAD83 datum at an elevation of approximately 5,295 feet above mean sea level.

Figure 1 below presents a layout of the site showing the area where each material is handled.

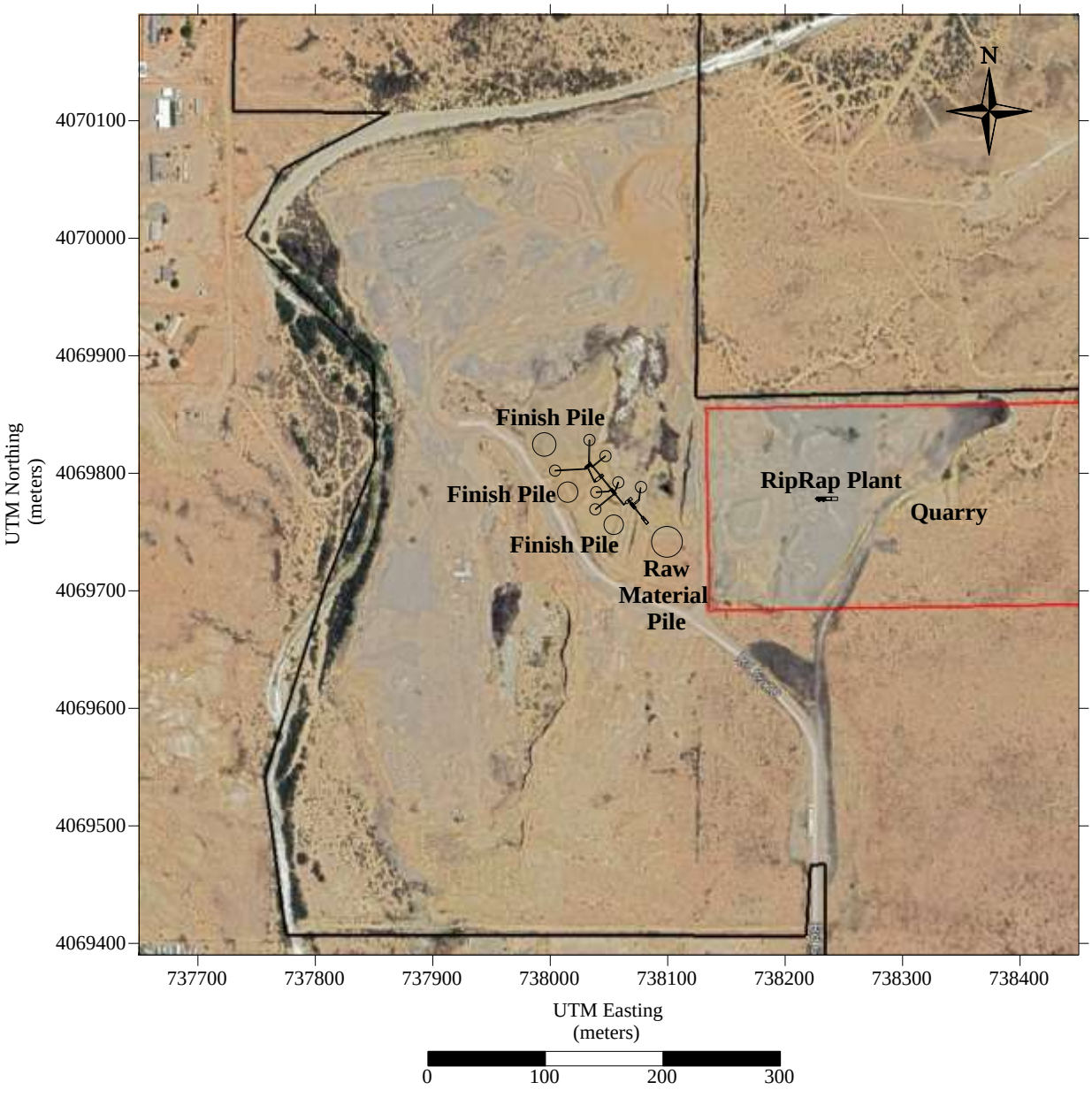


Figure 1: VHCC's Kirtland Pit Aerial View with Material Handling Areas

2.0 SIGNIFICANT MONITORING AIR QUALITY IMPACT ANALYSIS

This section identifies the technical approach and dispersion model inputs that will be used for the Class II federal and State ambient air quality standards and PM_{10} Class II Increment impacts for this stationary source. NMED AQB requires that all applicable criteria pollutant emissions be modeled using the most recent versions of US EPA's approved models and be compared with National Ambient Air Quality Standards (NAAQS), and New Mexico Ambient Air Quality Standards (NMAAQS). Table 5 shows the NAAQS and NMAAQS (without footnotes) that the source's ambient impacts must meet in order to demonstrate compliance. Table 5 also lists the Class II Significant Impact Levels (SILs) which are used to assess whether a source has a significant impact at downwind receptors. Table 6 lists all standards for which modeling is not required by NMED AQB.

The dispersion modeling analysis will be performed to estimate concentrations resulting from the operation of the Kirtland Pit using the maximum hourly emission rates while all emission sources are operating. The modeling will determine maximum off-site concentrations for nitrogen dioxide, (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), and particulate matter with aerodynamic diameter less than 10 micrometers (PM_{10}) and particulate matter with aerodynamic diameter less than 2.5 micrometers ($PM_{2.5}$), for comparison with modeling significance levels, and national/New Mexico ambient air quality standards (AAQS). Additionally, modeling will determine maximum off-site concentrations for NO_2 annual average; SO_2 3 hour, 24hour, and annual averages; and PM_{10} 24 hour and annual average increment limits. The modeling will follow the guidance and protocols outlined in the New Mexico Air Quality Bureau "Air Dispersion Modeling Guidelines" (Revised June, 2024) and the most up to date EPA's *Guideline on Air Quality Models*.

Initial site modeling will be performed with Kirtland Pit sources only to determine pollutant and averaging periods that exceeds pollutant SILs. If initial modeling for any pollutant and averaging period exceeds the SILs, than cumulative modeling will be performed for those pollutants and averaging periods and will include significant neighboring sources along with background ambient concentrations as defined in the NMED's modeling guidelines. For the PSD Class I and II Increment analysis, Kirtland Pit sources and neighboring increment consuming source within 50 kilometers will be included.

Relocation modeling will be performed and include all sources and methodology found in the initial site modeling plus the main crushing and screening plant 725kW, 1081 horsepower (hp) engine/generator. Relocation modeling will be done in flat terrain mode and use Farmington 2017 – 2021 meteorological data.

TABLE 5: National and New Mexico Ambient Air Quality Standard Summary

Pollutant	Avg. Period	Sig. Lev. ($\mu g/m^3$)	Class I Sig. Lev. ($\mu g/m^3$)	NAAQS	NMAAQS	PSD Increment Class I	PSD Increment Class II
CO	8-hour	500		9,000 ppb(1)	8,700 ppb(2)		
	1-hour	2,000		35,000 ppb(1)	13,100 ppb(2)		
NO_2	annual	1.0	0.1	53 ppb(3)	50 ppb(2)	2.5 $\mu g/m^3$	25 $\mu g/m^3$
	24-hour	5.0			100 ppb(2)		
	1-hour	7.52		100 ppb(4)			
$PM_{2.5}$	annual	0.13	0.05	9 $\mu g/m^3$(5)		1 $\mu g/m^3$	4 $\mu g/m^3$
	24-hour	1.2	0.27	35 $\mu g/m^3$(6)		2 $\mu g/m^3$	9 $\mu g/m^3$
PM_{10}	annual	1.0	0.2			4 $\mu g/m^3$	17 $\mu g/m^3$
	24-hour	5.0	0.3	150 $\mu g/m^3$(7)		8 $\mu g/m^3$	30 $\mu g/m^3$
SO_2	annual	1.0	0.1		20 ppb(2)	2 $\mu g/m^3$	20 $\mu g/m^3$
	24-hour	5.0	0.2		100 ppb(2)	5 $\mu g/m^3$	91 $\mu g/m^3$
	3-hour	25.0	1.0	500 ppb(1)		25 $\mu g/m^3$	512 $\mu g/m^3$
	1-hour	7.8		75 ppb(8)			

Standards converted from ppb to $\mu g/m^3$ use a reference temperature of 25° C and a reference pressure of 760 millimeters of mercury.
(1) Not to be exceeded more than once each year.
(2) Not to be exceeded.
(3) Annual mean.
(4) 98th percentile of 1-hour daily maximum concentrations, averaged over 3 years.
(5) Annual mean, averaged over 3 years.
(6) 98th percentile, averaged over 3 years.
(7) Not to be exceeded more than once per year on average over 3 years.
(8) 99th percentile of 1-hour daily maximum concentrations, averaged over 3 years.

TABLE 6: Standards for Which Modeling Is Not Required by NMED AQB.

Standard not Modeled	Surrogate that Demonstrates Compliance
CO 8-hour NAAQS	CO 8-hour NMAAQS
CO 1-hour NAAQS	CO 1-hour NMAAQS
NO_2 annual NAAQS	NO_2 annual NMAAQS
NO_2 24-hour NMAAQS	NO_2 1-hour NAAQS
O_3 8-hour	Regional modeling
SO_2 annual NMAAQS	SO_2 1-hour NAAQS
SO_2 24-hour NMAAQS	SO_2 1-hour NAAQS
SO_2 3-hour NAAQS	SO_2 1-hour NAAQS

2.1 DISPERSION MODEL SELECTION

The dispersion modeling will be conducted using the American Meteorological Society/Environmental Protection Agency Regulatory Model Improvement Committee Dispersion Model (AERMOD), Version 23132. This model is recommended by EPA for determining Class II impacts within 50 km of the source being assessed. Additionally, AERMOD was developed to handle complex terrain. In this analysis, AERMOD will be used to estimate pollutant ambient air concentrations of NO_2, CO, SO_2, PM_{10}, and $PM_{2.5}$ from VHCC's Kirtland Pit emission sources.

AERMOD is a Gaussian plume dispersion model that is based on planetary boundary layer principles for characterizing atmospheric stability. The model evaluates the non-Gaussian vertical behavior of plumes during convective conditions with the probability density function and the superposition of several Gaussian plumes. AERMOD modeling system has three components: AERMAP, AERMET, and AERMOD. AERMAP is the terrain preprocessor program. AERMET is the meteorological data preprocessor. AERMOD includes the dispersion modeling algorithms and was developed to handle simple and complex terrain issues using improved algorithms. AERMOD uses the dividing streamline concept to address plume interactions with elevated terrain.

AERMOD will be run using all the regulatory default options including use of stack-tip downwash, buoyancy-induced dispersion, calms processing routines, upper-bound downwash concentrations for super-squat buildings, default wind speed profile exponents, vertical potential temperature gradients, and no use of gradual plume rise. Beta version options include the use of flat terrain mode for fugitive ground release sources. The model incorporated local terrain into the calculations for point sources and neighboring sources only.

2.2 BUILDING WAKE EFFEMONTROSE

AERMOD can account for building downwash and cavity zone effects. Evaluation of building downwash on adjacent stack sources is deemed necessary, since most (if not all) of the stack source heights may be below Good Engineering Practice (GEP) heights. The formula for GEP height estimation is:

$$H_s = H_b + 1.50L_b$$

where: H_s = GEP stack height

H_b = building height

L_b = the lesser building dimension of the height, length, or width

The effects of aerodynamic downwash due to buildings and other structures will be accounted for by using wind direction-specific building parameters calculated by the USEPA-approved Building Parameter Input Program Prime (BPIP-Prime (*Version 04274*)) and the algorithms included in the AERMOD air dispersion model. No buildings are located at the site that will cause building wake effects for facility point sources.

2.3 METEOROLOGICAL DATA

Dispersion model meteorological input files were select for the years 2017-21 from NMED Model Section meteorological data collected at Farmington Airport, NM about 5 kilometers from the site. The similar elevation, topography, terrain, vegetation, and climate of both sites make this meteorological data representative of the model area. Figure 2 shows wind rose diagram of the meteorological wind speed versus direction data that has been collected for the years 2017-21.

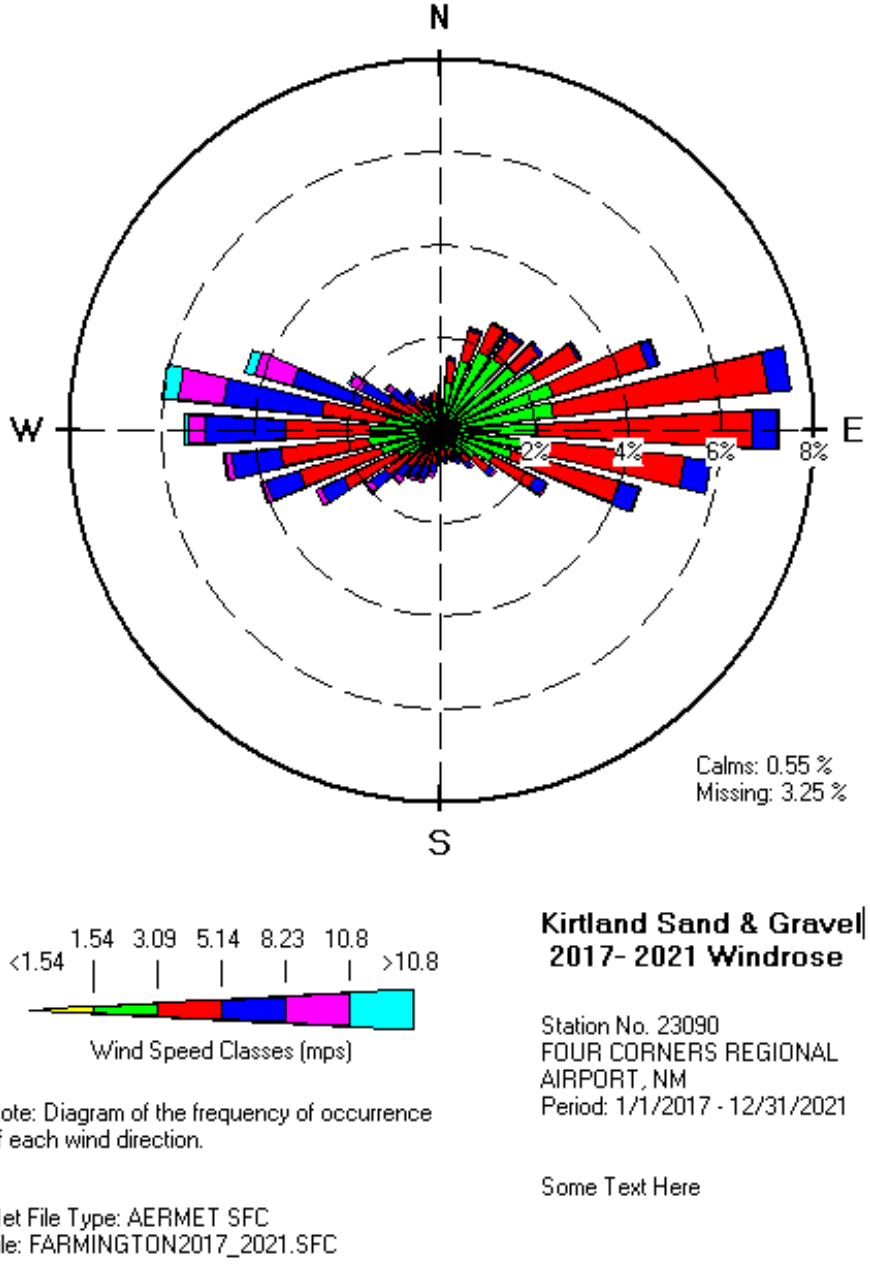


Figure 2: Wind Rose Farmington Meteorological Data 2017-21

2.4 RECEPTORS AND TOPOGRAPHY

For each pollutant, the radius of significant impact around the facility is established using a Cartesian grid. A 25-meter grid spacing is used for the facility boundary receptors. A 50-meter spacing and 100-meter spacing are extended to 500-meters and 1-km beyond the facility boundary, respectively from the facility boundary in each direction for a very fine grid resolution. Receptors for a fine grid resolution are placed with 250-meter spacing to a distance of 2.5-km from the facility boundary. Receptors for a course grid resolution are placed with 500-meter, and 1000-meter spacing to a distance of 5-km and 50-km, respectively from the facility boundary.

All model receptors will be preprocessed using the AERMAP software (*Version 18081*) associated with AERMOD. The AERMAP software establishes a base elevation and a height scale for each receptor location. The height scale is a measure of the receptor's location and base elevation and its relation to the terrain feature that has the greatest influence in dispersion for that receptor. AERMAP will be processed using U.S. Geological Survey (USGS) national elevation data (NED). Output from AERMAP will be used as input to the AERMOD runstream file for each model run. The AERMAP domain will be large enough to encompass the 10 percent slope factor required for calculating the controlling hill height.

2.5 MODELED EMISSION SOURCES INPUTS

Kirtland Sand and Gravel proposes to operate 8 AM to 5 PM Monday through Saturday for the months of November through February and daylight hours Monday through Saturday for the months of March through October. To represent the worst-case modeling scenario, two modeling runs will be performed, morning and afternoon.

2.5.1 Kirtland Sand and Gravel Road Vehicle Traffic Model Inputs

The unpaved road fugitive dust for truck traffic is modeled as a line of volume sources. The AQB's approved procedure for Modeling Haul Roads was followed to develop modeling input parameters for unpaved haul roads. Volume source characterization followed the steps described in the Air Quality Bureau's Guidelines (Tables 42 and 43).

2.5.2 Kirtland Sand and Gravel Material Handling Volume Source Model Inputs

Material handling and processing will follow the procedure found in AQB's Modeling Guidelines for Fugitive Equipment Sources (Table 41).

2.5.3 Kirtland Sand and Gravel Material Handling Point Source Model Inputs

For exhaust from engines, the release height will be the height from the ground to the exhaust exit height. The stack diameter will be determined by measuring the stack. Stack temperature and flow rate (stack velocity) will be determined from manufacturer's data or conservative parameters.

2.5.4 Kirtland Sand and Gravel Material Open Pit Model Inputs

For the site quarry, fugitive dust operation emissions within the open pit will be combined and input into the open pit source. The open pit dimensions are input as 168 meters north, 600 meters east, with a depth of 10 meters for a volume of 1,008,000 meters^3. The release height will be zero.

2.6 PARTICLE SIZE DISTRIBUTION

PM_{10} emissions may be modeled using plume deposition. Plume deposition simulates the effect of gravity as particles "fall-out" from the plume to the ground as the plume travels downwind. Therefore, the farther the plume travels from the emission point to the receptor, the greater the effect of plume deposition and the greater the decrease in modeled impacts or concentrations. Particle size distribution, particle mass fraction, and particle density are required inputs to the model to perform this function.

Particle size distribution for fugitive road dust on unpaved roads; material handling fugitive emissions; and combustion will use the particle size distribution found in the NMED Modeling Section approved values.

The mass-mean particle diameters were calculated using the formula:

$$d = ((d^3_1 + d^2_1 d_2 + d_1 d^2_2 + d^3_2) / 4)^{1/3}$$

Where: d = mass-mean particle diameter
d_1 = low end of particle size category range
d_2 = high end of particle size category range

Representative average particle densities were obtained from NMED accepted values.

Material	Density (g/cm^3)	Reference
Road Dust	2.5	NMED Value
Combustion	1.5	NMED Value
Fugitive Dust	2.5	NMED Value

The size distribution for PM_{10} emission sources are presented in Tables 7-9.

TABLE 7: Road Vehicle Fugitive Dust Deposition Parameters

Particle Size Category (μm)	Mass Mean Particle Diameter (μm)	Mass Weighted Size Distribution (%)	Density (g/cm^3)
PM10			
0 – 2.5	1.57	25.0	2.5
2.5 – 10	6.91	75.0	2.5

Based on NMED Model Guideline – June 2024 (Vehicle Fugitive)

TABLE 8: Combustion Source Deposition Parameters

Particle Size Category (μm)	Mass Mean Particle Diameter (μm)	Mass Weighted Size Distribution (%)	Density (g/cm^3)
PM10			
0 - 2.5	1.57	100.0	1.5

Based on NMED Model Guideline – June 2024 (Combustion)

TABLE 9: Material Handling (Fugitive) Dust Source Deposition Parameters

Particle Size Category (μm)	Mass Mean Particle Diameter (μm)	Mass Weighted Size Distribution (%)	Density (g/cm^3)
PM10			
0 - 2.5	1.57	7.8	2.5
2.5 – 5	3.88	27.0	2.5
5 – 10	7.77	65.2	2.5

Based on NMED Model Guideline – June 2024 (Coal Handling)

2.7 PM2.5 SECONDARY EMISSIONS MODELING

Particulate matter includes both "primary" PM, which is directly emitted into the air, and "secondary" PM, which forms in the atmosphere from chemical reactions involving primary gaseous emissions of precursor air contaminants. Primary PM consists of carbon (soot)—emitted from cars, trucks, heavy equipment, forest fires, and burning waste—and crustal material from unpaved roads, stone crushing, construction sites, and metallurgical operations. Secondary PM forms in the atmosphere from gases. Some of these reactions require sunlight and/or water vapor. Secondary PM includes:

- Sulfates formed from SO_2 emissions from power plants and industrial facilities;
- Nitrates formed from NO_X emissions from cars, trucks, industrial facilities, and power plants; and
- Carbon formed from reactive organic gas (ROG or VOC) emissions from cars, trucks, industrial facilities, forest fires, and biogenic sources such as trees.

AERMOD does not account for secondary formation of $PM_{2.5}$ for near-field modeling. Any secondary contribution of the VHCC source emissions is not explicitly accounted for in the model results. While representative background monitoring data for $PM_{2.5}$ should adequately account for secondary contribution from existing background sources, the VHCC assessment of their potential contribution to cumulative impacts as secondary $PM_{2.5}$ was performed based on guidance from the NMED Modeling Section and using prescribed equations. The permit application for VHCC's Kirtland Pit emissions of precursors include:

- NO_X – 2.0 tons per year (below SER)
- SO_2 – 0.004 tons per year (below SER)
- Volatile Organic Compounds (VOC) – 0.11 tons per year (below SER)
- Particulate Matter with an aerodynamic diameter of 2.5 micron or less ($PM_{2.5}$) – 0.81 tons per year (below SER).

Since all precursor emissions are below the significant emission rate (SER), $PM_{2.5}$ secondary emission concentration analysis was performed.

2.8 NO_2 Dispersion Modeling analysis

The AERMOD model predicts ground-level concentrations of any generic pollutant without chemical transformations. Thus, the modeled NO_X emission rate will give ground-level modeled concentrations of NO_X. NAAQS values are presented as NO_2.

EPA has a three-tier approach to modeling NO_2 concentrations.

- Tier I – total conversion, or all NOx = NO_2
- Tier II –Ambient Ratio Method 2 (ARM2)
- Tier III – case-by-case detailed screening methods, such as OLM and Plume Volume Molar Ratio Method (PVMRM) and NO_2/NO_X in-stack ratio

Initial modeling will be performed using both Tier I and Tier II methodologies. If these modeling iterations demonstrate that less conservative methods for determining 1-hour and annual NO_2 compliance would be needed for this project, then ambient impact of 1-hour and annual NOx predicted by the model will use Tier III – OLM or PVMRM.

For OLM or PVMRM, three inputs can be selected in the model, the ISR, the NO_2/NO_X equilibrium ratio for the ambient air, and the ambient ozone concentration. The ISR will be determined for each source or group of sources. The NO_2/NO_X equilibrium ratio will be the EPA default of 0.90. Ozone input will be from monitored ozone data collected from an approved monitoring station.

Based on EPA's ISR databases, a proposed conservative NO_2/NO_X ISR ratio for Diesel-fired RICE is 0.15. For neighboring sources, since the ISR has a diminishing impact on ambient NO_2/NO_X ratios as a plume is transported farther downwind due to mixing and reaction towards background

ambient NO_2/NO_X ratios, a default ISR of 0.30 based on the NMED Modeling Guidelines will be used. Table 10 summarizes the ISR selected for each NO_X source in the NO_2 1-hour modeling.

TABLE 10: Summary of Selected ISR

Source Description	Selected ISR
Plant Generator/Engine (RICE)	0.15
Neighboring Sources	0.30

Model Ozone Data

For OLM or PVMRM, modeling of the project-generated 1-hour NO_2 concentrations requires use of ambient monitored ozone concentrations. This hourly ozone data will be prepared based on the Bloomfield ozone station (Monitor ID 350450009) near the site for the years 2017 - 2021.

2.9 SIGNIFICANT NEIGHBORING BACKGROUND SOURCES

For all Cumulative Impact Analysis (CIA) combustion emissions above the SILs dispersion modeling (NO_X, CO, SO_2), will include all significant neighboring sources within 50 kilometers of the VHCC's Kirtland Pit. PM CIA particulate dispersion modeling will include all significant neighboring sources within 10 kilometers of the VHCC's Kirtland Pit and regional monitored background. These sources will be obtained from the Air Quality Bureau's modeling guideline.

2.10 REGIONAL BACKGROUND CONCENTRATIONS

Ambient background concentrations represent the contribution of pollutant sources that are not included in the modeling analysis, including naturally occurring sources. If the modeled concentration of a criteria pollutant is above the modeling significance level, the background concentration for each criteria pollutant will be added to the maximum modeled concentration to calculate the total estimated pollutant concentration for comparison with the AAQS.

The ambient background concentrations are listed in the Air Quality Bureau Guidelines for NO_2, CO, SO_2, PM_{10}, and $PM_{2.5}$. For CO and SO_2, VHCC is proposing using backgrounds for the generic "Rest of New Mexico". For PM_{10}, VHCC is proposing using backgrounds from the Shiprock Substation (Monitor ID 350451005). For $PM_{2.5}$, VHCC is proposing using backgrounds from the Farmington Environment Department Office (Monitor ID 350450019). For NO_2, VHCC is proposing using backgrounds from Bloomfield (Monitor ID 350450009).

	$PM_{2.5}$ ($\mu g/m^3$)	**PM_{10} ($\mu g/m^3$)**	**NO_2 ($\mu g/m^3$)**	**CO ($\mu g/m^3$)**	**SO_2 ($\mu g/m^3$)**
1 Hour			61.4	2148	3.5
8 Hour				1265	
24 Hour	11.77	66.0			
Annual	4.19		18.5		0.04

Paul Wade

From: Mustafa, Sufi A., ENV <sufi.mustafa@env.nm.gov>
Sent: Wednesday, December 4, 2024 2:32 PM
To: Paul Wade; Kassanjee, Sahil, ENV
Cc: Flack, Daniel; John Betz
Subject: RE: [EXTERNAL] Modeling Protocol New Permit VHCC

Paul
This modeling protocol is acceptable.
Thank you.

Sufi A. Mustafa, Ph.D.
Manager Air Dispersion Modeling and Emission Inventory Section
New Mexico Environment Department's Air Quality Bureau
Office: (505) 629 6186
sufi.mustafa@state.nm.us
525 Camino de los Marquez
Suite 1
Santa Fe, New Mexico, 87505
https://www.env.nm.gov/air-quality/

"Innovation, Science, Collaboration, Compliance"

From: Paul Wade <pwade@montrose-env.com>
Sent: Tuesday, November 19, 2024 1:04 PM
To: Mustafa, Sufi A., ENV <sufi.mustafa@env.nm.gov>; Kassanjee, Sahil, ENV <sahil.kassanjee@env.nm.gov>
Cc: Flack, Daniel <dflack@dtfengineering.com>; John Betz <jobetz@montrose-env.com>
Subject: [EXTERNAL] Modeling Protocol New Permit VHCC

Sufi
Attached is a modeling protocol for Vernon Hamilton Construction Company's Kirtland Pit aggregate plant new NSR permit application.

Let me know if you have any questions.

Thanks

Paul Wade
Senior Associate Engineer
Montrose Environmental Solutions, Inc.
Albuquerque, NM I US Mountain Time

Office: +1-505-830-9680 x6 | Mobile:

pwade@montrose-env.com |www.montrose-env.com

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Section 17

Compliance Test History

(Submitting under 20.2.70, 20.2.72, 20.2.74 NMAC)

To show compliance with existing NSR permits conditions, you must submit a compliance test history. The table below provides an example.

Compliance Test History Table

Unit No.	Test Description	Test Date
1b, 1c, 14, 20, 9, 26, 8, 3, 3a, 6, 4, 4a, 7, 16, 15, 17, 10, 18, 2, 2a, 19, 5, 5a, 24, 12, 22, 11, 25, 13, 21, RR_2, RR_3, RR_4, RR_5, RR_ENG	New Permitted Facility	TBD

Section 20

Other Relevant Information

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

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

No other relevant information.

Section 22: Certification

Company Name: VHCC LLC

I, Kevin Bradshaw, hereby certify that the information and data submitted in this application are true and as accurate as possible, to the best of my knowledge and professional expertise and experience.

Signed this 6th day of December, 2024, upon my oath or affirmation, before a notary of the State of New Mexico.

*Signature

12-6-2024
Date

Kevin Bradshaw
Printed Name

General Manager
Title

Scribed and sworn before me on this 6th day of December, 2024.

My authorization as a notary of the State of New Mexico expires on the 30th day of April, 2028.

Notary's Signature

12/6/2024
Date

Bernadette Fuhs
Notary's Printed Name

BERNADETTE FUHS
Notary Public
State of New Mexico
Comm. # 1080198
My Comm. Exp. Apr 30, 2028

*For Title V applications, the signature must be of the Responsible Official as defined in 20.2.70.7.AE NMAC.

Vernon Hamilton Construction Company
VHCC, LLC
P.O. Box 1110
Gallup, NM 87305
505-722-7855

Pinnacle Bank
Gallup, NM 87301
800-866-2737
82-244/1070

4855

12/06/2024

PAY TO THE ORDER OF NM Environment Dpt., Air Quality Bureau $**500.00

Five hundred and 00/100********** DOLLARS

NM Environment Dpt., Air Quality Bureau
525 Camino de los Marquez Suite 1
Santa Fe, NM 87505-1816

MEMO

AUTHORIZED SIGNATURE

⑈004855⑈ ⑆107002448⑆ 30103014 95⑈

Vernon Hamilton Construction Company VHCC, LLC

4855

12/06/2024 **NM Environment Dpt., Air Quality Bureau**

Date	Type	Reference	Original Amount	Balance Due	Payment
12/06/2024	Bill	Section 22	500.00	500.00	500.00
			Check Amount		500.00

Pinnacle Bank A/P A(500.00

Air Permit Application
Compliance History Disclosure Form

Pursuant to Subsection 74-2-7(S) of the New Mexico Air Quality Control Act ("AQCA"), NMSA §§ 74-2-1 to -17, the New Mexico Environment Department ("Department") may deny any permit application or revoke any permit issued pursuant to the AQCA if, within ten years immediately preceding the date of submission of the permit application, the applicant met any one of the criteria outlined below. In order for the Department to deem an air permit application administratively complete, or issue an air permit for those permits without an administrative completeness determination process, the applicant must complete this Compliance History Disclosure Form as specified in Subsection 74-2-7(P). An existing permit holder (permit issued prior to June 18, 2021) shall provide this Compliance History Disclosure Form to the Department upon request.

Permittee/Applicant Company Name		**Expected Application Submittal Date**
Vernon Hamilton Construction Company, LLC		December 13, 2024
Permittee/Company Contact	**Phone**	**Email**
Kevin Bradshaw	(505) 722-7855	Kevin@vernonhamiltoncon.com

	Within the 10 years preceding the expected date of submittal of the application, has the permittee or applicant:	
1	Knowingly misrepresented a material fact in an application for a permit?	☐ Yes ☒ No
2	Refused to disclose information required by the provisions of the New Mexico Air Quality Control Act?	☐ Yes ☒ No
3	Been convicted of a felony related to environmental crime in any court of any state or the United States?	☐ Yes ☒ No
4	Been convicted of a crime defined by state or federal statute as involving or being in restraint of trade, price fixing, bribery, or fraud in any court of any state or the United States?	☐ Yes ☒ No
5a	Constructed or operated any facility for which a permit was sought, including the current facility, without the required air quality permit(s) under 20.2.70 NMAC, 20.2.72 NMAC, 20.2.74 NMAC, 20.2.79 NMAC, or 20.2.84 NMAC?	☐ Yes ☒ No
5b	If "No" to question 5a, go to question 6. If "Yes" to question 5a, state whether each facility that was constructed or operated without the required air quality permit met at least one of the following exceptions: a. The unpermitted facility was discovered after acquisition during a timely environmental audit that was authorized by the Department; or b. The operator of the facility estimated that the facility's emissions would not require an air permit, **and** the operator applied for an air permit within 30 calendar days of discovering that an air permit was required for the facility.	☐ Yes ☐ No
6	Had any permit revoked or permanently suspended for cause under the environmental laws of any state or the United States?	☐ Yes ☒ No
7	For each "yes" answer, please provide an explanation and documentation.	

December 13, 2024

New Mexico Environment Department
Air Quality Bureau
Permits Section
525 Camino de los Marquez, Suite 1
Santa Fe, New Mexico 87507-3313

Subject: New Minor NSR Permit Application for Vernon Hamilton Construction Company's Kirtland Pit

To Whom it May Concern:

Attached please find two (2) hardcopies of the New 20.2.72 NMAC Permit Application for Vernon Hamilton Construction Company's (VHCC) Kirtland Pit. Electronic files will be submitted to the bureau under a file share program. This letter is attached to the application copy that has the original notarized signature page (Section 22), along with an application submittal fee of $500.

VHCC is applying for a new minor NSR 20.2.72 NMAC Air Quality Permit for the Kirtland Pit to be operated within county of San Juan, state of New Mexico. Regulation governing this permit application is 20.2.72.200.A(1) NMAC. The function of the facility is to crush and screen aggregate material from the on-site quarry into usable construction sand and gravel.

The address for the facility known as, VHCC's Kirtland Pit, is 32 Rd 6210, Kirtland, NM. The approximate location of this facility is 0.7 miles east-southeast of Kirtland in San Juan County.

Please let me know if you have any questions or need additional information. If you have any questions regarding this significant permit revision application please call Paul Wade of Montrose Environmental Solutions, Inc. at (505) 830-9680 ext 6 or Kevin Bradshaw of VHCC at (505) 722-7855

Sincerely,

Paul Wade
Senior Associate Engineer
Montrose Environmental Solutions, Inc.

Cc: Kevin Bradshaw, VHCC

Montrose Environmental Solutions, Inc.
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