NEW MEXICO ENVIRONMENT DEPARTMENT VOLUNTARY REMEDIATION AGREEMENT

I. Introduction

This Voluntary Remediation Agreement ("Agreement") is entered into voluntarily by Schlumberger, represented by Lee Conn, Technical Director, who is duly authorized and appointed ("Participant") and the secretary of the New Mexico Environment Department ("Department"), or his or her designee, pursuant to the Voluntary Remediation Act, Sections 74-4G-1 et seq. NMSA 1978, and the New Mexico Voluntary Remediation Regulations (20.6.3 NMAC). The purpose of this Agreement is to detail the obligations and functions of each party relevant to the remediation to be conducted at the M-I SWACO, Hobbs ("Site"), located at 4417 N. Lovington Highway in Hobbs, under the Voluntary Remediation Program (VRP Site No. 53231004). This Voluntary Remediation Agreement is issued pursuant to Section 20.6.3.300 NMAC and the Delegation Order dated March 24, 2023, through which the Cabinet Secretary has delegated signatory authority to the Chief of the Ground Water Quality Bureau.

The activities conducted by the Participant under this Agreement are subject to approval by the Department. The activities conducted by the Participant shall be consistent with this Agreement, all applicable laws and regulations, and any pertinent guidance documents. The Participant shall employ sound scientific, engineering, and construction practices in the voluntary remediation activities at this Site.

II. Statement of Eligibility

The secretary or his designee has determined that the application, submitted by the Participant to the Department on April 13, 2023, is complete, and that the Participant is eligible to enter into this Agreement in accordance with Section 74-4G-5 NMSA 1978 and 20.6.3.200.A NMAC.

III. Parties Bound

This Agreement shall apply to and be binding upon the Participant, its officers, managing agents, directors, principals, partners, employees, receivers, trustees, agents, parents, subsidiaries and affiliates, and upon the Department, its employees, and agents. The Participant has submitted with the application a signed Declaration of Ability and Intent as set forth in 20.6.3.200.B(2) NMAC. No change in ownership, corporate, or partnership status shall in any way alter the Participant's status or responsibilities under this Agreement unless the Participant or Department terminates this Agreement in accordance with 20.6.3.300.H NMAC.

The Participant shall provide a copy of this Agreement to any subsequent owners or successors before ownership rights are transferred. The Participant shall provide a copy of this Agreement to all contractors, subcontractors, laboratories, and consultants or other parties, which are retained by the Participant, to conduct any work under this Agreement, within 14 days after the effective date of this Agreement or within 14 days of the date of retaining their services.

IV. Designated Project Manager

On or before the effective date of this Agreement, the Department shall designate a project manager. The Primary Applicant specified on the Voluntary Remediation Program Application

will function as the project manager for the Participant. Each project manager shall be responsible for overseeing the implementation of this Agreement. The Department project manager will be the Department-designated representative at the site. To the maximum extent possible, communications between the Participant and Department and all documents (including reports, approvals, and other correspondence) concerning the activities performed pursuant to the terms and conditions of this Agreement shall be directed through the project managers. During implementation of this Agreement, the project managers shall, whenever possible, operate by consensus and shall attempt in good faith to resolve disputes informally through discussion of the issues. Each party has the right to change its respective project manager by notifying the other party in writing at least five days prior to the change.

V. Definitions

"Site" means the area described in the Voluntary Remediation Application. This description is attached and incorporated herein as Exhibit 1. All other terms used are defined in Section 74-4G-3 NMSA 1978 and 20.6.3.7 NMAC.

VI. Addresses for All Correspondence

Documents, including reports, approvals, notifications, disapprovals, and other correspondence to be submitted under this Agreement, may be sent by certified mail, first class mail, hand delivery, overnight mail, or by courier service to the following addresses or to such addresses as the Participant or Department designates in writing. Signatory documents, such as Voluntary Remediation Agreements, shall be sent via Electronic Signature software, such as DocusignTM. Please notify NMED if you are unable to sign the VRA electronically and NMED will provide a hard copy via mail.

Documents to be submitted to the Department should be sent to:

Mailing Address:

Tim Noger

Ground Water Quality Bureau

New Mexico Environment Department

P.O. Box 5469

Santa Fe, NM 87502

E-mail: Tim.Noger@env.nm.gov Phone number: (505) 629-8604 Fax number: (505) 827-2965 Physical Address:

Tim Noger

Ground Water Quality Bureau

New Mexico Environment Department

1190 St. Francis Drive Santa Fe, NM 87505

Documents to be submitted to the Participant should be sent to:

Mailing Address:

Lee Conn, Technical Director Schlumberger 7220 W IH-20 Midland, Texas 79706 lconn@miswaco.slb.com Physical Address:

4417 N. Lovington Highway

Hobbs, NM 88240

VII. Compliance with Applicable Laws

All work undertaken by the Participant pursuant to this Agreement shall be performed in compliance with all applicable federal, state and local laws, ordinances and regulations, including, but not limited to all Occupational Safety and Health Administration, Department of Transportation, Resource Conservation and Recovery Act, New Mexico Water Quality Control Commission, and New Mexico Environmental Improvement Board Petroleum Storage Tank regulations. In the event of a conflict between federal, state, or local laws, ordinances, or regulations, the Participant shall comply with the most stringent of such laws, ordinances, or regulations, unless provided otherwise in writing by the Department or other appropriate regulatory personnel with jurisdiction over such laws, ordinances, and regulations. Where it is determined that a permit is required under federal, state or local laws, ordinances, or regulations, the Participant shall submit timely and complete applications and take all other actions necessary to obtain all such permits or approvals. The Participant shall be responsible for obtaining all permits that are necessary for the performance of the work hereunder, and for all ongoing or proposed Site activities, and for all ongoing or proposed facility operations.

VIII. Performance Standards and Associated Requirements

The Participant has submitted with [Type appropriate article: his, her, its, or their] application to the Department a preliminary work plan describing the proposed voluntary remediation activities as they are currently envisioned as being submitted in a final voluntary remediation work plan, which includes a description of the known and suspected contaminants to be addressed by the proposed voluntary remediation activities. This preliminary work plan was prepared pursuant to 20.6.3.200.B NMAC. A copy of the preliminary work plan is attached and incorporated herein as Exhibit 2.

The contaminants covered by this Agreement are described as follows:

• Total Petroleum Hydrocarbon, Metals, Volatile Organic Compounds and Semi-volatile Organic Compounds in Soil. Specifically, gasoline range organics, diesel range organics, oil range organics, arsenic, barium, cadmium, chromium, hexavalent chromium, lead, selenium, silver, and mercury in subsurface soil.

Voluntary remediation activities undertaken pursuant to this Agreement shall achieve the following standards or risk-based levels:

• New Mexico Environment Department Risk Assessment Guidance for Site Investigations and Remediation, November 2022.

It is understood that the parties may wish to modify the list of contaminants and the media in which the contaminants are located, as covered by this Agreement, as additional information about the Site is developed. The Department may approve such changes through approval of work plans and other submittals provided by the Participant during the course of undertaking voluntary remediation activities.

IX. Access

To the extent that the Site or other areas where work is to be performed hereunder are presently

owned or controlled by parties other than those bound by this Agreement, the Participant shall obtain or shall use its best efforts to obtain access agreements from the present owners. Best efforts shall include, at a minimum, certified letters from Participant to the present owners of such properties requesting access agreements to permit the Participant, Department, and their authorized representatives' access to such property. Such agreements shall provide access for the Department and authorized representatives of the Department, as specified below. In the event that such access agreements are not obtained, the Participant shall so notify the Department, which may then, at its discretion, assist the Participant in gaining access.

The Participant shall provide authorized representatives of the Department access to the Site and other areas where work is to be performed at all reasonable times. Such access shall be related solely to the work being performed on the Site pursuant to this Agreement and may include, but is not limited to: inspecting and copying of Site and facility records; reviewing the progress of the Participant in carrying out the terms of this Agreement; conducting such tests, inspections, and sampling as the Department may deem necessary; using a camera, sound recording, or other documentary type equipment for field activities; and verifying the data submitted to the Department by the Participant hereunder. Prior to conducting remediation activities, the Participant shall provide a minimum of 72 hours' notice to the Department to allow observation of Site activities and to allow the Department's authorized representatives to collect split samples, at the Department's discretion. The Participant shall permit the Department's authorized representatives to inspect and copy all records, files, photographs, documents, and other writings, including all sampling and monitoring data, which pertain to this Agreement and over which the Participant exercises authority.

X. <u>Deliverables and Submittal Schedule</u>

A. Final Voluntary Remediation Work Plan

In accordance with 20.6.3.400 NMAC, the Participant shall submit to the Department a proposed final voluntary remediation work plan, detailing investigation and remediation activities to be undertaken to achieve the performance standards described in Section VIII of this Agreement. At a minimum, the final work plan must include the elements listed in 20.6.3.400.B NMAC.

Submittal Schedule:

The proposed final work plan shall be submitted by the Participant no later than 45 days after this Agreement has been signed.

If the work plan is to be prepared in phases, the work plan for the first phase shall be submitted no later than 45 days after this Agreement has been signed. Following completion, to the Department's satisfaction, of the work which is the subject of the final work plan for the first phase, the Department may require submission of one or more proposed final work plans for subsequent phases.

Department Review:

The secretary or his designee shall review and approve, approve with conditions, or

disapprove a proposed final work plan within 45 days of receipt. Written notice shall be made of any conditions or deficiencies. If the secretary or his designee disapproves a final work plan, the Participant may be granted an opportunity to submit a revised version, as determined by the secretary or his designee.

Modification of Voluntary Remediation Work Plan:

The approved final voluntary remediation work plan may be modified at the request of the Participant and/or the Department, with both parties' approval, in accordance with 20.6.3.400.D NMAC.

B. Periodic Status Reports

The Participant shall submit periodic status reports, which detail activities completed for the reporting period and those planned for the upcoming reporting period, to the Department for the duration of this Agreement. The status report shall identify any proposed variances to the approved work plan and describe interim progress on implementation of the work plan, including analytical results of any sampling, water level measurements, Site maps or photos, as appropriate.

Submittal Schedule:

The first status report shall be submitted by the Participant no later than 90 days after this Agreement has been signed. Subsequent status reports shall be submitted on a semi-annual basis until the completion report is submitted to the Department.

C. Voluntary Remediation Completion Report

In accordance with 20.6.3.500.B NMAC, following the completion of Site voluntary remediation activities, the Participant shall demonstrate to the Department that Site conditions meet the applicable standards specified in Section VIII of this Agreement by submitting to the Department a voluntary remediation completion report. The content of the completion report is detailed in 20.6.3.500.B NMAC. The report shall be submitted to the Department with the legal description of the affected property, and with an Affidavit of Completion of Voluntary Remediation signed by the Participant that indicates that remediation is complete, in accordance with this Agreement and applicable regulations and guidance.

Submittal Schedule:

The voluntary remediation completion report shall be submitted to the Department within 90 days following completion of voluntary remediation activities.

Department Review:

The Department shall review and determine the sufficiency of a completion report within 45 days of receipt. If the secretary or his designee does not approve the completion report, the secretary or his designee shall either issue a finding that the Participant is not in compliance with the Agreement and terminate the Agreement, or advise the Participant in writing of data gaps in the report. The Participant shall correct any identified data gaps and resubmit the completion report within 30 days of receipt of notice of data gaps.

XI. Certificate of Completion

If the secretary or his designee approves the voluntary remediation completion report, the secretary or his designee will issue either a Certificate of Completion or a Conditional Certificate of Completion, as appropriate, pursuant to Section 74-4G-7 NMSA 1978 and 20.6.3.500.B NMAC. If a Conditional Certificate of Completion is issued, the Department shall conduct audits to ensure that all engineering controls, remediation systems, post-closure care, and affirmations of future non-residential land use are being maintained appropriately. These audits shall be performed at least every other year for the first 10 years following the issuance of the Conditional Certificate of Completion, and every five years thereafter. If, during the course of such an audit, the Department finds that any of the monitoring requirements, engineering controls, remediation systems, post-closure care, or affirmations of future non-residential land use are not being properly maintained such that the performance standards described in Section VIII of this Agreement are no longer being met, the Department may revoke the Conditional Certificate of Completion and initiate an enforcement action.

No Certificate of Completion or Conditional Certificate of Completion shall be issued to a Participant who has not paid invoiced oversight costs in full to the Department.

XII. Covenant Not to Sue

Pursuant to Section 74-4G-8 NMSA 1978 and 20.6.3.600 NMAC, after the secretary or his designee issues the Certificate of Completion or Conditional Certificate of Completion, the secretary or his designee shall provide a covenant not to sue to a purchaser or prospective purchaser of the Site that did not contribute to the Site contamination, for any direct liability, including future liability, for claims based upon the contamination covered by the Agreement and over which the Department has authority. Except as may be provided under federal law or as may be agreed to by a federal government entity, the covenant not to sue shall not release or otherwise apply to claims by the federal government for claims based on federal law. Except as may be agreed to by another department or agency of the state, the covenant not to sue shall not release or otherwise apply to claims of any other office, department, or agency of the state. Except as may be agreed to by a third party, the covenant not to sue shall not release or otherwise affect a person's liability to third parties.

XIII. <u>Dispute Resolution</u>

This section shall apply to any dispute arising under any section of this Agreement, unless specifically excepted. Dispute resolution shall be conducted in accordance with 20.6.3.300.I NMAC).

XIV. Reservation of Rights

The Department and Participant reserve all rights and defenses they may have pursuant to any available legal authority unless expressly waived herein. The Department expressly reserves the right to take any action, including any enforcement action, to address any release not covered by this Agreement, including any release that occurs after issuance of the Certificate of Completion or any release of a contaminant not covered by the voluntary remediation agreement. The secretary's covenant not to sue shall not apply to any such release.

Nothing herein is intended to release, discharge, or in any way affect any claims, causes of action or demands in law or equity which the parties may have against any person, firm, partnership or corporation not a party to this Agreement for any liability it may have arising out of, or relating in any way to the generation, storage, treatment, handling, transportation, release or disposal of any materials, hazardous substances, hazardous waste, contaminants or pollutants at, to, or from the Site. The parties to this Agreement expressly reserve all rights, claims, demands, and causes of action they have against any and all other persons and entities who are not parties to this Agreement, and as to each other for matters not covered hereby.

The Participant reserves the right to seek contribution, indemnity, or any other available remedy against any person other than the Department found to be responsible or liable for contribution, indemnity or otherwise for any amounts which have been or will be expended by the Participant in connection with the Site.

XV. Enforcement Shield

Pursuant to the provisions of 20.6.3.300.A NMAC, the secretary will not initiate any enforcement action, including an administrative or judicial action, against a Participant for the contamination or release thereof, or for the activity that results in the contamination or release thereof, if the contamination is the subject of an Agreement pursuant to 20.6.3 NMAC. However, this Section shall not be a bar to any enforcement action if the Agreement is not finalized, if the Agreement is terminated or rescinded, or if the Participant does not successfully initiate or implement the Agreement within a reasonable time under the schedules set forth in this Agreement and approved work plans.

XVI. Oversight Costs

The Participant agrees to reimburse the Department for all of its costs associated with oversight and implementation of this Agreement in accordance with 20.6.3.300.J NMAC. These costs shall include those described in 20.6.3.300.J NMAC, as well as long-term oversight performed by the Department, as described in 20.6.3.500.B(5) NMAC, if a Conditional Certificate of Completion is issued.

Oversight will be invoiced based on actual hours of staff oversight, at a variable rate beginning at \$125.00 per hour. The hourly rate is calculated and updated on November 1 of each year, following a 30 calendar day public comment period. The hourly rate was revised on November 1, 2023. Travel and per diem costs will be invoiced at state-designated rates. Sampling and analysis costs will be invoiced at actual cost plus indirect overhead rate.

The Department will track all costs to the Department for review and oversight activities related to the Site and provide quarterly (or more often at the discretion of the Department) invoices per this Agreement for said costs. The Participant shall pay these invoiced costs to the Department within 30 calendar days after the date that the Participant receives notice that these costs are due and owed. If payment is not made within 30 days, the Department may terminate this Agreement and bring an action to collect the amount owed and the costs of bringing the collection action. If the Department prevails in such collection action, the Participant shall pay the Department's

reasonable attorneys' fees and costs incurred in the collection action.

In the event that this Agreement is terminated for any reason, the Participant agrees to reimburse the Department for all costs incurred or obligated by the Department before the date of notice of termination of the Agreement.

XVII. Notice of Bankruptcy

As soon as Participant has knowledge of its intention to file bankruptcy, or no later than seven days prior to the actual filing of a voluntary bankruptcy petition, Participant shall notify the Department of its intention to file a bankruptcy petition. In the case of an involuntary bankruptcy petition, Participant shall give notice to the Department as soon as it acquires knowledge of such petition.

XVIII. Indemnification

The Participant shall defend, indemnify, and hold harmless the Department and the State of New Mexico from all actions, proceedings, claims, demands, costs, damages, attorneys' fees, and all other liabilities and expenses of any kind from any source which may arise out of the performance of this Agreement, caused by the negligent act or failure to act of the Participant, its officers, employees, servants, subcontractors or agents, or if caused by the actions of any client of the Participant resulting in injury or damage to persons or property during the time when the Participant or any officer, agent, employee, servant or subcontractor thereof has or is performing services pursuant to this Agreement.

XIX. Effective Date and Subsequent Modification

The Agreement shall become final and effective upon being signed by both the secretary or his designee and the Participant. The effective date of the Agreement shall be the later date of signature by either the secretary or his designee or the Participant. This Agreement may be amended only by mutual agreement of the Department and the Participant. Amendments shall be in writing and shall be effective upon being signed by both the secretary or his designee and the Participant.

XX. Termination

As provided for in 20.6.3.300.H NMAC, if an Agreement is not reached between an applicant and the secretary or his designee on or before the 30th calendar day after the secretary or his designee determines an applicant to be eligible pursuant 20.6.3.200 and 20.6.3.300 NMAC, the applicant or the secretary or his designee may withdraw from the negotiations. The Participant may terminate the voluntary remediation Agreement upon 60 calendar days' written notice via certified mail, return receipt requested to the Department. The secretary or his designee may terminate this Agreement upon finding that the Participant is not in compliance with this Agreement. Notice of termination will be made to the Participant via certified mail, return receipt requested, and facts supporting the rationale for termination shall be set forth in the notification. The Department's costs incurred or obligated before the date the notice of termination is received are recoverable by the Department under the Agreement if the Agreement is terminated.

XXI. Complete Agreement

This Agreement contains the entire Agreement of the parties.

XXII. Applicable Law

This Agreement shall be governed by and construed in accordance with the laws of the State of New Mexico.

The provisions of this Agreement shall be satisfied when the Department gives the Participant written notice in the form of a Certificate of Completion that the Participant has demonstrated to the secretary's satisfaction that the terms of this Agreement have been completed, including the selection and implementation of a remedial action, when appropriate.

Nothing in this Agreement shall restrict the State of New Mexico from seeking other appropriate relief to protect human health or the environment from contamination at or from this Site if not remediated in accordance with this Agreement.



Signatures

Participant(s):			
By:		Name:	
(Signa	ture of authorized representative)		(Print or type)
Date:		-	
New Mexico	Environment Department:		
By:		Name:	
(Secre	tary or designee)		(Print or type)
Date:			
Enclosures:	Exhibit 1: Legal Description of F Exhibit 2: Preliminary Work Plan		
	Exhibit 2. Treminiary Work Fra	11	

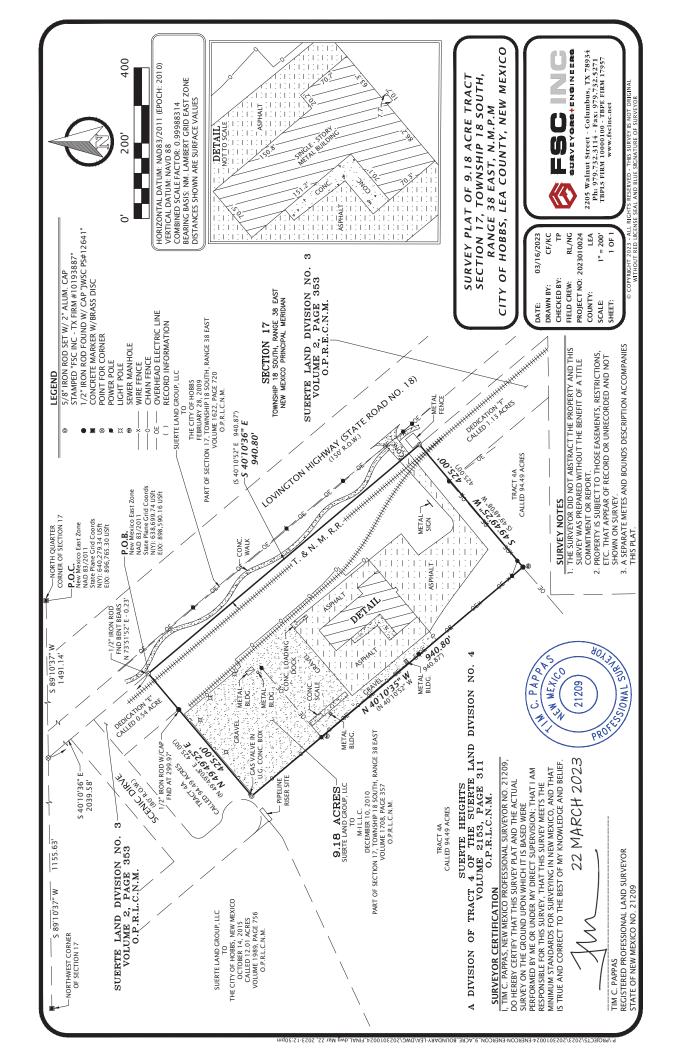
NEW MEXICO ENVIRONMENT DEPARTMENT VOLUNTARY REMEDIATION AGREEMENT

EXHIBIT 1

Legal Description of Property

MI SWACO (Hobbs) VRP Site No. 53231004

The site is a 9.18-acre parcel located at 4417 N. Lovington Highway, more particularly described as Tract 4A, a division of Tract 4 of the Suerte Land Division Number 4, Volume 2153, Page 311 of O.P.R.L.C.N.M. The full legal description is included on the following survey.





TBPLS Firm 10000100 TBPE Firm 17957

LEA COUNTY, NEW MEXICO SECTION 17, TOWNSHIP 18 SOUTH, RANGE 38 EAST, N.M.P.M.

DESCRIPTION OF A 9.18 ACRE TRACT OF LAND SITUATED IN SECTION 17, TOWNSHIP 18 SOUTH, RANGE 38 EAST, NEW MEXICO PRINCIPAL MERIDIAN, LEA COUNTY, NEW MEXICO AND BEING THE SAME TRACT DESCRIBED IN A DEED DATED DECMEBER 10, 2010 FROM SUERTE LAND GROUP, LLC TO M-I L.L.C., AS RECORDED IN VOLUME 1708, PAGE 357, OF THE OFFICIAL PUBLIC RECORDS OF LEA COUNTY, NEW MEXICO FOR WHICH REFERENCE IS MADE AND THE SAID 9.18 ACRE TRACT BEING DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

COMMENCING at a concrete marker found w/brass disc stamped [North Quarter of Section 17] [Grid Coordinates: **N** 640,279.34 USft **E** 896,765.30 USft];

THENCE South 89° 10' 37" West with the Northerly line of said Section 17 a distance of 1,491.14 feet to a point for the Westerly corner of a called tract of land being part of said Section 17 described in a deed dated February 28, 2009 from Suerte Land Group, LLC to The City of Hobbs, as recorded in Volume 1622, Page 720, Lea County Official Public Records, from which a concrete marker found w/brass disc stamped [Northwest corner of Section 17] for the Northwest corner of Section 17 bears South 89° 10' 37" West a distance of 1155.63 feet;

THENCE South 40° 10' 36" East with the Southwest line of said City of Hobbs tract (Vol. 1622, Pg. 720, O.R.B.L.C.N.M.) a distance of 2039.58 feet to a point found (Grid Coordinates: **N** 638,699.74 USft **E** 896,590.16 USft) for the Northerly corner and being the **POINT OF BEGINNING** of the herein described tract, being the Easterly corner of a called 0.54 acre tract of land described as Dedication "E" of the Suerte Land Division No. 3, as recorded in Volume 2, Page 353, Lea County Official Public Records, from which a 1/2 inch iron rod found bent bears North 73° 51' 52" East a distance of 0.23 feet;

THENCE South 40° 10′ 36″ East (called South 40° 10′ 52″ East) continuing with the Southwest line of said City of Hobbs tract (Vol. 1622, Pg. 720, O.R.B.L.C.N.M.), being the Northeast line of the herein described tract a distance of 940.80 feet (called 940.87′) to a 5/8 inch iron rod set w/cap for the Easterly corner of the herein described tract, being the Northerly corner of a called 1.13 acre tract of land described as Dedication "F" in said Suerte Land Division No. 3;

THENCE South 49° 49' 25" West [called South 49° 48' 08" West] with the Northwest line of said 1.13 acre tract and a Northwest line of a called 94.49 acre tract of land described as Tract 4A of the Suerte Heights – Division of Tract 4 of the Suerte Land Division No. 4, as recorded in Volume 2153, Page 311, Lea County Official Public Records, being the Southeast line of the herein described tract a distance of 425.00 feet [called 425.00'] to a 1/2 inch iron rod found w/cap "JWSC PS# 12641" for the Southerly corner of the herein described tract, being an interior corner of said 94.49 acre tract;

THENCE North 40° 10′ 35″ West (called North 40° 10′ 52″ West) with a Northeast line of said 94.49 acre tract, being the Southwest line of the herein described tract a distance of 940.80 feet (called 940.87′) to



TBPLS Firm 10000100 TBPE Firm 17957

a 5/8 inch iron rod set w/cap for the Westerly corner of the herein described tract, being an interior corner of said 94.49 acre tract;

THENCE North 49° 49' 25" East [called North 49° 49' 08" East] with a Southeast line of said 94.49 acre tract, being the Northwest line of the herein described tract at 299.97 feet passing a 1/2 inch iron rod found w/cap "JWSC PS# 12641" for an exterior corner of said 94.49 acre tract, being the Southerly corner of said 0.54 acre tract, continuing with the Southeast line of said 0.54 acre tract for a total distance of 425.00 feet [called 425.00'] to the **POINT OF BEGINNING**, containing 9.18 acres of land, more or less.

- 1. Bearing Basis: New Mexico Lambert Grid, New Mexico East Zone, NAD 83/2011 [EPOCH: 2010]
- 2. All distances are surface values, to obtain grid values multiply surface distances by a Combined Scale Factor of 0.99988314.
- 3. Any reference to a 5/8" iron rod set w/cap is a 5/8" iron rebar 24" inches long and set with a 2" aluminum cap stamped "FSC INC TX FIRM #10193887".

This metes and bound description and plat attached hereto represent an on-the-ground survey made under my supervision on January 24, 2023 and March 16 & 22, 2023.

Tim C. Pappas

Registered Professional Land Surveyor No. 21209

Project No. 2023010024

Word File: 2023010024_9.18_acre_m&b.docx

ACAD File: 2023010024.dwg

Date:

22 MARCH 2023

NEW MEXICO ENVIRONMENT DEPARTMENT VOLUNTARY REMEDIATION AGREEMENT

EXHIBIT 2

Preliminary Voluntary Remediation Work Plan

M-I Swaco, Hobbs VRP Site No. 53231004



March 30, 2023

Ms. Rebecca Cook Voluntary Remediation Program Ground Water Quality Bureau New Mexico Environment Department PO Box 5469 Santa Fe, NM 87502

Re: Preliminary Voluntary Remediation Work Plan Former M-I SWACO Facility

4417 N Lovington Highway

Hobbs, Lea County, New Mexico 88240 ENERCON Project No.: SCLUMBJ-00901

Dear Ms. Cook:

1.0 INTRODUCTION

At the request of Schlumberger, Enercon Services, Inc. (ENERCON) is pleased to provide this preliminary voluntary remediation work plan to apply for entry into the New Mexico Environmental Department (NMED) Voluntary Remediation Program (VRP) at the former M-I SWACO facility located at 4417 N Lovington Highway in Hobbs, New Mexico (site; refer to figure 1).

2.0 BACKGROUND

2.1 Site Description and Physical Setting

The site is the former M-I SWACO facility located at 4417 N Lovington Highway in Hobbs, New Mexico. According to the Lea County Appraisal District, the site is 9.18 acres in size and the associated Parcel ID is 4000406260001. The land use for the site is commercial/industrial and the site is located in a mixed-land use area.

2.2 Site History and Land Use

The site was previously operated by M-I SWACO as an oil field production chemical distribution and blend facility. The site appears to be currently improved with an office-warehouse building, a former compressor shed, a truck scale and six aboveground storage tanks (ASTs). Reportedly, the site was purchased and developed by Magcobar (drilling mud producer) in 1975. In 1986, ownership of the facility transferred to M-I SWACO, which utilized the site for the production of water-based drilling mud until 1991. The site was leased by Lonestar Distribution, Inc. (LDI) from 1992 to at least 2001. LDI stored and distributed prepackaged dry sack and liquid drilling mud products. Trans Pecos Materials reportedly leased the northern portion of the site for storage and distribution of gravel and crushed rock.

2.3 Summary of Previous ENERCON Assessments and Remediation

In April 2021, Schlumberger requested that ENERCON provide a proposal to conduct a Limited Phase II environmental exit assessment at the site.

At the direction of ENERCON, a licensed New Mexico driller advanced a total of 20 soil borings at the site between September 14 and September 16, 2021.

The soil borings were advanced using a combination of hollow-stem auger and solid-stem auger methods to depths of 10 to 20 feet below ground surface (bgs). The drilling equipment was decontaminated prior to use and between each boring location.

The subsurface soils generally consist of sand and silt with gravel and intermittent clay layers. Evidence of groundwater was not encountered. Soil samples were obtained continuously, and field screened for volatile organic vapors with a photo-ionization detector (PID). Marginally elevated PID readings were observed in SB-2, SB-6, SB-10, SB-11, and SB-16. No visual evidence (e.g. yellowed or discolored soil) of potential impacts were observed.

Sampling Procedures

Following field screening, three soil samples were collected from each of the borings using EPA 5035 collection methods. The samples were collected at the boring surface, midpoint of the boring, and termination of the boring. An additional sample was collected in borings where elevated PID readings were encountered in select borings.

The soil samples were collected using dedicated devices provided by the laboratory and placed into laboratory-provided sample containers. The samples were immediately placed on ice and transported under chain of custody procedures to an accredited environmental laboratory, in Houston, Texas. Some samples were placed on hold pending the results of other analyses. In general samples were analyzed for:

- TPH gasoline range organics (GRO) by SW8015C.
- TPH diesel range organics (DRO) by SW8015C.
- TPH oil range organics (ORO) by SW8015C.
- Volatiles (VOCs) by SW8260C.
- Semi-Volatiles (SVOCs) by 8270D.
- RCRA metals by SW6020A/SW7471B.
- Hexavalent chromium by SW7196A.

Additionally, select samples were further analyzed for one of the following: arsenic, barium, or hexavalent chromium, using the Synthetic Precipitation Leaching Procedure (SPLP).

Subsequent to collection of the soil samples, the borings were plugged with bentonite chips and hydrated. Each surface was restored to match the surrounding area. Soil cuttings were placed in 55-gallon drums that were temporarily staged on the west side of the warehouse pending characterization and disposal.

Laboratory Analytical Results

The laboratory analytical results were compared to the applicable NMED Ground Water Quality Bureau Risk Assessment Guidance for Investigations and Remediation Volume I Soil Screening Levels: Residential Soil Cancer SSL, Residential Soil Noncancer SSL, Industrial/Occupational Soil Cancer SSL, and Soil Leachate Dilution Attenuation Factor 20 (SL-SSL DAF 20). The SL-SSL DAF 20 is the lowest value among all applicable human health exposure pathways and ecological receptors for each constituent of potential concern (COPC), and for this assessment SL-SSL DAF 20 values were used for all COPCs except TPH. Residential Soil Noncancer SSLs were used for TPH results. A summary of the soil analytical results is presented in Tables 1, 2, 3, and 4.

TPH-GRO

The laboratory analytical results indicate that one of the 26 samples analyzed exhibited TPH-GRO concentrations above the laboratory method detection limits (MDLs). The identified concentration of 0.30 milligrams per kilogram (mg/kg) at SB-19 (1-2') was below the Residential Soil Noncancer SSL of 100 mg/kg.

TPH-DRO/ORO

The laboratory analytical results indicate that all of the 27 samples analyzed exhibited TPH-DRO and ORO concentrations above the laboratory MDLs, but below the associated DRO and ORO Residential Soil Noncancer SSL of 1,000 mg/kg.

VOCs

The laboratory analytical results show that no VOCs concentrations were detected above the laboratory MDLs in the three samples analyzed [SB-10 (1-2'), SB-11 (1-2'), and SB-11 (4-5')]. It should be noted the associated MDLs for 1,2-dibromoethane (EDB) are above the associated SL-SSL DAF 20 of 0.000352 mg/kg. The EDB MDLs are well below the associated Residential Soil Cancer SSL. All other VOCs were below the applicable Residential Soil Cancer and Noncancer SSLs.

SVOCs

The laboratory analytical results show that several SVOCs were detected in the soil samples analyzed from SB-10 and SB-11. The MDLs for 4-chloroaniline, 4-nitroaniline, bis(2-chloroethyl)ether, n-nitrosodi-n-propylamine, and pyridine are above the associated SL-SSL DAF 20. The laboratory MDLs/results for all other SVOCs are below the applicable SL-SSL DAF 20. No SVOC concentrations were above the applicable Residential Soil Cancer and Noncancer SSLs.

RCRA Metals

The laboratory analytical results show that concentrations of one or more of the RCRA metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver) were detected in the 38 soil samples analyzed. The detected concentrations of cadmium, chromium, lead, mercury, selenium, and silver were below the associated SL-SSL DAF 20. However, arsenic and barium were identified in select samples at concentrations above the applicable SL-SSL DAF 20. Additionally, select samples of arsenic and barium had concentrations above the applicable Residential Soil Cancer and Noncancer SSLs. Furthermore, select samples exhibited arsenic concentrations above the Industrial/Occupational Soil Cancer SSL.

Arsenic concentrations range from 1.48 mg/kg to 58.8 mg/kg. Four samples exceed the SL-SSL DAF 20 of 5.83 mg/kg; four samples exceed the Residential Soil Cancer SSL of 7.07 mg/kg; and two samples exceed the Industrial/Occupational Soil Cancer SSL of 35.9 mg/kg. ENERCON calculated the Exposure Point Concentration (EPC) for arsenic according to NMED 95% Upper Confidence Level (UCL) guidance using EPA's ProUCL 5.1. The resultant EPC of 9.191 mg/kg (95% H-UCL value) is greater than SL-SSL DAF 20 and the Residential Soil Noncancer SSL; however, it is below the Industrial/Occupational Soil Noncancer SSL. The EPC calculation is included in Attachment A.

Barium concentrations range from 145 mg/kg to 17,300 mg/kg. Nine samples exceed the SL-SSL DAF 20 of 2,700 mg/kg. Three samples exceed the Residential Soil Noncancer SSL of 15,600 mg/kg. No identified barium concentrations exceed the Industrial/Occupational Soil Noncancer

SSL. The resultant EPC of 7,290 mg/kg (95% Adjusted Gamma UCL value) is greater than the SL-SSL DAF 20 but less than Residential Soil Noncancer SSL. The EPC calculation is included in Attachment A.

Hexavalent Chromium

The results for the samples analyzed for hexavalent chromium were below the laboratory MDLs. However, the laboratory MDLs are greater than the SL-SSL DAF 20. The calculated EPC of 0.337 mg/kg (95% Student's-t UCL value) is greater than the SL-SSL DAF 20 but well below the Residential Soil Cancer SSL. The EPC calculation is included in Attachment A.

SPLP

Based on the exceedances of SL-SSL DAF 20 for arsenic, barium, and hexavalent chromium in soil, the samples with the highest arsenic, barium, and hexavalent chromium concentrations, SB-16 (1-2'), SB-9 (1-2'), and SB-15 (1'-2'), respectively, were further analyzed by SPLP, to determine if the potential exists for these COPCs to leach to groundwater.

The result for arsenic shows a concentration of 0.00580 milligrams per liter (mg/L), which is greater than the associated NMED Tap Water Cancer and Tap Water Noncancer screening levels.

The result for barium of 0.821 mg/L is less than the associated Tap Water Noncancer screening level.

The result of <0.00600 mg/L for hexavalent chromium is less than the associated Tap Water Noncancer screening level, but potentially greater than the associated Tap Water Cancer screening level.

2.4 Suspected/Known Contaminants of Concern

The following is a summary of the findings.

- The laboratory analytical results indicate that TPH, VOCs, SVOCs, hexavalent chromium, and six of the eight RCRA metals are below the residential soil action levels for the State of New Mexico.
- Barium concentrations range from 145 mg/kg to 17,300 mg/kg. Nine samples exceed the SL-SSL DAF 20 of 2,700 mg/kg. Three samples exceed the Residential Soil Noncancer SSL of 15,600 mg/kg. No identified barium concentrations exceed the Industrial/Occupational Soil Noncancer SSL. The resultant EPC of 7,290 mg/kg (95% Adjusted Gamma UCL value) is greater than the SL-SSL DAF 20 but less than Residential Soil Noncancer SSL.
- Arsenic concentrations range from 1.48 mg/kg to 58.8 mg/kg. Four samples exceed the SL-SSL DAF 20 of 5.83 mg/kg; four samples exceed the Residential Soil Cancer SSL of 7.07 mg/kg; and two samples exceed the Industrial/Occupational Soil Cancer SSL of 35.9 mg/kg. The EPC for arsenic was found to be greater than SL-SSL DAF 20 and the Residential Soil Noncancer SSL; however, it is below the Industrial/Occupational Soil Noncancer SSL.
- The potential for arsenic and hexavalent chromium to leach to groundwater exists based on the SPLP analyses. The sample collected immediately below SB-16 (1-2'), at a depth of 9' to 10' bgs, did not exhibit an arsenic concentration above SL-SSL DAF 20. Note: groundwater is expected to be located from greater than 50 feet bgs at site in the High Plains Aquifer within Lea County.

3.0 PROPOSED PERFORMANCE STANDARD (20.6.3.10 NMAC)

ENERCON anticipates meeting performance standard and associated requirements applicable to the "source, nature and extent, migration pathways, and environmental fate and transport of contaminates in all environmental media present at the site". Specifically, surface soils will be remediated to NMED Ground Water Quality Bureau Risk Assessment Guidance for Investigations and Remediation Volume I Soil Screening Level for Industrial/Occupational Soil Cancer SSLs for arsenic and barium.

4.0 SUMMARY OF PROPOSED SAMPLING, ANALYSIS, AND REMEDIATION

ENERCON will sample surface soils by hand auger methods/slide core sampler in the vicinity of SB-9 and SB-16 for investigative derived waste (IDW) profile sampling. Samples will be collected from 0 to 2' bgs. The locations are depicted on Figure 2. Soil will be analyzed for TPH by TX 1005, reactivity/corrosivity/ignitability (RCI) by EPA Method SW846, and toxicity characteristic leaching procedure (TCLP) for volatile organic compounds (VOC), TCLP semi-volatile organic compounds (SVOC) and TCLP metals.

ENERCON will oversee an excavation contractor to excavate, direct load, transport, and dispose of up to 200 cubic yards (CY) (300 tons) of metals affected soils off-site to an approved landfill. The proposed areas of excavation are depicted on Figure 3. Confirmation samples will be taken during excavation activities to confirm soil arsenic concentrations are below NMED Industrial/Occupational SSLs. Soil samples will be collected from the base of each excavation area and each sidewall (10 samples). Soil samples will be analyzed for total arsenic EPA Method 6020. For quality assurance/quality control (QA/QC) purposes, a minimum of the one blind duplicate will be collected and analyzed for every 10 soil samples collected. If arsenic concentrations exceed SSLs, additional excavation and sampling will need to be performed to delineate impacted areas.

The samples will be placed into laboratory-supplied sample containers, immediately placed on ice, and transported to an accredited laboratory under proper chain-of-custody protocol. The samples will be analyzed on a standard turnaround time basis (estimated 7-day laboratory analysis time).

When all confirmation samples are below NMED Industrial/Occupational soil screening levels, excavated areas will be backfilled to grade with aggregate base coarse gravel similar to native soils.

5.0 SUMMARY OF PROPOSED REMEDIATION

Based on the assessment findings, concentrations of barium and arsenic in soil at the site are above screening levels for residential land use, and arsenic is above screening levels for industrial land use. To provide closure of the site, ENERCON proposes the following:

- Remediation of arsenic above NMED Industrial/Occupational SSLs by excavation of areas in the vicinity of SB-9 (1-2)' and SB-16 (1-2)'.
- File restrictive covenant (RC) to limit future of land use to non-residential due to arsenic and barium soil impacts.

6.0 HOW PROPOSED ACTIVITIES WILL MEET THE VRP PERFORMANCE STANDARDS

6.1 Excavation Activities & Restrictive Covenant

Meeting the VRP performance standards will be accomplished in a two-fold process detailed as followed:

- The excavation and off-site removal of known arsenic concentrations in the vicinity of SB-9 and SB-16 above industrial/occupational limits.
- Filing of RC to limit land use to non-residential due to arsenic and barium impacts remaining on-site above residential limits post excavation activities.

This two-fold process will mitigate the source, nature and extent, migration pathways, and environmental fate and transport of arsenic and barium impacted soil at site to industrial/occupational limits. Since property will be restricted to industrial/occupational use, Residential SSLs will not be applicable.

7.0 REFERENCES

- New Mexico Administrative Code Title 20 Environmental Protection Chapter 6 Water Quality Part 3 Voluntary Remediation 10 Performance Standard and Associated Requirements A-G. (1999, July). https://www.srca.nm.gov/parts/title20/20.006.0003.html
- 2. New Mexico Environment Department. Risk Assessment Guidance of Site Investigations and Remediation Volume I Soil Screening Guidance for Human Health Risk Assessments. (2021, November). https://www.env.nm.gov/hazardouswaste/wpcontent/uploads/sites/10/2021/12/NMED SSG-VOL I Dec 2 2021.pdf

On behalf of Schlumberger, thank you for allowing ENERCON to provide this preliminary work plan. We look forward to providing quality environmental services to the State of New Mexico.

Sincerely yours,

Enercon Services, Inc.

Lance Meaux, P.G.

Environmental Geologist

Lance Menux

Darren D. Lovvorn, P.G.

Division Manager

Attachments: Figure 1 – Site Location Map

Figure 2 – IDW Sample Location Map

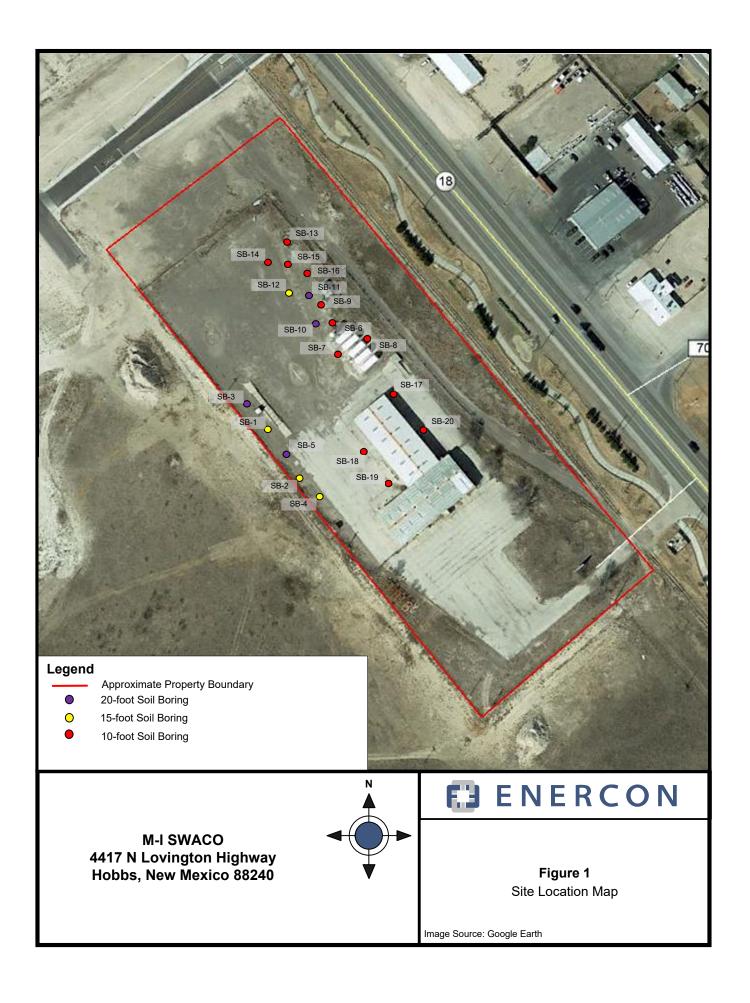
Figure 3 – Excavation Activities Location Map

Tables – Soil Analytical Tables (Volatiles, Semi-Volatiles, Metals, TPH, SPLP)

Attachment A - Calculated NMED EPC

Attachment B – Guidance for Restrictive Covenant Attachment C – Laboratory Analytical Report

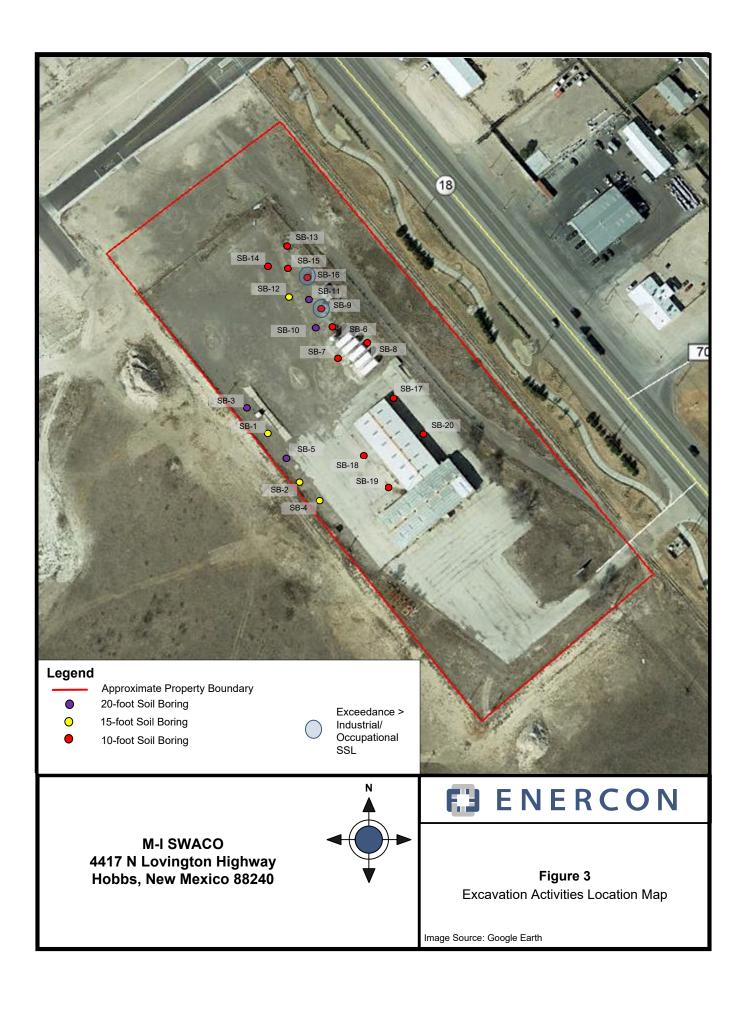






IDW Sample Location Map

Image Source: Google Earth



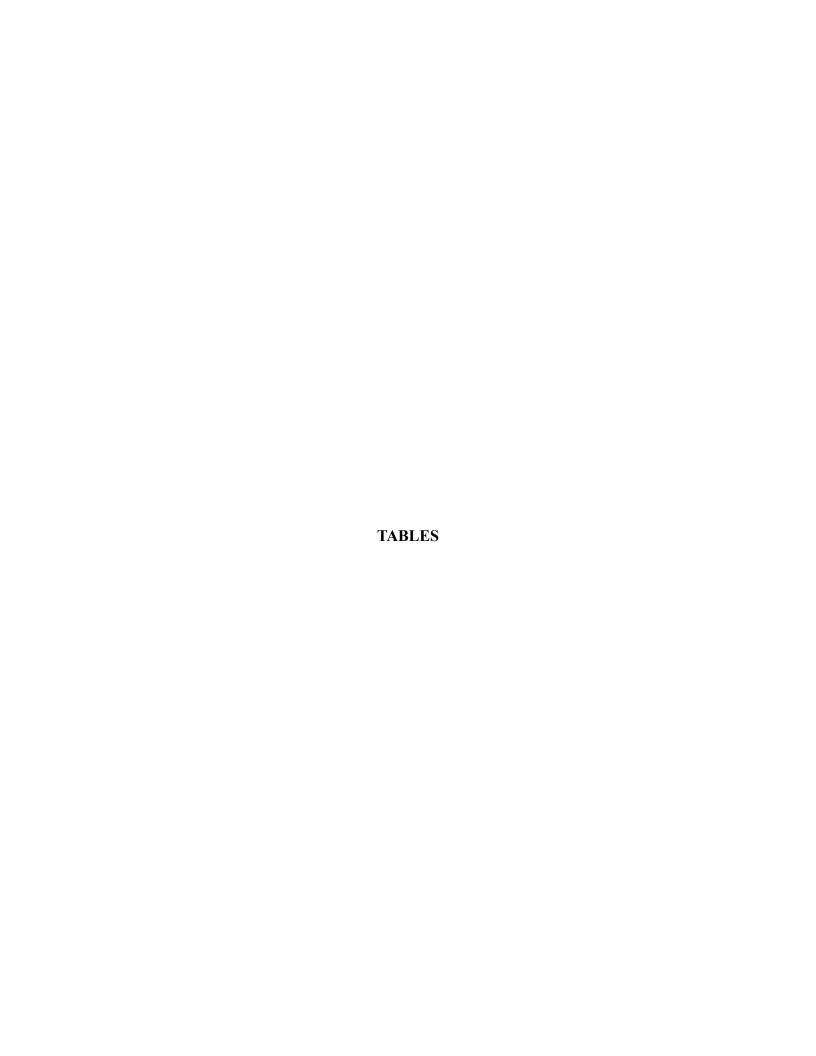


Table 1 Soil Analytical Results Volatiles

		•••	latiles					
	Soil Boring	SB-10	SB	-11				
	Company	ENERCON	ENERCON	ENERCON		NMED Soil Sc	reening Levels	
	Depth (feet)	1-2'	1-2'	4-5'				
	Date	9/15/2021	9/15/2021	9/15/2021	Residential Soil, Cancer	Residential Soil, Noncancer	Industrial/ Occupational Soil, Cancer	SL-SSL, DAF 20
	1,1,1-Trichloroethane (TCA)	<0.00047	<0.00048	<0.00065	NE	14,400	NE	51.1
	1,1,2,2-Tetrachloroethane	<0.00075	<0.00078	<0.0010	7.98	1,560	39.4	0.00481
	1,1,2-Trichlor-1,2,2-trifluoroethane	<0.00065	<0.00068	0.00091	NE	50,800	NE	3200
	1,1,2-Trichloroethane (1,2-TCA)	<0.00047	<0.0048	<0.00065	18.8	2.61	92.1	0.0268
	1,1-Dichloroethane (1,1-DCA)	<0.00047	<0.00048	<0.00065	78.6	15600	383	0.136
	1,1-Dichloroethene (1,1-DCE)	<0.00047	<0.00048	<0.00065	NE	440	NE	1.95
	1,2,4-Trichlorobenzene	<0.00093	<0.00097	<0.0013	240	82.9	1,250	3.10
	1,2-Dibromo-3-chloropropane	< 0.00093	<0.00097	<0.0013	0.0858	5.88	1.18	0.00139
	1,2-Dibromoethane (EDB)	<0.00047	<0.00048	<0.00065	0.672	135	3.31	0.000352
	1,2-Dichlorobenzene	<0.00093	<0.00097	<0.0013	NE	2,150	NE	9.08
	1,2-Dichloroethane (EDC)	<0.00056	<0.00058	<0.00078	8.32	55.6	40.7	0.0238
	1,2-Dichloroethene (1,2-DCE)	N/A	N/A	N/A	NE	NE	NE	NE
	1,2-Dichloropropane (PDC)	<0.00075	<0.00078	<0.0010	17.8	29	86.8	0.0277
	1,3-Dichlorobenzene	<0.00093	<0.00097	<0.0013	NE	NE	NE	NE
	1,4-Dichlorobenzene	<0.00093	<0.00097	<0.0013	1,290	5,480	6,730	1.12
	2-Butanone (MEK)	<0.0012	<0.0013	<0.0017	NE	37,400	NE	20.1
	2-Hexanone (MBK)	<0.0013	<0.0014	<0.0018	NE	200*	NE	0.0088*
	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	<0.0019	<0.0019	<0.0026	NE	5,810	NE	4.80
	Acetone	<0.0019	<0.0019	<0.0026	NE	66,300	NE	49.8
	Benzene	<0.00047	<0.00048	<0.00065	17.8	114	87.2	0.0418
	Bromodichloromethane	<0.00047	<0.00048	<0.00065	6.19	156	30.2	0.00621
	Bromoform (Tribromomethane)	<0.00056	<0.00058	<0.00078	674	123	176	0.147
	Bromomethane	<0.00093	<0.00097	<0.0013	NE	17.7	NE	0.0343
	Carbon disulfide	<0.00056	<0.00058	<0.00078	NE	1,550	NE	4.42
ø	Carbon tetrachloride (Tetrachloromethane)	<0.00056	<0.00058	<0.00078	10.7	144	52.5	0.0367
VOCs	Chlorobenzene (Monochlorobenzene)	<0.00056	<0.00058	<0.00078	NE	378	NE	1.08
1	Chloroethane (Ethyl Chloride)	<0.00075	<0.00078	<0.0010	NE	19,000	NE	107
	Chloroform (Trichlorobenzene)	<0.00047	<0.00048	<0.00065	5.90	3.06	28.7	0.0109
	Chloromethane	<0.00047	<0.00048	<0.00065	41.1	268	201	0.0952
	cis-1,2-Dichloroethene (cis-1,2,-DCE)	<0.00075	<0.00078	<0.010	NE	156	NE NE	0.352
	cis-1,3-Dichloropropene	<0.00047	<0.00078	<0.00065	29.3	141	146	0.0281
	Cyclohexane	<0.00093	<0.00097	<0.0013	NE NE	6,500*	NE	13*
	Dibromochloromethane	<0.00047	<0.00048	<0.00065	13.9	1,230	67.4	0.00755
	Dichlorodifluoromethane (Fluorocarbon-12)	<0.00065	<0.00068	<0.00091	NE	182	NE	7.23
	Ethylbenzene	<0.00065	<0.00068	<0.00091	75.1	3,930	368	12.3
	Isopropylbenzene (Cumene)	<0.00084	<0.00087	<0.0012	NE	2,360	NE	11.4
	Methyl acetate	<0.00065	<0.00068	<0.0012	NE	78,200	NE NE	71.1
	Methyl tert-butyl ether (MTBE)	<0.00047	<0.00048	<0.00065	975	37,800	4,820	0.553
	Methylcyclohexane	<0.00093	<0.00097	<0.0013	NE NE	5,500	NE	316
	Methylene chloride (Dichloromethane)	<0.00093	<0.00097	<0.0013	766	409	14,400	0.471
	o-Xylene	<0.00093	<0.00097	<0.0013	NE	805	NE	2.98
	Styrene (Ethenylbenzene)	<0.00065	<0.00068	<0.00091	NE	7,260	NE	20.6
	Tetrachloroethene (PCE)	<0.00065	<0.00068	<0.00091	337	111	1,650	0.321
	Toluene (Methylbenzene)	<0.00056	<0.00058	<0.00078	NE	5,230	NE	12.1
	trans-1,2-Dichloroethene (trans-1,2-DCE)	<0.00030	<0.00038	<0.00076	NE	295	NE NE	0.503
	trans-1,3-Dichloropropene	<0.00056	<0.00058	<0.00078	NE	NE NE	NE	NE
	Trichloroethene (TCE)	<0.00056	<0.00058	<0.00078	15.5	6.77	112	0.0310
	Trichlorofluoromethane (Fluorocarbon-11)	<0.00030	<0.00038	<0.00076	NE	1,230	NE	15.7
	Vinyl chloride (Chlorothene)	<0.00077	<0.00078	<0.0000	0.742	113	28.4	0.0134
	Xylenes, Total	<0.00073	<0.00070	<0.0010	NE	871	NE	154
	Ayrenes, Total	~0.00093	~0.00097	\U.U13	INE	0/1	INE	134

All values in milligrams per kilogram (mg/kg) unless otherwise noted

SL-SSL - New Mexico Environmental Department Soil Leachate Soil Screening Levels

Values exceed the applicable NMED Residential Soil, Cancer Soil Screening Levels

Values exceed the applicable NMED Residential Soil, Soil Screening Levels

Values exceed the applicable NMED Industrial/Occupational, Cancer Soil Screening Levels

Vaules exceed the applicable NMED SL-SSL Soil Screening Levels

NE- Not Established

N/A - Not Applicable

NS - None Specified

J - Analyte detected below quantitation limit

* Values from US EPA Regional Screening Levels

Soil Analytical Results Semi-Volatiles

	Soil Boring	SB-10	SB	-11							
	Company	ENERCON	ENER				NME	Soil Screening	Levels		
	Depth (feet)	1-2'	1-2'	4-5'							
	Date	9/15/2021	9/15/2021	9/15/2021	Residential Soil, Cancer	Residential Soil, Noncancer	Industrial/ Occupational Soil, Cancer	Industrial/ Occupational Soil, Noncancer	Construction Worker Soil, Cancer	Construction Worker Soil, Noncancer	SL-SSL, DAF 20
	I,1-Biphenyl	<0.018	<0.018	<0.0018	848 NF	39,100	4,430	649,000	30,200	177,000	0.131 66.2
	2,4,5-Trichlorophenol 2,4,6-Trichlorophenol	<0.028 <0.019	<0.027 <0.018	<0.0027 <0.0018	NE 484	61,600 61.6	NE 2,330	91,600 916	NE 17,000	26,900 269	0.674
1 1	2,4-Dichlorophenol	<0.019	<0.018	<0.0018	NE	185	2,330 NE	2.750	17,000 NE	807	0.825
	2,4-Dimethylphenol	<0.036	<0.035	<0.0035	NE	1,230	NE	18,300	NE	5,380	6.45
	2,4-Dinitrophenol	< 0.050	< 0.0097	<0.0048	NE	123	NE	1,830	NE	538	0.669
	2,4-Dinitrotoluene (2,4-DNT)	N/A	N/A	N/A	17.1	123	82.3				0.0492
	2,6-Dinitrotoluene (2,6-DNT)	<0.036	<0.035	<0.0035	3.56	18.5	17.2	276	165	80.9	0.0102
	2-Chloronapthalene (b-Chloronaphthalene)	<0.014	<0.014	<0.0014	NE	6,260	NE	104,000	NE	28,300	57.0
	2-Chlorophenol 2-Methyl-4,6-dinitrophenol	<0.014 N/A	<0.014 N/A	<0.0014 N/A	NE NE	391 NE	NE NE	6,490	NE	1,770	1.15 NE
	2-Methylnapthalene	<0.0055	<0.0054	<0.00054	NE NE	232	NE	3.370	NE	1,000	2.76
1 1	2-Methylphenol (o-Cresol)	<0.012	<0.012	<0.0012	NE NE	3,200	NE NE	41,000	NE	NE.	0.75
	2-Methylphenol (p-Cresol)	N/A	N/A	N/A	NE	NE	NE				NE
	2-Nitroaniline	<0.021	<0.020	<0.0020	NE	630*	NE	8,000	NE	NE	0.08*
	2-Nitrophenol	<0.0028	<0.0027	<0.0027	NE	NE	NE	NE	NE	NE	NE
	3&4 Methylphenol	<0.011 <0.028	<0.011 <0.027	<0.0011 <0.0027	NE 12	NE NE	NE 57	NE NE	NE 410	NE NE	NE 0.124
	3,3-Dichlorobenzidine 3-Nitroaniline	<0.028 <0.021	<0.027 <0.020	<0.0027 <0.0020	12 NE	NE NE	57 NE	NE NE	410 NE	NE NE	0.124 NE
	4,6-Dinitro-2-methylphenol	<0.021	<0.020	<0.0020	NE NE	NE NE	NE NE	NE NE	NE NE	NE NE	NE NE
	4-Bromophenyl phenyl ether	<0.018	<0.017	<0.0017	NE	NE	NE	NE	NE	NE NE	NE
	4-Chloro-3-methyphenol	<0.0077	<0.0075	<0.00075	NE	6,300	NE	82,000	NE	NE	1.7
	4-Chloroaniline	<0.012	<0.012	<0.0012	NE	2.7*	NE	110	NE	NE	0.00016*
	4-Chlorophenyl phenyl ether	<0.017	<0.016	<0.0016	NE	NE	NE	NE	NE	NE	NE
	1-Nitroaniline 1-Nitrophenol	<0.024 <0.021	<0.024 <0.020	<0.0024 <0.0020	NE NE	27* NE	110 NE	NE NE	NE NE	NE NE	0.0016* NF
	Acenaphthene	<0.021	<0.020	<0.0020	NE NE	3,480	NE NE	50,500	NE NE	15,100	82.5
Ì	Acenphthylene	<0.011	<0.011	<0.0011	NE	NE NE	NE	NE.	NE	NE.	NE NE
	Acetophenone	<0.0088	<0.0086	<0.00086	NE	7,820	NE	130,000	NE	35,400	9.64
	Anthracene	<0.0055	0.015J	0.0014J	NE	17,400	NE	253,000	NE	75,300	85.1
	Atrazine	<0.022	<0.021	<0.0021	23.2	2,160	112	32,100	819	9,420	0.0341
	Benz(a)anthracene Benzaldehyde	<0.018 <0.013	0.038 <0.013	0.0031J <0.0013	1.53 170	NE NE	32.3 820	NE NE	240 NE	NE NE	0.637 0.0041
	Benzo(a)pyrene	<0.013	0.013	0.0038	1.12	17.4	23.6	251	173	15	4.42
	Benzo(b)fluoranthene	<0.013	0.068	0.0047	1.53	NE	32.3	NE NE	240	NE NE	6.17
S	Benzo(g,h,i)perylene	<0.0077	0.040	0.0033J	NE	NE	NE	NE	NE	NE	NE
	Benzo(k)fluoranthene	<0.0099	0.024J	0.0022J	15.3	NE	323	NE	2,310	NE	60.5
	Sis(2-chloroethoxy)methane	<0.0099	<0.0097	<0.00096	NE	190	NE	2,500	NE	NE	0.013
	Bis(2-chloroethyl)ether	<0.012 <0.015	<0.012 <0.015	<0.0012 <0.0015	3.11 99.3	NE NE	15.7 519	NE NE	1.95 3,540	NE NE	0.000605 0.0475
	Bis(2-chloroisopropyl)ether Bis(2-ethylhexyl)phthalate	<0.019	0.032J	0.0013	380	1,230	1,830	18.300	13,400	5.380	200
	Butyl benzyl phthalate	<0.014	<0.014	<0.0014	290	NE	1,200	NE	NE	NE	0.24
	Caprolactam	<0.013	<0.013	<0.0013	NE	31,000	NE	400,000	NE	NE	2.5
	Carbazole	<0.013	<0.013	<0.0013	NE	NE	NE	NE	NE	NE	NE
	Chrysene Dibenz(a,h)anthracene	<0.0088 <0.018	<0.047 <0.017	0.0036 <0.0017	1.53 0.153	NE NE	3,230 3.23	NE NE	23,100 24	NE NE	186 1.97
	Dibenz(a,n)antnracene Dibenzofuran	<0.018	<0.017	<0.0017	78	NE NE	1,200	NE NE	NE	NE NE	0.15
	Diethyl phthalate (DEP)	<0.011	<0.0073	<0.0011	NE	49,300	1,200 NE	733,000	NE NE	215,000	97.9
	Dimethyl phthalate	<0.0088	<0.0086	<0.00086	NE	61,600	NE	916,000	NE	269,000	3.57
	Di-n-butyl phthalate	<0.013	<0.013	<0.0013	NE	6,160	NE	91,600	NE	26,900	33.8
	Di-n-octyl phthalate	<0.0099	<0.0097	<0.00096	NE	630	NE	8,200	NE	NE	57
1 1	Fluoranthene Fluorene	<0.012 <0.012	0.085 <0.012	0.0071 <0.0012	NE NE	2,320 2,320	NE NE	33,700 33,700	NE NE	10,000 10,000	1,340 80
1 1	-iuorene Hexachlorobenzene	<0.012	<0.012	<0.0012	3.33	49.3	NE 16	733	NE 117	215	0.189
1 1	Hexachlorobutadiene	<0.013	<0.013	<0.0013	68.3	61.6	52.1	91.6	2,400	269	0.0413
	Hexachlorocyclopentadiene	<0.0088	<0.0086	<0.00086	NE	2.30	NE	5,490	NE	867	2.40
	Hexachloroethane	<0.017	<0.016	<0.0016	133	43.1	641	641	4,670	188	0.0320
	ndeno(1,2,3-cd)pyrene	<0.0088	0.026J	0.0022J	1.53	NE 10.000	32.3	NE 400.000	240	NE 50.700	20.1
	sophorone Naphthalana	<0.0088 <0.0066	<0.0086 <0.0064	<0.00086	5,610 49.7	12,300 162	27,000 241	183,000 843	198,000 111	53,700 159	4.23 0.0823
	Naphthalene Nitrobenzene	<0.0099	<0.0064	<0.00064	60.4	131	293	1,540	1.350	353	0.0823
1 1	N-Nitrosodi-n-propylamine	<0.0099	<0.0097	<0.00030	0.078	NE	0.33	NE	NE	NE NE	0.0000081
	N-Nitrosodiphenylamine	<0.0077	<0.0075	<0.00075	1,090	NE	5,240	NE	37,900	NE	10
	Pentachlorophenol (PCP)	< 0.036	<0.035	<0.0035	9.85	234	44.5	3,180	346	989	0.152
	Phenanthrene	<0.017	0.052	0.0047	NE	1,740	NE	25,300	NE	7,530	85.9
1 1	Phenol	<0.012 0.0091J	<0.012 0.060	<0.012 0.0051	NE NE	18,500 1,740	NE NE	275,000 1,200	NE NE	77,400 NE	52.3 192
	Pyrene Pyridine	0.0091J <0.0099	<0.060	<0.0051	NE NE	1,740 78*	NE NE	1,200 25,300	NE NE	NE 7,530	0.0068*
	yridine	<0.0099	<0.0097	<0.00096	INE	16	NE	25,300	INE	1,530	0.0068

All values in milligrams per kilogram (mg/kg) unless otherwise noted
SL-SSL - New Mexico Environmental Department Soil Leachate Soil Screening Levels
Values exceed the applicable NIMED Residential Soil, Cancer Soil Screening Levels
Values exceed the applicable NIMED Residential Soil, Soil Screening Levels
Values exceed the applicable NIMED Industrial/Occupational, Cancer Soil Screening Levels
Values exceed the applicable NIMED SL-SSL Soil Screening Levels
NE- Not Established
N/A - Not Applicable
N/A - Not Applicable
J - Analyte detected below quantitation limit
* Values from US EPA Regional Screening Levels

Soil Analytical Results West of Warehouse

П	Soil Boring	SE		e.	3-2	SB	2	SB-	4		SB-5					
		SE)- I	SE	0-2	30.	-	30-	4				NMED So	il Screening Le	evels	
	Depth (feet)	1-2'	14-15'	1-2'	14-15'	1-2'	19-20'	1-2'	14-15'	1-2'	19-20'					
	Date	9/14/2021	9/14/2021	9/14/2021	9/14/2021	9/14/2021	9/14/2021	9/14/2021	9/14/2021	9/14/2021	9/14/2021	Residential Soil, Cancer	Residential Soil, Noncancer	Industrial/ Occupational Soil, Cancer	SL-SSL, DAF 20	EPC
	Arsenic	5.84	1.68	9.18	4.34	5.90	1.48	7.16	2.11	5.60	2.03	7.07	13.0	35.9	5.83	9.191
	Barium	3,920	201	7,870	592	3,250	296	765	145	6,710	196	NE	15,600	NE	2,700	7,290
	Cadmium	0.107J	<0.0280	0.143J	< 0.0597	0.0751J	< 0.0276	0.084J	< 0.0561	0.202J	0.149J	85,900	70.5	417,000	9.39	NC
v.	Chromium	7.04	9.98	13.7	4.39	3.87	8.91	2.76	4.29	7.82	3.53	96.6	45,200	505	205,000	NC
to to	Chromium, Hexavalent	< 0.322	N/A	< 0.311	N/A	< 0.316	N/A	N/A	N/A	N/A	N/A	3.05	235	72.1	0.192	0.337
Ž	Lead	7.75	1.67	13.7	1.19	5.57	1.58	1.61	1.43	13.7	5.43	NE	400	NE	270	NC
I	Selenium	1.13	<0.0942	0.525J	0.274J	0.931J	0.196J	<0.186	<0.189	0.844	0.384J	NE	391	NE	10.2	NC
I	Silver	0.0326J	<0.0155	0.0359J	< 0.0332	0.0324J	<0.0153	< 0.0306	< 0.0312	0.0528J	<0.0154	NE	391	NE	13.8	NC
I	Mercury	0.0622	0.0234	0.12	0.0357	0.0317	0.113	0.0315	0.0628	0.0484	0.0432	NE	23.8	NE	2.09	NC
	GRO	< 0.012	N/A	< 0.012	N/A	<0.0080	N/A	<0.010	N/A	< 0.012	N/A	NE	100	NE	NE	NC
ΙĒ	DRO	13	N/A	130	N/A	110	N/A	5.8	N/A	7	N/A	NE	1,000	NE	NE	NC
ľ	ORO	8.7	N/A	240	N/A	74	N/A	11	N/A	23	N/A	NE	1,000	NE	NE	NC

All values in milligrams per kilogram (mg/kg) unless otherwise noted

SL-SSL - New Mexico Environmental Department Soil Leachate Soil Screening Levels

Values exceed the applicable NMED Residential Soil, Cancer Soil Screening Levels

Values exceed the applicable NMED Residential Soil, Soil Screening Levels

Values exceed the applicable NMED Industrial/Occupational, Cancer Soil Screening Levels

values exceed the applicable times industrial companional, cancer con corecining t

Vaules exceed the applicable NMED SL-SSL Soil Screening Levels Vaules exceed the calculated Exposure Point Concentration

NC - Not Calculated

NE- Not Established

N/A - Not Applicable

NS - None Specified

Soil Analytical Results Barite AST Area Former Barite Pump Engine Diesel AST at Former Mud Mixing Plant

	Soil Boring	SE	3-6	SB-7	SE	3-8	SE	3-9		SB-10			NMED So	il Screening	Levels	
	Depth (feet)	1-2'	4-5'	1-2'	1-2'	4-5'	1-2'	9-10'	1-2'	2-3'	4-5'					
	Date	9/15/2021	9/15/2021	9/15/2021	9/15/2021	9/15/2021	9/15/2021	9/15/2021	9/15/2021	9/15/2021	9/15/2021	Residential Soil, Cancer	Residential Soil, Noncancer	Industrial/ Occupational Soil, Cancer	SL-SSL, DAF 20	EPC
	Arsenic	10.50	6.99	3.32	6.14	4.98	38.8	3.54	3.42	7.94	6.58	7.07	13.0	35.9	5.83	9.191
	Barium	16,800	9,060	9,910.0	7,250	2,280	17,300	2,720	5,230	1,370	1,140	NE	15,600	NE	2,700	7,290
	Cadmium	0.161J	N/A	0.114J	0.123J	N/A	0.307J	N/A	0.106J	0.105J	0.0634J	85,900	70.5	417,000	9.39	NC
ď	Chromium	27.3	N/A	25.90	3.05	N/A	12.9	N/A	22.7	5.61	4.58	96.6	45,200	505	205,000	NC
Metals	Chromium, Hexavalent	< 0.318	N/A	< 0.312	< 0.314	N/A	N/A	N/A	< 0.336	N/A	N/A	3.05	235	72.1	0.192	0.337
Ž	Lead	45.4	N/A	10.6	24.2	N/A	158	N/A	5.08	1.51	1.49	NE	400	NE	270	NC
	Selenium	0.45J	N/A	0.148J	1.06	N/A	0.222J	N/A	0.347J	0.425J	0.224J	NE	391	NE	10.2	NC
	Silver	0.116J	N/A	0.0298J	0.104J	N/A	0.240J	N/A	0.0391J	< 0.0156	<0.0150	NE	391	NE	13.8	NC
	Mercury	0.263	N/A	0.07330	0.0794	N/A	1.13	N/A	0.0234	0.0113	0.0148	NE	23.8	NE	2.09	NC
	GRO	<0.011	N/A	<0.010	<0.010	N/A	<0.011	N/A	<0.011	<0.011	<0.010	NE	100	NE	NE	NC
TPH	DRO	15	N/A	8	13	N/A	27	N/A	4.6	5.3	1.7J	NE	1,000	NE	NE	NC
Ľ	ORO	33	N/A	31	35	N/A	110	N/A	8.4	8.6	3.9	NE	1,000	NE	NE	NC

All values in milligrams per kilogram (mg/kg) unless otherwise noted

SL-SSL - New Mexico Environmental Department Soil Leachate Soil Screening Levels

Values exceed the applicable NMED Residential Soil, Cancer Soil Screening Levels

Values exceed the applicable NMED Residential Soil, Soil Screening Levels

Values exceed the applicable NMED Industrial/Occupational, Cancer Soil Screening Levels

Vaules exceed the applicable NMED SL-SSL Soil Screening Levels

Vaules exceed the calculated Exposure Point Concentration

NC - Not Calculated

NE- Not Established

N/A - Not Applicable

NS - None Specified

Soil Analytical Results Former Mud Mixing Plant Former Drilling Mud AST Tank Farm

	Soil Boring		SB-11		SB	-12	SB-13	SB-14	SB-15	SB	-16		NMED So	il Screening	Levels	
	Depth (feet)	1-2'	4-5'	19-20'	1-2'	14-15'	1-2'	1-2'	1-2'	1-2'	9-10'		00			
	Date	9/15/2021	9/15/2021	9/15/2021	9/14/2021	9/14/2021	9/14/2021	9/14/2021	9/14/2021	9/15/2021	9/15/2021	Residential Soil, Cancer	Residential Soil, Noncancer	Industrial/ Occupational Soil, Cancer	SL-SSL, DAF 20	EPC
	Arsenic	2.60	5.32	N/A	4.13	2.62	3.08	3.54	2.26	58.8	2.12	7.07	13.0	35.9	5.83	9.191
	Barium	2,680	5,110	54.3	11,200	374	1,370	468	1,950	16,200	661	NE	15,600	NE	2,700	7,290
	Cadmium	0.198J	0.207J	N/A	0.176	0.0369J	0.146J	0.146J	0.207J	0.283	N/A	85,900	70.5	417,000	9.39	NC
<u>0</u>	Chromium	14.6	4.73	N/A	8.32	2.55	10.3	21.2	14.8	7.46	N/A	96.6	45,200	505	205,000	NC
Metals	Chromium, Hexavalent	N/A	N/A	N/A	N/A	N/A	< 0.334	< 0.340	< 0.351	N/A	N/A	3.05	235	72.1	0.192	0.337
ž	Lead	8.36	2.61	N/A	10.5	1.61	6.11	8.12	9.17	201	N/A	NE	400	NE	270	NC
	Selenium	0.286J	0.265J	N/A	<0.102	<0.0982	0.172J	<0.0980	0.356J	0.505	N/A	NE	391	NE	10.2	NC
	Silver	0.0400J	0.0333J	N/A	0.0264J	<0.0162	<0.0158	0.0317J	0.0327J	0.234	N/A	NE	391	NE	13.8	NC
	Mercury	0.0379	0.0226	N/A	0.0286	0.00919	0.0141	0.0183	0.0165	1.41	N/A	NE	23.8	NE	2.09	NC
	GRO	< 0.011	<0.011	N/A	< 0.010	N/A	<0.010	< 0.011	<0.0091	< 0.010	N/A	NE	100	NE	NE	NC
ᇤ	DRO	17	40	N/A	1.6J	N/A	1.2J	60	64	4.4	N/A	NE	1,000	NE	NE	NC
	ORO	25	40	N/A	6.7	N/A	4.8	98	13	28	N/A	NE	1,000	NE	NE	NC

All values in milligrams per kilogram (mg/kg) unless otherwise noted

SL-SSL - New Mexico Environmental Department Soil Leachate Soil Screening Levels

Values exceed the applicable NMED Residential Soil, Cancer Soil Screening Levels

Values exceed the applicable NMED Residential Soil, Soil Screening Levels

Values exceed the applicable NMED Industrial/Occupational, Cancer Soil Screening Levels

Vaules exceed the applicable NMED SL-SSL Soil Screening Levels

Vaules exceed the calculated Exposure Point Concentration

NC - Not Calculated

NE- Not Established

N/A - Not Applicable

NS - None Specified

Soil Analytical Results Warehouse

	Soil Boring	SB-17	SB-18	SB-19	SB	-20	DUP (SB-3)	DUP2 (SB-9)	DUP3 (SB-20)		NMED So	oil Screening	Levels	
	Depth (feet)	1-2'	1-2'	1-2'	1-2'	9-10'	1-2'	1-2'	1-2'			•		
	Date	9/15/2021	9/16/2021	9/16/2021	9/16/2021	9/16/2021	9/14/2021	9/15/2021	9/16/2021	Residential Soil, Cancer	Residential Soil, Noncancer	Industrial/ Occupational Soil, Cancer	SL-SSL DAF 20	EPC
	Arsenic	2.88	3.06	3.22	4.50	4.43	4.68	6.03	7.30	7.07	13.0	35.9	5.83	9.191
	Barium	421	213	209	425	N/A	3,330	13,400	256	NE	15,600	NE	2,700	7,290
	Cadmium	0.0591J	0.138J	0.233J	0.0643J	N/A	0.0909J	0.204J	0.0847J	85,900	70.5	417,000	9.39	NC
<u>ග</u>	Chromium	5.13	6.83	7.65	4.62	N/A	3.54	23.3	4.21	96.6	45,200	505	205,000	NC
etals	Chromium, Hexavalent	< 0.347	< 0.345	< 0.340	< 0.337	N/A	<0.316	N/A	<0.338	3.05	235	72.1	0.192	0.337
Ž	Lead	4.48	6.11	20.7	3.32	N/A	9.57	15.1	3.15	NE	400	NE	270	NC
	Selenium	<0.100	0.244J	0.229J	0.154J	N/A	1.26	0.152J	0.124J	NE	391	NE	10.2	NC
	Silver	< 0.0165	0.0259J	0.0333J	0.0172J	N/A	0.0494J	0.0420J	<0.0165	NE	391	NE	13.8	NC
	Mercury	0.0207	0.0241	0.0372	0.0190	N/A	0.0399	0.0646	0.0602	NE	23.8	NE	2.09	NC
_	GRO	< 0.012	<0.0090	0.30	<0.0085	N/A	<0.012	<0.011	<0.0097	NE	100	NE	NE	NC
卢	DRO	44	14	19	21	N/A	18	2.0	11	NE	1,000	NE	NE	NC
Ľ	ORO	270	340	200	180	N/A	120	8.0	170	NE	1,000	NE	NE	NC

All values in milligrams per kilogram (mg/kg) unless otherwise noted

SL-SSL - New Mexico Environmental Department Soil Leachate Soil Screening Levels

Values exceed the applicable NMED Residential Soil, Cancer Soil Screening Levels

Values exceed the applicable NMED Residential Soil, Soil Screening Levels

Values exceed the applicable NMED Industrial/Occupational, Cancer Soil Screening Levels

Vaules exceed the applicable NMED SL-SSL Soil Screening Levels

Vaules exceed the calculated Exposure Point Concentration

NC - Not Calculated

NE- Not Established

N/A - Not Applicable

NS - None Specified

Table 4 SPLP Results

Soil Boring	SB-9	SB-15	SB-16	NMED Tap Water,	NMED Tap Water,
Depth (feet)	1-2'	1-2'	1-2'	Cancer	Noncancer
Date	9/15/2021	9/14/2021	9/15/2021		
Arsenic	N/A	N/A	0.00580	0.000855	0.00355
Barium	0.821	N/A	N/A	NE	3.28
Chromium, Hexavalent	N/A	<0.00600	N/A	0.000501	0.0267

All values in milligrams per Liter (mg/L) unless otherwise noted

Values exceed the applicable NMED Tap Water, Cancer SSL

Values exceed the applicable NMED Tap Water, Noncancer SSL

NE- Not Established

N/A - Not Applicable NS - None Specified

J - Indicates a value estimated by the laboratory

ATTACHMENT A CALCULATED NMED EPC

1	A B C	D E	F atistics for Un	G Censored Full D	H Data Sets	I	J	К	L
2									
3	User Selected Options	S							
4	Date/Time of Computation	ProUCL 5.110							
5	From File	As data.xls							
	Full Precision	OFF							
6	Confidence Coefficient	95%							
7	Number of Bootstrap Operations	2000							
8	Number of Bootstrap Operations	2000							
9									
10	Arsenic								
11	Aisenic								
12			0	l Otatiatian					
13				l Statistics			(5)	51 .: T	
14	lota	I Number of Observation	ons 30				er of Distinct (30
15						Numbe	r of Missing (0
16		Minim						Mean	7.511
17		Maxim						Median	4.235
18			SD 11.75				Std. E	rror of Mean	2.145
19		Coefficient of Variat	on 1.564					Skewness	3.731
20									
21			Normal	GOF Test					
22		Shapiro Wilk Test Statis	tic 0.458			Shapiro W	ilk GOF Test		
23	5% S	Shapiro Wilk Critical Va	ue 0.927		Data No	t Normal at	5% Significar	nce Level	
24		Lilliefors Test Statis	tic 0.352			Lilliefors	GOF Test		
25		5% Lilliefors Critical Va	ue 0.159		Data No	t Normal at	5% Significar	nce Level	
26		Data I	Not Normal at	5% Significand			-		
27									
			Assumina No	rmal Distributio	on .				
28	95% N	ormal UCL				UCLs (Adju	sted for Skev	wness)	
29	55.0.1.	95% Student's-t U	CL 11.16					(Chen-1995)	12.6
30								hnson-1978)	11.4
31									
32			Gamma	GOF Test					
33		A-D Test Statis		T GOI TEST	Andor	non Dorling	Gamma GO	E Toot	
34				D-					-1
35		5% A-D Critical Va		Da			_	nificance Lev	JI
36		K-S Test Statis					ov Gamma G		
37		5% K-S Critical Va					ted at 5% Sig	nificance Leve	31
38		Data Not Ga	mma Distribu	ted at 5% Signi	TICANCE Lev	el			
39									
40				a Statistics				,	
41		k hat (Ml					•	rrected MLE)	1.121
42		Theta hat (MI	· _			Theta	star (bias co	*	6.701
43		nu hat (Ml					•	as corrected)	67.26
44	M	LE Mean (bias correcte	ed) 7.511					as corrected)	7.094
45					,	Approximate	e Chi Square	Value (0.05)	49.38
46	Adju	sted Level of Significar	ce 0.041			Α	djusted Chi S	Square Value	48.5
47			1	<u> </u>					
48			Assuming Ga	mma Distributio	on				
49	95% Approximate Gamm	a UCL (use when n>=5	0)) 10.23		95% Ad	justed Gam	ma UCL (use	when n<50)	10.42
50								-	
			Lognorm	al GOF Test					
51 52		Shapiro Wilk Test Statis	-		Shan	oiro Wilk Loc	normal GOF	Test	
J2									

EO	Α		В		C 5%	Sh		D Wilk (Critic	E al Value	9	F 0.927		G			H a Not	Logr	l ormal	at 5	5% Si		anc	K e Le			L
53 54										Statistic		0.129						_	s Log			_					
55						5%				al Value		0.159				Data			gnorm					nce	Level	ı	
56								Data a	appea	ar Appro	oxin	nate Logr	norr	mal at	5% \$				_								
57									-																		
58											ĺ	Lognorma	al S	tatistic	cs												
59						M	linim	um of	Logg	ged Data	а	0.392									Me	an of	log	ged	Data	1	1.554
60						M	axim	um of	Logg	ged Data	а	4.074									;	SD of	log	ged	Data	1	0.808
61																											
62										Ass	sum	ing Logn	orm	nal Dis	tribu	ition											
63									95%	6 H-UCL	-	9.191							909	% Cł	hebys	shev (MV	UE)	UCL		9.629
64					95	% C	heby	shev	(MVL	JE) UCI	-	11.06							97.59	% Cł	nebys	shev ((MV	UE)	UCL		13.05
65					99	% C	heby	shev	(MVL	JE) UCI	-	16.96															
66													ı													1	
67									No	nparam	etri	c Distribu	itior	n Free	UCL	L Stati	stics										
68						[Data	appea	ar to f	follow a	Dis	cernible	Dist	tributio	n at	5% S	ignific	ance	Level								
69																											
70										Nonpa	aran	rametric Distribution Free UCLs															
71					·					CLT UCI		11.04										5% Ja					11.16
72					9					rap UCI		11.02										% Boo		•			23.64
73										rap UCI		29.63							959	6 Pe	ercen	tile Bo	oots	trap	UCL		11.45
74										rap UCI		12.99															
75		90% Chebyshev(Mean, 97.5% Chebyshev(Mean, 97								,		13.95							95% (-						16.86
76		97.5% Chebyshev(Mean, S							Sd) UCI	_	20.91							99% (Chel	byshe	ev(Me	ean,	Sd)	UCL		28.85	
77																											
78									050	, , , , , , , , , , , , , , , , , , ,		uggested	ı UC	ار to ل	JSE												
79									95%	6 H-UCL	-	9.191															
80		Nice	o. C	OC+:	one ra	ord:	na +L	0.0015	otic -	of a OF	0/ 1	JCL are p	·ra·	idod t	o h - '	ln +b -	1100" 1	0.0-1	004 41-	. ~ -	ot c	nro	ict	OE	/ LIC	vī	
81		NOte	e. ougge	estic	ons reg																	propr	ıate	ะ ฮอร	⁄₀ UC	·L.	
82		The	ese reco)mr	nendati							d upon da s of the si										le an	ıd I 4	pp /'	2006	١	
83	ш								•			rld data s							_					•			
84		.owe	voi, 311111	uial		Juito	vvill l	.01.00	vei d	i veai v	, v UI	ia uata Si	cio,	ioi at	iaitiU	mai III	oigi it i	uie ui	JOI IIIC	ay VV	ant to	, 00118	Juil	u 310	Jusuc	Jail.	
85					F	Prol I	CL	omnut	tes ar	nd outpi	uts	H-statistic	c ha	ased I	ICI s	for hi	storic	al res	sons	onlv	<u> </u>						
86		Н	-statistic	င ဂfi				•		•		low) value								•		:hnica	ıl Gı	uide			
87		- ''		J 311					-	_		to avoid t							-						-		
88	L	Jse o	f nonpar	ram	etric m							te UCL95									v a a	amma	a dis	stribu	ution.		
90			- F								•										- 3						
91																											
92																											
93																				+							
94																				+							
95																				+							
96																				\dagger							
97																				\dagger							
98																				\top							
99																											
100																											
101																											
102																				\top							
103																											
104																											
		-1									-1		-1					1					1				

	Α	В	С	D	Е	F	G	Н	- 1	J	K	L
105	As Sitewide											
106												
107												
108	9.18											
109												
110	5.9											
111	1.48											
112												
113												
114												
115												
116												
117												
118												
119												
120												
121	7.94											
122												
123												
124												
125												
126												
127	3.08											
128												
129												
130												
131	2.88											
132												
133												
134	4.5											
135	7.3											

	A B C	D E UCL Statis	F stics for Unce	G ensored Full Dat	H ta Sets	ı	J	K	L			
2												
3	User Selected Options	S										
4	Date/Time of Computation	ProUCL 5.110										
5	From File	Ba data.xls										
6	Full Precision	OFF										
7	Confidence Coefficient	95%										
8	Number of Bootstrap Operations	2000										
9												
10												
	Barium											
12												
13			General	Statistics								
14	Tota	I Number of Observations	30			Numbe	r of Distinct	Observations	29			
15						Numbe	r of Missing	Observations	0			
16		Minimum	145					Mean	4566			
17		Maximum						Median	1660			
17		SD					Std.	Error of Mean	1005			
18		Coefficient of Variation						Skewness	1.249			
20												
21			Normal C	GOF Test								
22		Shapiro Wilk Test Statistic	0.78		:	Shapiro Wi	lk GOF Test	<u> </u>				
23	5% \$	Shapiro Wilk Critical Value	0.927			-						
24		Lilliefors Test Statistic		Data Not Normal at 5% Significance Level Lilliefors GOF Test								
		5% Lilliefors Critical Value	0.159		Data Not	Normal at	5% Significa	ince Level				
25 26	5% Lilliefors Critical Value 0.159 Data Not Normal at 5% Significance Level Data Not Normal at 5% Significance Level											
27	Tata Horrisman at 0.0 olg. mounto 2010											
28		As	suming Norn	nal Distribution								
29	95% N	ormal UCL			95% l	JCLs (Adju	sted for Ske	wness)				
30		95% Student's-t UCL	6273					(Chen-1995)	6464			
31						95% Modifi	ed-t UCL (Jo	ohnson-1978)	6311			
32												
33			Gamma (GOF Test								
34		A-D Test Statistic	0.843		Anders	on-Darling	Gamma GC	F Test				
35		5% A-D Critical Value	0.798	Data		-		gnificance Lev	/el			
36		K-S Test Statistic	0.143		Kolmogo	rov-Smirno	v Gamma G	iOF Test				
37		5% K-S Critical Value		Detected da	ata appear	Gamma D	istributed at	5% Significan	ce Level			
38		Detected data follow Ap	pr. Gamma C	Distribution at 5%	6 Significa	nce Level						
39												
40			Gamma	Statistics								
41		k hat (MLE)	0.627			k	star (bias co	rrected MLE)	0.587			
42		Theta hat (MLE)	7277			Theta	star (bias co	rrected MLE)	7779			
43		nu hat (MLE)	37.64	nu star (bias corrected)								
44	N	ILE Mean (bias corrected)	4566				MLE Sd (bi	as corrected)	5960			
45		·	I		A	pproximate	e Chi Square	e Value (0.05)	22.64			
46	Adju	sted Level of Significance	0.041			A	djusted Chi	Square Value	22.05			
47			I									
48		As	suming Gam	ma Distribution								
48	95% Approximate Gamn	na UCL (use when n>=50)			95% Adjı	usted Gam	ma UCL (us	e when n<50)	7290			
50							•	,				
51			Lognormal	GOF Test								
52		Shapiro Wilk Test Statistic			Shapi	ro Wilk Log	normal GOI	- Test				
JZ	<u> </u>		I	<u> </u>	-							

E2	Α	В		C 5%	Shapi	D ro Wilk (E Critical Value	F 0.927	+	G	H Data Not	l : Lognormal a	J at 5% Signific	K ance Level	L			
53 54							Test Statistic		+			lliefors Logno	_					
54 55							Critical Value											
55 56							appear Appro		gnor	mal at 5%		_	. 3					
56 57										<u> </u>								
58								Lognorr	Lognormal Statistics									
59					Mini	mum of	Logged Data	-					Mean of	logged Data	7.448			
60	Maximum of Logged Data												SD of	logged Data	1.594			
61																		
62							Ass	uming Log	norr	nal Distribu	ition							
63							95% H-UCL	16255				90%	Chebyshev (MVUE) UCL	11869			
64				95%	% Che	byshev	(MVUE) UCI	14707				97.5%	Chebyshev (MVUE) UCL	18646			
65				99%	% Che	byshev	(MVUE) UCI	26382										
66																		
67							•			n Free UCI								
68					Dat	a appea	ar to follow a	Discernible	Dis	stribution at	5% Signific	cance Level						
69																		
70									istril	bution Free	UCLs							
71							5% CLT UCI							ckknife UCL	6273			
72							ootstrap UCI							tstrap-t UCL	6599			
73							ootstrap UCI		\perp			95%	Percentile Bo	otstrap UCL	6288			
74							ootstrap UCI											
75					ean, Sd) UCI			95% Chebyshev(Mean, Sd) UCL 8946										
76		97.5% C	Cheby	shev(Me	ean, Sd) UCI	10842		99% Chebyshev(Mean, Sd) UCL 14565										
77								0		01 4: 11								
78					NEC/ *	ata	0		ea U	CL to Use								
79				9	95% A	ajusted	Gamma UCI	7290										
80				\//han -	dote	cot fall-	we an anni-	vimata (a -		ormal\ diat:-	ibution non	sing one of th	0 COE +00+					
81		\/\han a	nnli									sing one of the name of the na		e in Drol ICI				
82		vviieli a	ihhiii	capi e , it is	s suyÿ	<i>ซ</i> อเซน เ0	use a UCL	vaseu upor	ıau	แอนเมนเเบเ (e.y., yanın	ia) passiliy Di	our GOP lest	3 111 710UCL				
83		Note: Sug	gest	tions rega	rdina	the sele	ction of a QF	% UCL are	pro	vided to be	In the user	to select the r	most appropri	iate 95% LIC				
84		. io.o. oug	9001	-	•				•		•	and skewne						
85		These red	com					•				ized in Singh		d Lee (2006)				
86	Н						•					the user may		, ,				
87 88		- ,									9-7-							
89																		
90																		
91									\dashv									
92																		
93									\top									
94																		
95									\top									
96																		
97																		
98																		
99																		
100																		
101																		
102																		
103																		
104																		
																		

E2	Α	В		C 5%	Shapi	D ro Wilk (E Critical Value	F 0.927	+	G	H Data Not	l : Lognormal a	J at 5% Signific	K ance Level	L			
53 54							Test Statistic		+			lliefors Logno	_					
54 55							Critical Value											
55 56							appear Appro		gnor	mal at 5%		_	. 3					
56 57										<u> </u>								
58								Lognorr	Lognormal Statistics									
59					Mini	mum of	Logged Data	-					Mean of	logged Data	7.448			
60	Maximum of Logged Data												SD of	logged Data	1.594			
61																		
62							Ass	uming Log	norr	nal Distribu	ition							
63							95% H-UCL	16255				90%	Chebyshev (MVUE) UCL	11869			
64				95%	% Che	byshev	(MVUE) UCI	14707				97.5%	Chebyshev (MVUE) UCL	18646			
65				99%	% Che	byshev	(MVUE) UCI	26382										
66																		
67							•			n Free UCI								
68					Dat	a appea	ar to follow a	Discernible	Dis	stribution at	5% Signific	cance Level						
69																		
70									istril	bution Free	UCLs							
71							5% CLT UCI							ckknife UCL	6273			
72							ootstrap UCI							tstrap-t UCL	6599			
73							ootstrap UCI		\perp			95%	Percentile Bo	otstrap UCL	6288			
74							ootstrap UCI											
75					ean, Sd) UCI			95% Chebyshev(Mean, Sd) UCL 8946										
76		97.5% C	Cheby	shev(Me	ean, Sd) UCI	10842		99% Chebyshev(Mean, Sd) UCL 14565										
77								0		01 4: 11								
78					NEC/ *	ata	0		ea U	CL to Use								
79				9	95% A	ajusted	Gamma UCI	7290										
80				\//han -	dote	cot fall-	we an anni-	vimata (a -		ormal\ diat:-	ibution non	sing one of th	0 COE +00+					
81		\/\han a	nnli									sing one of the name of the na		e in Drol ICI				
82		vviieli a	hhii	capi e , it is	s suyÿ	<i>ซ</i> อเซน เ0	use a UCL	vaseu upor	ıau	แอนเมนเเบเ (e.y., yanın	ia) passiliy Di	our GOP lest	3 111 710UCL				
83		Note: Sug	gest	tions rega	rdina	the sele	ction of a QF	% UCL are	pro	vided to be	In the user	to select the r	most appropri	iate 95% LIC				
84		. io.o. oug	9001	•	•				•		•	and skewne						
85		These red	com					•				ized in Singh		d Lee (2006)				
86	Н						•					the user may		, ,				
87 88		- ,									9-7-							
89																		
90																		
91									\dashv									
92																		
93									\top									
94																		
95									\top									
96																		
97																		
98																		
99																		
100																		
101																		
102																		
103																		
104																		
										· -								

1	A	В	С	D	E UCL Statis	F stics for Unce	G ensored Full Da	H ata Sets	I	J		K	L
2													
	Us	ser Selec	cted Options										
3			mputation	ProUCL 5.1	10								
4			From File	HexCr data.	xls								
5		Full	I Precision	OFF									
6	Cont		Coefficient	95%									
7	Number of Bo			2000									
8	Number of Bo	UiSii ap (Эрегацопъ	2000									
9													
10	Hexavalent Chro	!											
11	nexavalent Chro	omium											
12													
13						General S	Statistics						
14			Total	Number of C)bservations	15						servations	14
15									Numbe	er of Miss	ing Obs	servations	0
16					Minimum	0.311	<u></u>					Mean	0.331
17					Maximum	0.351						Median	0.336
18					SD	0.0138	·			S	td. Erro	r of Mean	0.00356
19				Coefficient	t of Variation	0.0417					(Skewness	-0.219
20													
21						Normal G	OF Test						
22			S	hapiro Wilk 1	est Statistic	0.901			Shapiro W	ilk GOF	Test		
23			5% SI	hapiro Wilk C	ritical Value	0.881		Data app	ear Normal	at 5% Sig	nifican	ce Level	
24				Lilliefors 7	Test Statistic	0.194			Lilliefors	GOF Te	st		
			5	% Lilliefors C	ritical Value	0.22		Data appr	ear Normal	at 5% Sig	nifican	ce Level	
25 26	5% Lilliefors Critical Value 0.22 Data appear Normal at 5% Significance Level Data appear Normal at 5% Significance Level												
	2 da appear Horrian at 676 diginited not 2001												
27					As	sumina Norn	nal Distributior						
28			95% No	rmal UCL					UCLs (Adju	isted for	Skewn	ess)	
29					dent's-t UCL	0.337			95% Adjust			•	0.336
30						0.007			95% Modif				0.337
31											- (001111		0.007
32						Gamma C	20E Test						
33				٨ ٦ ٦	Test Statistic			Λ al	rson-Darling	Gom	COFT	oct	
34						0.704	Doto sta -l		-				00 000
35					Critical Value		Detected		ar Gamma [•	ce Level
36					Test Statistic	0.202	<u> </u>	_	orov-Smirn				
37					Critical Value				ar Gamma [vistribute	a at 5%	Significar	ce Level
38				Detected	data appear	Gamma Dist	tributed at 5%	Significan	ce Level				
39													
40						Gamma	Statistics						
41					k hat (MLE)	613.7				,		cted MLE)	491
42					ta hat (MLE)				Theta	•			6.7359E-4
43					18411					•	corrected)	14730	
44			MI	_E Mean (bia	0.331				MLE So	d (bias	corrected)	0.0149	
45								Approximat	e Chi Sqı	uare Va	lue (0.05)	14449	
46			Adjus	sted Level of	Significance	0.0324			A	djusted (Chi Squ	are Value	14415
47													
48					As	suming Gam	ma Distribution	n					
49	95% <i>F</i>	Approxin	nate Gamma	UCL (use w	hen n>=50))	0.337		95% Ac	ljusted Gam	ıma UCL	(use w	hen n<50)	0.338
50		•		`									
						Lognormal	GOF Test						
51													
52			S	hapiro Wilk T	Test Statistic	0.898		Shar	oiro Wilk Lo	gnormal (GOF Te	est	1

E3	Α		В		C 5%	Sha		D Wilk (Critica	E al Value	:	F 0.881		G		H Data app	ear	l Lognorma	al at 5	J 5% Sig	nific		K e Leve	el	L
53 54										Statistic		0.2						efors Logr		_					
55						5%				ıl Value		0.22	Data appear Lognormal at 5% Significance Level												
56									Data	appear	r Log	normal	at 5	5% Sig	nific	ance Lev									
57																									
58											Lo	Lognormal Statistics													
59						М	linim	um of	Logge	ed Data	ı -	1.168	Mean of logged Data -1.10									-1.107			
60	Maximum of Logged Data								-	1.047								SD	of lo	ogge	d Dat	а	0.0419		
61																									
62										Ass	umin	ng Logno	orma	al Dist	ribu	tion									
63									95%	H-UCL	. 1	N/A						90%	6 Che	byshe	v (N	MVUI	E) UC	L	0.341
64					959	% C	heby	shev	(MVU	E) UCL		0.346						97.5%	Che	byshe	v (N	NVU	E) UC	L	0.353
65					999	% C	heby	shev	(MVU	E) UCL		0.366													
66											1		-												
67									Non	parame	etric	Distribut	tion	Free	UCL	_ Statistics	S								
68							Data	appea	ar to fo	ollow a l	Disc	ernible [Dist	ributio	n at	5% Signi	ficar	nce Level							
69																									
70										Nonpa	rame	etric Dist	tribu	ution F	ree	UCLs									
71										LT UCL		0.337											fe UC		0.337
72					95					ap UCL		0.336								95% B					0.337
73										ap UCL		0.336						95%	Perc	entile	Boo	otstra	ap UC	L	0.336
74				-						ap UCL		0.336			-		-								
75	90% Chebyshev(Mean, Sd) UCI								•		0.341						95% C	-	-			-		0.346	
76	97.5% Chebyshev(Mean, Sd) UC								d) UCL		0.353	99% Chebyshev(Mean, Sd) UCL 0.366													
77																									
78	3										ggested	UC	L to U	lse									1		
79							95	% Stu	udent's	s-t UCL	-	0.337													
80		. .	0						-4'	-1 . 050)/ I ! *	3 1		:a. 7:		41-		1				^	E0/ !:	O'	
81		Not	e: Sugge	estic	ns rega											p the use				appro	pria	ate 9	ა% U	UL.	
82		T 1	.006 ===		لدعادهم							•				distributio				ioble	o:'	11 = :	(2004	2)	
83	i i								-							es summa nal insigh		_					-		n
84		iowe	vei, Sim	uidli	ons res	นแร	WIII	iot co.	vei all	i nedi V	VUIIC	ı uala SE	≠ ເ ਠ,	101 80	uillO	ııaı IIISIYN	ונ נוופ	usei IIIa	y war	ii io co	ııst	uit a s	อเสแรโ	ıcıal	11.
85		,	Vote: Ec	r hia	hly pec	ativ	elv-c	kewer	d data	confid	lenco	a limite /	<u> </u>	Che	n l	ohnson, Lo	Odn	nrmal and	l Gan	uma) n	nev	r not	he		
86			101 0 . FUI	-			-					•	_			s for posit	-			•	пау	TIOL	n a		
87					. Silable	. 🕠	110113	and c	JUI 113	JII 3 IIIE	, u IOC	as provid	.u a	ajuotii	i i Gi i l	o ioi pusii	very	JNGWEU!	uula S	,ow.					
88																									
89				+									-												
90				+									+											-	
91 92																									
93																									
93																									
95				+					+				+								\dashv				
96				+					+				+								\dashv				
97				+					+												1				
98																									
99				+																					
100				+																					
101				+																					
101				+																					
103				+																					
103													1												
104											1		1												

	Α	В	С	D	E	F	G	Н	J	K	L
105	Hexavalent	Cr Sitewide	Results:								
106	0.322										
107	0.311										
108	0.316										
109	0.318										
110	0.31										
111	0.314										
112	0.336										
113	0.334										
114	0.34										
115	0.351										
116	0.347										
117	0.345										
118	0.34					·					
119	0.337										
120	0.338										

ATTACHMENT B GUIDANCE FOR RESTRICTIVE COVENANT

Guidance for Restrictive Covenants

New Mexico Environment Department Voluntary Remediation Program

A Restrictive Covenant notifies future owners of the existence of a Conditional Certificate of Completion and of requirements that must be fulfilled and maintained to keep it valid.

- The Restrictive Covenant must be completed by the Legal and Titled Owner of the property.
- The Restrictive Covenant must be filed by the Legal and Titled Owner within the County where the property is located.
- The covenant must touch and concern the land.
- The covenant must include the statement that all future and successive owners are bound by the covenant.
- If the owner is a corporation, the corporation must provide documentation showing that the person signing the document is thereby authorized to do so on behalf of the company or corporation.
- The restrictive covenant must be based on the template on the next page, and must be approved by NMED prior to filing.
- The covenant must be acknowledged by a Notary Public.
- The Owner must submit to the Department a copy of the filed Restrictive Covenant.

STATE OF NEW MEXICO

COUNTY OF [county name]

DEED RECORDATION COVENANT RESTRICTING PROPERTY TO NON-RESIDENTIAL USE

THIS DEED RECORDATION is made this ______ day of [month], 20__ by [Owner legal name], a [resident of XX County/or/state and type incorporation/association], ("Owner(s)") with its principal place of business located at [address], states that it is the legal fee owner and holds title to the below listed real property in [county] the State of New Mexico;

WHEREAS, the Owner(s) has, in exchange for site remediation activities, received a Conditional Certificate of Completion, attached hereto as Exhibit A, from the New Mexico Environment Department ("NMED") pursuant NMSA 1978, §¶74-4G-1 to 74-4G-12 and 20.6.3 NMAC. A Conditional Certification of Completion ("CCOC") means that the property, or a portion of the property, contains contaminants in soil, soil vapor, or ground water above the risk-based guidelines, site-specific goals, or ground water quality standards set forth in 20.6.2 NMAC and related statutes and regulations;

WHEREAS, this property has remaining environmental contamination that requires post-completion monitoring, maintenance of engineering controls, remediation systems, post-closure care and/or an affirmation of future non-residential land use as described in Exhibit A;

WHEREAS, NMED staff, contractors, or designated individuals may be required to enter the Property to conduct site investigation, testing of soil and ground water, and other environmental test to determine continued compliance with the CCOC;

WHEREAS, the Property, located at [address], and being more fully described in the attached Exhibit A, and hereby incorporated into this covenant, shall be used only for non-residential purposes unless and until such time as the NMED issues a final Certificate of Completion pursuant to 20.6.3.500 NMAC, thus removing conditional restrictions;

WHEREAS, the restriction set forth herein shall be binding upon the successors, purchasers, and assigns of Owner(s) and shall be a covenant running with the land in perpetuity.

IN WITNESS WHEREOF, the said Owner(s) has caused this instrument to be signed by its authorized representative on the day and year first above written.

	[owner name]		
	By: [authorized rep [authorized sig		_
STATE OF NEW MEXICO COUNTY OF [county name] Subscribed and sworn to before me this	day of	by	
My commission expires:	Notary Public		

VRP Project Number:	_
WHEN RECORDED MAIL TO: [site/project owner(s)]	
RECORDED AT THE REQUEST OF: [site/project owner(s)]	

$\frac{EXHIBIT\;A}{Conditional\;Certificate\;of\;Completion}$

[Insert CCOC]

ATTACHMENT C LABORATORY ANALYITCAL REPORT

See Phase I ESA