

**SEVENTH FIVE-YEAR REVIEW REPORT
FOR
SOUTH VALLEY SUPERFUND SITE
BERNALILLO COUNTY, NEW MEXICO**



July 2025



Prepared by

**U.S. Environmental Protection Agency
Region 6
DALLAS, TEXAS**



**SEVENTH FIVE-YEAR REVIEW REPORT
SOUTH VALLEY SUPERFUND SITE
EPA ID#: NMD980745558
BERNALILLO COUNTY, NEW MEXICO**

This memorandum documents the U.S. Environmental Protection Agency's (EPA) performance, determinations, and approval of the South Valley Superfund Site (Site) seventh five-year review under Section 121(e) of the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S. Code Section 9621(c), as provided in the attached Seventh Five-Year Review (FYR) Report. The purpose of this FYR is to determine whether the selected remedies for the Site continue to protect human health and the environment.

Summary of the Seventh Five-Year Review Report

The South Valley Site includes two industrial source facilities that were used for various commercial, industrial, and manufacturing purposes since the 1950s. The Site involves two potentially responsible parties (PRPs): Univar USA, Inc. (Univar) and General Electric Aviation (GEA). The Site is divided into six distinct areas, operable units (OUs), to clean up the Site:

- OU 01 Municipal Wells – The Record of Decision (ROD) for OU 01, signed on March 22, 1985, addressed contamination of City of Albuquerque municipal wells SJ-6 and SJ-3 with volatile organic compounds (VOCs). The Remedial Action Objective (RAO) was achieved by replacing these wells with the Burton #4 well in 1987, thereby eliminating the threat to the drinking water supply. Deletion procedures for OU 01 were initiated in 2017 for removing OU 01 from the National Priorities List (NPL). The EPA completed the deletion on September 23, 2019.
- OU 02 Institutional Controls – The ROD for OU 02, signed on September 30, 1988, required plugging and abandoning wells SJ-6, SJ-3, and shallow private wells, thereby restricting groundwater use, and implementing a groundwater monitoring program to eliminate contaminant migration between aquifers. These actions fulfilled the RAO. Deletion procedures commenced in 2017 for removing OU 02 from the National Priorities List. The EPA completed the NPL deletion of OU 02 on September 23, 2019.
- OU 03 Univar Groundwater – The ROD for OU 03, signed on June 28, 1988, targeted the Edmunds Street Groundwater Plume with an RAO of aquifer restoration by reducing site-related VOC concentrations to acceptable levels. Groundwater and vapor recovery systems operated until 2006 and achieved compliance with VOC cleanup goals by 2014. Subsequently, 1,4-dioxane was identified as a contaminant of concern, and a remedial work plan was approved in 2016. A groundwater recovery, treatment, and injection system for 1,4-dioxane removal became operational in 2018 and continues to operate toward achieving cleanup goals.
- OU 04 Univar Soil Vapor – The ROD for OU 04, signed on June 28, 1988, required Univar to investigate a potential vadose zone contamination source on their property. The investigation found no evidence of contamination, and the ROD specified no further action. Additional investigation was taken during the Seventh FYR to understand potential impacts from vapor intrusion. Based on the screening level risk assessment, there are no potential VI issues at OU 04. Univar has completed all the requirements for OU 04, and no further action is required at this time.

- OU 05 GEA Shallow Zone Aquifer and Soil Contamination – The ROD for OU 05, signed on September 30, 1988, addressed the GEA Shallow Zone groundwater plume and VOCs detected in soils at the GEA facility. The RAO was achieved through enhanced dewatering, soil flushing, and soil vapor extraction techniques, with groundwater recovery systems operating from 1994 until their shutdown in 2010. Compliance monitoring concluded in 2014, and all associated infrastructure was decommissioned. The EPA completed the NPL deletion of OU 05 on September 23, 2019.

All wells and infrastructure associated with the OU 05 groundwater treatment system were plugged and abandoned or removed as approved by EPA. GEA submitted a letter to EPA requesting that they commence with the deletion procedures for OU 05 on April 7, 2017. On August 11, 2017, NMED provided concurrence to EPA regarding GEA's request. EPA issued a deletion docket on June 13, 2018, and on September 23, 2019, EPA completed the deletion of OU 05 from the NPL. A Restrictive Covenant was recorded on the OU 05 property in 2014, limiting its use to commercial and industrial activities and prohibiting residential, recreational, or groundwater uses. The Covenant requires the property owner to maintain engineered barriers over areas with residual contamination, and mandates health and safety plans for any subsurface work to prevent exposure to remaining SVOCs and hexavalent chromium in soil.

- OU 06 GEA Deep Zone Aquifer – The ROD for OU 06, signed on September 30, 1988, focused on the GEA Deep Zone aquifer beneath the GEA facility. The RAO is to hydraulically contain the groundwater plume and reduce VOC concentrations to protect Albuquerque's water supply. A groundwater remediation system, operational since 1996, has contained the plume and reduced its volume and mass. During the Seventh FYR, all VOCs were below the Applicable or Relevant and Appropriate Requirements (ARARs), and this OU has entered into a monitoring phase towards closure.

OU 01 and OU 02 are not included in this Seventh FYR because no contaminants are remaining on site above levels that allow for unlimited use and unrestricted exposure (UU/UE). Furthermore, there have been no changes to toxicity levels for any contaminants of concern since the deletion of these OUs from the NPL. Based on the information available during this Seventh FYR, the following determinations were made for the selected remedies for the OUs at the South Valley Superfund Site:

- OU 03 Univar Groundwater – The remedy is protective of human health and the environment in the short-term. Currently, there is no known exposure to contaminated groundwater based on monitoring data. An institutional control is in place, which restricts use of the contaminated groundwater. However, 1,4-dioxane is present above groundwater cleanup goals. For the remedy to be protective in the long-term, the presence of 1,4-dioxane in groundwater should be fully delineated and the treatment and removal system must continue to operate effectively until cleanup goals are achieved. Since 1,4-dioxane is a contaminant of concern (COC) at the site, EPA will issue a decision document such as an Explanation of Significant Differences (ESD) to document the inclusion of this COC and the appropriate cleanup levels. Since the last FYR the EPA screening levels for 1,4-dioxane have been revised and the new cleanup levels need to be documented in the ESD.
- OU 04 Univar Vadose Zone – The remedy is protective of human health and the environment. A soil vapor remedy was in operation and demonstrated no contaminants remain in place.

- OU 05 GEA Shallow Zone Aquifer and Soil Contamination – The remedy is protective of human health and the environment in the short-term. All groundwater cleanup goals have been achieved at OU5. A restrictive covenant limits property uses, and an engineered barrier cap prevents exposure to contaminated soils. However, there are no formal procedures for routine inspection, maintenance, and repair of the engineered barrier cap. To ensure the remedy is protective in the long-term, EPA will issue a decision document such as an ESD that includes an Institutional Control to the selected remedy. An Institutional Control Implementation and Assurance Plan that includes routine inspection, maintenance, and repair of the engineered soil cap at OU 05 must be developed and implemented.
- OU 06 GEA Deep Zone Aquifer – The remedy being implemented protects human health and the environment. The groundwater treatment system effectively contains the contamination plume and reduces contaminants to protect Albuquerque's water supply. All contaminants of concern are below the required cleanup standards, and the remedy is currently in the two-year post-cleanup compliance monitoring phase.

The remedial actions at OU 04 and OU 06 are protective. The remedial actions at OU 03 and OU 05 are protective in the short-term. The recommendations and follow-up actions identified in this Seventh FYR process for OU 03 and OU 05 should be addressed to ensure the remedy remains protective of human health and the environment in the long-term.

Public input on the FYR was solicited through a public notice in the Albuquerque Journal on September 30, 2024. Public comments and/or Site interviews are included in Section IV, Community Notification, Involvement & Site Interviews.

Actions Needed

The following actions must be taken for the remedy to be protective in the long term:

- OU 03 Identify the full extent of 1,4-dioxane groundwater contamination at OU 03. The treatment and removal system must continue to operate effectively until cleanup goals are achieved. If the treatment system is not effectively remediating and maintaining capture of 1,4-dioxane, then remedy enhancements need to be explored to effectively remediate the Site. EPA should issue an ESD to document 1,4-dioxane as a COC and its cleanup level.
- Develop and issue an ESD that selects Institutional Controls as a component of the selected remedial action. An Institutional Control Implementation and Assurance Plan will be developed to implement necessary routine inspection, maintenance, and repair of the engineered soil cap at OU 05.

Determination

I have determined that the remedy for the South Valley Superfund Site is protective in the short-term. For the remedy to be protective in the long-term, the presence of 1,4-dioxane at OU 03 groundwater should be fully delineated and the treatment and removal system must continue to operate effectively until cleanup goals are achieved. If the treatment system is not effectively remediating and maintaining capture of 1,4-dioxane, then remedy enhancements need to be explored to effectively remediate the Site. In addition, Institutional Control Implementation and Assurance Plan that includes routine inspection, maintenance, and repair of the engineered soil cap at OU 05 must be developed and implemented. The remedy at OU 04 and OU 06 protects human health and the environment.

MONICA SMITH

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Date

**SEVENTH FIVE-YEAR REVIEW REPORT
SOUTH VALLEY SUPERFUND SITE
EPA ID#: NMD980745558
BERNALILLO COUNTY, NEW MEXICO**

Issues/Recommendations	
OU(s) without Issues/Recommendations Identified in the Five-Year Review:	
<i>OU 04 and OU 06</i>	

Issues and Recommendations Identified in the Five-Year Review:				
OU(s): OU 03	Issue Category: Remedy Performance			
	Issue: 1,4-dioxane is present above groundwater cleanup goals. The extent of 1,4-dioxane is not fully delineated in groundwater east of the Site.			
	Recommendation: Identify the full extent of the groundwater contamination. The treatment and removal system must continue to operate effectively until cleanup goals are achieved. If the treatment system is not effectively remediating and maintaining capture of 1,4-dioxane, then remedy enhancements need to be explored to effectively remediate the Site.			
Affect Current Protectiveness	Affect Future Protectiveness	Party Responsible	Oversight Party/Support Agency	Milestone Date
No	Yes	PRP	EPA/State	12/30/2027
OU(s): OU 03	Issue Category: Other			
	Issue: 1,4-dioxane not in ROD.			
	Recommendation: EPA will issue an ESD to include 1,4-dioxane as a COC and its cleanup level.			
Affect Current Protectiveness	Affect Future Protectiveness	Party Responsible	Oversight Party/Support Agency	Milestone Date
No	No	EPA	-	12/30/2027

Issues and Recommendations Identified in the Five-Year Review:

OU(s): OU 05	Issue Category: Institutional Controls			
	Issue: An engineered barrier cap is used to prevent exposure to contaminated soils and is showing signs of wear. There are no formal procedures for routine inspection, maintenance, and repair of the engineered barrier cap.			
	Recommendation: Develop and issue a decision document that includes Institutional Controls as a component of the selected remedial action. An Institutional Control Implementation and Assurance Plan will be developed to implement necessary routine inspection, maintenance, and repair of the engineered soil cap and site cleanup at OU 05.			
Affect Current Protectiveness	Affect Future Protectiveness	Party Responsible	Oversight Party/Support Agency	Milestone Date
No	Yes	PRP	EPA/State	12/30/2027

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LIST OF ABBREVIATIONS & ACRONYMS

ARAR	Applicable or Relevant and Appropriate Requirement
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
COC	Contaminant of Concern
COPC	Contaminant of Potential Concern
EPA	United States Environmental Protection Agency
ESD	Explanation of Significant Differences
FYR	Five-Year Review
GEA	General Electric Aviation
GRTIS	Groundwater Recovery and Injection System
GWQB	Ground Water Quality Bureau
GWPS	Ground Water Protection Standards
IC	Institutional Control
LEP	Limited English Proficiency
MCL	Maximum Contaminant Level
MTBE	Methyl Tert-Butyl Ether
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NMED	New Mexico Environment Department
NMWQCC	New Mexico Water Quality Control Commission
NPL	National Priorities List
O&M	Operation and Maintenance
OU	Operable Unit
PCE	Tetrachloroethene
PRP	Potentially Responsible Party
RA	Remedial Action
RAO	Remedial Action Objectives
RAP	Remedial Action Plan
RI/FS	Remedial Investigation and Feasibility Study
ROD	Record of Decision
RPM	Remedial Project Manager
SOS	Superfund Oversight Section
TCE	Trichloroethene
TCA	1,1,1-Trichloroethane
UU/UE	Unlimited Use and Unrestricted Exposure
VES	Vapor Extraction System
VISL	Vapor Intrusion Screening Level
VOC	Volatile Organic Compounds
µg/L	Micrograms per Liter

I. INTRODUCTION

The purpose of a Five-Year Review (FYR) is to evaluate the implementation and performance of a remedy in order to determine if the remedy is and will continue to be protective of human health and the environment. The methods, findings, and conclusions of reviews are documented in five-year review reports such as this one. In addition, FYR reports identify issues found during the review, if any, and document recommendations to address them.

The EPA is preparing this five-year review pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 121, consistent with the National Contingency Plan (NCP)(40 CFR Section 300.430(f)(4)(ii)) and considering EPA policy.

This is the Seventh FYR for the South Valley Superfund Site. The triggering action for this statutory review is March 25, 2025, the completion date of the previous FYR. This Seventh FYR has been prepared because hazardous substances, pollutants, or contaminants remain at the site above levels that allow for unlimited use and unrestricted exposure (UU/UE).

The Site consists of six Operating Units (OUs). OU 01, OU 02, and OU 05 were deleted from the National Priorities List because no contaminants are remaining on site above levels that allow for UU/UE. OUs 03, 04, 05 and 06 are included in the Seventh FYR:

- OU 03 addresses: Univar groundwater
- OU 04 addresses: Univar Edmunds Street source control (vadose zone)
- OU 05 addresses: General Electric Aviation (GEA) groundwater, shallow zone and engineering and institutional controls for contaminated soil.
- OU 06 addresses: GEA groundwater, deep zone

OUs are further summarized in Table 1, Appendix C and in greater detail in the data review and technical assessment sections of this FYR.

The South Valley Superfund Site Five-Year Review was led by Mr. Sai Appaji, EPA Region 6 Remedial Project Manager, and Dr. Caitlyn Hall, New Mexico Environment Department (NMED) Ground Water Quality Bureau (GWQB). Participants included Ms. Loryn Harris and Mr. Mark Garman, NMED GWQB Superfund Oversight Section (SOS). Participants for the Site inspection at Univar included: Ms. Michelle Stayrook, Remediation Manager, Univar Solutions and Ms. Katy Brantingham, Associate Vice President, Arcadis US, Inc. Participants at GEA included, GEA's contractors: Ms. Julie Einerson, Owner, Genesis Environmental, Safety, and Health, LLC. and John Billiard, Technical Services Director, Axis Group, Inc. The responsible parties were notified of the initiation of the five-year review. The review began on 8/16/2024.

Site Background

The South Valley Site is in southern Albuquerque, Bernalillo County, New Mexico, one-half mile west of the Albuquerque International Airport; one-half mile east of the Rio Grande; close to the intersection of South Broadway and Woodward Road. Historical and current land use surrounding the Site is primarily industrial and residential.

One portion of the South Valley Site is known as the Univar Site (**Appendix C, Figure C-1**). Since 1965, multiple companies have utilized the Univar site as a distribution facility for dry ice, chlorine, ammonia

gas, and other industrial chemicals. Univar has remained the only active company on the Site since 1985, when it purchased the property from AmeriGas.

Univar Solutions USA Inc. (formerly Van Waters & Rogers) is the responsible party for OU 03 and OU 04. OU 03 focused on VOC contamination in groundwater and soil gas linked to past chemical storage and handling practices at the Univar facility on Edmunds Street. OU 04 continued long-term monitoring and assessment of vapor intrusion risks. Following significant reductions in VOC concentrations and risk-based evaluations, EPA determined in 2023 that no further action was required for OU 04, concluding remediation efforts for Univar's portions of the site. Univar formally requested deletion of OU 04, but this has not been approved by EPA.

The other portion of the Site is known as the former Air Force Plant 83 Site (also referred to as the General Electric Aviation (GEA) Site). The Plant 83 consisted of two facilities: North Plant 83 Area, located north of Woodward Road, which was demolished in October 1997; and South Plant 83 Area, located south of Woodward Road, which was demolished in May 2011 (**Appendix C, Figure C-1**). Both facilities have been used for manufacturing purposes since the 1950s, first by Eidel Manufacturing; followed by the Atomic Energy Commission through its contractor, American Car Foundry; followed by the U.S. Air Force through its contractors at General Electric; and finally, by General Electric Aviation (GEA) as facility owner since 1984.

GEA is the responsible party for OU 01, OU 02, OU 05, and OU 06 at the South Valley Superfund Site. OU 01 involved the Replacement Well area, and OU 02 (San Jose-6) was merged into GE's remediation scope and later deleted from the National Priorities List (NPL) in 2019. OU 05 addressed shallow zone contamination at the former Air Force Plant 83 through soil flushing, vapor extraction, and enhanced dewatering, culminating in its deletion in 2019. OU 06 remains an active remediation effort managed by GE, targeting VOC contamination in the Deep Zone aquifer using a pump-and-treat system with reinjection, with continued monitoring under discharge permit DP-1065.

Groundwater is located in the Santa Fe Group Aquifer. The remediation at Univar, OU 03, is limited to the shallow portion of the aquifer while at General Electric Aviation (GEA), OUs 05 and 06, because the impact extends deeper within the formation, the remediation addresses different depth horizons that were divided by convention into the shallow zone aquifer and the deep zone aquifer. The deep zone aquifer includes both the intermediate zone and deep zone referred to in the 1988 ROD for OU 03). OU 05 addresses impacts to the shallow zone aquifer located proximate to the South Plant 83 and North Plant 83 Areas and a portion of the San Jose residential neighborhood, located just north of North Plant 83 Area. OU 06 addresses impacts to portions of the deep zone aquifer found east of the Plant 83 facilities, south of Woodward Road and east of South Broadway. Descriptions of the Site hydrology as it pertains to the Operable Units, including the Shallow Zone Aquifer and the Deep Zone Aquifer are provided in **Appendix B**.

FIVE-YEAR REVIEW SUMMARY FORM

SITE IDENTIFICATION		
Site Name: South Valley Superfund Site		
EPA ID: NMD980745558		
Region: 6	State: NM	City/County: Bernalillo County
SITE STATUS		
NPL Status: Final		
Multiple OUs? Yes	Has the site achieved construction completion? Yes	
REVIEW STATUS		
Lead agency: EPA		
Author name (Federal or State Project Manager): Caitlyn Hall		
Author affiliation: New Mexico Environment Department		
Review period: 3/25/2020 - 3/25/2025		
Date of site inspection: 9/26/2024		
Type of review: Statutory		
Review number: 7		
Triggering action date: 3/25/2020		
Due date (five years after triggering action date): 3/25/2025		

II. RESPONSE ACTION SUMMARY

Basis for Taking Action

In 1978, the City of Albuquerque detected low levels of VOCs in municipal wells SJ-3 and SJ-6 which prompted their removal (both plugged and abandoned) and the subsequent installation of a replacement well, Burton #4 (OU 01). In 1981, the EPA and NMED designated a one square mile area around SJ-6 as a Superfund Site which was added to the National Priorities List (NPL).

OU 03 Univar Groundwater and OU 04 Univar Vadose Zone

Initial investigations, starting in 1978 through the early 1980s, resulted in the discovery of a plume of contaminated groundwater starting at the Univar site and extending to the east. Various VOCs were detected in the first groundwater zone at the site. During site characterization, the following hazardous substances were detected in ground water: acetone, carbon tetrachloride, chloroform, 1,2-Dichloroethane

(1,2-DCA), trans-1,2-Dichloroethene (trans-1,2-DCE), 1,1-Dichloroethene (1,1-DCE), methylene chloride, tetrachloroethene (PCE), trichloroethene (TCE) and 1,1,1-Trichloroethane (TCA). The human health exposure route of concern for this operable unit is groundwater ingestion.

During groundwater contamination source investigations in the 1980s, vadose zone contamination was discovered. OU 04 was established, separating the vadose zone (OU 04) and groundwater (OU 03). Investigations at the Site. Various VOCs (i.e., Tetrachloroethane, 1,1-Dichloroethane) were detected in soils at the site, but the highest concentrations of soil contamination were found at the water table interface, which indicated most of the contamination had migrated to the groundwater. OU 04 considered three primary routes of exposure: direct contact, ingestion of contaminated soils, and inhalation.

OU 05 GEA Shallow Zone Aquifer and Soil Contamination and OU 06 GEA Deep Zone Aquifer

Initial investigations on the GEA property were conducted in 1984 and 1985. A second investigation was conducted in 1987 and 1988. VOCs in groundwater were detected as high as 112 micrograms per liter (µg/L) for DCA, 55 µg/L for DCE, 30 µg/L for 1,2-DCA, 64 µg/L for TCE, 28 µg/L for PCE, and 2.6 µg/L for vinyl chloride. VOCs were detected in soils at low concentrations, while semi-volatile organic compounds and hexavalent chromium were detected in soil above the EPA's industrial soil screening levels with hexavalent chromium being as high as 48 mg/kg. OU 5 and OU 06 were concerned with contamination exposure from groundwater consumption or ingestion. In addition, OU 05 considered routes of exposure including: inhalation and ingestion and dermal contact with soil.

Table 1 and Table 2 list the Site Contaminants of Concern by media and the cleanup goals associated with the South Valley Superfund Site. The RA objectives and rationales for implementation at each OU are detailed below.

Response Actions

OU 01 Municipal Wells

The OU 01 ROD was signed on March 22, 1985. The remedy included in that ROD was to replace city water supply wells, San Jose #3 & #6.

RAOs described in the ROD include:

- Provide a new water supply well to replace the capacity of the contaminated well San Jose No. 6.

OU 01 was addressed when the Burton 4 municipal well was installed to replace the use of contaminated City supply wells, SJ-3 and SJ-6. OU 01 RA objectives were achieved in April 1987. OU 01 was deleted from the South Valley Superfund Site on September 23, 2019.

OU 02 Institutional Controls

The OU 02 ROD was signed on September 30, 1988. The remedy components selected in that ROD included:

- Plug SJ #3 & #6 wells plus any private wells that might be a conduit from shallow to intermediate aquifers;
- Groundwater monitoring; and
- Access restrictions.

RAOs selected in the ROD include:

- Eliminate potential conduits for shallow groundwater contamination to migrate to lower groundwater zones.
- Restrict the usage of groundwater at or near the site.

OU 02 included plugging and abandoning several wells identified as potential contamination conduits to the shallow and deep groundwater zones. OU 02 included the establishment of a monitoring well network containing 23 wells downgradient and north/east of the Site, in the vicinity of SJ-6 (completed between 1990 and 1992). OU 02 RA objectives were achieved in 1994. OU 02 was deleted from the South Valley Superfund Site on September 23, 2019.

OU 03 Univar Groundwater Plume

OU 03 addresses the groundwater plume of site-related VOCs at the Univar facility (South Valley Site, Edmunds Street). The 1990 Consent Decree between Univar, EPA, and NMED required groundwater remediation in accordance with the 1988 ROD, which identified risks from the plume's potential to impact a major Albuquerque water supply well field. Site characterization detected hazardous substances including acetone, carbon tetrachloride, chloroform, 1,2-DCA, trans-1,2-DCE, 1,1-DCE, methylene chloride, PCE, TCE, and TCA.

The ROD stated that although there were no current users of the ground water within the contaminated plume area, the movement of the plume could impact a major well field for the City of Albuquerque water supply.

OU 03 includes monitoring of ground water, treated water, and ambient air to ensure the effectiveness of the remedy. The risks were assessed according to the Maximum Contaminant Levels (MCLs), set forth under the Safe Drinking Water Act and New Mexico Water Quality Control Commission (NMWQCC) Regulations (i.e., New Mexico Administrative Code [NMAC]).

The selected remedy, described in the Remedial Action Plan (RAP) and Remedial Design Report, involved groundwater containment and recovery via extraction wells (installed in 1989), treatment through packed tower aeration, and aquifer reinjection via infiltration galleries. The treatment system was operational by the end of 1990. Vadose zone treatment, originally planned for OU 04, was initiated in 1999 to enhance VOC removal within OU 03.

On June 10, 2014, EPA issued a Notice of Completion of Consent Decree Requirements for Constituents of Concern, confirming all dissolved chlorinated VOCs (except 1,4-dioxane) were below Applicable or Relevant and Appropriate Requirements (ARARs), and approved Univar's request for partial OU 03 closure (Appendix B). The partial closure for OU 03 and determination that no further remedial actions were necessary was based on: the 1990 Consent Decree, the June 28, 1988 ROD (as amended by the September 2006 Explanation of Significant Differences), and monitoring data demonstrating that all VOCs (excluding 1,4-dioxane) met cleanup levels for eight consecutive sampling events prior to sampling cessation.

OU 04 Univar Vadose Zone

The ROD for OU4, issued in March 1989, was to address the source of groundwater contamination. The Univar OU 04 soil investigation for potential COCs in the vadose zone determined that the soils did not pose a risk to human health and the environment. The ROD issued in 1989 specified *No Further Action*.

The OU 04 ROD did include a provision to determine whether the soil gases would pose any threat to human health and the environment after groundwater remediation goals are achieved. A Soil Vapor Extraction (SVE) system was implemented and completed which resulted in non-detect soil vapor concentrations for all VOCs. Thus, it was determined that the soil gases did not pose a threat to human health or the environment.

OU 05 GEA Shallow Zone Aquifer and Soil Contamination and OU 06 GEA Deep Zone Aquifer

Initial investigations at the GEA property occurred in 1984–1985, followed by a second phase in 1987–1988. VOCs were detected in groundwater at concentrations up to 112 µg/L (DCA), 55 µg/L (DCE), 30 µg/L (1,2-DCA), 64 µg/L (TCE), 28 µg/L (PCE), and 2.6 µg/L (vinyl chloride). Low VOC concentrations were also found in soils.

Based on these findings, the Former Plant 83/General Electric ROD—covering OU 05 and OU 06—was issued in September 1988. The ROD confirmed VOC and metal contamination in soil and groundwater; however, metals were later removed as COCs for both OUs after further assessment showed they did not exceed ARARs.

The ROD specified remediation for VOCs in soils and two aquifer zones: the shallow and deep zones (the latter includes what the ROD initially called intermediate and shallow). Although the ROD did not list all COCs, it identified 1,1-DCE, isophorone, and PCE due to their carcinogenicity. Remediation was required for groundwater up to 160 ft bgs based on risk evaluations and in accordance with NMWQCC standards (Table C-3, Appendix C).

Soil action levels were also established during site characterization. While soil VOCs posed no direct threat to human health, they were identified as a source of potential groundwater contamination through migration from the vadose zone. Site investigations identified residual concentrations of semi-volatile organic compounds (SVOCs) and hexavalent chromium in shallow soils within five Areas of Concern (AoCs) at the GEA property. While these constituents did not exceed levels that would pose an unacceptable direct risk to human health under commercial/industrial use, they were present above EPA Region 6 industrial soil screening levels. AoC-D contains hexavalent chromium from 5 to 18 feet bgs, while AoC-A, B, C, and E include SVOCs extending from near surface to depths of 4.2 to 16.5 feet bgs. As documented in the recorded Restrictive Covenant (2014), engineered barriers—concrete caps and, in one case, 5 feet of clean fill—were constructed to prevent exposure. The covenant limits site use to non-residential purposes and requires maintenance of these barriers to ensure continued protection against soil contact or vapor intrusion.

OU 05 ROD Response Actions Included:

- Further delineation of VOCs in the vadose zone and shallow aquifer through new monitoring wells
- Soil vapor extraction in Hazardous Waste Storage Areas 1, 3, and 4, with vapor-phase activated carbon treatment

- Groundwater extraction and treatment in the shallow aquifer (~30 ft bgs) using liquid-phase activated carbon, continued until concentrations met state and federal standards

OU 05 Remediation and Deletion

OU 05 underwent comprehensive remediation—including soil vapor extraction and shallow aquifer treatment—which successfully reduced VOC concentrations below regulatory thresholds. The treatment system and wells were decommissioned by 2011. After completing all remedial and administrative requirements, OU 05 was formally deleted from the National Priorities List in 2019.

OU 06 ROD Response Actions Included:

- Groundwater extraction and treatment in the deep aquifer (~160 ft bgs) via air stripping and liquid-phase activated carbon
- Continued treatment until VOC concentrations met evolving regulatory standards, including those revised through an Explanation of Significant Difference during the project

Table 1: Operable Units Summary for South Valley Superfund Site, Albuquerque, Bernalillo County, New Mexico.

Operating Unit	Issue	Remedial Action	Current Status	National Priorities List Deletion Status
OU 01	Municipal wells contaminated with volatile organic compounds (VOCs)	Wells were plugged and abandoned, a replacement well installed	Completed in 1987	Deleted from Site on September 23, 2019
OU 02	Remedial goal to eliminate/prevent migration of contaminants from shallow to intermediate aquifers	Wells were plugged and abandoned, new and replacement well installed; restrict groundwater use; groundwater monitoring	Completed in 2019	Deleted from Site on September 23, 2019
OU 03	Reduce groundwater related VOCs to acceptable levels	Pump-treat-injection system	EPA approved partial completion for VOCs; Continue pump-treat-injection system for 1,4-dioxane	Must continue pump-treat-injection system for 1,4-dioxane. OU 03 is not eligible for deletion from the NPL at this time.

OU 04	Soil vadose zone investigation for potential solvent contamination	Investigation found no evidence of contamination	Completed in 1988	A formal request for the deletion of OU 04 was submitted on February 17, 2023, but this has not been formally approved.
OU 05	Remediating shallow zone groundwater and eliminating source materials	Pump-treat-injection system, enhanced dewatering, soil flushing, and soil vapor extraction; Engineered barrier consisting of 5 feet of clean fill and a concrete cap to cover the contaminated soil	Completed in 2014. Restrictive covenants filed with county.	Deleted from Site on September 23, 2019
OU 06	Hydraulically contain plume to protect water supply wells and reduce the concentrations of VOCs to acceptable levels	Pump-treat-injection system	Continue pump-treat-injection system	Must continue pump-treat-injection system for Site related VOCs. OU 06 is not eligible for deletion from the NPL at this time.

Table 2: Groundwater Cleanup Goals from ROD or ESD

Contaminant of Concern		
	Cleanup Levels	Federal Drinking Water Standard or State of New Mexico Groundwater Standard
Acetone	NS**	NS
Carbon tetrachloride	5	MCL
Chloroform	100	NMWQCC
1,2-dichloroethane	5	MCL
Trans-1,2-dichloroethene	70	MCL
1,1-dichloroethene	5	NMWQCC
Methylene chloride	100	NMWQCC
Tetrachloroethene	5*	MCL
1,1,1-trichloroethene	60	NMWQCC

Trichloroethene	5	MCL
1,4-Dioxane (Offsite)	4.6 [^]	HHRE****
1,4-Dioxane (Onsite)	29	HHRE****

* The initial ARAR for tetrachloroethene was set as 20 µg/L, based on NMWQCC standards (based on New Mexico Administrative Code, various dates); this ARAR was modified in a 2006 Explanation of Significant Differences (EPA 2006a) to reflect the MCL of 5 µg/L promulgated in 1992.

** No Standard.

*** NMWQCC standards effective December 21, 2018.

**** Human Health Risk Evaluation completed by Univar USA, Inc., March 6, 2014.

[^] The initial ARAR for off-site 1,4-dioxane was 6.7 µg/L, but was updated on October 12, 2023 to be 4.6 µg/L after the EPA revised the Regional Screening Level.

Status of Implementation

Remedy implementation activities were conducted during this Seventh Five Year Review period at OU 03 and OU 06 pursuant to the requirements of the South Valley Superfund Site RODs and the decision documents referenced in **Appendix A**. Remedial activities are complete at OU 01, OU 02, OU 04, and OU 05. A partial deletion of OU 03 for only VOCs was completed in 2014. For additional information regarding removing VOCs at OU 03 refer to **Appendix B**.

OU 03 Univar 1,4-Dioxane Groundwater Plume

In early 2014, Univar completed a Human Health Risk Evaluation to establish site-specific, risk-based cleanup goals for 1,4-dioxane: 29 µg/L for on-site groundwater and 6.7 µg/L for off-site areas. EPA and NMED approved Univar's July 27, 2016, Remedial Work Plan to address 1,4-dioxane, which included installing two recovery wells (RW-05, RW-06) and three injection wells (IW-01, IW-02, IW-03) per the April 27, 2017, Well Installation Report. A monitoring program was also initiated.

In 2018, Univar began groundwater treatment and monitoring efforts for 1,4-dioxane. In 2021, a work plan was submitted to install additional monitoring wells east of the site to further delineate the extent of 1,4-dioxane migration in off-site areas. Upon completion of well installation, EPA subsequently determined additional risk evaluation and continued remediation were necessary. On October 12, 2023, the EPA revised the off-site cleanup level for 1,4-dioxane from 6.7 µg/L to 4.6 µg/L based on updated Regional Screening Levels. This change reflects evolving toxicological assessments and aligns with EPA's November 2024 final risk determination for 1,4-dioxane under the Toxic Substances Control Act (TSCA), which concluded that the chemical poses an unreasonable risk to human health under certain conditions of use, including exposure via water.

Univar evaluated the existing monitoring well network and submitted the Remedial Work Plan to address 1,4-dioxane contamination in groundwater on May 13, 2016. After EPA approved the plan on July 22, 2016, additional wells were installed to complete the lateral delineation of the plume. During the Sixth FYR, two new recovery wells and three injection wells were installed, and existing wells were redeveloped. On March 5, 2018, Univar installed and began operating an Advanced Oxidation Treatment System and the groundwater recovery and injection system (GRTIS). This treatment system was designed to reduce 1,4-dioxane concentrations in groundwater to less than 6.7 µg/L. In 2022, due to exceedance of the off-site standard of 1,4-dioxane, additional monitoring wells were installed downgradient. In 2023, EPA approved a new work plan to determine the extent of the 1,4-dioxane contaminant plume. Additional wells were installed in late 2024 and the report completed during the FYR. The new monitoring wells will

help in monitoring the plume extent and 1,4-dioxane concentrations off-site. Details about this phase of site investigation and results will be reported in the next FYR.

The groundwater network at OU 03 includes recovery wells (RW-02, RW-05, RW-06, and GM-27) and injection wells (VE-4, VE-6, IW-01, IW-02, and IW-03) as well as an infiltration gallery for treated water injection. Groundwater depths were periodically measured during 2018 and quarterly in 2019. Sampling occurs at least semi-annually using low-flow procedures and/or HydraSleeve™ samplers in monitoring wells GM-02, GM-09S, GM-11S, GM-14S, GM-15S, GM-21, GM-25, GM-26, GM-29, GM-30, RW-04, and I-01 (**Figure C-2, Appendix C**).

Due to low concentrations of 1,4-dioxane (near or below 1.0 µg/L reporting limit) in recovery well RW-02, its operation was suspended during the previous FYR and the well was incorporated into the groundwater monitoring program. The groundwater monitoring schedule is reviewed and adjusted annually as needed. Remedy implementations to address 1,4-dioxane and VOCs at OU 03 are detailed in **Appendix B**. In 2020, elevated concentrations of 1,4-dioxane in monitoring well GM-09S prompted modifications to the GRTIS. Monitoring well GM-09S was converted into a recovery well, while former vapor extraction wells VE-02 and VE-03 were converted into injection wells to facilitate flushing of 1,4-dioxane upgradient of GM-09S.

At the start of the FYR period, on-site 1,4-dioxane concentrations ranged from 12.5 µg/L to 94.2 µg/L. By the end of the FYR period, concentrations were reduced to <1.0 µg/L to 16.7 µg/L. As of the June 28, 2024 annual report, there were no exceedances of the on-site risk-based cleanup goal of 29 µg/L in on-site wells.

At the start of the Seventh FYR period, off-site 1,4-dioxane concentrations ranged from <6.7 µg/L to 20.7 µg/L. Between July 2023 and April 2024, off-site 1,4-dioxane concentrations consistently exceeded the revised cleanup goal (4.6 µg/L) in recovery wells RW-02 and GM-27, as well as Zone A shallow monitoring wells GM-29 and occasionally GM-15S, with the highest recorded level of 16.7 µg/L at GM-15S in April 2024. During this period, no exceedances were detected in Zone A shallow monitoring well GM-14S or in the more transmissive Zone B monitoring wells.

OU 04 Univar Soil Vapor

OU 04, also known as the Edmunds Street Source Area, is part of the South Valley Superfund Site in Albuquerque, New Mexico. The site historically housed chemical storage and distribution operations, leading to subsurface releases of VOCs such as TCE, PCE, and TCA. While groundwater contamination from these VOCs has been addressed under other operable units, OU 04 was retained for source area evaluation and assessment of potential soil vapor intrusion. With groundwater remediation complete, the remaining concern was whether residual VOCs in the vadose zone posed a vapor intrusion risk.

To resolve this, the EPA and NMED authorized a limited soil vapor investigation to support potential site closure. The primary goal of the investigation was to evaluate the soil vapor pathway and determine whether conditions warranted further action or closure of OU 04. On October 14, 2022, Arcadis installed two soil gas probes (SGP-01 in OU 04 and SGP-02 just south of the office building) using a hand auger. Probes were constructed with stainless steel mesh screens and Teflon tubing, and samples were collected on November 2, 2022. Helium leak testing was performed to confirm sample integrity.

Samples were analyzed using the EPA Method TO-15 for site-specific VOCs, including 1,1-DCE, PCE, TCE, 1,1,1-TCA, 1,4-dioxane, and vinyl chloride. While several VOCs were detected above method

reporting limits, all concentrations were below NMED vapor intrusion screening levels (VISLs) for Industrial VISL soil gas cancer and noncancer values (2021 guidance). Based on USEPA's VISL calculator, cumulative cancer risk estimates were 1.98×10^{-6} for SGP-01 and 4.10×10^{-7} for SGP-02—both below the target risk threshold of 1×10^{-5} and the non-cancer hazard quotient of 1.0. As a result, no further action was recommended, and the findings support closure of OU 04.

OU 05 GEA Shallow Zone Aquifer and Contaminated Soil and 06 GEA Deep Zone Aquifer

The OU 05 remedy included soil vapor extraction, shallow zone groundwater extraction and treatment, and enhanced dewatering from the time of the 1988 ROD through completion of active remediation in 2014. Contaminated soil areas at the former Plant 83 were capped with concrete, and deed restrictions were recorded in 2014 to prevent exposure to residual contaminants that remain beneath these caps. All monitoring and production wells at both the North and South Plants were plugged and abandoned. OU 05 was deleted from the NPL in 2019.

The OU 06 Deep Zone Remediation System (DZRS), operational since April 1996, includes three active extraction wells (EW-003R, EW-004, and EW-005), three inactive extraction wells (EW-001, EW-002, and EW-006), a groundwater treatment system to remove dissolved VOCs to below ARAR concentrations, and redundant treatment via liquid-phase granular activated carbon. The system also incorporates 11 injection wells to return treated water to the Deep Zone and 21 monitoring wells with 43 monitoring points in the extraction and injection area to track remediation progress (**Appendix C**).

Until November 15, 2017, the remediation system used four operating extraction wells to capture impacted groundwater for subsequent treatment and injection. Pulse pumping for EW-005 was approved and implemented on June 8, 2020, and has continued to the present.

As of August 14, 2023, all monitoring wells were below ARARs except for TCE in P82-09D. Since November 2022, all of the monitoring wells were below ARAR for TCE (which was the final VOC of concern above ARAR) (Annual report 2024). All monitoring wells had been below ARARs for VOC and COCs. GE's proposed closure plan for OU6 was approved on February 22, 2024. The following wells are being monitored quarterly for attainment to work towards closure: EW-001, EW-002, EW-003R, EW-004, EW-005, EW-006, P83-07D, P83-09D, P83-19U, P83-19M, P83-19LR, P83-19D-2, P83-22D-2, P83-30D-2, P83-22S, P83-22M, P83-22D, P83-26M, P83-26D, P83-29S, P83-32, WB-01 (1-6), WB-02 (1-5), WB-04 (1-6), WB-05 (1-6), and WB-07 (1-5).

Institutional Control (IC) Summary Table

Table 3: Summary of Planned and/or Implemented ICs

Media, engineered controls, and areas that do not support UU/UE based on current conditions	ICs Needed	ICs Called for in the Decision Documents	Impacted Parcel(s)	IC Objective	Title of IC Instrument Implemented and Date (or planned)
Ground Water	Yes	No	The New Mexico State Engineer designated an area that encompasses the entire South Valley Superfund Site	Restrict use and access to the shallow groundwater aquifer to protect the public from potentially contaminated water.	Press Release in 1988 from the New Mexico Office of the State Engineer.
Ground Water/Soil	Yes	No	Former South Plant 83, GEA (OU 05)	Restrict groundwater use/restrict specific areas from excavation. Restrict land use to commercial and industrial use only.	Declaration of Restrictive Covenants, September 16, 2014

Systems Operations/Operations & Maintenance

OU 03 and OU 04 Univar Operation and Maintenance

Operation and maintenance (O&M) activities at OU 03 were conducted on an approximate bi-weekly schedule during the Seventh FYR period. O&M activities were completed in accordance with the Univar Operation, Maintenance and Monitoring Manual (July 31, 2018). The O&M activities implemented included, but were not limited to, the inspection and monitoring of GRTIS system components, including tanks and piping, flow rates, and recovery well pressures. Performance sampling and treatment process monitoring activities were also completed to assess the system for optimization.

Univar measures 1,4-dioxane concentrations in the groundwater influent and effluent to assess the operational performance of the GRTIS. The GRTIS system was in operation above 98% of the time throughout the FYR except for system maintenance, hydrogen peroxide changeout periods, and brief power outages.

No active O&M activities are currently conducted at OU 04. Groundwater contamination from chlorinated solvents was addressed under other operable units, and OU 04 remained open only to assess potential vapor intrusion risk. In 2022, Arcadis conducted a limited soil gas investigation under EPA and NMED oversight. Two soil gas probes were installed and sampled, with results showing all VOCs below NMED industrial VISLs (June 2022). USEPA VISL-based risk estimates were well below regulatory thresholds. Based on these findings, no further action was recommended. A formal request for a Notice of Completion of Consent Decree Requirements was submitted to EPA on February 17, 2023, supporting closure of OU 04.

OU 05 GEA Operation and Maintenance

Hazardous substances remain in place in soil at OU 05, and restrictive covenants recorded in 2014 were established to limit exposures and ensure long-term protectiveness. The covenant restricts the property to commercial and industrial use only and prohibits any use of on-site groundwater. A change in property ownership has occurred since the covenant was recorded. The restrictive covenant also imposes engineering controls over five Areas of Concern (AoCs), where residual concentrations of SVOCs and hexavalent chromium remain in soil above USEPA Region 6 industrial soil screening levels (SSLs). Specifically, the covenant states that “engineered barriers must remain in place at all times... [and] must be designed, operated and maintained to inhibit inhalation and ingestion of, and dermal contact with, the Hazardous Substances contained in the soil.”

Despite these clear requirements, there is currently no documented standard operating procedure (SOP) or institutional control (IC) implementation plan in place to verify the integrity or maintenance status of the engineered soil caps. GEA’s contractors conduct general operations and maintenance across the site; however, the lack of a formal inspection and repair program for the caps raises concerns about potential cap degradation over time. This concern is supported by site inspection observations from the FYR field visit, which identified apparent wear, weathering, and possible damage to portions of the cap (see Photograph No. 12). It is unclear whether these conditions represent localized deficiencies or broader deterioration, but in either case, they indicate that the current maintenance approach is insufficient to comply with the restrictive covenant’s requirements for preserving cap functionality.

This FYR identifies the absence of a cap-specific maintenance and inspection program as a significant issue. To address this, it is recommended that an Institutional Control Implementation and Assurance Plan (ICIAP) be developed and implemented. The ICIAP should include detailed SOPs for routine inspection, condition assessment, and timely repair of the OU 05 engineered barriers. The plan should also clearly identify responsible parties, establish inspection frequencies, provide documentation protocols, and outline corrective action procedures for any observed deficiencies. Implementation of such a plan is critical to ensuring the barriers continue to function as intended—to prevent exposure and uphold the obligations specified in the restrictive covenant.

OU 06 GEA Operation and Maintenance

According to the GE Annual Reports from 2020 to 2024 for this FYR period, the OU 06 treatment plant operated continuously, with brief halts for system malfunctions, maintenance activities, adjustments related to surrounding development projects (e.g., the Sunport Boulevard extension), or system optimization measures. One notable interruption occurred due to biofouling on extraction well EW-003R, which was out of operation for five months (September 28, 2022 to February 20, 2023) before being rehabilitated and returned to service. System changes prompted by surrounding development projects included rerouting HDPE pipes to extraction wells EW-003R and EW-005, connecting new injection pipelines to IW-637R and IW-631, and installing updated electrical and control systems in 2023. Additional improvements to enhance functionality and monitoring included rehabilitating monitoring wells (e.g., P83-09D) and installing new wells (e.g., P83-32).

III. PROGRESS SINCE THE LAST REVIEW

This section includes the protectiveness determinations and statements from the **last** five-year review, as well as the recommendations from the **last** five-year review and their current status.

Table 4: Protectiveness Determinations/Statements from the 2020 FYR

OU #	Protectiveness Determination	Protectiveness Statement
03	Protective	The remedy is protective of human health and the environment.
04	Protective	The remedy is protective of human health and the environment.
05	Protective	The remedy is protective of human health and the environment.
06	Protective	The remedy is protective of human health and the environment.
Sitewide	Protective	The remedial actions at OU 03, OU 04, OU 05, and OU 06 are protective.

IV. FIVE-YEAR REVIEW PROCESS

Community Notification, Involvement & Site Interviews

A public notice was made available by a newspaper posting in the Albuquerque Journal on 9/30/2024 stating that there was a five-year review and inviting the public to submit any comments to the U.S. EPA.

The results of the review and the report will be made available at the following Site information repositories:

Zimmerman Library
Government Information Dept.
University of New Mexico
Albuquerque, NM 87131
505.277.9100

New Mexico Environment Department
Ground Water Quality Bureau
1190 St. Francis Drive, Suite N2300
Santa Fe, NM 87502-5469

During the FYR process, interviews were conducted to document any perceived problems or successes with the remedy that has been implemented to date. Interviewee participants included community members, Site's contract engineers, consultants, managers, and City and County representatives. In general, participants agreed that the project continues to progress and is beneficial to the environment. Interview records are included in **Appendix D**. The results of these interviews are summarized below.

The area surrounding the South Valley Superfund Site has a disproportionately high percentage of minority populations and low-income households compared to state and national averages. These communities are more vulnerable to environmental and health risks associated with contaminated sites, aligning with stakeholder concerns about reduced life expectancy in the South Valley and limited community involvement in decision-making processes. The high prevalence of limited English proficiency (LEP) in the area exacerbates these vulnerabilities, creating barriers to accessing critical information about the site and contributing to feelings of exclusion. Combined with limited access to clean water, restricted land use, and uncertainty about future site plans, these factors underscore the community's expressed desire for transparent, equitable, and multilingual engagement strategies to achieve more effective public outreach.

From the perspective of external stakeholders, including community members and local agencies, the South Valley Superfund Site has made notable progress in remediation. However, stakeholders remain concerned about unresolved issues in other areas, particularly in deleted OUs, where monitoring is limited, and questions about residual contamination persist. There is widespread community frustration over the lack of transparency in closure plans, OU deletion processes, and decision-making processes, with stakeholders emphasizing the need for better communication and greater inclusion of community voices. Community stakeholders stated that the uncertainty around the long-term presence of contaminants such as 1,4-dioxane and their lack of understanding about the criteria used for closing OUs contributes to the erosion of trust regarding the Site's operations.

The community has experienced significant environmental and social impacts from the site's operations. Stakeholders highlight the challenges posed by reduced access to water due to contaminated or closed wells, as well as broader health disparities such as shorter life expectancy in the South Valley compared to other parts of Bernalillo County. Their community is also concerned about the future of land use, with fears that industrial redevelopment may further harm the community rather than offer opportunities for beneficial use. They believe that communication gaps between all entities and the public community members exacerbate these concerns. Community members stated that outdated/incomplete website

information and insufficient outreach have left them feeling disconnected from critical updates. Stakeholders call for more inclusive engagement strategies, detailed and accessible information, and proactive involvement in planning and decision-making.

Operationally, stakeholders point to challenges with equipment maintenance and “unknown” contaminants that may be impacting environmental health. They recommend improving monitoring efficiency and addressing gaps in air and water quality assessments or better explaining how these are being done. Community members stress the need for more robust engagement efforts, including more transparent communication of decisions and their implications, better coordination among environmental projects, and recognition of the area’s historical and cultural significance. While stakeholders acknowledge the progress made at the Site, they emphasize that its success will ultimately depend on transparent processes, meaningful collaboration, and aligning closure efforts with the community’s environmental and social priorities.

OU 03: Interviewed employees of Univar and GEA’s contractor, Arcadis, stated their focus was addressing 1,4-dioxane in OU 03 through a GRTIS. Advanced oxidation processes effectively treat recovered groundwater to concentrations below 1 µg/L and monitoring data shows declining trends, though occasional exceedances occur in specific off-site wells. The addition of monitoring wells and access roads east of Interstate 25 has enhanced capabilities but increased costs and extended the anticipated operational timeline. Despite these challenges, the project has experienced minimal downtime, maintained strong agency relationships, and achieved significant contaminant mass removal. OU 03 challenges include: 1) increased costs related to stricter cleanup standards, 2) additional delineation efforts east of Interstate 25, and 3) administrative burdens from evolving regulatory oversight. These challenges have been addressed with proactive measures, such as adopting passive sampling techniques (e.g., HydraSleeves™) to enhance efficiency and reduce costs. GEA and Univar request monitoring program review to identify low-value wells for potential abandonment. Univar will seek formal concurrence for "no further action" on soil remediation and agreement that additional assessments east of Interstate 25 are complete.

OU 06: Representatives with GEA and GEA’s contractor Axis shared that the remediation system has successfully achieved groundwater cleanup levels below ARARs since November 2022, demonstrating effective remediation of the Rio Grande Aquifer. During this FYR, OU 06 has entered the Attainment Monitoring phase. Since November 2022, the remediation system has successfully achieved groundwater cleanup levels below ARARs, demonstrating effective remediation of the Rio Grande Aquifer. The OU 06 remediation system has operated continuously. Modifications to the system, such as pulse pumping of extraction wells and well rehabilitation, have improved cleanup efficiency and maintained the system's effectiveness. Despite challenges, including costly well rehabilitation and increased security requirements following vandalism, the system has been consistently protective of human health and the environment. GEA and Axis are expecting to enter final closure by January 2026. The interviewees emphasized the importance of maintaining operational integrity during the Attainment Monitoring phase to avoid costly reactivations of extraction and injection wells.

Site Inspection

The inspection of the Site was conducted on September 26, 2024, at GE and Univar. The South Valley Superfund Site Five-Year site inspections were led Mr. Sai Appaji, Remedial Project Manager, EPA and Dr. Caitlyn Hall and Mr. Mark Garman of NMED’s Ground Water Quality Bureau (GWQB). Participants for the Site inspection at Univar included: Ms. Michelle Stayrook, Remediation Manager, Univar Solutions and Ms. Katy Brantingham, Associate Vice President, Arcadis US, Inc. Participants at GEA

included GEA's contractor: Ms. Julie Einerson, Owner, Genesis Environmental, Safety, and Health, LLC. and John Billiard, Technical Services Director, Axis Group, Inc. The purpose of the inspection was to assess the protectiveness of the remedy.

Univar Inspection

The general appearance of OU 03 is in good working condition and well-maintained. Equipment associated with the remedial system (advanced oxidation) appeared well-serviced and maintained. The remediation treatment buildings and many wells are located in a fenced, secure area. All hazardous materials on-site are properly stored. All exterior security fences were in excellent condition. All pertinent documents were on-site, readily available, and up to date. All treated water from the advanced oxidation system is discharged to the infiltration gallery.

The inspection team inspected several monitoring wells (GM-03, GM-04, GM-13, W-01, W-02) and extraction wells (RW-02, RW-06, GM-27). All monitoring, extraction, and injection wells were locked and secure from vandalism or theft. Some minor instances of on-site illegal dumping (e.g., household items and construction debris) has occurred but with no apparent affected on the OU.

At the time of the site inspection, Univar was installing additional groundwater monitoring wells east of I-25 to delineate the scope impact of 1,4-dioxane to inform next steps for treatment.

GE Inspection

The site inspection team reviewed the OU 06 Deep Zone Aquifer Remediation system, including treatment system components. Institutional controls for the OU 05 Shallow Zone Aquifer were evaluated following the plugging and abandonment of associated wells in April 2013. Equipment and system components appeared to be in good working order, and the remediation treatment buildings are located within a secure, fenced area. New security measures were implemented in response to trespassing. Hazardous materials on-site were properly stored, all pertinent documents were readily available and current, and site access was well maintained. The former OU 05 area was inspected to verify the continued integrity of institutional controls and capped surfaces, with no issues observed.

The inspection team inspected several monitoring wells (WB-01, WB-04, WB-05, P83-09D) and extraction wells (EW-003R, EW-004, EW-005). All monitoring, extraction and injection wells were locked and secure from vandalism or theft. Previously, some minor instances of on-site illegal dumping (e.g., household items and construction debris) were occurring, however, these activities do not appear to have affected the OU.

Data Review

This FYR for the Site was performed through a review of the RODs, Explanation of Significant Differences (ESDs), other historic site documents, site inspections performed on September 26, 2024, interviews with stakeholders, and a review of data collected at the Site during the previous review periods. This FYR covers the period of March 25, 2020, through March 25, 2025.

During the Seventh FYR period, groundwater elevation levels and analytical results were reviewed for OU 03 and OU 06. Data collection and monitoring during this period met the requirements outlined in the ROD and associated decision documents.

OU 03 Ground Water Flow

The eastern edge of the OU 03 groundwater plume remains partially un-delineated, which aligns with the general eastward direction of groundwater flow, suggesting the potential for further downgradient migration beyond the current monitoring network. Surface elevation contour maps are depicted in **Figure C-5 through Figure C-11, Appendix C**.

OU 03 Univar 1,4-Dioxane Groundwater Plume

From 2020 to 2024, the remediation efforts at the site, including the operation of the GRTIS, demonstrated significant progress in reducing 1,4-dioxane concentrations in both on-site and off-site groundwater monitoring wells. The GRTIS was optimized in 2020 to enhance removal efficiency by expanding the recovery well network and flushing contaminated areas with clean treated water. These efforts led to marked decreases in concentrations at key wells, such as GM-08 and GM-09S, where the highest on-site concentrations had been observed. By the end of 2020, 1,4-dioxane concentrations in on-site wells were consistently below the on-site cleanup goal of 29 µg/L, although some off-site wells, including GM-15S and GM-29, continued to exceed the off-site cleanup goal of 4.6 µg/L (formerly 6.7 µg/L until October 12, 2023).

In 2021, the GRTIS continued to operate effectively, maintaining on-site concentrations below 29 µg/L. Off-site wells east of Interstate 25 (I-25) exhibited fluctuating concentrations, with wells GM-15S, GM-27, and GM-29 frequently exceeding the off-site cleanup goal. For example, GM-15S reached 23.6 µg/L in April 2021. Despite these exceedances, influent concentrations at the treatment system decreased, demonstrating effective mass removal. Fluctuations in concentrations were attributed to slow advection in fine-grained materials, particularly in the A-Zone aquifer subunit.

By 2022, the GRTIS had removed a cumulative 21.3 pounds of 1,4-dioxane, further reducing concentrations in both on-site and off-site monitoring wells. On-site concentrations remained below the cleanup goal of 29 µg/L, and influent samples showed decreasing trends, indicating a declining mass of 1,4-dioxane at the source. However, off-site wells such as GM-29 and GM-15S continued to exceed the off-site cleanup goal of 4.6 µg/L, with concentrations in GM-29 ranging from 15.1 µg/L to 18.3 µg/L throughout the year. Monitoring well GM-02 exhibited an anomalous increase to 19.6 µg/L in April 2022, but subsequent resampling confirmed levels below detection. Additional efforts, such as well re-development and abandonment of well HL-01 due to site activities, improved the monitoring network.

In 2023, the GRTIS achieved significant milestones, removing a total of 22.7 pounds of 1,4-dioxane by the end of the reporting period. All on-site wells continued to remain below the cleanup goal of 29 µg/L, and influent concentrations to the treatment system showed a consistent decrease. Off-site wells, however, still presented challenges, with GM-15S fluctuating between <1.0 µg/L and 20.9 µg/L and GM-29 maintaining concentrations above the 4.6 µg/L cleanup goal throughout the year. The system's effectiveness was evidenced by decreasing trends in most recovery wells, particularly in GM-09S, where concentrations significantly declined following initial high levels in 2020.

By 2024, concentrations of 1,4-dioxane in on-site wells remained below the cleanup goal of 29 µg/L, reflecting the sustained success of the GRTIS. Off-site exceedances were noted at wells RW-02, GM-27, GM-15S, and GM-29, with the highest off-site concentration recorded at GM-15S (16.7 µg/L) in April 2024. Notably, no exceedances were detected in Zone A shallow monitoring well GM-14S or in Zone B monitoring wells, indicating limited migration of the contaminant plume to more transmissive aquifer

zones. The gradual reduction in concentrations across most wells suggests continued progress toward remedial goals.

Overall, the period from 2020 to 2024 demonstrated consistent improvements in 1,4-dioxane remediation through the operation and optimization of the GRTIS. Significant mass removal was achieved, and while challenges persist in off-site areas, particularly in fine-grained zones, concentration trends in most wells suggest stabilization or gradual decreases. Continued monitoring, system maintenance, and optimization are recommended to further advance progress toward achieving remedial objectives.

OU 06 GE Deep Zone Analytical Results

From 2020 to 2024, significant progress was made in reducing VOC concentrations in the Deep Zone Aquifer through the operation of the DZRS. The system consistently maintained effective capture of impacted groundwater, preventing the migration of the contaminant plume and leading to a steady decline in VOC concentrations over the five years.

In 2020, the DZRS effectively formed a capture zone around the Deep Zone plume, as evidenced by groundwater flow converging toward the extraction wells. Despite rising water table elevations, due to the termination of the nearby municipal well Miles-01, the system fully captured impacted groundwater. TCE and 1,1-DCE were the only VOCs detected above their ARARs. Notably, TCE concentrations in well P83-09D reached 6.9 µg/L, exceeding the ARAR of 5 µg/L, while 1,1-DCE in WB-05(5) was detected at 5.4 µg/L, just above 1,1-DCE's ARAR. No VOCs were detected in down-gradient monitoring wells such as P83-19D-2 and P83-30D-2, indicating effective plume containment. Adjustments to the extraction system pump rates and ongoing optimization efforts improved removal efficiency, reducing the impacted groundwater plume to only two wells, exceeding regulatory limits by the end of 2020.

In 2021, TCE remained the sole VOC detected above ARARs, with exceedances observed in wells P83-09D and WB-01(3), recording concentrations of 7.1 µg/L and 7.0 µg/L, respectively. Other VOCs such as 1,1-DCA, 1,1-DCE, methyl tert-butyl ether (MTBE), and PCE were detected but remained below their respective ARARs. The DZRS demonstrated its effectiveness, fully capturing the plume without any operational changes required. The remediation system's consistent performance was further validated by the absence of VOCs in down-gradient monitoring wells, ensuring that the impacted groundwater was confined within the intended capture zone.

In 2022, the trend of decreasing VOC concentrations continued. TCE was detected above ARARs only in well P83-09D, with concentrations showing a downward trajectory and ending the year at 5.3 µg/L. All other wells, including WB-01(3) and WB-05, remained below ARARs for TCE and other VOCs. No VOCs were detected in down-gradient monitoring wells, and 1,1-DCA was confirmed as non-detect at sentinel well P83-19U. An anomalous detection of toluene occurred at low concentrations in several monitoring wells. Still, these detections were significantly below the ARAR of 750 µg/L and were considered anomalies, as toluene had not been previously detected in these wells. The remediation system continued to optimize its operations, including adjustments to pump rates, further improving capture efficiency and VOC mass removal. The plume's aerial extent and concentration continued to diminish due to these efforts.

By 2023, the remediation efforts yielded substantial results, with VOC detections falling below ARARs across the monitoring network. TCE was detected above ARARs only in well P83-09D during July, August, and November, with concentrations marginally exceeding the ARAR at 5.5 µg/L, 5.1 µg/L, and

5.1 µg/L, respectively. Other wells, including WB-01(3), consistently recorded TCE concentrations below ARARs, indicating a positive downward trend (e.g., 4.2 µg/L in June 2023). The anomalous toluene detections from the previous year did not recur, reinforcing the conclusion that they were isolated incidents. The DZRS continued effectively capturing the plume, preventing any migration beyond its designated capture zone and moving closer to achieving the remedial goals.

In 2024, the remediation efforts culminated in all VOC concentrations remaining below ARARs throughout the reporting period. Key wells such as P83-09D and WB-01(3) showed continued decreases in TCE concentrations, ending the year at 2.4 µg/L and 4.8 µg/L, respectively. Down-gradient monitoring wells, including P83-19U, P83-19LR, and P83-30D-2, consistently showed no detectable VOCs, confirming that the plume was fully contained and that the remediation system effectively protecting the surrounding groundwater resources. The DZRS achieved full compliance with ARARs for all VOCs across the monitoring network, demonstrating the success of the remediation strategy implemented over the past years.

From 2020 to 2024, the DZRS proved to be highly effective in reducing VOC concentrations in the Deep Zone Aquifer. The system's ability to adapt through operational optimizations and adjustments ensured the continual decline of VOC levels, particularly TCE, the primary contaminant of concern. By maintaining full capture of the impacted groundwater and preventing plume migration, the remediation efforts have significantly reduced the size and concentration of the contaminant plume. The consistent decrease in VOC concentrations, culminating in all wells being below ARARs by 2024, reflects the success of the remediation program. Continued monitoring and maintenance of the system are recommended to ensure long-term compliance and safeguard against potential future exceedances.

V. TECHNICAL ASSESSMENT

QUESTION A: Is the remedy functioning as intended by the decision documents?

Question A Summary:

The review of documents, monitoring data, and the results of the site inspection indicates that the remedy components are functioning as intended at OU 03 and OU 06. OU 04 is functioning as intended, as confirmed by the 2022 soil vapor investigation and laboratory analysis showing all VOC concentrations below NMED industrial VISLs, and EPA's VISL risk calculations indicating cumulative cancer risks and hazard indices below regulatory thresholds. Remedial action goals and objectives have been achieved at OU 01, OU 02, and OU 05 and these OUs have been deleted from the NPL for the Site. The following briefly describes the remedial action status at OUs 03 and 06.

OU 03 Univar Groundwater

The remedial systems at OU 03 (Univar) have decreased the concentrations of VOCs to below the ARARs. The RA has achieved the requirements of the ROD signed on June 28, 1988, and the Consent Decree dated March 27, 1990. The concentrations of COCs (excluding 1,4-dioxane) were less than the cleanup goals for at least eight consecutive sampling events before groundwater sampling and treatment were discontinued. On June 10, 2014, EPA approved Univar's request to close OU 03 for VOCs only.

On November 19, 2009, EPA notified Univar to evaluate the occurrence of 1,4-dioxane in various wells and determine whether it threatened human health and the environment. On January 14, 2010, EPA approved the planned evaluation of 1,4-dioxane in groundwater and approved a Remedial Work Plan to

address 1,4-dioxane in groundwater on July 22, 2016. On March 5, 2018, Univar began the remediation of 1,4-dioxane in groundwater and continues to operate the treatment plant and extraction/injection system as designed. The advanced oxidation process, along with the flushing of the vadose zone with treated water, has resulted in a significant reduction in 1,4-dioxane groundwater concentrations. During this FYR, Univar has continued to reduce the concentration of 1,4-dioxane in the plume, as well as worked to contain contaminant migration off-site. Univar has achieved on-site concentrations below the target 29 µg/L, though off-site concentrations exceed the 4.6 µg/L clean up goal. Groundwater delineation of the 1,4-dioxane plume is being improved by the October 2024 installation of additional monitoring wells east of I-25 to define the leading edge of the groundwater contamination.

OU 06 GEA Deep Zone

The remedial system at OU 06 (the deep zone aquifer at GEA) has reduced the mass and volume of contaminants in the deep zone aquifer, and the plume is stable and contained. The remedy continues to operate and function as designed. The deep zone groundwater plume has been reduced to one small area near monitoring well P83-09D with concentrations of TCE above ARARs in 2023. However, monitoring demonstrates VOC concentrations are below ARARs in all wells since January 2024. The groundwater treatment system effectively treats extracted groundwater for reinjection back into the aquifer. The Deep Zone pump and treat system has reached a state of asymptotic remediation efficiency. GEA continues to pulse-pump extraction wells to improve extraction efficiencies. They are also exploring remedy enhancements to address the remaining VOC contamination.

QUESTION B: Are the exposure assumptions, toxicity data, cleanup levels, and remedial action objectives (RAOs) used at the time of the remedy selection still valid?

Question B Summary:

The remedies selected for the South Valley Site were selected to eliminate the VOCs within the Site soils and restore groundwater under and near the Site to levels below State and Federal regulatory standards.

Remediation requirements identified within the RODs have not been revised or changed since the last FYR. The Site cleanup goals, as listed in **Table C-2** and **Table C-3, Appendix C**, have not changed except for the EPA revision of the Regional Screening Level for 1,4-dioxane was reduced to 4.6 µg/L from 6.7 µg/L.

Exposure pathways, land use, health receptors and routes of exposure, ecological receptors and routes of exposure, newly identified contaminants or source areas, toxic byproducts or changes in site conditions have not changed since the last FYR. Toxicity factors for COCs and contaminant characteristics have not changed to alter or impede the protectiveness of the remedies since the last FYR.

Progress toward meeting RAOs has advanced as anticipated. Remedial Actions at OU 01, OU 02, OU 04, and OU 05 are completed, and EPA has approved their deletion from the NPL. OU 03 and OU 06 are progressing as expected toward meeting RAOs, with no issues affecting remedy protectiveness.

QUESTION C: Has any other information come to light that could call into question the protectiveness of the remedy?

The Sunport Boulevard expansion project was the only major development project that led to the rerouting of EW-003R and EE-005, a new IW-637R HDPE pipe was connected to IW-637R, and a HDPE wye bend was installed to connect injection well IW-631. Since GE adjusted their treatment and monitoring

appropriately so as not to impact the Site or interrupt any remediation functionality. Otherwise, there have been no changes in land use, drinking water wells, or environmental vulnerabilities near the South Valley Site that could impact the effectiveness of the selected remedies. No new risks or information have emerged that would affect the performance or protectiveness of the remedies.

VI. ISSUES/RECOMMENDATIONS

Issues/Recommendations	
OU(s) without Issues/Recommendations Identified in the Five-Year Review:	
<i>OU 04, OU 06</i>	

Issues and Recommendations Identified in the Five-Year Review:				
OU(s): OU 03	Issue Category: Remedy Performance			
	Issue: 1,4-Dioxane			
	Recommendation: Identify the full extent of the groundwater contamination and continue remedial action of pump and treat system from the in-progress well installation. If pump and treat system is not effectively remediating the 1,4-dioxane, then remedy enhancements need to be explored to effectively remediate the Site.			
Affect Current Protectiveness	Affect Future Protectiveness	Party Responsible	Oversight Party/Support Agency	Milestone Date
No	Yes	PRP	EPA/State	12/30/2027
OU(s): OU 03	Issue Category: Other			
	Issue: 1,4-dioxane not in ROD.			
	Recommendation: EPA will issue an ESD to include 1,4-dioxane as a COC and its cleanup level.			
Affect Current Protectiveness	Affect Future Protectiveness	Party Responsible	Oversight Party/Support Agency	Milestone Date
No	No	EPA	-	12/30/2027

Issues and Recommendations Identified in the Five-Year Review:				
OU(s): OU 05	Issue Category: Institutional Controls			
	Issue: There are no formal procedures for routine inspection, maintenance, and repair of the engineered barrier cap.			
	Recommendation: Develop and issue a decision document that selects Institutional Controls as a component of the selected remedial action. An Institutional Control Implementation and Assurance Plan will be developed to implement necessary routine inspection, maintenance, and repair of the engineered soil cap at OU 05.			
Affect Current Protectiveness	Affect Future Protectiveness	Party Responsible	Oversight Party/Support Agency	Milestone Date
No	Yes	PRP	EPA/State	12/30/2027

OTHER FINDINGS

In addition, the following are recommendations that were identified during the FYR that may improve public outreach efforts, but do not affect current and/or future protectiveness:

Enhance Transparent and Accessible Communication

- **Multilingual Materials:** Translate all public notices, updates, and informational materials into Spanish and other prevalent languages in the South Valley community to ensure broader accessibility.
- **User-Friendly Website:** Revise the South Valley Superfund Site's webpage to be intuitive and easy to navigate, providing clear summaries of findings, meeting schedules, FAQs, and progress reports.
- **Visual Aids:** Incorporate infographics, timelines, and interactive maps to present technical information in a more digestible format, helping residents understand ongoing actions and their implications for community health and safety.
- **Community Partnerships:** Collaborate with local organizations, such as the Mountain View Neighborhood Association, to disseminate information effectively and foster trust within the community.

Enhance Local Engagement in Decision-Making

- **Regular Public Meetings:** Organize consistent and well-publicized meetings with local residents and stakeholders, providing platforms for meaningful input and discussion regarding site activities and future plans.
- **Clear Communication Strategy:** Develop a comprehensive communication plan that addresses local concerns, outlines site progress, and explains remediation strategies in straightforward language to alleviate fears about potential industrial redevelopment and long-term contamination risks.
- **Accessible Land Use Plans:** Provide clear and concise explanations of land use plans, ensuring that residents understand the intended outcomes and how such plans may affect the community's development and safety.

VII. PROTECTIVENESS STATEMENT

Protectiveness Statement(s)	
<i>Operable Unit:</i> OU 03	<i>Protectiveness Determination:</i> Short-term Protective
<i>Protectiveness Statement:</i> The remedy is protective of human health and the environment in the short term. Currently, there is no known exposure to contaminated groundwater based on monitoring data. An institutional control is in place, which restricts use of the contaminated groundwater. However, 1,4-dioxane is present above groundwater cleanup goals and not listed as a COC. Therefore, EPA will issue an ESD to include 1,4-dioxane as a COC and its cleanup level. For the remedy to be protective in the long-term, the presence of 1,4-dioxane in groundwater should be fully delineated and the treatment and removal system must continue to operate effectively until cleanup goals are achieved. If the treatment system is not effectively remediating and maintaining capture of 1,4-dioxane, then remedy enhancements need to be explored to effectively remediate the Site.	

Protectiveness Statement(s)	
<i>Operable Unit:</i> OU 04	<i>Protectiveness Determination:</i> Protective
<i>Protectiveness Statement:</i> The remedy is protective of human health and the environment. A soil vapor remedy was in operation and demonstrated no contaminants remain in place.	

Protectiveness Statement(s)	
<i>Operable Unit:</i> OU 05	<i>Protectiveness Determination:</i> Short-term Protective
<i>Protectiveness Statement:</i> The remedy is protective in the short term. The remedy currently protects human health and the environment because groundwater remediation is complete. All groundwater cleanup goals have been achieved. A restrictive covenant limits property uses, and an engineered barrier cap prevents exposure to contaminated soils. However, there are no formal procedures for routine maintenance, inspection and repair of the engineered barrier cap. For the remedy to be protective in the long-term, a decision document such as an ESD will be issued to select Institutional Controls as a component of the selected remedial action. An Institutional Control Implementation and Assurance Plan will be developed to implement necessary routine inspection, maintenance, and repair of the engineered soil cap at OU 05.	

Protectiveness Statement(s)	
<i>Operable Unit:</i> OU 06	<i>Protectiveness Determination:</i> Protective
<i>Protectiveness Statement:</i> The remedy is protective of human health and the environment. Groundwater treatment system has achieved RAOs and is currently in the two-year post-cleanup compliance monitoring phase	

Sitewide Protectiveness Statement
<i>Protectiveness Determination:</i> Short-term Protective
<i>Protectiveness Statement:</i> The remedial actions at OU 03 and OU 05 are short-term protective. For the remedy to be protective in the long-term, the presence of 1,4-dioxane at OU 03 groundwater should be fully delineated and the treatment and removal system must continue to operate effectively until cleanup goals are achieved. If the treatment system is not effectively remediating and maintaining capture of 1,4-dioxane, then remedy enhancements need to be explored to effectively remediate the Site. Institutional Control Implementation and Assurance Plan that includes routine inspection, maintenance, and repair of the engineered soil cap at OU 05 must be developed and implemented.

VIII. NEXT REVIEW

The next five-year review report for the South Valley Superfund Site is required in June 2030, five years from the completion date of this review.

APPENDIX A – REFERENCE LIST

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APPENDIX B – ADDITIONAL SITE INFORMATION

SITE CHRONOLOGY

South Valley Superfund Site

Date	Event
1978	Volatile organic compounds were detected in City of Albuquerque wells from the San Jose and Miles municipal well fields. In subsequent sampling, contamination persisted in wells SJ-3 and SJ-6 (in the San Jose well field) whereas the impact in well Miles-1 (in the Miles well field) was not confirmed and it was returned to service.
1981	As pre-National Priorities List responses, the City of Albuquerque took Albuquerque municipal wells SJ-3 and SJ-6 off-line.
September 8, 1983	The South Valley Site is placed on the National Priorities List.
March 22, 1985	The Record of Decision for OU 01 was signed.
September 2, 2005	Second FYR for GE-owned site OUs.
September 15, 2005	Third FYR for UNIVAR-owned site OUs.
September 28, 2005	Approval of the FYR memorandum for the Site.
February 5, 2009	Consent Decree for U.S. VS GENERAL ELECTRIC COMPANY - CIVIL NO. 1:09-CV-00545 released.
August 26, 2010	Fourth Five Year Review completed for the South Valley Superfund Site. First Site wide FYR initiated by EPA.
January 31, 2013	South Valley Superfund Site Open House updating the Public on cleanup progress.
April 1, 2015	Community Involvement Plan developed by EPA
July 3, 2015	Fifth Five Year Review completed for the South Valley Superfund Site
September 17, 2015	Site Status Summary released by EPA
February 23, 2017	Community Involvement Plan developed by EPA
September 28, 2023	Community Meeting held by EPA to provide an update
Univar – Edmunds Street OUs (OU 03 and OU 04)	
June 28, 1988	OU 03 - Record of Decision for the Edmunds Street Ground Water OU is signed.
January 1989	Submittal of the Remedial Investigation and Feasibility Study reports to EPA and NMED.
30 March 1989	OU 04 – the Record of Decision for the Edmunds Street Property Source Control is signed.
March 27, 1990	The Consent Decree in the Matter of the United States of America versus Univar Corporation was entered on docket.
September 7, 1990	The Remedial Action Plan for OU 03 was submitted to the EPA and NMED.
1990	The construction of the groundwater remedy at OU 03 was completed.
September 10, 1990 through January 14, 1991	The groundwater system for OU 03 startup program was conducted.
November 8, 1995	First FYR for Univar completed
March 1996	EPA and NMED verbally approve modifications to the groundwater monitoring plan, including use of Columbia Analytical Services, lower reporting limits, and elimination of analysis for benzene, toluene, ethylbenzene, total xylene and 1, 2- dichloroethane.
March 1998	Two groundwater monitoring wells installed, one as a replacement well (GM-22R) and one new well (GM-25)
November 1998	vapor extraction system for OU 04 installed
July 16, 1999	air quality permit for the vapor extraction system obtained

Date	Event
August 1999	pilot study for the vapor extraction system begins
September 14, 2000	Second FYR for Univar completed
October 2000	installation of additional vapor extraction system wells for full system build out completed
July 15, 2003	City of Albuquerque Environmental Health Department approved discontinuing compliance monitoring for the vapor extraction system (OU 04)
October 7, 2004	Univar received authorization from EPA (Mr. Terry Roundtree) in an electronic communication to discontinue semi-annual sampling of the treatment unit influent and effluent and groundwater monitoring wells and to reduce the number of groundwater monitoring wells monitored annually.
January 31, 2005	EPA submitted letter to Univar requesting the installation of deeper wells
August 2005	deeper wells GM-27 and GM-28 installed
September 2, 2005	Third FYR for Univar completed
September 7, 2006	ARCADIS on behalf of Univar submitted a work plan to optimize future remedial activities.
October 18, 2006	EPA approved changes to the optimization plan for remedial activities
September 29, 2006	vapor extraction system was shut down
November 3, 2006	groundwater treatment system was shut down
December 5, 2007	Discussion between EPA and Univar regarding the results of the optimization study and revision of the remedial actions
January 30, 2008	EPA and NMED approve revised remedial action
November 19, 2009	Letter from EPA notifying Univar that they started the FYR for the South Valley Superfund site and alleviating concerns that Univar should perform this review consistent with the Consent Decree.
November 19, 2009	letter from EPA to Univar requiring evaluation for 1,4-dioxane
January 7, 2010	letter from ARCADIS on behalf of Univar to EPA outlining activities for the evaluation of 1,4-dioxane
January 14, 2010	letter from EPA to Univar approving proposed activities for the evaluation of 1,4-Dioxane
July 14, 2011	letter from EPA to Univar requiring an evaluation of current monitoring network adequacy for use in determining extent of 1,4-Dioxane
October 4, 2011	letter from ARCADIS on behalf of Univar detailing proposed investigation actions for 1,4-Dioxane
November 21, 2011	letter from EPA to Univar approving proposed investigation activities for 1,4-Dioxane
February, 2012	ARCADIS on behalf of Univar performs 8 hour pump test
May 29, 2012	ARCADIS on behalf of Univar submits report on 8 hour pump test
May 31, 2012	ARCADIS on behalf of Univar submits work plan for additional actions which include an extended pump test and treatment pilot study for 1,4-Dioxane
June 13, 2012	letter from EPA to Univar approving extended pump test and treatment study for 1,4-Dioxane
Aug-Nov, 2012	ARCADIS extended pump test and treatment study for 1,4-Dioxane
June 24, 2013	ARCADIS on behalf of Univar submits report on extended pump test and treatment study
October 18, 2013	ARCADIS on behalf of Univar submits a Human Health Risk Evaluation for 1,4-Dioxane
January 17, 2014	ARCADIS on behalf of Univar submits Revised Human Health Risk Evaluation of 1,4-Dioxane

Date	Event
January 24, 2014	ARCADIS on behalf of Univar submits Monitoring Well Drilling and Installation and Ground Water Monitoring Network Work Plan
March 18, 2014	letter from EPA to Univar approves the Revised Human Health Risk Evaluation for 1,4-Dioxane
March 19, 2014	ARCADIS on behalf of Univar submits the Revised Well Installation and Monitoring Network Work Plan
April 23, 2014	letter from EPA to Univar approving the Revised Well Installation and Monitoring Network Work Plan
June 2, 2014	ARCADIS on behalf of Univar submits Notice of Completion of Consent Decree Requirements for Constituents of Concern (VOCs). Does not include 1,4-Dioxane
June 10, 2014	letter from EPA to Univar approving completion of Consent Decree requirements
May 13, 2016	Submittal of Remedial Work Plan for 1,4-Dioxane in Ground Water – 3301 Edmunds Street Site
June 10, 2016	EPA comments to Remedial Work Plan for 1,4-Dioxane in Ground Water – 3301 Edmunds Street Site
July 22, 2016	Submittal of revised Remedial Work Plan for 1,4-Dioxane in Ground Water – 3301 Edmunds Street Site
July 27, 2016	EPA approves to Remedial Work Plan for 1,4-Dioxane in Ground Water – 3301 Edmunds Street Site
April 27, 2017	Final Proposed Remedial System Well Installation Report - 3301 Edmunds Street Site
July 13, 2017	April 2017 Groundwater Monitoring Activities - 3301 Edmunds Street Site
October 27, 2017	Design Drawings - 1,4-Dioxane Groundwater Project - Univar USA Incorporated
July 31, 2018	Univar submittal of OM&M Manual for 1,4-Dioxane in Groundwater Treatment Project
July 31, 2018	Univar submittal of Treatment System Construction Report for 1,4-Dioxane in Groundwater Treatment Project
April 23, 2019	Univar submittal of Field Sampling Plan for 1,4-Dioxane in Groundwater Treatment Project
April 24, 2019	EPA Approval of Field Sampling Plan for 1,4-Dioxane in Groundwater Treatment Project
June 12, 2019	Univar submittal of Field Sampling Plan – For 1,4-Dioxane in Groundwater Treatment Project
September 1, 2019	Letter – Univar USA, Inc. name changed to Univar Solutions USA, Inc.
September 14, 2020	Univar submittal of Sampling Methodology Change for Certain Groundwater Monitoring Wells (change sampling methodology to use HydraSleeves)
September 2, 2020	Univar submittal of Request for Notice of Completion of Record of Decision Requirements for the Edmunds Street Source Area Operable Unit (OU4)
October 6, 2020	EPA response to Request for Notice of Completion of Record of Decision Requirements for the Edmunds Street Source Area Operable Unit (OU4) – comments requesting additional soil vapor instruction data
January 13, 2021	Univar response to Request for Notice of Completion of Record of Decision Requirements for the Edmunds Street Source Area Operable Unit (OU4) – clarifying EPA and NMED comments
June 10, 2021	Univar submittal of Work Plan for Drilling and Installation of Monitoring Wells GM-31 and GM-32

Date	Event
June 24, 2021	EPA response to Work Plan for Drilling and Installation of Monitoring Wells GM-31 and GM-32 - seeking access and task considerations
June 29, 2021	Univar submittal of Work Plan for Drilling and Installation of Monitoring Wells GM-31 and GM-32 – clarifying EPA and NMED comments
June 30, 2021	EPA approved Work Plan for Drilling and Installation of Monitoring Wells GM-31 and GM-32
August 5, 2021	EPA response to Request for Notice of Completion of Record of Decision Requirements for the Edmunds Street Source Area Operable Unit (OU4) - requests groundwater sampling plan of VOCs for OU4
January 5, 2022	Univar response to Request for Notice of Completion of Record of Decision Requirements for the Edmunds Street Source Area Operable Unit (OU4) – sampling found that all VOC concentrations were below detection limits
March 2022	Univar submittal of Final Report Development of a Quantitative Framework for Evaluating Natural Attenuation of 1,1,1-TCA, 1,1-DCA, 1,1-DCE, and 1,4-Dioxane in Groundwater (ER-201730)
July 5, 2022	Revised Proposed Gas Sampling plan approved by EPA and NMED
December 13, 2022	Univar submittal of the Revised Soil Gas Sampling Report (OU 04)
December 28, 2022	Univar submittal of Monitoring Wells GM-31 and GM-32 Installation and Sampling Report (EPA Approval Date: December 27, 2023)
January 24, 2023	EPA and NMED response to Revised Soil Gas Sampling Report (OU 04) – requested changing the input parameters to the USEPA Vapor Intrusion Screening Level (VISL) calculator to include vinyl chloride analytical results, an exposure frequency of 250 days, to rerun the calculator, and evaluating at a target cancer risk (TCR) of 1.0E-06.
February 17, 2023	Univar submittal of the Revised Soil Gas Sampling Report (OU 04) indicating that VOC analytical results were below NMED VISLs for Industrial VISL soil gas cancer and non-cancer values.
February 9, 2023	EPA responds with comments for Monitoring Wells GM-31 and GM-32 Installation and Sampling Report
March 31, 2023	Univar submittal of Monitoring Wells GM-31 and GM-32 Installation and Sampling Report (Rev. 1)
September 28, 2023	Community Meeting held by EPA to provide an update
October 12, 2023	EPA advisement of updated off-site groundwater cleanup levels are required to be 4.6 µg/L (formerly 6.7 µg/L).
November 1, 2023	Univar submittal of April 2023 Groundwater Sample Results - Yale Landfill Monitoring Wells Yale6 and Yale7
November 27, 2023	Univar submittal of 2023 Supplemental Groundwater Investigation Work Plan, Revision 1, (WP Rev. 1) to investigate extent of 1,4-dioxane
December 27, 2023	EPA approved Monitor Wells GM-31 and GM-32 Installation and Sampling Report
December 1, 2024	EPA approved 2023 Supplemental Groundwater Investigation Work Plan, Revision 1, (WP Rev. 1)
GEA – Plant 83/GE OUs (OU 02, OU 05, and OU 06)	
1988	Remedial Investigation/Feasibility Study completed
September 30, 1988	Record of Decision for OU 02, the vicinity of SJ-6 signed
September 30, 1988	Record of Decision for shallow soil and groundwater (OU 05) and deep groundwater (OU 06) signed
June 16, 1989	Administrative Order in the Matter of General Electric Company, South Valley Superfund Site was entered on docket
1991	Remedial design start for OU 05 soil vapor extraction system

Date	Event
1992	Remedial design start for OU 05 shallow groundwater remediation system
1992	Remedial design completed for OU 05 soil vapor extraction system
June 1992	start of the remedial action for the shallow soils
1994	Remedial design start for the deep zone groundwater remediation system
1993	Final closeout report for OU 05 soil vapor extraction system completed
1993	Remedial design complete for OU 05 shallow groundwater remediation system
May 1994	Remedial action starts for the shallow groundwater remediation system
1995	Remedial design complete for deep zone groundwater remediation system
April 1996	Dedication ceremony for deep zone groundwater remediation system, full time operation begins
September 2000	First FYR for GEA completed
2001	Optimization No. 1 for the deep zone groundwater remediation system
September 15, 2005	Second FYR for GEA completed
August 15, 2006	2005-2006 annual reports for the shallow and deep aquifer remediation systems submitted
September 18, 2006	GEA, through their contractor, submits proposed changes to the October 2006 sampling
October 26, 2006	Explanation of Significant Difference stipulates new Maximum Contaminant Level/applicable or relevant and appropriate requirement for tetrachloroethylene at 5 microgram per liter
February 23, 2007	EPA notification that 2 wells, P83-08D and P83-08M, need to be plugged and abandoned
March 2, 2007	EPA receives request for Comfort Letter for the owner of Duke City Distributing Co. property
March 2, 2007	EPA approves to the request to plug and abandon P83-08D and P83-08M
March 9, 2007	EPA provides Comfort Letter to the owner of neighboring property
March 16, 2007	GEA contractor proposal to plug and abandon P83-08D and P83-08M
April 4, 2007	EPA approval to plug and abandon wells P83-08D and P83-08M
April 18, 2007	EPA approves changes to the April 2007 sampling event
May 11, 2007	NMED approves the renewal of the groundwater discharge permit DP 1065
July 5, 2007	GEA provided EPA results for 1,4-dioxane
August 15, 2007	GEA submits the 2006-2007 annual reports for the shallow and deep aquifer remediation systems
September 11, 2007	GEA submits request to terminate operation of North Plant – shallow zone treatment
October 24, 2007	EPA conditionally approves GEA's request to terminate operations at the North Plant shallow zone treatment system
November 5, 2007	GEA response to EPA's conditions approval
November 13, 2007	EPA approves the changes proposed on 5 November
October 31, 2007	Operations of the shallow zone groundwater treatment system for North Plant terminated
April 2, 2008	GEA submits work plan to optimize the deep zone system
August 15, 2008	GEA submits 2007-2008 annual reports for the shallow and deep aquifer remediation systems
October 17, 2008	1,1-dichloroethene in sample collected from well SEW-05 in North Plant 83 Area exceeds the applicable or relevant and appropriate requirement
October 21, 2008	GEA submits 2008 revision of the performance and compliance monitoring plan for both the shallow and deep zones treatment systems
November 24, 2008	extraction well SEW-05 within the North Plant treatment system is brought back into operation

Date	Event
August, 2009	GEA informs EPA that Manufacturing Plant Operations will cease in late 2010.
October 2009	Operations at the North Plant 83 Area ceased
November 10, 2009	GEA requests to plug and abandon North Plant 83 wells
November 19, 2009	Letter from EPA notifying GEA that they started the FYR for the South Valley Superfund site and alleviating concerns that GEA should perform this review consistent with the Administrative Order.
November 19, 2009	Letter from EPA to GEA regarding sampling for 1,4-dioxane.
March 4, 2010	Letter from EPA to GEA approving the plugging and abandonment of all off-site monitoring and extraction wells related to the North Plant 83 shallow zone.
March 15, 2010	Axis submits Work Plan to EPA to conduct a chemical injection remediation program in the shallow zone aquifer SW-08 and SEW-05 areas
June 1, 2010	Letter from EPA to GEA approval to conduct chemical injection remediation program
July 12, 2010	Letter from EPA to GEA requesting a plan detailing the investigations related to the closure of GEA manufacturing facility operations
August 3, 2010	GEA response to EPA's request for plans outlining GEA's planned investigations of GEA manufacturing facility
August 19, 2010	GEA requests a review of the deep zone monitoring network
September 1, 2010	ISOTEC on behalf of GEA submitted a report detailing field activities related to the chemical injection remediation program
September 9, 2010	Letter from EPA to GEA requesting a work plan that outlines investigation activities related to the closure of GEA manufacturing facilities
October 19, 2010	EPA approves modifications to the deep zone monitoring program
December 9, 2010	DBS&A on behalf of GEA submits a Sump Investigation Work Plan related to the GEA manufacturing facility closure
January 26, 2011	GEA letter to EPA - response to recommendations in the Fourth FYR
March 9, 2011	GEA submits Chemical Injection Remediation Program Final Report and Request to Close North and South Plant 83
March 16, 2011	GEA submits additional responses to recommendations in the Fourth FYR
March 23, 2011	EPA letter to GEA - acknowledging GEA has addressed all recommendations pertaining to GEA in the Fourth FYR
May 9, 2011	GEA letter to EPA - request to abandon wells and close North Plant 83 Shallow Zone System
May 31, 2011	EPA letter to GEA - approves the request to abandon wells and close the North Plant 83 shallow zone system
August 4, 2011	DBS&A on behalf of GEA submits Sump Inspection and Investigation Report
October 12, 2011	GEA submits Work Plan for Remediation of Hazardous Materials East and West Tank Line Area
October 19, 2011	GEA letter to EPA outlining groundwater sampling in the east west tank line area
October 21, 2011	EPA letter to GEA approving Work Plan for Remediation of Hazardous Materials East and West Tank Line
October 25, 2011	EPA letter approves groundwater sampling in the east west tank line area.
November 1, 2011	GEA submits letter to EPA Final Report and Request for Closure North Plant 83 Shallow Zone
November 4, 2011	GEA submits East West Tank Line Ground Water Sampling and Flow Field Sampling Plan.

Date	Event
November 28, 2011	EPA letter to GEA - approval of Final Closure Report North Plant 83 Shallow Zone
June 18, 2012	DBS&A on behalf of GEA submits Final Report GEA Manufacturing Facility
August 15, 2012	GEA submits to EPA - report, requests closure of the South Plant 83 Shallow Zone
September 12, 2012	State of New Mexico Ground Water Discharge Plan Renewal (DP-1065) approved
October 17, 2012	GEA submits Revised Final Report GEA Manufacturing Facility.
November 2, 2012	EPA letter to GEA - approval of Final Closure GEA Manufacturing Facility
February 13, 2013	EPA letter to GEA - approval of closure of the South Plant 83 remediation system and other unused monitoring wells
May 28, 2013	GEA submits Final Report for Closure of the South Plant 83 Remediation System
April 1, 2014	GEA submits to EPA - Draft Declaration of Restrictive Covenants that outlines the Institutional Controls for the Former GEA Manufacturing Facility
April 16, 2014	Axis on behalf of GEA submits to EPA - the fourth revision of the Performance Monitoring Compliance Program.
August 25, 2014	Axis on behalf of GEA submits to EPA - Work Plan to Optimize the Deep Zone Remediation System, Operable Unit 06
August 27, 2014	EPA acknowledges Work Plan to Optimize Deep Zone Remediation System and has no further comments.
September 16, 2014	GEA files Declaration of Restrictive Covenants for the former GEA Manufacturing Facility with the Bernalillo County Clerk
September 22, 2014	GEA letter to EPA - Request for Closure Former Plant 83/GE Operable Unit 05
August 5, 2015	Sunport Blvd Public Hearing
February 22, 2016	GEA response to 5th FYR report issue concerning 1,1 DCA in Well P83-09U
April 7, 2017	GEA Request for Partial Delisting
April 11, 2017	Submittal of 2017 Remedial Action Report – San Jose 6 Operable Unit
June 5, 2017	EPA requesting comments to GEA Delisting Request
August 11, 2017	NMED Concurrence Letter to EPA for Delisting of OU 01, OU 02, and OU 05
October 23, 2017	Axis group notification of intention to modify Deep Zone groundwater remediation system extraction rates
October 30, 2017	EPA acknowledgment for request to modify extraction rates for the Deep Zone groundwater remediation system
January 17, 2018	EPA approval of the OU 02/ OU 05 remedial action report
May 25, 2018	Maps of South Valley NPL Site OU 01, OU 02, and OU 05, proposed for partial deletion
June 13, 2018	EPA Deletion Docket: South Valley Superfund Site
January 15, 2019	Letter from Mayor of Albuquerque, NM State Representative and NM State Senators – Partial Delisting of Superfund Site
March 5, 2019	EPA response to Mayor of Albuquerque, NM State Rep and NM State Senator letter
March 28, 2019	NMED response to NM State Rep and NM State Senator letter

Date	Event
May 2, 2019	GEA to EPA – Revised request to Plug and Abandon Monitoring Wells P-1, P-2 and P-3
June 6, 2019	Letter (Second) from NM State Representative and NM State Senators – Partial Delisting of Superfund Site
July 10, 2019	NMED letter to Esther Abeyta, NM State Representative and NM State Senators – Partial Delisting of OU 01, OU 02, and OU 05
July 15, 2019	EPA Re-opens Public Comment Period for Partial Delisting of OU 01, OU 02, and OU 05
July 19, 2019	EPA response (Second) to NM State Rep and NM State Senator letter
August 26, 2019	Letter (Third) from NM State Representative and NM State Senators – Partial Delisting of Superfund Site
September 6, 2019	EPA response (Third) to NM State Rep and NM State Senator letter
September 23, 2019	EPA Announces the Deletion of OU 01, OU 02, and OU 05 in Federal Register
July 14, 2022	GE requests to terminate DP-1065 (NMED)
November 29, 2022	NMED denies DP-1065 termination
June 14, 2023	Underground Injection Control General Discharge Permit is approved under DP-1065 (NMED)
January 29, 2024	EPA approved Request to remove Westbay™ Well 04 Screens 10, 11, 12
February 5, 2024	GE responds to EPA comments on Closure Plan
February 20, 2024	Unauthorized treated water discharge from a liner rip during well rehabilitation (NMED DP-1065) prompts investigation
February 22, 2024	Final OU6 Closure Plan approved
April 15, 2024	Unauthorized treated water discharge (NMED DP-1065) – Administrative Closure approved

Additional Hydrology Site Information

Shallow Zone Aquifer

By convention, the shallow zone aquifer refers to groundwater that is above the relatively continuous silty clay layer and/or above an elevation of 4,900 feet (ft) above mean sea level (amsl). In the North Plant 83 Area, there is a continuous silty clay layer underneath the aquifer. Accordingly, the shallow zone aquifer groundwater is primarily perched. Perched groundwater does not have a uniform flow direction, but rather flows in directions dictated by the undulating surface of the underlying silty clay layer. In the South Plant 83 Area, the silty clay layer underneath the aquifer is not continuous. Hence, the groundwater generally flows west to east. The shallow zone formation consists of layers of coarse-grained sands, silty sands, clays, and silty clays. This shallow zone aquifer generally extends to a depth of approximately 20-25 ft below ground surface (bgs). The shallow zone formation is underlain by a relatively continuous silty clay layer, except at the south end of South Plant 83 where it is absent or does not provide hydraulic separation from the deep zone aquifer.

Deep Zone Aquifer

By convention, the deep zone aquifer refers to the aquifer below an elevation of 4,900 ft amsl. The following text summarily describes the deep zone aquifer geology. The geology consists of unconsolidated alluvial units of the older Santa Fe Group. These sediments (down to approximately 4,300 ft amsl) are primarily ancestral Rio Grande-related, braided fluvial deposits and contain lenticular deposits of finer grained, relatively lower conductivity sands, silts, and clays. Sediments within the upper 600-700 ft of the deep zone aquifer (the area where groundwater is being remediated) are characterized by high proportions of sands and gravels that form extensive and locally high conductivity units across the site. Discontinuous silts and clays are present within this interval, and may limit the downward rate of contaminant movement in the vertical direction. Note that these silts and clays form confining layers in upper portions of the aquifer, but these confining layers are not laterally extensive. There is no evidence of a laterally extensive confining layer east of the Albuquerque Metropolitan Arroyo and Flood Control Authority (AMAFCA) South Diversion Channel, in the area of interest.

OU 03 GEA Volatile Organic Compounds Groundwater Plume Status of Implementation and 2004 – 2014 History of 1,4-Dioxane

OU 03

Although the ROD for OU 03 required the implementation of a groundwater remedy, Univar enhanced the effectiveness of the groundwater remediation system for OU 03 by installing a soil vapor extraction system (VES) to address vadose zone contamination.

The original design of the recovery well system was based on modeling of different groundwater remediation scenarios. Groundwater extraction wells RW-01, RW-02, RW-03, and RW-04 were installed in October and November 1989 at the locations shown on **Figure C-2, Appendix C**. These recovery wells were completed at depths of 155, 166, 180, and 200 ft bgs, respectively, in the intermediate aquifer.

The operating requirements for the remedial system were identified during development of the ARARs as part of the remedial investigation and feasibility study (RI/FS). The cleanup goals for the groundwater impacted by site-related VOCs are defined as the EPA's MCL and NMWQCC standards (**Appendix C, Table C-2**). The groundwater and air discharge concentrations from the treatment unit are to meet the groundwater discharge criteria specified by the NMWQCC and the air discharge criteria specified by the Albuquerque Environmental Health Department.

The VES was originally installed to address contamination in the vadose zone (OU 04) at the Edmunds Street Source Control and to improve the removal of VOCs from the groundwater, although it was not required by the ROD. The VES consists of a self-contained extraction blower, vapor-liquid separator (knockout pot), controls, valves, and piping. The system had a maximum throughput of approximately 450 standard cubic feet per minute and was located inside of a wheel-mounted trailer located in the southeast corner of the Univar property. Further details on the testing and operation of this system are provided in the Third FYR report. The VES was turned off after cleanup goals were achieved on September 29, 2006.

Approximately 850 million gallons of groundwater were treated from June 4, 1990 to April 30, 2006. The groundwater remedial system was shut off on November 3, 2006. Subsequent compliance monitoring showed that the groundwater and vapor extraction systems reduced the dissolved chlorinated VOC concentrations to levels below ARARs as defined in the ROD. On June 10, 2014, EPA approved Univar's request for a partial closure of OU 03 for VOCs.

Remedy Operation and Maintenance at OU 03

On June 10, 2014, EPA approved Univar's request to close OU 03 for VOC's only. During this FYR period, O&M activities targeted 1,4-dioxane contamination.

VOC's

The groundwater treatment system for OU 03 began operation June 4, 1990. Long-term Operations and Maintenance (O&M) of the remedial system had been conducted since system startup in January 1991 through November 2006. All routine O&M of the remedial system was performed as specified in the RAP. Monitoring of the groundwater remedial system during the sixteenth year of operation (September 1990 through May 2006) was conducted to assess the overall effectiveness of the treatment unit and as specified

in RAP. The combined remedial system includes the recovery wells, groundwater treatment unit, infiltration gallery, VES, and associated equipment.

On September 7, 2006, ARCADIS submitted, on behalf of Univar, a work plan to optimize remedial activities as only PCE was being detected at maximum concentrations of 12 µg/L (MCL of 5 µg/L). In addition, the remedial system had reached an asymptotic recovery rate of less than 1 pound of VOC's per year. EPA approved the work plan which consisted of shutting down the groundwater remediation system and the VES the week of November 3, 2006 and continue semi-annual groundwater monitoring. On January 30, 2008, EPA and NMED approved revisions to the RA's which kept the remedial systems turned off and continued groundwater measurements and sampling to monitor VOC levels. Subsequent groundwater monitoring showed that the groundwater remediation system and the VES reduced the chlorinated VOC concentrations to levels below ARARs.

1,4-Dioxane

On June 16, 2004, EPA requested that Univar sample and analyze groundwater for 1,4-dioxane to determine if the compound was present. On November 19, 2009, following several years of monitoring, EPA notified Univar that they are required to sample for 1,4-dioxane, a probable human carcinogen, as part of the groundwater monitoring program pursuant to Section XVI(D) of the Univar Consent Decree. Univar was to evaluate the occurrence of 1,4-dioxane and determine if it poses a threat to human health and the environment. On January 7, 2010, Univar submitted a work plan to further evaluate the presents of 1,4-dioxane in groundwater, develop a conceptual site model (CSM), conduct a risk assessment, and propose a schedule to perform groundwater sampling from 24 wells previously used for the treatment and extraction of VOC's. On January 14, 2010, EPA approved Univar's recommended approach to further investigation of 1,4-dioxane as COC.

On March 18, 2014, EPA approved a Human Health Risk Evaluation (HHRE) submitted by Univar that evaluated potential human health risks and defined site-specific, risk-based cleanup goals. In addition, Univar evaluated the monitoring well network and submitted a work plan for the installation of additional monitoring wells to aid in the delineation and to monitor the migration of 1,4-dioxane impacted groundwater.

APPENDIX C – TABLES AND FIGURES

Table C-1: Operable Units Summary for South Valley Superfund Site, Albuquerque, Bernalillo County, New Mexico.

Operating Unit	Issue	Remedial Action	Current Status	Proposed Action
OU 01	Municipal wells contaminated with volatile organic compounds (VOCs)	Wells were plugged and abandoned, a replacement well installed	Completed in 1987	Deleted from Site on September 23, 2019
OU 02	Remedial goal to eliminate/prevent migration of contaminants from shallow to intermediate aquifers	Wells were plugged and abandoned, new and replacement well installed; restrict groundwater use; groundwater monitoring	Completed in 2019	Deleted from Site on September 23, 2019
OU 03	Reduce groundwater related VOCs to acceptable levels	Pump-treat-injection system	EPA approved partial completion for VOCs; Continue pump-treat-injection system for 1,4-dioxane	Continue pump-treat-injection system for 1,4-dioxane
OU 04	Soil vadose zone investigation for potential solvent contamination	Investigation found no evidence of contamination	Completed in 1988	ROD specified No Further Action. A formal request for the deletion of OU 04 was submitted on February 17, 2023, but this has not been formally approved.
OU 05	Remediating shallow zone groundwater and eliminating source materials	Pump-treat-injection system, enhanced dewatering, soil flushing, and soil vapor extraction	Completed in 2014	Deleted from Site on September 23, 2019
OU 06	Hydraulically contain plume to protect water supply wells and reduce the concentrations of VOCs to acceptable levels	Pump-treat-injection system	Continue pump-treat-injection system	Continue pump-treat-injection system for Site related VOCs

Table C-5: Comparison of OU 03 ARARS to Current Standards for Drinking and Ground Water, South Valley Superfund Site, Albuquerque, Bernalillo County, New Mexico.

Contaminant of Concern	Cleanup Goal from ROD or ESD Micrograms per Liter (µg/L)		Current Standards*** (µg/L)	
	Concentration	Source	MCL	NMWQCC (12/8/2018)
Acetone	NS**	NS	NS	NS
Carbon tetrachloride	5	MCL	5	5
Chloroform	100	NMWQCC	NS	100
1,2-dichloroethane	5	MCL	5	5
Trans-1,2-dichloroethene	70	MCL	100	100
1,1-dichloroethene	5	NMWQCC	7	7
Methylene chloride	100	NMWQCC	NS	5
Tetrachloroethene	5*	MCL	5	5
1,1,1-trichloroethene	60	NMWQCC	200	200
Trichloroethene	5	MCL	5	5
1,4-Dioxane (Offsite)	6.7^	HHRE****	4.6^	4.6^
1,4-Dioxane (Onsite)	29	HHRE****	NS	NS

* The initial ARAR for tetrachloroethene was set as 20 µg/L, based on NMWQCC standards (based on New Mexico Administrative Code, various dates); this ARAR was modified in a 2006 Explanation of Significant Differences (EPA 2006a) to reflect the MCL of 5 µg/L promulgated in 1992.

** No Standard

*** NMWQCC standards effective December 21, 2018.

**** Human Health Risk Evaluation completed by Univar USA, Inc., March 6, 2014.

^ The initial ARAR for off-site 1,4-dioxane was 6.7 µg/L, but was updated on October 12, 2023 to be 4.6 µg/L after the EPA revised the Regional Screening Level.

Table C-6: Comparison of OU 02, 05 and 06 ARARS to Current Standards for Drinking and Ground Water, South Valley Superfund Site, Albuquerque, Bernalillo County, New Mexico.

Contaminant of Concern	Cleanup Goal Micrograms per Liter (µg/L)	Current Standards (µg/L)	
		MCL	NMWQCC***
1,1,1-Trichloroethane	60	200	200
1,1,2,2-Tetrachloroethane	10	--	10
1,1,2-Trichloroethane	5	5	5
1,1-Dichloroethane	25	--	25
1,1-Dichloroethene	5	7	7
1,2-Dichloroethane	5	5	5
1,2-Dichloropropane	5	5	5
Benzene	5	5	5
Bromoform	80	80*	--
Carbon tetrachloride	5	5	5
Chlorobenzene	80	100	--
Chloroform	80	80*	100
Chloromethane	2,300,000	--	--
Dibromochloromethane	80	80*	--
Dichlorobromomethane	80	80*	--
Ethylbenzene	700	700	700
Ethylene dibromide	0.05	0.05	0.05
Methyl tertiary butyl ether	100	--	100
Methylene chloride	5	5	5
Tetrachloroethene	5**	5	5
Toluene	750	1,000	1000
<i>trans</i> -1,2-Dichloroethene	100	100	100
Trichloroethene	5	5	5
Vinyl chloride	1	2	2
Xylenes (total)	620	10,000	620

* 80 micrograms per liter is the MCL for Total trihalomethanes.

** The initial ARAR for tetrachloroethene was set as 20 µg/L, based on NMWQCC standards (based on New Mexico Administrative Code, various dates); this ARAR was modified in a 2006 Explanation of Significant Differences (EPA 2006a) to reflect the MCL of 5 µg/L promulgated in 1992.

Note: Dashes (--) indicate no drinking water or groundwater standard.

*** NMWQCC standards effective December 21, 2018

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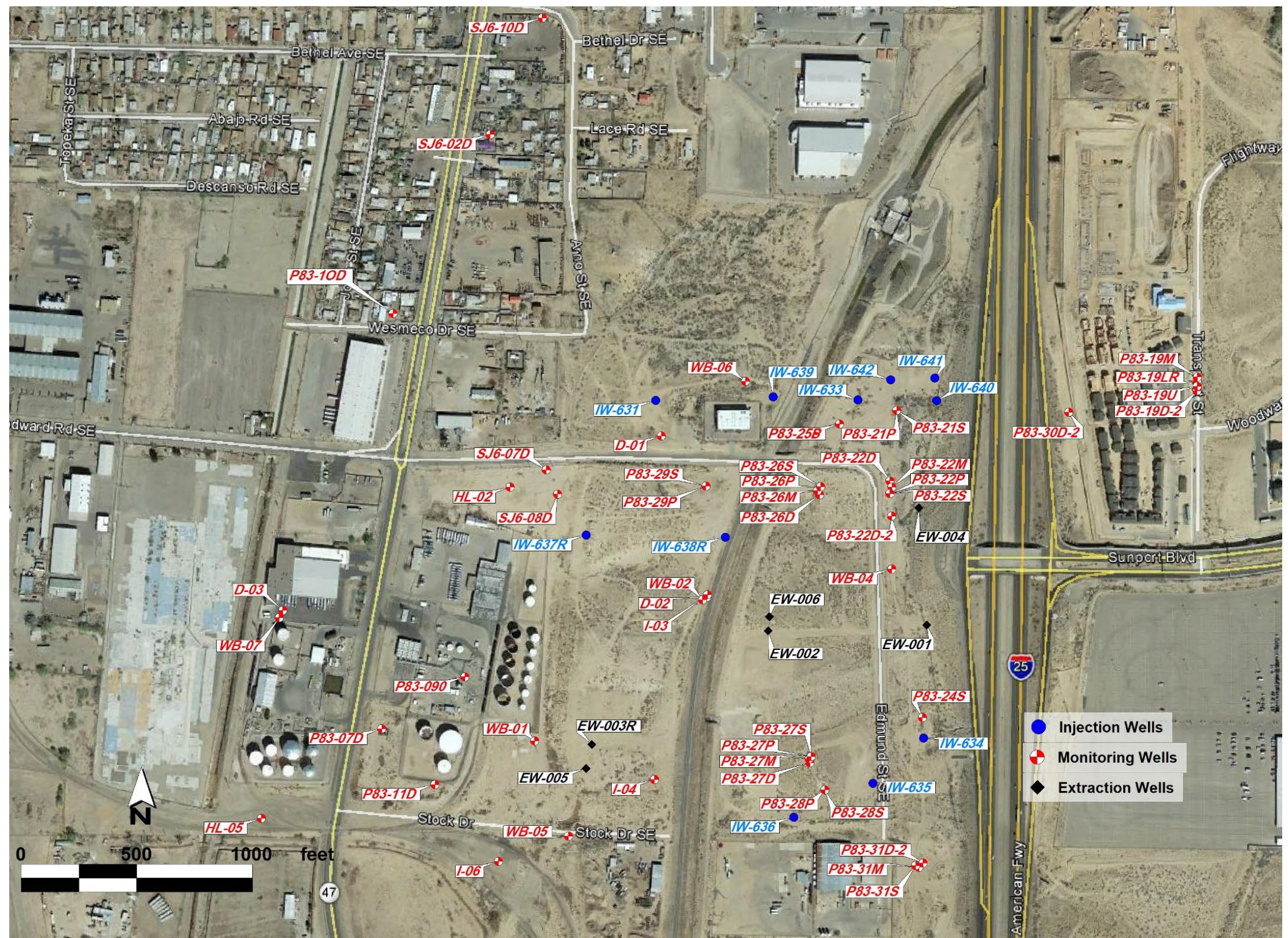
Figure C-1: Operable Units OU 02, OU 03, OU 04, OU 05, and OU 06, South Valley Superfund Site, Albuquerque, Bernalillo County, New Mexico



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Figure C-3: GEA Well Locations for Deep Zone Remediation System (OU 06), South Valley Superfund Site, Albuquerque, Bernalillo County, New Mexico



LEGEND

- BUILDING
- FENCE
- RAILROAD TRACKS
- INFILTRATION GALLERY
- NON-UNIVAR MONITORING WELL
- SHALLOW INJECTION WELL
- RECOVERY WELL LOCATION AND DESIGNATION (GREEN = ACTIVE)
- SHALLOW MONITORING WELL
- DEEP MONITORING WELL
- VAPOR EXTRACTION WELL
- USEPA (UNITED STATES ENVIRONMENTAL PROTECTION AGENCY) SHALLOW MONITORING WELL

DATA TABLES (Concentrations in ug/L):

Well ID	2016-01	2017-04	2018-05	2018-10	2019-04
GM-10	<2.0	NS	NS	NS	NS
GM-01	<2.0	NS	NS	NS	NS
GM-13	5.4	NS	NS	NS	NS
A-01**	<2.0	1.1	1.3	1.8	1.0
GM-02	<3.6 U	2.7	1.2	<1.0	<1.0
GM-06	3.0	NS	NS	NS	NS
GM-05	8.2	NS	NS	NS	NS
GM-19	<2.0	NS	NS	NS	NS
GM-04	<2.0	NS	NS	NS	NS
GM-20	4.2	NS	NS	NS	NS
GM-08	16.5	NS	NS	NS	NS
GM-09S	65.4	11.0 U	3.2	<1.0	43.3
GM-26	6.7	1.0	1.5	<1.0	1.3
GM-25	3.6	3.9	2.5	2.5	4.0
RW-01	6.4	NS	NS	NS	NS
GM-27	160	102	4.3	9.3	24.9
GM-21	143	98.5	<1.0 U	8.4	<1.0
RW-06	NS	3.4	7.8	10.7	10.8
GM-22R	<2.0	NS	NS	NS	NS
I-01	3.4	2.8	3.1	5.6	3.6
RW-02	<2.3 U	1.1	<1.0 U	1.3	1.3
RW-03	2.1	NS	NS	NS	NS
GM-11S	13.0	6.1	1.5	<1.0	1.9
RW-05	NS	7.7	3.9	5.1	3.7
GM-14S	<2.0	1.1	<1.0 U	<1.0	2.6
GM-15S	13.4	18.3	<1.0 U	<1.0	4.4
RW-04	2.6	2.2	5.2	3.1	2.2
GM-29	23.6	17.7	10.1	<1.0	8.7
GM-30	3.4	8.2	6.5	6.5	5.3

NOTE: SAMPLE COLLECTED BY LOW FLOW SAMPLING METHODS UNLESS NOTED DIFFERENTLY BY A * OR #.

NOTE: SAMPLE COLLECTED BY HYDRASLEEVE

NOTE: SAMPLE COLLECTED FROM OPERATING EXTRACTION PUMP

NOTE: NS NOT SAMPLED

NOTE: THE COMPOUND WAS POSITIVELY IDENTIFIED; HOWEVER, THE ASSOCIATED NUMERICAL VALUE IS AN ESTIMATED CONCENTRATION ONLY

NOTE: CONSIDERED NON-DETECT AT MEASURED CONCENTRATION DUE TO BLANK CONTAMINATION

NOTE: CLEAN UP GOALS FOR 1,4-DIOXANE IN GROUNDWATER: 6.7 ug/L - OFF UNIVAR PROPERTY; 29 ug/L - ON UNIVAR PROPERTY

NOTE: SURVEY COORDINATES: NEW MEXICO STATE PLAINS CENTRAL ZONE, U.S. FOOT, NAD83 HORIZONTAL; NAVD83 VERTICAL

GRAPHIC SCALE: 0 150' 300'

UNIVAR USA INC.
3301 EDMUNDS STREET SITE
ALBUQUERQUE, NEW MEXICO
2019 ANNUAL REMEDIATION REPORT
DISTRIBUTION OF 1,4-DIOXANE
IN THE SHALLOW AQUIFER -
JANUARY 2016 THROUGH APRIL 2019
FIGURE 4

Figure C-5: Univar Potentiometric Surface Elevation – April 3, 2018, South Valley Superfund Site, Albuquerque, Bernalillo County, New Mexico

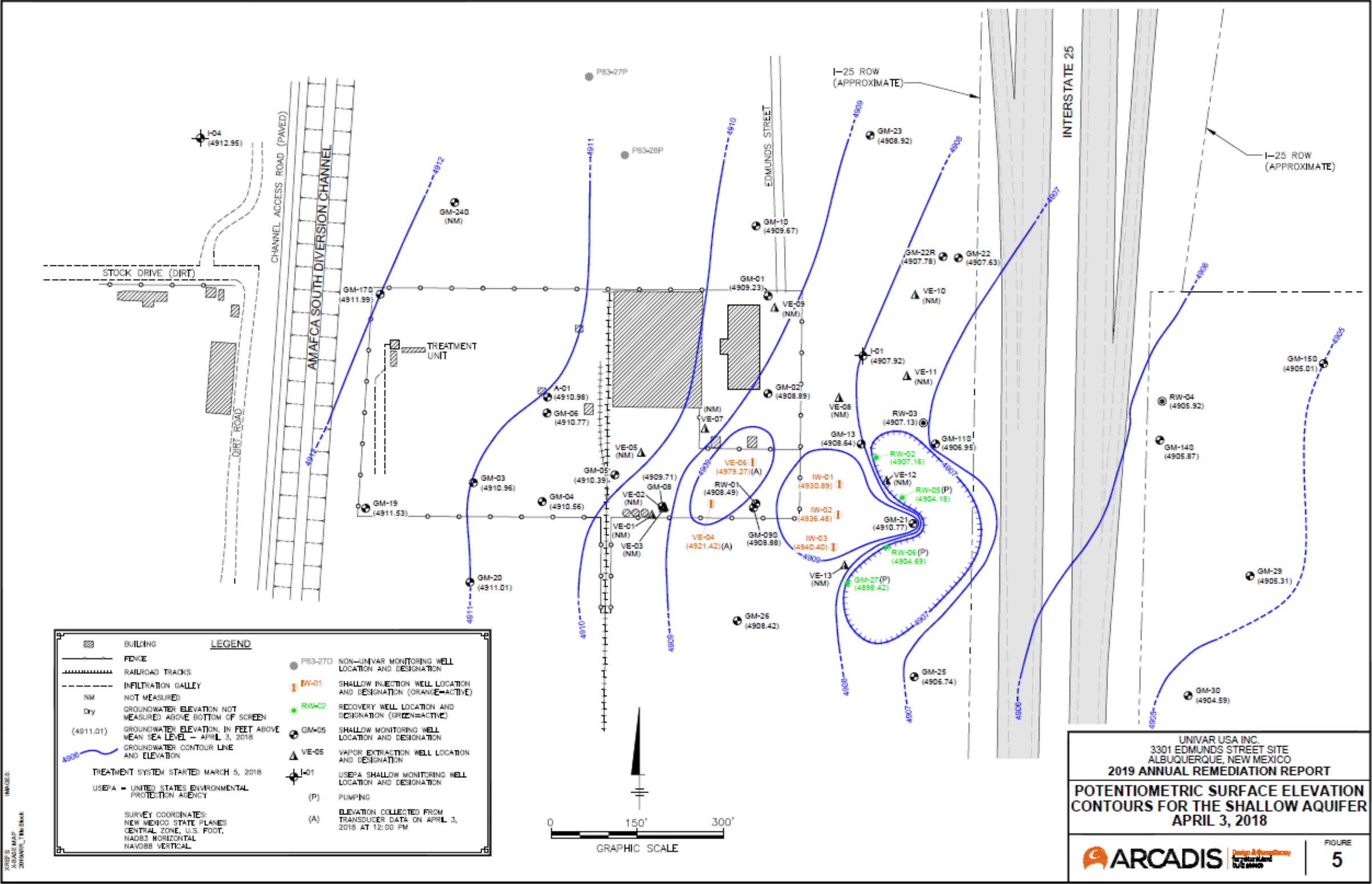


Figure C-6: Univar Potentiometric Surface Elevation – May 14, 2018, South Valley Superfund Site, Albuquerque, Bernalillo County, New Mexico

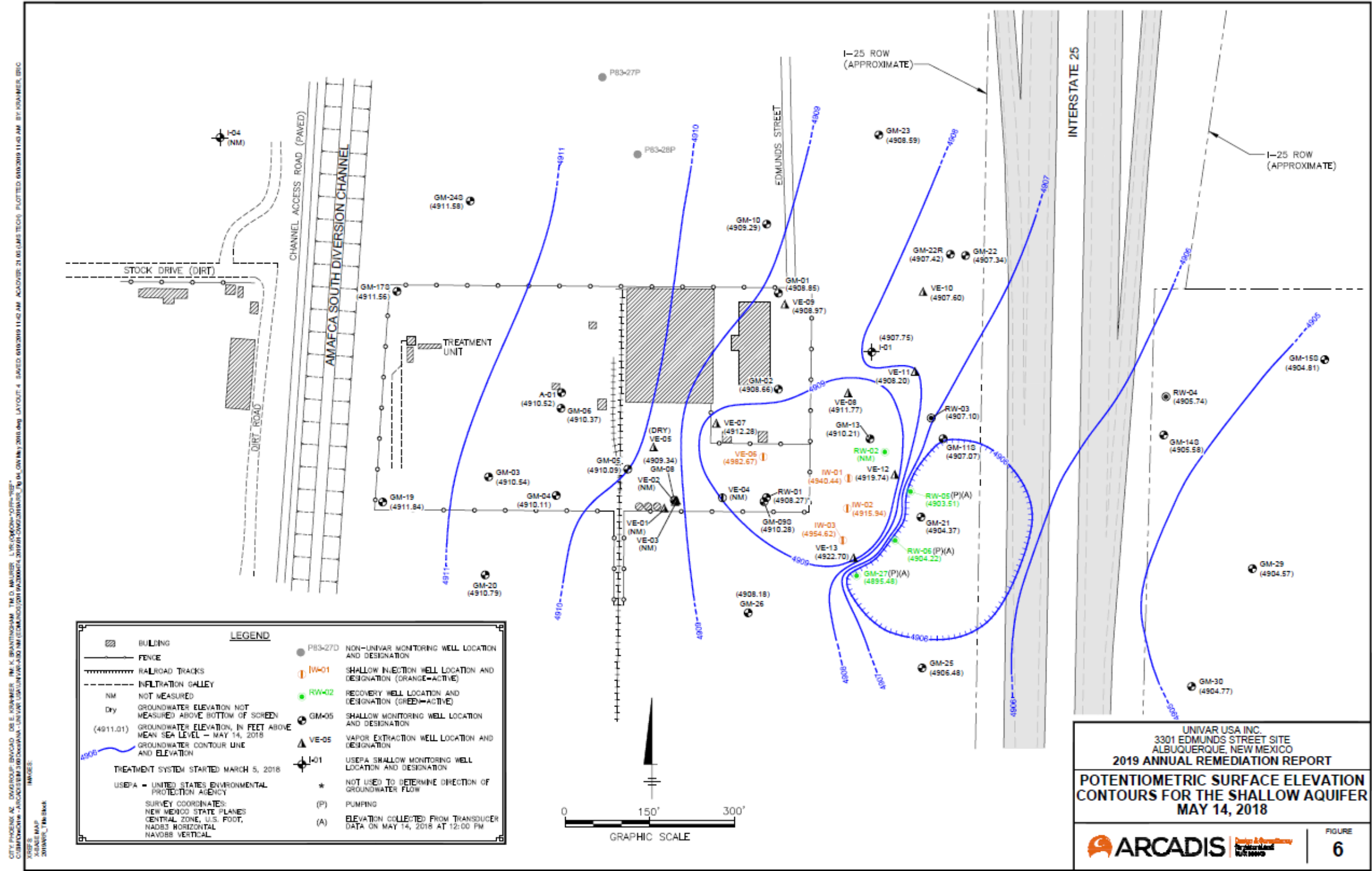


Figure C-7: Univar Potentiometric Surface Elevation – August 23, 2018, South Valley Superfund Site, Albuquerque, Bernalillo County, New Mexico

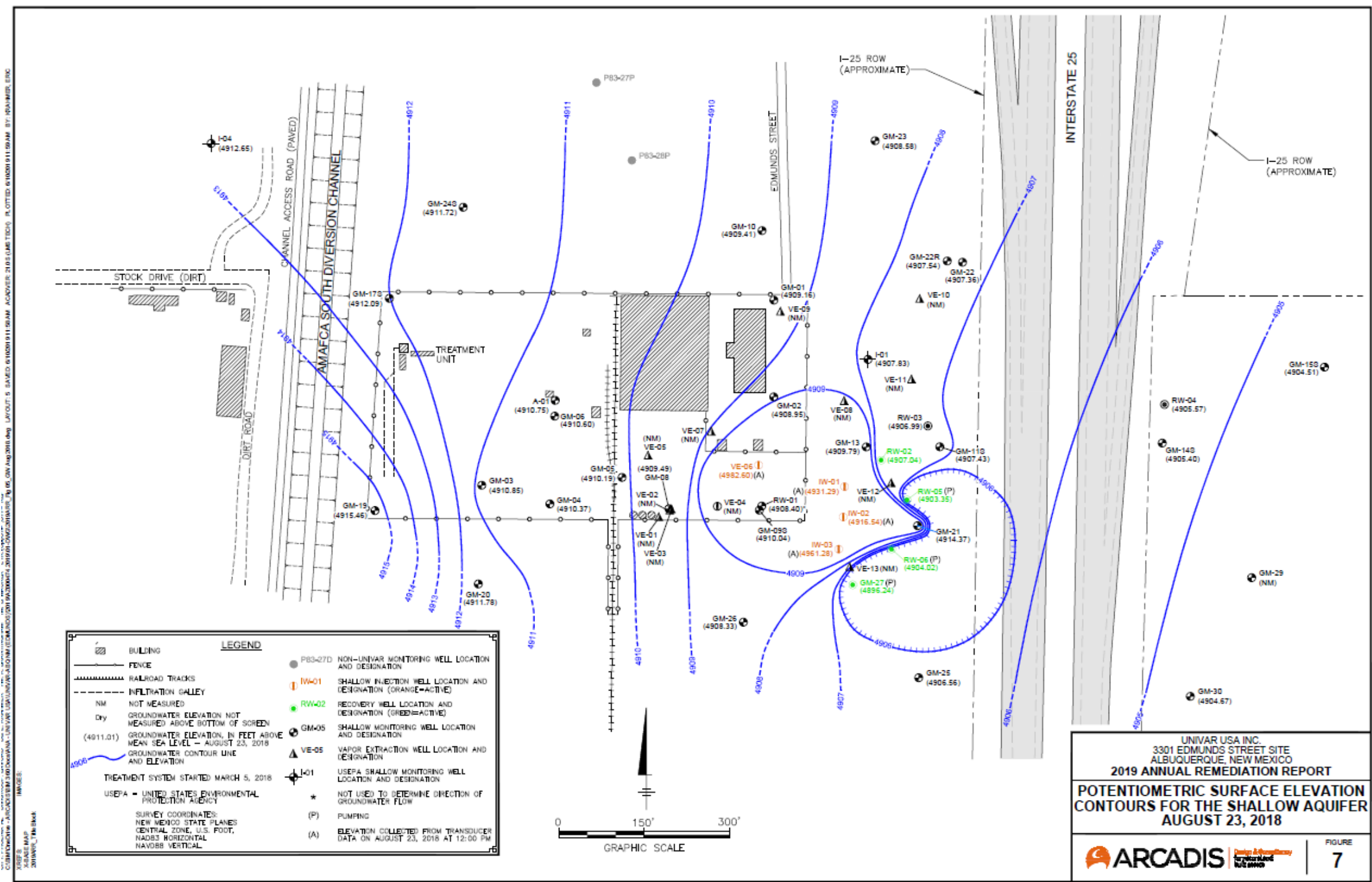


Figure C-8: Univar Potentiometric Surface Elevation – October 4, 2018, South Valley Superfund Site, Albuquerque, Bernalillo County, New Mexico

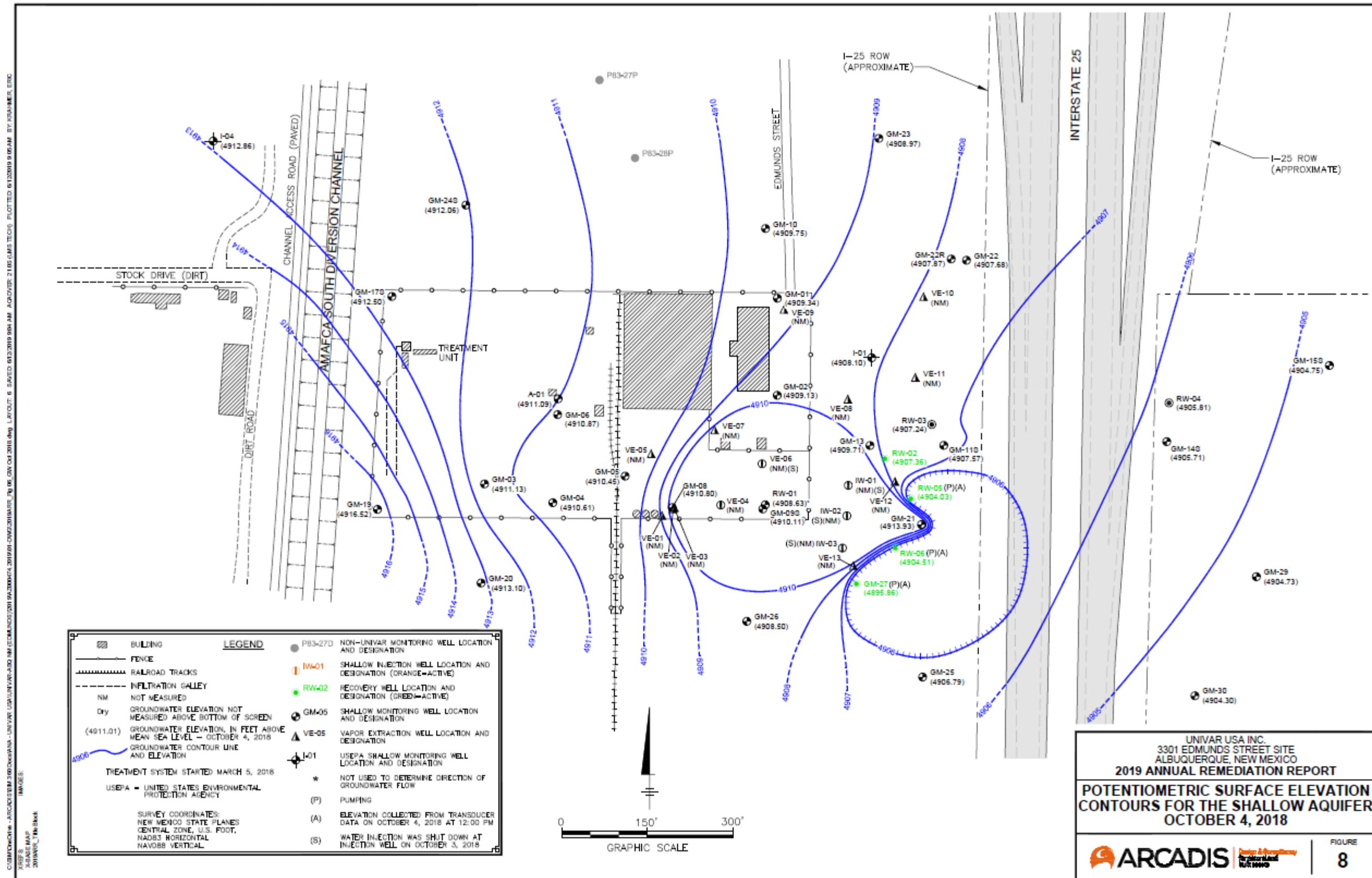


Figure C-9: Univar Potentiometric Surface Elevation – November 6, 2018, South Valley Superfund Site, Albuquerque, Bernalillo County, New Mexico

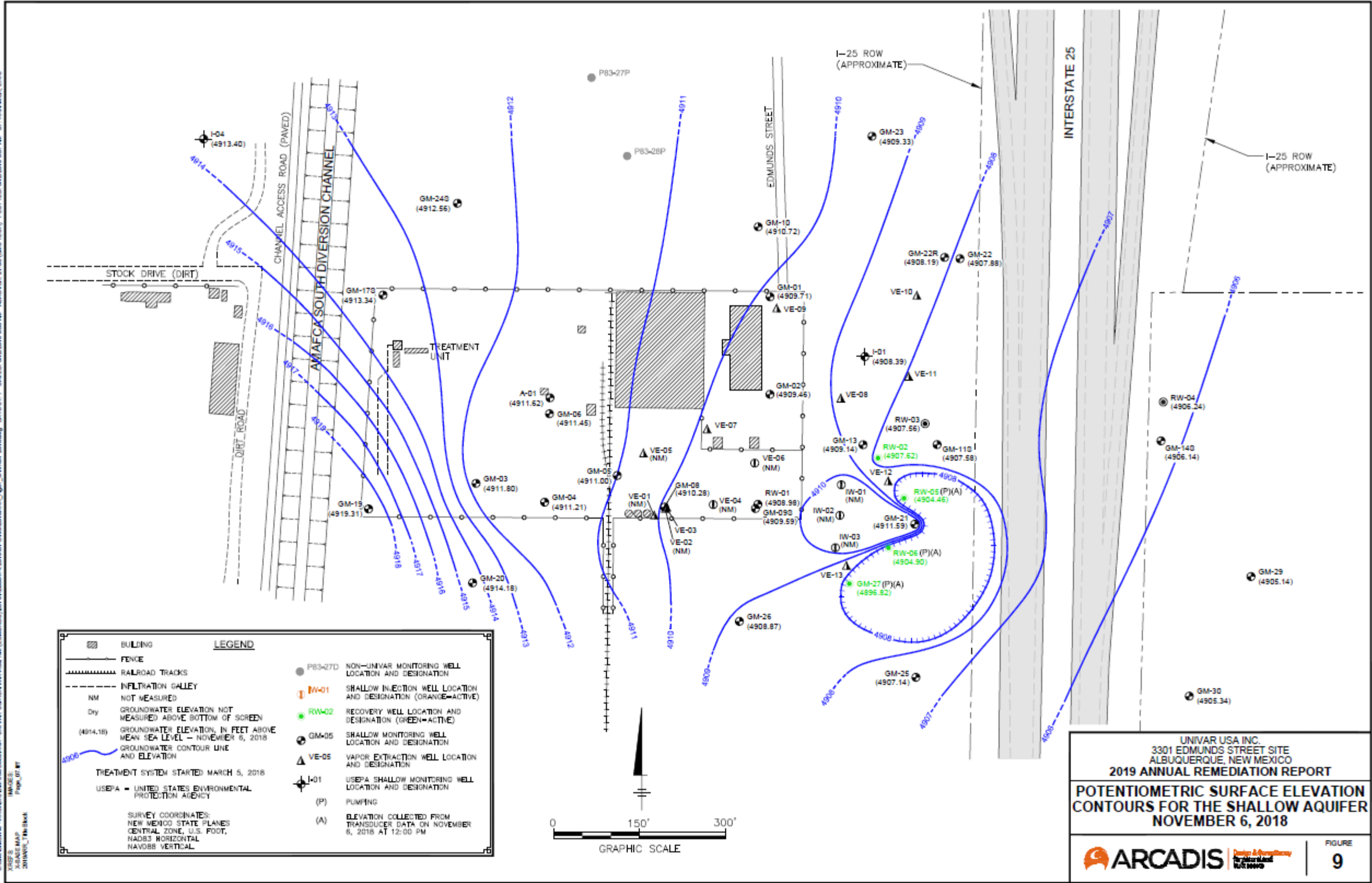
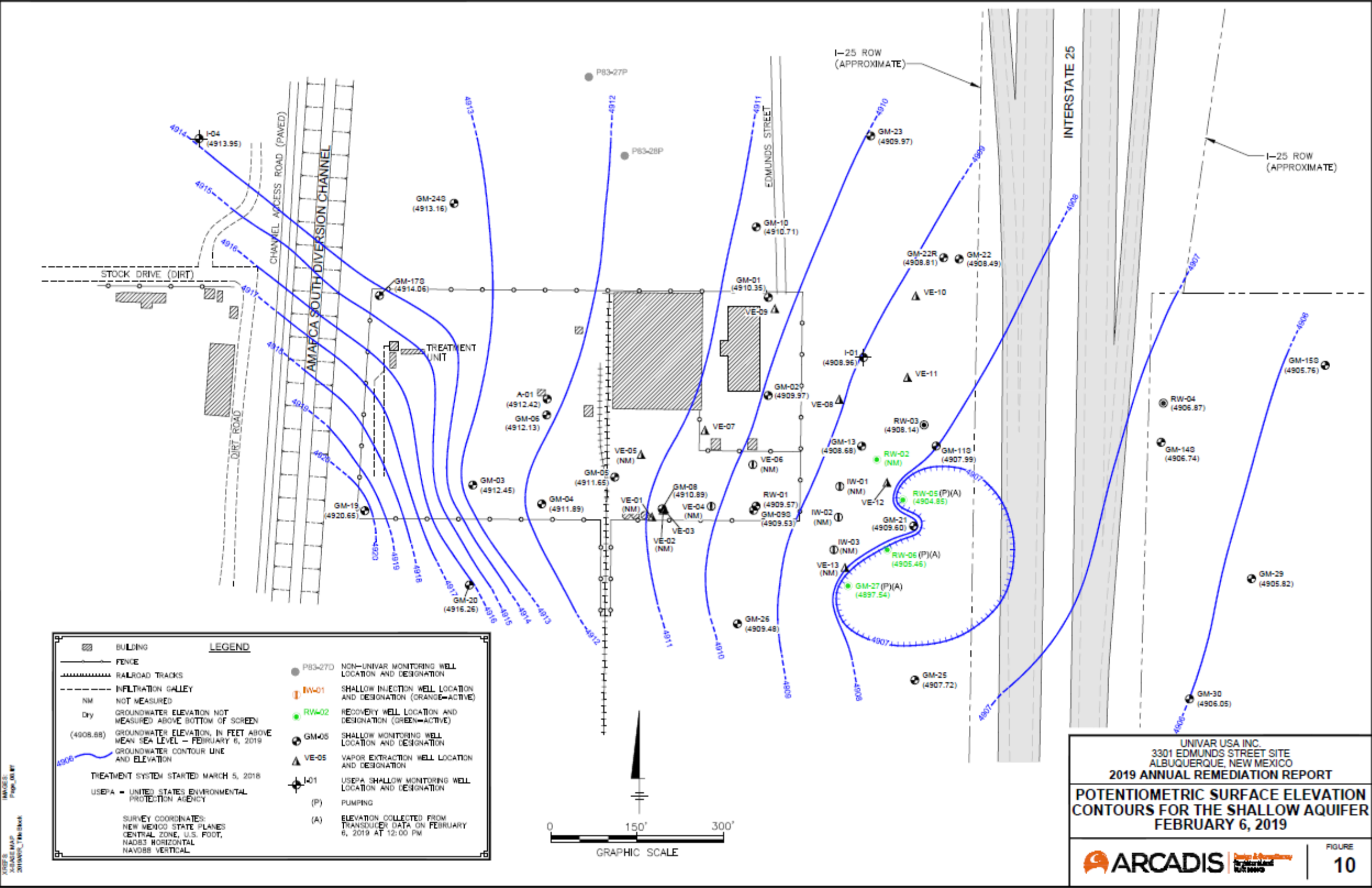


Figure C-10: Univar Potentiometric Surface Elevation – February 6, 2019, South Valley Superfund Site, Albuquerque, Bernalillo County, New Mexico



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APPENDIX D – INTERVIEWS

INTERVIEW RECORD

Site Details		
Name: South Valley Superfund Site	EPA ID: NMD980745558	Subject: Eighth Five-Year Review
Interviewer		
Name: Caitlyn Hall	Title: Water Resources Professional III	Affiliation: New Mexico Environment Dept.
Individual Contacted		
Name: Genevieve Chavez Mitchell	Title: President	Affiliation: Mountain View Neighborhood Association
Phone Number: +1 575-649-5479	Email Address: mvnassoc@gmail.com	
Interview Details		
Interview Format: In Person	Interview Location: Mountain View Neighborhood	Interview Category: Resident
Interview Date: September 30, 2024	Interview Time: 13:00	

Questionnaire:

1. What is your overall impression of the project?
2. What effects have site operations had on the surrounding community?
3. Are you aware of any community concerns regarding the site or its operation and administration?
If so, please give details.

First, the community feels disconnected from the communication process. Although the site is still active, there is uncertainty about how to access timely and relevant information. Current communication channels are ineffective, as updates are often posted on a website without proper notice or clarity regarding their importance or purpose. This lack of proactive engagement leaves community members uninformed.

Second, there is significant concern over the current condition of the landscape, which appears desolate and resembles a contaminated site. There has been no clear communication or discussion about the rehabilitation of the area, specifically whether there are plans to restore plant life or improve the overall condition. Additionally, community members are anxious about the long-term future of the site. They have questions about whether the land will be sold, what the closure plans entail, and if any structures will remain after operations cease. These uncertainties extend beyond just the cessation of monitoring, raising broader concerns about the site's eventual closure and its impact on the surrounding area.

In addition, the community has expressed concerns about the monitoring of wells at the site. They are unsure about how the wells are being monitored, who is responsible for overseeing the process, and what the monitoring procedures entail. There is a lack of clarity regarding how compliance with environmental standards is being enforced and what measures are in place to ensure that the monitoring is conducted thoroughly and transparently.

Providing more detailed information about the well monitoring process, including the roles of responsible parties, the frequency and methods of monitoring, and how compliance is verified, would help to alleviate these concerns and build trust within the community.

- 4. Are you aware of any events, incidents, or activities at the site such as vandalism, trespassing, or emergency responses from local authorities? If so, please give details.**

No

- 5. Do you have any comments, suggestions, or recommendations regarding the site's management or operation?**

The EPA and NMED should take a more proactive approach to community engagement. This could include working closely with neighborhood associations and other active community groups to identify effective ways to communicate with and involve the local population. This approach would foster a more inclusive and accessible dialogue about the site.

While meetings are valuable, providing written fact sheets and summaries that are easily digestible by a general audience would be highly beneficial. These materials should be posted online and shared with the community to ensure that all stakeholders, including those unable to attend meetings, are informed and on the same page. Relying on word of mouth alone is insufficient for distributing accurate and comprehensive information.

It's important to coordinate communication between different ongoing environmental projects in the area. While the focus here is on the South Valley Superfund site, the community is also affected by other nearby sites, and it can be confusing for them to separate activities related to each. From a lived experience perspective, the community does not experience these sites in isolation, so a more integrated approach to communication would help them better understand what is happening across the region.

- 6. Do you consent to have your name included along with your responses to this questionnaire in the five-year review report?**

Yes

INTERVIEW RECORD

Site Details		
Name: South Valley Superfund Site	EPA ID: NMD980745558	Subject: Eighth Five-Year Review
Interviewer		
Name: Caitlyn Hall	Title: Water Resources Professional III	Affiliation: New Mexico Environment Dept.
Individual Contacted		
Name: Kelsey Bicknell	Title: Environmental Manager	Affiliation: Albuquerque Bernalillo County Water Utility Authority
Phone Number: 505-289-3009	Email Address: kbicknell@abcwua.org	
Interview Details		
Interview Format: Other	Interview Location: Microsoft Teams	Interview Category: Local Agency
Interview Date: October 8, 2024	Interview Time: 14:00	

Questionnaire:

1. What is your overall impression of the project?

Overall, the project has made notable progress, especially given the size of the contamination plume and the various sites contributing to the Superfund. However, there are several concerns that suggest areas for improvement. One major issue is the shifting groundwater levels across Albuquerque, which have moved contaminants from the vadose zone into the groundwater. This raises questions about whether some of the previously closed operating units (OUs) were closed prematurely, potentially allowing contamination to persist.

Regarding OU5, there are concerns about the presence of 1,4-dioxane, as the same treatments were used, and it's unclear whether they effectively addressed this contaminant. Additionally, the community has not received any updates about OU4, and there is confusion regarding the differences between Univar and GE as responsible parties.

Another issue is that the closure plan was not shared with the Albuquerque Water Utility Authority (ABQWUA) for review and comment, leading to communication challenges and missed opportunities for local input.

In the case of OU6, some monitoring wells continue to detect contaminants, though the levels are below threshold limits. Despite this, there is concern that the closure was too hasty, as contaminants are still present in the groundwater. More clarity is needed on long-term assurances for remediation and how continued monitoring will be handled to ensure the site's safety.

2. What effects have site operations had on the surrounding community?

The site operations have had several significant effects on the surrounding community. One major impact has been the need to shut down groundwater wells, reducing the community's access to water. This has created ongoing concerns, particularly as the community expresses a desire to reclaim historical ownership of the land. While land ownership presents legal and logistical challenges, this remains a deeply rooted historical issue.

Additionally, the contamination of the site severely limits its potential use, restricting opportunities for community benefits. There is uncertainty about what can be done with the land, as the contamination and associated restrictions make it unclear how the site could be repurposed in a way that would genuinely benefit the community. There is also concern that future land use could lead to more industrial activity that may not align with the community's needs or interests. However, it is currently unknown what specific outcomes the community desires for this land.

This issue is further complicated by the fact that it is one of several contaminated sites in the area, making it difficult for the community to disentangle the impacts of each site.

For ABQWUA, site operations have made it challenging to install new drinking water wells, limiting their ability to utilize the aquifer. Even though the contamination may be below certain remedial levels, the groundwater quality has not been fully restored, leaving the water unusable for drinking purposes. This ongoing contamination continues to hinder the community's access to local water resources.

**3. Are you aware of any community concerns regarding the site or its operation and administration?
If so, please give details.**

The public meeting clearly shows that the community views this as an environmental justice issue. Many are concerned that the actions taken at the site are not sufficiently protective of human health, and they feel that the site closure process is being rushed. There is a lack of clarity around what is happening with the closure and the long-term plans for the site. The community believes there has not been enough transparency regarding both the operation and the closure process.

Additionally, there is strong community opposition to using Monitored Natural Attenuation as a remediation strategy, as the community perceives this approach as too passive and insufficient to protect human health.

The community also raised concerns about the lack of follow-through on a commitment by the EPA to involve Environmental Justice coordinators at this site. It is unclear if this engagement has occurred, and the community feels that their questions and concerns are not being adequately addressed, especially during the public comment period. There is a need for greater involvement and communication to ensure that the community's concerns are heard and addressed transparently.

4. Are you aware of any events, incidents, or activities at the site such as vandalism, trespassing, or emergency responses from local authorities? If so, please give details.

No.

5. Do you have any comments, suggestions, or recommendations regarding the site's management or operation?

First, there should be more frequent and transparent communication that aligns with the community's needs. The EPA website is currently outdated, with the last update in 2020, leaving the community and the Albuquerque Water Utility Authority (ABQWUA) without up-to-date information. Regular updates to the website would help ensure that all stakeholders remain informed.

Additionally, all major stakeholders, including the community and ABQWUA, should be involved in closure plans, key decision-making processes, and the dissemination of annual reports or updates, as they have not been adequately

included in these processes so far.

Another recommendation is to develop and regularly update a reference sheet that provides background information and details on current developments. This sheet should include clear visuals to help explain the status of different sites, reducing confusion for those unfamiliar with the technical details. Visual tools would be helpful in outlining the scope of each site. Lastly, it is suggested that presentations be made more accessible by avoiding overly technical language and ensuring that key information is not glossed over during public meetings or discussions.

6. Do you consent to have your name included along with your responses to this questionnaire in the five-year review report?

Yes

INTERVIEW RECORD

Site Details		
Name: South Valley Superfund Site	EPA ID: NMD980745558	Subject: Eighth Five-Year Review
Interviewer		
Name: Caitlyn Hall	Title: Water Resources Professional III	Affiliation: New Mexico Environment Dept.
Individual Contacted		
Name: Xavier Barraza	Title: Environmental and Economic Justice Coordinator	Affiliation: Los Jardines Institute
Phone Number: N/A	Email Address: justice@losjardinesinstitute.org	
Interview Details		
Interview Format: Other	Interview Location: Microsoft Teams	Interview Category: Other
Interview Date: October 7, 2024	Interview Time: 08:00	

Questionnaire:

1. What is your overall impression of the project?

From the perspective of the community, particularly Los Jardines, this Superfund site exemplifies how the U.S. has historically worked in lockstep with industry, often neglecting to prioritize environmental cleanup. Los Jardines acknowledges the efforts of the EPA and NMED, but only when their actions have aligned with community values. Unfortunately, there have been instances where these agencies have not engaged with the community in a meaningful and intentional way, leaving much to be desired.

The community feels that the site has dramatically altered their landscape, pointing to the loss of acequias on the east side as a significant example. While they recognize that the environmental destruction was not solely the fault of GE and Univar, but also involved the military base and Atomic Energy Commission, they believe this site played a major role in the degradation of their environment.

There is deep concern within the community regarding the premature removal of the site from the National Priorities List (NPL). They are particularly troubled that operating units are being removed while an unresolved Title XI complaint, filed in 2014, still exists. Additionally, two more Title XI complaints have been filed and are under EPA review, leaving the community feeling that their concerns are being ignored in favor of pushing ahead with closure.

Los Jardines also takes issue with the way the site has been described in the Public Involvement Plan (PIP) from February 2017, where section 2.2 labels the area as an “industrial” part of the city. They argue that while the area may be zoned industrial now, its historical use has been residential and agricultural. Referring to it as industrial diminishes the community's long-standing connection to the land and downplays the impact the contamination has had on the people living there.

2. What effects have site operations had on the surrounding community?

From the community's perspective, site operations have had significant environmental and health impacts on the surrounding area, and there are multiple reports that document these effects. Los Jardines, in particular, urges the EPA and NMED to review these reports, as they reflect the lived experiences of people living near the Superfund site. For example, the South Valley Partners for Environmental Justice found that the life expectancy in the South Valley is 7-12 years shorter than in other parts of Bernalillo County, based on a 2005-2007 study. This stark difference is a critical concern for the community.

Regarding specific site operations, the community has concerns about the packed aeration process used in certain operating units (OUs). There are lingering questions about whether there was a scrubber on the tower and whether other chemicals of concern, such as PFAS or microplastics, were tested for, as these could have been introduced through the contaminant processing. The community also worries that these chemicals may have leached back into the aquifer, potentially affecting local water quality.

Air quality and its subsequent potential impact on groundwater and community health is another major concern. The community is uncertain about the potential release of harmful chemicals into the air during the aeration process, and they have requested more information about the serial numbers and specifics of the units used. These issues, combined with the overall health disparities in the area, make it clear that the community believes site operations have had serious, ongoing effects on their well-being and environment.

3. Are you aware of any community concerns regarding the site or its operation and administration? If so, please give details.

From the Los Jardines's perspective, there are several significant concerns regarding the site's operation and administration. While the community understands that this site is separate from the ASTF site and the nitrate plume, they view it as part of a larger, more complex set of issues. It is difficult for the community to separate the effects of this site from others, as they have all contributed to a devastating socio-cultural and public health loss in the area.

One of the community's major concerns is that they would have preferred bioremediation as a solution. However, historical decisions labeled bioremediation as "too expensive and superfluous," opting instead for methods involving plastic, oil, and high energy use. The community questions who made these decisions and what reports were reviewed, as they are unsure where to find this information. They feel excluded from the decision-making process and would like to have more transparency regarding past evaluations and reports.

Additionally, the community is unsure if all of their comments and concerns submitted about the site have been adequately addressed. They believe there is no clear record or institutional memory from the EPA or NMED regarding how their input has been handled. This lack of transparency is seen as part of a broader pattern of poor communication and engagement from these agencies.

Finally, the community is concerned about whether the pollution has simply been redistributed rather than fully addressed. They would like confirmation that the contaminants have not just been moved elsewhere, and if so, they are asking for clear evidence to demonstrate this. Overall, the community feels that their concerns are not being adequately heard or addressed in the site's operation and administration.

4. Are you aware of any events, incidents, or activities at the site such as vandalism, trespassing, or emergency responses from local authorities? If so, please give details.

No. A follow-up question was asked in relation to this: how have historical comments and events in relation to such incidents and events been responded to and what has been done to evaluate and protect waterways in this area?

5. Do you have any comments, suggestions, or recommendations regarding the site's management or operation?

First, there seems to be no effort to foster institutional learning or translate knowledge from this site to other Superfunds. Los Jardines believes there is a lack of collaboration and knowledge-sharing between different Superfund sites, despite communities across the country raising similar concerns and questions.

There is also a need for better communication standards to explain not just what is happening at the site, but the "so what"—why these actions matter and their impact on the community is unclear. For example, with OU2 (SJ6 and SJ3), the community is concerned that wells have been plugged and abandoned, but there has been no clarity about what happened to the contaminants that were present. The community feels that while the immediate site was prioritized for cleanup, the impacts on the surrounding residential areas were not adequately considered. Documentation from the EPA and NMED is insufficient to explain what actions people living near the site should take. It wasn't just public wells that were affected—private wells were impacted too, and the reports do not clearly address what was done to support those who relied on private wells. Even the communication outreach was incomplete, as not everyone in the neighborhood received the postcards intended to inform them.

Communication breakdowns remain a major issue for interested parties. Los Jardines is particularly frustrated that the site seems to be moving toward closure despite two recent Title XI complaints being lodged, with one from 2014 still unresolved. While the community understands that the EPA is triaging issues nationwide, they feel they are being overlooked and left behind.

The Office of Natural Resources Trustee (ONRT) secured \$750,000 for reparations, but the community feels that this money, which is being used to rehabilitate waterways, does not adequately compensate for the ecosystem losses and the overall decline in their quality of life. Los Jardines believes that the actions of this site have transformed the landscape and ecosystem, which have not been properly considered. They believe more should have been done to address their losses directly.

Los Jardines also recommends testing private water wells, as a previous effort that involved using the USPS for community outreach resulted in a strong turnout with the offer of free water quality tests.

There is also a lack of transparency about how the EPA determines what constitutes an Operating Unit (OU). The community feels the criteria are vague and do not adequately incorporate local ecological and social knowledge, which would be essential to understanding the broader impacts.

Furthermore, the community has concerns about the concept of "value engineering" mentioned in the planning and development of this site—they are unclear about who is conducting it, how it is being calculated, and where the reports are to substantiate the decisions made under this practice.

Lastly, there are worries about potential retaliation within the EPA for those that are working towards environmental justice. Los Jardines referenced a ProPublica report from September 18, 2024 that detailed employees who were trying to do their jobs ethically may have faced coercive pressures, and they are concerned that this may have influenced the management of sites. While there was no direct mention of this particular site, Los Jardines is concerned that this action could have happened with the South Valley Superfund Site and the nearby sites of concern. They are calling for more transparency and accountability in addressing these internal issues.

6. Do you consent to have your name included along with your responses to this questionnaire in the five-year review report?

Yes

INTERVIEW RECORD

Site Details		
Name: South Valley Superfund Site	EPA ID: NMD980745558	Subject: Eighth Five-Year Review
Interviewer		
Name: Caitlyn Hall	Title: Water Resources Professional III	Affiliation: New Mexico Environment Dept.
Individual Contacted		
Name: John W. Billiard, PE & Julie Einerson, CHMM	Title: Principal Engineer & Project Manager	Affiliation: GE Aerospace
Phone Number: +1 505-440-2905	Email Address: julie.einerson@ge.com	
Interview Details		
Interview Format: Email	Interview Location: N/A	Interview Category: Other
Interview Date: November 13, 2024	Interview Time: N/A	

Questionnaire:

1. What is your overall impression of the project? (general sentiment)

This project is nearing completion and has entered the Attainment Monitoring phase prior to final closure. OU 06 (Deep Zone Groundwater) has achieved its goal of reaching ARARs in the groundwater. OU 06 is managed by GE and is the only operable unit of the South Valley Superfund Site for which GE is responsible.

2. Is the remedy functioning as expected? How well is the remedy performing?

OU 6 is functioning as designed. Remediation system data collected to date demonstrates groundwater capture, treatment, and reinjection of treated water back to the aquifer and that the system has been, and continues to be, protective of human health and the environment. To date, about 8.9 billion gallons of groundwater have been extracted, treated to non-detect levels, and returned to the Rio Grande aquifer for beneficial use.

3. What does the monitoring data show? Are there any trends that show contaminant levels are decreasing?

The OU 6 groundwater sampling data indicate levels of dissolved VOCs in groundwater have been below ARARs since November 2022. Accordingly, the project entered the Attainment Monitoring phase in January 2024 that includes at least two years of quarterly groundwater monitoring, prior to final closure.

4. Is there a continuous on-site O&M presence? If so, please describe staff and activities. If there is not a continuous on-site presence, describe staff and frequency of site inspections and activities.

The OU 6 remediation system operates on a continuous basis (i.e. 24/7/365). Two operators currently work at the

OU 6 remediation system during normal working hours, five days per week all year. When the operators are not physically at the site, an automated system will alert them via telephone call if the remediation system requires attention. When necessary, one of the operators will return to the site and attend to the remediation system as required outside of normal work hours (evenings and weekends).

5. Have there been any significant changes in the O&M requirements, maintenance schedules, or sampling routines since start-up or in the last five years? If so, do they affect the protectiveness or effectiveness of the remedy? Please describe changes and impacts.

The OU 6 remediation system has been, and continues to be, protective of human health and the environment. Modifications to the groundwater sampling program (e.g. Attainment Monitoring) were made after discussions with, and approval by, the regulatory agencies. Based on groundwater data, the groundwater extraction and injection systems were modified to improve the efficiency of the overall system. Changes in the past five years included pulse pumping extraction well EW-003R to improve cleanup efficiency and rehabilitation of P83-09D to remove accumulated silts, which may have acted as a source of contaminants. These changes improved VOC concentrations in groundwater to levels below ARARs since November 2022.

6. Have there been unexpected O&M difficulties or costs at the site since start-up or in the last five years? If so, please give details.

O&M difficulties at the OU6 remediation system have included rehabilitation and the repair of extraction and injection wells. Well rehabilitation is very costly and time consuming. As the remediation system ages, effort is required to maintain the treatment equipment (e.g. Programmable Logic Controller, electrical equipment, pumps, valves, motors) in operational working order. However, because the treatment system was designed with redundancies throughout the system, equipment failures rarely cause downtime. In 2023, after the opening of the Sunport Blvd. Extension, there were several cases of vandalism and theft that required costly upgrades to security for the O&M system. Since the security upgrades were put in place there have been no additional vandalism issues.

7. Have there been opportunities to optimize O&M, or sampling efforts? Please describe changes and resultant or desired cost savings or improved efficiency.

When necessary, extraction and injection wells are rehabilitated to improve efficiency. As part of closure during the Attainment Monitoring phase of the project, extraction wells are operated to maintain the integrity of the extraction and injection wells. Extraction wells are turned off and on at different times to maintain operational capabilities.

Note that when an extraction or injection well is turned off for a relatively lengthy time (months or longer) naturally occurring bacteria grow and clog the screen interval, requiring well rehabilitation prior to restarting of extraction or injection operations. This is very important when considering long-term changes such as closure. Should the OU 6 remediation system be turned off for a month or longer, it will likely require very significant and costly work to restart the system due to the loss of extraction and injection well capacity.

8. Do you have any comments, suggestions, or recommendations regarding the project?

The OU 6 remediation system has effectively remediated the Rio Grande Aquifer and has achieved all remediation goals identified in the Record of Decision. Since November 2022, monitoring well data indicates that dissolved VOCs in groundwater are below ARARs. Accordingly, the remediation project entered Attainment Monitoring in January 2024 and is expected to enter final closure in January 2026.

INTERVIEW RECORD

Site Details		
Name: South Valley Superfund Site	EPA ID: NMD980745558	Subject: Eighth Five-Year Review
Interviewer		
Name: Caitlyn Hall	Title: Water Resources Professional III	Affiliation: New Mexico Environment Dept.
Individual Contacted		
Name: Michelle Stayrook	Title: Remediation Manager	Affiliation: Univar Solutions
Phone Number: +1 614-477-6376	Email Address: Michelle.stayrook@univar.com	
Interview Details		
Interview Format: Email	Interview Location: N/A	Interview Category: Other
Interview Date: November 14, 2024	Interview Time: N/A	

Questionnaire:

1. What is your overall impression of the project? (general sentiment)

The project is very mature. There has been success with achieving remedial action objectives and ultimately a no further action for VOCs. Univar has been very responsive to agencies' request to address 1,4-D. Overall very good engagement and relationship with agencies. However, recent retirements within USEPA and NMED created temporary disruption, including costs to address questions from unplanned technical deep dives.

2. Is the remedy functioning as expected? How well is the remedy performing?

Yes. Remedy has removed mass, flushed vadose zone, and effectively treated water that has been reinjected. There has been no extended downtime. It is anticipated remedial action objectives will be achieved in a reasonable timeframe within the current treatment area.

3. What does the monitoring data show? Are there any trends that show contaminant levels are decreasing?

Concentrations are decreasing on-site and off-site. Concentrations do fluctuate in a few wells. Delineation is complete in the transmissive zone and is anticipated to be delineated in the fines.

4. Is there a continuous on-site O&M presence? If so, please describe staff and activities. If there is not a continuous on-site presence, describe staff and frequency of site inspections and activities.

System is monitored remotely and can be stopped/restarted remotely. The site is active; therefore, Univar employees are on-site to identify/address any significant issues or support requests triggered through remote monitoring.

- 5. Have there been any significant changes in the O&M requirements, maintenance schedules, or sampling routines since start-up or in the last five years? If so, do they affect the protectiveness or effectiveness of the remedy? Please describe changes and impacts.**

No significant changes in O&M. Additional wells have been added to the monitoring well network. This work included significant spend to install access road necessary to install deep wells. The access road allows for alternate sampling methods (3vol purge, low flow sampling, as needed). This work does not affect remedy protectiveness.

- 6. Have there been unexpected O&M difficulties or costs at the site since start-up or in the last five years? If so, please give details.**

No unexpected O&M difficulties. Yes, there has been unexpected costs to complete delineation of groundwater east of Interstate 25. Similar to Response #5, USEPA/NMED required delineation of groundwater. The cost drivers included two phases of investigations, construction of a roadway, and installation of 5 deep wells exceeding 200-300 feet, and on-going monitoring. Additional costs include legal fees and access fees to gain access to private properties, construction of gates, etc. In addition, Univar is now required to meet a more stringent off-site cleanup goal, thereby extended the planned operation of the current treatment system.

- 7. Have there been opportunities to optimize O&M, or sampling efforts? Please describe changes and resultant or desired cost savings or improved efficiency.**

No. Univar would be open to discussing a reduced monitoring program or use of passive sampling across the site.

- 8. Do you have any comments, suggestions, or recommendations regarding the project?**

Overall, the project has achieved high success. Remediation of the emerging contaminant has also had much success to date. The biggest challenges have been changes in agency oversight which introduced overly burdensome technical scrutiny. My hope for this project is for Univar to be recognized for its continued upstanding participation, as well as team continuity.

Univar would like to recommend reducing the monitoring program by identifying those wells that no longer provide value for 1,4D remediation and therefore can be abandoned.

Univar is seeking written concurrence that no further action is needed for soil (OU-4).

Finally, it is Univar's desire and goal that parties agree that additional assessment east of I25 is now complete and a reasonable path forward can be discussed with USEPA/NMED.

INTERVIEW RECORD

Site Details		
Name: South Valley Superfund Site	EPA ID: NMD980745558	Subject: Eighth Five-Year Review
Interviewer		
Name: Caitlyn Hall	Title: Water Resources Professional III	Affiliation: New Mexico Environment Dept.
Individual Contacted		
Name: Katy Brantingham	Title: Project Manager	Affiliation: Arcadis U.S., Inc.
Phone Number: +1 602-797-4523	Email Address: katy.brantingham@arcadis.com	
Interview Details		
Interview Format: Email	Interview Location: N/A	Interview Category: Other
Interview Date: November 14, 2024	Interview Time: N/A	

Questionnaire:

1. What is your overall impression of the project? (general sentiment)

Very Good. Open and cooperative communication between all parties.

2. Is the remedy functioning as expected? How well is the remedy performing?

The objective of the groundwater recovery, treatment, and injection system (GRTIS) was to reduce 1,4-dioxane concentrations to at or below the risk-based cleanup goals (cleanup goals) of on-site (Univar Solutions property) groundwater to 29 micrograms per liter (µg/L) or less and off-site (properties not owned by Univar Solutions) groundwater to 6.7 µg/L or less (Arcadis 2016a). The USEPA stated in their letter dated October 12, 2023 (USEPA 2023) that the off-site groundwater cleanup level for 1,4-dioxane shall be revised to 4.6 µg/L based on USEPA revising the Regional Screening Level. This will be used as the off-site cleanup goal going forward. This objective is being achieved by recovering groundwater impacted with 1,4-dioxane and pumping it to the treatment system, treating the 1,4-dioxane in the recovery water (advance oxidation process), and reinjecting the treated water upgradient of the recovery area. The treatment system treats 1,4-dioxane to a concentration less than 1 µg/L.

3. What does the monitoring data show? Are there any trends that show contaminant levels are decreasing?

1,4-Dioxane time concentration curves and groundwater elevation graphs were presented in the 2024 Annual Report. There were no exceedances of the on-site risk-based cleanup goal of 29 µg/L in on-site wells. In April 2024, 1,4-dioxane concentrations exceeded the off-site cleanup goal of 4.6 µg/L on the west side of Interstate 25 only in the samples collected from recovery wells RW-02 (4.7 µg/L) and GM-27 (5.5 µg/L). 1,4-dioxane concentrations exceed the off-site cleanup goal of 4.6 µg/L on the east side of Interstate 25: GM-15S (16.7 µg/L),

and GM-29 (12.5 µg/L). The overall concentration trends are decreasing for monitoring wells on the east side of I-25.

4. Is there a continuous on-site O&M presence? If so, please describe staff and activities. If there is not a continuous on-site presence, describe staff and frequency of site inspections and activities.

Univar Solutions still operates at the facility so there are personnel and security at the facility. Maintenance and monitoring of the GRTIS is conducted by Arcadis and includes remote system monitoring, monthly O&M site visits, monthly process monitoring and quarterly GRTIS performance sampling. These are conducted in accordance with the Remedial Work Plan.

5. Have there been any significant changes in the O&M requirements, maintenance schedules, or sampling routines since start-up or in the last five years? If so, do they affect the protectiveness or effectiveness of the remedy? Please describe changes and impacts.

More wells have been added to the East side of I25 which have increased the overall sampling program. Reduction in cleanup levels have increased the anticipated operational timeframe of the GRTIS.

6. Have there been unexpected O&M difficulties or costs at the site since start-up or in the last five years? If so, please give details.

Reconfiguration of pumping and injection well system configuration were conducted to optimize remediation. Additionally, Univar is now required to meet a more stringent off-site cleanup goal, thereby extended the planned operation of the GRTIS.

7. Have there been opportunities to optimize O&M, or sampling efforts? Please describe changes and resultant or desired cost savings or improved efficiency.

HydraSleeves are used for groundwater sampling resulting in reduced costs and better efficiency.

8. Do you have any comments, suggestions, or recommendations regarding the project?

Overall the treatment system project has had little down time and is achieving the goals. I would suggest that we review the sampling frequency and reduce the amount of sample where appropriate.

APPENDIX E – SITE INSPECTION CHECKLIST

I. SITE INFORMATION	
Site name: South Valley Superfund Site – GE	Date of inspection: September 26, 2024
Location and Region: Albuquerque, New Mexico	EPA ID: NMD980745558
Agency, office, or company leading the five-year review: EPA Region 6	Weather/temperature: Sunny, Calm, high 70s
Remedy Includes: (Check all that apply) ☐ Landfill cover/containment ☐ Monitored natural attenuation ☒ Access controls ☐ Groundwater containment ☒ Institutional controls ☐ Vertical barrier walls ☒ Groundwater pump and treatment ☐ Surface water collection and treatment ☐ Other _____ _____ _____ _____	
Attachments: ☒ Inspection team roster attached ☐ Site map attached	
II. INTERVIEWS (Check all that apply)	
1. O&M site manager John Billiard _____ _Technical Director _____ ___9/26/2024 Name Title Date Interviewed ☒ at site ☐ at office ☐ by phone Phone no. _____ Problems, suggestions; ☒ Report attached _____ _____ _____	
2. O&M staff Leonard Stockton, Jr. _____ _Senior Engineer _____ 9/26/2024 Name Title Date Interviewed ☒ at site ☐ at office ☐ by phone Phone no. _____ Problems, suggestions; ☐ Report attached _____ _____ _____	

3.	Local regulatory authorities and response agencies (i.e., State and Tribal offices, emergency response office, police department, office of public health or environmental health, zoning office, recorder of deeds, or other city and county offices, etc.) Fill in all that apply.
Agency County of Bernalillo Contact Dan McGregor (505) 848-1500 Natural Resources Manager 30/09/2024 Name Title Date Phone no. Problems; suggestions; ☒ Report attached	
Agency Albuquerque Bernalillo County Water Utility Authority Contact Kelsey Bicknell (505) 289-3009 Environmental Manager 08/10/2024 Name Title Date Phone no. Problems; suggestions; ☒ Report attached	
4.	Other interviews (optional) ☒ Report attached.
Genevieve Chavez, Mountain View Neighborhood Association	
Xavier Barraza, Los Jardines	

III. ON-SITE DOCUMENTS & RECORDS VERIFIED (Check all that apply)	
1.	O&M Documents ☒ O&M manual ☒ Readily available ☒ Up to date ☐ N/A ☒ As-built drawings ☒ Readily available ☒ Up to date ☐ N/A ☒ Maintenance logs ☒ Readily available ☒ Up to date ☐ N/A Remarks _____

2.	Site-Specific Health and Safety Plan	☒ Readily available	☒ Up to date	☐ N/A
	☒ Contingency plan/emergency response plan	☒ Readily available	☒ Up to date	☐ N/A
Remarks _____				

3.	O&M and OSHA Training Records	☒ Readily available	☒ Up to date	☐ N/A
Remarks Leonard Stockton and Louis Keating – on file in office				
4.	Permits and Service Agreements			
	☐ Air discharge permit	☐ Readily available	☐ Up to date	☐ N/A
	☒ Effluent discharge	☒ Readily available	☒ Up to date	☐ N/A
	☐ Waste disposal, POTW	☐ Readily available	☐ Up to date	☐ N/A
	☐ Other permits _____	☐ Readily available	☐ Up to date	☐ N/A
Remarks: NMED Groundwater Discharge Permit 1065 (in administrative continuance, January 13, 2023)				

5.	Gas Generation Records	☐ Readily available	☐ Up to date	☐ N/A
Remarks _____				

6.	Settlement Monument Records	☐ Readily available	☐ Up to date	☐ N/A
Remarks _____				

7.	Groundwater Monitoring Records	☒ Readily available	☒ Up to date	☐ N/A
Remarks: Annual and semi-annual reports submitted on-time to EPA				

8.	Leachate Extraction Records	☐ Readily available	☐ Up to date	☐ N/A
Remarks _____				

9.	Discharge Compliance Records	☐ Readily available	☐ Up to date	☐ N/A
☐ Air		☐ Readily available	☐ Up to date	☐ N/A
☒ Water (effluent)		☒ Readily available	☒ Up to date	☐ N/A
Remarks _____				

10.	Daily Access/Security Logs	☒ Readily available	☒ Up to date	☐ N/A
Remarks: Sign in sheet upon access to building				

IV. O&M COSTS																																											
1.	O&M Organization ☐ State in-house ☐ PRP in-house ☐ Federal Facility in-house ☐ Other _____ _____ _____ ☐ Contractor for State ☒ Contractor for PRP ☐ Contractor for Federal Facility																																										
2.	O&M Cost Records ☒ Readily available ☒ Up to date ☐ Funding mechanism/agreement in place Original O&M cost estimate _____ ☐ Breakdown attached Total annual cost by year for review period if available <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">From _____</td> <td style="width: 20%;">To _____</td> <td style="width: 40%; text-align: center;">_____ attached</td> <td style="width: 20%; text-align: right;">☐ Breakdown</td> </tr> <tr> <td style="text-align: center;">Date</td> <td style="text-align: center;">Date</td> <td style="text-align: center;">Total cost</td> <td></td> </tr> <tr> <td>From _____</td> <td>To _____</td> <td style="text-align: center;">_____ attached</td> <td style="text-align: right;">☐ Breakdown</td> </tr> <tr> <td style="text-align: center;">Date</td> <td style="text-align: center;">Date</td> <td style="text-align: center;">Total cost</td> <td></td> </tr> <tr> <td>From _____</td> <td>To _____</td> <td style="text-align: center;">_____ attached</td> <td style="text-align: right;">☐ Breakdown</td> </tr> <tr> <td style="text-align: center;">Date</td> <td style="text-align: center;">Date</td> <td style="text-align: center;">Total cost</td> <td></td> </tr> <tr> <td>From _____</td> <td>To _____</td> <td style="text-align: center;">_____ attached</td> <td style="text-align: right;">☐ Breakdown</td> </tr> <tr> <td style="text-align: center;">Date</td> <td style="text-align: center;">Date</td> <td style="text-align: center;">Total cost</td> <td></td> </tr> <tr> <td>From _____</td> <td>To _____</td> <td style="text-align: center;">_____ attached</td> <td style="text-align: right;">☐ Breakdown</td> </tr> <tr> <td style="text-align: center;">Date</td> <td style="text-align: center;">Date</td> <td style="text-align: center;">Total cost</td> <td></td> </tr> </table>			From _____	To _____	_____ attached	☐ Breakdown	Date	Date	Total cost		From _____	To _____	_____ attached	☐ Breakdown	Date	Date	Total cost		From _____	To _____	_____ attached	☐ Breakdown	Date	Date	Total cost		From _____	To _____	_____ attached	☐ Breakdown	Date	Date	Total cost		From _____	To _____	_____ attached	☐ Breakdown	Date	Date	Total cost	
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3.	Unanticipated or Unusually High O&M Costs During Review Period Describe costs and reasons: Installation of additional site security to reduce trespassing and vandalism. _____ _____																																										
V. ACCESS AND INSTITUTIONAL CONTROLS ☒ Applicable ☐ N/A																																											
A. Fencing																																											

1.	Fencing damaged	☐ Location shown on site map	☒ Gates secured	☐ N/A
Remarks: Site is secured by a security fence. All monitoring wells and pump facilities are locked and secured. No evidence of tampering.				
B. Other Access Restrictions				
1.	Signs and other security measures	☐ Location shown on site map	☐ N/A	
Remarks _____				

C. Institutional Controls (ICs)**1. Implementation and enforcement**

Site conditions imply ICs not properly implemented ☐ Yes ☒ No ☐ N/A

Site conditions imply ICs not being fully enforced ☐ Yes ☒ No ☐ N/A

Type of monitoring (*e.g.*, self-reporting, drive by): New Mexico Office of the State Engineers drilling restrictions; NMED groundwater discharge permits

Frequency: monthly discharge records; quarterly sampling

Responsible party/agency: GE, EPA, NMED

Contact _____

_____	Name	Title	Date	Phone no.
-------	------	-------	------	-----------

Reporting is up-to-date ☒ Yes ☐ No ☐ N/A

Reports are verified by the lead agency ☒ Yes ☐ No ☐ N/A

Specific requirements in deed or decision documents have been met ☐ Yes ☐ No ☒ N/A

Violations have been reported ☒ Yes ☐ No ☐ N/A

Other problems or suggestions: ☐ Report attached

Accidental discharge of treated water in 2023 was reported to NMED and the action was closed.

2. Adequacy ☒ ICs are adequate ☐ ICs are inadequate ☐ N/A
Remarks _____

D. General

1. Vandalism/trespassing ☐ Location shown on site map evident ☒ No vandalism

Remarks _____

2.	Land use changes on site ☐ N/A Remarks: Sunport Boulevard expansion that intersects over the site has been adequately accounted for.
3.	Land use changes off site x N/A Remarks
VI. GENERAL SITE CONDITIONS	
A. Roads x Applicable ☐ N/A	
1.	Roads damaged ☐ Location shown on site map x Roads adequate ☐ N/A Remarks

B. Other Site Conditions			
Remarks: Site was well maintained.			
VII. LANDFILL COVERS ☐ Applicable x N/A			
A. Landfill Surface			
1.	Settlement (Low spots)	☐ Location shown on site map	☐ Settlement not evident
	Areal extent _____ Depth _____		
	Remarks _____		
2.	Cracks	☐ Location shown on site map	☐ Cracking not evident
	Lengths _____	Widths _____	Depths _____
	Remarks _____		
3.	Erosion	☐ Location shown on site map	☐ Erosion not evident
	Areal extent _____ Depth _____		
	Remarks _____		

4.	Holes	☐ Location shown on site map	☐ Holes not evident
	Areal extent _____ Depth _____		
	Remarks _____		

5.	Vegetative Cover	☐ Grass	☐ Cover properly established of stress
	☐ Trees/Shrubs (indicate size and locations on a diagram)		
	Remarks _____		

6.	Alternative Cover (armored rock, concrete, etc.)	☐ N/A	
	Remarks _____		

7.	Bulges Areal extent _____ Height _____ Remarks _____ _____ _____	☐ Location shown on site map ☐ Bulges not evident
8.	Wet Areas/Water Damage ☐ Wet areas ☐ Location shown on site map Areal extent _____ ☐ Ponding ☐ Location shown on site map Areal extent _____ ☐ Seeps ☐ Location shown on site map Areal extent _____ ☐ Soft subgrade ☐ Location shown on site map Areal extent _____ Remarks _____ _____ _____	☐ Wet areas/water damage not evident
9.	Slope Instability Areal extent _____ Remarks _____ _____ _____	☐ Slides ☐ Location shown on site map ☐ No evidence of slope instability
B. Benches ☐ Applicable x N/A (Horizontally constructed mounds of earth placed across a steep landfill side slope to interrupt the slope in order to slow down the velocity of surface runoff and intercept and convey the runoff to a lined channel.)		
1.	Flows Bypass Bench Remarks _____ _____ _____	☐ Location shown on site map ☐ N/A or okay
2.	Bench Breached Remarks _____ _____ _____	☐ Location shown on site map ☐ N/A or okay

3.	Bench Overtopped Remarks _____ _____ _____	☐ Location shown on site map	☐ N/A or okay
C. Letdown Channels ☐ Applicable ☒ N/A (Channel lined with erosion control mats, riprap, grout bags, or gabions that descend down the steep side slope of the cover and will allow the runoff water collected by the benches to move off of the landfill cover without creating erosion gullies.)			
1.	Settlement Areal extent _____ Depth _____ Remarks _____ _____ _____	☐ Location shown on site map	☐ No evidence of settlement
2.	Material Degradation Material type _____ Areal extent _____ Remarks _____ _____ _____	☐ Location shown on site map	☐ No evidence of degradation
3.	Erosion Areal extent _____ Depth _____ Remarks _____ _____ _____	☐ Location shown on site map	☐ No evidence of erosion

4.	Undercutting ☐ Location shown on site map ☐ No evidence of undercutting Areal extent _____ Depth _____ Remarks _____ _____ _____
5.	Obstructions Type _____ ☐ No obstructions ☐ Location shown on site map Areal extent _____ Size _____ Remarks _____ _____ _____
6.	Excessive Vegetative Growth Type _____ ☐ No evidence of excessive growth ☐ Vegetation in channels does not obstruct flow ☐ Location shown on site map Areal extent _____ Remarks _____ _____ _____
D. Cover Penetrations ☐ Applicable x N/A	
1.	Gas Vents ☐ Active ☐ Passive ☐ Properly secured/locked ☐ Functioning ☐ Routinely sampled ☐ Good condition ☐ Evidence of leakage at penetration ☐ Needs Maintenance ☐ N/A Remarks _____ _____ _____
2.	Gas Monitoring Probes ☐ Properly secured/locked ☐ Functioning ☐ Routinely sampled ☐ Good condition ☐ Evidence of leakage at penetration ☐ Needs Maintenance ☐ N/A Remarks _____ _____ _____
3.	Monitoring Wells (within surface area of landfill) ☐ Properly secured/locked ☐ Functioning ☐ Routinely sampled ☐ Good condition ☐ Evidence of leakage at penetration ☐ Needs Maintenance ☐ N/A Remarks _____ _____

4.	Leachate Extraction Wells		
	☐ Properly secured/locked	☐ Functioning	☐ Routinely sampled
	☐ Good condition	☐ Evidence of leakage at penetration	☐ Needs Maintenance
	☐ N/A		
	Remarks _____		

5.	Settlement Monuments		☐ Located
	☐ Routinely surveyed		☐
	N/A		
	Remarks _____		

E. Gas Collection and Treatment ☐ Applicable ☒ N/A	
1.	Gas Treatment Facilities ☐ Flaring ☐ Thermal destruction ☐ Collection for reuse ☐ Good condition ☐ Needs Maintenance Remarks _____ _____ _____
2.	Gas Collection Wells, Manifolds and Piping ☐ Good condition ☐ Needs Maintenance Remarks _____ _____ _____
3.	Gas Monitoring Facilities (<i>e.g.</i> , gas monitoring of adjacent homes or buildings) ☐ Good condition ☐ Needs Maintenance ☐ N/A Remarks _____ _____ _____
F. Cover Drainage Layer ☐ Applicable ☒ N/A	
1.	Outlet Pipes Inspected ☐ Functioning ☐ N/A Remarks _____ _____ _____
2.	Outlet Rock Inspected ☐ Functioning ☐ N/A Remarks _____ _____ _____
G. Detention/Sedimentation Ponds ☐ Applicable ☐ N/A	
1.	Siltation Areal extent _____ Depth _____ ☐ N/A ☐ Siltation not evident Remarks _____ _____ _____

2.	Erosion Areal extent _____ Depth _____ ☐ Erosion not evident Remarks _____ _____ _____ _____
3.	Outlet Works ☐ Functioning ☐ N/A Remarks _____ _____ _____ _____
4.	Dam ☐ Functioning ☐ N/A Remarks _____ _____ _____ _____

H. Retaining Walls			☐ Applicable	☒ N/A
1.	Deformations	☐ Location shown on site map	☐ Deformation not evident	
	Horizontal displacement_____	Vertical displacement_____		
	Rotational displacement_____			
	Remarks_____			

2.	Degradation	☐ Location shown on site map	☐ Degradation not evident	
	Remarks_____			

I. Perimeter Ditches/Off-Site Discharge				
		☐ Applicable	☒ N/A	
1.	Siltation	☐ Location shown on site map	☐ Siltation not evident	
	Areal extent_____	Depth_____		
	Remarks_____			

2.	Vegetative Growth	☐ Location shown on site map	☐ N/A	
	☐ Vegetation does not impede flow			
	Areal extent_____	Type_____		
	Remarks_____			

3.	Erosion	☐ Location shown on site map	☐ Erosion not evident	
	Areal extent_____	Depth_____		
	Remarks_____			

4.	Discharge Structure	☐ Functioning	☐ N/A	
	Remarks_____			

VIII. VERTICAL BARRIER WALLS				
		☐ Applicable	☒ N/A	

1.	Settlement ☐ Location shown on site map ☐ Settlement not evident Areal extent _____ Depth _____ Remarks _____ _____ _____ _____
2.	Performance Monitoring Type of monitoring _____ ☐ Performance not monitored Frequency _____ ☐ Evidence of breaching Head differential _____ Remarks _____ _____ _____ _____

IX. GROUNDWATER/SURFACE WATER REMEDIES ☒ Applicable ☐ N/A	
A. Groundwater Extraction Wells, Pumps, and Pipelines ☐ Applicable ☐ N/A	
1.	Pumps, Wellhead Plumbing, and Electrical ☒ Good condition ☒ All required wells properly operating ☐ Needs Maintenance ☐ N/A Remarks _____ _____ _____ _____ _____
2.	Extraction System Pipelines, Valves, Valve Boxes, and Other Appurtenances ☒ Good condition ☐ Needs Maintenance Remarks _____ _____ _____ _____
3.	Spare Parts and Equipment ☒ Readily available ☒ Good condition ☐ Requires upgrade ☐ Needs to be provided Remarks _____ _____ _____ _____
B. Surface Water Collection Structures, Pumps, and Pipelines ☐ Applicable ☒ N/A	
1.	Collection Structures, Pumps, and Electrical ☐ Good condition ☐ Needs Maintenance Remarks _____ _____ _____ _____
2.	Surface Water Collection System Pipelines, Valves, Valve Boxes, and Other Appurtenances ☐ Good condition ☐ Needs Maintenance Remarks _____ _____ _____ _____

3.	Spare Parts and Equipment
	☐ Readily available ☐ Good condition ☐ Requires upgrade ☐ Needs to be provided
	Remarks _____

C. Treatment System		☒ Applicable	☐ N/A
1.	Treatment Train (Check components that apply) ☐ Metals removal ☐ Oil/water separation ☐ Bioremediation ☒ Air stripping ☒ Carbon adsorbers ☒ Filters _____ ☒ Additive (e.g., chelation agent, flocculent): AquaMag and pH controls Others _____ ☒ Good condition ☐ Needs Maintenance ☒ Sampling ports properly marked and functional ☒ Sampling/maintenance log displayed and up to date ☒ Equipment properly identified ☒ Quantity of groundwater treated annually 168 million gallons (extracted and reinjected 2024) Quantity of surface water treated annually _____ Remarks _____ _____ _____ _____		
2.	Electrical Enclosures and Panels (properly rated and functional) ☐ N/A ☒ Good condition ☐ Needs Maintenance Remarks _____ _____ _____ _____		
3.	Tanks, Vaults, Storage Vessels ☐ N/A ☒ Good condition ☐ Proper secondary containment ☐ Needs Maintenance Remarks _____ _____ _____ _____		
4.	Discharge Structure and Appurtenances ☐ N/A ☒ Good condition ☐ Needs Maintenance Remarks _____ _____ _____ _____		

5.	Treatment Building(s) ☐ N/A ☒ Good condition (esp. roof and doorways) ☐ Needs repair ☐ Chemicals and equipment properly stored Remarks _____ _____ _____
6.	Monitoring Wells (pump and treatment remedy) ☒ Properly secured/locked ☒ Functioning ☒ Routinely sampled ☒ Good condition ☒ All required wells located ☐ Needs Maintenance ☐ N/A Remarks _____ _____ _____
D. Monitoring Data	
1.	Monitoring Data ☒ Is routinely submitted on time ☒ Is of acceptable quality
2.	Monitoring data suggests: ☒ Groundwater plume is effectively contained ☒ Contaminant concentrations are declining

D. Monitored Natural Attenuation	
1.	Monitoring Wells (natural attenuation remedy) ☒ Properly secured/locked ☒ Functioning ☒ Routinely sampled ☒ Good condition ☒ All required wells located ☐ Needs Maintenance ☐ N/A Remarks _____ _____ _____
E. OTHER REMEDIES	
If there are remedies applied at the site which are not covered above, attach an inspection sheet describing the physical nature and condition of any facility associated with the remedy. An example would be soil vapor extraction.	
XI. OVERALL OBSERVATIONS	
A. Implementation of the Remedy	
Describe issues and observations relating to whether the remedy is effective and functioning as designed. Begin with a brief statement of what the remedy is to accomplish (i.e., to contain contaminant plume, minimize infiltration and gas emission, etc.). The GE remedy involves the operation of the Deep Zone Remediation System (DZRS), which captures and treats VOC-impacted groundwater to prevent plume migration and reduce contaminant concentrations to levels below regulatory limits. The remedy is functioning as designed and has successfully functioned to enter closure stages.	
B. Adequacy of O&M	
Describe issues and observations related to the implementation and scope of O&M procedures. In particular, discuss their relationship to the current and long-term protectiveness of the remedy. The GE remedy has proven adequate in effectively capturing and treating VOC-impacted groundwater, maintaining compliance with regulatory requirements and preventing plume migration.	
C. Early Indicators of Potential Remedy Problems	
Describe issues and observations such as unexpected changes in the cost or scope of O&M or a high frequency of unscheduled repairs, that suggest that the protectiveness of the remedy may be compromised in the future. There have been no observed issues such as unexpected changes in O&M costs, scope, or frequent unscheduled repairs that would suggest a potential compromise to the protectiveness of the remedies in the future.	

D. Opportunities for Optimization
Describe possible opportunities for optimization in monitoring tasks or the operation of the remedy. None.

3. **Local regulatory authorities and response agencies** (i.e., State and Tribal offices, emergency response office, police department, office of public health or environmental health, zoning office, recorder of deeds, or other city and county offices, etc.) Fill in all that apply.

Agency County of Bernalillo

Contact Dan McGregor
(505) 848-1500

Natural Resources Manager

30/09/2024

Name

Title

Date

Phone no.

Problems; suggestions; ☒ Report attached

Agency Albuquerque Bernalillo County Water Utility Authority

Contact Kelsey Bicknell
(505) 289-3009

Environmental Manager

08/10/2024

Name

Title

Date

Phone no.

Problems; suggestions; ☒ Report attached

4. **Other interviews** (optional) ☒ Report attached.

Genevieve Chavez, Mountain View Neighborhood Association

Xavier Barraza, Los Jardines

III. ON-SITE DOCUMENTS & RECORDS VERIFIED (Check all that apply)			
1.	O&M Documents x O&M manual x As-built drawings x Maintenance logs Remarks _____ _____ _____	x Readily available x Readily available x Readily available	x Up to date ☐ N/A x Up to date ☐ N/A x Up to date ☐ N/A
2.	Site-Specific Health and Safety Plan x Contingency plan/emergency response plan Remarks _____ _____ _____	x Readily available x Readily available	x Up to date ☐ N/A x Up to date ☐ N/A
3.	O&M and OSHA Training Records Remarks: Kept with ARCADIS	x Readily available	x Up to date ☐ N/A
4.	Permits and Service Agreements ☐ Air discharge permit ☐ Effluent discharge ☐ Waste disposal, POTW ☐ Other permits _____ Remarks: State engineer permit for extraction wells and water supply; Air discharge permit terminated in 2005	☐ Readily available ☐ Readily available ☐ Readily available ☐ Readily available	☐ Up to date x N/A ☐ Up to date x N/A ☐ Up to date x N/A ☐ Up to date x N/A
5.	Gas Generation Records Remarks _____ _____ _____	☐ Readily available	☐ Up to date x N/A
6.	Settlement Monument Records Remarks _____ _____ _____	☐ Readily available	☐ Up to date x N/A

7.	Groundwater Monitoring Records	☐ Readily available	☐ Up to date	☒ N/A
Remarks _____				

8.	Leachate Extraction Records	☐ Readily available	☐ Up to date	☒ N/A
Remarks _____				

9.	Discharge Compliance Records	☐ Readily available	☐ Up to date	☒ N/A
	☐ Air	☐ Readily available	☐ Up to date	☒ N/A
	☐ Water (effluent)	☐ Readily available	☐ Up to date	☒ N/A
Remarks _____				

10.	Daily Access/Security Logs	☒ Readily available	☒ Up to date	☐ N/A
Remarks: sign in sheet required upon entrance to site				

IV. O&M COSTS																																											
1.	O&M Organization ☐ State in-house ☐ PRP in-house ☐ Federal Facility in-house ☐ Other _____ _____ _____ ☐ Contractor for State ☒ Contractor for PRP ☐ Contractor for Federal Facility																																										
2.	O&M Cost Records ☒ Readily available ☒ Up to date ☐ Funding mechanism/agreement in place Original O&M cost estimate _____ ☐ Breakdown attached Total annual cost by year for review period if available <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">From _____</td> <td style="width: 20%;">To _____</td> <td style="width: 40%; text-align: center;">_____ attached</td> <td style="width: 20%; text-align: right;">☐ Breakdown</td> </tr> <tr> <td style="text-align: center;">Date</td> <td style="text-align: center;">Date</td> <td style="text-align: center;">Total cost</td> <td></td> </tr> <tr> <td>From _____</td> <td>To _____</td> <td style="text-align: center;">_____ attached</td> <td style="text-align: right;">☐ Breakdown</td> </tr> <tr> <td style="text-align: center;">Date</td> <td style="text-align: center;">Date</td> <td style="text-align: center;">Total cost</td> <td></td> </tr> <tr> <td>From _____</td> <td>To _____</td> <td style="text-align: center;">_____ attached</td> <td style="text-align: right;">☐ Breakdown</td> </tr> <tr> <td style="text-align: center;">Date</td> <td style="text-align: center;">Date</td> <td style="text-align: center;">Total cost</td> <td></td> </tr> <tr> <td>From _____</td> <td>To _____</td> <td style="text-align: center;">_____ attached</td> <td style="text-align: right;">☐ Breakdown</td> </tr> <tr> <td style="text-align: center;">Date</td> <td style="text-align: center;">Date</td> <td style="text-align: center;">Total cost</td> <td></td> </tr> <tr> <td>From _____</td> <td>To _____</td> <td style="text-align: center;">_____ attached</td> <td style="text-align: right;">☐ Breakdown</td> </tr> <tr> <td style="text-align: center;">Date</td> <td style="text-align: center;">Date</td> <td style="text-align: center;">Total cost</td> <td></td> </tr> </table>			From _____	To _____	_____ attached	☐ Breakdown	Date	Date	Total cost		From _____	To _____	_____ attached	☐ Breakdown	Date	Date	Total cost		From _____	To _____	_____ attached	☐ Breakdown	Date	Date	Total cost		From _____	To _____	_____ attached	☐ Breakdown	Date	Date	Total cost		From _____	To _____	_____ attached	☐ Breakdown	Date	Date	Total cost	
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3.	Unanticipated or Unusually High O&M Costs During Review Period Describe costs and reasons: Additional costs included two phases of investigations, roadway construction, the installation of five deep wells exceeding 200–300 feet in depth, and ongoing monitoring. Additional expenses encompassed legal and access fees for entry to private properties, as well as the construction of gates and related infrastructure.																																										
V. ACCESS AND INSTITUTIONAL CONTROLS ☒ Applicable ☐ N/A																																											
A. Fencing																																											

1.	Fencing damaged	☐ Location shown on site map	☒ Gates secured	☐ N/A
Remarks _____				

B. Other Access Restrictions				
1.	Signs and other security measures	☐ Location shown on site map	☐ N/A	
Remarks _____				

C. Institutional Controls (ICs)

1. **Implementation and enforcement**

Site conditions imply ICs not properly implemented

☐ Yes ☒ No ☐

N/A

Site conditions imply ICs not being fully enforced

☐ Yes ☒ No ☐

N/A

Type of monitoring (*e.g.*, self-reporting, drive by)

Frequency

Responsible party/agency

Contact

Name

Title

Date

Phone no.

Reporting is up-to-date

☐ Yes ☐ No ☐

N/A

Reports are verified by the lead agency

☐ Yes ☐ No ☐

N/A

Specific requirements in deed or decision documents have been met

☐ Yes ☐ No

☐

N/A

Violations have been reported

☐ Yes ☐ No ☐

N/A

Other problems or suggestions: ☐ Report attached

2. **Adequacy**

☐ ICs are adequate

☐ ICs are inadequate

☐ N/A

Remarks

D. General

1.	Vandalism/trespassing	☐ Location shown on site map evident	☐ No vandalism
Remarks _____ _____ _____			
2.	Land use changes on site	☐ N/A	
Remarks _____ _____ _____			
3.	Land use changes off site	☐ N/A	
Remarks _____ _____ _____			
VI. GENERAL SITE CONDITIONS			
A. Roads ☒ Applicable ☐ N/A			
1.	Roads damaged	☐ Location shown on site map	☒ Roads adequate ☐ N/A
Remarks _____ _____ _____			

B. Other Site Conditions			
Remarks: Well-maintained.			
VII. LANDFILL COVERS ☐ Applicable x N/A			
A. Landfill Surface			
1.	Settlement (Low spots)	☐ Location shown on site map	☐ Settlement not evident
	Areal extent _____ Depth _____		
	Remarks _____		
2.	Cracks	☐ Location shown on site map	☐ Cracking not evident
	Lengths _____	Widths _____	Depths _____
	Remarks _____		
3.	Erosion	☐ Location shown on site map	☐ Erosion not evident
	Areal extent _____ Depth _____		
	Remarks _____		

4.	Holes	☐ Location shown on site map	☐ Holes not evident
	Areal extent _____ Depth _____		
	Remarks _____		

5.	Vegetative Cover	☐ Grass	☐ Cover properly established of stress
	☐ Trees/Shrubs (indicate size and locations on a diagram)		
	Remarks _____		

6.	Alternative Cover (armored rock, concrete, etc.)	☐ N/A	
	Remarks _____		

7.	Bulges ☐ Location shown on site map ☐ Bulges not evident Areal extent _____ Height _____ Remarks _____ _____ _____ _____
8.	Wet Areas/Water Damage ☐ Wet areas/water damage not evident ☐ Wet areas ☐ Ponding ☐ Seeps ☐ Soft subgrade Remarks _____ _____ _____ ☐ Location shown on site map ☐ Location shown on site map ☐ Location shown on site map ☐ Location shown on site map Areal extent _____ Areal extent _____ Areal extent _____ Areal extent _____
9.	Slope Instability ☐ Slides ☐ Location shown on site map ☐ No evidence of slope instability Areal extent _____ Remarks _____ _____ _____ _____
B. Benches ☐ Applicable ☒ N/A (Horizontally constructed mounds of earth placed across a steep landfill side slope to interrupt the slope in order to slow down the velocity of surface runoff and intercept and convey the runoff to a lined channel.)	
1.	Flows Bypass Bench ☐ Location shown on site map ☐ N/A or okay Remarks _____ _____ _____ _____
2.	Bench Breached ☐ Location shown on site map ☐ N/A or okay Remarks _____ _____ _____ _____

3.	Bench Overtopped Remarks _____ _____ _____	☐ Location shown on site map	☐ N/A or okay
C. Letdown Channels ☐ Applicable X N/A (Channel lined with erosion control mats, riprap, grout bags, or gabions that descend down the steep side slope of the cover and will allow the runoff water collected by the benches to move off of the landfill cover without creating erosion gullies.)			
1.	Settlement Areal extent _____ Depth _____ Remarks _____ _____ _____	☐ Location shown on site map	☐ No evidence of settlement
2.	Material Degradation Material type _____ Areal extent _____ Remarks _____ _____ _____	☐ Location shown on site map	☐ No evidence of degradation
3.	Erosion Areal extent _____ Depth _____ Remarks _____ _____ _____	☐ Location shown on site map	☐ No evidence of erosion

4.	Undercutting ☐ Location shown on site map ☐ No evidence of undercutting Areal extent _____ Depth _____ Remarks _____ _____ _____
5.	Obstructions Type _____ ☐ No obstructions ☐ Location shown on site map Areal extent _____ Size _____ Remarks _____ _____ _____
6.	Excessive Vegetative Growth Type _____ ☐ No evidence of excessive growth ☐ Vegetation in channels does not obstruct flow ☐ Location shown on site map Areal extent _____ Remarks _____ _____ _____
D. Cover Penetrations ☐ Applicable x N/A	
1.	Gas Vents ☐ Active ☐ Passive ☐ Properly secured/locked ☐ Functioning ☐ Routinely sampled ☐ Good condition ☐ Evidence of leakage at penetration ☐ Needs Maintenance ☐ N/A Remarks _____ _____ _____
2.	Gas Monitoring Probes ☐ Properly secured/locked ☐ Functioning ☐ Routinely sampled ☐ Good condition ☐ Evidence of leakage at penetration ☐ Needs Maintenance ☐ N/A Remarks _____ _____ _____
3.	Monitoring Wells (within surface area of landfill) ☐ Properly secured/locked ☐ Functioning ☐ Routinely sampled ☐ Good condition ☐ Evidence of leakage at penetration ☐ Needs Maintenance ☐ N/A Remarks _____ _____

4.	Leachate Extraction Wells		
	☐ Properly secured/locked	☐ Functioning	☐ Routinely sampled
	☐ Good condition		
	☐ Evidence of leakage at penetration	☐ Needs Maintenance	☐ N/A
	Remarks _____		

5.	Settlement Monuments		☐ Located
			☐ Routinely surveyed
			N/A
	Remarks _____		

E. Gas Collection and Treatment ☐ Applicable ☒ N/A	
1.	Gas Treatment Facilities ☐ Flaring ☐ Thermal destruction ☐ Collection for reuse ☐ Good condition ☐ Needs Maintenance Remarks _____ _____ _____
2.	Gas Collection Wells, Manifolds and Piping ☐ Good condition ☐ Needs Maintenance Remarks _____ _____ _____
3.	Gas Monitoring Facilities (<i>e.g.</i> , gas monitoring of adjacent homes or buildings) ☐ Good condition ☐ Needs Maintenance ☐ N/A Remarks _____ _____ _____
F. Cover Drainage Layer ☐ Applicable ☒ N/A	
1.	Outlet Pipes Inspected ☐ Functioning ☐ N/A Remarks _____ _____ _____
2.	Outlet Rock Inspected ☐ Functioning ☐ N/A Remarks _____ _____ _____
G. Detention/Sedimentation Ponds ☐ Applicable ☒ N/A	
1.	Siltation Areal extent _____ Depth _____ ☐ N/A ☐ Siltation not evident Remarks _____ _____ _____

2.	Erosion Areal extent _____ Depth _____ ☐ Erosion not evident Remarks _____ _____ _____ _____
3.	Outlet Works ☐ Functioning ☐ N/A Remarks _____ _____ _____ _____
4.	Dam ☐ Functioning ☐ N/A Remarks _____ _____ _____ _____

H. Retaining Walls			☐ Applicable	☒ N/A
1.	Deformations	☐ Location shown on site map	☐ Deformation not evident	
	Horizontal displacement_____	Vertical displacement_____		
	Rotational displacement_____			
	Remarks_____			

2.	Degradation	☐ Location shown on site map	☐ Degradation not evident	
	Remarks_____			

I. Perimeter Ditches/Off-Site Discharge				
		☐ Applicable	☒ N/A	
1.	Siltation	☐ Location shown on site map	☐ Siltation not evident	
	Areal extent_____	Depth_____		
	Remarks_____			

2.	Vegetative Growth	☐ Location shown on site map	☐ N/A	
	☐ Vegetation does not impede flow			
	Areal extent_____	Type_____		
	Remarks_____			

3.	Erosion	☐ Location shown on site map	☐ Erosion not evident	
	Areal extent_____	Depth_____		
	Remarks_____			

4.	Discharge Structure	☐ Functioning	☐ N/A	
	Remarks_____			

VIII. VERTICAL BARRIER WALLS				
		☐ Applicable	☒ N/A	

1.	Settlement ☐ Location shown on site map ☐ Settlement not evident Areal extent _____ Depth _____ Remarks _____ _____ _____ _____
2.	Performance Monitoring Type of monitoring _____ ☐ Performance not monitored Frequency _____ ☐ Evidence of breaching Head differential _____ Remarks _____ _____ _____ _____

IX. GROUNDWATER/SURFACE WATER REMEDIES ☒ Applicable ☐ N/A	
A. Groundwater Extraction Wells, Pumps, and Pipelines ☒ Applicable ☐ N/A	
1.	Pumps, Wellhead Plumbing, and Electrical ☒ Good condition ☒ All required wells properly operating ☐ Needs Maintenance ☐ N/A Remarks _____ _____ _____ _____ _____
2.	Extraction System Pipelines, Valves, Valve Boxes, and Other Appurtenances ☒ Good condition ☐ Needs Maintenance Remarks _____ _____ _____ _____
3.	Spare Parts and Equipment ☒ Readily available ☐ Good condition ☐ Requires upgrade ☐ Needs to be provided Remarks _____ _____ _____ _____
B. Surface Water Collection Structures, Pumps, and Pipelines ☐ Applicable ☒ N/A	
1.	Collection Structures, Pumps, and Electrical ☐ Good condition ☐ Needs Maintenance Remarks _____ _____ _____ _____
2.	Surface Water Collection System Pipelines, Valves, Valve Boxes, and Other Appurtenances ☐ Good condition ☐ Needs Maintenance Remarks _____ _____ _____ _____

3. **Spare Parts and Equipment**

☐ Readily available ☐ Good condition ☐ Requires upgrade ☐ Needs to be provided

Remarks _____

C. Treatment System		☒ Applicable	☐ N/A
1.	Treatment Train (Check components that apply) ☐ Metals removal ☐ Oil/water separation ☐ Bioremediation ☐ Air stripping ☐ Carbon adsorbers ☐ Filters _____ ☐ Additive (<i>e.g.</i> , chelation agent, flocculent) _____ ☒ Others 1,4-dioxane removal by advanced oxidation ☒ Good condition ☐ Needs Maintenance ☒ Sampling ports properly marked and functional ☒ Sampling/maintenance log displayed and up to date ☒ Equipment properly identified ☒ Quantity of groundwater treated annually: 34,894,919 gallons (2024) ☐ Quantity of surface water treated annually _____ Remarks _____ _____ _____ _____		
2.	Electrical Enclosures and Panels (properly rated and functional) ☐ N/A ☒ Good condition ☐ Needs Maintenance Remarks _____ _____ _____ _____		
3.	Tanks, Vaults, Storage Vessels ☐ N/A ☒ Good condition ☐ Proper secondary containment ☐ Needs Maintenance Remarks _____ _____ _____ _____		
4.	Discharge Structure and Appurtenances ☐ N/A ☒ Good condition ☐ Needs Maintenance Remarks _____ _____ _____ _____		

5.	Treatment Building(s) ☐ N/A ☒ Good condition (esp. roof and doorways) ☐ Needs repair ☒ Chemicals and equipment properly stored Remarks _____ _____ _____
6.	Monitoring Wells (pump and treatment remedy) ☒ Properly secured/locked ☒ Functioning ☒ Routinely sampled ☒ Good condition ☒ All required wells located ☐ Needs Maintenance ☐ N/A Remarks _____ _____ _____
D. Monitoring Data	
3.	Monitoring Data ☒ Is routinely submitted on time ☒ Is of acceptable quality
4.	Monitoring data suggests: ☒ Groundwater plume is effectively contained ☒ Contaminant concentrations are declining

D. Monitored Natural Attenuation	
1.	Monitoring Wells (natural attenuation remedy) ☒ Properly secured/locked ☒ Functioning ☒ Routinely sampled ☒ Good condition ☒ All required wells located ☐ Needs Maintenance ☐ N/A Remarks _____ _____ _____
E. OTHER REMEDIES	
If there are remedies applied at the site which are not covered above, attach an inspection sheet describing the physical nature and condition of any facility associated with the remedy. An example would be soil vapor extraction.	
XI. OVERALL OBSERVATIONS	
A.	Implementation of the Remedy
Describe issues and observations relating to whether the remedy is effective and functioning as designed. Begin with a brief statement of what the remedy is to accomplish (i.e., to contain contaminant plume, minimize infiltration and gas emission, etc.). The Univar remedy utilizes the Groundwater Recovery and Treatment Injection System (GRTIS) to capture and treat 1,4-dioxane-contaminated groundwater, reducing concentrations below cleanup goals and preventing off-site migration.	
B.	Adequacy of O&M
Describe issues and observations related to the implementation and scope of O&M procedures. In particular, discuss their relationship to the current and long-term protectiveness of the remedy. The Univar remedy is adequate in achieving significant reductions in 1,4-dioxane concentrations, meeting cleanup goals on-site while effectively mitigating off-site contaminant migration.	

C.	Early Indicators of Potential Remedy Problems
	Describe issues and observations such as unexpected changes in the cost or scope of O&M or a high frequency of unscheduled repairs, that suggest that the protectiveness of the remedy may be compromised in the future. Except for the cost drivers, which included two phases of investigations, roadway construction, the installation of five deep wells exceeding 200–300 feet in depth, and ongoing monitoring, as well as additional expenses such as legal and access fees for private properties and the construction of gates, there have been no unexpected changes in the cost or scope of O&M, nor a high frequency of unscheduled repairs at the Univar site, that would suggest a potential compromise to the protectiveness of the remedy in the future.
D.	Opportunities for Optimization
	Describe possible opportunities for optimization in monitoring tasks or the operation of the remedy. None.

APPENDIX F – SITE INSPECTION PHOTOS



Photograph No. 1

Site: South Valley Superfund Site

Description: OU 03, 1,4 Dioxane Advanced Oxidation Treatment Building.



Photograph No. 2
Description: OU 03, Extraction Wells Influent and effluent from Old Treatment Building.

Site: South Valley Superfund



Photograph No. 3

Site: South Valley Superfund

Description: OU 03, Equalization Tank and sand filter unit in Treatment Building.



Photograph No. 4
Description: OU 03, UV Oxidation Unit and Hydrogen Peroxide tank in
Treatment Building.

Site: South Valley Superfund



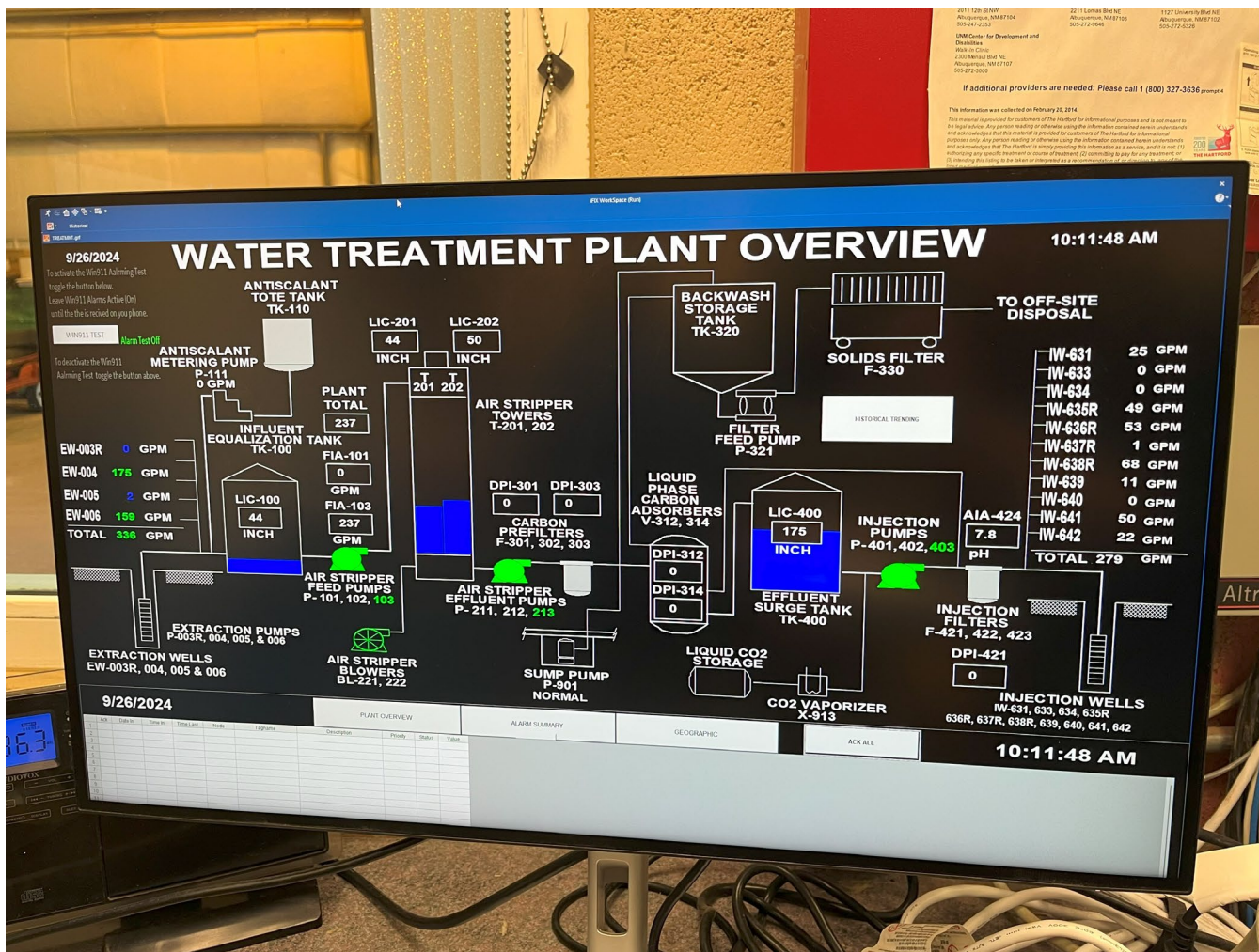
Photograph No. 5

Site: South Valley Superfund

Description: OU 03, Area east of fenced area that has extraction, injection and monitoring wells (monitoring well pictured).



Photograph No. 6 Site: South Valley Superfund
Description: OU 03, Area east of I-25; installation of additional monitoring wells.



Photograph No. 7
Description: OU 06, Water Treatment Plant Overview.

Site: South Valley Superfund



Photograph No. 8

Description: OU 06, Influent water lines from Extraction wells.

Site: South Valley Superfund



Photograph No. 9

Site: South Valley Superfund

Description: OU 06, Influent Equalization Tank and Liquid Phase Carbon Absorbers (2).



Photograph No. 10

Site: South Valley Superfund

Description: OU 06, Injection Pumps and Filters. Treated Water is pumped to Injection Wells.



Photograph No. 11

Description: OU 05, Monitoring Well – WB-01 looking northwest at Chevron Facilities.

Site: South Valley Superfund



Photograph No. 12

Site: South Valley Superfund

Description: OU 05, South Plant 83 Area; Concrete Cap, Institutional Control