FOURTH FIVE-YEAR REVIEW REPORT FOR WASTE DISPOSAL, INC. SUPERFUND SITE LOS ANGELES COUNTY, CALIFORNIA

PREPARED BY

U.S. Army Corps of Engineers

Seattle District

FOR

U.S. Environmental Protection Agency

Region 9

Approved by: Date:

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Executive Summary

This is the fourth Five-Year Review of the Waste Disposal, Inc. (Site) located in Santa Fe Springs, California. The purpose of this Five-Year Review is to determine if the remedy is and will continue to be protective of human health and the environment.

The Site covers 38 acres in an industrial and residential area of Santa Fe Springs. The main feature of the Site is a buried, concrete-lined, 42 million-gallon, 600-foot-diameter reservoir, which was initially used for crude petroleum storage. After the storage of crude petroleum ceased around the early 1940s, a variety of liquid and solid wastes were placed into the reservoir for disposal. By 1963, the reservoir was covered with fill, and by 1964 most, although not all, disposal activities appear to have ceased. Grading over the remainder of the buried wastes continued until approximately 1966.

The Site was added to the National Priorities List in July 1987, when it was determined that Site conditions posed several human health risks, including the potential for uncontrolled exposure via direct contact with buried wastes and contaminated soil, and soil vapor migration into nearby businesses. Contaminants of concern in the soil include 11 metals, 7 chlorinated pesticides, 16 volatile organic compounds, polycyclic aromatic hydrocarbons, and polychlorinated biphenyls.

The original Record of Decision (ROD), which specified a cleanup remedy, was signed December 27, 1993. The cleanup remedy consisted of the following: excavating designated areas to clean-up standards; consolidating excavated materials; placing perforated piping for the passive gas extraction system throughout the area to be capped; constructing a Resource Conservation and Recovery Act (RCRA)-equivalent cap over the reservoir and other areas; monitoring soil gases; installation of an extraction treatment system if constituents and volumes of gases require it; and implementing institutional controls.

Following the issuance of the 1993 ROD, new information became available including: the expanded lateral extent and volume of buried waste on the Site, the nature and increased extent of soil gas beneath the Site, and the presence of liquids inside the buried concrete-lined reservoir at the center of the Site. Based on this new information, the U. S. Environmental Protection Agency issued an amended ROD in June 2002. The Amended ROD selected a final sitewide remedy to contain waste materials; prevent exposure to contaminated soil, buried wastes, soil gases, and site liquids; and to protect long-term human health and the environment. The major components of the remedy include a RCRA Subtitle C-equivalent cap over the existing reservoir; engineered capping systems for areas outside the reservoir; a reservoir gas collection, extraction, and treatment system; liquids collection systems; engineering controls for buildings as necessary to prevent exposures to contaminants; passive

gas migration control or active soil vapor extraction systems; implementation of institutional controls; and implementation of long-term operations and maintenance and groundwater monitoring.

The Site's remedy components are functioning as intended in accordance with the Amended ROD. The exposure assumptions and remedial action objectives remain valid. Toxicity data have been updated for certain chemicals of concern. However, chemicals of concern with the changed toxicity information are either not detected or detected at concentrations within the U.S. Environmental Protection Agency's acceptable protective risk range. No new information has come to light that could call remedy protectiveness into question.

The remedy at the Waste Disposal, Inc. Site remains protective of human health and the environment. The remedy successfully contains on-site waste, blocks exposure pathways, and prevents exposure to contaminated soils. The reservoir gas collection system and engineering controls for on-site structures prevent migration of vapors to on-site and/or off-site indoor air. Groundwater remains unaffected by Site contamination.

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List of Acronyms and Abbreviations

City	City of Sante Fe Springs
EPA	U.S. Environmental Protection Agency
RCRA	Resource Conservation and Recovery Act
ROD	Record of Decision
USACE	United States Army Corps of Engineers
Waste Disposal, Inc. Group	Waste Disposal, Inc. Group, responsible party
WDI	Waste Disposal, Inc.

1. Introduction

The purpose of a Five-Year Review is to evaluate the implementation and performance of a remedy to determine if the remedy will continue to be protective of human health and the environment. The methods, findings, and conclusions of reviews are documented in Five-Year Reviews. In addition, Five-Year Reviews identify issues found during the review, if any, and document recommendations to address them.

The U.S. Environmental Protection Agency (EPA) prepared this Five-Year Review pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act Section 121, 40 Code of Federal Regulations Section 300.430(f)(4)(ii) of the National Contingency Plan and EPA policy.

This is the fourth Five-Year Review for the Waste Disposal Inc. (WDI) Superfund Site. The triggering action for this statutory review is the completion of the previous Five-Year Review on September 12, 2019. The Five-Year Review has been prepared because hazardous substances, pollutants, or contaminants remain at the Site above levels that allow for unlimited use and unrestricted exposure.

The WDI Superfund Site Five-Year Review was led by Russell Mechem, EPA Region 9 Remedial Project Manager. Participants included Cynthia Ruelas, EPA Region 9 Superfund Five-Year Review Coordinator, and from the United States Army Corps of Engineers (USACE): Zoe Bezold, PE, (Environmental Engineer), Trevor Bryant (Geologist), and Helen Sanchez (Project Engineer). The review began on November 7, 2023.

Table 1. Five-Year Review Summary Form

SITE IDENTIFICATION		
Site Name: Waste Disposal, Inc.		
EPA ID: CAD980884357		
Region: 9	**State:** CA	**City/County:** Santa Fe Springs/Los Angeles
SITE STATUS		
National Priorities List Status: Final		
Multiple Operable Units? No	**Has the site achieved construction completion?** Yes	
REVIEW STATUS		
Lead agency: EPA ***[If "Other Federal Agency", enter Agency name]*:**		
Author name (Federal or State Project Manager): Russell Mechem		
Author affiliation: EPA Region 9 Remedial Project Manager		
Review period: 11/7/2023 - 6/5/2024		
Date of site inspection: 3/6/2024		
Type of review: Statutory		
Review number: 4		
Triggering action date: 9/12/2019		
Due date *(five years after triggering action date)*: 9/12/2024		

1.1. Background

The Site covers 38 acres in an industrial and residential area of Santa Fe Springs, Los Angeles County, California. The main feature of the Site is a buried, concrete-lined, 42-million gallon, 600-foot-diameter reservoir, which was initially used for crude petroleum storage. The reservoir was constructed prior to 1924, and by the late 1920s, areas outside of the reservoir were used for the unregulated disposal of a variety of liquid and solid wastes. Between 1937

and 1941, the owner/operators removed the reservoir cover, and the reservoir was used as a landfill from the early to mid-1940s until the mid-1960s. The reservoir was then used for the disposal of a variety of liquid and solid wastes.

The disposal site operated under a permit from Los Angeles County from 1949 until 1964 and may have continued operating for roughly 2 to 3 years while the Site was being graded. Permitted wastes included rotary drilling mud, clean earth, rock, sand, gravel, paving fragments, concrete, brick, plaster, steel mill slag, dry mud cake from oil field sumps, and acetylene sludge. Investigations show that disposed materials also included, but were not limited to, the following unpermitted wastes: organic wastes, oil refinery wastes, solvents, petroleum-related chemicals, and other chemical wastes. Wastes were disposed within the reservoir and in areas adjacent to and outside of the reservoir.

By 1963, the reservoir was covered with fill, and by 1964 most, although not all, disposal activities appear to have ceased. Grading over the remainder of the buried wastes continued until approximately 1966.

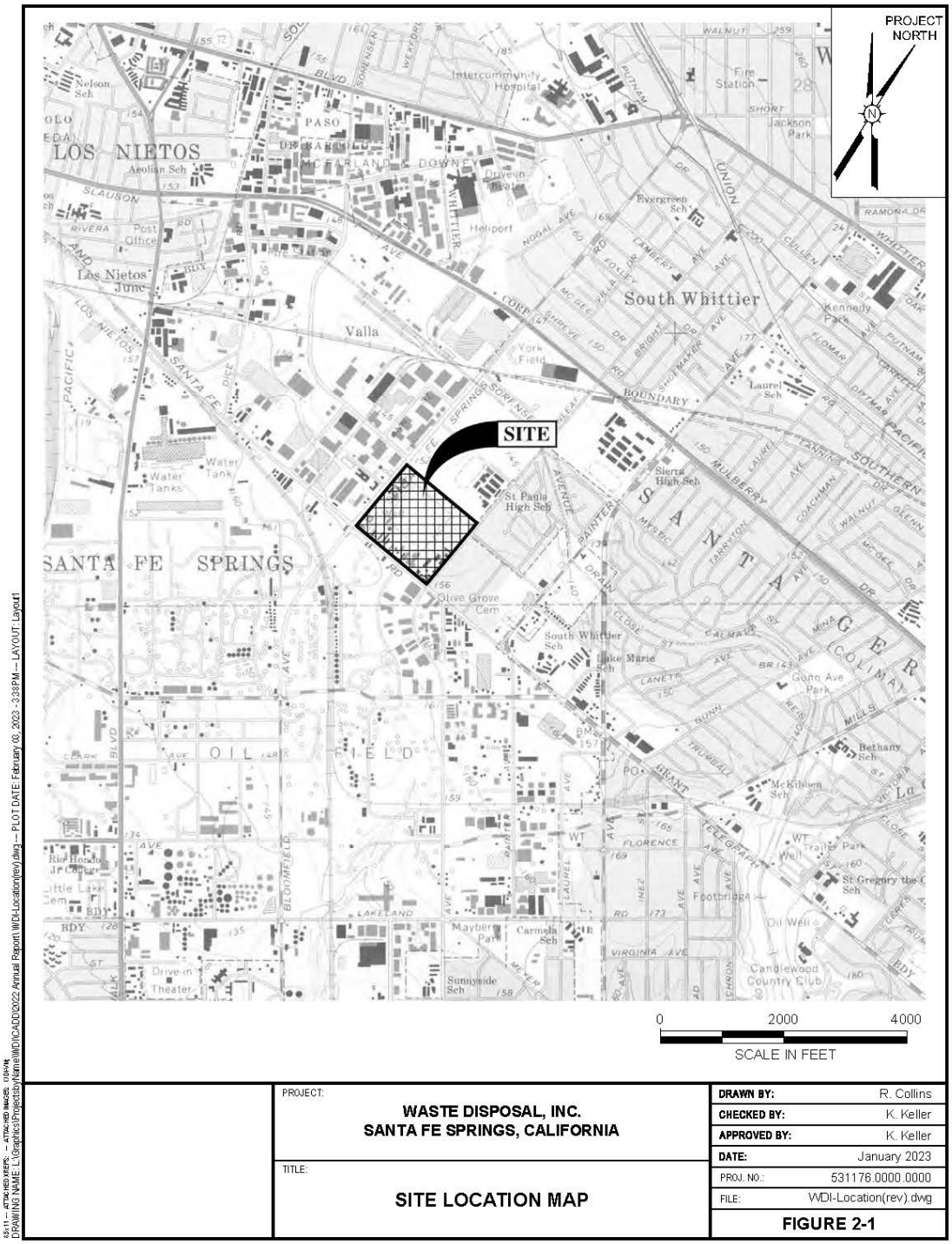
1.2. Physical Characteristics

The Site is located on the east side of Santa Fe Springs in Los Angeles County, California (Figure 1). The Site is bounded by Santa Fe Springs Road on the northwest, a warehouse and a private high school on the northeast, Los Nietos Road on the southwest, and Greenleaf Avenue on the southeast. Adjacent land uses include residential, light industrial, and commercial.

The Site is divided into Areas 1 through 8 (Figure 2). Zoning for the Site is M-2 Heavy Manufacturing with an industrial land use designation. The Site encompasses a total of 18 individual land parcels, 16 of which currently contain structures. Landowners and tenants operate a host of small business enterprises, encompassing commercial and light industrial activities. Existing structures accommodate a wide variety of light industrial businesses, including heavy equipment storage, a tool and die shop, printing and plating shops, and vehicle maintenance facilities, among others. A majority of these small businesses use chemicals containing volatile organic compounds, such as solvents and petroleum products, that can contribute to detections by indoor air monitoring systems installed as part of EPA's selected environmental remedy. No land uses near the Site have changed since selection of the remedial actions for the Site.

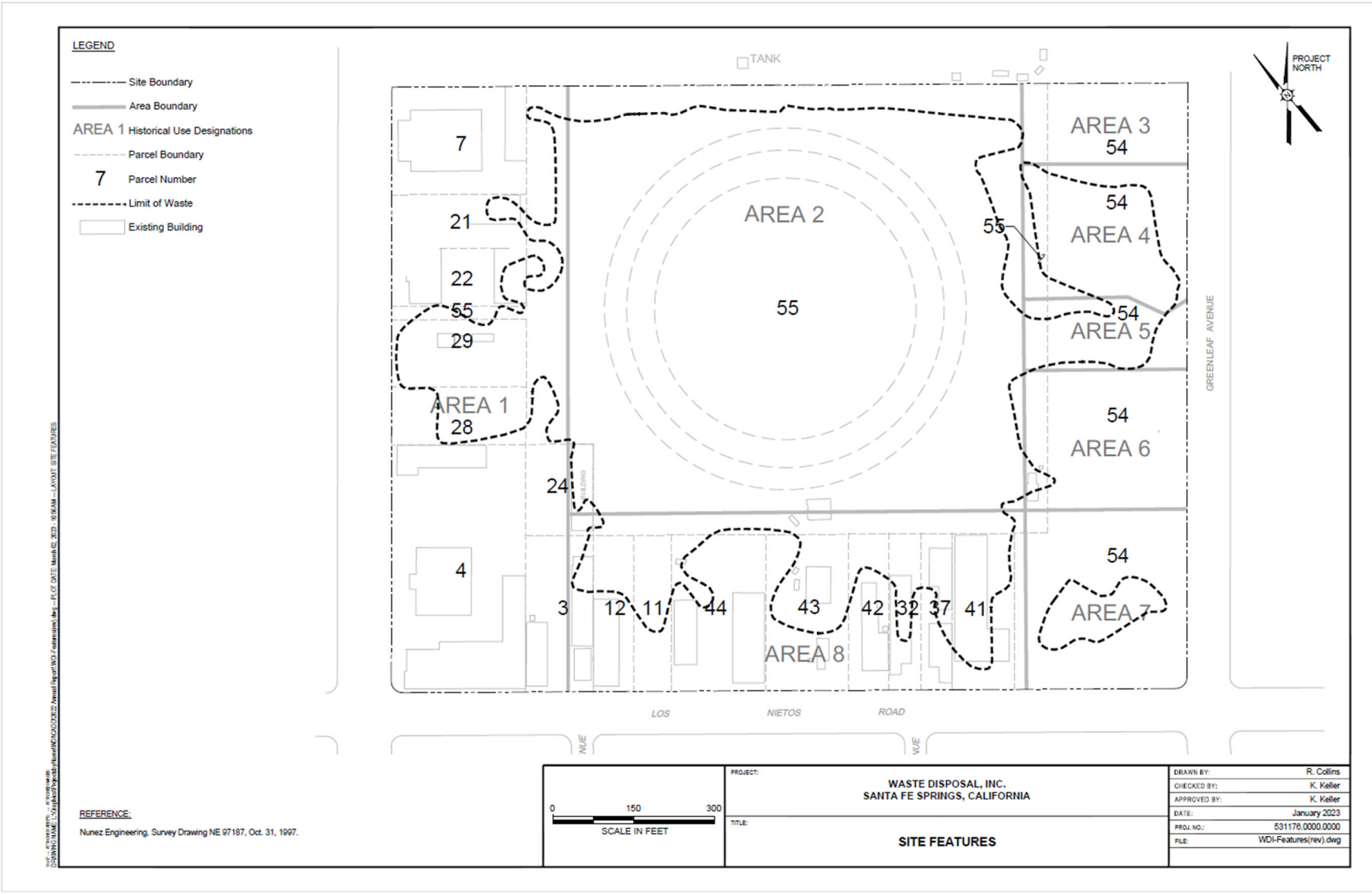
The City of Santa Fe Springs (City) has long been interested in having the Site redeveloped. To that end, the City adopted the *Specific Plan for the Development of the Waste Disposal, Inc. Site*

(Specific Plan) in May 2004. The Specific Plan lays out a vision for redevelopment of the Site along with conceptual site plans, siting and set-back requirements, and design guidelines. EPA, through the Superfund Redevelopment Initiative, coordinated with the City and other stakeholders to encourage and support appropriate beneficial reuse that would not compromise the integrity of the completed remedy. In 2019, developer CenterPoint Properties purchased Parcels 26, 30, 49, 50, and 51, and began planning for redevelopment. CenterPoint Properties' parcels (26, 30, 49, 50, and 51) were reconsolidated into what is now known as Parcels 54 and 55 (Figure 3). EPA remains actively involved in redevelopment activities to ensure the integrity and protectiveness of the completed environmental remedy. Onsite redevelopment-related activities began in 2019 when CenterPoint Properties demolished the warehouse on Parcel 54. Proposed Site development location can be seen on Figure 4.



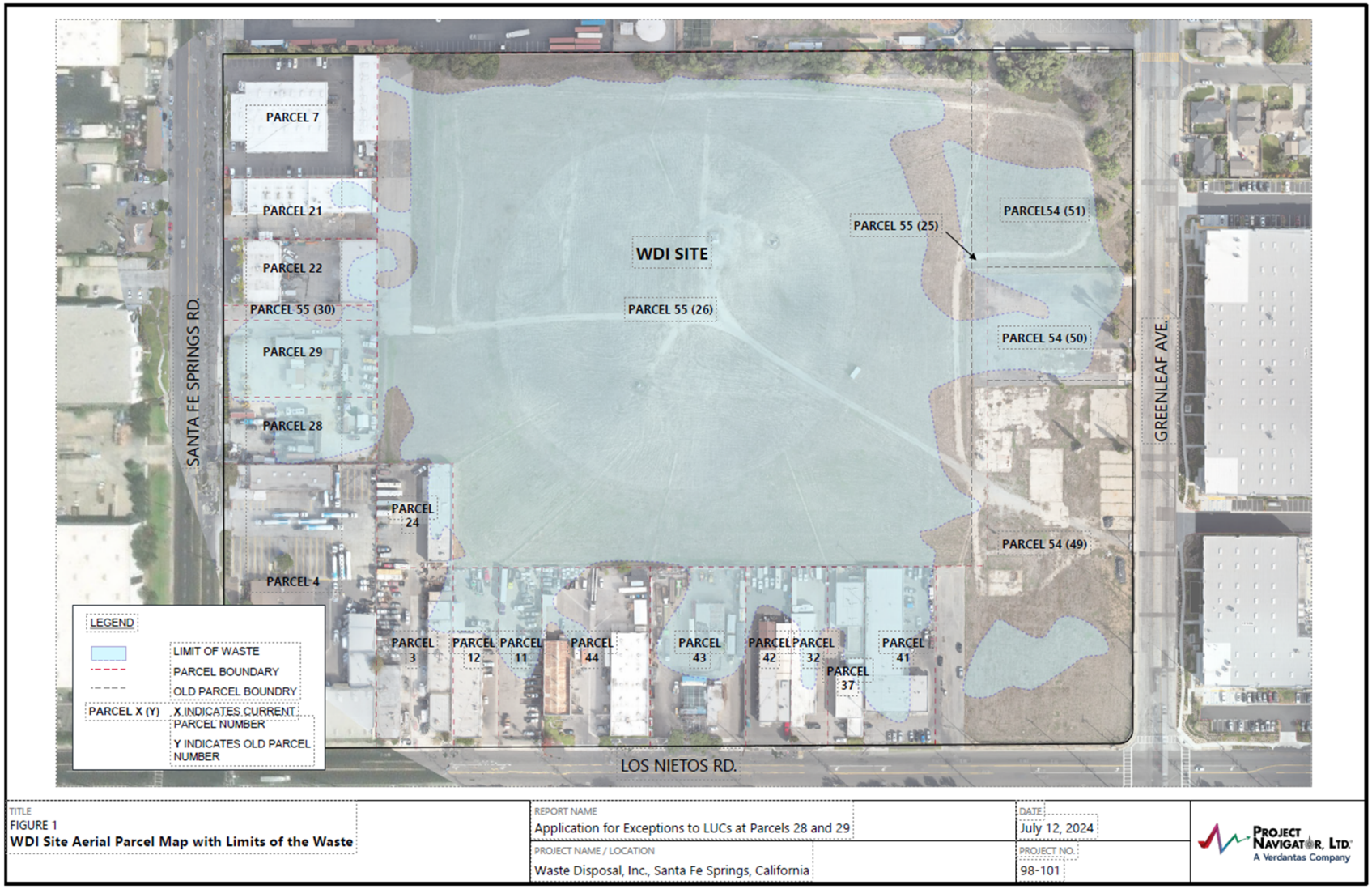
Source: Project Navigator, Ltd. 2023. MY2022 Annual Operations, Maintenance, and Monitoring.

Figure 1. Site Location Map



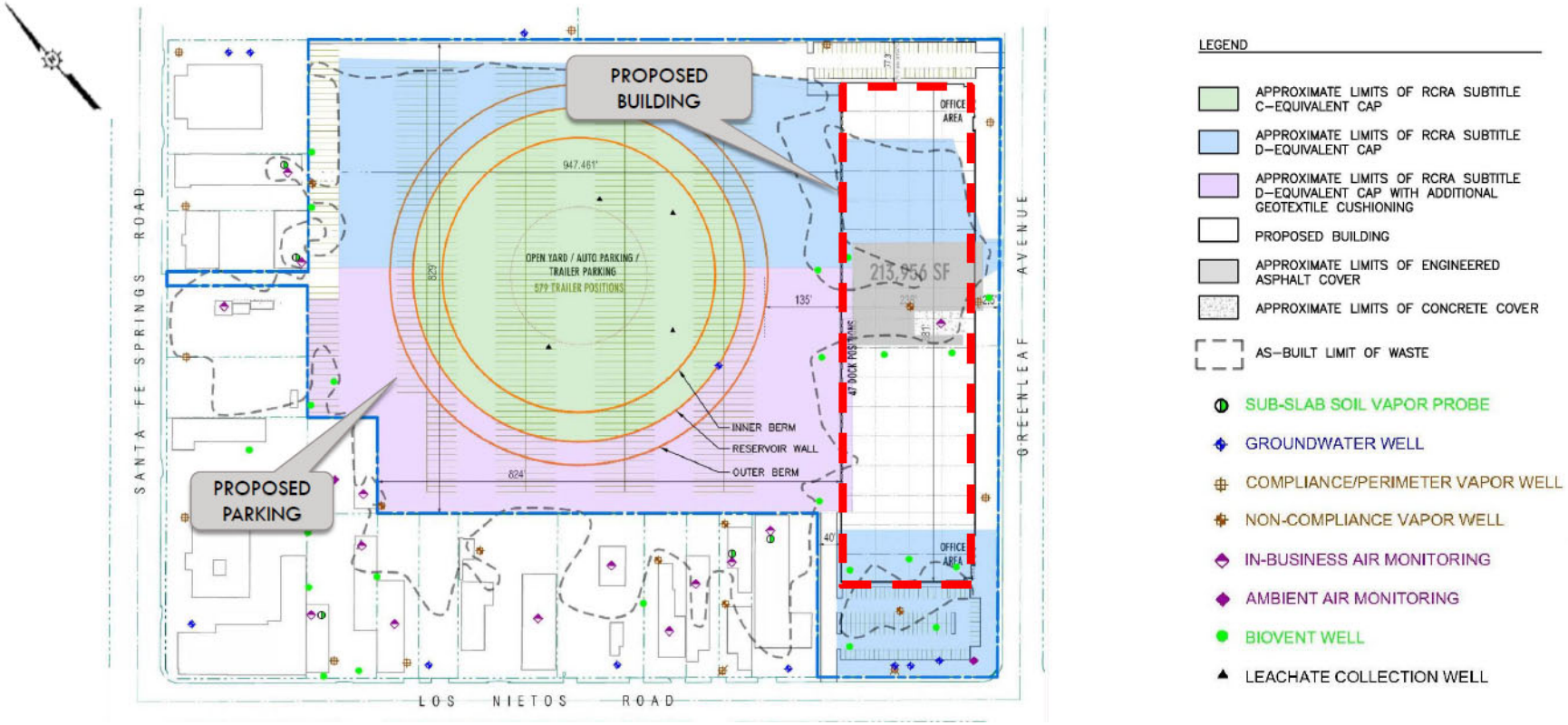
Source: Project Navigator, Ltd. 2023. MY2022 Annual Operations, Maintenance, and Monitoring.

Figure 2. Site Features (Areas 1-8)



Source: Project Navigator, Ltd. 2024. Application for Exceptions to LUCs at Parcels 28 and 29.

Figure 3. Site Features (Waste Delineation and Parcels)



Source: CenterPoint Properties and Roux Inc. 2022. Greenleaf Business Center – WDI Development Project Overview [Power Point Slides]. May 22.

Figure 4. Proposed Development Location

1.3. Hydrology

The Site is located in the Whittier area of the Los Angeles Central Groundwater Basin. The Site is underlain by unconsolidated recent alluvium and the Lakewood and San Pedro formations (primarily Pleistocene age fluvial sedimentary deposits). The subsurface stratigraphy and materials at the WDI Site, listed by increasing depth from ground surface, include:

- 5 to 15 feet of fill material covering the concrete reservoir, waste containment areas, and most of the Site;
- 10 to 25 feet of sandy clay and silt;
- 50 feet of sandy, pebbly, channelized braided river (fluvial) deposits; and
- At around 80 to 130 feet below ground surface, inter-bedded and pebbly sands.

The Site is underlain by (1) a shallow, upper water-bearing zone that exhibits localized groundwater flow generally to the southwest; and (2) a deeper, lower water-bearing zone where the southeasterly groundwater flow direction is consistent with regional flow. The shallow water-bearing zone at the Site extends to a depth of approximately 48 to 70 feet. The deeper water-bearing zones extend from 70 feet to approximately 1,000 feet below ground surface. The upper and lower water-bearing zones exhibit some degree of hydraulic interconnection, and there does not appear to be a distinct physical separation between the two zones. Although low permeability layers are present throughout the Site, the deepest soil borings at the Site (100 to 130 feet below ground surface) have not identified a sitewide low permeability layer. Groundwater flow rates are estimated to range from 6 to 60 feet per year based on the onsite soil characteristics.

2. Remedial Actions Summary

2.1. Basis for Taking Action

When EPA added the Site to the National Priorities List in July 1987, Site conditions posed several human health risks, including the potential for uncontrolled exposure via direct contact with buried wastes and contaminated soil, and soil vapor migration into nearby businesses. Site waste also posed a potential threat of groundwater contamination.

The contaminants of concern in the soil include 11 metals, 7 chlorinated pesticides, 16 volatile organic compounds, polycyclic aromatic hydrocarbons, and polychlorinated biphenyls. The contaminants of concern identified for soil gas include 12 volatile organic compounds and methane. The risk to human health and the environment caused by the presence of these

contaminants of concern in the soil, soil gas, and potentially groundwater provided the basis for taking action under the Comprehensive Environmental Response, Compensation, and Liability Act.

2.2. Remedy Selection

EPA issued a ROD in 1993. The selected remedy consisted of building a hazardous waste cap with capacity to add gas extraction and treatment if necessary. Following the issuance of the 1993 ROD, new information became available, including the expanded lateral extent and volume of buried waste on the Site, the nature and increased extent of soil gas beneath the Site, and the presence of liquids inside the buried concrete-lined reservoir at the center of the Site. Based on this new information, EPA issued an Amended ROD in June 2002.

The remedial action objectives for the remedy as stated in the 2002 Amended ROD are as follows:

- Protect human health and the environment by preventing exposure to buried wastes and contaminated soils;
- Protect current and future on-site and off-site receptors from exposure to soil gases;
- Prevent human exposure, from direct contact, consumption, and other uses, to Site liquids with contaminant concentrations exceeding State and Federal standards;
- Prevent Site liquids from contributing to exceedances of State and Federal groundwater standards; and
- Prevent human exposure to groundwater that exceeds State and Federal standards due to Site-related contaminants.

The Amended ROD modified the previously selected remedy for the contaminated soils and addressed waste materials, contaminated soil, subsurface liquids, subsurface gases, and groundwater conditions. As described in the Amended ROD, major components of the revised remedy include the following:

- Installation of a RCRA-equivalent cap for hazardous waste over the existing reservoir (in Area 2);
- Installation of engineered capping systems for areas outside of the reservoir (in Area 2) that will be designed to achieve RCRA solid waste engineering and performance standards, including limiting hydraulic conductivity to no more than 10^{-6} centimeters per second and constructing graded soil mono-fill covers, asphalt, concrete paving, and/or building foundations. Engineered capping systems will be installed over selected portions of Areas 1, 2, 4, 5, 6, 7, and 8;

- Installation of a gas collection, extraction, and treatment system beneath the RCRA-equivalent cap over the reservoir to collect, remove, and treat subsurface gases;
- Installation of liquids collection systems including liquids collection points in the reservoir (Area 2), to monitor, collect, and extract leachate and free liquids for treatment and disposal at an off-site facility approved by EPA;
- Use of engineering controls (e.g., physical barriers and/or indoor venting systems) at, and/or within, existing and new buildings overlying or adjacent to waste to prevent exposure to Site contaminants. Existing buildings or structures in locations where it is not technically feasible to install engineering controls will be demolished or removed;
- To minimize the potential exposure to soil gas, passive gas migration control (e.g., bio-venting wells) or active soil vapor extraction systems will be installed along portions of the waste perimeter outside of the reservoir area and near existing buildings. Monitoring systems will be installed to ensure performance;
- Implementation of institutional controls, including zoning ordinances, access controls, groundwater use restrictions, and environmental restrictive covenants (covenants), to ensure the integrity of remedial systems, minimize the potential for exposure to residual wastes and hazardous substances, and restrict land use and site access;
- Implementation of long-term groundwater monitoring to ensure the revised remedy is not contributing to exceedances of groundwater standards; and
- Implementation of long-term operations and maintenance to ensure that all environmental systems and control components function effectively.

For groundwater, EPA determined that the groundwater would be monitored, and the results would be compared to drinking water standards.

For soil gas, EPA calculated a soil gas performance standard for each chemical of concern by applying an attenuation factor of 100 to EPA's 2000 Ambient Air Preliminary Remediation Goals. Soil Gas Performance Standards are the only standards selected in the Amended ROD (Table 2).

Table 2. Soil Gas Performance Standards from 2002 Amended ROD

Chemical	Soil Gas Performance Standard (ppbv[1])	Basis for Cleanup Level
1,2-Dichloroethane	20	1 x 10^{-5} lifetime cancer target risk
1,1-Dichloroethene	100	1 x 10^{-4} lifetime cancer target risk
1,2,4-Trimethylbenzene	20	Hazard quotient of 0.2
1,2-Dichloroethene (cis)	180	Hazard quotient of 0.2
1,2-Dichloroethene (trans)	400	Hazard quotient of 0.2
1,2-Dichloropropane	20	1 x 10^{-5} lifetime cancer target risk
1,3,5-Trimethylbenzene	20	Hazard quotient of 0.2
1,2-Dibromoethane	1	1 x 10^{-5} lifetime cancer target risk
1,1,1 -Trichloroethane	3,600	Hazard quotient of 0.2
Carbon Tetrachloride	21	1 x 10^{-5} lifetime cancer target risk
Benzene	10	1 x 10^{-6} lifetime cancer target risk
Chloroform	20	1 x 10^{-5} lifetime cancer target risk
Ethylbenzene	5,000	Hazard quotient of 0.2
Methane	1.25% (near buildings) 5.0% (Site perimeter)	1 .25% Near Buildings - 25% of Lower Explosive Limit - City of Santa Fe Springs Ordinance; 27 California Code of Regulations §20937 5% Site Perimeter - 27 California Code of Regulations §20937
Xylenes	4,000	Hazard quotient of 0.2
PCE	500	1 x 10^{-5} lifetime cancer target risk
Toluene	2,000	Hazard quotient of 0.2
TCE	200	1 x 10^{-5} lifetime cancer target risk
Vinyl Chloride	10	1 x 10^{-6} lifetime cancer target risk

[1] ppbv = Parts per billion by volume

PCE = Tetrachloroethene

TCE = trichloroethene

2.3. Remedy Implementation

Physical construction of the remedy components specified by the Amended ROD began in March 2004 and was completed in August 2005. The site achieved formal RA-complete status in 2006 following EPA approval of a combined remedial action completion and as-built report. The engineered capping systems provide effective containment to prevent exposure to underlying

waste materials and prevent infiltration. Although the reservoir gas collection and granular activated carbon treatment system was initially constructed with blowers for active collection, it was converted to passive operation in December 2007 due to very low rates of gas generation. The long-term soil gas monitoring program monitors selected soil vapor monitoring wells and the reservoir gas collection system for compliance with Site soil gas performance standards and to identify any potential health risks associated with soil gas migration.

The liquids collection system includes four collection points (Figure 5) within the lined former reservoir to monitor, collect, and extract very small volumes of leachate and free liquids for treatment and disposal at an off-site facility approved by EPA. Two of the collection points (LC-2 and LC-4) were automated in December 2007 and were pumped continuously. From December 2007 through September 2017, approximately 7,515 gallons of liquids were collected at well LC-2 and approximately 4,620 gallons of liquids were collected at well LC-4. In September 2017, liquid collection system operations were discontinued to conduct bi-weekly monitoring of static liquid levels in the leachate wells.

Twenty-four passive bio-venting wells were installed for soil gas migration control along a portion of the waste perimeter outside of the reservoir area and near existing buildings. The bio-vent wells provide air to enhance aerobic decomposition/biodegradation of subsurface wastes.

Institutional controls in the form of covenants protect eighteen site parcels from adverse activities that could compromise the physical integrity of the selected remedy (Table 3). The objectives of the covenants are as follows:

- Notify potential Site users of hazardous material presence and presence of remedial systems;
- Prohibit residential land use and limit future use to industrial activity;
- Minimize potential for exposure of future Site users;
- Protect the integrity of the remedy; and
- Provide access to the Site for regulatory agencies and responsible parties.

The covenants for each parcel place numerous restrictions on land and water uses and provide notice to prospective purchasers or other users about the status and condition of the Site. Among other restrictions, the covenants prohibit residential land use and require EPA's review and prior written approval for an extensive list of activities that could potentially damage the engineered capping and monitoring systems. The covenants also include extensive land use restrictions (Prohibited Uses) intended to prevent human exposure to harmful waste materials

and to protect the integrity of the completed remedy. The covenants require owners to maintain any necessary engineered capping systems and engineering controls for any new structures or buildings that may require city building permits, as specified by EPA. Owners may not use, or allow others to use the property in a manner that may interfere with or adversely affect the implementation, integrity, or protectiveness of response actions required by EPA for the selected remedy. The Waste Disposal Inc., Group implements an Institutional Controls Monitoring and Enforcement Work Plan (Project Navigator Ltd., 2015) under EPA oversight. The Institutional Controls Monitoring and Enforcement Work Plan was initially created in 2007 and is updated on a periodic basis as needed, to reflect information on changes in property ownership, tenant occupancy, or parcel-specific land-use. The last revision was in 2015. The Waste Disposal, Inc. Group implements the Institutional Controls Monitoring and Enforcement Work Plan through (1) a combination of detailed parcel-specific site inspections; and (2) an extensive internet-based monitoring program designed to detect potential changes in property ownership, tenancy, financial status, land use, permitting; and upcoming construction. The annual Operations, Maintenance, and Monitoring reports, prepared by Project Navigator, Ltd. and TRC Solutions on behalf of Waste Disposal, Inc. Group, include results of the Institutional Controls Monitoring and Enforcement Work Plan implementation.

Table 3. Summary of Implemented Institutional Controls

Media, Engineered Controls, and Areas	Institutional Controls Needed	Institutional Controls Called for in the Decision Documents	Impacted Parcels	Objectives	Title and Date
Waste Materials, Groundwater, and Soil Gas	Yes	Yes	Parcels 3, 4, 7, 11, 12, 21, 22, 24, 28, 29, 32, 37, 41, 42, 43, 44, 54, and 55	As noted above	Land Use Covenant – Environmental Restrictions (Dated 16 April 2003 through 9 March 2009)

2.4. System Operations/Operation and Maintenance

2.4.1. Operations and Maintenance Requirements

Long-term operation and maintenance and performance monitoring ensures environmental systems and institutional control components continue to function effectively. Operation and maintenance activities follow the Site's Operational Maintenance and Monitoring Plan, which EPA approved on December 12, 2013. Regular operation and maintenance, generally conducted annually, includes the following:

- Inspection of the RCRA Subtitle C-equivalent and Subtitle D-equivalent covers (annual);
- Survey of settlement monuments (annual);
- Reservoir gas collection, venting, and treatment system operation and inspections (semi-annual);
- Groundwater and soil vapor monitoring well inspections (inspections conducted during sampling events - annual for groundwater, and semi-annual for soil vapor);
- Bio-vent well inspections;
- Stormwater drainage system inspections;
- Monitoring of liquid levels and liquid removal;
- Landscape maintenance;
- Site security; and
- Reporting

Monitoring of institutional controls occurs in accordance with the Institutional Controls Monitoring and Enforcement Work Plan. The Waste Disposal, Inc., Group conducts quarterly Institutional Control monitoring and enforcement inspections of site properties with recorded covenants. A third-party company, Terradex, monitors land usage on behalf of the Waste Disposal, Inc., Group.

A licensed land surveyor completes a survey of settlement monuments to assess structure stability, yearly. Unacceptable settling was not observed during the review period. The Gas Migration Control System operates in passive mode and is inspected, with samples taken semiannually. In December 2013, the EPA approved modifications to the Operations Maintenance and Monitoring Sampling Program, which reduced the sampling frequency and the number of analytes. In accordance with the modified Operations, Maintenance and Monitoring Sampling Program, in-business indoor air is conducted semiannually. The analyte list currently consists of methane, trichlorofluoromethane, 1,1,2-trichloro-1,2,2-trifluoroethane, benzene, trichloroethene, tetrachloroethene, and toluene. From 2019 through 2023, only

benzene and trichloroethene were detected in indoor air samples at concentrations exceeding Indoor Air Threshold Levels. However, sub-slab sample concentrations during the 2019 to 2023 review period were all below Indoor Air Threshold Levels, which demonstrates the source of elevated contaminant concentrations of indoor air is related to business activities. The Waste Disposal Inc., Group has conducted chemical use inventories to collect information on chemicals used in specific buildings. Chemical use inventories show that businesses use chemicals that can contribute to indoor air threshold exceedances. EPA will continue to work with the Waste Disposal Inc., Group to maintain updated chemical use inventories.

The liquid collection wells are inspected, sounded, and bailed, and the liquid wastes are characterized and disposed of off-site as necessary on a semiannual basis.

2.4.2. Significant Operations and Maintenance Requirements

CenterPoint Properties, as a new onsite property owner, responded to and addressed unauthorized ground disturbances discovered on their parcels. Prior to completing repairs, CenterPoint Properties submitted work plans to the EPA for review and approval. USACE and Waste Disposal Inc., Group personnel provided construction oversight during repairs. Damage to the RCRA Subtitle D-Equivalent Cover from an unauthorized excavation by an offsite contractor was repaired on February 10, 2022. On April 6, 2023, CenterPoint Properties backfilled an unauthorized boring discovered near the stray ball fence on the northeast side of the Site. On October 13, 2023, CenterPoint Properties backfilled three unauthorized borings installed by the contractor of parcel 22 for an electrical upgrade. As enhanced site security, CenterPoint Properties has installed upgraded closed circuit video surveillance to monitor Site activities.

3. Progress Since the Last Five-Year Review

3.1. Previous Five-Year Review Protectiveness Statement and Issues

The protectiveness statement from the third Five-Year Review for the Waste Disposal, Inc. Site stated the following:

> *The remedy at the Waste Disposal, Inc. Site is protective of human health and the environment. The remedy successfully contains on-site waste, blocks exposure pathways, and prevents direct exposure to contaminated soils. The reservoir gas collection system and engineering controls for on-site structures prevent migration of vapors to on-site and/or off-site indoor air. Groundwater remains unaffected by Site contamination.*

The previous year Five-Year Review did not identify any issues regarding protectiveness. The previous Five-Year Review recommended updating site chemical use inventories to help validate that the indoor air threshold exceedances are related to tenants' business operations, which involve the use of solvents. This recommendation has not been implemented at this time since on-property business activities have not substantially changed, but EPA will work with the Waste Disposal Inc., Group to prepare updated chemical use inventories.

3.2. Work Completed at the Site During this Five-Year Review Period

RCRA Subtitle C- and D-Equivalent Cover crack repairs were performed in October 2019, August 2020, December 2021, October 2022, and October 2023.

Observations requiring action during this period included silt fencing repairs, repairs to foul ball netting that blocks stray baseballs from the neighboring school, weed control, drum disposal, trash removal, graffiti abatement, and gopher abatement. Resolution of these issues occurred soon after they were found.

Planning for commercial redevelopment of Parcels 54 and 55 continued throughout the review period. CenterPoint Properties submitted numerous work plans and reports as part of a predesign package to construct a proposed warehouse with office space along the eastern side of the Site (Greenleaf Avenue) and parking in the central area above the former reservoir. The EPA, Department of Toxic Substances Control, and Waste Disposal Inc. Group reviewed and provided comments on these submittals. In 2022, the EPA and CenterPoint Properties developed the draft Statement of Work and Bona Fide Prospective Purchaser Agreement, which is pending agreement by all stakeholders. The Statement of Work includes numerous requirements for work plans, engineering design packages, stakeholder coordination, operation and maintenance, and quality assurance to be performed by CenterPoint Properties. The redevelopment plan generally calls for importation of soil and soil surcharging to raise the ground surface above the existing RCRA cover, replacement of existing capping materials in areas with warehouse construction, vertical building construction with underlying vapor intrusion mitigation system (vapor barrier), construction of parking above the raised cap in the central portion of the Site, and reconstruction of monitoring and other Site systems.

During the review period, onsite redevelopment activities included a geotechnical investigation and initial demolition activities. Roux Associates, Inc. on behalf of CenterPoint Properties completed a geotechnical investigation on Parcels 54 and 55 between January 22 and February 22, 2019. CenterPoint Properties demolished the warehouse on Parcel 54 in December 2020. In the spring of 2021, CenterPoint Properties removed nine onsite power poles. Three poles were

located within the RCRA D-Equivalent Cover. The removal process included excavating around the pole, cutting the liner, removing the poles by crane, repairing the liner, and backfilling/compacting the excavated area. The temporary power pole servicing the reservoir gas collection system, trailer, and storage bin was disconnected and removed.

4. Five-Year Review Process

4.1. Community Notification, Involvement and Site Interviews

4.1.1. Five-Year Review Public Notice and Press Release

A public notice was made available by local newspaper posting in the San Gabriel Valley Tribune, Pasadena Star-News, and Whittier Daily News on January 26, 2024, stating that there was a Five-Year Review and inviting the public to submit any comments to the EPA. No comments were received. EPA also issued a press release on February 8, 2024 (https://www.epa.gov/newsreleases/epa-review-effectiveness-cleanups-14-privately-owned-california-superfund-sites-2024), notifying that there was a Five-Year Review. Copies of the public notice and press release are presented in Appendix G. EPA also placed a notification on the Site website (www.epa.gov/superfund/wastedisposal) stating that the Site was undergoing a five-year review.

Results of the five-year review and the report will be made available at the following Site information repositories: EPA Superfund Records Center, located at 75 Hawthorne Street, Room 3110, San Francisco, California 94105, and at the Santa Fe Springs Library at 11700 Telegraph Road in Santa Fe Springs, California 90670. The Five-Year Review will also be made available on the Site's webpage.

4.1.2. Site Interviews

During the Five-Year Review process, interviews were conducted to document any perceived problems or successes with the remedy that has been implemented to date. The following personnel were interviewed: Michael J Skinner, Michael J Skinner Consulting, PRP project coordinator; Raudel Sanchez, Project Navigator, Ltd, PRP consultant; Jessy Fierro, California Department of Toxic Substances Control, Project Manager; and Anthony C. Ward, Roux Inc., consultant for property developer. The results of these interviews are summarized below. Copies of interview questionnaires are presented in Appendix H.

All interviewees reported the remedy was performing as designed, and the monitoring data shows concentrations of contaminants are stable or decreasing. Mr. Skinner and Mr. Sanchez recommended revising monitoring activities, reducing the frequency, locations, and costs for some monitoring activities, and stated the EPA is currently reviewing Waste Disposal Inc., Group's proposed optimization monitoring approach. EPA will continue discussions with Waste Disposal Inc., Group and EPA will determine whether revisions to the operation and maintenance plan might be appropriate. Mr. Sanchez outlined several operations and maintenance challenges experienced during the review period including damage to the RCRA Subtitle D-Equivalent Cover by an offsite contractor, discovery of an unauthorized boring near the stray ball fence, and three unauthorized borings installed by the contractor of Parcel 22 for an electrical upgrade. Mr. Sanchez reported Waste Disposal Inc., Group or CenterPoint Properties addressed unauthorized ground disturbances in a timely manner. EPA reviewed and approved work plans prior to completing repairs. Ms. Fiero stated California Department of Toxic Substances Control recommends sending a notice regarding redevelopment activities to the neighboring community and posting the notice at the perimeter of the Site.

The responses indicate effective collaboration between stakeholders on redevelopment planning and activities. Mr. Ward reported the EPA has reviewed and approved all environmental and geotechnical planning documents. Mr. Ward indicated the construction of a new building, parking areas, and related amenities will impact the remedy. However, redevelopment activities will consist of protective measures to prevent release and exposure to site contaminants. The protective measures include the following:

- Destruction, relocation, and/or protection of monitoring points within the footprint of the redevelopment;
- Replacement of portions of the RCRA caps;
- Excavation and reconsolidation of waste materials;
- Installation of engineering controls to protect against exposure to waste and soil vapor;
- Installation of vapor barrier(s) for buildings;
- Installation of structural ground improvements for the building;
- Reconstruction of stormwater systems;
- Redeployment of Site monitoring systems; and
- Site security

4.2. Data Review

During the 2019 to 2023 review period groundwater monitoring and soil gas/indoor air sampling were completed at the Site. Analytical data collected from these activities

demonstrates that Site contaminants are not contributing to groundwater drinking standards, and exposure of receptors to soil gases is being prevented.

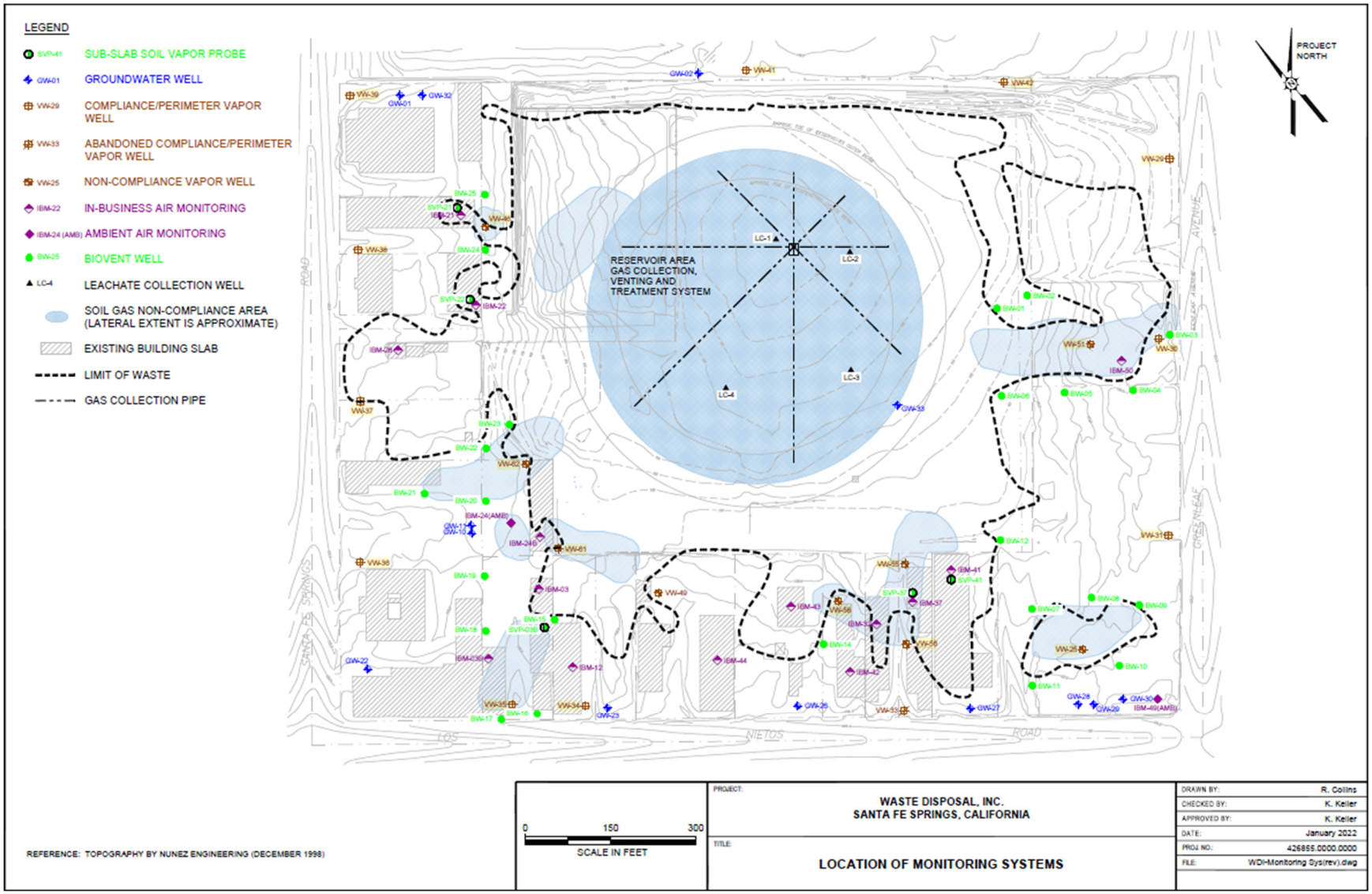
4.2.1. Groundwater

Groundwater monitoring was completed annually at three monitoring wells (GW-11, GW-30, GW-32). Groundwater samples were collected and analyzed for arsenic, benzene, carbon tetrachloride, chloroform, lead, manganese, mercury, tetrachloroethene, trichloroethene, toluene, total xylenes, and vinyl chloride.

Contaminant concentrations in groundwater have remained low when compared to the drinking water standards since 2001. The only Site-related contaminants detected were tetrachloroethene and trichloroethene in monitoring well GW-11 and these concentrations did not exceed the drinking water standards of 0.005 milligram per liter. During the 2019 to 2023 period, arsenic and manganese were detected above drinking water standards with values comparable to local levels. The source of these contaminant concentrations is attributed to off-site contributors as viewed from upgradient on-Site well GW-32.

4.2.2. Soil Gas/Indoor Air

Soil gas sampling was completed annually at 15 on-Site vapor wells with sampling of four selected vapor wells being completed twice per year. All sampled wells are in Figure 5. Evaluated contaminants and their 2002 Amended ROD Performance Standards are outlined in Table 2.



Source: Project Navigator, Ltd. 2023. MY2022 Annual Operations, Maintenance, and Monitoring.

Figure 5. Well Network Locations

Contaminant concentrations in soil gas have decreased since investigations began at the Site in 1998. During the 2019 to 2023 period, the only contaminant detected slightly above Performance Standards was trichloroethene in 2019 and 2020 samples collected at vapor well VW-35-D. Historical data shows declining levels of trichloroethene at this location since 1998.

Indoor air sampling was completed at nine indoor locations and two outdoor locations two times per year. Sub-slab sampling was also completed at the same time as indoor air sampling at five vapor probes. Evaluated contaminants and their 2002 Amended ROD Performance Standards are outlined in Table 2.

Benzene was detected in indoor air samples above Indoor Air Threshold Levels at IBM-21 in 2019, IBM-22 in 2020, IBM-32 from 2020 to 2022, IBM-37 in 2019, IBM-41 from 2020 to 2022, and IBM-50 in 2020. Additionally, trichloroethene concentrations above Indoor Air Threshold Levels were detected at IBM-32 from 2021 to 2022. Sub-slab sample concentrations during the 2019 to 2023 review period were all below Indoor Air Threshold Levels. Locations where indoor air sample concentrations for benzene and trichloroethene were above Indoor Air Threshold Levels are automotive businesses where volatile organic compounds are frequently used. The source of elevated benzene and trichloroethene concentrations is business-related based on (1) sub-slab sample concentrations being below Indoor Air Threshold Levels, (2) indoor sample concentrations exceeding Indoor Air Threshold Levels, and (3) use of chemicals including solvents within the buildings.

The reservoir gas collection and granular activated carbon treatment system has remained in passive mode since 2007.

4.2.3. Climate Resilience and Seismicity Screening

The Site demonstrates high resilience to potential climate and regional seismicity impacts. There is potential for earthquakes in the Site's region that, if sufficiently severe, could impact the integrity of the concrete reservoir. However, the engineered capping systems were designed to meet seismic standards as well as accommodate potential structural loadings, such as vehicle parking in the central reservoir area. Moreover, the protectiveness of the remedy is unlikely to be impacted due to historical liquid collection removing potential contaminants. Recent measurements also indicate that liquid levels in the reservoir are low, suggesting little to no escape would occur in an earthquake. The capping systems were designed and constructed after consideration and analysis of potential seismic impacts.

Located in a level urban setting, the Site has demonstrated very low vulnerability to natural weather events, such as heavy rainstorms or related flooding, erosion, or sedimentation

effects. Due to the domed shape of the reservoir area and overlying engineered capping system, flooding or heavy rains would not impact the protectiveness of the remedy, as water would flow radially outward from the Site and through controlled drainage pathways and a retention basin. The Waste Disposal Inc., Group has constructed an effective surface water management system, including flow diversion and sedimentation/retention features, that controls drainage both on-site and leaving the Site. Additionally, due to the urban location of the Site, wildfires would not reach the Site and impact the protectiveness. The Waste Disposal Inc., Group implements regular grass mowing, weed control, and inspections to manage vegetation and limit the potential for localized brush fires. Signage, fencing, closed circuit television cameras, and coordination with first responders all contribute to minimizing the potential for fire damage. Similarly, future redevelopment will consider these influences and incorporate protective design features, such as surface water management, Site security and control, and maintained vegetation.

Southern California has experienced decreased levels of rainfall in recent years, leading to drought conditions and declining groundwater elevations. Although groundwater remediation is not a component of the selected remedy, the remedy does include long-term groundwater monitoring to help ensure and demonstrate that the Site does not contribute to groundwater contamination. Ten (10) of the Site's 13 groundwater monitoring wells have experienced declining water levels so they cannot be sampled at this time. Only three wells contain water at depths that allow for sampling. Decreasing groundwater elevations would not impact the protectiveness of the remedy since the remedial action does not include a groundwater treatment component. However, continued decreases could impact the ability to monitor the protectiveness of the containment remedy on a long-term basis. Groundwater elevation trend analysis shows that if reduced precipitation continues, GW-30 would likely go dry within roughly the next decade, while GW-11 and GW-32 could similarly go dry in the next several decades (Figure 6). Please note Figure 6 indicates long-term decline in water levels but is limited due to variability in the data. EPA will continue to track water levels for the monitoring wells and will consider a possible need to modify existing wells or install new wells for additional groundwater monitoring if local groundwater elevations remain at current or lower elevations.

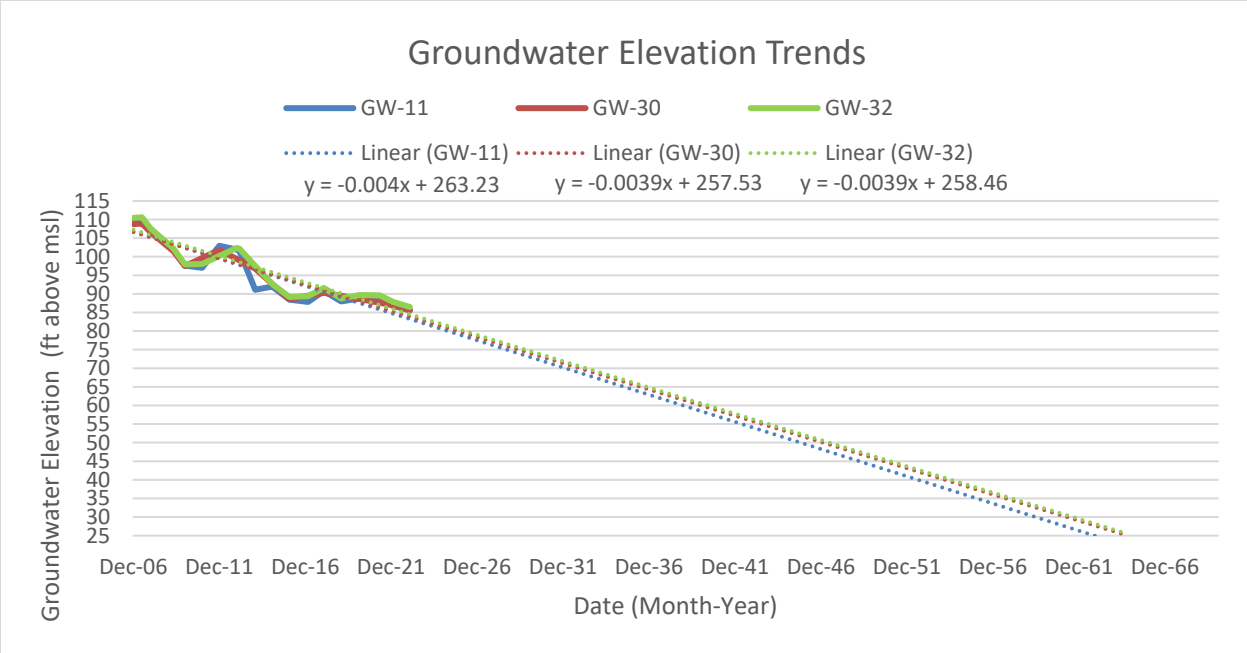


Figure 6. Groundwater Elevation Trend Analysis for GW-11. GW-30, and GW-32 using annual elevation data from 2006 to 2023.

4.3. Site Inspection

The Site inspection was conducted on March 6, 2024. In attendance were Helen Sanchez of USACE, Raudel Sanchez of Project Navigator, Ltd representing Waste Disposal Inc., Group, and Chris Rose of Roux, Inc. representing CenterPoint Properties. The purpose of the inspection was to assess the condition of the remedy and verify that the remedy is operating as intended. Despite some minor maintenance deficiencies, the remedy is in good condition and operating as intended. During the inspection, the inspector located and assessed the condition of leachate wells, bioventing wells, monitoring wells, settlement monuments, vapor probes, the granular activated carbon system, adjacent buildings, and catch basins. The wells were in good condition. However, several well labels were not visible or fading. Additionally, leachate well, LC-2, was missing a well cap. USACE inspected the remedial cap for any signs of rodent burrows, damage, or disturbance. The cap was in good condition, and no disturbances were observed. While inspecting the perimeter of the Site, several minor maintenance deficiencies were observed, including torn silt fencing, broken fencing on Greenleaf Avenue, worn netting by St. Paul High School, and overgrowth of vegetation. All of these observations can be addressed easily during routine operation and maintenance. USACE attempted to inspect buildings on Parcel Nos. 32, 37, and 41, where indoor air exceeded threshold levels, but the businesses were closed at the time of inspection. These buildings will be marked for follow-up inspections and

updated chemical-use inventories by Waste Disposal Inc., Group in consultation with USACE. Chemical use inventories conducted in the past show that businesses at the Site use chemicals that can contribute to indoor air threshold exceedances. Stormwater infrastructure, including flow control and retention features, was well maintained and clear of debris. The Site Inspection Report is included as Appendix I.

5. Technical Assessment

5.1. Question A: Is the remedy functioning as intended by the decision documents?

The Site remedy components are functioning as intended by the Amended ROD. Inspections of the RCRA C and D Covers confirmed the covers remain in good condition without significant cracks and prevent exposure to buried wastes or contaminated soils. Annual groundwater monitoring results demonstrate groundwater remains unimpacted by site contamination. Liquid collection wells have reached asymptotic levels at LC-1 and LC-4, and active recovery is no longer necessary. In the previous five years, the majority of soil gas concentrations detected meet soil gas performance standards, with very few exceptions (see Appendix C), and there is no evidence of soil gas intrusion into businesses. The monitoring and enforcement program effectively ensures institutional controls remain in place to maintain integrity of the remedy and prevent exposure to waste.

5.1.1. Remedial Action Performance

The RCRA Subtitle C-and D-equivalent covers prevent exposure to buried wastes and contaminated soil. The covers also prevent infiltration, manage drainage, and contain soil vapor. Waste Disposal Inc., Group inspects the RCRA Subtitle C- and D-equivalent covers on at least an annual basis, and during regular site maintenance visits, to assess erosion, settling, cracking, and damage that could affect the performance of the cover. The Waste Disposal Inc., Group resolves inspection findings in a timely manner.

Contaminant concentrations in groundwater do not exceed drinking water standards, demonstrating that the remedy achieves this remedial action objective for groundwater.

The current remedy protects onsite and off-site receptors from exposure to soil gases. Soil gas concentrations are decreasing, and contaminant concentrations remain primarily below the Performance Standards. While indoor air sampling results indicated concentrations of chemicals of concern above the indoor air thresholds, comparison to the sub-slab samples and

use of chemicals inside building suggested the source of chemicals of concerns resulted from business operations.

5.1.2. System Operations and Maintenance

A licensed land surveyor completes a survey of settlement monuments to assess structure stability on an annual basis. No unacceptable settling was observed during the review period.

The gas migration system continues to operate in passive mode. Monitoring results over the last five years demonstrate soil gas concentrations are stable and except for a few instances, as shown in Appendix C, have met soil gas performance standards throughout the Site. The sentinel biovent well system continues to allow air infiltration to aid natural biodegradation.

Liquid recovery wells have demonstrated decreased liquid recovery rates, and liquid collection was discontinued in late 2017. Liquid levels have remained stable since liquid collection ended. Small increases in liquid levels have been observed in LC-3, but these increases do not impact the effectiveness of the remedy.

5.1.3. Implementation of Institutional Controls and Other Measures

The monitoring and enforcement program effectively ensures institutional controls remain in place to maintain integrity of the remedy and prevent exposure to waste. In accordance with the Institutional Controls Monitoring and Enforcement Work Plan, Waste Disposal Inc., Group completes quarterly monitoring and enforcement inspections at the properties and utilizes an internet-based monitoring program to detect changes in property ownership, tenancy, financial status, land use, permitting, and upcoming construction. Monitoring and inspections promptly detect unauthorized ground disturbances, which allows the site operator to respond in a timely manner. EPA reviews and approves all work plans to address unauthorized ground disturbances.

5.2. Question B: Are the Exposure Assumptions, Toxicity Data, Cleanup Levels, and Remedial Action Objectives Used at the Time of Remedy Selection Still Valid?

The exposure assumptions, toxicity data, cleanup levels, and remedial action objectives used at the time of remedy selection are still valid, except for select Indoor Air Threshold Levels, which remain less stringent than the indoor air regional screening levels. Concentrations of these chemicals have not been detected above Soil Gas Performance Standards in the compliance wells since remedy completion. A review of laws and regulatory changes indicated changes

would not affect the protectiveness of the remedial actions identified in the Amended ROD. Appendix D contains an analysis of applicable or relevant and appropriate requirements.

5.2.1. Changes in Exposure Pathways

CenterPoint Properties is redeveloping a portion of the Site, but the exposure pathways will not change. The land use will remain commercial. The RCRA Subtitle C- and D-equivalent covers and monitoring points will be maintained or replaced, so the remedy will continue to function as designed. CenterPoint Properties plans to install a vapor intrusion mitigation system underneath the building. EPA reviews and approves all planning documents prior to construction.

5.2.2. Changes in Standards, TBCs, Toxicity, and Contaminant Characteristics

Toxicity values for several contaminants have changed since the development of the Amended ROD, but these changes do not affect protectiveness. Review of toxicity data indicates the Indoor Air Threshold Levels for most of the contaminants are less than the regional screening levels or fall within EPA's generally acceptable risk range except for ethylbenzene and xylenes (Appendix F). Additionally, Indoor Air Threshold Levels have not been established for 1,2,4- and 1,3,5-trimethylbenzene, but the EPA has established industrial air regional screening levels for these chemicals. While listed in the Amended ROD as chemicals of concern for subsurface soil gas, ethylbenzene, xylene, 1,2,4-trimethylbenzene, and 1,3,5-trimethylbenzene have not been detected above Soil Gas Performance Standards since remedy completion and are not monitored in indoor air.

5.3. Question C: Has Any Other Information Come to Light That Could Call Into Question the Protectiveness of the Remedy?

No additional information has come to light that could call into question the protectiveness of the remedy.

6. Issues/Recommendations

There were no issues that affect protectiveness identified in this Five-Year Review.

6.1. *Other Findings*

- EPA will work with the Waste Disposal Inc. Group and building owners/tenants to update indoor chemical use surveys for all in-business air monitoring locations.

The following recommendations that improve community involvement but do not affect current and/or future protectiveness were identified during the Five-Year Review:

- The Waste Disposal Inc., Group and the developer should provide notification regarding redevelopment activities to the neighboring community; and
- The agencies should continue to review the Institutional Controls Monitoring and Enforcement Work Plan and site management plans to access if additional actions may be taken to prevent unauthorized ground disturbances (e.g., additional signage, fencing, or other security such as perimeter video surveillance).

7. Protectiveness Statement

Table 4. Protectiveness Statement

Sitewide Protectiveness Statement
Protectiveness Determination: Protective
Protectiveness Statement: The remedy at the Waste Disposal Inc. Site is protective of human health and the environment. The remedy successfully contains on-site waste, blocks exposure to buried wastes and liquids, and prevents direct exposure to contaminated soils. The reservoir gas collection system and engineering controls for on-site structures prevent migration of vapors to on-site and/or off-site indoor air. Groundwater remains unaffected by Site contamination.

8. Next Review

The next Five-Year Review for the Waste Disposal Inc. Superfund Site is required five years from the completion date of this review.

Appendix A: List of Documents Reviewed

CDM Federal Programs Corporation. 1997. Sub-surface Gas Contingency Plan, Waste Disposal, Inc. Superfund Site, July 18.

CenterPoint Properties and Roux Inc. 2022. Greenleaf Business Center – WDI Development Project Overview [Power Point Slides]. May 22.

EPA (United States Environmental Protection Agency). 1993. Waste Disposal Inc. Soil and Subsurface Gas Operable Unit Record of Decision. December 27.

EPA. 2002.Waste Disposal Inc. Amended Record of Decision. June 21.

EPA. 2019 Five-Year Review Report for Waste Disposal Inc. Superfund Site. September 12.

Project Navigator Ltd. 2007. Institutional Controls Monitoring and Enforcement Work Plan, Revision 3, Waste Disposal Inc. Superfund Site. October. Revised 17 September 2015.

Project Navigator Ltd. and TRC Solutions, Inc. Operations, Maintenance, and Monitoring Plan (OMMP), Waste Disposal Inc. Superfund Site. June 2013

Project Navigator Ltd. and TRC Solutions, Inc. 2020. MY2019 Annual Operations, Maintenance and Monitoring Report, Waste Disposal Inc. Superfund Site. May 7.

Project Navigator Ltd. and TRC Solutions, Inc. 2021. MY2020 Annual Operations, Maintenance and Monitoring Report, Waste Disposal Inc. Superfund Site. March 29.

Project Navigator Ltd. 2023. Waste Disposal Inc., (WDI) 2nd Half MY2023 OM&M Update Report. December 20.

Project Navigator Ltd. and TRC Solutions, Inc. 2022. MY2021 Annual Operations, Maintenance and Monitoring Report, Waste Disposal Inc. Superfund Site. March 24.

Project Navigator Ltd. and TRC Solutions, Inc. 2023. MY2022 Annual Operations, Maintenance and Monitoring Report, Waste Disposal Inc. Superfund Site. April 11.

Project Navigator Ltd. and TRC Solutions, Inc. 2024. MY2023 Annual Operations, Maintenance and Monitoring Report, Waste Disposal Inc. Superfund Site. April.

Project Navigator Ltd. 2019. Waste Disposal Inc., (WDI) Annual RCRA Subtitle C and D Equivalent Cover Inspection. November 27.

Project Navigator Ltd. 2020. Waste Disposal Inc., (WDI) Annual RCRA Subtitle C and D Equivalent Cover Inspection. September 3.

Project Navigator Ltd. 2021. Waste Disposal Inc., (WDI) Annual RCRA Subtitle C and D Equivalent Cover Inspection. December 1.

Project Navigator Ltd. 2022. Waste Disposal Inc., (WDI) Annual RCRA Subtitle C and D Equivalent Cover Inspection. November 14.

Project Navigator Ltd. 2023. Waste Disposal Inc., (WDI) 2023 Annual RCRA Subtitle C and D Equivalent Cover Inspection. December 4.

Appendix B: Site Chronology

Event	Date
Reservoir was built for crude oil storage	1924 – 1930s
Site was used for disposal of a range of waste and solid fill materials	1940s – 1950s
Waste disposal activities were regulated under permit from Los Angeles County, Department of Sanitation	1949 – 1964
Facility closure	1964
Proposed National Priorities List listing	1986
Final National Priorities List listing	1987
General Notice issued to 28 potentially responsible parties	1987
Removal Action (Fencing, Drum Removal)	1987 – 1988
Remedial Investigation (and report)	1987-1989
Endangerment Assessment	1989-1990
Begin Groundwater Monitoring Activities	1992
Start of Feasibility Study	1993
Proposed Plan	1993
ROD Signature	1993
Administrative Unilateral Order 94-17	1994
Predesign Investigations	1994-1995
Predesign Report	1995
90% Remedial Design Report	1996
Community Meeting on 90% Design Report	1996
Public Meetings	1996
Decision to Review Remedy Selection & Prepare an Amended ROD	1996
Amended Administrative Unilateral Order 97-Q9 (to add additional generator potentially responsible parties and perform additional remedial design investigative activities)	1997
Remedial Design Investigations	1997-1998
Pilot Scale Liquids Treatability Study (TM-13)	1997-1999
Continue Groundwater Investigations	1997-2000
Community Meetings on Remedial Design	1999
Groundwater Data Evaluation Report	2000
General Notice re-issued to additional potentially responsible parties, including current owners	2001
Completion of Supplemental Feasibility Study	2001
Remedial Design Investigations Summary Report	2001
Public Meeting on Proposed Plan	2001

Event	Date
ROD Amendment Signature	2002
Consent Decree filed	2003
Construction of remedy	2004 – 2005
Formal Operations, Maintenance, and Monitoring began	2006
Gas Collection, Extraction, and Treatment System converted to passive operations	2007
First Five-Year Signature	2009
Temporary sub-slab soil vapor probes were installed in Parcels 03B, 21, 22, 37, and 41	2010
Second Five-Year Signature	2015
Liquid recovery pumps were shutdown to determine steady state liquid levels.	2017
Geotechnical Investigation for the Redevelopment of Parcels 26, 30, 49, 50, and 51	2019
CenterPoint Properties purchased Parcels 26, 30, 49, 50, and 51	2019
Third Five-Year Signature	2019
CenterPoint Properties demolished the warehouse on Parcel 50	2020

Appendix C: Data Review

Groundwater elevations have been generally decreasing since 2006 with elevations fluctuating upward or downward in the short term. These decreasing trends have resulted in most wells being dry since at least 2016. Downgradient well GW-30, located in the southeastern corner of the property, shows a decrease in groundwater elevation by approximately 3 to 4 feet since 2018. Background wells GW-11 and GW-32, located to the northeast and north corner of the Site respectively, show the same general trend of decreasing from 2018-2019, remaining stable 2019-2021, before decreasing again in 2022. These trends of decreasing groundwater elevation match those of the region and are shown in Figure C-1. A continued decrease in groundwater elevation for the Site would eventually result in all wells being dry and determination of groundwater related remedial action objectives being unachievable.

The groundwater flow direction in the Site vicinity has recently been interpreted as being toward the south-southwest at a gradient of approximately 0.0012 foot per foot. The gradient increased slightly during the review period with the gradient in 2022 being measured as 0.0014 foot per foot. Groundwater flow direction can be seen in Figure C-2.

Contaminant concentrations detected in groundwater have historically been low to non-existent across the Site since groundwater investigation began. Between 2019 and 2023, only 3 wells contained measurable groundwater, GW-11, GW-30, and GW-32. All three wells had low detections for arsenic during this period. Additionally, GW-11 and GW-32 had detections for manganese. In 2023, slightly elevated concentrations for manganese and arsenic were reported in all three wells. However, these concentrations are comparable to background concentrations in the area, likely attributed to an offsite, upgradient source.

While only one of the three groundwater wells on Site having measurable groundwater is a perimeter well, historical data from other perimeter wells indicates that the current remedy is not contributing to groundwater exceedances at the Site. Prior to running dry, perimeter wells GW-22 and GW-23 only had a single exceedance for Benzene in 2007, and perimeter wells GW-26, GW-27, and GW-29 have never had an exceedance for benzene. Historical exceedances of both manganese and arsenic in wells GW-22, GW-23, GW-26, GW-27, and GW-29 were similar to those in GW-11, GW-30, and GW-32 and comparable to background concentrations in the area.

Liquid collection at the Site was discontinued in late 2017 to determine steady state liquid levels. Since then, liquid levels have remained consistently stable in LC-1, LC-2, and LC-4,

fluctuating only seasonally. Liquid levels in LC-3 have slowly risen since 2017, but total column height remains the lowest amongst the four wells at 6 feet. Figure C-3 shows the trends of the four liquid collection wells since collection ended.

Soil gas monitoring and sampling is conducted at the Site in three different forms: Vapor well sampling, sub-slab sampling, and indoor ambient air sampling. Quarterly vapor well sampling has been completed at the Site from 1998 to 2008. Since 2008 the vapor well sampling is conducted annually. During the current review period vapor wells VW-25, VW-29, VW-31, VW-34, VW-36, VW-37, VW-38, VW-39, VW-41, VW-42, VW-51, VW-56, VW-58, VW-61, and VW-62 were sampled annually with vapor wells VW-30, VW-35, VW-46, and VW-55 being sampled twice per year (Table C-1). Some vapor wells are nested and consist of shallow (S), intermediate (I), and/or deep (D) probes at a given location. All compliance vapor wells were non-detect for all contaminants, except for VW-35-D, which had a concentration around 200 parts per billion by volume trichloroethene in 2019 and 2020. Since 2020 these trichloroethene detections have decreased back to acceptable levels, with the most recent detection in 2023 being 5.7 parts per billion by volume. VW-35-D has historically had elevated concentrations of trichloroethene which have been decreasing since 1998. The largest decreases in trichloroethene concentrations occurred during this current review period. Between 2019 and 2023 trichloroethene concentrations decreased from 210 in 2019 to 5.7 in 2023. Trend analysis of VW-35-D can be seen in Figure C-4.

Sub-slab sampling is completed alongside indoor ambient air sampling on an annual basis at the following locations: IBM-03B, IBM-21, IBM-22, IBM-37, and IBM-41 (Tables C-2 and C-3). During the current review period, indoor ambient air samples collected at these five locations contained benzene above Indoor Air Threshold Limits, while IBM-37 additionally had concentrations of toluene above Indoor Air Threshold Limits in 2019. All sub-slab samples collected from the corresponding indoor ambient air locations were non-detect or below Indoor Air Threshold Levels during this period. The highest of these being 25 parts per billion by volume at IBM-22 in June of 2023. Due to sub-slab sample concentrations being below Indoor Air Threshold Limits, the concentrations reported in the indoor ambient air samples are likely not Site related. Instead, these concentrations are likely connected to business operations and the use of solvents and volatile organic compounds related to the automotive industry.

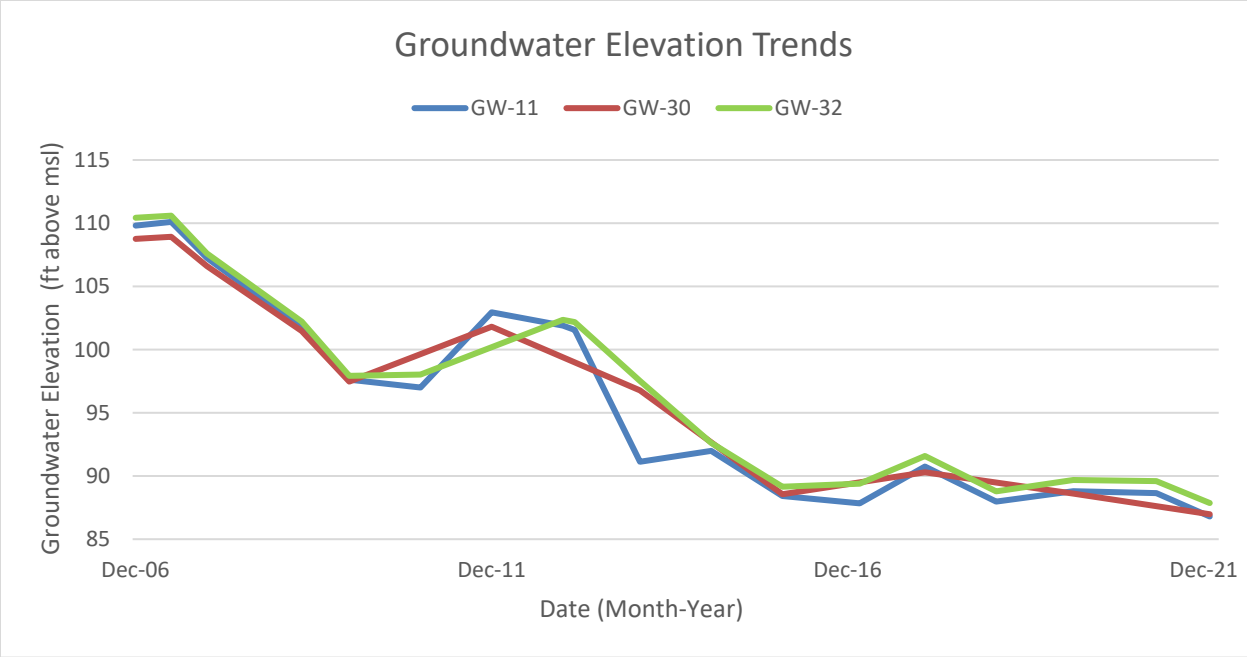
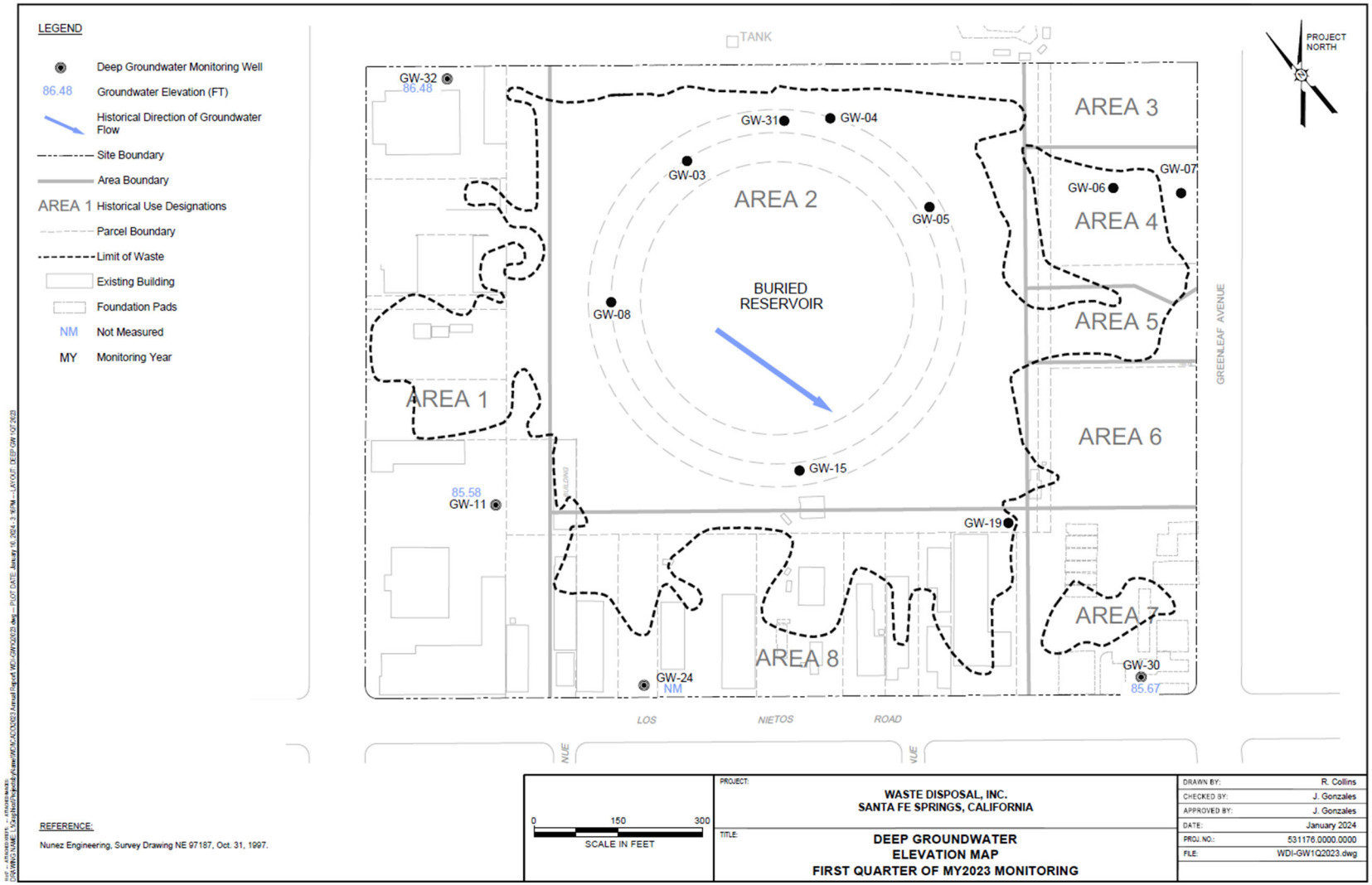
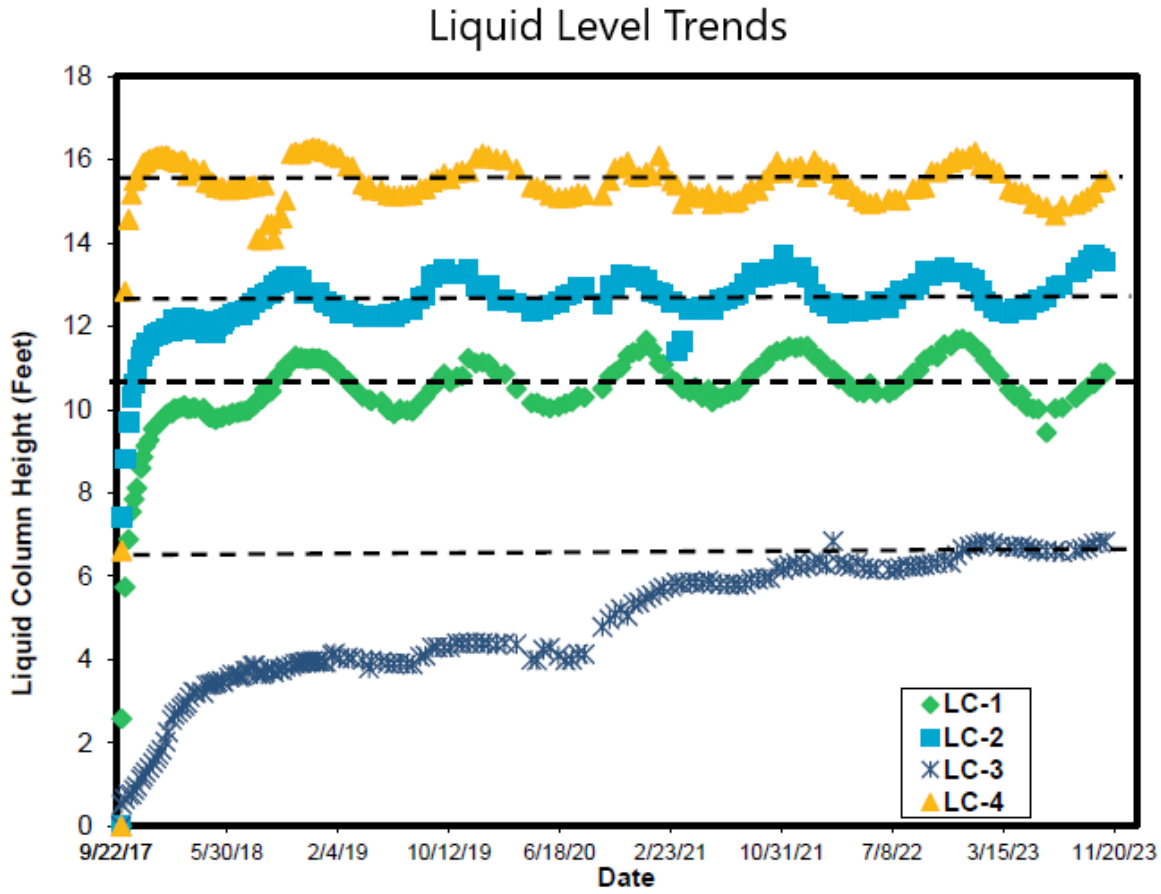


Figure C-1. Groundwater elevations in feet above mean sea level (msl) for wells GW-11, GW-30, and GW-32 from December 2006 to December 2021.



Source: Project Navigator, Ltd. 2024. MY2023 Annual Operations, Maintenance, and Monitoring Report.

Figure C-2. Groundwater Flow Direction Map



Source: Project Navigator Ltd. 2023. Waste Disposal Inc., (WDI) 2nd Half MY2023 OM&M Update Report.

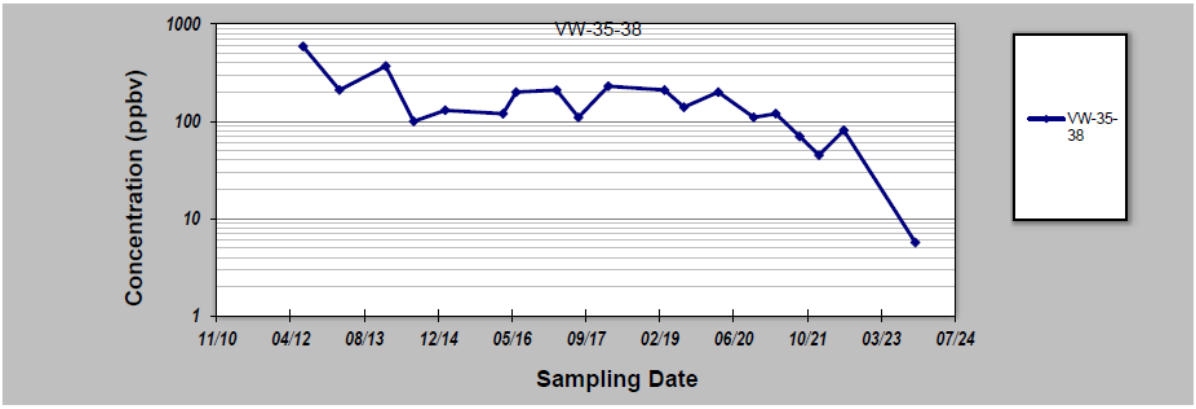
Figure C-3. Liquid level trends from 2017 to 2023 for liquid collection wells LC-1, LC-2, LC-3, and LC-4.

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	14-Feb-24	Job ID:	5-Year Review
Facility Name:	Waste Disposal, Inc.	Constituent:	TCE
Conducted By:	Trevor Bryant	Concentration Units:	ppbv

Sampling Point ID: VW-35-38

Sampling Event	Sampling Date	TCE CONCENTRATION (ppbv)
1	6/25/2012	590
2	2/27/2013	210
3	1/6/2014	370
4	7/14/2014	100
5	2/13/2015	130
6	3/10/2016	120
7	6/7/2016	200
8	3/8/2017	210
9	8/3/2017	110
10	2/21/2018	230
11	3/9/2019	210
12	7/18/2019	140
13	3/7/2020	200
14	11/2/2020	110
15	3/31/2021	120
16	9/9/2021	70
17	1/18/2022	45
18	7/5/2022	81
19	11/1/2023	57
20		
Coefficient of Variation:		0.76
Mann-Kendall Statistic (S):		-89
Confidence Factor:		99.9%
Concentration Trend:		Decreasing



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

Figure C-4. Trichloroethene soil gas trend at VW-35-D from 2012 to 2023.

Table C-1. Vapor Well Monitoring Results

		EPA Method 25C	EPA Method 3C/ASTM D1946					EPA Method TO-15		
Sample Location	Sample Event Date	Total Gaseous Nonmethane Organics as Methane	Methane	Oxygen + Argon *	Nitrogen	Carbon Monoxide	Carbon Dioxide	Chloroform	Trichloroethene	Benzene
		ppmv	ppmv	(%, v/v)	(%, v/v)	(%, v/v)	(%, v/v)	ppbv	ppbv	ppbv
COMPLIANCE VAPOR WELLS										
VW-29-10 (VW-29-S)	1/12/2019	<1.0	<2.0	24	72	0.30	3.5	1.0	<0.72	0.30 J
	2/4/2020	<1.6	<2.0	19	77	<0.050	4.0	<8.2	<8.2	<8.2
	3/4/2021	<1.0	<2.0	24	75	<0.050	1.1	<7.0	<7.0	<7.0
	1/12/2022	<1.0	<2.0	18	79	<0.050	2.1	<6.8	<6.8	<6.8
	5/26/2023	<1.0	4700	13	79	<0.050	7.1	<7.4	<7.4	<7.4
VW-29-23 (VW-29-I)	1/12/2019	2.7	<2.0	18	71	0.20	11	<0.70	<0.70	0.28 J
	2/4/2020	<2.0	<2.0	14	78	<0.050	8.0	<10	<10	<10
	3/4/2021	<1.0	<2.0	22	76	<0.050	1.9	<7.6	<7.6	<7.6
	1/12/2022	<1.0	12	17	80	<0.050	3.1	<7.2	<7.2	<7.2
	5/26/2023	<1.0	<2.0	12	81	<0.050	7.7	<7.4	<7.4	<7.4
VW-29-35 (VW-29-D)	1/12/2019	<1.0	<2.0	17	73	0.21	10	1.9	<0.76	0.89
	1/12/2019 Dup	<1.0	<2.0	16	74	0.22	10	0.55 J	<0.69	0.57 J
	2/4/2020	<1.5	<2.0	13	79	0.18	7.9	<7.7	<7.7	<7.7
	4/26/2021	<1.0	<2.0	16	77	0.17	7.0	<6.8	<6.8	<6.8
	1/12/2022	<1.0	<2.0	18	80	<0.050	2.5	<7.1	<7.1	<7.1
	1/12/2022 Dup	<1.0	<2.0	17	80	<0.050	2.8	<8.2	<8.2	<8.2
	5/26/2023	<1.0	<2.0	9.6	79	<0.050	11	<7.1	<7.1	<7.1
	5/26/2023 Dup	<1.0	2.7	9.5	80	<0.050	11	<7.8	<7.8	<7.8
VW-30-07 (VW-30-S)	3/27/2019	<1.0	<2.0	15	80	0.27	4.4	<0.78	<0.78	0.45 J
	11/25/2019	<1.0	<2.0	17	78	0.29	4.8	<0.72	<0.72	<0.72
	8/13/2020	<1.0	70	19	79	0.25	2.2	<7.4	<7.4	<7.4
	1/13/2021	<1.0	<2.0	15	80	0.28	4.4	<7.2	<7.2	<7.2
	7/7/2021	<1.0	<2.0	22	75	<0.050	2.3	<6.8	<6.8	<6.8
	7/7/2021 Dup	<1.0	<2.0	22	75	<0.050	2.3	<6.9	<6.9	<6.9
	1/11/2022	<1.0	13	19	80	<0.050	1.3	<8.3	<8.3	<8.3
	7/5/2022	<1.0	<2.0	19	79	<0.050	2.4	<7.0	<7.0	<7.0
	4/26/2023	41	120	20	79	<0.050	1.5	<7.8	<35	<4.4
	10/19/2023	<1.0	<2.0	17	79	<0.050	3.8	<5.0	<5.0	<5.0
VW-30-23 (VW-30-I)	3/27/2019	<1.0	<2.0	5.6	80	0.23	14	<0.78	0.42 J	0.42 J
	11/25/2019	<1.0	<2.0	5.7	80	<0.050	14	<0.76	0.51 J	0.20 J
	8/13/2020	<1.0	<2.0	19	78	0.35	2	<8.5	<8.5	1.9 J

		EPA Method 25C	EPA Method 3C/ASTM D1946					EPA Method TO-15		
Sample Location	Sample Event Date	Total Gaseous Nonmethane Organics as Methane	Methane	Oxygen + Argon *	Nitrogen	Carbon Monoxide	Carbon Dioxide	Chloroform	Trichloroethene	Benzene
		ppmv	ppmv	(%, v/v)	(%, v/v)	(%, v/v)	(%, v/v)	ppbv	ppbv	ppbv
	1/13/2021	<1.0	<2.0	5	81	0.27	14	<7.1	<7.1	<7.1
	7/7/2021	<1.0	11	15	78	<0.050	7.2	<6.8	<6.8	<6.8
	1/11/2022	<1.0	81	19	80	<0.050	1.3	<7.2	<7.2	<7.2
	7/5/2022	<1.0	<2.0	10	80	<0.050	9.8	<7.2	<7.2	<7.2
	7/5/2022 Dup	<1.0	<2.0	11	80	<0.050	9.5	<7.0	<7.0	<7.0
	4/26/2023	1.2	160	6.1	82	<0.050	12	<9.0	<9.0	<9.0
	10/19/2023	<1.0	2.9	4.1	89	<0.050	14	<5.0	<5.0	<5.0
VW-30-35 (VW-30-D)	3/27/2019	<1.0	<2.0	5.1	83	0.26	12	<0.82	0.45 J	3.4
	11/25/2019	<1.0	<2.0	4.4	81	0.30	14	1.0	0.63 J	<0.78
	11/25/2019 Dup	<1.0	<2.0	4.6	81	0.27	14	0.15 J	0.59 J	0.15 J
	8/13/2020	<1.0	<2.0	4.3	82	0.51	13	<7.7	<7.7	<7.7
	1/13/2021	<1.0	<2.0	3.9	81	0.28	15	<7.1	<7.1	<7.1
	7/7/2021	<1.0	<2.0	7.7	81	<0.050	12	<6.8	<6.8	<6.8
	1/11/2022	<1.0	33	11	81	<0.050	7.5	<7.1	<7.1	<7.1
	7/5/2022	<1.0	10	8.2	81	<0.050	10	<7.0	<7.0	<7.0
	4/26/2023	<1.0	0.18	4.8	82	<0.050	13	<7.2	<7.2	<7.2
	10/19/2023	<1.0	<2.0	2.6	83	<0.050	14	<5.0	<5.0	<5.0
VW-31-10 (VW-31-S)	1/12/2019	<1.0	<2.0	22	74	0.26	3.7	<0.77	0.22 J	0.71 J
	2/5/2020	<1.4	<2.0	17	79	<0.050	4.1	<7.4	<7.4	<7.4
	1/13/2021	<1.0	<2.0	18	79	0.28	3.1	<7.2	<7.2	<7.2
	1/6/2022	<1.0	<2.0	18	80	<0.050	1.8	<7.4	<7.4	<7.4
	5/26/2023	<1.0	8.2	15	80	<0.050	4.8	<7.2	<7.2	<7.2
VW-31-30 (VW-31-D)	1/12/2019	<1.0	<2.0	13	73	0.26	14	0.61 J	11	1.2
	2/5/2020	<1.5	<2.0	15	79	<0.050	6.6	<7.5	9.6	<7.5
	1/13/2021	<1.0	<2.0	11	78	0.31	10	<7.4	7.3 J	<7.4
	1/6/2022	<1.0	<2.0	16	79	<0.050	5.0	<7.2	2.9 J	<7.2
	1/6/2022 Dup	<1.0	13	15	79	<0.050	5.8	<7.8	3.7 J	<7.8
	5/26/2023	<1.0	24	14	80	<0.050	6.7	<7.4	4.6 J	<7.4
VW-34-10 (VW-34-S)	1/18/2019	5.4	<2.0	17	78	0.24	5.2	0.46 J	<0.70	1.3
	2/13/2020	<1.0	<2.0	15	77	<0.050	7.6	<7.8	<7.8	<7.8
	1/12/2021	<1.0	<2.0	14	78	0.37	7.5	<9.8	<9.8	<9.8
	1/27/2022	<1.0	<2.0	17	79	<0.050	4.3	<7.0	<7.0	<7.0
	1/27/2022 Dup	<1.0	<2.0	16	80	<0.050	4.3	<7.0	<7.0	<7.0
	5/25/2023	<1.0	6.5	13	79	<0.050	7.8	<7.1	<7.1	<7.1

		EPA Method 25C	EPA Method 3C/ASTM D1946					EPA Method TO-15		
Sample Location	Sample Event Date	Total Gaseous Nonmethane Organics as Methane	Methane	Oxygen + Argon *	Nitrogen	Carbon Monoxide	Carbon Dioxide	Chloroform	Trichloroethene	Benzene
		ppmv	ppmv	(%, v/v)	(%, v/v)	(%, v/v)	(%, v/v)	ppbv	ppbv	ppbv
VW-34-23 (VW-34-I)	1/18/2019	<1.0	<2.0	22	77	0.18	0.69	0.98 J	<1.0	0.64 J
	2/13/2020	<1.0	<2.0	20	78	<0.050	1.8	<7.8	<7.8	<7.8
	1/12/2021	<1.0	<2.0	17	79	0.14	3.8	<7.4	<7.4	<7.4
	1/27/2022	<1.0	<2.0	17	79	<0.050	3.6	<8.2	<8.2	<8.2
	5/25/2023	<1.0	35	21	79	<0.050	<0.10	<7.5	<7.5	<7.5
VW-34-40 (VW-34-D)	1/18/2019	3.8	<2.0	13	79	0.21	8.1	0.64 J	3.4	2.3
	2/13/2020	<1.0	<2.0	8.6	79	0.37	12	<7.4	3.7 J	<7.4
	2/13/2020 Dup	<1.0	<2.0	8.7	79	0.41	12	<8.5	3.1 J	<8.5
	1/12/2021	<1.0	<2.0	7.5	80	0.36	12	<7.3	4.4 J	<7.3
	1/27/2022	<1.0	12	20	80	<0.050	0.088 J	<7.4	<7.4	<7.4
	5/25/2023	<1.0	2200	14	81	<0.050	5.0	<7.2	3.9 J	<7.2
	5/25/2023 Dup	5.0	<2.0	8.7	80	<0.050	11	<7.4	4.0 J	<7.4
VW-35-10 (VW-35-S)	3/9/2019	3.6	90	18	77	0.22	4.8	0.31 J	15	3.0
	7/18/2019	<1.0	14	16	77	0.23	6.5	<0.90	3.5	0.43 J
	3/7/2020	<1.0	<2.0	18	78	<0.050	4.5	<7.2	4.0 J	<7.2
	11/2/2020	<1.0	700	19	78	0.13	2.7	<7.4	1.6 J	<7.4
	3/31/2021	<1.0	<2.0	19	76	<0.050	4.2	<7.6	4.4 J	<7.6
	9/9/2021	<1.0	12	20	75	<0.050	5.0	<7.6	2.4 J	<7.6
	1/18/2022	<1.0	<2.0	16	80	<0.050	4.1	<7.6	3.0 J	<7.6
	7/5/2022	<1.0	<2.0	16	78	<0.050	5.3	<7.4	3.1 J	<7.4
	1/21/2023	<1.0	<2.0	15	71	<0.050	3.9	<7.0	2.5 J	<7.0
	10/19/2023	<1.0	5.5	7.9	80	<0.050	12	5.5	95	<5.0
VW-35-38 (VW-35-D)	3/9/2019	2.3	<2.0	10	79	0.13	11	7.5	170	0.35 J
	3/9/2019 Dup	4.1	<2.0	11	79	0.22	10	8.4	**210**	0.21 J
	7/18/2019	<1.0	<2.0	10	78	0.23	12	9.5	140	2.1
	7/18/2019 Dup	<1.0	<2.0	11	79	0.34	10	9.4	140	2.2
	3/7/2020	<1.0	<2.0	12	78	<0.050	11	8.7	190	<7.2
	3/7/2020 Dup	<1.0	<2.0	12	78	0.20	9.6	9.1	**200**	<7.4
	11/2/2020	<1.0	<2.0	14	79	0.044 J	7.1	5.4 J	110	<7.4
	3/31/2021	<1.0	<2.0	17	77	<0.050	6.7	5.2 J	120	<7.0
	9/9/2021	<1.0	<2.0	15	78	<0.050	7.7	4.9 J	78	<7.4
	9/9/2021 Dup	<1.0	<2.0	15	77	<0.050	7.8	4.8 J	70	<7.8
	1/18/2022	<1.0	23	15	80	<0.050	4.9	3.3 J	53	<7.2
	1/18/2022 Dup	<1.0	12	15	80	<0.050	5.0	3.0 J	45	1.6 J
	7/5/2022	<1.0	14	11	79	<0.050	9.6	4.7 J	81	<9.0

		EPA Method 25C	EPA Method 3C/ASTM D1946					EPA Method TO-15		
Sample Location	Sample Event Date	Total Gaseous Nonmethane Organics as Methane	Methane	Oxygen + Argon *	Nitrogen	Carbon Monoxide	Carbon Dioxide	Chloroform	Trichloroethene	Benzene
		ppmv	ppmv	(%, v/v)	(%, v/v)	(%, v/v)	(%, v/v)	ppbv	ppbv	ppbv
	1/21/2023	<1.0	<2.0	9.2	72	<0.050	10	7.6	130	<7.2
	10/19/2023	<1.0	<2.0	13	80	<0.050	6.2	<5.0	5.7	<5.0
	10/19/2023 Dup	<1.0	8.5	14	80	<0.050	6.2	<5.0	5.7	<5.0
VW-36-10 (VW-36-S)	1/18/2019	3.1	<2.0	19	77	0.21	4.4	<0.71	0.38 J	1.0
	6/25/2020	<1.0	<2.0	21	75	<0.050	3.6	<9.0	<9.0	<9.0
	1/13/2021	<1.0	<2.0	15	79	0.075	5.9	<7.2	<7.2	<7.2
	1/27/2022	<1.0	12	17	79	<0.050	4.6	<7.6	<7.6	<7.6
	5/23/2023	<1.0	8.7	18	78	<0.050	3.2	<7.4	<7.4	<7.4
VW-36-30 (VW-36-D)	1/18/2019	7.7	<2.0	12	78	0.20	9.6	0.37 J	0.37 J	0.90
	6/25/2020	<1.0	<2.0	16	74	0.37	9.4	<8.0	<8.0	<8.0
	6/25/2020 Dup	<1.0	<2.0	16	74	<0.050	9.7	<7.6	<7.6	<7.6
	1/13/2021	<1.0	<2.0	20	80	0.078	0.13	<6.6	<6.6	<6.6
	1/13/2021 Dup	<1.0	<2.0	20	80	0.080	0.21	<6.6	<6.6	<6.6
	1/27/2022	<1.0	<2.0	19	80	<0.050	1.4	<7.2	<7.2	<7.2
	5/23/2023	<1.0	<2.0	15	77	<0.050	7.6	<7.4	<7.4	<7.4
	5/23/2023 Dup	<1.0	<2.0	15	77	<0.050	7.7	<7.2	<7.2	<7.2
VW-37-10 (VW-37-S)	1/12/2021	<1.0	13	15	79	0.22	5.9	<7.8	<7.8	<7.8
	1/27/2022	<1.0	<2.0	15	80	<0.050	4.9	<7.2	<7.2	<7.2
	5/25/2023	<1.0	<2.0	15	80	<0.050	4.7	<7.1	<7.1	<7.1
VW-37-30 (VW-37-D)	1/12/2021	<1.0	<2.0	8.6	80	0.30	11	<7.7	<7.7	<7.7
	1/27/2022	<1.0	<2.0	19	80	<0.050	0.99	<7.8	<7.8	<7.8
	5/25/2023	<1.0	<2.0	10	80	<0.050	9.5	<7.1	<7.1	<7.1
VW-38-10 (VW-38-S)	3/9/2019	<1.0	<2.0	16	79	0.23	4.5	0.32 J	15	0.34 J
	3/6/2020	4.7	<2.0	19	78	<0.050	3.8	<7.7	<7.7	<7.7
	1/12/2021	<1.0	<2.0	14	80	0.15	6.2	<7.4	<7.4	<7.4
	1/12/2021 Dup	<1.0	<2.0	15	79	0.12	6.0	<7.4	<7.4	<7.4
	1/13/2022	<1.0	12	15	80	<0.050	5.3	<7.4	<7.4	<7.4
	1/13/2022 Dup	<1.0	<2.0	15	80	<0.050	5.5	<7.6	<7.6	<7.6
	1/21/2023	<1.0	<2.0	18	74	<0.050	3.8	<7.0	<7.0	<7.0
VW-38-34 (VW-38-D)	3/9/2019	14	22	2.3	84	0.25	13	<0.84	2.0	2.6
	3/6/2020	6.6	<2.0	11	81	<0.050	8.0	<7.2	<7.2	<7.2
	3/6/2020 Dup	<1.0	<2.0	12	81	0.24	7.0	<7.3	<7.3	<7.3
	1/12/2021	<1.0	<2.0	19	81	0.13	0.50	<7.2	<7.2	<7.2
	1/13/2022	<1.0	11	19	80	<0.050	0.48	<7.2	<7.2	<7.2

		EPA Method 25C	EPA Method 3C/ASTM D1946					EPA Method TO-15		
Sample Location	Sample Event Date	Total Gaseous Nonmethane Organics as Methane	Methane	Oxygen + Argon *	Nitrogen	Carbon Monoxide	Carbon Dioxide	Chloroform	Trichloroethene	Benzene
		ppmv	ppmv	(%, v/v)	(%, v/v)	(%, v/v)	(%, v/v)	ppbv	ppbv	ppbv
	1/21/2023	<1.0	<2.0	13	79	<0.050	6.3	<6.8	<6.8	<6.8
	1/21/2023 Dup	<1.0	<2.0	11	70	<0.050	6.1	<7.2	<7.2	<7.2
VW-39-07 (VW-39-S)	1/29/2019	3.3	<2.0	13	80	0.27	7.1	0.57 J	<0.74	1.6
	3/6/2020	6.4	<2.0	14	79	0.33	6.6	<7.8	<7.8	<7.8
	1/12/2021	<1.0	<2.0	15	80	0.18	4.8	<7.0	<7.0	<7.0
	1/13/2022	<1.0	<2.0	16	79	<0.050	4.4	<6.8	<6.8	<6.8
	4/6/2023	<1.0	<2.0	17	78	<0.050	5.2	<5.0	<5.0	1.4 J
VW-39-30 (VW-39-D)	1/29/2019	5.8	<2.0	22	77	0.55	<0.10	<0.75	<0.75	0.64 J
	1/29/2019 Dup	5.8	<2.0	7.4	81	0.26	11	<0.72	<0.72	0.7
	3/6/2020	4.7	<2.0	9.2	79	<0.050	12	<7.7	<7.7	<7.7
	1/12/2021	<1.0	<2.0	9.9	80	0.2	10	<7.1	<7.1	<7.1
	1/13/2022	<1.0	<2.0	13.0	79	<0.050	7.7	<6.8	<6.8	<6.8
	4/6/2023	<1.0	2.7	14	77	<0.050	8.9	<5.0	<5.0	<5.0
VW-41-07 (VW-41-S)	1/29/2019	1.2	<2.0	18	77	0.58	4.6	<0.70	<0.70	3.9
	2/27/2020	<1.0	<2.0	16	78	0.51	5.6	<7.8	<7.8	<7.8
	1/12/2021	<1.0	<2.0	19	79	0.090	2.6	<7.0	<7.0	<7.0
	1/13/2022	<1.0	<2.0	15	79	<0.050	5.5	<7.2	<7.2	<7.2
	6/13/2023	<1.0	8400	18	78	<0.050	2.9	<7.2	<7.2	<7.2
VW-41-20 (VW-41-D)	1/29/2019	2.6	<2.0	18	76	0.33	5.2	0.42 J	<0.72	2.5
	2/27/2020	<1.0	<2.0	15	77	0.43	6.6	<8.5	<8.5	<8.5
	1/12/2021	<1.0	<2.0	18	79	0.097	2.9	<7.0	<7.0	<7.0
	1/13/2022	<1.0	14	16	80	<0.050	4.4	<8.8	<8.8	<8.8
	6/13/2023	<1.0	<2.0	14	80	<0.050	5.8	<6.9	<6.9	<6.9
	6/13/2023 Dup	1.2	11	14	80	<0.050	6.1	<8.3	<8.3	6.5 J
VW-42-10 (VW-42-S)	1/29/2019	<1.0	<2.0	17	77	0.25	6.0	0.21 J	<0.75	1.5
	2/4/2020	<1.5	<2.0	21	77	<0.050	2.2	<7.5	<7.5	<7.5
	3/31/2021	<1.0	<2.0	22	75	<0.050	3.3	<6.6	<6.6	<6.6
	3/31/2021 Dup	<1.0	<2.0	22	75	<0.050	3.4	<6.6	<6.6	<6.6
	1/12/2022	<1.0	11	17	79	<0.050	4.2	<7.1	<7.1	<7.1
	1/20/2023	<1.0	<2.0	20	78	<0.050	1.6	<6.8	<6.8	<6.8
VW-42-30 (VW-42-D)	1/29/2019	1.4	<2.0	20	75	0.22	4.6	<0.70	<0.70	1.8
	2/4/2020	<1.5	<2.0	14	77	<0.050	8.7	<7.7	<7.7	<7.7
	2/4/2020 Dup	<1.5	<2.0	14	79	0.14	7.2	<7.8	<7.8	<7.8
	3/31/2021	8.6	<2.0	24	75	<0.050	0.99	<6.6	<6.6	<6.6
	1/12/2022	<1.0	<2.0	11	64	<0.050	7.6	<7.6	<7.6	<7.6

		EPA Method 25C	EPA Method 3C/ASTM D1946					EPA Method TO-15		
Sample Location	Sample Event Date	Total Gaseous Nonmethane Organics as Methane	Methane	Oxygen + Argon *	Nitrogen	Carbon Monoxide	Carbon Dioxide	Chloroform	Trichloroethene	Benzene
		ppmv	ppmv	(%, v/v)	(%, v/v)	(%, v/v)	(%, v/v)	ppbv	ppbv	ppbv
	1/20/2023	<1.0	<2.0	16	77	<0.050	6.4	<6.8	<6.8	<6.8
VW-42-Ambient	4/23/2019	<1.0	25	22	78	0.54	0.07 J	<0.78	<0.78	<0.78
	2/4/2020	<1.5	<2.0	21	79	<0.050	<0.10	<7.4	<7.4	<7.4
	4/1/2021	<1.0	<2.0	25	75	<0.050	<0.10	<0.72	<0.72	0.42 J
	4/1/2021 Dup	<1.0	<2.0	24	76	<0.050	<0.10	<0.72	<0.72	0.46 J
	1/18/2022	<1.0	<2.0	20	80	<0.050	<0.10	<0.72	<0.72	0.29 J
	1/20/2023	<1.0	<2.0	21	79	<0.050	<0.10	<0.68	<0.68	0.47 J
	1/20/2023 Dup	<1.0	<2.0	21	79	<0.050	<0.10	<0.66	<0.66	0.47 J
NON-COMPLIANCE VAPOR WELLS										
VW-25-35 (VW-25-D)	1/12/2019	<1.0	<2.0	4	72	0.25	24	0.29 J	1.8	1.7
	2/4/2020	<1.5	<2.0	3.2	81	0.14	16	<7.7	2.2 J	<7.7
	5/19/2021	<1.0	11	9.2	79	0.21	12	<6.8	<6.8	<6.8
	5/19/2021 Dup	<1.0	<2.0	8.9	78	0.22	13	<6.8	<6.8	<6.8
	1/10/2022	<1.0	11	20	80	<0.050	<0.10	<6.7	<6.7	<6.7
	6/1/2023	<1.0	<2.0	5.0	80	<0.050	15	<7.4	<7.4	<7.4
	6/1/2023 Dup	<1.0	<2.0	4.9	80	<0.050	15	<7.1	<7.1	<7.1
VW-46-07 (VW-46-S)	1/12/2019	<1.0	<2.0	26	74	0.22	0.069 J	<1.0	<1.0	0.38 J
	7/17/2019	<1.0	13	21	79	0.23	<0.10	<0.72	<0.72	0.42 J
	2/5/2020	<1.5	<2.0	21	79	<0.050	<0.10	<7.6	<7.6	<7.6
	11/2/2020	10	28000	5.2	88	2.1	1.8	19 J	<74	<74
	3/4/2021	<1.0	<2.0	21	76	<0.050	2.7	<7.1	<7.1	<7.1
	3/4/2021 Dup	<1.0	<2.0	14	78	<0.050	7.3	<7.0	<7.0	<7.0
	7/7/2021	3.4	11000	17	80	0.99	0.73	<7.0	<7.0	<7.0
	1/10/2022	<1.0	270	20	80	<0.050	0.069 J	<8.4	<8.4	<8.4
	7/12/2022	<1.0	3100	13	85	<0.050	1.3	<7.0	<7.0	<7.0
	7/12/2022 Dup	<1.0	3100	13	85	<0.050	1.3	<7.0	<7.0	<7.0
	1/20/2023	<1.0	4200	17	82	<0.050	0.41	<7.0	<7.0	<7.0
	9/21/2023	<1.0	4100	11	86	<0.050	2.4	3.4 J	<5.0	<5.0
VW-46-15 (VW-46-I)	1/12/2019	<1.0	<2.0	7.1	78	0.29	15	<0.76	0.69 J	2.1
	7/17/2019	<1.0	<2.0	18	78	0.24	3	<0.88	<0.88	3.0
	2/5/2020	<1.5	<2.0	7.5	80	<0.050	13	<7.5	<7.5	<7.5
	11/2/2020	<1.0	<2.0	6.5	81	<0.050	12	<7.4	<7.4	<7.4
	3/4/2021	2.8	<2.0	24	75	<0.050	<0.10	<6.6	<6.6	<6.6
	7/7/2021	<1.0	<2.0	9.2	79	<0.050	11	<7.2	<7.2	<7.2
	1/10/2022	<1.0	12	9.0	80	<0.050	11	<7.6	<7.6	<7.6

		EPA Method 25C	EPA Method 3C/ASTM D1946					EPA Method TO-15		
Sample Location	Sample Event Date	Total Gaseous Nonmethane Organics as Methane	Methane	Oxygen + Argon *	Nitrogen	Carbon Monoxide	Carbon Dioxide	Chloroform	Trichloroethene	Benzene
		ppmv	ppmv	(%, v/v)	(%, v/v)	(%, v/v)	(%, v/v)	ppbv	ppbv	ppbv
	1/10/2022 Dup	<1.0	11	9.5	81	<0.050	9.8	<6.9	<6.9	<6.9
	7/12/2022	<1.0	<2.0	8.7	80	<0.050	11	<6.9	<6.9	<6.9
	1/20/2023	<1.0	<2.0	9.8	80	<0.050	10	<6.8	<6.8	<6.8
	1/20/2023 Dup	<1.0	<2.0	9.9	80	<0.050	10	<6.7	<6.7	<6.7
	9/21/2023	<1.0	19	7.0	81	<0.050	12	<5.0	<5.0	<5.0
	9/21/2023 Dup	<1.0	22	6.9	81	<0.050	12	<5.0	<5.0	<5.0
VW-46-27 (VW-46-D)	1/12/2019	<1.0	<2.0	6.9	73	2.3	18	0.86	0.22 J	2.2
	7/17/2019	<1.0	<2.0	19	78	0.37	2.5	0.26 J	<0.74	2.5
	7/17/2019 Dup	<1.0	<2.0	18	79	0.37	2.5	<0.77	<0.77	2.2
	2/5/2020	<1.5	<2.0	8.1	81	<0.050	11	<7.4	<7.4	<7.4
	2/5/2020 Dup	<1.5	<2.0	8.1	81	<0.050	11	<7.6	<7.6	<7.6
	11/2/2020	<1.0	<2.0	6.5	82	<0.050	12	<7.6	3.6 J	<7.6
	3/4/2021	<1.0	<2.0	23	76	<0.050	0.50	<6.6	<6.6	<6.6
	3/4/2021 Dup	<1.0	<2.0	14	78	<0.050	7.3	<7.0	<7.0	<7.0
	7/7/2021	<1.0	12	14	78	<0.050	7.3	<7.1	<7.1	<7.1
	1/10/2022	<1.0	11	16	80	<0.050	3.5	<6.9	<6.9	<6.9
	7/12/2022	<1.0	<2.0	10	80	<0.050	10	<7.4	<7.4	<7.4
	1/20/2023	<1.0	<2.0	17	79	<0.050	3.5	<6.9	<6.9	<6.9
	9/21/2023	<1.0	10	8.0	81	<0.050	11	<5.0	<5.0	<5.0
VW-49-10 (VW-49-S)	1/18/2019	2.7	<2.0	12	79	0.19	8.3	<0.76	7.8	1.1
	2/27/2020	<1.0	<2.0	6.4	84	0.34	9.1	<8.2	13	<8.2
	5/10/2021	<1.0	<2.0	12	79	0.28	9.1	<7.2	8.4	<7.2
	5/10/2021 Dup	<1.0	<2.0	9.6	80	0.31	11	<7.2	11	<7.2
	1/31/2022	<1.0	12	6.4	84	<0.050	10	<7.4	12	<7.4
	4/27/2023	2.7	470	10	82	<0.050	7.8	<13	8.3 J	<13
VW-49-18 (VW-49-I)	1/18/2019	6.4	<2.0	12	79	0.19	8.3	<0.76	9.2	1.5
	2/27/2020	<1.0	<2.0	6	80	<0.050	15	<7.8	13	<7.8
	5/10/2021	<1.0	11	10	79	0.34	11	<7.2	7.5	<7.2
	1/31/2022	<1.0	<2.0	11	81	<0.050	8.7	<7.0	7.4	<7.0
	1/31/2022 Dup	<1.0	12	11	80	<0.050	9.2	<7.4	7.6	<7.4
	4/27/2023	<1.0	1.9	6.2	81	<0.050	12	<6.9	13	<6.9
VW-49-30 (VW-49-D)	1/18/2019	9.8	<2.0	11	80	0.19	8.6	0.40 J	7.6	1.0
	1/18/2019 Dup	6.3	<2.0	11	80	0.20	8.6	7.2	7.6	0.95
	2/27/2020	<1.0	<2.0	4.9	79	<0.050	16	<7.6	8.4	<7.6
	2/27/2020 Dup	<1.0	<2.0	4.9	80	0.31	15	<7.6	12	<7.6

		EPA Method 25C	EPA Method 3C/ASTM D1946					EPA Method TO-15		
Sample Location	Sample Event Date	Total Gaseous Nonmethane Organics as Methane	Methane	Oxygen + Argon *	Nitrogen	Carbon Monoxide	Carbon Dioxide	Chloroform	Trichloroethene	Benzene
		ppmv	ppmv	(%, v/v)	(%, v/v)	(%, v/v)	(%, v/v)	ppbv	ppbv	ppbv
	5/10/2021	<1.0	<2.0	11	79	0.34	10	<7.4	5.4 J	<7.4
	1/31/2022	<1.0	<2.0	14	80	<0.050	5.4	<7.2	2.5 J	<7.2
	4/27/2023	<1.0	4.4	4.9	80	<0.050	15	<8.9	12	<8.9
	4/27/2023 Dup	<1.0	<2.0	4.9	81	<0.050	14	<7.2	12	<7.2
VW-51-08 (VW-51-S)	3/27/2019	<1.0	<2.0	3.5	88	0.30	8.2	<0.80	<0.80	0.27 J
	8/13/2020	<1.0	10	22	78	0.20	0.073 J	<7.3	<7.3	<7.3
	5/10/2021	<1.0	310	4.9	83	0.32	12	<7.6	<7.6	<7.6
	2/7/2022	350	190000	15	65	<0.050	0.81	<190	<190	<190
	2/7/2022 Dup	300	170000	16	66	<0.050	0.74	<190	<190	<190
	4/26/2023	<1.0	110	21	79	<0.050	0.30	<8.9	<8.9	<8.9
VW-51-18 (VW-51-I)	3/27/2019	23	4700	1.9	82	0.48	15	<0.82	<0.82	160
	8/13/2020	<1.0	5900	1.8	79	0.47	18	<7.4	<7.4	<7.4
	5/19/2021	270	83000	21	66	5.1	0.50	<74	<74	<74
	1/11/2022	620	330000	13	53	<0.050	1.20	<390	<390	<390
	4/26/2023	590	680000	5.7	24	<0.050	2.0	<480	<480	<480
VW-51-30 (VW-51-D)	3/27/2019	<1.0	<2.0	23	77	0.17	0.071 J	<0.80	<0.80	0.30 J
	8/13/2020	19	3000	1.7	84	0.56	14	<7.8	<7.8	190
	8/13/2020 Dup	18	3000	1.7	83	0.54	14	<8.4	<8.4	210
	4/26/2021	21	890	13	80	0.25	6.3	<14	<14	48
	4/26/2021 Dup	16	890	13	80	0.25	6.5	<14	<14	49
	1/11/2022	8.3	1100	1.2	83	<0.050	16	<7.6	<7.6	46
	4/26/2023	3.4	530	2.0	84	<0.050	14	<7.4	12	32
	4/26/2023 Dup	3.5	510	3.0	83	<0.050	14	<7.8	12	32
VW-55-05 (VW-55-S)	3/21/2019	2.6	23	23	77	0.14	0.13	<0.78	<0.78	0.51 J
	7/18/2019	9.0	33000	1.4	80	2.3	13	<7.3	25	<7.3
	3/7/2020	<1.0	13000	1.5	87	0.93	9.4	<7.4	19	<7.4
	11/2/2020	35	29000	1.3	82	2.2	12	17 J	34 J	<70
	11/2/2020 Dup	30	29000	1.3	82	2.1	11	21 J	35 J	<76
	1/13/2021	18	20000	2.3	86	1.4	8.6	<13	7.3 J	<13
	9/1/2021	37	30000	2.2	80	<0.050	15	<14	31	<14
	9/1/2021 Dup	30	30000	2.1	80	<0.050	15	<15	27	<15
	1/21/2022	6.2	13000	1.4	89	<0.050	8.7	<6.9	16	<6.9
	7/12/2022	17	21000	1.5	82	<0.050	15	<14	19	<14
	1/13/2023	8.2	13000	5.4	82	<0.050	6.8	<7.0	11	<7.0
	9/21/2023	1.5	50000	1.4	81	<0.050	13	<5.0	17	<5.0

		EPA Method 25C	EPA Method 3C/ASTM D1946					EPA Method TO-15		
Sample Location	Sample Event Date	Total Gaseous Nonmethane Organics as Methane	Methane	Oxygen + Argon *	Nitrogen	Carbon Monoxide	Carbon Dioxide	Chloroform	Trichloroethene	Benzene
		ppmv	ppmv	(%, v/v)	(%, v/v)	(%, v/v)	(%, v/v)	ppbv	ppbv	ppbv
VW-55-18 (VW-55-I)	3/21/2019	<1.0	<2.0	6.5	81	0.16	12	0.16 J	1.1	4.0
	7/18/2019	<1.0	6300	18	77	1.2	2.8	0.66 J	25	6.5
	3/7/2020	<1.0	<2.0	2.3	80	<0.050	18	<8.0	<8.0	<8.0
	11/2/2020	<1.0	190	12	80	0.072	8.5	<7.8	<7.8	<7.8
	1/13/2021	<1.0	<2.0	4.7	82	0.12	13	<6.9	<6.9	<6.9
	9/1/2021	<1.0	<2.0	9.8	80	<0.050	10	<7.0	<7.0	<7.0
	1/21/2022	<1.0	<2.0	2.2	82	<0.050	16	<6.8	<6.8	<6.8
	7/12/2022	<1.0	21	12	80	<0.050	8.1	<7.1	<7.1	<7.1
	1/13/2023	<1.0	<2.0	2.1	79	<0.050	15	<7.0	<7.0	<7.0
	9/21/2023	<1.0	16	1.6	82	<0.050	16	<5.0	<5.0	<5.0
VW-55-29 (VW-55-D)	3/21/2019	<1.0	<2.0	2.8	83	0.20	14	0.44 J	0.87	0.40 J
	3/21/2019 Dup	<1.0	<2.0	7.2	80	0.18	12	0.34 J	0.77	0.55 J
	7/18/2019	<1.0	44	19.0	78	0.25	2.4	<0.92	6.60	0.67 J
	3/7/2020	<1.0	<2.0	3.3	82	0.23	15	<7.7	4.3 J	<7.7
	11/2/2020	<1.0	<2.0	2.7	81	0.09	16	<7.2	<7.2	<7.2
	1/13/2021	<1.0	<2.0	17	80	0.11	3.0	<6.8	<6.8	<6.8
	9/1/2021	<1.0	<2.0	23	76	<0.050	1.6	<7.0	<7.0	<7.0
	1/22/2022	<1.0	11	1.6	82	<0.050	16	<7.0	<7.0	<7.0
	1/22/2022 Dup	<1.0	<2.0	1.8	82	<0.050	16	<6.8	<6.8	<6.8
	7/12/2022	<1.0	<2.0	19	79	<0.050	2.0	<7.0	<7.0	<7.0
	1/13/2023	<1.0	<2.0	11	80	<0.050	7.8	<6.8	<6.8	<6.8
	1/13/2023 Dup	<1.0	<2.0	10	72	<0.050	7.4	<7.4	<7.4	<7.4
	9/21/2023	<1.0	45	2.7	82	<0.050	15	<5.0	<5.0	<5.0
VW-56-08 (VW-56-S)	3/21/2019	<1.0	<2.0	4.3	84	0.22	11	<0.77	2.6	2.90
	3/18/2020	<1.0	<2.0	12	80	<0.050	8.6	<7.2	<7.2	<7.2
	1/14/2021	<1.0	<2.0	3.7	85	0.18	12	<6.9	<6.9	<6.9
	1/14/2021 Dup	<1.0	<2.0	3.9	84	0.17	11	<6.8	<6.8	<6.8
	2/1/2022	<1.0	<2.0	2.4	85	<0.050	13	<7.4	2.4 J	<7.4
	1/13/2023	<1.0	<2.0	2.8	80	<0.050	11	<7.2	2.9 J	<7.2
VW-56-17 (VW-56-I)	3/21/2019	<1.0	<2.0	7.1	81	0.23	12	1.3	2.7	0.42 J
	3/18/2020	<1.0	<2.0	5.8	80	<0.050	14	<7.4	1.6 J	<7.4
	1/14/2021	<1.0	<2.0	18	80	0.21	1.9	<8.2	<8.2	<8.2
	2/1/2022	<1.0	11	4.9	81	<0.050	14	<7.1	2.5 J	<7.1
	1/13/2023	<1.0	<2.0	10	78	<0.050	9.1	<6.9	<6.9	<6.9
VW-56-28 (VW-56-D)	3/21/2019	<1.0	<2.0	7.8	80	0.23	12	1.2	2	1.3

		EPA Method 25C	EPA Method 3C/ASTM D1946					EPA Method TO-15		
Sample Location	Sample Event Date	Total Gaseous Nonmethane Organics as Methane	Methane	Oxygen + Argon *	Nitrogen	Carbon Monoxide	Carbon Dioxide	Chloroform	Trichloroethene	Benzene
		ppmv	ppmv	(%, v/v)	(%, v/v)	(%, v/v)	(%, v/v)	ppbv	ppbv	ppbv
	3/18/2020	<1.0	<2.0	12	80	<0.050	7.5	<7.2	<7.2	<7.2
	3/18/2020 Dup	<1.0	<2.0	10	82	<0.050	7.6	<7.6	<7.6	<7.6
	1/14/2021	<1.0	<2.0	19	80	0.18	0.96	<7.0	<7.0	<7.0
	2/1/2022	<1.0	<2.0	5.6	81	<0.050	13	<7.2	1.9 J	<7.2
	1/13/2023	<1.0	<2.0	16	77	<0.050	4.1	<6.8	<6.8	<6.8
VW-58-08 (VW-58-S)	3/25/2019	<1.0	<2.0	18	77	0.20	4.9	<0.76	38	0.53 J
	2/11/2020	<1.0	<2.0	16	78	<0.050	5.8	<0.76	33	<0.76
	5/10/2021	<1.0	<2.0	15	78	0.22	7.0	<7.0	37	<7.0
	1/31/2022	<1.0	<2.0	16	80	<0.050	4.7	<6.8	23	<6.8
	4/27/2023	<1.0	9.1	13	80	<0.050	6.8	<7.2	32	<7.2
VW-58-19 (VW-58-I)	3/25/2019	<1.0	<2.0	22	77	0.18	0.77	<0.82	<0.82	1.0
	2/11/2020	<1.0	<2.0	8.2	79	<0.050	13	0.60 J	10	<0.76
	5/10/2021	<1.0	<2.0	13	78	0.33	8.9	<7.2	4.6 J	<7.2
	1/31/2022	<1.0	<2.0	20	80	<0.050	0.075 J	<9.6	<9.6	<9.6
	4/27/2023	1.3	5.3	7.6	81	<0.050	11	<7.4	8.5	<7.4
VW-58-29 (VW-58-D)	3/25/2019	<1.0	<2.0	23	77	0.20	0.061 J	<0.74	<0.74	1.9
	2/11/2020	<1.0	<2.0	15	79	0.28	5.7	0.47 J	2.7	0.70 J
	2/11/2020 Dup	<1.0	<2.0	17	79	0.27	4.3	<0.71	2.3	0.53 J
	5/10/2021	<1.0	12	14	77	0.34	8	<7.6	3.7 J	<7.6
	1/31/2022	<1.0	<2.0	20	80	<0.050	0.063 J	<7.0	<7.0	<7.0
	4/27/2023	<1.0	<2.0	13	80	<0.050	6.5	<7.4	4.0 J	<7.4
VW-61-08 (VW-61-S)	3/27/2019	<1.0	<2.0	22	78	0.19	0.063 J	<0.74	<0.74	0.49 J
	4/16/2020	<1.0	<2.0	21	79	<0.050	<0.10	<8.2	<8.2	<8.2
	4/26/2021	<1.0	<2.0	8.3	81	0.22	11	<7.0	<7.0	4.9 J
	2/8/2022	<1.0	29	16	81	<0.050	2.8	<9.0	<9.0	<9.0
	6/1/2023	<1.0	140	20	79	<0.050	1.1	<5.3	<5.3	<5.3
VW-61-19 (VW-61-I)	3/27/2019	<1.0	<2.0	23	77	0.24	0.064 J	<0.90	<0.90	0.34 J
	4/16/2020	<1.0	<2.0	17	78	0.36	4.8	<7.8	<7.8	<7.8
	4/26/2021	<1.0	<2.0	20	76	0.24	3.9	<7.0	<7.0	<7.0
	2/8/2022	<1.0	<2.0	17	80	<0.050	3.1	<7.4	<7.4	<7.4
	6/1/2023	<1.0	25	4.5	81	<0.050	14	<7.2	<7.2	<7.2
VW-61-30 (VW-61-D)	3/27/2019	<1.0	<2.0	23	76	0.19	0.48	<0.78	<0.78	0.33 J
	3/27/2019 Dup	<1.0	<2.0	23	77	0.12	<0.10	<0.78	<0.78	0.35 J
	4/16/2020	<1.0	<2.0	7.9	79	0.35	13	<8.2	<8.2	<8.2
	4/16/2020 Dup	<1.0	<2.0	7.1	79	0.37	13	<7.8	<7.8	<7.8

		EPA Method 25C	EPA Method 3C/ASTM D1946					EPA Method TO-15		
Sample Location	Sample Event Date	Total Gaseous Nonmethane Organics as Methane	Methane	Oxygen + Argon *	Nitrogen	Carbon Monoxide	Carbon Dioxide	Chloroform	Trichloroethene	Benzene
		ppmv	ppmv	(%, v/v)	(%, v/v)	(%, v/v)	(%, v/v)	ppbv	ppbv	ppbv
	5/10/2021	<1.0	<2.0	24	75	0.25	<0.10	<6.9	<6.9	<6.9
	2/8/2022	<1.0	13	18	80	<0.050	1.4	<8.1	<8.1	<8.1
	2/8/2022 Dup	<1.0	<2.0	19	80	<0.050	1.3	<7.1	<7.1	<7.1
	6/1/2023	<1.0	<2.0	3.9	81	<0.050	15	<7.2	<7.2	<7.2
VW-62-08 (VW-62-S)	3/25/2019	<1.0	5100	4.2	86	0.33	9.0	<0.74	<0.74	1.3
	2/27/2020	8.7	7400	1.5	86	0.80	11	<7.6	<7.6	<7.6
	3/31/2021	<1.0	<2.0	24	75	<0.050	<0.10	<6.8	<6.8	<6.8
	1/20/2022	2.7	3300	3.1	85	<0.050	12	<7.4	<7.4	<7.4
	4/6/2023	5.5	6300	3.3	87	<0.050	8.7	<10	<10	<10
VW-62-18 (VW-62-I)	3/25/2019	<1.0	<2.0	6.0	81	0.14	13	<0.71	<0.71	0.51 J
	2/27/2020	<1.0	<2.0	3.7	79	0.5	17	<8.5	<8.5	<8.5
	3/31/2021	<1.0	<2.0	25	75	<0.050	<0.010	<7.0	4.9 J	<7.0
	1/20/2022	<1.0	<2.0	20	80	<0.050	0.073 J	<7.8	<7.8	<7.8
	1/20/2022 Dup	<1.0	<2.0	19	80	<0.050	0.074 J	<6.8	<6.8	<6.8
	4/6/2023	<1.0	<2.0	3.8	82	<0.050	14	<5.0	<5.0	<5.0
VW-62-29 (VW-62-D)	3/25/2019	<1.0	<2.0	22	77	0.14	0.98	0.17 J	<0.70	4
	3/25/2019 Dup	<1.0	<2.0	22	76	0.38	1.0	<0.70	<0.70	3.6
	2/27/2020	7.5	<2.0	2.9	80	0.32	17	<8.0	<8.0	<8.0
	3/31/2021	<1.0	<2.0	24	76	<0.050	<0.10	<6.8	<6.8	<6.8
	1/20/2022	<1.0	12	20	80	<0.050	0.067 J	<7.2	<7.2	<7.2
	4/6/2023	<1.0	5.7	13	80	<0.050	7.2	<5.0	<5.0	<5.0
	4/6/2023 Dup	<1.0	2.7	14	80	<0.050	6.1	<5.0	<5.0	<5.0
VW-62-Ambient	3/25/2019	<1.0	11	23	77	0.11	0.093 J	<0.72	<0.72	0.65 J
	2/27/2020	<1.0	<2.0	22	78	<0.050	<0.10	<7.5	<7.5	<7.5
	4/1/2021	<1.0	<2.0	24	76	<0.050	<0.10	<0.72	<0.72	0.46 J
	1/18/2022	<1.0	75	20	80	<0.050	0.061 J	<0.76	<0.76	0.28 J
	4/6/2023	<1.0	12	21	79	<0.050	0.060 J	<5.0	<5.0	<5.0

Notes:

Table contains historical and current data for the vapor monitoring wells that were identified in the project documents (CD, AROD, etc.) for monitoring purposes and do not include abandoned or destroyed locations/wells. Compliance vapor well results with bold font in highlighted cells show concentrations that exceeded the Soil Gas Performance Standards or Indoor Air Threshold Levels.

ppmv = Parts per million by volume ppbv = Parts per billion by volume (%v/v) = Percent by volume

< = Concentration of the constituent was not detected above the laboratory's reporting limit.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

Table C-2. Sub-slab Soil Vapor Probe Monitoring Results

		EPA Method 25C	EPA Method 3C/ASTM D1946					EPA Method TO-15					
Sample Location	Sample Event Date	Total Gaseous Nonmethane Organics as Methane	Methane	Oxygen + Argon *	Nitrogen	Carbon Monoxide	Carbon Dioxide	Trichloroethene	Toluene	Trichlorofluoro-methane	Trichloro-trifluoroethane	Tetrachloroethene	Benzene
		ppmv	ppmv	(%, v/v)	(%, v/v)	(%, v/v)	(%, v/v)	ppbv	ppbv	ppbv	ppbv	ppbv	ppbv
IBM-03B	9/23/2019	<1.0	<2.0	--	--	--	--	<8.2	<8.2	<8.2	<8.2	<8.2	<8.2
	3/10/2020	<1.0	<2.0	--	--	--	--	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0
	11/30/2020	<1.0	<2.0	--	--	--	--	<6.4	<6.4	<6.4	<6.4	<6.4	<6.4
	1/15/2021	<1.0	<2.0	--	--	--	--	<7.0	3.6 J	<7.0	<7.0	<7.0	<7.0
	7/26/2021	<1.0	20	--	--	--	--	<7.4	<7.4	<7.4	<7.4	<7.4	<7.4
	1/24/2022	0.82 J	10	--	--	--	--	<7.6	2.3 J	<7.6	<7.6	<7.6	1.9 J
	7/29/2022	<1.0	<2.0	--	--	--	--	<7.1	4.7 J	<7.1	<7.1	<7.1	<7.1
	5/23/2023	<1.0	2.3	--	--	--	--	<7.2	<7.2	<7.2	<7.2	<7.2	<7.2
	10/23/2023	<1.0	2.4	--	--	--	--	<5.0	4.1 J	<5.0	<5.0	<5.0	<5.0
IBM-21	10/28/2019	<1.0	<2.0	--	--	--	--	4.4 J	<7.8	7,700	21	170	<7.8
	2/27/2020	<1.0	<2.0	--	--	--	--	2.3 J	170	2,700	16	86	<7.8
	12/1/2020	<1.0	<2.0	--	--	--	--	<9.0	<9.0	<9.0	<9.0	<9.0	<9.0
	6/2/2021	<1.0	10	--	--	--	--	<7.0	<7.0	<7.0	<7.0	<7.0	<7.0
	11/12/2021	1.7	11	20	79	<0.050	0.066 J	<3.6	1.7 J	<3.6	<3.6	<3.6	<3.6
	2/3/2022	1.4	10	--	--	--	--	<0.68	2.0	0.26 J	<0.68	<0.68	0.98
	7/5/2022	<1.0	10	--	--	--	--	6.6 J	1.7 J	<6.9	<6.9	<6.9	<6.9
	5/23/2023	<1.0	5.8	--	--	--	--	<7.4	<7.4	<7.4	<7.4	<7.4	<7.4
	9/20/2023	<1.0	2.5	--	--	--	--	<5.0	1.3 J	1.5 J	<5.0	2.3 J	<5.0
IBM-22	10/14/2019	<1.0	<2.0	--	--	--	--	0.25 J	1.5	<0.74	<0.74	0.22 J	0.49 J
	3/16/2020	<1.0	<2.0	--	--	--	--	<7.0	<7.0	<7.0	<7.0	<7.0	<7.0
	11/23/2020	<1.0	<2.0	--	--	--	--	<7.8	<7.8	<7.8	<7.8	<7.8	<7.8
	11/23/2020 Dup	<1.0	<2.0	--	--	--	--	<7.8	<7.8	<7.8	<7.8	<7.8	<7.8
	5/10/2021	<1.0	<2.0	--	--	--	--	<14	<14	<14	<14	<14	<14
	12/11/2021	<1.0	<2.0	20	80	<0.050	0.089 J	<7.2	4.6 J	<7.2	<7.2	<7.2	<7.2
	6/8/2022	<1.0	12	20	80	<0.050	0.064 J	<7.0	<7.0	<7.0	<7.0	<7.0	<7.0
	8/19/2022	<1.0	10	--	--	--	--	<7.2	<7.2	<7.2	<7.2	<7.2	<7.2
	6/13/2023	1.7	3.3	--	--	--	--	<7.1	200	<7.1	<7.1	<7.1	25
	7/21/2023	<1.0	7.1	--	--	--	--	<7.4	11	<7.4	<7.4	<7.4	1.5 J
IBM-37	12/13/2019	<1.0	<2.0	--	--	--	--	1.7	24	<0.70	<0.70	14	0.75
	6/25/2020	6.1	<2.0	--	--	--	--	1.4	5.0	<7.1	<7.1	14	<7.1
	11/20/2020	<1.0	<2.0	--	--	--	--	<7.5	140	<7.5	<7.5	<7.5	<7.5
	1/14/2021	11	--	--	--	--	--	<7.2	210	<7.2	<7.2	4.2 J	<7.2
	8/30/2021	1	20	--	--	--	--	<7.0	1.6 J	<7.0	<7.0	3.1 J	<7.0
	1/24/2022	<1.0	<2.0	--	--	--	--	<8.6	5.2 J	<8.6	<8.6	<8.6	<8.6

		EPA Method 25C	EPA Method 3C/ASTM D1946					EPA Method TO-15					
Sample Location	Sample Event Date	Total Gaseous Nonmethane Organics as Methane	Methane	Oxygen + Argon *	Nitrogen	Carbon Monoxide	Carbon Dioxide	Trichloroethene	Toluene	Trichlorofluoro-methane	Trichloro-trifluoroethane	Tetrachloroethene	Benzene
		ppmv	ppmv	(%, v/v)	(%, v/v)	(%, v/v)	(%, v/v)	ppbv	ppbv	ppbv	ppbv	ppbv	ppbv
	8/19/2022	<1.0	<2.0	--	--	--	--	<7.1	1.6 J	<7.1	<7.1	<7.1	<7.1
	5/22/2023	<1.0	6.9	--	--	--	--	<7.4	3.3 J	<7.4	<7.4	2.7 J	<7.4
	10/31/2023	<1.0	2.6	--	--	--	--	1.4 J	13	<5.0	<5.0	7.9	<5.0
IBM-41	10/14/2019	<1.0	<2.0	--	--	--	--	<0.11	1.8	0.32 J	<0.80	2.1	5.1
	2/17/2020	<1.0	<2.0	--	--	--	--	<0.70	0.51 J	0.29 J	<0.70	0.98	<0.70
	11/20/2020	<1.0	<2.0	--	--	--	--	<7.8	16	<7.8	<7.8	<7.8	<7.8
	1/15/2021	<1.0	<2.0	--	--	--	--	<8.2	19	<8.2	<8.2	<8.2	5.6 J
	7/27/2021	<1.0	10	--	--	--	--	<7.0	7.2	<7.0	<7.0	<7.0	<7.0
	1/10/2022	<1.0	31	20	80	<0.050	0.50	<6.6	10	<6.6	<6.6	<6.6	<6.6
	7/22/2022	<1.0	10	--	--	--	--	<7.2	59	<7.2	<7.2	<7.2	2.2 J
	9/9/2022	<1.0	20	--	--	--	--	<7.8	18	<7.8	<7.8	<7.8	3.9 J
	5/22/2023	<1.0	15	--	--	--	--	<7.0	3.2 J	<7.0	<7.0	<7.0	<7.0
	7/20/2023	<1.0	5.1	--	--	--	--	<7.6	2.3 J	<7.6	<7.6	<7.6	<7.6
	7/20/2023 Dup	<1.0	2.6	--	--	--	--	<7.2	2.1 J	<7.2	<7.2	<7.2	<7.2

Notes:
ppmv = Parts per million by volume
ppbv = Parts per billion by volume (%v/v) = Percent by volume
< = Concentration of the constituent was not detected above the laboratory's reporting limit.

Table C-3. In-Business Monitoring Results

		EPA Method 25C	EPA Method 3C/ASTM D1946					EPA Method TO-15					
Sample Location	Sample Event Date	Total Gaseous Nonmethane Organics as Methane	Methane	Oxygen + Argon*	Nitrogen	Carbon Monoxide	Carbon Dioxide	Trichloroethene	Toluene	Trichlorofluoro-methane	Trichlorotrifluoroethane	Tetrachloroethene	Benzene
		ppmv	ppmv	(%, v/v)	(%, v/v)	(%, v/v)	(%, v/v)	ppbv	ppbv	ppbv	ppbv	ppbv	ppbv
IBM-03	9/21/2019	<1.0	<2.0	--	--	--	--	<0.097	4.9	0.31 J	<0.70	<0.70	1.5
	2/15/2020	<1.0	<2.0	--	--	--	--	<0.094	1.5	<0.67	<0.67	<0.67	0.50 J
	2/15/2020 Dup	<1.0	<2.0	--	--	--	--	<0.094	1.4	<0.67	<0.67	<0.67	0.51 J
	11/20/2020	<1.0	<2.0	--	--	--	--	<0.13	2.2	0.29 J	<0.67	<0.67	0.96
	1/21/2021	<1.0	<2.0	--	--	--	--	<0.13	3.6	0.30 J	<0.66	<0.66	0.57 J
	7/23/2021	<1.0	<2.0	--	--	--	--	<0.14	0.76	<0.70	<0.70	<0.70	<0.70
	1/21/2022	<1.0	<2.0	--	--	--	--	<0.13	2.4	0.25 J	<0.66	<0.66	0.43 J
	1/21/2022 Dup	<1.0	<2.0	--	--	--	--	<0.13	3.0	0.28 J	<0.66	0.37 J	1.1
	7/29/2022	<1.0	<2.0	--	--	--	--	<0.14	1.9	0.25 J	<0.69	<0.69	0.32 J
	5/22/2023	<1.0	2.6	--	--	--	--	<0.14	3.2	0.23 J	<0.69	<0.69	0.99
	10/23/2023	<1.0	2.3	--	--	--	--	<0.50	2.6	0.21 J	<0.50	<0.50	0.45 J
IBM-03B	9/29/2018	<1.0	<2.0	--	--	--	--	<0.098 S05	19 S05	0.24 J, S05	<0.70 S05	<0.70 S05	**4.7 S05**
	3/9/2019	<1.0	60	--	--	--	--	<0.094	0.42 J	0.31 J	<0.67	<0.67	0.21 J
	3/9/2019 Dup	<1.0	10	--	--	--	--	<0.094	0.46 J	0.29 J	<0.67	<0.67	0.23 J
	9/21/2019	1.6	<2.0	--	--	--	--	<0.097	160	<0.70	<0.70	<0.70	**61**
	9/21/2019 Dup	<1.0	<2.0	--	--	--	--	<0.098	11	<0.70	<0.70	<0.70	1.1
	3/7/2020	<1.0	<2.0	21	79	<0.050	<0.10	<0.094	0.72	0.21 J	<0.67	<0.67	0.23 J
	3/7/2020 Dup	<1.0	<2.0	22	78	0.14	<0.10	<0.094	0.79	0.21 J	<0.67	0.17 J	0.23 J
	11/18/2020	<1.0	<2.0	--	--	--	--	<0.14	0.82	<0.71	<0.71	0.34 J	0.33 J
	1/20/2021	<1.0	<2.0	--	--	--	--	<0.15	2.3	0.31 J	<0.75	0.31 J	0.33 J

		EPA Method 25C	EPA Method 3C/ASTM D1946					EPA Method TO-15					
Sample Location	Sample Event Date	Total Gaseous Nonmethane Organics as Methane	Methane	Oxygen + Argon*	Nitrogen	Carbon Monoxide	Carbon Dioxide	Trichloroethene	Toluene	Trichlorofluoro-methane	Trichlorotrifluoroethane	Tetrachloroethene	Benzene
		ppmv	ppmv	(%, v/v)	(%, v/v)	(%, v/v)	(%, v/v)	ppbv	ppbv	ppbv	ppbv	ppbv	ppbv
	1/20/2021 Dup	<1.0	<2.0	--	--	--	--	<0.13	2.5	0.32 J	<0.68	0.33 J	0.33 J
	7/24/2021	<1.0	10	--	--	--	--	<0.14	1.7	<0.69	<0.69	0.35 J	0.33 J
	7/24/2021 Dup	<1.0	<2.0	--	--	--	--	<0.14	1.6	<0.70	<0.70	0.48 J	0.33 J
	1/22/2022	<1.0	10	--	--	--	--	<0.13	2.5	0.28 J	<0.66	<0.66	0.43 J
	7/16/2022	<1.0	<2.0	--	--	--	--	<0.46	2.8	0.28 J	<0.46	0.36 J	0.52
	7/16/2022 Dup	<1.0	<2.0	--	--	--	--	<0.46	2.7	0.28 J	<0.46	0.33 J	0.52
	1/21/2023	<1.0	<2.0	--	--	--	--	<0.13	2.6	0.28 J	<0.67	0.28 J	0.86
	1/21/2023 Dup	<1.0	<2.0	--	--	--	--	<0.13	2.5	0.24 J	<0.67	0.27 J	0.80
	10/23/2023	<1.0	2.2	--	--	--	--	<0.50	1.5	0.22 J	<0.50	0.26 J	0.33 J
	10/23/2023 Dup	<1.0	10	--	--	--	--	<0.50	1.4	0.22 J	<0.50	0.24 J	0.35 J
IBM-21	10/25/2019	<1.0	<2.0	--	--	--	--	<0.094	11	320	1.8	<0.68	**2.0**
	10/25/2019 Dup	<1.0	<2.0	--	--	--	--	<0.094	14	320	1.8	<0.68	**3.2**
	2/26/2020	<1.0	<2.0	--	--	--	--	<0.094	1.5	3.1	<0.68	<0.68	0.57 J
	2/26/2020 Dup	<1.0	<2.0	--	--	--	--	<0.094	1.5	3.2	<0.68	<0.68	0.55 J
	12/1/2020	<1.0	<2.0	--	--	--	--	<0.14	3.0	0.31 J	<0.70	<0.70	0.89
	12/1/2020 Dup	<1.0	<2.0	--	--	--	--	<0.13	3.0	0.31 J	<0.66	<0.66	0.88
	1/28/2021	<1.0	<2.0	--	--	--	--	<0.15	0.33 J	<0.76	<0.76	<0.76	<0.76
	1/28/2021 Dup	<1.0	<2.0	--	--	--	--	<0.15	0.31 J	<0.76	<0.76	<0.76	<0.76
	11/12/2021	<1.0	<2.0	20	80	<0.050	0.067 J	<0.14	2.4	0.34 J	<0.70	<0.70	0.92
	2/3/2022	<1.0	10	--	--	--	--	<0.15	0.92	0.27 J	<0.76	<0.76	0.44 J

		EPA Method 25C	EPA Method 3C/ASTM D1946					EPA Method TO-15					
Sample Location	Sample Event Date	Total Gaseous Nonmethane Organics as Methane	Methane	Oxygen + Argon*	Nitrogen	Carbon Monoxide	Carbon Dioxide	Trichloroethene	Toluene	Trichlorofluoro-methane	Trichlorotrifluoroethane	Tetrachloroethene	Benzene
		ppmv	ppmv	(%, v/v)	(%, v/v)	(%, v/v)	(%, v/v)	ppbv	ppbv	ppbv	ppbv	ppbv	ppbv
	2/3/2022 Dup	<1.0	<2.0	--	--	--	--	<0.16	0.93	0.27 J	<0.80	<0.80	0.44 J
	7/5/2022	<1.0	<2.0	--	--	--	--	<0.47	0.43 J	0.25 J	<0.47	<0.47	0.15 J
	7/5/2022 Dup	<1.0	11	--	--	--	--	<0.46	0.31J	0.24 J	<0.46	<0.46	0.10 J
	5/22/2023	<1.0	3.0	--	--	--	--	<0.15	0.62 J	0.21 J	<0.76	<0.76	0.23 J
	9/20/2023	<1.0	4.0	--	--	--	--	<0.50	<2.5	<2.5	<2.5	<2.5	<0.32
IBM-22	10/11/2019	<1.0	<2.0	--	--	--	--	<0.097	5.7	0.57J	<0.69	<0.69	1.1
	3/13/2020	<1.0	<2.0	--	--	--	--	<0.094	1.1	0.27 J	<0.67	2.3	0.38 J
	3/13/2020 Dup	<1.0	<2.0	--	--	--	--	<0.094	1.0	<0.68	<0.68	0.69	0.33 J
	12/2/2020	<1.0	<2.0	--	--	--	--	<0.14	11	0.31 J	<0.70	<0.70	**2.2**
	5/8/2021	<1.0	<2.0	--	--	--	--	<0.14	3.4	0.23 J	<0.68	<0.68	0.63 J
	5/8/2021 Dup	<1.0	<2.0	--	--	--	--	<0.14	3.6	0.23 J	<0.69	<0.69	0.70
	12/11/2021	<1.0	11	20	80	<0.050	<0.10	<0.27	8.5	0.32 J	<1.4	<1.4	1.1 J
	6/9/2022	<1.0	30	--	--	--	--	<0.15	0.41 J	0.21 J	<0.76	<0.76	<0.76
	6/9/2022 Dup	<1.0	<2.0	--	--	--	--	<0.16	0.39 J	0.20 J	<0.78	<0.78	<0.78
	8/19/2022	<1.0	<2.0	--	--	--	--	<0.45	0.61	0.23 J	<0.45	0.24 J	0.14 J
	8/19/2022 Dup	<1.0	<2.0	--	--	--	--	<0.44	0.61	0.24 J	<0.44	<0.44	0.15 J
	6/13/2023	<1.0	2.1	--	--	--	--	<0.50	0.30 J	0.25 J	<0.50	<0.50	0.50
	6/13/2023 Dup	<1.0	18	--	--	--	--	<0.50	0.35 J	0.26 J	<0.50	<0.50	0.50
	7/21/2023	<1.0	32	--	--	--	--	<0.50	1.6	0.26 J	<0.50	<0.50	0.40 J
	7/21/2023 Dup	<1.0	2.4	--	--	--	--	<0.20	16	0.22 J	<1.0	0.54 J	1.8
IBM-24AMB	10/1/2019	<1.0	<2.0	--	--	--	--	<0.12	0.51 J	<0.85	<0.85	<0.85	0.34 J
	6/24/2020	<1.0	<2.0	--	--	--	--	<0.14	0.85	0.21 J	<0.70	<0.70	0.20 J

		EPA Method 25C	EPA Method 3C/ASTM D1946					EPA Method TO-15					
Sample Location	Sample Event Date	Total Gaseous Nonmethane Organics as Methane	Methane	Oxygen + Argon*	Nitrogen	Carbon Monoxide	Carbon Dioxide	Trichloroethene	Toluene	Trichlorofluoro-methane	Trichlorotrifluoroethane	Tetrachloroethene	Benzene
		ppmv	ppmv	(%, v/v)	(%, v/v)	(%, v/v)	(%, v/v)	ppbv	ppbv	ppbv	ppbv	ppbv	ppbv
	11/18/2020	<1.0	<2.0	--	--	--	--	<0.25	<1.3	<1.3	<1.3	<1.3	<1.3
	11/18/2020 Dup	<1.0	<2.0	--	--	--	--	<0.15	0.39 J	0.32 J	<0.78	<0.78	<0.78
	1/19/2021	<1.0	<2.0	--	--	--	--	<0.14	<0.69	0.28 J	<0.69	<0.69	<0.69
	7/8/2021	<1.0	<2.0	--	--	--	--	<0.14	0.31 J	0.33 J	<0.71	<0.71	0.18 J
	1/19/2022	<1.0	<2.0	--	--	--	--	<0.13	2.5	0.28 J	<0.66	<0.66	0.98
	7/8/2022	<1.0	10	--	--	--	--	<0.36	0.27 J	0.19 J	<0.36	<0.36	0.094 J
	7/8/2022 Dup	<1.0	<2.0	--	--	--	--	<0.38	0.28 J	0.19 J	<0.38	<0.38	0.098 J
	6/13/2023	<1.0	2.2	--	--	--	--	<0.50	0.35 J	0.21 J	<0.50	<0.50	0.12 J
	12/8/2023	<1.0	2.3	--	--	--	--	<0.50	1.1	0.24 J	<0.50	<0.50	0.45 J
IBM-24B	10/1/2019	0.61 J	<2.0	--	--	--	--	<0.11	1.5	<0.80	<0.80	<0.80	0.29 J
	10/1/2019 Dup	<1.0	<2.0	--	--	--	--	<0.011	2.0	0.39 J	<0.80	<0.80	0.47 J
	6/24/2020	<1.0	<2.0	--	--	--	--	<0.14	1.5	0.21 J	<0.68	<0.68	0.40 J
	6/24/2020 Dup	<1.0	<2.0	--	--	--	--	<0.14	0.64 J	0.21 J	<0.70	<0.70	0.15 J
	11/18/2020	<1.0	21	--	--	--	--	<0.13	11	0.31 J	<0.66	<0.66	1.8
	1/19/2021	<1.0	<2.0	--	--	--	--	<0.13	5.2	0.30 J	<0.68	<0.68	0.60 J
	1/19/2021 Dup	<1.0	<2.0	--	--	--	--	<0.13	5.0	0.28 J	<0.68	<0.68	0.61 J
	1/19/2022	<1.0	<2.0	--	--	--	--	<0.13	37	0.29 J	<0.66	<0.66	1.2
	1/19/2022 Dup	<1.0	<2.0	--	--	--	--	<0.13	33	0.26 J	<0.68	<0.68	1.1
	10/4/2022	<1.0	<2.0	--	--	--	--	<0.47	0.67	0.24 J	<0.47	<0.47	0.21 J
	10/4/2022 Dup	<1.0	<2.0	--	--	--	--	<0.52	0.68	0.25 J	<0.52	<0.52	0.22 J
	5/22/2023	<1,0	2.4	--	--	--	--	<0.14	0.43 J	0.24 J	<0.70	<0.70	0.18 J

		EPA Method 25C	EPA Method 3C/ASTM D1946					EPA Method TO-15					
Sample Location	Sample Event Date	Total Gaseous Nonmethane Organics as Methane	Methane	Oxygen + Argon*	Nitrogen	Carbon Monoxide	Carbon Dioxide	Trichloroethene	Toluene	Trichlorofluoro-methane	Trichlorotrifluoroethane	Tetrachloroethene	Benzene
		ppmv	ppmv	(%, v/v)	(%, v/v)	(%, v/v)	(%, v/v)	ppbv	ppbv	ppbv	ppbv	ppbv	ppbv
	5/22/2023 Dup	<1.0	2.4	--	--	--	--	<0.14	0.40 J	0.23 J	<0.69	<0.69	0.18 J
	9/20/2023	<1.0	23	--	--	--	--	<0.50	1.1	0.21 J	<0.50	<0.50	0.15 J
	9/20/2023 Dup	<1.0	3.0	--	--	--	--	**1.2**	1.1	0.21 J	<0.50	0.64	0.15 J
IBM-28	9/28/2018	<1.0	<2.0	--	--	--	--	<0.096 S05	0.68 S05	0.22 J, S05	<0.68 S05	<0.68 S05	0.19 J, S05
	3/29/2019	<1.0	<2.0	--	--	--	--	<0.094	0.78	0.24 J	<0.68	<0.68	0.32 J
	10/11/2019	<1.0	<2.0	--	--	--	--	<0.095	1.6	<0.68	<0.68	<0.68	0.48J
	3/13/2020	<1.0	<2.0	--	--	--	--	<0.097	0.69	<0.69	<0.69	0.34 J	<0.69
	11/18/2020	<1.0	45	--	--	--	--	<0.22	0.50 J	<1.1	<1.1	<1.1	<1.1
	1/29/2021	<1.0	<2.0	--	--	--	--	<0.13	0.75	<0.66	<0.66	<0.66	0.41 J
	8/6/2021	<1.0	10	--	--	--	--	<0.14	0.50 J	0.29 J	<0.70	<0.70	0.18 J
	1/7/2022	<1.0	32	20	80	<0.050	<0.10	<0.13	0.77	0.33 J	<0.67	<0.67	0.35 J
	8/19/2022	<1.0	<2.0	--	--	--	--	<0.45	0.60	0.24 J	<0.45	<0.45	0.18 J
	5/22/2023	<1.0	2.5	--	--	--	--	<0.15	0.47 J	0.23 J	<0.76	<0.76	0.15J
	5/22/2023 Dup	<1.0	2.4	--	--	--	--	<0.15	0.44 J	0.22 J	<0.74	<0.74	0.15 J
	9/20/2023	<1.0	43	--	--	--	--	0.17 J	0.44 J	0.22 J	<0.50	2.3	0.15 J
IBM-32	10/17/2019	<1.0	<2.0	--	--	--	--	<0.12	0.64 J	1.6	<0.87	<0.87	0.23 J
	10/17/2019 Dup	<1.0	<2.0	--	--	--	--	<0.10	0.84	1.6	<0.75	<0.75	0.24 J
	3/7/2020	<1.0	<2.0	22	78	<0.050	<0.10	<0.094	6.8	1.0	<0.67	<0.67	1.6
	11/20/2020	<1.0	<2.0	--	--	--	--	<0.14	12	<0.69	<0.69	<0.69	**2.9**
	1/14/2021	<1.0	<2.0	--	--	--	--	**<1.3**	20	<6.6	<6.6	<6.6	**3.2 J**
	Could not access regular sampling location during 3rd and 4th Quarters 2021. Due to oversight, sampled in different location in building in December 2021. Sample collected in regular location in First Quarter 2022.												

		EPA Method 25C	EPA Method 3C/ASTM D1946					EPA Method TO-15					
Sample Location	Sample Event Date	Total Gaseous Nonmethane Organics as Methane	Methane	Oxygen + Argon*	Nitrogen	Carbon Monoxide	Carbon Dioxide	Trichloroethene	Toluene	Trichlorofluoro-methane	Trichlorotrifluoroethane	Tetrachloroethene	Benzene
		ppmv	ppmv	(%, v/v)	(%, v/v)	(%, v/v)	(%, v/v)	ppbv	ppbv	ppbv	ppbv	ppbv	ppbv
	1/21/2022	1.7	<2.0	--	--	--	--	<0.26	59	0.35 J	<1.3	<1.3	**6.5**
	9/8/2022	<1.0	10	--	--	--	--	**5.6**	130	1.2 J	<1.4	<1.4	**7.5**
	10/18/2022	<1.0	10	--	--	--	--	**4.3**	76	0.79	<0.72	<0.72	**5.0**
	10/28/2022 Dup	<1.0	10	--	--	--	--	**4.4**	72	0.81	<0.75	<0.75	**5.0**
	4/27/2023	<1.0	12	--	--	--	--	<0.50	1.7	0.39 J	<0.50	<0.50	0.36 J
	4/27/2023 Dup	<1.0	2.6	--	--	--	--	<0.50	1.7	0.39 J	<0.50	<0.50	0.51
	10/20/2023	4.1	2.9	--	--	--	--	<0.50	**710**	<2.5	<2.5	<2.5	**49**
	10/20/2023 Dup	4.5	9.5	--	--	--	--	<0.50	**730**	0.50 J	<2.5	<2.5	**51**
IBM-37	12/12/2019	1.9	<2.0	--	--	--	--	<0.11	**450**	<0.78	<0.78	0.33 J	**2.4**
	12/12/2019 Dup	3.3	<2.0	--	--	--	--	<0.11	**450**	<0.78	<0.78	<0.78	**2.4**
	6/24/2020	<1.0	<2.0	--	--	--	--	<0.14	140	0.20 J	<0.78	<0.72	0.75
	11/20/2020	<1.0	9.8	--	--	--	--	<0.13	62	0.31 J	<0.68	<0.68	1.5
	11/20/2020 Dup	<1.0	23	--	--	--	--	<0.13	69	0.32 J	<0.68	0.56 J	1.6
	1/14/2021	<1.0	<2.0	--	--	--	--	<0.13	33	0.29 J	<0.67	<0.67	1.0
	1/14/2021 Dup	<1.0	12	--	--	--	--	<0.13	36	0.31 J	<0.67	<0.67	1.1
	8/27/2021	<1.0	40	--	--	--	--	**<1.4**	1.5 J	<6.9	<6.9	3.2 J	<0.87
	8/27/2021 Dup	<1.0	20	--	--	--	--	**<1.4**	1.8 J	<6.9	<6.9	3.4 J	<0.87
	1/21/2022	<1.0	<2.0	--	--	--	--	<0.13	26	0.26 J	<0.68	0.34 J	0.41 J
	8/19/2022	<1.0	10	--	--	--	--	<0.45	28	0.24 J	<0.45	<0.45	0.44 J
	5/22/2023	<1.0	3.7	--	--	--	--	<0.14	28	0.23 J	<0.68	<0.68	0.51 J
	10/31/2023	<1.0	3.5	--	--	--	--	<0.50 <0.50	54	0.20 J	<0.50	<0.50	0.87

		EPA Method 25C	EPA Method 3C/ASTM D1946					EPA Method TO-15					
Sample Location	Sample Event Date	Total Gaseous Nonmethane Organics as Methane	Methane	Oxygen + Argon*	Nitrogen	Carbon Monoxide	Carbon Dioxide	Trichloroethene	Toluene	Trichlorofluoro-methane	Trichlorotrifluoroethane	Tetrachloroethene	Benzene
		ppmv	ppmv	(%, v/v)	(%, v/v)	(%, v/v)	(%, v/v)	ppbv	ppbv	ppbv	ppbv	ppbv	ppbv
	10/31/2023 Dup	<1.0	3.3	--	--	--	--		52	0.21 J	<0.50	<0.50	0.92
IBM-41	10/11/2019	<1.0	5,600	--	--	--	--	<0.19	10	<1.4	<1.4	<1.4	0.69J
	10/11/2019 Dup	<1.0	<2.0	--	--	--	--	<0.19	10	<1.4	<1.4	<1.4	0.72J
	2/15/2020	<1.0	<2.0	--	--	--	--	<0.095	4.0	<0.68	<0.68	<0.68	0.78
	11/20/2020	<1.0	370	--	--	--	--	<0.13	16	<0.68	<0.68	<0.68	**4.5**
	1/21/2021	<1.0	<2.0	--	--	--	--	<0.13	25	0.28 J	<0.68	<0.68	**5.8**
	1/21/2021 Dup	<1.0	<2.0	--	--	--	--	<0.13	24	0.28 J	<0.67	<0.67	**5.6**
	7/23/2021	<1.0	<2.0	--	--	--	--	<0.14	34	<0.70	<0.70	<0.70	**8.1**
	1/7/2022	<1.0	11	20	80	<0.050	<0.10	<0.13	40	0.30 J	<0.66	<0.66	**7.7**
	1/7/2022 Dup	<1.0	<2.0	20	80	<0.050	<0.10	<0.13	38	0.32 J	<0.66	<0.66	**7.8**
	7/22/2022	<1.0	<2.0	--	--	--	--	<0.27	74	<1.4	<1.4	<1.4	**14**
	7/22/2022 Dup	<1.0	11	--	--	--	--	<0.27	81	<1.4	<1.4	<1.4	**15**
	9/9/2022	<1.0	10	--	--	--	--	<0.14	16	0.21 J	<0.70	<0.70	1.4
	9/9/2022 Dup	<1.0	<2.0	--	--	--	--	<0.14	16	0.21 J	<0.70	<0.70	1.5
	5/22/2023	<1.0	2.4	--	--	--	--	<0.14	65	0.23 J	<0.69	<0.69	**7.7**
	7/17/2023	<1.0	16	--	--	--	--	<0.20	89	0.20 J	<1.0	<1.0	**13**
	7/17/2023 Dup	<1.0	2.3	--	--	--	--	<0.50	100	<2.5	<2.5	<2.5	**13**
IBM-49AMB	9/21/2019	<1.0	<2.0	--	--	--	--	<0.096	1.1	0.29 J	<0.68	0.21 J	0.71
	2/15/2020	<1.0	<2.0	--	--	--	--	<0.093	0.83	<0.66	<0.66	<0.66	0.44 J
	11/18/2020	<1.0	<2.0	--	--	--	--	<0.14	0.42 J	0.31 J	<0.73	<0.73	<0.73
	1/21/2021	<1.0	<2.0	--	--	--	--	<0.15	0.68 J	<0.74	<0.74	<0.74	0.56 J

		EPA Method 25C	EPA Method 3C/ASTM D1946					EPA Method TO-15					
Sample Location	Sample Event Date	Total Gaseous Nonmethane Organics as Methane	Methane	Oxygen + Argon*	Nitrogen	Carbon Monoxide	Carbon Dioxide	Trichloroethene	Toluene	Trichlorofluoro-methane	Trichlorotrifluoroethane	Tetrachloroethene	Benzene
		ppmv	ppmv	(%, v/v)	(%, v/v)	(%, v/v)	(%, v/v)	ppbv	ppbv	ppbv	ppbv	ppbv	ppbv
	7/8/2021	<1.0	<2.0	--	--	--	--	<0.14	2.2	0.30 J	<0.72	0.32 J	0.62 J
	7/8/2021 Dup	<1.0	<2.0	--	--	--	--	<0.15	0.31 J	0.31 J	<0.74	<0.74	0.19 J
	1/18/2022	<1.0	14	--	--	--	--	<0.16	0.58 J	0.24 J	<0.81	<0.81	0.32 J
	7/8/2022	<1.0	10	--	--	--	--	<0.38	0.27 J	0.18 J	<0.38	<0.38	0.10 J
	6/13/2023	<1.0	2.1	--	--	--	--	<0.50	0.31 J	0.21 J	<0.50	<0.50	0.12 J
	12/8/2023	<1.0	2.3	--	--	--	--	<0.50	1.2	0.25 J	<0.50	<0.50	0.46 J
IBM-50	11/25/2019	<1.0	<2.0	21	79	<0.05	0.35	**3.6**	1.3	0.31 J	<0.87	0.68 J	0.49 J
	11/25/2019 Dup	<1.0	<2.0	22	78	<0.05	0.19	0.55 J	0.81	0.25 J	<0.70	0.43 J	0.35 J
	8/13/2020	<1.0	<2.0	--	--	--	--	<0.14	6.7	0.28 J	<0.72	0.35 J	**2.2**
	8/13/2020 Dup	<1.0	<2.0	--	--	--	--	<0.15	5.0	0.28 J	<0.74	<0.74	**2.6**

Notes:
(1) Results compared to Indoor Air Threshold Levels (IATLs) from the CDM Federal Programs Corporation, Subsurface Gas Contingency Plan, Waste Disposal, Inc. (July 1997).
(2) Results compared to Soil Gas Performance Standards from the EPA, Amended Record of Decision, Waste Disposal, Inc. June 2002. Results in shaded cells with bold font show concentrations that exceeded the IATLs or Soil Gas Performance Standards.
ppmv= Parts per million by volume
ppbv = Parts per billion by volume (%v/v) = Percent by volume
< = Concentration of the constituent was not detected above the laboratory's reporting limit. AMB = Ambient air sample
Laboratory Data Qualifiers
J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated. S05 - Analyzed beyond holding time.

Appendix D: Applicable or Relevant and Appropriate Requirements Assessment

Section 121 (d)(2)(A) of Comprehensive Environmental Response, Compensation, and Liability Act specifies that Superfund remedial actions must meet any Federal standards, requirements, criteria, or limitations that are determined to be legally applicable or relevant and appropriate requirements (ARARs). ARARs are those standards, criteria, or limitations promulgated under Federal or State law that specifically address a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance at a Comprehensive Environmental Response, Compensation, and Liability Act Site.

Changes (if any) in ARARs are evaluated to determine if the changes affect the protectiveness of the remedy. Each ARAR and any change to the applicable standard or criterion are discussed below.

Cleanup levels for indoor air are toxicity-based, not ARAR-based, and are evaluated in the Toxicity Analysis (Appendix F).

Federal and State laws and regulations that have been promulgated or changed since the 2002 Amended ROD are described in Table D-1. There have been no revisions to laws or regulations that affect the protectiveness of the remedy.

The following action- or location-specific ARARs have not changed in the past five years, and therefore do not affect protectiveness:

- Toxic Substances Control Act, 15 USC §§2601-2629
- Clean Water Act (CWA), 33 USC, CH. 26: §1251-1387
- RCRA, Public Law No. 94-580, 90 Stat. 2795: 42 U.S.C. §6901, et seq.
- National Emission Standards for Hazardous Air Pollutants (NESHAPS), 40 CFR Part 61
- Water Quality Monitoring Requirements for Permitted Facilities, 22 CCR §§66264.95, 66264.97, 66264.98, 66264.99
- Transportable and Fixed Treatment Unit, 22 CCR §67450.3
- Gas Monitoring and Control during Closure and Post Closure, 27 CCR §20921
- Post Closure Land Use, 27 CCR §21190
- SWRCB - Monitoring Points and the Point of Compliance, 27 CCR §§20405

- Water Quality Monitoring and Response Programs for Solid Waste Management Units, 27 CCR 20415-20430
- Solid Waste Management Act of 1972, Gas Control 27 CCR §20919
- Monitoring during Closure and Post-closure, 27 CCR §20923
- Perimeter Monitoring Network, 27 CCR §20925
- Structure Monitoring, 27 CCR §20931
- Monitored Parameters, 27 CCR §20932
- Reporting and Control of Excessive Gas Concentrations, 27 CCR §20937
- Dust Control for Landfill and Disposal Sites, 27 CCR §20800
- Drainage and Erosion Control, 27 CCR §21150
- Grading of Fill Surface at Landfill and Disposal Sites, 27 CCR §20650
- Security at Closed Sites, 27 CCR §21135
- CIWMB - Monitoring Frequency, 27 CCR §20933
- Vadose Zone Monitoring, 27 CCR §20415(d)
- Post Closure Maintenance, 27 CCR §21180
- SCAQMD Regulation IX, X (adopting Federal standards)
- Porter-Cologne Water Quality Control Act

TableD-1. Summary of ARAR Changes for Site in the Past Five Years

Requirement and Citation	Document	Description	Effect on Protectiveness	Comments	Recent Amendment Date
Clean Air Act (CAA), 42 USC §7401, et seq.	2002 Amended ROD	Establish Ambient Air Quality Standards for ambient air to protect public health and welfare. Identifies six pollutants.	Changes do not affect protectiveness.	The Act was amended to include seven new sections for clean heavy-duty vehicles grants and rebates, grants to reduce air pollution at ports, greenhouse gas reduction funds, low emissions electricity programs, methane emissions reduction program, climate pollution reduction grants, and environmental and climate justice block grants.	August 16, 2022

Requirement and Citation	Document	Description	Effect on Protectiveness	Comments	Recent Amendment Date
New Source Performance Standards (NSPSs), 40 CFR Part 60	2002 Amended ROD	Establishes standards for new stationary sources of air emissions to ensure that they are designed, equipped, operated, and maintained to reduce emissions to a minimum. The emission control technology on which the NSPSs are based is the best-demonstrated technology.	Changes do not affect protectiveness.	EPA amended the regulations that govern the process and timelines for state and Federal plans to implement emission guidelines under the Clean Air Act's New Source Performance Standards for existing sources.	November 17, 2023

Toxic Substances Control Act, 40 CFR §§761.50--761.79	2002 Amended ROD	Establishes means for storage and disposal of material contaminated with polychlorinated biphenyls of concentrations of 50 parts per million or greater.	Changes do not affect protectiveness.	The EPA expanded the extraction and determination methods for characterization of polychlorinated biphenyls wastes. The EPA amended the performance-based disposal option for polychlorinated biphenyls waste, removed the provision to allow polychlorinated biphenyls waste to be disposed as roadbed material, and added flexibility for cleanup and disposal of wastes generated by spills during emergency situations.	August 29, 2023

Requirement and Citation	Document	Description	Effect on Protectiveness	Comments	Recent Amendment Date
National Pollution Discharge Elimination System (NPDES), implemented by State Water Resources Control Board Statewide General Permits re Stormwater Discharges, 40 CFR PART 122	2002 Amended ROD	Requirements for certain industrial and construction activities to ensure stormwater discharges do not contribute to a violation of surface water quality standards.	Changes do not affect protectiveness.	The rule updates the regulations for better alignment with the Clean Water Act, add clarification and consistency to elements of section 401 certification, and support an efficient 401 certification process.	September 27, 2023

Appendix E: Institutional Control Assessment

Institutional controls have been applied to eighteen properties and consist of Environmental Restrictive Covenants (covenants) to restrict land and water uses and provide notice to prospective purchasers or other users about the status and condition of the Site. The covenants include extensive land use restrictions intended to prevent human exposure to harmful waste materials and to protect the integrity of the completed remedy. Under the covenants, owners must maintain engineered capping systems and controls for any new structures or buildings that may require city building permits, as specified by EPA. Owners may not use, or allow others to use the property in a manner that may interfere with or adversely affect the implementation, integrity, or protectiveness of response actions required by EPA for the selected remedy. Under EPA oversight, the Waste Disposal Inc., Group implements an Institutional Controls Monitoring and Enforcement Work Plan, which consists of formal site inspections and an internet-based monitoring program. Project Navigator, Ltd. completes a parcel-specific institutional control checklist on a yearly basis. The checklist requires review of the site controls including signage, remedy integrity, vegetation, the liquids recovery system, drainage, gas controls, monitoring points, and regulations. A third-party company, Terradex, monitors land usage on behalf of the Waste Disposal Inc., Group through an automated electronic process. Terradex's system monitors for excavations, building permits, zoning action and development permits, ownership change, properties for sale, environmental release, architectural and construction bids, and sensitive use.

During the review period, several unauthorized ground disturbance activities occurred at the Site. During a routine inspection on May 26, 2021, Project Navigator, Ltd. and the Army Corps of Engineers observed an unauthorized excavation by the developer of the adjacent property, Overton Moore Properties. The developer's subcontractor damaged a 2-foot by 90-foot area of the RCRA Subtitle D cover. Project Navigator, Ltd. immediately notified the Waste Disposal Inc., Group and the EPA. On December 16, 2022, Waste Disposal Inc., Group observed an unauthorized ten-inch borehole. On February 10, 2023, a contractor of the owner of parcel 22 installed three unauthorized borings for an electrical upgrade. For each instance of unauthorized disturbances, CenterPoint Properties submitted a work plan for EPA approval prior to completing repairs.

Appendix F. Toxicity Assessment

Prior to the amended ROD, EPA approved Indoor Air Threshold Levels that Waste Disposal Inc., Group submitted in the *Subsurface Gas Contingency Plan* (Table F-1). The Indoor Air Threshold Levels were based on the EPA preliminary remediation goals for ambient air from 1997. EPA's Integrated Risk Information System (IRIS) updates toxicity values used by EPA in risk assessment when newer scientific information becomes available, and the most recent update available used for this analysis was the November 2023 update.

Changes have occurred to some regional screening levels since the 2002 Amended ROD (Table F-1). Changes for nine contaminants, 1,2-dichloroethane, 1,2-dichloropropane, 1,2-dibromoethane, carbon tetrachloride, benzene, chloroform, 1,2-dichloropropane, carbon tetrachloride, benzene, chloroform, and tetrachloroethene fall within EPA's generally acceptable risk range of 1×10^{-4} to 1×10^{-6} for cancer derived regional screening levels or less than the regional screening level for noncancer-derived regional screening levels, so the changes do not affect protectiveness. The Indoor Air Threshold Levels for ethylbenzene and xylenes are higher than the regional screening levels and do not fall within the acceptable risk range. Additionally, two of the chemicals of concern, 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene, do not have established Indoor Air Threshold Levels but do have established regional screening levels. Since remedy completion, ethylbenzene, xylenes, 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene have not been detected above Soil Gas Performance Standards in Compliance and Non-Compliance vapor wells and are no longer monitored in vapor wells or indoor air.

Table F-1. Summary of Commercial Indoor Air Toxicity

Chemical	Indoor Air Threshold Levels		2023 Industrial Air RSL* c = cancer n = noncancer		RSLs More or Less Stringent?
	(ppbv)	(µg/m³)	(ppbv)	(µg/m³)	
1,1,1-Trichloroethane	368	2007	4,034.7	22,000 (n)	Less stringent
1,1-Dichloroethene	53	210	222	880 (n)	Less stringent
1,2,4 -Trimethylbenzene	-	-	53	260 (n)	More stringent
1,2-Dichloroethane	3.6	15	0.12	0.47 (c)	More stringent
1,2-Dichloroethene (cis)	18.6	73.7	45.4	180 (n)	Less stringent
1,2-Dichloroethene (trans)	36.8	146	45.4	180 (n)	Less stringent
1,2-Dichloropropane	1.86	8.59	0.71	3.3 (c)	More stringent
1,3,5 Trimethylbenzene	-	-	53	260 (n)	More stringent
Benzene	2.0	6.4	0.5	1.6 (c)	More stringent

Chemical	Indoor Air Threshold Levels		2023 Industrial Air RSL* c = cancer n = noncancer		RSLs More or Less Stringent?
	(ppbv)	(µg/m^3)	(ppbv)	(µg/m^3)	
Carbon Tetrachloride	0.68	4.3	0.32	2.0 (c)	More stringent
Chloroform	3.4	17	0.11	0.53 (c)	More stringent
Ethylbenzene	490	2126	1.1	4.9 (c)	More stringent
Dibromoethane	0.06	0.5	0.003	0.02 (c)	More stringent
Methane	1.25%	-	-	-	Not applicable
Tetrachloroethene	10.6	71.8	6.9	47 (c)	More stringent
Toluene	212	798.4	5841.5	22,000 (n)	Less stringent
Trichloroethene	0.56	3.0	0.56	3.0 (c)	No change
Vinyl Chloride	0.25	0.64	1.1	2.8 (c)	Less stringent
Xylenes	142.8	619.7	101	440 (n)	More stringent

Notes:
c = cancer, n = noncancer
RSL = Regional Screening Level
ppbv = parts per billion by volume
µg/m^3 = micrograms per liter
*EPA Region 9 Ambient Air Preliminary Remediation Goals with an exposure assumption of 250 days per year for 25 years

Appendix G: Public Notice and Press Release

2 A NEWS | SAN GABRIEL VALLEY TRIBUNE/PASADENA STAR-NEWS/WHITTIER DAILY NEWS FRIDAY, JANUARY 26, 2024

Good morning! **START YOUR DAY HERE**

Cool fact: Originally intended as a short-term tech demo, NASA's small Mars helicopter Ingenuity logged 72 flights over three years.

Star report

David Lee Roth erupts at Van Halen bandmate

Not content to go off on Sammy Hagar or brag about how much he spends on pot, former Van Halen singer David Roth recently aimed his sights squarely at the son of his late former bandmate Eddie Van Halen.

Roth

In the latest episode of his podcast, which was posted to YouTube on Wednesday, Roth went off on Wolfgang Van Halen, suggesting that nepotism played a part in his becoming a bassist for Van Halen in 2007, and that he complained that he wasn't getting enough attention from the singer when they performed together.

"This (expletive) kid, he's complaining the entire tour like I'm not paying enough attention to him on stage," Roth says. "I'm giving him the best. Everything I've got in front of 20-, 30,000 people at a clip, and he's complaining to everybody around me, the business manager, the security guy, the clothing lady, 'Dave's not paying enough attention to me,'" he says.

In a 2022 interview, Wolfgang Van Halen implied that Roth was the main reason an attempt at a tribute concert for his father didn't happen. "You know, I don't like to speak negatively about people, but there are some people that make it very difficult to do anything when it comes to Van Halen," he said.

Ozzy Osbourne planning to do two final concerts

After announcing his touring days were over, Ozzy Osbourne will return to the stage for a few final performances.

Osbourne

While the Black Sabbath legend has been dealing with health issues in recent years, his wife and manager, Sharon Osbourne, says the rocker is planning two final concerts in Birmingham, England, as a send-off to fans.

"He won't tour again but we are planning on doing two more shows to say goodbye as he feels like, 'I have never said goodbye to my fans and I want to say goodbye properly,'" Osbourne said, according to Rolling Stone UK.

Smiths guitarist to Trump: Stop using our music

The Smiths have become the latest musical act sowing discord with Donald Trump for using their songs without permission on the campaign trail.

Guitarist and songwriter Johnny Marr was apparently taken aback upon seeing a video clip of the former president playing the English band's song "Please, Please, Please, Let Me Get What I Want" at a 2023 rally in Rapid City, South Dakota.

"Ahh ... right ... OK. I never in a million years would've thought this could come to pass," the British rocker wrote on social media Tuesday. "Consider this s--- shut right down right now."

The Smiths join a growing list of music stars, including Steven Tyler, Rihanna and Linkin Park, who have issued cease-and-desist directives to the Trump campaign.

— From wire reports

Hot shot

HANS GUTKNECHT STAFF PHOTOGRAPHER

Better weather on its way: A man uses an umbrella in the rain as he walks through the Walmart parking lot in Panorama City Monday. The pendulum is swinging to a warmer, dry weekend.

Today in History

1915

President Woodrow Wilson signed the Rocky Mountain National Park Act, which created America's 10th national park.

1962

The United States launched Ranger 3 to land scientific instruments on the moon. (The probe ended up missing its target by more than 22,000 miles.)

2005

A U.S. Marine helicopter crashed in western Iraq, killing 30 Marines and a Navy medic aboard.

2020

NBA legend Kobe Bryant, his 13-year-old daughter, Gianna, and seven others were killed when their helicopter plunged into a steep hillside in dense morning fog in Southern California.

Lottery

WINNING NUMBERS

Daily 3 Afternoon: 8, 9, 2
Daily 3 Evening: 7, 5, 6
Daily 4: 8, 3, 4, 8
Fantasy 5: 16, 17, 22, 32, 37

DAILY DERBY

1st: 3, Hot Shot
2nd: 7, Eureka
3rd: 12, Lucky Charms
Race time: 1:41.88

SUPER LOTTO PLUS

Wednesday's drawing: 6, 19, 36, 41, 44
Mega number: 11
Wednesday's estimated jackpot: $18 million

MEGA MILLIONS

Tuesday's drawing: 21, 28, 58, 69, 70
Mega Number: 20
Today's estimated jackpot: $285 million

POWERBALL

Wednesday's drawing: 1, 5, 32, 50, 64
Powerball: 8
Saturday's estimated jackpot: $164 million

Birthdays

Cartoonist Jules Feiffer is 95.
Sportscaster-actor Bob Uecker is 89.
Actor Scott Glenn is 85.
Activist Angela Davis is 80.
Actor Richard Portnow is 77.
Rock musician Corky Laing is 76.
Producer-director Mimi Leder is 72.
Actor-comedian Ellen DeGeneres is 66.
Hockey Hall of Famer Wayne Gretzky is 63.
Musician Andrew Ridgeley is 61.
Actor Paul Johansson is 60.
Director Lenny Abrahamson is 58.
Actor Bryan Callen is 57.
Gospel singer Kirk Franklin is 54.
Actor Nate Mooney is 52.
Actor Jennifer Crystal is 51.
Actor Sarah Rue is 46.
Actor Colin O'Donoghue is 43.

EPA REVIEWING REMEDY FOR THE WASTE DISPOSAL INC. SUPERFUND SITE

The U.S. Environmental Protection Agency (EPA) has started its review of the remedy—the plan to address contamination—for the Waste Disposal, Inc. Superfund site (Santa Fe Springs, Calif.) This review is done to see if the plan is working as EPA intended.

Federal law requires EPA to review a Superfund remedy **every five years** if:

- a cleanup takes more than five years to complete; or
- hazardous waste is still on-site

What is included in the review?

- An inspection of the site and technologies used for the cleanup
- A review of site data and maintenance records
- A review of any new laws or requirements that could affect the cleanup

How can I learn more?

If you would like to learn more about the site, please contact:

- Russel Mechem, EPA Project Manager: (415) 972-3192, Mechem.Russell@epa.gov

Visit EPA's webpage at epa.gov/superfund/wastedisposal for more information.

EPA has also set up an information repository with paper copies of the site's Administrative Record:

- Santa Fe Springs City Library
  11700 Telegraph Road
  Santa Fe Springs, CA 90670
  Please contact the library for current hours of operation: 562-868-7738

EPA will complete the Five-Year Review report no later than September 30, 2024. When complete, EPA will post a copy on the webpage and send a copy to the library listed above.

Background

The facility that polluted the site was built before 1924 to store oil. It contains a concrete-lined pit that was used to hold a variety of chemical liquids and solid wastes. The Superfund cleanup of the site was completed in 2006. The last Five-Year Review found the cleanup plan was working as intended. The plan includes systems for managing and cleaning water run off. It also limits the use of surrounding properties (for example, no homes can be built).

CNSB #3775994

EPA to Review Effectiveness of Cleanups at 14 Privately-Owned California Superfund Sites in 2024

February 8, 2024

Contact Information
John Senn (senn.john@epa.gov)
415-972-3999

SAN FRANCISCO – The U.S. Environmental Protection Agency (EPA) will perform comprehensive five-year reviews this year of 14 National Priorities List Superfund privately-owned sites in California where cleanup remedies have been implemented. The sites will undergo a legally required review to ensure that previous remediation efforts continue to protect public health and the environment. Once the five-year reviews are complete, the findings will be posted to each Superfund site's web page.

"Reviewing the cleanup work that has occurred at these Superfund sites across California is critical to ensuring that public health and the environment are protected," **said EPA Pacific Southwest Superfund and Emergency Management Division Director Mike Montgomery.** "These reviews also serve as important ways to deliver information to the public about Superfund sites where pollution remains and additional work could be needed."

The California privately-owned Superfund sites where EPA will conduct five-year reviews in 2024 are:

- Advanced Micro Devices (Building 915) <https://epa.gov/superfund/advancedmicrodevices915> in Sunnyvale
- Fairchild Semiconductor Corporation South San Jose Plant <https://epa.gov/superfund/fairchildsemiconductorsouth>
- Industrial Waste Processing <https://epa.gov/superfund/industrialwasteprocessing> in Fresno

###

Contact Us <https://epa.gov/newsreleases/forms/contact-us> to ask a question, provide feedback, or report a problem.

LAST UPDATED ON FEBRUARY 9, 2024

Discover.

Accessibility Statement
<https://epa.gov/accessibility/epa-accessibility-statement>

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<https://epa.gov/planandbudget>

Contracting
<https://epa.gov/contracts>

EPA www Web Snapshot
<https://epa.gov/utilities/wwwepagov-snapshots>

Grants
<https://epa.gov/grants>

No FEAR Act Data
<https://epa.gov/ocr/whistleblower-protections-epa-and-how-they-relate-non-disclosure-agreements-signed-epa>

Plain Writing
<https://epa.gov/web-policies-and-procedures/plain-writing>

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Follow.

- Middlefield-Ellis-Whisman (MEW) Study Area <https://epa.gov/superfund/mew-study-area> in Mountain View, which comprises three Superfund sites: the Fairchild Semiconductor Corp.-Mountain View site, the Raytheon Company site, and the Intel Corp.-Mountain View site as well as portions of the Naval Air Station Moffett Field Superfund site.
- Palos Verdes Shelf portion of the Montrose Chemical Corp. site <https://epa.gov/superfund/montrose> in Torrance
- Teledyne <https://epa.gov/superfund/teledyne> and Spectra-Physics <https://epa.gov/superfund/spectra-physics> sites in Mountain View (joint cleanup and review)
- Triple Site <https://epa.gov/superfund/triplesite> in Sunnyvale, which comprises the following Superfund sites: the Advanced Micro Devices 901-902 Thompson Place site, the TRW Microwave site, and the Signetics site. The Signetics site is not part of the five-year review because it is not on the National Priorities List.
- Valley Wood Preserving, Inc. <https://epa.gov/superfund/valleywood> in Turlock
- Waste Disposal, Inc. <https://epa.gov/superfund/wastedisposal> in Santa Fe Springs

Background

Throughout the process of designing and constructing a cleanup at a hazardous waste site, EPA's primary goal is to make sure the remedy will be protective of public health and the environment. At many sites, where the remedy has been constructed, EPA continues to ensure it remains protective by requiring reviews of cleanups every five years. It is important for EPA to regularly check on these sites to ensure the remedy is working properly. These reviews identify issues (if any) that may affect the protectiveness of the constructed remedy and, if necessary, recommend action(s) necessary to address them.

There are many phases of the Superfund cleanup process including considering future use and redevelopment at sites and conducting post cleanup monitoring of sites. EPA must ensure the remedy is protective of public health and the environment and any redevelopment will uphold the protectiveness of the remedy into the future.

The Superfund program, a federal program established by Congress in 1980, investigates and cleans up the most complex, uncontrolled or abandoned hazardous waste sites in the country and endeavors to facilitate activities to return them to productive use. In total, there are 135 Superfund sites across the EPA's Pacific Southwest Region.

Learn more about Superfund and other cleanup sites in the Pacific Southwest <https://epa.gov/aboutepa/epa-region-9-pacific-southwest>.

Learn more about EPA's Superfund program <https://epa.gov/superfund>.

Learn more about EPA's Pacific Southwest Region <https://epa.gov/pacific-southwest-media-center>. Connect with us on Facebook <https://www.facebook.com/eparegion9> and on X <https://twitter.com/eparegion9>.

Appendix H: Interview Forms

Five-Year Review Interview Record				
Site:	Waste Disposal, Inc., Santa Fe Springs, CA		**EPA ID No:**	CAD980884357
Interview Questionnaire Date: 2/22/24				
(Fill in the components below, one line per person if multiple persons are providing responses)				
Name	**Organization**	**Title**	**Telephone**	**Email**
Michael J. Skinner	Michael J. Skinner Consulting, LLC	PRP PC	609-335-5800	mjs@superfundmanagement.com
				

(Record responses to the questions below)

1) Please describe your role in the project (e.g., PRP, PRP Project Coordinator, PRP consultant, property owner, groundwater user, drinking water provider, impacted adjacent property, consultant)? Please summarize your key areas of focus.

I am the PRP Project Coordinator and as such oversee all phases of site management including but not limited to, PRP Group (WDIG) management, O&M activities and reporting, redevelopment coordination, agency interactions, CD compliance, etc. Additionally, I am the Trustee for the WDIG Site Trust that is responsible for monitoring and enforcing Environmental Restriction Covenants (ERC) that are enumerated in each property owner settlement agreement. The Trustee is also responsible for maintaining the Trust's Qualified Settlement Fund so that it has sufficient funds to adequately fund all work required for ERC compliance and meeting Trust obligations.

2) How do you interact with the Superfund Project Manager and team regarding site activities or concerns with the cleanup?

First, it is important to note that the cleanup is completed, and the site is in O&M. Regular communications with the EPA RPM and other agency team members are generally by emails but also by "Team" meetings as needed. Frequency of interactions are driven by site project needs and obligations of both the RPM and me. We tend to work as one team, respecting each member's responsibilities and Superfund compliance obligations. The leaders of the full compliance team are the RPM and me.

3) What is your overall impression of the remedial action? Is it successful?

The remedial action has been in compliance and recognized by the EPA in all previous FYRs as protective of human health and the environment. Additionally, the containment remedy that was put into place is performing as intended and designed; and, it is highly effective with no issues as noted in the past 3 FYRs.

4) When you are reviewing the monitoring data, are there any trends that show contaminant levels decreasing or that site conditions are improving?

All monitoring data show site conditions are either stable or contaminant detections are declining. This consistent stability has been demonstrated for so many years that it is time to "right size" the monitoring effort. The only exception to these data are where the activities on the commercial properties are contributing to detections through the chemicals that are used in the private facilities.

Details of those data are provided by the O&M Project Manager (Raudel Sanchez) and in the Annual Reports.

5) Is the remedial action/cleanup functioning as expected and how well is it performing?

The remedy is definitely performing as designed and implemented. Details are provided by the Project Manager (Raudel Sanchez). In fact, all monitoring for the various systems show they are stable, and the frequency of the monitoring program can be safely modified or reduced.

6) Is there an ongoing, regular, or continuous O&M presence? If so, please describe staff and specific O&M activities and priorities. If there is not a continuous on-site presence, describe staff and frequency of site inspections and activities (e.g., regular, episodic, periodic, etc.).

This is not a site that requires full time technicians to maintain the remedial systems. Compliance obligations and frequency of scheduled inspections are all provided in the O&M manual. In addition to scheduled activities that occur on a fairly frequent basis, other site visits are provided by Project Navigator on an "as needed" basis, e.g. during the rainy season. Additional details provided by Project Manager (Raudel Sanchez).

7) Have there been any significant changes in the O&M requirements, maintenance schedules, or sampling routines in the last five years? Please describe changes and impacts.

There have not been any changes in O&M requirements over the past five years. Since the site is scheduled to undergo redevelopment there will be some modifications put into place so that site monitoring does not interfere with, or is inconsistent with redevelopment construction; however, there are guidance recommendations to be followed during that period. These plans are under review by the EPA.

8) Have there been unexpected O&M difficulties at the site in the last five years (e.g., fence damage, vandalism, storm damage, fires, floods, changes in groundwater levels)? If so, please give details.

There have been some instances that were unexpected during the past five years; however, they were addressed timely without impact to the site remedy or remedial systems. Details of those incidences are provided by the Project Manager (Raudel Sanchez).

9) Have there been opportunities to optimize O&M or sampling efforts? Please describe changes and desired results or improved efficiency (e.g., better warning system for groundwater wells, repair/replace outdated equipment).

The WDIG Team has sent several requests to optimize monitoring efforts, which are outlined in Question 11. There currently is no need to replace equipment.

10) Are you aware of any changes in Federal/State/County/Local laws, regulations, or cleanup standards that may impact the recovery of the existing contamination or how the cleanup will be conducted?

We are not aware of any regulation changes that will impact the continuing O&M at the site. As mentioned, this site is 20 yrs beyond "cleanup" and in fact, is a containment remedy and has shown through aggressive monitoring, that the remedy is effective and not compromised.

11) Do you have any comments, suggestions, or recommendations regarding the project?

The site remedy continues to demonstrate that it is effective and remains protective of human health and the environment. The future use of the site is redevelopment to the benefit of the local economy and our primary recommendation is to right size the monitoring program to be consistent with the remedial efficacy and future use.

The WDIG worked with EPA evaluating the need to continue liquids removal and those discussions were followed by a recommendation in a memo date 4/22/2019. Additionally, an updated memo for suspension/revision of some monitoring during redevelopment construction was submitted on 9/30/2022. The past 4 or 5 Annual Reports also contained recommendations for modifying monitoring frequency based on historical data.

The WDIG would like to continue discussions with EPA of these proposed opportunities to optimize the O&M efforts at the site.

Additional Site-Specific Questions

[If needed]

Five-Year Review Interview Record				
Site:	Waste Disposal, Inc., Santa Fe Springs, CA		**EPA ID No:**	CAD980884357
Interview Questionnaire Date:				
(Fill in the components below, one line per person if multiple persons are providing responses)				
Name	**Organization**	**Title**	**Telephone**	**Email**
Raudel Sanchez, Ph.D.	Project Navigator, Ltd.	Sr. Project Manager	310-994-2415	rsanchez@projectnavigator.com

(Record responses to the questions below)

1) Please describe your role in the project (e.g., PRP, PRP project coordinator, PRP consultant, property owner, tenant, groundwater user, drinking water provider, impacted adjacent property, consultant)?

My role in the project is OM&M Project Manager/OM&M QA Officer for the WDIG and my duties include the following task outlined in the OMMP.

- *Understand requirements of the AROD, CD, SOW, RAWP, and OMMP.*
- *Provides and/or interprets drawings or other engineering information for the WDIG.*
- *Reviews and evaluates OM&M contractor's suggestions for modifications in engineering design plans. Reports the results of the review or evaluation, and suggestions and modifications to the WDIG.*
- *Implements changes to engineering drawings and other engineering information as directed by the WDIG Coordinator or EPA RPM.*
- *Prepares, reviews, and submits reports/memos required for this project, ensuring the technical quality of reports and submission are acceptable and that procedures used to develop conclusions and recommendations are appropriate and correctly applied.*
- *Assures that the statistical analysis requirements for evaluating monitoring data are performed by qualitied personnel who demonstrate experience in statistical analysis procedures includes the use of DUMPStat.*
- *Assures that performance standards will be attained, and OM&M activities meet the OMMP requirements.*
- *Has authority to stop OM&M activities.*
- *Understands the requirements of agreements/contracts with contracts, subcontractors, and material equipment and instrumentation suppliers/vendors used for OM&M activities.*
- *Administers and verifies compliance with QAPP and SAP.*
- *Trains support personnel, if necessary, for OM&M oversight activities.*
- *Monitors implementation of corrective actions and modifications.*
- *Verifies that systems or component test, equipment and systems start-ups, are conducted in the presence of appropriate personnel, and documenting and maintaining records.*
- *Accompanies visiting inspectors representing public, regulatory, or other agencies having jurisdiction over the project. Reports results of these inspections to the WDIG and documents and maintains records.*
- *PNL's support of the Trust ERC Compliance.*
- *Technical reviewer of all redevelopment engineering plans and reports.*

2) How do you interact with the Superfund Project Manager, or EPA project team (including USACE inspector), regarding site activities or concerns with the cleanup?

My interactions with the EPA Superfund Project Manager and USACE Inspector are via emails, phones calls and Microsoft Teams Meetings. I conduct monthly inspections with the USACE Inspector to ensure that the project is meeting the requirements outlined in the OMMP.

3) What is your overall impression of the remedial action? Has it been successful?

My overall impression of the remedial actions is that it has been successful in the remedy being protective of human health and the environment. My professional judgement is based on in-business air, groundwater, and soil-gas data collected since the remedy was completed in 2005.

4) When you are reviewing the monitoring data, are there any trends that show contaminant levels decreasing or that site conditions are improving?

Based on my review of the monitoring data (in-business air, groundwater, and soil-gas data) scatter plots and DUMPStat Analysis show that trends are either decreasing or stable. See WDI Annual Reports for further information on scatter plots and DUMPStat Analysis.

5) Is the cleanup functioning as expected and how well is it performing?

Based on my professional judgement the remedy is functioning as it was designed and is protective of human health and the environment. My professional judgement is based on the following:

- *Scatter plots and DUMPStat analysis show that monitoring data is either decreasing or stable.*
- *Annual cover survey shows that settlement is not occurring on the RCRA Subtitle C and D Equivalent Cover.*
- *Annual Cover Inspection shows that the RCRA Subtitle C and D Equivalent Cover is in good condition.*
- *Leachate collection data shows that the leachate monitoring/control system has reached an asymptotic value.*
- *The reservoir gas collection system was converted to passive mode in December 2007, because, as an active system, minimal levels of organic vapors were being extracted from the reservoir.*
- *In-business air monitoring results indicate that gas migration to in-business air locations is not occurring. The results indicate that most of the constituents analyzed are below the Indoor Air Threshold Levels (IATLs). Although benzene and TCE have been detected above their IATLs, the presents of these constituents are associated with tenants' activities based on sub-slab vapor probe data.*
- *Groundwater data has shown that site activities have not impacted groundwater.*

6) Is there a continuous O&M presence? If so, please describe staff and specific activities. If there is not a continuous on-site presence, describe staff and frequency of site inspections and activities (regular, episodic, as-needed, etc.).

There is a continuous O&M presence at the Site (typically once a week) and includes the following activities throughout the year.

- *In-business air and sub-slab vapor probe sampling*
- *Soil-gas sampling*
- *Groundwater sampling*
- *Reservoir gas sampling*
- *Monthly site inspection with USACE inspector*
- *Leachate Control System inspection and gauging*
- *Security, fence, landscaping, gas reservoir, RCRA Subtitle C and D Equivalent Cover Inspections*
- *General housekeeping and repairs*

7) Have there been any significant changes in the O&M requirements, maintenance schedules, or sampling routines in the last five years? Please describe changes and impacts.

No significant changes in the O&M requirements have been implemented in the last five years. Landscaping maintenance for the site has been transferred to the new owner, CenterPoint Properties.

8) Have there been unexpected O&M difficulties at the site in the last five years (e.g., fence damage, vandalism, storm damage, fires, floods, substantial changes in groundwater levels)? If so, please give details.

During the last five years the following items were reported at the site.

- *Damage to the RCRA Subtitle D Equivalent Cover by an off-site contractor that was allowed to enter the site by CenterPoint Property general contractor on May 26, 2021. CenterPoint Properties submitted a workplan for the repair to EPA. EPA reviewed and approved the workplan to repair the cover. On February 10, 2022, CenterPoint completed the minor cover repair with no issues. USACE and WDIG personnel provided oversight during the repair of the cover.*
- *On December 16, 2022 an unauthorize borehole was observed by WDIG personnel in the northeast portion of the site adjacent to the stray ball fence. The unauthorized borehole was 10 inches in diameter and 8 feet deep. CenterPoint Properties submitted a workplan to backfill the unauthorized borehole to the EPA. EPA reviewed and approved the workplan to backfill the unauthorize borehole. On April 6, 2023, CenterPoint Properties backfill the unauthorize borehole with WDIG and USACE personnel providing oversight. No issues or concerns were reported.*
- *On February 10, 2023 three unauthorized shallow borings were drilled by the contractor of the owner of parcel 22 for an electrical upgrade. The WDIG was not aware of the three unauthorized shallow borings at parcel 22 and submitted a workplan to the EPA to backfill the unauthorize shallow boreholes. EPA reviewed and approved the workplan to backfill the three unauthorize shallow borings. The backfill of the three unauthorized shallow boreholes was completed on October 13, 2023. USACE and CenterPoint Properties personnel provided oversight during the backfilling activities. No issues or concerns were reported.*
- *A brush fire was reported on June 21, 2023 and no major damage was reported.*
- *Drought conditions have contributed to some groundwater monitoring wells doing dry.*
- *Vandalism has been reported throughout the last five years and has been addressed in a timely manner.*
- *Damage to the perimeter fence has been reported throughout the last five years and has been addressed in a timely manner.*

9) Have there been opportunities to optimize O&M or sampling efforts? Please describe changes and desired results or improved efficiency (e.g., better warning system for groundwater wells, repair/replace outdated equipment, use of automated instrumentation).

Monitoring data continues to show that site concentrations have decreased or are stable. To reflect these decreasing and stable trends, WDIG has submitted an optimized OM&M approach to the EPA. The WDIG submitted a technical memorandum, Updated Proposed Modifications to OM&M Program During Site Redevelopment Activities, dated September 30, 2022. This technical memorandum provides the WDIG recommendations for the OM&M Program.

10) Are you aware of any changes in Federal/State/County/Local laws, regulations, or performance standards that may impact the recovery of the existing contamination or how the cleanup will be conducted?

I am not aware of any changes in Federal/State/County/Local laws, regulations, or performance standards that may impact the recovery of the existing contamination or how the cleanup will be conducted.

11) Do you have any comments, suggestions, or recommendations regarding the remedial action ?

Site monitoring data shows that the remedy is performing as design and is protective of human health and the environment. My recommendations to optimize the OM&M program is outlined in the technical memorandum, Updated Proposed Modifications to OM&M Program During Site Redevelopment Activities, dated September 30, 2022.

Additional Site-Specific Questions
[If needed]

Five-Year Review Interview Record			
Site:	Waste Disposal, Inc., Santa Fe Springs, CA	**EPA ID No:**	CAD980884357

Interview Questionnaire

Date: February 23, 2024

(Fill in the components below, one line per person if multiple persons are providing responses)

Name	Organization	Title	Telephone	Email
Anthony C. Ward, P.G.	Roux Associates, Inc.	Vice President/Principal Geologist	310-879-4927	tward@rouxinc.com

(Record responses to the questions below)

1) Please describe your role in the project (e.g., property owner, groundwater user, drinking water provider, impacted adjacent property, consultant, redeveloper)? Please summarize your role as it may relate to beneficial reuse.

I am a Vice President / Principal Geologist with Roux Associates, Inc. (Roux). Roux is an environmental consulting firm providing environmental consulting and environmental engineering support to Greenleaf Business Center, LLC (GBC) leading up to and following GBC's purchase and planned redevelopment of approximately 25 acres of the WDI Superfund Site ("Site") which will be the project's beneficial use.

2) What is your overall impression of the cleanup project?

With the Site going into its fourth 5-Year Review with a mature Remedial Action, the cleanup project has been, and is presently, very effective in achieving its stated remedial goals and making it safe for GBC's industrial development project uses.

3) What is the current status of the redevelopment? Please discuss the proposed redevelopment and anticipated impacts to the site and completed remedial action.

Redevelopment has not yet commenced. GBC's redevelopment project California Environmental Quality Act (CEQA) review entitlements were approved by the City of Santa Fe Springs in March 2020. GBC is currently finalizing the plan check and permitting processes with the City of Santa Fe Springs and County of Los Angeles and will thereafter commence construction activities.

All redevelopment-related and environmental/geotechnical-based technical documents for the "pre-construction" (also referred to as the "surcharge" phase) of the redevelopment have been submitted to and approved by EPA, with support from US Army Corps of Engineers and input from the Department of Toxic Substances Control (DTSC). These documents include:

1. *Stormwater Pollution Prevention Plan (SWPPP)*
2. *Cover Removal and Replacement Plan (CRRP)*
3. *Air Monitoring Plan (AMP)*
4. *Monitoring Point Destruction, Protection, and Relocation Plan*
5. *Geotechnical Design Report (GDR)*
6. *Health and Safety Plan (HASP)*
7. *Surcharge Import-Export Material Handling Plan*
8. *Surcharge Grading Plan (SGP)*
9. *Soil Management Plan (SMP)*
10. *Surcharge Program Plan*

The documents above were prepared in advance of the Statement of Work (SOW). The SOW will form a part of, and an exhibit to, the Bona Fide Prospective Purchaser Agreement (BFPPA) between EPA and GBC which we anticipate will soon be approved by EPA and signed by both entities. Broadly, the SOW sets forth the procedures and requirements for protecting the WDI Site remedy as reflected in the Amended ROD related to redevelopment. Through the SOW, the BFPPA will require additional technical plans, design drawings, specifications, and other submittals to allow the "construction phase" of the redevelopment to commence and for subsequent development-related operation & maintenance of redevelopment features.

The redevelopment project plan includes construction of a 208,500 square foot industrial warehouse space with an adjacent parking lot that can support either 1,506 cars or 431 trailers. The building will be of tilt-wall concrete panel construction with 32-foot clear heights. The warehouse will be constructed on a speculative basis in hopes of attracting a long-term tenant to the space. Possible uses of the property include "last-mile" delivery, bulk storage of commercial goods and distribution, or fleet parking with a warehouse component. Construction of the new building, parking areas, and related amenities will impact the CERCLA Remedial Action that has been completed at the WDI Site based on the Amended ROD. The Work will include protective measures to prevent potential releases of, and exposures to, Site contaminants. These measures may include:

- *destruction, relocation, and/or protection of each monitoring point affected by the redevelopment;*
- *removal and replacement of large portions of the existing Resource Conservation and Recovery Act ("RCRA") capping systems;*
- *excavation and reconsolidation of waste materials within specified areas of the Site;*

- *installation of engineering controls and restoration of modified engineering capping systems to assure continuing containment of waste materials and soil vapor;*
- *installation of subsurface structural ground improvements for the building (e.g., rigid inclusions or similar);*
- *installation of a soil vapor intrusion mitigation system under buildings and their associated environmental monitoring systems;*
- *reconstruction of systems to manage storm water;*
- *re-deployment of Site monitoring systems; and*
- *security and Site control.*

Institutional controls, such as environmental restriction covenants, are also in place to ensure access to the Site for EPA, DTSC, Waste Disposal Inc. Group ("WDIG"), and designated representatives, while also preventing unauthorized construction and other activities that could adversely impact the completed Remedial Action.

4) Have any problems been encountered that would impact the protectiveness of the remedy?

We have not encountered any problems that would impact the protectiveness of the remedy.

5) Do you have any comments, suggestions, or recommendations regarding the cleanup?

Other than our planned close coordination with WDIG and EPA, and keeping the community and other stakeholders informed during redevelopment construction, we do not have any comments, suggestions, or recommendations regarding the cleanup.

6) Please describe your ongoing coordination with EPA, other stakeholders, and the community.

We are in regular, typically weekly, communication with EPA discussing technical plans, schedules, and related Site matters. We coordinate with WDIG on a regular basis in support of their ongoing operation and maintenance of the GBC portion of the WDI Site. We have also been in ongoing discussions with EPA, WDIG and DOJ regarding agreements (including, but not limited to, the BFPPA with the SOW), between EPA and GBC, prepared to enable to commencement of construction and operation of the redevelopment long term. We have also been in regular communication with the City of Santa Fe Springs and the County of Los Angeles regarding all required other approvals related to permits and/or CEQA requirements and entitlements for the planned redevelopment. In addition, we have been in periodic communication/coordination with the neighboring St. Paul High School. Finally, we have assisted in the preparation and submission of a Community Involvement Plan ("CIP") and a Community Impact Mitigation Plan ("CIMP"). In general, the CIP addresses the community involvement activities proposed by GBC related to redevelopment. The CIMP describes all activities to be performed by GBC to reduce, manage and mitigate the impacts from implementation of the redevelopment work, monitor community areas of impacts from redevelopment, and provide communication of validated monitoring data. The CIP and CIMP are presently under EPA review.

Additional Site-Specific Questions

[If needed]

Five-Year Review Interview Record				
Site:	Waste Disposal, Inc., Santa Fe Springs, CA		**EPA ID No:**	CAD980884357
Interview Questionnaire Date: 3/15/2024				
(Fill in the components below, one line per person if multiple persons are providing responses)				
Name	**Organization**	**Title**	**Telephone**	**Email**
Jessy Fierro	DTSC	Project Manager	818-717-6563	Jessy.Fierro@dtsc.ca.gov

(Record responses to the questions below)

1) Please describe DTSC's role at the site, both (a) historically during site investigations and remedial action and (b) in recent times during long-term operations, maintenance, and monitoring (OM&M)?
The Department of Toxic Substances Control (DTSC) Project Team has provided recommendations during the investigation and remediation phase, and provided concurrence of the Amended Record of Decision. During the OM&M phase, DTSC continues to provide feedback to maintain the integrity of the remediation elements and ensure state and federal guidelines are utilized to protect human health and the environment.

2) Please describe recent coordination between EPA and DTSC for this site within the last five years.
Recent coordination with EPA included activities associated with evaluating the OM&M activities and providing feedback on redevelopment plans.

3) Are you aware of any complaints, violations, or community concerns about the site in the last five years? Do you have any comments or suggestions on efforts by EPA or others to inform the community about post-construction and ongoing operations and maintenance activities related to the remedial action?
DTSC is not aware of complaints or public concerns related to the site in recent years. For the upcoming redevelopment, DTSC recommends informing the nearby community of the activities by mailing a brief work notice and posting the notice at the perimeter of the site.

4) What is your overall impression of the completed remedial action and ongoing operations, maintenance, and monitoring?
DTSC believes coordination with EPA has led to selecting appropriate remediation elements for the site. DTSC hopes to continue these efforts for future site activities to ensure they are protective of human health and the environment. DTSC appreciates EPA's coordination efforts.

Additional Site-Specific Questions

[If needed]

Appendix I: Site Inspection Report and Photos

Trip Report
Waste Disposal Inc. Superfund Site – Santa Fe Springs, California

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1. INTRODUCTION

a. Date of Visit: 06 March 2024
b. Location: Santa Fe Springs, CA
c. Purpose: A site visit was conducted to visually inspect and document the conditions of the remedy, the site, and the surrounding area for inclusion into the Five-Year Review Report.
d. Participants:

NAME	ORGANIZATION
Helen Sanchez	USACE-SPL, Project Engineer
Raudel Sanchez	Project Navigator, Ltd.
Chris Rose	Roux, Inc.

2. SUMMARY

A site visit was completed at the Waste Disposal Inc. Superfund Site in the City of Santa Fe Springs on 6 March 2024. The participants listed attended the Site. The weather was partly cloudy with heavy showers and in the 60s. The site visit lasted from approximately 11:00 to 2:30 p.m. which included a walk-through of the site, perimeter, leachate wells, bioventing wells, monitoring wells, settlement monuments, vapor probes, adjacent buildings, catch basin area, etc.

3. DISCUSSION

The inspection began at the site entrance located on Los Nietos Rd. The site has a wide network of bioventing wells, monitoring wells, leachate wells, settlement monuments, and vapor probes. The group toured the site locating these items. The group visited the following bioventing wells: BW-01, BW-10, BW-21, and BW-25 for their current status. All wells visibly

looked in good condition; however, some of the labels of the wells were faded or not visible. Project Navigator stated that labeling will be updated. Bollards were in place protecting the bioventing wells, except there was presence of some fading of the paint on bollards and wells.

Settlement monuments (SM) were located utilizing a map provided by Roux, Inc. SM 1, SM2, SM3, SM4, SM5, and SM6 were intact. Also, each settlement monument had a vertical marker that helped locate it. However, some of the labels were not visible or faded off. Project Navigator stated that labeling will be updated. The group inspected the monitoring wells: GW-30, GW -32. A map was utilized to locate these wells. The wells showed good condition. GW-32 did not have labeling, but Project Navigator stated that labeling will be updated. The group searched for GW-11 but it was not accessible due to vehicles parked over the area.

Leachate wells (LC-1, LC-2, LC-3, LC-4) were accessible and in good condition overall. LC-2 and LC-4 are both enclosed by a contained structure, but only LC-2 had no cap for its well. Vapor probes (VW-31, VW-25, VW-46) were located utilizing a map; they were in good condition. VW-46 and VW-25 had clear labeling and VW-31 had missing labeling. SVP-21 and SVP-41 were located inside adjacent building and were inaccessible; tenants' businesses were not open. Also, the collection system was stated by Project Navigator to be passive for the last 17 years. Also, Project Navigator mentioned that the flow rates through the GAC (granular activated carbon) system are measured from the effluent sampling port and that there is semi-annual sampling conducted. The group went to inspect Buildings on Parcel No.41, Parcel No.37, Parcel No. 32, but none of the businesses were open, probably due to the heavy rain that occurred that day. A chemical use survey list was requested for those buildings but there is no current updated list on site. However, there is a summary of the typical chemicals used at each parcel at WDI that is found in the *WDI OM&M Annual Reports* that was provided by Project Navigator. For Buildings Parcel No. 32, gasoline, motor oil, spray paint, lacquer thinner, cleaning products are found to be used. For Buildings Parcel No. 37, gasoline, lubricating oil, grease, hydraulic fluid, transmission fluid, antifreeze, paint, thinner are found to be used. For Buildings Parcel No. 41, paint, wood stain, varnish, shellac, paint thinner, adhesive, gasoline, acetone, motor oil, antifreeze, cleaning products are found to be used. Buildings Parcel No. 50 was demolished previously and thus, no present chemicals are being utilized.

The group also walked around the perimeter of the site to inspect any debris, damage, and current condition of the fencing. As we walked around the perimeter most of the silt fencing was intact with a few exceptions of torn silt fencing. Also, on Greenleaf Ave, it was noticed that the chain fencing was broken and needed repair. Signage at all three entrances of the site were properly placed and in good condition reading in both English and Spanish. Worn netting along

the St. Paul High School was visible; however, the netting will be torn down once redevelopment commences. The barrier along the high school was secure and only some weed abatement was needed along the barrier near the parking lot of the school.

On Greenleaf Ave, sandbags were placed to manage any water flow due to any storm event, rainfall, etc. Also, the site has a catch basin that is in good condition and is not blocked by any debris. The group walked the inside of the site to inspect the landscape for any rodent burrows, damage, disturbances. There were no visible rodent burrows or damages to the top layer cover.

4. ACTIONS

The USACE will incorporate information obtained from the site visit into the Five-Year Review report.

Helen Sanchez
Project Engineer
Los Angeles District

1			Monitoring well: GW-30

2			Monitoring well: GW-32

3			Leachate well: LC-1
4			Leachate well: LC-2

5		Leachate well: LC-3
6	 	Leachate well: LC-4

7			Settlement Monument: SM-2

8			Settlement Monument: SM-4
9			Bioventing Well: BW-01

10		Bioventing Well: BW-10

11			Bioventing Well: BW-21

12			Bioventing Well: BW-25

13			Vapor Probes: VW-25

14			Vapor Probes: VW-31

15				Vapor Probes: VW-46

16			Vapor Probes: VW-25

17		Perimeter fencing

18		Perimeter fencing

19		Perimeter fencing

20		GAC system

21		GAC system totalizer

22			Sandbags placed along perimeter on Greenleaf Ave.

23		Catch Basin

24		Netting along St. Paul High School

25	 WARNING NO ENTRY PERMITTED DUMPING STRICTLY PROHIBITED Authorized Personnel Only Private Property Waste Disposal, Inc. Superfund Site EPA United States Environmental Protection Agency Please Contact the City of Santa Fe Springs Fire Department or Police Department in Case of an Emergency 911 For More Information, or Other Inquiries Please Contact: Waste Disposal, Inc. Contact (949) 357-5649 CenterPoint Properties (847) 710-0898 ADVERTENCIA PROHIBIDO ENTRAR ESTRICTAMENTE PROHIBIDO DESCARGAR DESECHOS Solamente Personas Autorizadas Propiedad Privada Waste Disposal, Inc. Sitio "Superfund" EPA United States Environmental Protection Agency En Caso de Emergencia Por Favor Llame al Departamento de Bomberos o el Departamento de Policía de la Ciudad de Santa Fe Springs 911 Para Mas Informacion, o Otras Preguntas Por Favor Llame: Waste Disposal, Inc. (949) 357-5649 CenterPoint Properties (847) 710-0898	Signage

26		Landscape

27		Landscape