Site Assessment

Bekins Northwest Moving & Storage
1891 North First Street
Yakima, Washington

for
Washington State Department of Ecology

April 29, 2024

GeoEngineers

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Spokane, Washington 99202
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Site Assessment

Bekins Northwest Moving & Storage
1891 North First Street
Yakima, Washington

File No. 0504-200-00

April 29, 2024

Prepared for:

Washington State Department of Ecology
Toxics Cleanup Program, Central Region Office
1250 West Alder Street
Union Gap, Washington 98903-0009

Attention: Chelsea Wisotzkey, LUST Site Manager

Prepared by:

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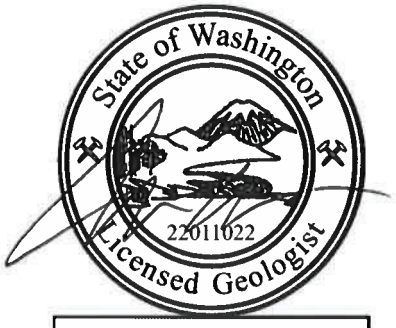

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1.0 INTRODUCTION

This report describes groundwater assessment activities conducted at the Bekins Northwest Moving & Storage (Bekins) facility (herein referred to as "site") located at 1891 North Street in Yakima, Washington, as shown on the attached Vicinity Map, Figure 1. The Washington State Department of Ecology (Ecology) reference numbers for this site include: Facility Site ID (FSID) No. 21186636 and Cleanup Site ID (CSID) No. 5677.

This assessment report has been prepared by GeoEngineers, Inc. (GeoEngineers) for the Washington State Department of Ecology (Ecology) under Amendment Number 6 to Ecology Master Contract No. C1900044, task work assignment number GEI054. This report describes site history, field activities, observations and chemical analytical results associated with groundwater samples collected at the site. The purpose of this assessment was to determine if groundwater contamination associated with the historic release of petroleum products from a former underground storage tank (UST) remains at the site.

2.0 SITE DESCRIPTION AND BACKGROUND

The Bekins site is located at 1891 North First Street in Yakima, Washington. The site is bounded to the north by the intersection of Highway 12 (US-12) and Highway 82 (US-82), to the south by commercial properties, to the east by commercial and residential properties and to the west by North First Street and the former Tiger Oil facility. The site is located on an approximately 1.62-acre parcel occupied by a warehouse and office building, asphalt parking areas and asphalt driveways. Bekins uses the site as a materials transfer and storage facility. Site features are shown in Site Plan, Figure 2.

In 1990, Burlington Environmental, Inc. Chemical Processors Division (Chempro) removed an approximately 1,000-gallon gasoline UST from the Bekins facility. Rust holes were observed in the UST during the UST removal activities. Soil samples collected from near the UST indicated benzene and total xylenes were present at concentrations greater than their respective Washington State Model Toxic Control Act (MTCA) Method A cleanup levels for unrestricted land use (Chempro 1991).

Chempro removed approximately 250 cubic yards (CY) of contaminated soil from around the UST and placed the soil in a landfarm east of the existing building. Confirmation samples from the excavated area were collected and analyzed for benzene, toluene, ethylbenzene and total xylenes (BTEX), total petroleum hydrocarbons (TPH) and lead. Groundwater was observed at approximately 10 feet below ground surface (bgs) in the excavation and a groundwater sample was collected from the excavation. Groundwater samples also were collected from two existing monitoring wells from a Tiger Oil site located south and west (up-gradient) of the Bekins facility. Chemical analytical results indicated the following (Chempro 1991):

- TPH was detected at concentrations greater than the MTCA Method A cleanup level (500 micrograms per liter [µg/L]) for diesel- and oil-range petroleum hydrocarbons (DRPH and ORPH, respectively) in groundwater;
- TPH was detected at concentrations greater than the MTCA Method A cleanup level (30 micrograms per kilogram [µg/kg] when benzene is present) for gasoline-range petroleum hydrocarbons (GRPH) in soil from the north, south and east sidewalls; and
- Lead was detected at a concentration greater than the MTCA Method A cleanup level (15 µg/L) in groundwater in the excavation.

Laboratory fractionation of TPH indicated that both lighter (GRPH) and heavier (DRPH and ORPH) petroleum hydrocarbon chains were present. Chempro identified two potential sources for the DRPH and ORPH contamination (Chempro 1991):

- Historical use of "smudging oil" from orchard operations that occurred prior to Bekins' occupation of the property; and
- The 1980s release of gasoline and diesel products from the Tiger Oil facility located approximately 100 feet up-gradient from the Bekins property.

Soil samples collected from the landfarm by Foss Environmental & Infrastructure (Foss) in 1998 indicated BTEX, TPH and lead concentrations were less than the MTCA Method A cleanup levels (Foss 1999).

Ecology issued a Letter of Partial Sufficiency in 2006 for the work that was previously completed to characterize and remediate gasoline-contaminated soil. However, the cleanup actions were determined to be not sufficient to meet MTCA's substantive requirements for characterizing and addressing gasoline contamination in groundwater (Ecology 2006).

3.0 FIELD INVESTIGATION ACTIVITIES

GeoEngineers advanced soil borings and installed temporary well points, collected grab groundwater samples from the temporary well points, and submitted the samples for chemical analysis to assess groundwater conditions associated with the former UST release described above.

The following sections describe field activities and a discussion of observed subsurface conditions. Based on site conditions, some modifications to the Work Plan were implemented as explained in the sections below.

3.1. Soil Assessment

Initial site reconnaissance occurred on November 28, 2023. During this site visit, site access was observed, and potential boring locations were marked. Site utilities located near the boring locations were identified and marked by Utilities Plus, LLC (Utilities Plus) on December 5, 2023. Boring locations are shown on Figure 2.

Anderson Environmental Contracting (AEC) advanced four borings (GEI054-B1 through GEI054-B4) on December 5 and 6, 2023, using a sonic drill rig. Subsurface soil conditions are depicted on boring logs included in Appendix A. The soil borings were advanced to approximately 20 feet bgs.

Soil recovered from the borings was field screened for petroleum contamination. Field screening results are included in the boring logs in Appendix A. Volatile organic vapors, measured using a photoionization detector (PID), were less than 1 part per million (ppm) in all borings and no sheens, odors or staining were observed.

Four soil samples were collected from each boring; however, because field screening did not indicate the presence of petroleum contamination, the soil samples were not submitted for chemical analysis.

AEC backfilled the borings with bentonite and completed the borings with cold-patch asphalt.

3.2. Groundwater Assessment

Grab groundwater samples were collected from temporary well points installed in the borings. The temporary well points were purged using low-flow techniques and groundwater quality parameters were monitored for approximately 30 minutes prior to sampling as described in the Work Plan. Depth to groundwater and groundwater quality parameters at the time of collecting the grab groundwater samples are summarized in the table below.

GROUNDWATER FIELD PARAMETERS

Temporary Monitoring Well Location	Field Measured Groundwater Quality Parameters						
	Depth to Groundwater (feet bgs)	pH (pH units)	Specific Conductivity (µS/cm)	ORP (mV)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	Temperature (degrees C)
GEI054-B1	11.20	6.67	422.7	144.4	5.08	1,023.40	15.0
GEI054-B2	11.56	6.93	442.2	26.7	3.21	812.87	17.0
GEI054-B3	12.10	6.99	428.8	32.7	2.60	1,018.17	17.4
GEI054-B4	14.68	7.56	463.8	87.9	9.72	406.4	16.1

Notes:

ORP = oxygen reduction potential; µS/cm = micro-Siemens per centimeter; mV = millivolts; mg/L = milligrams per liter; NTU = nephelometric turbidity unit; C = Celsius

3.3. Subsurface Conditions

Soil recovered from the borings indicate the subsurface generally consists of sand with varying amounts of gravel from the surface to about 10 feet bgs and a mix of gravel and cobbles from 10 feet bgs to 20 feet bgs.

Depth to groundwater ranged from 11.2 feet bgs (GEI054-B1) to 14.68 feet bgs (GEI054-B4). Groundwater flow direction was assumed to be north-northeast based on site topography and groundwater elevations obtained from the soil borings.

3.4. Investigation-Derived Waste

Investigation-derived waste (IDW), including soil cuttings, purge water, and decontamination fluids from assessment activities were placed in three 55-gallon drums and stored at the old scaling station at the property manager's request pending analysis and disposal. GrayMar Environmental Contracting, LLC (GrayMar) collected the IDW on March 13, 2024, and disposed the IDW at Waste Management's Ceder Springs landfill in Arlington, Oregon on March 19, 2024. The waste disposal manifest is included in Appendix B, IDW Disposal Documentation.

4.0 CHEMICAL ANALYTICAL RESULTS

Four groundwater samples and one duplicate sample were submitted to Eurofins Environment Testing Northwest (Eurofins) for chemical analysis. The laboratory report and a data validation report are included in Appendix C. The samples were analyzed for the following contaminants of concern (COCs):

- GRPH using Northwest Method NWTPH-Gx;

- BTEX and naphthalene (BTEXN), ethylene dichloride (EDC) and methyl tert-butyl ether (MTBE) using United States Environmental Protection Agency (EPA) Method 8260D;
- Ethylene dibromide (EDB) using EPA Method 8011;
- DRPH and ORPH using Northwest Method NWTPH-Dx; and
- Total and dissolved lead using EPA Method 6010D.

Groundwater chemical analytical results are presented and compared to MTCA Method A cleanup levels in Chemical Analytical Results–Groundwater, Table 1. COCs were either not detected or were detected at concentrations less than their respective MTCA Method A cleanup levels.

5.0 SUMMARY AND RECOMMENDATIONS

Four soil borings were advanced by AEC on December 5 and 6, 2023, at the Bekins Northwest Moving & Storage facility located at 1891 North Street in Yakima, Washington. Soil and grab groundwater samples were collected from the borings and the grab groundwater samples were submitted for chemical analysis. COCs were either not detected or were detected at concentrations less than their respective MTCA Method A cleanup levels.

Based on the results of this assessment, petroleum-related contaminants from the USTs were not detected at concentrations greater than the MTCA Method A cleanup levels in groundwater at the site at the locations sampled.

6.0 LIMITATIONS

We have prepared this report for the exclusive use of Washington State Department of Ecology and their authorized agents.

Within the limitations of scope, schedule and budget, our services were executed in accordance with generally accepted environmental science practices in this area at the time this report was prepared. The conclusions and opinions presented in this report are based on our professional knowledge, judgment and experience. No warranty or other conditions, express or implied, should be understood.

Please refer to Appendix D, Report Limitations and Guidelines for Use, for additional information pertaining to this report.

7.0 REFERENCES

Burlington Environmental Chempro Division. 1991. "Burlington Environmental, Site Characterization/Interim Action Report, Bekins Northwest, Yakima, Washington." June 1991.

Foss Environmental & Infrastructure. 1999. "Draft – Summary of Soil Sampling Activities." January 5, 1999.

GeoEngineers, Inc. (GeoEngineers). 2023. "Work Plan, Bekins Northwest Moving & Storage, 1891 North Street in Yakima, Washington." November 28, 2023. File No. 0504-200-00.

Washington State Department of Ecology. 2006. "Partial Sufficiency and Further Action Determination Under WAC 173-340-515(5) for the Following Hazardous Waste Site: Bekins Moving & Storage, 1891 North 1st Street Yakima, Washington 98901." May 22, 2006.

Washington Department of Ecology. 2024. "Model Toxics Control Act Regulation and Statute, Chapter 173-340 WAC and 70.105D RCW." Revised 2024.

TABLES

GeoEngineers

Table 1

Chemical Analytical Results - Groundwater[1]

Bekins Northwest Moving & Storage

Yakima, Washington

		Location ID	GEI055-B1		GEI055-B2		GEI055-B3		GEI055-B4	
		Sample Date	12/5/2023		12/6/2023		12/6/2023		12/5/2023	
Analyte	**MTCA CUL[7]**	**Units**								
Petroleum Hydrocarbons										
GRPH[2]	800/1,000[8]	µg/L	54	U	54	U	54	U	54	U
DRPH[3]	NE	µg/L	110	U	110	U	110	U	110	U
ORPH[3]	NE	µg/L	120	U	120	U	120	U	120	U
VOCs[4]										
Benzene	5	µg/L	0.093	U	0.093	U	0.093	U	0.093	U
Toluene	1,000	µg/L	0.31	U	0.31	U	0.31	U	0.31	U
Ethylbenzene	700	µg/L	0.20	U	0.20	U	0.20	U	0.20	U
m, p-Xylene	NE	µg/L	0.28	U	0.28	U	0.28	U	0.28	U
o-Xylene	NE	µg/L	0.16	U	0.16	U	0.16	U	0.16	U
Xylenes (total)	1,000	µg/L	0.44	U	0.44	U	0.44	U	0.44	U
Naphthalene	160	µg/L	0.63	U	0.63	U	0.63	U	0.63	U
Ethylene Dichloride (EDC)	5	µg/L	0.31	U	0.31	U	0.31	U	0.31	U
Methyl tert-butyl Ether (MTBE)	20	µg/L	0.16	U	0.16	U	0.16	U	0.16	U
Ethylene Dibromide (EDB)[5]	0.02	µg/L	0.0025	U	0.0047	U	0.0025	U	0.0025	U
Metals[6]										
Total Lead	15	µg/L	**9.3**	**J**	5.1	U	**7.1**	**J**	5.1	U
Dissolved Lead	15	µg/L	5.1	U	5.1	U	5.1	U	5.1	U

Notes:

[1]Samples analyzed by Eurofins Environment Testing Northwest (Eurofins) located in Spokane Valley, Washington.

[2]Gasoline-range petroleum hydrocarbons (GRPH) analyzed using Northwest Method NWTPH-Gx.

[3]Diesel- and oil-range petroleum hydrocarbons (DRPH and ORPH, respectively) analyzed using Northwest Method NWTPH-Dx.

[4]Volatile organic compounds (VOCs) analyzed using Environmental Protection Agency (EPA) Method 8260D.

[5]Ethylene dibromide (EDB) analyzed using EPA Method 8011.

[6]Total and dissolved lead analyzed using EPA Method 6010D.

[7]Washington State Model Toxics Control Act (MTCA) Method A cleanup levels (CUL).

[8]GRPH MTCA Method A CUL when benzene is present / no detectable benzene.

µg/L = microgram per liter.

NE = not established.

U = analyte was not detected above the laboratory method detection limit (MDL).

J = estimated concentration.

Bold indicates analyte was detected.

FIGURES

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Source(s):
- ESRI

Coordinate System: NAD 1983 StatePlane Washington South FIPS 4602 Feet

Vicinity Map

Bekins Northwest Moving & Storage
Yakima, Washington

GeoEngineers

Figure 1

P:\0\0504200\GIS\0504200_Project\0504200_Project.aprx\0504200000_F01_VicinityMap Date Exported: 10/19/23 by ccabrera

Source(s):
- Bing Imagery
- Yakima County GIS

Coordinate System: NAD 1983 StatePlane Washington South FIPS 4602 Feet

Legend

- GeoEngineers Boring Number and Approximate Location
- Approximate Location of Tiger Oil Site Well
- Site Boundary
- Approximate Landfarm Location
- Approximate UST Location and Previous 1991 Excavation Area
- Assumed Groundwater Flow Direction

N

0 60

Feet

Site Plan

Bekins Northwest Moving & Storage
Yakima, Washington

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Figure 2

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APPENDICES

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APPENDIX A
Boring Logs

SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			SYMBOLS GRAPH	SYMBOLS LETTER	TYPICAL DESCRIPTIONS
COARSE GRAINED SOILS	GRAVEL AND GRAVELLY SOILS	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES
				GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES
	MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
				GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
MORE THAN 50% RETAINED ON NO. 200 SIEVE	SAND AND SANDY SOILS	CLEAN SANDS (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS
				SP	POORLY-GRADED SANDS, GRAVELLY SAND
	MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND - SILT MIXTURES
				SC	CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS, ROCK FLOUR, CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
MORE THAN 50% PASSING NO. 200 SIEVE	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY
				OH	ORGANIC CLAYS AND SILTS OF MEDIUM TO HIGH PLASTICITY
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

NOTE: Multiple symbols are used to indicate borderline or dual soil classifications

ADDITIONAL MATERIAL SYMBOLS

SYMBOLS GRAPH	SYMBOLS LETTER	TYPICAL DESCRIPTIONS
	AC	Asphalt Concrete
	CC	Cement Concrete
	CR	Crushed Rock/ Quarry Spalls
	SOD	Sod/Forest Duff
	TS	Topsoil

Groundwater Contact

Measured groundwater level in exploration, well, or piezometer

Measured free product in well or piezometer

Graphic Log Contact

Distinct contact between soil strata

Approximate contact between soil strata

Material Description Contact

Contact between geologic units

Contact between soil of the same geologic unit

Sampler Symbol Descriptions

2.4-inch I.D. split barrel / Dames & Moore (D&M)

Standard Penetration Test (SPT)

Shelby tube

Piston

Direct-Push

Bulk or grab

Continuous Coring

Blowcount is recorded for driven samplers as the number of blows required to advance sampler 12 inches (or distance noted). See exploration log for hammer weight and drop.

"P" indicates sampler pushed using the weight of the drill rig.

"WOH" indicates sampler pushed using the weight of the hammer.

Laboratory / Field Tests

%F	Percent fines
%G	Percent gravel
AL	Atterberg limits
CA	Chemical analysis
CP	Laboratory compaction test
CS	Consolidation test
DD	Dry density
DS	Direct shear
HA	Hydrometer analysis
MC	Moisture content
MD	Moisture content and dry density
Mohs	Mohs hardness scale
OC	Organic content
PM	Permeability or hydraulic conductivity
PI	Plasticity index
PL	Point load test
PP	Pocket penetrometer
SA	Sieve analysis
TX	Triaxial compression
UC	Unconfined compression
UU	Unconsolidated undrained triaxial compression
VS	Vane shear

Sheen Classification

NS	No Visible Sheen
SS	Slight Sheen
MS	Moderate Sheen
HS	Heavy Sheen

NOTE: The reader must refer to the discussion in the report text and the logs of explorations for a proper understanding of subsurface conditions. Descriptions on the logs apply only at the specific exploration locations and at the time the explorations were made; they are not warranted to be representative of subsurface conditions at other locations or times.

Key to Exploration Logs

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Figure A-1

Drilled	Start 12/5/2023	End 12/5/2023	Total Depth (ft) 20	Logged By LO / Checked By JDO	Driller GeoEngineers, Inc.	Drilling Method Sonic
Surface Elevation (ft) / Vertical Datum	1080 NAVD88		Hammer Data	N/A	Drilling Equipment	Sonic 150 CC TSI
Easting (X) / Northing (Y)	1637696 470835		System Datum	WA State Plane South NAD83 (feet)	See "Remarks" section for groundwater observed	

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		48					SP	Brown sand with gravel and cobbles (loose, moist)			
1075	5		60			GEI054-B1(5)				NS	<1	
1070	10		60			GEI054-B1(10)		GP	Coarse gravel and cobbles (dense, moist)	NS	<1	Groundwater observed at approximately 11.20 feet bgs Grab groundwater sample GEI054 - B1-120523 submitted for analysis
1065	15		60			GEI054-B1(15)				NS	<1	
1060	20					GEI054-B1(20)			Temporary well set at 20 feet bgs	NS	<1	

Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on Aerial Imagery. Vertical approximated based on Aerial Imagery.

Date:2/28/24 Path:P:\0\0504200\GINT\050420000.GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_ENVIRONMENTAL_STANDARD_NO_GW

Log of Boring GEI054-B1

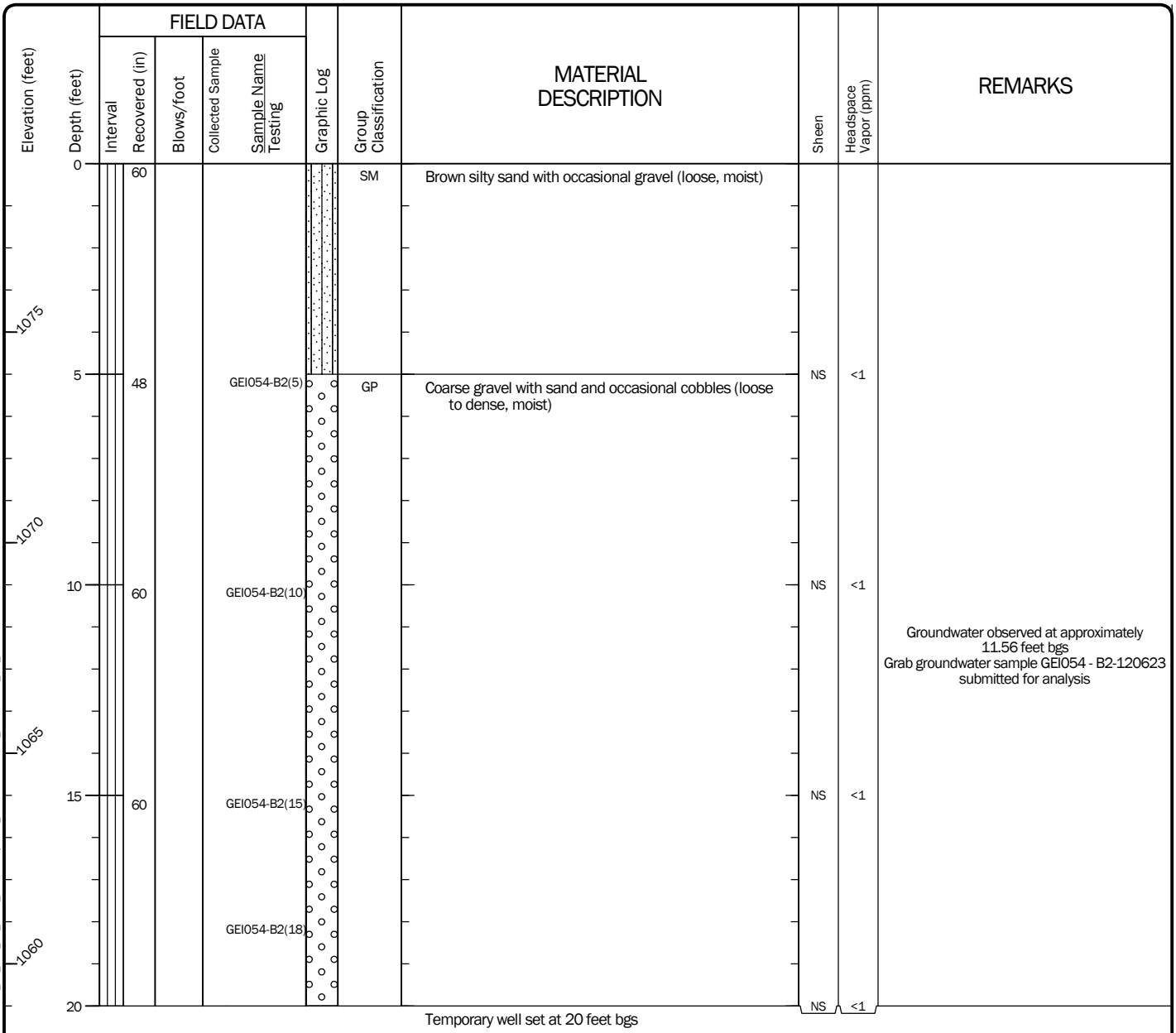
GeoEngineers

Project: Bekins Northwest Moving & Storage
Project Location: Yakima, Washington
Project Number: 0504-200-00

Figure A-2
Sheet 1 of 1

Drilled	Start 12/6/2023	End 12/6/2023	Total Depth (ft) 20	Logged By LO / Checked By JDO	Driller GeoEngineers, Inc.	Drilling Method Sonic
Surface Elevation (ft) / Vertical Datum	1079 / NAVD88		Hammer Data	N/A	Drilling Equipment	Sonic 150 CC TSI
Easting (X) / Northing (Y)	1637606 / 470771		System Datum	WA State Plane South NAD83 (feet)	See "Remarks" section for groundwater observed	

Notes:



Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on Aerial Imagery. Vertical approximated based on Aerial Imagery.

Log of Boring GEI054-B2

GeoEngineers

Project: Bekins Northwest Moving & Storage
Project Location: Yakima, Washington
Project Number: 0504-200-00

Figure A-3
Sheet 1 of 1

Drilled Start 12/5/2023 End 12/5/2023	Total Depth (ft) 20	Logged By LO Checked By JDO	Driller GeoEngineers, Inc.	Drilling Method Sonic	
Surface Elevation (ft) 1080 Vertical Datum NAVD88		Hammer Data N/A		Drilling Equipment Sonic 150 CC TSI	
Easting (X) 1637682 Northing (Y) 470778		System Datum WA State Plane South NAD83 (feet)		See "Remarks" section for groundwater observed	

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		60					SP	Dark brown sand with gravel and cobbles (loose, moist)			
1075	5		48			GEI054-B3(5)			Becomes gray	NS	<1	
1070	10		48			GEI054-B3(10)		GP	Coarse gravel with sand and cobbles (medium dense, moist)	NS	<1	Groundwater observed at approximately 12.10 feet bgs Grab groundwater sample GEI054 - B3-120623 submitted for analysis
1065	15		48			GEI054-B3(15)				NS	<1	
1060	20					GEI054-B3(20)			Temporary well set at 20 feet bgs	NS	<1	

Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on Aerial Imagery. Vertical approximated based on Aerial Imagery.

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Log of Boring GEI054-B3

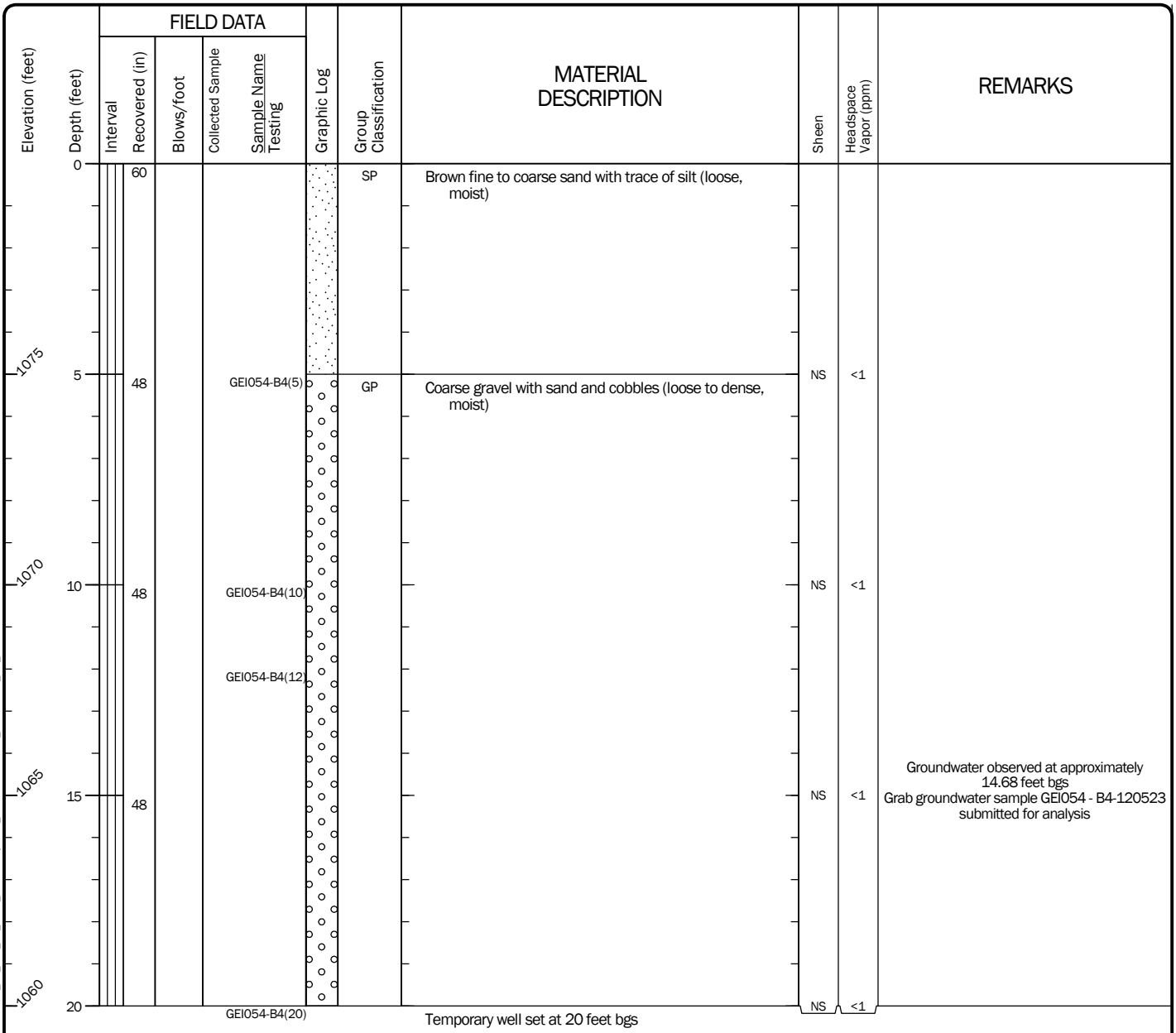
GeoEngineers

Project: Bekins Northwest Moving & Storage
Project Location: Yakima, Washington
Project Number: 0504-200-00

Figure A-4
Sheet 1 of 1

Drilled	Start 12/5/2023	End 12/5/2023	Total Depth (ft) 20	Logged By LO / Checked By JDO	Driller GeoEngineers, Inc.	Drilling Method Sonic
Surface Elevation (ft) / Vertical Datum	1080 NAVD88		Hammer Data	N/A	Drilling Equipment	Sonic 150 CC TSI
Easting (X) / Northing (Y)	1637741 470797		System Datum	WA State Plane South NAD83 (feet)	See "Remarks" section for groundwater observed	

Notes:



Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on Aerial Imagery. Vertical approximated based on Aerial Imagery.

Date:2/28/24 Path:P:\0\0504200\GINT\050420000.GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_ENVIRONMENTAL_STANDARD_NO_GW

Log of Boring GEI054-B4

GeoEngineers

Project: Bekins Northwest Moving & Storage
Project Location: Yakima, Washington
Project Number: 0504-200-00

Figure A-5
Sheet 1 of 1

APPENDIX B
IDW Disposal Documentation

TS20

Please print or type
(Form designed for use on elite (12-pitch) typewriter.)

505218

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of 1	3. Emergency Response Phone 866-472-9627	4. Waste Tracking Number 031324GMP616

GENERATOR

5. Generator's Name and Mailing Address
~~US Department of Energy~~ Department of Ecology
per Lori Bateman/Graymar
KR 3/27/24
1891 N FIRST ST
Yakima, WA 98901
Generator's Phone: 509-570-0779

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name: Graymar Environmental Services
U.S. EPA ID Number: WAH000055713

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
Chemical Waste Management of the NW, Inc.
17629 Cedar Springs Lane
Arlington, OR 97812
Facility's Phone: 5414542643
U.S. EPA ID Number: ORD089452353

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1	NONRCRA / NONDOT REGULATED MATERIAL (IDW SOIL)	02	DM	1000	P	X004
2	NONRCRA / NONDOT REGULATED MATERIAL (IDW WATER)	01	DM	100	P	X004
3.						
4.						

13. Special Handling Instructions and Additional Information
01: () OR358819
02: () OR358824

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.
Generator's/Offeror's Printed/Typed Name: Rick Phillips
Signature
Month 3 Day 13 Year 24

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Carlos Senda
Signature
Month 3 Day 13 Year 24
Transporter 2 Printed/Typed Name
Signature
Month Day Year

DESIGNATED FACILITY

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
17b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:
17c. Signature of Alternate Facility (or Generator)
Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Dawn Dunlop
Signature
Month 3 Day 19 Year 24

DESIGNATED FACILITY TO GENERATOR

APPENDIX C
Chemical Analytical Laboratory Reports and Data Validation Report

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Justin Orr
GeoEngineers Inc
523 East Second Ave
Spokane, Washington 99202

Generated 12/21/2023 3:07:19 PM

JOB DESCRIPTION

Bekins NW Moving & Storage/0504-200-00

JOB NUMBER

590-22423-1

Eurofins Spokane
11922 East 1st Ave
Spokane WA 99206

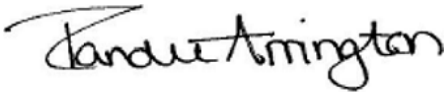
See page two for job notes and contact information.

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northwest, LLC Project Manager.

Authorization



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12/21/2023 3:07:19 PM

Authorized for release by
Randee Arrington, Business Unit Manager
Randee.Arrington@et.eurofinsus.com
(509)924-9200

Table of Contents

Job ID: 590-22423-1 Eurofins Spokane

Job Narrative
590-22423-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 12/7/2023 10:19 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.5°C

Receipt Exceptions
A trip blank was submitted for analysis with these samples; however, it was not listed on the Chain of Custody (COC).

GC/MS VOA
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC Semi VOA
Method 8011: Only one voa vial was provided for analysis

B-2:120623 (590-22423-4)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Metals
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Sample Summary

Client: GeoEngineers Inc
Job ID: 590-22423-1
Project/Site: Bekins NW Moving & Storage/0504-200-00

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-22423-1	B-1:120523	Water	12/05/23 13:30	12/07/23 10:19
590-22423-2	B-4:120523	Water	12/05/23 15:30	12/07/23 10:19
590-22423-3	B-3:120623	Water	12/06/23 11:20	12/07/23 10:19
590-22423-4	B-2:120623	Water	12/06/23 13:30	12/07/23 10:19
590-22423-5	DUP:120623	Water	12/06/23 08:00	12/07/23 10:19

Definitions/Glossary

Client: GeoEngineers Inc
Job ID: 590-22423-1
Project/Site: Bekins NW Moving & Storage/0504-200-00

Qualifiers

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Client: GeoEngineers Inc
Job ID: 590-22423-1
Project/Site: Bekins NW Moving & Storage/0504-200-00

Client Sample ID: B-1:120523
Lab Sample ID: 590-22423-1
Date Collected: 12/05/23 13:30
Matrix: Water
Date Received: 12/07/23 10:19

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane	ND		1.0	0.31	ug/L			12/11/23 23:08	1
Benzene	ND		0.40	0.093	ug/L			12/11/23 23:08	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/11/23 23:08	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/11/23 23:08	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			12/11/23 23:08	1
o-Xylene	ND		1.0	0.16	ug/L			12/11/23 23:08	1
Toluene	ND		1.0	0.31	ug/L			12/11/23 23:08	1
Naphthalene	ND		2.0	0.63	ug/L			12/11/23 23:08	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/11/23 23:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*80 - 120*		*12/11/23 23:08*	*1*
4-Bromofluorobenzene (Surr)	*100*		*76 - 120*		*12/11/23 23:08*	*1*
Dibromofluoromethane (Surr)	*107*		*80 - 123*		*12/11/23 23:08*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*12/11/23 23:08*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150	54	ug/L			12/11/23 23:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*68.7 - 141*		*12/11/23 23:08*	*1*

Method: SW846 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		12/11/23 12:35	12/11/23 17:23	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.23	0.11	mg/L		12/11/23 08:29	12/11/23 19:32	1
Residual Range Organics (RRO) (C25-C36)	ND		0.39	0.12	mg/L		12/11/23 08:29	12/11/23 19:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*99*		*50 - 150*	*12/11/23 08:29*	*12/11/23 19:32*	*1*
n-Triacontane-d62	*94*		*50 - 150*	*12/11/23 08:29*	*12/11/23 19:32*	*1*

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**0.0093**	**J**	0.060	0.0051	mg/L		12/08/23 10:55	12/18/23 16:25	1

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.060	0.0051	mg/L		12/18/23 17:27	12/19/23 12:46	1

Client: GeoEngineers Inc
Job ID: 590-22423-1
Project/Site: Bekins NW Moving & Storage/0504-200-00

Client Sample ID: B-4:120523
Date Collected: 12/05/23 15:30
Date Received: 12/07/23 10:19

Lab Sample ID: 590-22423-2
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane	ND		1.0	0.31	ug/L			12/11/23 23:30	1
Benzene	ND		0.40	0.093	ug/L			12/11/23 23:30	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/11/23 23:30	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/11/23 23:30	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			12/11/23 23:30	1
o-Xylene	ND		1.0	0.16	ug/L			12/11/23 23:30	1
Toluene	ND		1.0	0.31	ug/L			12/11/23 23:30	1
Naphthalene	ND		2.0	0.63	ug/L			12/11/23 23:30	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/11/23 23:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*80 - 120*		*12/11/23 23:30*	*1*
4-Bromofluorobenzene (Surr)	*96*		*76 - 120*		*12/11/23 23:30*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 123*		*12/11/23 23:30*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*12/11/23 23:30*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150	54	ug/L			12/11/23 23:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*68.7 - 141*		*12/11/23 23:30*	*1*

Method: SW846 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		12/11/23 12:35	12/11/23 17:55	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.23	0.11	mg/L		12/11/23 08:29	12/11/23 19:53	1
Residual Range Organics (RRO) (C25-C36)	ND		0.39	0.12	mg/L		12/11/23 08:29	12/11/23 19:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*97*		*50 - 150*	*12/11/23 08:29*	*12/11/23 19:53*	*1*
n-Triacontane-d62	*93*		*50 - 150*	*12/11/23 08:29*	*12/11/23 19:53*	*1*

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.060	0.0051	mg/L		12/08/23 10:55	12/18/23 16:29	1

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.060	0.0051	mg/L		12/18/23 17:27	12/19/23 12:50	1

Client: GeoEngineers Inc
Job ID: 590-22423-1
Project/Site: Bekins NW Moving & Storage/0504-200-00

Client Sample ID: B-3:120623
Lab Sample ID: 590-22423-3
Date Collected: 12/06/23 11:20
Matrix: Water
Date Received: 12/07/23 10:19

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane	ND		1.0	0.31	ug/L			12/11/23 23:51	1
Benzene	ND		0.40	0.093	ug/L			12/11/23 23:51	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/11/23 23:51	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/11/23 23:51	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			12/11/23 23:51	1
o-Xylene	ND		1.0	0.16	ug/L			12/11/23 23:51	1
Toluene	ND		1.0	0.31	ug/L			12/11/23 23:51	1
Naphthalene	ND		2.0	0.63	ug/L			12/11/23 23:51	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/11/23 23:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*80 - 120*		*12/11/23 23:51*	*1*
4-Bromofluorobenzene (Surr)	*97*		*76 - 120*		*12/11/23 23:51*	*1*
Dibromofluoromethane (Surr)	*108*		*80 - 123*		*12/11/23 23:51*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*		*12/11/23 23:51*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150	54	ug/L			12/11/23 23:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*68.7 - 141*		*12/11/23 23:51*	*1*

Method: SW846 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		12/11/23 12:35	12/11/23 18:12	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.23	0.11	mg/L		12/11/23 08:29	12/11/23 20:14	1
Residual Range Organics (RRO) (C25-C36)	ND		0.39	0.12	mg/L		12/11/23 08:29	12/11/23 20:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*94*		*50 - 150*	*12/11/23 08:29*	*12/11/23 20:14*	*1*
n-Triacontane-d62	*92*		*50 - 150*	*12/11/23 08:29*	*12/11/23 20:14*	*1*

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**0.0071**	**J**	0.060	0.0051	mg/L		12/08/23 10:55	12/18/23 16:34	1

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.060	0.0051	mg/L		12/18/23 17:27	12/19/23 12:54	1

Client: GeoEngineers Inc
Job ID: 590-22423-1
Project/Site: Bekins NW Moving & Storage/0504-200-00

Client Sample ID: B-2:120623
Lab Sample ID: 590-22423-4
Date Collected: 12/06/23 13:30
Matrix: Water
Date Received: 12/07/23 10:19

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane	ND		1.0	0.31	ug/L			12/12/23 00:13	1
Benzene	ND		0.40	0.093	ug/L			12/12/23 00:13	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/12/23 00:13	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/12/23 00:13	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			12/12/23 00:13	1
o-Xylene	ND		1.0	0.16	ug/L			12/12/23 00:13	1
Toluene	ND		1.0	0.31	ug/L			12/12/23 00:13	1
Naphthalene	ND		2.0	0.63	ug/L			12/12/23 00:13	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/12/23 00:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*80 - 120*		*12/12/23 00:13*	*1*
4-Bromofluorobenzene (Surr)	*98*		*76 - 120*		*12/12/23 00:13*	*1*
Dibromofluoromethane (Surr)	*111*		*80 - 123*		*12/12/23 00:13*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*		*12/12/23 00:13*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150	54	ug/L			12/12/23 00:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*68.7 - 141*		*12/12/23 00:13*	*1*

Method: SW846 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.019	0.0047	ug/L		12/11/23 12:35	12/11/23 18:28	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.23	0.11	mg/L		12/11/23 08:29	12/11/23 20:35	1
Residual Range Organics (RRO) (C25-C36)	ND		0.39	0.12	mg/L		12/11/23 08:29	12/11/23 20:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*93*		*50 - 150*	*12/11/23 08:29*	*12/11/23 20:35*	*1*
n-Triacontane-d62	*93*		*50 - 150*	*12/11/23 08:29*	*12/11/23 20:35*	*1*

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.060	0.0051	mg/L		12/08/23 10:55	12/18/23 16:38	1

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.060	0.0051	mg/L		12/18/23 17:27	12/19/23 12:58	1

Client: GeoEngineers Inc
Job ID: 590-22423-1
Project/Site: Bekins NW Moving & Storage/0504-200-00

Client Sample ID: DUP:120623
Lab Sample ID: 590-22423-5
Date Collected: 12/06/23 08:00
Matrix: Water
Date Received: 12/07/23 10:19

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane	ND		1.0	0.31	ug/L			12/12/23 00:34	1
Benzene	ND		0.40	0.093	ug/L			12/12/23 00:34	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/12/23 00:34	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/12/23 00:34	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			12/12/23 00:34	1
o-Xylene	ND		1.0	0.16	ug/L			12/12/23 00:34	1
Toluene	ND		1.0	0.31	ug/L			12/12/23 00:34	1
Naphthalene	ND		2.0	0.63	ug/L			12/12/23 00:34	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/12/23 00:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*80 - 120*		*12/12/23 00:34*	*1*
4-Bromofluorobenzene (Surr)	*95*		*76 - 120*		*12/12/23 00:34*	*1*
Dibromofluoromethane (Surr)	*108*		*80 - 123*		*12/12/23 00:34*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*12/12/23 00:34*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150	54	ug/L			12/12/23 00:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*68.7 - 141*		*12/12/23 00:34*	*1*

Method: SW846 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		12/11/23 12:35	12/11/23 18:44	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.23	0.11	mg/L		12/11/23 08:29	12/11/23 20:56	1
Residual Range Organics (RRO) (C25-C36)	ND		0.39	0.12	mg/L		12/11/23 08:29	12/11/23 20:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*98*		*50 - 150*	*12/11/23 08:29*	*12/11/23 20:56*	*1*
n-Triacontane-d62	*96*		*50 - 150*	*12/11/23 08:29*	*12/11/23 20:56*	*1*

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**0.015**	**J**	0.060	0.0051	mg/L		12/08/23 10:55	12/18/23 16:42	1

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.060	0.0051	mg/L		12/18/23 17:27	12/19/23 13:02	1

Client: GeoEngineers Inc
Job ID: 590-22423-1
Project/Site: Bekins NW Moving & Storage/0504-200-00

Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 590-45044/6
Matrix: Water
Analysis Batch: 45044

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane	ND		1.0	0.31	ug/L			12/11/23 18:49	1
Benzene	ND		0.40	0.093	ug/L			12/11/23 18:49	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/11/23 18:49	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/11/23 18:49	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			12/11/23 18:49	1
o-Xylene	ND		1.0	0.16	ug/L			12/11/23 18:49	1
Toluene	ND		1.0	0.31	ug/L			12/11/23 18:49	1
Naphthalene	ND		2.0	0.63	ug/L			12/11/23 18:49	1
Xylenes, Total	ND		3.0	0.44	ug/L			12/11/23 18:49	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*80 - 120*		*12/11/23 18:49*	*1*
4-Bromofluorobenzene (Surr)	*98*		*76 - 120*		*12/11/23 18:49*	*1*
Dibromofluoromethane (Surr)	*108*		*80 - 123*		*12/11/23 18:49*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*12/11/23 18:49*	*1*

Lab Sample ID: LCS 590-45044/1003
Matrix: Water
Analysis Batch: 45044

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2-Dichloroethane	10.0	10.5		ug/L		105	80 - 120
Benzene	10.0	10.5		ug/L		105	80 - 120
Ethylbenzene	10.0	10.4		ug/L		104	80 - 122
m,p-Xylene	10.0	10.6		ug/L		106	80 - 125
Methyl tert-butyl ether	10.0	11.8		ug/L		118	68 - 134
o-Xylene	10.0	10.9		ug/L		109	80 - 130
Toluene	10.0	9.61		ug/L		96	80 - 129
Naphthalene	10.0	9.65		ug/L		97	61 - 140

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*100*		*80 - 120*
4-Bromofluorobenzene (Surr)	*100*		*76 - 120*
Dibromofluoromethane (Surr)	*103*		*80 - 123*
Toluene-d8 (Surr)	*97*		*80 - 120*

Lab Sample ID: LCSD 590-45044/4
Matrix: Water
Analysis Batch: 45044

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2-Dichloroethane	10.0	10.0		ug/L		100	80 - 120	4	14
Benzene	10.0	10.2		ug/L		102	80 - 120	3	15
Ethylbenzene	10.0	9.95		ug/L		100	80 - 122	5	35
m,p-Xylene	10.0	10.0		ug/L		100	80 - 125	5	35
Methyl tert-butyl ether	10.0	11.0		ug/L		110	68 - 134	7	18
o-Xylene	10.0	10.2		ug/L		102	80 - 130	7	35
Toluene	10.0	9.31		ug/L		93	80 - 129	3	35

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 590-45044/4
Matrix: Water
Analysis Batch: 45044

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Naphthalene			10.0	9.86		ug/L		99	61 - 140	2	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*101*		*80 - 120*
4-Bromofluorobenzene (Surr)	*99*		*76 - 120*
Dibromofluoromethane (Surr)	*105*		*80 - 123*
Toluene-d8 (Surr)	*99*		*80 - 120*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Lab Sample ID: MB 590-45045/6
Matrix: Water
Analysis Batch: 45045

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150	54	ug/L			12/11/23 18:49	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*68.7 - 141*		*12/11/23 18:49*	*1*

Lab Sample ID: LCS 590-45045/1005
Matrix: Water
Analysis Batch: 45045

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline			1000	925		ug/L		92	80 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*68.7 - 141*

Lab Sample ID: LCSD 590-45045/1016
Matrix: Water
Analysis Batch: 45045

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline			1000	869		ug/L		87	80 - 120	6	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*97*		*68.7 - 141*

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC)

Lab Sample ID: MB 590-45034/1-A
Matrix: Water
Analysis Batch: 45038

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 45034

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.010	0.0025	ug/L		12/11/23 12:35	12/11/23 14:55	1

Method: 8011 - EDB, DBCP, and 1,2,3-TCP (GC) (Continued)

Lab Sample ID: LCS 590-45034/2-A
Matrix: Water
Analysis Batch: 45038

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 45034

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2-Dibromoethane (EDB)	0.125	0.111		ug/L		89	60 - 140

Lab Sample ID: LCSD 590-45034/3-A
Matrix: Water
Analysis Batch: 45038

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 45034

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2-Dibromoethane (EDB)	0.125	0.0943		ug/L		75	60 - 140	16	20

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Lab Sample ID: MB 590-45022/1-A
Matrix: Water
Analysis Batch: 45039

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 45022

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.24	0.11	mg/L		12/11/23 08:29	12/11/23 15:42	1
Residual Range Organics (RRO) (C25-C36)	ND		0.40	0.12	mg/L		12/11/23 08:29	12/11/23 15:42	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*96*		*50 - 150*	*12/11/23 08:29*	*12/11/23 15:42*	*1*
n-Triacontane-d62	*82*		*50 - 150*	*12/11/23 08:29*	*12/11/23 15:42*	*1*

Lab Sample ID: LCS 590-45022/2-A
Matrix: Water
Analysis Batch: 45039

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 45022

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Diesel Range Organics (DRO) (C10-C25)	1.60	1.55		mg/L		97	50 - 150
Residual Range Organics (RRO) (C25-C36)	1.60	1.73		mg/L		108	50 - 150

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*98*		*50 - 150*
n-Triacontane-d62	*92*		*50 - 150*

Lab Sample ID: LCSD 590-45022/3-A
Matrix: Water
Analysis Batch: 45039

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 45022

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Diesel Range Organics (DRO) (C10-C25)	1.60	1.30		mg/L		81	50 - 150	17	25
Residual Range Organics (RRO) (C25-C36)	1.60	1.53		mg/L		96	50 - 150	12	25

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: LCSD 590-45022/3-A
Matrix: Water
Analysis Batch: 45039

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 45022

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
o-Terphenyl	*90*		*50 - 150*
n-Triacontane-d62	*78*		*50 - 150*

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 590-44999/2-A
Matrix: Water
Analysis Batch: 45018

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 44999

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.060	0.0051	mg/L		12/08/23 10:54	12/08/23 14:17	1

Lab Sample ID: LCS 590-44999/1-A
Matrix: Water
Analysis Batch: 45018

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 44999

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Lead	1.00	1.06		mg/L		106	80 - 120

Lab Sample ID: MB 590-45148/2-B
Matrix: Water
Analysis Batch: 45163

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 45147

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.060	0.0051	mg/L		12/18/23 17:27	12/19/23 11:02	1

Lab Sample ID: LCS 590-45148/1-B
Matrix: Water
Analysis Batch: 45163

Client Sample ID: Lab Control Sample
Prep Type: Dissolved
Prep Batch: 45147

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Lead	0.500	0.556		mg/L		111	80 - 120

Lab Chronicle

Client: GeoEngineers Inc
Job ID: 590-22423-1
Project/Site: Bekins NW Moving & Storage/0504-200-00

Client Sample ID: B-1:120523
Lab Sample ID: 590-22423-1
Date Collected: 12/05/23 13:30
Matrix: Water
Date Received: 12/07/23 10:19

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	45044	12/11/23 23:08	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	45045	12/11/23 23:08	JSP	EET SPK
Total/NA	Prep	8011			80 mL	2 mL	45034	12/11/23 12:35	MRV	EET SPK
Total/NA	Analysis	8011		1	1 mL	1 mL	45038	12/11/23 17:23	NMI	EET SPK
Total/NA	Prep	3510C			255.6 mL	2 mL	45022	12/11/23 08:29	MRV	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	45039	12/11/23 19:32	NMI	EET SPK
Dissolved	Filtration	FILTRATION			250 mL	250 mL	45148	12/18/23 17:26	AMB	EET SPK
Dissolved	Prep	3005A			50 mL	50 mL	45147	12/18/23 17:27	AMB	EET SPK
Dissolved	Analysis	6010D		1			45163	12/19/23 12:46	AMB	EET SPK
Total Recoverable	Prep	3005A			50 mL	50 mL	44999	12/08/23 10:55	AMB	EET SPK
Total Recoverable	Analysis	6010D		1			45149	12/18/23 16:25	AMB	EET SPK

Client Sample ID: B-4:120523
Lab Sample ID: 590-22423-2
Date Collected: 12/05/23 15:30
Matrix: Water
Date Received: 12/07/23 10:19

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	45044	12/11/23 23:30	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	45045	12/11/23 23:30	JSP	EET SPK
Total/NA	Prep	8011			80 mL	2 mL	45034	12/11/23 12:35	MRV	EET SPK
Total/NA	Analysis	8011		1	1 mL	1 mL	45038	12/11/23 17:55	NMI	EET SPK
Total/NA	Prep	3510C			257.2 mL	2 mL	45022	12/11/23 08:29	MRV	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	45039	12/11/23 19:53	NMI	EET SPK
Dissolved	Filtration	FILTRATION			250 mL	250 mL	45148	12/18/23 17:26	AMB	EET SPK
Dissolved	Prep	3005A			50 mL	50 mL	45147	12/18/23 17:27	AMB	EET SPK
Dissolved	Analysis	6010D		1			45163	12/19/23 12:50	AMB	EET SPK
Total Recoverable	Prep	3005A			50 mL	50 mL	44999	12/08/23 10:55	AMB	EET SPK
Total Recoverable	Analysis	6010D		1			45149	12/18/23 16:29	AMB	EET SPK

Client Sample ID: B-3:120623
Lab Sample ID: 590-22423-3
Date Collected: 12/06/23 11:20
Matrix: Water
Date Received: 12/07/23 10:19

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	45044	12/11/23 23:51	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	45045	12/11/23 23:51	JSP	EET SPK
Total/NA	Prep	8011			80 mL	2 mL	45034	12/11/23 12:35	MRV	EET SPK
Total/NA	Analysis	8011		1	1 mL	1 mL	45038	12/11/23 18:12	NMI	EET SPK
Total/NA	Prep	3510C			259.5 mL	2 mL	45022	12/11/23 08:29	MRV	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	45039	12/11/23 20:14	NMI	EET SPK
Dissolved	Filtration	FILTRATION			250 mL	250 mL	45148	12/18/23 17:26	AMB	EET SPK
Dissolved	Prep	3005A			50 mL	50 mL	45147	12/18/23 17:27	AMB	EET SPK
Dissolved	Analysis	6010D		1			45163	12/19/23 12:54	AMB	EET SPK
Total Recoverable	Prep	3005A			50 mL	50 mL	44999	12/08/23 10:55	AMB	EET SPK
Total Recoverable	Analysis	6010D		1			45149	12/18/23 16:34	AMB	EET SPK

Lab Chronicle

Client: GeoEngineers Inc
Job ID: 590-22423-1
Project/Site: Bekins NW Moving & Storage/0504-200-00

Client Sample ID: B-2:120623
Lab Sample ID: 590-22423-4
Date Collected: 12/06/23 13:30
Matrix: Water
Date Received: 12/07/23 10:19

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	45044	12/12/23 00:13	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	45045	12/12/23 00:13	JSP	EET SPK
Total/NA	Prep	8011			43 mL	2 mL	45034	12/11/23 12:35	MRV	EET SPK
Total/NA	Analysis	8011		1	1 mL	1 mL	45038	12/11/23 18:28	NMI	EET SPK
Total/NA	Prep	3510C			256.4 mL	2 mL	45022	12/11/23 08:29	MRV	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	45039	12/11/23 20:35	NMI	EET SPK
Dissolved	Filtration	FILTRATION			250 mL	250 mL	45148	12/18/23 17:26	AMB	EET SPK
Dissolved	Prep	3005A			50 mL	50 mL	45147	12/18/23 17:27	AMB	EET SPK
Dissolved	Analysis	6010D		1			45163	12/19/23 12:58	AMB	EET SPK
Total Recoverable	Prep	3005A			50 mL	50 mL	44999	12/08/23 10:55	AMB	EET SPK
Total Recoverable	Analysis	6010D		1			45149	12/18/23 16:38	AMB	EET SPK

Client Sample ID: DUP:120623
Lab Sample ID: 590-22423-5
Date Collected: 12/06/23 08:00
Matrix: Water
Date Received: 12/07/23 10:19

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	45044	12/12/23 00:34	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	45045	12/12/23 00:34	JSP	EET SPK
Total/NA	Prep	8011			80 mL	2 mL	45034	12/11/23 12:35	MRV	EET SPK
Total/NA	Analysis	8011		1	1 mL	1 mL	45038	12/11/23 18:44	NMI	EET SPK
Total/NA	Prep	3510C			256.8 mL	2 mL	45022	12/11/23 08:29	MRV	EET SPK
Total/NA	Analysis	NWTPH-Dx		1	1 mL	1 mL	45039	12/11/23 20:56	NMI	EET SPK
Dissolved	Filtration	FILTRATION			250 mL	250 mL	45148	12/18/23 17:26	AMB	EET SPK
Dissolved	Prep	3005A			50 mL	50 mL	45147	12/18/23 17:27	AMB	EET SPK
Dissolved	Analysis	6010D		1			45163	12/19/23 13:02	AMB	EET SPK
Total Recoverable	Prep	3005A			50 mL	50 mL	44999	12/08/23 10:55	AMB	EET SPK
Total Recoverable	Analysis	6010D		1			45149	12/18/23 16:42	AMB	EET SPK

Laboratory References:
EET SPK = Eurofins Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Accreditation/Certification Summary

Client: GeoEngineers Inc
Job ID: 590-22423-1
Project/Site: Bekins NW Moving & Storage/0504-200-00

Laboratory: Eurofins Spokane

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Washington	State	C569	01-07-24

Method Summary

Client: GeoEngineers Inc
Job ID: 590-22423-1
Project/Site: Bekins NW Moving & Storage/0504-200-00

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	EET SPK
NWTPH-Gx	Northwest - Volatile Petroleum Products (GC/MS)	NWTPH	EET SPK
8011	EDB, DBCP, and 1,2,3-TCP (GC)	SW846	EET SPK
NWTPH-Dx	Northwest - Semi-Volatile Petroleum Products (GC)	NWTPH	EET SPK
6010D	Metals (ICP)	SW846	EET SPK
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET SPK
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	EET SPK
5030C	Purge and Trap	SW846	EET SPK
8011	Microextraction	SW846	EET SPK
FILTRATION	Sample Filtration	None	EET SPK

Protocol References:

None = None

NWTPH = Northwest Total Petroleum Hydrocarbon

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET SPK = Eurofins Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Eurofins Spokane
11922 E 1st Avenue

Spokane, WA 99206-5302
phone 509.924.9200 fax 509.924.9290

Chain of Custody Record

eurofins | Environment Testing America

Regulatory Program ☐ DW ☐ NPDES ☐ RCRA ☐ Other

Eurofins Environment Testing America

Client Contact	Project Manager: Justin Orr	Site Contact	Date:	COC No: 1
GeoEngineers, Inc.	Email: jorr@geoengineers.com	Lab Contact	Carrier:	1 of 2 COCs
523 E 2nd Ave	Tel/Fax: 509.570.0779			TALS Project #:
Spokane, WA 99202	Analysis Turnaround Time			Sampler:
509.363.3125 Phone	☐ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
FAX	TAT if different from Below STD			Walk-in Client.
Project Name: Bekins Yakima	☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day			Lab Sampling.
Site:				Job / SDG No.
PO# 0504-200-00				

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS/MSD (Y/N)	NWTPH-Gx	BTEX, EDB, MTBE 8260	EDB, EPA 8011	NWTPH-Dx	Total Lead 6010	Dissolved Lead 6010	Sample Specific Notes.
B-1 : 120523	12/05/23	1330	G	W	7			X	X	X	X	X	X	
B-4 : 120523	12/05/23	1530			7			X	X	X	X	X	X	
B-3 : 120623	12/06/23	1120			7			X	X	X	X	X	X	
B-2 : 120623	12/06/23	1330			5			X	X	X	X	X	X	
DUP : 120623	12/06/23	0800			7			X	X	X	X	X	X	
B-2 (5')	12/04/23	1135	G	S	3			X	X	X	X	X	X	Hold
B-2 (10')	"	1140						X	X	X	X	X	X	Hold
B-2 (15')	"	1145						X	X	X	X	X	X	Hold
B-2 (18') B-2 (18')	"	1220						X	X	X	X	X	X	Hold
DUP (20')	"	0800						X	X	X	X	X	X	Hold

Preservation Used: 1= Ice, 2= HCl, 3= H2SO4; 4=HNO3; 5=NaOH, 6= Other

Possible Hazard Identification
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assesse

☐ Return to Client ☐ Disposal by L

590-22423 Chain of Custody

Special Instructions/QC Requirements & Comments.

Custody Seals Intact. ☐ Yes ☐ No	Custody Seal No.	Cooler Temp (°C) Obs'd. 4.4	Corr'd: 4.5	Therm ID No.: IR Gun
Relinquished by:	Company: GEI	Date/Time: 12/07/23 1030	Received by:	Company: EET SPO	Date/Time: 12/7/23 10:19
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

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Regulatory Program ☐ DW ☐ NPDES ☐ RCRA ☐ Other

Eurofins Environment Testing America

Client Contact	Project Manager: Justin Orr	Site Contact:	Date	COC No: 2
GeoEngineers, Inc.	Email: jorr@geoengineers.com	Lab Contact:	Carrier:	2 of 2 COCs
523 E 2nd Ave	Tel/Fax. 509.570.0779			TALS Project #:
Spokane, WA 99202	**Analysis Turnaround Time**			Sampler:
509.363.3125 Phone	☐ CALENDAR DAYS ☐ WORKING DAYS			**For Lab Use Only**
FAX	TAT if different from Below			Walk-in Client:
Project Name: Bekins	☐ 2 weeks			Lab Sampling
Site: Yakima, WA	☐ 1 week			Job / SDG No.
PO# 0504-200-60	☐ 2 days ☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS/MSD (Y/N)	NWTPH-Gx	BTEX, EDB, MTBE 8260	EDB EPA 8011	NWTPH-Dx	Total Lead 6010	dissolved Lead 6010	Sample Specific Notes:
B-1 (5')	12/5/23	1140	G	S	3			X	X	X	X	X	X	Hold (CH)
B-1 (10')		1145						X	X	X	X	X	X	H
B-1 (15')		1150						X	X	X	X	X	X	H
B-1 (20')		1200						X	X	X	X	X	X	H
B-4 (5')		1355						X	X	X	X	X	X	H
B-4 (10')		1405						X	X	X	X	X	X	H
B-4 (12')		1415						X	X	X	X	X	X	H
B-4 (20')		1420						X	X	X	X	X	X	H
B-3 (5')	12/6/23	0920						X	X	X	X	X	X	H
B-3 (10')		0935						X	X	X	X	X	X	H
B-3 (15')		0945						X	X	X	X	X	X	H
B-3 (20')		1015						X	X	X	X	X	X	H

Preservation Used 1= Ice, 2= HCl, 3= H_2SO_4, 4=HNO_3, 5=NaOH, 6= Other

Possible Hazard Identification
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☐ Disposal by Lab ☐ Archive for ____ Months

Special Instructions/QC Requirements & Comments
Hold soil samples

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No. | Cooler Temp. (°C): Obs'd. 4.4 Corr'd: 4.5 | Therm ID No.: IR0006

	Company	Date/Time	Received by	Company	Date/Time
Relinquished by:	GEI	12/7/23 1030		EET-SPO	12/7/23 10:19
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-22423-1

Login Number: 22423
List Number: 1
Creator: Morris, Mackenzie 1

List Source: Eurofins Spokane

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	Received Trip Blank(s) not listed on COC.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	False	Did not receive all required containers.
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Data Validation Report

523 East Second Avenue, Spokane, Washington 99202, Telephone: 509.363.3125 www.geoengineers.com

Project: Bekins Northwest Moving and Storage — Environmental Assessment
December 2023 Groundwater Samples

File: 0504-200-00

Date: January 28, 2024

This report documents the results of a United States Environmental Protection Agency (USEPA)-defined Stage 2A data validation (USEPA Document 540-R-08-005; USEPA, 2009) of analytical data from the analyses of groundwater samples collected as part of the December 2023 sampling event, and the associated laboratory and field quality control (QC) samples. The samples were obtained from the Bekins Northwest Moving and Storage facility located at 1891 North Street in Yakima, Washington.

OBJECTIVE AND QUALITY CONTROL ELEMENTS

GeoEngineers, Inc. (GeoEngineers) completed the data validation consistent with the USEPA Contract Laboratory Program National Functional for Organic Superfund Methods Data Review (USEPA, 2020a) and Inorganic Superfund Methods Data Review (USEPA, 2020b) (National Functional Guidelines) to determine if the laboratory analytical results meet the project objectives and are usable for their intended purpose. Data usability was assessed by determining if:

- The samples were analyzed using well-defined and acceptable methods that provide reporting limits below applicable regulatory criteria;
- The precision and accuracy of the data are well-defined and sufficient to provide defensible data; and
- The quality assurance/quality control (QA/QC) procedures utilized by the laboratory meet acceptable industry practices and standards.

In accordance with the Quality Assurance Project Plan (QAPP), Appendix B of the Work Plan (GeoEngineers, 2023), the data validation included review of the following QC elements:

- Data Package Completeness
- Chain-of-Custody Documentation
- Holding Times and Sample Preservation
- Surrogate Recoveries
- Method Blanks
- Matrix Spikes/Matrix Spike Duplicates
- Laboratory Control Samples/Laboratory Control Sample Duplicates
- Field Duplicates

VALIDATED SAMPLE DELIVERY GROUPS

This data validation included review of the sample delivery group (SDG) listed below in Table 1.

TABLE 1. SUMMARY OF VALIDATED SAMPLE DELIVERY GROUPS

Laboratory SDG	Samples Validated
590-22423-1	B-1:120523, B-2:120623, B-3:120623, DUP:120623, B-4:120523

CHEMICAL ANALYSIS PERFORMED

Eurofins Spokane, Environment Testing Northwest, LLC (Eurofins), located in Spokane, Washington, performed laboratory analyses on the samples using the following methods:

- Gasoline-Range Hydrocarbons (NWTPH-Gx) by Method NWTPH-Gx;
- Petroleum Hydrocarbons (NWTPH-Dx) by Method NWTPH-Dx;
- Volatile Organic Compounds (VOCs) by Method EPA8260D;
- 1,2-Dibromoethane (EDB) by Method EPA8011; and
- Total and Dissolved Metals by Method EPA6010D

DATA VALIDATION SUMMARY

The results for each of the QC elements are summarized below.

Data Package Completeness

Eurofins provided the required deliverables for the data validation according to the National Functional Guidelines. The laboratory followed adequate corrective action processes and the identified anomalies were discussed in the relevant laboratory case narrative.

Chain-of-Custody Documentation

Chain-of-custody (COC) forms were provided with the laboratory analytical reports. The COCs were accurate and complete when submitted to the laboratory, with the following exception:

SDG 590-22423-1: The laboratory noted that a trip blank sample was received at the laboratory, but not listed on the COC. There were no analyses performed for this sample.

Holding Times and Sample Preservation

The sample holding time is defined as the time that elapses between sample collection and sample analysis. Maximum holding time criteria exist for each analysis to help ensure that the analyte concentrations found at the time of analysis reflect the concentration present at the time of sample collection. Established holding times were met for each analysis. The sample cooler arrived at the laboratory within the appropriate temperatures of between two and six degrees Celsius.

Surrogate Recoveries

A surrogate compound is a compound that is chemically similar to the organic analytes of interest, but unlikely to be found in an environmental sample. Surrogates are used for organic analyses and are added to the

samples, standards, and blanks to serve as an accuracy and specificity check of each analysis. The surrogates are added to the samples at a known concentration and percent recoveries are calculated following analysis. The surrogate percent recoveries for field samples were within the laboratory control limits.

Method Blanks

Method blanks are analyzed to ensure that laboratory procedures and reagents do not introduce measurable concentrations of the analytes of interest. A method blank was analyzed with each batch of samples, at a frequency of 1 per 20 samples. For each sample batch, method blanks for the applicable methods were analyzed at the required frequency. None of the analytes of interest were detected in the method blanks.

Matrix Spikes/Matrix Spike Duplicates

Since the actual analyte concentration in an environmental sample is not known, the accuracy of a particular analysis is usually inferred by performing a matrix spike (MS) analysis on one sample from the associated batch, known as the parent sample. One aliquot of the sample is analyzed in the normal manner and then a second aliquot of the sample is spiked with a known amount of analyte concentration and analyzed. From these analyses, a percent recovery is calculated. Matrix spike duplicate (MSD) analyses are generally performed for organic analyses as a precision check and analyzed in the same sequence as a matrix spike. Using the result values from the MS and MSD, the relative percent difference (RPD) is calculated. The percent recovery control limits for MS and MSD analyses are specified in the laboratory documents, as are the RPD control limits for MS/MSD sample sets.

One MS/MSD analysis should be performed for every analytical batch or every 20 field samples, whichever is more frequent. The frequency requirements were met for each analysis and the percent recovery and RPD values were within the proper control limits.

Laboratory Control Samples/Laboratory Control Sample Duplicates

A laboratory control sample (LCS) is a blank sample that is spiked with a known amount of analyte and then analyzed. An LCS is similar to an MS, but without the possibility of matrix interference. Given that matrix interference is not an issue, the LCS/LCSD control limits for accuracy and precision are usually more rigorous than for MS/MSD analyses. Additionally, data qualification based on LCS/LCSD analyses would apply to all samples in the associated batch, instead of just the parent sample. The percent recovery control limits for LCS and LCSD analyses are specified in the laboratory documents, as are the RPD control limits for LCS/LCSD sample sets.

One LCS/LCSD analysis should be performed for every analytical batch or every 20 field samples, whichever is more frequent. The frequency requirements were met for all analyses and the percent recovery and RPD values were within the proper control limits.

Field Duplicates

In order to assess precision, field duplicate samples were collected and analyzed along with the reviewed sample batches. The duplicate samples were analyzed for the same parameters as the associated parent samples. Precision is determined by calculating the RPD between each pair of samples. If one or more of the sample analytes has a concentration less than five times the reporting limit for that sample, then the absolute difference is used instead of the RPD. The RPD control limit for water samples is 30 percent.

SDG 590-22423-1: One field duplicate sample pair, B-3:120623 and DUP:120623, was submitted with this SDG. The precision criteria for the target analytes were met for this sample pair.

OVERALL ASSESSMENT

As was determined by this data validation, the laboratory followed the specified analytical methods. Accuracy was acceptable, as demonstrated by the surrogate and LCS/LCSD percent recovery values. Precision was acceptable, as demonstrated by the LCS/LCSD and field duplicate RPD values.

No analytical results were qualified. The data are acceptable for the intended use.

REFERENCES

U.S. Environmental Protection Agency (USEPA). "Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use," EPA-540-R-08-005. January 2009.

U.S. Environmental Protection Agency (USEPA) 2020a. Contract Laboratory Program National Functional Guidelines for Organic Superfund Methods Data Review, EPA-540-R-20-005. November 2020.

U.S. Environmental Protection Agency (USEPA) 2020b. Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Methods Data Review, EPA-542-R-20-006. November 2020.

GeoEngineers, Inc. (GeoEngineers). "Work Plan, Bekins Northwest Moving & Storage," prepared for Washington State Department of Ecology. November 28, 2023.

APPENDIX D
Report Limitations and Guidelines for Use

APPENDIX D
REPORT LIMITATIONS AND GUIDELINES FOR USE[1]

This Appendix provides information to help you manage your risks with respect to the use of this report.

Environmental Services Are Performed for Specific Purposes, Persons and Projects

This report has been prepared for the exclusive use of the Washington State Department of Ecology (Ecology). This report is not intended for use by others, and the information contained herein is not applicable to other sites.

GeoEngineers structures our services to meet the specific needs of our clients. For example, an environmental site assessment study conducted for a property owner may not fulfill the needs of a prospective purchaser of the same property. Because each environmental study is unique, each environmental report is unique, prepared solely for the specific client and project site. No one except Ecology should rely on this environmental report without first conferring with GeoEngineers. This report should not be applied for any purpose or project except the one originally contemplated.

This Environmental Report is Based on a Unique Set of Project-Specific Factors

This report has been prepared for the Bekins Northwest Moving & Storage (Bekins) facility located at 1891 North First Street in Yakima, Washington. GeoEngineers considered a number of unique, project-specific factors when establishing the scope of services for this project and report. Unless GeoEngineers specifically indicates otherwise, do not rely on this report if it was:

- not prepared for you,
- not prepared for your project,
- not prepared for the specific site explored, or
- completed before important project changes were made.

If important changes are made after the date of this report, GeoEngineers should be given the opportunity to review our interpretations and recommendations and provide written modifications or confirmation, as appropriate.

Reliance Conditions for Third Parties

Our report was prepared for the exclusive use of Ecology. No other party may rely on the product of our services unless we agree in advance to such reliance in writing. This is to provide our firm and Ecology with reasonable protection against open-ended liability claims by third parties with whom there would otherwise be no contractual limits to their actions. Within the limitations of scope, schedule and budget, our services have been executed in accordance with our Agreement with Ecology and generally accepted environmental practices in this area at the time this report was prepared.

[1] Developed based on material provided by ASFE, Professional Firms Practicing in the Geosciences; www.asfe.org.

Environmental Regulations are Always Evolving

Some substances may be present in the site vicinity in quantities or under conditions that may have led, or may lead, to contamination of the subject site, but are not included in current local, state or federal regulatory definitions of hazardous substances or do not otherwise present current potential liability. GeoEngineers cannot be responsible if the standards for appropriate inquiry, or regulatory definitions of hazardous substance, change or if more stringent environmental standards are developed in the future.

Uncertainty May Remain Even After This Phase II ESA is Completed

No Environmental Site Assessment (ESA) can wholly eliminate uncertainty regarding the potential for contamination in connection with a property. Our interpretation of subsurface conditions in this study is based on field observations and chemical analytical data from widely spaced sampling locations. It is always possible that contamination exists in areas that were not explored, sampled or analyzed.

Subsurface Conditions Can Change

This environmental report is based on conditions that existed at the time the study was performed. The findings and conclusions of this report may be affected by the passage of time, by manmade events such as construction on or adjacent to the site, by new releases of hazardous substances, or by natural events such as floods, earthquakes, slope instability or groundwater fluctuations. Always contact GeoEngineers before applying this report to determine if it is still applicable.

Most Environmental Findings are Professional Opinions

Our interpretations of subsurface conditions are based on field observations and chemical analytical data from widely spaced sampling locations at the site. Site exploration identifies subsurface conditions only at those points where subsurface tests are conducted, or samples are taken. GeoEngineers reviewed field and laboratory data and then applied our professional judgment to render an opinion about subsurface conditions throughout the site. Actual subsurface conditions may differ – sometimes significantly – from those indicated in this report. Our report, conclusions and interpretations should not be construed as a warranty of the subsurface conditions.

Do Not Redraw the Exploration Logs

Environmental scientists prepare final boring and testing logs based upon their interpretation of field logs and laboratory data. To prevent errors or omissions, the logs included in an environmental report should never be redrawn for inclusion in other design drawings. Only photographic or electronic reproductions are acceptable but recognize that separating logs from the report can elevate risk.

Read These Provisions Closely

Some clients, design professionals and contractors may not recognize that the geoscience practices (geotechnical engineering, geology and environmental science) are far less exact than other engineering and natural science disciplines. This lack of understanding can create unrealistic expectations that could lead to disappointments, claims and disputes. GeoEngineers includes these explanatory “limitations” provisions in our reports to help reduce such risks. Please confer with GeoEngineers if you are unclear how these “Report Limitations and Guidelines for Use” apply to your project or site.

Geotechnical, Geologic and Geoenvironmental Reports Should Not be Interchanged

The equipment, techniques and personnel used to perform an environmental study differ significantly from those used to perform a geotechnical or geologic study and vice versa. For that reason, a geotechnical engineering or geologic report does not usually relate any environmental findings, conclusions or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. Similarly, environmental reports are not used to address geotechnical or geologic concerns regarding a specific project.

Biological Pollutants

GeoEngineers' Scope of Work specifically excludes the investigation, detection, prevention or assessment of the presence of Biological Pollutants. Accordingly, this report does not include any interpretations, recommendations, findings, or conclusions regarding the detecting, assessing, preventing or abating of Biological Pollutants and no conclusions or inferences should be drawn regarding Biological Pollutants, as they may relate to this project. The term "Biological Pollutants" includes, but is not limited to, molds, fungi, spores, bacteria and viruses, and/or any of their byproducts.

If Ecology desires these specialized services, they should be obtained from a consultant who offers services in this specialized field.

GeoEngineers