



STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

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February 22, 2017

MR. ROBERT BLISS  
GENERAL SERVICES ADMINISTRATION  
400 15<sup>TH</sup> STREET SW  
AUBURN, WASHINGTON 98134

**Re: Opinion pursuant to WAC 173-340-515(5) on Proposed Remedial Action for the following Hazardous Waste Site:**

- **Site Name:** GSA Federal Center S Bldg 1206
- **Site Address:** 4735 E. Marginal Way S., Bldg 1206, Seattle, Washington
- **Facility/Site ID No.:** 18866
- **VCP Project No.:** NW2930
- **Cleanup Site ID No.:** 12493

Dear Mr. Bliss:

Thank you for submitting documents regarding your proposed remedial action for the **GSA Federal Center S Bldg 1206** facility (Site) for review by the Washington State Department of Ecology (Ecology) under the Voluntary Cleanup Program (VCP). Ecology appreciates your initiative in pursuing this administrative option for cleaning up hazardous waste sites under the Model Toxics Control Act (MTCA), Chapter 70.105D RCW.

This letter constitutes an advisory opinion regarding a review of submitted documents/reports pursuant to requirements of MTCA and its implementing regulations, Chapter 70.105D RCW and Chapter 173-340 WAC, for characterizing and addressing the following release(s) at the Site:

- Total petroleum hydrocarbons in the diesel- (TPH-D) and heavy oil- (TPH-O) ranges and carcinogenic polycyclic aromatic hydrocarbons (cPAHs) into the Soil

Ecology is providing this advisory opinion under the specific authority of RCW 70.105D.030(1)(i) and WAC 173-340-515(5).

This opinion does not resolve a person's liability to the state under MTCA or protect a person from contribution claims by third parties for matters addressed by the opinion. The state does

not have the authority to settle with any person potentially liable under MTCA except in accordance with RCW 70.105D.040(4). The opinion is advisory only and not binding on Ecology.

Ecology's Toxics Cleanup Program has reviewed the following information regarding your proposed remedial actions:

1. Kane Environmental Inc., 2016. *Groundwater Quality Monitoring Report #4, Fall 2016, Federal Center South Underground Storage Tank*. October 5.
2. Kane Environmental Inc., 2016. *Memorandum, Federal Center Underground Storage Tank*. October 5.
3. Riley Group, Inc., 2014. *Underground Storage Tank Closure Report, Federal Center South, 4735 East Marginal Way South, Seattle, Washington 98134*. July 23.
4. EHS International, 2011. *U.S. General Services Administration Federal Center South Underground Storage Tank Assessment Final*. October 5.

The documents listed above are kept in the Central Files of the Northwest Regional Office of Ecology (NWRO) for review by appointment only. You can make an appointment by calling the NWRO resource contact at (425) 649-7235 or sending an email to: [nwro\\_public\\_request@ecy.wa.gov](mailto:nwro_public_request@ecy.wa.gov).

This opinion is void if any of the information contained in those documents is materially false or misleading.

The Site is defined by the extent of contamination caused by the following release(s):

- Total petroleum hydrocarbons in the diesel- (TPH-D) and heavy oil- (TPH-O) ranges and carcinogenic polycyclic aromatic hydrocarbons (cPAHs) into the Soil

The Site is more particularly described in Enclosure A to this letter, which includes a detailed Site diagram. The description of the Site is based solely on the information contained in the documents listed above.

Based on a review of supporting documentation listed above, pursuant to **requirements contained in MTCA and its implementing regulations, Chapter 70.105D RCW and Chapter 173-340 WAC, for characterizing and addressing the following release(s) at the Site, Ecology has determined:**

- Comments in Ecology's March 4, 2015 opinion letter were not addressed in the report and memorandum dated October 5, 2016. The issues identified in the letter need to

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be resolved to fully understand and characterize the Site prior to any determinations can be made by Ecology.

- The ground water monitoring report needs to include groundwater contour maps with a note that tidal influence on ground water is likely.
- Please include boring logs for monitoring wells KMW-1 through KMW-4 in the report.

**This opinion does not represent a determination by Ecology that a proposed remedial action will be sufficient to characterize and address the specified contamination at the Site or that no further remedial action will be required at the Site upon completion of the proposed remedial action.** To obtain either of these opinions, you must submit appropriate documentation to Ecology and request such an opinion under the VCP. **This letter also does not provide an opinion regarding the sufficiency of any other remedial action proposed for or conducted at the Site.**

Please note that this opinion is based solely on the information contained in the documents listed above. Therefore, if any of the information contained in those documents is materially false or misleading, then this opinion will automatically be rendered null and void.

The state, Ecology, and its officers and employees make no guarantees or assurances by providing this opinion, and no cause of action against the state, Ecology, its officers or employees may arise from any act or omission in providing this opinion.

Again, Ecology appreciates your initiative in conducting independent remedial action and requesting technical consultation under the VCP. As the cleanup of the Site progresses, you may request additional consultative services under the VCP, including assistance in identifying applicable regulatory requirements and opinions regarding whether remedial actions proposed for or conducted at the Site meet those requirements.

If you have any questions regarding this opinion, please contact me at (425) 649-7064 or [hvic461@ecy.wa.gov](mailto:hvic461@ecy.wa.gov).

Sincerely,

A handwritten signature in cursive script that reads "Heather Vick".

Heather Vick, LHg  
NWRO Toxics Cleanup Program

Enclosures: (1) A Description and Diagrams of the Site

cc: John Kane, Kane Environmental, Inc.  
Sonia Fernandez, VCP Coordinator, Ecology

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## **Enclosure A**

### **Description and Diagrams of the Site**

## Site Description

*This section provides Ecology's understanding and interpretation of Site conditions, and is the basis for the opinions expressed in the body of the letter.*

**Site:** The Site is defined as total petroleum hydrocarbons in the diesel (TPH-D) and oil ranges (TPH-O) in soil at 4735 East Marginal Way South in Seattle, Washington (Property). The Property corresponds to King County tax parcel number 3573200975 which is 32.99 acres in size. The Site is located in the southeastern portion of the Property. The Property is also the location of another VCP site, NW2177, which is located in the northwestern portion of the Property.

**Area and Property Description:** The Property is located in the Duwamish Waterway area of south Seattle. The Property contains a 424,367-square foot masonry building that was constructed in 1931. Other industrial operations extend both north and south along the Duwamish Waterway shoreline and eastward across East Marginal Way South. Three underground storage tanks (USTs) were formally located east of Building 1206 which is in the southeast corner of the Property (see Figure 1 in the Site Diagrams). Two abandoned rail spurs are located east of the USTs.

**Property History and Current Use:** The Property and surrounding area were originally a tidal marsh near the mouth of the Duwamish River. Fill placement has created the current land surface, and the river was straightened and channelized in the early 1900s to become the Duwamish Waterway. In 1930, the Ford Motor Company (Ford) built an automobile manufacturing plant on the Property consisting of Building 1201. In 1940, Ford released the Property to the U.S. Government and it became the Seattle Quartermaster Depot and Army Port of Embankment. Shortly after, the 1202 building was constructed on the Property and the Army Corps of Engineers took over activities at the Property. In 1957, the U.S. Air Force took over the Property to begin manufacturing the supersonic, self-guided nuclear-tipped "BOMARC" interceptor missile. ACOE moved back into the 1201 building in 1974. In the following years, Building 1202 became a major storage and shipment facility for the Alaska Native Corporation. Building 1202 was also used for final assembly of the AMTRAK Cascades high-speed rail cars. Building 1203 was constructed in 1969 and used for a motor pool. Building 1206 was part of the original Ford motor plant complex and was formerly designated as an 'oil house'. Fuel for steam heat was routed through Building 1206 to Building 1201 where the boilers were formerly located.

In 2012, the northern portion of Building 1202 was demolished in order to construct a new building which is called the Federal Central South Building 1202; Building 1203 was also demolished at that time. The southern half of Building 1202 was later demolished and is currently a concrete slab only. Building 1201 is currently used for offices. Building 1206 housed the Bureau of Indian Affairs until 2014. The U.S. Army Corps of Engineers (ACOE) is currently headquartered in the new 1202 building. The Property is currently used for warehousing and offices.

**Sources of Contamination:** Sources of contamination on the Site include three 30,000-gallon USTs that were installed by Ford in 1930. The three USTs were numbered with the

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northernmost being UST1 and the southernmost being UST3 as shown in Figure 2 of the attached Site Diagrams. Multiple former piping runs between the USTs and Building 1206, west of the USTs, are also considered potential sources of contamination on the Site. The three USTs, which were located just east of Building 1206, were first used to store bunker C oil used for boilers in Building 1201. The USTs were later used to store heating oil. The USTs were most likely last used in the 1970s and 1980s. The boilers in Building 1201 currently use natural gas as fuel. Analysis of the UST contents prior to removal indicated that primarily total petroleum hydrocarbons in the diesel range (TPH-D) with minor amounts of TPH in the oil range (TPH-O) were present. The USTs and related appurtenances on the Property were removed in March 2014.

**Physiographic Setting:** The Site is located within the Puget Sound Lowland physiographic province, a north-south trending structural and topographic depression that is bordered on its west side by the Olympic Mountains, and to the east by the Cascade Mountain foothills. The Puget Sound Lowland is underlain by Tertiary volcanic and sedimentary bedrock, and has been filled to the present day land surface with Pleistocene glacial and nonglacial sediments.

**Surface/Storm Water System:** The closest surface water body to the Site is the Duwamish Waterway located immediately west of the Site. Storm water runoff on and in the vicinity of the Property disperses via sheet flow to catch basins connected to the City of Seattle stormwater system.

**Ecological Setting:** Limited wildlife habitat exists along the eastern shoreline of the Duwamish Waterway. More extensive terrestrial habitat exists in a small park, Terminal 108 Park, located immediately north of the Property, and in the larger Kellogg Island situated mid-stream across from the Site. The island is about 1,000 feet west of the Site.

**Geology:** Soil within the UST excavation consisted primarily of sand (fill) which was underlain by a silt layer at approximately 14 feet bgs.

**Ground Water:** Ground water occurs within the base of the fill and in the underlying alluvium under generally unconfined (water table) conditions. The depth to water varies seasonally and with the tide, ranging from 5 to 6 feet below ground surface. The ground water flow direction is most likely to the west towards the waterway, except at high tide when some flow reversal occurs in the northwestern portion of the Site.

**Water Supply:** The Property is supplied with water from the City of Seattle which obtains drinking water from the Cedar and Tolt River watersheds. No water supply wells are located in the area according to Ecology's well log database.

**Release and Extent of Soil and Ground Water Contamination:**

*Soil:* The three 30,000-gallon USTs were decommissioned and removed from the Property in

March 2014. The USTs were pumped, rinsed and inerted prior to removal. Following removal of the three USTs, soil was overexcavated in the area that formerly contained the USTs. The excavation was divided into two areas, Area 1 and Area 2. Area 1 was located immediately northwest of the three USTs (see Figure 2 in the Site Diagrams) and contained a former broken line. Area 1 was excavated to a maximum depth of 9 feet bgs. Area 2 contained the three USTs and was excavated to a maximum depth of 12 feet bgs. Soil samples collected during the excavation work were mostly analyzed for TPH-D and TPH-O; selected soil samples were analyzed for benzene, toluene, ethylbenzene and xylenes as well as volatile organic compounds and naphthalene.

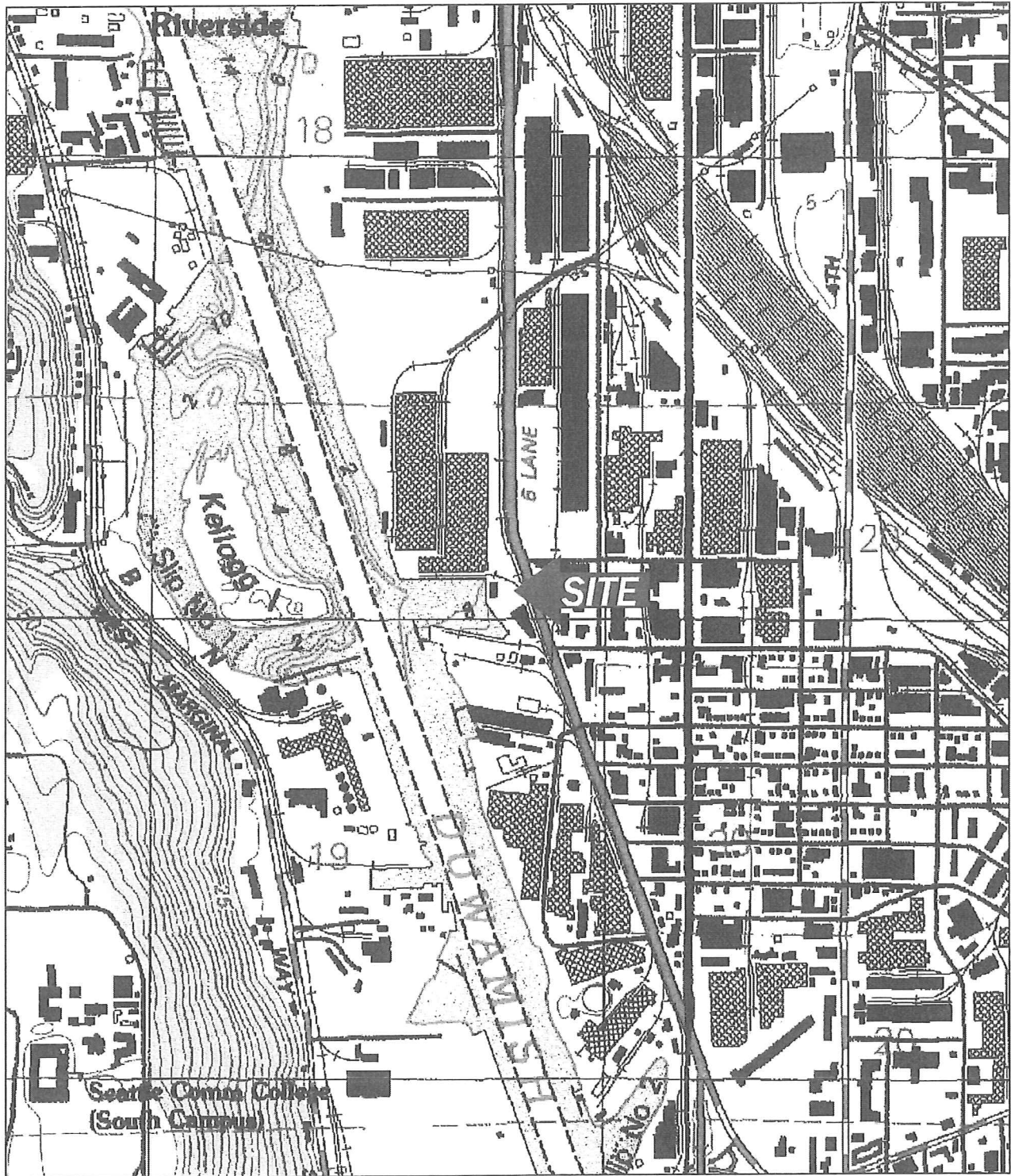
In December 2013, soil overlying the USTs was first removed and sampled as was soil underlying some of the fuel piping. A total of 23 soil characterization samples were collected and submitted for analysis.

The three USTs were removed in March 2014. The bottoms of the three USTs were submerged in water that occurred at approximately 13 feet bgs. Seven sidewall soil samples (UA-4 through UA-9; UA-11) were collected in the excavations above the level of the water. A soil sample was collected from beneath each of the former UST locations (UA-1B through UA-3B); these samples were collected below the level of the water in the excavation. Nine of the ten soil samples contained no detectable petroleum hydrocarbons above laboratory detection limits. Only sidewall soil sample UA-8W:12 contained 1,700 mg/kg of TPH-D, which is below the Method A cleanup level.

*Ground Water:* In November 2015, four monitoring wells were installed on the Site, three (KMW-1 through KMW-3) within the UST excavation backfill and one (KMW-4) to the west of the UST excavation. The monitoring wells were installed to depths of 14 to 20 feet. The wells were sampled quarterly from December 2015 to September 2016 constituting four consecutive quarters. The samples were analyzed for TPH-D and TPH-O. Only TPH-O was detected in all of the wells at concentrations up to 411 micrograms per liter ( $\mu\text{g/L}$ ), not exceeding the MTCA Method A cleanup level of 500  $\mu\text{g/L}$ .

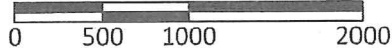
## Site Diagrams





USGS, 1983, Seattle South, Washington  
7.5-Minute Quadrangle

Approximate Scale: 1"=1000'



Corporate Office  
17522 Bothell Way Northeast  
Bothell, Washington 98011  
Phone: 425.415.0551  
Fax: 425.415.0311

GSA Federal Center South Building

Figure 1

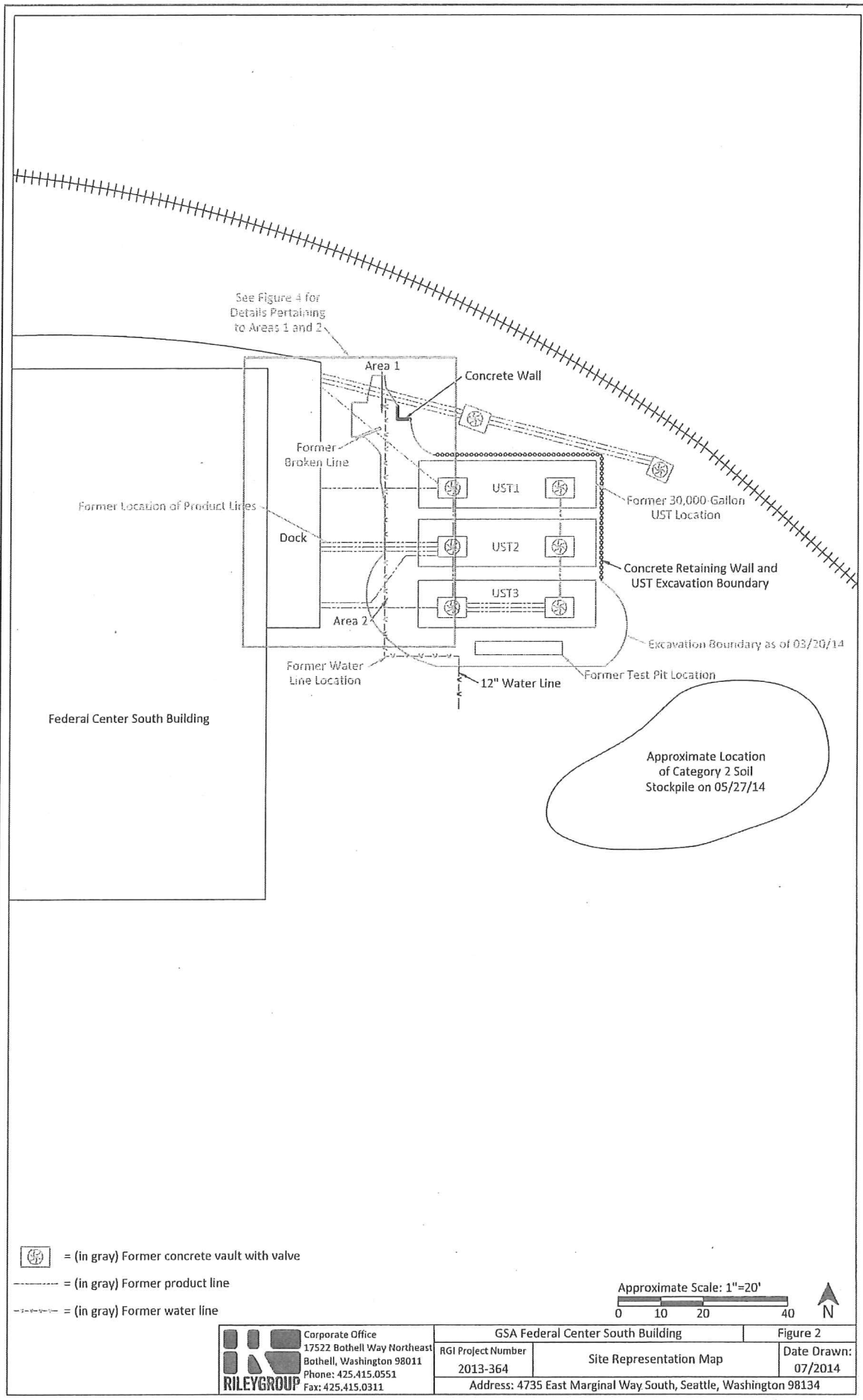
RGI Project Number  
2013-364

Site Vicinity Map

Date Drawn:  
07/2014

Address: 4735 East Marginal Way South, Seattle, Washington 98134



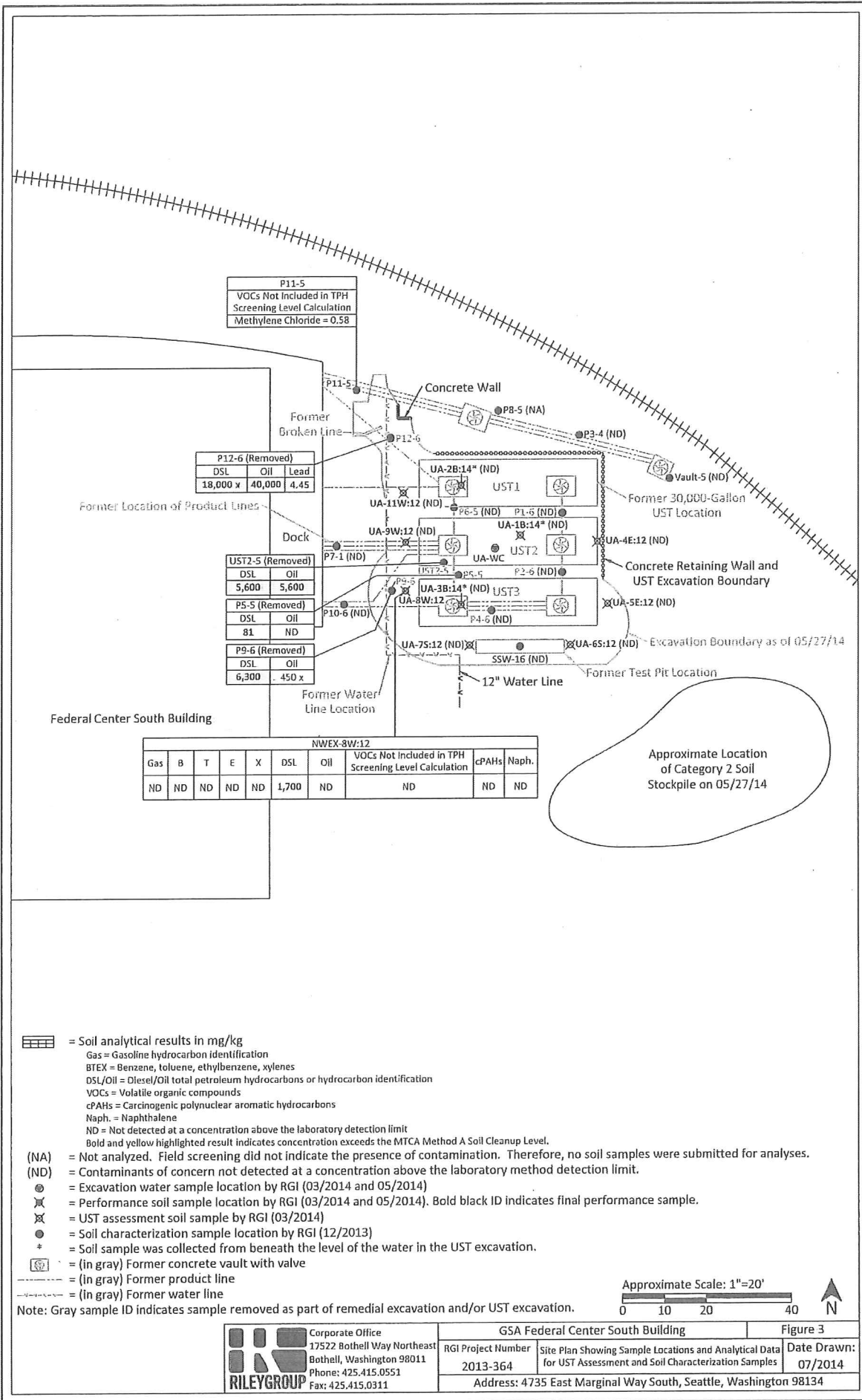


**RILEYGROUP**  
 Corporate Office  
 17522 Bothell Way Northeast  
 Bothell, Washington 98011  
 Phone: 425.415.0551  
 Fax: 425.415.0311

GSA Federal Center South Building  
 RG1 Project Number  
 2013-364  
 Site Representation Map  
 Address: 4735 East Marginal Way South, Seattle, Washington 98134

Figure 2  
 Date Drawn:  
 07/2014





P11-5			
VOCs Not Included in TPH Screening Level Calculation			
Methylene Chloride = 0.58			

P12-6 (Removed)			
DSL	Oil	Lead	
18,000 x	40,000	4.45	

UST2-5 (Removed)	
DSL	Oil
5,600	5,600

P5-5 (Removed)	
DSL	Oil
81	ND

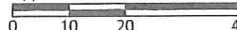
P9-6 (Removed)	
DSL	Oil
6,300	450 x

NWEX-8W:12									
Gas	B	T	E	X	DSL	Oil	VOCs Not Included in TPH Screening Level Calculation	cPAHs	Naph.
ND	ND	ND	ND	ND	1,700	ND	ND	ND	ND

- = Soil analytical results in mg/kg
- Gas = Gasoline hydrocarbon identification
- BTEX = Benzene, toluene, ethylbenzene, xylenes
- DSL/Oil = Diesel/Oil total petroleum hydrocarbons or hydrocarbon identification
- VOCs = Volatile organic compounds
- cPAHs = Carcinogenic polynuclear aromatic hydrocarbons
- Naph. = Naphthalene
- ND = Not detected at a concentration above the laboratory detection limit
- Bold and yellow highlighted result indicates concentration exceeds the MTCA Method A Soil Cleanup Level.
- (NA) = Not analyzed. Field screening did not indicate the presence of contamination. Therefore, no soil samples were submitted for analyses.
- (ND) = Contaminants of concern not detected at a concentration above the laboratory method detection limit.
- = Excavation water sample location by RGI (03/2014 and 05/2014)
- ⊗ = Performance soil sample location by RGI (03/2014 and 05/2014). Bold black ID indicates final performance sample.
- ⊗ = UST assessment soil sample by RGI (03/2014)
- = Soil characterization sample location by RGI (12/2013)
- ⊕ = Soil sample was collected from beneath the level of the water in the UST excavation.
- = (in gray) Former concrete vault with valve
- = (in gray) Former product line
- = (in gray) Former water line

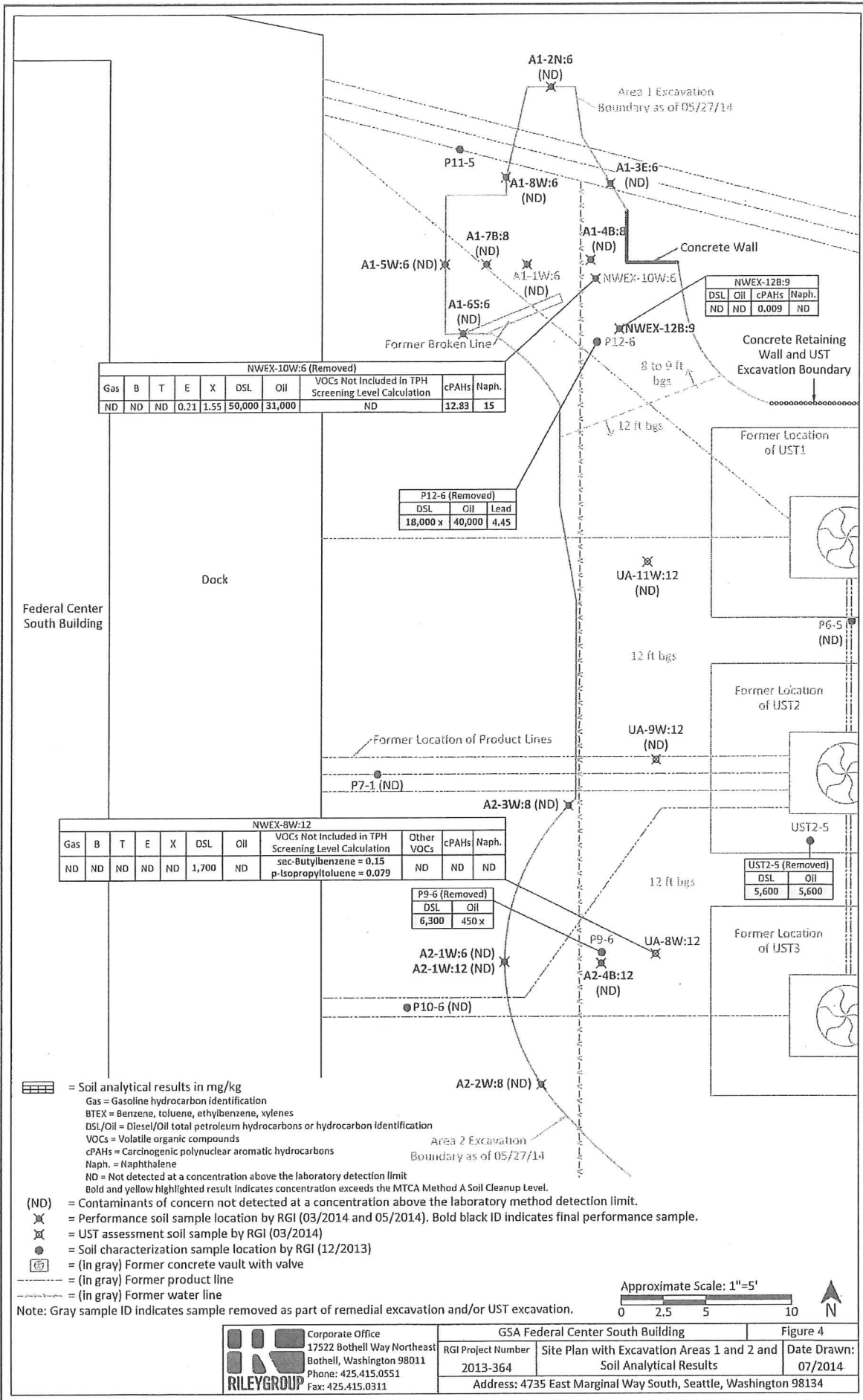
Note: Gray sample ID indicates sample removed as part of remedial excavation and/or UST excavation.

Approximate Scale: 1"=20'



	Corporate Office		GSA Federal Center South Building		Figure 3
	17522 Bothell Way Northeast		RGI Project Number	Site Plan Showing Sample Locations and Analytical Data	Date Drawn:
	Bothell, Washington 98011		2013-364	for UST Assessment and Soil Characterization Samples	07/2014
Phone: 425.415.0551		Address: 4735 East Marginal Way South, Seattle, Washington 98134			
Fax: 425.415.0311					

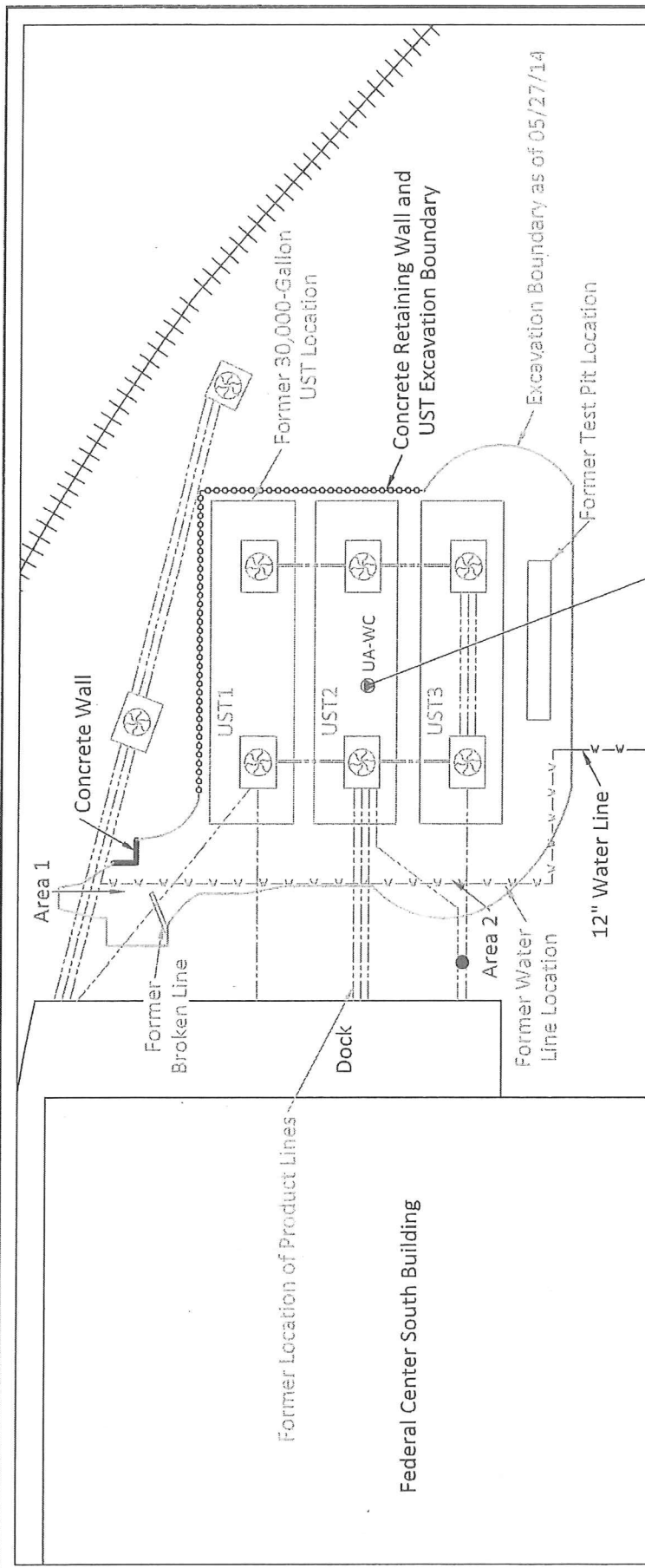




**RILEYGROUP**  
 Corporate Office  
 17522 Bothell Way Northeast  
 Bothell, Washington 98011  
 Phone: 425.415.0551  
 Fax: 425.415.0311

**GSA Federal Center South Building**  
 RGI Project Number: 2013-364  
 Site Plan with Excavation Areas 1 and 2 and Soil Analytical Results  
 Date Drawn: 07/2014  
 Address: 4735 East Marginal Way South, Seattle, Washington 98134





= Excavation water analytical results in ug/L

- Gas = Gasoline hydrocarbon identification
- BTEX = Benzene, toluene, ethylbenzene, xylenes
- DSL/Oil = Diesel/Oil total petroleum hydrocarbons
- cPAHs = Carcinogenic polynuclear aromatic hydrocarbons
- VOCs = Volatile organic compounds
- ND = Not detected at a concentration above the laboratory detection limit
- = Not analyzed

**Bold and yellow highlighted result indicates concentration exceeds the MTCA Method A Cleanup Level for Ground Water.**

(in blue) Excavation water sample location by RGJ (03/2014 and 05/2014)

= Sample UA-WC was collected at time of removal of UST 2 while the other two USTs remained in place.

The estimated depth to water was not consistent with the depth observed after removal of all the USTs (approximately 10 feet bgs).

(in gray) Former concrete vault with valve

(in gray) Former product line

(in gray) Former water line

Date	Depth to Water	UA-WC			
		Gas	BTEX	Total DSL/Oil	Other VOCs
05/16/14	~10	---	---	1,800	ND
03/18/14	~13	ND	ND	530	ND



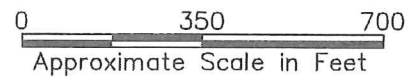
 <b>RILEYGROUP</b>	Corporate Office 17522 Bothell Way Northeast Bothell, Washington 98011 Phone: 425.415.0551 Fax: 425.415.0311	GSA Federal Center South Building RGI Project Number <b>2013-364</b> Address: 4735 East Marginal Way South, Seattle, Washington 98134	Figure 5 Date Drawn: <b>07/2014</b>
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LEGEND

——— Approximate Location of Property Boundary



Project No. 78901

**Federal Center South**  
4735 East Marginal Way South  
Seattle, Washington

**Figure 2**  
Site Plan



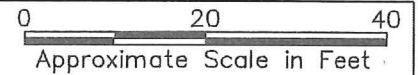
KMW-4			
Date	DRO	RRO	DRO + RRO
2015/12/04	ND	411	411
2016/03/09	ND	166	166
2016/06/09	ND	ND	ND
2016/09/19	ND	156	156






KMW-3			
Date	DRO	RRO	DRO + RRO
2015/12/04	ND	175	175
2016/03/09	ND	187	187
2016/06/09	ND	ND	ND
2016/09/19	ND	110	110

KMW-1			
Date	DRO	RRO	DRO + RRO
2015/12/04	ND	311	311
2016/03/09	ND	ND	ND
2016/06/09	ND	ND	ND
2016/09/19	ND	192	192

KMW-2			
Date	DRO	RRO	DRO + RRO
2015/12/04	ND	254	254
2016/03/09	ND	ND	ND
2016/06/09	ND	ND	ND
2016/09/19	ND	239	239

LEGEND



-  Extent of 2014 Riley Group UST Excavation
-  Underground Retaining Wall
-  Groundwater Monitoring Well
-  Heavy Oil Exceedance, Groundwater, 2014 Riley Group
-  Former UST

All locations are approximate.



Project No. 78901

Federal Center South  
4735 East Marginal Way South  
Seattle, Washington

Figure 3  
Quarterly Monitoring  
Analytical Results

