STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
Northwest Regional Office • 3190 160th Ave SE • Bellevue, WA 98008-5452 • 425-649-7000
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August 8, 2013

Mr. Troy White
Seattle Public Schools
PO Box 34165, MS 23-361
Seattle, WA 98124-1165

Re: SITE HAZARD ASSESSMENT: Facility Site ID 82825487
Seattle School Dist John
2445 3rd Ave S
Seattle, WA 98134
Property Tax # 7666205235
Cleanup Site ID 6720

Dear Mr. White:

The Washington State Department of Ecology (Ecology) is writing to inform you that the above referenced property was subject to a site hazard assessment (SHA) as required under the Model Toxics Control Act, on 6/28/2013. The site was determined to be contaminated with gasoline, diesel, cPAHs and lead. The site's hazard ranking, an estimation of the potential threat to human health and/or the environment relative to all other Washington state sites assessed at this time, has been determined by Ecology to be a 4, where a 1 represents the highest relative risk and 5 the lowest.

For your information, Ecology will be publishing ranking of this, and other recently assessed sites, in the August 2013 Special Issue of the Site Register. The hazard ranking will be used in conjunction with other considerations in determining Ecology's priority for future action at this site.

For inquiries regarding what may occur with your site now that it is on Ecology's Hazardous Sites List please contact Donna Musa at (425) 649-7136 or donna.musa@ecy.wa.gov.

Sincerely,

Donna Musa
Site Hazard Assessments
Toxics Cleanup Program

cc: Ted Benson, Ecology (ted.benson@ecy.wa.gov)

SITE HAZARD ASSESSMENT
Worksheet 1
Summary Score Sheet

SITE INFORMATION:

Cleanup Site ID: 6720

Seattle School Dist John Stanford Center

Facility/Site ID: 82825487

2445 3rd Ave S

Seattle, King County, WA 98134

Section:	8	Latitude:	47.58068
Township:	24N	Longitude:	-122.33093
Range:	4E	Tax/Parcel ID:	7666205235

Site Scored/ranked for the August 2013 Hazardous Sites List Publication

SITE DESCRIPTION:

The Seattle School Dist John Stanford Center site is a former USPS mail terminal located in Seattle, King County, Washington. The 6.92-acre property is located approximately 2500 feet from Duwamish Waterway, and zoned for general industrial (IG1 U/85) use.

Adjoining properties include BNSF railroad tracks to the west, a parking lot to the north, and Pacific Galleries Antique Mall and Rabanco Recycling to the south. Properties located east of the site include King county Transit service center (northeast), restaurants and retail stores including a Shell service station (east) and Pep Boys auto parts (southeast).

The site is currently operated as a Seattle Public Schools administrative offices by Seattle Public Schools.

The current use of the property listed by the King County Department of Assessments is "office building".

The Puget Sound Initiative was established by the Governor's office in 2007 with the goal of restoring the health of Puget Sound by 2020. A leading source of pollution to Puget Sound is contaminated sites around its shorelines. Ecology's Toxics Cleanup Program has identified contaminated sites within one-half mile of the Sound. This site is a Puget Sound Initiative site.

SITE BACKGROUND:

A summary of prior operations/tenants at the subject property is presented below.

From	To	Operator/Tenant	Activity
	2013	Seattle Public Schools	Administrative Offices
		United States Postal Service	USPS Mail Terminal

SITE CONTAMINATION:

In 1990 the Seattle School Dist John Stanford Center site was reported to Washington Department of Ecology and placed on the LUST list with ID number 805.

Releases to the subsurface from multiple USTs and hydraulic lifts have been identified at the site. Most of the USTs (gasoline, diesel, waste oil) were located in the northern portion of the site near the former Vehicle Maintenance Facility (VMF) building, but one (heating oil) was located west of the main building. The hydraulic hoists are located inside the VMF building. Oil-water separators associated with the VMF building are also suspected to have contributed to subsurface impacts.

In 1983, a release from an 8,000-gallon gasoline UST located in the northeastern portion of the site (east of the main building and south of the VMF building) was identified and the UST was taken out of service. The UST was removed in 1988 along with a second 8,000-gallon gasoline UST. In 1984, a release from an 8,000-gallon diesel UST in the same area was identified and the UST was taken out of service. The diesel UST was also removed in 1988 and replaced with a new 12,000-gallon diesel UST. The 12,000-gallon diesel UST was subsequently removed in 1994 (no release identified).

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A release from an 8,000-gallon heating oil UST located west of the main site building was identified in 1991. The UST was removed and replaced with a new 6,000-gallon heating oil UST.

In 1994, a 550-gallon waste oil UST and two oil-water separators were removed from the site. The UST and oil-water separators were located south of the VMF building and northwest of the gasoline and diesel UST area.

A soil and groundwater investigation conducted in 1998 included soil sampling at 26 soil borings advanced at five areas of concern identified in a 1997 Phase I ESA, collection of reconnaissance groundwater samples at select boring locations, and collection of groundwater samples from 12 existing site monitoring wells. The five areas of concern included the previous UST removal areas described above plus a former culvert excavation area located near the western property margin south of the VMF building, an area near a paint booth and oil-water separator (installed in 1994 after removal of the previous oil-water separators) located at the western end of the VMF building, and a hydraulic lift area located inside the VMF building north of the former waste oil UST removal area.

The results of the 1998 investigation identified impacts to soil and groundwater primarily at the former gasoline, diesel, and waste oil UST areas and hydraulic lift area, but also at other locations. Two soil samples collected west of the former gasoline/diesel UST area contained diesel (2,670 mg/kg) and oil (7,820 mg/kg) TPH at concentrations above MTCA Method A cleanup levels. A groundwater sample collected from well MW-2A (south of the former gasoline/diesel UST area) contained oil-range TPH at 1.8 mg/l, above the MTCA Method A cleanup level.

Reconnaissance groundwater sample results from the 1998 investigation indicated potential exceedences of MTCA cleanup levels for diesel- and oil-range TPH, PCBs (Aroclor 1260), and vinyl chloride. Diesel-range TPH was detected at concentrations above cleanup levels (1.23 mg/l) in a reconnaissance groundwater sample collected west of the hydraulic hoist area. Oil-range TPH was detected at concentrations above cleanup levels (up to 18.1 mg/l) in reconnaissance groundwater samples collected in the area between the main building and VMF building including one sample collected near the western property boundary. PCB Aroclor 1260 was also detected in the sample collected near the western property boundary at a concentration of 0.213 ug/l, above the MTCA Method A cleanup level. Vinyl chloride was detected in one reconnaissance groundwater sample collected south of the paint booth area (west end of VMF building) at a concentration of 1.31 ug/l, above the MTCA Method A cleanup level.

An additional investigation performed in 1988 included collection of soil and groundwater samples from eight soil borings advanced around the hydraulic hoists in the VMF building and to the west of the former waste oil UST and oil-water separators removed in 1994. Oil-range TPH was detected in soil samples in the hydraulic hoist area at concentrations up to 28,000 mg/kg and in reconnaissance groundwater samples up to 183 mg/l. Oil-range TPH was also detected in reconnaissance groundwater samples collected west of the former waste oil UST area at concentrations up to 4.5 mg/l.

PAST REMEDIATION ACTIVITIES:

A groundwater treatment/product recovery system was installed in the gasoline/diesel UST area in June 1997 and was operated until January 1998. A total of 2,300 gallons of product was reportedly recovered before the system was shut down. During the 1994 removal of the 12,000-gallon diesel UST, approximately 5 cubic yards of soil was removed from the site. No indication of additional soil excavation or other remedial actions were identified for the gasoline/diesel UST area. Groundwater samples collected from monitoring wells in 1994 contained benzene (up to 180 ug/l) and lead (up to 2,700 ug/l) at concentrations above MTCA Method A cleanup levels. An excavation water sample collected during removal of the 12,000-gallon diesel UST in 1994 contained gasoline-, diesel-, and oil-range TPH and BTEX at concentrations above MTCA Method A cleanup levels.

Remedial activities at the waste oil UST area were performed in 1994 and included excavation and offsite disposal of 693 tons of affected soil. Soil impacts remained at the northern side of the excavation (southern margin of the VMF building) and included gasoline (up to 110 mg/kg) and oil-range TPH (up to 3,300 mg/kg) in addition to low concentrations of cis-1,2 dichloroethene (12 ug/kg), trichloroethene (1.4 ug/kg) and tetrachloroethene (1.1 ug/kg). A water sample collected from the excavation contained diesel (2.8 mg/l), PAHs (21.34 ug/l) including benzo(a)pyrene (2.3 ug/l), and low concentrations of benzene and xylenes (both 1.6 ug/l).

During removal of the 8,000-gallon heating oil UST located west of the main site building in 1991 a total of 137

cubic yards of affected soil was excavated and disposed offsite. In addition, 2,500 gallons of water (with some free product) was pumped from the excavation. Diesel-range TPH concentrations were below MTCA cleanup levels for soil and excavation water samples collected following remedial activities.

Soil was also excavated at the location of a culvert discovered near the western property boundary between the main building and the VMF building. Samples collected prior to excavation contained TPH (up to 340 mg/kg) and PCBs (up to 0.634 mg/kg). One sample collected after excavation contained oil-range TPH at 730 mg/kg. A total of 624 tons of affected soil was excavated from the culvert area and disposed offsite.

CURRENT SITE CONDITIONS:

Ecology issued a conditional no-further-action (NFA) determination in 1999 which included a Restrictive Covenant for soil in the hydraulic lift area and for groundwater site-wide. The NFA also required annual groundwater monitoring for cPAHs until concentrations below MTCA Method B cleanup levels are documented for four consecutive annual monitoring events.

Ecology performed a Periodic Review in April 2011 and concluded that the cleanup actions performed at the site appeared to be protective of human health and the environment. Ecology indicated that although soil cleanup levels have not been met at some locations at the site (primarily the hydraulic lift area, but also at other locations), the Restrictive Covenant is effectively preventing exposure to hazardous substances and protecting the integrity of the cleanup action. However, Ecology indicated that site groundwater may not be in compliance with cleanup standards and the 1999 NFA determination because annual monitoring for cPAHs appears to have ceased before compliance (based on the conditions of the NFA) could be determined.

The most recent groundwater data available is for samples collected in November 2011. At well MW-3, located near the northeast corner of the main site building, cPAHs were detected at concentrations above MTCA Method B cleanup level of 0.012 ug/l including benzo(b)fluoranthene (0.027 ug/l) and benzo(a)pyrene (0.027 ug/l). The 2011 Groundwater Monitoring Report suggests that the cPAHs concentrations may be related to proximity to treated support pilings beneath the main site building rather than to the previous releases of hazardous materials.

In March 2012, based on the Periodic Review, Ecology rescinded the NFA status for the site. Although Ecology concurred that the cPAHs detected in well MW-3 may be related to proximity to the treated support pilings, the connection had not been proved.

Five other Ecology cleanup sites are located on properties which adjoin the subject site. The King County Metro Transit site (CSID 5146) is located northeast of the site with reported impacts to soil, groundwater, and surface water from THP (gasoline, diesel, other), solvents, benzene, metals, and PCBs. This King County Metro Transit is located upgradient from the subject site and could potentially impact the subject site. The other four sites do not appear to present an environmental concern for the subject site. The Exxon Station 7-9532 (CSID 11226) site is located east of the subject property and has an NFA status for remediated TPH (gasoline, other) and benzene in soil. The Pyramid Tire site (CSID 8351) is located southeast of the subject site (cross-gradient) and is a LUST site with TPH-gasoline and benzene impacts reported for soil. The Western Petroleum site (CSID 8010) is located south of the subject site (cross-gradient) and has an NFA status for TPH (diesel, other) in soil and groundwater. The BNR Occidental Street site (CSID 9471) is located west-southwest of the subject site (down-gradient) and is a LUST site with TPH-other reported in soil and groundwater.

The approximate depth to groundwater is 8 feet below ground surface, with groundwater flowing to the west. Subsurface soils are silty sand and clayey silt.

SPECIAL CONSIDERATIONS:

Checked boxes indicate routes applicable for WARM scoring

☐ **Surface Water**

Releases were to the subsurface only.

☑ **Air**

☑ **Groundwater**

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Worksheet 1
Summary Score Sheet

ROUTE SCORES:

Surface Water/ Human Health:		Surface Water/ Environment:	
Air/ Human Health:	9.7	Air/ Environment:	1.1
Groundwater/ Human Health:	40.4		

Overall Rank: 4

REFERENCES:

WARM Toxicological Database

WARM Scoring Manual

Washington Department of Transportation 24-hour Isopluvial Maps, January 2006 update. http://www.wsdot.wa.gov/publications/fulltext/Hydraulics/Wa24hrIspoluvials.pdf

King County GIS Center iMAP application, Property Information, Groundwater Program, and Sensitive Areas mapsets. Accessed January 2013. http://www.kingcounty.gov/operations/GIS/Maps/iMAP.aspx

National Climatic Data Center 2011 Local Climatological Data for Seattle, Seattle Tacoma Airport. http://www1.ncdc.noaa.gov/pub/orders/IPS-90B1F39F-6CFA-4A6B-AA82-5ED1FF897CCC.pdf

Washington State Department of Health Source Water Assessment Maps. March 2011 update. https://fortress.wa.gov/doh/eh/dw/swap/maps/

Ecology Water Resources Explorer, accessed January 2013. https://fortress.wa.gov/ecy/waterresources/map/WaterResourcesExplorer.aspx

FEMA Map Service Center, accessed January 2013. https://msc.fema.gov/webapp/wcs/stores/servlet/FemaWelcomeView?storeId=10001&catalogId=10001&langId=-1

Missouri Census Data Center, Circular Area Profiles - 2010 census data around a point location. http://mcdc.missouri.edu/websas/caps10c.html. Accessed February 2013

Letter Report, 2003 Annual Groundwater Monitoring, Seattle School Support Center, 24 March 2003, URS Corporation.

UST Closure Report, 500-Gallon Waste Oil UST and 12,000-Gallon Diesel Fuel UST at United States Postal Service Seattle, WA. 6 February 1995. URS Consultants.

Supplemental Soil and Groundwater Sampling, General Mail Facility, United States Postal Sevice, 2445 Third Avenue South, Seattle, WA. 5 Oct 1998. ICF Kaiser.

Report, Soil and Groundwater Investigation, USPS General Mail Facility, Seattle, WA. 27 July 1998. Dames & Moore.

2011 Groundwater Monitoring Report—John Stanford Center. 30 December 2011. Herrera Environmental Consultans, Inc.

No further action and restrictive Covenant for Independent Remedial Action at US Postal Service General Mail Facility at 2445 third Avenue South, Seattle, Washington. 5 April 1999. Ecology. Final.

Phase I Environmental Site Assessment, United States Postal Service, Former General Mail Facility, 2445 3rd Avenue South, Seattle, Washington 98134, ICF Kaiser, 15 October 1997.

Periodic Review-Seattle School District John Stanford Center, aka Seattle Schools Support Center Facility Site ID# 82825487. April 2011. Ecology NW Region Office TCP.

Notice of Rescinding "No Further Action" Status at the Following Hazardous Waste Site: Seattle School District John Stanford Center. 19 March 2012. Ecology.

SITE HAZARD ASSESSMENT
Worksheet 2
Route Documentation

Cleanup Site ID: 6720 Seattle School Dist John Stanford Center

Facility/Site ID: 82825487

1. SURFACE WATER ROUTE

List those substances to be considered for scoring:

Not Applicable

Explain the basis for choice of substances to be used in scoring:

List those management units to be considered for scoring:

Explain basis for choice of unit to be used in scoring:

2. AIR ROUTE

List those substances to be considered for scoring:

Gasoline/benzene; diesel; cPAHs

Explain the basis for choice of substances to be used in scoring:

Primary contaiminants historically identified in soil and groundwater

List those management units to be considered for scoring:

Soil vapor

Explain basis for choice of unit to be used in scoring:

Potential for vapor phase transport

3. GROUNDWATER ROUTE

List those substances to be considered for scoring:

Gasoline/benzene; diesel; cPAHs; lead

Explain the basis for choice of substances to be used in scoring:

Primary contaminants historically identified in soil and groundwater

List those management units to be considered for scoring:

Groundwater

Explain basis for choice of unit to be used in scoring:

Confirmed release

Worksheet 5

Air Route

CSID: 6720 **Site Name:** Seattle School District John Stanford Center

1.0 Substance Characteristics

1.1 Introduction (WARM Scoring Manual) - Please Review before scoring

1.2 Human Toxicity

Substance	Ambient Air Standard Value	Acute Toxicity Value	Chronic Toxicity Value	Carcinogenicity Value
TPH Gasoline / Benzene	10	3	X	5
Diesel	4	X	X	X
Benzo(a)pyrene	10	X	X	X

Highest Value 10

Bonus Points? +2

Toxicity Value 12

1.3 Mobility

Gaseous Mobility	Max Value: 4	
Particulate Mobility	Soil Type:	Mobility Value 4
	Erodibility:	
	Climatic Factor:	

1.4 Final Human Health Toxicity/Mobility Matrix Value **HH Final Matrix Value** 24

1.5 Environmental Toxicity/Mobility

Substance	Non-human Mammalian Inhalation Toxicity (mg/m3)	Acute Value	Mobility Value	Table A-7 Matrix Value
TPH Gasoline / Benzene	31947	3	4	6
Diesel	X	X	3	2
Benzo(a)pyrene	X	X	2	1

Env. Final Matrix Value 6

1.6 Substance Quantity

Amount: ~15,000 ft sq

Basis: Estimated surface area of contaminated soil

Substance Quantity Value 6

Worksheet 5

Air Route

CSID: 6720 **Site Name:** Seattle School District John Stanford Center

2.0 Migration Potential

2.1 Containment Containment Value: 5

Explain Basis: Cover >2 feet, no vapor collection

3.0 Targets

3.1 Nearest Population Population Distance Value: 10

Workers/residents on adjoining properties

3.2 Distance to and name of nearest sensitive environments Sensitive Environment Value: 5

~2,500 ft; Duwamish Waterway

3.3 Population within 0.5 miles Population Value: 7

51 population

4.0 Release Release to Air Value: 0

Explain basis for scoring a release to air

no confirmed release

Pathway Scoring - Air Route, Human Health Pathway

$AIR_H = (SUB_{AH}*60/329)*[REL_A+(TAR_{AH}*35/85)]/24$

Where:

SUB_{AH} =(Human toxicity + 5) * (Containment + 1) + Substance Qty	SUB_{AH}	180
REL_A = Release to Air	REL_A	0
TAR_{AH} = Nearest Population + Population within 1/2 mile	TAR_{AH}	17
	AIR_H	9.7

Pathway Scoring - Air Route, Environmental Pathway

$AIR_E = (SUB_{AE}*60/329)*[REL_A+(TAR_{AE}*35/85)]/24$

Where:

SUB_{AE} =(Environmental Toxicity Value +5)*(Containment +1) +Substance Qty	SUB_{AE}	72
REL_A = Release to Air	REL_A	0
TAR_{AE} = Nearest Sensitive Environment	TAR_{AE}	5
	AIR_E	1.1

Worksheet 6

Groundwater Route

CSID: 6720 **Site Name:** Seattle School District John Stanford Center

1.0 Substance Characteristics

1.1 Human Toxicity

Substance	Drinking Water Standard Value	Acute Toxicity Value	Chronic Toxicity Value	Carcinogenicity Value
Diesel	6	5	3	X
Benzo(a)pyrene	10	10	X	7
TPH Gasoline / Benzene	10	3	X	5
Lead	8	X	X	X

Highest Value 10

Bonus Points? +2

Toxicity Value 12

1.2 Mobility

Cations/Anions Max Value: 2 lead

Solubility Max Value: 3 gasoline Mobility Value 3

1.3 Substance Quantity

Amount: 2000 cubic yards of soil

Basis: Estimated volume of impacted soil remaining in-place

Substance Quantity Value 4

2.0 Migration Potential

2.1 Containment Containment Value 10

Explain Basis: Contaminated soil

2.2 Net Precipitation 10-20 inches Net Precipitation Value 2

2.3 Subsurface Hydraulic Conductivity Conductivity Value 3

silt/sand

2.4 Vertical Depth to Groundwater Depth to Aquifer Value 8

confirmed release to groundwater

3.0 Targets

3.1 Groundwater Usage Aquifer Use Value 3

Irrigation (Safeco Field and domestic), Industrial uses

3.2 Distance to Nearest Drinking Water Well Well Distance Value 0

>2 miles

3.3 Population Served within 2 Miles Population Served Value 0.00

0 population

Worksheet 6

Groundwater Route

CSID: 6720 **Site Name:** Seattle School District John Stanford Center

3.4 Area Irrigated by GW Wells within 2 miles Area Irrigated Value 1.68

5 acres

4.0 Release Release to Groundwater Value 5

Explain basis for scoring a release to groundwater:

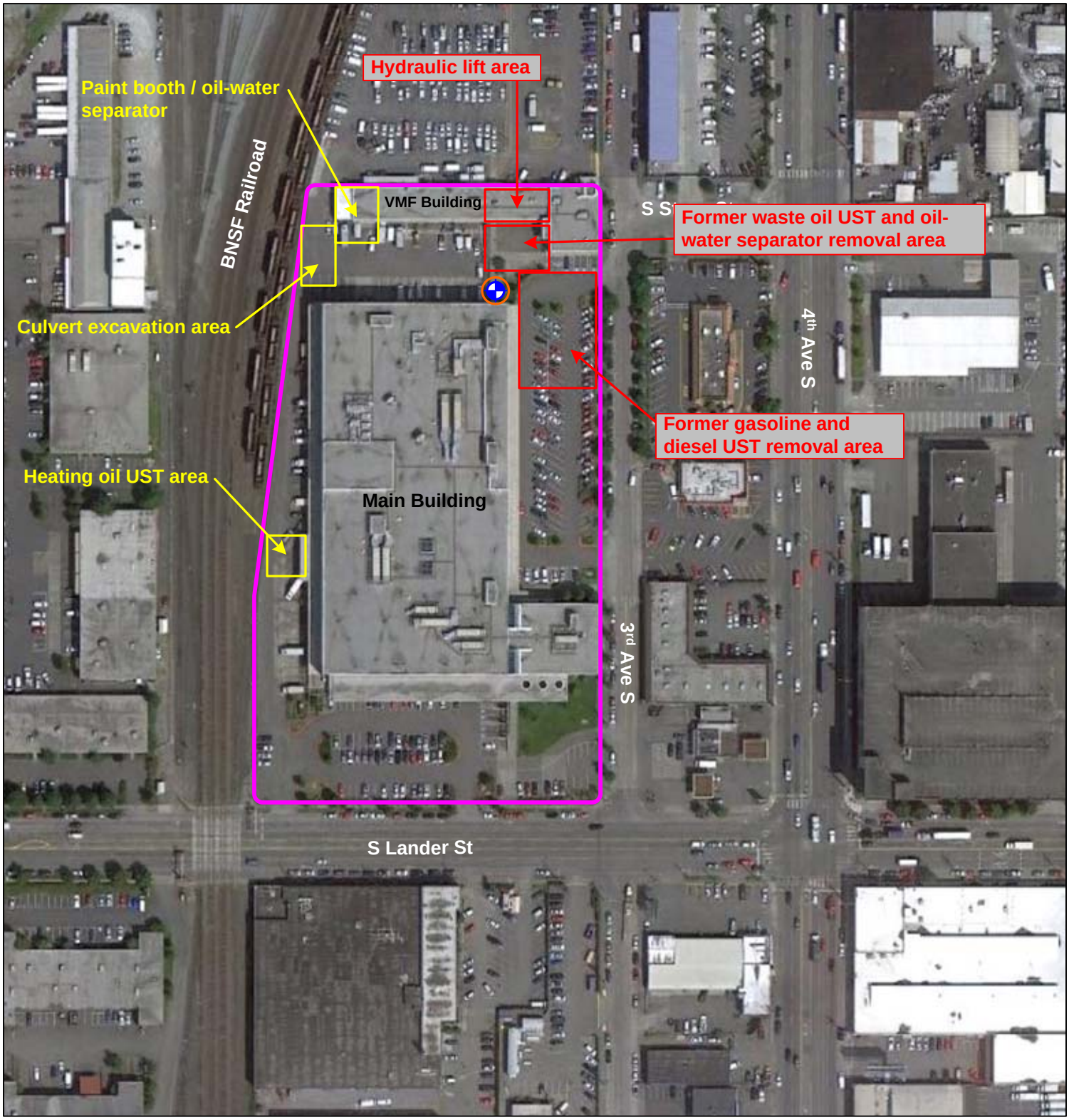
confirmed release

Pathway Scoring - Groundwater Route, Human Health Pathway

$GW_H = (SUB_{GH}*40/208)*[(MIG_G*25/17)+REL_G+(TAR_{GH}*30/165)]/24$

Where:

SUB_{GH} =(Human toxicity + mobility + 3) * (Containment + 1) + Substance Qty	SUB_{GH}	202
MIG_G=Depth to Aquifer+Net Precip + Hydraulic Conductivity	MIG_G	13
REL_G = Release to Groundwater	REL_G	5
TAR_{GH} = Aquifer Use + Well Distance + Population Served + Area Irrigated	TAR_{GH}	4.677050983
	GW_H	40.4



Legend:

- Property location (approximate)
- Site areas with remaining primary contaminant impacts (approximate)
- Other site areas with historical releases (approximate)
- Monitoring well (MW-3) with cPAH concentrations above cleanup levels in 2011

Notes:

1. All locations are approximate, and not to scale.

N

Seattle School John Stanford Center
2445 3rd Avenue S
Seattle, WA 98134

DEPARTMENT OF ECOLOGY
State of Washington

Site Overview Map

CSID 6720

CSID6720.vsd

Washington Ranking Method
Route Scores Summary and Ranking Calculation Sheet

Site Name: Seattle School Dist John Stanford Center **CSID:** 6720

Site Address: 2445 3rd Ave S, Seattle, 98134 **FSID:** 82825487

HUMAN HEALTH ROUTE SCORES

Enter Human Health Route Scores for all Applicable Routes:

Pathway	Route Score	Quintile Group
Surface Water	ns	0
Air	9.7	2
Groundwater	40.4	4

H=	4
M=	2
L=	0

$$\frac{H^2 + 2M + L}{8} = \frac{16 + 4 + 0}{8}$$

Human Health Priority Bin Score: **3**

rounded up to next whole number

ENVIRONMENT ROUTE SCORES

Enter Environment Route Scores for all Applicable Routes:

Pathway	Route Score	Quintile Group
Surface Water	ns	0
Air	1.1	1

H=	1
L=	0

$$\frac{H^2 + 2L}{7} = \frac{1 + 0}{7}$$

Environment Priority Bin Score: **1**

rounded up to next whole number

Comments/Notes:

FINAL MATRIX RANKING **4**

FOR REFERENCE:

Final WARM Bin Ranking Matrix

Human Health Priority	Environment Priority 5	4	3	2	1	N/A
5	1	1	1	1	1	1
4	1	2	2	2	3	2
3	1	2	3	4	4	3
2	2	3	4	4	5	3
1	2	3	4	5	5	5
N/A	3	4	5	5	5	NFA

Quintile Values for Route Scores - February 2013 Values

Quintile	Human Health: Surface Water	Human Health: Air	Human Health: Ground Water	Environment: Surface Water	Environment: Air
5	>= **27.0**	>= **32.0**	>= **50.1**	>= **47.0**	>= **32.0**
4	>= **18.5**	>= **21.1**	>= **40.4**	>= **30.3**	>= **26.1**
3	>= **12.4**	>= **13.1**	>= **31.6**	>= **21.4**	>= **21.1**
2	>= **7.5**	>= **7.1**	>= **22.4**	>= **11.0**	>= **14.6**
1	< **7.5**	< **7.1**	< **22.4**	< **11.0**	< **14.6**

Quintile value associated with each route score entered above