SITE HAZARD ASSESSMENT
Worksheet 1
Summary Score Sheet

SITE INFORMATION:

Cleanup Site ID: 6480

Allen Goumas

Facility/Site ID: 66253238

15310 Juanita Dr NE

Kenmore, King County, WA 98011

Section:	13	Latitude:	47.73782
Township:	26N	Longitude:	-122.24961
Range:	4E	Tax/Parcel ID:	3649100512

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

SITE DESCRIPTION:

The Allen Goumas site is a former Al's Auto Service located in Kenmore, King County, Washington. The 0.28-acre property is located approximately 100 feet from an unnamed creek adjacent to Juanita Drive, and zoned for neighborhood business (NB) use.

Adjacent properties are a mix of residential and commercial use. Arrowhead Elementary School is located to the west, across Juanita Drive NE, a coffee shop and a gourmet food store are located to the south, an automotive shop is located to the west, and a retail storefront and residential homes are located to the north across NE 153rd Place.

The site is currently operated as a vacant lot by Mohamed Souaiaia.

The site is currently a vacant, asphalt paved lot. Recent images obainted from Google and King County show shipping containers and vehicles parked at the site, but no permanent structures.

The site is located at the southeast corner of NE 153rd Place and Juanita Drive NE in Kenmore, Washington.

SITE BACKGROUND:

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

From	To	Operator/Tenant	Activity
	1995	Al's Union 76	gasoline and service station

SITE CONTAMINATION:

In 1995 the Allen Goumas site was reported to Washington Department of Ecology and placed on the LUST list with ID number 3860.

In 1995, six underground storage tanks were removed from three excavations at the property. During excavation activities, gasoline and BTEX constituent contamination was identified in soils.

Overexcavation was conducted to address soils with contamination present above MTCA Method A cleanup levels, however some gasoline and xylene contaminated soil (700 ppm and 42 ppm, respectively) was left in place near pump island number 1 due to concerns regarding the structural integrity of the fueling area canopy. Groundwater was not encountered, however some water accumulated in excavation number two was sampled and contained concentrations of gasoline, benzene and xylenes above groundwater cleanup levels established by MTCA.

PAST REMEDIATION ACTIVITIES:

Additional soil sampling activities were summarized in reports prepared in 2006 and 2008, however details of remedial activities and/or groundwater characterization are not included.

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Worksheet 1
Summary Score Sheet

No additional investigative or remedial activities are recorded in Ecology's file for the site.

CURRENT SITE CONDITIONS:

The site is a vacant, paved lot and no longer used for fuel sales or automotive servicing. A 2007 color aerial photograph from King County suggests more than 75% of the property was excavated and re-surfaced following demolition of the former gasoline station structures. Well records for a nearby Shell station indicate groundwater occurs at less than 20 feet below ground surface, and groundwater flow is expected to be westerly toward Lake Washington.

Concentrations of gasoline and xylenes above MTCA Method A cleanup levels have been identified in soils near the former #1 pump island.

The approximate depth to groundwater is 5-15 feet below ground surface, with groundwater flowing to the west. Subsurface soils are well graded gravelly, silty sand.

SPECIAL CONSIDERATIONS:

Checked boxes indicate routes applicable for WARM scoring

☐ **Surface Water**

Release occurred in the subsurface

☑ **Air**

Gasoline and xylenes present in subsurface soils above MTCA Method A cleanup levels.

☑ **Groundwater**

Gasoline and xylenes present in subsurface soils above MTCA Method A cleanup levels.

Historic aerial photographs suggest the former gasoline station was demolished between 2005 and 2007. Excavation activities conducted during site redevelopment may have addressed residual petroleum hydrocarbon contamination in soils at the site, but the information available in Ecology's site file is conconclusive. Impacted soil is assumed to remain on site for scoring purposes.

ROUTE SCORES:

Surface Water/ Human Health:		Surface Water/ Environment:	
Air/ Human Health:	29.1	Air/ Environment:	34.5
Groundwater/ Human Health:	1.5		

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/

SITE HAZARD ASSESSMENT
Worksheet 1
Summary Score Sheet

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

Global Environmental Resources Inc., 2006, Site Assessment Report Al's Union 76 15310 Juanita Drive Bothell, Washington 98011. May 8.

Omega Services, 1995, Al's Union 76 15310 Juanita Drive Bothell, Washington 98011 UST Site Assessment and Independent Cleanup Action Report. September 25.

Construction Management Services of Washington, Inc., 2008, Soil Boring Report Remediation of Al's 76 Site. July 9.

SITE HAZARD ASSESSMENT
Worksheet 2
Route Documentation

Cleanup Site ID: 6480 Allen Goumas

Facility/Site ID: 66253238

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 and xylenes

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

Present in soil above MTCA Method A cleanup levels

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 transport

3. GROUNDWATER ROUTE

List those substances to be considered for scoring:

Gasoline and xylenes

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

Present in soil above MTCA Method A cleanup levels

List those management units to be considered for scoring:

Groundwater

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

Shallow depth to groundwater

Worksheet 5

Air Route

CSID: 6480 **Site Name:** Allen Goumas

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
Gasoline (benzene)	10	3	X	5
Xylenes	1	3	1	X

Highest Value 10

Bonus Points? 0

Toxicity Value 10

1.3 Mobility

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

Mobility Value 4

1.4 Final Human Health Toxicity/Mobility Matrix Value **HH Final Matrix Value** 20

1.5 Environmental Toxicity/Mobility

Substance	Non-human Mammalian Inhalation Toxicity (mg/m3)	Acute Value	Mobility Value	Table A-7 Matrix Value
Gasoline (benzene)	31947	3	4	6
Xylenes	21714	3	3	5

Env. Final Matrix Value 6

1.6 Substance Quantity

Amount: 100 square feet

Basis: Estimated surface area of contaminated soil

Substance Quantity Value 1

Worksheet 5

Air Route

CSID: 6480 **Site Name:** Allen Goumas

2.0 Migration Potential

2.1 Containment Containment Value: 5

Explain Basis: Assume 2' thick cover, no vapor collection system

3.0 Targets

3.1 Nearest Population Population Distance Value: 10

Within 300 feet

3.2 Distance to and name of nearest sensitive environments Sensitive Environment Value: 7

125 feet to Saint Edward State Park

3.3 Population within 0.5 miles Population Value: 52

2664 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}	151
REL_A = Release to Air	REL_A	0
TAR_{AH} = Nearest Population + Population within 1/2 mile	TAR_{AH}	62
	AIR_H	29.1

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}	67
REL_A = Release to Air	REL_A	0
TAR_{AE} = Nearest Sensitive Environment	TAR_{AE}	7
	AIR_E	1.5

Worksheet 6

Groundwater Route

CSID: 6480 **Site Name:** Allen Goumas

1.0 Substance Characteristics

1.1 Human Toxicity

Substance	Drinking Water Standard Value	Acute Toxicity Value	Chronic Toxicity Value	Carcinogenicity Value
Gasoline (benzene)	8	3	X	5
Xylenes	2	10	1	X

Highest Value 10

Bonus Points? +2

Toxicity Value 12

1.2 Mobility

Cations/Anions Max Value:

Solubility Max Value: 3 Mobility Value 3

1.3 Substance Quantity

Amount: 10-15 cubic yards of soil

Basis: Estimated volume of impacted soil remaining in-place

Substance Quantity Value 2

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

Less than 25 feet

3.0 Targets

3.1 Groundwater Usage Aquifer Use Value 4

Irrigation and domestic

3.2 Distance to Nearest Drinking Water Well Well Distance Value 2

1/2 to 1 mile

3.3 Population Served within 2 Miles Population Served Value 4.90

24 population (estimated)

Worksheet 6

Groundwater Route

CSID: 6480 **Site Name:** Allen Goumas

3.4 Area Irrigated by GW Wells within 2 miles Area Irrigated Value 2.37

10 acres

4.0 Release Release to Groundwater Value 0

Explain basis for scoring a release to groundwater:

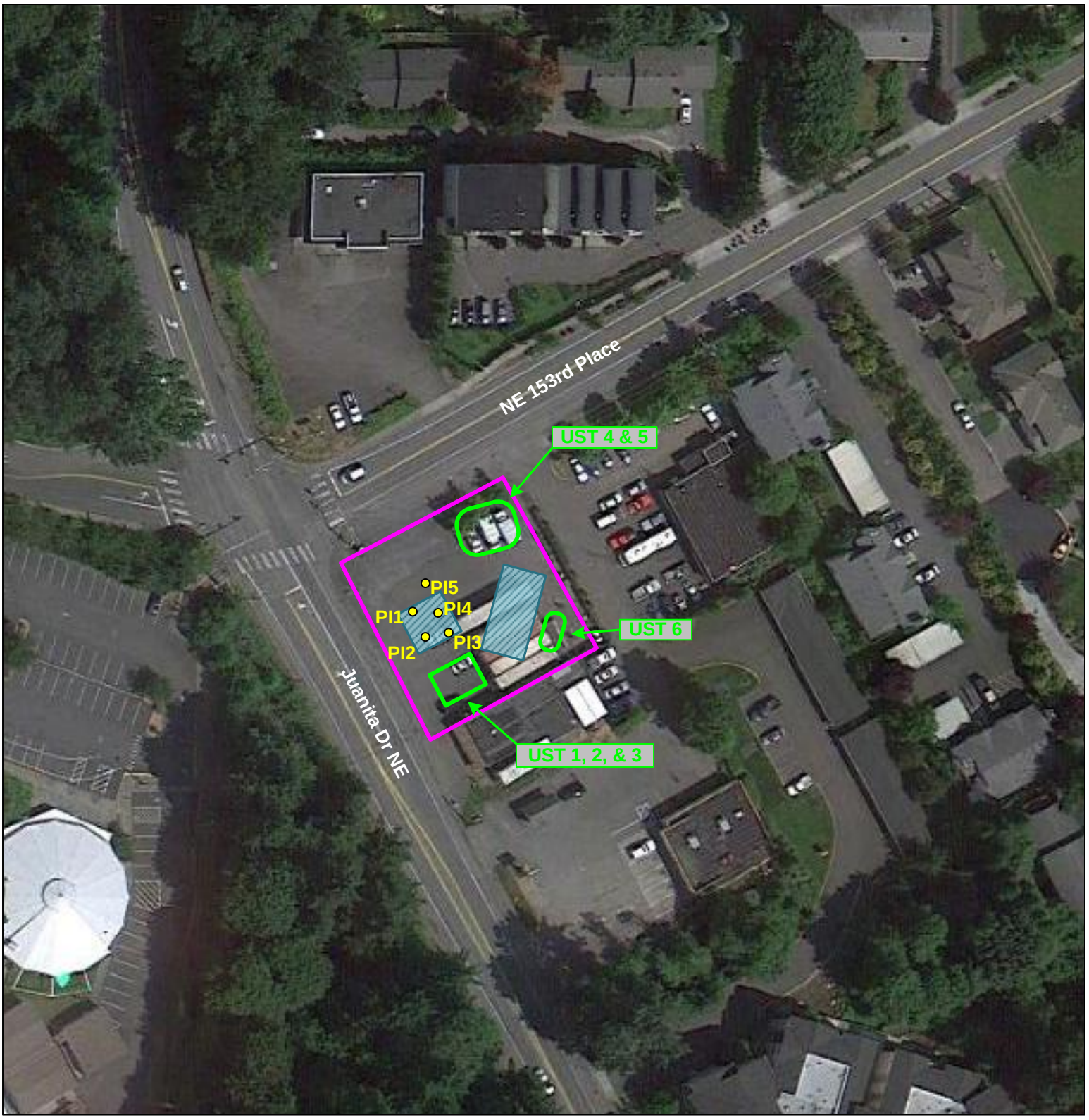
No confirmed release to groundwater

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}	200
MIG_G=Depth to Aquifer+Net Precip + Hydraulic Conductivity	MIG_G	13
REL_G = Release to Groundwater	REL_G	0
TAR_{GH} = Aquifer Use + Well Distance + Population Served + Area Irrigated	TAR_{GH}	13.27068773
	GW_H	34.5



Legend:

- Property location (approximate)
- Former UST location (approximate)
- Former structure (approximate)
- Former pump island location (approximate)

Notes:

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

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Allen Goumas
15310 Juanita Drive NE
Kenmore, WA 98028

DEPARTMENT OF ECOLOGY
State of Washington

Site Overview Map

CSID 6480
CSID6480.vsd

Washington Ranking Method
Route Scores Summary and Ranking Calculation Sheet

Site Name: Allen Goumas **CSID:** 6480

Site Address: 15310 Juanita Drive NE **FSID:** 66253238

HUMAN HEALTH ROUTE SCORES

Enter Human Health Route Scores for all Applicable Routes:

Pathway	Route Score	Quintile Group
Surface Water	ns	0
Air	29.1	4
Groundwater	34.5	3

H=	4
M=	3
L=	0

$$\frac{H^2 + 2M + L}{8} = \frac{16 + 6 + 0}{8}$$

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	1.5	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