



Grant Co.
Safeway Store #3252
:TCP #/VCP
FILE COPY

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

4601 N Monroe Street • Spokane, Washington 99205-1295 • (509)329-3400

July 7, 2009

Mr. Jeff Brown
Dir. Of Environmental Affairs
Safeway, Inc.
5918 Stoneridge Mall Road
Pleasanton, CA 94588-3229

Dear Mr. Brown:

Re: Further Action at the following Site:

- **Site Name:** Safeway #3252 Fuel
- **Site Address:** 505 S. Pioneer Way, Moses Lake, WA
- **Facility/Site No.:** 4131720
- **VCP Project No.:** EA0189

The Washington State Department of Ecology (Ecology) received your request for an opinion on your independent cleanup of the Safeway #3252 fuel facility (Site). This letter provides our opinion. We are providing this opinion under the authority of the Model Toxics Control Act (MTCA), Chapter 70.105D RCW.

Issue Presented and Opinion

Is further remedial action necessary to clean up contamination at the Site?

YES. Ecology has determined that further remedial action is necessary to clean up contamination at the Site.

This opinion is based on an analysis of whether the remedial action meets the substantive requirements of MTCA, Chapter 70.105D RCW, and its implementing regulations, Chapter 173-340 WAC (collectively "substantive requirements of MTCA"). The analysis is provided below.

Description of the Site

This opinion applies only to the Site described below. The Site is defined by the nature and extent of contamination associated with the following release:

- Petroleum hydrocarbons into the Soil and Ground Water.

Enclosure A includes a detailed description and diagram of the Site, as currently known to Ecology.

Please note a parcel of real property can be affected by multiple sites. At this time, we have no information that the parcels associated with this Site are affected by other sites.

Basis for the Opinion

This opinion is based on the information contained in the following documents:

1. Interim Remedial Action Report, Safeway Fuel Station No. 3252, 505 South Pioneer Way, Moses Lake, Washington: Environmental Partners, Inc., February 21, 2008.
2. Ground Water Monitoring Summary Report, Safeway Fuel Station No. 3252, 505 S. Pioneer Way, Moses Lake, Washington: Environmental Partners, Inc., October 14, 2008.

Those documents are kept in the Central Files of the Eastern Regional Office of Ecology (ERO) for review by appointment only. You can make an appointment by calling Kari Johnson at 509/329-3415.

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

Analysis of the Cleanup

Ecology has concluded that **further remedial action** is necessary to clean up contamination at the Site. That conclusion is based on the following analysis:

1. Characterization of the Site.

Ecology has determined your characterization of the Site is not sufficient to establish cleanup standards and select a cleanup action.

Petroleum-contaminated soil and ground water were encountered at the Site. Most of the impacted soil was excavated and removed from the site; however, contaminated soil remains along the northern property boundary (location NP-NSW-W) and in the new UST excavation (locations JH-NSW and JH-ESW). Additional soil was not removed along the northern property boundary due to proximity of the sidewalk and the street. Ground water monitoring results indicate that petroleum hydrocarbons concentrations were below cleanup levels for four consecutive quarters.

Based on these results, Ecology has the following recommendations:

- The extent of soil contamination along the northern property boundary should be defined to determine if contaminated soil extends under the sidewalk or under the street.
- If contamination extends under the sidewalk or into the street, ownership of the area under the sidewalk and into the right-of-way should be determined.
- If contaminated soil remains at the Site after all remedial actions are complete, institutional controls will be required. Institutional controls may include the following:
 - A cap over the contaminated soil.
 - Storm water controls.
 - Environmental covenant.

Limitations of the Opinion

1. Opinion does not settle liability with the state.

Liable persons are strictly liable, jointly and severally, for all remedial action costs and for all natural resource damages resulting from the release or releases of hazardous substances at the Site. This opinion **does not**:

- Resolve or alter a person's liability to the state.
- Protect liable persons from contribution claims by third parties.

To settle liability with the state and obtain protection from contribution claims, a person must enter into a consent decree with Ecology under RCW 70.105D.040(4).

2. Opinion does not constitute a determination of substantial equivalence.

To recover remedial action costs from other liable persons under MTCA, one must demonstrate that the action is the substantial equivalent of an Ecology-conducted or Ecology-supervised action. This opinion does not determine whether the action you performed is substantially equivalent. Courts make that determination. *See* RCW 70.105D.080 and WAC 173-340-545.

3. State is immune from liability.

The state, Ecology, and its officers and employees are immune from all liability, and no cause of action of any nature may arise from any act or omission in providing this opinion. *See* RCW 70.105D.030(1)(i).

Mr. Jeff Brown
July 7, 2009
Page 4

Contact Information

Thank you for choosing to clean up the Site under the Voluntary Cleanup Program (VCP). After you have addressed our concerns, you may request another review of your cleanup. Please do not hesitate to request additional services as your cleanup progresses. We look forward to working with you.

For more information about the VCP and the cleanup process, please visit our web site: www.ecy.wa.gov/programs/tcp/vcp/vcpmain.htm. If you have any questions about this opinion, please contact me by phone at 509/329-3522 or e-mail at paca461@ecy.wa.gov.

Sincerely,



Patti Carter
ERO Toxics Cleanup Program

Enclosures (1): A – Description and Diagram of the Site

cc: Greg McCormick, EPI

Enclosure A

Description and Diagram of the Site

Site Description

- Petroleum impacted soils and ground water were encountered at the site during an environmental site assessment. The impacted areas were in the vicinity of former underground storage tanks.
- Ten separate excavations were completed at the Site and soil samples were collected from the excavations. Approximately 863 tons of impacted soils were removed from the Site.
- Five ground water monitoring wells were installed and sampled for four consecutive quarters.
- Soils at the Site consist of gravel, silty sand with gravel, and sandy silt. Ground water was encountered at about 12 feet below ground surface.

The source of the Site Description is the Interim Remedial Action Report, EPI, February 2008.

Site Diagram

FIGURE 1

MEMORANDUM

June 30, 2009

TO: Keith Holliday KH
FROM: Patti Carter PC
SUBJECT: Safeway #3252 Fuel, Moses Lake, WA

Recommendation

Contaminated soil was encountered during a site assessment at the property. Most of the impacted soil was excavated and removed from the Site. Contaminated soil was left in place adjacent to the sidewalk along the northern property boundary and was not removed due to proximity of the sidewalk.

Additional remedial actions are required at the Site. The extent of soil contamination along the northern property boundary should be evaluated to determine if soil contamination extends under the sidewalk or under the street. If contaminated soil remains at the site after all remedial actions are complete and cannot be removed or remediated, a restrictive covenant will be required.

Background

The Site is located at 505 S. Pioneer in Moses Lake (Figure 1). A retail gasoline service station was located on the northern parcel of the property from 1955 to about 1980. The gas station had two dispenser islands and two mechanics pits. The USTs were reportedly removed in the 1980's. In 1980 the building was converted to a muffler shop with automotive service until the spring of 2006 (Figure 2). A motel was located on the southern parcel from mid-1950 until 1970, when the building was demolished. The parcel was vacant until 1978. At that time, a Sambo's restaurant was constructed and operated until the early 1980's. Godfather's Pizza operated on the parcel until 2007.

Soils at the Site consist of gravel from the surface to about one foot below ground surface (bgs). From about 1 foot to the maximum depth of excavation (16 feet bgs), soils consist of silty sand with gravel (to 14 feet bgs) and sandy silt (to 16 feet bgs). Groundwater was encountered at about 12 feet bgs within the silty sand with gravel. Groundwater was measured to be about three feet in depth and perched on the underlying silt. Groundwater flow is northwesterly.

Remedial Actions

An environmental site assessment (ESA) was conducted in July 2006 to document existing conditions prior to property acquisition by Safeway. The assessment identified elevated concentrations of diesel-range petroleum hydrocarbons (DRPH) in soil and shallow groundwater. The impacted areas were determined to be in the area of the former USTs in the northwest corner of the property.

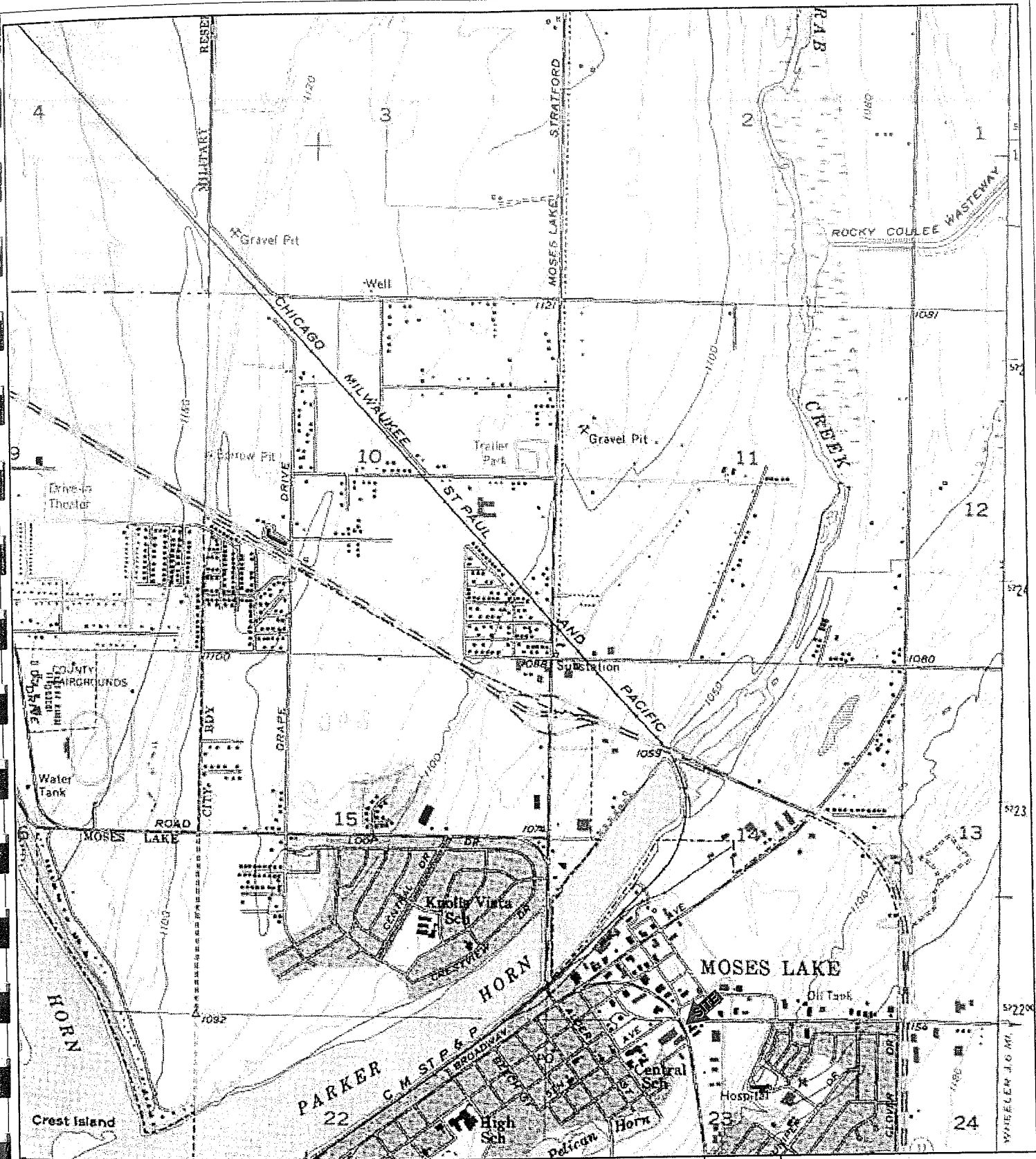
A supplemental Phase II ESA was conducted in November 2006 and confirmed the presence of DRPH, gasoline-range petroleum hydrocarbons (GRPH), and benzene-impacted soil at depth from approximately 10 to 14 feet below ground surface (bgs). DRPH exceeding the cleanup level was also detected in groundwater at concentrations exceeding the cleanup level. A geophysical survey indicated the presence of three additional USTs located in the northeastern portion of the Site.

Ten separate excavations were dug at the Site (Figures 3 & 4). The northwestern excavation (NW) was located in the northwestern corner of the Site in the location of the former retail gasoline stations USTs. The northern excavation (NP) was the area associated with one of the former retail gasoline station dispenser islands. The southeastern excavation (SE) and Excavation 2 (EX-2) were extensions of the NP excavation to the southeast and were associated with petroleum-impacted soil discovered during the NP excavation activities. Two excavations (GPRUST and WOT) were associated with removal of the existing USTs. Two other excavations (MP-1 and MP-2) were associated with the removal of the two mechanics pits. Excavation HOI was associated with removal of the vehicle hoist location. The last excavation (New UST) was for the purpose of installing USTs for the new gasoline station.

Approximately 863 tons of petroleum impacted soils were removed from the Site excavations. Contaminated soils were transported to Waste Management's Greater Wenatchee Regional Landfill for disposal.

Sixty-four soil samples were collected from the remedial excavations (Figures 3 and 4). Analytical results indicated that the accessible impacted soils were removed (Table 1). However, not all impacted soil could be removed due to proximity of the adjacent roads and sidewalks. Soils with residual DRPH concentrations above the cleanup level remain in the following locations:

- The north sidewall of the NP excavation. One sample from 12 feet bgs contained a concentration of 6,000 mg/kg. Soils from this area could not be removed due to proximity of the sidewalk and roadway (Wheeler Road). Samples collected from 12.5 – 15.5 feet bgs in the excavation were below cleanup levels.
- The northern sidewalls of the New UST excavation. One sample from the northwest sidewall at 10 feet bgs contained a concentration of 3,000 mg/kg and one sample from the northeast sidewall at 10 feet bgs contained a concentration of 3,700 mg/kg. Samples collected at 13 feet bgs in the excavation were below



KEY:



SOURCE: USGS 7.5 MINUTE QUADRANGLE
(TOPOGRAPHIC)

MOSES LAKE NORTH, WA
1956

REVISED 1978

SCALE = 1:24,000



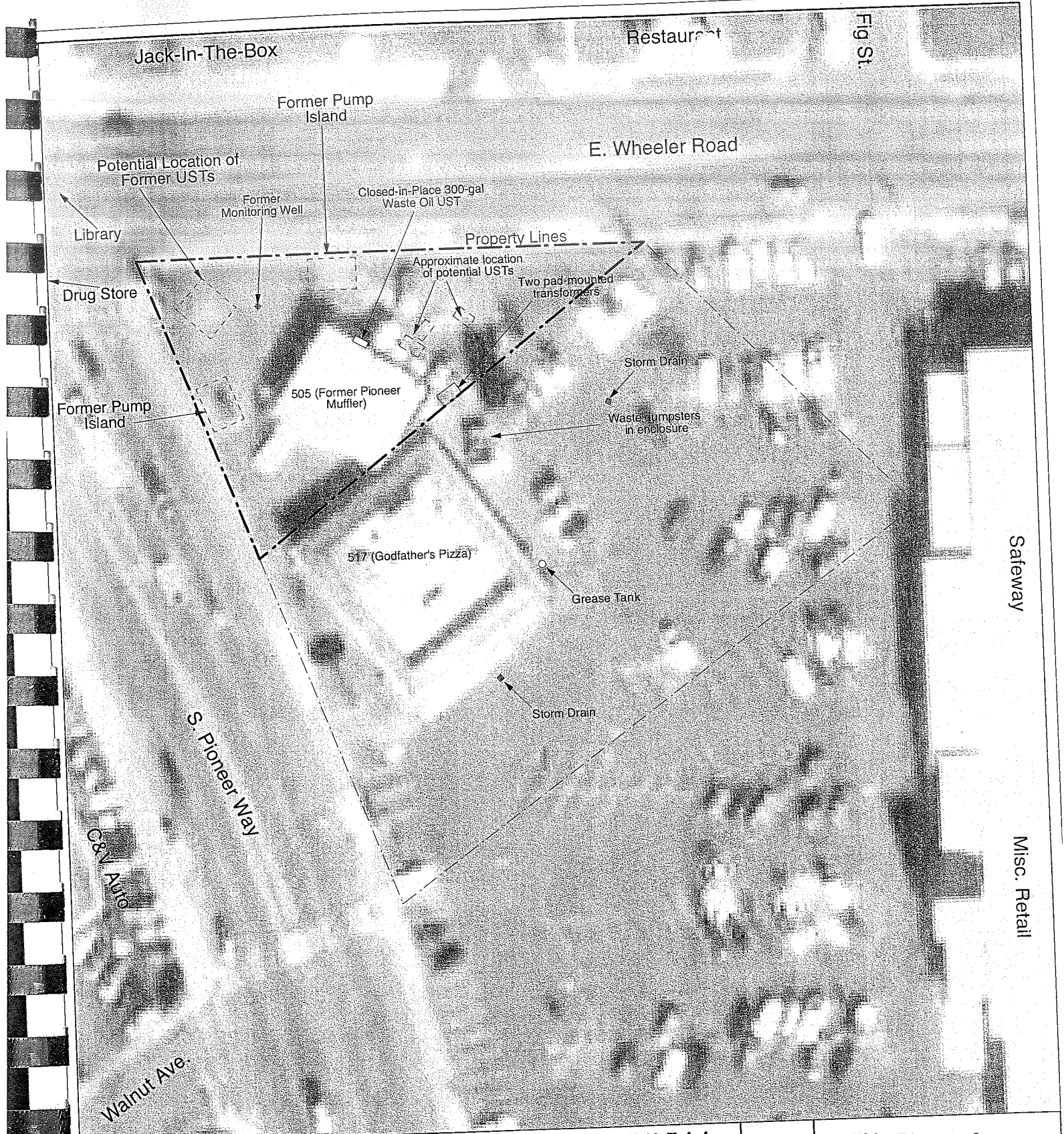
**ENVIRONMENTAL
PARTNERS INC**

295 NE Gilman Boulevard, Suite 201
Issaquah, Washington 98027

FIGURE 1

GENERAL VICINITY MAP

PROJECT	082203.3 Figure 1		
PREPARED FOR	SAFeway INC.		
LOCATION	505 S. PIONEER WAY MOSES LAKE, WASHINGTON		
SHEET 1 of 1	DRAWN BY DPG	REVIEWED BY TCM	DATE 10/08/07



KEY:



SOURCE: GOOGLE MAPS, COPYRIGHT 2006
(PHOTO DATE UNKNOWN)
EPI OBSERVATIONS ON JUNE 26, 2006



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FIGURE 2

SITE REPRESENTATION WITH
FORMER STRUCTURES

PROJECT	082203.4 Figure 2		
PREPARED FOR	SAFeway, INC.		
LOCATION	505 S. PIONEER WAY MOSES LAKE, WA		
SHEET 1 of 1	DRAWN BY DPG	REVIEWED BY TCM	DATE 10/19/07

SCALE: 1" = 50'

WHEELER ROAD

NW-NSW		
DEPTH	DRPH	
6	ND	
10	ND	
13	ND	150

NP-NSW-W		
DEPTH	DRPH	
6	ND	
10	ND	
12	6,000	

NP-BOT-W		
DEPTH	DRPH	
15.5	ND	

NW-BOT-E		
DEPTH	DRPH	
15.5	ND	

JH-IN-2		
DEPTH	DRPH	
0.5	ND	

NP-NSW-E		
DEPTH	DRPH	
6	ND	
10	ND	
12	1,900	

JH-IN-1		
DEPTH	DRPH	
0.5	ND	

NW-BOT-N		
DEPTH	DRPH	
15.5	ND	

EXISTING CONCRETE SIDEWALK

APPARENT LOCATION OF FORMER USTs

STOCKPILE FROM NEW UST EXCAVATION

NW-WSW		
DEPTH	DRPH	
6	ND	
10	ND	
13	980	

NP-SSW-W		
DEPTH	DRPH	
10	ND	
12	ND	

NW-SSW		
DEPTH	DRPH	
6	ND	
12.5	ND	

NP-WSW		
DEPTH	DRPH	
8.5	ND	
13	1,200	

EX-2.11		
DEPTH	DRPH	
11	4,500	

JH-WSW		
DEPTH	DRPH	
9	ND	

JH-NSW		
DEPTH	DRPH	
10	3,000	

JH-WSW-S		
DEPTH	DRPH	
11	910	

NP-SSW-W		
DEPTH	DRPH	
8.5	ND	
13	1,900	

SE-WSW		
DEPTH	DRPH	
9	ND	
13	ND	

JH-ESW		
DEPTH	DRPH	
10	3,700	

SE-SSW		
DEPTH	DRPH	
9	ND	
13	ND	

SE-BOT		
DEPTH	DRPH	
15	ND	

SE-ESW		
DEPTH	DRPH	
9	ND	
13	ND	

JH-ESW-S		
DEPTH	DRPH	
10	670	

NP EXCAVATION

NW EXCAVATION

SE EXCAVATION

NEW UST EXCAVATION

FORMER'S PIZZA BUILDING

FORMER ABANDONED HOIST

FORMER MECHANICS PT

FORMER MECHANICS PT

FORMER PUMP ISLAND LOCATION

WATER TANK

NP-ESW-N		
DEPTH	DRPH	
8	37	57

NP-BOT-E		
DEPTH	DRPH	
16.5	ND	

FORMER SAND-FILLED UST

FORMER GASOLINE UST

NP-BOT-S		
DEPTH	DRPH	
14	ND	

NP-BOT-SE		
DEPTH	DRPH	
14	ND	

NP-ESW-S		
DEPTH	DRPH	
8	ND	
13	43	

FORMER 300-GALLON OIL UST

NP-SSW-E		
DEPTH	DRPH	
8.5	ND	
13	ND	

SOUTH PIONEER WAY

MLSB-1



- KEY:
- ESTIMATED EXTENT OF REMEDIAL EXCAVATION AREAS
 - ESTIMATED EXTENT OF NEW UST EXCAVATION AREA
 - ESTIMATED EXTENT OF UST/MECHANICS' PIT/HOIST EXCAVATION AREAS
 - PROPERTY LINE



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FIGURE 3

REMEDIAL EXCAVATIONS WITH SOIL ANALYTICAL RESULTS IN MG/KG

PROJECT 082203.4 Figure 3

PREPARED FOR SAFEWAY, INC.

LOCATION 505 SOUTH PIONEER WAY
MOSES LAKE, WASHINGTON

SHEET 1 of 1

DRAWN BY ARM

REVIEWED BY DPG

DATE 10/17/07

WHEELER ROAD

APPARENT HYDRAULIC GRADIENT

EXISTING CONCRETE SIDEWALK

INFILTRATION BASIN

APPARENT LOCATION
OF FORMER USTs

STOCKPILE FROM NEW
UST EXCAVATION

WATER TANK

FORMER PUMP
ISLAND LOCATION

NW EXCAVATION

FORMER
MECHANICS
PIT

NP EXCAVATION

FORMER PUMP
ISLAND LOCATION

FORMER
ABANDONED
HOIST

SE EXCAVATION

FORMER
300-GALLON
OIL UST

WOT Excavation

MP-1 B1
DEPTH | DRPH
6 | ND

MP-1 B2
DEPTH | DRPH
6 | ND

MP-2 B1
DEPTH | DRPH
6 | ND

MP-2 B2
DEPTH | DRPH
6 | ND

HOI-ESW
DEPTH | DRPH
4 | ND

HOI-BOT
DEPTH | DRPH
6 | ND

HOI-SSW
DEPTH | DRPH
4 | ND

HOI-SP
DEPTH | DRPH
ND | ND

HOI-NSW
DEPTH | DRPH
4 | ND

HOI-WSW
DEPTH | DRPH
4 | ND

GPRUST Excavation
FORMER SAND-
FILLED UST
FORMER
GASOLINE UST

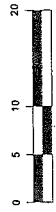
NEW
UST
EXCAVATION

FORMER'S PIZZA
BUILDING

MLSB-1

SOUTH PIONEER WAY

KEY:



ESTIMATED EXTENT OF REMEDIAL EXCAVATION AREAS
ESTIMATED EXTENT OF NEW UST EXCAVATION AREA
ESTIMATED EXTENT OF UST/MECHANICS' PIT/HOIST
EXCAVATION AREAS

PL - PROPERTY LINE



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PROJECT 082203.4 Figure 4

PREPARED FOR SAFEWAY, INC.

LOCATION 505 & 517 SOUTH PIONEER WAY
MOSES LAKE, WASHINGTON

SHEET 1 of 1

DRAWN BY ARM

REVIEWED BY DPG

DATE 10/17/07

FIGURE 4

DECOMMISSIONING EXCAVATION
WITH SOIL ANALYTICAL RESULTS IN MG/KG

Table 1
Summary of Analytical Results for Soil Samples
Safeway Fueling Station No. 3252
Moses Lake, Washington
EPI Project No. 082203.4

Sample Location	Sample Identification	Sample Depth (ft)	Date Sampled	HCID ^(a)	GRPH ^(b) (mg/kg)	Benzene ^(c) (mg/kg)	Toluene ^(c) (mg/kg)	Ethylbenzene ^(c) (mg/kg)	Total Xylenes ^(c) (mg/kg)	MTBE ^(d) (mg/kg)	EDB/EDC ^(e) (mg/kg)	DRPH ^(f) (mg/kg)	ORPH ^(f) (mg/kg)	PCB's ^(g) (mg/kg)	VOC's ^(h) (mg/kg)			PAH's ⁽ⁱ⁾ (mg/kg)										MTCA 5 METALS ^(j) (mg/kg)				
															Trichlorofluoromethane	Tetrachloroethene	All Other VOC's	Benzo(a)pyrene	Benzo(g,h,i)perylene	Fluoranthene	Benzo(b)fluoranthene	Pyrene	Benzo(a)anthracene	Chrysene	Ideno(1,2,3-c,d)pyrene	All Other PAH's	Arsenic	Cadmium	Chromium	Lead	Mercury	
Northwest Excavation	NW BOT E@15.5	15.5	6/28/07	--	ND	ND	ND	ND	ND	--	--	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	ND	ND	7.9	ND	ND	
	NW BOT N@15.5	15.5	6/28/07	--	ND	ND	ND	ND	ND	--	--	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	ND	ND	8.1	ND	ND		
	NW-WSW:6	6	6/25/07	--	ND	ND	ND	ND	ND	--	--	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	ND	ND	2.9	6.3	ND		
	NW-WSW:10	10	6/25/07	--	ND	ND	ND	ND	ND	--	--	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	ND	ND	3.6	8.8	ND		
	NW-WSW:13	13	6/25/07	--	ND	ND	ND	ND	0.58	ND	ND	980	ND	--	--	--	--	--	--	--	--	--	--	--	--	ND	ND	4.4	ND	ND		
	NW-SSW:6	6	6/25/07	--	ND	ND	ND	ND	ND	--	--	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	ND	ND	4.3	ND	ND		
	NW-SSW:12.5	12.5	6/25/07	--	ND	ND	ND	ND	ND	--	--	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	ND	ND	6.1	ND	ND		
	NW-NSW:6	6	6/25/07	--	ND	ND	ND	ND	ND	--	--	43	ND	--	--	--	--	--	--	--	--	--	--	--	--	ND	ND	6.2	6.0	ND		
	NW-NSW:10	10	6/25/07	--	ND	ND	ND	ND	ND	--	--	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	ND	ND	4.2	ND	ND		
	NW-NSW:13	13	6/25/07	--	ND	ND	ND	ND	ND	--	--	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	ND	ND	4.0	ND	ND		
	NW-ESW:6	6	6/25/07	--	ND	ND	ND	ND	ND	--	--	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	ND	ND	7.5	ND	ND		
	NW-ESW:10	10	6/25/07	--	ND	ND	ND	ND	ND	--	--	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	ND	ND	4.2	ND	ND		
NW-ESW:13	13	6/25/07	--	ND	ND	ND	ND	ND	--	--	150	ND	--	--	--	--	--	--	--	--	--	--	--	--	ND	ND	2.7	ND	ND			
North Fuel Pump Island	NP-NSW-E:6	6	6/30/07	ND	ND	--	--	--	--	--	--	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	ND	ND	5.4	76	ND		
	NP-NSW-E:10	10	6/30/07	--	ND	ND	ND	ND	ND	--	--	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	ND	ND	4.1	ND	ND		
	NP-NSW-E:12	12	6/30/07	--	ND	ND	ND	ND	ND	--	--	1,900	ND	--	--	--	--	--	--	--	--	--	--	--	--	ND	ND	2.2	ND	ND		
	NP-NSW-W:6	6	6/30/07	ND	ND	--	--	--	--	--	--	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	ND	ND	4.9	ND	ND		
	NP-NSW-W:10	10	6/30/07	--	ND	ND	ND	ND	ND	--	--	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	ND	ND	5.7	ND	ND		
	NP-NSW-W:12	12	6/30/07	--	ND	ND	ND	ND	ND	--	--	6,000	ND	--	--	--	--	--	--	--	--	--	--	--	--	ND	ND	3.5	ND	ND		
	NP-SSW-W:8.5	8.5	7/2/07	--	ND	ND	ND	ND	ND	--	--	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	ND	ND	3.5	ND	ND		
	NP-SSW-W:10	10	6/30/07	--	ND	ND	ND	ND	ND	--	--	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	ND	ND	3.4	ND	ND		
	NP-SSW-W:12	12	6/30/07	--	ND	ND	ND	ND	ND	--	--	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	ND	ND	5.1	8.2	ND		
	NP-SSW-W:13	13	7/2/07	--	ND	ND	ND	ND	ND	--	--	1,900	ND	--	--	--	--	--	--	--	--	--	--	--	--	ND	ND	5.2	8.2	ND		
	NP-SSW-E:8.5	8.5	7/2/07	--	ND	ND	ND	ND	ND	--	--	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	ND	ND	2.4	8.2	ND		
	NP-SSW-E:13	13	7/2/07	--	ND	ND	ND	ND	ND	--	--	ND	65	--	--	--	--	--	--	--	--	--	--	--	--	ND	ND	3.8	8.3	ND		
	NP-WSW:8.5	8.5	7/2/07	--	ND	ND	ND	ND	ND	--	--	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	ND	ND	2.5	ND	ND		
	NP-WSW:13	13	7/2/07	--	ND	ND	ND	ND	ND	--	--	1,200	ND	--	--	--	--	--	--	--	--	--	--	--	--	ND	ND	4.9	ND	ND		
	NP-ESW-N:8	8	7/2/07	--	ND	ND	ND	ND	ND	--	--	37	ND	--	--	--	--	--	--	--	--	--	--	--	--	ND	ND	3.8	ND	ND		
	NP-ESW-N:13	13	7/2/07	--	ND	ND	ND	ND	ND	--	--	57	ND	--	--	--	--	--	--	--	--	--	--	--	--	ND	ND	4.3	ND	ND		
	NP-ESW-S:8	8	7/2/07	--	ND	ND	ND	ND	ND	--	--	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	ND	ND	4.0	7.6	ND		
	NP-ESW-S:13	13	7/2/07	--	ND	ND	ND	ND	ND	--	--	43	76	--	--	--	--	--	--	--	--	--	--	--	--	ND	ND	7.5	13	ND		
	NP-BOT-W:15.5	15.5	7/2/07	ND	--	--	--	--	--	--	--	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	ND	ND	12	8.7	ND		
	NP-BOT-E:16.5	16.5	7/2/07	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	ND	ND	6.6	ND	ND		
NP-BOT-S:14	14	7/2/07	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	ND	ND	8.9	ND	ND			
NP-BOT-SE:14	14	7/2/07	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	ND	ND	8.5	ND	ND			
MTCA Method A and Method B Soil Cleanup Levels for Unrestricted Land Uses (in mg/kg) ^(k)				n/a	100/30 ^(m,n)	0.03 ^(m,n)	7 ⁽ⁿ⁾	6 ⁽ⁿ⁾	9 ⁽ⁿ⁾	0.1 ⁽ⁿ⁾	--	2,000 ⁽ⁿ⁾	2,000 ⁽ⁿ⁾	1 ⁽ⁿ⁾	24,000 ⁽ⁿ⁾	0.05 ⁽ⁿ⁾	--	0.1 ⁽ⁿ⁾	--	--	--	--	--	--	0.1 ⁽ⁿ⁾	20 ⁽ⁿ⁾	2 ⁽ⁿ⁾	19 ⁽ⁿ⁾	250 ⁽ⁿ⁾	2 ⁽ⁿ⁾		

Notes:
 All samples submitted to OnSite Environmental Inc., Redmond WA for analysis.
 (a) Hydrocarbon Identification using Ecology Method NWTPH-HCID
 (b) Gasoline-range petroleum hydrocarbons (GRPH) using Ecology Method NWTPH-Gx
 (c) Benzene, toluene, ethylbenzene, total xylenes, and Mthyl T-Butyl Ether using EPA Method 8021
 (d) MTBE by EPA Method 8260B
 (e) EDB by EPA Method 8011/EDC by EPA Method 8260B
 (f) Diesel-range and Oil-range petroleum hydrocarbons using Ecology Method NWTPH-Dx
 (g) Polychlorinated Biphenyls (PCB's) using EPA Method 8082
 (h) Volatile Organic Compounds (VOCs) using EPA Method 8260B
 (i) Polycyclic aromatic hydrocarbons (PAHs) using EPA Method 8270D
 (j) MTCA 5 Metals using EPA Method 6010B/7471A
 (k) Other PAHs, see laboratory report for full detail
 (l) Model Toxics Control Act (MTCA) Cleanup Regulation, Chapter 173-340 WAC, February 12, 2001
 (m) 100 for GRPH mixtures without benzene and a total of ethylbenzene, toluene, and xylenes less than 1% of the GRPH mixture; otherwi
 (n) MTCA Method A Soil Cleanup Level For Unrestricted Land Uses
 (o) MTCA Method B Soil Cleanup Level Used Due To No Method A Value Developed
 Bolded values indicate detections above the Method Detection Limit
 Shaded values indicate detections exceeding the applicable MTCA Method A Soil Cleanup Level
 nd - not detected above the applicable Method Detection Limit
 -- = not analyzed

Table 1
Summary of Analytical Results for Soil Samples
Safeway Fueling Station No. 3252
Moses Lake, Washington
EPI Project No. 082203.4

Sample Location	Sample Identification	Sample Depth (ft)	Date Sampled	HCID ^(a)	GRPH ^(b) (mg/kg)	Benzene ^(c) (mg/kg)	Toluene ^(c) (mg/kg)	Ethylbenzene ^(c) (mg/kg)	Total Xylenes ^(c) (mg/kg)	MTBE ^(d) (mg/kg)	EDB/EDC ^(e) (mg/kg)	DRPH ^(f) (mg/kg)	ORPH ^(f) (mg/kg)	PCB's ^(g) (mg/kg)	VOC's ^(h) (mg/kg)			PAH's ⁽ⁱ⁾ (mg/kg)										MTCA 5 METALS ^(j) (mg/kg)				
															Trichlorofluoromethane	Tetrachloroethene	All Other VOC's	Benzo(a)pyrene	Benzo(g,h,i)perylene	Fluoranthene	Benzo(b)fluoranthene	Pyrene	Benzo(a)anthracene	Chrysene	Indeno(1,2,3-c,d)pyrene	All Other PAH's	Arsenic	Cadmium	Chromium	Lead	Mercury	
Southeast Excavation	SE BOT:15	15	7/5/07	—	ND	ND	ND	ND	ND	—	—	ND	ND	—	—	—	—	—	—	—	—	—	—	—	—	—	ND	ND	10	ND	ND	
	SE WSW:9	9	7/5/07	—	ND	ND	ND	ND	ND	—	—	ND	88	—	—	—	—	—	—	—	—	—	—	—	—	ND	ND	6.4	8.8	ND		
	SE WSW:13	13	7/5/07	—	ND	ND	ND	ND	ND	—	—	ND	ND	—	—	—	—	—	—	—	—	—	—	—	—	ND	ND	4.4	ND	ND		
	SE ESW:9	9	7/5/07	—	ND	ND	ND	ND	ND	—	—	ND	ND	—	—	—	—	—	—	—	—	—	—	—	—	ND	ND	3.5	ND	ND		
	SE ESW:13	13	7/5/07	—	ND	ND	ND	ND	ND	—	—	ND	ND	—	—	—	—	—	—	—	—	—	—	—	—	ND	ND	4.7	ND	ND		
	SE SSW:9	9	7/5/07	—	ND	ND	ND	ND	ND	—	—	ND	ND	—	—	—	—	—	—	—	—	—	—	—	—	ND	ND	3.3	7.2	ND		
SE SSW:13	13	7/5/07	—	ND	ND	ND	ND	ND	—	—	ND	ND	—	—	—	—	—	—	—	—	—	—	—	—	ND	ND	5.3	7.3	ND			
Excavation 2	EX-2:11	11	6/28/07	—	ND	ND	ND	ND	ND	—	—	4,500	320	—	—	—	—	—	—	—	—	—	—	—	—	ND	ND	2.4	ND	ND		
Mechanic Pit #1	MP-1 B1:6	6	6/25/07	ND	ND	ND	ND	ND	ND	ND	—	ND	ND	ND	ND	ND	ND	ND	ND	0.048	0.022	0.021	0.019	0.028	0.012	0.025, 0.019 ^(k)	ND	ND	9.3	15	ND	
	MP-1 B2:6	6	6/25/07	ORPH	ND	ND	ND	ND	ND	ND	—	ND	290	ND	ND	ND	ND	ND	ND	0.01	ND	0.017	ND	ND	ND	0.012 ^(k)	ND	ND	17	10	ND	
	MP-1 SP	—	6/25/07	ND	ND	ND	ND	ND	ND	ND	—	ND	ND	ND	ND	ND	ND	ND	ND	0.0095	ND	0.0079	ND	ND	ND	ND	ND	ND	7.6	8.0	ND	
Mechanic Pit #2	MP-2 B1:6	6	6/27/07	ND	ND	—	—	—	—	—	—	ND	ND	ND	0.86	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	9.0	21	ND	
	MP-2 B2:6	6	6/27/07	ND	ND	—	—	—	—	—	—	ND	ND	ND	1.8	0.6	ND	0.25	0.13	0.37	0.24	0.36	0.27	0.27	0.12	0.012, 0.068, 0.028, 0.22, 0.009 ^(k)	ND	ND	4.2	21	ND	
Vehicle Hoist	HOI-NSW:4	4	6/25/07	—	—	—	—	—	—	—	—	ND	ND	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	HOI-ESW:4	4	6/25/07	—	—	—	—	—	—	—	—	ND	ND	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	HOI-SSW:4	4	6/25/07	—	—	—	—	—	—	—	—	ND	ND	ND	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	HOI-WSW:4	4	6/25/07	—	—	—	—	—	—	—	—	ND	ND	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	HOI-BOT:6	6	6/25/07	—	—	—	—	—	—	—	—	ND	ND	ND	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	HOI-SP	—	6/25/07	—	—	—	—	—	—	—	—	—	ND	ND	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
New UST Excavation	JH-SP-1	—	7/18/07	—	ND	ND	ND	ND	ND	—	—	450	ND	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	JH-SP-2	—	7/18/07	—	ND	ND	ND	ND	ND	—	—	150	ND	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	JH-SP-3	—	7/18/07	—	ND	ND	ND	ND	ND	—	—	120	ND	—	—	—	—	ND	ND	ND	ND	0.053	ND	ND	ND	0.062, 0.34, 0.11	—	—	—	—	—	
	JH-NSW:10	10	7/18/07	—	ND	ND	ND	ND	0.083	—	—	3,000	ND	—	—	—	—	ND	ND	ND	ND	0.072	ND	ND	0.072	0.097, 0.29, 1.7, 2.2, 0.69, 0.24	—	—	—	—	—	
	JH-ESW:10	10	7/18/07	—	ND	ND	ND	ND	0.3	—	—	3,700	ND	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	JH-ESW-S:10	10	7/18/07	—	ND	ND	ND	ND	ND	—	—	670	ND	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	JH-WSW:9	9	7/18/07	—	ND	ND	ND	ND	ND	—	—	ND	ND	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	JH-WSW-S:11	11	7/18/07	—	ND	ND	ND	ND	ND	—	—	910	ND	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Infiltration Basin	JH-IN-1	—	7/23/07	—	—	—	—	—	—	—	—	ND	74	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	JH-IN-2	—	7/23/07	—	—	—	—	—	—	—	—	ND	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
MTCA Method A and Method B Soil Cleanup Levels for Unrestricted Land Uses (in mg/kg) ⁽ⁿ⁾				n/a	100/30 ^(m,n)	0.03 ^(m,n)	7 ⁽ⁿ⁾	5 ⁽ⁿ⁾	9 ⁽ⁿ⁾	0.1 ⁽ⁿ⁾	—	2,000 ⁽ⁿ⁾	2,000 ⁽ⁿ⁾	1 ⁽ⁿ⁾	24,000 ⁽ⁿ⁾	0.05 ⁽ⁿ⁾	—	0.1 ⁽ⁿ⁾	—	—	—	—	—	—	0.1 ⁽ⁿ⁾	20 ⁽ⁿ⁾	2 ⁽ⁿ⁾	19 ⁽ⁿ⁾	250 ⁽ⁿ⁾	2 ⁽ⁿ⁾		

Notes:
All samples submitted to OnSite Environmental Inc., Redmond WA for analysis.
(a) Hydrocarbon Identification using Ecology Method NWTPH-HCID
(b) Gasoline-range petroleum hydrocarbons (GRPH) using Ecology Method NWTPH-Gx
(c) Benzene, toluene, ethylbenzene, total xylenes, and Methyl T-Butyl Ether using EPA Method 8021
(d) MTBE by EPA Method 8260B
(e) EDB by EPA Method 8011/EDC by EPA Method 8260B
(f) Diesel-range and Oil-range petroleum hydrocarbons using Ecology Method NWTPH-Dx
(g) Polychlorinated Biphenyls (PCB's) using EPA Method 8082
(h) Volatile Organic Compounds (VOCs) using EPA Method 8260B
(i) Polycyclic aromatic hydrocarbons (PAHs) using EPA Method 8270D
(j) MTCA 5 Metals using EPA Method 6010B/747.1A
(k) Other PAHs, see laboratory report for full detail
(l) Model Toxics Control Act (MTCA) Cleanup Regulation, Chapter 173-340 WAC, February 12, 2001
(m) 100 for GRPH mixtures without benzene and a total of ethylbenzene, toluene, and xylenes less than 1% of the GRPH mixture; otherwise
(n) MTCA Method A Soil Cleanup Level For Unrestricted Land Uses
(o) MTCA Method B Soil Cleanup Level Used Due To No Method A Value Developed
Bolded values indicate detections above the Method Detection Limit
Shaded values indicate detections exceeding the applicable MTCA Method A Soil Cleanup Level
nd - not detected above the applicable Method Detection Limit
— = not analyzed

cleanup levels. Based on soil sample results and field screening, the remaining impacted soil in the northwest sidewall of the new UST excavation is limited to a 4-inch zone at about 10 feet bgs. The impact in the northeast sidewall is in a 9-inch zone at about 10 feet bgs. Due to installation of new tanks, additional soil was not removed.

No contamination was observed during removal of the existing USTs (GPRUST and WOT). All sample results were non-detect or below cleanup levels.

During site remediation, about 20,000 gallons of shallow groundwater were removed from the NW and NP excavations. Water was temporarily stored on-site in a 21,000-gallon above ground tank and treated by air sparging. When laboratory analyses of the treated water resulted in DRPH concentrations within Ecology discharge limits (<500 ug/l) (Table 2), the water was discharged to an infiltration basin with permission of Ecology and the City.

Five monitoring wells were installed in November 2007 (Figure 5). Groundwater was typically encountered between about 7 and 12 feet bgs. Groundwater measurements indicated that flow is generally northwesterly.

Groundwater samples were collected in November 2007, and February, May, and September 2008. All results were below cleanup levels (Table 3).

Conclusions

Contaminated soil was encountered during a site assessment at the property. Most of the impacted soil was excavated and removed from the site. Contaminated soil was left in place adjacent to the sidewalk along the northern property boundary and in the New UST Excavation.

The extent of soil contamination along the northern property boundary (NP-NSW-W location) should be evaluated to determine if soil contamination extends under the sidewalk or under the street. If contaminated soil remains at the site after all remedial actions are complete and cannot be removed or remediated, a restrictive covenant will be required.

Table 2
Summary of Analytical Results for Ground Water Samples
Safeway Fueling Station No. 3252
Moses Lake, Washington
EPI Project No. 082203.4

Sample Location	Sample Identification	GRPH ^(a)	Benzene ^(a)	Toluene ^(a)	Ethylbenzene ^(a)	Total Xylenes ^(a)	MTBE ^(b)	EDB ^(c) /EDC ^(b)	DRPH ^(d) (µg/L)	ORPH ^(d) (µg/L)	Metals (µg/L)
Northwest Excavation	NWH2O	ND	ND	ND	ND	ND	ND	ND	5,700	ND	5.8 (As), 5.9 (Pb)
Baker Tank	BT-H2O	--	--	--	--	--	--	--	9,600	ND	45 ^(e) (As), 76 (Cr), 150 (Pb)
Baker Tank	BT-H2O-2	--	--	--	--	--	--	--	590	ND	7.8 (As), 3.2 (Pb)
Baker Tank	BT-H2O-3	--	--	--	--	--	--	--	ND	ND	7.4 (As)
Southwest Test Pit	SW-H2O	--	--	--	--	--	--	--	ND	ND	10 (As)
MTCA Method A Cleanup Levels for Groundwater (in µg/L) ^(f)		1,000/800 ^(g)	5	1,000	700	1,000	20	0.01 (EDB), 5.0 (EDC)	500	500	5.0 (As), 50 (Cr), 15 (Pb)

Notes:

All samples submitted to OnSite Environmental, Inc., Redmond WA for analysis.

(a) Gasoline-range petroleum hydrocarbons (GRPH), benzene, toluene, ethylbenzene, total xylenes using Ecology Method NWTPEH-Gx/BTEX.

(b) Methyl T-Butyl Ether (MTBE) and 1,2-Dichloroethane (EDC) using EPA Method 8260B.

(c) 1,2-Dibromoethane (EDB) using EPA Method 8011.

(d) Diesel-range and Oil-range petroleum hydrocarbons using Ecology Method NWTPEH-Dx.

(e) Spike likely due to non-filtered sample during intense agitation.

(f) Model Toxics Control Act (MTCA) Cleanup Regulation, Chapter 173-340 WAC, February 12, 2001.

(g) 1000 for GRPH mixtures without benzene and a total of ethylbenzene, toluene, and xylenes less than 1% of the GRPH mixture; otherwise 800.

Bolded values indicate detections above the Method Detection Limit.

Shaded values indicate detections exceeding the applicable MTCA Method A Soil Cleanup Level.

nd - not detected above the applicable Method Detection Limit.

-- = not analyzed

WHEELER ROAD

FORMER PUMP
ISLAND LOCATION

EXISTING CONCRETE SIDEWALK

LOCATION OF
FORMER USTs

MW-2

MW-1

KIOSK

FORMER
GASOLINE UST

FORMER PUMP
ISLAND LOCATION

MW-3

FUEL PUMP
CANOPY

NEW
FUEL
STORAGE
TANKS

MW-4

MW-5

SOUTH PIONEER WAY

KEY:



BORING LOCATION



**ENVIRONMENTAL
PARTNERS INC**

295 NE Gilman Boulevard, Suite 201
Tualuma, Washington 98027

PROJECT

082203.6 Figure 5

PREPARED
FOR

SAFEWAY, INC.

LOCATION

505 SOUTH PIONEER WAY
MOSES LAKE, WASHINGTON

SHEET
1 of 1

DRAWN BY
AIRM

REVIEWED BY
TCM

DATE
10/13/08

SITE REPRESENTATION

Table 3
Summary of Analytical Results for Ground Water Samples
Petroleum Hydrocarbons in µg/L
Safeway Fueling Center - Monitoring Well Installation
Moses Lake, Washington
EPI Project No. 082203.6

Monitor Well Number	Sample Date	GRPH ^(a)	DRPH ^(b)	ORPH ^(b)	Benzene ^(c)	Toluene ^(c)	Ethylbenzene ^(c)	Total Xylenes ^(c)
MW-1	11/9/07	ND (<50)	ND (<130)	ND (<250)	ND (<1)	ND (<1)	ND (<1)	ND (<3)
	2/19/08	ND (<50)	ND (<130)	ND (<250)	ND (<1)	ND (<1)	ND (<1)	ND (<3)
	5/14/08	ND (<50)	ND (<130)	ND (<250)	ND (<1)	ND (<1)	ND (<1)	ND (<3)
	9/5/08	ND (<100)	ND (<250)	ND (<400)	ND (<1)	ND (<1)	ND (<1)	ND (<2)
MW-2	11/9/07	ND (<50)	ND (<130)	ND (<250)	ND (<1)	ND (<1)	ND (<1)	ND (<3)
	2/19/08	ND (<50)	ND (<130)	ND (<250)	ND (<1)	ND (<1)	ND (<1)	ND (<3)
	5/14/08	ND (<50)	ND (<130)	ND (<250)	ND (<1)	ND (<1)	ND (<1)	ND (<3)
	9/5/08	ND (<100)	ND (<250)	ND (<400)	ND (<1)	ND (<1)	ND (<1)	ND (<2)
MW-3	11/9/07	ND (<50)	ND (<130)	ND (<250)	ND (<1)	ND (<1)	ND (<1)	ND (<3)
	2/19/08	ND (<50)	ND (<130)	ND (<250)	ND (<1)	ND (<1)	ND (<1)	ND (<3)
	5/14/08	ND (<50)	ND (<130)	ND (<250)	ND (<1)	ND (<1)	ND (<1)	ND (<3)
	9/5/08	ND (<100)	ND (<250)	ND (<400)	ND (<1)	ND (<1)	ND (<1)	ND (<2)
MW-4	11/9/07	ND (<50)	ND (<130)	ND (<250)	ND (<1)	ND (<1)	ND (<1)	ND (<3)
	2/19/08	ND (<50)	ND (<130)	ND (<250)	ND (<1)	ND (<1)	ND (<1)	ND (<3)
	5/14/08	ND (<50)	ND (<130)	ND (<250)	ND (<1)	ND (<1)	ND (<1)	ND (<3)
	9/5/08	ND (<100)	ND (<250)	ND (<400)	ND (<1)	ND (<1)	ND (<1)	ND (<2)
MW-5	11/9/07	ND (<50)	ND (<130)	ND (<250)	ND (<1)	ND (<1)	ND (<1)	ND (<3)
	2/19/08	ND (<50)	ND (<130)	ND (<250)	ND (<1)	ND (<1)	ND (<1)	ND (<3)
	5/14/08	ND (<50)	ND (<130)	ND (<250)	ND (<1)	ND (<1)	ND (<1)	ND (<3)
	9/5/08	ND (<100)	ND (<250)	ND (<400)	ND (<1)	ND (<1)	ND (<1)	ND (<2)
MW-5	11/9/07	ND (<50)	ND (<130)	ND (<250)	ND (<1)	ND (<1)	ND (<1)	ND (<3)
	2/19/08	ND (<50)	ND (<130)	ND (<250)	ND (<1)	ND (<1)	ND (<1)	ND (<3)
	5/14/08	ND (<50)	ND (<130)	ND (<250)	ND (<1)	ND (<1)	ND (<1)	ND (<3)
	9/5/08	ND (<100)	ND (<250)	ND (<400)	ND (<1)	ND (<1)	ND (<1)	ND (<2)
MTCA Method A Water Cleanup Levels for Unrestricted Land Uses (in µg/L; ppb) ^(d)		800/1,000 ^(e)	500	500	5	1,000	700	1,000

Notes:
(a) Gasoline-Range Petroleum Hydrocarbons (GRPH) using Ecology NWTPH-GX Method.
(b) Diesel- and Oil-Range Petroleum Hydrocarbons (DRPH & ORPH) using Ecology NWTPH-DX Method.
(c) Benzene, toluene, ethylbenzene, and total xylenes using EPA Method 8021.
(d) Model Toxics Control Act (MTCA) Cleanup Regulation, Chapter 173-340 WAC, February 12, 2001.
(e) 800 for GRPH mixtures with benzene present in ground water; 1,000 for GRPH mixtures with no detectable benzene in ground water.
Bolded values indicate detections above the Method Detection Limit. Shaded values indicate detections exceeding the applicable MTCA Method A Soil Cleanup Level.
ND - not detected above the applicable Method Detection Limit.