

CSID 5999

WORKSHEET 1
SUMMARY SCORE SHEET

Site Name/Location (Street, City, County, Section/Township/Range, TCP ID Number):

P&K Auto
1415 Gillespie
Richland, WA 99352 Benton County

Sec 11/T 9N/R29E
Ecology I.D. No. 38448497

Longitude: 119.00° 16' 52.5''

Latitude: 46.00° 16' 26.11''

Site scored/ranked for 08/24/05 update

Site Description (Include management areas, substances of concern, and quantities):

The property known as the P & K Auto site is located on the corner of Lee Boulevard and Gillespie in Richland Washington. The site is legally described as:

Lot 3 Block 403 Plat of Richland subject to Easements and Restrictions of Record.

Since the 1940's to present, activities at this site have included a Chevrolet dealership with service and repair, a Texaco gasoline station, an ARCO gasoline station, P&K Auto, Horne's Auto Sales, which was a used car lot with repair services, and was recently sold to build a new Rite Aid. The site was listed on the Washington Department of Ecology (Ecology) Confirmed and Suspected Contaminated Sites list as a result of a report of a release, submitted by White Shield Environmental, found during the removal of underground storage tanks (USTs) located at the property.

In 1996, White Shield was hired to remove and decommission three 10,000 gallon gasoline UST and a 6,000 gallon diesel UST at the P & K Auto facility. The USTs appeared to be in good condition with no apparent leaks or holes, but during the excavation contamination was encountered. Samples were collected at the extent of the excavation, location of dispenser islands, under piping from the USTs to the dispensers, and from groundwater encountered during excavation at approximately 12 feet below ground level (bgs). Two of the samples collected were above Model Toxics Control Act (MTCA) Method A cleanup levels. One soil sample located under a piping elbow was above MTCA Method A cleanup level for gasoline. The groundwater sample from the tank removal excavation was above MTCA Method A cleanup level for diesel. Approximate 400 cubic yards of contaminated soil was stockpiled on the lot and then removed to an unknown location. The site then sat with no further documented remediation until a subsurface survey was performed in 2004 for the purchase of the property for a future Rite Aid.

In August 2004, a subsurface investigation of the site was performed by ATC Associates Inc. using a direct push rig to collect both soil and water samples. A total of 15 borings to a depth of 16 feet bgs were installed and soil samples were taken every four feet. These samples were field screened for volatile organic compounds and the samples exhibiting the highest photoionization detector (PID) readings were submitted for laboratory analysis. Groundwater samples were taken

from 10 of these boring sites. Various soil samples had gasoline range hydrocarbons, benzene, and ethyl benzene above their respective MTCA Method A cleanup levels. Groundwater samples revealed benzene, ethyl benzene, lead, lube oil, naphthalene, xylene, and toluene above their respective Method A cleanup levels.

In October 2004, an underground site survey was conducted in the parking lot of the site to detect any further USTs suspected to be at the site. Both magnetometer and ground penetrating radar surveys were conducted to map out the location of any further USTs located at the site. These surveys revealed that three further USTs were located within the site.

In April 2005, work began for the decommissioning of the remaining USTs located on the site. The decommissioning was conducted by 3-Kings Environmental as a contractor for Blue Mountain Environmental. Two of the known UST had been filled with water and abandoned in the late 1970s when the ARCO station was built. This water/gasoline mixture was pumped out by Emerald Recycling and the two 8,000 gallon USTs were removed. The other UST was a waste oil tank which was still in use. The remaining waste oil was tested using the Chlor-Detect 1000 test and failed. This waste oil was classified as a hazardous waste and transported to Pollution Control Industries of Tennessee, LLC. for incineration. All the tanks were removed along with all associated fuel lines and hydraulic hoists from the property. The gasoline tank's excavation and fuel line trench's sidewalls and bottoms were tested for NWTPH-Gx-MTBE and total lead. The waste oil tank and hydraulic oils excavations were tested for NWTPH-Dx. All soil samples analyzed showed no evidence of remaining petroleum hydrocarbons above MTCA Method A cleanup levels. Approximately 1,118.5 tons of contaminated soil was removed from the site to Finley Buttes landfill. During the removal of the UST in 2005, no groundwater was encountered or sampled.

It appears from the information provided by Blue Mountain Environmental that the last cleanup process in 2005 removed all contaminated soil from the site, but groundwater contamination at the site has been documented. Rite Aid has agreed to install a minimum of three groundwater monitoring wells and to conduct voluntary quarterly monitoring of groundwater when the building site work has been completed.

Special Considerations (Include limitations in site file data or data which cannot be accommodated in the model, but which are important in evaluating the risk associated with the site, or any other factor(s) over-riding a decision of no further action for the site):

Due to the significant contamination documented on-site being primarily subsurface, the surface water and air routes are not applicable for WARM scoring for this site. Thus, only the groundwater route will be scored.

ROUTE SCORES:

Surface Water/Human Health: NS Surface Water/Environ.: NS
Air/Human Health: NS Air/Environmental: NS
Ground Water/Human Health: 75.4

NS = Not scored

OVERALL RANK: 2

WORKSHEET 2 - ROUTE DOCUMENTATION

1. SURFACE WATER ROUTE - not scored

List those substances to be considered for scoring: Source: 1-4

Explain basis for choice of substance(s) to be used in scoring.

List those management units to be considered for scoring: Source: 1-4

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

2. AIR ROUTE - not scored

List those substances to be considered for scoring: Source: 1-4

Explain basis for choice of substance(s) to be used in scoring.

List those management units to be considered for scoring: Source: 1-4

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

3. GROUND WATER ROUTE

List those substances to be considered for scoring: Source: 1-4

Diesel and Gasoline

Explain basis for choice of substance(s) to be used in scoring. Source: 1-4

Analytical results from groundwater samples showed concentrations greater than their respective Method A MTCA cleanup levels for benzene, ethyl benzene, lead, lube oil, naphthalene, toluene, and xylene.

List those management units to be considered for scoring: Source: 11-4

Contaminated on-site groundwater

Explain basis for choice of unit to be used in scoring. Source: 1-4

Chemical analyses of on-site groundwater indicated significant concentrations of benzene, ethylbenzene, lead, lube oil, naphthalene, toluene, and xylene.

WORKSHEET 3 (If Required)
SUBSTANCE CHARACTERISTICS WORKSHEET
FOR MULTIPLE UNIT/SUBSTANCE SITES
Combination 1 Combination 2 Combination 3

Unit: Section Not Applicable.

1. SURFACE WATER ROUTE

Substance(s):
Human Toxicity Value:
Environ. Toxicity Value:
Containment Value:
Rationale:

Surface Water Human

Subscore: (+3)(+1)= (+3)(+1)= (+3)(+1)=
() () = () () = () () =

Surface Water Environ.

Subscore: (+3)(+1)= (+3)(+1)= (+3)(+1)=
() () = () () = () () =

2. AIR ROUTE

Substance(s):
Human Toxicity/Mobility
Value:
Environ. Toxicity/
Mobility Value:
Containment Value:
Rationale:

Air Human Subscore: (+3)(+1)= (+3)(+1)= (+3)(+1)=
() () = () () = () () =

Air Environ. Subscore: (+3)(+1)= (+3)(+1)= (+3)(+1)=
() () = () () = () () =

3. GROUND WATER ROUTE

Substance(s):
Human Toxicity Value:
Containment Value:
Rationale:

Ground Water Subscore: (+3)(+1)= (+3)(+1)= (+3)(+1)=
() () = () () = () () =

Based on their respective highest scoring toxicity/containment combinations, the following management units will be used for route scoring:

Surface Water -
Air -
Ground Water -

WORKSHEET 6
GROUND WATER ROUTE

1.0 SUBSTANCE CHARACTERISTICS

1.1 Human Toxicity

| Substance | Drinking Water Standard | | Acute Toxicity | | Chronic Toxicity | | Carcinogenicity | | |
|-----------------|-------------------------|------|----------------|------|------------------|------|-----------------|------|------|
| | (ug/l) | Val. | (mg/kg-bw) | Val. | (mg/kg/day) | Val. | WOE | PF* | Val. |
| 1. Benzene | 5 | 8 | 3306 | 3 | - | - | A | .029 | 5 |
| 2. Ethylbenzene | 700 | 4 | 3500 | 3 | 0.1 | 1 | - | - | ND |
| 3. Lead | 5 | 8 | - | ND | - | ND | B2 | - | ND |
| 4. Lube Oil | - | ND | - | ND | - | ND | - | - | ND |
| 5. Naphthalene | 160 | 4 | 490 | 5 | 0.004 | 3 | - | - | ND |
| 6. Toluene | 2000 | 2 | 5000 | 3 | 0.2 | 1 | - | - | ND |
| 7. Xylene | 10000 | 2 | 50 | 10 | 2 | 1 | - | - | ND |

Source: 1-6

*Potency Factor

Highest Value: 10

(Max. =10)

+2 Bonus Points? 2

Final Toxicity Value: 12

(max. +12)

1.2 Mobility (Use numbers to refer to above listed substances)

Cations/Anions: 3) lead = 2

Source: 3,4

Value: 3

(Max. =3)

Or

Solubility(mg/l): 1) 1.8E+03 = 3, 2) 1.5E+02 = 2,
4) 3.0E+01 = 1, 5) 3.0E+01 = 1,
6) 5.4E+02 = 2, 7) 2.0E+02 = 2

1.3 Substance Quantity: Total vol. = 52,000 gallons

Source: 3,4

Value: 6

(Max. =10)

Explain basis: Site had 3 - 10,000 gallon & 2 -
8,000 gallon gasoline UST and 1 -
6,000 gallon diesel UST

2.0 MIGRATION POTENTIAL

2.1 Containment

Source: 1-4,6 Value: 10

(Max. =10)

Explain basis: Spills, discharge to soil = 10
No Cover

2.2 Net Precipitation: 1.6 inches

Source: 6,10 Value: 1

(Max. =5)

2.3 Subsurf. Hydraul. Conduct.: Sands

Source: 3,6 Value: 4

(Max. =4)

2.4 Vertical Depth to Ground Water: <25 feet

Source: 1-4,6 Value: 8

(Max. =8)

WORKSHEET 6 (CONTINUED)
GROUND WATER ROUTE

3.0 TARGETS

- 3.1 Ground Water Usage: Public w/minimal hookups Source: 6,9 Value: 4
(Max.=10)
- 3.2 Dist. to Nearest Drinking Water Well: 2,640-5,000 Source: 6,11 Value: 2
(Max.=5)
- 3.3 Population Served within 2 Miles: City of Richland Source: 6,12 Value: 100
Serves 40,650 40650 = 201.6, max score 100 (Max.=100)
- 3.4 Area Irrigated by (Groundwater) Wells within 2 Source: 6,8 Value: 15
miles: 0.75√no.acres= 0.75√404.9=15.09 (Max.=50)
- 4.0 RELEASE
- Explain basis for scoring a release to ground Source: 1-4,6 Value: 5
water: Documented release of diesel in groundwater (Max.=5)
at the site. Sample results 1700ug/L

SOURCES USED IN SCORING

1. Leaking Underground Storage Tank Closure Report, August 1996, prepared by White Shield, Grandview, Washington.
2. Regional Ground Water Contaminant Source Identification/Assessment Wellsian Way Wellfield, Richland, Benton County, prepared by Washington State Department of Ecology, Central Regional Office, Toxics Cleanup Program, Yakima, Washington, Pages 53-55.
3. Subsurface Survey at Future Rite Aid Site in Richland, Washington, November 1, 2004, prepared by Blue Mountain Environmental, Inc.
4. USTs Decommissioning and Site Remediation, Site Assessment at P&K Auto (Rite Aid) Richland, Washington, May 30, 2005, prepared by Blue Mountain Environmental, Inc.
5. Washington Department of Ecology, Toxicology Database for Use in Washington Ranking Method Scoring, January 1992.
6. Washington Department of Ecology, WARM Scoring Manual, April 1992.
7. U.S. EPA SITEINFO GIS Query for lat./long. of site.
8. Ecology Water Rights Information System (WRIS).
9. Facility Site/Atlas, Department of Ecology, Geographic Information System, available at <http://apps.ecy.wa.gov/website/facsite/viewer.htm>
10. Washington Climate for Benton, Franklin Counties, Cooperative Extension Service, College of Agriculture, Washington State University.
11. Tri-Cities Mid-Columbia Telephone Directory, 2005-2006, City of Richland Map, page S21.
12. Washington State Department of Health, Division of Environmental Health, Office of Drinking Water, Water System Search, Available at <http://www4.doh.wa.gov/SentryInternet/FindWaterSystem.aspx>