

WORKSHEET 1
Summary Score Sheet
2/14/2011

Coca Cola Bottling Company
2101 Woburn Street, Bellingham WA

SITE INFORMATION:

Coca Cola Bottling Company
2101 Woburn Street
Bellingham, WA Whatcom County, WA 98226

Section/Township/Range: Sec 38N/T03E/R29E-update
Latitude: 48.75816 Longitude: -122.44591
Ecology Facility Site ID No.: 7083381

Site scored/ranked for the February 16, 2011, Hazardous Sites List

Site Features/ Description

The site is home to a Coca-cola distribution warehouse. It sits on a 2.6 acre site in an industrial section of Bellingham between Valencia Street and Woburn Avenue. The site has historic contamination underneath the current location of loading dock stemming from a fueling station formerly located in the southeast portion of the building. The fuel tank has been removed and significant clean-up has occurred. There remains contamination on the site in the form of both soil and groundwater contamination.

The geology of the site is described as Bellingham glaciomarine drift. Typical particle size distribution is 48% clay and silt, 12% very fine sand, 11% fine sand, 10% medium sand, 4% course sand and 12% pebbles. Groundwater is variable and has been reported as shallow as 7.5 feet below ground surface. Water appears to flow towards the southwest at a slow rate.

Site History

The site history is best described in the three reports listed below:

Underground Storage Decommissioning. Coca Cola Bottling Company by W.D. Purnell and Associates, Inc. Oct. 19, 1990.

A 2000 gallon fuel tank was removed on August 22, 1990. The tank was used to store gasoline from 1978 to 1988 and diesel from 1988- 1990. The report also discusses a 60 gallon diesel spill in 1989.

Collacurcio was hired to remove the fuel tank. W.D. Purnell was hired to conduct soil testing of the pit. A new loading dock was constructed over the tank location prior to the test results of the soil sampling were known. The tank appeared to be free of any holes at the time it was removed.

Test results from the sidewalls and bottom of pit indicated levels of gasoline and diesel range TPH above MTCA method A levels. At the time it was hypothesized that the majority of the contamination was due to the prior spill.

The IT Group, Subsurface Investigation Report Coca Cola Bottling Company of Bellingham Feb 28, 2000

Oct. 28, 1999 the IT group conducted a soil and groundwater investigation. Twelve borings were taken from inside and outside of excavation area. In all 28 soil samples and 2 groundwater samples were collected. Several samples were above method A standards. Soil samples from BH6, 9 and 10 were above MTCA method A for TPH-D with the highest concentration being 5,600 ppm in BH-6. TPH-G in sample BH-10 was above MTCA method A with a level of 35 ppm. Benzene was also found above MTCA method A standard in BH-1 (8.6 ug/l) and BH-2 (8.3ug/l).

All samples that were above MTCA clean up levels were located west of tank area. It was believed that this contamination stemmed from a 100 gallon diesel spill. Soil was removed 1-2 feet deep but no confirmation testing was ever completed. `

CCBC of Washington at Bellingham Report of Findings Feb. 2008

A second source removal took place on February 6, 2006. In all 32 tons of impacted soil from the previous excavation and sent to Rinker for disposal. Samples were taken from the sidewalls and bottom of pit. All samples were reported as non-detect for TPH with the following exceptions; the east bottom sample (5.7 mg/kg TPHD) and North sidewall at 6 ft (92 mg/kg). The North sidewall could not be further excavated due to the location of the loading dock building.

After the second attempt at source removal there were 4 total rounds of subsurface investigation that took place between September 19, 2005 and September 24, 2007. This included taking borehole soil samples and groundwater samples from monitoring wells. In all 7 monitoring wells were installed along with 48 soil samples being collected from 25 locations. All sample results used for this site hazard assessment were taken during this time. No further clean-up has taken place. Sample locations are shown on figure 1.

Table 2. GROUNDWATER SAMPLING RESULTS

| Sample No. | Analyte Found | Sample Result (ppm) | Applicable Standard | (ppm) |
|------------|---------------|---------------------|---------------------|-------|
|------------|---------------|---------------------|---------------------|-------|

| | | | | |
|------|----------|--------------|--------------|-----|
| MW-2 | Gasoline | 1,400 | MTCA A Ind.* | 800 |
| MW-1 | Diesel | 790 | MTCA A Ind.* | 500 |
| MW-2 | Benzene | 24 | MTCA A Ind.* | 5 |

*MTCA A Ind. refers to the Model Toxics Control Act Method A Soil Cleanup Levels for Industrial Land Use

Table 1. SOIL SAMPLING RESULTS

| Sample No. | Analyte Found | Sample Result (ppm) | Applicable Standard | (ppm) |
|------------|---------------|---------------------|---------------------|-------|
| BH-101 | Diesel | 6,900 | MTCA A Ind.* | 2,000 |
| BH-208 | Gasoline | 2,600 | MTCA A Ind.* | 30 |

*MTCA A Ind. refers to the Model Toxics Control Act Method A Soil Cleanup Levels for Industrial Land Use

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
 Air/Human Health: NS
 Groundwater/Human Health: 43.7

Surface Water/Environmental: NS
 Air/Environmental: NS

OVERALL RANK: 3

WORKSHEET 2
Route Documentation

1. **GROUNDWATER ROUTE**

- a. List those substances to be considered for scoring: Source: 1,2,3
Gasoline, Benzene, Xylene,
- b. Explain basis for choice of substance(s) to be used in scoring:
These substances were detected in on-site surface soil samples at concentrations exceeding their respective MTCA cleanup levels.
- c. List those management units to be considered for scoring: Source: 1,2,3
Subsurface soil, Groundwater
- d. Explain basis for choice of unit to be used in scoring:
The contaminating substances were detected in on-site subsurface soil and groundwater samples at concentrations exceeding their respective MTCA cleanup levels.

WORKSHEET 6
Groundwater Route

1.0 SUBSTANCE CHARACTERISTICS

| 1.2 Human Toxicity | | | | | | | | | | |
|---------------------------|---------------|--------------------------------|-------|----------------------------|-------|------------------------------|-------|-----------------|------|-------|
| Substance | | Drinking Water Standard (µg/L) | Value | Acute Toxicity (mg/ kg-bw) | Value | Chronic Toxicity (mg/kg/day) | Value | Carcinogenicity | | Value |
| | | | | | | | | WOE | PF* | |
| 1 | Gasoline | 5 | 8 | 3306 | 3 | -- | -- | A=1 | .029 | 5 |
| 2 | Diesel | 20 | 6 | 490 | 5 | .004 | 3 | -- | -- | -- |
| 3 | Toluene | 2000 | 2 | 5000 | 3 | 0.2 | 1 | -- | -- | -- |
| 4 | Ethyl-Benzene | 700 | 4 | 3500 | 3 | 0.1 | 1 | -- | -- | -- |
| 5 | Xylenes | 10000 | 2 | 50 | 10 | 2 | 1 | -- | -- | -- |

* Potency Factor

Source:1,2,3

Highest Value: 10

(Max = 10)

Plus 2 Bonus Points: no

Final Toxicity Value: 10

(Max = 12)

| 1.2 Mobility (use numbers to refer to above listed substances) | |
|---|--------------------------|
| Cations/Anions [Coefficient of Aqueous Migration (K)] | OR Solubility (mg/L) |
| 1= Gasoline | 1= $1.8 \times 10^3 = 3$ |
| 2= Diesel | 2= $3.0 \times 10^1 = 2$ |
| 3= Toluene | 3= $5.4 \times 10^2 =$ |
| 4= Ethyl Benzene | 4= $1.5 \times 10^2 =$ |
| 5= Xylenes | 5= $2.0 \times 10^2 =$ |

Source:1,2,3,4

Value:3

(Max = 3)

| | |
|---|---|
| 1.3 Substance Quantity (volume): | |
| Explain basis: ~ Unknown. Use default value of 1. | Source: <u>1, 3</u> Value: <u>1</u> (Max=10) |

2.0 MIGRATION POTENTIAL

| | | Source | Value |
|-----|---|--------|-------------------------|
| 2.1 | Containment (explain basis): Spills, discharges, and contaminated soil are present on and under the surface of the ground. | 5 | 10 (Max = 10) |
| 2.2 | Net precipitation: | 6 | 3 (Max = 5) |
| 2.3 | Subsurface hydraulic conductivity: | 1,2,3 | 5 (Max = 4) |
| 2.4 | Vertical depth to groundwater: | 1,2,3 | 8 (Max = 8) |

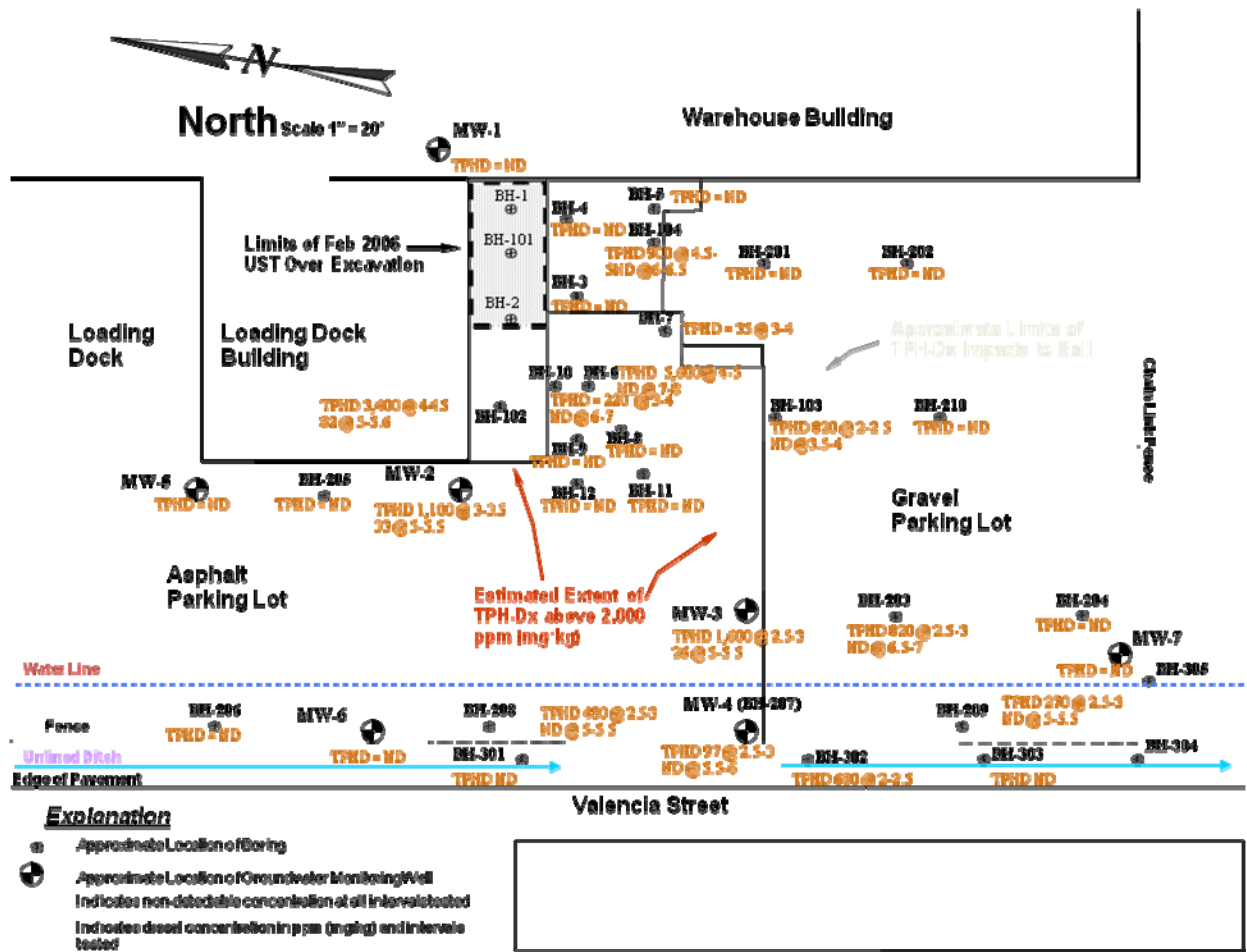
3.0 TARGETS

| | | Source | Value |
|-----|---|--------|--------------------------|
| 3.1 | Groundwater usage: Public and private supply, but alternate sources available with minimum hookup requirements | 3, 6 | 4 (Max = 10) |
| 3.2 | Distance to nearest drinking water well: < 10,000 feet | 8 | 0 (Max = 5) |
| 3.3 | Population served within 2 miles: $\sqrt{\text{pop.}} = 32$ | 8 | 32 (Max = 100) |
| 3.4 | Area irrigated by (groundwater) wells within 2 miles: $(0.75) * \sqrt{\# \text{ acres}} =$ | 8 | 4 (Max = 50) |

4.0 RELEASE

| | | Source | Value |
|--|---|--------|-----------------------|
| | Explain basis for scoring a release to groundwater: Confirmed release | 1,2,3 | 5 (Max = 5) |

Figure 1



SOURCES USED IN SCORING

1. Purnell, W.D. and Associates. October 19th, 1990. Underground Storage Tank Decommissioning, Coca-Cola Bottling Company, 2101 Woburn Street, Bellingham, Washington, 98226
2. The IT Group, February 28, 2000. Subsurface Investigation Report, Coca-Cola Bottling Company of Bellingham, 2101 Woburn Street, Bellingham, Washington, 98225
3. Easterbrook, Donald J. December 1963. Late Pleistocene Glacial Events and Relative Sea-Level Changes in the Northern Puget Lowland, Washington. Geological Society of America Bulletin v. 74, p. 1465-1484, 3 figs., 3 pls.
4. Washington State Department of Ecology, Toxicology Database for Use in Washington Ranking Method Scoring, January 1992
5. Washington State Department of Ecology, WARM Scoring Manual, April 1992.
6. Washington Climate – Net Rainfall Table
7. United States Department of Agriculture Soil Conservation Service, Soil Survey of Whatcom County Area, Washington,
8. Washington WRATS printout for two-mile radius of site.
9. State Department of Ecology, Water Rights Application System