CSID 604

Tacoma-Pierce County Health Department
Source Protection Programs/Site Hazard Assessment

Worksheet 1 - Summary Score Sheet

SITE INFORMATION

Name: CleanCare Corporation
Address: 1510 Taylor Way
City: Tacoma, County: Pierce, State: WA Zip: 98421
Section/Township/Range: 35-21-3 **Latitude: 47°16'25.2"N**
Longitude: 122°23'31.5"W

TCP ID Number: ~~13861775~~
3798239

Site assessed/ranked for the February 26, 2002 update

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

The CleanCare site encompasses approximately 4 acres over three contiguous parcels (0321352052, 0321352054, and 0321352050) and is located in a former tidal marsh of Commencement Bay. Historical photos indicate that much of the property was swampy prior to development. This site is located between the Blair and Hylebos Waterways in an area commonly referred to as the "Tacoma Tideflats". This site is zoned by the City of Tacoma as "M-3" Heavy Industrial.

Site History

This site, and the general area, has been used extensively as a fill site. As waterways were dredged in the tidal marsh during the 1940's and early 1950's, dredge spoils were placed on adjacent areas, including the CleanCare site. The saltwater marsh habitat was replaced with a freshwater marsh as a result of the build-up in elevation. Additional filling occurred with the reported fill materials consisting of sand, gravel, wood debris, lime sludge waste and dredge spoils from the Hooker Chemical & Plastics Corporation plant[1], waste lime from Domtar, demolition debris, and auto fluff from General Metals. Placement of this fill material resulted in a final elevation that reportedly varies between 12 – 14 feet above mean sea level.

The western portion of the CleanCare site was filled first, with two types of fill material cited: lime waste and auto fluff. Lime solvent sludge from the Hooker Chemical Plant lime ponds, along with material dredged from the Hylebos Waterway adjacent to the Hooker plant, was used to fill in some wet areas. Previous reports indicate that this fill material is 1 to 2 feet thick. Hooker ran analyses on the lime solvent sludge in their ponds prior to removal and detected chlorinated hydrocarbons, heavy metals, asbestos, salts, and caustic compounds in the sludge. The dredge spoils were similar in nature,

[1] The Hooker Chemical plant was purchased in 1968 by Occidental Petroleum although correspondence dated after that time still came out under the Hooker letterhead. The "Hooker" plant split from the parent company and changed its name to Occidental Chemical Corporation in 1982. This chemical plant changed hands again in 1997 when Pioneer Chlor-Alkali bought it.

with the addition of some oil and grease. Automobile fluff fill has been estimated to be 3 – 8 feet thick in this portion of the site, although the exact area or extent of the fluff is not known.

The eastern half of the CleanCare site was primarily wetland prior to filling. Fill material reportedly consisted of wood waste, demolition/construction debris, and lime wastes from Hooker Chemical. There is a great deal of uncertainty regarding the lime wastes – where they were placed and whether they were subsequently excavated and removed, either in part or *in toto*.

Subsequent to being used as a fill site for waste material, this site has been used by a succession of businesses. Solidus, Inc. began leasing a portion of the CleanCare site in 1974 and bought all 3 parcels in the early 80's. After purchasing the property, Solidus first leased to Poligen (Lilyblad/Sol-Pro) and later to NW Processing. CleanCare, Inc. acquired the site in 1994/95. Throughout these iterations of lessees and owners, the operations have remained similar: the temporary treatment, storage, disposal, and recycling of hazardous and nonhazardous waste from other locations.

Improper handling and storage at this facility has resulted in a number of spills and leaks, with subsequent contamination of soils and stormwater and potential contamination of groundwater. Washington State Dept. of Ecology Inspection Reports for this site have noted lack of proper containment, leaking drums and tanks, as well as spills.

Current Site Conditions

CleanCare closed its business in November 1999. EPA stabilized the site by removing waste materials stored at the site and securing the perimeter with fencing and locked gates. EPA completed its removal action in September 2000 which involved:

- The removal of two million gallons of waste from 33 aboveground storage tanks, 19 temporary aboveground storage tanks, and 3,630 drums on this site;
- Demolishing four aboveground storage tanks and installing an asphalt cap over three areas of the site;
- Replacing the broken and contaminated stormwater system with an aboveground stormwater management system.

The above-ground stormwater management system is currently being managed by DOE. Approximately 65% of the site is now capped.

Contaminants of concern

Potential contaminants of concern resulting from the poor management practices of the various treatment, storage, and disposal (TSD) operations at this site include oil, grease, gasoline, diesel, Stoddard solvent, ethylene glycol, chlorinated and nonchlorinated solvents, acids, caustics, coal sludge, and cyanide.

Other potential contaminants include lime waste sludge components (chlorinated hydrocarbons, heavy metals, asbestos, salts, and caustic compounds); PCBs, cyanide, and heavy metals from autofluff fill; and arsenic and cadmium from Asarco slag. Additionally, a 1982 Washington State Department of Ecology Inspection Report noted the possible dumping of methylmercuric phosphate sludge in the general vicinity of the CleanCare site.

A number of site inspections and investigations have been conducted at this and adjacent properties. A cursory review of some of these documents revealed a variety of known contaminants at the CleanCare site. Spills to the ground and stormwater system of Safety-Kleen solvents, #2 diesel, lube oil, and mineral spirits are documented. Soil sampling done in 1982 by Washington State Department of Ecology, in 1995 for CleanCare and in 2000 by EPA has detected lead, arsenic, cadmium, mercury, PCBs, pesticides, a variety of VOCs and SVOCs, and diesel and heavier molecular weight hydrocarbons. Groundwater sampling done by CleanCare for quarterly reporting purposes has detected PCBs, pesticides, motor oil, arsenic, and a variety of VOCs and SVOCs.

Subsurface Soil Investigation

The Initial Investigation (II) conducted by the Tacoma-Pierce County Health Department included 14 borings done using a direct push continuous core sampler. Because of the heterogeneous nature of the fill material, recovery was fair to poor overall. The most predominate fill material encountered was wood waste; however, autofluff material and lime waste was also present. Soil samples were taken and analyzed for VOCs, SVOCs, PCBs, metals, TPH-gas, and TPH-diesel extended. Analytes detected above MTCA Method A cleanup levels were arsenic, cadmium, chromium, lead, carcinogenic PAHs, gas, diesel, and oil. Also detected were various chlorinated hydrocarbons as well as barium, mercury and benzene.

Groundwater was encountered at about 5 feet in most of the borings. Temporary well points were installed and water samples taken and analyzed for VOCs, SVOCs, PCBs, metals, TPH-gas, and TPH-diesel extended. Analytes detected above MTCA Method A cleanup levels were arsenic, cadmium, chromium, lead, mercury, carcinogenic PAHs, and TPH.

Groundwater Investigation

Two aquifers were investigated at the CleanCare site. The shallow, upper aquifer is in the fill material. The deeper aquifer is in sand and separated from the upper aquifer by a silty clay layer. Additional groundwater monitoring wells were installed at the CleanCare site as part of the II, resulting in a total of 11 shallow aquifer wells (from 6 to 13 feet deep) and 7 deeper wells (from 23 to 28 feet deep). The deeper wells were screened at the top of the aquifer; depth to the bottom of the deeper aquifer is not known.

Three rounds of groundwater monitoring have been conducted with samples collected and analyzed for VOCs, SVOCs, metals, TPH-gas, and TPH-diesel extended. Analytes

detected above MTCA Method A cleanup levels were arsenic, lead, benzene, vinyl chloride, trichloroethylene, tetrachloroethylene, carcinogenic PAHs, TPH-gasoline, TPH-diesel, TPH-oil, and 1,2-dichloroethane. Also detected were barium, cadmium, chromium, various chlorinated hydrocarbons, 2-butanone, and cresols.

The only contaminant found in the deeper aquifer with concentrations above MTCA Method A cleanup levels was diesel at 20,000 ppb. Also detected were arsenic, barium, chromium, lead, benzene, methyl ethyl ketone, cresols, PAHs, and pentachlorophenol.

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):

The contamination detected in the Initial Investigation of this site is in the subsurface soil and groundwater. Groundwater contamination was found in both the shallow, upper aquifer and in the deeper aquifer just below it. The bottom of the shallow, upper aquifer is about 20 feet bgs, but the bottom of the deeper aquifer (screened at the top of the aquifer, between 23 and 28 feet bgs) is unknown. This site is scored based on the confirmed release to the shallow, upper aquifer. The groundwater is classified as usable, but not used.

There is a municipal production well for the City of Tacoma (well source 9, ACN703) which is 779 feet deep located 1460 feet to the northwest of monitoring well CCW-3A on the CleanCare site. Another two well sources (So 01/ACN770, and So 03/AFK816) for Kaiser Aluminum & Chemical are located just within the two mile radius to the southeast of CleanCare which draw from 884 and 900 feet bgs, respectively. Both the City of Tacoma and Kaiser well sources draw from a very deep aquifer which is unlikely to be affected by the contamination detected in the upper 30 feet of the CleanCare site.

TPCHD also shows 8 individual wells within a two mile radius. Four of these wells are on the south side of the Blair Waterway and another two are on the north side of the Hylebos Waterway. Because these wells are located on the far sides of each waterway, with respect to the CleanCare location, they are unlikely to be hydraulically connected to the contaminated groundwater at CleanCare.

The remaining two individual wells are southeast of the CleanCare site and just within the two mile radius. One was decommissioned in 1995 and the other is 80 feet deep. This latter well is screened from 72 to 78 feet, with a surface seal down to 23 feet. This well water is likely protected from the contamination detected in the upper aquifer at CleanCare by a 22 foot layer of clay and silt, with some fine sand, from 17 to 39 feet bgs.

ROUTE SCORES:

Surface Water/Human Health: **NS**

Surface Water/Environ. **NS**

Air/Human Health: **NS**

Air/ Environmental: **NS**

Ground Water/Human Health: **39.0**

OVERALL RANK: 3