Site Inspection Report
Coski Industrial Dump
Tacoma, Washington
WAD 009281007

Report Prepared By:

Suzanne E. Milham

Washington State Department of Ecology

Preliminary Assessment/Site Inspection Program

February 1986

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SITE INSPECTION REPORT
COSKI INDUSTRIAL DUMP
PIERCE COUNTY WASHINGTON

MARCH, 1986

HAZARDOUS WASTE CLEANUP PROGRAM

PRELIMINARY ASSESSMENT/SITE INSPECTION SECTION

State of Washington
Booth Gardner
Governor

Department of Ecology

PREPARED BY SUZANNE E. MILHAM

Site Name/Location

Coski Industrial Dump WAD 009281007
5403 Pendle Lange Road
Tacoma, Washington 98422

Latitude: 47/16/03.1

Longitude: 122/21/18.0

Northwest ¼ Section 31, T. 21 North, Range 4, East Willamette Meridian

Investigation Participants

Suzanne Milham: Washington State Department of Ecology (Ecology)
Hazardous Waste Cleanup Program
(206) 459-6319

Ned Therien: Ecology (no longer working for Ecology)

Bob Kievit: United States Environmental Protection Agency
(206) 753-9014

Principal Site Contact

Bernard Coski
(206) 927-0362

Date of Inspection and Sampling

November 11, 1985

1.0 SITE OWNER/OPERATOR

Bernard Coski
5403 Pendle Lange Road
Tacoma, Washington 98422
(206) 927-0362

2.0 SITE HISTORY AND BACKGROUND

This site is an unpermitted landfill in a deep ravine which Mr. Coski is trying to fill and eventually plant a tree farm. Coski began accepting wastes in 1975. The majority of materials disposed of in the landfill consisted of wood waste, demolition debris, and car interior "fluff" from nearby General Metals Company. Four hundred and fifty cubic yards of sludge classified by Ecology as hazardous waste from Lillyblad Poligen Company and fuel filter clay from U.S. Oil Company in unknown amounts were also disposed of there.

This site was closed September 10, 1984 pending resolution of a court case for unpermitted dumping.

Coski is presently applying quarry wastes which form a cap over the other wastes buried. These quarry waste consist of clay, sand, and small gravel.

3.0 ENVIRONMENTAL SETTING

The entire landfill facility occupies 70 acres which are partially fenced. The western half of the site is in the Tacoma city limits and the eastern half is in Pierce County. The south side of the property adjoins Manke Lumber Company property. Power lines and a right of way pass through the site which is in a wooded area on steep bluffs along the shore of the Hylebos waterway. The intervening terrain is very steep.

There are 5,600 residents and 1,400 employees working within two miles.[2]

A residential area is approximately 1/16 mile from the site to the north; there are 3,000 residents within one mile.[2] There is a mix of residential and industrial use in the nearby area. The shoreline of the Hylebos waterway is highly industrialized.

3.1 Climate

The mean annual precipitation for this area is approximately 40 inches.[1] The maximum 2-year, 24-hour rainfall is approximately 2 inches.[1]

In July 1984, the average daily maximum temperature was approximately 91 degrees, and in January 1984 the lowest average temperature was approximately 17 degrees Fahrenheit.[1]

3.2 Geology and Hydrology

Soils are permeable, Vashon Advance sand and gravel, with ground water estimated to be 50 feet deep.[4] Soils are of relatively high permeability. Springs emanate from the sides of the bluff below the landfill along with landfill leachate. These springs flow west into an unnamed creek which lies in the ravine at the base of this bluff which eventually flows into the Hylebos waterway.

3.3 Topography and Drainage

The landfill is in a ravine which lies among steep bluffs along the North Shore of the Hylebos waterway. The elevation of this site is approximately 400 feet above mean sea level. The intervening terrain is steep at approximately 25% gradient. Drainage and leachate from the site flow to the west into a ravine which contains a tributary to the Hylebos waterway. Once reaching this tributary, water flows to the southwest. The bottom of this ravine is at an approximately 110 foot elevation. Several springs also feed this tributary from both sides of the ravine. The landfilled waste is approximately 60 feet deep at its deepest point. Coski's landfill operation has greatly changed the original topography of the ravine in which it is located.

3.4. Ground Water and Surface Water Uses

There is no known use of downgradient ground water. Within 3 miles there are 19 public and 21 private wells serving a total of 62,000 people.[2] All drinking water wells are upgradient.[2] The nearest well (Abuan, Woodworth) is 3,000 feet to the north.[2]

The site is 500 feet from an unnamed tributary of the Hylebos waterway. The Hylebos waterway is ½ mile southwest of the site. Commencement Bay and the Hylebos waterway are marine environments used for fishing and recreation; there is no use of surface water for drinking in the area.

4.0 METHODS

On November 15, 1985, I, Suzanne Milham, accompanied by Ned Therien (Ecology), and Bob Nievit (EPA), performed a site investigation and sampling at the Coski Industrial Landfill. Jodi Snyder of the Tacoma-Pierce County Health Department also participated in part of the investigation.

The weather was overcast, foggy, and raining. The temperature was 35-40° F.

We were met at the site by Mr. and Mrs. Coski and their son.

The Coski's took us on a tour of the site explaining generally when, where, what, and how much material was dumped in which locations. It was difficult if not impossible to make any accurate conclusions about

the depths and exact locations of potentially hazardous materials since so much material had been buried over many years.

The site is a bluff on the edge of a large ravine in which Coski has filled with debris. Most of the site has been recently covered with a layer of gray clay-gravel slurry; this was very sticky and difficult to walk in. This material comes from a nearby quarry. This site is under major power lines and next to a residential area. There are several dead trees and a state of internal combustion in several areas on site. The ground in these areas was cracked deeply and had hot steam and methane gas rising out of it.

Coski said that the wastes at this site were comprised primarily of auto fluff from General Metals Company, wood wastes, and clay from from a nearby quarry. Ned asked about the treater clay from U.S. Oil Company which was dumped at this site, and Coski said it smelled badly at first when it rained but was now covered with other materials.

The Coskis did not remain present during the sampling procedure.

Samples were taken of soil and water upgradient on site, and down-gradient in the ravine below the site. Figure 1 describes sample locations.

Two on-site soil samples were collected first - NCT067 and 068.

Sample 067 was a composite collected at an elevation of 290 feet (elevations are all in reference to mean sea level) from a ditch on-site which had not been covered with clay. Sample 068 was taken in an area representative of the auto fluff which Coski landfilled there at approximately the same elevation.

Sample 066 was collected to gain a representative background of soil south of Pendle Lange Road, at the same elevation as 067 and 068.

The ravine along the edge of Coski's property had several places where dark brown leachate was emanating from the hillside. This leachate flows into a small creek which emanates at the top of the ravine near Pendle Lange Road.

Sample 062 was collected of water at approximately the mid-point of the ravine where the most leachate from the Coski property was evident at an elevation of approximately 200 feet.

Sample 064 and 065 were collected of sediment at this same location.

Sample 061 was collected of water from the north end (top) of the ravine. This stream had a septic tank, sewage odor and it was undetermined where this originated from. This location was at an elevation of approximately 300 feet.

5.0 ANALYTICAL PARAMETERS

Ecology analyzed soil and sediment samples NCT064-068 for pesticides, EP Toxicity Metals and Acid Base Neutral Extractable, EPA priority

pollutants. Samples NCT064 and NCT065 were duplicates collected for quality control and assurance purposes.

Water samples NCT061, 062, 063, 069, and 070 were analyzed for pesticides, priority pollutant metals, and volatile organics. Samples 062 and 063 were duplicates taken for quality control and assurance purposes. Lauck's laboratory performed the analyses for pesticides, acid base neutral extractable priority pollutants, and volatile organics. The metals and phenolic analyses were done by the Manchester environmental laboratory.

5.1 Quality Control/Quality Assurance of Sample Collection

Stringent quality control and assurance procedures for sample collection were developed in conjunction with the EPA Site Inspection Sampling Guidelines, and training course literature. These procedures are also discussed in detail in the sampling and safety plans which were developed for this site prior to performing the actual inspection. (See Appendices D & E.) Procedures for documentation, chain of custody, decontamination of samples and personnel, safety, and labeling are included in these plans.

Blind duplicates were made from one sample for each parameter analyzed. The laboratory was not notified which samples were the duplicates. Transfer and transport blanks were prepared by the laboratory and maintained and analyzed for each parameter sampled.

5.2 Laboratory and Data: Quality Control/Quality Assurance

The laboratories which performed the sample analysis practiced strict quality control and assurance per EPA standards.

Lauck's laboratory supplied a surrogate recovery report contained in Appendix A. Surrogate (chemically similar) compounds were utilized in the analysis of volatile organics. Surrogates were added to each sample prior to extraction and analysis to monitor for matrix effects, purging efficiency and sample processing errors. The control limits used by Lauck's represent 95 percent confidence interval established by their laboratory through repetitive analysis of these sample types.

The Manchester Laboratory used similar quality control and assurance procedures.

All laboratory sample analyses results were reviewed for consistency and accuracy by each member of the PA/SI team and at least one organic chemist prior to inclusion to this report.

6.0 RESULTS AND DISCUSSION

The complete laboratory analysis reports are attached in Appendix "A".

Volatile Organic Analysis

There were no measurable quantities of any volatile organic chemicals present in any of the soil or water samples analyzed.

Trace amounts of acetone were found as a laboratory contaminant in the method blank NCT070 and samples NCT068 and 069.

Acid Base Neutral Extractable Priority Pollutants

There were various phthalate compound present in all the sediment and soil samples collected. (See Appendix A.) There were nine of these compounds identified. Phthalates are associated with plastics and are most likely a breakdown product from the extensive amounts of "auto fluff" buried at this site. None of the levels of phthalates found in soil were above the stringent criteria reference set by EPA for drinking water. Phthalates are a common modern constituent in the environment as evidenced by sample NCT066 which was collected off-site to the south of Pendle Lange Road, presumably upgradient from on-site contaminants. This sample contained three of the phthalate compounds in levels greater than those on-site; this contamination presumably originated from the nearby road and subsequent traffic and tire degradation products.

Polychlorinated Biphenyls (PCBs) and Dibenzo furans were found in three samples. (See Figure 1.) Contamination was found in two locations on-site; in a ditch; and off-site in sediment from the middle of the r the landfill. Aroclor 1242 (AC) was found in the middle of the ravine in samples NCT063 and 064 at .21 or .61 ppm respectively. AC 1242 was also found on-site in sample NCT068 at 4.2 ppm. Aroclor 1254 was found in samples NCT064 and NCT068 at .49 and 3.3 ppm respectively. Debenzo furan was found in the middle of the ravine in sediments NCT064-065 at .086 or .056 ppm or .86 and .56 ppb respectively. The Dibenzo Furan is probably related to the PCBs since it is known to be a contaminant of even pure PCBs[3]. The EPA proposed water quality criterion for protection of freshwater marine life is .001 ug/l and .001 ppb PCBs.[3]

Because there are no regulatory criteria for these contaminants in soil, the factor of 10 times the drinking water primary standards were applied in order to determine the significance of these values. All levels of PCBs detected on-site are believed to be significant.

Since PCBs were present on-site and in leachate stream sediments immediately downgradient from the site, it is likely that there is off-site migration of PCBs. The levels found in these samples may not be representative of the highest levels of PCBs to be found on-site; since sampling sites represent only a small area of the total landfill.

There were eight other extractable priority pollutants compounds detected in soil and sediment on- and off-site in samples NCT064, 065, and 068. None of the values for these eight compounds exceeded the EPA drinking water primary standards by more than five times. (See Appendix A.)

Metals

There was no elevation of metals in any of the water samples analyzed. All levels were well below the National Primary Drinking Water Regulation standards.

When compared to the background sample, NCT066, some of the soil samples exhibited slightly elevated levels of lead, cadmium, chromium, arsenic, and barium. These elevations were present in both on-site samples NCT067 and NCT068 and in the off-site ravine sediment samples NCT064.

Conclusions and Recommendations

Because of the presence of significant levels of PCBs on-site, further soil sampling should be done in order to determine the full extent of contamination. The Department of Ecology in conjunction with EPA should initiate this sampling effort.

The quantities of other hazardous materials identified in soil are small and there is no immediate, apparent threat to human health, drinking water supplies, or the environment. The amounts of these pollutants present in soil are much smaller than the standards set for drinking water. There was no measurable contamination of surface and spring water on- and off-site which indicates pollution has not migrated via this pathway to the Hylebos waterway or to the ground water. PCBs tend to bind with the soil which may explain its presence in the ravine and on-site sediment/soil samples and absence in any of the water samples collected.

Southwest Region

Contact Persons: Tim Nord (360) 407-6241 or Michael Spencer (360) 407-7195

County	Site Name	Nearest City	Rank	Status
Pierce (Cont.)	♦**Chevron Bulk Plant #206394**	**Eatonville**	**2**	**Awaiting RA**
	Choi Property	Puyallup	3	Awaiting RA
	Commencement Bay Nearshore Tideflats	Tacoma	0▲	RA in Progress
	Conan Fuel Service	Gig Harbor	4	Independent RA
	Coski Industrial Dump	Tacoma	5	Awaiting RA
	D Street Petroleum	Tacoma	4	Construction Complete
	Dorman Tire Yard Fire	Roy	2	Awaiting RA
	Edgewood Shopping Center	Milton	2	Independent RA
	Elbe Mall	Elbe	5	Awaiting RA
	ERS Trucking	Tacoma	2	Awaiting RA
	Fred Jones Mfg Tacoma Division	Tacoma	1	Independent RA
	Frederickson Industrial Park	Puyallup	1	RA in Progress
	Garraways Auto Parts	Spanaway	3	Independent RA
	General Metals	Tacoma	1	Construction Complete
	Hesselgrave Charters & Tours	Puyallup	4	Awaiting RA
	Hidden Valley Landfill Thun Field	Puyallup	0▼	RA in Progress
	Hylebos Wood Debris Site Sediments	Tacoma	0▼	RA in Progress
	Lakewood Ponders Corner	Lakewood	0▲	Construction Complete
	Landscaping by Pat Boring	Tacoma	4	Awaiting RA
	Leons Trucking	Buckley	5	Independent RA
	Lewis Auto Wrecking	Puyallup	4	Awaiting RA
	Lilyblad Petroleum Inc	Tacoma	1	RA in Progress
	Lincoln Avenue Ditch	Tacoma	3	RA in Progress
	Manke Lumber Co Sumner Plant	Sumner	5	Awaiting RA
	Middlesex Corp	Puyallup	3	Awaiting RA
	Music Machine	Tacoma	2	RA in Progress
	National Oil Dump	Tacoma	4	Awaiting RA
	Newman Recycling	Tacoma	4	Awaiting RA
	Norwegian Salmon Industries	Gig Harbor	1	RA in Progress
	Occidental Chemical Dauphin	Tacoma	3	Awaiting RA
	Occidental Chemical Marine View	Tacoma	3	Awaiting RA
	Old Pierce County Court House	Tacoma	5	Independent RA
	Parkland Cleaners	Parkland	3	Independent RA
	Petroleum Reclaiming Service	Tacoma	2	RA in Progress
	Ponders Auto Parts	Tacoma	3	Awaiting RA
	Port of Tacoma 721 Alexander	Tacoma	3	Independent RA
	PRI Northwest	Tacoma	0▼	RA in Progress
	Puget Power Electron Power	Orting	2	Independent RA
	PSE Puyallup Serv Ctr	Puyallup	2	Awaiting RA
	RW Investments	Tacoma	3	Independent RA
	Rhone Poulenc Basic Chemical	Tacoma	3	Independent RA
	River Road Landscaping	Puyallup	3	Awaiting RA
	Robert Rosch Property	Roy	1	Independent RA
	Seattle Transfer	Tacoma	5	Awaiting RA
	Shore Terminals LLC	Tacoma	0▼	RA in Progress
	Simon & Sons	Tacoma	0▼	RA in Progress
	Sound Battery	Tacoma	0▼	RA in Progress
	♦**Stowe Construction**	**Sumner**	**5**	**Awaiting RA**
	Suburban Mechanical Inc	Tacoma	4	Awaiting RA
	Suburban Realty Inc	Tacoma	1	Awaiting RA
	Sumner National Auto Parts	Sumner	1	Awaiting RA
	Tacoma Coal Gasification	Tacoma	0▼	RA in Progress

Hazardous Sites List Legend:

♦ New site added to the ranked list, February 2001
● New site added to the National Priorities List (NPL)

Ranking
0▼ Superfund site; State has lead
0▲ Superfund site; Federal (EPA) has lead
0* Superfund site; site is under a Federal Facilities Agreement
0 Superfund site; EPA and State co-lead