

HEALTH CONSULTATION
KALADISH WASTE DISPOSAL SITE
REVIEW OF SOIL AND SEDIMENT CONTAMINATION
CERCLIS NO. CTD980524649
NAUGATUCK, CONNECTICUT

April 24, 1996

Prepared by
The Connecticut Department of Public Health
under cooperative agreement with
The Agency for Toxic Substances and Disease Registry

The conclusions and recommendations in this health consultation are based on the data and information made available to the Connecticut Department of Public Health and the Agency for Toxic Substances and Disease Registry. The Connecticut Department of Public Health and the Agency for Toxic Substances and Disease Registry will incorporate additional information when received. The incorporation of any additional data could change the conclusions and recommendations listed in this document.

BACKGROUND AND STATEMENT OF ISSUE

The Kaladish Waste Disposal Site is an inactive municipal and industrial landfill located off of Andrews Mountain Road in Naugatuck, Connecticut [1]. The landfill, which covers approximately 14 acres of a 70 acre parcel, operated from 1949-1957 and is composed of an area where open burning occurred, a potential waste lagoon and a drum storage area[1]. A lagoon was identified on-site by the Connecticut Department of Environmental Protection (CT DEP) during a 1981 site inspection but was not found during more recent site investigations[1]. The site is heavily overgrown. There are no buildings on site.

From 1949-1956 the landfill received municipal waste. This waste was burned periodically. From 1956-1957 the site received industrial waste including rubber, paper, fabric and waste chemicals including methyl ethyl ketone[1]. The industrial wastes were also burned on-site for a period of approximately 2 months. A court injunction in February of 1957 prohibited the use of the property for any type of waste disposal[1]. It is believed that an oil business was operated at the site around 1957 but little information is available on these site activities.

The site is surrounded by undeveloped privately owned land. The nearest residence is located approximately 2,000 feet from the site[1]. Approximately 400 people live within one half mile of the site. An unnamed, intermittent stream passes through the western portion of the site and ultimately flows into Spruce Brook to the south of the site.

In August of 1995, the CDM Federal Programs Corporation conducted soil and sediment sampling at the site. This sampling was requested by the Environmental Protection Agency/ New England, Office of Site Remediation and Restoration to perform a Site Inspection Prioritization of the site. In March of 1996, EPA requested a health consultation to determine whether contaminants in soil and sediment at the site pose a health threat[2].

EPA provided the *Draft Site Inspection Prioritization Report* for review. Eight soil samples were collected at 0-10 inches below the surface from the approximate location of the landfill and drum storage areas. Five sediment samples were collected from the unnamed stream and Spruce Brook. Samples were analyzed for volatile organic compounds, semivolatile organic compounds, pesticides, polychlorinated biphenyls and metals. Table 1 summarizes those contaminants that were identified for further evaluation because they exceeded health based comparison values.

Table 1
 CONTAMINANTS DETECTED IN SOIL/SEDIMENTS SAMPLES
 KALADISH WASTE DISPOSAL SITE
 August, 1995

CONTAMINANT	MAXIMUM CONCENTRATION (ppm)	COMPARISON VALUE (ppm)	SOURCE
bis (2-ethylhexyl) phthalate	780	none	
benzo (a) pyrene	0.94	0.10	CREG
benzo (a) anthracene	2.2	0.9	EPA SSL
benzo (a) fluoranthene	2.6	0.9	EPA SSL
arsenic	6.9	0.5	CREG
beryllium	1.5	0.2	CREG
cadmium	82.2	40	EMEG/chronic/child
lead	1810	400	EPA SSL

CREG- Cancer Risk Evaluation Guide

EPA SSL- Environmental Protection Agency/Soil Screening Level

EMEG/chronic/child-Environmental Media Evaluation Guideline for child, chronic exposure ppm-parts per million

DISCUSSION

The most significant exposure to contaminated soil is likely to occur through incidental ingestion and dermal contact. Because of the remote location of this site, it is unlikely that young children frequent this site. Exposure to contaminated soil was evaluated assuming that only children older than age six would frequent the site. Conservative assumptions were made regarding soil ingestion (200 mg/soil/day) and exposure duration (2 days/week-20 weeks/year). The highest concentration of each of the contaminants was used for all exposure dose calculations. In addition, dermal exposure was evaluated and included in the evaluation of total exposure.

Based on the older child, periodic trespassing scenario, none of the contaminants identified in soil or sediments at the Kaladish Waste Disposal site present a public health threat.

CONCLUSIONS

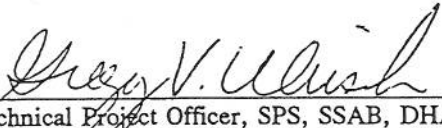
Based on review of the soil and sediment sampling data provided for the Kaladish Waste Disposal site, ATSDR and CT DPH conclude that the contamination present in soil and sediment do not represent a public health threat. This conclusion is based on the assumption that children younger than age six do not frequent the site. This assumption seems reasonable based on the remote location of the site.

RECOMMENDATIONS

No recommendations are being made at this time.

CERTIFICATION

The Health Consultation for the Kaladish Waste Disposal site was prepared by the Connecticut Department of Public Health under a cooperative agreement with the Agency for Toxic Substances and Disease Registry (ATSDR). It is in accordance with approved methodology and procedures existing at the time the health consultation was initiated.


Technical Project Officer, SPS, SSAB, DHAC

The Division of Health Assessment and Consultation (DHAC), ATSDR, has reviewed this Health Consultation and concurs with its findings.


Chief, SSAB, DHAC, ATSDR

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REFERENCES

1. CDM Federal Programs Corporation. Draft Site Inspection Prioritization Report, Kaladish Waste Disposal Site, Naugatuck, Connecticut. January, 4, 1996.
2. United States Environmental Protection Agency. Memorandum to Louise House, ATSDR Region I from Athanasios Hatzopoulos concerning Health Consultation for the Kaladish Waste Disposal site, Naugatuck, CT. March 11, 1996.
3. Agency for Toxic Substances and Disease Registry. Toxicological Profile for Polycyclic Aromatic Hydrocarbons. Atlanta: ATSDR, August, 1995.
4. Agency for Toxic Substances and Disease Registry. Toxicological Profile for Cadmium. Atlanta: ATSDR, April, 1993.
5. Agency for Toxic Substances and Disease Registry. Toxicological Profile for Arsenic. Atlanta: ATSDR, April, 1993.
6. Agency for Toxic Substances and Disease Registry. Toxicological Profile for Beryllium. Atlanta: ATSDR, April, 1993.
7. Agency for Toxic Substances and Disease Registry. Toxicological Profile for Lead. Atlanta: ATSDR, April, 1993.