

SITE REVIEW AND UPDATE
CHEMICAL LEAMAN TANK LINES, INC.
LOGAN TOWNSHIP, GLOUCESTER COUNTY, NEW JERSEY
CERCLIS NO. NJD047321443

Prepared by:

New Jersey Department of Health
Environmental Health Service

Under Cooperative Agreement with the
Agency for Toxic Substances and Disease Registry

SUMMARY OF BACKGROUND AND HISTORY

The Bridgeport Terminal of Chemical Leaman Tank Lines, Inc (CLTL). is located in Logan Township, Gloucester County, New Jersey, approximately two miles south of the Delaware River and one mile east of the town of Bridgeport (Figure 1). The 31.4 acre site is surrounded by fallow farmland and a wetlands area bordering the terminal to the southeast. Cooper Lake, a "man-made" lake about 20 acres in size, is located approximately 400 feet north of the main terminal building of the CLTL site.

There is another U.S. Environmental Protection Agency (USEPA) Superfund site located approximately 2000 feet east of the CLTL main terminal building (Figure 1). This site is known as the Bridgeport Rental and Oil Services, Inc. (BROS) site.

CLTL consists of an active terminal that is used for dispatching, storage, maintenance and cleaning of tractors and tank trailers. The company has been in operation at this location since 1961.

Rinse water generated at CLTL during the tank cleaning process was impounded in a series of six unlined settling and aeration lagoons that discharged to groundwater and nearby wetlands. This procedure continued until the lagoons were taken out of operation in August 1975 when CLTL was required, by the New Jersey Department of Environmental Protection (NJDEP), to install an upgraded rinse water containment system.

In early 1977, liquid that remained in the settling and aeration lagoons was reportedly drained into the wetlands area near the site. Remaining liquid was pumped into a tanker truck and transported off-site. The sludge in the settling lagoons was vacuumed prior to backfilling with clean fill and construction debris. Accumulated sludge in the aeration lagoons was not removed prior to its backfilling. In 1982, CLTL again excavated visible sludge and contaminated soil from the settling lagoons, this time to a depth of 12 feet. The excavated areas were filled with clean sand.

Past wastewater handling and disposal practices at the CLTL site have resulted in organic and inorganic contamination of the soil, groundwater (including the neighboring private wells) and the adjacent wetlands area.

There are approximately ten (10) private residences located within 1,200 feet of the site (Figure 2). Site related contamination was detected in the private wells of residences north of the site in the late 1970's and the CLTL Company supplied drinking water to affected residents. These residents, however, continued to use groundwater for non-potable purposes such as showering, washing and garden irrigation. This groundwater usage continued until 1987, when the USEPA connected the six (6) homes north of the site to an extension of the Bridgeport Municipal Water System.

Chemical Leaman Tank Lines was listed on the National Priorities List (NPL, a.k.a. Superfund) in 1985. In July 1985, the company signed an Administrative Consent Order (ACO) with the USEPA

which directed the company to conduct a Remedial Investigation/Feasibility Study (RI/FS). The USEPA found the original CLTL RI/FS to be unacceptable and preceded to revise it in 1989. A final RI/FS was completed by the USEPA in July 1990.

The USEPA plan for site remediation was divided into three phases, or operable units. Operable Unit One (OU1) addresses the groundwater contamination; OU2 addresses the source/soil contamination and; OU3 addresses the contamination in the surrounding wetlands. A Record of Decision (ROD) for OU1 was signed in September 1990 and CLTL signed a Consent Decree in which they agreed to preform the Remedial Design and Removal Action. The ROD for OU3 was signed in 1993. A ROD for OU2 is currently on hold pending the results of remedial activity on the other two operable units (USEPA, personal communication).

Past public health and community concern about the CLTL site have involved the residents concerns about the quality of the groundwater. In addition, there have also been numerous complaints about odors emanating from the terminal building.

A Health Assessment for the CLTL Site was prepared for the Agency for Toxic Substances and Disease Registry (ATSDR) on April 10, 1989. The Health Assessment noted that human exposure pathways were associated with inhalation of contaminated air, ingestion of contaminated surface and subsurface soil, and dermal absorption of contaminants by contact with groundwater. Contaminants of concern at the site consisted largely of volatile organic compounds, semi-volatile organic compounds, inorganic compounds and pesticides.

In its final conclusion, ATSDR categorized the CLTL site to be of potential public health concern because human exposure to hazardous substances, at concentrations of concern, may occur and probably have occurred in the past.

The previous Health Assessment recommended that:

- 1) Private wells near the site, that still utilize groundwater, should be regularly monitored;
- 2) Ambient air monitoring be preformed to determine if concentrations of VOC's from the truck washing operation were of public health concern;
- 3) The wetlands assessment and the surface water and sediment investigations should continue. More data was needed on the consumption of biota, including the possible bioaccumulation of site contaminants in local fish. Information on the degree of fishing in the area was also requested, and;
- 4) It was recommended that on-site worker exposure to contamination be minimized through the use of personal protective clothing. In addition, it was recommended that optimal dust control measures be used during site remediation to minimize exposure to nearby residents.

On September 21, 1990, the ATSDR added an addendum to the April 10, 1989 Health Assessment when it was learned that one resident just south of the site was using contaminated water (12.5 ppb, TCE) for non-potable purposes. The Health Assessment Addendum noted that human exposure pathways were associated with inhalation of contaminated air while bathing, washing clothes, and washing dishes. The short-term use of this private well was determined to be unlikely to result in a significant adverse health effect.

The Health Assessment Addendum recommended that:

- 1) Measures are implemented to ensure that potential users of groundwater in the area of site-related contamination are informed of the potential adverse health effects that may occur if this groundwater is used for domestic purposes.
- 2) The one identified residential well that is used for indoor domestic water purposes (not drinking water) should be frequently monitored for VOCs to ensure that TCE concentrations do not increase to unacceptable levels while the residents are waiting to be connected to the municipal water supply. Periodic monitoring for TCE concentrations in water from this private well should continue until the house is connected.

CURRENT SITE CONDITIONS

On May 10, 1994, J. Pasqualo and J.J. Winegar of the NJDOH visited the Chemical Leaman Tank Lines site accompanied by a representative of the Gloucester County Health Department and the ATSDR representative, S. Jones. The following observations were made during the site visit:

- The Chemical Leaman Tank Lines site was still an active truck and trailer washing facility. Chemical residues are flushed out of the tankers and pumped to the enclosed settling tank as part of the current operations of the facility. Various chemicals are separated out of the rinse water and the remaining water is pumped to a large holding tank on the western side of the property.
- Rinse water is no longer lagooned on site. The water is temporarily collected in the holding tank and shipped off site in tank trailers to a disposal facility.
- Several private homes were noted very close to the northern property line, just on the other side of the rail road tracks.
- The former settling lagoons on the eastern side of the property are overgrown and no longer evident. The former aeration lagoons at the southern edge of the property are also no longer visible. There is a undocumented overflow lagoon near the rinse water holding tank, which was empty and surrounded by a grassy berm.

- Five berms have been constructed on the southeastern edge of the facility by the USEPA. These berms were constructed to facilitate the installation and sampling of monitoring wells in the cedar swamp area.
- Numerous truck tankers were parked and/or stored on the unpaved parking lot on the northwestern side of the facility.

Conditions at the Chemical Leaman Tank Lines site have not changed significantly since the 1989 ATSDR Health Assessment, however, there has been a significant amount of new environmental data collected that further characterize the site.

The basic conclusion in the previous health assessment that the site was of potential health concern was correct in that residents were likely exposed, in the past, to VOCs from groundwater. This exposure occurred to those residents north of the site who used groundwater for non-potable purposes prior to the 1987 municipal water hook up. In addition, one resident south of the site may have been exposed to site related contaminants through the domestic (not drinking water) use of residential groundwater. This well was found to be contaminated¹ with TCE (max. concentration, 33.6 ppb) when surveys by the USEPA (1989) showed the contamination plume to be larger than expected. This resident has been supplied bottled water since 1987 and was eventually connected to the municipal water supply, along with two other threatened residences in early 1993.

Initial data collected during work on the RI for OU3 (1991/1992) indicated that the site has had little impact on Cooper Lake. Contaminants in the surface water and sediments were at or below background levels. However, recent field work performed for Operable Unit One has indicated that the groundwater plume is larger than previously suspected. Contaminated groundwater has been found north of the lake. Therefore, it is suspected that the contamination is migrating beneath Cooper Lake, possibly threatening the water quality of the lake. The lake is still used for recreational purposes, including swimming and fishing.

Further assessment of Cooper Lake is needed because of new data on the extent of the contaminant plume movement and because of community concern expressed about the quality of the lake. The USEPA is currently assessing the lake. Additional surface water and sediment samples were collected for analysis in October 1994. According to the USEPA (personal communication) they will be collecting additional hydrogeologic data in the vicinity of the lake. When all of these data are available, USEPA will assess the impact of the groundwater contaminant plume on the lake.

Soil and sediment sampling in Cedar Swamp indicated that site related contaminants have been detected in the wetlands adjacent to the CLTL facility. The majority of these contaminants are concentrated in the drainage swale area just south of the site and in an area to the east of the former primary settling lagoon where the overflow occurred. This is the area that directly received waste water from the aeration lagoons and indirectly from site runoff water from other areas including the

¹ 3/28/89, 12.5 ppb; 6/20/89, 33.6 ppb; 1/25/90, 19.0 ppb; and 10/16/90, 23.0 ppb.

truck parking lot.

CURRENT ISSUES

Past public health concerns regarding potential human exposure pathways associated with the Chemical Leaman Tank Lines site are valid. A past inhalation pathway existed, for an unknown period of time, until the residences were connected to the municipal water supply in 1987. Most of the human exposures likely occurred from the residential use of contaminated groundwater during showering, washing and other non-potable purposes.

The public health implications of the past exposure to site related VOCs were discussed at length in the previous Health Assessment. The use of off-site groundwater for either potable or non-potable purposes was found to pose a health risk to these residents.

All but one of the ten potentially effected residences near the site are currently supplied with water through direct connection with the local municipal water system. The last residence, located south of the CLTL facility is supplied with bottled drinking water and is using a private well for domestic purposes, which has been sampled periodically by the USEPA (USEPA, Personal communication). This well is thought to be well outside the CLTL plume. CLTL has agreed to extend the water line to this residence. The construction is expected to be completed in 1995.

The potential pathway involving the inhalation of contaminated fugitive dust generated on site was considered but dismissed in the previous health assessment. This determination was made due to the low levels of contaminants in the surface soil. Current data on the site from areas that have a high potential to generate dust (e.g., truck parking lot) show some small areas contaminated with arsenic and lead. Arsenic was detected at 20.9 ppm in the western edge of the parking lot; and lead was detected at 254 ppm in the eastern area of the lot. These samples were taken in the 0 to 2' zone and are not dust samples. The CLTL facility regularly uses a dust suppressant on the parking lot, but the area is known to be dusty at times (USEPA, Personal communication), indicating that dust suppressants on occasion are not used effectively. In addition, the USEPA noted that they are concerned about the potential for small leaks of chemicals from tanker trucks parked in this area. Under current site conditions, the inhalation pathway for contaminated fugitive dust is not a public health concern.

While employees and nearby residents may be exposed to fugitive VOCs from the tank trailer washing activities from the active, non-superfund, portion of the site, there are no documented on-going exposures to site-related contaminants associated with the site..

CONCLUSIONS

Conclusions that were made in the 1989 ATSDR Health Assessment, regarding the site being of potential public health concern, are valid for past exposures only. As was concluded in this health assessment, past human exposures to contaminated groundwater constituted the most important health threat identified. It is clear, from the most recent site data, that all of the affected residences are currently supplied with water through direct connection with the local municipal water system. These residents are no longer being exposed to contaminated groundwater.

Using the current ATSDR public health assessment terminology, the site posed a public health hazard in the past and presently constitutes no apparent public health hazard.

The conclusion in the original health assessment that the surface soil contaminants were not present at levels of health concern remains true. Recent site data show that there are some contaminant levels in the surface soil that are at levels of concern in isolated "hot spots". There are, however, no exposure pathways to link these areas (e.g., the swale area) to any human receptors.

There are other areas with very low levels of contaminants in surface soils (0-2') which could become airborne (e.g., the truck parking lot), but concentrations were not at levels of health concern. The use of dust suppressing agents by the CLTL facility further reduces the possibility of any contaminated fugitive dust is being released from the site, however the dust suppressants are apparently not always used and/or used properly. Additional methods of dust suppression should be considered.

The conclusion that employees and nearby residents were being exposed to fugitive VOCs from the tank trailer washing activities is valid. These exposures are from the active, non-superfund, portion of the site. Potential occupational exposures to these contaminants are the responsibility of the Occupational Safety and Health Administration. Exposures to the residents from fugitive VOCs are handled by the Gloucester County Health Department (GCHD) on a case by case basis, usually in response to nuisance odor complaints from area residents (GCHD, Personal communication). The active portion of the facility is also subject to Resource Conservation and Recovery Act (RCRA) regulations.

The groundwater contamination from the CLTL site has not been fully characterized. The northern edge of the plume is passing under Cooper Lake and may have a impact on the overall quality of its water.

The two recommendations made in the Addendum to the Health Assessment were addressed. Residents that have been affected by the contaminated groundwater have been informed of levels of contamination in their residential wells by the USEPA and GCHD through public meetings and by letter. The contaminated well in question was periodically resampled and the residence was eventually

connected to the public water supply in 1993.

RECOMMENDATIONS

Recommendations made in the original health assessment which are still valid include:

1. Residents in the surrounding area should continue to use the public water supply. Any private wells near the site still being used for potable or non-potable purposes should be regularly monitored for contamination.
2. Continue with the preparation of the wetlands assessment and the surface water and sediment investigations. Although much of this data has been collected during the work on OU3, further environmental assessment of Cooper Lake, surface water and sediments, is needed because of new data on extent of the contaminant plume movement and because of community concern about the quality of the lake.
3. Recommendations made in the 1989 ATSDR Health Assessment regarding data needs on bioaccumulation of contaminants in fish and the degree of fishing in the area are valid if additional sampling of Cooper Lake reveals further contamination.

New recommendations based on current site conditions include:

1. The contaminant plume needs to be fully characterized.
2. A residential well survey of the CLTL area should be initiated to determine the groundwater usage of potentially effected residents who, while connected to the public water supply, may still use groundwater for non-potable purposes such as irrigation of gardens or filling swimming pools.
3. ATSDR should preform a Health Consultation of Cooper Lake when new surface water and sediment data are available.
4. The Gloucester County Health Department should continue to evaluate the possible VOC exposures to local residents from the tank washing operation. They should consider air monitoring if odor complaints persist.
5. Additional methods of dust suppression in the parking lot should be considered.

RECOMMENDATIONS OF THE HEALTH ACTIVITIES RECOMMENDATIONS PANEL (HARP)

The data and information developed in the Site Review and Update for the site, Chemical Leaman Tank Lines, Inc (CLTL), Logan Township, Gloucester County, New Jersey, has been evaluated by ATSDR's Health Activities Recommendation Panel (HARP) for appropriate follow-up with respect to health activities. The panel determined that no follow up health actions are indicated at this time.

PUBLIC HEALTH ACTION PLAN

The Public Health Action Plan (PHAP) for the Chemical Leaman Tank Lines, Inc (CLTL) contains a description of the actions to be taken at or in the vicinity of the site. The purpose of the PHAP is to ensure that this health assessment not only identifies public health hazards, but provides a plan of action designed to mitigate and prevent adverse human health effects resulting from exposure to hazardous substances in the environment. Included, is a commitment on the part of ATSDR and NJDOH to follow-up on this plan to ensure that it is implemented. ATSDR will provide an annual follow-up to this PHAP, outlining the actions completed and those in progress. This report will be placed in repositories that contain copies of this site review and update, and will be provided to persons who request it. The public health actions taken or to be implemented are as follows:

Actions Undertaken by ATSDR/NJDOH:

1. The data and information developed in the Site Review and Update have been evaluated by ATSDR/NJDOH to determine if public health concerns, regarding potential human exposure pathways associated with the Chemical Leaman Tank Lines site.

Actions Planned by ATSDR/NJDOH:

1. ATSDR and the NJDOH will coordinate with the appropriate environmental agencies to develop plans to implement the recommendations contained in this site review and update.
2. ATSDR will provide an annual follow up to this PHAP, outlining the actions completed and those in progress. This report will be placed in repositories that contain copies of this site review and update, and will be provided to persons who request it.

ATSDR will reevaluate and expand the Public Health Action Plan (PHAP) when needed. New environmental, toxicological, health outcome data, or the results of implementing the above proposed actions may determine the need for additional actions at this site.

CERTIFICATION

The Site Review and Update for the Chemical Leaman Tank Lines, Inc., site was prepared by the New Jersey Department of 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 Site Review and Update was initiated.

Technical Project Officer, SPS, RPB, DHAC

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

Division Director, DHAC, ATSDR

DOCUMENTS REVIEWED

1. Record of Decision for Operable Unit One, Chemical Leaman Tank Lines site, U.S. Environmental Protection Agency (USEPA), September 1990.
2. Draft Record of Decision for Operable Unit Three, Chemical Leaman Tank Lines site, U.S. Environmental Protection Agency (USEPA), September 28, 1990.
3. Chemical Leaman Tank Lines site, Operable Unit Three Draft Proposed Plan, U.S. Environmental Protection Agency (USEPA), July 1, 1993.
4. Community Relations Plan, Chemical Leaman Tank Lines site, U.S. Environmental Protection Agency (USEPA), July 29, 1991.
5. Risk Assessment Report for The Active Terminal Area, Chemical Leaman Tank Lines, Inc (CLTL), Logan Township, Gloucester County, New Jersey, Superfund Site, U.S. Environmental Protection Agency (USEPA), July 1989.
6. Final Risk Assessment Operable Unit Two, Chemical Leaman Tank Lines, Inc (CLTL), Logan Township, New Jersey, U.S. Environmental Protection Agency (USEPA), July 10, 1991.
7. Remedial Investigation Report, Operable Unit Two, Chemical Leaman Tank Lines, Inc (CLTL), Logan Township, New Jersey, U.S. Environmental Protection Agency (USEPA), August 16, 1991.
8. Health Assessment for Chemical Leaman Tank Lines, Inc (CLTL), Logan Township, Gloucester County, New Jersey, ATSDR, April 10, 1989.
9. Chemical Leaman, Private Well Sampling, U.S. Environmental Protection Agency (USEPA), January 4, 1991.

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