

Health Consultation

Review of Air Monitoring and Air Sampling Data
Collected from April 15 through September 20, 1999
During Excavation of Areas of Environmental Concern:
12, 20, 6-1, 5-1, 5-2, 5-3, 16, and 9-4

REMINGTON PARK
(Aliases: LAKE SUCCESS BUSINESS PARK and REMINGTON ARMS PARK)

BRIDGEPORT, FAIRFIELD COUNTY, CONNECTICUT

CERCLIS NO. CTD980520480

AUGUST 30, 2000

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
Agency for Toxic Substances and Disease Registry
Division of Health Assessment and Consultation
Atlanta, Georgia 30333

Health Consultation: A Note of Explanation

An ATSDR health consultation is a verbal or written response from ATSDR to a specific request for information about health risks related to a specific site, a chemical release, or the presence of hazardous material. In order to prevent or mitigate exposures, a consultation may lead to specific actions, such as restricting use of or replacing water supplies; intensifying environmental sampling; restricting site access; or removing the contaminated material.

In addition, consultations may recommend additional public health actions, such as conducting health surveillance activities to evaluate exposure or trends in adverse health outcomes; conducting biological indicators of exposure studies to assess exposure; and providing health education for health care providers and community members. This concludes the health consultation process for this site, unless additional information is obtained by ATSDR which, in the Agency's opinion, indicates a need to revise or append the conclusions previously issued.

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HEALTH CONSULTATION

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Prepared by:

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

On May 11, 2000, the U.S. Environmental Protection Agency (EPA) forwarded the Air Sampling Summary Report of the Lake Success Business Park, to the Connecticut Department of Public Health (CT DPH). That report was one of a series of ongoing air sampling efforts being conducted during remediation activities at this site. The EPA requested a review of the most recent round of air sampling results covering the period of April 15 through September 20, 1999 [1]. All soil activities ceased after the last September sampling round, when a discovery was made of live ammunition in soil awaiting stabilization. A full site survey for unexploded ordinances will be conducted [2]. The purpose of this Health Consultation is to evaluate the results of air samples (for dust and lead) collected from April 15 through September 20, 1999, during soil stabilization and excavation activities at areas of environmental concern (AEC) 12, AEC 20, AEC 6-1, AEC 5-1, AEC 5-2, AEC 5-3, AEC 16, and AEC 9-4 (see site diagram in Appendix A).

Inhalation or ingestion of airborne dust represents the major routes of potential exposure to contaminants during excavation and stabilization of contaminated soils. To reduce the risk from these potential exposures, dust control measures are being used during all of these activities. These include keeping soils damp and/or covered during excavation, transport, storage and treatment. In addition, an air monitoring and sampling plan was developed to ensure that people both on-site and living in the community are not exposed to site contaminants at levels that pose a health risk.

The Lake Success Business Park (previously known as Remington Arms Park) occupies approximately 422 acres in northern Bridgeport and western Stratford. This facility was previously owned by the Remington Arms Company. From 1905 to 1989 this facility was used for production, testing, and disposal of small and large caliber ammunition compounds and wastes. In 1989, the entire manufacturing and testing activities were stopped, when a complete shut down occurred. Activities at the site left widespread contamination, mostly lead, in the soil. The property is currently owned by Sporting Goods Properties, Inc., a wholly owned subsidiary of E. I. du Pont de Nemours & Company, Inc. (DuPont) [3].

Under the Environmental Protection Agency's Resource Conservation and Recovery Act, an Administrative Consent Order was entered into (in 1990) which requires the investigation of areas on site where releases, spills or discharges of hazardous substances may have occurred. In

addition, the Administrative Consent Order requires that Sporting Goods Properties propose cleanup strategies for areas where contamination presents an unacceptable risk to human health or the environment. An initial site investigation was submitted to EPA by Sporting Goods Properties in December of 1992 which identified 51 Areas of Concern. While other metals including antimony, arsenic, barium, copper, mercury, nickel and strontium are present in soil, lead was identified as the most widespread contaminant.

An estimated population of 2,000 people live within 1,000 feet of the site property boundary. The nearest residence is approximately 300 feet from one of the areas of concern. A retirement home is located about 600 feet from another AEC, and an elementary school is located about 1,500 feet from a third AEC. During initial phases of remediation activities, residents expressed concerns about the potential exposure to contamination.

Weekly reports of all time-weighted sampling results have been forwarded to the local health departments, CT DPH, EPA and the CT DEP for review. Action levels for time-weighted samples were set by EPA and Sporting Goods Properties, Inc. and approved by ATSDR and CT DPH. The action level for TSP was set at 0.15 mg/m^3 and the action level for lead was set at $3 \text{ } \mu\text{g/m}^3$. Any exceedance of an action levels would results in a fax to the local health departments, CT DPH, EPA and CT DEP. The fax indicates the date of the exceedance, the sampling location of the exceedance, the sampling result, the activity occurring on the day of the exceedance, meteorological data, discussion of activities that may have contributed to the exceedance and an explanation of the response taken to avoid any future exceedances.

DISCUSSION

All soil disturbing activities have ended following the September 1999 discovery of live ammunition on site. This prudent action will reduce the potential for physical harm to workers, as well as reduce the potential for soil becoming projected into the air if an ordinance detonates. In order to determine whether other unexploded ordinances are present on the site, a complete site survey will be conducted. This procedure will be done in a manner that protects both residents and workers from any physical danger. The soil stabilization and excavation activities will not start-up again until after the survey is completed in December of 2000. Air monitoring and sampling activities will commence once the excavation activities are again under way [2].

Prior to this discovery, soil disturbing activities were being conducted. During these activities, two methods of collecting air data were used to determine whether contaminants were entering the air. The methods used are real-time monitoring and time-weighted sampling.

Real-time monitoring was conducted downwind of all excavations at a frequency of every hour or three to four times per day depending on activities. The real-time air monitoring is used as an immediate indicator to determine whether contaminants are becoming airborne in the work zone so that measures can be taken to reduce dust generation immediately. When an exceedance of the action level is confirmed, procedures are immediately commenced to arrest dust generation. Real-time monitoring is not being used to characterize public health risks.

During the excavation of soil at AEC 12, 20, 5-1, 5-2, 5-3, and 9-4, time-weighted samples were collected for lead and TSP. During excavation of soil from AEC 6-1 and AEC 16, time-weighted samples were collected for total suspended particulates only since elevated lead levels were not detected in these soils. Time-weighted samples provide the average concentration of a substance in the air over a period of time and are being conducted at the perimeter of the site. Sampling locations included the JFK Elementary School, the Bishop Curtis Retirement home, the surface impoundment location, and at the perimeter by the nearest downwind resident. (See site diagram in Appendix A.) Action levels for time-weighted samples were set by EPA and Sporting Goods Properties, Inc. and approved by ATSDR and CT DPH. The action level for TSP was set at 0.15 mg/m³ and the action level for lead was set at 3 µg/m³.

During the sampling period, 116 samples were collected and analyzed for lead and total suspended particulates. Seven samples were analyzed for total suspended particulates only, and 68 samples were analyzed for lead only. There were no exceedances of time-weighted action levels during any of the excavation activities [1].

CONCLUSIONS

1. During the excavation of AEC 12, AEC 20, AEC 6-1, AEC 5-1, AEC 5-2, AEC 5-3, AEC 16, and AEC 9-4, there were no exceedances of the time-weighted, health-based action levels. Therefore, the community adjacent to the site were not exposed to contamination at levels of health concern as a result of these site activities. Based on ATSDR's hazard category scheme, the excavation of the above areas posed a no apparent public health hazard.
2. The cessation of soil disturbing activities is a prudent public health measure that was implemented during the site survey for unexploded ordinances.
3. Dust control measures taken during soil excavation and transport are effective in preventing contamination from becoming airborne.

RECOMMENDATIONS

1. The complete site survey for unexploded ordinances should be conducted in a manner that protects both residents and workers from any physical danger.
2. Air monitoring and sampling during soil excavation, removal, storage and treatment activities should continue to ensure that site related contaminants are not becoming airborne and migrating off-site.
3. Once soil excavation activities startup in December of 2000, it is anticipated that URS Greiner Woodward-Clyde Diamond Group will provide weekly summaries of all time-

weighted sampling results to CT DPH, the Bridgeport and Stratford Health Departments, CT DEP and EPA. The Occurrence Reports should then be used whenever exceedances occur.

4. The Connecticut Department of Public Health will monitor the weekly results (when available) of air sampling as the excavation, removal, storage and treatment of soil continues.
5. The Connecticut Department of Public Health will continue to work with EPA to evaluate any proposed changes to the air sampling and monitoring plans.

Public Health Action Plan

1. The CT Department of Public Health will review any additional data once it becomes available.
2. The CT Department of Public health will coordinate with the appropriate local health departments near the site as needed.

REFERENCES

1. Corporate Remediation Group. 1999 Remedy 1 Air Sampling Summary Report, Lake Success Business Park, Bridgeport, Connecticut. May 2000.
2. ATSDR Record of Activity for telephone communication between Stephanie Carr (EPA) and Gary Perlman (CT DPH). June 27, 2000.
3. ATSDR Health Consultation "Air Monitoring and Sampling During Excavation of AEC 24, 11 and 3-3 Range and Stratford Site Roads, Remington Park", CERCLIS NO. CTD 980520480. June 21, 1999.

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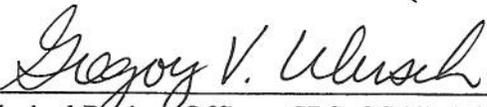
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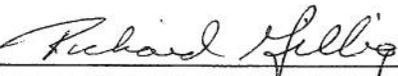
CERTIFICATION

The Health Consultation for the Lake Success Business Park 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, ATSDR, has reviewed this Health Consultation and concurs with its findings.



Chief, SPS, SSAB, DHAC, ATSDR

APPENDIX A

Site Diagram

