

Site Review And Update

BRIDGEPORT RENTAL AND OIL SERVICE

LOGAN TOWNSHIP, GLOUCESTER COUNTY, NEW JERSEY

CERCLIS NO. NJD053292652

SEPTEMBER 2, 1992

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

Site Review and Update: A Note of Explanation

The purpose of the Site Review and Update is to discuss the current status of a hazardous waste site and to identify future ATSDR activities planned for the site. The SRU is generally reserved to update activities for those sites for which public health assessments have been previously prepared (it is not intended to be an addendum to a public health assessment). The SRU, in conjunction with the ATSDR Site Ranking Scheme, will be used to determine relative priorities for future ATSDR public health actions.

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Prepared By:

Remedial Programs Branch
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Agency for Toxic Substances and Disease Registry

SUMMARY OF BACKGROUND AND HISTORY

The Bridgeport Rental and Oil Service (BROS) site is in Logan Township, Gloucester County, New Jersey, on approximately 30 acres in a rural, agricultural area. The site is bordered on the west by a former peach orchard and on the east by a swampy area that leads to Little Timber Creek. Before cleanup began, the site consisted of a tank farm with 100 tanks and process vessels, drums, tank trucks, and a 13-acre unlined waste oil and wastewater lagoon. Two man-made ponds are adjacent to the lagoon, south (Swindell Pond) and west (Gaventa Pond) of the site.

The lagoon, which was initially a sand and gravel pit dug in the 1930s, was used for disposal from the 1950s until the 1970s. According to the U.S. Environmental Protection Agency (EPA) 1991 remedial action update, the lagoon contains approximately 5,000 cubic yards of oil; 80,000 cubic yards of sludge and sediments contaminated with polychlorinated biphenyls (PCBs) in excess of 500 ppm; other organic and inorganic compounds; and 70 million gallons of wastewater contaminated with several volatile organic compounds (VOCs). Currently, a court order prohibits further commercial waste--handling activities at the site.

Groundwater in two of the aquifers beneath the lagoon is contaminated to a lateral distance from the lagoon of approximately 1,100 feet or more (11). The Phase I remedial investigation and feasibility study (RI/FS) performed by EPA in July 1984 identified groundwater contamination (VOCs) in excess of 100 ppb in two rounds of groundwater samples (4).

ATSDR Actions

The Agency for Toxic Substances and Disease Registry (ATSDR) has been involved with the BROS site since February 1983, when EPA requested consultation assistance from the Centers for Disease Control (CDC) a water sampling report issued by the EPA Field Investigation Team (FIT). CDC concurred with the FIT recommendation that three wells remain closed because of organic contamination, and that bottled water be supplied to residents previously served by those wells. In addition, CDC recommended routine monitoring of groundwater and all wells in the affected area.

In 1986, a health assessment prepared by ATSDR for the BROS site discussed results of water samples from 11 residential wells and the potential for health effects associated with non--ingestion uses of the water. The assessment concluded that current (November 1985) concentrations of VOCs were not an imminent health threat to area residents, as long as water was not ingested. Past concentrations of vinyl chloride (approximate average 80 ppb) in one well indicated that the carbon filtration system may have

needed inspection and repair. ATSDR recommended inspection of the carbon filtration system and repair if necessary. ATSDR also recommended that, if city water was not provided by July 1986, health effects associated with use of the water would need to be reevaluated.

In May 1988, ATSDR prepared a health consultation for EPA on the BROS incineration site that answered questions about the health impact of putting an incinerator at the BROS site; the impact of putting two incinerators near each other, and offered suggestions about alternative remediation measures. ATSDR suggested that stack emission data and air monitoring data from the Rollins Environmental Services Inc. facility and the BROS facility are needed to determine the actual effect of the two incinerators on community air quality.

In December 1990, ATSDR prepared another health consultation for EPA and reviewed the draft contingency plan for the BROS Lagoon and Project Site Cleanup. ATSDR recommended six measures that addressed emergency response, air monitoring for contaminants at levels of concern, and responsibility for corrective actions to ensure public health.

In August 1991, ATSDR prepared an addendum to the 1986 health assessment after additional sampling data were provided by EPA. EPA was concerned that Swindell Pond, which is adjacent to the BROS site, is contaminated. ATSDR concluded that contaminant levels measured in the pond and adjoining property were not deleterious to human health.

EPA Actions

EPA has released a Phase 1 RI/FS (conducted in 1983--84) for the BROS site. In December 1984, the record of decision (ROD) for the site was signed; it approved the site remediation. The ROD also authorized a Phase 2 RI/FS to determine appropriate groundwater cleanup and lagoon closure remedies.

The design for the potable water extension line was completed in September 1985. Extension of a public water supply pipeline from the existing pump station in the Village of Bridgeport was completed by EPA in April 1987 through a cooperative agreement with the New Jersey Department of Environmental Protection and Energy (NJDEPE, formerly NJDEP). Before connections to the public water supply were completed (1982 to 1987), bottled water was supplied to approximately 33 homes.

The design for the removal and disposal of the tanks and their contents was completed in 1986. Cleanup of the tank farm was completed in April 1988 by Rollins Environmental Services of Bridgeport, under direction of the Army Corp of Engineers.

The Phase 2 RI/FS was planned to begin after completion of the lagoon and site cleanup; however, in response to public concern and passage of time since the ROD was signed, the final workplan for the Phase 2 RI/FS was issued in July 1989. That workplan outlined the remedial investigation for the groundwater contamination monitoring part of the cleanup.

After several trial burns, the incinerator was permitted by NJDEPE in November 1991; incineration of contaminated sludges and soil excavated from the lagoon has begun. Clean closure of the lagoon is expected to be completed in 1993.

Past Community Health Concerns

No community health concerns were identified in the 1986 health assessment (5); however, the ROD summarized community concerns during 1983-84. Initial community concerns focused on the time required to install a public water supply system and what remedial studies would address groundwater. During the draft RI/FS, the community agreed to the remediation of the lagoon. However, the public was opposed to the onsite incineration because of past negative experiences with a nearby hazardous waste incinerator, as well as because of their perceptions of incinerator inefficiency.

The owner of the Swindell Pond expressed concern about the contamination of his pond by the adjacent BROS site; EPA had asked ATSDR to review 1990 surface water, sediment, and surface soil data for the area (10).

Health Outcome Data

According to ATSDR site file documentation of the BROS site, and a discussion with the New Jersey Department of Health, no health studies are available on the community surrounding the BROS site (14).

CURRENT SITE CONDITIONS

On April 22, 1992, Gregory Ulirsch, ATSDR, Arthur Block, ATSDR, Region II, and James Pasqualo, New Jersey Department of Health, visited the BROS site. Representatives of the Army Corp of Engineers and the Gloucester County Health Department also toured the site. Following are observations made and information obtained during the site visit:

- The site is undergoing active remediation;
- Groundwater contamination is migrating towards the north and there appears to be a co-mingling contaminant plume with another nearby National Priority List Site (NPL) (Chemical Leaman Tank Lines);

- Residences previously served by contaminated wells have been provided an alternative water source;
- Access to the site is now restricted;
- People fish and swim in Gaventa Pond;
- One nearby resident has reported odor complaints; and
- Farms (apple and peach orchards) have operated and may still operate adjacent to the site.

The approximate number of people potentially affected at the BROS site is between 2,000 and 5,000 (13).

Since the health assessment was issued in 1986, the BROS site has undergone active remediation. Although the health assessment addressed the status of residential wells and public health implications during that period, ATSDR has not evaluated the current public health implications of the BROS site. The Agency will do so when EPA environmental data are received.

The horizontal extent of soil contamination has not been completely determined, nor has the vertical extent been totally defined (7). The nature of contamination in nearby surface water bodies (Gaventa Pond, Swindell Pond, and the Little Timber Creek) is not well characterized, and the quantity and quality of sediments in adjacent ponds are unknown. The Phase II RI/FS was planned to determine remaining contamination on and around the BROS site; to complement the Phase I RI/FS; and to provide sufficient data to conduct the Phase II FS. Currently, the Phase II RI/FS is in progress.

Groundwater beneath the BROS site remains contaminated (11). Currently, only the Upper and Middle Potomac-Raritan-Magothy (PRM) aquifers have been investigated as part of the Phase II RI/FS. The Phase II RI/FS for the groundwater study is ongoing; work related to data validation of wetlands sample analyses, environmental assessment tasks, residential well sampling, and additional field investigation tasks is pending completion. Groundwater VOC contamination that first migrated vertically has extended downgradient in the Upper Middle PRM as a contaminant plume southeast of the BROS lagoon (11). As a result of groundwater sampling data (11), EPA has installed three or four off-site monitoring wells southeast of the BROS lagoon to further characterize the groundwater contamination (15).

The status of private well closures, installation of filtration devices, monitoring efforts, and well uses and restrictions is not known.

CURRENT ISSUES

Public health concerns are these:

- The Phase II RI/FS will provide the final remedial design for cleanup of groundwater at the BROS site. However, implementation of the groundwater cleanup is not scheduled until the lagoon remediation has been completed in late 1993.
- Although municipal water is available to area residents, it is not known whether use of private wells for domestic uses has ceased. Past exposures to contaminated groundwater may have existed, and present and future exposures may still exist.
- Determining the extent of contamination of Gaventa Pond, Swindell Pond, and Little Timber Creek is part of the Phase II RI/FS work in progress. Because those surface waters are open areas, which are still accessible to the public, they are an indeterminant public health concern.
- Since initiation of the incineration remediation in November 1991, ATSDR has not received data demonstrating the current efficiency of the incineration process and the quality of the air around the BROS site.

Community Health Concerns:

- Local residents are primarily concerned about contamination of the groundwater and incineration of hazardous waste. As mentioned in the EPA Remedial Action Update of February 1991, because of community concern, conduct of the Phase II RI/FS for groundwater has been accelerated. One resident recently expressed concern about odor from the BROS site (13,14).

CONCLUSIONS

The recommendations in the 1986 health assessment were implemented following a conference call to EPA representatives. That discussion resulted in a change of the carbon filtration device of one residential well.

Currently, exposure to site-related contaminants, through the use of residential well water, has been eliminated or reduced by providing affected residents with an approved public water supply; however, it is not known how many people continue to use groundwater from their wells and for what purposes.

New groundwater data from off-site monitoring wells northwest and southeast of the BROS site are necessary to evaluate the current and future risks of groundwater contamination to the surrounding communities.

Past, present, and future exposures to PCBs and other organic and inorganic contaminants in soil, water, and air surrounding the BROS site are possible. Additional information is needed to determine if such exposures constitute a public health hazard.

Current EPA sediment, surface soil, and surface water Phase II RI/FS data for the Gaventa Pond, Swindell Pond, and Little Timber Creek are necessary to evaluate past, present, and future public health concerns; those surface water areas are used for fishing and swimming and are readily accessible to the public.

Air monitoring data are needed to characterize the adverse health risks to the public during incineration of the contaminated soil and sludge, which is ongoing and scheduled for completion in late 1993.

RECOMMENDATIONS

Because further evaluation of the public health significance of past, present, and future exposure to site-related contaminants is needed, it is recommended that a public health assessment of the BROS site be conducted.

In addition, ATSDR recommends a private well survey to determine how private residential wells within a mile radius of the BROS site are used. That survey should include residents already supplied with safe public water to determine whether access to contaminated private wells has been prevented.

Health Activities Recommendations Panel Statement

The Public Health Review of the site was reviewed by the Health Activities Recommendations Panel on August 17, 1992. The panel's statement follows:

The data and information developed in this site review and update have been evaluated to determine if follow-up actions may be indicated. Further site evaluation is needed to determine public health actions.

DOCUMENTS REVIEWED

Documents reviewed by ATSDR for this summary are as follows:

1. EPA. October 23, 1981. Field Investigation of Uncontrolled Hazardous Waste Sites. FIT Project, Task Report of Mitre Model Scoring of Bridgeport Rental, New Jersey. Contract No. 68-01-6056 prepared by Ecology and Environment Inc.
2. EPA. December 14, 1982. Final Report. Hazardous Waste Site Investigation Report, Bridgeport Rental and Oil Services, Gloucester County, New Jersey. Contract TDD #02-8208-07 prepared by Fred C. Hart Associates Inc.
3. CDC. February 24, 1983. Review of Water Sampling Report for Bridgeport Rental and Oil Services, Gloucester, New Jersey.
4. U.S. EPA. December 31, 1984. Record of Decision, Remedial Alternative Selection for Bridgeport Rental and Oil Services (BROS) Inc., Logan Township, New Jersey.
5. ATSDR. March 26, 1986. Health Assessment for Bridgeport Rental and Oil Service. Bridgeport, New Jersey, CERCLIS Number NJD053292652.
6. ATSDR. May 26, 1988. Health Consultation: BROS Incinerator Site, prepared by Emergency Response Branch.
7. EPA. July 1989. Final Work Plan, Phase 2 Remedial Investigation/Feasibility Study, Bridgeport Rental and Oil Services Site, Logan Township, NJ. Work Assignment 233-2L07, Contract Number 68-01-7251.
8. ATSDR. December 21, 1990. Health Consultation: BROS Lagoon and Project Site Clean-up Draft Contingency Plan Review.
9. U.S. EPA Region 2. February 1991. Bridgeport Rental and Oil Services Superfund Site, Logan Township, NJ, Remedial Action Update.
10. ATSDR. August 9, 1991. Addendum to Health Assessment: Bridgeport Rental and Oil Services (BROS) Superfund Site, Bridgeport, New Jersey, prepared by Emergency Response and Consultation Branch.
11. EPA. March 1992. Technical Memorandum No. 7: Identification and Screening of Alternatives for Groundwater Remediation at the Bridgeport Rental and Oil Service Site in Logan Township, NJ. EPA Work Assignment 014-2L07 prepared by MPI/CH2M Hill.
12. ATSDR. March 30, 1992. Trip Report: Site Visit Information for Bridgeport Oil and Rental Services.

13. ATSDR. July 23, 1992. Record of Activity for conversation with ATSDR representative, Region 2.
14. NJDOH. July 27, 1992. Record of Activity for conversation with Department of Health, County of Gloucester, New Jersey. Community Health Concerns for BROS site.
15. ATSDR. August 11, 1992. Record of Activity for conversation with EPA representative for BROS site.