

Site Review And Update

**WHITE CHEMICAL CORPORATION
NEWARK, ESSEX COUNTY, NEW JERSEY
CERCLIS NO. NJD001239185**

SEPTEMBER 20, 1993

REVISED

FEBRUARY 14, 1994

**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**

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.

REVISED SITE REVIEW AND UPDATE

**WHITE CHEMICAL CORPORATION
NEWARK, ESSEX COUNTY, NEW JERSEY**

CERCLIS NO. NJD001239185

**Prepared by:
The New Jersey Department of Health
Under a Cooperative Agreement with
The Agency for Toxic Substances and Disease Registry**

SUMMARY OF BACKGROUND AND HISTORY

White Chemical Company, a former manufacturer of acid chlorides and flame retardant compounds, is located at 660 Frelinghuysen Avenue, Newark, Essex County, New Jersey (Figure 1). It is located on about 4 acres of land (Figure 2) that is in a densely populated residential and industrial area. Approximately 12,000 people live within 0.25 miles and 25,000 people live within one mile of the site. Residents and companies in the City of Newark are supplied with public water.

Adjacent to the site, on the west, is a feather bedding manufacturer and a sportswear manufacturer that together employ about 225 workers. To the south of the site across Frelinghuysen Avenue is Weequahic Park and several large housing projects less than 0.25 miles away. East of the site is a trunk commuter rail line. Newark International Airport and U.S. Highway 1 are about 0.5 mile away from the site. To the north is a garment manufacturer that employs approximately 200 workers.

During fire prevention visits in April and May of 1990 the Newark Fire Department noted numerous leaking, ruptured and uncovered drums. A fire inspector, who did not wear respiratory protection, developed a sore throat, persistent cough, and eye irritation after each of three visits to the site.

The New Jersey Department of Environmental Protection and Energy (NJDEPE) took responsibility for the site on May 15, 1990. More than 11,000 55-gallon drums and hundreds of cylinders, tanks, and vats and several laboratory storage rooms containing thousands of containers of materials were discovered.

Chemicals stored on-site included flammable liquids, oxidizers, corrosives, acid chlorides, shock-sensitive materials, and organic acids. These chemicals were stored without regard to chemical compatibilities. Most of the chemicals were stored outside without protection from weathering.

The NJDEPE exhausted its funding for the site in August 1990 and the U.S. Environmental Protection Agency (USEPA) assumed responsibility for the clean-up on October 1, 1990. The USEPA requested that the Agency for Toxic Substances and Disease Registry (ATSDR) evaluate site conditions in September 1990.

A health consultation was released by the ATSDR on September 28, 1990 (2). It was concluded that the White Chemical site posed an imminent and substantial threat to the health and safety of residents and workers near the site. They recommended that the site should be immediately secured and stabilized, the air should be monitored, and contingency plans for the protection of residents and workers should be developed.

On September 28, 1990, the USEPA initiated a Removal Action under the authority of CERCLA. On October 17, 1990, the ATSDR, USEPA and the New Jersey Department of Health (NJDOH) formulated and coordinated an emergency response plan for the site. The USEPA prepared a Focused Feasibility Study for all of the chemicals above-ground in June 1991. A Remedial Investigation/Feasibility Study (RI/FS) is being prepared by the USEPA.

The site has been stabilized by the removal of the drums, cylinders, vats and bottles from the site and by emptying and cleaning out the large storage tanks and chemical manufacturing equipment. The USEPA began removing the chemicals in September 1990 and completed the project in March 1993.

The National Institute for Occupational Health conducted a health hazard investigation of the site in September 1992 (3). Personality Handkerchiefs Corporation, at the northern end of White Chemical Corporation, reported that some of their employees had experienced respiratory system irritation, allegedly caused by White Chemical Corporation. It is reported that plant operations had been shutdown and the employees had been sent home on two occasions due to airborne releases from White Chemical (1). Cooper Sportswear, Inc. noted that they had complaints from employees regarding odors and symptoms of respiratory irritation attributed to White Chemical Airborne releases (1). Both companies reported that the incidents were most frequent during the summer months. NIOSH determined that out of 31 workers, three reported sore throat, nausea or headaches 9 reported respiratory symptoms, and 9 reported dermatitis. It could not definitively be concluded if these symptoms were due to occupational exposure. They concluded that three employees developed reactive airways disease secondary to occupational exposures and concluded that no further physical site modifications appear necessary.(3)

During a site visit, the ATSDR Emergency Response Coordinator noted an ongoing release of fumes from numerous drums and containers, unsafe and unstable storage of large quantities of hazardous substances, unlabeled leaking containers, and mixed storage of leaking or open containers of incompatible materials. As a result, the ATSDR prepared a Public Health Advisory addressing the health hazards on-site in November 1990. The White Chemical Public Health Advisory (1) concluded: 1) There was a threat of a catastrophic release due to the uncontrolled storage of hazardous substances which posed an imminent and substantial threat to residents and workers near the site and 2) The evidence of continuous airborne releases and reports of adverse health effects in nearby worker populations are of public health concern. The Health Advisory (1) recommended that: 1) Immediately undertake actions to stabilize the site; 2) Restrict public access to the site; 3) Conduct continuous air monitoring to detect and characterize contaminant migration from the site; 4) Establish procedures to notify the public of the need for protective actions in case of a release; 5) Estimate the impact of a release from the site caused by fire or explosion that involves the drum storage areas; 6) The city of Newark, the State of New Jersey, and the ATSDR should develop contingency plans to provide protection of the health of workers and residents likely to be impacted by a release from the site; and 7) Coordinate with Federal health agencies to determine if nearby workers are at risk from the continuing emissions from the site.

The USEPA has not yet prepared a Remedial Investigation/Feasibility Study (RI/FS) or a Record of Decision (ROD) for the site. A Health Assessment for this site has not yet been prepared by the Agency for Toxic Substances and Disease Registry (ATSDR). Prior to the emergency removal of the stored chemicals on-site, exposure appeared to be via inhalation of chemicals released from fuming drums, direct contact with chemicals from leaking drums and physical hazards from falling or exploding drums. The health advisory concluded that the White Chemical Company site posed an imminent health hazard. Previous public health concerns focused on the threat posed by the uncontrolled hazardous substances and on worker health at the adjacent facilities.

CURRENT SITE CONDITIONS

On May 27, 1993 a site visit was conducted by Jim Pasqualo and Howard Rubin of the NJDOH along with representatives of the USEPA and the ATSDR Regional Office. Characterization, staging, and removal of drums and laboratory packs had been completed. These actions have eliminated the threat of on-site releases of uncontrolled hazardous substances.

The site was fenced off and well marked with warning signs. However, part of the fence had been pulled down by trespassers on multiple occasions, allowing unlimited access from the railroad tracks. A large quantity of equipment of various sizes have been left on-site. This equipment had been used in specialty chemical production and may have residual value. However, the equipment poses a potential physical hazard. There is evidence that extensive trespassing and vandalism is occurring which is rendering the equipment unusable and causing the yard and buildings to be cluttered with debris. During the site visit a trespasser was found on-site carrying bags to collect objects of value. He had apparently entered the site via the rail road tracks.

CURRENT ISSUES

Public health concerns previously focused on the imminent health threat posed by approximately eleven thousand drums and bottles of laboratory chemicals that had been stockpiled on-site. The site has been stabilized and no longer represents an imminent public health threat.

A completed human exposure pathway existed in the past among on-site workers and later for the employees of the adjacent facilities and the nearby residents who may have been subjected to environmental releases of hazardous chemicals. It is possible that leaking chemicals migrated off-site onto other properties and/or into nearby surface waters. However, the most likely route of exposure that may have caused adverse health effects is via past atmospheric releases.

According to the USEPA, NIOSH is not currently planning any subsequent follow-up activities for the White Chemical Site.

There is insufficient data to currently ascertain the public health significance of the migration of hazardous chemicals off-site either via run-off or by atmospheric release. The USEPA is in the process of preparing an RI/FS for the site. When the document is released, additional information will be available from which to determine the sites environmental impact and the possibility of additional exposure pathways.

Newly identified public health concerns regard the potential for exposure to soil-borne contaminants and physical hazards to trespassers. There are no other current community health concerns.

CONCLUSIONS

The health advisory concluded that: 1) The threat of a catastrophic release posed by the uncontrolled storage of hazardous substances at the site poses an imminent and substantial threat to residents and workers near the site; and 2) The evidence of continuous airborne releases and reports of adverse health effects in nearby worker populations are of public health concern. These conclusions were valid and were followed. Stabilization and removal activities conducted by USEPA have eliminated the possibility of an uncontrolled release of hazardous substances at the site. In light of the existing data, none of the public health advisory conclusions are still valid.

Preliminary information given in the Public Health Advisory (1) and in the NIOSH investigation (3) indicated the possibility that people working on-site and off-site may have experienced respiratory problems as a result of acute exposure to atmospheric releases of chemicals from White Chemical Corp. A lack of sufficient data prevents reconstruction of possible exposure doses and estimation of the possibility of adverse health effects.

Although the risk has been abated, the workers may have obtained an adequate exposure dose to hazardous fumes to have resulted in adverse health effects. NIOSH is not currently planning any follow-up activities for this site. NIOSH is taking appropriate action since there are no complaints about prolonged adverse effects associated with past exposures.

Trespassers can enter and vandalize the facility unimpeded. Contact with residual contamination is possible. Significant physical hazards exist at the site. Thus, a potential exposure pathway still exists for trespassers on the site due to the physical hazards.

Soil and ground water contamination may exist at the site. Insufficient data exists to indicate if completed human exposure pathways are associated with these media.

Based upon current conditions at the site, there is no completed human exposure pathways associated with White Chemical. Additionally, there are no previously identified or current community health concerns which have not been addressed.

RECOMMENDATIONS

It is imperative that the City of Newark should assist the USEPA to immediately provide adequate site security to prevent unauthorized access and possible exposure of trespassers to hazardous substances and physical hazards.

Physical hazards present on the White Chemical Co. site are a public health hazard to vandals who enter the site.

After review of current site conditions and the public concerns associated with the site, the ATSDR and the NJDOH have determined that, except for securing the site, no further immediate action is required. The ATSDR and the NJDOH shall determine the need for an additional SRU, health consultation, or public health assessment when the RI/FS for the site is available for review. However, new environmental data or changes in site conditions or usage may determine the need for additional actions.

HEALTH ACTIVITIES RECOMMENDATION PANEL (HARP) RECOMMENDATION

The data and information developed in the Site Review and Update for the White Chemical Site, Newark, 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 community health education is needed. This education program should specifically target workers who work or worked in companies adjunct to the site, former White Chemical workers, and residents. In addition, the panel determined that health professions education is needed.

PUBLIC HEALTH ACTION PLAN

The Public Health Action Plan (PHAP) for the White Chemical site 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

1. Environmental data and remedial activities have been evaluated within the context of human exposure pathways and relevant public health issues.

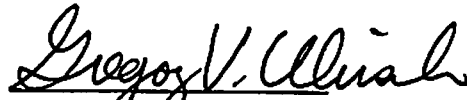
Actions Planned

1. As resources permit, an environmental health education program will be undertaken in the community living near this site. The purpose of the program is to advise the local public health professionals, health care providers and local residents of the nature and possible consequences of exposure to contaminants associated with the site. For health professionals providing clinical care, the value of obtaining a complete and accurate exposure history will be stressed. Information provided on the contaminants of concern may include, but not be limited to, the physical nature of the contaminants, potential pathways and exposure routes, potential health effects, symptoms of exposure, testing and treatment if known. In addition, information will be provided to residents about ways to protect their own health, and prevent adverse health effects from exposure to toxic substances.
2. 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.
3. 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.

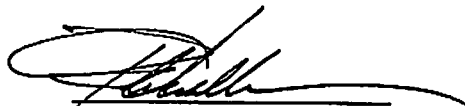
CERTIFICATION

The Site Review and Update for the White Chemical 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. Agency for Toxic Substances and Disease Registry. Public Health Advisory for White Chemical Company, Newark, Essex County, New Jersey. November 1990.
2. Agency for Toxic Substances and Disease Registry. Health Consultation for the White Chemical Company Site, Newark, Essex County, New Jersey. September 28, 1990.
3. Agency for Toxic Substances and Disease Registry. Memo from Arthur Block to Hal Emmett regarding the NIOSH health hazard investigation of the White Chemical Site. October 5, 1992.

Preparer of Report:

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New Jersey Department of Health**

ATTACHMENT A



WESTON Roy F. Weston, Inc.
MAJOR PROGRAMS DIVISION

In Association with ICF Technology Inc., C.C. Johnson & Malhotra, P.C., Resource Applications, Inc. and R.E. Sarriera Associates

EPA PM
P. CAMMARATA

TAT PM
B. ROSEN

FIGURE 1
SITE LOCATION

WHITE CHEMICAL, NJ

