File # 130021

New York State
Department of Environmental Conservation

MEMORANDUM

TO: Mike O'Toole 8/12

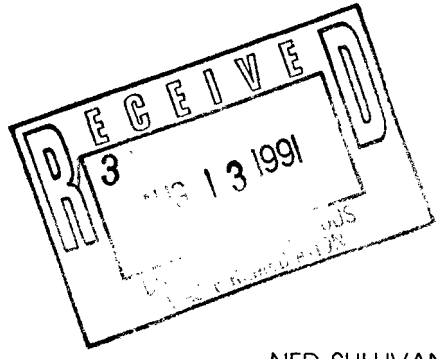
1)

For Your Information

2)

3

4/ JG



NED SULLIVAN
Deputy Commissioner

IDENTIFICATION NUMBER:
GOVERNOR'S NUMBER: 9130591

CORRESPONDENT

ECHOLS, CECILIA
USEPA
26 Federal Plaza
New York, N.Y. 10278

Addressed to: COMM. JORLING

Date:

Subject: Informational Public Meeting

* ROUTE TO *	* DATE *
N. Sullivan	08-12-91

☐ Reply for Commissioner's Signature
☐ Reply Direct
☐ Draft for Governor's Signature
☒ Other: FYI

DUE DATE: / /

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

10-17-3 (9-88) 10b

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION II
JACOB K. JAVITS FEDERAL BUILDING
NEW YORK, NEW YORK 10278

Representatives From
The U.S. Environmental Protection Agency
Invite You to Attend
An Informational Public Meeting
On
Monday, August 19, 1991
At
7:00 P.M.

Anchor Chemical Superfund Site
Hicksville Library
Hicksville, New York

Purpose: To present the upcoming site investigation (Remedial Investigation/Feasibility Study) and related field activities.

For Further Information Contact:
Cecilia Echols
Community Relations Coordinator
212-264-0949

Superfund Program
Fact Sheet

EPA
Region II

Anchor Chemical Site
Hicksville, New York

August 1991

EPA Begins Remedial Investigation at the Anchor Chemical Superfund Site

The U.S. Environmental Protection Agency (EPA) is initiating a **Remedial Investigation/Feasibility Study (RI/FS)*** at the Anchor Chemical **Superfund** site in Hicksville, New York. The objectives of the study are to determine the nature and extent of soil and **ground water** contamination originating from past industrial activities at the site, to evaluate various cleanup alternatives, and to collect sufficient data and information in order to select the most appropriate alternative. The RI site field activities began in June 1991.

This fact sheet provides a brief description and history of the Anchor Chemical site, a synopsis of the EPA Superfund process, and a summary of the RI activities to be conducted over the next several months. This fact sheet also announces a public informational meeting which will be held to discuss the progress of the RI and identifies other ways the public may become involved in site investigations.

Site Overview

The Anchor Chemical Superfund site is located at 500 West John Street in the village of Hicksville, Nassau County, New York. K.B. Company has owned this property since 1964. The site, which consists of a two-story building on a 1.5-acre lot, was leased to Anchor Chemical from 1964 to 1978, and Anchor/Lith Kem-Ko from 1978 to 1985. Both companies manufactured and blended chemicals for the graphic arts industry. Seventeen underground storage tanks, which range from 550 gallons to 4,000 gallons in capacity, are located two feet below the concrete floor in the northeast corner of the building (see Figure 1). These tanks stored solvents and chemicals utilized in both Anchor Chemical's and Anchor/Lith Kem-Ko's manufacturing process. The site is currently leased to J&D Brauner Company for use as a furniture warehouse.

The area surrounding the site is predominantly commercial and recreational. The site is bordered to the west by commercial property, to the south by West John Street, and to the northeast by Cantiague Park (see Figure 1). Approximately 90,000 people obtain drinking water from public supply wells located within three miles of the site. There are no known private residential wells in the vicinity of the site. Additionally, a ground water **recharge** basin is located in close proximity to the site.

ANCHOR CHEMICAL SUPERFUND SITE

Public Informational Meeting

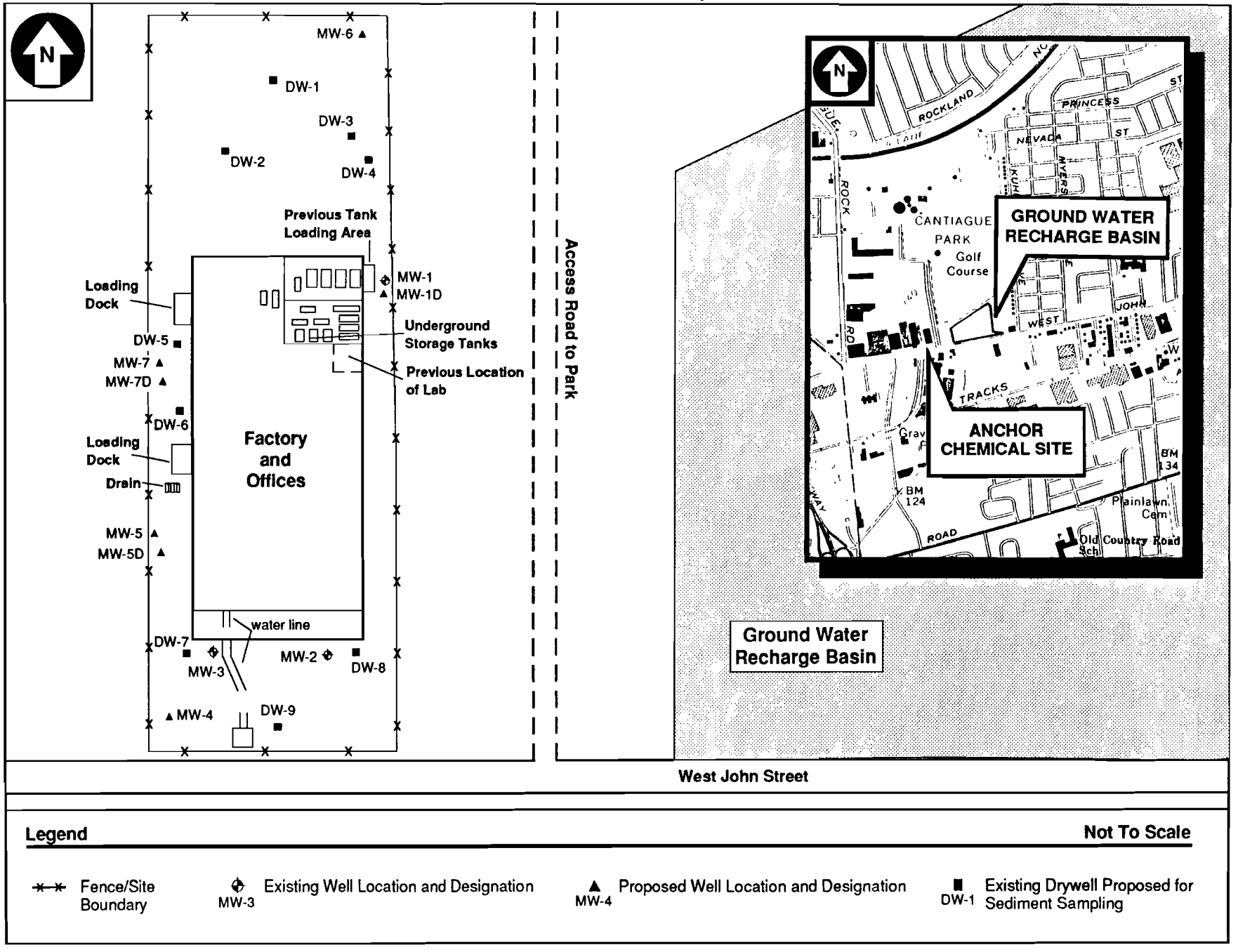
Monday, August 19, 1991
7:00 p.m.

Hicksville Library
169 Jerusalem Avenue
Hicksville, NY 11801
(516) 931-1417

EPA will hold a public informational meeting to present the upcoming site investigation. EPA and NYSDEC representatives will be present at the meeting to answer questions regarding the RI/FS and related field activities.

*Note: Words that are in **bold** print are defined in the glossary on pages 6 and 7.

Figure 1.
Anchor Chemical Study Area



In 1977, the Nassau County Department of Health (NCDH) discovered that the floor drains located inside the building were connected to a storm water **drywell** in the parking lot. Subsequent collection and analysis of sediment samples from the drywell revealed high levels of **volatile organic compounds (VOCs)** including: **1,1,1-trichloroethane, trichloroethylene,** and **tetrachloroethylene**. Subsequently, all lines leading from the building to the drywell were sealed.

In 1981, **pressure tests** conducted in compliance with a Nassau County Fire Prevention Ordinance, revealed leaks in five of the underground storage tanks. Consequently, these tanks were emptied and filled with concrete.

In 1982, at the request of the NCDH, a monitoring program was implemented at the site to determine the extent of soil and ground water contamination due to discharges from the leaking tanks. Three ground water **monitoring wells** were installed, and ground water and soil samples were collected and analyzed. Soil samples were found to contain elevated levels of **methylene chloride**, and 1,1,1-trichloroethane; ground water samples were found to contain elevated levels of 1,1,1-trichloroethane, tetrachloroethylene, **1,1-dichloroethane**, methylene chloride, and trichloroethylene.

Additional tank pressure testing in 1983 indicated leaks in a tank containing methylene chloride. However, no records were found regarding the closure of this tank.

In 1983, the site was placed on the New York State Department of Environmental Conservation (NYSDEC) list of inactive hazardous waste sites. In June of 1986 the site was placed on EPA's **National Priorities List (NPL).** Placement on the NPL makes the site eligible for federal action under the Comprehensive Environmental Response, Compensation, and Liability Act (also known as Superfund) and the Superfund Amendments and Reauthorization Act (SARA). An explanation of the Superfund process is provided on page 5 of this fact sheet.

In 1989, EPA signed an **Administrative Order on Consent** with one of the **potentially responsible parties (PRPs)**: K.B. Company (the owner of the site). EPA also issued a **Unilateral Order** to Chessco Industries, Inc. (the owner of Anchor/Lith Kem-Ko) another PRP. The agreements require the two parties to conduct or otherwise participate in the investigations of the site and to reimburse EPA for the cost of overseeing these activities.

Since the issuance of the orders, the PRPs have collected historical information about the site and drafted a **Work Plan** and **Project Operations Plan** for the site. EPA approved these documents in April 1991. EPA also completed the preparation of a **Community Relations Plan** in June 1991.

Upcoming Site Investigations

The Remedial Investigation (RI) tasks have been designed to provide sufficient data to determine the nature and extent of soil and ground water contamination at the Anchor Chemical site. The RI field activities began in June 1991 and will continue for approximately twenty-two weeks. At the completion of field activities, an RI report will be prepared summarizing the sampling results, findings, and conclusions of the field investigations. A public meeting will be held by EPA to discuss the findings of the RI.

The Feasibility Study (FS) will be conducted following the RI. This study will identify and evaluate cleanup alternatives for addressing the contamination at the site. After the FS is completed, a **Proposed Plan** outlining EPA's preferred cleanup alternative will be issued to the public for review and comment. EPA will also hold a public meeting and provide a 30-day comment period on the Proposed Plan and other documents.

Upcoming Field Activities

The following field activities are anticipated to be conducted during the RI at the Anchor Chemical site:

- *Inspection and Decommissioning of Underground Storage Tanks:* The status of twelve of the seventeen underground storage tanks is unknown. Therefore, these tanks will be inspected to determine their content and condition. The content of each tank will be sampled and analyzed. Subsequently, each tank will be emptied, cleaned, and filled with concrete.

- *Installation of Monitoring Wells:* A total of seven monitoring wells will be installed at the site. Both shallow (approximately 70 feet below the land surface) and deep (approximately 140 feet below the land surface) wells will be installed to

determine the horizontal and vertical ground water flow direction and the extent of ground water contamination.

- *Characterization of Ground Water and Sediment:* To initially characterize ground water quality at the site, the seven newly installed monitoring wells and the three existing monitoring wells will be sampled and analyzed for hazardous substances. In addition, sediment samples from nine existing drywells located throughout the site will be collected and analyzed.

- *Drilling of Soil Borings and Sampling of Soil and Ground Water:* To further characterize site contamination, subsurface soil and additional ground water samples will be collected and analyzed for hazardous substances. To enable the collection of subsurface soil samples, approximately nine **soil borings** will be drilled at potential contaminant source areas at the site. Six soil borings will be drilled near the underground storage tanks, and the remaining borings will be drilled in three of the existing drywells.

- *Survey of Water Supply Wells:* The Hicksville and Westbury Water Districts, the NYSDEC, and the NCDH will be contacted for information regarding the locations of public and private water supply wells within a two mile radius of the site. Information regarding well status, location, and other pertinent information will also be collected.

All samples collected during the RI will be analyzed for a range of contaminants including: VOCs, **semi-volatile organic compounds (SVOCs)**, pesticides, **polychlorinated biphenyls (PCBs)** and metals. EPA will use the analytical results to conduct a **risk assessment.** The risk assessment will determine the actual or potential threat to human health and the environment posed by the site.

For More Information

All EPA reports on the Anchor Chemical site, including the Community Relations Plan, and the Work Plan and Project Operations Plan for the RI, are available for public review at the information repositories established at the following locations.

Hicksville Library
169 Jerusalem Avenue
Hicksville, NY 11801
(516) 931-1417
Contact: Mrs. Watman
Hours: Mon.- Fri.: 10:00 a.m. to 9:00 p.m.
Sat.: 10:00 a.m. to 5:00 p.m.
Sun.: 1:00 p.m. to 5:00 p.m.

U.S. Environmental Protection Agency
Emergency and Remedial Response Division
26 Federal Plaza
New York, NY 10278
Contact: Dorothy Allen
Hours: Mon. - Fri.: 9:00 a.m to 5:00 p.m.

If you have any questions about the site or would like more information, please call or write:

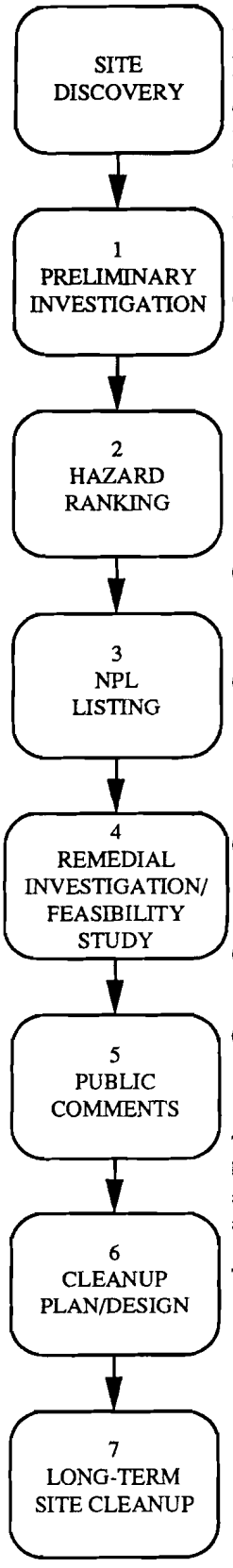
Dorothy Allen
Remedial Project Manager
U.S. Environmental Protection Agency
26 Federal Plaza, Room 747
New York, NY 10278
(212) 264-6321

Cecilia Echols
Community Relations Coordinator
U.S. Environmental Protection Agency
Office of External Programs
26 Federal Plaza, Room 905
New York, NY 10278
(212) 264-0949

As part of the Superfund program, EPA is providing communities with an opportunity to apply for Technical Assistance Grant. These grants of up to $50,000 per site are designed to enable community groups to hire a technical advisor or consultant to assist them in interpreting and commenting on the site findings and the planned cleanup. Citizens who are interested in the Technical Assistance Grants program may obtain an application package by calling or writing:

Marilyn Fast
Technical Assistance Grants Coordinator
U.S. EPA, Region II
26 Federal Plaza, Room 1714
New York, New York 10278
(212) 264-9860

The Superfund Process



In 1980, Congress passed a law called the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLA created a tax on the chemical and petroleum industries. The money collected from this tax, known as the Superfund, goes toward the cleanup of abandoned or uncontrolled hazardous wastes sites. The discovery of a potential hazardous waste site can occur in the course of required reporting or routine inspections or when there is physical evidence of contamination (drums, odors). The Superfund process then begins. The basic steps of the Superfund process are discussed below.

(1) Preliminary investigations, usually conducted by state environmental agencies, provide preliminary information regarding the history of disposal and present conditions at the site.

(2) If EPA decides that there is a potential for contamination at the site, a Hazard Ranking Study is conducted (this often uses information from the preliminary investigations). A site is ranked using a scoring system that evaluates many factors, among them:

- Possible harm to human populations or the environment from hazardous substances leaving the site through ground water, surface water, surface soil, or air;
- Possible harm to individuals coming in contact with hazardous substances at the site itself (from inhalation, direct contact, fire, explosion, and accidental ingestion of substances at the site); and
- Potential for substances at the site to contaminate drinking water wells and the number of people potentially affected by well contamination;

(3) If a site is considered to present a potentially serious hazard, the site is placed on the National Priorities List (NPL). Sites on the NPL present the most serious problems among hazardous waste sites nationwide and are eligible for Superfund money.

(4) Once a site is placed on the NPL, a Remedial Investigation (RI) is conducted. An RI assesses the nature and extent of contamination on site and determines the potential risks to the community and the environment. In addition to the RI, a Feasibility Study (FS) is conducted. The FS examines the pros and cons of various cleanup options (e.g. removal of contaminated soil, installation of water purification systems, or containment of contaminants).

(5) Before choosing one or a combination of cleanup methods, EPA addresses public comments. The purpose of this is to determine which of the proposed cleanup alternatives would most effectively meet the desires of the local community.

(6) The optimal cleanup alternative is documented in the Record of Decision, after which a cleanup plan is designed.

(7) Cleanup is the last step of the process. The method of cleanup may vary according to the type and amount of contamination present at a site, the possible receptors of contamination near the site, and the concerns of the community.

The time it takes to complete the Superfund process varies with each site. In general, the RI/FS stage can take between one and two years. The design of the chosen cleanup alternative takes approximately six months. The actual cleanup may take another one to three years but may be significantly prolonged if ground water has been affected.

Throughout the Superfund Process, several activities are continuously being conducted, including:

- ***Site Monitoring.*** If a site is thought to be an immediate threat to public health or the environment, continuous monitoring of onsite conditions occurs. Under severe conditions, EPA may conduct an emergency cleanup (called immediate removal or initial remedial measures).
- ***Community Relations.*** EPA actively informs the community and community officials of the status of the remediation process. In addition, EPA encourages public input throughout the process. Specific activities may vary from site to site depending on the level and nature of public concern. Activities often include public meetings, press releases, and community interviews.
- ***Enforcement.*** After a site is included on the NPL, EPA determines who is responsible for the contamination at the site. The potentially responsible parties (PRPs) are legally obligated to either conduct or pay for the cleanup of the site and to reimburse EPA and state agencies for oversight costs and costs incurred during any previous remediation.

Glossary

Administrative Order on Consent: A legal agreement entered into by EPA and one or more Potentially Responsible Parties (PRPs) that sets forth the requirements for conducting studies and cleanup actions by the PRPs at a Superfund site under the supervision of EPA.

Community Relations Plan: A Community Relations Plan is a formal plan describing EPA community relations activities at a Superfund Site. The plan identifies issues of community concern and presents community relations activities to be conducted by EPA during RI/FS activities at the site.

1,1-Dichloroethane: 1,1-Dichloroethane is a man-made chemical commonly used as an industrial solvent, cleaning and degreasing agent. 1,1-Dichloroethane is a contaminant commonly found in ground water at hazardous waste sites due to its tendency to move readily from soil to ground water. 1,1-Dichloroethane is classified as a possible human carcinogen.

Drywell: A drywell is a hole excavated in porous ground and usually covered and filled with loose gravel or rubble to receive water (as drainage from surface water runoff) and allow it to percolate into ground water.

Feasibility Study (FS): A study that identifies and evaluates alternatives for addressing site contamination at a Superfund site.

Ground water: Water found beneath the earth's surface that fills pores between materials such as sand, soil, gravel and cracks in bedrock and often serves as a principal source of drinking water.

Methylene Chloride: Methylene chloride is a man-made chemical used as an industrial degreaser and paint remover. Methylene chloride is also used in aerosols as a flammability depressant and as a caffeine extractant in coffee and tea. Methylene chloride is found to move readily from soil to ground water. Methylene chloride is classified as a probable human carcinogen.

Monitoring Well: Wells drilled to "monitor"ground water quality and movement. These wells do not supply water for drinking or industrial use. Samples from monitoring wells are analyzed to determine whether contaminants are present. Comparing water levels in monitoring wells shows the direction of ground water flow.

National Priorities List (NPL): EPA's list of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under Superfund.

Polychlorinated biphenyls (PCBs): A mixture of compounds composed of the biphenyl molecule and chlorine. PCBs, because of their low flammability, were typically used in the electrical industry in insulating liquids for capacitors and transformers. EPA has classified PCBs as a probable human carcinogen based on evidence in both animals and humans showing a link between PCBs and increased cancer rates.

Potentially Responsible Parties (PRPs): Individuals or companies identified by EPA as potentially liable under CERCLA for cleanup costs. PRPs may include hazardous substance generators, present or former owners of hazardous substances that were disposed, those who accepted hazardous substances and/or transported them to certain facilities or locations, as well as property owners where hazardous substances were placed.

Pressure Test: A pressure test is a test performed on underground storage tanks to determine the integrity of the tank; i.e., whether or not a leak exists.

Project Operations Plan: A document prepared by EPA or a PRP which describes in detail how investigations identified in the Work Plan will be conducted at a specific Superfund site.

Proposed Plan: A public participation requirement of SARA in which EPA summarizes for the public the preferred *cleanup* strategy, the rationale for the preference, reviews the alternatives presented in the detailed analysis of the *remedial*

Glossary (Continued)

investigation/feasibility study, and presents any waivers to cleanup standards of CERCLA §121(d)(4) which may be proposed. This may be prepared either as a fact sheet or as a separate document. In either case, it must actively solicit public review and comment on all alternatives under Agency consideration.

Recharge: The processes by which water from any surface source migrates downward through the soil to add to or replenish the ground water.

Remedial Investigation (RI): The Remedial Investigation determines the nature, extent, and composition of contamination at a hazardous waste site, and directs the types of cleanup options that are developed in the FS.

Risk Assessment: A qualitative or quantitative evaluation of human health and/or environmental risk resulting from exposure to a chemical or physical agent (pollutant); it combines exposure assessment results with toxicity assessment results to estimate risk.

Sediments: The sand or mud typically found at the bottom and sides of bodies of water, such as creeks, rivers, streams, lakes, swamps, and ponds. Sediments typically consist of soil, silt, clay, plant matter, and sometimes gravel.

Semi-Volatile Organic Compounds (SVOCs): A type of organic compound that is heavier in weight and has a higher vapor pressure such that it does not volatilize (or evaporate) as readily as VOCs.

Soil Boring: A hole drilled into the ground for obtaining subsurface soil samples and characterizing soils and buried wastes.

Superfund: The common name used for the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), a Federal law passed in 1980 and modified in 1986 by the Superfund Amendments and Reauthorization Act (SARA). CERCLA created the Hazardous Substance Trust Fund, or "Superfund," which is financed by special taxes and general Federal revenues. The Superfund is used to investigate and to cleanup abandoned or uncontrolled hazardous waste sites.

Tetrachloroethylene: Tetrachloroethylene is a man-made chemical commonly used as a dry-cleaning solvent and as a degreaser. Tetrachloroethylene moves readily from soil to ground water. In addition, it is known to degrade slowly in ground water. Tetrachloroethylene is classified as a probable human carcinogen; it has been found to be carcinogenic in mice and rats.

1,1,1-Trichloroethane (TCA): TCA is a man-made chemical commonly used to remove grease from metals. It is found in inks, shoe polish, metal-cutting oils, and in aerosols. TCA is a common ground water contaminant at hazardous waste sites because it moves readily from soil to ground water. TCA has not been classified as a human carcinogen.

Trichloroethylene (TCE): A nonflammable man-made solvent used in dry cleaning and the degreasing of metal. TCE is a common ground water contaminant at hazardous waste sites because it moves readily from soil into ground water. Long-term exposure to low levels of TCE has been shown to cause liver damage in humans. EPA has classified TCE as a probable human carcinogen; it has been shown to cause cancer in mice.

Unilateral Order: A legal document issued by EPA to one or more PRP that sets forth the requirements for participation in studies and cleanup actions by the PRP at a Superfund site under the supervision of EPA.

Volatile Organic Compounds (VOCs): A group of chemical compounds composed primarily of carbon and hydrogen that are characterized by their tendency to evaporate (or volatilize) into the air from water or soil. VOCs include substances that are contained in common solvents and cleaning fluids. Some VOCs are known to cause cancer.

Work Plan: A document prepared by EPA or a PRP which identifies and describes the investigations which will be performed at a specific Superfund site.

Mailing List Additions

If you or someone you know would like to be placed on the Anchor Chemical Site mailing list, please fill out and mail this form to:

Cecilia Echols
Community Relations Coordinator
U.S. Environmental Protection Agency, Region II
Office of External Programs
26 Federal Plaza, Room 905
New York, New York 10278
(212) 264-0949

Name: _____

Address: _____

Affiliation: _____ Phone: _____

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION II
26 FEDERAL PLAZA
NEW YORK, NEW YORK 10278
Forwarding and Address Correction Requested

Region II
Office of External Programs
26 Federal Plaza, Room 905
New York, NY 10278

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Permit No. G-35

Inside: Anchor Chemical Superfund Site Fact Sheet

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REGION II
JACOB K. JAVITS FEDERAL BUILDING
NEW YORK, NEW YORK 10278

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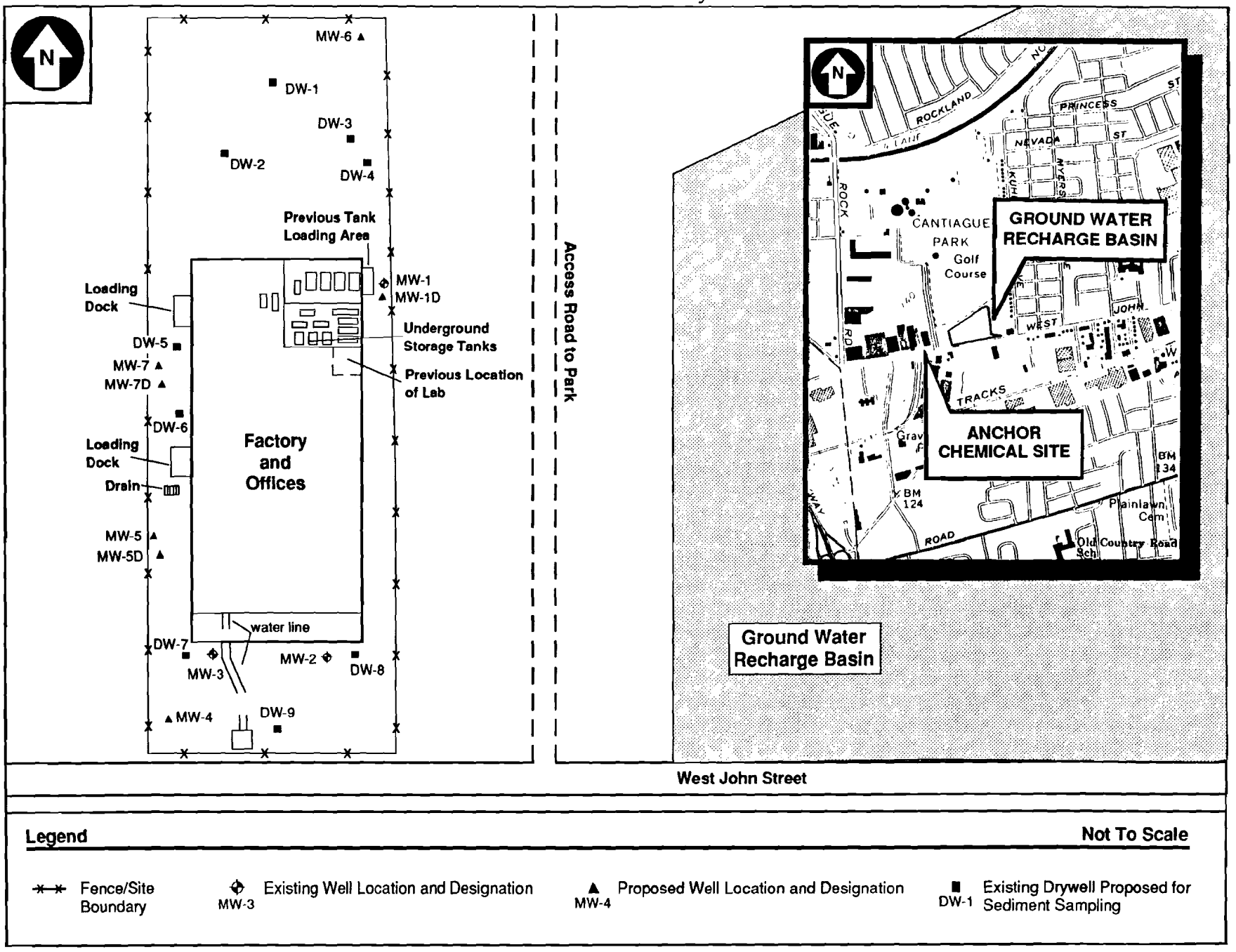

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The following field activities are anticipated to be conducted during the RI at the Anchor Chemical site:

- *Inspection and Decommissioning of Underground Storage Tanks:* The status of twelve of the seventeen underground storage tanks is unknown. Therefore, these tanks will be inspected to determine their content and condition. The content of each tank will be sampled and analyzed. Subsequently, each tank will be emptied, cleaned, and filled with concrete.

- *Installation of Monitoring Wells:* A total of seven monitoring wells will be installed at the site. Both shallow (approximately 70 feet below the land surface) and deep (approximately 140 feet below the land surface) wells will be installed to

determine the horizontal and vertical ground water flow direction and the extent of ground water contamination.

- *Characterization of Ground Water and Sediment:* To initially characterize ground water quality at the site, the seven newly installed monitoring wells and the three existing monitoring wells will be sampled and analyzed for hazardous substances. In addition, sediment samples from nine existing drywells located throughout the site will be collected and analyzed.

- *Drilling of Soil Borings and Sampling of Soil and Ground Water:* To further characterize site contamination, subsurface soil and additional ground water samples will be collected and analyzed for hazardous substances. To enable the collection of subsurface soil samples, approximately nine **soil borings** will be drilled at potential contaminant source areas at the site. Six soil borings will be drilled near the underground storage tanks, and the remaining borings will be drilled in three of the existing drywells.

- *Survey of Water Supply Wells:* The Hicksville and Westbury Water Districts, the NYSDEC, and the NCDH will be contacted for information regarding the locations of public and private water supply wells within a two mile radius of the site. Information regarding well status, location, and other pertinent information will also be collected.

All samples collected during the RI will be analyzed for a range of contaminants including: VOCs, **semi-volatile organic compounds (SVOCs)**, pesticides, **polychlorinated biphenyls (PCBs)** and metals. EPA will use the analytical results to conduct a **risk assessment.** The risk assessment will determine the actual or potential threat to human health and the environment posed by the site.

For More Information

All EPA reports on the Anchor Chemical site, including the Community Relations Plan, and the Work Plan and Project Operations Plan for the RI, are available for public review at the information repositories established at the following locations.

Hicksville Library
169 Jerusalem Avenue
Hicksville, NY 11801
(516) 931-1417
Contact: Mrs. Watman
Hours: Mon.- Fri.: 10:00 a.m. to 9:00 p.m.
Sat.: 10:00 a.m. to 5:00 p.m.
Sun.: 1:00 p.m. to 5:00 p.m.

U.S. Environmental Protection Agency
Emergency and Remedial Response Division
26 Federal Plaza
New York, NY 10278
Contact: Dorothy Allen
Hours: Mon. - Fri.: 9:00 a.m to 5:00 p.m.

If you have any questions about the site or would like more information, please call or write:

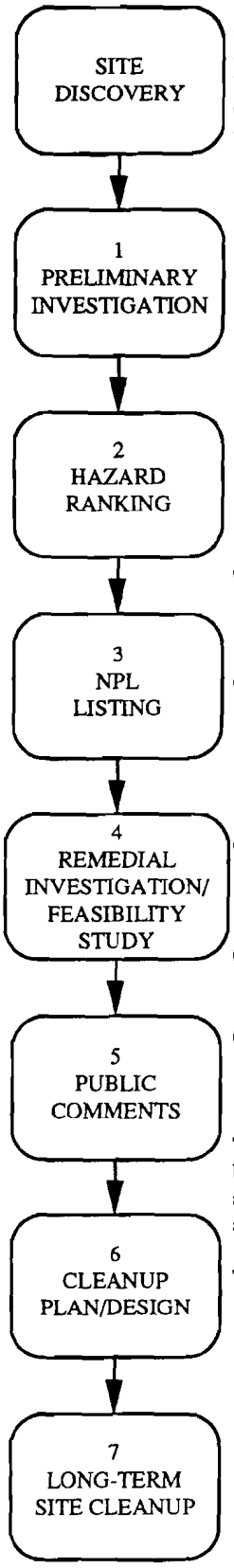
Dorothy Allen
Remedial Project Manager
U.S. Environmental Protection Agency
26 Federal Plaza, Room 747
New York, NY 10278
(212) 264-6321

Cecilia Echols
Community Relations Coordinator
U.S. Environmental Protection Agency
Office of External Programs
26 Federal Plaza, Room 905
New York, NY 10278
(212) 264-0949

As part of the Superfund program, EPA is providing communities with an opportunity to apply for Technical Assistance Grant. These grants of up to $50,000 per site are designed to enable community groups to hire a technical advisor or consultant to assist them in interpreting and commenting on the site findings and the planned cleanup. Citizens who are interested in the Technical Assistance Grants program may obtain an application package by calling or writing:

Marilyn Fast
Technical Assistance Grants Coordinator
U.S. EPA, Region II
26 Federal Plaza, Room 1714
New York, New York 10278
(212) 264-9860

The Superfund Process



In 1980, Congress passed a law called the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLA created a tax on the chemical and petroleum industries. The money collected from this tax, known as the Superfund, goes toward the cleanup of abandoned or uncontrolled hazardous wastes sites. The discovery of a potential hazardous waste site can occur in the course of required reporting or routine inspections or when there is physical evidence of contamination (drums, odors). The Superfund process then begins. The basic steps of the Superfund process are discussed below.

(1) Preliminary investigations, usually conducted by state environmental agencies, provide preliminary information regarding the history of disposal and present conditions at the site.

(2) If EPA decides that there is a potential for contamination at the site, a Hazard Ranking Study is conducted (this often uses information from the preliminary investigations). A site is ranked using a scoring system that evaluates many factors, among them:

- Possible harm to human populations or the environment from hazardous substances leaving the site through ground water, surface water, surface soil, or air;
- Possible harm to individuals coming in contact with hazardous substances at the site itself (from inhalation, direct contact, fire, explosion, and accidental ingestion of substances at the site); and
- Potential for substances at the site to contaminate drinking water wells and the number of people potentially affected by well contamination;

(3) If a site is considered to present a potentially serious hazard, the site is placed on the National Priorities List (NPL). Sites on the NPL present the most serious problems among hazardous waste sites nationwide and are eligible for Superfund money.

(4) Once a site is placed on the NPL, a Remedial Investigation (RI) is conducted. An RI assesses the nature and extent of contamination on site and determines the potential risks to the community and the environment. In addition to the RI, a Feasibility Study (FS) is conducted. The FS examines the pros and cons of various cleanup options (e.g. removal of contaminated soil, installation of water purification systems, or containment of contaminants).

(5) Before choosing one or a combination of cleanup methods, EPA addresses public comments. The purpose of this is to determine which of the proposed cleanup alternatives would most effectively meet the desires of the local community.

(6) The optimal cleanup alternative is documented in the Record of Decision, after which a cleanup plan is designed.

(7) Cleanup is the last step of the process. The method of cleanup may vary according to the type and amount of contamination present at a site, the possible receptors of contamination near the site, and the concerns of the community.

The time it takes to complete the Superfund process varies with each site. In general, the RI/FS stage can take between one and two years. The design of the chosen cleanup alternative takes approximately six months. The actual cleanup may take another one to three years but may be significantly prolonged if ground water has been affected.

Throughout the Superfund Process, several activities are continuously being conducted, including:

- ***Site Monitoring.*** If a site is thought to be an immediate threat to public health or the environment, continuous monitoring of onsite conditions occurs. Under severe conditions, EPA may conduct an emergency cleanup (called immediate removal or initial remedial measures).
- ***Community Relations.*** EPA actively informs the community and community officials of the status of the remediation process. In addition, EPA encourages public input throughout the process. Specific activities may vary from site to site depending on the level and nature of public concern. Activities often include public meetings, press releases, and community interviews.
- ***Enforcement.*** After a site is included on the NPL, EPA determines who is responsible for the contamination at the site. The potentially responsible parties (PRPs) are legally obligated to either conduct or pay for the cleanup of the site and to reimburse EPA and state agencies for oversight costs and costs incurred during any previous remediation.

Glossary

Administrative Order on Consent: A legal agreement entered into by EPA and one or more Potentially Responsible Parties (PRPs) that sets forth the requirements for conducting studies and cleanup actions by the PRPs at a Superfund site under the supervision of EPA.

Community Relations Plan: A Community Relations Plan is a formal plan describing EPA community relations activities at a Superfund Site. The plan identifies issues of community concern and presents community relations activities to be conducted by EPA during RI/FS activities at the site.

1,1-Dichloroethane: 1,1-Dichloroethane is a man-made chemical commonly used as an industrial solvent, cleaning and degreasing agent. 1,1-Dichloroethane is a contaminant commonly found in ground water at hazardous waste sites due to its tendency to move readily from soil to ground water. 1,1-Dichloroethane is classified as a possible human carcinogen.

Drywell: A drywell is a hole excavated in porous ground and usually covered and filled with loose gravel or rubble to receive water (as drainage from surface water runoff) and allow it to percolate into ground water.

Feasibility Study (FS): A study that identifies and evaluates alternatives for addressing site contamination at a Superfund site.

Ground water: Water found beneath the earth's surface that fills pores between materials such as sand, soil, gravel and cracks in bedrock and often serves as a principal source of drinking water.

Methylene Chloride: Methylene chloride is a man-made chemical used as an industrial degreaser and paint remover. Methylene chloride is also used in aerosols as a flammability depressant and as a caffeine extractant in coffee and tea. Methylene chloride is found to move readily from soil to ground water. Methylene chloride is classified as a probable human carcinogen.

Monitoring Well: Wells drilled to "monitor"ground water quality and movement. These wells do not supply water for drinking or industrial use. Samples from monitoring wells are analyzed to determine whether contaminants are present. Comparing water levels in monitoring wells shows the direction of ground water flow.

National Priorities List (NPL): EPA's list of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under Superfund.

Polychlorinated biphenyls (PCBs): A mixture of compounds composed of the biphenyl molecule and chlorine. PCBs, because of their low flammability, were typically used in the electrical industry in insulating liquids for capacitors and transformers. EPA has classified PCBs as a probable human carcinogen based on evidence in both animals and humans showing a link between PCBs and increased cancer rates.

Potentially Responsible Parties (PRPs): Individuals or companies identified by EPA as potentially liable under CERCLA for cleanup costs. PRPs may include hazardous substance generators, present or former owners of hazardous substances that were disposed, those who accepted hazardous substances and/or transported them to certain facilities or locations, as well as property owners where hazardous substances were placed.

Pressure Test: A pressure test is a test performed on underground storage tanks to determine the integrity of the tank; i.e., whether or not a leak exists.

Project Operations Plan: A document prepared by EPA or a PRP which describes in detail how investigations identified in the Work Plan will be conducted at a specific Superfund site.

Proposed Plan: A public participation requirement of SARA in which EPA summarizes for the public the preferred *cleanup* strategy, the rationale for the preference, reviews the alternatives presented in the detailed analysis of the *remedial*

Glossary (Continued)

investigation/feasibility study, and presents any waivers to cleanup standards of CERCLA §121(d)(4) which may be proposed. This may be prepared either as a fact sheet or as a separate document. In either case, it must actively solicit public review and comment on all alternatives under Agency consideration.

Recharge: The processes by which water from any surface source migrates downward through the soil to add to or replenish the ground water.

Remedial Investigation (RI): The Remedial Investigation determines the nature, extent, and composition of contamination at a hazardous waste site, and directs the types of cleanup options that are developed in the FS.

Risk Assessment: A qualitative or quantitative evaluation of human health and/or environmental risk resulting from exposure to a chemical or physical agent (pollutant); it combines exposure assessment results with toxicity assessment results to estimate risk.

Sediments: The sand or mud typically found at the bottom and sides of bodies of water, such as creeks, rivers, streams, lakes, swamps, and ponds. Sediments typically consist of soil, silt, clay, plant matter, and sometimes gravel.

Semi-Volatile Organic Compounds (SVOCs): A type of organic compound that is heavier in weight and has a higher vapor pressure such that it does not volatilize (or evaporate) as readily as VOCs.

Soil Boring: A hole drilled into the ground for obtaining subsurface soil samples and characterizing soils and buried wastes.

Superfund: The common name used for the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), a Federal law passed in 1980 and modified in 1986 by the Superfund Amendments and Reauthorization Act (SARA). CERCLA created the Hazardous Substance Trust Fund, or "Superfund," which is financed by special taxes and general Federal revenues. The Superfund is used to investigate and to cleanup abandoned or uncontrolled hazardous waste sites.

Tetrachloroethylene: Tetrachloroethylene is a man-made chemical commonly used as a dry-cleaning solvent and as a degreaser. Tetrachloroethylene moves readily from soil to ground water. In addition, it is known to degrade slowly in ground water. Tetrachloroethylene is classified as a probable human carcinogen; it has been found to be carcinogenic in mice and rats.

1,1,1-Trichloroethane (TCA): TCA is a man-made chemical commonly used to remove grease from metals. It is found in inks, shoe polish, metal-cutting oils, and in aerosols. TCA is a common ground water contaminant at hazardous waste sites because it moves readily from soil to ground water. TCA has not been classified as a human carcinogen.

Trichloroethylene (TCE): A nonflammable man-made solvent used in dry cleaning and the degreasing of metal. TCE is a common ground water contaminant at hazardous waste sites because it moves readily from soil into ground water. Long-term exposure to low levels of TCE has been shown to cause liver damage in humans. EPA has classified TCE as a probable human carcinogen; it has been shown to cause cancer in mice.

Unilateral Order: A legal document issued by EPA to one or more PRP that sets forth the requirements for participation in studies and cleanup actions by the PRP at a Superfund site under the supervision of EPA.

Volatile Organic Compounds (VOCs): A group of chemical compounds composed primarily of carbon and hydrogen that are characterized by their tendency to evaporate (or volatilize) into the air from water or soil. VOCs include substances that are contained in common solvents and cleaning fluids. Some VOCs are known to cause cancer.

Work Plan: A document prepared by EPA or a PRP which identifies and describes the investigations which will be performed at a specific Superfund site.

Mailing List Additions

If you or someone you know would like to be placed on the Anchor Chemical Site mailing list, please fill out and mail this form to:

Cecilia Echols
Community Relations Coordinator
U.S. Environmental Protection Agency, Region II
Office of External Programs
26 Federal Plaza, Room 905
New York, New York 10278
(212) 264-0949

Name: _____

Address: _____

Affiliation: _____ Phone: _____

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