Department of Environmental Conservation

**Division of Environmental Remediation**

# Record of Decision

## Marsh Valve Site
## Dunkirk, Chautauqua County, New York
## Site Number 9-07-023

**March 2003**

New York State Department of Environmental Conservation
GEORGE E. PATAKI, *Governor* ERIN M. CROTTY, *Commissioner*

# DECLARATION STATEMENT - RECORD OF DECISION

## Marsh Valve Inactive Hazardous Waste Disposal Site

## Dunkirk, Chautauqua County, New York
## Site No. 907023

**Statement of Purpose and Basis**

The Record of Decision (ROD) presents the selected remedy for the Marsh Valve site, a Class 2 inactive hazardous waste disposal site. The selected remedial program was chosen in accordance with the New York State Environmental Conservation Law and is not inconsistent with the National Oil and Hazardous Substances Pollution Contingency Plan of March 8, 1990 (40CFR300), as amended.

This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (NYSDEC) for the Marsh Valve inactive hazardous waste disposal site, and the public's input to the Proposed Remedial Action Plan (PRAP) presented by the NYSDEC. A listing of the documents included as a part of the Administrative Record is included in Appendix B of the ROD.

**Assessment of the Site**

Actual or threatened release of hazardous waste constituents from this site have been addressed by implementing a series of Emergency Removal Actions as identified in this ROD. The removal of contaminated soil from the site has significantly reduced the threat to public health and the environment.

This site does not present a current or potential threat to public health or the environment.

**Description of Selected Remedy**

Based on the results of the Remedial Investigation and Feasibility Study (RI/FS) for the Marsh Valve site and the criteria identified for evaluation of alternatives, the NYSDEC has selected No Further Action based upon the performance of the emergency removal action.

**New York State Department of Health Acceptance**

The New York State Department of Health (NYSDOH) concurs that the remedy selected for this site is protective of human health.

**Declaration**

The selected remedy is protective of human health and the environment, complies with State and Federal requirements that are legally applicable or relevant and appropriate to the remedial action to the extent practicable, and is cost effective. This remedy utilizes permanent solutions and alternative treatment or resource recovery technologies, to the maximum extent practicable, and satisfies the preference for remedies that reduce toxicity, mobility, or volume as a principal element.

MAR 3 1 2003

Date

Dale A. Desnoyers, Director
Division of Environmental Remediation

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# RECORD OF DECISION

**Marsh Valve Site**
**Dunkirk, Chautauqua County, New York**
**Site No. 9-07-023**
**March 2003**

## SECTION 1: SUMMARY AND PURPOSE OF THE RECORD OF DECISION

The New York State Department of Environmental Conservation (NYSDEC), in consultation with the New York State Department of Health (NYSDOH), has selected a remedy for the Marsh Valve Site, a Class 2 inactive hazardous waste disposal site. The presence of hazardous waste had created significant threats to human health and/or the environment that are addressed by this remedy. As more fully described in Sections 3 and 5 of this document, improper storage, containment and handling resulted in the disposal of hazardous wastes, including inorganic compounds (metals). These wastes contaminated the surface and subsurface soils at the site, and resulted in:

- a significant threat to human health associated with potential exposure to metal contaminated foundry sand fill material and dusts.

- a significant environmental threat associated with the impacts of contaminants to soils and groundwater

At the request of NYSDEC a removal action was undertaken at the Marsh Valve site by the United States Environmental Protection Agency (EPA) in response to the threats identified above. A removal action may be conducted at a site when a source of contamination or exposure pathway can be effectively addressed before completion of a remedial investigation/feasibility study (RI/FS). The removal action undertaken at this site included: complete demolition of the former manufacturing facility building; removal of two underground storage tanks (USTs); and, excavation and disposal of all foundry sand fill material to a depth where native silty-clay soils are present.

Because the implementation of the above removal action, is protective of human health and the environment, No Further Action is selected as the remedy for this site. The NYSDEC also proposes to remove the site from the New York State Registry of Inactive Hazardous Waste Disposal Sites.

The selected remedy, discussed in detail in Section 6, is intended to attain the remediation goals identified for this site in Section 6. The remedy must conform with officially promulgated standards and criteria that are directly applicable, or that are relevant and appropriate. The selection of a remedy must also take into consideration guidance, as appropriate. Standards, criteria and guidance are hereafter called SCGs.

## SECTION 2: SITE LOCATION AND DESCRIPTION

The Marsh Valve Site, Site #907023 is located at 307 - 315 Brigham Road, in the City of Dunkirk, Chautauqua County, New York (see Figure 1). Situated in a mixed residential, commercial and industrial area, Marsh Valve was a small manufacturer of brass valves and fittings. The Marsh Valve property is over two acres in size, located at the southern end of Fourth Street on Brigham Road. To the north and across the street from the site is a play field currently owned by the City of Dunkirk. Further north and to the east are residential properties. Located directly south is a regulated wetland area that is a contributor to Crooked Brook which eventually empties into Lake Erie. Located to the west is a heavy use rail corridor. The nearest surface water is Crooked Brook that lies 500 feet to the south. Lake Erie is approximately 2,000 feet to the west.

## SECTION 3: SITE HISTORY

### 3.1: Operational/Disposal History

The former Marsh Valve Company building was constructed in various stages beginning in 1912 until 1966 (Figure 2). Once housing the Thomas Coupling Company, the Marsh Valve Company has occupied the property since the early 1920's. In 1941 a foundry was built on the site. There had been various owners of the facility, but the primary function of this facility was the manufacture of brass fittings and valves.

The final owner/operator of the facility doing business as Marsh Valve Foundry Company and Marsh Valve Co. filed for Chapter 11 bankruptcy in September 1991. After a Chapter 7 bankruptcy filing in September 1992, the company was determined to be out of business in February 1994.

Reports of disposal of foundry sands to the rear of the facility were first investigated in 1988. An exact chronology of dumping activities is undetermined, however, the volume of foundry sands at the site indicated dumping activities over a sustained period of time.

### 3.2: Remedial History

On August 16, 1988, a sample of the foundry sand/fill material was collected and analyzed by the Chautauqua County Department of Health. The analysis failed for Extraction Procedure Toxicity (EP Tox) lead at 7.8 milligrams per liter (mg/l). Analytical results for lead at a level exceeding 5.0 mg/l defined the fill material as a hazardous waste.

Subsequently, the NYSDEC directed Marsh Valve Company to cease the disposal operation and directed the company to close the landfill. After negotiations between NYSDEC and Marsh Valve failed, NYSDEC notified the company that the Department would proceed pursuant to its authority under the Environmental Conservation Law (ECL) Section 27-1309.

In February 1997, a Phase I environmental site assessment was completed for the City of Dunkirk. As a result of this investigation, in June 1997, an emergency drum removal, (ERA, No. 9090) was undertaken by NYSDEC to remove a drum of leaking waste that had Toxicity Characteristic Leaching Procedure (TCLP) failure for benzene, lead and selenium. A TCLP failure of benzene at .05 mg/l, lead at 5.0 mg/l and selenium at 1.0 mg/l defines a characteristic hazardous waste as per 6NYCRR Part 371. An additional 15 drums of lead contaminated coolant from inside the facility were removed along with visually contaminated gravel/soil and nine drums of various wastes compiled as laboratory packs. Cost of the drum removal was approximately $13,625.

To determine the extent of metal contamination proximate to the Marsh Valve site, NYSDEC initiated an Immediate Investigative Work Assignment (IIWA) in April 1998. The IIWA consisted of 11 subsurface borings and 13 test pits. In addition, four groundwater monitoring wells were installed, developed and sampled (Figure 3). Results of the IIWA determined that hazardous waste consisting of lead was present in the spent foundry sands in the fill areas of the site. Cost of the IIWA was approximately $30,000.

A subsequent sampling effort by NYSDEC, in April 1999 determined that lead also existed in sands, dusts and materials within the former manufacturing facility building.

In 2000, the NYSDEC listed the site as a Class 2 site in the Registry of Inactive Hazardous Waste Disposal Sites in New York. A Class 2 site is a site where hazardous waste presents a significant threat to the public health or the environment and action is required.

On August 31, 2000, a request was made by NYSDEC of the EPA to conduct an emergency removal action at the Marsh Valve Site. In March 2001 an Action Memorandum, with a project ceiling of $550,000 was approved by EPA that authorized the removal of hazardous substances from the building. In response to the request, EPA contractors stabilized the building structure, removed numerous drums and piles of foundry sand waste, removed asbestos containing valve packing and initiated a grid sampling program to determine the extent of wastes disposed outside and under the facility. Based on analytical data from the grid sampling and previous sampling efforts the Agency for Toxic Substances and Disease Registry (ATSDR) in cooperation with NYSDOH recommended removing lead contaminated soils as well as removing lead contaminated dusts from inside of the building. Data was also sent to the EPA's Environmental Response Team which, in cooperation with the United States Fish and Wildlife Service, completed an ecological evaluation of the data. The evaluation determined that the presence of high levels of lead, copper and zinc in perched groundwater and surface soils could potentially impact wetland areas and groundwater. Because of these findings, and with support of the NYSDEC, the EPA increased the project ceiling to $3,000,000. This increase authorized complete demolition of the former facility, removal of two underground storage tanks, and allowed for the complete removal of impacted site sands and soils to native soils. Figure 4 shows the extent of the soil removal. Following removal of the contaminated soil the site was backfilled with certified clean soils. The removal action was determined to be complete with final grading of the site in August 2002.

Follow up groundwater sampling was conducted at the site by NYSDEC in September 2002.

## SECTION 4: ENFORCEMENT STATUS

Potentially Responsible Parties (PRPs) are those who may be legally liable for contamination at a site. This may include past or present owners and operators, waste generators, and haulers.

The Potential Responsible Parties (PRP) for the site include: William de la Cerda, De La Cerda Corporation, Marsh Valve Company and Marsh Foundry Company.

The PRPs may be subject to legal actions by the State for recovery of all response costs the State has incurred.

Upon issuance of the Record of Decision the NYSDEC may approach the PRPs to reimburse the NYSDEC for past costs.

## SECTION 5: SITE CONTAMINATION

Site contamination at the Marsh Valve site consisted mainly of foundry sands, which were contaminated with lead, copper and zinc. The foundry sand was used as fill material throughout the site.

### 5.1: Summary of the Immediate Investigative Work Assignment

Beginning in April 1998, NYSDEC implemented an IIWA to define the nature and extent of any contamination resulting from previous activities at the site. All work completed under the IIWA is discussed, in detail, in the report entitled "Report on Activities, Immediate Investigative Work Assignment (IIWA), Work Assignment #D003666-04", prepared by NYSDEC, dated August 1998.

The IIWA included the following activities:

- general site survey;
- underground storage tank investigation;
- installation of eleven soil borings, thirteen test pits and four monitoring wells;
- collection of eighteen surface soil samples;
- collection of twenty-three subsurface soil samples; and,
- collection of five groundwater samples.

To determine which media (soil, groundwater, etc.) were contaminated at levels of concern, the IIWA analytical data were compared to environmental standards, criteria, and guidance values (SCGs). Groundwater, drinking water and surface water SCGs identified for the Marsh Valve site are based on NYSDEC Ambient Water Quality Standards and Guidance Values and Part 5 of the New York State Sanitary Code. For soils, NYSDEC Technical and Administrative Guidance Memorandum (TAGM) 4046 provides soil cleanup guidelines for the protection of groundwater, background conditions, and health-based exposure scenarios.

Based on the IIWA results, after comparison to the SCGs and review of potential public health and environmental exposure routes, it was determined that a threat to the public health and the environment existed due to metals contamination in site soils. The extent of the contamination is briefly summarized below and more comprehensive information can be found in the IIWA Report.

Chemical concentrations are reported in parts per billion (ppb) or parts per million (ppm). For comparison purposes, where applicable, SCGs are provided for each medium.

#### 5.1.1: Site Geology and Hydrogeology

The Marsh Valve site falls within the Eastern Lake section of the Central Lowland Province which extends across northern Chautauqua County. The Dunkirk area is underlain by shales and siltstones of the Upper Devonian Canadaway Group. Boring in the area of concern at this site determined the location of the bedrock at 18.5 feet below the ground surface.

Stratigraphy of the site included foundry sand fill type material of various thickness from surface to approximately two feet but up to over four feet in some cases. Underlying this material is a yellowish brown sand of lacustrine origin. This material is underlain by a blue grey till which extends to approximately 18.5 feet where the grey Dunkirk Shale of the Canadaway Group is encountered.

Groundwater in this area is limited and there is a perched condition at the site where surface waters infiltrate and accumulates upon the denser till.

### 5.1.2: Nature of Contamination

As described in the IIWA report, many soil, and groundwater samples were collected to characterize the nature and extent of contamination. Summarized in Table 1, the main category of contaminants that exceeded their SCGs were inorganic compounds (metals).

### 5.1.3: Extent of Contamination

An IIWA was initiated in April 1998 to assess the extent of impacted soils and to determine if the metal contamination had impacted surrounding properties and groundwater.

Soil samples were collected from surface soil, soil borings, test pits and four monitoring well installations. All sample results were compared to recommended soil cleanup guidance provided for in the NYSDEC Technical and Administrative Guidance Memorandum (TAGM) HWR–94-4046 (4046) entitled "Determination of Soil Cleanup Objectives and Levels" dated January 4, 1994 (Revised). The following are the media which were investigated and a summary of the findings of the investigation.

#### Soil

Forty-one soil samples were collected as part of the IIWA. Eleven of the samples were analyzed for total metals, five of the samples were analyzed for total lead and selenium, five of the samples were analyzed for total lead, six samples were analyzed for TCLP Metals and four samples were analyzed for TCLP lead. Additionally, six of the samples were analyzed for total phenols, two of the samples were analyzed for semi-volatile organic compounds (SVOCs), one sample was analyzed for volatile organic compounds (VOCs) and one sample included analysis for fuel oil EPA method 8021.

Some of the exceedances were common metals such as calcium, iron, manganese, magnesium, potassium and sodium. While any metal in excessive quantities is a concern, some metals are considered more toxic and more of a concern to human health or the environment. Several of these metals were found in fill at the site above SCGs (value in parenthesis). These metals were; arsenic at a maximum concentration of 19.6 ppm (7.5 or SB(site background)), beryllium at 0.860 ppm (0.16 or SB), cadmium at 6.23 ppm (1 or SB), chromium at 152 ppm (50 or SB), copper at 55,600 ppm (25 or SB), lead at 4,750 ppm (400 - EPA residential soil lead hazard standard), mercury at 0.389 ppm (0.1), nickel at 654 (13 or SB), thallium at 36.4 ppm (SB), and zinc at 9,900 ppm (20 or SB).

Total phenolics analyses were conducted on six samples. Of the six, five slightly exceeded cleanup objectives. The highest concentration of phenolics was 0.395 ppm (0.03 or MDL (method detection limit)).

Volatile analysis was conducted on a sample collected at 4 to 8 feet below ground surface(bgs) from the soil in monitoring well, MW - 4. The results were non-detect for all compounds.

Semi-volatile analysis was conducted on two soil samples. A TCLP sample from test pit #5 was non-detect for all parameters. The analysis for a sample from 6-8 feet at MW-4 contained concentrations of compounds known as polycyclic aromatic hydrocarbons (PAHs) specifically, chrysene at 0.5 ppm (0.400) and benzo(a)pyrene at 0.460 ppm (0.061) exceeded cleanup goals.

To determine if the on-site fill material constituted a hazardous waste as defined in 6NYCRR - Part 371, TCLP metals analyses were conducted on six on-site samples. Three of the six exceeded the regulatory levels (5 mg/l (ppm)) for TCLP lead. Three additional TCLP lead samples were collected but only one sample of foundry sand inside a drum carcass within the fill area exceeded regulatory limits with a concentration of 15.6 parts per million (mg/l).

During the removal action, as a supplement to the IIWA, additional soil and groundwater samples were collected by the EPA, to characterize the nature and extent of contamination. This sampling confirmed that metal contamination, primarily, lead, copper and zinc, existed at the Marsh Valve site.

## Off-site Sampling

Eleven surface samples, either discrete or composite, were collected from surrounding properties. Off-site samples were analyzed for total metals, total lead and selenium or total lead only. One discrete sample, collected from the recreational fields to the east of the site, was analyzed for TCLP lead.

This sampling showed no failure of TCLP for lead and no locations exceeded the EPA residential soil lead hazard standard of 400 ppm. Zinc as high as 324 ppm (216 (SB)) slightly exceeded site background in three samples. Due to the relatively slight exceedances these values are considered inconsequential. The sample point chosen for site background was arbitrarily chosen to be a discrete sample point from the recreational fields. This point was chosen to be representative of a much larger area. Some variability in the actual background concentration of zinc is anticipated. A definitively impacted concentration would be a value that would be much higher than the background. Since the exceedences were close to the background they are not considered to be negatively impacted, therefore, the exceedences are considered inconsequential.

## Groundwater

A total of thirteen groundwater samples were collected during the IIWA project from four monitoring wells and one test pit. All monitoring well samples were analyzed for metals, VOCs and SVOCs except monitoring well MW-4 which also included pesticide/PCB analysis. The test pit water samples were analyzed for VOCs and SVOCs.

Results for metals analyses denoted exceedances of groundwater standards for iron, manganese and thallium for all monitoring wells and exceedances in sodium and magnesium for monitoring wells MW-1, MW-2, and MW-3. These three monitoring wells were considered downgradient and located in the runoff area from the asphalt paved parking area. VOC analysis indicated minor concentrations of acetone and 2-Butanone but none of the amounts exceeded the Class GA Standards for either of these contaminants. SVOC analysis had minimal concentrations of contaminants. The presence of these compounds is attributed to laboratory contaminants or handling practices, however, no value exceeded the Class GA standards. Pesticide/PCB results for MW-4 were below detection limits for all compounds.

Subsequent post-remedial samples were collected from MW-1, MW-2, and MW-3. Monitoring well MW-4 was removed during remediation and not sampled. Samples collected from the three monitoring wells were analyzed for inorganic compounds. Analytical results from the subsequent sampling were below the detection limits for thallium and showed a significant decrease in other metals, specifically, the three metals of particular concern, lead, copper and zinc. These subsequent sampling results indicate that the removal action was successful in removing the impacted soils from the site.

## 5.2: Interim Remedial Measures

An interim remedial measure is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before completion of an RI/FS.

As previously stated in Section 1 and in more detail in Section 3.2 a removal action, which is considered an interim remedial measure, was completed by EPA at the Marsh Valve Site.

## 5.3: Summary of Human Exposure Pathways:

This section describes the types of human exposures that may present added health risks to persons at or around the site.

An exposure pathway describes the means by which an individual may be exposed to contaminants originating from a site. An exposure pathway has five elements: [1] a contaminant source, [2] contaminant release and transport mechanisms, [3] a point of exposure, [4] a route of exposure, and [5] a receptor population.
The source of contamination is the location where contaminants were released to the environment (any waste disposal area or point of discharge). Contaminant release and transport mechanisms carry contaminants from the source to a point where people may be exposed. The exposure point is a location where actual or potential human contact with a contaminated medium may occur. The route of exposure is the manner in which a contaminant actually enters or contacts the body (e.g., ingestion, inhalation, or direct contact). The receptor population is the people who are, or may be, exposed to contaminants at a point of exposure.

An exposure pathway is complete when all five elements of an exposure pathway exist. An exposure pathway is considered a potential pathway when one or more of the elements currently does not exist, but could in the future.

There are no completed exposure pathways known to exist either on-site or off-site at this time. Prior to site remediation, the potential existed for people accessing the Marsh Valve property to be exposed to high levels of metals from incidental ingestion of contaminated soils and/or inhalation of contaminated dust or soils. The implemented remedy eliminated the potential for exposure to site contaminants.

## 5.4: Summary of Environmental Impacts

This section summarizes the environmental impacts presented by the site prior to the removal action. Environmental impacts include existing and potential future exposure pathways to fish and wildlife receptors, as well as damage to natural resources such as aquifers and wetlands.

An ecological evaluation of the Marsh Valve Site was completed by EPA and the United States Fish and Wildlife Service in July 2001 to support the decision of the EPA to completely remove all of the impacted soils at the site. The evaluation determined:

- If groundwater were to discharge into the nearest surface water body (Crooked Brook) there could be significant biological impacts on aquatic biota.

Before the removal action, surface water at the site was collected and analyzed for lead, copper and zinc. Dissolved lead was not found in any sample at a detection limit of 5 ppb, however, copper was found as high as 3,000 ppb and zinc was found as high as 5,400 ppb. These compounds exceeded their respective acute toxicity thresholds developed for the U.S. Department of Energy of 13 ppb and 120 ppb. This determination supported the complete removal of impacted soils at the Marsh Valve site.

As a result of the removal action environmental impacts from the contaminated foundry sands were removed which, in turn, effectively mitigated the potential threat to environmental resources.

Post-removal action groundwater sampling analysis indicated no lead below the Class GA standard and that concentrations of copper and zinc were well below Class GA standards further indicating success of the action.

## SECTION 6: SUMMARY OF THE REMEDIATION GOALS AND SELECTED REMEDY

Goals for the remedial program have been established through the remedy selection process stated in 6 NYCRR Part 375-1.10. At a minimum, the remedy selected must eliminate or mitigate all significant threats to public health and/or the environment presented by the hazardous waste disposed at the site through the proper application of scientific and engineering principles.

Prior to the completion of the removal action described in Section 5.2, the remediation goals for this site were to eliminate or reduce to the extent practicable:

- exposures of persons at or around the site to inorganic compounds, specifically lead, copper and zinc in foundry sand fill materials found throughout the site;
- environmental exposures of flora or fauna to inorganic compounds, specifically lead, copper and zinc in foundry sand fill materials found throughout the site;
- the release of contaminants from soil into groundwater that may create exceedances of groundwater quality standards; and,
- the release of contaminants from surface soil and subsurface soil into ambient air through wind borne dust.

The NYSDEC believes that the removal action has accomplished these remediation goals.

Based on the results of the investigations at the site, the removal action that has been performed, and the evaluation discussed below, the NYSDEC has selected No Further Action as the preferred alternative for the site. The NYSDEC will also delist the site from the New York Registry of Inactive Hazardous Waste Disposal Sites.

The basis for this selection is the NYSDEC's conclusion that No Further Action is protective of human health and the environment and meets all SCGs. Overall protectiveness was achieved through meeting the remediation goals listed above.

Sampling conducted by NYSDEC prior to excavation determined that the subsurface (native) soils below the fill material were not impacted and that these soils were at or below recommended cleanup goals (Table 1). Because of this determination all impacted fill materials were removed to native soils throughout the entire site.

Complete removal of soils down to native material has eliminated the potential for human and environmental exposure to metals contaminated foundry sand fill materials. In addition, this removal has mitigated the potential for the metals to impact groundwater and surface water. Removal of impacted materials within and beneath the former manufacturing facility has further eliminated the potential for human exposure to airborne dusts and soils.

The main SCGs applicable to this project are as follows:

NYSDEC Ambient Water Quality Standards and Guidance Values and Part 5 of the New York State Sanitary Code; and,

NYSDEC Technical and Administrative Guidance Memorandum (TAGM) 4046.

Removal of the soils has mitigated the potential for impact to the surface waters and groundwater. Sampling of groundwater has confirmed that compounds of concern, specifically, lead, copper and zinc are all well below Class GA standards.

Therefore, the NYSDEC concludes that the removal action already completed has achieved the remediation goals for the site and that No Further Action is needed.

## SECTION 7: COMMUNITY ACCEPTANCE

Concerns of the community regarding the IIWA reports and the PRAP have been evaluated. The responsiveness summary (Appendix A) presents the public comments received and the manner in which the NYSDEC addressed the concerns raised.

In general, the public comments received were supportive of the selected remedy.

## SECTION 8: HIGHLIGHTS OF COMMUNITY PARTICIPATION

As part of the remedial investigation process, a number of Citizen Participation activities were undertaken to inform and educate the public about conditions at the site and the potential remedial alternatives. The following public participation activities were conducted for the site:

- Repositories for documents pertaining to the site were established.
- A public contact list, which included nearby property owners, elected officials, local media and other interested parties, was established.

- A Fact Sheet was issued in February 2003 presenting the Proposed Remedial Action Plan.
- A public meeting was held on March 10, 2003 to present and receive comment on the PRAP.
- A responsiveness summary (Appendix A) was prepared to address the comments received during the public comment period for the PRAP.

# TABLE 1
## Nature and Extent of Contamination
April 1998 - September 2002

| SURFACE SOIL | Contaminants of Concern | Concentration Range Detected (ppm)[a] | SCG[b] (ppm)[a] | Frequency of Exceeding SCG |
|---|---|---|---|---|
| Inorganic Compounds | Copper | 24 - 55600 | SB(945) | 78 of 104 |
| | Lead | 17 - 3700 | 400* | 67 of 104 |
| | Zinc | 54 - 25000 | SB(216) | 95 of 104 |

| SUBSURFACE SOIL | Contaminants of Concern | Concentration Range Detected (ppm)[a] | SCG[b] (ppm)[a] | Frequency of Exceeding SCG |
|---|---|---|---|---|
| Inorganic Compounds | Copper | 31.8 - 434 | SB(945) | 0 of 3 |
| | Lead | 11.9 - 78.6 | 400* | 0 of 5 |
| | Zinc | 71.8 - 476 | SB(216) | 1 of 3 |

| Pre-removal action GROUNDWATER | Contaminants of Concern | Concentration Range Detected (ppb)[a] | SCG[b] (ppb)[a] | Frequency of Exceeding SCG |
|---|---|---|---|---|
| Inorganic Compounds | Copper | 80.6 - 165 | 200 | 0 of 4 |
| | Lead | 50.0 U | 25 | 4 of 4[c] |
| | Zinc | 92.3 - 283 | 300 | 0 of 4 |

| Post-removal action[d] GROUNDWATER | Contaminants of Concern | Concentration Range Detected (ppb)[a] | SCG[b] (ppb)[a] | Frequency of Exceeding SCG |
|---|---|---|---|---|
| Inorganic Compounds | Copper | 5.13U - 13.5 | 200 | 0 of 3 |
| | Lead | 2.0 -2.3 | 25 | 0 of 3 |
| | Zinc | 7.8 - 32.9 | 300 | 0 of 3 |

[a] ppb = parts per billion, which is equivalent to micrograms per liter, ug/L, in water;
ppm = parts per million, which is equivalent to milligrams per kilogram, mg/kg, in soil;

[b] SCG = standards, criteria, and guidance values; NYSDEC Ambient Water Quality Standards and Guidance Values and, NYSDEC Technical and Administrative Guidance Memorandum (TAGM) 4046.

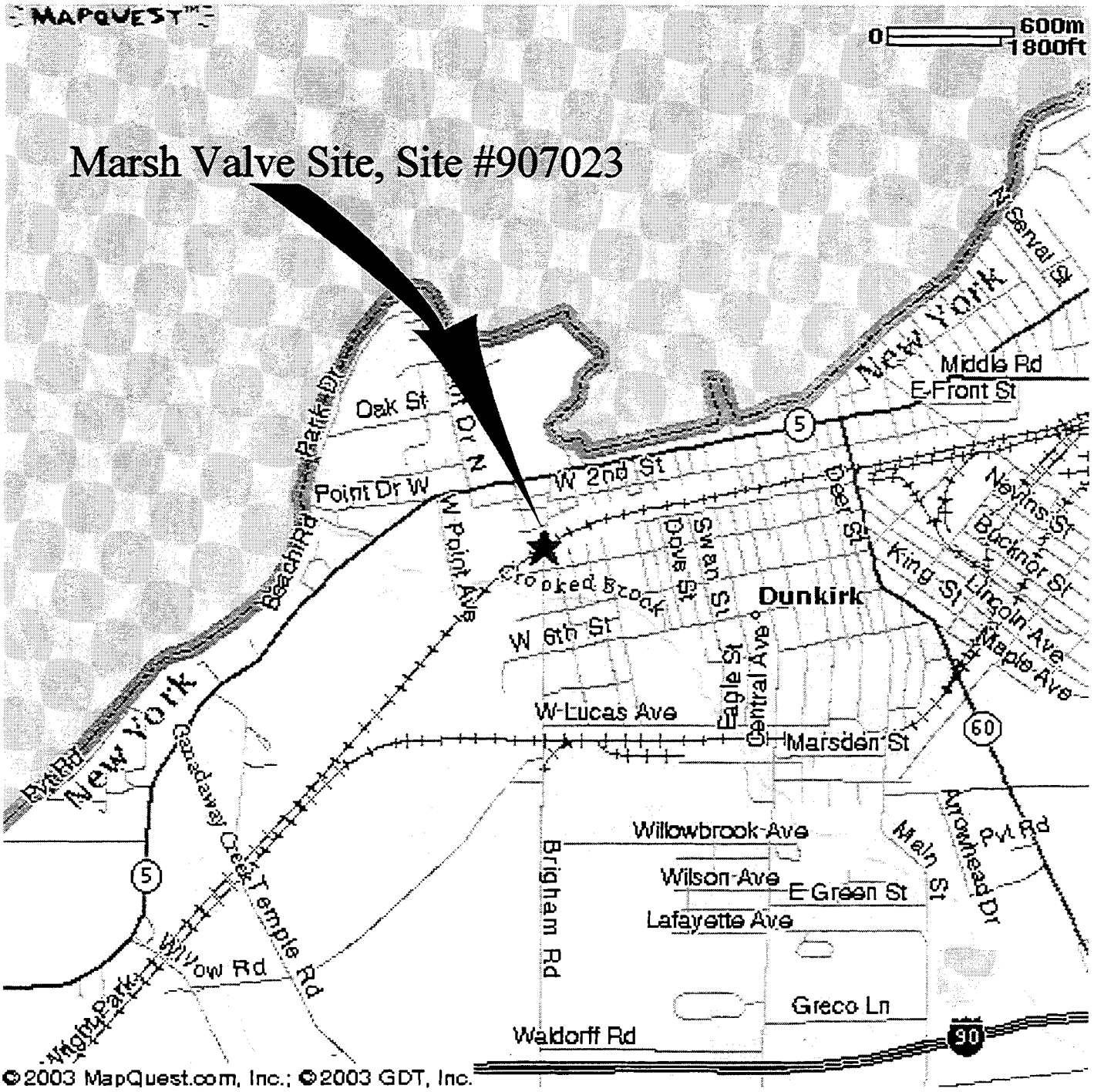
[c] The concentration range detected practical quantitation limit (PQL) exceeded the SCGs therefore all results identified as 50.0U were identified as exceeding SCG.

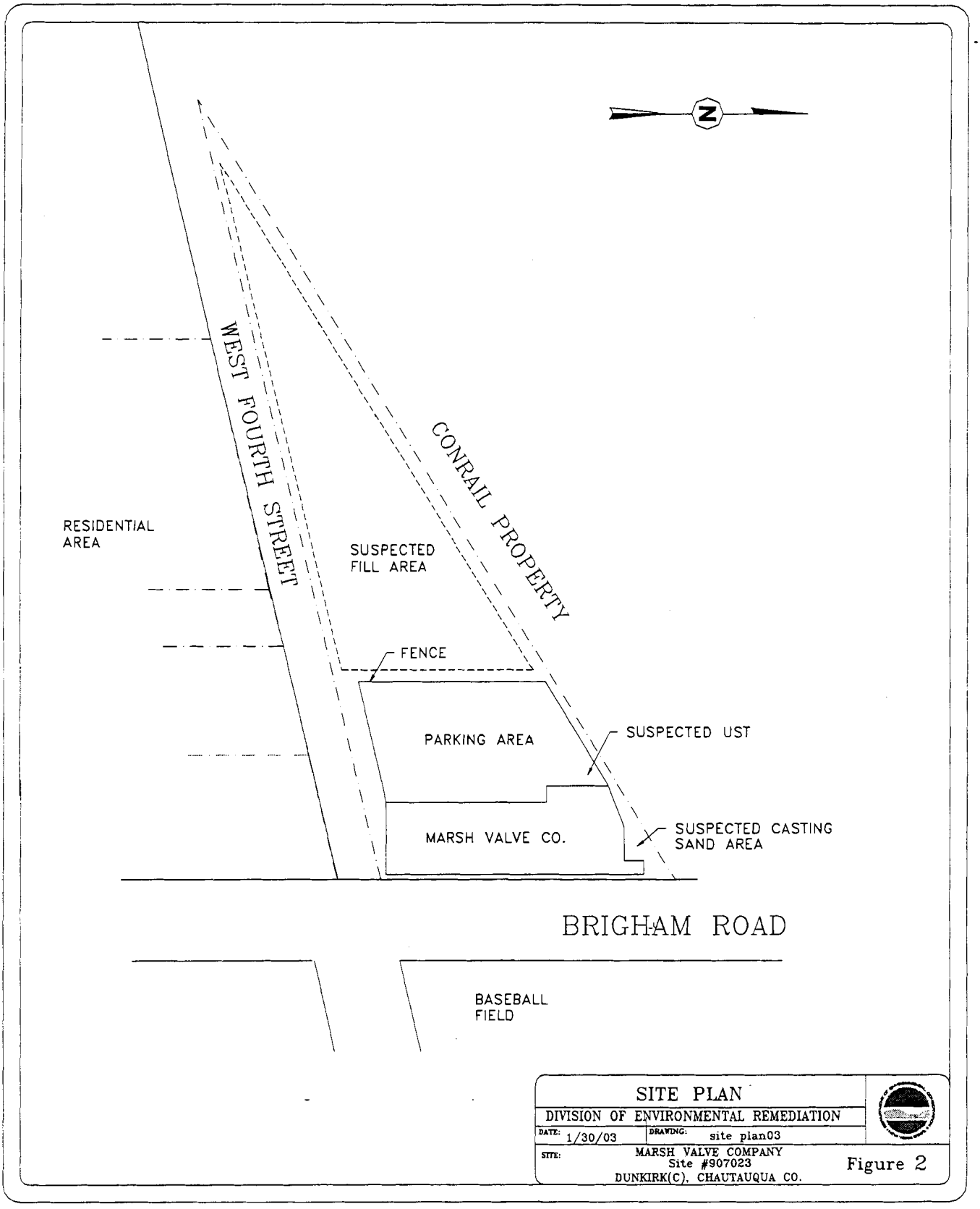
[d] Post-removal action groundwater samples were collected September 24, 2002.

SB - Site Background.

*EPA residential soil lead hazard standard of 400 ppm.

FIGURE 1
SITE MAP

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PARKING AREA
SUSPECTED UST
MARSH VALVE CO.
SUSPECTED CASTING SAND AREA
BRIGHAM ROAD
BASEBALL FIELD
SITE PLAN
DIVISION OF ENVIRONMENTAL REMEDIATION
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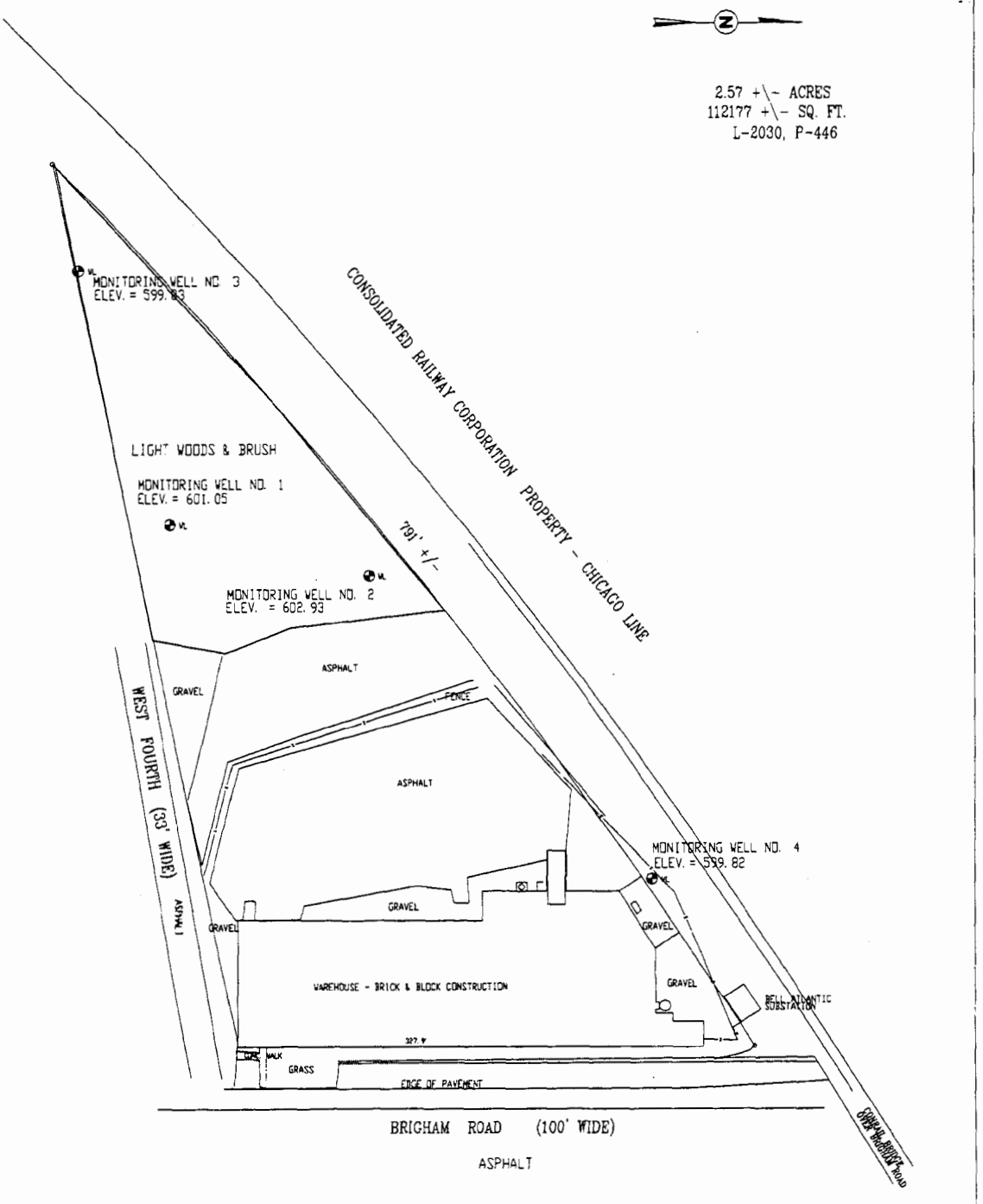
DRAWING: site plan03
SITE: MARSH VALVE COMPANY
Site #907023
DUNKIRK(C), CHAUTAUQUA CO.

Figure 2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LIGHT WOODS & BRUSH
MONITORING WELL NO. 1
ELEV. = 601.05
791' +/-
MONITORING WELL NO. 2
ELEV. = 602.93
ASPHALT
GRAVEL
FENCE
WEST FOURTH (33' WIDE) ASPHALT
ASPHALT
MONITORING WELL NO. 4
ELEV. = 599.82
GRAVEL
GRAVEL
GRAVEL
GRAVEL
WAREHOUSE - BRICK & BLOCK CONSTRUCTION
BELL ATLANTIC SUBSTATION
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CURB
WALK
GRASS
EDGE OF PAVEMENT
BRIGHAM ROAD (100' WIDE)
ASPHALT
CHAUTAUQUA ROAD
MONITORING WELL LOCATIONS
DIVISION OF ENVIRONMENTAL REMEDIATION
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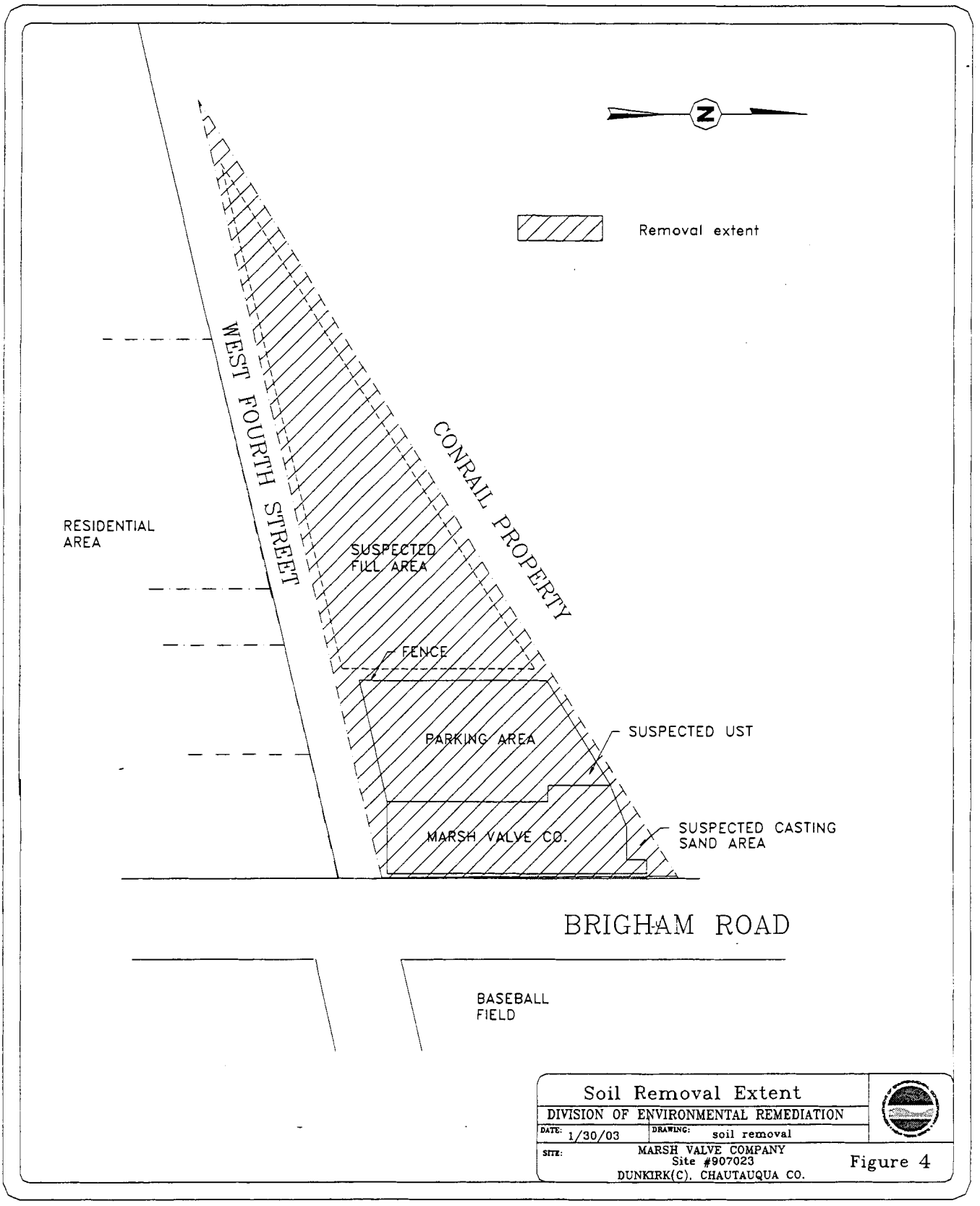
SITE: Marsh Valve Site, Site #907023
Dunkirk (C), Chautauqua County
Figure 3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Removal extent
WEST FOURTH STREET
CONRAIL PROPERTY
RESIDENTIAL AREA
SUSPECTED FILL AREA
FENCE
PARKING AREA
SUSPECTED UST
MARSH VALVE CO.
SUSPECTED CASTING SAND AREA
BRIGHAM ROAD
BASEBALL FIELD
Soil Removal Extent
DIVISION OF ENVIRONMENTAL REMEDIATION
DATE: 1/30/03
DRAWING: soil removal
SITE: MARSH VALVE COMPANY
Site #907023
DUNKIRK(C), CHAUTAUQUA CO.

Figure 4

# APPENDIX A

## Responsiveness Summary

# RESPONSIVENESS SUMMARY

**Marsh Valve**
**Dunkirk, Chautauqua County, New York**
**Site No. 9-07-023**

The Proposed Remedial Action Plan (PRAP) for the Marsh Valve site, was prepared by the New York State Department of Environmental Conservation (NYSDEC) in consultation with the New York State Department of Health (NYSDOH) and was issued to the document repositories on February 24, 2003. The PRAP outlined the remedial measure proposed for the contaminated soil at the Marsh Valve site.

The release of the PRAP was announced by sending a notice to the public contact list, informing the public of the opportunity to comment on the proposed remedy.

A public meeting was held on March 10, 2003, which included a presentation of the Remedial Investigation (RI) and the Feasibility Study (FS) as well as a discussion of the proposed remedy. The meeting provided an opportunity for citizens to discuss their concerns, ask questions and comment on the proposed remedy. These comments have become part of the Administrative Record for this site. The public comment period for the PRAP ended on March 27, 2003.

This responsiveness summary responds to all questions and comments raised during the public comment period. The following are the comments received, with the NYSDEC's responses:

**COMMENT 1:** Was there any success with the cost recovery efforts?

**RESPONSE 1:** The cleanup effort was largely funded with federal funds. Because the Marsh Valve Company and its principals filed for and were granted bankruptcy in 1994, successful cost recovery is not likely.

**COMMENT 2:** What kind of testing was done on the ball field across the street from the site?

**RESPONSE 2:** Soil samples were taken from the ball fields to determine background levels. Concentrations of contaminants were considered normal for the area.

**COMMENT 3:** What about the ownership of the site? What will happen now?

**RESPONSE 3:** The property will remain vacant until the property is acquired for payment of back taxes.

# APPENDIX B
## Administrative Record

### Marsh Valve
### Dunkirk, Chautauqua County, New York
### Site No. 9-07-023

1. Responsiveness Summary, Marsh Valve Site, Dunkirk(C), Chautauqua County, New York, Site No. 9-07-023, Dated March 27, 2003, prepared by NYSDEC.

2. Proposed Remedial Action Plan for the Marsh Valve site, dated February 2003, prepared by the NYSDEC.

3. Letter dated February 18, 2003 from Gary A. Litwin, NYSDOH to Dale A. Desnoyers NYSDEC, Concurrence with Proposed Remedial Action Plan.

4. Health Consultation (Final) for the Marsh Valve Company Site in Dunkirk, Chautauqua County, New York, Dated May 29, 2002, prepared by NYSDOH in cooperation with the United States Agency for Toxic Substances and Disease Registry (ATSDR).

5. Pollution Reports (POLREPS) #1 through #14(final) Dated from April 13, 2001 to January 18, 2002, prepared by United States Environmental Protection Agency (EPA).

6. Request for $2 Million Statutory Exemption, Ceiling Increase and a Change in Scope of Response for the Removal Action at the Marsh Valve Site, City of Dunkirk, Chautauqua County, New York-ACTION MEMORANDUM, Dated August 31, 2001 from Dilshad Perera, EPA to William Muszynski, EPA.

7. Memorandum Dated July 23, 2001, from David Charters, PhD, EPA to Dilshad Perera, EPA, Ecological Evaluation of the Marsh Valve Site, Dunkirk, New York

8. Structural Observation at the Marsh Valve Company, May 2, 2001, Delta Engineers, P.C.

9. Request for a CERCLA Removal Action at the Marsh Valve Site, Dunkirk Chautauqua County , New York-ACTION MEMORANDUM, Dated March 23, 2001, From Dilshad Perera, EPA to Richard Caspe, EPA.

10. Memorandum dated October 20, 2000, from Dale A. Desnoyers, NYSDEC to Michael J. O'Toole, NYSDEC, Referral for State Funded RI/FS.

11. Letter dated August 31, 2000 from Michael J. O'Toole, NYSDEC to Richard Caspe, EPA, Request for Emergency Removal Action.

12. Letter dated February 2, 2000, from Robert Marino, NYSDEC to William de la Cerda (owner Marsh Valve Company), listing of the Marsh Valve Site as a classification 2 hazardous waste site in the Registry of Inactive Hazardous Waste Disposal Sites.

13. Letter dated November 3, 1999 from G. Anders Carlson, PhD, NYSDOH to Michael J. O'Toole, NYSDEC, Classification package.

14. Report on Activities, Immediate Investigative Work Assignment (IIWA), Work Assignment #D003666-04, Marsh Valve Site (Unlisted), Dunkirk (C), Chautauqua County dated August 1998, prepared by NYSDEC.

15. Immediate Investigative Work Assignment (IIWA) Project Work Plan, dated February 1998, prepared by NYSDEC.

16. Letter Report, IT Corporation (IT) Field Activities for the Marsh valve Site Immediate Investigative Work Assignment (IIWA) Project, dated July 2, 1998, International Technology Corporation

17. Site Survey, Marsh Valve Site dated July 1998 prepared by Niagara Boundary and Mapping Services.

18. Memorandum dated June 26,1997, from David S. Szymanski, NYSDEC to Peter J. Buechi, NYSDEC, Emergency Removal Action Request for Marsh Valve Company.

19. Abandoned Drums at Marsh Valve Company, 307 Brigham Road, Dunkirk, New York (Chautauqua County) Hazardous Spill Authorization #9090, Initial Inventory and Assessment, dated June 25, 1997 Environmental Services Group.

20. Letter dated June 5, 1989 from William de la Cerda, Marsh Valve Company to Kevin R. Hintz, NYSDEC, proposal to investigate suspected landfill.

21. Letter dated March 20, 1989 from Kevin R. Hintz, NYSDEC to Neal Gustafson, Marsh Valve Company, illegal landfill.