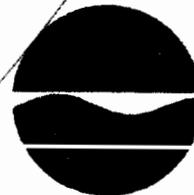


New York State Department of Environmental Conservation  
50 Wolf Road, Albany, New York 12233-7010



Langdon Marsh  
Commissioner

MEMORANDUM

TO: Ann Hill DeBarbieri, Deputy Commissioner

FROM: Michael O'Toole, Jr., Director, Div. of Hazardous Waste Remediation

SUBJECT: Lehigh Valley Railroad (#915071) *Michael J. O'Toole Jr.*

DATE: AUG 11 1994

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The attached PRAP has been prepared by Carl Hoffman proposing no further action and classification to 5, for the Lehigh Valley Railroad Site located in the City of Buffalo.

Two 100,000 gallon above-ground storage tanks on a 100-acre plus parcel owned by Lehigh Valley Railroad had been leased to Booth Oil. Chlorinated organic compounds were detected in the tanks and groundwater during a Phase II Investigation. The one-acre parcel that the tanks were on became Class 2. Approximately 100 acres previously included as the 2A site were delisted at that time.

The Lehigh Valley Railroad performed a voluntary IRM and Post-IRM site investigation which forms the basis for this action. The PRP removed the tanks and investigated the site. Some residual contamination remains onsite, but will not interfere with continued industrial use. The site had been a railyard, and has elevated metals and semi-volatiles associated with creosote ties and coal burning. Volatile organics are below RSCOs in site soils but are present in downgradient wells slightly above standards.

The main issue is change of use for this former railyard. If the property is converted to recreational or residential land use, additional measures may be appropriate to suit the new use. The NYSDOH has been particularly concerned in this regard, and it has been resolved to their satisfaction with specific wording of the class 5 site description. The Registry entry is included within the PRAP and would become the permanent notice to a change of use at this site.

The draft PRAP was circulated for review by DFW, DOW, BWRA, Region 9, and NYSDOH. At this point, all changes have been incorporated into the PRAP and it is ready to be presented to the public. Your concurrence to present the document to the public is requested.

Attachment

CH:dl

bcc: M. O'Toole (2)  
C. Goddard  
E. Barcomb  
T. Reamon  
C. Hoffman

# PROPOSED REMEDIAL ACTION PLAN

## LEHIGH VALLEY RAILROAD SITE

City of Buffalo, Erie County, New York

Site No. 915071

August, 1994

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### SECTION 1: PURPOSE OF THE PROPOSED PLAN

The New York State Department of Environmental Conservation (NYSDEC) in consultation with the New York State Department of Health (NYS DOH) is proposing **No Further Action** for the **Lehigh Valley Railroad Site**.

This Proposed Remedial Action Plan (PRAP) describes the Interim Remedial Measure (IRM) removal program recently completed for this site, and discusses the rationale for selecting this IRM as the final remedy for the site.

In addition to proposing **No Further Action**, the Departments are also **proposing to reclassify the Lehigh Valley Site to Class 5 from Class 2** on the Registry of Inactive Hazardous Waste Sites in New York State. Class 5 sites are those sites known to contain hazardous waste which have been completely remediated or closed and require no further maintenance.

This PRAP is issued by the NYSDEC as an integral component of the citizen participation plan responsibilities provided by the New York State Environmental Conservation Law (ECL). This document summarizes the information that can be found in greater detail in previous

investigation reports, which are on file at the document repository.

The NYSDEC will not finalize the recommendations of **No Further Action and Classification to 5** until all comments submitted during the public comment period have been carefully reviewed and considered. Therefore, the public is encouraged to review all reports within the document repository to gain a comprehensive understanding of the site, the investigations conducted, and the remedial measures undertaken.

The project documents can be reviewed at the following repositories:

#### **NYSDEC-REGION 9 OFFICE**

**270 Michigan Avenue**

**Buffalo, NY 14203**

**(716) 851-7220**

**Contact: Jaspal Walia, P.E.**

**8:30 AM - 4:30 PM**

#### **NYSDEC-DHWR**

**50 Wolf Road, Room 220**

**Albany, NY 12233-7010**

**(518) 457-9538**

**Contact: Carl Hoffman, P.E.**

**8:30 AM - 4:30 PM**

Written comments on the PRAP and the classification change can be submitted to **Mr. Carl Hoffman** at the above address.

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**DATES TO REMEMBER:**

**August 24, 1994 - September 22, 1994**  
Public comment period on PRAP.

**September 13, 1994 at 7:00 pm**  
Public meeting at the **Region 9 Office at 270 Michigan Avenue, in Buffalo.**

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**SECTION 2: SITE LOCATION AND DESCRIPTION**

The Lehigh Valley Railroad site (#915071) is a one acre site located north of Tift Street, in the City of Buffalo, Erie County (see site location map). The Tift Farm Nature Preserve is adjacent to the western site boundary. It is a unique urban natural resource as an environmental education area and wildlife preserve. This urban setting includes areas of industrial, recreational and undeveloped land use. The closest surface water is Berm Pond 1000 ft to the west, Lake Erie is about 4000 ft to the west, and the Buffalo River is about one mile to the north. Numerous other inactive hazardous waste sites lie in the immediate vicinity, including the Alltiff site to the southeast.

**SECTION 3: SITE HISTORY**

**3.1: Operational/Disposal History**

**Early 1900's-** The Lehigh Valley Rail Way Company acquired approximately 170 acres of property for railroad yard operations.

**1949-** The Lehigh Valley Railroad Company was formed by merger.

**April 1, 1976-** The Lehigh Valley Railroad ceased all operations with the formation of Conrail. Sixty-one acres of the original parcel were conveyed to Conrail and 109 acres were

retained. Portions of the retained property were leased, or conveyed to others.

**1972 to 1977-** The northeast parcel was leased to Riverside Service Corporation and INS Equipment of Buffalo, for the disposal of foundry sand.

**1975-** A citizens complaint indicated that acid sludge from the Chevrolet Plant was being spread on the northeast portion of the property. The NYSDEC responded to the complaint and the disposal was stopped.

**March 1, 1977 to October 31, 1982-** Two 100,000 gallon, 24 ft diameter, aboveground storage tanks were leased to Booth Oil Company. (Booth Oil allegedly stored a mixture of waste oil and hazardous waste still bottoms containing chlorinated volatile organic compounds in these tanks.)

**June 16, 1981-** Representatives of the Erie County Department of Environment and Planning (ECDEP) and the New York State Department Of Transportation (NYSDOT) inspected an estimated 1100 gallons of oil standing within a diked area on the north side of the north tank leased to Booth Oil. Oil spill clean-up measures were initiated and follow-up inspections made.

**1982-** The ECDEP indicated that the spillage was satisfactorily cleaned-up

**3.2: Remedial History**

**In July 1984-** A profile report was prepared by the ECDEP that identified numerous areas of concern on the 100 plus acre parcel. The report further recommended that the site be recognized as the Lehigh Valley Railroad site on the Registry and retain a 2A classification, indicating the need for further investigation.

**In 1988-** A Phase II Engineering Investigation was begun by the State to investigate all areas of concern on the 100 plus acre site. A final report was issued in March 1990. **In September 1990,** additional field investigation work was initiated by the State. Specific supplemental work included test pitting in the acid sludge disposal

area, sampling of blue/grey sludge, and sampling of purple/green granular material contained in drums located in debris piles. The July, 1991 supplementary study report concluded that hazardous waste disposal could not be confirmed in the acid sludge area or in the debris. However there was widespread low-level hydrocarbon and metal contamination throughout the area. The Lehigh Valley Railroad site was then redefined to include only the approximately one acre portion of the site that included the storage tanks and was designated as class 2. Class 2 sites are those sites where sufficient information exists to determine that they pose a significant threat to the public health or environment. The Phase II study demonstrated that the sludge/oily waste contained within the storage tanks had a total concentration of chlorinated solvents of 953 parts per million (ppm) and a 870 ppm detection of 1,1,1 trichloroethane, indicative of hazardous waste. Also, total 1,2- dichloroethene was detected at 20 parts per billion (ppb) in a downgradient Phase II groundwater monitoring well (GW-4).

The presence of oily waste containing chlorinated volatile organic compounds in old, poorly maintained tanks where a known release had previously occurred, posed a significant threat, justifying a classification of 2 for this one area portion of the Lehigh Valley Railroad site.

### **3.3: Interim Removal Measure**

Interim Remedial Measures (IRMs) were conducted at this site. An IRM is implemented when a source of contamination or exposure pathway can be effectively addressed before completion of the remedial investigation. Lehigh Valley Railroad, a Potentially Responsible Party (PRP), initiated the removal of these two tanks. In July 1991, the tank contents were sampled by the PRP. A workplan for tank removal was reviewed by the NYSDEC prior to the removal action which was performed

in October, 1991. The tank contents were properly disposed as RCRA F001 hazardous waste. The decontaminated tanks and piping were scrapped. During the tank removal, signs of spillage or leakage usually indicated by stained soil or stressed vegetation, was not apparent.

## **SECTION 4: CURRENT STATUS**

### **4.1: Summary of the Post-IRM Site Investigation**

In March, 1992 the PRP provided a workplan for a post-IRM site investigation. The workplan was reviewed by the NYSDEC and the revised workplan was implemented in April, 1993. The workplan provided for the following investigations.

#### **Soil Investigation**

Fifty-one soil samples were collected and 29 contained detectable concentrations of volatile organic compounds. All were below the respective recommended soil cleanup objectives (RSCO) outlined by Technical and Administrative Guidance Memorandum (TAGM) HWR-92-4046. 1,1,1 trichloroethane was detected in 15 samples, with the highest concentration at 200 ppb. This compound is site specific and linked to contents in the storage tanks by the Phase II study.

Semi-volatile compounds were detected in all soil samples and 42 of the 51 samples exceeded individual RSCOs. Seven samples were analyzed for metals and those too exceeded RSCOs. Even though semi-volatile and metal concentrations exceed RSCOs, the contamination is consistent with the historical use of this site, for heavy industry and as a railroad yard. Preservatives in railroad ties and coal fired boilers are sources of semi-volatile compounds.

### VOCs detected in Soil

<u>Contaminant</u>	<u>Freq</u> of 51	<u>RSCO</u> ppb	<u>Max</u> ppb
chloroform	10	300	42
1,1,1-TCA	15	800	200
TCE	1	700	5
ethylbenzene	3	5500	100
xylenes	3	1200	870
benzene	1	60	56
toluene	2	1500	59
2-butanone	2	300	17
carbon disulfide	4	2700	37
acetone	1	200	140

### VOCs detected in Groundwater

<u>Contaminant</u>	<u>Freq</u> of 6	<u>Max</u> ppb	<u>GA St</u> ppb
chloroform	1	1900	7
1,2 DCE	2	20	5
vinylchloride	3	31	2
TCE	1	5	5
xylene	3	8	5

The highest concentration of semi-volatile compounds detected in groundwater was found in upgradient well MW-1, with naphthalene at 84 ppb and 2-methylnaphthalene at 160 ppb. All other detections of semi-volatile compounds in four of the six monitoring wells were below 15 ppb.

### Groundwater Investigation

Three additional shallow monitoring wells (MW-1, MW-2, MW-3) were installed to specifically focus on the storage tank locations and three previously installed wells (TF-1, GW-4, GW-5) as shown on the site map in this document, were also sampled as part of the groundwater assessment in May, 1993. Groundwater is shallow, approximately three feet below ground surface, and flows southwest across the site. Monitoring well borings typically show four to eight feet of fill materials, including foundry sand, gravel and bricks overlying glacial lake deposits of fine sands and clays. Four of the six wells MW-1, MW-2, MW-3, GW-4, had detectable concentrations of volatile organic compounds. GW-4 had 20 ppb of 1,2 dichloroethene, which is identical to the results of its previous sampling in December 1988. Chloroform was detected in upgradient well MW-1 at 1900 ppb. Vinyl chloride was detected in downgradient wells MW-2 at 31 ppb, and MW-3 at six ppb. No volatile organics were detected in wells TF-1 and GW-5.

Metals analysis found detections of metals in all six monitoring wells. Iron, lead, manganese, and sodium were detected at levels exceeding NYSDEC groundwater standards (GA standards). Iron was detected at a maximum concentration of 25,800 ppb in upgradient well GW-5, while the GA standard for iron is 300 ppb. Lead was detected at a maximum concentration of 73.8 ppb in downgradient well MW-3, compared to the GA standard for lead of 25 ppb. Manganese and sodium were found at maximum concentrations in downgradient well GW-4. Manganese was detected at 1070 ppb and sodium at 32,400 ppb, which compares to the GA standards of 300 ppb and 20,000 ppb, respectively, for those metals.

### Surface water Sampling

One surface water sample was collected in May 1993, along the western border of the property near the Tift Farm Nature Preserve. No detectable concentrations of volatile or semi-volatile compounds were detected. Six metals were detected, with iron and manganese exceeding the surface water standard of 300 ppb.

## Sediment Sampling

One sample designated as a sediment sample was collected in an area intermittently covered by surface water. As the sample location was covered by water during precipitation events and not in constant contact for uptake by the water column, it was compared to recommended soil cleanup objectives (RSCOs). Acetone was detected at 300 ppb which is above the acetone RSCO of 200 ppb. Several metals detected above RSCOs included:

<u>Metal</u>	<u>Max(ppm)</u>	<u>RSCO(ppm)</u>
iron	93,900	2,000
aluminum	8,340	30
zinc	1,850	20
lead	2,260	30

### **4.2: Summary of Human Exposure Pathways**

The removal of the two tanks and their contents has substantially eliminated the exposure to waste posed by this site from vandalism or leakage. Fire and mechanical hazard presented by these storage tanks were also eliminated. Remaining low-level groundwater contamination does not pose any threat to a known drinking water supply. The area is served by municipal water. Groundwater would not be a likely future source of supply due to the proximity of Lake Erie. Remaining soil contamination is consistent with the heavy industrial urban setting and present land use.

### **4.3: Summary of Environmental Exposure Pathways:**

The potential leakage or spillage of remaining contents of the two aboveground storage tanks posed the greatest adverse impacts to groundwater and surface water.

Existing groundwater and soil contamination for volatile organic compounds are above drinking water standards, but are consistent with land use of this area. Total metals and semi-volatile compounds are elevated from historical industrial use and not as a result of hazardous waste disposal. Onsite surface water is related to precipitation events. The site topography is flat which slows the migration of any remaining contamination off site by surface water or groundwater pathways.

## **SECTION 5: ENFORCEMENT STATUS**

The NYSDEC's Division of Environmental Enforcement of the NYSDEC started negotiations with the Lehigh Valley Railroad (LVRR) so that the IRM and the Post-IRM Site Investigation would be conducted under an Order on Consent. The LVRR chose not to enter into a legal agreement, and instead performed these tasks voluntarily.

## **SECTION 6: SUMMARY OF THE REMEDIATION GOALS:**

Goals for the remedial program have been established through the remedy selection process stated in 6NYCRR 375-1.10. These goals are established under the guideline of meeting all standards, criteria, and guidance (SCGs) and protecting human health and the environment.

At a minimum, the remedy selected will eliminate or mitigate all significant threats to the public health and to the environment presented by the hazardous waste disposed at the site through the proper application of scientific and engineering principles.

The goals selected for this site are :

- ★ Elimination of the source of hazardous waste, thereby eliminating all potential threat of direct human or animal contact with waste.

★ Prevention of future releases of waste to groundwater or surface water migration pathways.

★ Evaluation of remaining site conditions to determine that all significant threat posed to public health or the environment presented by the hazardous waste disposed at this site has been eliminated.

**SECTION 7: SUMMARY OF THE PREFERRED REMEDY:**

The Proposed Remedial Action Plan for the Lehigh Valley Railroad Site is **No Further Action and reclassification of this Site to Class 5 on the Registry of Inactive Hazardous Waste Sites in New York State.** The selection of this remedial alternative is based upon the Interim Remedial Measure (IRM) Source Removal Program conducted at this site and the results of the Post IRM Site Investigation. This effort included the following work:

Demolition of two storage tanks, and removal and disposal of tank contents as RCRA F001 hazardous waste.

Post removal site investigation of soil, groundwater, and surface water quality.

Several volatile organic compounds have been detected above groundwater standards. Chloroform was detected in upgradient monitoring well MW-1 at a concentration of 1,900 ppb compared to the NYSDEC standard of seven ppb. The site is not the likely source for chloroform as it had not been previously detected in analysis of tank contents. Chloroform was randomly detected in soil samples but not detected in downgradient wells. 1,2 dichloroethene and vinyl chloride are attributed to tank contents. Sampling of GW-4 in 1988 and 1993 indicates 1,2 dichloroethene concentrations in groundwater have remained

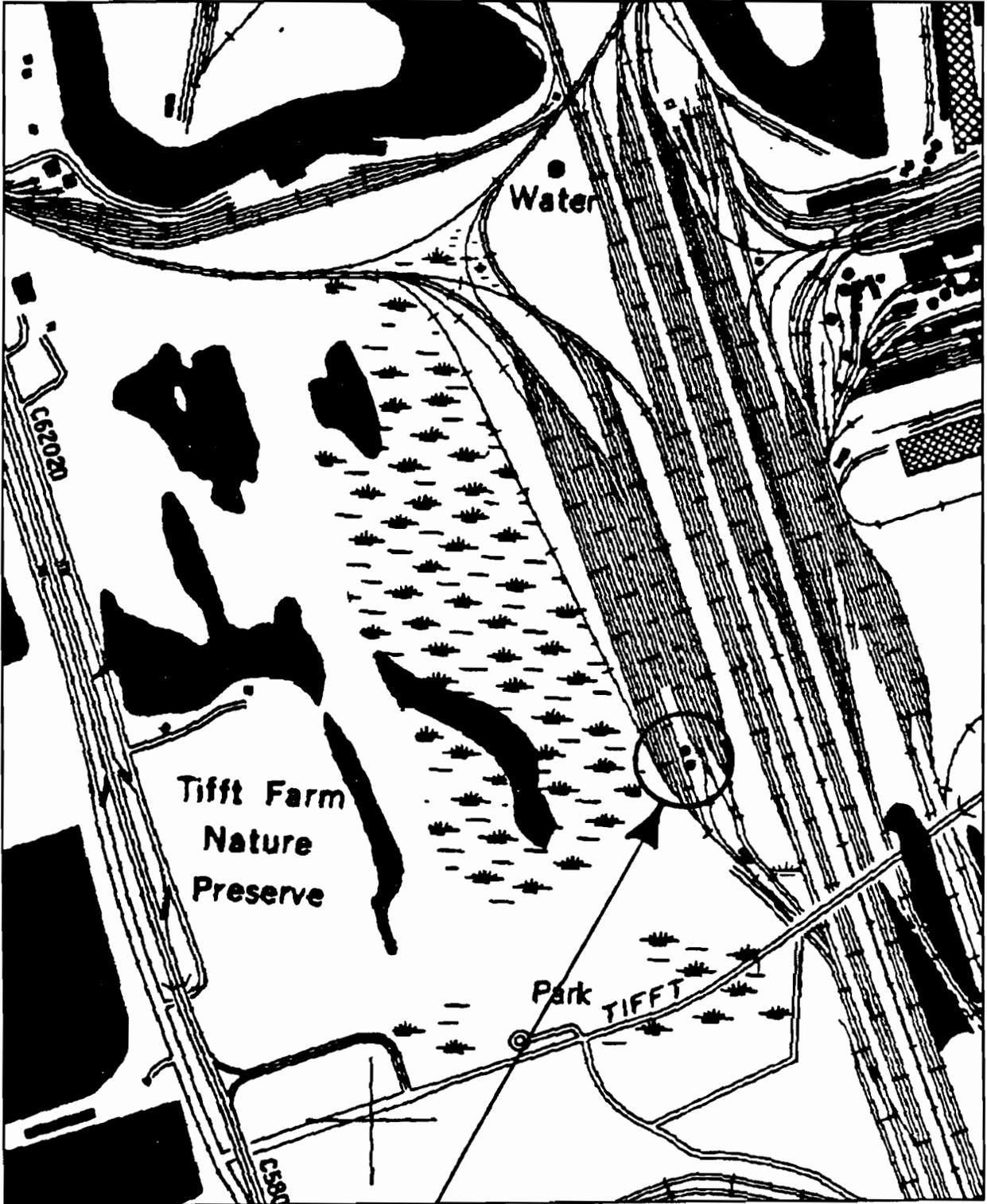
constant at 20 ppb, compared to the groundwater standard of 5 ppb. Vinyl chloride was detected in MW-2 at a concentration of 31 ppb compared to the groundwater standard of 2 ppb. Considering that the source of these compounds has been removed, the contamination is low-level, and that the groundwater in this once heavily industrialized setting is not used as a drinking water source, no further benefit would be achieved by pump and treat technology, or other remedial measures.

The **No Further Action** alternative is an acceptable alternative, even though residual contamination remains onsite. Residual contamination does not present any problems to continued industrial land use. A change in land use to residential or recreational use, however, must satisfactorily address residual contamination in a manner consistent with the intended land use.

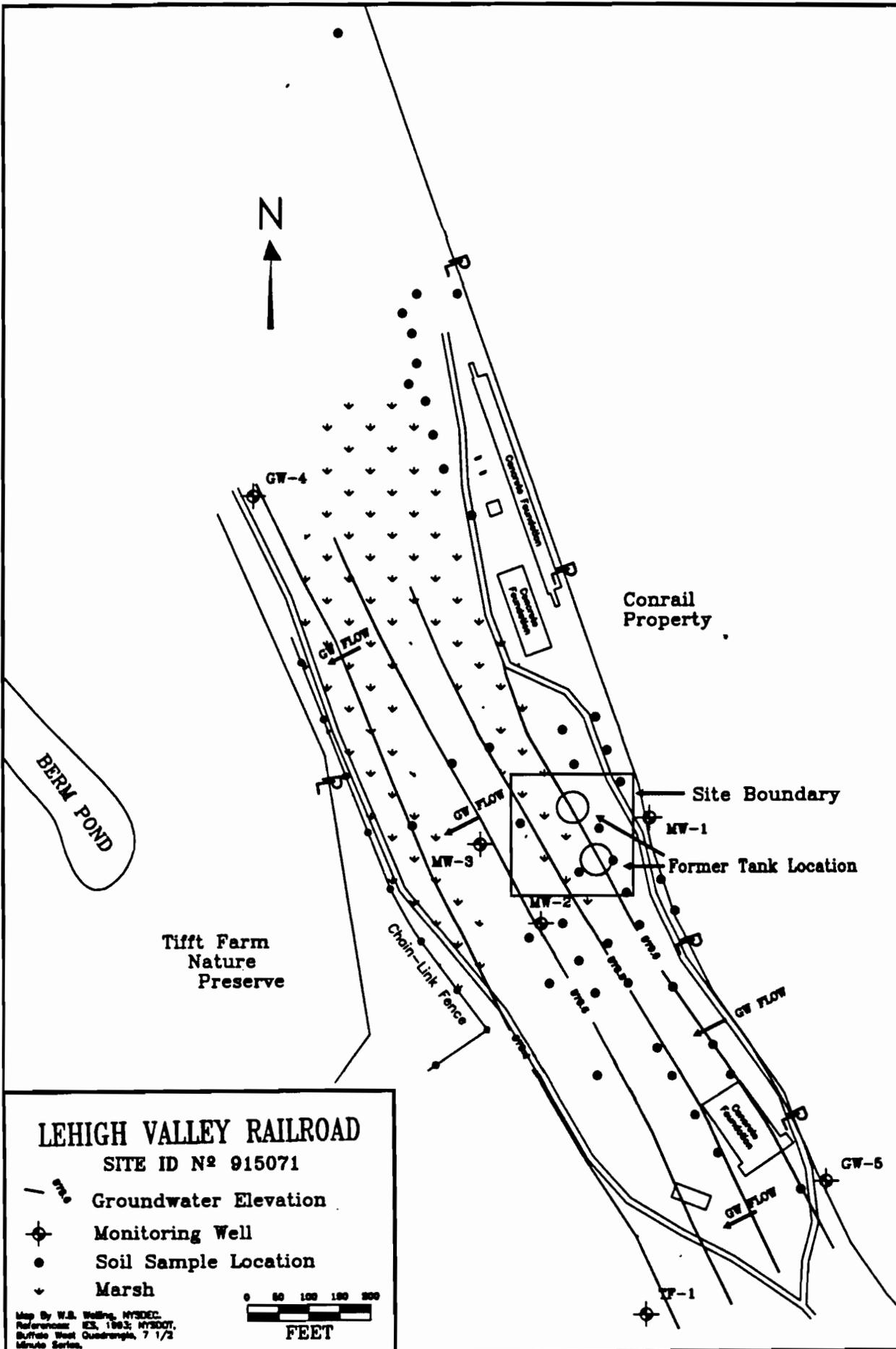
This PRAP also proposes **Reclassification of this site to class 5 on the Registry of Inactive Hazardous Waste Sites in New York State.** Class 5 defines those sites as being properly closed and not requiring continued operation, maintenance, and/or monitoring. The revised Registry of Inactive Hazardous Waste Disposal Sites in New York State entry sheet is included in this document. It will provide permanent notice that residual contamination remains onsite.

Community Acceptance- Concerns of the community regarding this IRM, the Post IRM site Investigation, and reclassification to 5 as outlined in this Proposed Remedial Action Plan will be evaluated. A "Responsiveness Summary" will be prepared that describes public comments received and how the Department will address the concerns raised. If the final remedy selected differs significantly from the proposed remedy, notices to the public will be issued describing the differences and the reasons for the changes.





Site Location Map - Lehigh Valley Railroad Site



BERM POND

Tift Farm  
 Nature  
 Preserve

Conrail  
 Property

Site Boundary

MW-1

Former Tank Location

GW-4

MW-3

MW-2

GW FLOW

GW FLOW

GW-5

TF-1

Chain-Link Fence

Conrail  
 Tank  
 Location

Conrail  
 Tank  
 Location

