



Superfund Record of Decision:

Endicott Village Well
Field, NY



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15. Supplementary Notes			
16. Abstract (Limit: 200 words) The Endicott Village Well Field site consists of a municipal well, the Ranney Well, and its zone of influence, and is located in Endicott, Broome County, New York. Ground water pumped from the well serves as the primary drinking water source for the area. Land use in the area of concern includes a golf course, a sewage treatment plant, an airport, a few industrial tracts, two inactive landfills, and the Endicott Landfill. The Endicott Landfill accepted municipal and industrial waste from the late 1950s until 1975, and has been used to compost sludge from the onsite sewage treatment plant since 1982. In 1981, EPA detected VOC contamination in the Ranney Well, which was confirmed by subsequent State and local investigations from 1984 to 1987. Consequently in 1983, local authorities installed a diffused aeration air stripping unit on the Ranney Well, and in 1984 a purge well was installed to intercept VOCs before impacting the Ranney Well. A 1987 Record of Decision (ROD) provided for installation of a packed column air stripper to treat water from the Ranney Well. In 1988, EPA identified the landfilled materials in the Endicott Landfill as the probable source of ground water contamination, and determined that the purge well did not adequately prevent the movement of contaminated ground water to the Ranney Well. This ROD addresses (See Attached Page)			
17. Document Analysis a. Descriptors Record of Decision - Endicott Village Well Field, NY Second Remedial Action Contaminated Medium: gw Key Contaminants: VOCs (benzene, PCE, TCE) b. Identifiers/Open-Ended Terms c. COSATI Field/Group			
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Abstract (Continued)

management of migration of the contaminant plume as an interim remedy. Final restoration of the aquifer and remediation of source material will be addressed in a subsequent ROD. The primary contaminants of concern affecting the ground water are VOCs including benzene, PCE, and TCE.

The selected remedial action for this site includes upgrading the existing purge well system by installing an additional purge well between the landfill and the Ranney Well; pumping ground water from the purge well and discharging the water onsite to the sewage treatment plant, or treating the water prior to discharge, based on the results of purge well testing; and monitoring purge well water. The estimated present worth cost for this remedial action, assuming that no treatment will be required is \$376,000, which includes an estimated annual O&M cost of \$24,000 for 30 years.

PERFORMANCE STANDARDS OR GOALS: Not provided.

ROD FACT SHEET

SITE

Name: Endicott Wellfield
Location: Broome County, Endicott, N.Y.
HRS Score: 35.57
NPL Rank: 666

ROD

Date signed: March 29, 1991

Remedy: This alternative consists of upgrading the existing Purge Well system with the installation of an additional Purge Well, to be installed west of Nanticoke Creek essentially between the suspected source of the VOCs to the aquifer (Endicott Landfill) and the receptor (the Ranney Well).

Capital Cost: \$150,000
O&M/Year: \$24,000
Present Worth Cost: \$376,000

LEAD

Responsible party IBM, Village of Endicott, and Town of Union
Primary contact: Sherrel D. Henry, (212) 264-8675
Main PRP: IBM
PRP contact: Dennis Whittaker, (607) 755-6269

WASTE

Type: still investigating the source of contamination
Medium: ground water
Origin: possible dumping
Est. Quantity: not known

DECLARATION FOR RECORD OF DECISION

SITE NAME AND LOCATION

Endicott Wellfield Superfund Site
Village of Endicott
Broome County, New York

STATEMENT OF BASIS AND PURPOSE

This decision document presents the selected interim remedial action for the Endicott Village Wellfield Site, which was chosen in accordance with the requirements of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). This decision document summarizes the factual and legal basis for selecting the remedy for this Site.

The New York State Department of Environmental Conservation (NYSDEC) concurs with the selected remedy. A letter of concurrence from NYSDEC is appended to this document.

The information supporting this interim remedial action decision is contained in the administrative record for this site.

ASSESSMENT OF THE SITE

Actual or threatened releases of hazardous substances from this Site may present an imminent and substantial threat to public health, welfare, or the environment. The interim remedial action selected in this Record of Decision ("ROD") will help to abate that threat. A source control remedial action, which will further abate that threat, will be selected in a subsequent ROD.

DESCRIPTION OF THE SELECTED REMEDY

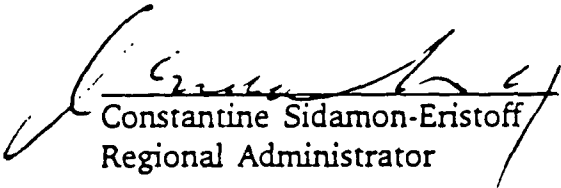
The selected remedy will include the following activities:

- Upgrading the existing Purge Well system, located on the En-joie Golf Course, with the installation of an additional Purge Well, to be installed west of Nanticoke Creek between the suspected source of the VOCs to the aquifer (Endicott Landfill) and the receptor (the Ranney Well);
- The location of the additional Purge Well will be chosen to intercept the plume near its suspected source and to expedite remediation of the aquifer;

- The proposed well is estimated to be 110 feet deep and will be screened across the majority of the aquifer between the depths of approximately 50 and 110 feet;
- The design will be based upon a pilot hole drilled at the proposed location during the Phase II supplemental RI;
- Implementation of a Supplemental Purge Well monitoring program to monitor the effects of the additional Purge Well on contaminant migration in the aquifer, of concern and to evaluate the effectiveness of the interim action. The program will include provisions for taking chemical analysis and ground water elevations of the Purge Well and surrounding monitoring wells;
- Continued operation and maintenance of the existing Purge Well located on the En-joie Golf Course and;
- Following installation of the Supplemental Purge Well, a detailed aquifer pump test will be conducted using the Purge Well as the pumping well. It is envisioned that the discharge from the test can be routed through the Sewage Treatment Plant. Based upon the analysis of the Supplemental Purge Well water, the treatment requirements for the Purge Well discharge will be determined.

DECLARATION

This selected remedy is protective of human health and the environment, complies with Federal and State requirements that are legally applicable or relevant and appropriate to the remedial action, and is cost-effective. This remedy utilizes permanent solutions and alternative treatment technologies to the maximum extent practicable, given the limited scope of this action. However, because this action does not constitute the final remedy for the Site, the statutory preference for remedies that employ treatment that reduces toxicity, mobility, or volume as a principal element will not be satisfied by this interim action. The on-going second operable unit RI/FS study will address fully the principal threats posed by this Site.


Constantine Sidamon-Eristoff
Regional Administrator

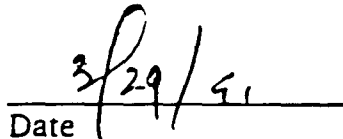

Date

TABLE OF CONTENTS

Page

DECISION SUMMARY

I.	SITE NAME, LOCATION, AND DESCRIPTION.....	i
II.	SITE HISTORY AND ENFORCEMENT ACTIVITIES.....	1
	A. Site History	
	B. Previous Studies	
	C. Previous Remedial Measures	
	D. Enforcement	
III.	HIGHLIGHTS OF COMMUNITY PARTICIPATION.....	3
IV.	SCOPE AND ROLE OF RESPONSE ACTION.....	4
V.	SUMMARY OF SITE CHARACTERISTICS.....	4
	A. Hydrogeology	
	B. Chemical Characteristics	
VI.	SUMMARY OF SITE RISKS.....	6
VII.	DESCRIPTION OF REMEDIAL ALTERNATIVES.....	7
VIII.	SUMMARY OF COMPARATIVE ANALYSIS OF ALTERNATIVES	8
IX.	SELECTED REMEDY.....	12
X.	STATUTORY DETERMINATIONS.....	13
XI.	EXPLANATION OF SIGNIFICANT CHANGES.....	14

ATTACHMENTS

APPENDIX 1- FIGURES.....15

FIGURE 1. SITE LOCATION MAP

FIGURE 2. LOCATIONS OF GROUND WATER MONITORING WELLS (PLATE 2-2, RI/FS INTERIM REPORT)

FIGURE 3. DISTRIBUTION OF CHLORO-ALKENE PLUMES (PLATE 4-3, RI/FS INTERIM REPORT)

FIGURE 4. DISTRIBUTION OF CHLORO-ALKANE PLUMES (PLATE 4-4, RI/FS INTERIM REPORT)

APPENDIX 2- TABLES.....16

TABLE 1. MONITORING WELL DRILLING SUMMARY

TABLE 2. VOLATILE ORGANIC COMPOUNDS IN GROUND WATER

APPENDIX 3. NYSDEC LETTER OF CONCURRENCE17

APPENDIX 4. RESPONSIVENESS SUMMARY.....18

PART I. SUMMARY OF MAJOR ISSUES AND CONCERNS

PART II. COMPREHENSIVE RESPONSES TO ALL SIGNIFICANT
QUESTIONS AND COMMENTS

DECISION SUMMARY
ENDICOTT WELLFIELD SUPERFUND SITE

ENDICOTT, NEW YORK

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION II

NEW YORK

I. SITE NAME, LOCATION, AND DESCRIPTION

The Endicott Well Field Site (the "Site") is located in the Village of Endicott, Broome County, New York. The Site consists of the Ranney Well, which is a municipal drinking water well, and its zone of influence on area ground water. The boundaries of this zone have been generally delineated by main street to the north, the eastern boundary of the En-joie Golf Course to the east, the Susquehanna River to the south and the Tri-Cities Airport and Airport Road to the west. The southerly flowing Nanticoke Creek generally bisects the area.

The project study area is comprised primarily of open land associated with the En-joie Golf Course and the facilities of the Village of Endicott Sewage Treatment Plant ("STP") and the Endicott Landfill ("LF #1"). There are two inactive landfills ("LF #2" and "LF #3") and a few industrial tracts in the northern portion of the study area (Figure 1). Privates homes are not located within the study area.

II. SITE HISTORY AND ENFORCEMENT ACTIVITIES

A. Site History

Most of the Site is on land owned by the Village of Endicott (En-joie Golf Course, the Endicott Landfill, Sewage Treatment Plant, and the Tri-Cities Airport). Two other inactive landfills exist just north and east of LF #1 along Nanticoke Creek. LF #2 is to the west of Nanticoke Creek and is privately owned and is zoned heavy industrial. The landfill to the east of Nanticoke Creek (LF #3), is reportedly a privately owned industrial fill area and is also zoned heavy industrial.

The Village of Endicott operated LF #1 from the late 1950's until 1975 with concurrent operation by The Town of Union during a portion of that period. During that time, the landfill accepted primarily municipal refuse, though industrial wastes were also disposed of there. In 1982, LF #1 was reopened for the disposal of composted sludge from the STP. The volume of sludge and wastes disposed of at the Endicott Landfill is not known.

The Ranney Well is generally pumped at 3,700 gallon per minute ("gpm") and provides approximately 47 percent of the total water supply to the Village of Endicott Municipal system. The Municipal system serves an estimated 45,000 people in the area. The Ranney Well operated without major problems until May 1981, when the United States Environmental Protection Agency ("EPA") detected vinyl chloride and trace amounts of other volatile organic compounds ("VOCs") in the well's discharge. Subsequent sampling by the New York State Department of Health confirmed the initial results.

B. Previous Studies

Following the discovery of the VOCs in the Ranney Well, investigations were conducted separately by the Village of Endicott and the NYSDEC. These investigations; Kudges, (1983); Adams and Grant (1984); and Grant (1984, 1985); evaluated the hydrogeologic setting and VOC distribution and identified preliminary remedial measures.

Between March, 1986 and July, 1987, pursuant to a cooperative agreement with EPA, NYSDEC conducted a Remedial Investigation and Feasibility Study ("RI/FS") at the Site. The purpose of this study was to investigate the nature and extent of contamination of the Ranney Well and the remedial action that should be taken to further diminish the concentration of VOCs in the Ranney Well discharge. On September 25, 1987, the EPA issued a ROD which selected air stripping at the Ranney Well and the continued use of the existing Purge Well system, which is described below.

However, the RI/FS study concluded that the information obtained to date was inadequate to confirm the source or sources of the VOCs in the ground water reaching the Ranney Well. Therefore, the ROD stipulated that a supplemental RI/FS be initiated to further investigate the nature and extent of contamination in suspected source areas and to evaluate possible source control measures.

C. Previous Remedial Measures

In March, 1983, the Village installed diffused aeration equipment in the Ranney Well to air strip volatile organic compounds. In July 1984, a Purge Well was installed to capture the contaminant plume before it impacted the Ranney Well. The Purge Well currently pumps an estimated 600 gpm.

Presently, the remedial alternative (as selected in the 1987 ROD) of a packed column air stripper to treat the raw water from the Ranney Well is in the construction phase and is scheduled for start-up in Spring, 1991.

D. Enforcement

EPA identified four potentially Responsible Parties ("PRPs") as generators, owners, and/or operators. Notice letters informing the PRPs of their potential liabilities were mailed on February 1, 1988 to the Village of Endicott (the "Village"), Endicott Johnson Corporation, and International Business Machines Corporation ("IBM"), for implementation of the September 15, 1987 ROD for the construction of the air

stripper. Subsequently, notice letters were mailed to the same three PRPs on February 23, 1988, also for implementation of the 1987 ROD for conducting the Supplemental RI/FS. EPA provided similar notice to the Town of Union ("the Town") on March 24, 1988.

Several negotiation meetings were held to discuss technical and legal issues of a Consent Decree for the construction of the stripper and an Administrative Order on Consent ("AO") for the conduct of the supplemental RI/FS.

A settlement was reached which included a Consent Decree, Civil Action No. 88-1067, for construction of the air stripper at the Ranney Well, between EPA, the Town, and the Village was entered in U.S. District Court for the Northern District of New York on January 10, 1989. In addition, EPA issued an AO, Index No. II CERCLA-89214, for performance of the supplemental RI/FS, to IBM, the Village of Endicott, and the Town of Union on September 19, 1988. Endicott Johnson declined to participate in the settlements.

Lozier/Ground Water Associates performed the supplemental RI/FS on behalf of IBM. Field work for Phase I of the RI/FS was initiated in October, 1989. The Interim RI Report for the Phase I study was approved by EPA in November, 1990. A second phase to further delineate ground water contaminant plumes is ongoing and is expected to be completed by the summer of 1991.

III. HIGHLIGHTS OF COMMUNITY PARTICIPATION

The RI, Technical Memorandum and the Proposed Plan were released to the public in February, 1991. These documents were made available at two information repositories maintained at the Endicott Village Clerk's Office and the EPA Region II Office in New York City. The notice of availability for these documents was published in the Endicott Valley News on February 22 and on March 1, 1991. A public comment period was held from February 22, 1991 through March 23, 1991. In addition, a public meeting was held on March 6, 1991 to present the preferred alternative as presented in the Proposed Plan for the Site. At this meeting, representatives from EPA presented the Proposed Plan regarding the interim remedy. Afterwards, EPA answered questions and responded to comments concerning such plan and other details related to the various reports. Responses to the comments and questions received during the public comment period are included in the Responsiveness Summary, which is included in this ROD as Appendix 4.

IV. SCOPE AND ROLE OF INTERIM REMEDY

The RI/FS for the first operable unit determined the remedial action for the Ranney Well. Therefore, any potential threat posed by contamination will be addressed by the remedial action (as selected in the 1987 ROD) of a packed column air stripper to treat the raw water from the Ranney Well discharge.

This ROD results from data collected during Phase I of the supplemental RI/FS conducted subsequent to the first operable unit ROD. This operable unit is an interim remedial action to expedite cleanup of the ground water aquifer and to restrict migration of the ground water contaminant plume emanating from the Endicott Landfill. EPA will implement an interim remedial action to increase the efficiency of the existing Purge Well system and to aid in aquifer cleanup by reduction of the contaminant plume. Based upon available data, the majority of the contaminated ground water is being intercepted by the existing Purge Well located east of Nanticoke Creek. However, it appears that the existing Purge Well is not fully effective in capturing the VOC contaminated ground water plume emanating from the Endicott Landfill and that migration of the plume is more controlled by the Ranney Well influence.

Additionally, low levels of VOCs were detected downgradient of the Purge Well. Therefore, it is also possible that VOCs may potentially be migrating around, and under the catchment area of the existing Purge Well system under the pumping influences of the Ranney Well. The existing Purge Well system appears to be inadequate in fully controlling the migration of VOCs from the Endicott Landfill.

EPA's decision to address the ground water contamination problem as an interim remedial action will serve to further reduce migration of contaminated ground water and the potential threat to the Ranney Well. This remedy does not constitute a final action for the ground water. To the extent possible, this interim remedial action will be consistent with any planned future actions.

The overall supplemental RI which is ongoing will address source control and aquifer restoration. EPA expects to select a remedy for the source control/aquifer restoration next year.

V. SUMMARY OF SITE CHARACTERISTICS

A. Hydrogeology

In order to further evaluate the hydrogeology at the Site, 26 monitoring wells were installed during the Phase I RI. The locations of the monitoring wells are shown in

Figure 2. Data on each of the monitoring wells is summarized in Table 1. The geologic setting of the Site is relatively complex. The Site is located in the Susquehanna River Valley that has been filled with glacial and alluvial sediments up to 200 feet thick. The glacial sediments consist of fine-grained sediments, coarse-grained sediments, coarse-grained outwash and ice contact deposits, overlying a dense heterogenous till.

The ice contact deposits and the outwash deposits collectively make up the main aquifer system in the project study area. This is the aquifer from which the Ranney Well obtains its water. Ground water flow within the main aquifer has been drastically changed by the pumping influence of the Ranney and the existing Purge Wells. Under non-pumping conditions, ground water flow in the aquifer is from northeast to southwest, in the direction of flow in the Susquehanna River. However, the Ranney Well and the existing Purge Well combined pumping influence of 4,300 gpm, have locally reversed ground water flow. Ground water in the vicinity of these wells now flows generally from the northwest to the southeast.

B. Chemical Characteristics

The full extent of contamination at the Site is being evaluated in the Phase II of the on-going RI/FS. Three rounds of ground water sampling were collected from monitoring wells installed during Phase I of the RI and from selected monitoring wells installed during previous investigations. In addition, the existing Purge and Ranney Wells were also sampled. The analytical results for VOCs detected are summarized in Table 2.

Ground Water Samples collected at various locations indicated contamination by various VOCs. It is also evident from the data that the chloro-alkene VOCs; tetrachloroethene (PCE), trichloroethene (TCE), 1,2-dichloroethene (DCE) (total), 1,1-DCE, and vinyl chloride and the chloro-alkane VOCs; 1,1,1-trichloroethane (TCA), 1,2-dichloroethane (DCA), 1,1-DCA, and chloroethane are the primary contaminants in ground water.

The distribution of the chloro-alkene VOCs in ground water is shown in Figure 3 by the lightly shaded contours. As shown, two chloro-alkene plumes were detected, consisting primarily of vinyl chloride and 1,2-DCE. One plume is in the glacial aquifer near the STP extending to the Purge Well; the other is in the alluvial deposit near MW-5.

The largest chloro-alkene plume was observed in the outwash and ice contact deposits and appears to have its core near the northern corner of LF #1 near monitoring well EW-15. The highest chloro-alkene concentration encountered in this plume was at

356 ppb (vinyl chloride, 86 ppb and 1,2-DCE, 270 ppb) in monitoring well EW-15. Under the pumping influences of the Ranney and Purge Wells, the plume has migrated in the aquifer, eastward toward the Purge Well. The existing Purge Well appears to be capturing a major portion of this plume with the highest concentration encountered of 73 ppb. Given the number of wells monitoring this plume, its horizontal extent is well-defined. Some questions still exist as to its vertical extent and whether underflow under the existing Purge Well exists. Evidence of this underflow is seen in the contamination in deep monitoring wells MW-2 (160 feet) installed during this investigation and reported in monitoring well EW-2d.

Another chloro-alkene plume is seen near monitoring well MW-5 in the shallow alluvial deposits. TCE (600 ppb) and 1,2-DCE (320 ppb) are the primary constituents of this plume. The limited number of wells monitoring this plume prevented full definition of its extent.

As seen in Figure 4 by the lightly shaded contours, the chloro-alkanes (primarily chloroethane) appears to be wide-spread across LF #1. A definite plume in the glacial aquifer is apparent near the STP extending to the Purge Well. The highest concentrations within this plume were detected in monitoring wells EW-6 (187 ppb) and EW-8 (102 ppb). The existing Purge Well detected 54 ppb. As with the chloro-alkene plume, the chloro-alkane plume in the glacial aquifer appears to be well-defined. Again, underflow under the Purge Well may be occurring based on vinyl chloride concentrations at levels above the Maximum Contaminant Levels ("MCLs") established under the Safe Drinking Water Act, at 66 ppb in ground water monitoring well MW-2, located downgradient of the existing Purge Well. All data gaps will be further evaluated during Phase II of the supplemental RI.

VI. SUMMARY OF SITE RISKS

An analysis of the results of the Phase I RI report was conducted by EPA to determine health impacts which could potentially result from the contamination detected at the Endicott Well Field Site.

The data revealed that numerous VOCs were detected in ground water samples above MCLs, EPA Health Advisories, and other criteria. Some of these chemicals are suspected carcinogens (cancer causing) in humans or are known carcinogens in animals (1,2-dichloroethane, tetrachloroethylene, trichloroethylene). Other chemicals detected in the samples are known human carcinogens (vinyl chloride and benzene). All of these compounds are hazardous substances within the meaning of CERCLA.

A quantitative Risk Assessment ("RA") was not performed for this interim remedial action. However, one was performed for the first operable unit for the Site. Results

of that RA determined that ingestion of contaminated Ranney Well water posed the greatest human health risk at the Site. The Ranney Well draws water primarily from the Susquehanna River, with the balance derived from area ground water. The start-up of the air-stripper that is being constructed pursuant to the first operable unit ROD will significantly reduce the risk. However, the results of the Phase I RI indicated that the existing remedial measures may not be effective in curtailing the source of the contamination to the Ranney Well. A detailed RA will be performed as part of the supplemental investigation for the Site.

Actual or threatened releases of hazardous substances from this Site may present an imminent and substantial threat to public health, welfare, or the environment. The interim remedial action selected in this ROD will help to abate that threat. A source control remedial action, which will further abate that threat, will be selected in a subsequent ROD.

VII. DESCRIPTION OF REMEDIAL ALTERNATIVES

The objective of the present remedy is to enhance ground water cleanup while an additional investigation to curtail the source(s) of ground water contamination and to evaluate aquifer restoration is undertaken. While the purpose of this interim remedy is to work toward the goal of restoration, it does not constitute a final action for the Site.

ALTERNATIVE 1: No Action

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended by SARA, requires that the "no-action" alternative be considered at every site to establish a baseline against which other alternatives may be compared. Under this alternative, the Site would remain in its present condition with continued operation of the existing systems (i.e. Purge Well and aeration system and the air stripper) and associated monitoring. No remediation measures would be implemented at this time.

Capital cost:	\$0
Annual Operation & Maintenance:	\$22,000
Estimated Present Worth:	\$207,000

Time to Implement: Immediate

ALTERNATIVE 2: Supplemental Purge Well

This alternative consists of upgrading the existing Purge Well system with the installation of an additional Purge Well, to be installed west of Nanticoke Creek essentially between the suspected source of the VOCs to the aquifer (Endicott Landfill) and the receptor (the Ranney Well). The proposed location of the Purge Well is chosen to intercept the plume near its suspected source and to begin remediation of the aquifer.

The proposed well is estimated to be 110 feet deep and would be screened across the majority of the aquifer between the depths of approximately 50 and 110 feet. This design would intercept the majority of the flow within the contaminated portion of the aquifer, and prevent contaminated ground water from continuing to move under the Purge Well system, as may be happening with the existing Purge Well. However, the actual design will be based upon a pilot hole drilled at the proposed location during the Phase II RI. Operation and Maintenance cost for this alternative only applies to the additional Purge Well. The estimated present worth cost assumes that no treatment of the water will be required.

Capital cost:	\$150,000
Annual Operation & Maintenance:	\$24,000
Estimated Present Worth:	\$376,000

Time to Implement: 24 months (This includes the Design phase)

VIII. SUMMARY OF COMPARATIVE ANALYSIS OF ALTERNATIVES

In accordance with the NCP, a detailed analysis of each alternative is required. In order to determine the most appropriate alternative that is protective of human health and the environment, attains ARARs, is cost-effective, and utilizes permanent solutions and treatment technologies to the maximum extent practicable, the two alternatives were evaluated against each other. The nine evaluation criteria against which the alternatives are evaluated are as follows:

Threshold Criteria - The first two criteria must be satisfied in order for an alternative to be eligible for selection.

1. Overall Protection of Human Health and the Environment
addresses whether a remedy provides adequate protection and describes how risks posed through each pathway are eliminated, reduced, or controlled

through treatment, engineering controls, or institutional controls.

2. **Compliance with Applicable, or Relevant and Appropriate Requirements (ARARs)** is used to determine whether each alternative will meet all of its Federal and State ARARs. When an ARAR is not met, the detailed analysis should discuss whether one of six statutory waivers is appropriate.

Primary Balancing Criteria - The next five "primary balancing criteria" are to be used to weigh major trade-offs among the different hazardous waste management strategies.

3. **Long-term Effectiveness and Permanence** focuses on any residual risk remaining at the Site after the completion of the remedial action. This analysis includes consideration of the degree of threat posed by the hazardous substances remaining at the Site and the adequacy of any controls (for example, engineering and institutional) used to manage the hazardous substances remaining at the Site.
4. **Reduction of Toxicity, Mobility, or Volume Through Treatment** is the anticipated performance of the treatment technologies a particular remedy may employ.
5. **Short-term Effectiveness** addresses the period of time needed to achieve protection and any adverse impacts on human health and the environment that may be posed during the construction and implementation period until cleanup goals are achieved.
6. **Implementability** addresses the technical and administrative feasibility of implementing an alternative and the availability of various services and materials required during its implementation.
7. **Cost** includes estimated capital, and operation and maintenance costs, both translated to a present-worth basis. The detailed analysis evaluates and compares the cost of the respective alternatives, but draws no conclusions as to the cost-effectiveness of the alternatives. Cost-effectiveness is determined in the remedy selection phase, when cost is considered along with the other balancing criteria.

Modifying Criteria - The final two criteria are regarded as "modifying criteria," and are to be taken into account after the above criteria have been evaluated. They are generally to be focused upon after public comment is received.

8. **State Acceptance** indicates whether based upon its review of the RI/FS and the Proposed Plan, the State concurs with the selected remedy.

9. Community Acceptance refers to the community's comments on the remedial alternatives under consideration, along with the Proposed Plan. Comments received during the public comment period, and EPA's responses to those comments, are summarized in the Responsiveness Summary which is a part of this ROD.

The following is a summary of the comparison of the two alternative's strengths and weaknesses with respect to the nine evaluation criteria.

1. Overall Protection of Human Health and the Environment

The no-action alternative would not ensure that the Ranney Well will not be impacted by VOCs emanating from the Endicott Landfill. However, the operation of the air-stripper is designed to remove VOCs to below MCLs.

Implementation of the interim remedy should serve to expedite remediation of the aquifer by increasing the volume of contaminants removed from the ground water. In addition, upgrading the existing Purge Well system would be beneficial in maintaining the protection of public health and the environment. Although the existing Purge Well appears to be capturing a majority of the VOCs emanating from the Landfill, results from the Phase I RI indicates that the potential exists for VOCs to migrate under, and around the Purge Well to the Ranney Well. The additional Purge Well will be located and designed to be more effective in intercepting and removing the contaminant plume closer to its suspected source. This should reduce the potential for VOCs to migrate to the Ranney Well, thus further protecting public health and the environment. This interim system may be incorporated into the design of the source control remedy for the Site.

2. Compliance With ARARs

CERCLA provides that if an interim measure is conducted, certain ARARs may be waived for the duration of the interim action, since these requirements will be achieved upon completion of the permanent remedy. Because both alternatives constitute interim actions, final cleanup standards for contaminants in ground water do not have to be set or achieved during this action; the final remedy for the Site will address source control and ground water restoration as well as potential impacts to wetland areas, cultural resources, or endangered species.

However, other ARARs related to implementation of the interim action would have to be achieved. At this time it is assumed that the water from the additional Purge Well can be routed through the STP.

3. Long-term Effectiveness

Uncertainties still exist in the no-action alternative's effectiveness to remediate the aquifer. Upgrading the Purge Well system with the installation of an additional Purge Well will be effective in controlling plume migration as long as it is operational.

4. Reduction of Toxicity, Mobility, or Volume

The no-action alternative will not further reduce the toxicity, mobility, or volume of the contaminated ground water. Installation of an additional Purge Well will initiate reduction in the volume of ground water contaminated by VOCs through its removal from the aquifer and subsequent treatment. In addition, the Purge Well will also reduce the mobility of the contaminants by capturing contaminated ground water within its cone of influence.

Data to support the extent to which the mobility, and volume are reduced will be further evaluated following installation and testing of the additional Purge Well.

5. Short-term Effectiveness

Short-term risks associated with implementation are not expected to be a problem for either alternative. Both alternatives will result in contaminated material being brought to the surface. However, no appreciable risks to residents are expected, since there is a large amount of open, publicly-owned land available, and there are no residences in the immediate area. Additionally, workers will use conventional personnel protective gear.

6. Implementability

Installation of the additional Purge Well can be achieved using standard and readily available technology. The technology to monitor the performance and adequacy of the additional Purge Well is reliable and proven for the types of chemicals found at the Site. Subsequent testing of the additional Purge Well would provide the data necessary to evaluate the technical feasibility of the Purge Well system as a control for the migration of the contaminant plume.

7. Cost

The costs for the two alternatives are listed on the previous pages. Comparison of the present worth costs for the two alternatives indicates that the no-action alternative is the least costly at \$207,000. Capital cost is the present worth value for implementing

the remedial action. Annual operation and maintenance ("O&M") costs are used to quantify the yearly expense of O&M. The 30 year annual cost is then calculated and expressed in current value terms.

The capital cost for the additional Purge Well include the drilling and installation of the Purge Well and pump, well pit, electric installation, meter and controls, and a discharge line to Nanticoke Creek. The estimated capital costs for these items is \$150,000.

The O&M of the alternative include energy cost for the pump, two sample analyses per month, and well maintenance. These costs are estimated to be \$24,000. The net present worth of the additional Purge Well is estimated to be \$376,000. This assumes no treatment of the discharge water will be required.

8. State Acceptance

The State of New York concurs with the selected interim remedy.

9. Community Acceptance

All comments submitted during the public comment period were evaluated and are addressed in the attached Responsiveness Summary.

IX. THE SELECTED REMEDY

Based on the results of the Phase I RI Report and the Technical Memorandum for implementation of the Interim Remedial Measures, EPA has selected Alternative 2, Supplemental Purge Well, as the Interim Remedy at the Endicott Well Field site. The cost of this remedy is estimated to be \$376,000.

The selected remedy will include the following activities:

- Upgrading the existing Purge Well system, located on the En-joie Golf Course, with the installation of an additional Purge Well, to be installed west of Nanticoke Creek between the suspected source of the VOCs to the aquifer (Endicott Landfill) and the receptor (the Ranney Well);
- The location of the additional Purge Well will be chosen to intercept the plume near its suspected source and to expedite remediation of the aquifer;

- The proposed well is estimated to be 110 feet deep and will be screened across the majority of the aquifer between the depths of approximately 50 and 110 feet;
- The design will be based upon a pilot hole drilled at the proposed location during the Phase II supplemental RI;
- Implementation of a Supplemental Purge Well monitoring program to monitor the effects of the additional Purge Well on contaminant migration in the aquifer, of concern and to evaluate the effectiveness of the interim action. The program will include provisions for taking chemical analysis and ground water elevations of the Purge Well and surrounding monitoring wells;
- Following installation of the Supplemental Purge Well, a detailed aquifer pump test will be conducted using the Purge Well as the pumping well. It is envisioned that the discharge from the test can be routed through the Sewage Treatment Plant. Based upon the analysis of the Supplemental Purge Well water, the treatment requirements for the Purge Well discharge will be determined.

This interim remedy is not intended to replace the existing Remedial Measures, but is designed to increase their ability to protect public health and the environment. The goal of this action is to further reduce migration of contaminated ground water and to collect data on aquifer and contaminant response to remediation measures. The ultimate goal of remediation will be determined in a final remedial action for the Site. Upon completion of the Phase II RI/FS, this interim remedy may be incorporated into the design of the source control remedy for the Site.

X. STATUTORY DETERMINATIONS

1. Protection of Human Health and the Environment

The selected interim remedy is protective of human health and the environment. The interim remedy, installation of a Supplemental Purge Well with monitoring and maintenance, will reduce the potential for VOCs to migrate to the Ranney Well. The use of a Purge Well system in the short-term is a proven method of reducing the concentrations of volatile organic compounds.

2. Attainment of ARARs

Given the limited scope of this interim action, the selected interim remedy will attain applicable or relevant and appropriate requirements directly related to implementation of this action.

The selected interim remedy will not effectively restore the ground water to its beneficial uses. The restoration of ground water will be addressed when EPA issues the final ROD for this Site.

3. Cost Effectiveness

While Alternative 1, No Action, is the least expensive remedy, it is not protective of human health and the environment. Therefore, Alternative 2 is the most cost effective remedy that will provide reliable protection of human health and the environment.

4. Utilization of Permanent Solutions Employing Alternatives Technologies to the Maximum Extent Practicable

The selected interim action does not represent a permanent solution with respect to the remediation of ground water. Since an air stripper treatment system will be installed at the Ranney Well discharge to provide a permanent source of clean drinking water to residents affected or potentially affected by the Site, the selected interim remedy does utilize permanent solutions to the maximum extent practicable, given the limited scope of this action. Selection of permanent solutions and alternative treatment technologies to the maximum extent practicable will be addressed further in the final remedy for the Site.

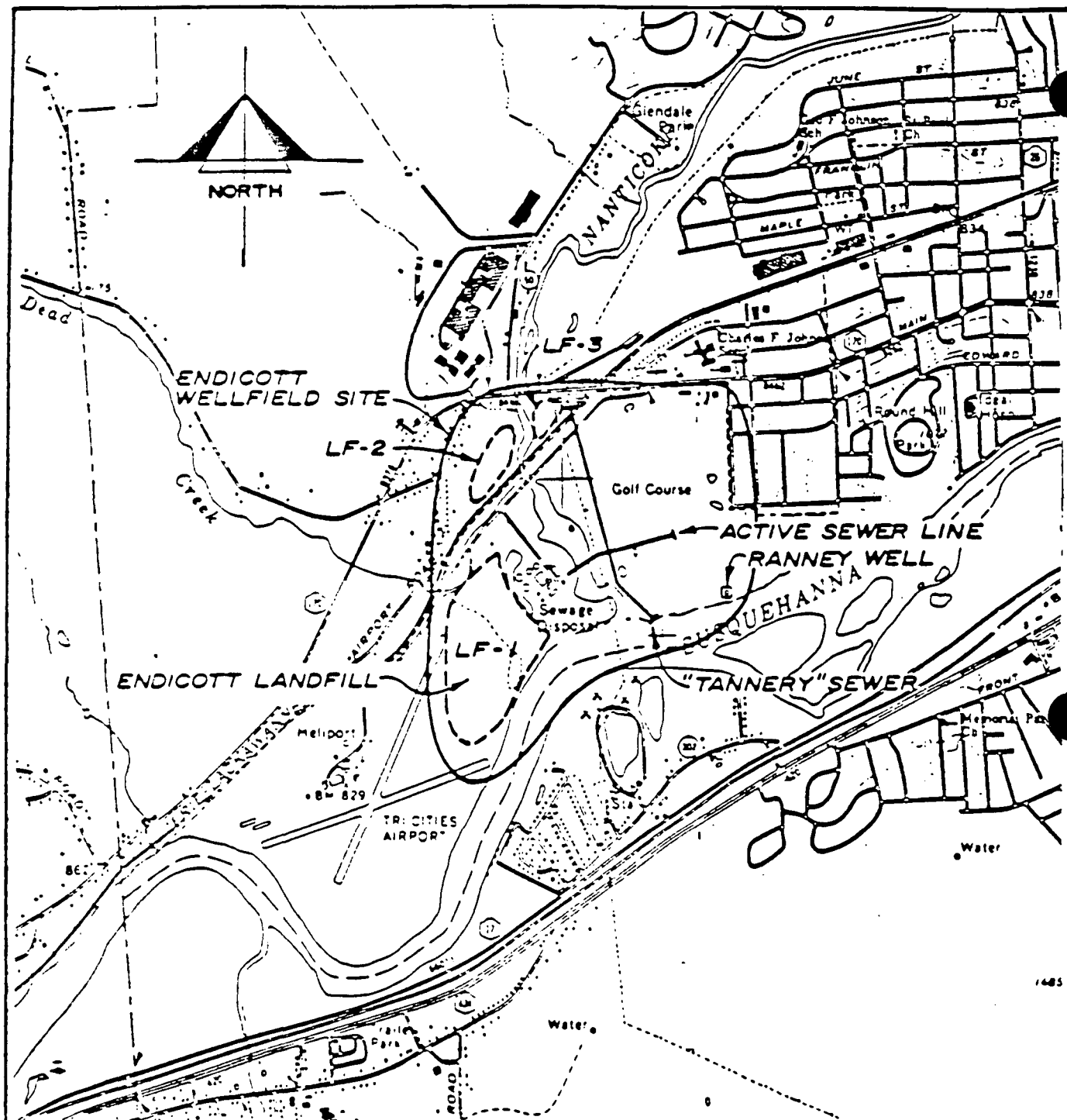
5. Preference for Treatment as a Principle Element

Since this action constitutes a measure to aid in ground water clean up, and does not constitute the final remedy for the Site, the statutory preference for treatment as a principle element will be addressed in the selection of the final remedy for the Site.

XI. Explanation of Significant Changes

The Proposed Plan for the interim action for the Endicott Wellfield site was released for public comment on February 22, 1991. The Proposed Plan identified Alternative 2, Supplemental Purge Well, as the preferred alternative. EPA reviewed all written and verbal comments submitted during the public comment period. Upon review of these comments, it was determined that no significant changes to the remedy, as it was originally identified in the Proposed Plan, were necessary.

APPENDIX 1



QUADRANGLE LOCATION



BASE MAP ADAPTED FROM:
NYDOT, 1973 ENDICOTT, N.Y.
QUADRANGLE MAP

FIGURE 1 LOCATION MAP

ENDICOTT WELLFIELD SITE
ENDICOTT, NEW YORK

LOUIS/GRUENE WATER ASSOCIATES
WESTERVILLE, OHIO

REVISIONS	DATE

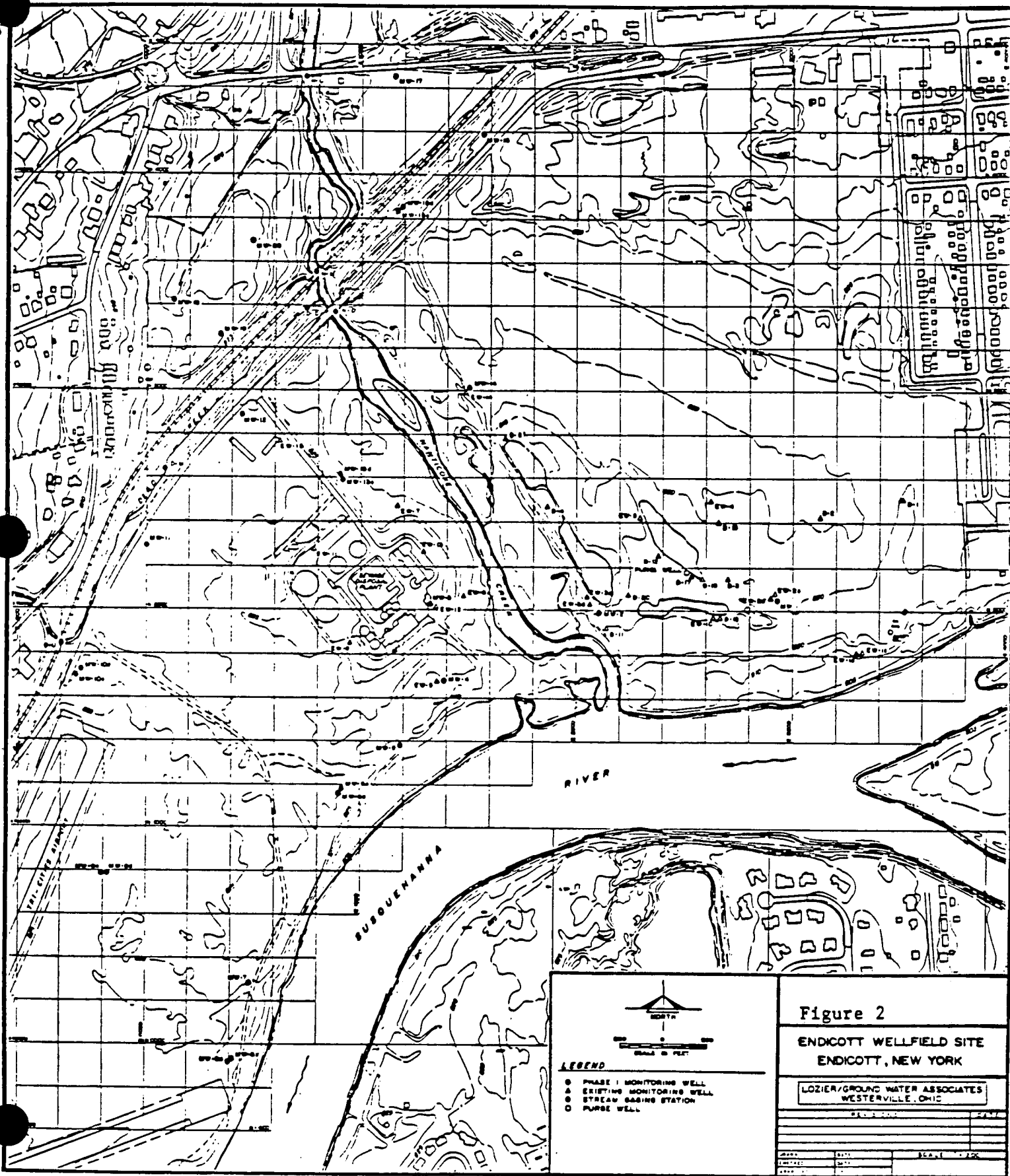
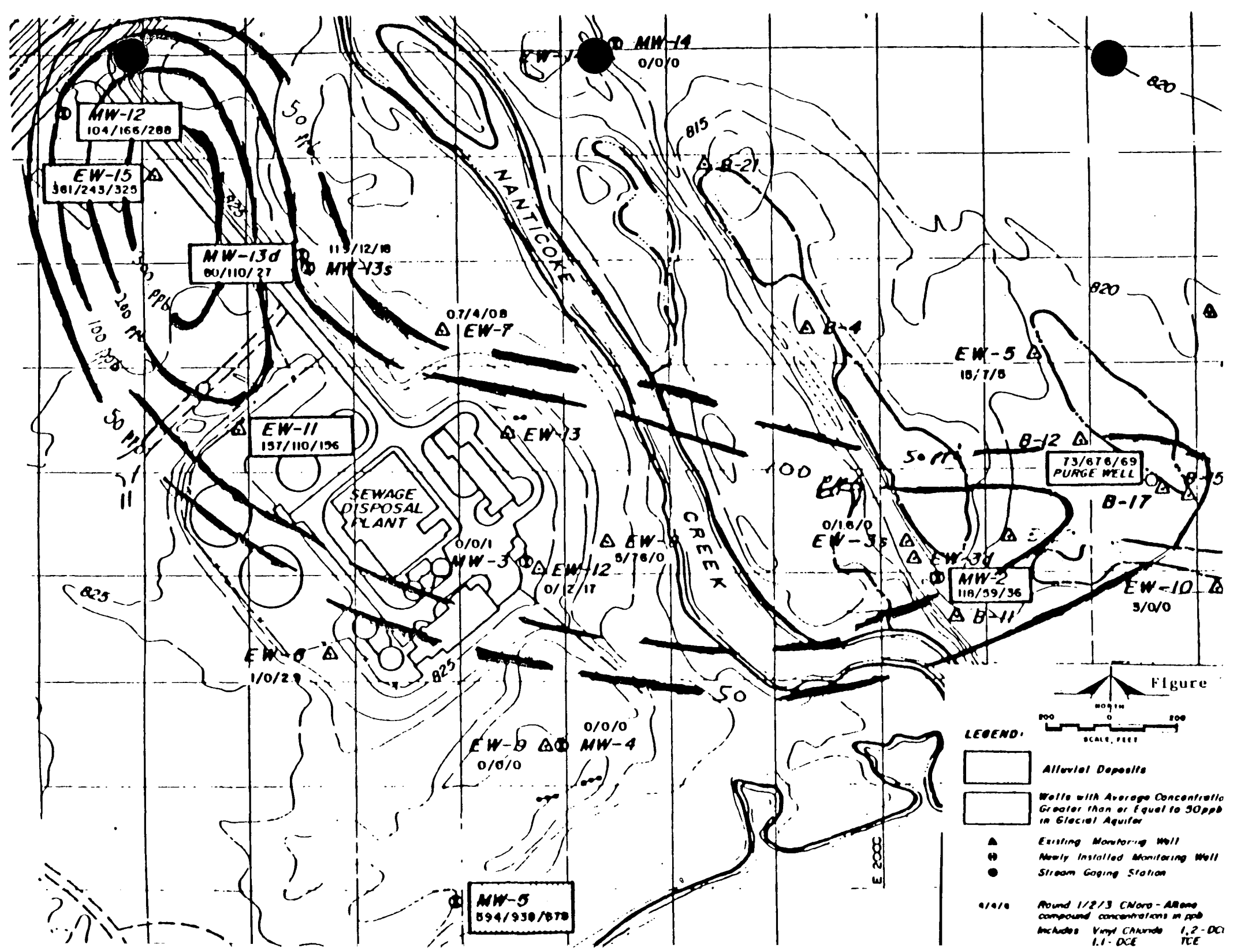


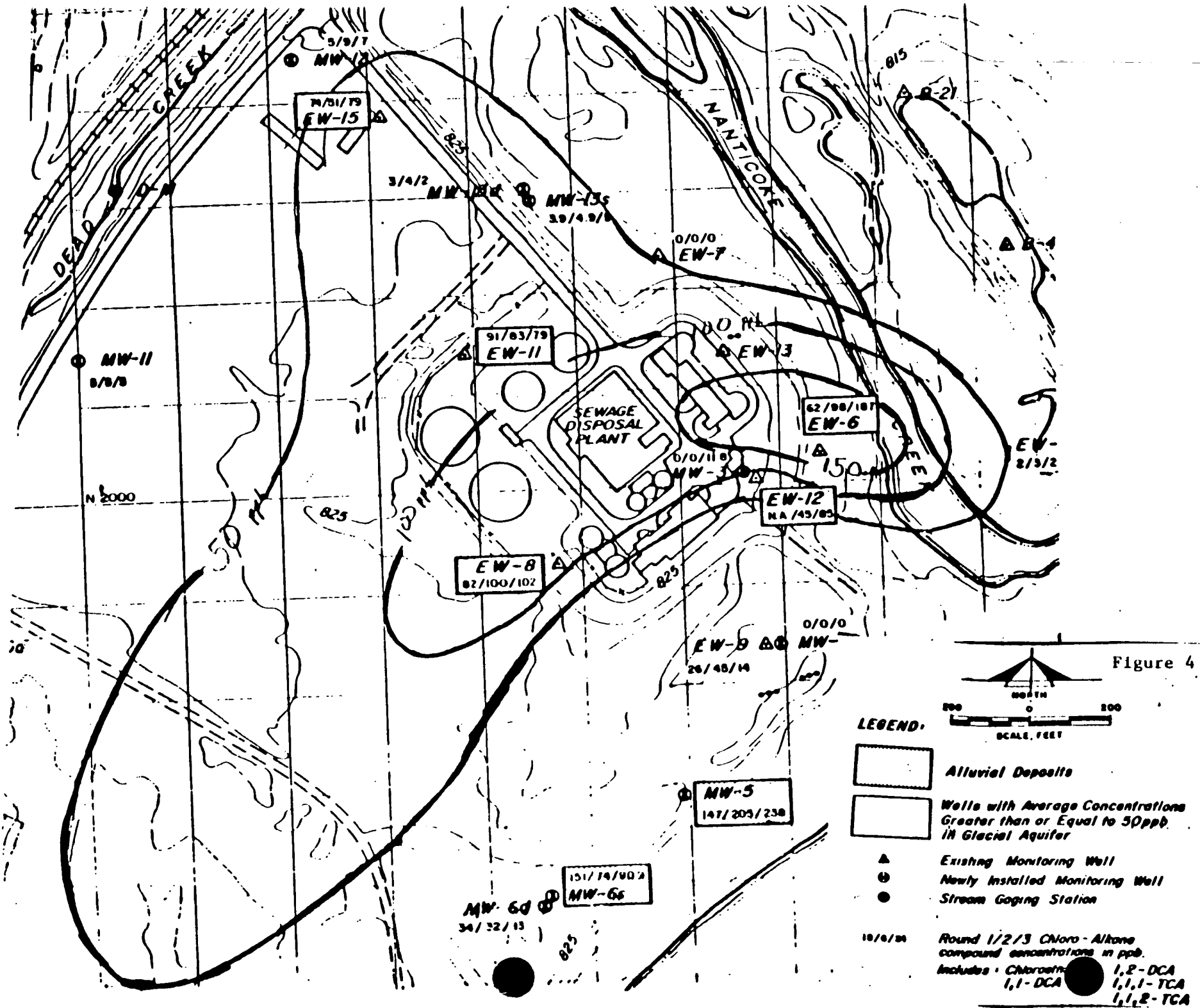
Figure 2

ENDICOTT WELLFIELD SITE
ENDICOTT, NEW YORK

LOZIER/GROUND WATER ASSOCIATES
WESTERVILLE, OHIO

DATE	10/1/88	SCALE	1" = 100'
BY	LOZIER		
CHECKED	LOZIER		
DATE	10/1/88		





APPENDIX 2

TABLE 1
PHASE 1
DRILLING SUMMARY
ENDICOTT WELLFIELD SITE

WELL	DEPTH DRILLED	SCREENED INTERVAL	LAB SAMPLE DEPTH
MW-1	100	70 - 75	20 - 22
MW-2	162	154 - 159	45 - 47
MW-3	33	27 - 32	N/A
MW-3d	180	None	30 - 32 (Dup)
MW-4	100	91 - 96	18 - 20
MW-5	27	17.5 - 22.5	15 - 17
MW-6s	24	17 - 22	N/A
MW-6d	100	88 - 93	20 - 22
MW-7	25	19 - 24	17 - 19
MW-8s	115	108 - 113	N/A
MW-8d	182	139 - 154	17 - 19
MW-9s	20	14 - 19	N/A
MW-9d	100	65 - 70	20 - 22
MW-10s	26	20 - 25	N/A
MW-10d	150	57.5 - 62.5	15 - 17
MW-11	100	39 - 44	17 - 19
MW-12	100	35 - 40	25 - 27 (Dup)
MW-13s	20	14 - 19	N/A
MW-13d	100	78 - 83	10 - 12
MW-14	100	84 - 89	14 - 20
MW-15s	15	9 - 14	N/A
MW-15d	50	30 - 35	10 - 12
MW-16	50	25 - 30	25 - 27
MW-17	50	42 - 47	30 - 32
MW-18	34	17 - 22	20 - 22
MW-19	30	21 - 26	25 - 27
MW-20	47	30 - 35	25 - 27

=====
All depths referenced in feet below grade.

Table 2
 Endicott Wellfield Site
 TCL Volatile Organics in Ground Water

Sample	QA/QC	Date Sampled	Vinyl Chloride	1,2- DCE	TCE	PCE	Chloro ethane	1,1- DCA	1,1,1- TCA	Benz	Tol	Ethyl Benz	Chloro Xyl	Meth Chlor	Other	TCL VOC's
B-2-1		02/22/90		1 J	2			1 J						2 B		
B-2-2		04/10/90		1 J	2			1 J						2		
B-2-3		05/08/90		0.8 J	2			0.9 J								
EW-2a-1		02/23/90	6	0.8 J										3 B		
EW-2a-2		04/10/90	8	0.8 J										3		
EW-2a-3		05/08/90	5											3 B		
EW-3a-1		02/22/90					2							2 B		
EW-3a-2		04/10/90	1 J	0.6 J			3							0.6 BJ	Acetone (2 J)	
EW-3a-2	MS	04/10/90					2							3 B	Acetone (3 J)	
EW-3a-2	MSD	04/10/90	1 J	0.5 J			3							0.7 BJ	Acetone (3 J)	
EW-3a-3		05/08/90					2							0.6 B		
EW-4-1		02/22/90												0.5 BJ		
EW-4-2		04/10/90		0.7 J	0.6 J			0.9 J								
EW-4-3		05/08/90						0.9 J								
EW-5-1		02/23/90	2	10	3		2	4						2 B		
EW-5-2		04/11/90		6	1 J			2		0.6 J	2		2	0.6 BJ	Acetone (2 BJ)	
EW-5-2	MS	04/11/90		6				2					2	0.5 BJ	Acetone (2 BJ)	
EW-5-2	MSD	04/11/90		6				3					2			
EW-5-3		05/08/90		5				2			2		3	2 B	Acetone (12)	
EW-6-1		02/22/90	2	3			56	6		3			5	2 B		
(EW-6-1)	DUP-1	02/22/90	1 J	2			54	6		3			4	6 B		
EW-6-2		04/12/90	4 J	3 J	0.6 J		88	10		3 J			5	0.8 BJ		
EW-6-3		05/09/90					180	7 J		7 J			9	5		

All concentrations in ug/L, (ppb).

Table 2
Endicott Wellfield Site,
TCL Volatile Organics in Ground Water

Sample	QA/QC	Date Sampled	Vinyl Chloride	1,2- DCE	TCE	PCE	Chloro ethane	1,1- DCA	1,1,1- TCA	Benz	Tol	Ethyl Benz	Xyl	Chloro Benz	Meth Chlor	Other TCL VOC's
EW-7-1		02/20/90	0.7 J												4 B	Vinyl Acetate (3 J)
EW-7-2		04/12/90	4												1 B	
EW-7-3		05/09/90	0.8 J								1 J				0.9 J	
(EW-7-3)	DUP-12	05/09/90	0.8 J								0.8 J				1 B	
EW-8-1		02/22/90		1 J			80	2 J		12				5	3 B	
EW-8-2		04/11/90					98	2 J		15				4 J	4 B	
(EW-8-2)	DUP-8	04/11/90					97	2 J		17				5 J	9 B	
EW-8-3		05/09/90	0.9 J	2			99	3		16				6	3 B	trans-1,2-Dichloropropene (1)
EW-9-1		02/23/90					26								0.9 BJ	
EW-9-1	MS	02/23/90					21								2 B	
EW-9-1	MSD	02/23/90					30								1 B	
EW-9-2		04/11/90					45			0.7 J					0.9 BJ	
(EW-9-2)	DUP-7	04/11/90					42			0.7 J					0.7 BJ	
EW-9-3		05/10/90					14								4 B	
EW-9-3	MS	05/10/90					26								0.9 BJ	
EW-9-3	MSD	05/10/90					13								10 B	
EW-10-1		02/23/90	3												4 B	
EW-10-2		04/11/90								5	9	0.8 J	4		0.6 BJ	
EW-10-3		05/09/90								1 J	9	1 J	6		2	
EW-11-1		02/21/90	13	89	43	11	55	32	4	0.8 J					2 B	1,1-Dichloroethene (1 J)
EW-11-2		04/12/90	15	59	30	6	57	24	2 J	2 J	1 J		0.5 J		0.8 BJ	
EW-11-3		05/09/90	14	84	45	13	52	24	3 J						11 B	
EW-12-1		02/23/90														2-Butanone (23000)
EW-12-2		04/10/90	3	9			39	6		1 J					3	2-Butanone (20)
EW-12-3		05/09/90	4	13			73	10	2	3	2		3	4	1 BJ	

Table 2
Endicott Wellfield Site
TCL Volatile Organics in Ground Water

Sample	QA/QC	Date Sampled	Vinyl Chloride	1,2- DCE	TCE	PCE	Chloro ethane	1,1- DCA	1,1,1- TCA	Benz	Tol	Ethyl Benz	Chloro Xyl	Chloro Benz	Meth Chlor	Other TCL VOC's
EW-15-1		02/22/90	86	270	5		19	54	1 J	3				2	2 B	1,1-Dichloroethene (0.7 J)
EW-15-2		04/11/90	130	110	3 J		18	32	1 J	2 J				0.6 J	0.8 BJ	
EW-15-3		05/09/90	120	200	5		25	51	2	3					4 B	1,2-Dichloroethane (1 J)
MW-1-1		02/23/90	14	1 J											4 B	
MW-1-2		04/11/90	0.9 J							0.8 J	2		2		3 B	Carbon Disulfide (5)
MW-1-3		05/09/90	1 J								1 J		2		0.9 BJ	Carbon Disulfide (1 J)
MW-2-1		02/22/90	66	52			66	7							7 B	
MW-2-2		04/11/90	13	46			27	5		4	7	0.7 J	4		4 B	Acetone (26)
MW-2-3		05/10/90	15	21			22	3		1 J	2		4		2 B	Acetone (43), 4-methyl-2-pentanone (3)
(MW-2-3) DUP-10		05/10/90	15	21			22	3		1 J	2		3		3 B	Acetone (44), 4-methyl-2-pentanone (3)
MW-3-1		02/20/90													7	
MW-3-2		04/11/90														
MW-3-3		05/09/90		1 J			11	0.8 J		0.9 J				3	0.6 BJ	
MW-4-1		02/23/90													2 B	
MW-4-2		04/11/90								1 J	4	0.9 J	6		4 B	
MW-4-3		05/10/90												0.8 J		Acetone (7)
MW-5-1		02/21/90	2	220	360	3	2	15	130	2				1 J	2 B	1,1-Dichloroethene (9)
(MW-5-1) DUP-2		02/21/90		220	360			13								1,1-Dichloroethene (7 J)
MW-5-2		04/10/90	2	320	600	3	2	13	190	2				1 J	2	1,1-Dichloroethene (13)
MW-5-3		05/08/90	2	280	380	3	2	16	220	2				1 J	1	1,1-Dichloroethene (16)
MW-6a-1		02/20/90	0.8 J	6	2		150	1 J		8	5	10	38	4	5 B	2-Hexanone (11)
MW-6a-2		04/10/90		1 J	1 J		73	1 J		2		0.5 J	1 J	2	0.7 BJ	Acetone (5), Acrolein (8 J)
MW-6a-3		05/10/90		1			78	0.9 J		2				2	1 BJ	Acetone (20)

All concentrations in ug/L, (ppb).

Table 2
Endicott Wellfield Site
TCL Volatile Organics in Ground Water

Sample	QA/QC	Date Sampled	Vinyl Chloride	1,2-DCE	TCE	PCE	Chloro ethane	1,1-DCA	1,1,1-TCA	Benz	Tol	Ethyl Benz	Xyl	Chloro Benz	Meth Chlor	Other TCL VOC's
MW-6d-1		02/22/90					34								2 B	
MW-6d-2		04/10/90					32				1 J				1	
MW-6d-3		05/10/90					13				0.9 J		0.8 J		3 B	Acetone (9), 4-Methyl-2-Pentanone (3)
MW-7-1		02/20/90		9 J			770	18		11 J	8 J	30	100	140	15 B	
MW-7-2		04/09/90	2	3			880	6		11	6	29	130	140	2	Acetone (5)
MW-7-2	MS	04/09/90					850					28 J	130			
MW-7-2	MSD	04/09/90					820					28 J	130			
(MW-7-2)	DUP-5	04/09/90					850			12 J		28 J	130	170		
MW-7-3		05/08/90					1000	36 J				27 J	120	190	21 J	
(MW-7-3)	DUP-9	05/08/90					1100	39		12 J		27	120	190	8 J	trans-1,2-Dichloropropene (8 J)
MW-8d-1		02/21/90					83								0.8 B	
MW-8d-2		04/09/90					3								1	
MW-8d-3		05/08/90								3	3		2			Acetone (2 J)
MW-8s-1		02/21/90					21								4 B	
MW-8s-2		04/09/90					36									
MW-8s-3		05/08/90								3	27	5	19		1	
MW-9d-1		02/20/90	4				23								5 B	
MW-9d-2		04/10/90	9				25								3 B	
MW-9d-3		05/08/90	2				27								2 B	
MW-9s-1		02/20/90		3			10	4							3 B	
MW-9s-2		04/09/90		4			11	4							1	
(MW-9s-2)	DUP-6	04/09/90		2			7	3		0.6 J					4 B	Acetone (2 BJ)
MW-9s-3		05/08/90		3			15	5							0.7 BJ	

Table 2
Endicott Wellfield Site
TCL Volatile Organics in Ground Water

Sample	QA/QC	Date Sampled	Vinyl Chloride	1,2- DCE	TCE	PCE	Chloro ethane	1,1- DCA	1,1,1- TCA	Benz	Tol	Ethyl Benz	Chloro Xyl	Benz	Meth Chlor	Other TCL VOC's
MW-10d-1		02/20/90		4	6		1 J								3	
MW-10d-2		04/10/90		0.6 J	3										1	
MW-10d-3		05/08/90		3	2											
MW-10d-3	MS	05/08/90		3											0.8 J	
MW-10d-3	MSD	05/08/90		3											4 B	
MW-10a-1		02/20/90		2	6		3								2	Vinyl Acetate (3 J)
MW-10a-2		04/10/90		0.7 J	5		0.6 J								2	Acetone (6 B)
MW-10a-3		05/08/90		2	7										3 B	
MW-11-1		02/20/90		2	4			4	1 J						2 B	1,1-Dichloroethene (1 J)
(MW-11-1) DUP-3		02/20/90		2	4			4	0.9 J							1,1-Dichloroethene (1 J)
MW-11-2		04/09/90		3	5			4	1 J							1,1-Dichloroethene (1 J)
MW-11-3		05/08/90		2	4			4	1 J						4 B	1,1-Dichloroethene (1 J)
MW-12-1		02/20/90	16	88			2	3			13		3	1 J		2-Butanone (6)
MW-12-1	MS	02/20/90	12	72				3					1 J		0.9 J	
MW-12-1	MSD	02/20/90	14	80			1	3					1 J			
MW-12-2		04/09/90	46	120			4 J	5			5		2 J			Acetone (8 J)
MW-12-3		05/08/90	18	270				7 J			5 J					
MW-13d-1		02/21/90	80				3								9 B	
MW-13d-2		04/10/90	110				4 J								2 BJ	Acetone (17 B)
MW-13d-3		05/09/90	27				2			1 J	9	1 J	7		4 B	
MW-13a-1		02/21/90	0.9 J	5	6		0.9 J	3							0.9 BJ	
MW-13a-2		04/10/90	2	6	4		0.9 J	4							2	
MW-13a-3		05/09/90	2	9	7		2	7								

Table 2
Endicott Wellfield Site
TCL Volatile Organics in Ground Water

Sample	QA/QC	Date Sampled	Vinyl Chloride	1,2- DCE	TCE	PCE	Chloro ethane	1,1- DCA	1,1,1- TCA	Benz	Tol	Ethyl Benz	Chloro Xyl	Meth Benz	Chlor	Meth Chlor	Other	TCL	VOC's
MW-14-1		02/22/90														2 B			
MW-14-2		04/10/90														0.5 BJ			
MW-14-3		05/08/90								3	8	2	14						
MW-15d-1		02/22/90														2 B			
MW-15d-2		04/10/90			0.6 J														
MW-15d-3		05/09/90														3 B			
(MW-15D-3) DUP-11		05/09/90														2 B			
MW-15a-1		02/22/90														8 B			
MW-15a-2		04/10/90														0.5 J	Acrolein (3 J)		
MW-15a-3		05/09/90																	
MW-16-1		02/22/90														0.5 BJ			
MW-16-1	MS	02/22/90														2 B			
MW-16-1	MSD	02/22/90														9 B			
MW-16-2		04/11/90														2 B			
MW-16-3		05/09/90														4 B			
MW-17-1		02/21/90							2										
MW-17-2		04/11/90							1 J							1 B			
MW-17-3		05/10/90							1 J							1 BJ	Acetone (7)		
MW-18-1		02/21/90																	
MW-18-2		04/11/90														4 B			
MW-18-3		05/08/90														0.5 J			
MW-18-3	MS	05/08/90														1			
MW-18-3	MSD	05/08/90														7	Acetone (17)		

Table 2
Endicott Wellfield Site
TCL Volatile Organics in Ground Water

Sample	QA/QC	Date Sampled	Vinyl Chloride	1,2-DCE	TCE	PCE	Chloro ethane	1,1-DCA	1,1,1-TCA	Benz	Tol	Ethyl Benz	Xyl	Chloro Benz	Meth Chlor	Other	TCL VOC's
MW-19-1		02/21/90						2	0.9 J						0.8 BJ		
MW-19-2		04/11/90						1 J	0.6 J					0.9 J	0.5 BJ		
MW-19-3		05/08/90						2						1 J	1 B		
MW-20-1		02/21/90		1 J			1 J			3	2	2	5	1 J	1 B	Acetone (4 J), Vinyl Acetate (26)	
MW-20-2		04/11/90		0.8 J						2	0.7 J		2	1 J	2		
MW-20-3		05/08/90		0.8 J						2	1 J	0.6 J	2				
PURGE-1		02/21/90	38	35			46	5							1		
PURGE-1	MS	02/21/90	42	40			52	6							1		
PURGE-1	MSD	02/21/90	43	41			53	6							0.9 J		
PURGE-2		04/10/90	35	32	0.6 J		43	6		0.6 J					0.7 BJ		
PURGE-3		05/09/90	39	30			49	5							1 B		
RANNEY-1		02/21/90		2													
(RANNEY-1) DUP-4		02/21/90		2											0.9 BJ		
RANNEY-2		04/12/90		1 J	0.5 J												
RANNEY-3		05/10/90		2											5 B	Acetone (13)	
Equipment Blanks																	
MW-EB-1		02/20/90													5	Vinyl Acetate (10), Carbon Disulfide	
MW-EB-2		02/21/90														Carbon Disulfide (2 J)	
MW-EB-3		02/22/90													2 B		
MW-EB-4		02/23/90													3 B		

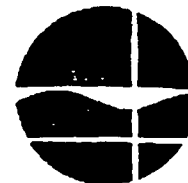
All concentrations in ug/L, (ppb).

Table 2:
Endicott Wellfield Site
TCL Volatile Organics in Ground Water

Sample	QA/QC	Date Sampled	Vinyl Chloride	1,2- DCE	TCE	PCE	Chloro ethane	1,1- DCA	1,1,1- TCA	Benz	Tol	Ethyl Benz	Xyl	Chloro Benz	Meth Chlor	Other	TCL	VOC's
=====																		
Trip Blanks																		
MW-TB-1		02/20/90																
MW-TB-2		02/21/90														0.7 J		
MW-TB-3		02/22/90														0.9 BJ		
MW-TB-4		02/23/90														7 B		
MW-TB-5		04/09/90																
MW-TB-6		04/10/90														3		
MW-TB-7		04/11/90																
MW-TB-8		04/12/90														0.9 BJ		
MW-TB-9		05/08/90														1		
MW-TB-10		05/09/90														2 B		
MW-TB-11		05/10/90														2 B		

APPENDIX 3

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



Thomas C. Jorling
Commissioner

MAR 25 1991

Ms. Kathleen C. Callahan
Director
Emergency and Remedial Response Division
United States Environmental Protection Agency
Region II
26 Federal Plaza
New York, New York 10278

Dear Ms. Callahan:


Re: Endicott Wellfield Site, Broome County, Site No. 7-04-008

The final draft Record of Decision (ROD) for the Endicott Wellfield Site received by the New York State Department of Environmental Conservation (NYSDEC) on March 15, 1991, has been reviewed. The NYSDEC concurs with the selected Interim Remedial Measure (IRM) as presented in the draft ROD. This IRM calls for a purge well between the Endicott Landfill and the Village of Endicott Public Water Supply Well.

The USEPA must note that the Village of Endicott Sewage Treatment Plant may have to modify their SPDES permit if they accept the purge well discharge. Also, USEPA should acknowledge in this ROD where the funding for this IRM is coming from. If a Superfund State contract is necessary, this process should be initiated as soon as possible.

If you have any questions concerning this matter, please contact Mr. Michael J. O'Toole, Jr., P.E. at (518) 457-5861.

Sincerely,


Edward G. Sullivan
Deputy Commissioner

APPENDIX 4

RESPONSIVENESS SUMMARY
FOR THE
PROPOSED REMEDIAL ACTION PLAN
AT THE
ENDICOTT WELL FIELD SITE
ENDICOTT, NEW YORK

Public Comment:
February 22 through March 23, 1991

March 1991

Prepared for:
U.S. Environmental Protection Agency
Region II

ENDICOTT WELLFIELD SITE
RESPONSIVENESS SUMMARY
FOR THE
PROPOSED PLAN

TABLE OF CONTENTS

	<u>Page</u>
Overview.....	2
Background.....	3
Part I: SUMMARY OF MAJOR QUESTIONS AND CONCERNS.....	4
A. Technical Concerns.....	4
B. Other Concerns.....	4
Part II: COMPREHENSIVE RESPONSE TO SIGNIFICANT COMMENTS.....	5
A. Ground Water Flow.....	5
B. Capture Zone of Purge Well(s).....	6
C. Time and Cost of the Proposed Purge Well.....	8
APPENDIX A.....	9

**RESPONSIVENESS SUMMARY
ENDICOTT WELLFIELD SUPERFUND SITE**

The U.S. Environmental Protection Agency (EPA) held a public comment period from February 22, 1991 through March 23, 1991 for interested parties to comment on the Technical Memorandum for Implementation of the Interim Remedial Measures and Proposed Plan for remedial action at the Endicott Wellfield Superfund Site in Endicott, New York.

EPA held a public meeting on March 6, 1991 at the Municipal Building, Endicott, New York to describe the remedial alternatives and to present EPA's Preferred Alternative to clean up the Endicott Wellfield site.

A responsiveness summary is required for the purpose of providing EPA and the public with a summary of citizens' comments and concerns about the site raised during the public comment period and EPA's responses to those concerns. All comments summarized in this document will be considered in EPA's final decision for selection of the remedial alternative for cleanup of the site. The responsiveness summary is organized into the following sections:

- Overview:** This section briefly describes the public meeting held on March 6, 1991 and includes historical information about the Endicott Wellfield site along with the proposed remedial alternatives to clean up the site.
- Background:** This section provides a brief history of community interest and concerns regarding the Endicott Wellfield site.
- Part I:** This section provides a summary of commentors' major issues and concerns, and expressly acknowledges and responds to those raised by the local community. "Local community" may include local homeowners, businesses, the municipality, and not infrequently, potentially responsible parties (PRPs).
- Part II:** This section provides a comprehensive response to all significant comments and is comprised of the specific legal and technical questions raised during the public comment period.

As an additional resource, the transcript to the public meeting held on March 6, 1991 is attached as Appendix A. Some EPA responses in the Responsiveness Summary clarify answers given at the March 6, 1991 meeting, as reported in Appendix A.

OVERVIEW

At the time of the public comment period, EPA published its preferred alternative for the Endicott Wellfield Superfund site located in Endicott, New York. The public meeting for the Endicott Wellfield site began at 7:00 p.m. on March 6, 1991 with presentations by EPA and was followed by a question and answer session. Approximately 13 residents and local officials attended the meeting.

Melvin Hauptman, Chief, Eastern New York/Caribbean Superfund Section; Sherrel Henry, EPA Remedial Project Manager; and Cecilia Echols, Region II Community Relations Coordinator, represented EPA. EPA contractor personnel were represented by Gerry Zanzalari, ARCS II Community Relations Specialist.

EPA screened possible alternatives, giving consideration to nine key criteria:

- Threshold criteria, including

- Overall protection of human health and the environment
- Compliance with Federal, State, and local environmental and health laws

- Balancing criteria, including

- Long-term effectiveness
- Short-term effectiveness
- Reduction of mobility, toxicity, or volume
- Ability to implement
- cost, and

- Modifying criteria, including

- State acceptance, and
- Local acceptance.

EPA weighed State and local acceptance of the remedy prior to reaching the final decision regarding the remedy for the site.

The Agency's selected remedy is Alternative 2, the Supplemental Purge Well. This alternative consists of upgrading the existing Purge Well system with the installation of an additional Purge Well, to be installed west of Nanticoke Creek essentially between the suspected source of the VOCs to the aquifer (Endicott Landfill) and the receptor (the Ranney Well). The proposed location of the Purge Well is chosen to intercept the plume near its suspected source and to begin remediation of the aquifer.

The proposed well is estimated to be 110 feet deep and would be screened across the majority of the aquifer between the depths of approximately 50 and 110 feet. This design would intercept the majority of the flow within the contaminated portion of the aquifer, and prevent contaminated ground water from continuing to move under the Purge Well system, as may be happening with the existing Purge Well. However, the actual design will be based upon a pilot hole drilled at the proposed location during the Phase II RI. The goal of Alternative 2 is to further reduce migration of contaminated ground water and to collect data on aquifer and contaminant response to remediation measures. The ultimate goal of remediation will be determined in a final remedial action for the Site.

BACKGROUND

Community interest and concern about the site has been relatively steady over the past several years.

To obtain public input on the Technical Memorandum for Implementation of the Interim Remedial Measures and the proposed remedy, EPA held a public comment period from February 22 to March 23, 1991.

EPA's community relations efforts included preparation of a community relations plan in April 1985; publication of a fact sheet in October 1989 at the start of the field work for the Supplemental RI/FS; and the establishment of site information repositories located at the Endicott Village Clerk's Office which contain the Interim RI, Technical Memorandum and other relevant documents; and a public meeting notice that appeared in the February 22 and March 1, 1991 edition of the Endicott Village News. In addition, EPA prepared a Fact Sheet, describing the Agency's proposed remedial action plan for the site. This proposed plan fact sheet was sent to the information repository and distributed to citizens and officials noted on EPA's site mailing list in February 1991. A public meeting was held on

February 6, 1991. Approximately 13 people attended the public meeting. Those in attendance included local area residents, State, County, and local officials, representatives from EPA, and representatives from companies interested in the site activities and cleanup decisions. EPA also maintained contact with local officials and citizen leaders throughout the remedy selection process.

I. SUMMARY OF MAJOR QUESTIONS AND CONCERNS

This section provides a summary of commentors' major issues and concerns, and expressly acknowledges and responds to those raised by the local community. The major issues and concerns regarding the proposed remedy for the Endicott Wellfield site were received at the public meeting on March 6, 1991. These concerns are summarized below and are organized into the following categories:

- A. Technical Concerns
- B. Other Concerns

A summary of the comments and EPA's response to them is provide below.

A. TECHNICAL CONCERNS

- A local official inquired as to how the purge well functions.

EPA Response: The existing purge well is designed to capture contaminants in the groundwater, and our analyses indicate that it has been relatively successful. However, as described earlier, EPA has decided to install an additional purge well downgradient from the existing well and closer to the Endicott Landfill to capture low levels of contaminants that seem to be bypassing the original well. This additional well will be installed to a greater depth than the original well and will take in additional quantities of contaminated groundwater. The addition of this purge well is aimed at preventing contamination from reaching the Ranney Well. In addition, EPA plans to expand our investigation of this issue as part of the Phase II study.

B. OTHER CONCERNS:

- A local official asked if EPA had experienced as great a level of PRP and local government agency cooperation at other Superfund sites as it has in Endicott.

EPA RESPONSE: The PRP at the Endicott site has been extremely cooperative with EPA concerning cleanups and this level of cooperation is sincerely appreciated.

- A local official asked when the site would be available for use in the future.

EPA RESPONSE: EPA is currently uncertain when the site will be available for future use since our proposed remedy focuses exclusively on groundwater. The issue of as to the source of the contamination is still being investigated. If the Endicott Landfill is determined to be the source, it will be addressed in the final Record of Decision for the Site.

PART II: COMPREHENSIVE RESPONSE TO SIGNIFICANT COMMENTS

This section provides a comprehensive technical response to comments or questions received during the public comment period. Concerns and questions presented in this section consist of three categories:

- A. Ground Water Flow
- B. Capture Zone of the Proposed and the Existing Purge Well
- C. Time and Cost of the Proposed Purge Well

The Village of Endicott, a PRP, through their consultant Malcolm Pirnie, submitted comments on the proposed installation of the supplemental Purge Well. The comments that were submitted by Malcolm Pirnie and EPA's response to them is provided below.

A. Ground Water Flow

The Proposed Plan indicates that ground water containing volatile organic compounds (VOCs) may flow beneath the existing purge well toward the Ranney well. Ground water flow paths could be much better defined if several flow-sections, which include the purge well and Ranney well, were constructed. Using existing hydraulic head data, flow nets could be constructed for these flow-section and would provide an indication of the vertical component of ground water.

EPA Response. Ground water flow beneath the existing purge well will be further defined during Phase II of the supplemental RI/FS. In addition, at the conclusion of this

study , the vertical component of ground water flow will be further defined utilizing all available data.

- The Proposed Plan indicates that VOC-contaminated ground water is present below and downgradient of the existing purge well. It is implied that this ground water represents a potential threat to the quality of water which the Ranney well withdraws. Yet, the location of the proposed purge well is sufficiently upgradient from this area that it will have no appreciable effect on the movement of this contaminated ground water. The Proposed Plan's discussion of the short-term effectiveness of the two evaluated alternatives should indicate that neither alternative will control the movement of ground water and contaminants in this portion of the aquifer.

EPA Response. The Proposed Plan indicated that contaminants were detected down-gradient of the existing purge well in order to show that the purge well system may not be effective in capturing all of the contaminants emanating from the suspected source of the contamination (the Endicott Landfill). The Supplemental Purge Well (SPW) is intended to increase the efficiency of the existing purge well system and to aid in aquifer cleanup by reduction of the contaminant plume.

The VOC- contaminated ground water detected downgradient of the existing purge well does represent a potential threat to the quality of the water the Ranney Well withdraws. However, the first operable unit determined the remedial action for the Ranney Well. Presently, this remedial action (as selected in the 1987 ROD) of a packed column air stripper to treat the raw water from the Ranney Well is scheduled for start-up in Spring, 1991. Therefore, any threat to the Ranney Well water supply will be addressed by that remedial action.

The intent of the Short-term Effectiveness section is to address the effects of the alternative during the construction and implementation period until cleanup goals are achieved. While the selected alternative does not address the part of the aquifer which is downgradient of the existing purge well, the results of the Phase I RI sampling did not detect any contaminant above the Maximum Contaminant Levels established under the Safe Drinking Water Act. Therefore, the selected interim remedy has no short-term impacts on the Ranney Well quality. Clarification of this fact is made in the ROD.

B. Capture Zone of the proposed and the Existing Purge Well

- To date, the capture zone of the existing purge well has not been defined. The Technical Memorandum cites a previous conclusion by GZA (1987) that the existing purge well's capture zone does not extend west of Nanticoke Creek. Yet, the interim report, Plates 3-1 through 3-3, indicates groundwater flow paths which extend significantly west of Nanticoke Creek. Limiting ground water flowlines, which identify the boundaries of the capture zone, should be plotted for the purge well and Ranney well. This will allow the areas which contribute ground water to the purge well and Ranney well to be identified.

EPA Response.

The Scope of Work for the Phase II of the supplemental RI/FS includes provision for identification of the boundaries of the capture zone. In addition, monitoring well MW-30 will be installed at the proposed location of the SPW and it will be used to assist in the proper design of the additional purge well. This will include defining the capture zone for the existing purge well.

- We believe that as part of the evaluation process, the probable capture zone of a supplemental purge well must be estimated. Unless this determination is made, it is unclear how the benefit of the supplemental purge well can be evaluated. Without knowledge of its capture zone, it is not possible to estimate what portions of the contaminated ground water it will control. Existing data, including potentiometric maps and aquifer characteristics from the 1984 pumping test of the existing purge well, can be used for this determination.

EPA Response.

The main benefit of the SPW is to expedite the clean-up of the ground water aquifer. The probable capture zone of the SPW will be eventually evaluated during the final FS for the Site because it is envisioned that this interim remedy may be incorporated into the design of the source control remedy.

- Coupled with the determination of the supplemental purge well's zone of capture, the effect of its operation on the zone of capture of the existing purge well should be evaluated.

EPA Response.

The effects of the SPW operation on the zone of capture of the existing purge well will be evaluated during the detailed aquifer pump test that will be conducted after the installation of the SPW. This will be further evaluated during the monitoring program to be implemented for the SPW.

- Based on the evaluation of the capture zones for the proposed and existing purge wells, the contaminant sources which will be controlled by the proposed interim remedial action should be clearly identified.

EPA Response.

Based on the results of the Phase I RI, it was determined that the Endicott Landfill appeared to be the most significant source of the Volatile Organic Compounds detected at the Site. Phase II of the supplemental RI will further investigate if a deeper plume of contaminants may be emanating from an industrial landfill located west of Nanticoke Creek. It is proposed that the SPW will be installed west of Nanticoke Creek, essentially between the suspected source of VOCs to the aquifer (Endicott Landfill) and the receptor (the Ranney Well). The proposed location is chosen to intercept the plume nearest its suspected source.

- In order to more fully determine the range of options which are available for an interim remedial action, we believe an alternative which includes installation of a deeper purge well in conjunction with the existing purge well should be evaluated.

EPA Response. The final design of the SPW will be based on a monitoring well to be drilled at the proposed location during the Phase II RI/FS. However, the SPW is estimated to be 110 feet deep and the existing purge well is reported to be approximately 65 feet deep. Therefore, the SPW will be deeper than the existing one.

C. Time and Cost of the Proposed Purge Well

- The addition of the estimated present worth of \$207,000 for the no-action alternative to the \$376,000 cited for the supplemental purge well, or a total of \$583,000, appears to reflect more accurately the estimated present worth of the proposed purge well. This is required since the annual operation and maintenance costs associated with the no-action alternative will also be performed, even if a

supplemental purge well is installed.

EPA Response. The annual operation and maintenance cost associated with the no-action alternative are being expended under an existing remedial action. Therefore, those costs were not included in the present worth cost of the SPW. The ROD indicates that the operation and maintenance cost for the selected alternative only applied to the additional Purge Well.

The Proposed Plan indicates that the time required to implement the proposed interim remedial action is 24 months. It would be useful to compare this period to the current schedule for completing the Feasibility Study (FS) and the selection and implementation of the final remedial action. The existing Project Operations Plan indicates that the FS will be completed approximately one year after initiation of Phase II of the Remedial Investigation, scheduled for this spring.

EPA Response. The schedule in the Project Operations Plan is only an estimate for the completion of a draft FS, not for implementation of the Remedial Action. After the FS is finalized, a Record of Decision will be issued. The proposed interim action will permit data to be collected which can then be utilized in the development of a ground water model to fully characterize the hydrologic setting of the Site and for possible utilization as part of the overall remedy for the Site.

APPENDIX A

1 STATE OF NEW YORK

2 COUNTY OF BROOME

3 - - - - -

4 In the Matter of

5 The Superfund Proposed Plan

6 Endicott Wellfield Superfund Site

7 Endicott, New York

8 - - - - -

9 A Public Hearing held at the Municipal
10 Building, Endicott, New York, on the 6th day of
11 March, 1991, commencing at 7:00 PM.

12

13 BEFORE: CZERENDA COURT REPORTING, INC

14 164 Court Street

15 Binghamton, New York 13901

16 Notary Public

17 Binghamton - (607) 723-5820

18 (800) 633-9149

19 MICHELE L. VAN ATTA, RPR

20 Shorthand Reporter

21 APPEARANCES: Cecilea Echols

22 Sherrel Henry

23 Melvin Hauptman

24

1 MS. ECHOLS: We're ready to begin.
2 Good evening and welcome. I'm Cecilia
3 Echols, the Community Relations
4 Coordinator for the Endicott Wellfield
5 Superfund Site.

6 Today's informational meeting is
7 regarding the proposed interim remedial
8 action to restrict and reduce the volume
9 of groundwater contamination at the site.
10 On our agenda today is Melvin Hauptman.
11 He will speak about the overview of
12 Superfund. And we also have Sherrel
13 Henry. She's the Remedial Project
14 Manager, and she'll discuss the site
15 history and the interim proposed remedy.

16 Before I give the floor to Mel, I
17 would like to tell you a little bit about
18 Community Relations and its role in
19 Superfund. Community Relations is the
20 program that is designed as part of
21 Superfund to help citizens get involved
22 in the decision-making process.

23 We always look for input during
24 the Remedial Investigation / Feasibilit

1 Study, the removal actions during
2 community interviews and remedial design
3 phases.

4 The Superfund Program also offers
5 a Technical Assistance Grant Program --
6 there was a handout on the table outside.
7 So I hope everyone took advantage of
8 picking up one. It is a grant that is
9 awarded to groups to hire a technical
10 advisor, and for him to assist the group
11 in reviewing and interpreting documents
12 that are related to a specific site.

13 I would encourage that everyone
14 have signed in on the sign-in sheet so we
15 can always update our mailing list and
16 keep you abreast of all the different
17 activities that are happening at the
18 site.

19 And I hope that everyone took the
20 handouts, especially the package that was
21 on the table and has to do with the
22 overheads so you can look on as Sherrel
23 will be going over it. And on that note,
24 I'll give the floor to Mel.

1 MR. HAUPTMAN: Thanks, Cecilia.
2 I want to thank you people for coming
3 tonight. Let me tell you a little bit
4 about Superfund so you know why we're
5 here tonight and what we're doing.

6 Superfund was passed in 1980 by
7 Congress. It's one of the environmental
8 laws that EPA has the authority to run.
9 And it was passed in 1980 because of
10 sites like the Love Canal that were very
11 much in the news, sites where the
12 chemical industries have disposed of
13 their chemicals that they didn't want
14 anymore, not that every Superfund Site is
15 a Love Canal.

16 So, what the Congress said to EPA
17 was, go out and find these sites and
18 figure out which ones are the worst ones,
19 and do that by modeling the site. Figure
20 out, you know, who's drinking the
21 groundwater, who's living near the site
22 that might be breathing air contaminated
23 by chemicals, is the river being impacted
24 by the site, things like that.

1 So we designed a model and scored
2 sites across the country, and sites that
3 scored above twenty-eight and a half got
4 placed on a program called the National
5 Priorities List and became eligible for
6 Superfund money. Now Superfund is called
7 the fund because the law authorized EPA
8 to start collecting revenues from the
9 industries.

10 And the first fund, the 1980 fund,
11 was funded at a level of one and a half
12 billion dollars. The program went for
13 five years, like most of the
14 environmental laws that Congress passes.
15 And there was a one-year layover from '85
16 to '86, and it got reauthorized in '86 at
17 a much higher funding level of nine and a
18 half billion dollars.

19 What was EPA supposed to do with
20 all this money once we found the sites?
21 We were supposed to do a detailed field
22 investigation of every one of these sites
23 and figure out what the chemicals were
24 and where they were migrating to, because

Superfund - Endicott

1 these chemicals tend to move because of
2 rain and things like that once placed in
3 the environment.

4 So Superfund Sites could have a
5 pool of chemicals coming out of its
6 bottom that might be polluting an
7 aquifer, people might be drinking that
8 water, it might be leaking chemicals into
9 a nearby water or a stream that might
10 have an affect on people or fish or
11 wildlife, and again people might be
12 breathing air contaminated with
13 chemicals.

14 So you people are supposed to go
15 out and do a detailed study at every one
16 of these sites, called a remedial
17 investigation, take a lot of samples of
18 the environment, the groundwater, the
19 area, the waste material itself, and find
20 out the extent of contamination at that
21 site.

22 The second part of this study
23 that's called the Remedial Investigation,
24 to find out where the chemicals are an

1 where they're going -- the second part of
2 the study is called the Feasibility
3 Study, and that's not a field study, but
4 rather an office operation whereby a
5 consultant would figure out different
6 feasible remedies that can be applied:

7 Dig up all these chemicals and
8 take it away somewhere else maybe; dig it
9 all up and treat it on site; contain the
10 site, if that's the best thing that
11 should be done with the site, things like
12 that, different engineering remedies that
13 could be applied to the site. A
14 groundwater pool may be pumped and
15 treated to try and reduce the
16 contaminates in the groundwater.

17 So, out of the Feasibility Study,
18 the EPA would then go forward and select
19 a remedy, and it's called a Cost Effect
20 Remedy. That's fancy lingo for the
21 cheapest of the various remedies that
22 will do the best job. And we're supposed
23 to entertain that nomination of the
24 remedy like before the public, and that's

1 what we're doing tonight.

2 Endicott Wellfield is a Superfund
3 site. EPA first became aware of it
4 because the Ranney well was contaminated
5 with chemicals. We didn't know where
6 they were coming from, but we knew they
7 were not naturally occurring chemicals,
8 and they were above health-based levels.
9 So that was the first remedy we selected
10 way back when, several years ago,
11 Sherrel?

12 MS. HENRY: Yeah.

13 MR. HAUPTMAN: We then went
14 forward and did another study to try and
15 figure out where the chemicals were
16 coming from. And that's part of what
17 we're doing tonight. We're proposing a
18 second remedy addressing the source of
19 chemicals as best as we can define it
20 right now. There will be a third type
21 remedy for this site, and that will
22 probably be the last of the three.

23 Now, another part of Superfund is
24 if EPA was spending its own Superfund

1 money, we were supposed to try and get
2 that money back from the people
3 responsible for placing the chemicals at
4 the sites. Those people were called
5 responsible parties.

6 And who are they? They're the
7 people who made the chemicals, took the
8 chemicals to the site that were placed in
9 the ground, and/or people that owned or
10 operated the site when chemicals were
11 disposed. These are all responsible
12 parties under the law.

13 And what Congress said to EPA is,
14 if you're going to spend EPA funds --
15 when you think there's a couple hundred
16 sites across the country that might cost
17 20 million dollars a pop, you can eat up
18 the money real fast -- try to maintain
19 the level of funding in the fund and try
20 to get your money back from responsible
21 parties at every site and try to get it
22 back from every one of the responsible
23 parties as a group.

24 So EPA can go forward and either

1 spend its own money or try to identify
2 responsible parties and have them do the
3 work themselves with government oversight
4 just as EPA is doing it.

5 For the first action at the
6 Endicott Wellfield Site we spent our own
7 money, fund money. The subsequent
8 studies that are taking place now,
9 responsible parties came forward after we
10 identified them.

11 I'll let Sherrel take it over from
12 here and tell you the specifics about the
13 site.

14 MS. HENRY: I have a very short
15 presentation, and it's basically going
16 over the proposed plan, which is located
17 outside on the desk. I hope everyone has
18 a copy of it. And if you want to follow
19 along, there's a handout of all of my
20 slides.

21 First, I'm going to give you some
22 background information about the site.
23 Can everyone see that one, see that up
24 there? All right.

1 The Endicott Wellfield Superfund
2 Site is located in the western end of
3 Endicott in Broome County. The site
4 consists of the Ranney well and its zone
5 of influence on area groundwater.

6 The Ranney Well was designed over
7 30 years ago, and it provides water to
8 the Village of Endicott Municipal System.
9 It operated without major problems until
10 May of 1981. Here's a map to give you a
11 better idea of exactly where it's
12 located.

13 The project study area basically
14 consists of the open area associated with
15 the En-Joie Golf Course, and the open
16 area of the sewage treatment plant, and
17 also the Endicott landfill, which is
18 identified here as Landfill One.
19 There's also two smaller landfills in the
20 northern portion of the project area,
21 Landfill Two and Landfill Three, located
22 right there. And this entire area right
23 here (indicating), there is what's
24 defined as the project study area.

1 MS. McVANNAN: May I ask what the
2 Tannery Sewer is on the other side
3 towards the southeast part of the map
4 there, the right?

5 MS. HENRY: I see what you're
6 talking about. That's been closed. We
7 did an investigation of it, and we didn't
8 find any contamination coming from the
9 sewer. That's since been closed.

10 MS. McVANNAN: The Tannery, as
11 far as I know, was never there, that's
12 why I'm --

13 MS. HENRY: There were previous
14 studies conducted at the site by the
15 Village of Endicott, and these studies
16 included a study in 1983 by Eugene Kudges
17 from the Village of Endicott, and Adams
18 and Grant did the study in 1984.

19 And these studies are basically
20 identified preliminary remedial measures
21 which ultimately resulted in the
22 reduction of the VOC in the Ranney Well
23 and remedial measures that were
24 implemented, including in 1983 the

1 Village of Endicott installed diffused
2 aeration directly in the Ranney well and
3 in July of 1984 a purge well was
4 installed. And the purge well currently
5 pumps at 600 gallons per minute.

6 In 1987 a Remedial Investigation /
7 Feasibility Study was done, the RI/FS
8 that Mel was talking about, and this was
9 completed in July of 1987. And this was
10 done by the New York State DEC. And in
11 1987, based on this report, EPA issued a
12 record of decision in which it selected
13 air stripping at the Ranney well and also
14 the performance of the supplemental RI/FS
15 Remedial Investigation / Feasibility
16 Study.

17 This implementation of the air
18 stripping is being performed by the
19 Village of Endicott, pursuant to a
20 Consent Decree entered into by the EPA,
21 the Village of Endicott, and Town of
22 Union. And this air stripping is
23 scheduled to begin operation in the
24 spring of 1991.

1 The supplemental RI/FS was
2 performed by IBM through their
3 consultants, Lozier/Groundwater
4 Associates. And this report, this
5 supplemental RI/FS, was broken up into
6 two phases, a Phase I and a Phase II.

7 The Phase I was completed in
8 November of 1990. And the results of
9 this Phase I indicated that the
10 groundwater in the aquifer, from which
11 the Ranney well gets its water, has be
12 impacted by volatile organic compounds,
13 and it also indicated the Endicott
14 landfill appears to be the most
15 significant source of this volatile
16 organic contamination.

17 In addition, low levels of
18 contaminants were detected downgradient
19 of the existent purge well which would
20 indicate that the purge well may not be
21 effective in capturing all the
22 contaminants emanating from the Endicott
23 landfill, and this is why EPA decided
24 to -- in a sense we detected the water

1 definitely contaminated.

2 EPA decided to do something about
3 it now, to start aquifer cleanup instead
4 of waiting until later, and we evaluated
5 two alternatives. And these alternatives
6 can include:

7 No action alternative, which would
8 entail leaving the site as it is with the
9 continued monitoring of the existent
10 system, mainly the air stripper and the
11 aeration system and the existent
12 purge well. And the cost would be
13 \$207,000 for the monitoring program.

14 And the second alternative is the
15 supplemental purge well, and this would
16 entail upgrading the current purge well
17 with the addition of an additional well
18 which would better be able to capture the
19 contaminants emanating from the suspected
20 source area. And the cost of this would
21 be estimated to be \$376,000.

22 EPA's proposed, we choose
23 alternative number two. And the
24 rationale for this is that this new

1 purge well would restrict the migration
2 of the contaminate plume and would also
3 aid in aquifer cleanup, which, you know
4 is very important, and it would increase
5 the efficiency of the existent
6 purge well.

7 And after, you know, after EPA --
8 after the comment period is over, which
9 would be over March 27th, and the
10 community has submitted comments, EPA
11 will move forward with a record of
12 decision, in which we will formalize the
13 selection of the remedy. And after that,
14 we will send special notice letters to
15 PRP's to ask them to participate in the
16 implementation of this remedy.

17 And that's the end of my
18 presentation. Are there any questions?

19 MS. ECHOLS: Before anyone has a
20 question, please state your name so the
21 stenographer can make an account of it.

22 MR. PALMISANO: I'm Frank
23 Palmisano, Trustee in the Village of
24 Endicott. In your experience -- anybody

1 can answer this question. In your
2 experience with this kind of Superfund
3 situation, environmental situation with
4 the well, have you ever experienced the
5 kind of cooperation that you've seen here
6 in the Village of Endicott between
7 business and government in solving
8 problems?

9 MS. HENRY: Not really. The PRP
10 have been very, very cooperative on this
11 site.

12 MR. PALMISAON: Mm-mm.

13 MS. McVANNAN: I'm Pat McVannan
14 from Endicott also, and I'd like to know
15 just how the purge well works. Obviously
16 the first one didn't. You're going to
17 upgrade it, that's going to cost
18 \$376,000. I'd like to know just what its
19 function is and how it's going to work to
20 make sure it's now going to be clean.

21 MS. HENRY: The existent purge
22 well has been effective, but what we're
23 finding is low levels of contaminates is
24 downgrading and the purge well was

1 designed to capture the contaminates from
2 the groundwater around irrigation, in
3 ponds and then discharged to the river.

4 It's been effective, we haven't
5 found, you know, anything in the purge
6 well above levels, but the problem is
7 that we're finding stuff downgrading,
8 which could be getting under the existent
9 purge well, and that's going to be
10 studied further in the Phase II study.

11 MS. McVANNAN: Is it going to
12 suck in more water and cover a larger
13 area or go to a deeper depth?

14 MS. HENRY: Yes. When the first
15 purge well was implemented, like we
16 weren't really sure where the source is,
17 but now we have a fairly good idea that
18 it's the Endicott Landfill. So this well
19 will be placed closer to the landfill so
20 that we can capture in the area where the
21 contaminate is more concentrated; so we
22 can capture most of it there.

23 MS. McVANNAN: So you say
24 supplement, but you're actually building

1 another well?

2 MS. HENRY: Yeah, we are building
3 another well. What I want to make clear
4 is the Ranney well water is safe. This
5 is just to enhance -- you know we have to
6 cleanup the aquifer, you know, the source
7 of contamination. That's something we
8 have to do even now. Right now the
9 drinking water is safe, but we have to do
10 something about the source or else
11 eventually it may impact the Ranney well.

12 Any more questions?

13 MS. McVANNAN: When will that
14 area be available for another land use?

15 MS. HENRY: Say that again.

16 MS. McVANNAN: When will -- the
17 area where you have your landfill, when
18 will that area be available or when can
19 it be used for regular, you know,
20 municipal use, other than just sitting
21 there?

22 MS. HENRY: I'm not really sure.
23 We have to -- if the landfill is
24 contaminated, we eventually have to do

1 something about that, and then, you know,
2 we won't even address that until probably
3 later on down in the year because it's an
4 additional study that needs to be done
5 before we can even address the landfill.
6 This is just the groundwater.

7 Anything else?

8 Thank you all for coming, and you
9 still have an opportunity to submit
10 formal comments by March 23rd.

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1 STATE OF NEW YORK :

2 COUNTY OF BROOME :


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4 I, Michele L. Van Atta, RPR, Shorthand
5 Reporter, do certify that the foregoing is a true
6 and accurate transcript of the proceedings in the
7 matter of Endicott Wellfield Superfund Site, held in
8 Endicott, New York, on March 6, 1991.

9

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MICHELE L. VAN ATTA, RPR

13

Shorthand Reporter

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Notary Public

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