ENGINEERING INVESTIGATIONS AT INACTIVE HAZARDOUS WASTE SITES

PHASE II INVESTIGATION

UTICA CITY DUMP
UTICA (C)

SITE NO. 633015
ONEIDA (C)

Prepared for:

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
50 Wolf Road, Albany, New York

Thomas C. Jorling, Commissioner

DIVISION OF HAZARDOUS WASTE REMEDIATION

Michael J. O'Toole, Jr., P.E. – Director

MAY 1992

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ENGINEERING INVESTIGATIONS AT INACTIVE HAZARDOUS WASTE SITES IN THE STATE OF NEW YORK PHASE II INVESTIGATION

UTICA CITY DUMP
633015

UTICA (C), ONEIDA (C)

MAY 1992

Performed Under
NYSDEC CONTRACT NO. D002340
NYSDEC WORK ASSIGNMENT NO. D002340-3

By
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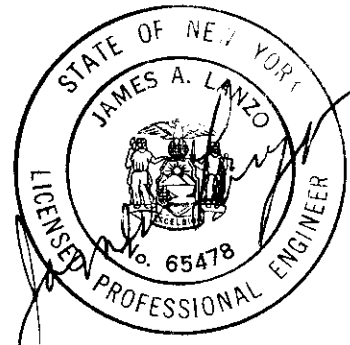

For
DIVISION OF HAZARDOUS WASTE REMEDIATION
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

UTICA CITY DUMP

NYSDEC PHASE II INVESTIGATION

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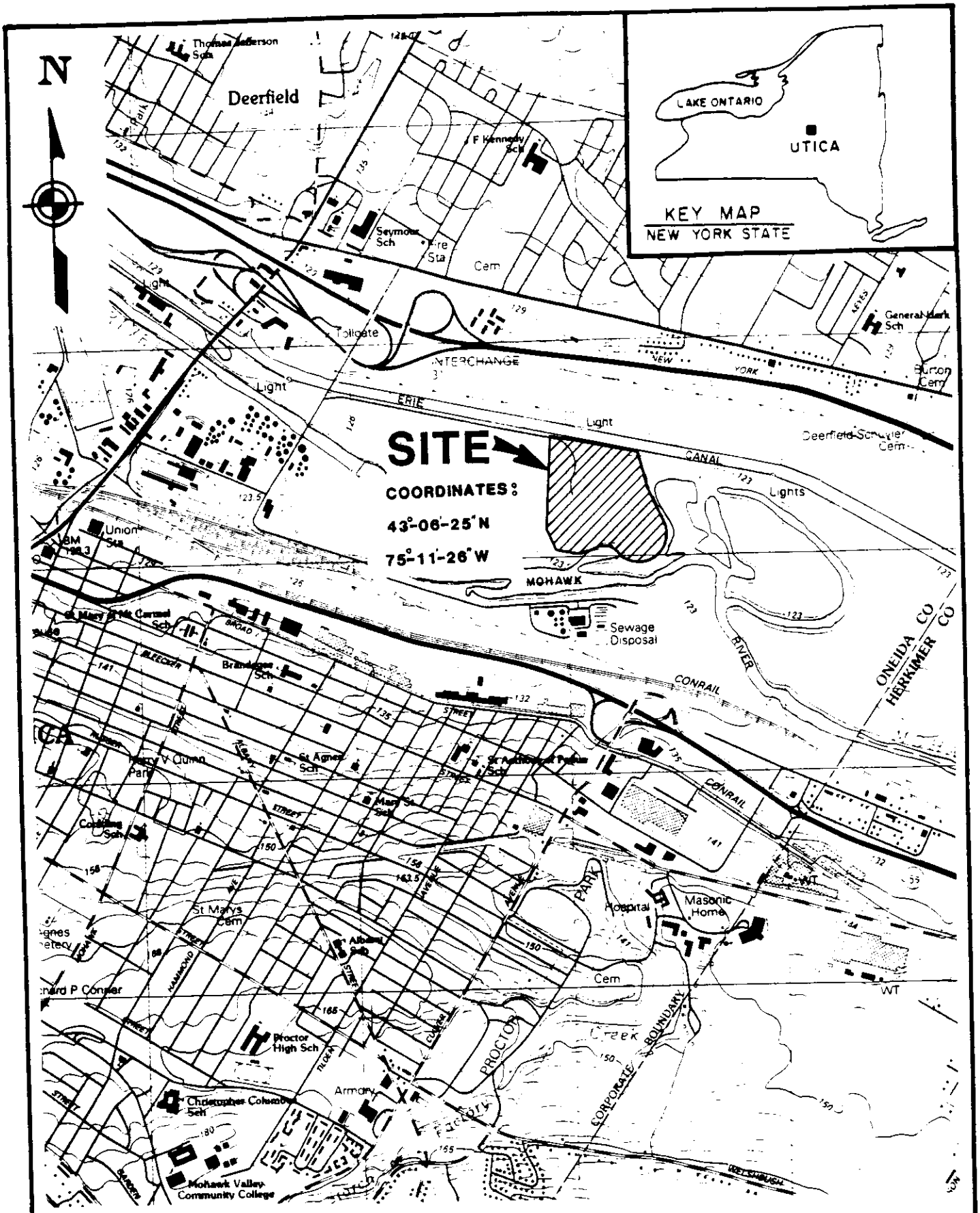
1. EXECUTIVE SUMMARY

The Utica City Dump (Site #633015) is located at the terminus of Incinerator Road in the City of Utica, Oneida County, New York (Figure 1-1). The 55-acre, inactive dump is bordered on the east and south by the Mohawk River, on the north by the Erie Barge Canal, and on the west by the City of Utica's active Hardfill Landfill. The site is currently classified as 2a on the New York State Registry of Inactive Hazardous Waste Disposal sites. Figure 1-2 shows a site sketch (Ref. 4). Photographs taken during the site reconnaissance are presented as Figure 1-3.

The dump accepted municipal wastes generated by the City of Utica from the early 1930s until 1972, when it was closed. An onsite incinerator was used to burn some of the refuse from the early 1930s to 1960. Many local industries have allegedly disposed of wastes at the site. In addition, some illegal dumping has occurred in the past (Ref. 4). A recent Right-to-Know (RTK) questionnaire indicated that Bendix Fluid Power Division disposed of more than 200 tons of electrochemical milling sludge (USEPA Hazardous Waste Code F006) per year from 1955 to 1979 at the site (Ref. 4). An earlier RTK Questionnaire (October 1984) revealed that the Utica Division of Kelsey-Hayes Co. disposed of 1.5 tons of sodium hydroxide descaling salts (USEPA Hazardous Waste Code D002) at the site once every four years from 1964 to 1984 (Ref. 3).

Previous investigations at the site have included a Phase II study which was conducted by EA Science and Technology. As part of that study, three monitoring wells were installed around the perimeter of the Utica City Dump. Due to flooding of the Mohawk River at the time of groundwater sampling, only two wells could be sampled. As a result of the flooding, a groundwater gradient reversal occurred. EA Science and Technology reported therefore that upgradient-downgradient groundwater relationships could not be established for the site. Nevertheless, NYSDEC groundwater



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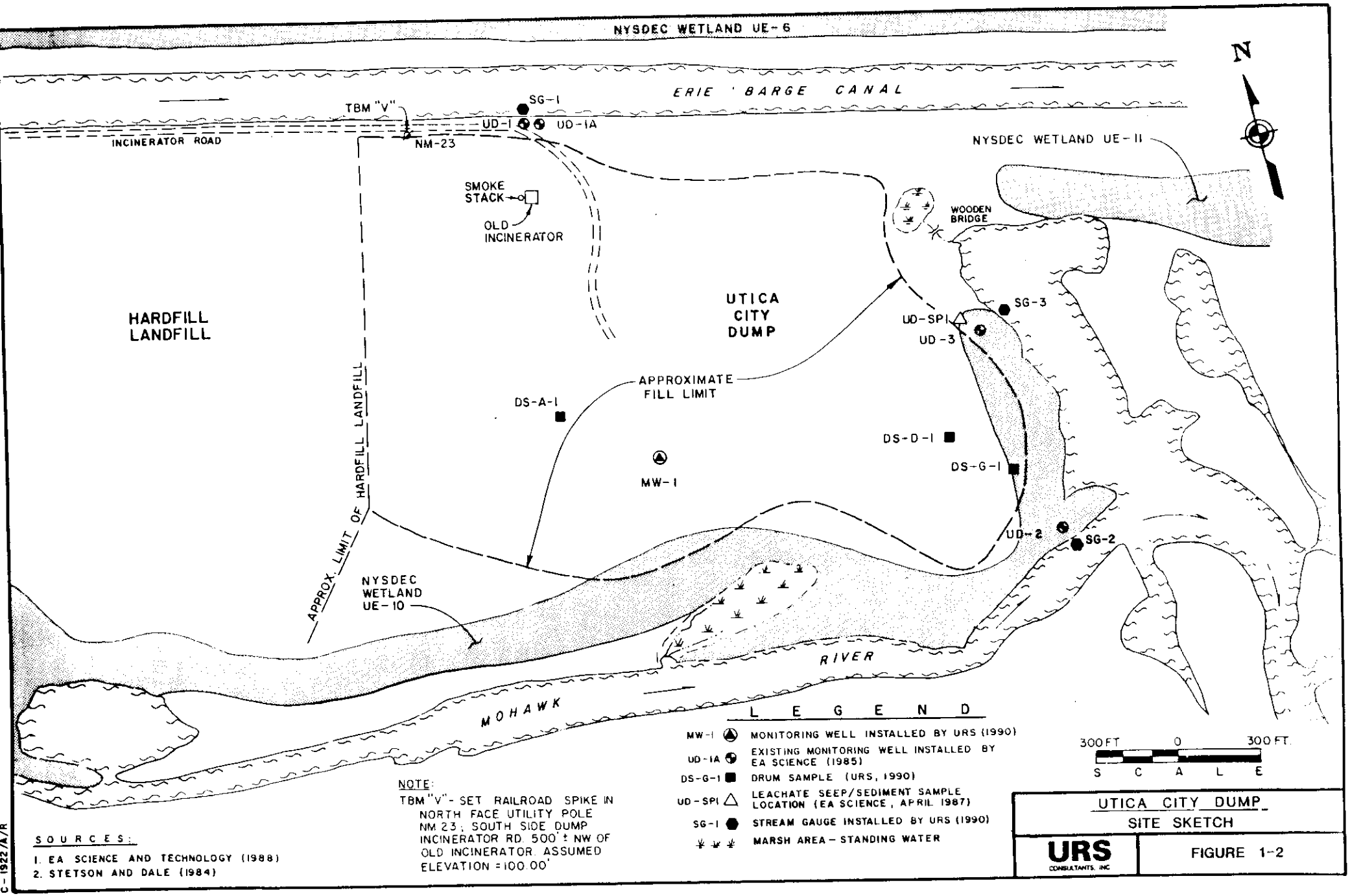
UTICA CITY DUMP
SITE LOCATION MAP

FIGURE 1-1

A-3301



NOTE:
TBM "V" - SET RAILROAD SPIKE IN NORTH FACE UTILITY POLE NM 23; SOUTH SIDE DUMP INCINERATOR RD. 500' ± NW OF OLD INCINERATOR. ASSUMED ELEVATION = 100.00'

SOURCES:
1. EA SCIENCE AND TECHNOLOGY (1988)
2. STETSON AND DALE (1984)

UTICA CITY DUMP
SITE SKETCH

URS CONSULTANTS, INC

FIGURE 1-2

C-1922/A/R

A large leachate "stream" located in the vicinity of URS monitoring well UD-3.

One of the drum clusters which are located onsite. This one is located in an overgrown area on the eastern side of the site.

FIGURE 1-3
SITE PHOTOGRAPHS
Utica City Dump

The remnants of the City of Utica's incinerator are located along Incinerator Road on the northwest portion of the site.

FIGURE 1-3
SITE PHOTOGRAPHS - CONTINUED
Utica City Dump

criteria for iron, manganese, and total phenol were exceeded in both wells. The EA Science and Technology study also reported that a leachate seep was discharging into the Mohawk River at the time of this sampling event. Analytical data revealed the presence of phenol and iron in excess of NYSDEC guideline values for Class C surface water. Thus a direct release of contaminants from the site to surface water was documented. Of three waste samples collected from individual steel drums lying on the ground at the site, one was classifiable as a corrosive hazardous waste with a pH > 12.5 as listed in 6NYCRR Part 371.3(c). In addition, several hundred drums were observed at the dump. These drums were reported to be in varying stages of deterioration. Because this Phase II study did not provide enough information to adequately characterize and reclassify the site, NYSDEC authorized URS Consultants, Inc., to conduct another Phase II Investigation.

URS's Phase II Investigation included installation of one monitoring well to monitor the water table aquifer. Environmental sampling included one surface soil sample, 4 groundwater samples (one from the URS well and 3 from existing wells installed by EA Science and Technology), and 3 surface waste (drum) samples. Groundwater and soil samples were analyzed for Target Compound List (TCL) organics, Target Analyte List (TAL) metals, and cyanide. Waste samples were tested for RCRA waste characterization.

Results of the surface soil analysis indicate the presence of acetone (25 ppb), total xylenes (6 ppb), 4-nitrophenol (340 ppb), and bis(2-ethylhexyl)phthalate (280 ppb). Cyanide was present at 0.72 ppb. Analytical results of groundwater samples reveal low levels of chlorinated solvents, BTEX compounds, and PAHs. Concentrations of some metals in groundwater samples (i.e., iron, lead, magnesium, and manganese) are significantly elevated relative to NYSDEC Standards and Guideline values. Of three waste samples tested, none was classifiable as hazardous waste.

Geology of the site consists of a thin (< 2 feet) sandy silt soil cover over approximately 15 feet of heterogeneous fill. The fill overlies interbedded fluvial sandy silt and lacustrine clayey silt. These shallow deposits are underlain by glaciofluvial, lacustrine, and alluvial deposits which extend to a depth of at least 141 feet (Ref. 4). Depth to groundwater at the site ranges from 5 to 10 feet. No community wells are located within a three-mile radius of the site. Potable water is supplied to the area by the Utica Board of Water Supply through intakes at Hinckley Reservoir, approximately 15 miles north of the site (Ref. 4).

Based on the findings of this Phase II Investigation, coupled with results of analytical data from previous investigations of the Utica City Dump, the following Hazard Ranking System scores were calculated:

$S_M = 11.09$ ($S_{GW} = 6.12$, $S_{SW} = 18.18$, $S_A = 0.00$)
$S_{FE} = 0.00$
$S_{DC} = 50.00$

Documentation of hazardous waste deposition at the site exists from Right-to-Know questionnaires completed by hazardous waste generators (Ref. 2, 3). Based on the adverse impacts to groundwater related to the hazardous waste disposal and the proximity of the site to NYSDEC regulated wetlands, the New York State Barge Canal, and the Mohawk River coupled with the presence of hazardous waste, significant threat to the environment has been demonstrated. URS recommends that the NYSDEC reclassify the site to a Class 2 on the Registry of Inactive Hazardous Waste Disposal sites. URS recommends that a Remedial Investigation/Feasibility Study (RI/FS) be conducted for the Utica City Dump, since this is considered the best mechanism to address all concerns regarding the site. Suggested elements for inclusion in the RI/FS are detailed in Section 4.8.

2. PURPOSE

The objectives of this Phase II Investigation are to determine whether hazardous wastes have been disposed of at the site; whether contaminants still exist in the groundwater, soils, or air at the site; and whether or not threats to human health or the environment exist. The findings of the investigation will be used to make recommendations regarding future action at the site and to develop a final HRS score.

The Phase II completed by EA Science and Technology in 1988 did not provide enough information to adequately evaluate and reclassify the site. Therefore, NYSDEC authorized this Phase II Investigation with the following scope:

- Installation of an additional well to better evaluate upgradient and downgradient conditions;
- Assessment of the relationship of trace levels of contamination in the groundwater at the adjacent Hardfill Landfill site to contaminants at the Utica City Dump;
- Investigation and sampling of additional drums in the onsite drum clusters;
- Location and sampling of additional seep locations in order to determine leachate characteristics; and
- Recommendation of future actions or required work.

3. SCOPE OF WORK

3.1 Introduction

The site-specific tasks that were performed for the Phase II Investigation included:

- Records search
- Site reconnaissance/site inspection
- Geophysical survey
- Drilling and installation of one monitoring well
- Air monitoring during onsite activities
- Environmental sampling of subsurface soil, groundwater, surface waste, and drilling water
- Site survey and mapping
- Site contamination assessment

The site-specific tasks are described below. Field activities were supervised by a URS Geologist and completed in accordance with the NYSDEC project Work Plan (Ref. 11), Quality Assurance Project Plan approved by NYSDEC (Ref. 12), and the Health and Safety Plan accepted by the NYSDEC (Ref. 13).

3.2 Records Search

A records search was performed to update and expand the data presented in a previous Phase II Investigation completed by EA Science and Technology in 1988, and to compile any additional information made available since this previous study. This Phase II Investigation involved the compilation of information gathered from several sources, including, but not limited to:

- o New York State Department of Environmental Conservation (NYSDEC) - Central Offices, Albany
- o New York State Department of Environmental Conservation (NYSDEC) - Region 6
- o New York State Department of Environmental Conservation (NYSDEC) - Region 9
- o New York State Department of Health (NYSDOH) - Albany
- o Oneida County Department of Health (OCDOH)
- o United States Geological Survey (USGS)
- o Public libraries

Field information and analytical data gathered by URS Consultants, Inc., along with information from previous investigations have been incorporated in this report.

3.3 Site Reconnaissance/Site Inspection

A site walkover was conducted on June 25, 1990, by URS Geologists Scott Swanson and Robert Kreuzer, NYSDEC Engineering Geologist William Shaw, and NYSDEC Engineer Mike Sirowich. Weather was sunny and warm with a gentle breeze from the west. The group walked the site, and staked the location of the proposed monitoring well (MW-1). Four monitoring wells (UD-1, UD-1A, UD-2, and UD-3) installed in 1985 by EA Science and Technology were also located. These wells were installed during the previous NYSDEC Phase II Investigation. Monitoring well UD-1 did not have a lock and the riser cap was missing. This well was determined to be unusable. The other three wells were secure.

Topography and terrain were also studied, especially with regard to drill rig accessibility. The surface of the site comprises both wooded areas and grassy/bushy vegetated areas, with abundant mounds of debris scattered around the site. Several hundred metal drums were observed among the debris mounds. Many of these were badly deteriorated and

contained little or no material. Two leachate areas were discovered on site, one (near MW-1) that flowed into surface depressions, and another (near UD-3) that flowed toward the Mohawk River. Both leachate areas were stained orange.

Air monitoring was conducted continuously across the site during the three-hour tour using an HNu photoionization detector (PID). No readings above background levels were recorded. A radiation survey meter was also employed to monitor radiation at the site. Some positive readings were noted. The meter, however, did not appear to be functioning properly.

During the geophysical survey, URS Geologist Scott Swanson and NYSDEC Engineering Geologist William Shaw conducted a second radiation survey. The purpose was to verify safe working conditions at the dump, especially near MW-1 where the geophysics was being performed. As with the initial survey, some positive readings were noted. Since, however, the meter continued to behave erratically, the results could not be utilized.

To make certain that no radiation threat existed at the Utica City Dump, NYSDEC Engineering Geologist William Shaw and URS Geologist Michael Gutmann conducted a third radiation survey shortly before the scheduled start of drilling. Mr. Shaw utilized a NYSDEC radiation survey meter which had been factory-calibrated. Throughout the site walkover, no readings above background levels were recorded. At that time, it was concluded that no radiation threat existed at the site.

3.4 Geophysical Survey

Two subsurface geophysical surveys, utilizing EM-31 and magnetometry methods, were conducted at the Utica City Dump site by Weston Geophysical Corporation of Westboro, Mass. The purpose of the surveys was to locate buried utilities or other subsurface obstructions. Survey results were

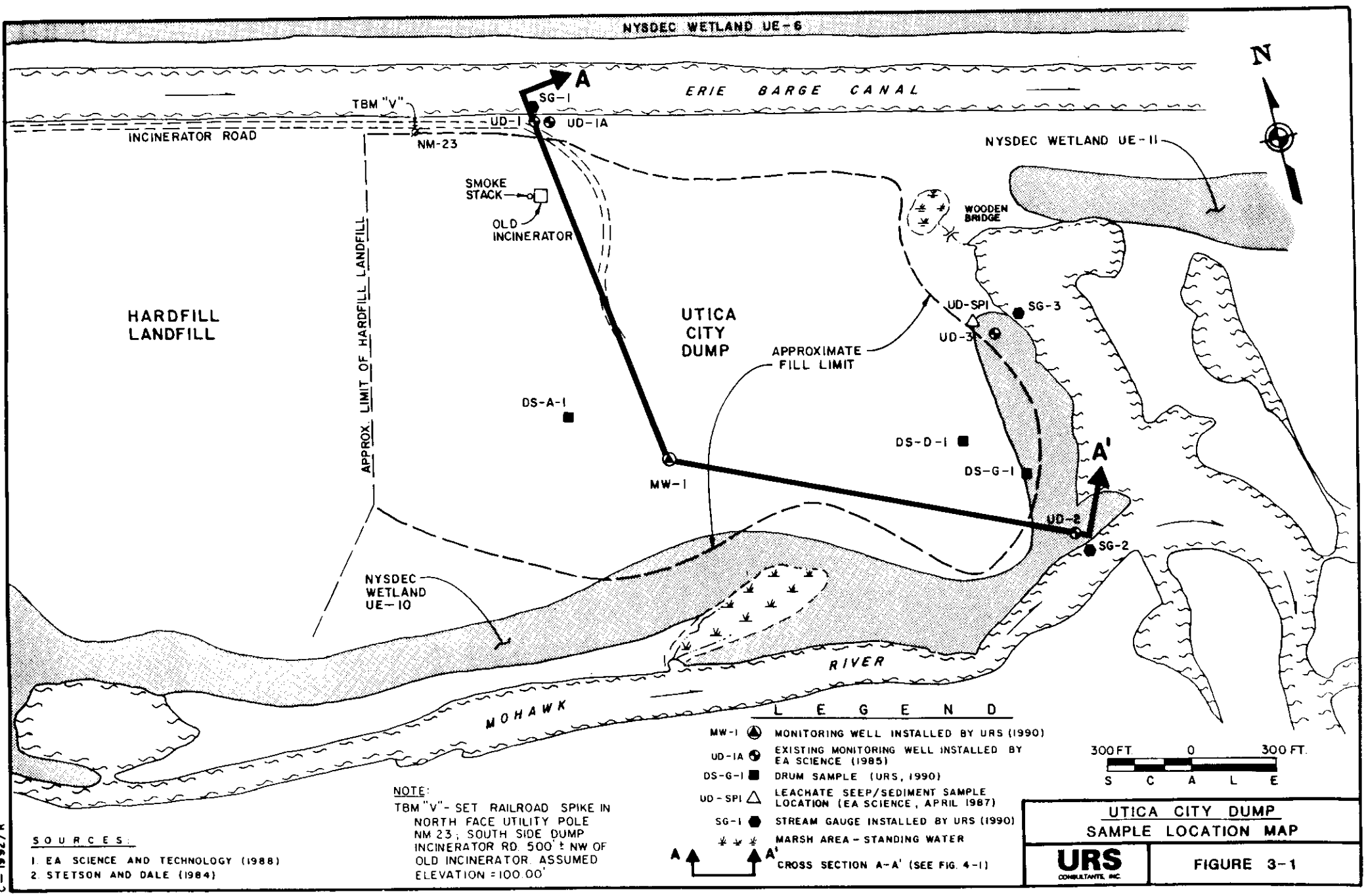
also used to locate potential subsurface drilling hazards in the area where construction of the monitoring well was planned, so as to finalize location of the proposed well.

Magnetometer and conductivity readings were obtained at 2-foot intervals along a 20 x 20-foot survey grid centered around the proposed monitoring well location. Metal objects buried in the subsurface, which cause fluctuations in the earth's magnetic field, are detectable by the magnetometer survey. The EM-31 survey measures electrical conductivity of soil, water, or buried materials. Metal objects or buried fill materials cause anomalies relative to background conductivity readings. An assessment of subsurface conditions may be made by interpretation of these data. Results of the survey suggested that the proposed location of monitoring well MW-1 was within an area of steep magnetic gradients, indicative of metallic objects. The source of the high magnetic values was interpreted, however, as being distant enough from MW-1 as to make the drilling location acceptable. Results of the geophysical survey are presented in Appendix A.

3.5 Soil Boring/Monitoring Well Installation

The location of the monitoring well (MW-1) installed at the site during the present investigation is shown on Figure 3-1. Field work commenced on August 23, 1990, and was completed the same day. Drilling operations were performed by American Auger and Ditching Co. of West Monroe, New York, using a truck-mounted Mobile B-57 drill rig.

The boring was advanced and monitoring well constructed in accordance with NYSDEC guidelines. Procedures for drilling in overburden followed specifications as detailed in the NYSDEC Technical/ Administrative Guidance Memorandum, Guidelines for Exploratory Boring, Monitoring Wells Installation, and Documentation of these Activities


NYSDEC WETLAND UE-6
ERIE BARGE CANAL
TBM "V"
INCINERATOR ROAD
NM-23
SG-1
UD-1
UD-1A
A
N
NYSDEC WETLAND UE-11
SMOKE STACK
OLD INCINERATOR
WOODEN BRIDGE
HARDFILL LANDFILL
APPROX. LIMIT OF HARDFILL LANDFILL
UTICA CITY DUMP
APPROXIMATE FILL LIMIT
UD-SP1
SG-3
UD-3
DS-A-1
DS-D-1
DS-G-1
MW-1
A'
UD-2
SG-2
NYSDEC WETLAND UE-10
RIVER
MOHAWK
L E G E N D
MW-1 MONITORING WELL INSTALLED BY URS (1990)
UD-1A EXISTING MONITORING WELL INSTALLED BY EA SCIENCE (1985)
DS-G-1 DRUM SAMPLE (URS, 1990)
UD-SP1 LEACHATE SEEP/SEDIMENT SAMPLE LOCATION (EA SCIENCE, APRIL 1987)
SG-1 STREAM GAUGE INSTALLED BY URS (1990)
MARSH AREA - STANDING WATER
A A' CROSS SECTION A-A' (SEE FIG. 4-1)
300 FT 0 300 FT.
SCALE
NOTE:
TBM "V" - SET RAILROAD SPIKE IN NORTH FACE UTILITY POLE NM 23; SOUTH SIDE DUMP INCINERATOR RD. 500' ± NW OF OLD INCINERATOR. ASSUMED ELEVATION = 100.00'
SOURCES:
1. EA SCIENCE AND TECHNOLOGY (1988)
2. STETSON AND DALE (1984)
UTICA CITY DUMP
SAMPLE LOCATION MAP
URS CONSULTANTS, INC.
FIGURE 3-1

(Ref. 14). The drill rig and equipment were steam-cleaned prior to drilling. As work progressed, downhole tools were cleaned according to NYSDEC-approved protocols and then placed on a clean, lined surface to minimize the potential for cross-contamination. The well boring was advanced to completion depth using 4-1/4-inch hollow-stem augers. Split-barrel samples were taken continuously to accurately define the subsurface soil characteristics and to identify the depth to groundwater. All samples were taken in advance of the augers, following ASTM 1586-84. The URS supervising geologist provided field descriptions and material classifications in accordance with ASTM D2488-84 as samples were obtained. In addition, all retrieved samples were inspected for visual signs of contamination and screened with a PID for the presence of organic vapors. One subsurface soil sample was selected for geotechnical analysis. One additional subsurface soil sample was collected for chemical analysis (Section 3.6). Appendix B presents the subsurface soil boring logs and Appendix C presents the results of geotechnical testing.

Table 3-1 presents descriptions of the URS well and the 3 wells installed in 1985 by EA Science and Technology. The URS well was placed to more accurately define the nature of contamination and to better assess groundwater flow across the site in conjunction with the EA Science and Technology wells. The URS well was installed in fill, and monitors the water-table surface.

The monitoring well was constructed of 2-inch ID schedule 40 PVC threaded flush-joint riser pipe, and a 10-foot length of 0.010-inch machine-slotted PVC well screen. Following the placement of the PVC well materials through the augers, quartz sand (#3 Q-Rok) was backfilled below and around the well screen to approximately 2 feet above the top of the well screen. [A gradation curve of #3 Q-Rok is included in Appendix C.] The screened interval was then sealed with a bentonite pellet seal approximately 2 feet thick. Cement/bentonite grout was tremied above the

TABLE 3-1
MONITORING WELL SUMMARY
UTICA CITY DUMP

Well No.	Date of Installation/Consultant	Well Boring Depth (ft.)	Location	Unit Screened	Screened Interval (ft.)
MW-1	August 1990/URS Consultants, Inc.	24	Central part of dump - upgradient	Fill	6-16
UD-1A	June 28, 1985/EA Science and Technology	34	Downgradient north of site near Erie Barge Canal	Clayey silt/silty clay	14-29
UD-2	June 28, 1985/EA Science and Technology	21.5	Downgradient, southeastern portion of site near Mohawk River	Fill and clayey silt/silty clay	7.5-17.5
UD-3	July 1, 1985/ EA Science and Technology	21.5	Downgradient, eastern edge of site, near Mohawk River	Clayey silt/sand	7.5-17.5

bentonite seal up to the ground surface. The well riser was fitted with a vented PVC cap, and the well was then secured with a 5-foot length of 4-inch ID steel/protective casing with lockable cap. Well construction and materials for the monitoring wells are detailed in Appendix D.

Three rounds of water level readings were obtained during the drilling, well development, and sampling activities. Three staff gauges were installed at the site by URS (Figure 3-1). Staff gauge SG-1 was placed near well UD-1A in the barge canal, and SG-2 and SG-3 were placed in the Mohawk River near wells UD-2 and UD-3, respectively. The staff gauges were also monitored during groundwater level measurements. These data allowed a determination of the groundwater flow direction to be made across the site, as discussed in Section 4.4.2.

3.6 Monitoring Well Development

Approximately three weeks after monitoring well MW-1 was installed, the URS well was developed to remove residual sediments inadvertently introduced during the drilling and well installation process, as well as to ensure that water in the well represented groundwater. The monitoring well was developed using a suction lift pump and dedicated polyethylene tubing until the discharge achieved visual clarity, turbidity was less than 50 NTU, and temperature/pH/conductivity measurements stabilized. The three existing wells installed by EA Science and Technology were also re-developed in the same manner and according to the criteria described above. Well development logs indicating volume extracted, parameter measurements, pumping data, and recharge characteristics are provided in Appendix E.

3.7 Environmental Sampling and Analysis

Samples taken for chemical analysis included subsurface soil, groundwater, and drum waste. The samples were placed in pre-cleaned glass

jars with teflon-lined screw-caps. Each sample jar was labeled with a site-specific sample identification code indicating the sample location and number. Samples were preserved on ice and shipped under chain-of-custody control to Versar Laboratories, Inc., of Springfield, Virginia. The NYSDEC Analytical Services Protocol (ASP) dated September 1989 was utilized for analysis and reporting (Ref. 15). Appendix F provides a description of the type and locations of environmental samples and Appendix G presents Form Is for the analytical data. The data are summarized in Chapter 4.

3.7.1 Subsurface Soil Sampling and Analysis

One subsurface soil sample was collected from the URS well boring. The sample was obtained above the water table from the surface-to-2-foot depth (Table 3-2). In addition, one field blank was obtained by rinsing the split-barrel sampler with deionized water after decontamination. The soil sample and field blank were analyzed for Target Compound List (TCL) volatiles, semivolatiles, pesticides/PCBs and cyanide as well as Target Analyte List (TAL) metals. Analytical results for this sample are presented in Section 4.5.3.

3.7.2 Groundwater Sampling and Analysis

Groundwater samples were collected from the URS monitoring well (MW-1) and the three secure EA Science and Technology wells (UD-1A, UD-2, and UD-3) on October 4, 1990. In addition, one field blank was collected by rinsing a decontaminated stainless-steel bailer which had been used for well sampling. The water samples were analyzed for TCL volatiles, semi-volatiles, pesticides/PCBs, and cyanide, as well as TAL metals. One trip blank was also analyzed for TCL volatiles. Since the same water source was used for drilling at the Utica City Dump as was used for the Mohawk Valley Oil Phase II site, a drill water sample was not collected at this site. Full TCL and TAL metals and cyanide analysis was conducted on the

TABLE 3-2
SOIL SAMPLE SUMMARY
UTICA CITY DUMP

Boring	Sample (ft)	Sample Selection Criteria
MW-1	0-2	Cover soil

drill water sample collected during the Mohawk Valley Oil site study. Results of these analyses are summarized in Section 4.5.4 (Table 4-4).

Prior to groundwater sampling in each well, the water level was recorded and the well purged of at least three well volumes with a stainless-steel bailer and dedicated nylon rope. The bailer was initially decontaminated by successively rinsing with a non-phosphate soap and water wash, tap water, pesticide-grade methanol and deionized water. All sample bottles were filled using the stainless-steel bailer, which was decontaminated between well sampling events.

3.7.3 Drum Sampling and Analysis

Three drum waste samples were collected from clusters of 55-gallon drums lying in three separate areas about the site. Each sample was obtained from a single drum within drum clusters A, D, and G (Figure 1-2). These clusters had been designated by EA Science and Technology during its Phase II Investigation (Ref. 4). Each drum sampled was screened with a PID, with no readings above background being recorded. The NYSDEC Work Plan specified that 10 drum samples were to be collected. Only 3 suitable samples could be collected, however, since most of the accessible drums were badly rusted and empty. The drum waste samples were analyzed for RCRA waste Characteristics. Analytical results are presented in Section 4.5.7. Sample descriptions are included in Appendix F.

3.7.4 Leachate Seep Sampling and Analysis

Four leachate seep samples were to be collected at the site as specified in the NYSDEC Work Plan (Ref. 11). However, the leachate seeps previously identified during the site reconnaissance (Figure 1-3) were found to be dry during the sampling program. Therefore, no leachate samples were collected.

3.8 Air Monitoring

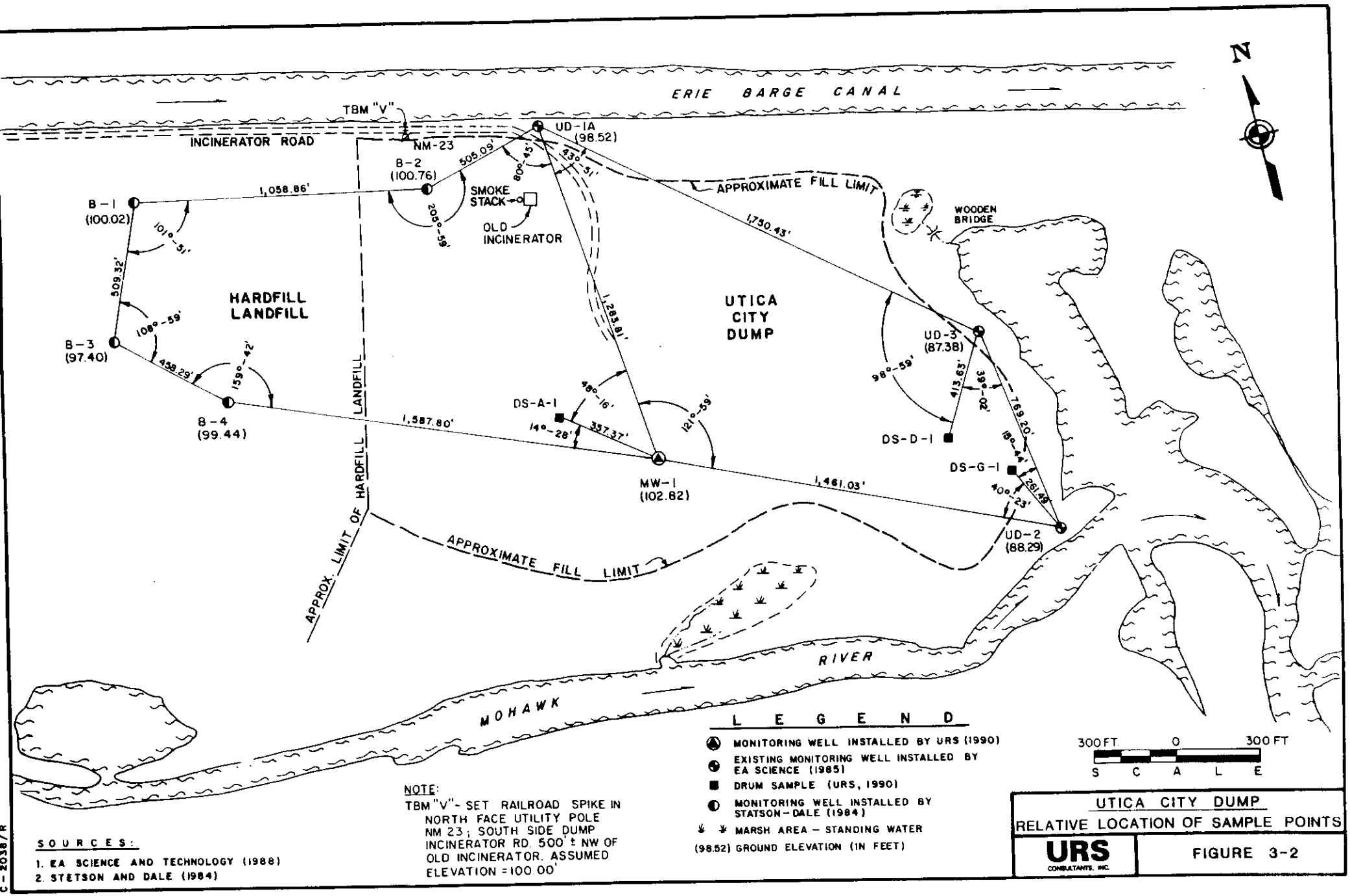
Air monitoring was performed with an HNu PID throughout the drilling and sampling programs. The HNu was calibrated daily with an isobutylene standard, and all results were recorded. Air in the breathing zone (generally 4 to 5 feet above ground) was monitored during both drilling and sampling activities. No responses of the HNu above background were recorded during the drilling or sampling activities. In addition, headspace in each well was monitored prior to most water level measurements and prior to groundwater sampling. A summary of these results is presented in Section 4.6.

Explosive atmosphere/oxygen content was measured with an explosimeter throughout the drilling program. The explosimeter was calibrated daily with a methane standard, and the background atmosphere and results were recorded in the field notebook. Monitoring took place around and within the borehole during drilling to ensure safe working conditions. Levels above background were not recorded at any time during drilling.

3.9 Surveying and Mapping

Following the completion of the Phase II monitoring well installation and field sampling programs, the wells and sampling points were surveyed for horizontal and vertical location. These data were then used for the preparation of the site maps and to assist with data interpretation.

The horizontal datum was local and site-specific. The vertical datum was based upon an assumed elevation (100.00 feet) of a railroad spike set as a Temporary Bench Mark (TBM) in the northerly face of a utility pole (NM 23), on the south side of Incinerator Road, 500± feet northwest of the incinerator building (Figure 3-2).



L E G E N D

- MONITORING WELL INSTALLED BY URS (1990)
- EXISTING MONITORING WELL INSTALLED BY EA SCIENCE (1985)
- DRUM SAMPLE (URS, 1990)
- MONITORING WELL INSTALLED BY STATSON-DALE (1984)
- MARSH AREA - STANDING WATER
- (98.52) GROUND ELEVATION (IN FEET)

NOTE:
TBM "V" - SET RAILROAD SPIKE IN NORTH FACE UTILITY POLE NM 23; SOUTH SIDE DUMP INCINERATOR RD. 500' ± NW OF OLD INCINERATOR. ASSUMED ELEVATION = 100.00'

SOURCES:
1. EA SCIENCE AND TECHNOLOGY (1988)
2. STETSON AND DALE (1984)

UTICA CITY DUMP
RELATIVE LOCATION OF SAMPLE POINTS

URS CONSULTANTS, INC.

FIGURE 3-2

C-2038/R

All surveying was done under the supervision of a New York-licensed Land Surveyor. A site map was prepared based on the Phase II site sketch and aerial photographs. Obvious defects were corrected and important additional topographic features were added as necessary. Wells and sample points were plotted to an appropriate scale using the survey data. Figure 3-2 shows the relative location of sample points for the Utica City Dump.

On March 13, 1991, URS conducted an additional survey to locate the four Stetson-Dale monitoring wells on the adjacent Hardfill Landfill site. At that time, the Stetson-Dale wells were found to be without locks. These four wells were part of an engineering study performed by Stetson-Dale at the Hardfill Landfill as part of the City's application for a Part 360 permit. This survey was tied into the URS survey of the Utica City Dump and was intended to update and expand the existing Phase II map base and provide additional data for groundwater flow interpretation. These additional survey points (B-1 through B-4) have been included in Figure 3-2.

4. SITE ASSESSMENT

4.1 Site History

The Utica City Dump is located at the terminus of Incinerator Road, approximately one-half mile east of its intersection with Leland Avenue in the City of Utica, Oneida County, New York (Figure 1-1). The 55-acre dump is bordered on the east and south by the Mohawk River, on the north by the Erie Barge Canal, and on the west by the City of Utica's active Construction and Demolition (C&D) Debris Hardfill Landfill (Figure 3-1) (Ref. 4).

The City of Utica began operating the dump in the early 1930s, accepting municipal wastes generated from the City of Utica. During its early years of operation, the site operated as an open dump. In later years, the City of Utica used the trench-and-fill method of disposal, employing excavated soil and demolition debris as cover. Some wastes were incinerated at an onsite incinerator building from approximately 1930 to 1960 (Figure 3-1). The incinerator ash was mixed with municipal refuse and deposited across the site. The Utica City Dump was closed in 1972. Since then, the City has used land west of the dump (Hardfill Landfill) for disposal of C&D Debris generated by the City of Utica (Ref. 4).

Little information is available concerning the types and quantities of industrial and hazardous wastes that have been disposed of at the dump. Most wastes deposited at the dump were municipal (with some industrial) garbage. However, many industries located in the City of Utica have allegedly disposed of wastes on this site in the past, including: Bonide Chemical, Beaunit Fibers, Savage Arms, Univac, General Electric, Kelsey Hayes, and Foster Paper (Ref. 4). In addition, unauthorized dumping has occurred in the past. It is unknown, however, what wastes were deposited (Ref. 4).

Interviews, conducted by EA Science and Technology with Utica City Department of Public Works employees, did produce some information concerning past dumping practices and site occurrences. Some employees reported exploding drums, which caused fires at the dump. Others reported that fires began as a result of drums spontaneously combusting. In addition, underground fires have burned at the dump for months at a time (Ref. 4). The Utica City Fire Marshall stated in Feburary 1991 that the dump did not pose a fire hazard (Ref. 1).

A Right-to-Know (RTK) questionnaire completed in July 1984 revealed that Bendix Fluid Power Division disposed of approximately 200 tons per year of electrochemical milling sludge (EPA waste code F006) at the Utica City Dump from 1955 to 1979 (Ref. 2). A separate RTK questionnaire (October 1984) indicated that the Utica City Division of Kelsey-Hayes Co. disposed of approximately 1.5 tons of solid sodium hydroxide descaling salts (Class D002) at the dump once every 4 years from 1964 to 1984 (Ref. 3). Since the Utica City Dump was reported closed in 1972, it is likely that from 1972 to 1979, the reported disposal of electrochemical milling sludge occurred at the adjacent Hardfill Landfill. Similarly, it is likely that, from 1972 to 1984, the reported disposal of sodium hydroxide descaling salts occurred at the Hardfill Landfill.

At present, active disposal of C&D debris occurs west of the Utica City Dump at the Hardfill Landfill (Figure 3-1). The City of Utica also uses the northwesternmost portion of the Utica City Dump for disposal of snow removed from city streets (Ref. 4).

4.2 Regional Setting

4.2.1 Geography

The Utica City Dump is bordered by the Erie Barge Canal on the north, the Mohawk River on the east and south, and the City of Utica's

Hardfill Landfill on the west. The Mohawk River and Erie Barge Canal are designated Class C water bodies in the vicinity of the Utica City Dump (Ref. 16). Four protected freshwater wetlands are located within one mile of the site (Ref. 6). Two of these (UE-10 and UE-11) are located along the perimeter of the Utica City Dump (Figure 3-1).

No community wells have been identified within a three-mile radius of the site (Ref. 7). Potable water is supplied to the area by the Utica Board of Water Supply through intakes at Hinckley Reservoir, approximately 15 miles north of the site (Ref. 4).

4.2.2 Geology

The Utica City Dump is located within the Hudson-Mohawk Lowlands physiographic province of New York State (Ref. 17). The Mohawk River Valley in the vicinity of the site is underlain by the Ordovician age Utica Shale Formation. Depth to bedrock at the Hardfill Landfill, adjacent to the site, is in excess of 141 feet (Ref. 4). Regional dip of the bedrock is reportedly to the south (Ref. 18).

Pleistocene glaciation eroded the Mohawk Valley Trough beneath the present-day valley floor. The trough was subsequently buried with a sequence of glacial till, outwash, and lake sediments. Recent floodplain sediments of the Mohawk River cap the glacial deposits. The entire valley fill sequence is saturated. Regional groundwater flow is generally toward the valley axis (north-northeast), with only a slight downvalley flow component (east).

4.3 Site Setting

The surface of the Utica City Dump is generally covered and hummocky. Vegetation across the site consists of grassy areas, bushes, trees, and shrubs. Many isolated mounds of debris in the form of 55-

gallon drums and general municipal refuse are in evidence. The surface slopes predominantly although irregularly toward the east and south. Average slope ranges from 2 to 4 percent across the site (Ref. 4). Uncovered refuse protrudes from the subsurface along the perimeter of the dump and through the thin cover material at numerous locations. During the site reconnaissance, leachate outbreaks and ponded areas were observed near the central, southern, and eastern areas of the dump. In addition, many drum clusters were observed throughout the site. The Phase II Investigation completed by EA Science and Technology in 1988 adequately describes the drum cluster areas (Figure 1-2) (Ref. 4). Only one existing building (Incinerator Building) was observed at the site. The building is located just south of the terminus of Incinerator Road (Figure 3-1). Access to Incinerator Road near the junction of Leland Avenue is controlled by a locked gate which is guarded during working hours.

4.4 Site Hydrogeology

4.4.1 Site Geology

Four shallow subsurface soil units were delineated within borings advanced as part of this and the previous Phase II Investigation. These units are described below:

- o Fill - Generally brown and gray, medium dense, moist to wet sandy silt mixed with gravel, household refuse, paper, plastic, and metal cans. Thickness is approximately 14-15 feet.

- o Sandy Silt - Gray, medium dense, wet, sandy silt. Thickness is approximately 3 feet.

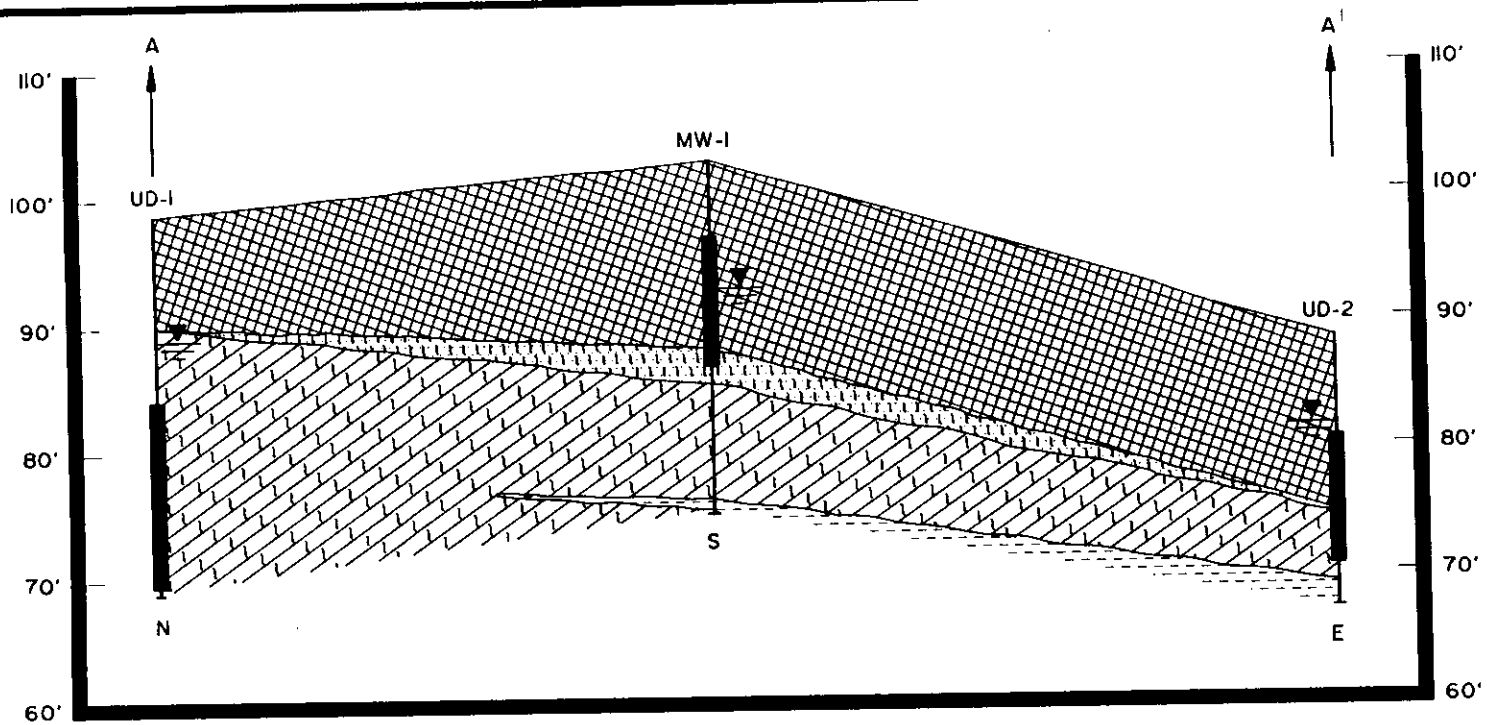
- o Clayey Silt - Gray, very soft, moist to wet, medium plasticity clayey silt with some sand. Thickness ranges from approximately 9 feet to 20 feet.

- o Peat/ Clayey Silt - Gray and brown, wet peat and clayey silt mixed with woody material. The unit was encountered at 26.5 feet below grade at MW-1 and 19 feet below grade at UD-2. It is at least 3 feet thick.

Figure 4-1 illustrates a generalized subsurface cross-section across the Utica City Dump site. Subsurface information from well borings UD-1 and UD-2 have been interpreted by EA Science and Technology, and their interpretations have been integrated into this cross-section (Ref. 4).

In general, shallow soils identified by URS Consultants, Inc., during the 1990 Phase II Investigation corresponds to the surficial soil units identified by EA Science and Technology in 1988 (Ref. 4). Subsurface information from four borings (B-1 through B-4) advanced in 1984 at the Hardfill Landfill reveals a similar profile. These four borings were part of an engineering study performed by Stetson-Dale at the Hardfill Landfill as part of the City's application for a Part 360 permit. Subsurface logs and a site map for these borings, are included in Appendix B. Monitoring wells were placed in each of these soil borings,and groundwater samples were subsequently collected and analyzed in July 1984, August 1984, and May 1986. A discussion of these results is presented in Section 4.5.3.

As part of a water pollution project in 1967, two borings (NU-1 and NU-2) were advanced approximately 200 feet west of the Utica City Dump. The borings were advanced to depths of 101.5 feet and 141.5 feet, respectively. Subsurface information from these borings shows a similar near-surface stratigraphic profile to those identified by URS (1990), EA



SECTION A - A'
(SEE FIGURE 3-1 FOR PLAN)

LEGEND

- FILL
- SANDY SILT
- CLAYEY SILT/SILTY CLAY
- PEAT/CLAYEY SILT
- MW-1 — MONITORING WELL NO.
- WATER SURFACE WITHIN WELL (10/04/90)
- MONITORING INTERVAL
- BOTTOM OF BORING

300FT 0 300 FT
HORIZONTAL SCALE

NOTES:

1. VERTICAL DATUM BASED ON AN ASSUMED ELEVATION OF 100.00 FT. (SEE FIGURE 3-1 FOR LOCATION)
2. GEOLOGIC CONDITIONS SHOWN ARE REPRESENTATIVE OF CONDITIONS ENCOUNTERED AT EACH BORING LOCATION TO THE DEPTH DRILLED. EXTRAPOLATIONS BETWEEN BORINGS HAVE BEEN INTERPRETED USING STANDARD ACCEPTED GEOLOGIC PRACTICES AND PRINCIPLES. ACTUAL CONDITIONS MAY VARY BETWEEN BORINGS FROM THOSE SHOWN.

UTICA CITY DUMP
GEOLOGIC CROSS SECTION A-A'

URS CONSULTANTS, INC.

FIGURE 4-1

CC-2638

Science and Technology (1988), and Stetson-Dale (1984). This information also indicates that bedrock was not encountered, and that lenses of relatively coarse sand and gravel were encountered at intermediate depths (Ref. 4). These boring logs and a map are included in Appendix B.

4.4.2 Groundwater Hydrology

As part of this Phase II Investigation, one monitoring well was installed to define the nature of groundwater quality within the fill and to better assess groundwater flow across the site. Water level data from URS well MW-1, coupled with the water level data from the three useable previously constructed wells (UD-1A, UD-2, and UD-3), made possible a site-wide groundwater flow characterization. Based on this information, monitoring well UD-1A appeared to be upgradient relative to UD-2 and UD-3, but downgradient relative to MW-1. MW-1 was also upgradient relative to UD-2 and UD-3. Two temporary stream gauges (SG-2 and SG-3) were placed in the Mohawk River near UD-2 and UD-3, respectively. One additional temporary stream gauge (SG-1) was placed in the Erie Barge Canal near UD-1A. These stream gauges were monitored when groundwater levels in monitoring wells were monitored. The additional data help provide an understanding of surface water effects on groundwater flow at the site. Table 4-1 presents all water level and stream gauge data gathered during the field investigation.

Groundwater at the site was encountered in the surficial unconsolidated deposits. At well locations MW-1 and UD-2, the water table was found within the surficial fill zone. At wells UD-1A and UD-3, the water table was found within a unit comprising clayey silt with some sandy seams. Based on the stratigraphic sequence at and adjacent to the Utica City Dump, the aquifer of concern for purposes of HRS scoring is considered to be the shallow surficial deposits beneath the site, since most leachate, if not all, would discharge through it to the Mohawk River or Erie Barge Canal. Although relatively coarse sand and gravel lenses

TABLE 4-1

UTICA CITY DUMP - WATER ELEVATION DATA

Monitoring Well	MW-1	UD-1A	UD-2	UD-3
Riser elevation (ft)	105.74	100.28	90.19	89.75
Ground elevation (ft)	102.82	98.52	88.29	87.38
* Riser height (ft)	2.92	1.76	1.9	2.37
9/14/90	92.19	88.93	82.09	82.06
10/04/90	92.72	89.02	81.79	82.25
10/05/90	. .	89.09	81.76	. .
3/13/91	92.64	85.12	85.27	84.57

HARDFILL LANDFILL - WATER ELEVATION DATA

Monitoring Well	B-1	B-2	B-3	B-4
Riser elevation (ft)	104.00	103.67	101.48	103.81
Ground elevation (ft)	100.02	100.76	97.40	99.44
* Riser height (ft)	3.98	3.09	4.08	4.37
3/13/91	91.96	91.53	90.74	90.56

MOHAWK RIVER - WATER ELEVATION DATA

Stream Gauge (ft)	SG-1 Erie Canal	SG-2 Mohawk River	SG-3 Mohawk River
10/04/90	92.36	81.22	81.26
10/05/90	92.70	82.46	82.49
3/13/91	82.41	83.33	83.39

All elevations relative to temporary benchmark established for site (see Figure 3-1)

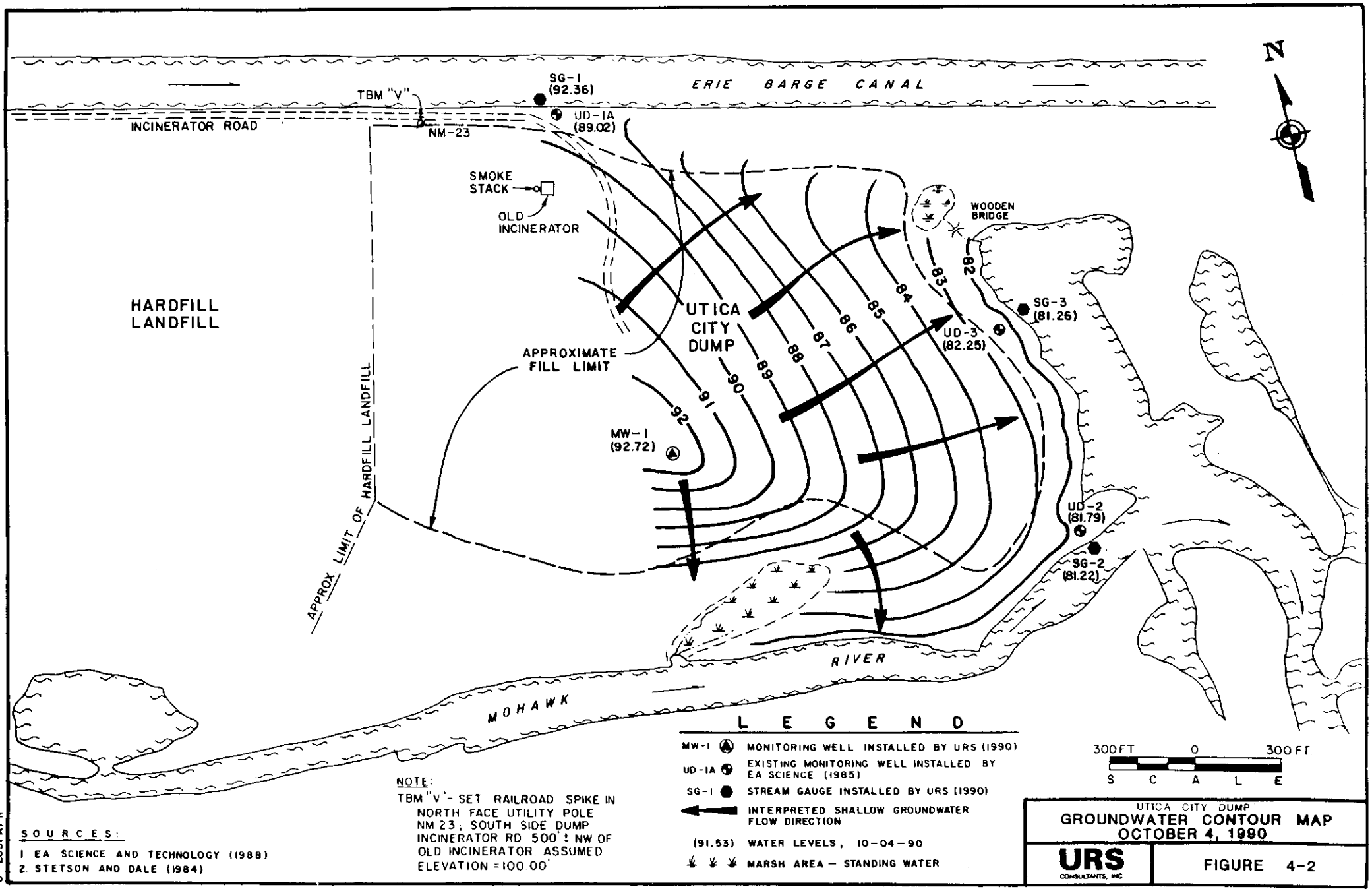
. . Indicates that no data were obtained on the date indicated

* Riser height referenced above ground surface

were identified at greater depths beneath the site, potential contaminants are not likely to adversely affect these deposits for the following reasons: 1) the dump lies in close proximity to a major discharge area (i.e., Mohawk River), 2) the fill at the dump lies on top of a relatively impermeable unit of silty clay with some sand, and 3) there is likely to be an upward hydraulic gradient in the Mohawk Valley near the dump.

Figure 4-2 illustrates apparent shallow groundwater flow across the Utica City Dump on October 4, 1990. Depth to groundwater ranged from 5 to 10 feet below ground surface. Groundwater flow within the surficial sediments is away from the central fill area. The groundwater flow shown near MW-1 indicates a northerly flow north of MW-1 to UD-1A (.003 ft/ft); a relatively steep southerly horizontal gradient south of the site (0.02 ft/ft); and a southeasterly to easterly flow direction to the east of the site (.007 ft/ft). Figure 4-2 indicates that MW-1 is upgradient of the other wells and that there is no clear background monitoring well for the site. In addition, MW-1 is screened in the fill layer, thus making it unusable as a background well. This apparent radial groundwater flow pattern is probably the result of groundwater mounding within fill area. Infiltration into the fill is greatly enhanced by the thin (<2 ft) sandy silt cover capping the loose fill.

The observed groundwater flow pattern described above is much different than the northwesterly flow defined by EA Science and Technology on April 7, 1987. At that time, groundwater was affected by the Mohawk River, which was in flood stage (Ref. 4). Under normal river conditions, EA Science and Technology has reported a southeasterly groundwater flow direction across the site (April 28, 1987) (Ref. 4). The latter observation is generally consistent with data collected by URS, in that it corresponds to groundwater flow across the eastern portion of the site. However, additional data provided by URS indicate a relatively steep horizontal southerly flow pattern in the vicinity of monitoring well MW-1.



NOTE:
TBM "V" - SET RAILROAD SPIKE IN NORTH FACE UTILITY POLE NM 23; SOUTH SIDE DUMP INCINERATOR RD. 500' ± NW OF OLD INCINERATOR. ASSUMED ELEVATION = 100.00'

SOURCES:
1. EA SCIENCE AND TECHNOLOGY (1988)
2. STETSON AND DALE (1984)

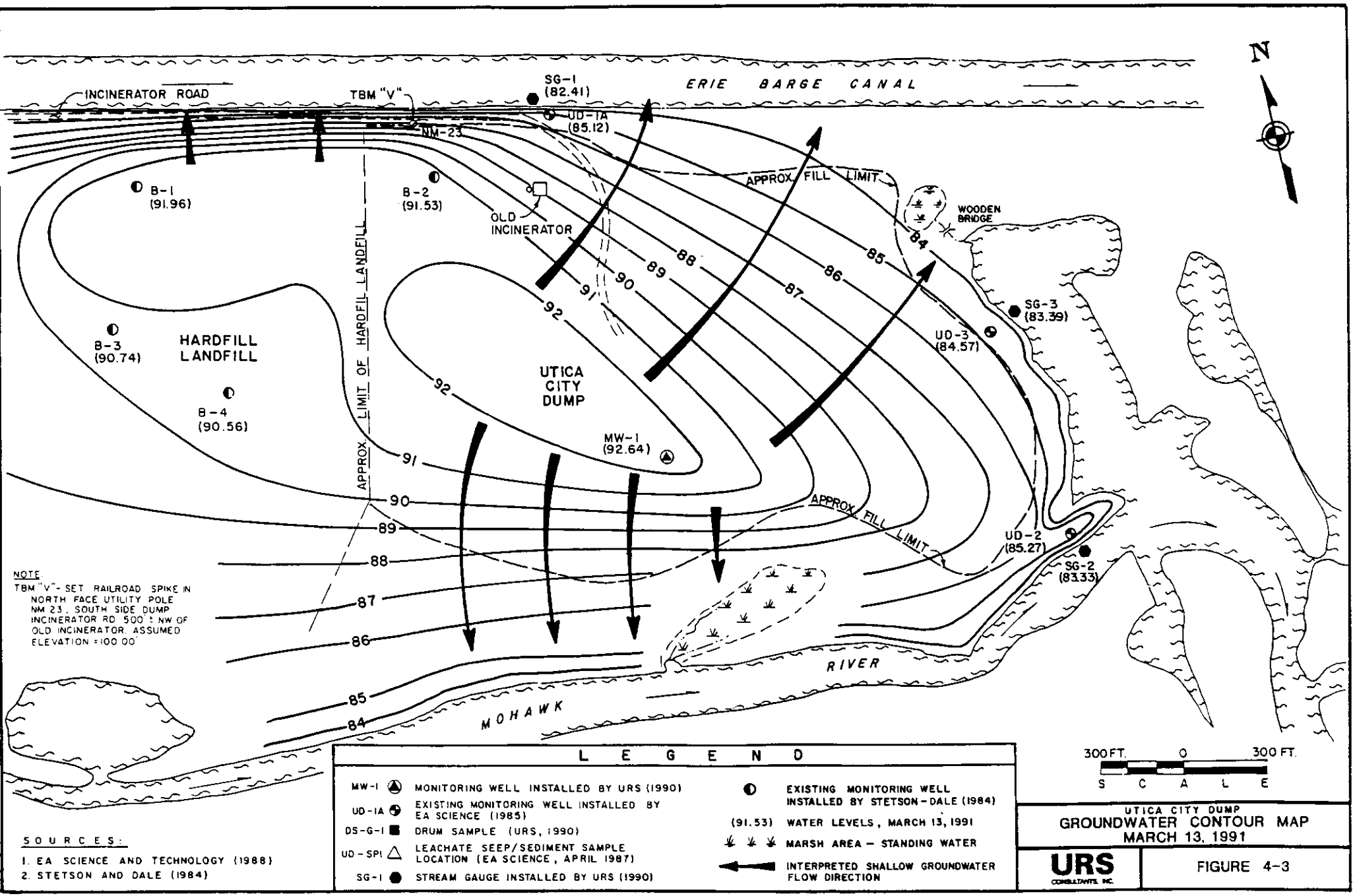
UTICA CITY DUMP
GROUNDWATER CONTOUR MAP
OCTOBER 4, 1990

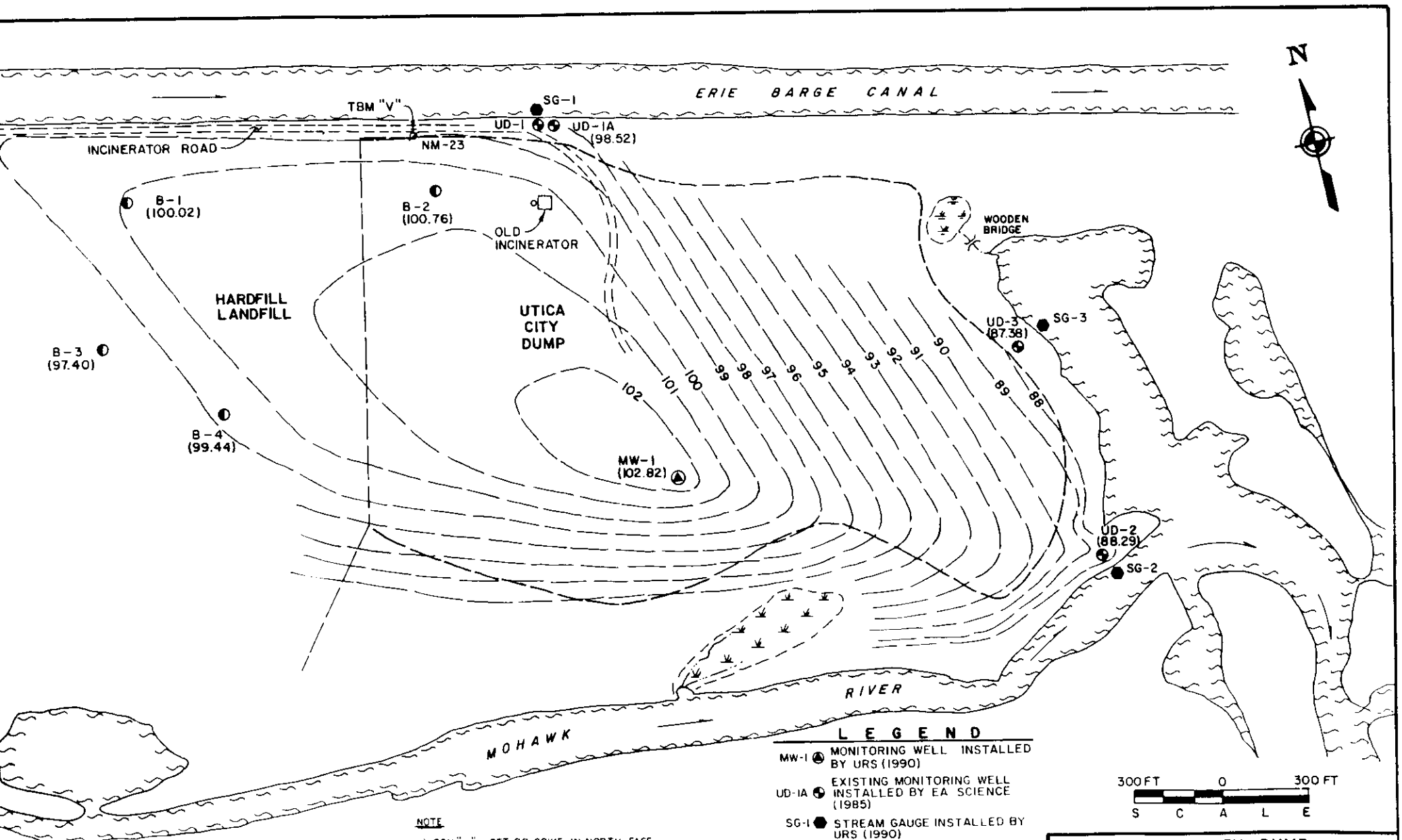
URS CONSULTANTS, INC.

FIGURE 4-2

In an effort to characterize the hydrogeologic relationship between the Utica City Dump and the Hardfill Landfill, URS established horizontal and vertical control of the locations of the four Stetson-Dale wells (located on the Hardfill Landfill) and measured a complete round of water levels for all wells on March 13, 1991. Figure 4-3 presents the groundwater flow across the Hardfill Landfill and Utica City Dump on March 13, 1991. Water levels ranged from approximately 3 to 10 feet below ground surface at the Utica City Dump, and from approximately 6.5 to 9 feet below ground surface at the Hardfill Landfill. With the exception of UD-1A, water levels measured on March 13, 1991 are somewhat higher than those previously measured at the Utica City Dump on October 4, 1990. The water level within UD-1A on March 13, 1991, was approximately 4 feet lower than the water level in UD-1A on October 4, 1990. The water level in the canal was approximately 10 feet lower on March 13, 1991 compared to the canal water level on October 4, 1990. The canal water level is regulated by the New York State Department of Transportation (NYSDOT) Barge Canal Waterways. Every November, NYSDOT lowers the canal water level by 6 to 10 feet, in anticipation of the spring snow melt and for flood control. Similarly, the canal water level is raised 6 to 10 feet every April, when boat traffic resumes on the canal (Ref. 24).

With the exception of the canal water level influences, the pattern of groundwater flow observed on March 13, 1991 at the Utica City Dump, is generally similar to the pattern of groundwater flow on october 4, 1990. For example, the groundwater flow depicted on March 13, 1991 confirms the groundwater mounding condition at the Utica City Dump, and appears to be coincident with topography in the vicinity of MW-1 (Figure 4-4). Since the water level data from the four wells at the Hardfill Landfill were not available on October 4, 1990, the hydraulic relationship between the sites was unknown. Figure 4-3 indicates that the groundwater mounding condition at the Utica City Dump is contiguous with the adjacent Hardfill Landfill, suggesting that the Hardfill Landfill occupies a generally sidegradient position. Figure 4-3 indicates a northeast flow north of MW-1 (0.006


INCINERATOR ROAD
TBM "V"
SG-1 (82.41)
ERIE BARGE CANAL
UD-1A (85.12)
NM-23
B-1 (91.96)
B-2 (91.53)
OLD INCINERATOR
APPROX. FILL LIMIT
WOODEN BRIDGE
B-3 (90.74)
HARDFILL LANDFILL
APPROX. LIMIT OF HARDFILL LANDFILL
UTICA CITY DUMP
SG-3 (83.39)
UD-3 (84.57)
B-4 (90.56)
MW-1 (92.64)
UD-2 (85.27)
SG-2 (83.33)
RIVER
MOHAWK
N
300 FT. 0 300 FT.
SCALE
NOTE
TBM "V" - SET RAILROAD SPIKE IN NORTH FACE UTILITY POLE NM 23, SOUTH SIDE DUMP INCINERATOR RD 500 ± NW OF OLD INCINERATOR. ASSUMED ELEVATION = 100.00'
SOURCES:
1. EA SCIENCE AND TECHNOLOGY (1988)
2. STETSON AND DALE (1984)
LEGEND
MW-1 MONITORING WELL INSTALLED BY URS (1990)
UD-1A EXISTING MONITORING WELL INSTALLED BY EA SCIENCE (1985)
DS-G-1 DRUM SAMPLE (URS, 1990)
UD-SP1 LEACHATE SEEP/SEDIMENT SAMPLE LOCATION (EA SCIENCE, APRIL 1987)
SG-1 STREAM GAUGE INSTALLED BY URS (1990)
EXISTING MONITORING WELL INSTALLED BY STETSON-DALE (1984)
(91.53) WATER LEVELS, MARCH 13, 1991
MARSH AREA - STANDING WATER
INTERPRETED SHALLOW GROUNDWATER FLOW DIRECTION
UTICA CITY DUMP
GROUNDWATER CONTOUR MAP
MARCH 13, 1991
URS CONSULTANTS, INC.
FIGURE 4-3



LEGEND

- MW-1 ▲ MONITORING WELL INSTALLED BY URS (1990)
- UD-1A ◓ EXISTING MONITORING WELL INSTALLED BY EA SCIENCE (1985)
- SG-1 ⬢ STREAM GAUGE INSTALLED BY URS (1990)
- ◐ EXISTING MONITORING WELL INSTALLED BY STETSON-DALE (1984)
- (98.52) GROUND ELEVATION (IN FEET)
- MARSH AREA-STANDING WATER

NOTE

1) TBM "V" - SET RR SPIKE IN NORTH FACE UTILITY POLE NM 23, SOUTH SIDE ACCESS RD 500 ± NW OF OLD INCINERATOR ASSUMED ELEVATION = 100.00'

2) CONTOURS ARE APPROXIMATE AND BASED ON GROUND ELEVATIONS AT URS PHASE II SAMPLE POINTS.

SOURCES:

1 EA SCIENCE AND TECHNOLOGY (1988)
2 STETSON AND DALE (1984)

UTICA CITY DUMP
TOPOGRAPHIC SKETCH

URS CONSULTANTS, INC.

FIGURE 4-4

ft/ft); a southerly flow south of MW-1 (0.015 ft/ft); and a southeasterly to easterly flow east of MW-1 (0.006 ft/ft). North of B-1 and B-2 on the Hardfill Landfill, groundwater flow is north (0.02 ft/ft). The steep groundwater gradient along the northern portion of the Hardfill Landfill and Utica City Dump appears to be the result of the lower water level in the canal, and indicates the wall of the canal constricts groundwater flow into the canal. It appears that the canal water level influences the water level in UD-1A more than the groundwater flow from the Utica City Dump and the Hardfill Landfill.

The shallow groundwater flow pattern is generally consistent with isopleths of elevation (Figure 4-4). The shallow groundwater mound depicted in Figures 4-2 and 4-3 appears very similar to the apparent topographic mound of fill depicted in Figure 4-4.

4.4.3 Surface Water Hydrology

The nearest surface water bodies to the Utica City Dump are the Mohawk River and the Erie Barge Canal. The Erie Barge Canal defines the northern boundary of the site, whereas the Mohawk River defines the southern and eastern boundaries of the site. The Erie Barge Canal and Mohawk River are classified as Class C water bodies in the vicinity of the site (Ref. 16).

The site is adjacent to a major discharge area (i.e., the Mohawk River). Although no tributaries of the Mohawk River dissect the dump, 4 protected freshwater wetlands are located within one mile of the site (Ref. 6). One of these wetlands, UE-10, is located along the southern margin of the dump and another, UE-11, along the site's northeastern edge (Figure 3-1).

During the Phase II Investigation conducted by EA Science and Technology, leachate pools and seeps were visible at several locations

across the site. Investigators reported that some of the seeps and pools were rust-colored, with an apparent oil sheen. Two orange-stained leachate areas were discovered by URS personnel during site reconnaissance, but no leachate seeps could be discerned during the sampling program.

4.5 Site Contamination Assessment

4.5.1 Previous Geophysical Investigations

As part of the Phase II Investigation completed by EA Science and Technology in 1988, a perimeter geophysical survey was conducted. Terrain conductivity (EM-34) and resistivity surveys were utilized to determine extent of fill and other subsurface characteristics. The EM-34 survey revealed the presence of 3 highly anomalous zones and as many as 8 moderately anomalous zones. Monitoring wells UD-2 and UD-3 were located within 2 of the 3 highly anomalous zones. EA Science and Technology reported that the highly anomalous zones may indicate subsurface contamination (plumes) (Ref. 4). Results of the resistivity survey suggested depths to groundwater and estimated depths to various interpreted stratigraphic units.

4.5.2 Previous Investigations of Subsurface Soils

No environmental testing of subsurface soil was performed during any previous investigations at the site.

4.5.3 Phase II Subsurface Soil Contamination Investigation

One surface soil sample was collected from the landfill cover material (0-2 feet) at boring location MW-1. The sample consisted of sandy silt with some fill material. A rinse blank was also collected by rinsing the split-barrel sampler with deionized water after sampling and

decontamination. Both samples were analyzed for TCL organics, TAL metals, and cyanide. Analytical data are presented in Table 4-2.

Volatile organic compounds detected included acetone (25 ppb) and total xylenes (6 ppb). Two semivolatiles, 4-nitrophenol (340 ppb) and bis(2-ethylhexyl)phthalate (280 ppb), were detected in the subsurface soil sample. Eighteen metals were detected, although concentrations were below the observed natural ranges presented by Shacklette and Boerngen (Ref. 19). Cyanide was detected at 0.72 ppb. No comparisons were made to background soil conditions since none were sampled.

4.5.4 Previous Investigations of Groundwater

As part of the engineering report conducted by Stetson-Dale in 1984, four monitoring wells (B-1 through B-4) were installed at the Hardfill Landfill. Groundwater samples were collected from each well in July and August 1984. Samples were analyzed for metals and for other groundwater quality parameters. Several metals, including arsenic, iron, mercury, manganese, lead, and selenium exceeded groundwater quality criteria (Ref. 4). In May 1986, another round of groundwater sampling was carried out at these wells. Samples were analyzed for priority pollutants. Benzene was detected in wells B-1 and B-2 at 2 ppb and 1 ppb, respectively. Chlorobenzene was also present in wells B-1 and B-3 at 3 ppb and 4 ppb respectively. Concentrations of arsenic in B-4 exceeded New York State groundwater quality criteria. A map of the relative locations of these wells is presented in Appendix B.

As part of the Phase II Investigation completed by EA Science and Technology in 1988, groundwater samples were collected from monitoring wells UD-1A and UD-3 (Figure 3-1). A third well, UD-2, was inaccessible as a result of flooding of the Mohawk River and was therefore not sampled. Table 4-3 summarizes the results. At the time of sampling, groundwater flow was northwest (i.e. from UD-3 toward UD-1A). EA Science and

TABLE 4-2

CITY OF UTICA DUMP, ID NO. 633015
ANALYTICAL RESULTS - SUBSURFACE SOIL SAMPLES
URS CONSULTANTS, INC. - AUGUST 1990

SAMPLE ID		MW-1
SAMPLE DEPTH (FT)		0-2
COLLECTION DATE		8/23/90
PARAMETER	TYPE	
CHLOROMETHANE	VOC	
BROMOMETHANE	VOC	
VINYL CHLORIDE	VOC	
CHLOROETHANE	VOC	
METHYLENE CHLORIDE	VOC	
ACETONE	VOC	25
CARBON DISULFIDE	VOC	
1,1-DICHLOROETHENE	VOC	
1,1-DICHLOROETHANE	VOC	
1,2-DICHLOROETHENE (TOTAL)	VOC	
CHLOROFORM	VOC	
1,2-DICHLOROETHANE	VOC	
2-BUTANONE	VOC	
1,1,1-TRICHLOROETHANE	VOC	
CARBON TETRACHLORIDE	VOC	
VINYL ACETATE	VOC	
BROMODICHLOROMETHANE	VOC	
1,2-DICHLOROPROPANE	VOC	
CIS-1,3-DICHLOROPROPENE	VOC	
TRICHLOROETHENE	VOC	
DIBROMOCHLOROMETHANE	VOC	
1,1,2-TRICHLOROETHANE	VOC	
BENZENE	VOC	
TRANS-1,3-DICHLOROPROPENE	VOC	
BROMOFORM	VOC	
4-METHYL-2-PENTANONE	VOC	
2-HEXANONE	VOC	
TETRACHLOROETHENE	VOC	
1,1,2,2-TETRACHLOROETHANE	VOC	
TOLUENE	VOC	
CHLOROBENZENE	VOC	
ETHYLBENZENE	VOC	
STYRENE	VOC	
TOTAL XYLENES	VOC	6 J

All results reported in μg/kg (ppb).

VOC - Volatile Organic Compounds

J - Indicates the value is less than the sample quantitation but greater than zero.

TABLE 4-2

CITY OF UTICA DUMP, ID NO. 633015
ANALYTICAL RESULTS - SUBSURFACE SOIL SAMPLES
URS CONSULTANTS, INC. - AUGUST 1990

SAMPLE ID		MW-1
SAMPLE DEPTH (FT)		0-2
COLLECTION DATE		8/23/90
PARAMETER	TYPE	
PHENOL	SEMI	
BIS(2-CHLOROETHYL) ETHER	SEMI	
2-CHLOROPHENOL	SEMI	
1,3-DICHLOROBENZENE	SEMI	
1,4-DICHLOROBENZENE	SEMI	
BENZYL ALCOHOL	SEMI	
1,2-DICHLOROBENZENE	SEMI	
2-METHYLPHENOL	SEMI	
BIS(2-CHLOROISOPROPYL) ETHER	SEMI	
4-METHYLPHENOL	SEMI	
N-NITROSO-DI-N-PROPYLAMINE	SEMI	
HEXACHLOROETHANE	SEMI	
NITROBENZENE	SEMI	
ISOPHORONE	SEMI	
2-NITROPHENOL	SEMI	
2,4-DIMETHYLPHENOL	SEMI	
BENZOIC ACID	SEMI	
BIS(2-CHLOROETHOXY)METHANE	SEMI	
2,4-DICHLOROPHENOL	SEMI	
1,2,4-TRICHLOROBENZENE	SEMI	
NAPHTHALENE	SEMI	
4-CHLOROANILINE	SEMI	
HEXACHLOROBUTADIENE	SEMI	
4-CHLORO-3-METHYLPHENOL	SEMI	
2-METHYLNAPHTHALENE	SEMI	
HEXACHLOROCYCLOPENTADIENE	SEMI	
2,4,6-TRICHLOROPHENOL	SEMI	
2,4,5-TRICHLOROPHENOL	SEMI	
2-CHLORONAPHTHALENE	SEMI	
2-NITROANILINE	SEMI	
DIMETHYLPHTHALATE	SEMI	
ACENAPHTHYLENE	SEMI	
2,6-DINITROTOLUENE	SEMI	
3-NITROANILINE	SEMI	

All results reported in µg/kg (ppb).

SEMI - Semivolatile Organic Compounds

TABLE 4-2

CITY OF UTICA DUMP, ID NO. 633015
ANALYTICAL RESULTS - SUBSURFACE SOIL SAMPLES
URS CONSULTANTS, INC. - AUGUST 1990

SAMPLE ID		MW-1
SAMPLE DEPTH (FT)		0-2
COLLECTION DATE		8/23/90
PARAMETER	TYPE	
ACENAPHTHENE	SEMI	
2,4-DINITROPHENOL	SEMI	
4-NITROPHENOL	SEMI	340 J
DIBENZOFURAN	SEMI	
2,4-DINITROTOLUENE	SEMI	
DIETHYLPHTHALATE	SEMI	
4-CHLOROPHENYL-PHENYL ETHER	SEMI	
FLUORENE	SEMI	
4-NITROANILINE	SEMI	
4,6-DINITRO-2-METHYLPHENOL	SEMI	
N-NITROSODIPHENYLAMINE	SEMI	
4-BROMOPHENYL-PHENYL ETHER	SEMI	
HEXACHLOROBENZENE	SEMI	
PENTACHLOROPHENOL	SEMI	
PHENANTHRENE	SEMI	
ANTHRACENE	SEMI	
DI-N-BUTYLPHTHALATE	SEMI	
FLUORANTHENE	SEMI	
PYRENE	SEMI	
BUTYLBENZYLPHTHALATE	SEMI	
3,3'-DICHLOROBENZIDINE	SEMI	
BENZO(A)ANTHRACENE	SEMI	
CHRYSENE	SEMI	
BIS(2-ETHYLHEXYL)PHTHALATE	SEMI	280 BJ
DI-N-OCTYL PHTHALATE	SEMI	
BENZO(B)FLUORANTHENE	SEMI	
BENZO(K)FLUORANTHENE	SEMI	
BENZO(A)PYRENE	SEMI	
INDENO(1,2,3-CD)PYRENE	SEMI	
DIBENZ(A,H)ANTHRACENE	SEMI	
BENZO(G,H,I)PERYLENE	SEMI	

All results reported in µg/kg (ppb).

SEMI - Semivolatile Organic Compounds

B - Indicates compound was detected in the associated method blank

J - Indicates the value is less than the sample quantitation limit but greater than zero.

TABLE 4-2

CITY OF UTICA DUMP, ID NO. 633015
ANALYTICAL RESULTS - SUBSURFACE SOIL SAMPLES
URS CONSULTANTS, INC. - AUGUST 1990

SAMPLE ID		MW-1
SAMPLE DEPTH (FT)		0-2
COLLECTION DATE		8/23/90
PARAMETER	TYPE	
ALPHA-BHC	PST	
BETA-BHC	PST	
DELTA-BHC	PST	
GAMMA-BHC (LINDANE)	PST	
HEPTACHLOR	PST	
ALDRIN	PST	
HEPTACHLOR EPOXIDE	PST	
ENDOSULFAN I	PST	
DIELDRIN	PST	
4,4'-DDE	PST	
ENDRIN	PST	
ENDOSULFAN II	PST	
4,4'-DDD	PST	
ENDOSULFAN SULFATE	PST	
4,4'-DDT	PST	
METHOXYCHLOR	PST	
ENDRIN KETONE	PST	
ALPHA-CHLORDANE	PST	
GAMMA-CHLORDANE	PST	
TOXAPHENE	PST	
AROCLOR-1016	PCB	
AROCLOR-1221	PCB	
AROCLOR-1232	PCB	
AROCLOR-1242	PCB	
AROCLOR-1248	PCB	
AROCLOR-1254	PCB	
AROCLOR-1260	PCB	

All results reported in µg/kg (ppb).

PST - Pesticides

PCB - Polychlorinated Biphenyls

TABLE 4-2

CITY OF UTICA DUMP, ID NO. 633015
ANALYTICAL RESULTS - SUBSURFACE SOIL SAMPLES
URS CONSULTANTS, INC. - AUGUST 1990

SAMPLE-ID		OBSERVED	MW-1
SAMPLE DEPTH		Range in	0-2
COLLECTION DATE		(ppb) #	8/23/90
PARAMETER	TYPE		
ALUMINUM	MET	7,000->100,000	7,660
ANTIMONY	MET	<1-8.8	
ARSENIC	MET	<0.1-73	18.8
BARIUM	MET	10-1,500	50.3
BERYLLIUM	MET	<1-7	
CADMIUM	MET		
CALCIUM	MET	100-280,000	1,730
CHROMIUM	MET	1-1,000	13.2
COBALT	MET	<0.3-70	10.7 B
COPPER	MET	<1-700	61.9
IRON	MET	100->100,000	17,800
LEAD	MET	10-300	59.2
MAGNESIUM	MET	50-50,000	3,080
MANGANESE	MET	<2-7,000	121
MERCURY	MET	0.01-3.4	
NICKEL	MET	<5-700	23.5
POTASSIUM	MET	50-37,000	590 B
SELENIUM	MET	<0.1-3.9	0.65 B
SILVER	MET		0.92 B
SODIUM	MET	<500-50,000	202 B
THALLIUM	MET	2.2-23	
VANADIUM	MET	<7-300	16.3
ZINC	MET	<5-2,900	61.3
CYANIDE	CN		0.72

All results reported in mg/kg (ppm)

MET - Metals

CN - Cyanide

B - Value is less than the quantitation limit but greater than or equal to the instrument detection limit.

Observed range in Eastern U.S. (metals) obtained from: Shacklette and Boerngen, 1984

TABLE 4-3

UTICA CITY DUMP, ID NO. 633015
SUMMARY OF ANALYTICAL RESULTS - GROUNDWATER SAMPLES
EA SCIENCE AND TECHNOLOGY - APRIL 1987

SAMPLE ID		# ARAR	UD-1A	UD-3
SAMPLE TYPE		VALUE	GROUNDWATER	GROUNDWATER
PARAMETER	CLASS	(ppb)		
ALUMINUM	MET			500
ARSENIC	MET	25		10
BARIUM	MET	1,000		968
CADMIUM	MET	10	5	
CALCIUM	MET		98,100	16,700
IRON	MET	300	10,700	54,000
MAGNESEIUM	MET	35,000 G	13,400	89,000
MANGANESE	MET	300	790	2,300
NICKEL	MET		60	50
POTASSIUM	MET		1,400	94,100
SODIUM	MET	20,000	18,000	260,000
ZINC	MET	300	40	70
TOTAL CYANIDE	CN	100		20
TOTAL PHENOL	SEMI	1	90	80
pH	MISC		6.1	

All results reported in µg/L(ppb)

MET - Metals

CN - Cyanide

SEMI - Semivolatile Organic Compounds

MISC - Miscellaneous characteristics

G - Guidance Value

- NYSDEC Ambient Water Quality Standards and Guidance Values, September 1990

Technology reported this condition as a groundwater reversal due to flooding of the Mohawk River. Under normal Mohawk River discharge conditions, groundwater flow appears to be from UD-1A toward UD-3. Based on these conditions, EA Science and Technology concluded that upgradient groundwater quality criteria could not be established for groundwater analytical results (Ref. 4). Nevertheless, NYSDEC groundwater quality standards (considered to be ARARs for this site) were exceeded in both wells for iron, manganese, and total phenol, and in UD-3 for magnesium and sodium.

4.5.5 Phase II Groundwater Contamination Investigation

The single monitoring well (MW-1), installed by URS, was sampled on October 4, 1990, and the 3 monitoring wells (UD-1A, UD-2, and UD-3), installed by EA Science and Technology, were sampled on October 5, 1990. MW-1 is situated upgradient, within the central part of the dump, whereas UD-1A was upgradient of UD-2 and UD-3 at the time of sampling (Figure 3-1). Based on groundwater elevation data obtained on March 13, 1991, the Hardfill Landfill appears to be sidegradient of the Utica City Dump. All groundwater samples were analyzed for TCL organics, TAL metals, and cyanide. Table 4-4 summarizes these results. Analytes and concentrations detected in these samples are discussed by chemical group below.

Volatiles - Four volatiles were detected in MW-1. These included chloroethane (15 ppb), methylene chloride (17 ppb), acetone (20 ppb), and total xylenes (130 ppb). Of these, total xylenes, methylene chloride, and chloroethane exceeded NYSDEC groundwater quality criteria. Methylene chloride was detected in the method blank, indicating probable laboratory contamination. No volatile organic compounds were detected in well UD-1A. In well UD-2, acetone, ethylbenzene, and total xylenes were detected at concentrations of 8 ppb, 3 ppb, and 6 ppb, respectively. Acetone was detected in the method blank, and only total xylenes were present at

TABLE 4-4

UTICA CITY DUMP, ID NO. 633015
ANALYTICAL RESULTS - GROUNDWATER SAMPLES

SAMPLE-ID		@ ARAR	MW-1	UD-1A	UD-2	UD-3	DW-1
SAMPLE TYPE		Value	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	DRILL WATER
COLLECTION DATE		(ppb)	10/4/90	10/5/90	10/5/90	10/5/90	8/23/90
PARAMETER	TYPE	Class GA					
CHLOROMETHANE	VOC	5				R	
BROMOMETHANE	VOC	5				R	
VINYL CHLORIDE	VOC	2				R	
CHLOROETHANE	VOC	5	15 J			R	
METHYLENE CHLORIDE	VOC	5	17 BJ			R	
ACETONE	VOC	50	20 J		8 BJ	R	
CARBON DISULFIDE	VOC	50				R	
1,1-DICHLOROETHENE	VOC	5				R	
1,1-DICHLOROETHANE	VOC	5				R	
1,2-DICHLOROETHENE (TOTAL)	VOC	5				R	
CHLOROFORM	VOC	100				R	68
1,2-DICHLOROETHANE	VOC	5				R	
2-BUTANONE	VOC	50				R	
1,1,1-TRICHLOROETHANE	VOC	5				R	
CARBON TETRACHLORIDE	VOC	5				R	
VINYL ACETATE	VOC	50				R	
BROMODICHLOROMETHANE	VOC	50 G				R	
1,2-DICHLOROPROPANE	VOC	5				R	
CIS-1,3-DICHLOROPROPENE	VOC	5				R	
TRICHLOROETHENE	VOC	5				R	
DIBROMOCHLOROMETHANE	VOC	50				R	
1,1,2-TRICHLOROETHANE	VOC	5				R	
BENZENE	VOC	ND				R	
TRANS-1,3-DICHLOROPROPENE	VOC	5				R	
BROMOFORM	VOC	50 G				R	
4-METHYL-2-PENTANONE	VOC	50				R	
2-HEXANONE	VOC	50 G				R	
TETRACHLOROETHENE	VOC	5				R	
1,1,2,2-TETRACHLOROETHANE	VOC	5				R	
TOLUENE	VOC	5				R	3 J
CHLOROBENZENE	VOC	5				R	
ETHYLBENZENE	VOC	5			3 J	R	
STYRENE	VOC	5				R	
TOTAL XYLENES	VOC	5 *	130		6	R	

All results reported in µg/L (ppb).

VOC - Volatile Organic Compounds

ND - Non Detectable

G - Guidance values

* - Applies to each isomer (1, 2-, 1,3, and 1,4-) individually

B - Indicates compound was detected in associated method blank

J - Indicates the value is less than the sample quantitation limit but greater than zero.

R - Data rejected due to ASP violation.

@ ARARS - NYSDEC Ambient Water Quality Standards and Guidance Values, September 1990 (TOGS 1.1.1)

TABLE 4-4

UTICA CITY DUMP, ID NO. 633015
ANALYTICAL RESULTS - GROUNDWATER SAMPLES

SAMPLE-ID		@ ARAR	MW-1	UD-1A	UD-2	UD-3	DW-1
SAMPLE TYPE		Value	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	DRILL WATER
COLLECTION DATE		(ppb)	10/4/90	10/5/90	10/5/90	10/5/90	8/23/90
PARAMETER	TYPE	Class GA					
PHENOL	SEMI	1 #					
BIS(2-CHLOROETHYL) ETHER	SEMI	1					
2-CHLOROPHENOL	SEMI	1 #					
1,3-DICHLOROBENZENE	SEMI	5					
1,4-DICHLOROBENZENE	SEMI	4.7	10				
BENZYL ALCOHOL	SEMI	50					
1,2-DICHLOROBENZENE	SEMI	4.7					
2-METHYLPHENOL	SEMI	50					
BIS(2-CHLOROISOPROPYL) ETHER	SEMI	5					
4-METHYLPHENOL	SEMI	1 #					
N-NITROSO-DI-N-PROPYLAMINE	SEMI	50					
HEXACHLOROETHANE	SEMI	5					
NITROBENZENE	SEMI	5					
ISOPHORONE	SEMI	50 G					
2-NITROPHENOL	SEMI	1 #					
2,4-DIMETHYLPHENOL	SEMI	1 #					
BENZOIC ACID	SEMI	50					
BIS(2-CHLOROETHOXY)METHANE	SEMI	5					
2,4-DICHLOROPHENOL	SEMI	1 #					
1,2,4-TRICHLOROBENZENE	SEMI	5					
NAPHTHALENE	SEMI	10 G	60		49		
4-CHLOROANILINE	SEMI	5					
HEXACHLOROBUTADIENE	SEMI	5					
4-CHLORO-3-METHYLPHENOL	SEMI	1 #					
2-METHYLNAPHTHALENE	SEMI	5	42		21		
HEXACHLOROCYCLOPENTADIENE	SEMI	5					
2,4,6-TRICHLOROPHENOL	SEMI	1 #					
2,4,5-TRICHLOROPHENOL	SEMI	1 #					
2-CHLORONAPHTHALENE	SEMI	5					
2-NITROANILINE	SEMI	5					
DIMETHYLPHTHALATE	SEMI	50 G					
ACENAPHTHYLENE	SEMI	50					
2,6-DINITROTOLUENE	SEMI	5					
3-NITROANILINE	SEMI	5					

All results reported in µg/L (ppb).

SEMI - Semivolatile Organic Compounds

@ ARARS - NYSDEC Ambient Water Quality Standards and Guidance Values, September 1990 (TOGS 1.1.1)

G - Guidance values

- Sum of all phenolic compounds

TABLE 4-4

UTICA CITY DUMP, ID NO. 633015
ANALYTICAL RESULTS - GROUNDWATER SAMPLES

SAMPLE-ID		@ ARAR	MW-1	UD-1A	UD-2	UD-3	DW-1
SAMPLE TYPE		Value	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	DRILL WATER
COLLECTION DATE		(ppb)	10/4/90	10/5/90	10/5/90	10/5/90	8/23/90
PARAMETER	TYPE	Class GA					
ACENAPHTHENE	SEMI	20 G			10		
2,4-DINITROPHENOL	SEMI	1 #					
4-NITROPHENOL	SEMI	1 #					
DIBENZOFURAN	SEMI	50					
2,4-DINITROTOLUENE	SEMI	5					
DIETHYLPHTHALATE	SEMI	50 G					
4-CHLOROPHENYL-PHENYL ETHER	SEMI	5					
FLUORENE	SEMI	50 G					
4-NITROANILINE	SEMI	5					
4,6-DINITRO-2-METHYLPHENOL	SEMI	1 #					
N-NITROSODIPHENYLAMINE	SEMI	50 G					
4-BROMOPHENYL-PHENYL ETHER	SEMI	5					
HEXACHLOROBENZENE	SEMI	0.35					
PENTACHLOROPHENOL	SEMI	1 #					
PHENANTHRENE	SEMI	50 G					
ANTHRACENE	SEMI	50 G					
DI-N-BUTYLPHTHALATE	SEMI	50					
FLUORANTHENE	SEMI	50 G					
PYRENE	SEMI	50 G					
BUTYLBENZYLPHTHALATE	SEMI	50 G					
3,3'-DICHLOROBENZIDINE	SEMI	5					
BENZO(A)ANTHRACENE	SEMI	0.002 G					
CHRYSENE	SEMI	0.002 G					
BIS(2-ETHYLHEXYL)PHTHALATE	SEMI	50					8 JX
DI-N-OCTYL PHTHALATE	SEMI	50 G					
BENZO(B)FLUORANTHENE	SEMI	0.002 G					
BENZO(K)FLUORANTHENE	SEMI	0.002 G					
BENZO(A)PYRENE	SEMI	ND					
INDENO(1,2,3-CD)PYRENE	SEMI	0.002 G					
DIBENZ(A,H)ANTHRACENE	SEMI	50					
BENZO(G,H,I)PERYLENE	SEMI	50					

All results reported in µg/L (ppb).

SEMI - Semivolatiles

G - Guidance values

ND - Non Detectable

- Sum of all phenolic compounds

J - Indicates the value is less than the sample quantitation limit but greater than zero.

X - Mass spectrum does not meet NYSDEC ASP criteria but compound presence is strongly suspected

@ ARARS - NYSDEC Ambient Water Quality Standards and Guidance Values, September, 1990 (TOGS 1.1.1)

TABLE 4-4

UTICA CITY DUMP, ID NO. 633015
ANALYTICAL RESULTS - GROUNDWATER SAMPLES

SAMPLE-ID		@ ARAR	MW-1	UD-1A	UD-2	UD-3	DW-1
SAMPLE TYPE		Value	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	DRILL WATER
COLLECTION DATE		(ppb)	10/4/90	10/5/90	10/5/90	10/5/90	8/23/90
PARAMETER	TYPE	Class GA					
ALPHA-BHC	PST	ND					
BETA-BHC	PST	ND					
DELTA-BHC	PST	ND					
GAMMA-BHC (LINDANE)	PST	ND					
HEPTACHLOR	PST	ND					
ALDRIN	PST	ND					
HEPTACHLOR EPOXIDE	PST	ND					
ENDOSULFAN I	PST	5					
DIELDRIN	PST	ND					
4,4'-DDE	PST	ND					
ENDRIN	PST	ND					
ENDOSULFAN II	PST	5					
4,4'-DDD	PST	ND					
ENDOSULFAN SULFATE	PST	5					
4,4'-DDT	PST	ND					
METHOXYCHLOR	PST	35					
ENDRIN KETONE	PST	5					
ALPHA-CHLORDANE	PST	0.1					
GAMMA-CHLORDANE	PST	0.1					
TOXAPHENE	PST	ND					
AROCLOR-1016	PCB	0.1					
AROCLOR-1221	PCB	0.1					
AROCLOR-1232	PCB	0.1					
AROCLOR-1242	PCB	0.1					
AROCLOR-1248	PCB	0.1					
AROCLOR-1254	PCB	0.1					
AROCLOR-1260	PCB	0.1					

All results reported in µg/L (ppb).

PST - Pesticides

PCB - Polychlorinated Biphenyls

ND - Non Detectable

@ ARARS - NYSDEC Ambient Water Quality Standards and Guidance Values, September 1990 (TOGS 1.1.1)

TABLE 4-4

UTICA CITY DUMP, ID NO. 633015
ANALYTICAL RESULTS - GROUNDWATER SAMPLES

SAMPLE-ID		@ ARAR	MW-1	UD-1A	UD-2	UD-3	DW-1
SAMPLE TYPE		Value	GROUNDWATER	GROUNDWATER	GROUNDWATER	GROUNDWATER	DRILL WATER
COLLECTION DATE		(ppb)	10/4/90	10/5/90	10/5/90	10/5/90	8/23/90
PARAMETER	TYPE	Class GA					
ALUMINUM	MET		95,600	533	374	889	791
ANTIMONY	MET	3 G					
ARSENIC	MET	25	39.6			20.8	4.9 B
BARIUM	MET	1,000	1,260	190 B	307	946	19.6 B
BERYLLIUM	MET	3 G					
CADMIUM	MET	10	18.5 *		5.0 *		
CALCIUM	MET		195,000	91,600	297,000	108,000	12,900
CHROMIUM	MET	50	341 *		16.1 *	7.8 B	
COBALT	MET		97.5		57	8.9 B	
COPPER	MET	200	982 *	3.0 B*	8.6 B*	2.2 B	37
IRON	MET	300 #	278,000	16,400	47,700	32,500	1,640
LEAD	MET	25	1,820	5	47.8	4.8	5.5
MAGNESIUM	MET	35,000 G	75,800	11,800	59,900	76,100	1,270 B
MANGANESE	MET	300 #	2,610	577	833	1,600	396
MERCURY	MET	2	2.2	0.22			
NICKEL	MET		350		35.8 B		
POTASSIUM	MET		37,000		31,200	98,400	
SELENIUM	MET	10					
SILVER	MET	50	5.6 BN				
SODIUM	MET	20,000	35,100	15,000	25,500	156,000	2,980 B
THALLIUM	MET	4 G					
VANADIUM	MET		232		4.1 B		
ZINC	MET	300	2,830 E	31.4	26.3 E	32.1	55.5
CYANIDE	CN	100					

All results reported in µg/L (ppb)

MET - Metals

CN - Cyanide

@ ARARS - NYSDEC Ambient Water Quality Standards and Guidance Values, September 1990 (TOGS 1.1.1)

B - Value is less than the quantitation limit but greater than or equal to the instrument detection limit.

E - Value is estimated due the presence of interference

N - Spike recovery not within QC limits

* - Duplicate analysis not within QC limits

- Standard for sum of iron and manganese 500 ppb

concentrations above NYSDEC groundwater quality criteria. Two volatiles, chloroform (68 ppb) and toluene (3ppb) were detected in DW-1. These compounds, however, were not present in the groundwater samples. It appears that xylene is being released from the fill at levels which contravene groundwater standards at well locations MW-1 and UD-2.

Semivolatiles - No semivolatile compounds were detected in groundwater samples from UD-1A and UD-3. Samples from well MW-1 were found to contain 1,4-dichlorobenzene (10 ppb), naphthalene (60 ppb), and 2-methylnaphthalene (42 ppb). Concentrations of 1,4-dichlorobenzene and naphthalene exceed New York State groundwater quality criteria. In well UD-2, naphthalene (49 ppb), 2-methylnaphthalene (21 ppb), and acenaphthene (10 ppb) were present. Only naphthalene exceeded the NYSDEC groundwater criterion. In general, concentrations of these contaminants decrease from MW-1 towards downgradient well UD-2.

Pesticides/PCBs - Neither class of compounds was detected in groundwater samples collected from the site.

Metals and Cyanide - Eleven metals were detected within the least contaminated sample UD-1A, two of which (iron and manganese) exceeded New York State groundwater quality criteria. Nineteen metals were detected above New York State criteria among the other three groundwater samples. Sample MW-1 was found to be the most contaminated, with twelve metals exceeding New York State groundwater quality criteria. Of these metals, concentrations of chromium, iron, lead, and manganese were at least one order of magnitude above the criterion and the concentrations detected in well UD-1A. Four of the detected metals in UD-2 (iron, lead, magnesium, and manganese) were found at levels significantly above both New York State groundwater criteria and concentrations from UD-1A. The presence of iron above New York State groundwater quality criteria may not be attributable to the dump, since iron was detected in drill water sample DW-1. In UD-3, iron, magnesium, and manganese were found at

concentrations significantly above both New York State groundwater criteria and levels detected in UD-1A. Metals, including barium, arsenic, calcium, chromium, cobalt, copper, and potassium were found at levels significantly above the background levels of UD-1A but below the New York State groundwater criteria. Nevertheless, it is apparent that many metal contaminants are being released directly to groundwater at the dump. Cyanide was not detected in any of the groundwater samples collected during this Phase II Investigation.

Summary - MW-1 is most contaminated relative to the other three onsite wells. Although UD-1A is downgradient of MW-1, none of the organic compounds present in MW-1 were detected in UD-1A. Four organic compounds present in MW-1 were present in UD-2 although at lower concentrations (acetone, total xylenes, naphthalene, and 2-methylnaphthalene). Acetone was the only organic compound present in UD-3, but at a lower concentration than in MW-1 (Table 4-4). Metals contamination is greatest in MW-1, followed by UD-2 and UD-3. UD-1A is the least contaminated by metals. It is probable that MW-1 is most contaminated because it lies within the central fill area of the dump, whereas the other wells are perimeter wells. It appears that the metals contamination may be attributable to the disposal of electrochemical milling sludge, since the sludge is known to contain high levels of metals including arsenic, barium, cadmium, chromium, copper, iron, lead, mercury, and zinc (Ref. 25). Clearly, the Utica City Dump is adversely affecting the groundwater quality of the area.

4.5.6 Previous Investigations of Drum Samples

In April 1987 two waste samples, UD-D1 and UD-D2, were collected from drums by EA Science and Technology. These samples were obtained from two separate areas of the site, corresponding to drum cluster areas A and B, respectively (Figure 1-2). Table 4-5 presents analytical results for

TABLE 4-5

CITY OF UTICA DUMP, ID NO. 633015
ANALYTICAL RESULTS - DRUM SAMPLES
EA SCIENCE AND TECHNOLOGY - APRIL 1987

SAMPLE ID		UD-D1	UD-D2
SAMPLE DEPTH (FT)		WASTE	WASTE
PARAMETER	TYPE		
METHYLENE CHLORIDE	VOC	3,700	2,900
ACETONE	VOC	1600 *	250 *
ETHYLBENZENE	VOC		310
M-XYLENES	VOC		800
O/P-XYLENES	VOC		680
NAPHTHALENE	SEMI		25,000
2-METHYLNAPHTHALENE	SEMI		11,000
ACENAPHTHENE	SEMI		8,000
DIBENZOFURAN	SEMI		9,100
FLUORENE	SEMI		13,000
PHENANTHRENE	SEMI		43,000
ANTHRACENE	SEMI		10,000
FLUORANTHENE	SEMI		33,000
PYRENE	SEMI		17,000
BENZO(A)ANTHRACENE	SEMI		9,500
CHRYSENE	SEMI		8,200
BENZO(B)FLUORANTHENE	SEMI		7,600
BENZO(K)FLUORANTHENE	SEMI		7,200
BENZO(A)PYRENE	SEMI		8,600
INDENO(1,2,3-CD)PYRENE	SEMI		3,500
BENZO(G,H,I)PERYLENE	SEMI		3,700

All results reported in µg/kg (ppb).

VOC - Volatile Organic Compounds

SEMI - Semivolatile Organic Compounds

* - Parameter detected in method blank.

TABLE 4-5

CITY OF UTICA DUMP, ID NO. 633015
ANALYTICAL RESULTS - DRUM SAMPLES
EA SCIENCE AND TECHNOLOGY - APRIL 1987

SAMPLE ID		UD-D1	UD-D2
SAMPLE DEPTH (FT)		WASTE	WASTE
PARAMETER	TYPE		
ALUMINUM	MET	2,400	
ARSENIC	MET	2	1
BARIUM	MET		4.44
CADMIUM	MET		40.6
CALCIUM	MET	362,000	
CHROMIUM	MET	2.4	280
COBALT	MET		23.4
COPPER	MET	2.4	660
IRON	MET	2,800	740,000
LEAD	MET	30	30
MAGNESIUM	MET	3,620	699
MANGANESE	MET	28	1,760
MERCURY	MET	0.06	0.09
NICKEL	MET	3.1	0.70
POTASSIUM	MET	64	
ZINC	MET	29.4	57.8
TIN	MET	0.70	10
TOTAL CYANIDE	CN		0.65
TOTAL PHENOL	SEMI		120
EP-TOX ARSENIC	MET	0.326	0.488
EP-TOX CADMIUM	MET	0.006	
EP-TOX CHROMIUM	MET	0.02	
IGNITABLITY (°C)	HWC	>60°	> 60°
CORROSITIVITY (pH)	HWC	>12	8.2
REACTIVITY	HWC	NO	NO

All results reported in mg/kg (ppm), unless otherwise specified

MET - Metals

CN - Cyanide

SEMI - Semivolatile Organic Compounds

HWC - Hazardous Waste Characteristics

these samples. Analysis included Hazardous Substance List compounds and analytes and waste characterization (Ref. 4).

In sample UD-D1, only two organic compounds, methylene chloride (3,700 ppb) and acetone (1,600 ppb) were found. Fourteen metals were also detected, ranging from 0.06 ppm mercury to 362,000 ppm calcium. The pH of this sample exceeded the corrosivity threshold (>12.5) as well. Based on results of hazardous waste characteristics testing, sample UD-D1 was classified as a hazardous waste.

Five volatiles were detected in UD-D2. These included methylene chloride (2,900 ppb), acetone (250 ppb), ethylbenzene (310 ppb), m-xylene (800 ppb), and o/p xylene (680 ppb). Seventeen polycylic aromatic hydrocarbons (PAHs) were found at concentrations ranging from 3,500 ppb ideno(1,2,3-cd)pyrene to 43,000 ppb phenanthrene. Fourteen metals, ranging from 0.09 ppm mercury to 740,000 ppm iron were also detected. Total cyanide and phenol were found at .65 ppm and 120 ppm, respectively. Drum samples were also analyzed for EP Toxicity metals, revealing the presence of only four analytes, ranging from 0.006 ppm cadmium within UD-D1 to 0.488 ppm arsenic within UD-D2 (Table 4-5).

4.5.7 Phase II Drum Investigation

URS collected three waste samples from individual drums within respective drum clusters A, D, and G (Figure 1-2). Samples were respectively designated as DS-A-1, DS-D-1, and DS-G-1. All samples were analyzed for RCRA waste characteristics. Table 4-6 presents these results as well as maximum concentration levels allowed by USEPA for each respective analyte and characteristic. Descriptions of each sample are given in Appendix F.

No pesticides or herbicides were detected among the drum samples. Detected levels of EP Toxicity metals were below the regulatory levels

TABLE 4-6

UTICA CITY DUMP, ID NO. 633015
ANALYTICAL RESULTS - DRUM (WASTE) SAMPLES
URS CONSULTANTS, INC. - OCTOBER 1990

SAMPLE-ID		# Maximum	DS - A1	DS - D1	DS - G1
SAMPLE TYPE		Concentration	DRUM	DRUM	DRUM
COLLECTION DATE		Level	10/4/90	10/4/90	10/4/90
PARAMETER	TYPE	(ppb)			
GAMMA - BHC (LINDANE)	PST	400			
ENDRIN	PST	20			
METHOXYCHLOR	PST	10,000			
TOXAPHENE	PST	500			
2,4,D	HERB	10,000			
SILVEX	HERB	1,000			
EP TOX ARSENIC	MET	5,000			
EP TOX BARIUM	MET	100,000	125	232	551 B
EP TOX CADMIUM	MET	1,000		180	19.7
EP TOX CHROMIUM	MET	5,000		21.9	46.7
EP TOX LEAD	MET	5,000		16.2	218
EP TOX MERCURY	MET	200		0.58	0.53
EP TOX SELENIUM	MET	1,000			
EP TOX SILVER	MET	5,000			
pH	HWC	≤2 & ≥12.5	9.92	8.12	5.22
IGNITIBILITY	HWC	140 F	> 158	> 158	> 158 ***
REACTIVITY - CYANIDE	HWC	@ 500	0.47	< 0.20	< 0.20
REACTIVITY - SULFIDE	HWC	@ 250	< 54	< 39.1	< 39.8

All results reported in ug/kg (ppb).

PST - Pesticides

HERB - Herbicides

MET - Metals

HWC - Hazardous Waste Characteristics

6NYCRR Part 371, December 25. 1988.

@ NYSDEC Guideline value

B - Value is less than the quantitation limit but greater than or equal to the instument detection limit.

*** - Results should be considered with caution due to insufficient sample volume

defined by 6 NYCRR Part 371 for all three samples. General waste characteristics also fell below the characteristics limits. Therefore, these samples are considered non-hazardous.

Drum cluster A was sampled by both URS Consultants, Inc. (October, 1990), and EA Science and Technology (April, 1987) but probably different drums were sampled. Comparison of RCRA parameters shows lack of similarity. For example, sample UD-D1 (Table 4-5) was defined as hazardous waste (pH > 12.5) whereas sample DS-A-1 was classified as non-hazardous by the same criteria (Table 4-6). Three EP Toxicity metals; arsenic, cadmium, and chromium were present in UD-D1 and only one EP Toxicity metal (barium) was present in DS-A-1. Although the URS waste samples were not classifiable as hazardous wastes, at least one of the samples EA Science and Technology collected did classify as a hazardous waste, thus indicating that hazardous wastes do exist on the site.

4.5.8 Previous Investigations of Leachate

In March 1981, NYSDEC collected leachate (aqueous and sediment) samples from two locations at the Utica City Dump. The samples, designated LF-1 and LF-2, were obtained from swampy areas in the northeast and southeast parts of the site, respectively. Priority pollutant analysis was conducted on these samples by RECRA Research, Inc. Table 4-7 summarizes analytical results (Ref. 20).

Only one volatile (chloroethane, 5 ppb), was detected among the leachate samples. Four pesticides were present in LF-1, each at a concentration of 0.02 ppb. Three pesticides were detected in LF-2 at concentrations ranging from 0.05 ppb (heptachlor) to 0.16 ppb (alpha-BHC). Six metals, chromium (9 ppb), copper (14 ppb), lead (50 ppb), nickel (50 ppb), silver (10 ppb), and zinc (124 ppb) were present in LF-1. Six metals, cadmium (5 ppb), chromium (10 ppb), copper (12 ppb), lead (50

TABLE 4-7

UTICA CITY DUMP, ID NO. 633015
SUMMARY OF ANALYTICAL RESULTS - LEACHATE SAMPLES
NYSDEC - MARCH 1981

SAMPLE ID		UTICA LF-1	UTICA LF-2	UTICA LF-1	UTICA LF-2
SAMPLE TYPE		LEACHATE SEEP	LEACHATE SEEP	LEACHATE SEDIMENTS	LEACHATE SEDIMENTS
COLLECTION DATE		3/26/81	3/26/81	3/26/81	3/26/81
PARAMETER	CLASS				
METHYLENE CHLORIDE	VOC			81	
CHLOROETHANE	VOC	5			
CHLOROBENZENE	VOC			55	
PHENOL	SEMI		5		
ALDRIN	PST	0.02			
ALPHA-BHC	PST		0.16		
DELTA-BHC	PST	0.02			
GAMMA-BHC	PST	0.02	0.09		
HEPTACHLOR	PST	0.02	0.05	130	40
TOTAL ARSENIC	MET			17,000	
TOTAL BERYLLIUM	MET			940	940
TOTAL CADMIUM	MET		5	630	630
TOTAL CHROMIUM	MET	9	10	57,000	63,000
TOTAL COPPER	MET	14	12	240,000	260,000
TOTAL LEAD	MET	50	50	120,000	99,000
TOTAL MERCURY	MET			340	330
TOTAL NICKEL	MET	50	30	81,000	43,000
TOTAL SILVER	MET	10		1,100	940
TOTAL ZINC	MET	124	195	510,000	340,000
TOTAL PHENOL	SEMI		20	90	3,000
TOTAL CYANIDE	CN			2,300	1,600

Results in ug/l and ug/kg (ppb)

VOC - Volatile Organic Compounds

SEMI - Semivolitile Organic Compounds

PST - Pesticides

MET - Metals

CN - Cyanide

ppb), nickel (30 ppb), and zinc (195 ppb) were detected in LF-2. Total phenols (20 ppb) were present in LF-2.

Two volatiles, chlorobenzene (55 ppb) and methylene chloride (81 ppb), were present in leachate sediment LF-1 (Table 4-7). Only one pesticide, heptachlor, was detected in leachate sediment samples LF-1 (at 130 ppb) and LF-2 (at 40 ppb). Ten metals at levels ranging from 340 ppb (mercury) to 510,000 ppb (zinc) were found in LF-1. Nine metals at concentrations ranging from 330 ppb (mercury) to 340,000 ppb (zinc) were detected in LF-2. Total phenols and cyanide were detected in LF-1 at 2,300 ppb and 90 ppb, respectively, and in LF-2, at 1,600 ppb and 3,000 ppb, respectively.

In April 1987, EA Science and Technology collected two seep samples (one liquid and one sediment) near well UD-3 (Figure 3-1). At that time, the seep was flowing directly into the Mohawk River. Both samples were analyzed for HSL compounds and analytes. Table 4-8 presents a summary of results (Ref. 4).

Eleven metals ranging from lead (7 ppb) to sodium (150,000 ppb) were detected in the liquid seep sample. Iron was the only metal detected (14,000 ppb) which exceeded New York State guideline values for Class C surface water. Cyanide and total phenol were present at concentrations of 20 ppb and 80 ppb, respectively. Phenol concentrations exceeded New York State standards for Class C surface water. These analytical data, indicate a direct release of contaminants from the dump to the Mohawk River.

Although several organic compounds, including chlorobenzene, total xylenes, chloromethane, 1,4-dichlorobenzene, naphthalene, 2-methylnaphthalane, and acenaphthene were detected within groundwater samples collected during this Phase II Investigation, none of these compounds was present in the leachate seep sample (UD-SP1) which was

TABLE 4-8

UTICA CITY DUMP, ID NO. 633015
SUMMARY OF ANALYTICAL RESULTS - LEACHATE SEEP SAMPLES
EA SCIENCE AND TECHNOLOGY - APRIL 1987

SAMPLE ID		@ ARAR	UD-SP1	UD-SPSD1
SAMPLE TYPE		Value	SEEP	SEEP SEDIMENT
PARAMETER	CLASS	Class C Stream		
METHYLENE CHLORIDE	VOC			120 *
ACETONE	VOC			84 *
CHLOROBENZENE	VOC	5		14
AROCHLOR 1254	PCB	0.001		577
ALUMINUM	MET	100		6,000,000
BARIUM	MET		363	203,000
BERYLLIUM	MET			433
CADMIUM	MET	1.24 **	5	4,220
CALCIUM	MET		98,100	5,300,000
CHROMIUM	MET	226 **		15,000
COBALT	MET	5		5,910
COPPER	MET	13 **		36,000
IRON	MET	300	14,000	70,000,000
LEAD	MET	3.7		54,000
MAGNESIUM	MET		13,400	3,300,000
MANGANESE	MET		790	116,000
MERCURY	MET	0.2 G		160
NICKEL	MET	104 **	60	21,000
POTASSIUM	MET		1,400	1,060,000
SELENIUM	MET	1		260
SILVER	MET	0.1		636
SODIUM	MET			340,000
VANADIUM	MET	14		140
ZINC	MET	30	40	265,000
TIN	MET			4,000
TOTAL CYANIDE	CN	5.2		2,130
TOTAL PHENOL	SEMI		80	4,200
pH	MISC		6.1	

Results reported in ug/l and ug/kg (ppb)

VOC - Volatile Organic Compounds

PCB - Polychlorinated Biphenyls

MET - Metals

CN - Cyanide

SEMI - Semivolatile Organic Compounds

ARARS - NYSDEC Ambient Water Quality Standards and Guidance Values, April 1987

G - Guideline Value

** - Calculated ARAR

* Parameter detected in method blank

@ Applicable to only UD-SP1

collected during the Phase II conducted by EA Science and Technology (Ref. 4). In addition, none of these compounds was present in monitoring well UD-3 which is in close proximity to the point where UD-SP1 was obtained. Several metals are common, however, to both UD-SP1 and groundwater samples. These include cadmium, magnesium, manganese, and zinc. In general, detected concentrations of these metals are lower than the respective concentration within the groundwater samples.

With respect to the seep sediment, three volatiles were detected (methylene chloride, acetone, and chlorobenzene). Chlorobenzene (14 ppb), however, was the only volatile not detected in a method blank or trip blank. One PCB (Arochlor 1254) was present at 577 ppb in the sample. Twenty-one metals were detected, ranging from vanadium (140 ppb) to iron (70,000,000 ppb). Cyanide and total phenol were present at 2,130 ppb and 4,200 ppb, respectively.

4.5.9 Phase II Leachate Investigation

The NYSDEC Work Plan specified four leachate samples to be collected from seeps (where found) at the Utica City Dump (Ref. 11). Since no leachate seeps were located during the Phase II sampling program, no leachate samples could be collected.

As stated in Section 4.5.8, previous investigations of leachate seeps were conducted. Analytical data from these samples appear to be adequate and were utilized in the HRS scoring of surface water. EA Science and Technology has documented that one of the leachate seep samples collected was flowing directly into the Mohawk River at the time (Ref. 4).

4.5.10 Previous Investigations of Surface Water/Sediment

In June 1989, NYSDEC collected three surface water samples and one sediment sample at the Utica City Dump. One of the surface water samples was obtained on site in the marshy area at the southern edge of the site. One of the surface water samples was obtained from the Mohawk River upgradient of the dump. The sediment sample was taken from one of the ponded areas on the site. The location of the third surface water sample is unclear.

At this time, correlation of sample designations of surface water to their respective locations is not possible. However, only a few organic compounds were present among the three samples, and at low concentrations. At least ten metals were detected among the three samples. Only iron was present in excess of New York State surface water criteria for Class C surface water. Results of sediment sample analysis indicate the presence of fluoranthene and pyrene at 120 ppb and 160 ppb, respectively. Fourteen metals were also detected, and phenol was present at a concentration of 92 ppm (Ref. 20).

4.6 Air Quality

No concentrations of organics above background levels were recorded during Phase II drilling and sampling programs.

4.7 Conclusions

Based on the results of the Phase II field investigation, as well as on analytical results from previous investigations at the Utica City Dump, the following conclusions may be drawn:

- Hazardous waste disposal at the site has been documented. Approximately 4,800 tons of hazardous waste was disposed of at

the site (Ref. 2,3). In addition, hazardous waste has been confirmed to exist on site by analytical testing. One drum sample, UD-D1, collected by EA Science and Technology in 1987, was classifiable as a corrosive hazardous waste with a pH >12.5. Based on the adverse impacts to groundwater related to the hazardous waste disposal, coupled with the proximity of the site to adjacent wetlands, significant threat to the environment has been demonstrated.

- Right-to-Know questionnaires indicated that Bendix Fluid Power division disposed of approximately 200 tons per year of electrochemical milling sludge at the Utica City Dump from 1955 to 1979 (Ref. 2), and that Kelsey-Hayes Co. disposed of approximately 1.5 tons of solid sodium hydroxide descaling salts at the Utica City Dump once every four years from 1964 to 1984 (Ref. 3). Since the Utica City Dump was reported closed in 1972, and the Hardfill Landfill is contiguous to the Utica City Dump, it is likely that from 1972 to 1979 the reported disposal of electrochemical milling sludge occurred at the adjacent Hardfill Landfill. Similarly, it is likely that from 1972 to 1984 the reported disposal of sodium hydroxide descaling salts occurred at the Hardfill Landfill. Therefore, future investigations at the Utica City Dump should also include the Hardfill Landfill site.

- Shallow groundwater flow appears to be toward the surface water bodies (Mohawk River and Erie Barge Canal) and away from URS monitoring well MW-1 (Figures 4-2 and 4-3). The mounding effect of groundwater is consistent with topography across the site. The Hardfill Landfill appears to be sidegradient of the Utica City Dump.

- Groundwater flow is considered a mechanism for contaminant migration from the Utica City Dump to surrounding surface waters. However, since there are no groundwater receptors between the Utica City Dump and the discharge areas, no human health risk is expected to be present through the groundwater exposure route.

- No true background well exists for purposes of strict comparisons of offsite-onsite analytical data.

- Analytical results of groundwater reveal the presence of low levels of chlorinated solvents, BTEX compounds, PAHs, and several metals. Compounds which exceeded NYSDEC groundwater criteria included chloroethane, total xylenes, 1,4-dichlorobenzene, and naphthalene. Twelve metals detected among groundwater samples exceeded NYSDEC groundwater criteria. Of these, concentrations of iron and lead were an order of magnitude above ARARs in at least one sample. Other metals of concern which exceeded ARARs include arsenic, barium, cadmium, chromium, copper, mercury, and zinc. Clearly, the Utica City Dump is adversely impacting the groundwater quality of the area.

- Several organic compounds, including acetone, total xylenes, 4-nitrophenol, bis(2-ethylhexyl)phthalate, and cyanide were present in the thin sandy soil cover material that caps the dump. Since the cover material may be imported, and no background soil samples were taken, this contamination may not be attributable to the site.

- Although no leachate samples were collected during this Phase II Investigation, data from the previous investigations conducted by EA Science and Technology indicate that a seep

flowed from the Utica City Dump directly into the Mohawk River near well location UD-3 (Figure 3-1). This sample contained concentrations of cadmium and iron in contravention of Class C surface water standards, indicating a direct release of contamination to surface water from the site. The companion seep sediment sample contained chlorobenzene (14 ppb), arochlor 1254 (577 ppb), elevated levels of aluminum, barium, iron, lead, manganese, nickel, and zinc, and total cyanide (2,130 ppb) and total phenol (4,200 ppb).

- Several hundred steel drums as well as other forms of refuse are protruding from the cover material capping the dump.

4.8 Recommendations

Based on the documentation of hazardous waste disposal at the site and significant threat to the environment as defined by 6 NYCRR Part 375, URS recommends that the site be reclassified to Class 2 on the New York State Registry of Inactive Hazardous Waste Disposal Site. It is recommended that a Remedial Investigation/Feasibility Study (RI/FS) be conducted for Utica City Dump, since this is considered the best mechanism to address the following concerns regarding the site in an all-inclusive manner. Given that disposal of hazardous wastes may have also occurred at the Hardfill Landfill, future investigations should also include the Hardfill Landfill site.

1) The landfill cover currently in place is not in compliance with New York State regulations pertaining to closure of solid waste facilities (6 NYCRR 360). Since approximately 4,800 tons of hazardous waste deposition has been documented, a 6 NYCRR 373 capping system must be considered. A final closure plan must be developed in conjunction with any additional remedial measures determined to be necessary for the site.

2) The onsite incinerator building and stack have not been addressed to date in the assessment of onsite contamination. Based on the geophysical survey, the location of these structures lies within the limits of fill. For proper placement of the cap, these items should be removed from the site. An assessment should be made as to whether or not the incinerator and the stack may be considered as C&D debris. Depending on the nature of waste incinerated onsite, these structures may be contaminated and may not qualify for C&D identification. This may be done most likely as a separate operable unit within the RI/FS.

3) NYSDEC-regulated wetlands UE-10 and UE-11, adjacent to the site, are classified as Class II wetlands by NYSDEC. The basis for these classifications is that these wetlands:

- o are associated with permanent open water outside the wetland (the Mohawk River);
- o lie within an urbanized area (Utica); and
- o include one of the three largest wetlands in the town (UE-10) (Ref. 21).

The significance of these wetlands to the surrounding area, based upon these classifications, is that:

- o some fish and wildlife resident to the Mohawk River may spend part of their life cycle in the wetlands for reproduction, food, and/or cover;
- o the wetlands may aid in improving the quality of water in the Mohawk River;

- o the wetlands may provide unusually important natural, recreational, educational, scientific, open-space, and aesthetic benefits; and

- o UE-10 may be used by species with large space requirements (Ref. 22).

Based upon these considerations, a Step I Habitat-Based Assessment (HBA) should be performed, in accordance with NYSDEC Division of Fish and Wildlife guidance (Ref. 23). This will entail an ecological site description, characterization of the site as habitat, identification of ARARs and TBCs for the area and a determination of contravention of standards. Should significant contravention be found, step III of the HBA, the impact analysis, may be necessary in the future.

4) In particular, elements of the sampling and analysis of groundwater, surface water, sediment, and soil to be performed during the RI are as follows:

- o Undertake drum characterization and removal as an Interim Remedial Measure. Prior to construction of a Part 360 or Part 373 cap, the onsite drum piles will have to be removed in preparation for the subgrade. A visual inspection should be made regarding the estimated remaining quantities of material in the visible drums (aside from rainwater), and to assess whether leakage from the drums is having a detrimental effect on the immediate area (e.g., stressed vegetation, soil discoloration, positive air monitoring readings). Intact drums should be staged into representative groupings to facilitate the sampling process and to enable compositing of samples. Once characterized, the

drums and surrounding contaminated soil may, if necessary, be disposed of appropriately. This IRM should be completed during the RI/FS.

- Install four additional monitoring wells, 3 on site and one upgradient of the Hardfill Landfill (Figure 4-5). Samples should be collected from each well.

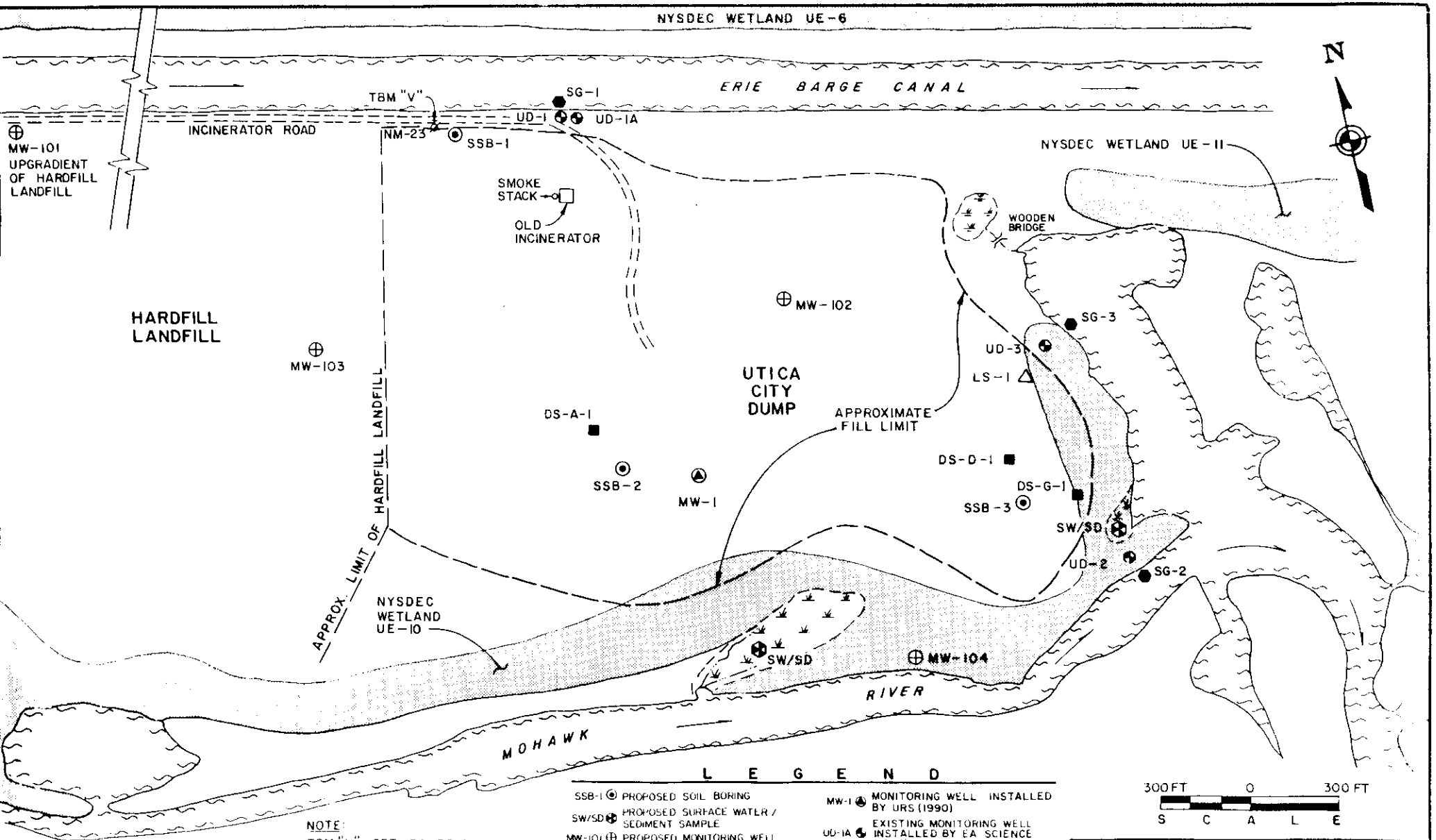
- Sample and employ for groundwater monitoring the existing wells at the Utica City Dump, and all proposed wells.

- Collect 3 surface soil samples (0-2 ft), two on site in areas of stressed vegetation (if present) near drum clusters, and one from an undisturbed area in the vicinity of the Utica City Dump.

- Collect 3 leachate seep/leachate sediment samples at the site. If possible, one of these samples should be taken from the same seep sampled by EA Science and Technology near UD-3 (Figure 4-5). Two additional locations should be selected at the southern and eastern edges of the fill slope.

- Collect 3 surface water/sediment samples from standing water ponds on the site (Figure 4-5) and from the adjacent wetlands.

- Analyze all samples, soil, groundwater, leachate/sediment, and surface water/sediment for the TCL compounds, TAL metals, and cyanide.



NOTE:
TBM "V" - SET RAILROAD SPIKE IN NORTH FACE UTILITY POLE NM 23; SOUTH SIDE DUMP INCINERATOR RD 500' ± NW OF OLD INCINERATOR. ASSUMED ELEVATION = 100.00'

SOURCES:
1 EA SCIENCE AND TECHNOLOGY (1988)
2 STETSON AND DALE (1984)

UTICA CITY DUMP
PROPOSED SAMPLE LOCATIONS

URS CONSULTANTS, INC.

FIGURE 4-5

- Conduct a magnetometer study across the entire site. The study should look for possible drum-filled trenches.

5. FINAL APPLICATION OF HAZARD RANKING SYSTEM

The Utica City Dump is an inactive, 55-acre dump owned by the City of Utica. The site was in operation from the early 1930s to 1972 and accepted municipal wastes generated by the City. An onsite incinerator burned a portion of the wastes from the early 1930s to 1960. Some illegal dumping has occurred in the past.

Many local industries have allegedly disposed of wastes at the site. Two separate Right-to-Know questionnaires have documented that the Bendix Fluid Division has disposed of approximately 200 tons/year of electro-chemical milling sludge from 1955 to 1979. In addition, the Utica Division of the Kelsey-Hayes Co. deposited approximately 1.5 tons of sodium hydroxide descaling salts once every four years from 1964 to 1984. Numerous deteriorated 55-gallon drums and municipal wastes protrude from the fill surface.

No community wells are located within a three-mile radius of the site. Potable water is supplied to the area by the Utica Board of Water Supply.

Phase II analysis of groundwater samples, subsurface soil samples, and waste samples, coupled with analytical data compiled on these matrices during previous investigations, indicates the following:

- Onsite soils are slightly contaminated
- Groundwater at the site contains chlorinated hydrocarbons, BTEX compounds, PAHs, and metals;
- Some surface wastes at the site are classifiable as hazardous wastes; and
- Periodic discharge to the Mohawk River of seeps containing elevated levels of some metals, phenols, and selected organic compounds has occurred.

FACILITY NAME: Utica City Dump

LOCATION: Utica, New York

EPA REGION: II

PERSON(S) IN CHARGE OF THE FACILITY: Tom Colucci, Commissioner of DPW

1 Kennedy Drive

Utica, New York, 13502

NAME OF REVIEWER: URS Consultants, Inc. DATE: 2/14/91

GENERAL DESCRIPTION OF THE FACILTY:

(For example: landfill, surface impoundment, pile, container; types of hazardous substances; location of the facility; contamination route of major concern; types of information needed for rating; agency action;etc.)

The Utica City Dump is an inactive landfill and incinerator facility which operated between 1930 and 1972. The 55 acre site is adjacent to both the Mohawk River and the NYS Barge Canal. The area accepted both residential and industrial waste. While much of the waste was incinerated, whenever the incinerator malfunctioned the waste was put directly into the landfill. Drums with unknown contents have been observed onsite. Large areas of leachate and orange colored surface water streams, were observed entering the Mohawk River during the site reconnaissance.

SCORES: Sm= 11.09 (Sgw = 6.12 Ssw = 18.18 Sa = 0.00)

Sfe = 0.00

Sdc = 50.00

HRS COVER SHEET

GROUND WATER ROUTE WORK SHEET

RATING FACTOR	ASSIGNED VALUE	MULTI-PLIER	SCORE	MAX. SCORE	REF. (SECTION)
1 OBSERVED RELEASE	0 45 **45**	1	45	45	3.1

IF OBSERVED RELEASE IS GIVEN A SCORE OF 45, PROCEED TO LINE 4
IF OBSERVED RELEASE IS GIVEN A SCORE OF 0, PROCEED TO LINE 2

2 ROUTE CHARACTERISTICS					3.2
DEPTH TO AQUIFER OF CONCERN	0 1 2 3 [ ]		0	6	
NET PRECIPITATION	0 1 2 3 [ ]			3	
PERMEABILITY OF THE UNSATURATED ZONE	0 1 2 3 [ ]			3	
PHYSICAL STATE	0 1 2 3 [ ]			3	
TOTAL ROUTE CHARACTERISTICS SCORE			0	15	
3 CONTAINMENT	0 1 2 3 [ ]			3	3.3
4 WASTE CHARACTERISTICS					
TOXICITY/PERSISTANCE	0 3 6 9 **18**	1	18	18	3.4
HAZARDOUS WASTE QUANTITY	12 15 18 0 1 2 3 **8** 4 5 6 7 8	1	8	8	
TOTAL WASTE CHARACTERISTICS SCORE			26	26	
5 TARGETS					
GROUND WATER USE	0 1 2 3 **1**	3	3	9	
DISTANCE TO NEAREST WELL /POPULATION SERVED	0 4 6 8 1 0 12 16 18 [ ] 24 30 32 35 40	1	0	40	
TOTAL TARGETS SCORE			3	49	
6 IF LINE 1 IS 45, MULTIPLY 1 X 4 X 5			3510	57,330	
IF LINE 1 IS 0, MULTIPLY 2 X 3 X 4 X 5			0		
7 DIVIDE LINE 6 BY 57,330 AND MULTIPLY BY 100					
Sgw =			6.12		

GROUND WATER ROUTE WORK SHEET

SURFACE WATER ROUTE WORK SHEET

RATING FACTOR	ASSIGNED VALUE	MULTI-PLIER	SCORE	MAX. SCORE	REF. (SECTION)
1 OBSERVED RELEASE	0 45 [45]	1	45	45	4.1
IF OBSERVED RELEASE IS GIVEN A SCORE OF 45, PROCEED TO LINE 4 IF OBSERVED RELEASE IS GIVEN A SCORE OF 0, PROCEED TO LINE 2					
2 ROUTE CHARACTERISTICS					4.2
FACILILTIES SLOPE AND INTERVENING TERRAIN	0 1 2 3 [ ]			3	
1-yr 24 HOUR RAINFALL	0 1 2 3 [ ]			3	
DISTANCE TO NEAREST SURFACE WATER	0 1 2 3 [ ]		0	6	
PHYSICAL STATE	0 1 2 3 [ ]			3	
TOTAL ROUTE CHARACTERISTICS SCORE			0	15	
3 CONTAINMENT	0 1 2 3 [ ]			3	4.3
4 WASTE CHARACTERISTICS					
TOXICITY/PERSISTANCE	0 3 6 9 12 15 [18]	1	18	18	4.4
HAZARDOUS WASTE QUANTITY	1 2 3 4 5 6 7 8 [8]	1	8	8	
TOTAL WASTE CHARACTERISTICS SCORE			26	26	
5 TARGETS					4.5
SURFACE WATER USE	0 1 2 3 [2]	3	6	9	
DISTANCE TO A SENSITIVE ENVIRONMENT	0 1 2 3 [2]	2	4	6	
POPULATION SERVED/DIST TO WATER INTAKE	0 4 6 8 10 12 16 18 20 [0]				
DOWNSTREAM	24 30 32 35 40 [ ]	1	0		
TOTAL TARGETS SCORE			10	55	
6 IF LINE 1 IS 45, MULTIPLY 1 X 4 X 5 IF LINE 1 IS 0, MULTIPLY 2 X 3 X 4 X 5			11700 0	64,350	
7 DIVIDE LINE 6 BY 64,350 AND MULTIPLY BY 100 Ssw =			18.18		

SURFACE WATER ROUTE WORK SHEET

AIR ROUTE WORK SHEET

RATING FACTOR	ASSIGNED VALUE	MULTI-PLIER	SCORE	MAX. SCORE	REF. (SECTION)
1 OBSERVED RELEASE	0 45 [0]	1	0	45	5.1

DATE AND LOCATION: 5/30/90 – Utica,New York

SAMPLING PROTOCOL: HNμ (PID)

IF LINE 1 IS 0, THE Sa =0. ENTER ON LINE 5
IF LINE 1 IS 45, THEN PROCEED TO; LINE 2.

2 WASTE CHARACTERISTICS 5.2

REACTIVITY AND INCOMPATIBILITY	0 1 2 3 [ ]	1		3
TOXICITY	0 1 2 3 [ ]	3	0	9
HAZARDOUS WASTE QUANTITY	3 4 5 6 7 8 [ ]	1	0	8

TOTAL WASTE CHARACTERISTICS SCORE	0	20

3 TARGETS 5.3

POPULATION WITHIN 4 MILE RADIUS	O 9 12 21 24 27 [ ]	1	0	30
DISTANCE TO SENSITIVE ENVIRONMENT	0 1 2 3 [ ]	2	0	6
LAND USE	0 1 2 3 [ ]	1		3

TOTAL TARGETS SCORE	0	39
4 MULTIPLY 1 X 2 X 3	0	35,100

5 DIVIDE LINE 4 BY 35,100 AND MULTIPLY BY 100

Sa= 0.00

	S	S^2
GROUNDWATER ROUTE SCORE (Sgw)	6.12	37.48
SURFACE WATER ROUTE SCORE (Ssw)	18.18	330.58
AIR ROUTE SCORE (Sa)	0.00	0.00
$S^2gw + S^2sw + S^2a$		368.06
square root of$(S^2gw + S^2sw + S^2a)$		19.18
$(S^2gw + S^2sw + S^2a)/1.73$		11.09

WORKSHEET FOR COMPUTING Sm

FIRE AND EXPLOSION WORK SHEET

RATING FACTOR	ASSIGNED VALUE	MULTI-PLIER	SCORE	MAX. SCORE	REF. (SECTION)
1 CONTAINMENT	1 3 [ ]	1		3	7.1
2 WASTE CHARACTERISTICS					
DIRECT EVIDENCE	0 3 [ ]	1		3	7.2
IGNITABILITY	0 1 2 3 [ ]	1		3	
REACTIVITY	0 1 2 3 [ ]	1		3	
INCOMPATIBILITY	0 1 2 3 [ ]	1		3	
HAZARDOUS WASTE QUANTITY	1 2 3 4 5 6 7 8 [ ]	1		3 8	
TOTAL WASTE CHARACTERISTICS SCORE			0	20	
3 TARGETS					7.3
DISTANCE TO NEAREST POPULATION	0 1 2 3 4 5 [ ]	1			
DISTANCE TO NEAREST BUILDING	0 1 2 3 [ ]	1			
DISTANCE TO A SENSITIVE ENVIRONMENT	0 1 2 3 [ ]	1		6	
LAND USE	0 1 2 3 [ ]	1			
POPULATION WITHIN 2 MILE RADIUS	0 1 2 3 4 5 [ ]	1			
BUILDINGS WITHIN 2 MILE RADIUS	0 1 2 3 4 5 [ ]	1			
TOTAL TARGETS SCORE			0	24	
4 MULTIPLY 1 X 2 3			0	1,440	

5 DIVIDE LINE 4 BY 1,440 AND MULTIPLY BY 100

Sfe = 0.00

FIRE AND EXPLOSION WORK SHEET

DIRECT CONTACT WORK SHEET					
RATING FACTOR	ASSIGNED VALUE	MULTI-PLIER	SCORE	MAX. SCORE	REF. (SECTION)
1 OBSERVED RELEAS 0 45	[0]	1	0	45	8.1
IF LINE 1 IS 45, PROCEED TO LINE 2 IF LINE 1 IS 0, PROCEED TO LINE 2					
2 ACCESSIBILITY 0 1 2 3	[3]	1	3	3	8.2
3 CONTAINMENT 0 15	[15]	1	15	15	8.3
4 WASTE CHARACTERISTICS TOXICITY 0 1 2 3	[3]	5	15	15	8.4
5 TARGETS					8.5
POPULATION WITHIN 1 MILE RADIUS 0 1 2 3 4 5	[4]	4	16	20	
DISTANCE TO A CRITICAL HABITAT 0 1 2 3	[0]	4	0	12	
TOTAL TARGETS SCORE			16	32	
6 IF LINE 1 IS 45, MULTIPLY 1 X 4 X 5			0		
IF LINE 1 IS 0, MULTIPLY 2 X 3 X 4 X 5			10800	21,600	
7 DIVIDE LINE 6 BY 21,600 AND MULTIPLY BY 100					
			Sdc =	50.00	

DIRECT CONTACT WORK SHEET

GROUNDWATER ROUTE

1 OBSERVED RELEASE

o CONTAMINANTS DETECTED (5 MAXIMUM):

Xylene, naphthalene, arsenic, barium, lead

o RATIONALE FOR ATTRIBUTING THE CONTAMINANTS TO THE FACILITY:

Analytical results from Phase II investigation (Ref. 9)

SCORE 45

***

2. ROUTE CHARACTERISTICS

DEPTH TO AQUIFER OF CONCERN

o NAME/DESCRIPTION OF AQUIFER(S) OF CONCERN:

Surficial unconsolidated deposits - water table aquifer.

o DEPTH(S) FROM THE GROUND SURFACE TO THE HIGHEST SEASONAL LEVEL OF THE SATURATED ZONE [WATER TABLE(S)] OF THE AQUIFER OF CONCERN:

0 feet - during flood conditions in 1987, EA well UD-3 had a water level at the surface (Ref. 4)

o DEPTH FROM THE GROUND SURFACE TO THE LOWEST POINT OF WASTE DISPOSAL/STORAGE:

Waste observed on ground surface. Subsurface data indicates depth of waste disposal to $\pm$ 15 feet below ground.

SCORE 3

***

NET PRECIPITATION

- MEAN ANNUAL OR SEASONAL PRECIPITATION(LIST MONTHS FOR SEASONAL):

  40 inches (Ref. 8)

- MEAN ANNUAL OR SEASONAL EVAPORATION (LIST MONTHS FOR SEASONAL):

  26 inches (Ref. 8)

- NET PRECIPITATION (SUBTRACT THE ABOVE FIGURES):

  14 inches

SCORE 2

PERMEABILITY OF UNSATURATED ZONE

- SOIL TYPE IN UNSATURATED ZONE:

  Sandy silt and heterogeneous fill

- PERMEABILITY ASSOCIATED WITH SOIL TYPE:

  10^{-3} to 10^{-4} cm/sec (Ref. 8)

SCORE 2

PHYSICAL STATE

- PHYSICAL STATE OF SUBSTANCES AT TIME OF DISPOSAL (OR AT PRESENT TIME FOR GENERATED GASES):

  Solid, sludge (Ref. 2)

SCORE 3

***

3. CONTAINMENT

CONTAINMENT

o METHOD(S) OF WASTE OF LEACHATE CONTAINMENT EVALUATED:

No liner, inadequate cover

o METHOD WITH THE HIGHEST SCORE:

No liner

SCORE 3

***

4. WASTE CHARACTERISTICS

TOXICITY AND PERSISTENCE

o COMPOUND(S) EVALUATED:

Compound Evalauted	Toxicity	Persistence	Score
Xylene	2	1	9
Naphthalene	2	1	9
Barium	3	3	18
Lead	3	3	18
Arsenic	3	3	18

o COMPOUND WITH THE HIGHEST SCORE:

Barium, arsenic, lead

SCORE 18

HAZARDOUS WASTE QUANTITY

o TOTAL QUANTITY OF HAZARDOUS SUBSTANCES AT THE FACILITY, EXCLUDING THOSE WITH A CONTAINMENT SCORE OF 0(GIVE A REASONABLE ESTIMATE EVEN IF QUANTITY IS ABOVE MAXIMUM):

< 200 tons/year for approximately 24 years = < 4,800 tons.
1.5 tons/year once every four years for 20 years = 7.5 tons
Total = ± 4,807.5 tons

SCORE 8

o BASIS OF ESTIMATING AND/OR COMPUTING WASTE QUANTITY:

Right-to-Know Questionnaire (Ref. 2,3). Although the RTK Questionnaire completed by Bendix lists 1955 to 1979 for the dates of disposal at the Utica City Dump, the Dump closed in 1972, therefore, only 17 years of disposal at the dump were possible. The remaining wastes may have been disposed at the adjacent Hardfill Landfill.

***

5. TARGETS

GROUNDWATER USE

o USE(S) OF AQUIFER(S) OF CONCERN WITHIN A 3-MILE RADIUS OF THE FACILITY:

Unused industrial cooling well on the Monarch Chemical site (Ref. 5)

SCORE 1

DISTANCE OF NEAREST WELL

o LOCATION OF NEAREST WELL DRAWING FROM AQUIFER OF CONCERN OR OCCUPIED BUILDING NOT SERVED BY A PUBLIC WATER SUPPLY:

5.5 miles (Ref. 6)

o DISTANCE TO ABOVE WELL OR BUILDING:

5.5 miles

POPULATION SERVED BY GROUNDWATER WELL WITHIN A 3-MILE RADIUS

o IDENTIFIED WATER-SUPPLY WELL(S) DRAWING FROM AQUIFER(S) OF CONCERN WITHIN A 3-MILE RADIUS AND POPULATIONS SERVED BY EACH:

NA

o COMPUTATION OF LAND AREA IRRIGATED BY SUPPLY WELL(S) DRAWING FROM AQUIFER(S) OF CONCERN WITHIN A 3-MILE RADIUS, AND CONVERSION TO POPULATION(1.5 PEOPLE PER ACRE):

NA

o TOTAL POPULATION SERVED BY GROUNDWATER WITHIN A 3-MILE RADIUS:

0 people

SCORE 0

SURFACE WATER ROUTE

1. OBSERVED RELEASE

o CONTAMINANTS DETECTED IN SURFACE WATER AT THE FACILITY OR DOWNHILL FROM IT (5 MAXIMUM):

Arsenic, chromium, lead mercury, cyanide

o RATIONALE FOR ATTRIBUTING THE CONTAMINANTS TO THE FACILITY:

Leachate seep sampled by NYSDEC in March 1981 (Ref. 4)

SCORE 45

***

2. ROUTE CHARACTERISTICS

FACILITY SLOPE AND INTERVENING TERRAIN

o AVERAGE SLOPE OF THE FACILITY IN PERCENT:

0-3% (Ref. 4)

o NAME/DESCRIPTION OF THE NEAREST DOWNSLOPE SURFACE WATER:

Mohawk River, New York State Barge Canal

o AVERAGE SLOPE OF TERRAIN BETWEEN FACILITY AND ABOVE-CITED SURFACE WATER IN PERCENT:

0-3% (Ref. 4)

o IS THE FACILITY LOCATED EITHER TOTALLY OR PARTIALLY IN SURFACE WATER?:

Yes - large leachate ponds on site

SCORE 3

o IS THE FACILITY COMPLETELY SURROUNDED BY AREAS OF HIGHER ELEVATION?

No

1-YEAR 24 HOUR RAINFALL IN INCHES

2.2 inches (Ref. 8)

SCORE 2

DISTANCE TO NEAREST DOWNSLOPE SURFACE WATER

Adjacent

SCORE 3

PHYSICAL STATE OF WASTE

Sludge, solid

SCORE 3

***

3. CONTAINMENT

CONTAINMENT

o METHOD(S) OF WASTE OR LEACHATE CONTAINMENT EVALUATED:

No liner, inadequate cover

o METHOD WITH THE HIGHEST SCORE:

No liner

SCORE 3

***

4. WASTE CHARACTERISTICS

TOXICITY AND PERSISTENCE

o COMPOUND(S) EVALUATED

COMPOUND EVALUATED	TOXICITY	PERSISTENCE	SCORE
Arsenic	3	3	18
Chrmoium	3	3	18
Lead	3	3	18
Mercury	3	3	18
Cyanide	3	3	18

o COMPOUND WITH THE HIGHEST SCORE:

All scored 18

SCORE 18

HAZARDOUS WASTE QUANTITY

o TOTAL QUANTITY OF HAZARDOUS SUBSTANCES AT THE FACILITY EXCLUDING THOSE WITH A CONTAINMENT SCORE OF 0 (GIVE A REASONABLE ESTIMATE EVEN IF QUANTITY IS ABOVE MAXIMUM):

±4807 tons

SCORE 8

o BASIS OF ESTIMATING AND/OR COMPUTING WASTE QUANTITY:

Right-to-Know Questionnaire (Ref. 2,3). Although the RTK Questionnaire completed by Bendix lists 1955 to 1979 for the dates of disposal at the Utica City Dump, the Dump closed in 1972, therefore, only 17 years of disposal at the dump were possible. The remaining wastes may have been disposed at the Hardfill Landfill.

***

5. TARGETS

SURFACE WATER USE

o USE(S) OF SURFACE WATER WITHIN 3 MILES DOWNSTREAM OF THE HAZARDOUS SUBSTANCE:

Recreation, shipping

Score 2

- IS THERE TIDAL INFLUENCE?

  NA

DISTANCE TO A SENSITIVE ENVIRONMENT

- DISTANCE TO A 5-ACRE(MINIMUM) COASTAL WETLAND, IF 2 MILES OR LESS:

  NA

- DISTANCE TO A 5 ACRE (MINIMUM) FRESH-WATER WETLAND, IF 1 MILE OR LESS:

  0.1 miles; UE#10, UE#11 (Ref. 6).

- DISTANCE TO CRITICAL HABITAT OF AN ENDANGERED SPECIES OR NATIONAL WILDLIFE REFUGE, IF 1 MILE OR LESS:

  None reported

SCORE 2

POPULATION SERVED BY SURFACE WATER

- LOCATION(S) OF WATER-SUPPLY INTAKE(S) WITHIN 3 MILES(FREE-FLOWING BODIES) OR 1 MILE (STATIC WATER BODIES) DOWNSTREAM OF THE HAZARDOUS SUBSTANCE AND POPULATION SERVED BY EACH INTAKE:

  Greater than 3 miles

- COMPUTATION OF LAND AREA IRRIGATED BY ABOVE-CITED INTAKE(S) AND CONVERSION TO POPULATION (1.5 PEOPLE PER ACRE):

  None reported

- TOTAL POPULATION SERVED

  0

- NAME/DESCRIPTION OF NEAREST ABOVE-CITED WATER BODIES:

  Mohawk River - New York State Barge Canal

- DISTANCE TO ABOVE-CITED INTAKES, MEASURED IN STREAM MILES:

  > 3 miles

SCORE 0

***

AIR ROUTE

1. OBSERVED RELEASE

o CONTAMINANTS DETECTED:

None

o DATE AND LOCATION OF DETECTION OF CONTAMINANTS:

5/30/90 - Utica, New York

o METHODS USED TO DETECT THE CONTAMINANTS:

HNu (PID)

o RATIONALE FOR ATTRIBUTING THE CONTAMINANTS TO THE SITE:

None

SCORE 0

***

2. WASTE CHARACTERISTICS

REACTIVITY AND INCOMPATIBILITY

o MOST REACTIVE COMPOUND

No air release

o MOST INCOMPATIBLE PAIR OF COMPOUNDS

No air release

SCORE 0

TOXICITY

o MOST TOXIC COMPOUND

No air release -

SCORE 0

HAZARDOUS WASTE QUANTITY

o TOTAL QUANTITY OF HAZARDOUS WASTE:

No air release

SCORE 0

o BASIS OF ESTIMATING AND/OR COMPUTING WASTE QUANTITY:

NA

***

3 TARGETS

POPULATION WITHIN 4-MILE RADIUS

o UNDERLINE RADIUS USED, GIVE POPULATION AND INDICATE HOW DETERMINED:

0 TO 4 MI 0 TO 1 MI 0 TO 0.5 MI 0 TO 0.25 MI

No air release

SCORE 0

DISTANCE TO A SENSITIVE ENVIRONMENT

o DISTANCE TO 5 ACRE (MINIMUM) COASTAL WETLAND, IF 2 MILES OR LESS:

NA

- DISTANCE TO 5 ACRE (MINIMUM) FRESH WATER WETLAND, IF 1 MILE OR LESS:

  No air release

- DISTANCE TO CRITICAL HABITAT OF AN ENDANGERED SPECIES, IF 1 MILE OR LESS:

  No air release

SCORE 0

LAND USE

- DISTANCE TO COMMERCIAL/INDUSTRIAL AREA , IF 1 MILE OR LESS:

  No air release

- DISTANCE TO NATIONAL OR STATE PARK, FOREST, OR WILDLIFE RESERVE, IF 2 MILES OR LESS:

  No air release

- DISTANCE TO RESIDENTIAL AREA, IF 2 MILES OR LESS:

  No air release

- DISTANCE TO AGRICULTURAL LAND IN PRODUCTION WITHIN THE LAST 5 YEARS, IF 1 MILE OR LESS:

  No air release

- DISTANCE TO PRIME AGRICULTURAL LAND IN PRODUCTION WITHIN PAST YEARS, IF 2 MILES OR LESS:

  No air release

- IS A HISTORICAL OR LANDMARK SITE(NATIONAL REGISTER OR HISTORIC PLACES AND NATIONAL NATURAL LANDMARKS) WITHIN VIEW OF THE SITE?

  No air release

SCORE 0

***

FIRE AND EXPLOSION

1. CONTAINMENT

o HAZARDOUS SUBSTANCES PRESENT:

No threat of fire or explosion (Ref. 1)

o TYPE OF CONTAINMENT, IF APPLICABLE:

NA

SCORE o

***

2. WASTE CHARACTERISTICS

DIRECT EVIDENCE

o TYPE OF INSTRUMENT AND MEASUREMENTS:

NA

SCORE 0

IGNITABILITY

o COMPOUND USED

NA

SCORE 0

REACTIVITY

o MOST REACTIVE COMPOUND:

NA

SCORE 0

INCOMPATIBILITY

o MOST INCOMPATIBLE PAIR OF COMPOUNDS:

NA

SCORE 0

HAZARDOUS WASTE QUANTITY

o TOTAL QUANTITY OF HAZARDOUS SUBSTANCES AT THE FACILITY:

NA

SCORE 0

o BASIS OF ESTIMATING AND/OR COMPUTING WASTE QUANTITY:

NA

3 TARGETS

DISTANCE TO NEAREST POPULATION

NA

SCORE 0

DISTANCE TO NEAREST BUILDING

NA

SCORE 0

DISTANCE TO SENSITIVE ENVIRONMENT

o DISTANCE TO WETLANDS

NA

o DISTANCE TO CRITICAL HABITAT:

NA

SCORE 0

LAND USE

- DISTANCE TO COMMERCIAL/INDUSTRIAL AREA

  NA

- DISTANCE TO NATIONAL OR STATE PARK, FOREST OF WILDLIFE RESERVE, IF 2 MILES OR LESS:

  NA

- DISTANCE TO RESIDENTIAL AREA, IF 2 MILES OR LESS:

  NA

- DISTANCE TO AGRICULTURAL LAND IN PRODUCTION WITHIN PAST 5 YEARS, IF 1 MILE OR LESS:

  NA

- DISTANCE TO PRIME AGRICULTURAL LAND IN PRODUCTION WITHIN PAST 5 YEARS, IF 2 MILES OR LESS:

  NA

- IF A HISTORIC OR LANDMARK SITE (NATIONAL REGISTER OF HISTORIC PLACES AND NATIONAL NATURAL LANDMARKS) WITHIN VIEW OF THE SITE?

  NA

SCORE 0

POPULATION WITHIN 2 MILE RADIUS

NA

SCORE 0

BUILDINGS WITHIN A 2 MILE RADIUS

NA

SCORE 0

***

DIRECT CONTACT

1. OBSERVED INCIDENT

o DATE, LOCATION AND PERTINENT DETAILS OF INCIDENT:

None

SCORE 0

***

2. ACCESSIBILITY

o DESCRIBE TYPE OF BARRIER(S):

Except for a locked gate across access road to site, no access restrictions exist.

SCORE 3

***

3. CONTAINMENT

o TYPE OF CONTAINMENT, IF APPLICABLE:

No liner, no adequate cover, waste and drums are exposed, large leachate streams were observed onsite.

SCORE 15

***

4. WASTE CHARACTERISTICS

TOXICITY

o COMPOUNDS EVALUATED

COMPOUND EVALUATED	TOXICITY
Acrochlor 1254	3
Lead	3
Mercury	3
Cyanide	3
Phenol	3

o COMPOUND WITH HIGHEST SCORE:

All compounds score the same

SCORE 3

***

5 TARGETS

POPULATION WITHIN 1 MILE RADIUS

5,591 (Ref. 4)

SCORE 4

DISTANCE TO CRITICAL HABITAT (OF ENDANGERED SPECIES)

None reported (Ref. 5)

SCORE 0

***

HRS REFERENCES

*1. Irving, P., Chief Fire Marshall, City of Utica, 1991. Personal Communication with Phyllis Rettke of URS Consultants, Inc. RE: Threat of Fire or Explosion at the Utica City Dump.

*2. NYSDEC, 1984. Right to Know Questionnaire completed by Bendix Fluid Power Division, Utica, New York.

*3. NYSDEC, 1984. Right to Know Questionnaire completed by Kelsey-Hayes Co., Whitesboro, New York.

4. NYSDEC, 1988. Phase II Investigation of the Utica City Dump, EA Science and Technology.

5. NYSDEC, 1990. Phase I Investigation of the Monarch Chemical Site, URS Consultants.

6. NYSDEC, 1987. Portion of Freshwater Wetlands Map for Oneida County.

7. NYSDOH, 1982. New York State Atlas of Community Water Systems.

8. Sax, I., 1987. Hazardous Chemicals Desk Reference, Van Nostrand Reinhold, New York, New York.

9. USEPA, 1984. Uncontrolled Hazardous Waste Site Ranking System, A Users Manual, (HW-10).

10. Versar, 1990. Analytical Results from Phase II Sampling at the Utica City Dump.

Site Inspection Report

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

EPA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D980509343

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
Utica City Dump	Incinerator Road

03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
Utica	NY	13501	Oneida		

09 COORDINATES LATITUDE	LONGITUDE	10 TYPE OF OWNERSHIP (Check one)
43° 06' 18".-	75° 11' 25".-	☐ A. PRIVATE ☐ B. FEDERAL _____ ☐ C. STATE ☐ D. COUNTY ☒ E. MUNICIPAL ☐ F. OTHER _____ ☐ G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION	02 SITE STATUS	03 YEARS OF OPERATION
5 / 30 / 90 (MONTH DAY YEAR)	☐ ACTIVE ☒ INACTIVE	1930 (BEGINNING YEAR) / 1972 (ENDING YEAR) ___ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)

☐ A. EPA ☐ B. EPA CONTRACTOR _____ (Name of firm) ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR _____ (Name of firm)
☐ E. STATE ☒ F. STATE CONTRACTOR URS Consultants (Name of firm) ☐ G. OTHER _____ (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO
Scott Swanson	Geologist	URS	(716) 883-5525
09 OTHER INSPECTORS Robert Kreuzer	10 TITLE Geologist	11 ORGANIZATION URS	12 TELEPHONE NO. (716) 883-5525
Bill Shaw	Engineering Geologist	NYSDEC	(518) 457-9538
Mike Sirowich	Engineer	NYSDEC	(315) 785-2261
			( )
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
Tom Colucci	Commissioner	DPW City of Utica, 13502	(315) 792-0181
			( )
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
☒ PERMISSION ☐ WARRANT	10:40	Sunny, 60's

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO.
Phyllis Rettke	URS Consultants, Inc.	(716) 883-5525

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
Same				1 / 29 / 91 (MONTH DAY YEAR)

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	0980509343

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- ☒ A. SOLID
- ☐ B. POWDER, FINES
- ☐ C. SLUDGE
- ☐ D. OTHER (Specify)
- ☐ E. SLURRY
- ☒ F. LIQUID
- ☐ G. GAS

02 WASTE QUANTITY AT SITE (Measures of waste quantities must be independent)

- TONS: 4,808
- CUBIC YARDS:
- NO. OF DRUMS:

03 WASTE CHARACTERISTICS (Check all that apply)

- ☒ A. TOXIC
- ☒ B. CORROSIVE
- ☐ C. RADIOACTIVE
- ☒ D. PERSISTENT
- ☐ E. SOLUBLE
- ☐ F. INFECTIOUS
- ☐ G. FLAMMABLE
- ☐ H. IGNITABLE
- ☐ I. HIGHLY VOLATILE
- ☐ J. EXPLOSIVE
- ☐ K. REACTIVE
- ☐ L. INCOMPATIBLE
- ☐ M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE	4,800	tons	Electro-Chemical Milling Sludge
OLW	OILY WASTE			
SOL	SOLVENTS			
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES	7.5	tons	
MES	HEAVY METALS			

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
D002	Sodium Hydroxide	1310-73-2	Drummed	unknown	
F006	Electro Chemical Milling		Drummed	unknown	
	Sludge				

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Right to Know Questionnaires, Bendix, Kelsey-Hayes

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NY	D980509343

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☐ A. GROUNDWATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

No use of groundwater within 3 miles of the site

01 ☒ B. SURFACE WATER CONTAMINATION — 02 ☒ OBSERVED (DATE: 5/30/90) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

Leachate seeps were observed entering the Mohawk River

01 ☐ C. CONTAMINATION OF AIR — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

None reported

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

Unknown

01 ☒ E. DIRECT CONTACT — 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 5,591 04 NARRATIVE DESCRIPTION

Population within 1 mile

01 ☒ F. CONTAMINATION OF SOIL — 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED: 55 (Acres) 04 NARRATIVE DESCRIPTION

Size of the Utica City Dump

01 ☐ G. DRINKING WATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

None reported

01 ☐ H. WORKER EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

None, site is closed

01 ☒ I. POPULATION EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 53,292 04 NARRATIVE DESCRIPTION

Population within a 3 mile radius of the site.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: NY | 02 SITE NUMBER: D980509343

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 [X] J. DAMAGE TO FLORA — 02 [ ] OBSERVED (DATE: _____) — [X] POTENTIAL — [ ] ALLEGED
04 NARRATIVE DESCRIPTION

There is a potential threat to the flora on the site and in the adjacent wetland areas from contaminants migrating offsite.

01 [X] K. DAMAGE TO FAUNA — 02 [ ] OBSERVED (DATE: _____) — [X] POTENTIAL — [ ] ALLEGED
04 NARRATIVE DESCRIPTION (Include name(s) of species)

There is a potential threat to the fauna living in the adjacent wetland areas and in both the Mohawk River and New York State Barge Canal from contact with contaminants migrating offsite.

01 [X] L. CONTAMINATION OF FOOD CHAIN — 02 [ ] OBSERVED (DATE: _____) — [X] POTENTIAL — [ ] ALLEGED
04 NARRATIVE DESCRIPTION

Leachate entering the Mohawk River has the potential to enter the food chain.

01 [X] M. UNSTABLE CONTAINMENT OF WASTES (Spills, Runoff, Standing liquids, Leaking drums) — 02 [X] OBSERVED (DATE: 5/30/90) — [ ] POTENTIAL — [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

Large leachate "streams" were observed leaving the site and entering the Mohawk River.

01 [X] N. DAMAGE TO OFFSITE PROPERTY — 02 [ ] OBSERVED (DATE: _____) — [X] POTENTIAL — [ ] ALLEGED
04 NARRATIVE DESCRIPTION

The large volume of leachate entering the Mohawk River has the potential to damage downstream property.

01 [ ] O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 [ ] OBSERVED (DATE: _____) — [ ] POTENTIAL — [ ] ALLEGED
04 NARRATIVE DESCRIPTION

None reported

01 [X] P. ILLEGAL/UNAUTHORIZED DUMPING — 02 [X] OBSERVED (DATE: 1987) — [ ] POTENTIAL — [ ] ALLEGED
04 NARRATIVE DESCRIPTION

Previous reports of illegal dumping

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

III. TOTAL POPULATION POTENTIALLY AFFECTED: 53,292 - population within a 3 mile radius of site

IV. COMMENTS

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

NYSDEC Files

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NY	D980509343

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
☐ A. NPDES				
☐ B. UIC				
☐ C. AIR				
☐ D. RCRA				
☐ E. RCRA INTERIM STATUS				
☐ F. SPCC PLAN				
☐ G. STATE (Specify)				
☐ H. LOCAL (Specify)				
☐ I. OTHER (Specify)				
☒ J. NONE				

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE
☐ A. SURFACE IMPOUNDMENT		
☐ B. PILES		
☒ C. DRUMS, ABOVE GROUND	unknown	
☐ D. TANK, ABOVE GROUND		
☐ E. TANK, BELOW GROUND		
☒ F. LANDFILL	unknown	
☐ G. LANDFARM		
☒ H. OPEN DUMP	unknown	
☐ I. OTHER (Specify)		

04 TREATMENT (Check all that apply)
☒ A. INCINERATION
☐ B. UNDERGROUND INJECTION
☐ C. CHEMICAL/PHYSICAL
☐ D. BIOLOGICAL
☐ E. WASTE OIL PROCESSING
☐ F. SOLVENT RECOVERY
☐ G. OTHER RECYCLING/RECOVERY
☐ H. OTHER (Specify)

05 OTHER
☐ A. BUILDINGS ON SITE

06 AREA OF SITE
55 (Acres)

07 COMMENTS

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

☐ A. ADEQUATE, SECURE ☐ B. MODERATE ☐ C. INADEQUATE, POOR ☒ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC.

Drums are rusted and contents have been released to the ground surface

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE ☒ YES ☐ NO

02 COMMENTS

VI. SOURCES OF INFORMATION (Cite specific references, e.g. state files, sample analysis, reports)

Site Inspection
NYSDEC files

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D980509343

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as applicable)

	SURFACE	WELL
COMMUNITY	A. ☑	B. ☐
NON-COMMUNITY	C. ☐	D. ☒

02 STATUS

ENDANGERED	AFFECTED	MONITORED
A. ☐	B. ☐	C. ☐
D. ☐	E. ☐	F. ☐

03 DISTANCE TO SITE

A. 15 (mi)
B. 5 (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)

☐ A. ONLY SOURCE FOR DRINKING ☐ B. DRINKING (Other sources available) COMMERCIAL, INDUSTRIAL, IRRIGATION (No other water sources available) ☐ C. COMMERCIAL, INDUSTRIAL, IRRIGATION (Limited other sources available) ☒ D. NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUND WATER 0

03 DISTANCE TO NEAREST DRINKING WATER WELL 5 (mi)

04 DEPTH TO GROUNDWATER	05 DIRECTION OF GROUNDWATER FLOW	06 DEPTH TO AQUIFER OF CONCERN	07 POTENTIAL YIELD OF AQUIFER	08 SOLE SOURCE AQUIFER
1 (ft)	East	1 (ft)	unknown (gpd)	☐ YES ☒ NO

09 DESCRIPTION OF WELLS (Including useage, depth, and location relative to population and buildings)

10 RECHARGE AREA		11 DISCHARGE AREA	
☐ YES ☐ NO	COMMENTS	☒ YES ☐ NO	COMMENTS: Leachate seeps were observed entering the Mohawk River

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)

☒ A. RESERVOIR, RECREATION DRINKING WATER SOURCE ☐ B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES ☐ C. COMMERCIAL, INDUSTRIAL ☐ D. NOT CURRENTLY USED

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME:	AFFECTED	DISTANCE TO SITE
Mohawk River	☐	adjacent (mi)
N.Y.S. Barge Canal	☐	adjacent (mi)
	☐	(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE
A. 5,591 NO. OF PERSONS	B. 29,911 NO. OF PERSONS	C. 53292 NO. OF PERSONS

02 DISTANCE TO NEAREST POPULATION 0.5 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE 7,871

04 DISTANCE TO NEAREST OFF-SITE BUILDING 0.5 (mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., rural, village, densely populated urban area)

The site is located on the flood plain of the Mohawk River approximately 1 mile north of the City of Utica.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION
01 STATE: NY | 02 SITE NUMBER: D980509343

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☐ A. 10^{-6} – 10^{-8} cm/sec ☐ B. 10^{-4} – 10^{-6} cm/sec ☒ C. 10^{-4} – 10^{-3} cm/sec ☐ D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☐ A. IMPERMEABLE (Less than 10^{-6} cm/sec) ☒ B. RELATIVELY IMPERMEABLE (10^{-4} – 10^{-6} cm/sec) ☐ C. RELATIVELY PERMEABLE (10^{-2} – 10^{-4} cm/sec) ☐ D. VERY PERMEABLE (Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK	04 DEPTH OF CONTAMINATED SOIL ZONE	05 SOIL pH	
unknown (ft)	Unknown (ft)	Unknown	

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
14 (in)	2.3 (in)	<3 %	S-SE	%

09 FLOOD POTENTIAL
SITE IS IN _____ YEAR FLOODPLAIN

10
☒ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE	OTHER
A. NA (mi)	B. 0.1 (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)
_____ (mi)
ENDANGERED SPECIES: None reported

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL	RESIDENTIAL AREAS; NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS: PRIME AG LAND	AGRICULTURAL LANDS: AG LAND
A. 0.9 (mi)	B. 1 (mi)	C. >2 (mi)	D. >1 (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

The site is located on the floodplain of Mohawk River just west of its confluence with the New York State Barge Canal. It is just north of NYSDEC regulated wetland UE-10 and west of wetland UE-11.

VII. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

NYSDEC files

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 6 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D980509343

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER	4	Versar	1990
SURFACE WATER / seep	1	Versar	1990
WASTE	3	Versar	1990
AIR			
RUNOFF			
SPILL			
SOIL	1	Versar	1990
VEGETATION			
OTHER/ seep sediment	1	Versar	1990

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
HNu	no readings above background - 5/30/90

IV. PHOTOGRAPHS AND MAPS

01 TYPE ☒ GROUND ☐ AERIAL

02 IN CUSTODY OF URS Consultants, Inc.
(Name of organization or individual)

03 MAPS ☒ YES ☐ NO

04 LOCATION OF MAPS URS Consultants, Inc., 570 Delaware Avenue, Buffalo, N.Y. 14202

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

Water levels were obtained from onsite monitoring wells. The data is contained in the Phase II report or available from URS Consultants, Inc.

VI. SOURCES OF INFORMATION (Cite specific references, e.g. state files, sample analysis, reports)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NY	D980509343

II. CURRENT OWNER(S)			PARENT COMPANY (If applicable)		
01 NAME City of Utica		02 D+B NUMBER	08 NAME		09 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.) 1 Kennedy Drive		04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD #, etc.)		11 SIC CODE
05 CITY Utica	06 STATE NY	07 ZIP CODE 13502	12 CITY	13 STATE	14 ZIP CODE
01 NAME		02 D+B NUMBER	08 NAME		09 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD #, etc.)		11 SIC CODE
05 CITY	06 STATE	07 ZIP CODE	12 CITY	13 STATE	14 ZIP CODE
01 NAME		02 D+B NUMBER	08 NAME		09 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD #, etc.)		11 SIC CODE
05 CITY	06 STATE	07 ZIP CODE	12 CITY	13 STATE	14 ZIP CODE
01 NAME		02 D+B NUMBER	08 NAME		09 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD #, etc.)		11 SIC CODE
05 CITY	06 STATE	07 ZIP CODE	12 CITY	13 STATE	14 ZIP CODE

III. PREVIOUS OWNER(S) (List most recent first)			IV. REALTY OWNER(S) (If applicable, list most recent first)		
01 NAME		02 D+B NUMBER	01 NAME		02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE
05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE
01 NAME		02 D+B NUMBER	01 NAME		02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE
05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE
01 NAME		02 D+B NUMBER	01 NAME		02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE
05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

NYSDEC Files

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D980509343

II. CURRENT OPERATOR (Provide if different from owner)

01 NAME	02 D+B NUMBER
none-site closed	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER

OPERATOR'S PARENT COMPANY (If applicable)

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

III. PREVIOUS OPERATOR(S) (List most recent first; provide only if different from owner)

01 NAME	02 D+B NUMBER
City of Utica	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
1 Kennedy Drive	

05 CITY	06 STATE	07 ZIP CODE
Utica	NY	13502

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD
1930's -1972	City of Utica

PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

IV. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

NYSDEC files

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D980509343

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

III. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
Bendix Fluid Power Division			

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
211 Seward Avenue			

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE
Utica	NY	13502			

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
Kelsey-Hayes Co.			

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
Mohawk Street			

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE
Whitesboro	NY	13492			

IV. TRANSPORTER(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
Bendix Corp.			

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
211 Seward Avenue			

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE
Utica	NY	13502			

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
Phil's Trucking			

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
900 Broad Street			

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE
Utica	NY	13502			

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

NYSDEC Right to Know Questionnaires

EPA FORM 2070-13(7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D980509343

II. PAST RESPONSE ACTIVITIES

01 ☐ A. WATER SUPPLY CLOSED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ B. TEMPORARY WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ C. PERMANENT WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ D. SPILLED MATERIAL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ E. CONTAMINATED SOIL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ F. WASTE REPACKAGED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ G. WASTE DISPOSED ELSEWHERE — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ H. ON SITE BURIAL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ I. IN SITU CHEMICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ J. IN SITU BIOLOGICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ K. IN SITU PHYSICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ L. ENCAPSULATION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ M. EMERGENCY WASTE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ N. CUTOFF WALLS — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ O. EMERGENCY DIKING/SURFACE WATER DIVERSION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ P. CUTOFF TRENCHES/SUMP — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Q. SUBSURFACE CUTOFF WALL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NY	D980509343

II PAST RESPONSE ACTIVITIES (Continued)

01 ☐ R. BARRIER WALLS CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ S. CAPPING/COVERING — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ T. BULK TANKAGE REPAIRED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ U. GROUT CURTAIN CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ V. BOTTOM SEALED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ W. GAS CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ X. FIRE CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Y. LEACHATE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Z. AREA EVACUATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 1. ACCESS TO SITE RESTRICTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 2. POPULATION RELOCATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 3. OTHER REMEDIAL ACTIVITIES — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 11 - ENFORCEMENT INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NY	D980509343

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION ☐ YES ☐ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY/ENFORCEMENT ACTION

III. SOURCES OF INFORMATION *(Cite specific references, e.g., state files, sample analysis, reports)*

EPA FORM 2070-13 (7-81)

GENERAL REFERENCES

11. NYSDEC, 1990, Phase II (Fourth Round) Work Plan, Utica City Dump Site.

12. URS Consultants, Inc., August 1990, Phase II (Fourth Round) Quality Assurance/Quality Control Plan, Utica City Dump Site.

13. URS Consultants, Inc., June 1990, Health and Safety Plan, Utica City Dump Site.

14. NYSDEC, May 1988/November 1988, Technical/Administrative Guidance Memorandums, "Guidelines for Exploratory Boring, Monitoring Wells Installation, and Documentation of These Activities."

15. NYSDEC, September 1989, Analytical Services Protocol, Volumes 1-8.

16. NYS Secretary of State, 1967. Official Compilation of Codes, Rules and Regulations of the State of New York, Conservation, Volume D.

17. Van Diver, Bradford B., 1980, Field Guide, Upstate New York. Dubuque, Iowa, Kendall/Hunt, 276 pp.

18. Van Diver, Bradford, B., 1985, Roadside Geology of New York. Missoula, Mont.: Mountain Press, 411 pp.

19. Schacklette, H.T. and Boerngen, J.E., 1984, Element Concentrations in Soils and Other Surficial Materials of the Conterminous United States: USGS Professional Paper 1270, 10 pp.

*20. NYSDEC, 1981, Analytical Results of Leachate Samples from Utica City Dump Site.

GENERAL REFERENCES (Continued)

*21. NYSDEC Region 6, Steward Brown, Personal Communication, March 13, 1991.

22. Freshwater Wetlands Maps and Classification Regulations, 6NYCRR 664.

23. NYSDEC Division of Fish and Wildlife, Habitat Based Assessment, Guidance Document for Conducting Environmental Risk Assessments at Hazardous Waste Sites, December 28, 1989.

*24. Porter, Mike, April, 1992. Personal communication with Michael Gutmann of URS; RE: seasonal regulation of Erie Barge Canal water level.

25. USEPA, September 1981. Treatability Manual; Industrial Descriptions, Volume II.

* References included in this report.

(1)

URS

AN INTERNATIONAL PROFESSIONAL SERVICES ORGANIZATIC

JOB NO. 35231.07 JOB NAME Utica City Dump

MEMO OF TELECON

DATE 2/14/91 TELEPHONE 1-315-724-5153

PERSON CALLING Phyllis Reitke PERSON CALLED Peter Irving

REPRESENTING URS REPRESENTING Chief Fire Marshall City of Utica

PURPOSE OF TELECON AND/OR EQUIPMENT INVOLVED:

TEXT OF TELECON

There is no problem with the Utica Dump site. They haven't had fires there in many years.

If there was a potential problem they would "neutralize" it.

CC: _____ _____ _____ _____

Bendix

Fluid Power
Division

State of New York
Department of Environmental
Conservation
Region IV
2176 Guilderland Avenue
Schenectady, New York 12306

February 13, 1984

Re: Notification of Hazardous Waste Site

Gentlemen:

Enclosed please find a copy of a notice being filed with the U.S. Environmental Protection Agency pursuant to Section 103(c) of the Comprehensive Environmental Response, Compensation and Liability Act.

Very truly yours,

E. P. Noris
Vice President & General Manager

Enclosure

cc: U.S. Environmental Protection Agency, Region II

bcc: G. Balch
R. Evans
R. Sondag
K. A. Wallach

D...SION OF SOLID AND HAZARDOUS WASTE

50 WOLF ROAD
ALBANY, NEW YORK 12233

GENERATOR FORM
PART - I

HAZARDOUS WASTE DISPOSAL QUESTIONNAIRE

PLEASE COMPLETE AND RETURN TO THE ABOVE ADDRESS. ATTENTION: RTK PROCESSING UNIT, ROOM 525

ICS #: 6166890

COMPANY NAME: BENDIX FLUID POWER DIVISION		ICS CODE / EPA ID NUMBER: NYD002244911	
COMPANY MAILING ADDRESS: 211 SEWARD AVE.		STATE: NY	ZIP CODE: 13502
PLANT NAME (if different): UTICA	CONTACT NAME: Richard Evans		TELEPHONE: 315 7931200
PLANT ADDRESS (if different) STREET	CITY	STATE	ZIP CODE

PRINCIPAL BUSINESS OF PLANT: Aircraft equipment manufacturer

PLEASE ANSWER THE FOLLOWING QUESTIONS:

CHECK ONE

1. SINCE JANUARY 1, 1952 THRU DECEMBER 31, 1981, HAVE YOU OR ANY PREVIOUS OWNERS/OPERATORS OF THIS FACILITY GENERATED ANY HAZARDOUS WASTE (SEE INSTRUCTIONS) AT YOUR PRESENT FACILITY, PLANT, PROPERTY, ETC?

☒ YES ☐ NO

IF THE ANSWER IS **YES** COMPLETE QUESTIONS **1, 2, 3, 4** AND **GENERATOR FORM PART - II**
IF THE ANSWER IS **NO** COMPLETE QUESTIONS 1 AND 4 AND RETURN THIS FORM

2. HAS THE FACILITY AT THIS LOCATION CHANGED ITS NAME OR IDENTIFICATION BECAUSE THERE WAS A CHANGE IN OWNERSHIP, CORPORATE NAME OR OPERATOR NAME, ETC. IF YES LIST THE NAMES BY WHICH THIS FACILITY HAS BEEN IDENTIFIED SINCE JANUARY 1, 1952 TO THE PRESENT.

☒ YES ☐ NO

NAME, ADDRESSES, AND TELEPHONE NUMBERS	DATES
Utica Division - Bendix Aviation Corporation	
Bendix - Electric and Fluid Power Division	
Bendix - Fluid Power Division	
Always Bendix but division names have changed	

3. DESCRIBE THE DOCUMENTS FROM WHICH DATA THAT IS INCLUDED ON PART-II WAS OBTAINED (SEE INSTRUCTIONS).

DOCUMENT DESCRIPTION	DATES
Hazardous waste manifests	1980-Present
Analysis sheets for nickel hydroxide	
Info prior to 1980 was obtained from present and past employees	

4. I HEREBY CERTIFY THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF THAT INFORMATION SUPPLIED IS TRUE AND COMPLETE. FALSE STATEMENTS SUBMITTED ON THIS DOCUMENT ARE PUNISHABLE PURSUANT TO SECTION 210.45 OF THE PENAL LAW.

Richard Evans — Plant Engineer — 7/84
NAME OF OWNER/OPERATOR, PARTNER OFFICER OR AUTHORIZED REPRESENTATIVE — TITLE — DATE

SIGNATURE — 315 793-1200 BUSINESS PHONE

Waste Disposal Pit Southeast Corner of fenced in property. Refer to 103 notice to EPA	Plating Room Cyanides (3) Heat Treat Cyanides	~~F009~~ F012	Unknown	x	x		Started 1953/4 ended 1968/9	NONE
CECOS International Niagara Falls Blvd. & Walmore Rd. Niagara Falls, NY	Nickel Hydroxide Sludge (4) Plating Sludge (5) PCB's/Capacitors (6) Asbestos (7)	F006 F006 B007 A001	658.49 0.63 0.55 1.48		x	x	1979 to Present	9A-090 Cecos International Niagara Falls, NY SCA Chemical Services Model City, NY -9A-081
Solvents & Petroleum Services 1405 Brewerton Road Syracuse, NY 13201 To be reclaimed/re-used	Mixed Solvents/oils (8) Trichloroethane 1,1,1 (9)	F003 F001	66.80 24.25	x		x	1979 to Present	7A-072 Solvents & Petroleum 1405 Brewerton Rd. Syracuse, NY 13201
SCA CHEMICAL SERVICES, INC. 1135 Balmer Road Model City, NY 14107	Nickel Hydroxide Sludge (10)	F006	73.6		x	x	1979 1981	SCA Chemical Services 1135 Balmer Road Model City, NY 14107 9A-081
New Era Oil Service 402 Parson Drive Syracuse, NY 13219	Various solvents & oils (11)	F001 F003	Unknown	x		x	2 sometime between 1955-1981	New Era Oil Service 402 Parson Drive Syracuse, NY 13219 7A-024
Sea-Land Services, Inc. PO Box 900 Edison, NJ 08817	Various solvents & oils	F001 F003	Unknown		x	x	R 11	Sea-Land Services, Inc PO Box 900 Edison, NJ 08817 JX-037
Frontier Chemical Waste Process Inc 4626 Royal Avenue Niagara Falls, NY 14303	Various solvents & oils (12)	F001 F002	Unknown	x		x	R 11	Frontier Chemical Waste Process Inc. 4626 Royal Avenue Niagara Falls, NY 1430 9A-078

Note: Quantity and some dates are unknown. Milling sludge process started in 1955 and Plating Room Cyanides and Heat Treat Cyanides started in 1953. In 1969 - 1981, Cyanides were disposed of (13) by Marsulex Chemical

G

GENERATOR FORM

PART - II

ndix Fluid Power	ICS NUMBER - EPA ID NUMBER NYD002244911	
ESS 1 Seward Ave, PO Box 457		
ica	STATE NY	ZIP 13503

DATE July 1984

ZARDOUS WASTE DISPOSAL SITE (SEE INSTRUCTIONS)	2. DESCRIPTION OF HAZARDOUS WASTES DEPOSITED AT THIS LOCATION (SEE INSTRUCTIONS)	3. EPA WASTE CODE	4. WASTE DISPOSED OF QUANTITY OF WASTE (TONS)	FORM LIQUID	FORM SOLID	FORM DRUMS	5. WASTE DISPOSAL DATES	6. TRANSPORTER OF HAZARDOUS WASTE (SEE INSTRUCTIONS)
ty of Utica Dump rz Ave ica, NY ndfill	Electro-Chemical milling sludge (1) See Attached analysis sheet Late 50's - Late 70's	F006	< 200 tons/yr Unknown		x	x	1955 to 1979	Bendix Corporation 211 Seward Avenue Utica, NY 13503 ? Own truck
nvironmental oil, Inc. yracuse, NY	Various solvents & oils (2) Material Believed to be Reclaimed	F001 F003	Unknown	x		x	1952 to 1981	Environmental Oil, Inc Syracuse, NY 7A-010
aste Disposal Pit outhease Corner of fenced n property. Refer to 103 otice to EPA	Plating Room Cyanides (3) Heat Treat Cyanides	F009 ~~[illegible]~~ F012	Unknown	x	x		Started 1953/4 ended 1968/9	NONE
ECOS International iagara Falls Blvd. & almore Rd. Niagara Falls, NY	Nickel Hydroxide Sludge (4) Plating Sludge (5) PCB's/Capacitors (6) Asbestos (7)	F006 F006 B007 A001	658.49 0.63 0.55 1.48		x	x	1979 to Present	9A-040 Cecos International Niagara Falls, NY SCA Chemical Services Model City, NY - 9A-081
olvents & Petroleum Services 405 Brewerton Road yracuse, NY 13201 o be reclaimed/re-used	Mixed Solvents/oils (8) Trichloroethane 1,1,1 (9)	F003 F001	66.80 24.25	x		x	1979 to Present	7A-072 Solvents & Petroleum 1405 Brewerton Rd. Syracuse, NY 13201
SCA CHEMICAL SERVICES, INC. 1135 Balmer Road Model City, NY 14107	Nickel Hydroxide Sludge (10)	F006	73.6		x	x	1979 1981	SCA Chemical Services 1135 Balmer Road Model City, NY 14107 9A-081
New Era Oil Service 402 Parson Drive Syracuse, NY 13219	Various solvents & oils (11)	F001 F003	Unknown	x		x	Sometime between 1955-1981	New Era Oil Service 402 Parson Drive Syracuse, NY 13219 7A-024

Utica Drury

NEW YORK ST. E DEPARTMENT OF ENVIRONMENTAL CON ERVATION
DIVISION OF SOLID AND HAZARDOUS WASTE

(3)

GENERATOR FORM
PART - I

50 WOLF ROAD
ALBANY, NEW YORK 12233

HAZARDOUS WASTE DISPOSAL QUESTIONNAIRE

PLEASE COMPLETE AND RETURN TO THE ABOVE ADDRESS, ATTENTION: RTK PROCESSING UNIT, ROOM 525

OMPANY NAME: ICS #: 6166888
KELSEY-HAYES CO.(MOHAWK ST.PLAN

ICS CODE
EPA ID NUMBER: NYD053719894

COMPANY MAILING ADI: V.C.SCARAFILE
MOHAWK ST.
WHITESBORO NY 13492

STATE | ZIP CODE

ANT NAME (if differen

CONTACT NAME | TELEPHONE

PLANT ADDRESS (if different)
TREET | CITY | STATE | ZIP CODE

RINCIPAL BUSINESS OF PLANT: Forge steel

PLEASE ANSWER THE FOLLOWING QUESTIONS:

CHECK ONE

1. SINCE JANUARY 1, 1952 THRU DECEMBER 31, 1981, HAVE YOU OR ANY PREVIOUS OWNERS/OPERATORS OF THIS FACILITY GENERATED ANY HAZARDOUS WASTE (SEE INSTRUCTIONS) AT YOUR PRESENT FACILITY, PLANT, PROPERTY, ETC?

~~☒ YES~~
~~☒ NO~~
yes

IF THE ANSWER IS **YES** COMPLETE QUESTIONS **1, 2, 3, 4** AND **GENERATOR FORM PART - II**
IF THE ANSWER IS **NO** COMPLETE QUESTIONS 1 AND 4 AND RETURN THIS FORM

2. HAS THE FACILITY AT THIS LOCATION CHANGED ITS NAME OR IDENTIFICATION BECAUSE THERE WAS A CHANGE IN OWNERSHIP, CORPORATE NAME OR OPERATOR NAME, ETC. IF YES LIST THE NAMES BY WHICH THIS FACILITY HAS BEEN IDENTIFIED SINCE JANUARY 1, 1952 TO THE PRESENT.

☒ YES
☐ NO

NAME, ADDRESSES, AND TELEPHONE NUMBERS	DATES
Utica Drop Forge and Tool	To 1/57
Kelsey Hayes Co. Utica Division	To 5/73
Kelsey Hayes Co. Subsidiary Fruehauf Corp.	5/73 to Present

3. DESCRIBE THE DOCUMENTS FROM WHICH DATA THAT IS INCLUDED ON PART-II WAS OBTAINED (SEE INSTRUCTIONS).

DOCUMENT DESCRIPTION	DATES

4. I HEREBY CERTIFY THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF THAT INFORMATION SUPPLIED IS TRUE AND COMPLETE. FALSE STATEMENTS SUBMITTED ON THIS DOCUMENT ARE PUNISHABLE PURSUANT TO SECTION 210.45 OF THE PENAL LAW.

Vincent Scarafile — NAME OF OWNER/OPERATOR, PARTNER OFFICER OR AUTHORIZED REPRESENTATIVE
MGR — TITLE
9/8/82 — DATE

Vincent Scarafile — SIGNATURE
315-7924100 — BUSINESS PHONE

NAME	ICS NUMBER - EPA ID NUMBER	
ADDRESS		
CITY	STATE	ZIP

GENERATOR FORM
PART - II

G

DATE _____

Note : All figures are Estimates

1. HAZARDOUS WASTE DISPOSAL SITE (SEE INSTRUCTIONS)	2. DESCRIPTION OF HAZARDOUS WASTES DEPOSITED AT THIS LOCATION (SEE INSTRUCTIONS)	3. EPA WASTE CODE	4. WASTE DISPOSED OF QUANTITY OF WASTE (TONS)	FORM LIQUID	FORM SOLID	FORM DRUMS	5. WASTE DISPOSAL DATES	6. TRANSPORTER OF HAZARDOUS WASTE (SEE INSTRUCTIONS)
Utica City Dump + Oriskany Landfill	Descaling Salts (NaOH)	D002	1.5		X		Once every 4 years 64-84	Phil's Trucking 900 Broad St. Utica, N.Y. 1350
This plant opened in 52. They started in 64. I think 1964 is when they 1st generated haz. waste.								

spoke with Vincent Scarafile 10/16/84

(3)

URS

AN INTERNATIONAL PROFESSIONAL SERVICES ORGANIZATION

JOB NO. 35231.07 JOB NAME Utica City Dump

MEMO OF TELECON

DATE 3/13/91 TELEPHONE 315-785-2513 (2261)

PERSON CALLING R. West PERSON CALLED

REPRESENTING URS REPRESENTING NYSDEC Region 6

PURPOSE OF TELECON AND/OR EQUIPMENT INVOLVED:

class (& reason for) for wetlands UE-10 and UE-11

TEXT OF TELECON

o Kent Sanders ain't in

o 315-793-2554 John Sandwick

UE10 class II ← ① associated w perm open water

UE11 class II ← ② 1 of ? largest

③ within urbanized area

→ ① & ③

Steward Brown

CC:

URS
AN INTERNATIONAL PROFESSIONAL SERVICES ORGANIZATION

JOB NO. 35231.07 JOB NAME UTICA CITY DUMP

MEMO OF TELECON

DATE 4/10/92 TELEPHONE 1-315-733-9530

PERSON CALLING MICHAEL GUTMANN PERSON CALLED MIKE PORTER

REPRESENTING URS REPRESENTING NYSDOT BARGE CANAL

PURPOSE OF TELECON AND/OR EQUIPMENT INVOLVED: INFORMATION REGARDING SEASONAL CONTROL OF WATER LEVEL IN ERIE BARGE CANAL.

TEXT OF TELECON

1) MIKE INDICATED THAT WATER LEVEL IN CANAL IS REGULATED. IN NOVEMBER, WATER LEVEL IS LOWERED 6 - 10 feet. PRIMARY REASON IS Flood control for SPRING and perhaps TO LIMIT ICE DAMAGE TO RETAINING WALLS. WATER LEVEL REMAINS LOW UNTIL APRIL, WHEN IT IS ~~RAISED~~ RAISED 6 - 10 feet, IN ANTICIPATION OF SEASONAL BOAT TRAFFIC.

cc: FILE.

APPENDIX A

GEOPHYSICAL REPORT - RESULTS OF UTICA CITY DUMP SITE

GEOPHYSICAL INVESTIGATION

UTICA CITY DUMP, MONARCH CHEMICAL NEW YORK EMULSIONS AND MOHAWK VALLEY OIL PROPERTIES

Utica, New York

Prepared for

URS CONSULTANTS
Buffalo, New York

August 1990

Weston Geophysical
CORPORATION

Weston Geophysical
CORPORATION

August 16, 1990

Mr. James Lanzo
URS Consultants
570 Delaware Avenue
Buffalo, New York 14202-1207

Subject: Geophysical Survey Results
Monarch Chemical, Utica City Dump,
New York Emulsion, and Mohawk Valley Oil Sites
Utica, New York

Dear Mr. Lanzo:

In accordance with your authorization, Weston Geophysical conducted magnetometry and electromagnetic terrain conductivity surveys at four sites in Utica, New York. The purpose of the investigation was to assist in locating buried utilities and other possible subsurface obstacles prior to the emplacement of monitoring wells by URS Consultants. This report summarizes the field program and findings at each site.

We appreciate the opportunity to provide geophysical services to URS Consultants, and will be pleased to provide any additional information that you may require.

Sincerely,

WESTON GEOPHYSICAL CORPORATION

Doria L. Kutrubes dg.
Doria L. Kutrubes
Geophysicist

M. Blackey
Mark Blackey
Manager, Geophysical Services

3586J
18021-03

TABLE OF CONTENTS

LIST OF FIGURES

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SECTION 1
INTRODUCTION

Geophysical surveys were conducted by Weston Geophysical Corporation between June 25–28, 1990, at four Utica, New York Sites. Magnetometry and electromagnetic terrain conductivity methods were used to locate buried utilities and other subsurface obstructions to assist the safe emplacement of monitoring wells by others.

LOCATION AND SURVEY CONTROL

Plan maps showing cultural features and geophysical coverage at each site are provided on Figures 2, 5, and 13. Base maps for each of those figures were supplied by URS Consultants or the New York State Department of Environmental Conservation (NYSDEC).

Geophysical survey lines at the Monarch Chemical Site (Figure 2) were positioned with taped measurements referenced to the west and north fences. Survey lines were established along a ten–foot grid, and the location of the magnetic base station marked on the pavement with spray paint for future reference. Magnetic stations were spaced every 20 feet and were offset by 10–foot intervals on adjacent traverses. EM–31 stations were spaced every 5 feet along all traverses.

Proposed monitoring well locations at the Utica City dump, New York Emulsions, and Mohawk Valley Oil sites were examined using EM–31 and magnetometry methods. Wells were centered in a 20 by 20 foot survey grid, with survey lines spaced at two–foot intervals. EM–31 or magnetic data were acquired every two feet along these survey lines.

GEOPHYSICAL METHODS OF INVESTIGATION

Magnetometry Survey Method

A digital Geometrics total-field proton precession magnetometer was used to acquire magnetic data. Metal objects, such as utility pipes or cables, steel drums, or other ferrous iron objects, cause perturbations in the earth's magnetic field which are detectable by this instrumentation. Appendix A describes the magnetometry method in greater detail.

EM-31 Survey Method

A Geonics model EM-31 terrain conductivity meter was used to acquire conductivity data. This electromagnetic (EM) induction instrument measures the electrical conductivity of soil, water, or other materials at depths to 15-20 feet. Metal objects and buried utilities may cause an abrupt change in conductivity values and a reversal in polarity (negative conductivity values) in the immediate vicinity of the object. The terrain conductivity method of investigation is described in greater detail in Appendix B.

SECTION 2
RESULTS

A summary of recommendations regarding placement of monitoring wells is provided as Table 1. Specific comments regarding each site are provided in the sections below.

Monarch Chemical Site

Magnetometry and EM-31 conductivity results are summarized on contour maps provided as Figures 3 and 4. Anomalous magnetic and conductivity readings were observed adjacent to metal fences, steel buildings, trucks, and overhead wires. With the exception of the southeast corner of the site (i.e. south of Station 1+00S), evidence of buried metallic objects was not found. South of Station 1+00S, magnetic and conductivity data indicate an area of buried metallic objects: no above-ground cultural features were observed which could cause the anomalies shown on Figures 3 and 4. Metallic debris, such as partially buried fences, rebar, etc., were observed protruding from the ground surface in the vicinity of this anomalous area.

In addition to the EM conductivity and magnetometry surveys conducted throughout the Monarch Chemical site, each proposed well was examined in further detail by rotating the EM-31 instrument through a 360-degree sweep and observing conductivity variations during that rotation. With the exception of MW-3, which is located south of Station 1+00S, all other wells appear to be in areas free of buried metal objects. Results of the monitoring well examinations are summarized in Table 1.

New York Emulsions and Mohawk Valley Oil Sites

Magnetic and conductivity data acquired around thirteen proposed well locations at these sites indicate that portions of the fill materials are most likely composed of coal cinders which may contain electrically-conductive materials such as metals. Examination of borings Soil-1 and Soil-2, and wells SC-2 and SC-3 were unaffected by the fill conditions; recommendations regarding those locations (see Table 1) thus have a high degree of confidence.

Geophysical data from the remaining locations (Soil-4, SC-4, SC- 5, SC-6, SC-7, SC-8, SC-9, and SC-10) were influenced by the high-conductivity fill materials. Conductivity values of several hundreds of millimhos per meter (mmhos/m) caused by the conductive fill alone can easily disguise anomalies caused by buried utilities or other objects. For this reason, we have qualified our recommendations regarding safe placement of these wells (see "question marks" accompanying recommendations on Table 1).

Well SC-4 (Figure 9) is proposed for an area with conductivity variations between -50 and +450 mmhos/m. Although these conductivity values may be due in part to the nearby chain link fence and the conductive soil conditions noted above, we cannot recommend any portion of the area surveyed as being free of buried objects or utility pipes/cables.

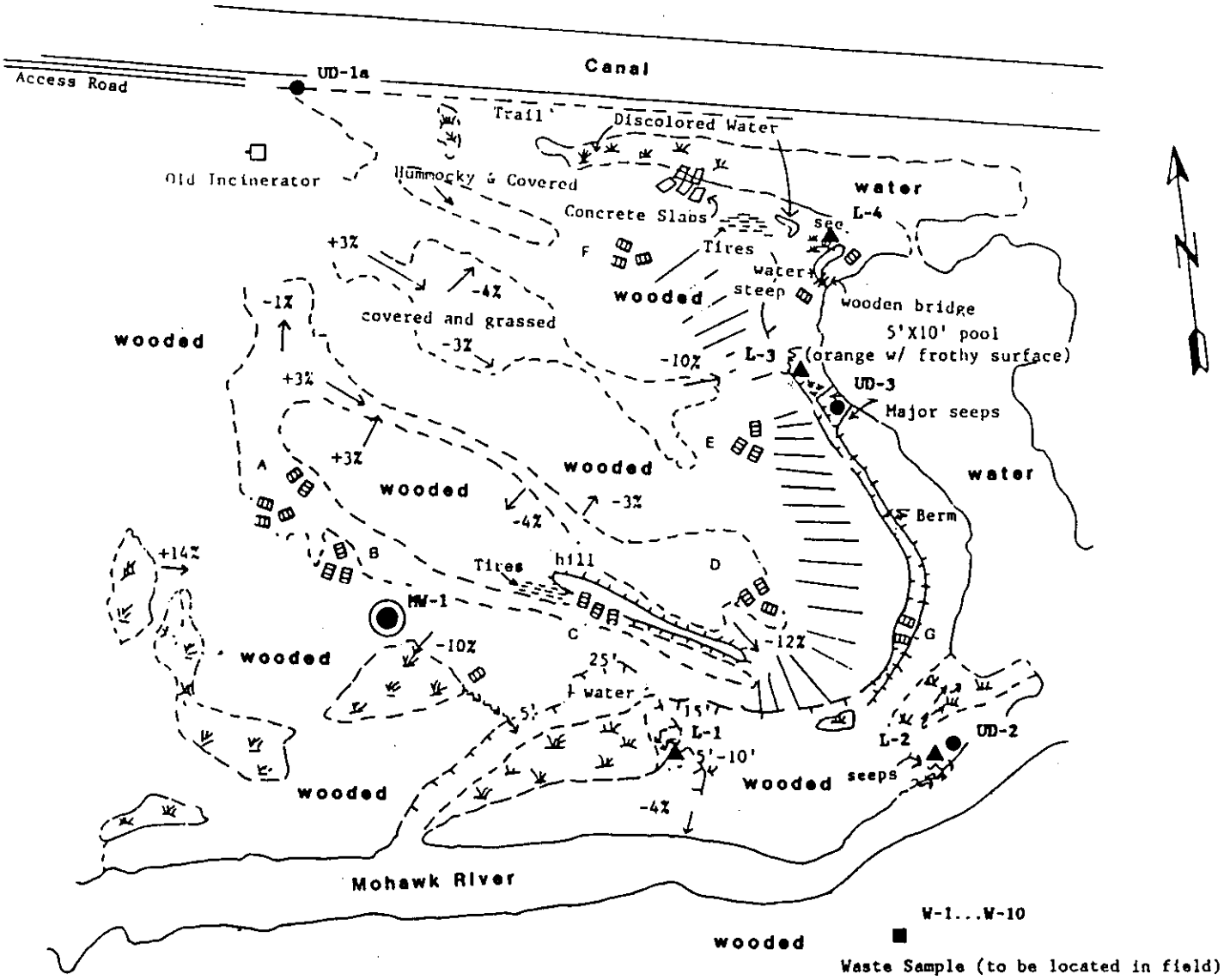
Similarly, wells SC-5, SC-6, SC-7, SC-9, and SC-10 are proposed for areas with widely varying conductivity values. Although some of those anomalies may be related to above-ground metal objects or the conductive fill materials, we cannot recommend drilling locations likely to be free of buried objects on the basis of these limited data sets.

Utica City Dump

One proposed monitoring well location at the Utica City Dump, MW- 1, was examined using a magnetometer. A contour map of that data is provided as Figure 14. High magnetic values are present southwest of MW-1's proposed location; the well is located in an area of steep magnetic gradients indicative of ferrous metal objects.

The source of the high magnetic values (and the steep magnetic gradient) is probably located near the west edge of the survey grid (near Line 0+10E, Station 0+10N); the proposed location of MW-1 should thus adequately avoid that anomaly source.

FIGURES



LEGEND

- Drum or Drum Cluster
- Proposed Monitoring Well
- Existing Monitoring Well
- Leachate Sample
- Proposed monitoring well screened using magnetometer

0 300 600

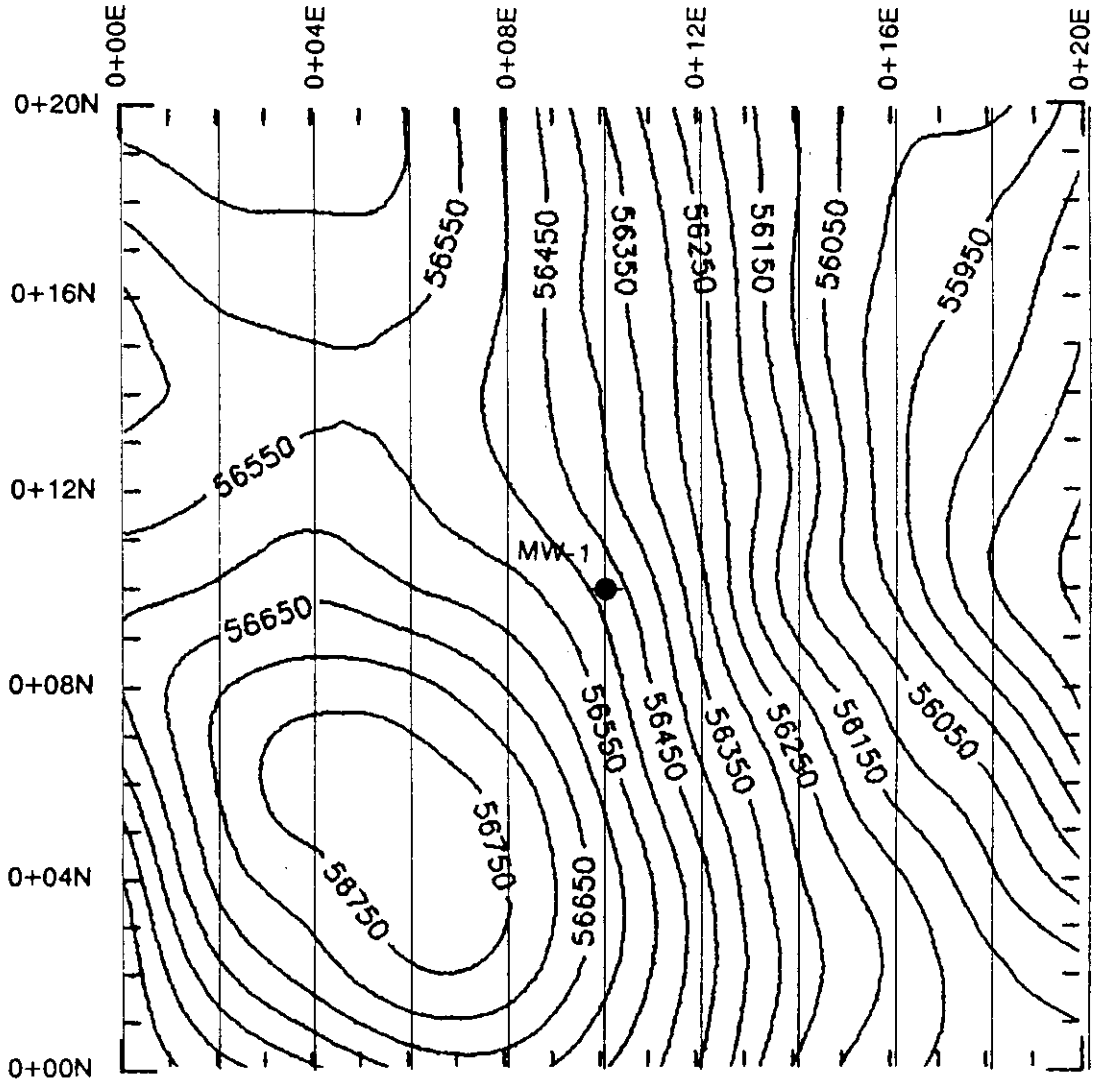
Approximate Scale(feet)

Note: Base map modified from 23 June 1984 aerial photograph.

Supplied by URS Consultants

prepared by DLK checked by MB reviewed by VJM	GEOPHYSICAL INVESTIGATION OF THE UTICA CITY DUMP, MONARCH CHEMICAL, NEW YORK EMULSIONS, AND MOHAWK VALLEY OIL PROPERTIES UTICA, NEW YORK prepared for URS CONSULTANTS	Plan Map Utica City Dump Weston Geophysical — Fig. 12

Proposed Monitoring Well
MW-1



0 5
scale in feet

EXPLANATION
Magnetometer survey line location
Proposed monitoring well
56650 Magnetic contour
Contour interval: 50 gammas

prepared by DLK checked by MB reviewed by WJM	GEOPHYSICAL INVESTIGATION OF THE UTICA CITY DUMP, MONARCH CHEMICAL, NEW YORK EMULSIONS, AND MOHAWK VALLEY OIL PROPERTIES UTICA, NEW YORK prepared for URS CONSULTANTS	Magnetic Contour Map Well MW-1 Utica City Dump Weston Geophysical — Fig. 13

8/90

TABLE

TABLE 1

Summary of Geophysical Well-Clearing Surveys
Monarch Chemical, New York Emulsions, Mohawk Valley Oil,
and Utica City Dump Sites

SITE	WELL DESIGNATION	STATUS/ACTION
Monarch Chemical	SC-4	OK*
	MC-1	OK
	MC-2	OK
	MC-3	Move 20 feet north
	MC-4	OK
	MC-5	OK
	SB-1	OK
	SB-2	OK
	SB-3	OK
	SB-4	OK
New York Emulsions/ Mohawk Valley Oil	SOIL-1	Move 4 ft. west
	SOIL-2	OK
	SOIL-4	Move 5 ft. south (?)**
	SC-1	Move 5-10 ft. southeast
	SC-2	OK
	SC-3	OK
	SC-4	No location recommended (see text)
	SC-5	No location recommended
	SC-6	No location recommended

TABLE 1 Continued

SITE	WELL DESIGNATION	STATUS/ACTION
	SC-7	No location recommended
	SC-8	Move 4 ft northeast (?)
	SC-9	No location recommended
	SC-10	No location recommended
Utica City Dump	MW-1	OK

* "OK" indicates an absence of significant buried metal objects

** Question marks indicate recommendations or interpretations with greater than normal uncertainty (see text for further explanation)

APPENDIX B

SOIL BORING LOGS

URS CONSULTANTS, Inc.

TEST BORING LOG
BORING NO. MW-1

PROJECT: UTICA CITY DUMP	SHEET NO. 1 OF 1
CLIENT: NYSDEC	JOB NO. :
BORING CONTRACTOR: AMERICAN AUGER AND DITCHING	BORING LOCATION:
GROUND WATER:	GROUND ELEVATION:
DATE: TIME: LEV: TYPE:	DATE STARTED: 8/23/90
TYPE: SS (CAS. / SAMP / CORE / TUBE)	DATE FINISHED: 8/23/90
DIA.: 2 IN	DRILLER: ROCKY BAYE
WT.: 140 lb	GEOLOGIST: MICHAEL GUTMANN
FALL: 30 IN	REVIEWED BY:
* POCKET PENETROMETER READING	

DEPTH FT	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY ROD %	DESCRIPTION: COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS
0		1	SS	7 5 / 5 3	60	BROWN GRAY	MEDIUM DENSE	FILL TOP 6 INCHES SANDY SILT WITH SOME GRAVEL BECOMES HOUSEHOLD REFUSE PAPER, PLASTIC CANS, METAL FRAGMENTS MIXED WITH SILT	SM	MOIST; FOUL ODOR
5		2	SS	5 / 3 2 / 5	5					
10		3	SS	3 8 / 11	5					VERY MOIST, PROBABLE WATER TABLE; HNu SAMPLE = 21 PPM
14.5										
15		4	SS	6 9 / 6	10	GRAY	MEDIUM DENSE	SANDY SILT SOME FILL	SM	SPLIT-SPOON BROKE IN HOLE => REMOVED BY PULLING AUGERS
17.5		5	SS	1 3 / 4 1	40	GRAY	VERY SOFT	CLAYEY SILT TRACE SAND	ML	MEDIUM PLASTICITY
20		6	SS	1 1 / 1 1	50					
25		7	SS	1 1 / 1 / 1	50					
26.5		8	SS	1 1 / 1	40					
27.5		—	—	—		GRAY	—	PEAT, SOME CLAYEY SILT	CH/MH	SOME WOODY MATERIAL
30								BOTTOM OF BOREHOLE AT 27.5 FT		
35										

A-3205

COMMENTS: ENVIRONMENTAL SAMPLE TAKEN AT 0 - 2 FT (TCL).

PROJECT NO.
BORING NO. MW-1

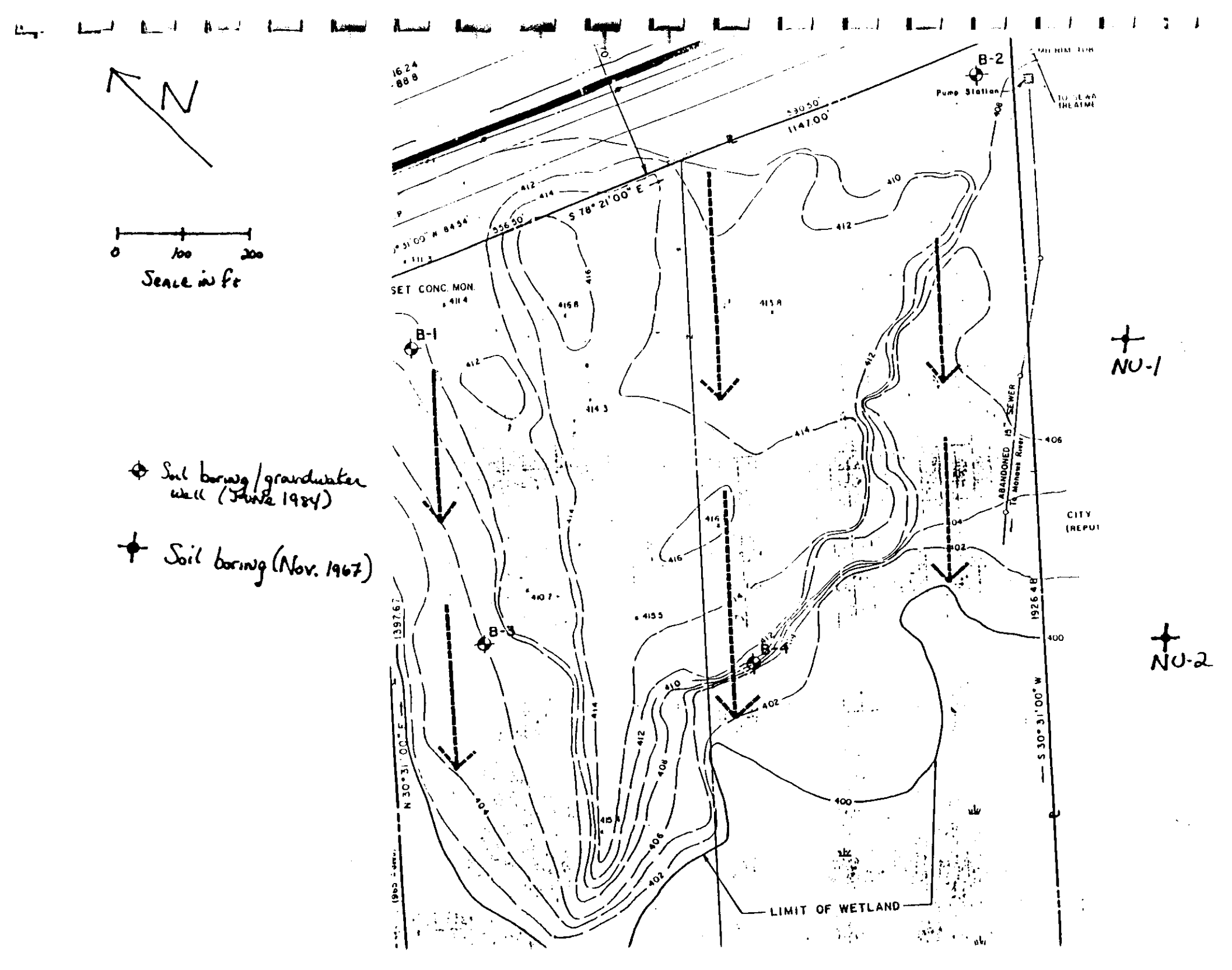

N
0
100
200
Scale in ft
Soil boring/groundwater well (June 1984)
Soil boring (Nov. 1967)
B-1
B-2
B-3
B-4
Pump Station
SET CONC. MON.
S 78° 21' 00" E
336.30'
530.30'
1147.00'
N 30° 31' 00" E
S 30° 31' 00" W
1397.67'
1926.48'
ABANDONED 15" SEWER
To Monona River
CITY
LIMIT OF WETLAND
NU-1
NU-2

Figure 3-2

ATLANTIC TESTING LABORATORIES, Limited

SUBSURFACE INVESTIGATION

Report No. CD642-1-4-86

CLIENT NYS Dept. of Environmental Conservation
Albany, NY

Location of Boring As staked by client

PROJECT Utica Landfill
I.D. No. 633015

Date, start 4-5-86 Finish 4-5-86

Boring No. UD-1 Sheet 1 of 1

Casing Hammer
Wt _____ lbs.
Fall _____ in.

Sampler Hammer
Wt 140 lbs.
Fall 30 in.
Casing _____

Ground Elev. _____

H.S. Auger 3-1/4" ID

Ground Water Observations

Date	Time	Depth	Casing at
4-5-86	-	8.0'	-

DEPTH	CASING BLOWS/FT.	SAMPLE NO.	DEPTH OF SAMPLE FROM	DEPTH OF SAMPLE TO	TYPE SAMPLE	BLOWS ON SAMPLER PER 6" SAMPLER O.D. 2"	DEPTH OF CHANGE	CLASSIFICATION OF MATERIAL (f-fine, m-medium, c-coarse; and — 35-50%, some — 20-35%, little — 10-20%, trace — 0-10%)	STANDARD PENETRATION NUMBER
		1	0.0	2.0	ss	4-7-14-4		cmf SAND and COBBLES	
		2	2.0	4.0	ss	12-11-8-10		cmf SAND, SILT and GRAVEL	
		3	4.0	6.0	ss	7-10-10-12		mf SAND and SILT	
		4	8.0	10.0	ss	2-2-3-4		Similar Soils	
	AUGER	5	15.0	17.0	ss	3-4-6-7		Silty CLAY and some SAND	
		6	20.0	22.0	WOH	2-3-3		Silty CLAY	
		7	25.0	27.0	ss	2-2-3-4		Silty CLAY; fine SAND (saturated)	
		8	30.0	32.0	ss	1-1-2-2		Silty CLAY and fine SAND	
		9	35.0	37.0	ss	6-6-5-7		Similar Soils	
								Boring Terminated at 37.5'	
								NOTE: Monitoring well installed in boring; see attached well installation diagram.	

parratt wolff inc

TEST BORING LOG

FISHER ROAD
EAST SYRACUSE, N.Y. 13057

PROJECT: Hardfill Disposal Area
LOCATION: Incinerator Road, Utica, New York
DATE STARTED: 6/6/84 DATE COMPLETED: 6/6/84

HOLE NO. B-1
SURF. EL.
JOB NO. 8487
GROUND WATER DEPTH WHILE DRILLING 9.0'
BEFORE CASING REMOVED -
AFTER CASING REMOVED Installed Well

N — NO. OF BLOWS TO DRIVE SAMPLER 12" W/140# HAMMER FALLING 30" — ASTM D-1586, STANDARD PENETRATION TEST

C — NO. OF BLOWS TO DRIVE CASING 12" W/ # HAMMER FALLING
"/OR — % CORE RECOVERY

CASING TYPE - HOLLOW STEM AUGER

SHEET 1 OF 1

DEPTH	SAMPLE DEPTH	SAMPLE NUMBER	C	SAMPLE DRIVE RECORD PER 6"	N	DESCRIPTION OF MATERIAL	STRATA CHANGE DEPTH
	0.0'-2.0'	1		Auger Sample		Black moist medium dense RUBBISH, fine to coarse SAND and fine GRAVEL, some wood	
5.0							
	5.0'-6.5'	2		6/7 6	13		
WL 10.0							9.0'
	10.0'-11.5'	3		2/1 1	2	Black wet very soft SILT and fine to coarse SAND, little fine to medium gravel, little peat	
							13.5'
15.0						Gray moist medium stiff organic and inorganic SILT, trace peat	
	15.0'-16.5'	4		2/3 3	6		
							18.0'
20.0						Gray moist medium stiff inorganic SILT, little organic silt, little clay	
	20.0'-21.5'	5		3/4 3	7		
						Bottom of Boring	21.5'
25.0						Note: Installed 2" P.V.C. observation well to 20.0' with 2" screen from 15.0' to 20.0'.	

parratt wolff inc

TEST BORING LOG

FISHER ROAD
EAST SYRACUSE, N.Y. 13057

PROJECT: Hardfill Disposal Area
LOCATION: Incinerator Road, Utica, New York
DATE STARTED: 6/6/84 DATE COMPLETED: 6/6/84

HOLE NO. B-2
SURF. EL.
JOB NO. 8487
GROUND WATER DEPTH WHILE DRILLING 13.0'
BEFORE CASING REMOVED -
AFTER CASING REMOVED Installed Well

N — NO. OF BLOWS TO DRIVE SAMPLER 12" W/140# HAMMER FALLING 30" — ASTM D-1586, STANDARD PENETRATION TEST

C — NO. OF BLOWS TO DRIVE CASING 12" W/ # HAMMER FALLING
"/OR — % CORE RECOVERY

CASING TYPE - HOLLOW STEM AUGER

SHEET 1 OF 1

DEPTH	SAMPLE DEPTH	SAMPLE NUMBER	C	SAMPLE DRIVE RECORD PER 6"	N	DESCRIPTION OF MATERIAL	STRATA CHANGE DEPTH
	0.0'-2.0'	1		Auger Sample		Brown moist loose RUBBISH, fine to coarse SAND and fine GRAVEL	
5.0	5.0'-6.5'	2		3/2 2	4		
10.0	10.0'-11.5'	3		3/10 5	15		
WL ▼							
15.0	15.0'-16.5'	4		2/4 4	8	Gray moist stiff SILT, trace wood, trace clay	15.0'
20.0	20.0'-21.5'	5		2/3 4	7	Gray moist medium stiff SILT and CLAY	19.0'
						Bottom of Boring	21.5'
25.0						Note: Installed 2" P.V.C. observation well to 20.0' with 2" screen from 15.0' to 20.0'.	

parratt wolff inc

TEST BORING LOG

FISHER ROAD
EAST SYRACUSE, N.Y. 13057

PROJECT: Hardfill Disposal Area
LOCATION: Incinerator Road, Utica, New York
DATE STARTED: 6/5/84 DATE COMPLETED: 6/5/84

HOLE NO. B-3
SURF. EL.
JOB NO. 8487
GROUND WATER DEPTH WHILE DRILLING 10.5'
BEFORE CASING REMOVED -
AFTER CASING REMOVED Installed Well

N — NO. OF BLOWS TO DRIVE SAMPLER 12" W/140# HAMMER FALLING 30" — ASTM D-1586, STANDARD PENETRATION TEST

C — NO. OF BLOWS TO DRIVE CASING 12" W/ # HAMMER FALLING
"/OR — % CORE RECOVERY

CASING TYPE - HOLLOW STEM AUGER

SHEET 1 OF 1

DEPTH	SAMPLE DEPTH	SAMPLE NUMBER	C	SAMPLE DRIVE RECORD PER 6"	N	DESCRIPTION OF MATERIAL	STRATA CHANGE DEPTH
	0.0'-2.0'	1		Auger Sample		Brown moist medium dense RUBBISH and WOOD, little fine to coarse sand	
5.0							
	5.0'-6.5'	2		10/11 1	12		
10.0 WL							10.0'
	10.0'-11.5'	3		5/5 5	10	Gray-brown moist to wet stiff SILT and CLAY, trace wood	
15.0							
	15.0'-16.5'	4		3/4 4	8		
						Bottom of Boring	16.5'
20.0						Note: Installed 2" P.V.C. observation well to 15.0' with 2" P.V.C. screen from 10.0' to 15.0'.	

parratt wolff inc

TEST BORING LOG

FISHER ROAD
EAST SYRACUSE, N.Y. 13057

PROJECT: Hardfill Disposal Area
LOCATION: Incinerator Road, Utica, New York
DATE STARTED: 6/5/84 DATE COMPLETED: 6/5/84

HOLE NO. B-4
SURF. EL.
JOB NO. 8487
GROUND WATER DEPTH WHILE DRILLING 15.0'
BEFORE CASING REMOVED -
AFTER CASING REMOVED Installed Well

N — NO. OF BLOWS TO DRIVE SAMPLER 12" W/140# HAMMER FALLING 30" — ASTM D-1586, STANDARD PENETRATION TEST

C — NO. OF BLOWS TO DRIVE CASING 12" W/ # HAMMER FALLING
"/OR — % CORE RECOVERY

CASING TYPE - HOLLOW STEM AUGER

SHEET 1 OF 1

DEPTH	SAMPLE DEPTH	SAMPLE NUMBER	C	SAMPLE DRIVE RECORD PER 6"	N	DESCRIPTION OF MATERIAL	STRATA CHANGE DEPTH
	0.0'-2.0'	1		Auger Sample		Black moist loose RUBBISH, some fine to coarse sand, some wood	
5.0	5.0'-6.5'	2		2/1 4	5		
10.0	10.0'-11.5'	3		7/3 4	7		
15.0 ▼ WL	15.0'-16.5'	4		1/5 2	7		
20.0	20.0'-21.5'	5		21/7 6	13	Brown moist medium dense WOOD	20.0'
						Bottom of Boring	21.5'
25.0							

Note: Installed observation well to 19.0' with 2" P.V.C. screen from 14.0' to 19.0'.

ONONDAGA SOILS
SUBSURFACE SURVEYS

Onondaga Soil Testing, Inc. *Subsurface Investigation*

5872 COURT ST. RD. • SYRACUSE, N. Y. 13206 • 463-4595

JOB NO. J-3250 HOLE NO. NU-1

TITLE WATER POLLUTION PROJECT, ONEIDA COUNTY, NEW YORK

CLIENT ONEIDA COUNTY DEPARTMENT OF PUBLIC WORKS, DIVISION OF WATER POLLUTION CONTROL

ELEV. 409.2'± TECHNICIAN RON BUSH

DATE STARTED NOVEMBER 10, 1967 COMPLETED NOVEMBER 15, 1967

GROUND WATER 26'11" BELOW SURFACE 12 HOURS AFTER COMPLETION

DEPTH BELOW SURFACE	C	BLOWS ON SAMPLER 0-6"	BLOWS ON SAMPLER 6"-18" N	SAMPLE NO.	DEPTH OF SAMPLE	CLASSIFICATION & REMARKS
	12					
	10	7	1-2	1	1'0"-2'6"	MISCELLANEOUS FILL: WOOD, ASHES, GLASS CONCRETE, ETC.
	23					
	46					
5'	1					(RED, BLACK, BROWN, WHITE, ETC, DAMP, NON PLASTIC)
	10	41	3-6	2	5'0"-6'6"	
	26					(RED, BLACK, BROWN, WHITE, ETC, DAMP, NON PLASTIC)
	43					
	1471					
10'	168					
	48	38	47-10	3	10'-11'6"	
	12					(BROWN, BLACK, WET, NON PLASTIC)
	10					
	11					
15'	25					
	12	3	3-3	4	15'-16'6"	15'0
	9					ORGANIC MATERIAL, SILT, WOOD, LEAVES (BROWN, WET, NON PLASTIC)
	9					
	9					
20'	12					
	23	1	1-1	5	20'-21'6"	(BROWN, WET, NON PLASTIC)
	17					
	13					
	11					
25'	22					24'0
	13	2	3-2	6	25'-26'6"	LOOSE MEDIUM TO FINE SAND & FINE GRAVEL (BROWN, WET, NON PLASTIC)
	15					
	14					
	12					
30'	10					
	13	3	4-5	7	30'-31'6"	30'0
	21					LOOSE MEDIUM TO FINE GRAVEL, SOME COARSE TO FINE SAND, & SILT (BROWN, WET, NON PLASTIC)
	22					
	23					
35'	28					34'0

NOTE: N = NO. BLOWS TO DRIVE 2" SPOON 12" WITH 140 LB. WT. 30" FALL OF

ONONDAGA SOILS
·SUBSURFACE SURVEYS·

Onondaga Soil Testing, Inc. *Subsurface Investigation*

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JOB NO. J-3250 HOLE NO. NU-1

TITLE WATER POLLUTION PROJECT, ONEIDA COUNTY, NEW YORK

CLIENT ONEIDA COUNTY DEPARTMENT OF PUBLIC WORKS, DIVISION OF WATER POLLUTION CONTROL

ELEV. 409.2'± TECHNICIAN RON BUSH

DATE STARTED NOVEMBER 10, 1967 COMPLETED NOVEMBER 15, 1967

GROUND WATER 26'11" BELOW SURFACE 12 HOURS AFTER COMPLETION

DEPTH BELOW SURFACE	C	BLOWS ON SAMPLER 0-6"	BLOWS ON SAMPLER 6"-18" N	SAMPLE NO.	DEPTH OF SAMPLE	CLASSIFICATION & REMARKS
	20	4	4-4	8	35'-36'1"	SOFT SILT, LITTLE CLAY, TRACE OF FINE SAND (GRAY, MOIST, SLIGHTLY PLASTIC)
	21					
	21					
	31					
40'	27					
	24	4	5-5	9	40'-41'6"	(GRAY, MOIST, SLIGHTLY PLASTIC)
	22					
	28					
	27					
45'	24					
	27	3	6-6	10	45'-46'6"	(GRAY, WET, SLIGHTLY PLASTIC)
	28					
	29					
	26					
50'	24					
	37	3	6-5	11	50'-51'6"	(GRAY, WET, SLIGHTLY PLASTIC)
	43					
	46					
	47					
55'	49					
	30	5	6-12	12	55'-56'6"	(GRAY, WET, SLIGHTLY PLASTIC)
	31					
	32					
	33					
60'	34					
	31	6	6-7	13	60'-61'6"	(GRAY, WET, SLIGHTLY PLASTIC)
	33					
	35					
	34					
65'	38					
	34	6	7-8	14	65'-66'6"	(GRAY, WET, SLIGHTLY PLASTIC)
	38					
	47					
70'	51					
	46					

ONONDAGA SOILS
SUBSURFACE SURVEYS

Onondaga Soil Testing, Inc. *Subsurface Investigation*

5972 COURT ST. RD. • SYRACUSE, N. Y. 13206 • 463-4595

JOB NO. J-3250 HOLE NO. NU-1

TITLE WATER POLLUTION PROJECT, ONEIDA COUNTY, NEW YORK

CLIENT ONEIDA COUNTY DEPARTMENT OF PUBLIC WORKS, DIVISION OF WATER POLLUTION CONTROL

ELEV. 409.2'± TECHNICIAN RON BUSH

DATE STARTED NOVEMBER 10, 1967 COMPLETED NOVEMBER 15, 1967

GROUND WATER 26'11" BELOW SURFACE 12 HOURS AFTER COMPLETION

DEPTH BELOW SURFACE	C	BLOWS ON SAMPLER 0-6"	BLOWS ON SAMPLER 6"-18" N	SAMPLE NO.	DEPTH OF SAMPLE	CLASSIFICATION & REMARKS
	34					
	49	7	9-9	15	71'-72'6"	FIRM SILT, LITTLE CLAY, & FINE SAND (GRAY, WET, SLIGHTLY PLASTIC)
	46					
	39					
75'	37					
	82	8	9-10	16	75'-76'6"	(GRAY, WET, SLIGHTLY PLASTIC)
	77					
	92					
	89					
80'	96					
	68	13	26-32	17	80'-81'6"	(GRAY, WET, SLIGHTLY PLASTIC)
	80					
	85					
	92					
85'	106					
	128	17	28-33	18	85'-86'6"	(GRAY, WET, SLIGHTLY PLASTIC)
	113					
	95					
	97					
90'	118					
		19	27-30	19	90'-91'6"	(GRAY, WET, SLIGHTLY PLASTIC)
95'						
		22	28-37	20	95'-96'6"	(GRAY, WET, SLIGHTLY PLASTIC)
						97'
100'						FIRM CLAY, LITTLE SILT (GRAY, WET, VERY PLASTIC)
		7	9-12	21	100'0 - 101'6"	101'
						BORING TERMINATED AT 101'6"
						NOTE: ADVANCED TEST HOLE WITH ROTARY E FROM 90' TO 100', NO CASING USED.
105'						

NOTE: N = NO. BLOWS TO DRIVE 2" SPOON 12" WITH 140 LB. WT. 30" PER BLOW

ONONDAGA SOILS
SUBSURFACE SURVEYS

Onondaga Soil Testing, Inc. *Subsurface Investigation*

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JOB NO. J-3250 HOLE NO. NU-2

TITLE WATER POLLUTION PROJECT, ONEIDA COUNTY, NEW YORK

CLIENT ONEIDA COUNTY DEPARTMENT OF PUBLIC WORKS, DIVISION OF WATER POLLUTION CONTROL

ELEV. 398.8± TECHNICIAN RON BUSH

DATE STARTED NOVEMBER 15, 1967 COMPLETED NOVEMBER 17, 1967

GROUND WATER 1'2" 48 HOURS AFTER COMPLETION

DEPTH BELOW SURFACE	C	BLOWS ON SAMPLER 0-6"	BLOWS ON SAMPLER 6"-18" N	SAMPLE NO.	DEPTH OF SAMPLE	CLASSIFICATION & REMARKS
	5					
	7	2	3-1	1	1'0"-2'6"	MISCELLANEOUS;ASHES,BRICK,CINDERS,WC (BROWN,BLACK,RED,WET,NON PLASTIC) 2'C
	3					VERY SOFT; SILT, LITTLE CLAY, ORGANI
	5					MATERIAL
5'	6					
	6			2U	5'0"-7'0"	UNDISTURBED SAMPLE (BROWN, WET,
	5					SLIGHTLY PLASTIC)
	4					24" RECOVERY
	3					
10'	4					
	3			3U	10'-12'0"	UNDISTURBED SAMPLE 24" RECOVERY
	4					2" VOID AT BOTTOM
	6					
	8					
15'	12					
	3			4U	15'-17'0"	UNDISTURBED SAMPLE 24" RECOVERY
	4					4" VOID AT BOTTOM
	14					
	16					
20'	17					
	38			5U	20'-22'0"	UNDISTURBED SAMPLE 24" RECOVERY
	43					3" VOID AT BOTTOM
	100					
	121					
25'	66					
	46			6U	25'-27'0"	UNDISTURBED SAMPLE 24" RECOVERY
	62					
	71					
	64					
30'	67					
	64			7U	30'-32'0"	UNDISTURBED SAMPLE 24" RECOVERY
	68					
	71					

ONONDAGA SOILS
SUBSURFACE SURVEYS

Onondaga Soil Testing, Inc. *Subsurface Investigation*

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JOB NO. J-3250 HOLE NO. NU-2

TITLE WATER POLLUTION PROJECT, ONEIDA COUNTY, NEW YORK

CLIENT ONEIDA COUNTY DEPARTMENT OF PUBLIC WORKS, DIVISION OF WATER POLLUTION CONTROL

ELEV. 398.8± TECHNICIAN RON BUSH

DATE STARTED NOVEMBER 17, 1967 COMPLETED NOVEMBER 30, 1967

GROUND WATER 1'2" 48 HOURS AFTER COMPLETION

DEPTH BELOW SURFACE	C	BLOWS ON SAMPLER 0-6"	BLOWS ON SAMPLER 6"-18" N	SAMPLE NO.	DEPTH OF SAMPLE	CLASSIFICATION & REMARKS
	54	6	8-8	8	35'-36'6"	FIRM SILT, LITTLE CLAY, TRACE OF FINE SAND
	56					(GRAY, MOIST, SLIGHTLY PLASTIC)
	61					
	64					
40'	68					
	36				40'-42'0"	UNDISTURBED SAMPLE NO RECOVERY
	42					
	47					
	51			9U	42'-44'0"	UNDISTURBED SAMPLE 24" RECOVERY
45'	48					
	42	7	8-9	10	45'-46'6"	(GRAY, MOIST, SLIGHTLY PLASTIC)
	48					
	66					
	66					
50'	67					
	86				50'-50'4"	UNDISTURBED SAMPLE NO RECOVERY
	90	15	16-27	11	50'6"-52'	(GRAY, WET, SLIGHTLY PLASTIC)
	102					
	98					
55'	100					
	95			12U	56'-58'0"	UNDISTURBED SAMPLE 12" RECOVERY
						5" VOID AT BOTTOM
		4	6-7	13	60'-61'6"	SOFT SILT, LITTLE CLAY, TRACE OF FINE SAND
						(GRAY, WET, SLIGHTLY PLASTIC)
		4	5-8	14	65'-66'6"	(GRAY, WET, SLIGHTLY PLASTIC)

NOTE: N = NO. BLOWS TO DRIVE 2" SPOON 12" WITH 140 LB. WT. 30" PER BLOW

ONONDAGA SOILS
SUBSURFACE SURVEYS

Onondaga Soil Testing, Inc. *Subsurface Investigation*

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JOB NO. J-3250 HOLE NO. NU-2

TITLE WATER POLLUTION PROJECT, ONEIDA COUNTY, NEW YORK

CLIENT ONEIDA COUNTY DEPARTMENT OF PUBLIC WORKS, DIVISION OF WATER POLLUTION CONTROL

ELEV. 398.8± TECHNICIAN RON BUSH

DATE STARTED NOVEMBER 30, 1967 COMPLETED NOVEMBER 30, 1967

GROUND WATER 1'2" 48 HOURS AFTER COMPLETION

DEPTH BELOW SURFACE	C	BLOWS ON SAMPLER 0-6"	BLOWS ON SAMPLER 6"-18" N	SAMPLE NO.	DEPTH OF SAMPLE	CLASSIFICATION & REMARKS
		4	6-8	15	70'-71'6"	(GRAY, WET, SLIGHTLY PLASTIC)
75'						
		6	8-8	16	75'-76'6"	(GRAY, WET, SLIGHTLY PLASTIC)
						78.0
80'						SOFT CLAY, LITTLE SILT, TRACE OF FINE SAND
		5	5-7	17	80'-81'6"	(GRAY, WET, VERY PLASTIC)
85'						
		4	5-6	18	85'-86'6"	(GRAY, WET, VERY PLASTIC)
90'						
		6	6-6	19	90'-91'6"	(GRAY, WET, VERY PLASTIC)
95'						
		6	7-6	20	95'-96'6"	(GRAY, WET, PLASTIC)
100'						
		5	6-6	21	100'-101'6"	(GRAY, WET, PLASTIC)
105'						

Onondaga Soil Testing, Inc. *Subsurface Investigation*

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JOB NO. J-3250 HOLE NO. NU-2

TITLE WATER POLLUTION PROJECT, ONEIDA COUNTY, NEW YORK

CLIENT ONEIDA COUNTY DEPARTMENT OF PUBLIC WORKS, DIVISION OF WATER POLLUTION CONTROL

ELEV. 398.8± TECHNICIAN RON BUSH

DATE STARTED NOVEMBER 30, 1967 COMPLETED DECEMBER 4, 1967

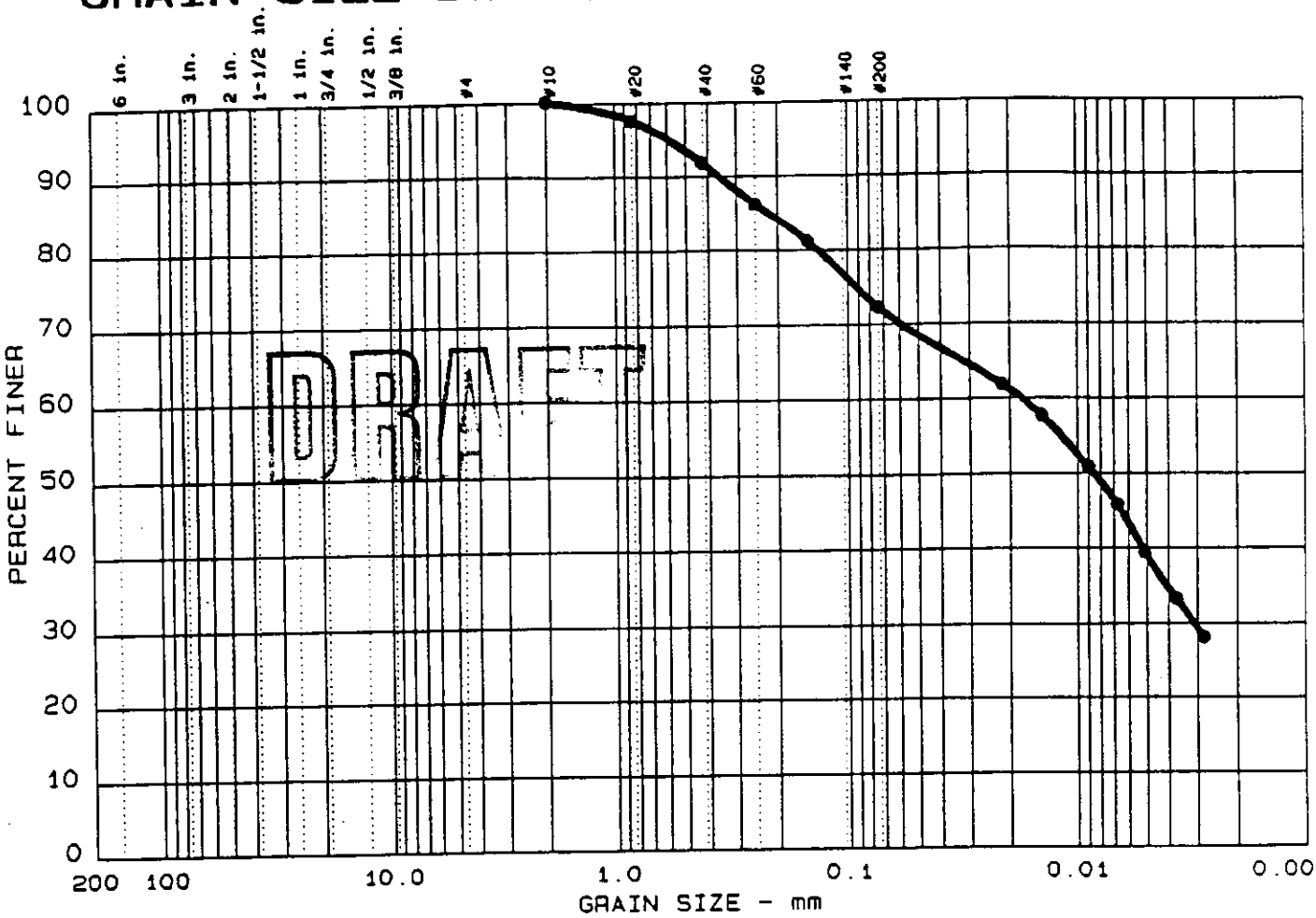
GROUND WATER 1'2" 48 HOURS AFTER COMPLETION

DEPTH BELOW SURFACE	C	BLOWS ON SAMPLER 0-6"	BLOWS ON SAMPLER 6"-18" N	SAMPLE NO.	DEPTH OF SAMPLE	CLASSIFICATION & REMARKS
		45	52-56	29	140'0"-141'6"	(BROWN, WET, NON PLASTIC) 141'6
						BORING TERMINATED AT 141'6"
145'						NOTE: ADVANCED TEST HOLE WITH ROTARY BIT FROM 55' TO 140', NO CASING USED.

APPENDIX C

GEOTECHNICAL SOIL TESTING RESULTS

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
●	1	0.0	0.0	27.7	33.4	38.9

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●			0.22		0.01	0.003				

MATERIAL DESCRIPTION	USCS	AASHTO
● DARK BROWN CLAY, Some Silt & Sand		

Project No.: G008.005
Project: UTICA CITY DUMP SITE, UTICA N.Y.
◆ Location: MW-1 / 21.5'- 23.5'

Date: JANUARY 3, 1991

GRAIN SIZE DISTRIBUTION TEST REPORT

EMPIRE SOILS INVESTIGATIONS, INC

Remarks:

CLIENT: URS

#10 & 4 SIEVE ORGANICS & GARBAGE, NOT INCLUDED

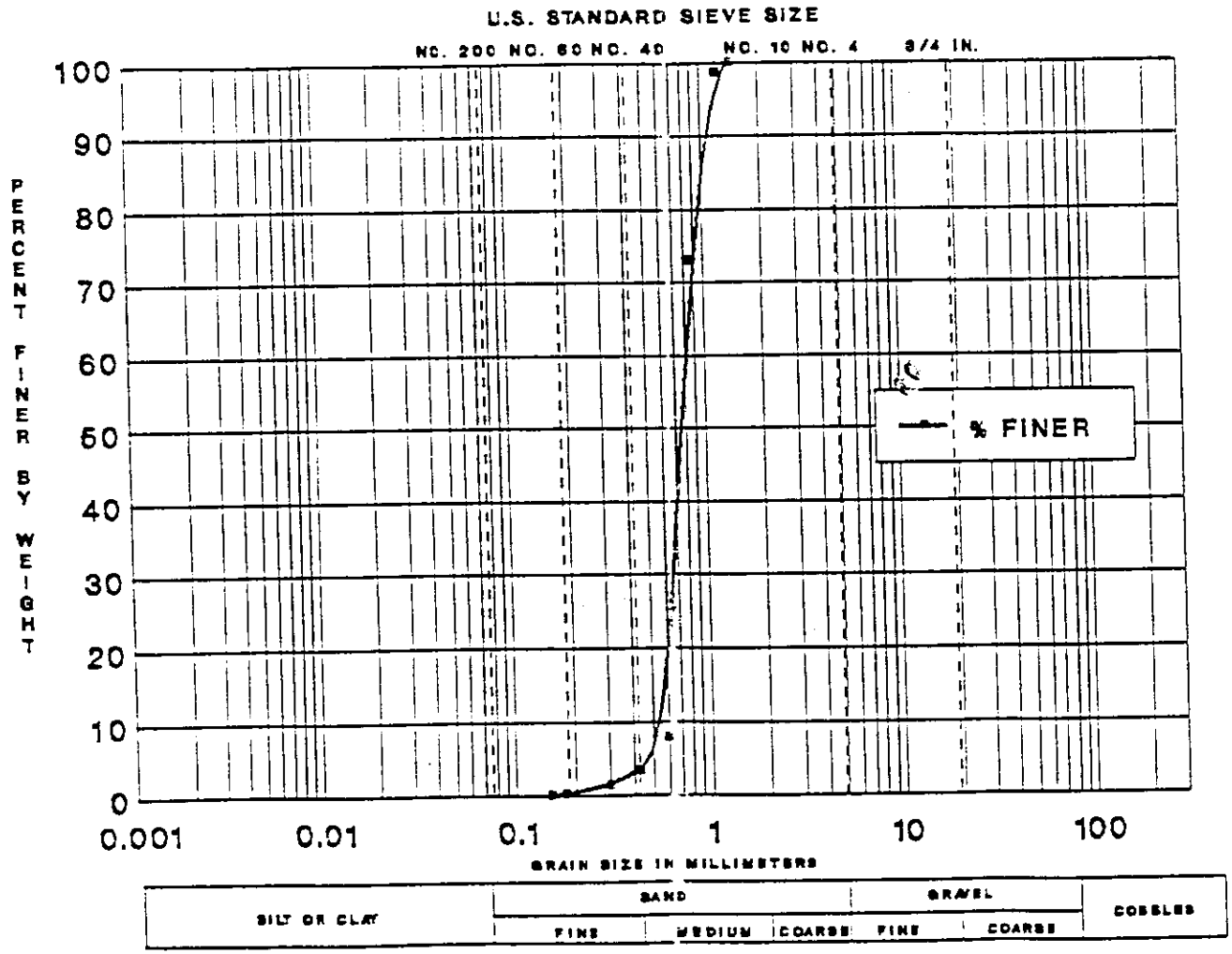
LAB NO. 583.001

Figure No. 1

BUFFALO DRILLING COMPANY, INC.

GRAIN SIZE ANALYSIS

Q-Rok # 3
February 15, 1989



APPENDIX D

MONITORING WELL CONSTRUCTION DETAILS

DRILLING SUMMARY

Geologist: Michael Gutmann

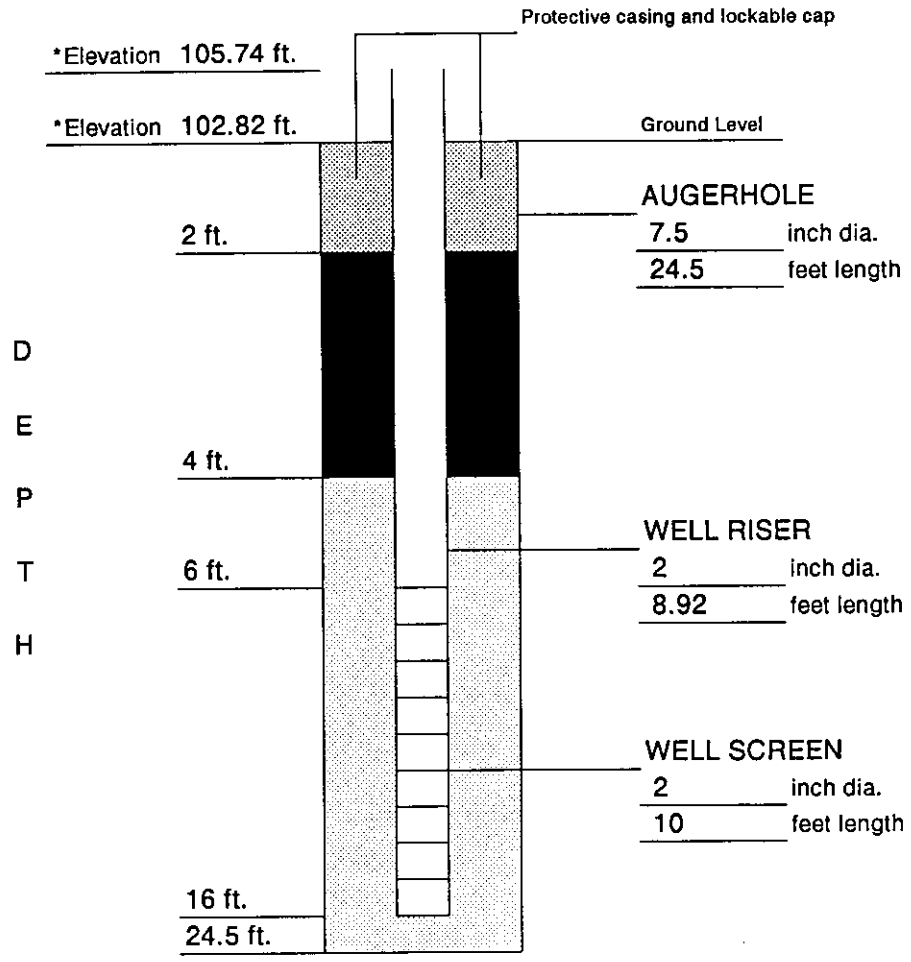
Drilling Company: American Auger & Ditching

Driller: Rocky Baye

Date: 8/23/90

GEOLOGIC LOG

depth(ft.)	lithology
0–2	Silt, and Fill
2–16.5	Fill
16.5–26	Clayey Silt
26–27	Peat and Clayey Silt



* NOTE: Elevations relative to assumed datum of 100.00 ft. (see text for description)

WELL DESIGN

CASING MATERIAL

Surface: Steel

Monitor: Schedule 40 PVC

SCREEN MATERIAL

Type: Schedule 40 PVC

Slot Size: .010 in.

SEAL MATERIAL

Seal #1 Type: Bentonite Pellets
Setting: 2 – 4 ft.

Seal #2 Type: None
Setting:

FILTER MATERIAL

Type: #3 Q Rok

Setting: 4 – 24.5 ft.

ROCK CORING

Cored Interval: None

Core Diameter: None

Reamed Diameter: None

LEGEND

Cement/Bentonite Grout

Bentonite Seal

Silica Sandpack

Client: NYSDEC	Project: Utica City Dump	Project No.: 35231.07
U R S CONSULTANTS, INC.	Monitoring Well Constuction Details	Well Number: MW-1

ATLANTIC TESTING LABORATORIES, LIMITED

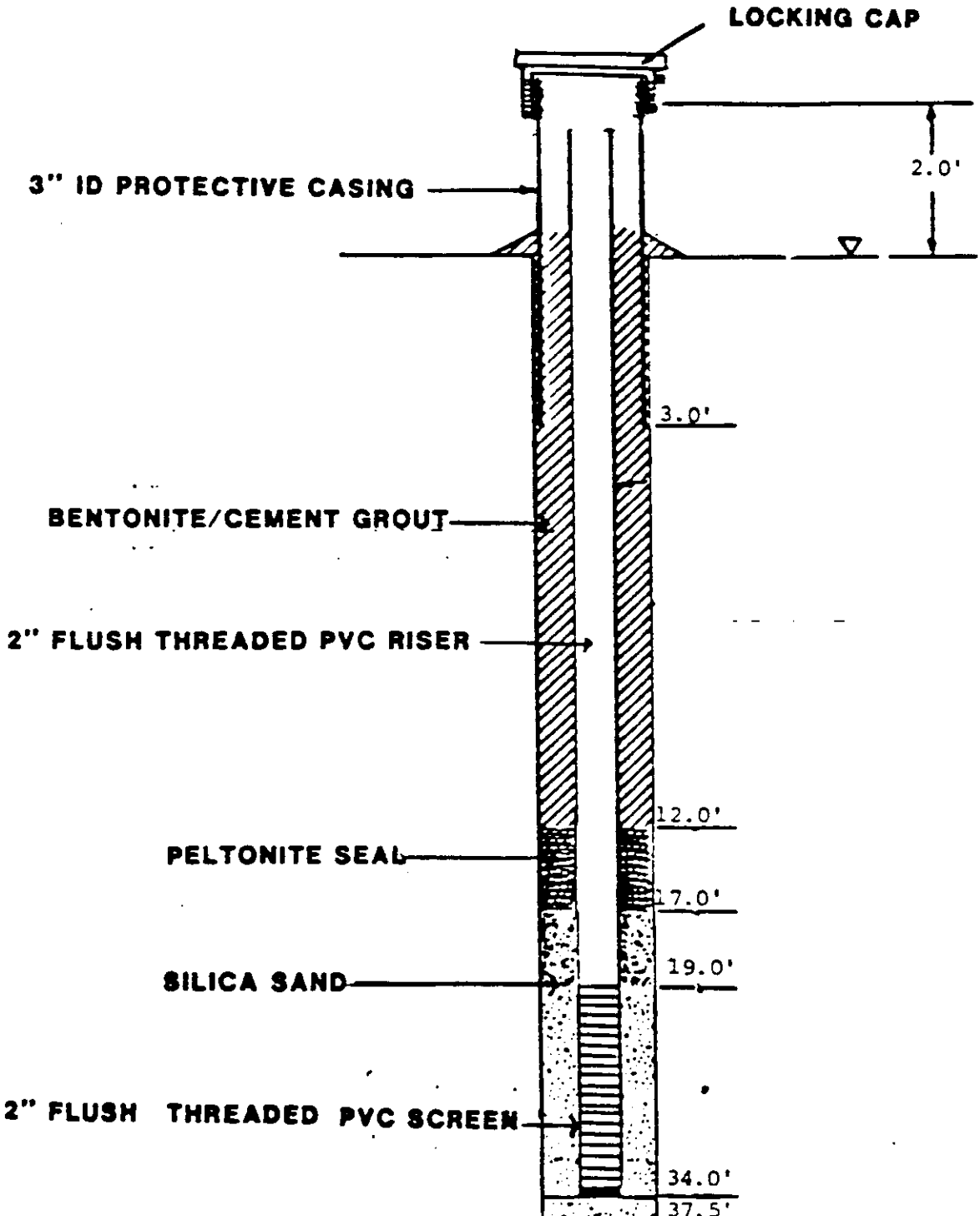
MONITORING WELL INSTALLATION DETAIL

PROJECT: Utica Landfill
I.D. No. 633015

PROJECT NO. CD642-1-4-86

CLIENT: NYS Dept. of Environmental Conservation
Albany, NY

WELL NO. UD-1



▽ @ 22'-25'6"

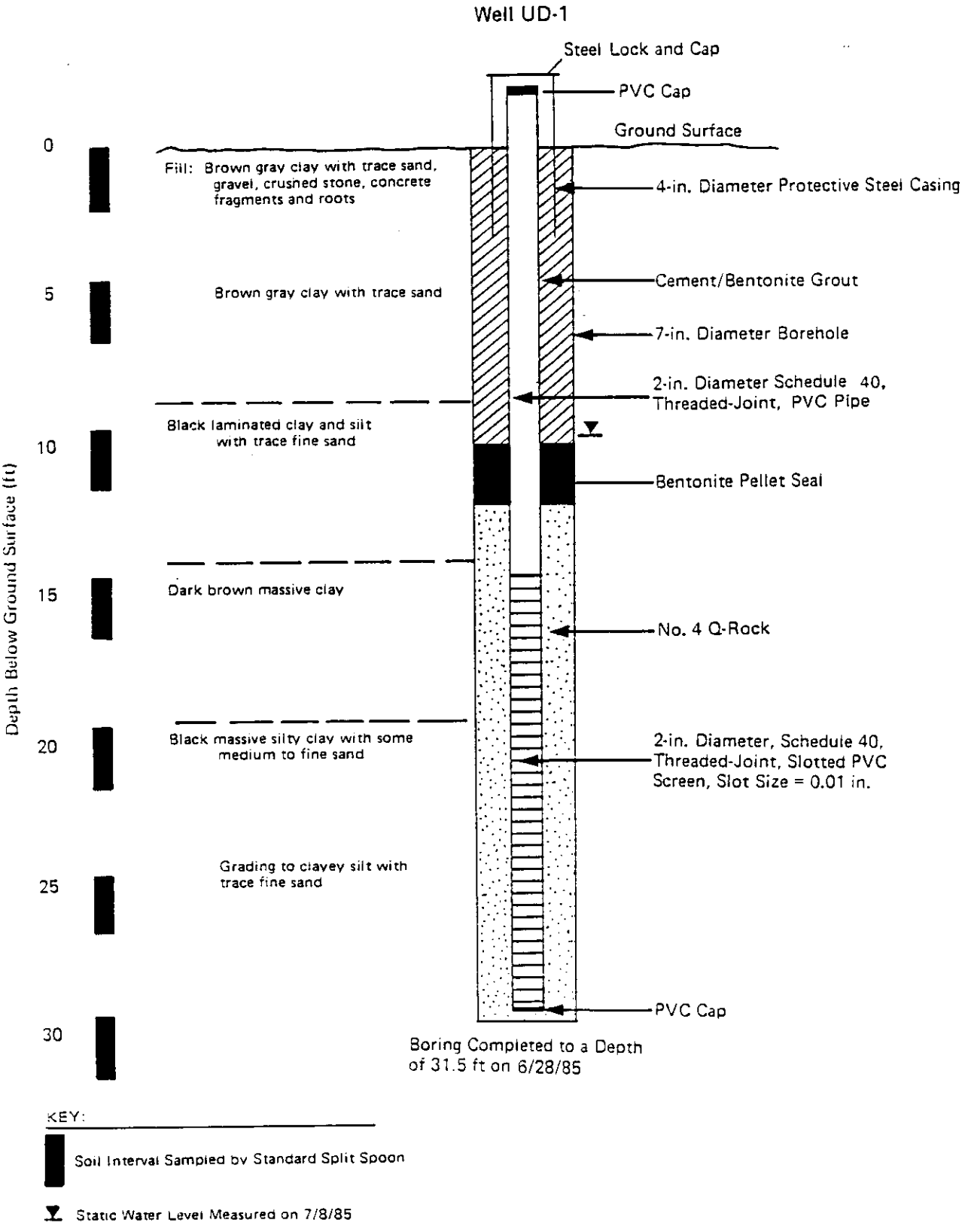


Figure 3-3. Boring log and well schematic, City of Utica Dump Site.

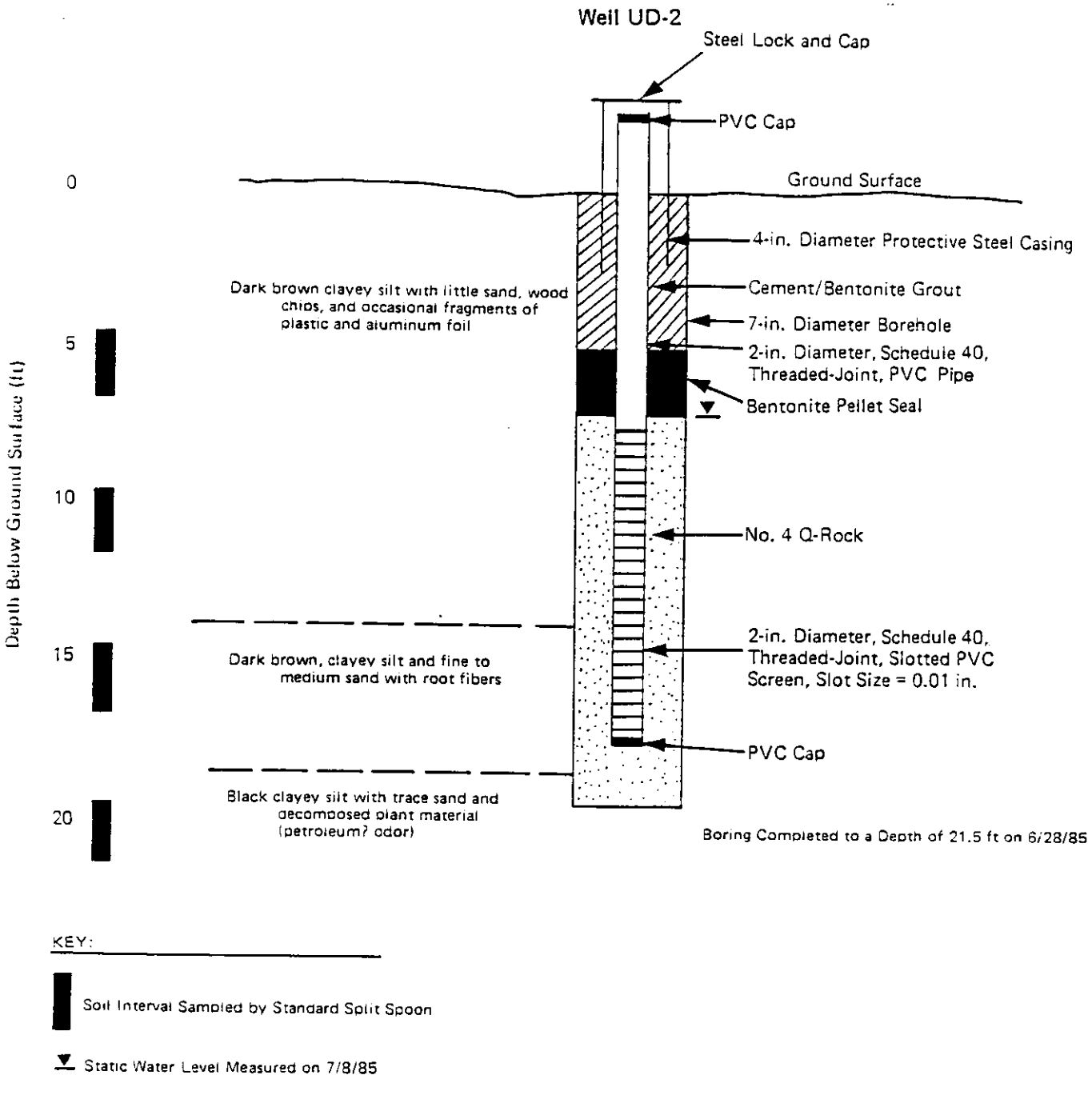


Figure 3-4. Boring log and well schematic, City of Utica Dump Site.

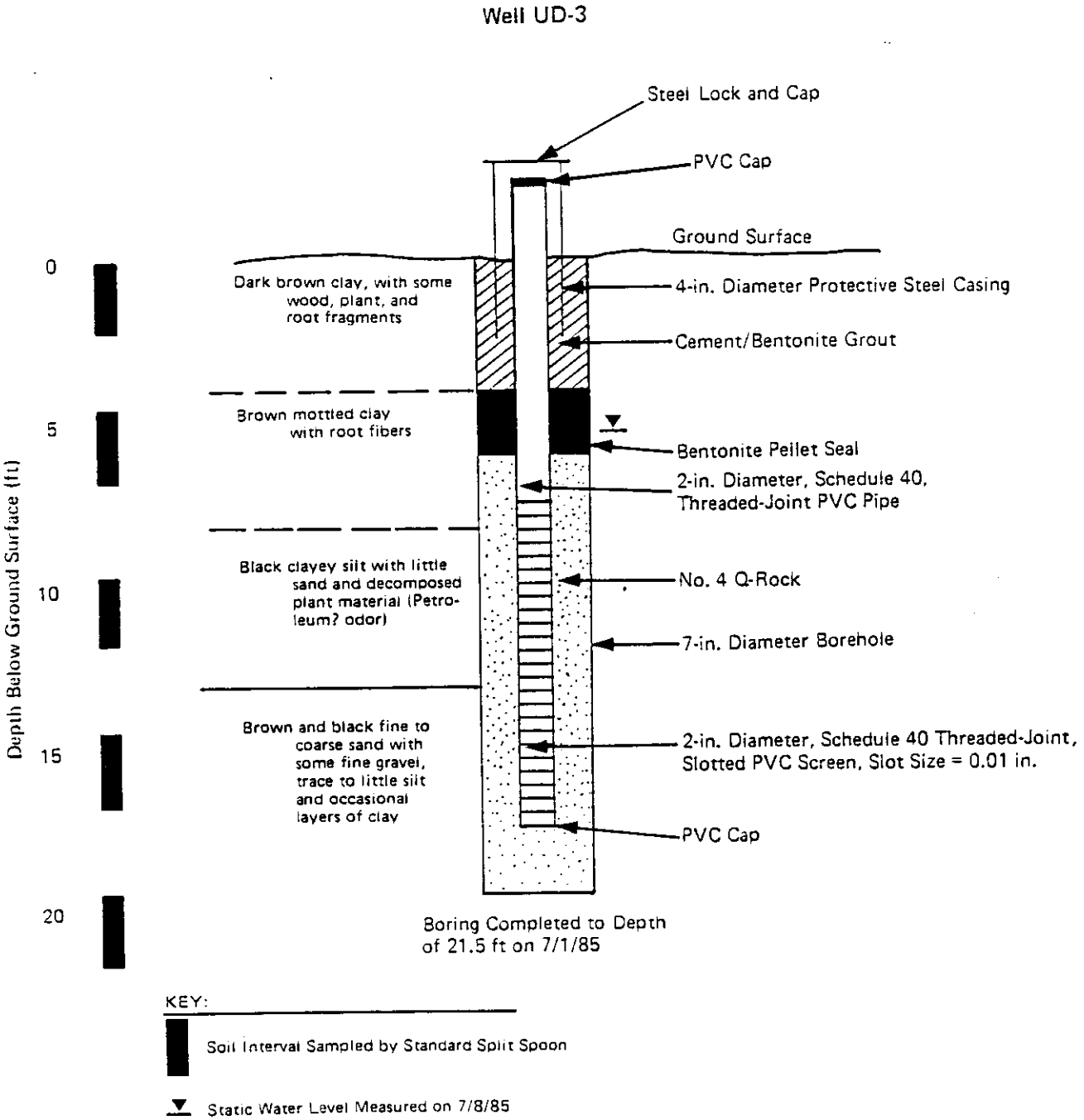


Figure 3-5. Boring log and well schematic, City of Utica Dump Site.

APPENDIX E

WELL DEVELOPMENT/PURGING LOGS

URS CONSULTANTS, INC.

WELL DEVELOPMENT/PURGING LOG

PROJECT TITLE: Utica City Dump - Phase II

PROJECT NO.: 35231.07

STAFF: Steve Frank - Wes Gamble

DATE: 9-13-90 DEVELOPMENT

WELL NO.: MW-1

① TOTAL CASING AND SCREEN LENGTH (FT.): 18.92

② CASING INTERNAL DIAMETER (in.): 2

③ WATER LEVEL BELOW TOP OF CASING (FT.) 13.62

④ VOLUME OF WATER IN CASING (GAL.) .9

$V = 0.0408 (②)^2 \times (① - ③) =$ _____ GAL.

WELL I.D.	VOL. GAL./FT.
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)										
	16	27	40	55	65	75	85	95	120	155	
Temperature (°C)	19.0	17.5	17.8	17.5	17.3	17.5	17.6	17.4	17.4	17.4	
Turbidity (NTU)	100+	100+	100+	100+	100+	105	100+	100+	20	42	
Conductivity (μmho)	1800	1800	1900	1850	2100	2000	2100	2000	2000	2000	
pH *											

COMMENTS: Developed with centrifugal suction pump @ ~1.3 gal/min

* pH electrode broken

A-2347

URS CONSULTANTS, INC.

WELL DEVELOPMENT/PURGING LOG

PROJECT TITLE: Utica City Dump - Phase II

PROJECT NO.: 35231.07

STAFF: Steve Frank - Wes Gamble

DATE: 10-4-90 PURGE

WELL NO.: MW-1

① TOTAL CASING AND SCREEN LENGTH (FT.): 18.92

② CASING INTERNAL DIAMETER (in.): 2

③ WATER LEVEL BELOW TOP OF CASING (FT.) 13.02

④ VOLUME OF WATER IN CASING (GAL.) 1

WELL I.D.	VOL. GAL./FT.
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

$V = 0.0408 (②)^2 \times (① - ③)$ = 3 GAL. (3 casings)

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)										
	5										
pH	6.51										
Temperature (°C)	13.5										
Turbidity (NTU)	100+										
Conductivity (µmho)	1752										

COMMENTS:

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URS CONSULTANTS, INC.

WELL DEVELOPMENT/PURGING LOG

PROJECT TITLE: Utica City Dump - Phase II

PROJECT NO.: 35731.07

STAFF: Steve Frank - Wes Gamble

DATE: 9-14-90, 10-4-90, 10-5-90 PURGE AND DEVELOPMENT

WELL NO.: UD-1a

① TOTAL CASING AND SCREEN LENGTH (FT.):	32
② CASING INTERNAL DIAMETER (in.):	2
③ WATER LEVEL BELOW TOP OF CASING (FT.)	11.35
④ VOLUME OF WATER IN CASING (GAL.)	3.5

WELL I.D.	VOL. GAL./FT.
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

$V = 0.0408 (②)^2 \times (① - ③)$ = 10.5 GAL. 3 casings

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)										
	9/14/90	Development	0	17.5		10-4-90	0	Purge 14		10-5-90 SAMPLE		
pH								6.43		6.54		
temperature (°C)								12.5		12.6		
Conductivity (umhos)								681		688		
turbidity (NTU)								100+		25		

COMMENTS: Slow recharge, pumped to dryness at ~ 8 gallons

No parameters tested for redevelopment. Well pumped to visual clarity.

A-2347

URS CONSULTANTS, INC.

WELL DEVELOPMENT/PURGING LOG

PROJECT TITLE: Utica City Dump - Phase II

PROJECT NO.: 35231.07

STAFF: Steve Frank - Wes Gamble

DATE: 9-14, 10-4, 10-5-90 Development and Purge

WELL NO.: UD-2

① TOTAL CASING AND SCREEN LENGTH (FT.):	2
② CASING INTERNAL DIAMETER (in.):	2
③ WATER LEVEL BELOW TOP OF CASING (FT.)	8.43
④ VOLUME OF WATER IN CASING (GAL.)	2.0

WELL I.D.	VOL. GAL./FT.
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

$V = 0.0408 (②)^2 \times (① - ③)$ = 6 GAL. 3 casings

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)										
	9/14/90	Developed .1		10/4/90	Purge 6.5		10/5/90	Sample			
pH					7.00			6.91			
temperature (°C)					12.1			15.3			
turbidity (NTU)					100+			100+			
Specific Conductivity (µmho)					7750			6990			

COMMENTS: Well developed to dryness. Relatively clear water. No parameters taken on development water.

A-2347

URS CONSULTANTS, INC.

WELL DEVELOPMENT/PURGING LOG

PROJECT TITLE: Utica City Dump - Phase II

PROJECT NO.: 35231.07

STAFF: Steve Frank - Wes Gamble

DATE: 9-14, 10-4, 10-_-90 Development and Purge

WELL NO.: UD-3

① TOTAL CASING AND SCREEN LENGTH (FT.):	20
② CASING INTERNAL DIAMETER (in.):	2
③ WATER LEVEL BELOW TOP OF CASING (FT.)	7
④ VOLUME OF WATER IN CASING (GAL.)	2

WELL I.D.	VOL. GAL./FT.
1"	0.04
2"	0.17
3"	0.38
4"	0.66
5"	1.04
6"	1.50
8"	2.60

$V = 0.0408 (②)^2 \times (① - ③)$ = 6 GAL. 3 casings

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)										
	9/14/90	Development 50		10/4/90	Purge 6.5	Not sampled	10/8/90	Purge 6	sample		
pH					7.35			7.04	7.03		
temperature (°C)					12.2			15.1	14.2		
turbidity (NTu)					100+			100+	100+		
Spec. Conductivity (umho)					2520			2040	2440		

COMMENTS: No parameters taken at development
Pumped well to visual clarity. Good recharge.
Purged on 10-4-90 but not sampled.

A-2347

APPENDIX F

SAMPLE DESCRIPTIONS

UTICA CITY DUMP
SAMPLE DESCRIPTIONS

SAMPLE ID	DATE SAMPLED	SAMPLE TYPE	DESCRIPTION	LOCATION
MW-1 GW	10/4/90	Groundwater	Highly turbid. No odor.	Central part of dump.
UD-1A GW	10/5/90	Groundwater	Clear. Slight sulfurous odor.	Along Barge Canal northeast of incinerator building.
UD-2 GW	10/5/90	Groundwater	Cloudy. Light brown. Sulfurous odor. Reactive with metals preservative.	Eastern edge of fill along the Mohawk River. South of UD-3.
UD-3 GW	10/8/90	Groundwater	Turbid. Slight odor.	Eastern edge of fill along the Mohawk River. North of UD-2.
DRUM A-1	10/4/90	Waste	White to cream white, solid/lumpy, plaster-like material. Loosely packed. Damp.	Central part of dump. Northwest of MW-1.
DRUM D-1	10/4/90	Waste	Black, granular material with metal shavings and chunks of steel. Damp.	Eastern edge of fill. Approximately 300' northwest of UD-2.
DRUM G-1	10/4/90	Waste	Rust/orange liquid with flakes and some sediment. Turpentine odor.	Eastern edge of fill. Approximately 400' southwest of UD-3.
MW1-SB 0-2 ft	8/23/90	Soil	Brown, gray, moist heterogeneous fill with sandy silt. Some ashes.	Central part of dump.

APPENDIX G

PHASE II ANALYTICAL RESULTS

ANALYTICAL DATA ASSESSMENT

FOR

PHASE II CHEMICAL ANALYSES AT UTICA CITY DUMP

Performed By:

VERSAR LABORATORIES, INC.

Prepared For:

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

By:

URS CONSULTANTS, INC.

JUNE 1991

INTRODUCTION: This assessment represents the best judgement of URS Consultants, Inc. (URS) concerning the useability of the chemical data produced by Versar Laboratories, Inc. a subcontractor to URS, as part of the Phase II Investigation at Utica City Dump site in Oneida County, New York. This project is being funded by the New York State Department of Environmental Conservation (NYSDEC). The data being evaluated is from the sampling of soil borings, waste and groundwater samples. All analyses performed by Versar Laboratories Inc., were subject to NYSDEC Analytical Services Protocol - September 1989.

Data documentation and chain-of-custody procedures were performed in accordance with NYSDEC Analytical Services Protocol - September 1989. Data validation and determination of useability were performed in accordance with the level of effort discussed in the transmittals between URS and the NYSDEC which stated each site would be screened for compliance with analytical holding times, surrogate and spike recovery criteria, method blank requirements, and initial and continuing calibration requirements. The primary importance of this chemical data is to allow an accurate assessment of sites and to determine if further study is required prior to reclassification and/or delisting.

CATEGORIES: The following tables summarize our assessment of data useability on a sample-by-sample and fraction-by-fraction basis. In evaluating this data, we have established three (3) categories which are,

for the most part, gradational in nature. The categories are defined as follows:

Category 1a - Data Useable - Fully useable, although some minor deviations from NYSDEC ASP criteria are possible.

Category 1b - Data Useable with Caution - Cumulative deviations from NYSDEC ASP criteria are greater than Category 1a (e.g., holding time violations, internal standard and surrogate recovery outliers, poor chromatography, calibration standards not within QC limits, etc.). However, TCL compounds were detected at or above the quantitation limit or deviations are not considered significant enough as to jeopardize the chemical representativeness of the sample results. Deviations are explained in the note section of each data useability table.

Category 2a - Rejected Fraction Due to Significant NYSDEC ASP Deviations - Did not comply with NYSDEC ASP or USEPA CLP holding time requirements or low surrogate recoveries indicate poor method efficiency resulting in low bias of analytical data. In either case no TCL compounds were detected at or above the quantitation limit.

Summary Assessment: We recommend acceptance and use of all data in Category 1a. The use of Category 1b data involves some risk in the event of a legalistic challenge based upon non-compliance with strict NYSDEC ASP criteria. However, given the purpose of the Phase II studies, we cautiously recommend the use of the data categorized as 1b. We recommend rejection of all data in Category 2a.

James Lanzo
Project Manager

Thomas Knickerbocker
QA/QC Officer

TABLE 1

UTICA CITY DUMP

ANALYTICAL DATA ASSESSMENT SUMMARY
MATRIX: Soil Borings, Groundwater, Waste
SAMPLE DELIVERY GROUP: 3394/3656/3659/3673/3657
ASSESSMENT CATEGORIES: 1a, 1b, 2a

Sample ID	VOA	SVOA	PEST/ PCB	Metals	CN	RCRA	EPTOX Metals	EPTOX Pest	EPTOX Herb	Notes
MW-1-SB	1a	1b	1a	1a	1a	-	-	-	-	1
SB-RB1	1a	1a	1a	1a	1a	-	-	-	-	
HLD BLK 8/27	1a	-	-	-	-	-	-	-	-	
MW-1-SB-MS	1a	1b	1a	1a	1a	-	-	-	-	1
MW-1-SB-MSD	1a	1b	1a	-	-	-	-	-	-	1
MW-1-SB-DUP	-	-	-	1a	1a	-	-	-	-	
MW-1-SB-MSB	1a	2a	1a	-	-	-	-	-	-	
MW-1-GW	1a	1a	1a	1a	1a	-	-	-	-	
M1-1-GW-MS	1a	1a	1a	1a	1a	-	-	-	-	
MW-1-GW-MSD	1a	1a	1a	-	-	-	-	-	-	
MW-1-GW-MSB	1a	2a	1a	-	-	-	-	-	-	
MW-1-GW-DUP	-	-	-	1a	1a	-	-	-	-	
UD-1A-GW	1b	1a	1a	1a	1a	-	-	-	-	2
UD-1A-GW-RE	1b	-	-	-	-	-	-	-	-	2
UD-2-GW	1b	1a	1a	1a	1a	-	-	-	-	2
UD-2-GW-RE	1b	-	-	-	-	-	-	-	-	2
UD-RB1-GW	2a	1a	1a	1a	1a	-	-	-	-	3
GW-TB-1	2a	-	-	-	-	-	-	-	-	3
HLD BLK-10/8	1a	-	-	-	-	-	-	-	-	
GW-TB-2	1a	-	-	-	-	-	-	-	-	
UD-3-GW	2a	1a	1a	-	-	-	-	-	-	
UD-3-GW-RE	2a	-	-	-	-	-	-	-	-	
HLD-BLK-10/10	1a	-	-	-	-	-	-	-	-	

TABLE 1 (Continued)

UTICA CITY DUMP

Sample ID	VOA	SVOA	PEST/ PCB	Metals	CN	RCRA	EPTOX Metals	EPTOX Pest	EPTOX Herb	Notes
DS-A1	-	-	-	-	-	1a	1a	1a	1a	
DS-D1	-	-	-	-	-	1a	1a	1a	1a	
DS-G1	-	-	-	-	-	1a	1a	1a	1a	

Abbreviation/Legend:

VOA - Target Compound List (TCL) Volatiles
SVOA - TCL Semivolatiles
Pest/PCB - TCL Pesticides/PCBs
Metals - Target Analyte List (TAL) Metals
CN - Cyanide
EPTOX Metals
- Extraction Procedure Toxicity Metals
EPTOX Pesticides
- Extraction Procedure Toxicity Pesticides
EPTOX Herbicides
- Extraction Procedure Toxicity Herbicides
RCRA - Ignitability, Corrosivity, Reactivity

RB - Rinse Blank
TB - Trip Blank
SB - Soil Boring
MS - Matrix Spike
MSD - Matrix Spike Duplicate
DUP - Duplicate
GW - Groundwater
MSB - Matrix Spike Blank
MW - Monitoring Well
DS - Waste
RE - Reanalysis

NOTES FOR TABLE 1

1. The associated semivolatile method blank had surrogate recoveries outside acceptable limits.

2. The volatile sample had surrogates outside acceptable recovery limits during the initial analysis. The sample was reanalyzed, with the same recovery outliers, therefore, indicating a matrix interference may be present.

3. The volatile sample was rejected because the surrogates were outside the acceptable recovery limits. This is not an environmental sample, therefore, there should be no matrix inteferences resulting in poor surrogate recoveries.

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

UCDMW1-1

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 3394 SAS No.: _____ SDG No.: 1

Matrix: (soil/water) SOIL Lab Sample ID: 29799

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Y2944

Level: (low/med) LOW Date Received: 08/25/90

% Moisture: not dec. 30 Date Analyzed: 09/01/90

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	14	U
74-83-9	Bromomethane	14	U
75-01-4	Vinyl chloride	14	U
75-00-3	Chloroethane	14	U
75-09-2	Methylene chloride	7	U
67-64-1	Acetone	25	
75-15-0	Carbon disulfide	7	U
75-35-4	1,1-Dichloroethene	7	U
75-34-3	1,1-Dichloroethane	7	U
540-59-0	1,2-Dichloroethene (total)	7	U
67-66-3	Chloroform	7	U
107-06-2	1,2-Dichloroethane	7	U
78-93-3	2-Butanone	14	U
71-55-6	1,1,1-Trichloroethane	7	U
56-23-5	Carbon tetrachloride	7	U
108-05-4	Vinyl acetate	14	U
75-27-4	Bromodichloromethane	7	U
78-87-5	1,2-Dichloropropane	7	U
10061-01-5	cis-1,3-Dichloropropene	7	U
79-01-6	Trichloroethene	7	U
124-48-1	Dibromochloromethane	7	U
79-00-5	1,1,2-Trichloroethane	7	U
71-43-2	Benzene	7	U
10061-02-6	Trans-1,3-dichloropropene	7	U
75-25-2	Bromoform	7	U
108-10-1	4-Methyl-2-pentanone	14	U
591-78-6	2-Hexanone	14	U
127-18-4	Tetrachloroethene	7	U
79-34-5	1,1,2,2-Tetrachloroethane	7	U
108-88-3	Toluene	7	U
108-90-7	Chlorobenzene	7	U
100-41-4	Ethylbenzene	7	U
100-42-5	Styrene	7	U
1330-20-7	Total xylenes	6	J

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

UCDMW1-1

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 3394 SAS No.: _____ SDG No.: 1

Matrix: (soil/water) SOIL Lab Sample ID: 29799

Sample wt/vol: 5.0 (g/mL) G Lab File ID: Y2944

Level: (low/med) LOW Date Received: 08/25/90

% Moisture: not dec. 30 Date Analyzed: 09/01/90

Column (pack/cap) CAP Dilution Factor: 1.0

Number TICs found: 4

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	13.23	7.1	J
2.		UNKNOWN SILOXANE	14.02	5.7	J
3.		UNKNOWN SILOXANE	19.08	53	J
4.		UNKNOWN	19.67	11	J

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

UCDMW11

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 3394A SAS No.: _____ SDG No.: B1

Matrix: (soil/water) SOIL Lab Sample ID: 29798

Sample wt/vol: 30.0 (g/mL) G Lab File ID: Z5932

Level: (low/med) LOW Date Received: 08/25/90

% Moisture: not dec. 30 dec. ____ Date Extracted: 08/31/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 09/27/90

GPC Cleanup: (Y/N) N pH: 6.00 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	500	U
111-44-4	bis(2-Chloroethyl)ether	500	U
95-57-8	2-Chlorophenol	500	U
541-73-1	1,3-Dichlorobenzene	500	U
106-46-7	1,4-Dichlorobenzene	500	U
100-51-6	Benzyl alcohol	500	U
95-50-1	1,2-Dichlorobenzene	500	U
95-48-7	2-Methylphenol	500	U
108-60-1	bis(2-Chloroisopropyl)ether	500	U
106-44-5	4-Methylphenol	500	U
621-64-7	N-Nitroso-di-n-propylamine	500	U
67-72-1	Hexachloroethane	500	U
98-95-3	Nitrobenzene	500	U
78-59-1	Isophorone	500	U
88-75-5	2-Nitrophenol	500	U
105-67-9	2,4-Dimethylphenol	500	U
65-85-0	Benzoic Acid	2400	U
111-91-1	bis(2-Chloroethoxy)methane	500	U
120-83-2	2,4-Dichlorophenol	500	U
120-82-1	1,2,4-Trichlorobenzene	500	U
91-20-3	Naphthalene	500	U
106-47-8	4-Chloroaniline	500	U
87-68-3	Hexachlorobutadiene	500	U
59-50-7	4-Chloro-3-methylphenol	500	U
91-57-6	2-Methylnaphthalene	500	U
77-47-4	Hexachlorocyclopentadiene	500	U
88-06-2	2,4,6-Trichlorophenol	500	U
95-95-4	2,4,5-Trichlorophenol	2400	U
91-58-7	2-Chloronaphthalene	500	U
88-74-4	2-Nitroaniline	2400	U
131-11-3	Dimethylphthalate	500	U
208-96-8	Acenaphthylene	500	U
606-20-2	2,6-Dinitrotoluene	500	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

UCDMW11

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 3394A SAS No.: _____ SDG No.: B1

Matrix: (soil/water) SOIL Lab Sample ID: 29798

Sample wt/vol: 30.0 (g/mL) G Lab File ID: Z5932

Level: (low/med) LOW Date Received: 08/25/90

% Moisture: not dec. 30 dec. ____ Date Extracted: 08/31/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 09/27/90

GPC Cleanup: (Y/N) N pH: 6.00 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	2400	U
83-32-9	Acenaphthene	500	U
51-28-5	2,4-Dinitrophenol	2400	U
100-02-7	4-Nitrophenol	340	JX
132-64-9	Dibenzofuran	500	U
121-14-2	2,4-Dinitrotoluene	500	U
84-66-2	Diethylphthalate	500	U
7005-72-3	4-Chlorophenyl-phenylether	500	U
86-73-7	Fluorene	500	U
100-01-6	4-Nitroaniline	2400	U
534-52-1	4,6-Dinitro-2-methylphenol	2400	U
86-30-6	N-nitrosodiphenylamine (1)	500	U
101-55-3	4-Bromophenyl-phenylether	500	U
118-74-1	Hexachlorobenzene	500	U
87-86-5	Pentachlorophenol	2400	U
85-01-8	Phenanthrene	500	U
120-12-7	Anthracene	500	U
84-74-2	Di-n-butylphthalate	500	U
206-44-0	Fluoranthene	500	U
129-00-0	Pyrene	500	U
85-68-7	Butylbenzylphthalate	500	U
91-94-1	3,3'-Dichlorobenzidine	990	U
56-55-3	Benzo(a)anthracene	500	U
218-01-9	Chrysene	500	U
117-81-7	bis(2-Ethylhexyl)phthalate	280	BJ
117-84-0	Di-n-octyl phthalate	500	U
205-99-2	Benzo(b)fluoranthene	500	U
207-08-9	Benzo(k)fluoranthene	500	U
50-32-8	Benzo(a)pyrene	500	U
193-39-5	Indeno(1,2,3-cd)pyrene	500	U
53-70-3	Dibenz(a,h)anthracene	500	U
191-24-2	Benzo(g,h,i)perylene	500	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

UCDMW11

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 3394A SAS No.: _____ SDG No.: B1

Matrix: (soil/water) SOIL Lab Sample ID: 29798

Sample wt/vol: 30.0 (g/mL) G Lab File ID: Z5932

Level: (low/med) LOW Date Received: 08/25/90

% Moisture: not dec. 30 dec. ____ Date Extracted: 08/31/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 09/27/90

GPC Cleanup: (Y/N) N pH: 6.00 Dilution Factor: 1.0

Number TICs found: 21

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	3.65	550	J
2.		UNKNOWN KETONE	3.92	1100	BJ
3.		UNKNOWN KETONE	4.03	500	J
4.		UNKNOWN KETONE	4.42	800	J
5.		UNKNOWN	5.15	2600	BJ
6.		UNKNOWN	6.90	200	J
7.		UNKNOWN	7.52	400	J
8.	74367-33-2	PROPANOIC ACID, 2-METHYL	8.67	300	BJ
9.		UNKNOWN	10.42	350	J
10.		UNKNOWN	13.14	300	J
11.	57-10-3	HEXADECANOIC ACID	14.20	350	J
12.	10544-50-0	SULFUR, MOL. (S8)	15.32	4200	J
13.		UNKNOWN	15.54	100	J
14.	483-65-8	PHENANTHRENE, 1-METHYL-7-(1-	16.45	400	J
15.		UNKNOWN HYDROCARBON	18.05	400	J
16.		UNKNOWN HYDROCARBON	18.69	200	J
17.		UNKNOWN HYDROCARBON	19.30	300	J
18.		UNKNOWN HYDROCARBON	19.94	550	J
19.		UNKNOWN HYDROCARBON	20.69	750	J
20.		UNK. POLYCYCLIC AROMATIC	21.29	1200	J
21.		UNKNOWN HYDROCARBON	22.65	350	J

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

UCD-MW1-1

Lab Name: VERSAR, INC. Contract:

Code: VERSAR Case No.: URS UCD SAS No.: SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 29798

Sample wt/vol: 30 (g/ml) G Lab File ID:

Level: (low/med) LOW Date Received: 08/25/90

% Moisture: not dec. 30.2 dec. Date Extracted: 08/31/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 09/22/90

GPC Cleanup: (Y/N) N pH: 6.0 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	5.7	U
319-85-7	beta-BHC	5.7	U
319-86-8	delta-BHC	5.7	U
58-89-9	gamma-BHC (Lindane)	5.7	U
76-44-8	Heptachlor	5.7	U
309-00-2	Aldrin	5.7	U
1024-57-3	Heptachlor Epoxide	5.7	U
959-98-8	Endosulfan I	5.7	U
60-57-1	Dieldrin	11	U
72-55-9	4,4'-DDE	11	U
72-20-8	Endrin	11	U
33213-65-9	Endosulfan II	11	U
72-54-8	4,4'-DDD	11	U
1031-07-8	Endosulfan Sulfate	11	U
50-29-3	4,4'-DDT	11	U
72-43-5	Methoxychlor	57	U
53494-70-5	Endrin Ketone	11	U
5103-71-9	alpha-Chlordane	11	U
5103-74-2	gamma-Chlordane	11	U
8001-35-2	Toxaphene	110	U
12674-11-2	Aroclor-1016	57	U
11104-28-2	Aroclor-1221	57	U
11141-16-5	Aroclor-1232	57	U
53469-21-9	Aroclor-1242	57	U
12672-29-6	Aroclor-1248	57	U
11097-69-1	Aroclor-1254	110	U
11096-82-5	Aroclor-1260	110	U

9/25/90

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW1-1

Lab Name: VERSAR_LABORATORIES_INC._ Contract: 35216.03__

Lab Code: VERSAR Case No.: 3394_ SAS No.: _____ SDG No.: SBRB-1

Matrix (soil/water): SOIL_ Lab Sample ID: 29797_____

Level (low/med): LOW__ Date Received: 08/25/90

% Solids: _86.6

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7660			P
7440-36-0	Antimony	5.2	U	N	P
7440-38-2	Arsenic	18.8		NS*	F
7440-39-3	Barium	50.3			P
7440-41-7	Beryllium	0.45	U		P
7440-43-9	Cadmium	1.1	U		P
7440-70-2	Calcium	1730			P
7440-47-3	Chromium	13.2			P
7440-48-4	Cobalt	10.7	B		P
7440-50-8	Copper	61.9		N*	P
7439-89-6	Iron	17800			P
7439-92-1	Lead	59.2			F
7439-95-4	Magnesium	3080			P
7439-96-5	Manganese	121			P
7439-97-6	Mercury	0.11	U		CV
7440-02-0	Nickel	23.5			P
7440-09-7	Potassium	590	B		P
7782-49-2	Selenium	0.65	B		F
7440-22-4	Silver	0.92	B		P
7440-23-5	Sodium	202	B		P
7440-28-0	Thallium	0.21	U		F
7440-62-2	Vanadium	16.3			P
7440-66-6	Zinc	61.3		E	P
	Cyanide	0.72			AS

Color Before: BROWN____ Clarity Before: _____ Texture: FINE__

Color After: YELLOW___ Clarity After: CLEAR_ Artifacts: _____

Comments:

_____THE_EPA_SAMPLE_NAME_PREFIX_IS_UDC-._____

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

UD-MW1

I Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 3656 SAS No.: _____ SDG No.: 2

Matrix: (soil/water) WATER Lab Sample ID: 32645

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: Y4026

Level: (low/med) LOW Date Received: 10/06/90

% Moisture: not dec. ____ Date Analyzed: 10/12/90

Column: (pack/cap) CAP Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	50	U
74-83-9	Bromomethane	50	U
75-01-4	Vinyl chloride	50	U
75-00-3	Chloroethane	15	J
75-09-2	Methylene chloride	17	BJ
67-64-1	Acetone	20	J
75-15-0	Carbon disulfide	25	U
75-35-4	1,1-Dichloroethene	25	U
75-34-3	1,1-Dichloroethane	25	U
540-59-0	1,2-Dichloroethene (total)	25	U
67-66-3	Chloroform	25	U
107-06-2	1,2-Dichloroethane	25	U
78-93-3	2-Butanone	50	U
71-55-6	1,1,1-Trichloroethane	25	U
56-23-5	Carbon tetrachloride	25	U
108-05-4	Vinyl acetate	50	U
75-27-4	Bromodichloromethane	25	U
78-87-5	1,2-Dichloropropane	25	U
10061-01-5	cis-1,3-Dichloropropene	25	U
79-01-6	Trichloroethene	25	U
124-48-1	Dibromochloromethane	25	U
79-00-5	1,1,2-Trichloroethane	25	U
71-43-2	Benzene	25	U
10061-02-6	Trans-1,3-dichloropropene	25	U
75-25-2	Bromoform	25	U
108-10-1	4-Methyl-2-pentanone	50	U
591-78-6	2-Hexanone	50	U
127-18-4	Tetrachloroethene	25	U
79-34-5	1,1,2,2-Tetrachloroethane	25	U
108-88-3	Toluene	25	U
108-90-7	Chlorobenzene	25	U
100-41-4	Ethylbenzene	25	U
100-42-5	Styrene	25	U
1330-20-7	Total xylenes	130	

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

UD-MW1

L Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 3656 SAS No.: _____ SDG No.: 2

Matrix: (soil/water) WATER Lab Sample ID: 32645

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: Y4026

Level: (low/med) LOW Date Received: 10/06/90

% Moisture: not dec. ____ Date Analyzed: 10/12/90

Column (pack/cap) CAP Dilution Factor: 5.0

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

100035

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

UDMW1

L Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 3656A SAS No.: _____ SDG No.: 2_3

Matrix: (soil/water) WATER Lab Sample ID: 32643

Sample wt/vol: 1060 (g/mL) ML Lab File ID: T4803

Level: (low/med) LOW Date Received: 10/06/90

% Moisture: not dec. ____ dec. ____ Date Extracted: 10/09/90

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 11/01/90

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	9	U
111-44-4	bis(2-Chloroethyl)ether	9	U
95-57-8	2-Chlorophenol	9	U
541-73-1	1,3-Dichlorobenzene	9	U
106-46-7	1,4-Dichlorobenzene	10	
100-51-6	Benzyl alcohol	9	U
95-50-1	1,2-Dichlorobenzene	9	U
95-48-7	2-Methylphenol	9	U
108-60-1	bis(2-Chloroisopropyl)ether	9	U
106-44-5	4-Methylphenol	9	U
621-64-7	N-Nitroso-di-n-propylamine	9	U
67-72-1	Hexachloroethane	9	U
98-95-3	Nitrobenzene	9	U
78-59-1	Isophorone	9	U
88-75-5	2-Nitrophenol	9	U
105-67-9	2,4-Dimethylphenol	9	U
65-85-0	Benzoic Acid	47	U
111-91-1	bis(2-Chloroethoxy)methane	9	U
120-83-2	2,4-Dichlorophenol	9	U
120-82-1	1,2,4-Trichlorobenzene	9	U
91-20-3	Naphthalene	60	
106-47-8	4-Chloroaniline	9	U
87-68-3	Hexachlorobutadiene	9	U
59-50-7	4-Chloro-3-methylphenol	9	U
91-57-6	2-Methylnaphthalene	42	
77-47-4	Hexachlorocyclopentadiene	9	U
88-06-2	2,4,6-Trichlorophenol	9	U
95-95-4	2,4,5-Trichlorophenol	47	U
91-58-7	2-Chloronaphthalene	9	U
88-74-4	2-Nitroaniline	47	U
131-11-3	Dimethylphthalate	9	U
208-96-8	Acenaphthylene	9	U
606-20-2	2,6-Dinitrotoluene	9	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

UDMW1

L Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 3656A SAS No.: _____ SDG No.: 2_3

Matrix: (soil/water) WATER Lab Sample ID: 32643

Sample wt/vol: 1060 (g/mL) ML Lab File ID: T4803

Level: (low/med) LOW Date Received: 10/06/90

% Moisture: not dec. ____ dec. ____ Date Extracted: 10/09/90

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 11/01/90

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	47	U
83-32-9	Acenaphthene	9	U
51-28-5	2,4-Dinitrophenol	47	U
100-02-7	4-Nitrophenol	47	U
132-64-9	Dibenzofuran	9	U
121-14-2	2,4-Dinitrotoluene	9	U
84-66-2	Diethylphthalate	9	U
7005-72-3	4-Chlorophenyl-phenylether	9	U
86-73-7	Fluorene	9	U
100-01-6	4-Nitroaniline	47	U
534-52-1	4,6-Dinitro-2-methylphenol	47	U
86-30-6	N-nitrosodiphenylamine (1)	9	U
101-55-3	4-Bromophenyl-phenylether	9	U
118-74-1	Hexachlorobenzene	9	U
87-86-5	Pentachlorophenol	47	U
85-01-8	Phenanthrene	9	U
120-12-7	Anthracene	9	U
84-74-2	Di-n-butylphthalate	9	U
206-44-0	Fluoranthene	9	U
129-00-0	Pyrene	9	U
85-68-7	Butylbenzylphthalate	9	U
91-94-1	3,3'-Dichlorobenzidine	19	U
56-55-3	Benzo(a)anthracene	9	U
218-01-9	Chrysene	9	U
117-81-7	bis(2-Ethylhexyl)phthalate	9	U
117-84-0	Di-n-octyl phthalate	9	U
205-99-2	Benzo(b)fluoranthene	9	U
207-08-9	Benzo(k)fluoranthene	9	U
50-32-8	Benzo(a)pyrene	9	U
193-39-5	Indeno(1,2,3-cd)pyrene	9	U
53-70-3	Dibenz(a,h)anthracene	9	U
191-24-2	Benzo(g,h,i)perylene	9	U

(1) - Cannot be separated from Diphenylamine

200014

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

UDMW1

I Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 3656A SAS No.: _____ SDG No.: 2 3

Matrix: (soil/water) WATER Lab Sample ID: 32643

Sample wt/vol: 1060 (g/mL) ML Lab File ID: T4803

Level: (low/med) LOW Date Received: 10/06/90

% Moisture: not dec. ____ dec. ____ Date Extracted: 10/09/90

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 11/01/90

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.00

Number TICs found: 21

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	2.78	25	BJ
2.		UNKNOWN DIMETHYL BENZENE	3.10	55	J
3.		UNKNOWN SUBSTITUTED BENZENE	3.73	5.7	J
4.	103-65-1	BENZENE, PROPYL-	4.08	9.4	J
5.		UNKNOWN SBUSTITUTED BENZENE	4.18	7.6	J
6.		UNKNOWN SUBSTITUTED BENZENE	4.27	7.6	J
7.		UNKNOWN SUBSTITUTED BENZENE	4.58	40	J
8.		UNKNOWN SUBSTITUTED BENZENE	4.95	7.6	J
9.		UNKNOWN AROMATIC HYDROCARBON	5.12	11	J
10.		UNKNOWN	5.95	9.4	J
11.		UNKNOWN AROMATIC HYDROCARBON	6.53	5.7	J
12.	585-34-2	PHENOL, 3-(1,1-DIMETHYLETHYL	8.13	7.6	J
13.		UNKNOWN AROMATIC HYDROCARBON	8.44	26	J
14.		UNKNOWN	8.85	11	J
15.	134-62-3	BENZAMIDE, N,N-DIETHYL-3-MET	11.19	9.4	J
16.		UNKNOWN SUBSTITUTED PHENOL	11.42	9.4	J
17.		UNKNOWN	11.94	13	J
18.		UNKNOWN	12.05	28	J
19.		UNKNOWN	12.47	7.6	J
20.		UNKNOWN	16.82	9.4	J
21.	78-51-3	ETHANOL, 2-BUTOXY-, PHOSPHAT	17.75	21	J

D

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

UDMWI

Lab Name: _____VERSAR, INC. ___ Contract: _

Lab Code: _VERSAR Case No.: URSUCD SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: ___32644

Sample wt/vol: 1060 (g/ml) ML Lab File ID: ____

Level: (low/med) LOW Date Received: ___10/06/90

% Moisture: not dec. _____ dec. _____ Date Extracted: ___10/09/90

Extraction: (SepF/Cont/Sonc) ____CONT Date Analyzed: ___10/22/90

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: _ 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.05	U
319-85-7	beta-BHC	0.05	U
319-86-8	delta-BHC	0.05	U
58-89-9	gamma-BHC (Lindane)	0.05	U
76-44-8	Heptachlor	0.05	U
309-00-2	Aldrin	0.05	U
1024-57-3	Heptachlor Epoxide	0.05	U
959-98-8	Endosulfan I	0.05	U
60-57-1	Dieldrin	0.09	U
72-55-9	4,4'-DDE	0.09	U
72-20-8	Endrin	0.09	U
33213-65-9	Endosulfan II	0.09	U
72-54-8	4,4'-DDD	0.09	U
1031-07-8	Endosulfan Sulfate	0.09	U
50-29-3	4,4'-DDT	0.09	U
72-43-5	Methoxychlor	0.47	U
53494-70-5	Endrin Ketone	0.09	U
5103-71-9	alpha-Chlordane	0.47	U
5103-74-2	gamma-Chlordane	0.47	U
8001-35-2	Toxaphene	0.94	U
12674-11-2	Aroclor-1016	0.47	U
11104-28-2	Aroclor-1221	0.47	U
11141-16-5	Aroclor-1232	0.47	U
53469-21-9	Aroclor-1242	0.47	U
12672-29-6	Aroclor-1248	0.47	U
11097-69-1	Aroclor-1254	0.94	U
11096-82-5	Aroclor-1260	0.94	U

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MW1

Lab Name: VERSAR_LABORATORIES_INC.___ Contract: 35216.03_

Lab Code: VERSAR Case No.: 3656__ SAS No.: _____ SDG No.: 1A_GW_

Matrix (soil/water): WATER_____ Lab Sample ID: 32641_

Level (low/med): LOW_____ Date Received: 10/06/90

% Solids: ___0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	95600			P
7440-36-0	Antimony	23.0	U	N	P
7440-38-2	Arsenic	39.6			F
7440-39-3	Barium	1260			P
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium	18.5		*	P
7440-70-2	Calcium	195000			P
7440-47-3	Chromium	341		*	P
7440-48-4	Cobalt	97.5			P
7440-50-8	Copper	982		*	P
7439-89-6	Iron	278000			P
7439-92-1	Lead	1820			F
7439-95-4	Magnesium	75800			P
7439-96-5	Manganese	2610			P
7439-97-6	Mercury	2.2			CV
7440-02-0	Nickel	350			P
7440-09-7	Potassium	37000			P
7782-49-2	Selenium	20.0	U	WN	F
7440-22-4	Silver	5.6	B	N	P
7440-23-5	Sodium	35100			P
7440-28-0	Thallium	1.0	U	W	F
7440-62-2	Vanadium	232			P
7440-66-6	Zinc	2830		E	P
	Cyanide	10.0	U	N	AS

Color Before: BROWN____ Clarity Before: OPAQUE Texture: _____

Color After: YELLOW___ Clarity After: CLEAR_ Artifacts: _____

Comments:

__EPA_SAMPLE_FIELD_NUMBER_PREFIX_IS_U/D._____

__CYANIDE_LAB_SAMPLE_ID_NUMBER_IS_32642._____

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

UD1AGW

L Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 3659 SAS No.: _____ SDG No.: 3

Matrix: (soil/water) WATER Lab Sample ID: 32679

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: V6225

Level: (low/med) LOW Date Received: 10/06/90

% Moisture: not dec. _____ Date Analyzed: 10/11/90

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene chloride	5	U
67-64-1	Acetone	10	U
75-15-0	Carbon disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon tetrachloride	5	U
108-05-4	Vinyl acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total xylenes	5	U

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

UD1AGW

L Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 3659 SAS No.: _____ SDG No.: 3

Matrix: (soil/water) WATER Lab Sample ID: 32679

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: V6225

Level: (low/med) LOW Date Received: 10/06/90

% Moisture: not dec. _____ Date Analyzed: 10/11/90

Column (pack/cap) CAP Dilution Factor: 1.0

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

UD1AGW_RE

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 3659 SAS No.: _____ SDG No.: 3

Matrix: (soil/water) WATER Lab Sample ID: 32679_RE

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: U5643

Level: (low/med) LOW Date Received: 10/06/90

% Moisture: not dec. _____ Date Analyzed: 10/13/90

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene chloride	5	U
67-64-1	Acetone	10	U
75-15-0	Carbon disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon tetrachloride	5	U
108-05-4	Vinyl acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total xylenes	5	U

10666

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

UD1AGW_RE

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 3659 SAS No.: _____ SDG No.: 3

Matrix: (soil/water) WATER Lab Sample ID: 32679_RE

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: U5643

Level: (low/med) LOW Date Received: 10/06/90

% Moisture: not dec. ____ Date Analyzed: 10/13/90

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

UD1AGW

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 3656A SAS No.: _____ SDG No.: 2_3

Matrix: (soil/water) WATER Lab Sample ID: 32676

Sample wt/vol: 1050 (g/mL) ML Lab File ID: T4797

Level: (low/med) LOW Date Received: 10/06/90

% Moisture: not dec. ____ dec. ____ Date Extracted: 10/09/90

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 10/31/90

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
100-51-6	Benzyl alcohol	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	bis(2-Chloroisopropyl)ether	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
65-85-0	Benzoic Acid	48	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	48	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	48	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

UD1AGW

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 3656A SAS No.: _____ SDG No.: 2_3

Matrix: (soil/water) WATER Lab Sample ID: 32676

Sample wt/vol: 1050 (g/mL) ML Lab File ID: T4797

Level: (low/med) LOW Date Received: 10/06/90

% Moisture: not dec. ____ dec. ____ Date Extracted: 10/09/90

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 10/31/90

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	48	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	48	U
100-02-7	4-Nitrophenol	48	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	48	U
534-52-1	4,6-Dinitro-2-methylphenol	48	U
86-30-6	N-nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	48	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
84-74-2	Di-n-butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	19	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	10	U
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

UD1AGW

I Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 3656A SAS No.: _____ SDG No.: 2_3

Matrix: (soil/water) WATER Lab Sample ID: 32676

Sample wt/vol: 1050 (g/mL) ML Lab File ID: T4797

Level: (low/med) LOW Date Received: 10/06/90

% Moisture: not dec. ____ dec. ____ Date Extracted: 10/09/90

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 10/31/90

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.00

Number TICs found: 2

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	2.85	57	BJ
2.	UNKNOWN	6.52	7.6	BJ

EPA SAMPLE NO.

PESTICIDE ORGANICS ANALYSIS DATA SHEET

UD1AGW

Lab Name: VERSAR, INC. Contract:

Lab Code: VERSAR Case No.: URSUCD SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 32673

Sample wt/vol: 1060 (g/ml) ML Lab File ID:

Level: (low/med) LOW Date Received: 10/06/90

% Moisture: not dec. dec. Date Extracted: 10/09/90

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 10/22/90

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.05	U
319-85-7	beta-BHC	0.05	U
319-86-8	delta-BHC	0.05	U
58-89-9	gamma-BHC (Lindane)	0.05	U
76-44-8	Heptachlor	0.05	U
309-00-2	Aldrin	0.05	U
1024-57-3	Heptachlor Epoxide	0.05	U
959-98-8	Endosulfan I	0.05	U
60-57-1	Dieldrin	0.09	U
72-55-9	4,4'-DDE	0.09	U
72-20-8	Endrin	0.09	U
33213-65-9	Endosulfan II	0.09	U
72-54-8	4,4'-DDD	0.09	U
1031-07-8	Endosulfan Sulfate	0.09	U
50-29-3	4,4'-DDT	0.09	U
72-43-5	Methoxychlor	0.47	U
53494-70-5	Endrin Ketone	0.09	U
5103-71-9	alpha-Chlordane	0.09	U
5103-74-2	gamma-Chlordane	0.09	U
8001-35-2	Toxaphene	0.94	U
12674-11-2	Aroclor-1016	0.47	U
11104-28-2	Aroclor-1221	0.47	U
11141-16-5	Aroclor-1232	0.47	U
53469-21-9	Aroclor-1242	0.47	U
12672-29-6	Aroclor-1248	0.47	U
11097-69-1	Aroclor-1254	0.94	U
11096-82-5	Aroclor-1260	0.94	U

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.
1A GW

Lab Name: VERSAR_LABORATORIES_INC.___ Contract: 35216.03_

Lab Code: VERSAR Case No.: 3656__ SAS No.: _____ SDG No.: 1A_GW_

Matrix (soil/water): WATER_____ Lab Sample ID: 32667_

Level (low/med): LOW_____ Date Received: 10/06/90

% Solids: ___0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	533			P
7440-36-0	Antimony	23.0	U	N	P
7440-38-2	Arsenic	3.0	U		F
7440-39-3	Barium	190	B		P
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium	5.0	U	*	P
7440-70-2	Calcium	91600			P
7440-47-3	Chromium	5.0	U	*	P
7440-48-4	Cobalt	5.0	U		P
7440-50-8	Copper	3.0	B	*	P
7439-89-6	Iron	16400			P
7439-92-1	Lead	5.0			F
7439-95-4	Magnesium	11800			P
7439-96-5	Manganese	577			P
7439-97-6	Mercury	0.22			CV
7440-02-0	Nickel	10.0	U		P
7440-09-7	Potassium	871	U		P
7782-49-2	Selenium	10.0	U	WN	F
7440-22-4	Silver	2.0	U	N	P
7440-23-5	Sodium	15000			P
7440-28-0	Thallium	1.0	U	W	F
7440-62-2	Vanadium	3.0	U		P
7440-66-6	Zinc	31.4		E	P
	Cyanide	10.0	U	N	AS

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:
__EPA_SAMPLE_FIELD_NUMBER_PREFIX_IS_U/D-.
__CYANIDE_LAB_SAMPLE_ID_NUMBER_IS_32670.

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

UD2GW

L Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 3659 SAS No.: _____ SDG No.: 3

Matrix: (soil/water) WATER Lab Sample ID: 32680

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: V6226

Level: (low/med) LOW Date Received: 10/06/90

% Moisture: not dec. ____ Date Analyzed: 10/11/90

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene chloride	5	U
67-64-1	Acetone	8	BJ
75-15-0	Carbon disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon tetrachloride	5	U
108-05-4	Vinyl acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	3	J
100-42-5	Styrene	5	U
1330-20-7	Total xylenes	6	

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

UD2GW

L Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 3659 SAS No.: _____ SDG No.: 3

Matrix: (soil/water) WATER Lab Sample ID: 32680

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: V6226

Level: (low/med) LOW Date Received: 10/06/90

% Moisture: not dec. _____ Date Analyzed: 10/11/90

Column (pack/cap) CAP Dilution Factor: 1.0

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

UD2GW_RE

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 3659 SAS No.: _____ SDG No.: 3

Matrix: (soil/water) WATER Lab Sample ID: 32680_RE

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: U5644

Level: (low/med) LOW Date Received: 10/06/90

% Moisture: not dec. ____ Date Analyzed: 10/13/90

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene chloride	5	U
67-64-1	Acetone	5	J
75-15-0	Carbon disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon tetrachloride	5	U
108-05-4	Vinyl acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	4	J
100-42-5	Styrene	5	U
1330-20-7	Total xylenes	8	

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

UD2GW_RE

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 3659 SAS No.: _____ SDG No.: 3

Matrix: (soil/water) WATER Lab Sample ID: 32680_RE

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: U5644

Level: (low/med) LOW Date Received: 10/06/90

% Moisture: not dec. ____ Date Analyzed: 10/13/90

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 124-38-9	CARBON DIOXIDE (ACN)	3.05	21	BJ

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

UD2GW

L Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 3656A SAS No.: _____ SDG No.: 2_3

Matrix: (soil/water) WATER Lab Sample ID: 32677

Sample wt/vol: 1060 (g/mL) ML Lab File ID: T4798

Level: (low/med) LOW Date Received: 10/06/90

% Moisture: not dec. ____ dec. ____ Date Extracted: 10/09/90

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 10/31/90

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	9	U
111-44-4	bis(2-Chloroethyl)ether	9	U
95-57-8	2-Chlorophenol	9	U
541-73-1	1,3-Dichlorobenzene	9	U
106-46-7	1,4-Dichlorobenzene	9	U
100-51-6	Benzyl alcohol	9	U
95-50-1	1,2-Dichlorobenzene	9	U
95-48-7	2-Methylphenol	9	U
108-60-1	bis(2-Chloroisopropyl)ether	9	U
106-44-5	4-Methylphenol	9	U
621-64-7	N-Nitroso-di-n-propylamine	9	U
67-72-1	Hexachloroethane	9	U
98-95-3	Nitrobenzene	9	U
78-59-1	Isophorone	9	U
88-75-5	2-Nitrophenol	9	U
105-67-9	2,4-Dimethylphenol	9	U
65-85-0	Benzoic Acid	47	U
111-91-1	bis(2-Chloroethoxy)methane	9	U
120-83-2	2,4-Dichlorophenol	9	U
120-82-1	1,2,4-Trichlorobenzene	9	U
91-20-3	Naphthalene	49	
106-47-8	4-Chloroaniline	9	U
87-68-3	Hexachlorobutadiene	9	U
59-50-7	4-Chloro-3-methylphenol	9	U
91-57-6	2-Methylnaphthalene	21	
77-47-4	Hexachlorocyclopentadiene	9	U
88-06-2	2,4,6-Trichlorophenol	9	U
95-95-4	2,4,5-Trichlorophenol	47	U
91-58-7	2-Chloronaphthalene	9	U
88-74-4	2-Nitroaniline	47	U
131-11-3	Dimethylphthalate	9	U
208-96-8	Acenaphthylene	9	U
606-20-2	2,6-Dinitrotoluene	9	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

UD2GW

L Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 3656A SAS No.: _____ SDG No.: 2_3

Matrix: (soil/water) WATER Lab Sample ID: 32677

Sample wt/vol: 1060 (g/mL) ML Lab File ID: T4798

Level: (low/med) LOW Date Received: 10/06/90

% Moisture: not dec. _____ dec. _____ Date Extracted: 10/09/90

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 10/31/90

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	47	U
83-32-9	Acenaphthene	10	
51-28-5	2,4-Dinitrophenol	47	U
100-02-7	4-Nitrophenol	47	U
132-64-9	Dibenzofuran	9	U
121-14-2	2,4-Dinitrotoluene	9	U
84-66-2	Diethylphthalate	9	U
7005-72-3	4-Chlorophenyl-phenylether	9	U
86-73-7	Fluorene	9	U
100-01-6	4-Nitroaniline	47	U
534-52-1	4,6-Dinitro-2-methylphenol	47	U
86-30-6	N-nitrosodiphenylamine (1)	9	U
101-55-3	4-Bromophenyl-phenylether	9	U
118-74-1	Hexachlorobenzene	9	U
87-86-5	Pentachlorophenol	47	U
85-01-8	Phenanthrene	9	U
120-12-7	Anthracene	9	U
84-74-2	Di-n-butylphthalate	9	U
206-44-0	Fluoranthene	9	U
129-00-0	Pyrene	9	U
85-68-7	Butylbenzylphthalate	9	U
91-94-1	3,3'-Dichlorobenzidine	19	U
56-55-3	Benzo(a)anthracene	9	U
218-01-9	Chrysene	9	U
117-81-7	bis(2-Ethylhexyl)phthalate	9	U
117-84-0	Di-n-octyl phthalate	9	U
205-99-2	Benzo(b)fluoranthene	9	U
207-08-9	Benzo(k)fluoranthene	9	U
50-32-8	Benzo(a)pyrene	9	U
193-39-5	Indeno(1,2,3-cd)pyrene	9	U
53-70-3	Dibenz(a,h)anthracene	9	U
191-24-2	Benzo(g,h,i)perylene	9	U

(1) - Cannot be separated from Diphenylamine

2000121A

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

UD2GW

I Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 3656A SAS No.: _____ SDG No.: 2_3

Matrix: (soil/water) WATER Lab Sample ID: 32677

Sample wt/vol: 1060 (g/mL) ML Lab File ID: T4798

Level: (low/med) LOW Date Received: 10/06/90

% Moisture: not dec. ____ dec. ____ Date Extracted: 10/09/90

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 10/31/90

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.00

Number TICs found: 5

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN SUBSTITUTED BENZENE	4.67	7.6	J
2. 496-11-7	1H-INDENE, 2,3-DIHYRDO-	5.22	13	J
3.	UNKNOWN	6.57	13	J
4.	UNK POLAYROMATIC HYDROCARBON	8.54	21	J
5.	UNKNOWN	12.40	7.6	J

 2C0697R

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

UD2GW

Lab Name: VERSAR, INC. Contract:

Lab Code: VERSAR Case No.: URSUCD SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 32674

Sample wt/vol: 1060 (g/ml) ML Lab File ID:

Level: (low/med) LOW Date Received: 10/06/90

% Moisture: not dec. dec. Date Extracted: 10/09/90

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 10/22/90

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.00

D

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.05	U
319-85-7	beta-BHC	0.05	U
319-86-8	delta-BHC	0.05	U
58-89-9	gamma-BHC (Lindane)	0.05	U
76-44-8	Heptachlor	0.05	U
309-00-2	Aldrin	0.05	U
1024-57-3	Heptachlor Epoxide	0.05	U
959-98-8	Endosulfan I	0.05	U
60-57-1	Dieldrin	0.09	U
72-55-9	4,4'-DDE	0.09	U
72-20-8	Endrin	0.09	U
33213-65-9	Endosulfan II	0.09	U
72-54-8	4,4'-DDD	0.09	U
1031-07-8	Endosulfan Sulfate	0.09	U
50-29-3	4,4'-DDT	0.09	U
72-43-5	Methoxychlor	0.47	U
53494-70-5	Endrin Ketone	0.09	U
5103-71-9	alpha-Chlordane	0.47	U
5103-74-2	gamma-Chlordane	0.47	U
8001-35-2	Toxaphene	0.94	U
12674-11-2	Aroclor-1016	0.47	U
11104-28-2	Aroclor-1221	0.47	U
11141-16-5	Aroclor-1232	0.47	U
53469-21-9	Aroclor-1242	0.47	U
12672-29-6	Aroclor-1248	0.47	U
11097-69-1	Aroclor-1254	0.94	U
11096-82-5	Aroclor-1260	0.94	U

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

2 GW

Lab Name: VERSAR_LABORATORIES_INC. Contract: 35216.03

Lab Code: VERSAR Case No.: 3656 SAS No.: SDG No.: 1A_GW

Matrix (soil/water): WATER Lab Sample ID: 32668

Level (low/med): LOW Date Received: 10/06/90

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	374			P
7440-36-0	Antimony	23.0	U	N	P
7440-38-2	Arsenic	3.0	U	W	F
7440-39-3	Barium	307			P
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium	5.0		*	P
7440-70-2	Calcium	297000			P
7440-47-3	Chromium	16.1		*	P
7440-48-4	Cobalt	57.0			P
7440-50-8	Copper	8.6	B	*	P
7439-89-6	Iron	47700			P
7439-92-1	Lead	47.8			F
7439-95-4	Magnesium	59900			P
7439-96-5	Manganese	833			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	35.8	B		P
7440-09-7	Potassium	31200			P
7782-49-2	Selenium	20.0	U	WN	F
7440-22-4	Silver	2.0	U	N	P
7440-23-5	Sodium	25500			P
7440-28-0	Thallium	1.0	U	W	F
7440-62-2	Vanadium	4.1	B		P
7440-66-6	Zinc	26.3		E	P
	Cyanide	10.0	U	N	AS

Color Before: BROWN Clarity Before: CLEAR Texture:

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

EPA_SAMPLE_FIELD_NUMBER_PREFIX_IS_U/D-.

CYANIDE_LAB_SAMPLE_ID_NUMBER_IS_32671.

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

U-D_UD-3GW

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 3673 SAS No.: _____ SDG No.: 4

Matrix: (soil/water) WATER Lab Sample ID: 32885

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: U5678

Level: (low/med) LOW Date Received: 10/10/90

% Moisture: not dec. _____ Date Analyzed: 10/15/90

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene chloride	5	U
67-64-1	Acetone	6	J
75-15-0	Carbon disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon tetrachloride	5	U
108-05-4	Vinyl acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total xylenes	5	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

U-D_UD-3GW

L Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 3673 SAS No.: _____ SDG No.: 4

Matrix: (soil/water) WATER Lab Sample ID: 32885

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: U5678

Level: (low/med) LOW Date Received: 10/10/90

% Moisture: not dec. ____ Date Analyzed: 10/15/90

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN SUBSTITUTED BENZENE	29.34	5.0	J

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

U-D_UD-3GWRE

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 3673 SAS No.: _____ SDG No.: 4

Matrix: (soil/water) WATER Lab Sample ID: 32885RE

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: V6390

Level: (low/med) LOW Date Received: 10/10/90

% Moisture: not dec. _____ Date Analyzed: 10/22/90

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene chloride	5	U
67-64-1	Acetone	8	J
75-15-0	Carbon disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon tetrachloride	5	U
108-05-4	Vinyl acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total xylenes	5	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

U-D_UD-3GWRE

L Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 3673 SAS No.: _____ SDG No.: 4

Matrix: (soil/water) WATER Lab Sample ID: 32885RE

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: V6390

Level: (low/med) LOW Date Received: 10/10/90

% Moisture: not dec. ____ Date Analyzed: 10/22/90

Column (pack/cap) CAP Dilution Factor: 1.0

Number TICs found: 3

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	7.72	8.0	J
2.	UNKNOWN SUBSTITUTED BENZENE	9.89	18	J
3.	UNKNOWN AROMATIC HYDROCARBON	11.99	8.0	J

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

UDUD3GW

I Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 3673A SAS No.: _____ SDG No.: 4

Matrix: (soil/water) WATER Lab Sample ID: 32888

Sample wt/vol: 1050 (g/mL) ML Lab File ID: T4809

Level: (low/med) LOW Date Received: 10/10/90

% Moisture: not dec. _____ dec. _____ Date Extracted: 10/15/90

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 11/01/90

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
100-51-6	Benzyl alcohol	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	bis(2-Chloroisopropyl)ether	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
65-85-0	Benzoic Acid	48	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	48	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	48	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

UDUD3GW

L Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 3673A SAS No.: _____ SDG No.: 4

Matrix: (soil/water) WATER Lab Sample ID: 32888

Sample wt/vol: 1050 (g/mL) ML Lab File ID: T4809

Level: (low/med) LOW Date Received: 10/10/90

% Moisture: not dec. ____ dec. ____ Date Extracted: 10/15/90

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 11/01/90

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	48	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	48	U
100-02-7	4-Nitrophenol	48	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	48	U
534-52-1	4,6-Dinitro-2-methylphenol	48	U
86-30-6	N-nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	48	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
84-74-2	Di-n-butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	19	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	10	U
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

UDUD3GW

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 3673A SAS No.: _____ SDG No.: 4

Matrix: (soil/water) WATER Lab Sample ID: 32888

Sample wt/vol: 1050 (g/mL) ML Lab File ID: T4809

Level: (low/med) LOW Date Received: 10/10/90

% Moisture: not dec. ____ dec. ____ Date Extracted: 10/15/90

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 11/01/90

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.00

Number TICs found: 2

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	2.78	23	BJ
2.	UNKNOWN	17.10	19	J

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

UDUD3GW

Lab Name: VERSAR, INC. Contract:

Lab Code: VERSAR Case No.: URSUCD SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 32890

Sample wt/vol: 1050 (g/ml) ML Lab File ID:

Level: (low/med) LOW Date Received: 10/10/90

% Moisture: not dec. dec. Date Extracted: 10/15/90

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 10/23/90

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.05	U
319-85-7	beta-BHC	0.05	U
319-86-8	delta-BHC	0.05	U
58-89-9	gamma-BHC (Lindane)	0.05	U
76-44-8	Heptachlor	0.05	U
309-00-2	Aldrin	0.05	U
1024-57-3	Heptachlor Epoxide	0.05	U
959-98-8	Endosulfan I	0.05	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan Sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.48	U
53494-70-5	Endrin Ketone	0.10	U
5103-71-9	alpha-Chlordane	0.48	U
5103-74-2	gamma-Chlordane	0.48	U
8001-35-2	Toxaphene	1.0	U
12674-11-2	Aroclor-1016	0.48	U
11104-28-2	Aroclor-1221	0.48	U
11141-16-5	Aroclor-1232	0.48	U
53469-21-9	Aroclor-1242	0.48	U
12672-29-6	Aroclor-1248	0.48	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

RC

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

UD-3GW

Lab Name: VERSAR_LABORATORIES_INC.___ Contract: 35216.03_

Lab Code: VERSAR Case No.: 3673__ SAS No.: _____ SDG No.: 3S-GW_

Matrix (soil/water): WATER_____ Lab Sample ID: 32894_

Level (low/med): LOW_____ Date Received: 10/10/90

% Solids: ___0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	889			P
7440-36-0	Antimony	23.0	U		P
7440-38-2	Arsenic	20.8			F
7440-39-3	Barium	946			P
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	108000			P
7440-47-3	Chromium	7.8	B		P
7440-48-4	Cobalt	8.9	B		P
7440-50-8	Copper	2.2	B		P
7439-89-6	Iron	32500			P
7439-92-1	Lead	4.8			F
7439-95-4	Magnesium	76100			P
7439-96-5	Manganese	1600			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	10.0	U		P
7440-09-7	Potassium	98400			P
7782-49-2	Selenium	3.0	U		F
7440-22-4	Silver	2.0	U		P
7440-23-5	Sodium	156000			P
7440-28-0	Thallium	20.0	U	E	F
7440-62-2	Vanadium	3.0	U		P
7440-66-6	Zinc	32.1			P
	Cyanide	10.0	U		AS

Color Before: BROWN____ Clarity Before: CLEAR_ Texture: _____

Color After: YELLOW___ Clarity After: CLEAR_ Artifacts: _____

Comments:

___THE_EPA_SAMPLE_NAME_PREFIX_IS_"U/D_".

___THE_CYANIDE_LAB_SAMPLE_ID#_IS_32888.

___THALLIUM_WAS_RUN_AT_A_10_FOLD_DILUTION_AND_FLAGGED_WITH_AN_"E".

03043

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MVO-SC1-DW

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 3392A SAS No.: _____ SDG No.: 2

Matrix: (soil/water) WATER Lab Sample ID: 29776A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: Y2976

Level: (low/med) LOW Date Received: 08/25/90

% Moisture: not dec. _____ Date Analyzed: 09/03/90

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene chloride	5	U
67-64-1	Acetone	10	U
75-15-0	Carbon disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	68	
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon tetrachloride	5	U
108-05-4	Vinyl acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	3	J
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total xylenes	5	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MVOSC1DW

I Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 3392B SAS No.: _____ SDG No.: B2

Matrix: (soil/water) WATER Lab Sample ID: 29775

Sample wt/vol: 1000 (g/mL) ML Lab File ID: T4031

Level: (low/med) LOW Date Received: 08/25/90

% Moisture: not dec. ____ dec. ____ Date Extracted: 08/30/90

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 09/12/90

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
100-51-6	Benzyl alcohol	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	bis(2-Chloroisopropyl)ether	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
65-85-0	Benzoic Acid	50	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	50	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	50	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MVOSC1DW

I Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 3392B SAS No.: _____ SDG No.: B2

Matrix: (soil/water) WATER Lab Sample ID: 29775

Sample wt/vol: 1000 (g/mL) ML Lab File ID: T4031

Level: (low/med) LOW Date Received: 08/25/90

% Moisture: not dec. ____ dec. ____ Date Extracted: 08/30/90

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 09/12/90

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	50	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	50	U
100-02-7	4-Nitrophenol	50	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	50	U
534-52-1	4,6-Dinitro-2-methylphenol	50	U
86-30-6	N-nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	50	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
84-74-2	Di-n-butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	20	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	8	JX
117-84-0	Di-n-octyl phthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

200018

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MVOSC1DW

Name: VERSAR, INC. Contract:

Lab Code: VERSAR Case No.: URS MVO SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 29774

Sample wt/vol: 1000 (g/ml) ML Lab File ID:

Level: (low/med) LOW Date Received: 08/25/90

% Moisture: not dec. dec. Date Extracted: 08/30/90

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 09/23/90

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.05	U
319-85-7	beta-BHC	0.05	U
319-86-8	delta-BHC	0.05	U
58-89-9	gamma-BHC (Lindane)	0.05	U
76-44-8	Heptachlor	0.05	U
309-00-2	Aldrin	0.05	U
1024-57-3	Heptachlor Epoxide	0.05	U
959-98-8	Endosulfan I	0.05	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan Sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin Ketone	0.10	U
5103-71-9	alpha-Chlordane	0.10	U
5103-74-2	gamma-Chlordane	0.10	U
8001-35-2	Toxaphene	1.0	U
12674-11-2	Aroclor-1016	0.50	U
11104-28-2	Aroclor-1221	0.50	U
11141-16-5	Aroclor-1232	0.50	U
53469-21-9	Aroclor-1242	0.50	U
12672-29-6	Aroclor-1248	0.50	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

KC 09/25/90

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MVO-SC1-DW

Lab Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 3392A SAS No.: _____ SDG No.: 2

Matrix: (soil/water) WATER Lab Sample ID: 29776A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: Y2976

Level: (low/med) LOW Date Received: 08/25/90

% Moisture: not dec. ____ Date Analyzed: 09/03/90

Column (pack/cap) CAP Dilution Factor: 1.0

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MVOSC1DW

L. Name: VERSAR INC. Contract: _____

Lab Code: VERSAR Case No.: 3392B SAS No.: _____ SDG No.: B2

Matrix: (soil/water) WATER Lab Sample ID: 29775

Sample wt/vol: 1000 (g/mL) ML Lab File ID: T4031

Level: (low/med) LOW Date Received: 08/25/90

% Moisture: not dec. _____ dec. _____ Date Extracted: 08/30/90

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 09/12/90

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.0

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	3.08	38	BJ

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SC1-DW

Lab Name: VERSAR_LABORATORIES_INC.___ Contract: 35216.03_

Lab Code: VERSAR Case No.: 3373__ SAS No.: _____ SDG No.: SBRB-1

Matrix (soil/water): WATER_____ Lab Sample ID: 29772_

Level (low/med): LOW_____ Date Received: 08/25/90

% Solids: ___0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5_	Aluminum_	791	_		P_
7440-36-0_	Antimony_	23.0	U		P_
7440-38-2_	Arsenic__	4.7	B		F_
7440-39-3_	Barium___	19.6	B		P_
7440-41-7_	Beryllium	2.0	U		P_
7440-43-9_	Cadmium__	5.0	U		P_
7440-70-2_	Calcium__	12900	_		P_
7440-47-3_	Chromium_	5.0	U		P_
7440-48-4_	Cobalt___	5.0	U		P_
7440-50-8_	Copper___	37.0	_		P_
7439-89-6_	Iron_____	1640	_		P_
7439-92-1_	Lead_____	5.5	_		F_
7439-95-4_	Magnesium	1270	B		P_
7439-96-5_	Manganese	396	_		P_
7439-97-6_	Mercury__	0.20	U		CV
7440-02-0_	Nickel___	10.0	U		P_
7440-09-7_	Potassium	871	U		P_
7782-49-2_	Selenium_	3.0	U		F_
7440-22-4_	Silver___	2.0	U		P_
7440-23-5_	Sodium___	2980	B		P_
7440-28-0_	Thallium_	2.0	U		F_
7440-62-2_	Vanadium_	3.0	U		P_
7440-66-6_	Zinc_____	55.5	_		P_
_____	Cyanide__	10.0	U		AS
_____	_____	_____	_		_

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

_THE_EPA_SAMPLE_NUMBER_PREFIX_IS_MVO-;_THE_CYANIDE_LAB_SAMPLE_ID_____
_NUMBER_IS_29773;_____

1D

HERBICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DRUM G-1

Lab Name: VERSAR, INC. Contract:

b Code: VERSAR Case No.: URS UCD SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 32647

Sample wt/vol: 20 (g/ml) ML Lab File ID:

Level: (low/med) LOW Date Received: 10/06/90

% Moisture: not dec. dec. Date Extracted: 10/19/90

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 10/24/90

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
94-75-7	2,4 D	400	U
93-72-1	Silvex	400	U

10/24/90

1D

HERBICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DRUM A-1

Lab Name: VERSAR, INC. Contract:

b Code: VERSAR Case No.: URS UCD SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 32648

Sample wt/vol: 20 (g/ml) ML Lab File ID:

Level: (low/med) LOW Date Received: 10/06/90

% Moisture: not dec. dec. Date Extracted: 10/19/90

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 10/24/90

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
94-75-7	2,4 D	400	U
93-72-1	Silvex	400	U

qa
10/24/90

1D

HERBICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DRUM D-1

Lab Name: VERSAR, INC. Contract:

b Code: VERSAR Case No.: URS UCD SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 32649

Sample wt/vol: 20 (g/ml) ML Lab File ID:

Level: (low/med) LOW Date Received: 10/06/90

% Moisture: not dec. dec. Date Extracted: 10/19/90

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 10/24/90

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
94-75-7	2,4 D	400	U
93-72-1	Silvex	400	U

ga
10/24/90

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DRUMG1

.a. ame:_____VERSAR, INC.___ Contract:_

b Code: VERSAR Case No.:URSUCD SAS No.: SDG No.:

trix: (soil/water)LEACHATE Lab Sample ID: ___32647

ample wt/vol: 20 (g/ml) ML Lab File ID: ____

vel: (low/med) LOW Date Received: ___10/06/90

Moisture: not dec._____ dec._____ Date Extracted:___10/18/90

traction: (SepF/Cont/Sonc) ____SEPF Date Analyzed: ___10/30/90

C Cleanup: (Y/N)N pH:____ Dilution Factor: _ 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
58-89-9	gamma-BHC (Lindane)	1.3	U
72-20-8	Endrin	2.5	U
72-43-5	Methoxychlor	13	U
8001-35-2	Toxaphene	25	U

FC 10/30/90

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DRUMA1

Lab Name: VERSAR, INC. Contract:

Lab Code: VERSAR Case No.: URSUCD SAS No.: SDG No.:

Matrix: (soil/water) LEACHATE Lab Sample ID: 32648

Sample wt/vol: 20 (g/ml) ML Lab File ID:

Level: (low/med) LOW Date Received: 10/06/90

% Moisture: not dec. dec. Date Extracted: 10/18/90

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 10/27/90

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
58-89-9	gamma-BHC (Lindane)	1.3	U
72-20-8	Endrin	2.5	U
72-43-5	Methoxychlor	13	U
8001-35-2	Toxaphene	25	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DRUMD1

Lab Name: VERSAR, INC. Contract:

Lab Code: VERSAR Case No.: URSUCD SAS No.: SDG No.:

Matrix: (soil/water) LEACHATE Lab Sample ID: 32649

Sample wt/vol: 20 (g/ml) ML Lab File ID:

Level: (low/med) LOW Date Received: 10/06/90

% Moisture: not dec. dec. Date Extracted: 10/18/90

Extraction: (SepF/Cont/Sono) SEPF Date Analyzed: 10/27/90

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
58-89-9	gamma-BHC (Lindane)	1.3	U
72-20-8	Endrin	2.5	U
72-43-5	Methoxychlor	13	U
8001-35-2	Toxaphene	25	U

KC
10/30/90

1

INORGANIC ANALYSES DATA SHEET

FIELD SAMPLE NO.

DRUM A-1

Client : URS_CONSULTANTS_____ Site: UTICA_CITY_DU

Lab Name: VERSAR_INC. Control No.: 3657____ Code: URS_UCD_ Batch: 5_____

Matrix : EXTRACT_____ Lab Sample ID: 32648____

Level (low/med): _____ Date Received: 10/06/90_

% Solids: ___0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	23.0	U		P
7440-39-3	Barium	125			P
7440-43-9	Cadmium	5.0	U		P
7440-47-3	Chromium	5.0	U		P
7439-92-1	Lead	16.0	U		P
7439-97-6	Mercury	0.20	U		CV
7782-49-2	Selenium	30.0	U		F
7440-22-4	Silver	2.0	U		P

Color Before: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After : COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

EP_TOXICITY_EXTRACT_____

INORGANIC ANALYSES DATA SHEET

FIELD SAMPLE NO.: DRUM D-1

Client : URS_CONSULTANTS_____ Site: UTICA_CITY_DU

Lab Name: VERSAR_INC. Control No.: 3657____ Code: URS_UCD_ Batch: 5_____

Matrix : EXTRACT_____ Lab Sample ID: 32649____

Level (low/med): _____ Date Received: 10/06/90_

% Solids: ___0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	23.0	U		P
7440-39-3	Barium	232			P
7440-43-9	Cadmium	180			P
7440-47-3	Chromium	21.9			P
7439-92-1	Lead	16.2			P
7439-97-6	Mercury	0.58			CV
7782-49-2	Selenium	3.0	U		F
7440-22-4	Silver	2.0	U		P

Color Before: YELLOW___ Clarity Before: CLEAR_ Texture: _____

Color After : COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

EP_TOXICITY_EXTRACT_____

INORGANIC ANALYSES DATA SHEET

FIELD SAMPLE NO.

DRUM G-1

Client : URS_CONSULTANTS_____ Site: UTICA_CITY_DU

Lab Name: VERSAR_INC. Control No.: 3657____ Code: URS_UCD_ Batch: 5_____

Matrix : EXTRACT_____ Lab Sample ID: 32647____

Level (low/med): _____ Date Received: 10/06/90_

% Solids: ___0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L_

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	46.0	U		P
7440-39-3	Barium	551			P
7440-43-9	Cadmium	19.7			P
7440-47-3	Chromium	46.7			P
7439-92-1	Lead	218			P
7439-97-6	Mercury	0.53			CV
7782-49-2	Selenium	60.0	U		F
7440-22-4	Silver	4.0	U		P

Color Before: YELLOW___ Clarity Before: CLEAR_ Texture: _____

Color After : COLORLESS Clarity After: CLEAR_ Artifacts: _____

Comments:

EP_TOXICITY_EXTRACT

Versar Laboratories INC.

General Chemistry Section
ANALYSIS REPORT

DATE: 05-Nov-90 PAGE: 1
CODE / CONTROL #: URS UCD / 3657
CLIENT / SITE: URS Consultants / Utica City Dump
PROJECT / BATCH: 420.71 / 5

LAB #	FIELD #	pH	Flashpoint (°F)	Reactive Cyanide (mg/kg)	Reactive Sulfide (mg/kg)
32647	DRUM G-1	5.22*	>158.	<0.20**	<39.8**
32648	DRUM A-1	9.92*	>158.	0.47	<54.0
32649	DRUM D-1	8.12*	>158.	<0.20	<39.1

* = By definition, sample is non-corrosive.
** = Result reported on an as-received basis.

C. Thompson
LABORATORY MANAGER

APPENDIX H

ADDITIONS/CHANGES TO REGISTRY OF INACTIVE HAZARDOUS WASTE DISPOSAL SITES

47-15-23 (11/90)—9d

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF HAZARDOUS WASTE REMEDIATION

Original—BHSC
Copy—REGION
Copy—DEE
Copy—DOH
Copy—PREPARER

ADDITIONS/CHANGES TO REGISTRY OF INACTIVE HAZARDOUS WASTE DISPOSAL SITES

1. SITE NAME	2. SITE NO.	3. TOWN	4. COUNTY
Utica City Dump	633015	Utica	Oneida

5. REGION	6. CLASSIFICATION	7. ACTIVITY
6	Current 2a / Proposed 2	☐ Add ☒ Reclassify ☐ Delist ☐ Modify

8a. DESCRIBE LOCATION OF SITE (Attach U.S.G.S. Topographic Map showing site location)
Thruway exit 31 to Genesee Street South. Genesee to Wurz Avenue. East on Wurz to Incinerator Road. Site is at the end of Incinerator Road

b. Quadrangle Utica East c. Site Latitude 43° 06' 18" Longitude 75° 11' 25" d. Tax Map Number 7-12-5,6

9a BRIEFLY DESCRIBE THE SITE (Attach site plan showing disposal/sampling locations)
The Utica City Dump is an inactive landfill and incinerator facility adjacent to the Mohawk River and the NYS Barge Canal. Both drums and large areas of leachate have been observed onsite.

b. Area 55 acres c. EPA ID Number NYD 980509343 d. PA/SI ☐ Yes ☒ No

e. Completed: ☐ Phase I ☒ Phase II ☐ PSA ☐ Sampling

10. BRIEFLY LIST THE TYPE AND QUANTITY OF THE HAZARDOUS WASTE AND THE DATES THAT IT WAS DISPOSED OF AT THIS SITE
Electro-chemical milling sludge [F006] (4,800 tons) and Sodium Hydroxide [D002] (7.5 tons) between 1955 and 1984.

11a. SUMMARIZED SAMPLING DATA ATTACHED
☐ Air ☒ Groundwater ☐ Surface Water ☒ Soil ☒ Waste ☒ EP Tox ☐ TCLP Leachate

b. List contravened parameters and values
Groundwater: Xylene, 130 ppb, 1,4-Dichlorobenzene, 10ppb, Naphthalene, 60 ppb, Arsenic 39.6 ppb, Barium 1260 ppb, Cadmium 18.5 ppb, Chromium 341ppb, Iron 278,000 ppb, Lead 1,820 ppb, Magnesium 76,100 ppb, Manganese 2,610 ppb, Mercury 2.2. ppb

12 SITE IMPACT DATA
a Nearest surface water: Distance Adjacent ft. Direction ____ Classification C
b Nearest groundwater: Depth 0 ft. Flow Direction east ☐ Sole Source ☐ Primary ☐ Principal
c Nearest water supply: Distance > 1500 ft. Direction east Active ☐ Yes ☒ No
d Nearest building: Distance 5,000 ft Direction west Use residence
e Crops or livestock on site? ☐ Yes ☒ No
f Exposed hazardous waste? ☒ Yes ☐ No
g Controlled site access? ☐ Yes ☒ No
h Documented fish or wildlife mortality? ☐ Yes ☒ No
i Impact on special status fish or wildlife resource? ☐ Yes ☒ No
j Within a State Economic Development Zone? ☐ Yes ☒ No
k For Class 2a: Code ____ Health Model Score ____
l For Class 2: Priority Category ____
m HRS Score Sm= 11.09, Sfe= 0.00, SDC = 50.00
n Significant Threat ☒ Yes ____ ☐ No ☐ Unknown

13. SITE OWNER'S NAME	14. ADDRESS	15. TELEPHONE NUMBER
City of Utica	Kennedy Drive, Utica NY	(315) 792-0181

16. PREPARER
Phyllis Rettke/Geologist/URS Consultants, Inc.
Name, Title and Organization
2/21/91 Date
Phyllis Rettke Signature

17. APPROVED
Name, Title and Organization
Date Signature