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M. Dunham

FINAL

PRELIMINARY SITE ASSESSMENT

CEDAR STREET DUMP

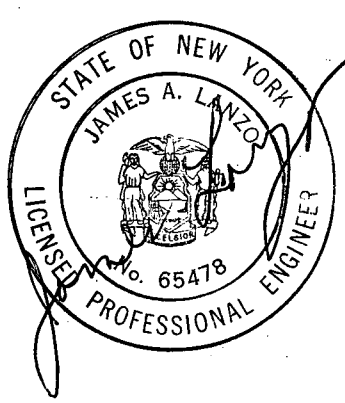
SITE NO. 819008

BATAVIA (C), GENESEE (C)

NOVEMBER 1995

PERFORMED UNDER

NYSDEC CONTRACT NO. D002340-21



BY

URS CONSULTANTS, INC.

FOR

DIVISION OF HAZARDOUS WASTE REMEDIATION

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

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1.0 EXECUTIVE SUMMARY

1.1 Site Description and Disposal History

The Cedar Street Dump site is located on property presently owned by Soccio & Della Penna, Inc., Agway, Inc., Graham Manufacturing Co., Inc., Conrail-Penn Central Railroad, and Genesee County (Figure 1-1).

The site consists of a 16-acre parcel on the west side of Cedar Street (west fill area) and approximately 8 acres on the east side of Cedar Street (east fill area) in a residential and industrial setting of the City of Batavia, New York (Figure 1-2). The west fill area is presently a flat, open, vacant lot covered with field grasses although the western end of the parcel is wooded. A snow fence has been placed along Cedar Street on the eastern side of the west fill area; however, the area is easily accessible by the site entrance, as well as through adjacent properties south of the site. The east fill area is a groomed lawn with gently rolling topography and sparse trees. In both areas, landfill materials were disposed of in former sand and gravel pits. Access to the east fill area is limited by fences and other barricades, but these obstacles are easily overcome on foot. Two water-filled quarries remain from past sand and gravel mining activities and are located east and south of the east fill area.

From the 1940s through the 1960s, the City of Batavia reportedly operated the Cedar Street Dump as a municipal and construction and demolition (C&D) debris landfill. There are no records of hazardous waste disposal at the site, however, the landfill was operated prior to regulatory restrictions and accepted any and all waste brought to the site. A former landfill employee was interviewed for the Preliminary Site Assessment (PSA) and recounted that the site also received waste from local industries and businesses. A 1985 inspection of the site found fifteen to twenty 55-gallon drums on the ground surface along the north side of the west fill area. Nine drums, 2 containing waste oil and 7 empty, were removed by Agway, Inc. A 1992 inspection of the site noted 57 drums on site. Thirty drums, of which 28 were empty and 2 were partially full, were labeled "Shell D-D" soil fumigant. Agway, Inc. reportedly sells the soil fumigant and the drums have since been removed from the site. Approximately 40,000 tires which were noted on site during a previous inspection in 1991 have since been removed under NYSDEC Region 8 supervision.

1.2 Site Investigation

Investigation of the Cedar Street Dump site began with a 1987 USEPA Site Inspection (SI) performed by NUS Corporation. The SI included sampling and analysis which indicated the presence of organic chemical compounds and metals on site. In 1988, the City of Batavia began detecting volatile organic compounds (VOCs) at the municipal wellfield approximately 2,000 feet southeast of the west fill area. In July 1989, the Genesee County Health Department (GCHD) and Batavia Water/Sewer Superintendent initiated a contaminant source investigation. Results of the investigation indicated a possible source southwest of the wellfield.

The NYSDEC investigation of the site began with a Phase I Investigation completed by Engineering - Science in 1988. A subsequent Phase II Investigation was completed by YEC, Inc. (YEC) in 1992, however, data was insufficient to allow reclassification of the site and additional investigation was recommended. This PSA, therefore, was developed to supplement information from the Phase II Investigation and allow reclassification of the site. Neither the Phase II Investigation nor the PSA were designed to determine the areal or vertical extent of contamination. They were intended to only document the presence of hazardous waste per 6 NYCRR Part 371, and/or significant threat to the public health or environment per 6 NYCRR Part 375.

Groundwater elevations were measured in all PSA and Phase II monitoring wells during PSA field work. Regional groundwater flow is to the northeast, however, the data indicated that groundwater flow at the site is to the southeast toward the City of Batavia wellfield under the influence of high volume pumping.

USEPA site inspection forms completed for this investigation are contained in Appendix A.

1.3 Presence of Hazardous Waste

Although there is no documentation of hazardous waste disposal at the Cedar Street Dump site, the facility was operated prior to regulatory restrictions and reportedly received waste which may have included hazardous waste from local industries and businesses. Previous sampling and this investigation have detected the presence of concentrations of hazardous substances including organics

and metals in groundwater and soil at the site above New York State standards, criteria, and guidance values (SCGs). Data validation has verified the presence of contaminants in PSA groundwater samples, indicating a plume emanating from the site rather than possible laboratory or equipment decontamination error.

1.4 Significant Threat

Significant threat to the public health or the environment is an element of the site classification and is demonstrated as a significant adverse impact to the environment and/or a significantly increased risk to the public health. Significant threat, as defined in 6 NYCRR Part 375-1.4(a), must be as a direct result of the documented disposal or presence of hazardous wastes. It also must include the contravention of federal or state environmental standards, impact on fish, wildlife, or flora, or a potential for direct human contact.

The various NYSDEC site classifications are:

1. Causing or presenting an imminent danger of causing irreversible or irreparable damage to the public health or environment - immediate action required;

2. Significant threat to the public health or environment - action required;

2a. Temporary classification assigned to sites that have inadequate and/or insufficient data for inclusion in any of the other classifications;

3. Does not present a significant threat to the public health or the environment - action may be deferred;

4. Site is properly closed - requires continued management;

5. Site properly closed, no evidence of present or potential adverse impact - no further action is required.

Numerous investigations have been completed for the Cedar Street Dump, however, none have uncovered conclusive evidence to document disposal of hazardous waste at the site. In the absence of hazardous waste disposal at the site, there is no regulatory basis for determining that the site poses a significant threat to public health or the environment.

Groundwater sampling and analysis conducted during this PSA have detected the presence of acetone at several deep monitoring well locations around and downgradient of the Cedar Street Dump site. There is no documented disposal of this solvent at the site. However, the areal distribution of the chemical, diminishing in concentration in a downgradient direction, suggests that the site is the source of the apparent contaminant plume. Although acetone is a common analytical laboratory and field equipment cleaning chemical which inadvertently contaminates environmental samples with some frequency, data validation review indicates that the acetone is not an aberrant analytical artifact. Furthermore, although the municipal drinking water used in the well drilling process contained 8 parts per billion of acetone, the concentrations of this chemical in four of the five deep monitoring wells sampled were more than an order of magnitude higher, indicating that the quality of the samples withdrawn from the wells was not impacted by the presence of the acetone in the drill water. Nevertheless, the confirmed presence of the acetone plume in this aquifer does not appear to have affected water quality at the municipal supply wells, as acetone was not detected in the raw water sample collected for this investigation at municipal Well A in January 1995.

Despite the evidence of several VOCs, semivolatile organic compounds (SVOCs) and elevated levels of metals leaving the site and the potential for concern to the environment, no evidence has been developed to date to indicate that the groundwater contamination in proximity to the Cedar Street Dump site has reached any of the City of Batavia's nearby municipal wells.

1.5 Recommendations

This PSA has identified hazardous waste constituents per 6 NYCRR Part 371 in groundwater from monitoring wells at the Cedar Street Dump. There is, however, a lack of significant threat to human health or the environment posed by this site. Based on findings of the PSA, the following recommendations are made:

- Continued monitoring of the City of Batavia's water supply for acetone as well as other contaminants is advisable, though samples of the City's water supply well did not detect any contaminants.

- Periodic sampling and analysis of the site monitoring wells by NYSDEC or New York State Department of Health (NYSDOH) for VOCs would be prudent

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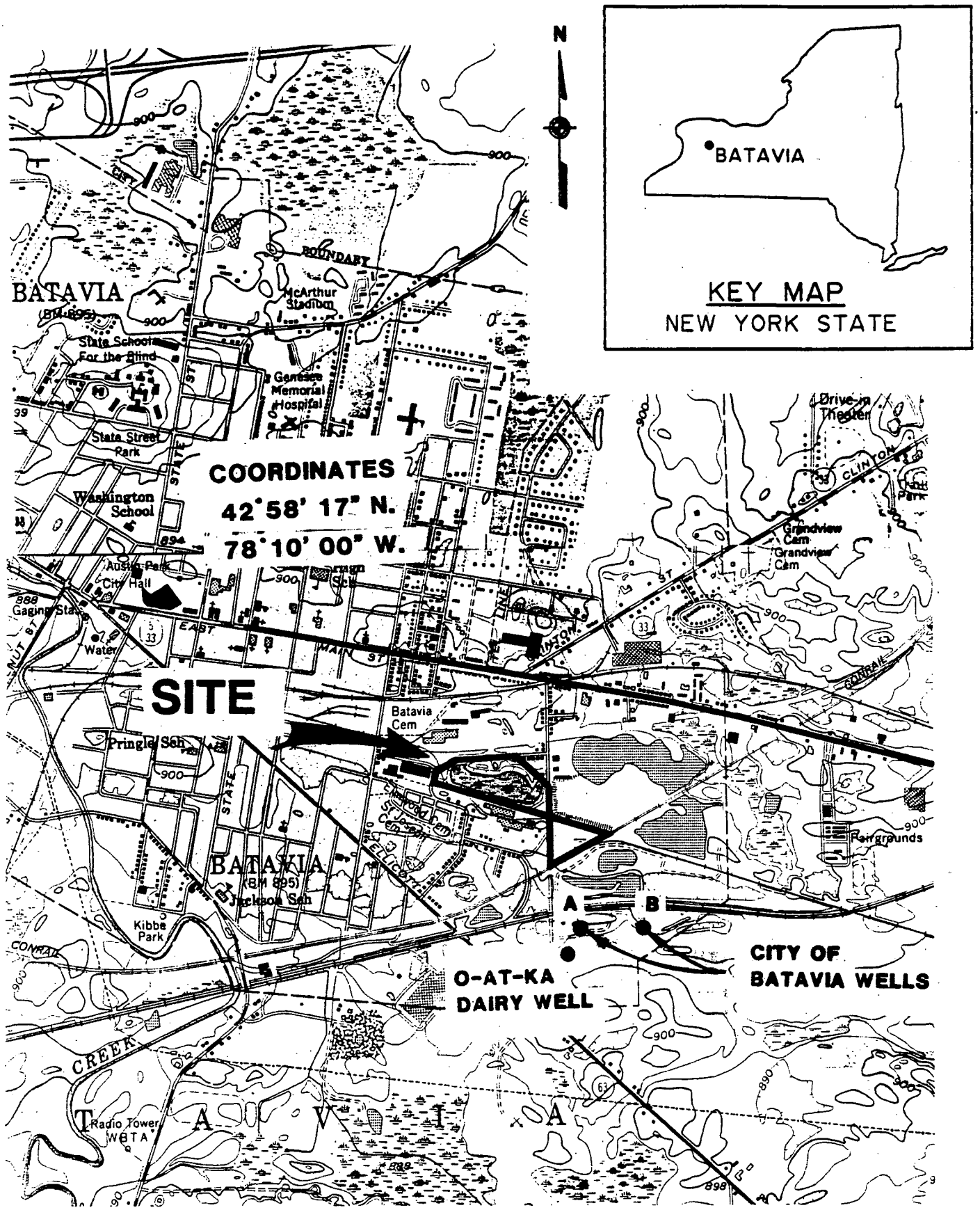

MAP SOURCE:
USGS 7.5 MINUTE SERIES
QUADRANGLE
BATAVIA NORTH, N.Y. 1978
BATAVIA SOUTH, N.Y. 1978

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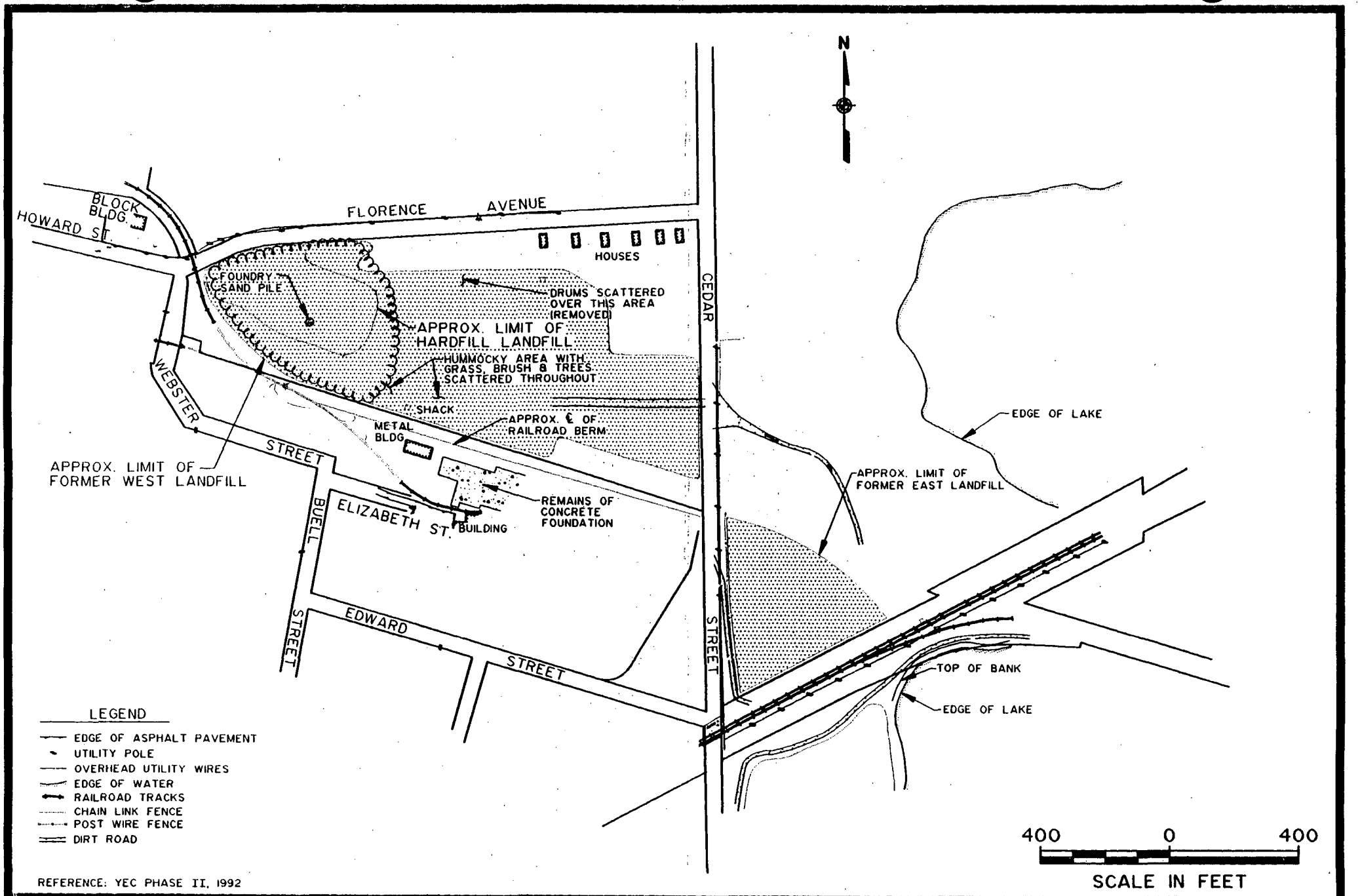
URS CONSULTANTS, INC.	SITE LOCATION MAP CEDAR STREET DUMP	FIGURE 1-1



REFERENCE: YEC PHASE II, 1992

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CEDAR STREET, BATAVIA, NEW YORK
SITE PLAN

FIGURE 1-2

2.0 SITE HISTORY

The Cedar Street Dump site consists of two separate landfill areas, one of which is approximately 8 acres in area and located on the east side of Cedar Street near the intersection with Edward Street. The second area is approximately 16 acres in area and is located on the west side of Cedar Street just south of Florence Avenue. The site is located within extensive glacial outwash sand and gravel deposits which comprise a high-yield aquifer utilized by the City of Batavia for municipal drinking water. These sand and gravel deposits previously were mined from the site area leaving large depressions which subsequently were filled. Total depth of the east fill area is estimated to be 16 feet, while the total depth of the west area is reported to be 30 to 40 feet.

Between 1940 and 1960, the City of Batavia operated the east fill area as a municipal waste landfill on land owned by the Lehigh Valley Railroad. The land presently is owned by Genesee County and Conrail-Penn Central Railroad Company. In 1961, the City of Batavia reportedly purchased the west fill area from the New York Central Railroad (Conrail) and from 1962 to 1968, operated it as a municipal waste and C&D debris landfill. Additional property owners include: Soccio and Della Penna, Inc., Agway, Inc., and Graham Manufacturing Company, Inc. (Appendix H).

During PSA field work, a URS Consultants, Inc. (URS) geologist met with a former landfill employee who worked at the facility for approximately four years during the 1960s. He requested to remain anonymous, but provided the following facts concerning the operation of the west fill area.

- The west fill area was a sandpit excavated 30 to 40 feet deep prior to filling
- Filling began along Cedar Street and proceeded west
- Wastes were compacted and covered with bank run gravel daily
- Wastes received at the site included:
    - City of Batavia municipal waste and sewage sludge
    - Dolar-Jarvis Division of National Lead metal castings, such as engine blocks

- Sylvania television components
- Yale & Towne (Trojan Industries, located on Clinton Street) wastes associated with the production of machinery and motors
- Agway, Inc. fertilizers and floor sweepings
- Waste oil and batteries from service stations and auto dealers
- Highway Department paint waste
- Cutting oils from an unknown source which typically were transported to the site in drums and poured into the landfill

- The landfill extends from Cedar Street west, almost to Webster Street, and north and south to the Soccio and Della Penna property line

- The landfill was operated prior to regulatory restrictions and, therefore, accepted any and all waste brought to the site which presumably could have included hazardous waste constituents of the type historically detected in groundwater at the site and in City Well A.

After the west fill area was closed in 1968, the area was covered with soil, divided into parcels, and sold. A portion of the Soccio and Della Penna property had been used as a waste tire staging area for a proposed "oil from tires" recovery operation. That business was never established and the tires have been removed. Additionally, past inspections of the site noted drums labeled "Shell D-D Soil Fumigant" staged on the ground surface, although these also have been removed. These drums are believed to have been owned by Agway, Inc. which reportedly sells the fumigant product. There is no documentation that D-D Soil Fumigant was disposed of at the site (NUS 1989).

In 1984, the site was placed in the New York State Registry of Inactive Hazardous Waste Sites with a temporary classification of 2a, indicating that inadequate and/or insufficient data was available to properly assess the site.

In September 1987, NUS Corporation conducted sampling at the site for a USEPA SI report. The inspection included sampling of soil, sediment, and surface water. The SI report detailed that surface and subsurface soil samples were collected and analyzed for Hazardous Substance List (HSL)

parameters with results indicating the presence of volatile organic compounds VOCs, phthalates, polynuclear aromatic hydrocarbons (PAHs), pesticides, polychlorinated biphenyls (PCBs), and metals. Municipal drinking water also was collected from the City of Batavia auxiliary supply wells, with NUS reporting a variety of naturally occurring inorganic compounds at relatively low concentrations. Based on results of the SI sampling, NUS recommended further high priority actions due to the proximity of the City wells. Specifically, NUS recommended a downgradient groundwater investigation to determine whether contaminants were being released to the aquifer of concern and further research of historical information to determine possible hazardous waste disposal including type and volume of waste (NUS 1989).

In May 1988, the City of Batavia began detecting trace concentrations of the VOC 1,1,1-trichloroethane (TCA) in municipal supply Well A which draws from the sand and gravel aquifer approximately 70 feet deep and 2,000 feet southeast and downgradient of the Cedar Street Dump site. By September of 1988, two additional compounds were being detected including trichloroethene (TCE) and 1,1-dichloroethane (DCA) (Wohlers 1989) (Table 2-1). Persistent detection of these compounds initiated a preliminary investigation by the GCHD and the Batavia Water/Sewer Superintendent to determine the source of contamination in Well A. By October 1988, the GCHD notified the NYSDEC that the investigation was underway. The results of the analysis of groundwater from the O-AT-KA milk plant well (south of the municipal wells) were found to be similar to Well A, indicating a possible source southwest of Well A. This potential source was identified as the Old Sylvania Plant, which is presently R.E. Chapin Manufacturing, Inc., on Ellicott Street (Wohlers 1989). An August 1989 sample analysis of groundwater from the Graham Manufacturing Plant well north of the site found no detections of the parameters analyzed. This discounts the area north of the site as a potential source.

By June 1991, groundwater monitoring data on contaminant concentrations revealed that higher concentrations of TCA, TCE, and DCA were detected in Well A after pumping was discontinued, whereas concentrations decreased as the well was pumped. Therefore, the City continued pumping the well to prevent buildup of contaminants. Information provided to URS indicates that the City water is subjected to ongoing analysis for chlorine, pH, turbidity, and bacteria. The water also is analyzed for VOCs and SVOCs annually. Well A continues to be pumped and

TABLE 2-1
HISTORICAL SAMPLING RESULTS
PRELIMINARY SITE ASSESSMENT
CEDAR STREET DUMP
BATAVIA CITY WELL A (μg/l)

City of Batavia VOC History		Well A*			
Laboratory	**Date**	**1,1,2,2 TCE**	**1,1,1 TCA**	**1,1,2 TCE**	**1,1 DCA DCE**
Friend	3-8-88	---	1.0	---	---
Friend	5-12-88	---	2.0	---	---
C.T. Male	8-25-88	---	2.0	---	---
C.T. Male	9-20-88	0.9	0.4	1.0	0.7
C.T. Male	11-30-88	1.0	3.5	1.2	10.9
C.T. Male	3-6-89	0.75	2.71	1.31	0.49
C.T. Male	6-8-89	---	1.73	1.41	0.33
NYSDOH	8-9-89	---	2.0	1.0	1.0
C.T. Male	9-19-89	0.61	1.55	1.40	---
C.T. Male	1-25-90	1.07	4.25	1.27	---
NYSDOH	3-13-90	---	2.0	1.0	---
C.T. Male	5-8-90	---	1.20	1.37	---
C.T. Male	9-27-90	0.70	6.37	---	3.16
C.T. Male	11-29-90	0.5	1.9	1.2	---
C.T. Male	11-29-90	0.5	1.9	1.1	---
C.T. Male	11-29-90	0.5	1.9	1.1	---
C.T. Male	2-26-91	---	---	---	---
C.T. Male	5-22-91	---	---	---	---
C.T. Male	5-22-91	---	---	---	---

Dashes indicate non-detectable concentrations.

used as a water supply well. The January 1995 PSA sample analysis detected no VOCs or SVOCs in groundwater from this well.

Investigation of the Cedar Street Dump site began with a Phase I Investigation completed by Engineering-Science in September 1988 for the NYSDEC Division of Solid and Hazardous Waste. This investigation included compilation of all available information about the site, preparation of a preliminary Hazard Ranking System (HRS) score, and recommendations for further investigation to adequately characterize the site. Recommendations of the Phase I Investigation included conducting a geophysical survey, installation of a groundwater monitoring network, and sampling of any remaining drums on site (Engineering-Science 1988).

Based on findings and recommendations of the Phase I Investigation, a Phase II Investigation was authorized by the NYSDEC and completed in March 1992 by YEC, Inc. The Phase II Investigation included a geophysical survey, installation of 7 watertable monitoring wells, collection of 7 groundwater samples, 1 surface water sample; 1 sediment sample, and 1 waste sample from a C&D debris pile. Metals concentrations in excess of New York State SCGs were detected in groundwater, surface water, sediment, and soil. In addition, results indicated the presence of TCA, TCE, and 1,2-dichloropropane in excess of standards in groundwater. The report concluded, however, that since these compounds are denser than water, the shallow watertable wells were not deep enough to intercept the maximum concentrations leaving the site. An additional investigation, including deep wells to sufficiently characterize the site, would be necessary for reclassification (YEC 1992).

After reviewing the Phase II report by YEC, Inc, the NYSDEC and the NYSDOH agreed that further work to explore deeper organic contamination at this site was required as recommended by the report. Therefore, URS was authorized by the NYSDEC in October 1994 to perform a PSA to supplement the Phase II investigation.

The east and west fill properties currently are awaiting property transfer, legal action, or potential delisting pending the results of the PSA. (Remsten 1993; Peachey 1994a; 1994b; Della Penna 1994; Reamon 1994).

3.0 TASK DISCUSSION

3.1 Task 1 - File Search and Site Reconnaissance

File Search

The majority of the background information pertaining to the Cedar Street Dump was obtained by YEC during the Phase II Investigation and is presented in the report on that investigation completed in March 1992. Additional current and historical information for the PSA was obtained by URS from the NYSDEC Central Office in Albany, Region 8 office in Avon, and from an interview with a Batavia resident who worked at the Cedar Street Dump during four years of the site operation.

3.2 Task 2 - Site Work Plan

In March 1992, YEC completed the Phase II Investigation and concluded that there was insufficient information to document hazardous waste at the Cedar Street Dump. According to YEC, further investigation was warranted. Phase II recommendations for additional investigations were to:

- Install deep monitoring wells and additional shallow monitoring wells within the sand and gravel aquifer
- Resample all Phase II wells to confirm metals concentrations in groundwater
- Sample the City wells, Tonawanda Creek, local industrial wells, and the south side of the site

The NYSDEC and NYSDOH determined that an additional investigation was required to sufficiently characterize the site for reclassification. The NYSDEC then amended URS' Work Assignment (D002340-21) to include the Cedar Street Dump for a PSA. The work assignment included development of a Task 2 - Site Work Plan and budget for completion of Task 3 - Environmental Sampling. The final NYSDEC approved work plan eliminated Task 3 work elements and detailed the Task 4 scope of work to include:

- Installation of deep monitoring wells to constitute a shallow and deep well pair at Phase II well locations GW-2, GW-4, and GW-5
- Installation of shallow and deep well pair GW-8 along the south side of the site between existing locations GW-4 and GW-5
- Collection of groundwater samples from each of the PSA monitoring wells and City of Batavia Well A
- Collection of up to 2 waste samples from drums reported on the ground surface on site

Additional requirements of the work plan included site survey and mapping, and completion of the USEPA HRS PA-Score.

3.3 Task 3 - Initial Environmental Sampling

Task 3 work elements were eliminated from the PSA since initial environmental sampling was performed as a Phase II Investigation completed by YEC in March 1992.

3.4 Task 4 - Subsurface Environmental Sampling

Site Reconnaissance

Prior to Task 4 drilling and well installation, a site reconnaissance was performed on December 7, 1994 by URS and a representative of the NYSDEC Region 8 office. The reconnaissance was performed to established drilling locations for PSA monitoring wells and identify any potential access difficulties for drilling equipment. The team also met with representatives of American Stone Mix and Eastern Molding International (EMI) for permission to access drilling location GW-4D. Representatives of the Veness-Strollo VFW Post 1602 were contacted to gain access for GW-8S and GW-8D, but access was denied by the VFW Board. An alternate location for this well pair was selected on EMI property and access was granted. Graham Manufacturing representatives were not available at this time, but were contacted later during Task 4 field work and access was approved for location GW-2D.

During the reconnaissance, the site was covered with snow but all drill locations were found to be accessible with a truck-mounted drill rig. Limits of fill in both the east and west fill areas are not distinguishable by ground surface expression. The west fill area appeared as a flat field which is predominantly open but wooded toward the western end. Minor debris was found on the ground surface; however, drums sighted during previous inspections and documented in the Phase II report had been removed. The railroad tracks, noted as crossing the site in the Phase II report, also had been removed. The eastern side of the west fill area has a snow fence along Cedar Street, however, the area is easily accessible through the entrance gate and adjacent properties. The east fill area is open and slightly rolling. Vehicle access to the east fill area is restricted by fences and other barricades, but the area is easily accessible on foot.

Subsurface Investigations

Between December 7 and 22, 1994, the PSA subsurface environmental sampling program at the Cedar Street Dump was conducted. Drilling and well installation services were provided by Technical Drilling Services of Elma, New York under the supervision of a URS geologist. All borings were advanced with a truck-mounted Mobile Drill Model B-57 drill rig utilizing 4.25-inch inside diameter (ID) hollow stem augers and split-spoon sampling techniques. The drill rig, as well as all drilling tools, were steam cleaned in a designated area of the west fill area prior to beginning each boring. Water for decontamination and drilling was obtained from the City of Batavia Water Treatment plant located on Lehigh Avenue.

Initially, a total of five subsurface borings and monitoring wells, designated GW-2D, GW-4D, GW-5D, GW-8S, and GW-8D, were completed for the PSA. Following consultation with the NYSDEC Project Manager, it was decided that an additional well pair, designated GW-9S and 9D, should be installed along the southern perimeter of the west fill area (Figure 3-1).

As specified in the work plan, deep borings advanced at Phase II well locations GW-2, GW-4, and GW-5 were drilled directly to the termination depth of the existing shallow wells since the subsurface had been sampled and logged previously during the 1992 Phase II Investigation. At location GW-5D (deep) split-spoon samples were collected continuously from 35 to 46 feet. From that depth the frequency was reduced to 5-foot intervals due to the uniformity of the sand formation.

It also was necessary to add water to the augers to control sand heaving. These deviations to the work plan were approved by the NYSDEC Project Manager prior to implementation. Similar sampling and drilling methods were carried out at each subsequent boring.

Deep borings were augered to a depth of 70 feet below ground surface (bgs) or shallower where auger refusal was encountered. Shallow borings were terminated at 35 feet bgs. Results of subsurface sampling confirmed the presence of homogenous sand with the occurrence of gravel, which is consistent with the published literature and the Phase II findings. At location GW-9, fill material consisting of gravel, sand, silt, and clay with traces of wood and brick fragments was encountered to a depth of 21.5 feet. One sample from each of the PSA borings was retained for chemical and geotechnical analysis. Samples for chemical analysis were shipped via overnight courier to Energy and Environmental Engineering, Inc. (E^3I) of Somerville, Massachusetts for full Target Compound List (TCL) and cyanide analysis. Samples for geotechnical analysis were delivered directly to Buffalo Drilling Company, Akron, New York for grain size distribution analysis. Boring logs completed for the PSA are presented in Appendix B. Geotechnical testing results are presented in Appendix C.

Upon reaching termination depth at each boring location, a 2-inch diameter PVC monitoring well was installed with a 10-foot PVC screen. The screen interval of each well was backfilled with sand and a bentonite pellet seal was placed above the sand filter backfill. The remainder of the borehole was backfilled with grout except at location GW-8D, where formation sands collapsed from 25 to 56 feet bgs. On completion, each well was secured with a steel protective casing and locking cap. Well construction details are presented in Appendix B.

Following well installation, each well was developed with a Waterra pump to remove sediment from the well and sand pack, and to ensure representative groundwater samples. The seven PSA wells installed by URS were then allowed to equilibrate for two weeks prior to purging and sampling. On January 5 and 6, 1995, the wells were purged and sampled along with City Well A. Samples were sent to E^3I laboratories for analysis of full TCL parameters and cyanide. No samples were collected from the existing Phase II monitoring wells. Well development and purging logs are presented in Appendix B.

In addition to the installation of monitoring wells, the PSA work plan specified that 2 waste samples were to be taken from drums reportedly on site. However, waste samples were not recovered since the drums had been removed.

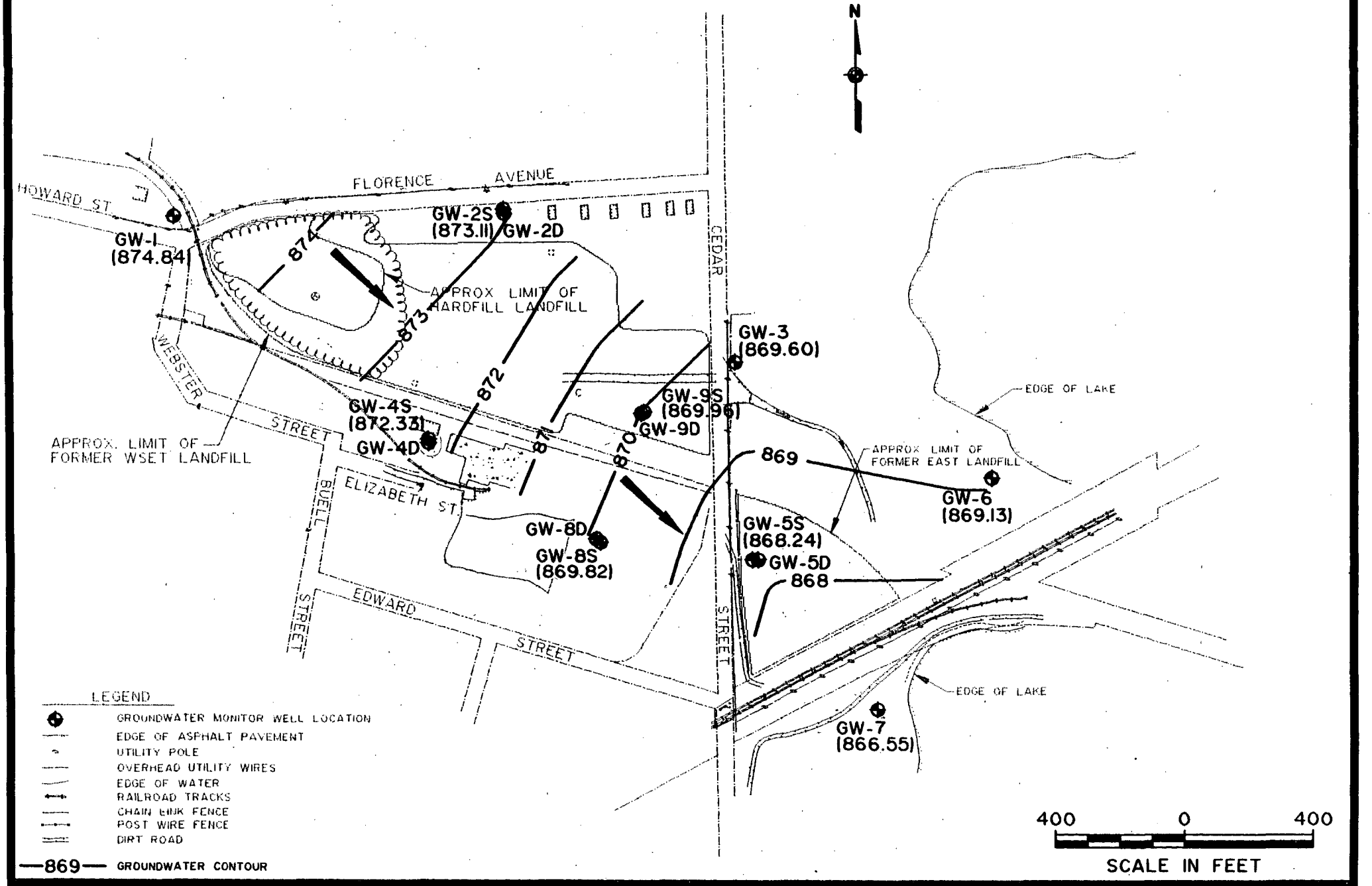
Upon completion of Task 4 sampling, a site survey was performed to locate and determine the elevations of all PSA and Phase II monitoring wells. Groundwater elevations were measured in all PSA and Phase II monitoring wells during PSA field work. The data indicated that groundwater flows to the southeast toward the City of Batavia wellfield under the influence of high volume pumping. Groundwater contour maps for the shallow and deep wells are presented as Figures 3-2 and 3-3.

Results of Chemical Analysis

Results of the chemical analysis were compared with New York State-established SCGs and are summarized by media in the following subsections. Soil sample results were compared against SCGs specified in NYSDEC Technical and Administrative Guidance Memorandum (TAGM) HWR-94-4046, *Determination of Soil Cleanup Objectives and Cleanup Levels*. This TAGM provides the basis for determining soil cleanup levels at Superfund and Potentially Responsible Party (PRP) inactive hazardous waste sites. Use of this document for the Cedar Street Dump PSA may not be directly applicable, but was used for comparison purposes. Since the procedures presented in the TAGM are for guidance purposes only, values presented in tables for inorganic parameters are based on an assumed total organic carbon (TOC) content of 1%. Analysis for TOC was not performed specifically on Cedar Street soil samples.

Groundwater sample results were compared to NYSDEC Division of Water Technical and Operational Guidance Series (TOGS) (1.1.1) *Ambient Water Quality Standards and Guidance Values*, October 1993.

Results of analysis are summarized by matrix in each respective section and a complete list of results by parameter is provided in Appendix D with the data usability summary.



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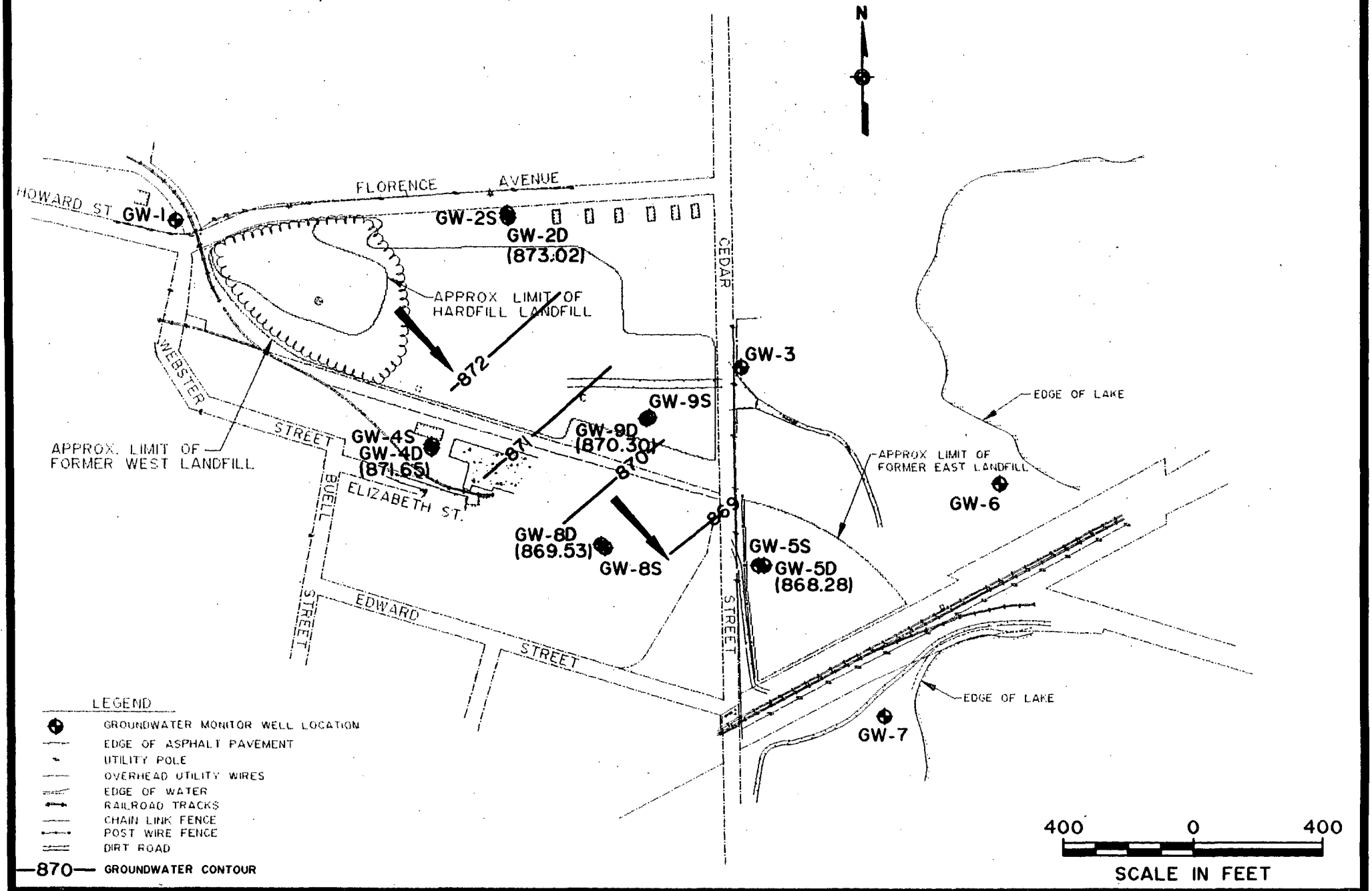
CEDAR STREET, BATAVIA, NEW YORK
GROUNDWATER CONTOURS (SHALLOW WELLS)

FIGURE 3-2



URS CONSULTANTS, INC.

CEDAR STREET, BATAVIA, NEW YORK
GROUNDWATER CONTOURS (DEEP WELLS)

FIGURE 3-3

3.4.1. Subsurface Soil Analysis

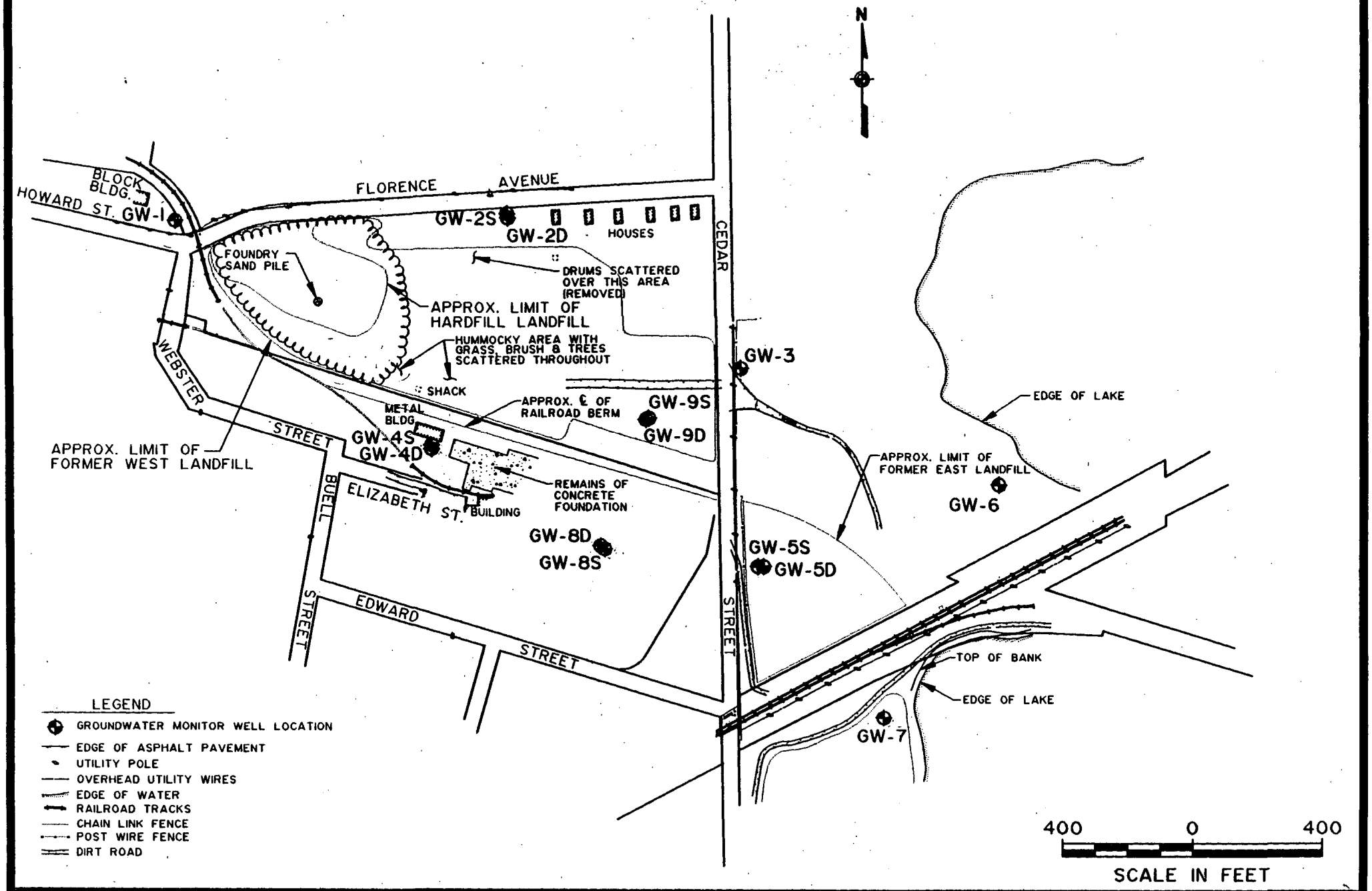
Volatile Organic Compounds

Although VOC concentrations were below established SCGs, a total of fourteen VOCs were detected in PSA subsurface soil samples from the vicinity of the Cedar Street Dump (Table 3-1). The highest concentrations were detected in soil from deep boring GW-9D along the southern perimeter of the west fill area with 18 ppb ethylbenzene and 93 ppb total xylene. The greatest number of VOCs were detected in deep boring sample GW-5D recovered from the immediate area of the east fill area. The most widespread compound detected was total xylenes, which was found at 6 of 7 sample locations, ranging from 0.8 ppb at GW-8D to 93 ppb at GW-9D.

VOCs historically detected in City of Batavia Municipal Well A include TCE, TCA, DCA and 1,2-DCE. TCE was detected in deep soil samples from boring locations GW-4D (10 ppb), GW-5D (3 ppb), and GW-8S (3 ppb). TCA was detected only in soil sample GW-5D (1 ppb). DCA was detected in samples GW-4D (1 ppb), GW-5D (11 ppb), and GW-9D (1 ppb). 1,2-dichloroethene (DCE) was detected in samples GW-4D (2 ppb) and GW-5D (7 ppb).

An additional concern is the possible presence of VOC constituents of "Shell D-D Soil Fumigant" allegedly disposed of at the site. 1,2-dichloropropane was the only "D-D" constituent detected with 2 ppb at location GW-4D.

Other VOCs detected in subsurface soil include: chloroethane at GW-9S (4 ppb), carbon disulfide at GW-8D (3 ppb), benzene at GW-2D (0.9 ppb) and GW-9S (0.6 ppb), tetrachloroethene at GW-4D (4 ppb), ethylbenzene at GW-2D (1 ppb) and GW-9D (18 ppb), and toluene at five of seven sampling locations ranging from 0.6 ppb at GW-9S to 5 ppb at GW-2D. Methylene chloride, detected in samples GW-5D (3 ppb) and GW-8D (2 ppb), also was detected in the rinse blank sample indicating a possible external source.



URS CONSULTANTS, INC.

CEDAR STREET, BATAVIA, NEW YORK
MONITORING WELL LOCATIONS

FIGURE 3-1

TABLE 3-1
ANALYTICAL SUMMARY TABLE
PRELIMINARY SITE ASSESSMENT
CEDAR STREET DUMP
SUBSURFACE SOIL

Sample ID		GW-2D	GW-4D	GW-5D	GW-8D
Date Sampled		12/16/94	12/11/94	12/08/94	12/14/94
Date Received		12/17/94	12/12/94	12/09/94	12/15/94
Depth (ft)		60	60-70	65-67	60-70
Units		UG/KG	UG/KG	UG/KG	UG/KG
Parameters	SCG[1] (UG/KG)				
Chloroethane	1900				
Methylene Chloride	100			3	2
Carbon Disulfide	2700				3
1,1-Dichloroethane	200		1	11	
1,2-Dichloroethene (total)	300 (6)		2	7	
Chloroform	300				0.6
1,1,1-Trichloroethane	800			1	
1,2-Dichloropropane	—		2		
Trichloroethene	700		10	3	
Benzene	60	0.9			
Tetrachloroethene	1400		4		
Toluene	1500	5		1	
Ethylbenzene	5500	1			
Xylene (total)	1200	7		1	0.8
Acenaphthene	50000				
Dibenzofuran	6200				
Fluorene	50000				
Phenanthrene	50000				
Anthracene	50000				
Carbazole	—				
Fluoranthene	50000			30	
Pyrene	50000			23	
Benzo(a)anthracene	224				
Chrysene	400				
bis(2-Ethylhexyl)phthalate	50000			40	63
Benzo(b)fluoranthene	1100				
Benzo(k)fluoranthene	1100				
Benzo(a)pyrene	61				
Indeno(1,2,3-cd)pyrene	3200				
Dibenz(a,h)anthracene	14				
Benzo(g,h,i)perylene	50000				

[1] - NYSDEC Division of Technical and Administrative Guidance Memorandum: Determination of Soil Clean-up Objectives and Clean-up Levels, January, 24,1994.

[a] - SCG value exceedance.

Footnotes defined in Appendix D.

— - No SCG value available.

TABLE 3-1
ANALYTICAL SUMMARY TABLE
PRELIMINARY SITE ASSESSMENT
CEDAR STREET DUMP
SUBSURFACE SOIL

Sample ID		GW-2D	GW-4D	GW-5D	GW-8D
Date Sampled		12/16/94	12/11/94	12/08/94	12/14/94
Date Received		12/17/94	12/12/94	12/09/94	12/15/94
Depth (ft)		60	60-70	65-67	60-70
Units		UG/KG	UG/KG	UG/KG	UG/KG
Parameters	SCG[1] (UG/KG)				
Dieldrin	44				
4,4'-DDE	2100				
Endrin	100				
Endosulfan II	900				
4,4'-DDD	2900				
4,4'-DDT	2100				
Endrin Ketone	—	0.58			
alpha-Chlordane	540 (7)			0.26	
gamma-Chlordane	540				

[1] - NYSDEC Division of Technical and Administrative Guidance Memorandum: Determination of Soil Clean-up Objectives and Clean-up Levels, January, 24,1994.

[a] - SCG value exceedance.

Footnotes defined in Appendix D.

— - No SCG value available.

TABLE 3-1
ANALYTICAL SUMMARY TABLE
PRELIMINARY SITE ASSESSMENT
CEDAR STREET DUMP
SUBSURFACE SOIL

Sample ID		GW-8S	GW-9D	GW-9S
Date Sampled		12/16/94	12/21/94	12/20/94
Date Received		12/17/94	12/22/94	12/21/94
Depth (ft)		30-35	55	25
Units		UG/KG	UG/KG	UG/KG
Parameters	SCG[1] (UG/KG)			
Chloroethane	1900			4
Methylene Chloride	100			
Carbon Disulfide	2700			
1,1-Dichloroethane	200		1	
1,2-Dichloroethene (total)	300 (6)			
Chloroform	300			
1,1,1-Trichloroethane	800			
1,2-Dichloropropane	—			
Trichloroethene	700	3		
Benzene	60			0.6
Tetrachloroethene	1400			
Toluene	1500	2	2	0.6
Ethylbenzene	5500		18	
Xylene (total)	1200	0.9	93	2
Acenaphthene	50000		130	
Dibenzofuran	6200		120	
Fluorene	50000		260	
Phenanthrene	50000		1100	
Anthracene	50000		390	
Carbazole	—		290	
Fluoranthene	50000		1100	
Pyrene	50000		720	
Benzo(a)anthracene	224		440 [a]	
Chrysene	400		440 [a]	
bis(2-Ethylhexyl)phthalate	50000			
Benzo(b)fluoranthene	1100		440	
Benzo(k)fluoranthene	1100		550	
Benzo(a)pyrene	61		520 [a]	
Indeno(1,2,3-cd)pyrene	3200		250	
Dibenz(a,h)anthracene	14		160 [a]	
Benzo(g,h,i)perylene	50000		270	

[1] - NYSDEC Division of Technical and Administrative Guidance Memorandum: Determination of Soil Clean-up Objectives and Clean-up Levels, January, 24,1994.

[a] - SCG value exceedance.

Footnotes defined in Appendix D.

— - No SCG value available.

TABLE 3-1
ANALYTICAL SUMMARY TABLE
PRELIMINARY SITE ASSESSMENT
CEDAR STREET DUMP
SUBSURFACE SOIL

Sample ID		GW-8S	GW-9D	GW-9S
Date Sampled		12/16/94	12/21/94	12/20/94
Date Received		12/17/94	12/22/94	12/21/94
Depth (ft)		30-35	55	25
Units		UG/KG	UG/KG	UG/KG
Parameters	SCG[1] (UG/KG)			
Dieldrin	44		1.8	
4,4'-DDE	2100		4.0	0.41
Endrin	100		3.1	
Endosulfan II	900		0.71	
4,4'-DDD	2900		15	0.46
4,4'-DDT	2100		32	
Endrin Ketone	—			
alpha-Chlordane	540 (7)		5.8	
gamma-Chlordane	540		4.5	

[1] - NYSDEC Division of Technical and Administrative Guidance Memorandum: Determination of Soil Clean-up Objectives and Clean-up Levels, January, 24,1994.

[a] - SCG value exceedance.

Footnotes defined in Appendix D.

— - No SCG value available.

TABLE 3-1
ANALYTICAL SUMMARY TABLE
PRELIMINARY SITE ASSESSMENT
CEDAR STREET DUMP
SUBSURFACE SOIL (INORGANIC RESULTS)

Sample ID		GW-2D	GW-4D	GW-5D	GW-8D
Date Sampled		12/16/94	12/11/94	12/08/94	12/14/94
Date Received		12/17/94	12/12/94	12/09/94	12/15/94
Depth (ft)		60	60-70	65-67	60-70
Units		MG/KG	MG/KG	MG/KG	MG/KG
Parameters	**SCG (MG/KG)**				
Aluminum	Site background N/A	1890	2860	3800	2000
Antimony	Site background N/A	11.8			
Arsenic	7.5	1.5	1.6	23.1 [a]	1.3
Barium	300	5.8	10.2	25	5.9
Beryllium	0.16				
Calcium	Site background N/A	196000	70500	92300	60000
Chromium	10	4	6.8	13.4 [a]	4.4
Cobalt	30	1.9	2.1	4.4	2.6
Copper	25	5.5	9.3	30.2 [a]	6.7
Iron	2000	4640 [a]	7530 [a]	12600 [a]	5390 [a]
Lead	Site background N/A	2.2	16.3	21.6	3.9
Magnesium	Site background N/A	16900	20700	28700	18100
Manganese	Site background N/A	173	245	257	183
Mercury	0.1				0.33 [a]
Nickel	13	4.5	7.8	11.4	3.4
Potassium	Site background N/A	463	606	903	430
Sodium	Site background N/A	57.1	55.5	71	
Vanadium	150	5.5	9.5	9.9	5.4
Zinc	20	26.7 [a]	27.5 [a]	51.7 [a]	45.8 [a]
Cyanide	Site background N/A	1.9			

[1] - Reported on a dry weight basis.
[a] - SCG value exceedance.
Footnotes defined in Appendix D.
N/A - not available

TABLE 3-1
ANALYTICAL SUMMARY TABLE
PRELIMINARY SITE ASSESSMENT
CEDAR STREET DUMP
SUBSURFACE SOIL (INORGANIC RESULTS)

Sample ID		GW-8S	GW-9D	GW-9S
Date Sampled		12/16/94	12/21/94	12/20/94
Date Received		12/17/94	12/22/94	12/21/94
Depth (ft)		30-35	55	25
Units		MG/KG	MG/KG	MG/KG
Parameters	SCG (MG/KG)			
Aluminum	Site background N/A	2630	3710	5180
Antimony	Site background N/A			
Arsenic	7.5		3	1.9
Barium	300	16.1	22.6	15.1
Beryllium	0.16			0.25 [a]
Calcium	Site background N/A	50300	82200	81500
Chromium	10	4.3	7.5	9.7
Cobalt	30	3	3.8	4.6
Copper	25	10.1	26.8 [a]	11.7
Iron	2000	6490 [a]	8560 [a]	8510 [a]
Lead	Site background N/A	4.3	12.2	8.8
Magnesium	Site background N/A	15800	27300	29000
Manganese	Site background N/A	178	269	229
Mercury	0.1		0.17 [a]	
Nickel	13	6.9	9	9
Potassium	Site background N/A	532	967	1560
Sodium	Site background N/A			
Vanadium	150	6.6	9.4	11
Zinc	20	35.3 [a]	51.6 [a]	32.4 [a]
Cyanide	Site background N/A	4.9		

[1] - Reported on a dry weight basis.
[a] - SCG value exceedance.
Footnotes defined in Appendix D.
N/A - not available

Semivolatile Organic Compounds

Seventeen SVOCs were detected in subsurface soil samples, 16 of which were detected in sample GW-9D recovered nearest to the west fill area. There were no SVOCs detected in soils samples GW-2D, GW-4D, GW-8S, or GW-9S. Bis(2-ethylhexyl)phthalate detected in samples GW-5D (30 ppb) and GW-8D (23 ppb) also was detected in the both the drill water (4 ppb) and the rinse blank (2 ppb) quality assurance/quality control (QA/QC) samples. This may indicate an external source for the compound. Fluoranthene (30 ppb) and pyrene (23 ppb) were the only other SVOCs detected in GW-5D.

Fourteen of the 16 SVOCs detected in subsurface soil sample GW-9D were PAH compounds. PAH concentrations ranged from 130 ppb for acenaphthene to 1,100 ppb for phenanthrene and fluoranthene. Four compounds detected exceeded the SCG--benzo(a)anthracene (440 ppb), chrysene (440 ppb), benzo(a)pyrene (520 ppb), and dibenz(a,h)anthracene (160 ppb). The total PAH concentration in sample GW-9D was 6,770 ppb. Dibenzofuran (120 ppb) was detected in sample GW-9D, although below SCGs. Carbazole also was detected at 290 ppb, but no SCG has been established for this compound.

Pesticides and PCBs

A total of 9 pesticide compounds were detected within 4 of the 7 subsurface soils samples analyzed. Similar to results of VOC and SVOC analysis, 8 of 9 pesticides detected were in sample GW-9D, with concentrations ranging from 0.71 ppb of endosulfan II to 32 ppb of 4,4´-DDT. Alpha-chlordane also was detected in GW-5D (0.26 ppb). Both 4,4´-DDE and 4,4´-DDD were detected in GW-9S, although concentrations were much lower in the shallow sample. Endrin ketone (0.58 ppb) was detected only in sample GW-2D. Pesticide concentrations were below established SCGs.

No PCBs were detected in subsurface soil samples from the Cedar Street Dump site.

Metals and Cyanide

Six out of 19 metals detected in subsurface soil samples exceeded SCGs. Iron and zinc exceeded SCGs in all samples tested. Copper exceeded SCGs in samples GW-5D and GW-9D, while mercury exceeded the SCG in samples GW-8D and GW-9D. Arsenic and chromium exceeded SCGs only in sample GW-5D. Beryllium, detected in sample GW-9S, exceeded SCGs.

Cyanide was detected only in samples GW-2D and GW-8S, though no SCG is available for this parameter.

TCLP/EPTox

The soil samples collected as part of the PSA were not tested for TCLP or EPTox. However, it can be concluded that hazardous waste was not found because the concentrations detected would not result, considering dilution, in failure of the TCLP test even if all contaminants leached out. Failure of a characteristic hazardous waste test would confirm hazardous waste presence.

3.4.2 Groundwater Analysis

Volatile Organic Compounds

No VOCs were detected in City Well A during this sampling event. Fourteen VOCs were detected in groundwater samples from the Cedar Street Dump site, of which 6 exceeded SCGs (Table 3-2). Acetone was found to be most widespread and at the highest concentrations in the deep wells with 85 ppb in GW-2D, 2,600 ppb in GW-4D, 500 ppb in GW-5D, 940 ppb in GW-8D, and 13 ppb in GW-9D. As depicted in Figure 3-4, a plume of acetone is emanating from the site although concentrations diminish rapidly with distance from the site. Toluene exceeded SCGs in samples GW-5D (15 ppb) and GW-8D (47 ppb) and also was detected in GW-9D (1 ppb) and GW-9S (1 ppb). Chloroethane (23 ppb) and benzene (3 ppb) were detected in GW-9S and exceeded SCGs. 1,1-dichloroethane was detected only in samples GW-9D (4 ppb) and GW-9S (9 ppb), but exceeded SCGs only at GW-9S. Xylenes were detected in GW-5D (6 ppb), GW-8D (6 ppb), GW-9D (1 ppb), and GW-9S (8 ppb). The xylene SCG of 5 ppb was exceeded in three of those samples. Chloroform,

TABLE 3-2
ANALYTICAL SUMMARY TABLE
PRELIMINARY SITE ASSESSMENT
CEDAR STREET DUMP
GROUNDWATER

Sample I.D.		CITY WELL A	GW-2D	GW-4D	GW-5D
Date Sampled		01/06/95	01/06/95	01/06/95	01/06/95
Date Received		01/07/95	01/07/95	01/07/95	01/07/94
Units		UG/L	UG/L	UG/L	UG/L
Parameters	SCG (UG/L)				
Chloroethane	5				
Acetone	50		85 [a]	2600 [a]	500 [a]
Carbon Disulfide	50			4	
1,1-Dichloroethane	5				
Chloroform	7				6
1,1,1-Trichloroethane	5				
Bromodichloromethane	50				10
Trichloroethene	5				
Dibromochloromethane	50				14
Benzene	0.7				
Bromoform	50				11
Toluene	5				15 [a]
Ethylbenzene	5				1
ylene (total)	5 (5)				6 [a]
-Methylphenol	1 (2)				
4-Methylphenol	1 (2)				
Naphthalene	10				
2-Methylnaphthalene	50				
Dimethylphthalate	50				
Diethylphthalate	50				2
Phenanthrene	50				
Carbazole	50				
Di-n-butylphthalate	50			2	2
bis(2-Ethylhexyl)phthalate	50			5	4
Aroclor-1232	0.1				
Aroclor-1248	0.1				

Class GA Groundwater
— - No SCG value.
ND - Non-detect.
[a] - SCG value exceedance.
Footnotes defined in Appendix D.

TABLE 3-2
ANALYTICAL SUMMARY TABLE
PRELIMINARY SITE ASSESSMENT
CEDAR STREET DUMP
GROUNDWATER

Sample I.D.		GW-8D	GW-8S	GW-9D	GW-9S
Date Sampled		01/06/95	01/06/95	01/06/95	01/06/95
Date Received		01/07/95	01/07/95	01/07/95	01/07/95
Units		UG/L	UG/L	UG/L	UG/L
Parameters	SCG (UG/L)				
Chloroethane	5				23 [a]
Acetone	50	940 [a]		13	
Carbon Disulfide	50				
1,1-Dichloroethane	5			4	9 [a]
Chloroform	7	5			
1,1,1-Trichloroethane	5		3		
Bromodichloromethane	50	2			
Trichloroethene	5		2		
Dibromochloromethane	50				
Benzene	0.7				3 [a]
Bromoform	50				
Toluene	5	47 [a]		1	1
Ethylbenzene	5	1			1
Xylene (total)	5 (5)	6 [a]		1	8 [a]
2-Methylphenol	1 (2)				1
4-Methylphenol	1 (2)				12 [a]
Naphthalene	10				2
2-Methylnaphthalene	50				1
Dimethylphthalate	50			2	
Diethylphthalate	50				2
Phenanthrene	50				2
Carbazole	50				2
Di-n-butylphthalate	50	2			
bis(2-Ethylhexyl)phthalate	50	2	3	2	2
Aroclor-1232	0.1				5.0 [a]
Aroclor-1248	0.1				1.7 [a]

Class GA Groundwater
— - No SCG value.
ND - Non-detect.
[a] - SCG value exceedance.
Footnotes defined in Appendix D.

TABLE 3-2
ANALYTICAL SUMMARY TABLE
PRELIMINARY SITE ASSESSMENT
CEDAR STREET DUMP
GROUNDWATER (INORGANIC)

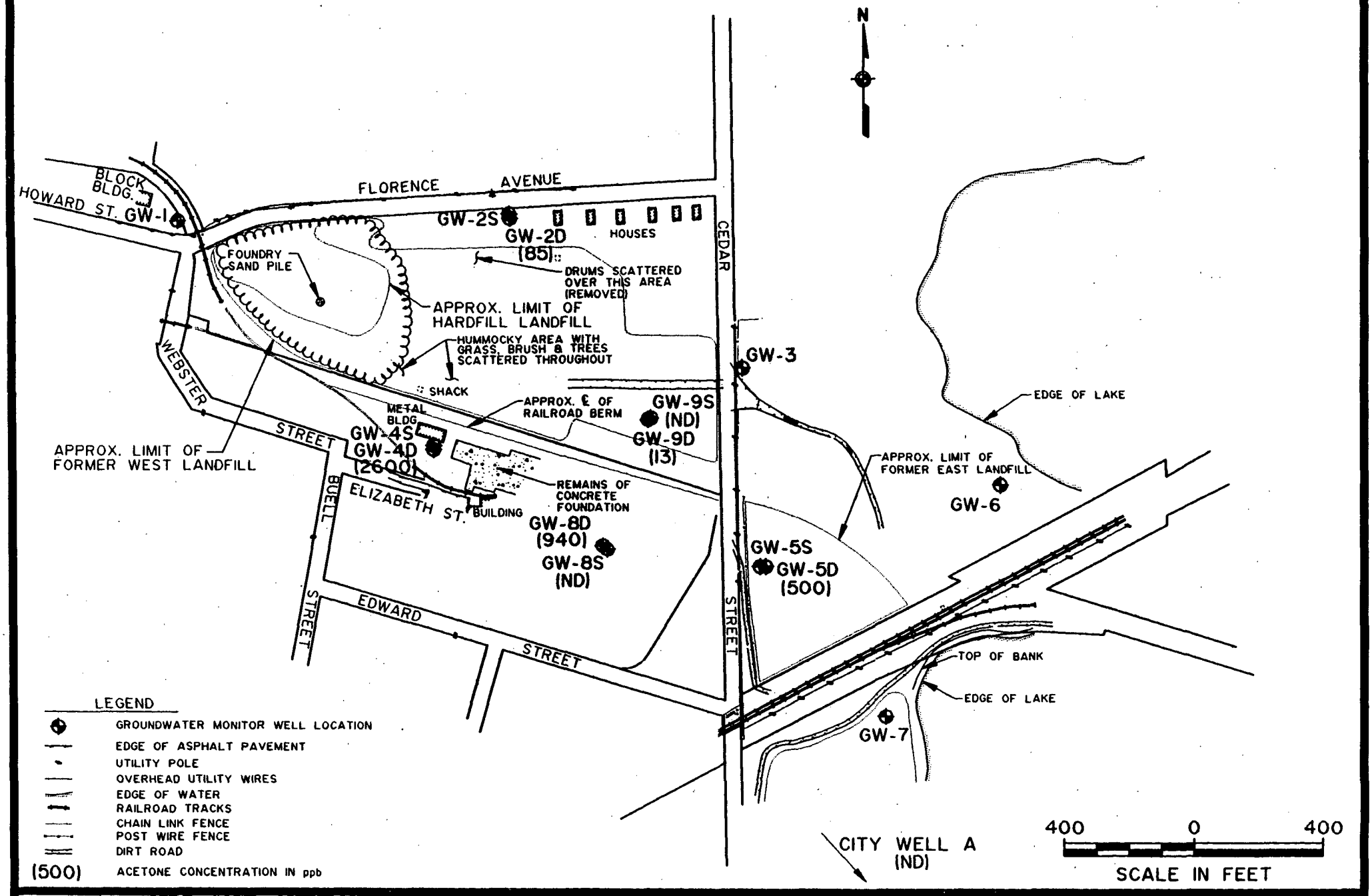
Sample I.D.		CITY WELL A	GW2D	GW4D	GW5D
Date Sampled		01/06/95	01/06/95	01/06/95	01/06/95
Date Received		01/07/95	01/07/95	01/07/95	01/07/94
Units		UG/L	UG/L	UG/L	UG/L
Parameters	SCG (UG/L)				
Aluminum	—		140	229	275
Arsenic	25				
Barium	1000	207	76.4	29.6	22.7
Calcium	—	119000	127000	45000	22300
Chromium	50				
Cobalt	—				
Copper	200	4	2.9	6.3	10.3
Iron	300 (19)	22.7	292	920 [a]	461 [a]
Lead	15				1.4
Magnesium	35000	34000	35200 [a]	21100	26600
Manganese	300 (19)		73.8	29.9	34.3
Mercury	2				
Nickel	—				
Potassium	—	7170	13200	12900	6890
Selenium	10				
Sodium	20000	72500 [a]	89600 [a]	50000 [a]	52000 [a]
Thallium	4	1.9			
Vanadium	—				
Zinc	300	17.9	15.4	54.3	22.6

Class GA Groundwater
— - No SCG value.
[a] - SCG value exceedance.
Footnotes defined in Appendix D.

TABLE 3-2
ANALYTICAL SUMMARY TABLE
PRELIMINARY SITE ASSESSMENT
CEDAR STREET DUMP
GROUNDWATER (INORGANIC)

Sample I.D.		GW8D	GW8S	GW9D	GW9S
Date Sampled		01/06/95	01/06/95	01/06/95	01/06/95
Date Received		01/07/95	01/07/95	01/07/95	01/07/95
Units		UG/L	UG/L	UG/L	UG/L
Parameters	SCG (UG/L)				
Aluminum	—	98.9	13400	1030	14200
Arsenic	25	2	10.4	1.8	18.9
Barium	1000	139	242	92.5	453
Calcium	—	167000	179000	67600	286000
Chromium	50		19.8	0.33	24.7
Cobalt	—		14.1		10.2
Copper	200	0.83	44.2	4.4	72.9
Iron	300 (19)	1590 [a]	23600 [a]	1080 [a]	46700 [a]
Lead	15	0.9	22.5 [a]		50.5 [a]
Magnesium	35000	53300 [a]	54800 [a]	29600	96300 [a]
Manganese	300 (19)	166	583 [a]	43.3	936 [a]
Mercury	2				0.31
Nickel	—		21.3	1.2	30.8
Potassium	—	37500	18400	10700	39300
[illegible]enium	10		3.9		
Sodium	20000	59400 [a]	48000 [a]	53700 [a]	48300 [a]
Thallium	4				
Vanadium	—		24.7	1.3	23.6
Zinc	300	14.5	166	22.1	187

Class GA Groundwater
— - No SCG value.
[a] - SCG value exceedance.
Footnotes defined in Appendix D.



URS CONSULTANTS, INC.

CEDAR STREET, BATAVIA, NEW YORK
ACETONE CONCENTRATIONS IN GROUNDWATER 1/6/95

FIGURE 3-4

bromodichloromethane, dibromochloromethane, and bromoform were detected in several wells and in the drill water. Ethylbenzene was detected below SCGs with 1 ppb in GW-5D, GW-8D, and GW-9S. Carbon disulfide (1 ppb) was detected only in GW-4D and below SCGs. 1,1,1-trichloroethane (3 ppb) and trichloroethene (2 ppb), which were previously detected in Batavia City Well A, were only detected in sample GW-8S at values below their SCGs.

Semivolatile Organic Compounds

Ten SVOCs were detected in groundwater samples, 6 of which were detected solely in GW-9S. 4-Methylphenol was the only SVOC found exceeding SCGs with 12 ppb in GW-9S. The most widespread SVOCs were phthalate compounds detected in samples from six out of eight well locations. These same compounds also were detected in the drill water sample. PAHs, 2-methylphenol, and carbazole also were detected at GW-9S.

No SVOCs were detected in the groundwater sample from City Well A.

Pesticides/PCBs

No pesticides were detected in groundwater samples from the PSA monitoring wells or City Well A.

PCBs Aroclor-1232 (5 ppb) and Aroclor-1248 (1.7 ppb) were detected in sample GW-9S at levels which exceeded SCGs.

A second round of sampling, as requested by the NYSDEC, was conducted at monitoring well MW-9S to futher define PCB contamination at this location (Table 3-2A). Both filtered and unfiltered water samples were collected on August 14, 1995 and analyzed for PCBs. One PCB species, Aroclor 1242, was detected at a concentration of 1 μg/l in the unfiltered sample. This value exceeds the SCG for PCBs. The filtered groundwater sample had no detections of PCBs, thus, we believe that the PCBs are adsorbed onto clay particles rather than dissolved in the groundwater.

TABLE 3-2A
ANALYTICAL RESULTS
PRELIMINARY SITE ASSESSMENT
CEDAR STREET DUMP
GROUNDWATER (PCBs)

Sample I.D.		GW-9S	GW-9S
Date Sampled		14-Aug-95	14-Aug-95
Date Analyzed		07-Sep-95	07-Sep-95
Matrix		Water (Filtered)	Water (Unfiltered)
Units		UG/L	UG/L
Parameter	Class		
AROCLOR-1016	PCB		
AROCLOR-1221	PCB		
AROCLOR-1232	PCB		
AROCLOR-1242	PCB		1 J
AROCLOR-1248	PCB		
AROCLOR-1254	PCB		
AROCLOR-1260	PCB		

Metals and Cyanide

Nineteen metals were detected in PSA groundwater samples. Sodium was detected exceeding SCG values in all groundwater samples including City Well A. Iron exceeded SCGs in all samples except City Well A and GW-2D. Lead exceeded SCGs in samples GW-8S and GW-9S, but also was detected in GW-5D and GW-8D. Manganese was detected in all samples except City Well A but exceeded SCGs only in GW-8S and GW-9S. All other metals detected were below SCGs.

Cyanide was not detected in any of the groundwater samples.

3.4.3 Surficial PCB Analysis

In conjunction with the filtered/unfiltered groundwater samples collected on August 14, 1995, shallow surficial soil samples were collected and analyzed on site using immunoassay techniques. A total of 12 soil samples were collected within a 25-foot radius of well MW-9S. Field measurements were taken with Millipores enzyme-linked immunosorbent assay kit for PCBs. Results for all samples indicated that concentrations are not greater than 10 mg/l.

3.4.4 Quality Assurance/Quality Control Sample

Drill Water Sample

Volatile Organic Compounds

Five VOCs were detected in the drill water sample collected from the City Water Treatment Plant on Lehigh Street (Table 3-3). Although all concentrations were detected below SCGs, low concentrations of chloroform, bromodichloromethane, dibromochloromethane, and bromoform found in groundwater samples may be attributable to drill water introduced to each borehole to control running sand. Although acetone was detected in the drill water samples, the low level reported does not account for the high concentrations detected in groundwater samples GW-2D, GW-4D, GW-5D, and GW-8D.

TABLE 3-3
ANALYTICAL SUMMARY TABLE
PRELIMINARY SITE ASSESSMENT
CEDAR STREET DUMP
DRILLING WATER

Sample ID		DRILLW
Date Sampled		12/08/94
Date Received		12/09/94
Units		UG/L
Parameter	SCG (UG/L)	
Acetone	50	8
Chloroform	7	6
Bromodichloromethane	50	6
Dibromochloromethane	50	11
Bromoform	50	13
bis(2-Ethylhexyl)phthalate	50	4
Di-n-octylphthalate	50	10
Antimony	3	80.1 [a]
Barium	1000	14
Calcium	—	13600
Iron	300 (19)	97
Magnesium	35000	21600
Nickel	—	15.6
Potassium	—	3060
Sodium	20000	49300 [a]
Zinc	300	23.4

— - No SCG value.
Footnotes defined in Appendix D.

Semivolatile Organic Compounds

Bis(2-ethylhexyl)phthalate and di-n-octylphthalate were the only SVOCs detected in the drill water samples which may indicate the source of these two compounds detected in the monitoring well.

Pesticides and PCBs

There were no pesticides or PCBs detected the drill water sample.

Metals and Cyanide

Nine metals were detected in the drill water sample of which antimony and sodium exceeded SCGs. While antimony was not detected in groundwater, the high concentration of sodium detected in drill water may have contributed to the elevated levels detected in samples from monitoring wells. Cyanide was not detected in the drill water sample.

Contaminant Migration Calculations

Contaminant migration calculations were made for the purpose of estimating the travel time of contaminants in the aquifer (Appendix G). Travel times for the more mobile compounds indicate that these compounds have already traveled to a location where they would have been detected in City Well A. None were detected, however, in the PSA sampling water from City Well.

4.0 CONCLUSIONS AND RECOMMENDATIONS

4.1 Summary of Conclusions

Based on findings of the Cedar Street Dump Site PSA Task 4, the following summary of conclusions has been developed:

- The site was operated by the City of Batavia as a municipal waste and C&D debris landfill. The site also received waste from local industries and businesses which may have included hazardous waste since the facility operated prior to regulatory restrictions.

- There is no documented evidence of hazardous waste disposal at the Cedar Street Dump per 6 NYCRR Part 371.

- Previous investigations of the site and this PSA have identified the presence of hazardous compounds in groundwater exceeding State SCGs including: toluene, acetone, xylenes, 1,1-dichloroethane, 1,1,1-trichloroethane, 1,2-dichloropropane, chloroethane, benzene, 4-methylphenol, Aroclor-1232, and Aroclor-1248.

- This site does not pose a significant threat to human health or the environment as defined in NYCRR Part 375 - 1.4(a) because there is no confirmed evidence of the presence of hazardous waste.

- Data validation indicates acetone concentrations detected in PSA groundwater samples are not the result of laboratory or equipment decontamination error.

- The rapid decrease in acetone concentrations in groundwater at greater distance from the site indicate that this highly water soluble compound may be dispersed and diluted to non-detectable concentrations prior to reaching City Well A.

- Groundwater flow from the site is toward City Well A under the influence of high volume pumping to the municipal water supply system.

- Based on the low concentrations of contaminants found in monitoring well samples and the constituents detected in City Well A, it appears that the site is not the source of the contaminants previously detected at in this city well.

- Similar VOCs detected in City Well A and in the O-AT-KA Milk Products plant well indicate a potential contaminant source southwest of the City wellfield.

- Chemical contamination has been detected in groundwater downgradient of the site area, indicating that the site may pose a concern because of the close proximity of the municipal water supply wells.

- PSA soil samples were not tested for TCLP or EPTox, however, concentrations of contaminants indicate analysis would not result in failure of a characteristic hazardous waste test.

- Although VOC contamination exceeding SCG values have previously been found in groundwater samples from City Well A, no VOCs were detected in the PSA samples from that well.

- The PA-Score calculated for this site was 50. PA-Score sheets are presented in Appendix F.

- Contaminant migration time calculations for this site indicate that mobile contaminants already have advanced past monitoring well GW-7, and that it may take hundreds or thousands of years for the less mobile compounds to reach that location. Contaminant migration calculations are present in Appendix G.

4.2 Recommendations

Results of this PSA have identified hazardous constituents as identified by 6 NYCRR Part 371 in groundwater from monitoring wells at the Cedar Street Dump site. However, there is, lack of immediate significant threat to human health or the environment posed by this site. With regard to findings of the PSA, the following recommendations have been formulated:

- The Batavia City wells should be monitored frequently for VOCs and other selected chemicals including acetone, xylene, and 4-methylphenol.

- Periodic sampling of site monitoring wells and VOC analysis by the NYSDEC or NYSDOH would be prudent.

REFERENCE

Della Penna, R. 1994. Letter to T. Reamon of the NYSDEC regarding tire removal at the Cedar Streets Dump site.

Engineering Science. 1988. Executive Summary of the Phase I Investigation of the Cedar Street Dump. Prepared for NYSDEC (Ref. 4).

FEMA. 1982. Flood Insurance Rate Map for the City of Batavia, New York, Genesee County - Panel Number 360279-0001B. Effective Sept. 16, 1982.

NYSDEC. n.d. Laboratory Results, City of Batavia VOC History, from NYSDEC files (Ref. 2).

NYSDOH. 1982. Atlas of Community Water Systems.

NUS. 1989. Potential Hazardous Waste Site, Executive Summary for the Site Inspection Report for the Cedar Street Landfill - West Site. USEPA No. NYD981185259 (Ref. 1).

Peachey, M.J., NYSDEC. 1994a. Letter to W. Remsten regarding Cedar Street Dump Site Investigation (Ref. 6).

Peachey, M.J., NYSDEC. 1994b. Letter to R. Della Penna regarding Cedar Street Dump Site Investigation (Ref. 7).

Reamon, T., NYSDEC. 1994. Letter to R. Della Penna regarding Cedar Street Dump site reclassification
(Ref. 10).

Remtsen, W., Batavia City Administrator. 1993. Letter to P. Bush, NYSDEC, regarding Cedar Street Dump Delisting (Ref. 8).

USDA. 1967. Soil Survey of Genesee County, New York.

USGS. 1978. Topographic Maps, Batavia North 1950, photo revised 1978; Batavia South 1950, photo revised 1978.

USGS. 1988. Potential Yields of Wells in Unconsolidated Aquifers in Upstate New York - Niagara Sheet by Todd S. Miller. WRI Report 88-4076. Denver, CO: Department of the Interior.

USGS. 1989. Water Resources Data, New York Water Year 1989; Volume 3. Western New York. USGS Water-Data Report NY-89-3. Denver, CO: Department of the Interior.

Wohlers, E., GCHD. 1989. Memo to F. Ricotta, NYSDEC, regarding low level groundwater contamination, Cedar Street, Batavia, Genesee County (Ref. 3).

YEC. 1992. Engineering Investigations at Inactive Hazardous Waste Sites in New York; Phase II Investigation at the Cedar Street Dump Site, Site No. 819008 (Ref 5).

Note: References with a number (e.g., Ref. 4) are included in Appendix E of this report.

1. **SITE NAME** Cedar Street Dump

2. **SITE NUMBER** 819008

3. **TOWN/CITY/VILLAGE**
   a. Name of Town Supervisor or Mayor - William Reemtsen - City Manager
   b. Address of Village, City, or Town Hall - West Main Street, Batavia 14020
   c. Telephone Number - 315-446-3716

4. **COUNTY** Genesee

5. **REGION** 8

6. **CLASSIFICATION** 2a
   CURRENT

7. **LOCATION OF SITE**

a. Quadrangle	Batavia North, 1978, Batavia South 1978
b. Site Latitude 42° 58′ 17″N	Site Longitude 78° 10′ 0″W
c. Tax Map Numbers	Multiple - see attached sheet
d. Site Street Address	Multiple - see attached sheet

8. **BRIEFLY DESCRIBE THE SITE**

The site, now located in a manufacturing/residential area had previously been mined for sand and gravel. The resulting depressions were filled with municipal and industrial waste.

a. Area 2+16 acres b. EPA ID Number NYD981185259
c. Completed (X) Phase I (X) Phase II (X) PSA ( ) RI/FS ( ) PA/SI ( ) Other

9. **HAZARDOUS WASTE DISPOSED (Include EPA Hazardous Waste Numbers)**

None documented.

10. **ANALYTICAL DATA AVAILABLE**

a. ( ) Air (X) Groundwater ( ) Surface Water ( ) Sediment (X) Soil (X) Waste ( ) Leachate ( ) EPTox ( ) TCLP

b. Contravention of Standards or Guidance Values

Chloroethane	Toluene	Aroclor 1232
1,1 - Dichloroethane	Xylene	Aroclor 1248
Benzene	4-methylphenol	Iron
Acetone		Magnesium
		Sodium

11. **SITE DATA**

a. Nearest Surface Water: Distance 600 ft. Direction NE Classification —

b. Nearest Groundwater: Depth 20 ft. Flow Direction SE ( ) Sole Source ( ) Primary (X) Principal

c. Nearest Water Supply: Distance 2,000 ft. Direction southeast Active (x) Yes ( ) No

d. Nearest Building: Distance onsite ft Direction — Use Manufacturing

e. In State Economic Development Zone?	( ) Y	(x) N	i. Controlled Site Access?	( ) Y	(X) N
f. Crops or livestock on site?	( ) Y	(x) N	j. Exposed hazardous waste?	( ) Y	(X) N
g. Documented fish or wildlife mortality?	( ) Y	(x) N	k. HRS Score (PA-Score) = 50		

12. **SITE OWNER'S NAME(S)** 13. **ADDRESS(ES)** 14. **TELEPHONE NUMBER(S)**

Multiple - see attached sheet

PA-Score
Multiple Site Owners for the Cedar Street Dump

	Tax Map #'s
Soccio and Della Penna, Inc. P.O. Box 433 40 Ellicott Street Batavia, New York Phone #716-343-1450	084.20.10
Agway, Inc. P.O. Box 4933 Syracuse, New York 13221 Phone # 716-343-3365	084.20.1.7
American Stone Mix, Inc. 8320 Bellona Avenue Towson, MD 21204 Phone # 716-343-4741	084.20.1.14
Eastern Moulding International Elizabeth Street Batavia, New York 14020 Phone # 716-344-0220	084.20.1.24
Graham Manufacturing, Inc. 20 Florence Avenue Batavia, New York 14020 Phone # 716-343-2216	084.16.1.36
Genesee County County Building 1 Batavia, New York 14020 Phone # 716-344-2550	085.17.1.1
Genesee-Leroy Stone Products 6869 Ellicott Street Pavillion, NY 14525 Phone # 716-343-1868	085.17.1.4

APPENDIX A
SI Summary Forms

SI Data Summary

Site Name Cedar Street Dump

Site Name Cedar Street Dump

EPA Region II Date 3/9/95

Contractor Name or State Office and Address URS Consultants, Inc

GENERAL SITE INFORMATION

1. CERCLIS ID No. NYD981187024

Address 115,139, and 141 Cedar Street City Batavia

County Genesee State NY Zip Code 14020 Congressional District

2. Owner Name Multiple Owners(see attached sheet) Operator Name City of Batavia

Owner address
City State

Operator address Main Street
City Batavia State NY

3. Type of ownership (check all that apply):
■ Private ☐ Federal Agency ☐ State ■ County ☐ Municipal
☐ Other References(s) 1

4. Approximate size of property: 24 acres References(s)

5. Latitude 42 ° 59 ' 15.0 "N Longtitude 78 ° 10 ' 00 .0 "W References(s) 1

6. Site status: ☐ Active ■ Inactive ☐ Unknown References(s) 1

7. Years of operation: From: 1940s to: 1960s ☐ Unknown References(s)

8. Previous Investigations:

Type	Agency/State/Contractor	Date	
Phase I	Engineering Science	1988	References(s) 1
Phase II	YEC	1992	References(s) 1
SI	NUS FIT for USEPA	1989	References(s) 1
			References(s)
			References(s)
			References(s)

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Multiple Site Owners for the Cedar Street Dump

Soccio and Della Penna, Inc.
P.O. Box 433
40 Ellicott St.
Batavia, New York

Agway, Inc.
P.O. Box 4933
Syracuse, New York 13221

American Stone Mix, Inc.
8320 Bellona Avenue
Towson, MD 21204

Eastern Moulding International
Elizabeth Street
Batavia, New York 14020

Graham Manufacturing, Inc.
20 Florence Avenue
Batavia, New York 14020

Genesee County
County Building 1
Batavia, New York 14020

WASTE SOURCE INFORMATION

1. **Waste source types** (check all that apply)

- ☐ Constituent
- ☐ Wastestream (type) _____
- ■ Landfill
- ■ Drums
- ☐ Contaminated soil
- ☐ Land Treatment
- ☐ Tanks or non-drum containers (type) _____
- ☐ Pile (type) _____
- ☐ Surface impoundment (buried)
- ☐ Surface impoundment (backfilled)
- ☐ Other _____

Reference(s) 1

2. **Types of wastes** (check all that apply)

- ■ Organic chemicals
- ☐ Inorganic chemicals
- ■ Municipal wastes
- ☐ Radionuclides
- ☐ Metals
- ■ Pesticides/Herbicides
- ☐ Solvents
- ☐ Other _____

Reference(s) _____

3. **Summarize history of waste disposal operations:**

Operated as a municipal and C&D Landfill, any and all wastes accepted

Reference(s) Interview w/ former landfill employee

CONTINUATION PAGE FOR SOURCE CHARACTERIZATION

Source # 1 Name Former Landfill (West side of Cedar St.) Source type Landfill

Describe source: Municipal/Industrial waste from City of Batavia

Ground water migration containment: None

Surface water migration containment: None

Air migration (gas and migration) containment: _____

Physical state of wastes: ■ Liquid ■ Solid ■ Sludge/Slurry ☐ Gas ☐ Unknown

Constituent quantity of hazardous substances: _____ (specify units)

Wastestream quantity containing hazardous substances: _____ (specify units)

Hazardous substances associated with source #: ____:

_____ _____ _____

_____ _____ _____

_____ _____ _____

Reference(s) _____

Source # 2 Name Former Landfill (East side of Cedar St.) Source type Landfill

Describe source: Municipal/Industrial waste from City of Batavia

Groundwater migration containment: None

Surface water migration containment: None

Air migration (gas and migration) containment: _____

Physical state of wastes: ☐ Liquid ■ Solid ☐ Sludge/Slurry ☐ Gas ☐ Unknown

Consitutuent quantity of hazardous substances: _____ (specify units)

Wastestream quantity containing hazardous substances: _____ (specify units)

Volume of source (yd^3): _____ Area of source (ft^2): _____

Hazardous substances associated with source# _____:

_____

Reference(s) _____

5. Description of removal or remedial activities

If a removal has occurred, identify the removal authority and describe the activities. Specify the date(s) of the removal.

1. Tire removal (Soccio and Della Penna Property)

In excess of 40,000 tires have been removed under the aegis of the NYSDEC Region 8.

2. Drum Removal (Agway property)

Drums previously identified at the site have been removed by AGWAY.

Reference(s) 1, and NYSDEC files

GROUND WATER INFORMATION

1. **Groundwater drinking water use within 4 miles of site sources:**
   ■ Municipal ☐ Private ☐ Both ☐ No Drinking Water Use

   Reference(s) 2

2. **Is groundwater contaminated?**
   ☐ Yes ☐ No ☐ Uncertain but likely ☐ Uncertain but not likely
   ■ Additional sampling required
   Is analytical evidence available? ■ Yes ☐ No Reference(s) 8
3. **Is groundwater contamination attributable to the site?**
   ☐Yes ■ No ☐ Additional sampling required Reference(s)

Groundwater from monitoring wells at the site is contaminated as is shown on table GW-2.

4. **Are drinking water wells contaminated?**
   ☐Yes ■ No ☐ Uncertain but likely ☐ Uncertain but not likely
   ☐ Additional sampling required
   Is analytical evidence available? ■ Yes ☐ No Reference(s) 8
5. *** Net Precipitation** (HRS Section 3.1.2.2): 3 inches Reference(s)
6. **County average number of persons per residence:** Reference(s)

7. **Discuss general stratigraphy underlying the site.** Attach sketch of stratigraphic column.

   The site is underlain by a glacial outwash aquifer which is at least 80 feet thick.

Reference(s) 1,8

8. Using Table GW-1 (next page), summarize geology underlying the site (starting with formation #1 as closest to ground surface). Indicate if formation is interconnected with overlying formation.

TABLE GW-1: SITE GEOLOGY

NAME OF FORMATION	INTERCONNECT (yes/no)	TYPE OF MATERIAL	AVERAGE THICKNESS (feet)	HYDRAULIC CONDUCTIVITY (cm/sec)	USED FOR DRINKING WATER?
Glacial Outwash Aquifer		Sand	up to 80'		Yes

Reference(s):

9. Does a karst aquifer underlie any site source?
☐ Yes ■ No **Reference(s):**

10. Depth to top of aquifer: See report **feet** **Elevation:** Varies across the site, see report

11. In the table below, enter the number of people obtaining drinking water form wells located within 4 miles of the site. For each aquifer, attach population calculation sheets. Key aquifer to formations listed in Table GW-1.

POPULATION SERVED BY WELLS WITHIN DISTANCE CATEGORIES BY AQUIFER

DISTANCE OF WELL(S) FROM SITE SOURCES	AQUIFER A: INCLUDES FORMATIONS -Glacial Outwash Aquifer	AQUIFER B: INCLUDES FORMATIONS __	AQUIFER C: INCLUDES FORMATIONS
1/4 MILE OR LESS	8000		
>1/4 MILE TO 1/2 MILE			
>1/2 MILE TO 1 MILE			
>1 MILE TO 2 MILES			
>2 MILES TO 3 MILES			
>3 MILES TO 4 MILES			

Reference(s) 1,2

12. Is ground water from multiple wells blended prior to distribution?
■ Yes ☐ No Reference(s) 1,2

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13. Is groundwater blended with surface water?

■ Yes ☐ No Reference(s) 1,2

Briefly describe: The City of Batavia Municipal water supply uses a combination of wells and Tonawanda Creek to supply approximately 16,000 residents in the area.

14. **Distance from any incompletely contained source available to groundwater to nearest drinking water** (HRS Section 3.3.1): 2000 feet Reference(s) 1

15. **Briefly describe standby drinking water wells within 4 miles of sources at the site:**

Reference(s)

16. **Using Table GW-2, summarize groundwater analytical results for all sampling investigations.** Include and identify background water sample results.

17.* **Groundwater resources within 4 miles of site sources** (HRS Section 3.3.3):

- ☐ Irrigation (5-acre minimum) of commercial food or commercial forage crops
- ☐ Commercial livestock watering
- ■ Ingredient in commercial food preparation
- ☐ Supply for commercial aquaculture
- ☐ Supply for major or designated water recreation area, excluding drinking water use
- ☐ Water usable for drinking water but no drinking water wells are within 4 miles
- ☐ None of the above

Reference(s)

18. **Wellhead protection area (WHPA) within 4 miles of site sources** (HRS Section 3.3.4):

- ☐ Source with non-zero containment factor value lies within or above WHPA
- ☐ Observed groundwater contamination attributable to site source(s) lies within WHPA
- ■ WHPA lies within 4 miles of site sources
- ☐ None

References(s)

Additional groundwater pathway description:

Groundwater enters several man-made ponds which were part of the former sand and gravel quarry. These ponds are used illegally by local residents for swimming and fishing.

Reference(s) 8

TABLE GW-2: ANALYTICAL RESULTS FOR GROUNDWATER PATHWAY

SAMPLE ID & DATE	TYPE OF WELL	SCREENED INTERVAL	HAZARDOUS SUBSTANCE	CONCENTRATION (ppb)	DETECTION LIMIT	REFERENCES
GW-2D 1/6/95	Irrigation ■ Monitoring ☐ Drinking water People served _____ ☐ Other _____		Acetone Sodium	85 86600		
GW-4D 1/6/95	☐ Irrigation ■ Monitoring ☐ Drinking water People served _____ ☐ Other _____		Acetone Iron Sodium	2600 920000 50000		
GW-5D 1/6/95	Irrigation ■ Monitoring ☐ Drinking water People served _____ ☐ Other _____		Acetone Toluene Xylene Iron Sodium	500 15 6 461 52000		
GW-8D 1/6/95	Irrigation ■ Monitoring ☐ Drinking water People served _____ ☐ Other _____		Acetone Toluene Xylene Iron Magnesium Sodium	940 47 6 1590 53300 59400		
GW-8S 1/6/95	Irrigation ■ Monitoring ☐ Drinking water People served _____ ☐ Other _____		Iron Lead Magnesium Manganese Sodium	23600 22.5 54800 483 48000		
GW-9D 1/6/95	Irrigation ■ Monitoring ☐ Drinking water People served _____ ☐ Other _____		Iron Sodium	1080 53700		
GW-9S 1/6/95	Irrigation ■ Monitoring ☐ Drinking water People served _____ ☐ Other _____		Chloroethane 1,2-Dichloroethane Benzene Xylene 4-Methylphenol Aroclor - 1232 Aroclor - 1248 Iron Lead Magnesium Manganese Sodium	23 9 3 8 12 5 1.7 46700 50.5 96300 936 48300		

SURFACE WATER INFORMATION

Complete this section of the data summary for each watershed if there are multiple watersheds. Photocopy this page if necessary.

1. **Describe surface water migration path from site sources to at least 15 miles downstream.** Attach a sketch of the surface water migration route.

Surface water from the site drains into the quarry ponds on the eastern portion of the site or into storm sewers. Tonawanda Creek is over 1 mile from the site and there is no direct overland connection.

Reference(s) 7

2. **Is surface water contaminated?**
   ☐ Yes ☐ No ☐ Uncertain but likely ■ Uncertain but not likely ☐ Additional sampling required
   Is analytical evidence available? ☐ Yes ☐ No Reference(s) 8

3. **Is surface water contamination attributable to the site?**
   ☐ Yes ■ No ☐ Additional sampling required Reference(s) 8

4. **Floodplain category in which site sources are located** (check all that apply):
   ☐ 1-year ☐ 10-year ■ 100-year ■ 500-year ☐ None Reference(s) 5

5. **Describe flood containment for each source** (HRS Section 4.1.2.1.2.2):

Source #1	W. Side of Cedar St.	Flood containment	None
Source #2	E. Side of Cedar St.	Flood containment	None
Source #3		Flood containment	
Source #		Flood containment	
Source #		Flood containment	
Source #		Flood containment	
Source #		Flood containment	

Reference(s) 8

6. **Shortest overland distance to surface water from any source** (HRS Section 4.1.2.1.2.1.3):
   4000 feet Reference(s) 7

7. **Size of drainage area** (HRS Section 4.4.3): ___ Acres Reference(s)

8.* Describe predominant soil group within the drainage area (HRS Section 4.1.2.1.2.1.2).

Most of the site was originally covered with Palmyra Gravelly Loam which is developed on Tonawanda Creek outwash of calcareous gravels. Much of the original soil was removed during previous operations at the site.

Reference(s)

9. *2-year 24-hour rainfall (HRS Section 4.1.2.1.2.1.2)

_____ inches Reference(s)_____

10. *Elevation of the bottom of nearest surface water body:

_____ feet above sea level Reference(s)_____

11. *Elevation of top of uppermost aquifer:

_____ feet above sea level Reference(s)_____

12. Predominant type of water body between probable point of entry to surface water and nearest drinking water intake:

■ River ☐ Lake Reference(s)_____

13. Identify all drinking water intakes, fisheries, and sensitive environments within 15 miles downstream.

TARGET NAME/TYPE	WATER BODY TYPE	DISTANCE FROM PPE	FLOW (CFS)	TARGET CHARACTERISTICS[1]	TARGET SAMPLED?
City of Batavia Water Intakes	Stream	5000'	238	8,000	No

[1] If target is a drinking water intake, provide number of people served by intake.
If target is a fishery, provide species and annual production of human food chain organisms (pounds per year).
If target is a wetland, specify wetland frontage (in miles). Attach calculation pages.

Reference(s) 2,3,7

14. Is surface water drinking water blended prior to distribution?

■ Yes ☐No Reference(s) 1,2

See groundwater response #13 on page 8.

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15. Describe any standby drinking water intakes within 15 miles downstream.

None

Reference(s) _____

16. ***Surface water resources within 15 miles downstream** (HRS Section 4.1.2.3.3):

- ☐ Irrigation (5-acre minimum) of commercial food or commercial storage crops
- ☐ Commercial livestock watering
- ☐ Ingredient in commercial food preparation
- ■ Major or designated water recreation area, excluding drinking water use
- ☐ Water designated by the state for drinking water use but is not currently used.
- ☐ Water usable for drinking water but no drinking water intakes within 15 miles downstream
- ☐ None of the above

Reference(s) _____

17. **Using Table SW-1, summarize surface water analytical results for all sampling investigations.** Include and identify background sample results.

TABLE SW-1: SUMMARY OF ANALYTICAL RESULTS FOR SURFACE WATER PATHWAY

SAMPLE ID & DATE	SAMPLE TYPE	SAMPLE OBJECTIVE	TARGET DATE	HAZARDOUS SUBSTANCE	CONCENTRATION (SPECIFY UNITS)	DETECTION LIMIT	REFERENCES
None Collected	☐ Aqueous ☐ Sediment ☐ Other	☐ Release ☐ Fishery ☐ Drinking water ☐ Sensitive environment Distance from PPE					
	☐ Aqueous ☐ Sediment ☐ Other	☐ Release ☐ Fishery ☐ Drinking water ☐ Sensitive environment Distance from PPE					
	☐ Aqueous ☐ Sediment ☐ Other	☐ Release ☐ Fishery ☐ Drinking water ☐ Sensitive environment Distance from PPE					
	☐ Aqueous ☐ Sediment ☐ Other	☐ Release ☐ Fishery ☐ Drinking water ☐ Sensitive environment Distance from PPE					
	☐ Aqueous ☐ Sediment ☐ Other	☐ Release ☐ Fishery ☐ Drinking water ☐ Sensitive environment Distance from PPE					
	☐ Aqueous ☐ Sediment ☐ Other	☐ Release ☐ Fishery ☐ Drinking water ☐ Sensitive environment Distance from PPE					
	☐ Aqueous ☐ Sediment ☐ Other	☐ Release ☐ Fishery ☐ Drinking water ☐ Sensitive environment Distance from PPE					
	☐ Aqueous ☐ Sediment ☐ Other	☐ Release ☐ Fishery ☐ Drinking water ☐ Sensitive environment Distance from PPE					
	☐ Aqueous ☐ Sediment ☐ Other	☐ Release ☐ Fishery ☐ Drinking water ☐ Sensitive environment Distance from PPE					

SOIL INFORMATION

1. **Is surficial soil or contamination present at the site?**
   ☐Yes ■ No ☐ Uncertain but likely ☐ Unlikely but not likely
   ☐ Additional sampling required
   Is analytical evidence available? ■ Yes ☐ No Reference(s) 1, 8

2. **Is surficial or soil contamination attributable to the site?**
   ☐ Yes ■ No ☐ Additional sampling required

3. **Is surficial contamination on the property and within 200 feet of a residence, school, daycare center, or workplace?**
   ☐ Yes ■No ☐ Uncertain but likely ☐ Uncertain but not likely
   ☐ Additional sampling required
   Is analytical evidence available? ■ Yes ☐ No Reference(s) 1,8

4. ***Total area of surficial contamination** (HRS Section 5.2.1.2)
   _____ square feet Reference(s)_____

5. ***Attractiveness/accessibility of the areas of observed contamination** (HRS Section 5.2.1.1).
   Check all that apply:

   ☐ Designated recreational area
   ■ Used regularly, or accessible and unique recreational area
   ☐ Moderately accessible with some use
   ☐ Slightly accessible with some use
   ☐ Accessible with no use
   ☐ Inaccessible with some use
   ☐Inaccessible with no use
   Reference(s) _____

6. **Using Table SE-1, summarize analytical results detecting surficial contamination within 200 feet of a residence, school daycare center, or workplace.** Include and identify background sample results.

7. **Using Table SE-2, summarize analytical results detecting surficial contamination within the boundary of a resource or a terrestrial sensitive environment.** Include and identify background sample results if not listed in Table SE-1.

8. **Population within 1-mile travel distance from site.** Do not include populations from Table SE-1.

DISTANCE FROM SITE SOURCES	POPULATION
1/4 mile or less	
> 1/4 to 1/2 mile	
> 1/2 to 1 mile	

1
Reference(s) _____

TABLE SE-1: ANALYTICAL RESULTS FOR SOIL EXPOSURE PATHWAY

SAMPLE ID & DATE	SAMPLE DEPTH	TYPE OF PROPERTY	POPULATION	HAZARDOUS SUBSTANCE	CONCENTRATION (SPECIFY UNITS)	DETECTION LIMIT	REFERENCES
NA		☐ Residence ☐ School ☐ Daycare center ☐ Workplace					
		☐ Residence ☐ School ☐ Daycare center ☐ Workplace					
		☐ Residence ☐ School ☐ Daycare center ☐ Workplace					
		☐ Residence ☐ School ☐ Daycare center ☐ Workplace					
		☐ Residence ☐ School ☐ Daycare center ☐ Workplace					
		☐ Residence ☐ School ☐ Daycare center ☐ Workplace					
		☐ Residence ☐ School ☐ Daycare center ☐ Workplace					
		☐ Residence ☐ School ☐ Daycare center ☐ Workplace					

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TABLE SE-2: ANALYTICAL RESULTS FOR SOIL EXPOSURE PATHWAY

SAMPLE ID & DATE	SAMPLE DEPTH	TYPE OF TARGET	HAZARDOUS SUBSTANCE	CONCENTRATION (SPECIFY UNITS)	DETECTION LIMIT	REFERENCES
NA		☐ Terrestial sensitive environment ☐ Resources* ☐ Commercial agriculture ☐ Commercial silviculture ☐ Commercial livestock production or grazing				
		☐ Terrestial sensitive environment ☐ Resources* ☐ Commercial agriculture ☐ Commercial silviculture ☐ Commercial livestock production or grazing				
		☐ Terrestial sensitive environment ☐ Resources* ☐ Commercial agriculture ☐ Commercial silviculture ☐ Commercial livestock production or grazing				
		☐ Terrestial sensitive environment ☐ Resources* ☐ Commercial agriculture ☐ Commercial silviculture ☐ Commercial livestock production or grazing				

AIR INFORMATION

1. **Is air contamination present at the site?**
☐ Yes ■ No ☐ Uncertain but likely ☐ Uncertain but not likely
☐ Additional sampling required
Is analytical evidence available? ☐ Yes ■ No Reference(s)_____

2. **Is air contamination attributable to the site?**
☐ Yes ■No ☐ Addtional sampling required

3. **Are populations, sensitive environments, or wetlands exposed to airborne hazardous substances released from the site?**
☐ Yes ■ No ☐ Uncertain but likely ☐ Uncertain but not likely
☐ Additional sampling required
Is analytical evidence available? ☐ Yes ☐ No Reference(s)_____

4. **Evidence of biogas release from any of the following source types at the site:**
☐ Below-ground containers or tanks ☐ Landfill ☐ Buried surface impoundment
Reference(s) _____

5.* **Particulate migration potential factor value:** ___(HRS Figure 6-2)

6.* **Particulate mobility factor value:** _____ (HRS Figure 6-3)

7. **Distance from any incompletely contained source to nearest residence or regularly occupied area:** _____ miles Reference(s) _____

8. **Population within 4 miles of site sources.**

DISTANCE FROM SITE SOURCES	POPULATION
0 (within site sources)	
1/4 mile or less	
>1/4 to 1/2 mile	
>1/2 to 1 mile	
>1 to 2 miles	
>2 to 3 miles	
>3 to 4 miles	

Reference(s)_____

9.* **Resources within 1/2 mile of site sources** (HRS Section 6.3.3):
☐ Commercial agriculture
☐ Commercial silviculture
☐ Major or designated recreation area
■ None of the above
Reference(s) _____

10. Sensitive environments and wetlands within 4 miles of the site.

NAME/DESCRIPTION/ LOCATION OF SENSITIVE ENVIRONMENT OR WETLAND	DISTANCE FROM SITE (MILES)	TYPE OF SENSITIVE ENVIRONMENT	WETLAND SIZE (ACRES)
NA			

References(s) _____

11. **Using Table Air-1, summarize air analytical results for all sampling investigations.** Include and identify background sample results.

ADDITIONAL INFORMATION AND COMMENTS

Reference(s)

TABLE AIR-1: SUMMARY OF ANALYTICAL RESULTS FOR AIR PATHWAY

SAMPLE ID&DATE	SAMPLE TYPE	DISTANCE FROM SITE (MILES)	TARGET(S) WITHIN DISTANCE CATEGORY	HAZARDOUS SUBSTANCE	CONCENTRATION (SPECIFY UNITS)	DETECTION LIMIT	REFERENCES
No samples collected			☐Number of people____ ☐Name of sens.environment _____ _____ ☐Wetland acreage__				
			☐Number of people____ ☐Name of sens.environment _____ _____ ☐Wetland acreage__				
			☐Number of people____ ☐Name of sens.environment _____ _____ ☐Wetland acreage____				
			☐Number of people____ ☐Name ofsens.environment _____ _____ ☐Wetland acreage_____				
			☐Number of people____ ☐Name ofsens.environment_____ _____W etland acreage_____				

REFERENCE LIST

1. YEC, Inc., 1992. Engineering Investigations at Inactive Hazardous Waste Sites, Phase II Investigation of the Cedar Street Dump Site.

2. NYSDOH, 1982. Atlas of Community Water Systems

3. USGS, 1989. Water Resources Data, New York Water Year 1989; Volume 3. Western New York. USGS Water-Data Report NY-89-3.

4. USGS, 1988. Potential Yields of Wells in Unconsolidated Aquifers in Upstate New York - Niagara Sheet by Todd S. Miller. WRI Report 88-4076.

5. FEMA, 1982. Flood Insurance Rate Map for the City of Batavia, New York, Genesee County - Panel Number 360279-0001B. Effective Sept. 16,1982.

6. USDA, 1967. Soil Survey of Genesee County, New York.

7. USGS Topographic Maps, Batavia North 1950, photorevised 1978; Batavia South 1950, photorevised 1978.

8. URS Consultants, 1995. Field Investigation and Analytical Results of the Cedar Street Dump PSA.

APPENDIX B
Boring Logs, Well Construction Details and Well Development/Purge Logs

SUMMARY OF BORING INFORMATION AND WELL CONSTRUCTION DETAILS

Boring ID	Date Completed	Elevation Ground Surface (feet msl)	Total Depth (feet)	Screen Interval (feet)	Depth to Groundwater 1/5/95 (feet)	Groundwater Elevation 1/5/95 (feet msl)
GW-1S	2/20/91	889.89	24.0	13.0-23.0	18.10	874.84
GW-2S	2/21/91	891.97	26.0	15.0-25.0	21.48	873.11
GW-3S	2/20/91	885.47	24.0	13.0-23.0	19.18	869.60
GW-4S	2/21/91	902.01	34.5	24.0-34.0	32.40	872.33
GW-5S	2/19/91	895.66	34.0	24.0-34.0	30.31	868.24
GW-6S	2/18/91	882.84	21.0	10.0-20.0	16.55	869.13
GW-7S	2/22/91	894.72	32.0	22.0-32.0	30.57	866.55
GW-8S	12/16/94	900.28	35.0	25.0-35.0	32.50	869.82
GW-9S	12/20/94	893.51	35.0	22.0-32.0	26.03	869.96
GW-2D	12/19/94	892.04	62.0	51.5-61.5	21.50	873.02
GW-4D	12/15/94	901.86	70.0	59.0-69.0	32.13	871.65
GW-5D	12/9/94	896.26	70.0	59.0-69.0	29.74	868.28
GW-8D	12/16/94	900.60	70.0	59.0-69.0	33.44	869.53
GW-9D	12/21/94	893.32	65.0	54.0-64.0	25.59	870.30

All depths are referenced to ground surface.

YEC, INC.

Page 1 of 1 **Drilling Log**

Project Cedar Street Dump Owner

Location Batavia, N.Y. W.O. Number A0043

Well Number MW-2 Total Depth 26' Diameter 4"

Surface Elevation 891.97 Water Level: Initial 17.7' 24-hrs 18.79 TOC

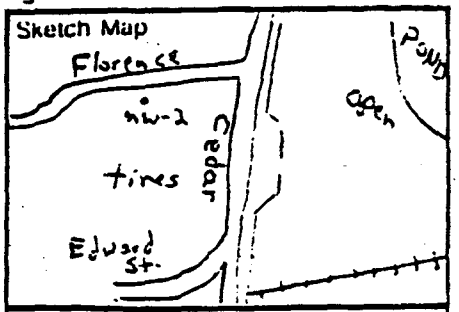
Screen: Dia. 2" Length 10' Slot Size 10

Casing: Dia. 2" Length 28' Type PVC

Drilling Company Buffalo Drilling Drilling Method 4¼" I.D. H.S.A.

Driller Larry Schroeder Log By BC Date Drilled 2-21-91

Sketch Map



Notes
down gradient

Depth (Feet)	Graphic Log	Well Construction	Sample Number	Blows to Sampler 6" 12" 18" 24"	Recovery	Description/Soil Classification (Color, Texture, Structures)
0						
2'						
4'			1	8 12 14 18	2	4-6' lt brn-md brn Fn-crs sd, some Fn-md gvl, ltl slt moist, loose-firm Tip = 8.3
6'						
8'						
10'			2	13 32 30 24	3.2	9-11' lt-md brn Fn-crs sd + Fn-md gvl. dry-moist, Firm, dense Tip = 1
12'						11-14' inc. gvl + cobble content No Fines md sd to cobble size
14'						
16'			3	20 20 16 20	1.5	14-16' md-crs sd + Fn-crs gvl. weathering RC's of gvl size firm-dense, dry-moist Tip = 0
18'			4	8 9 11 12	2.3	16-18' wet lt-md brn Fn-md gvl, ltl slt, Fn-crs sd. Tip = 0 at 16.5' Fn-crs sd, ltl. slt, Firm-loose
20'			5	17 42 44 24	2.7	18-20' Augering sd-blowing, giving high counts Fn-crs sd to gvl. loose, firm, wet Tip = 0
22'			6	18 24 14 18	2	20-22' Fn-crs sd. ltl Fn-md gvl. loose, firm wet
24'			7	16 18 32 38	2	22-24' Fn-crs sd to 23.5' sharp cntct w/ slt bed ½" thk grdng back to Fn sd w/ ltl. slt. Firm-dense Tip = 0
26'			8	9 13 19 19	2	24-26' md-crs sd. to 24.5' grdng to v. Fn sd + slt.

Well construction materials
3½ bags #2 quartz sand
½ bucket 3/8" bentonite pellets
3 bags grout

URS CONSULTANTS, Inc.

TEST BORING LOG
BORING NO. GW-2D

PROJECT: CEDAR STREET DUMP, BATAVIA, NY
SHEET NO. 1 OF 2
CLIENT: NYS DEPT OF ENVIRONMENTAL CONSERVATION
JOB NO.: 0535245.09
BORING CONTRACTOR: TECHNICAL DRILLING SERVICES
BORING LOCATION: N SIDE OF WEST FILL AREA

GROUND WATER:					CAS.	SAMP	CORE	TUBE
DATE	TIME	LEV	TYPE	TYPE		SPLIT SPOON		
1/5/95		21.50'	BGS	DIA.		2"		
		870.54'	AMSL	WT.		140#		
				FALL		30"		
				• POCKET PENETROMETER READING				

GROUND ELEVATION: 892.04
DATE STARTED: 12/16/94
DATE FINISHED: 12/19/94
DRILLER: CARL RENGERT
GEOLOGIST: ANDRE LAPRES
REVIEWED BY: DUANE LENHARDT

DEPTH FT	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY ROD %	DESCRIPTION COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS
5										REFER TO YEC DRILLING LOG MW-2 FOR DESCRIPTION 0-26 FT.
10										
15										
20										
25										
30										
35										

COMMENTS

PROJECT NO. 0535245.09

URS CONSULTANTS, Inc.

TEST BORING LOG
BORING NO. GW-2D

PROJECT: CEDAR STREET DUMP, BATAVIA, NY
SHEET NO. 2 OF 2

CLIENT: NYS DEPT. OF ENVIRONMENTAL CONSERVATION
JOB NO. : 05.35245.09

DEPTH FT	STRATA	SAMPLE NO.	SAMPLE TYPE	SAMPLE BLOWS PER 6"	SAMPLE RECOVERY RQD %	DESCRIPTION COLOR	DESCRIPTION CONSISTENCY HARDNESS	DESCRIPTION MATERIAL DESCRIPTION	DESCRIPTION CLASS USCS	REMARKS	PID
35											
		S-1	SS	14 12 / 10 12	80%	BROWN	MEDIUM DENSE	MEDIUM-FINE SAND. WELL SORTED. WET.	SM		0
40		S-2	SS	17 25 / 15 18	70%		DENSE				0
45		S-3	SS	12 14 / 16 16	70%		MEDIUM DENSE	MEDIUM SAND.		WATER ADDED TO BOREHOLE TO CONTROL RUNNING SAND.	0
50		S-4	SS	10 12 / 25 20	100%	GRAY	DENSE				0
										RUNNING SAND & DIFFICULT DRILLING.	
55		S-5	SS	20 31 / 25 22	100%	BROWN	VERY DENSE			SAMPLE S-5 RETAINED FOR GEOTECHNICAL ANALYSIS.	0
								BECOMING GRAVELLY.	SW		
60		S-6	SS	35 41 / 50/.2	50%	GRAY				SAMPLE S-6 RETAINED FOR CHEMICAL ANALYSIS.	0
		S-7	SS	50/.1	0%			BORING TERMINATED AT 62 FT.		AUGER REFUSAL AT 62 FT SAMPLER REFUSAL AT 62.1 FT.	
65											

COMMENTS BORING ADVANCED WITH MOBILE DRILL B-57 DRILL RIG & 4.25" I.D HOLLOW STEM AUGER. 2" PVC MONITORING WELL INSTALLED TO 61.5 FT WITH 10 FT SCREEN.

PROJECT NO. 05.35245.09
BORING NO. GW-2D

YEC, INC.

Page ____ of ____ **Drilling Log**

Project Cedar Street Dump Owner

Location Batavia, N.Y. W.O. Number A0043

Well Number MW-4 Total Depth 35' Diameter 4"

Surface Elevation 902.01' Water Level: Initial 27' 24-hrs 29.51'

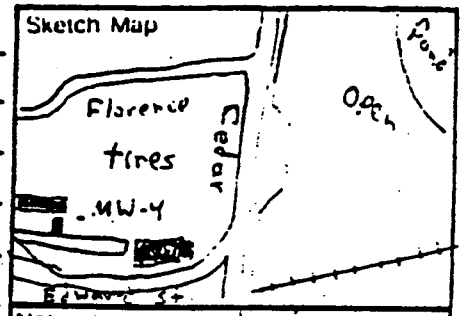
Screen: Dia. 2" Length 10' Slot Size 10

Casing: Dia. 2" Length 37' Type PVC

Drilling Company Buffalo Drilling Drilling Method 4¼" I.D. H.S.A.

Driller Larry Shroeder Log By BC Date Drilled 2-21-91

Sketch Map



Notes down gradient

Depth (Feet)	Graphic Log	Well Construction	Sample Number	Blows to Sampler 6" 12" 18" 24"	Recovery	Description/Soil Classification (Color, Texture, Structures)
0						0-4' cuttings dk brn-blk gvly loam + peat dry, moist cobbles @ 2.5'
4'			1	12 8 12 16	15	4-6' 0.2' clayey peat 0.3' Fn-crs gravl, some Fn-crs sd Tip-4-5 1.0' Fn-crs sd. 0.5' Fn-crs gravl (r.f.) dry, loose-dense
8'						
10'			2	22 28 21 37	2	9-11' lt.-md. Brn Fn-crs gravl. + sd. ltl. slt dry Tip=4-5
12'						moist slt @ 13' then more Fn-ters sd. + gravl.
14'						
16'			3	28 30 45 40	2	14-16' lt. brn/blue Fn-crs sd + Fn-crs gravl dense, dry Tip=4-5
18'						
20'			4	9 25 26 20	15	19-21' Fn-crs sd, ltl. Fn-md gravl. moist, loose-dense Tip-8
22'						
24'			5	20 20 21 21	2	24-26' same (sd + gravl.)
26'						
28'						
30'			6	10 16 20 20	2	29-31' lt. brn Fn-md sd, wet, Firm water at 29'
32'			7	10 17 32 47	2	31-33' lt. brn Fn-md sd grading into slty sd + silt @ 32.5'
34'			8	5 10 25 20	2	33-35' silt acting as aquitard-accumulating water above lt brn Fn-md sd to 34.5 then V. Fn sd + slt to 35' Firm, loose
36'						

Well construction materials

3 bags #2 quartz sand
½ bucket 3/8" bentonite pellets
6 bags grout

URS CONSULTANTS, Inc.

TEST BORING LOG
BORING NO. GW-4D

PROJECT: CEDAR STREET DUMP, BATAVIA, NY
SHEET NO. 1 OF 2
CLIENT: NYS DEPT. OF ENVIRONMENTAL CONSERVATION
JOB NO. : 0535245.09
BORING CONTRACTOR: TECHNICAL DRILLING SERVICES
BORING LOCATION: SW SIDE OF WEST FILL AREA
GROUND ELEVATION: 901.86
DATE STARTED: 12/9/94
DATE FINISHED: 12/15/94
DRILLER: CARL RENGERT
GEOLOGIST: ANDRE LAPRES
REVIEWED BY: DUANE LENHARDT

GROUND WATER:					CAS.	SAMP	CORE	TUBE
DATE	TIME	LEV	TYPE	TYPE		SPLIT SPOON		
1/5/95		32.13'	BGS	DIA.		2"		
		869.73'	AMSL	WT.		140#		
				FALL		30"		
				* POCKET PENETROMETER READING				

DEPTH FT	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY ROD %	DESCRIPTION COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS
5										REFER TO VEC DRILLING LOG MW-4 FOR DESCRIPTION 0-35 FT
10										
15										
20										
25										
30										
35										

COMMENTS

PROJECT NO. 0535245.09

URS CONSULTANTS, Inc.

TEST BORING LOG
BORING NO. GW-4D

PROJECT: CEDAR STREET DUMP, BATAVIA NY
SHEET NO. 2 OF 2

CLIENT: NYS DEPT. OF ENVIRONMENTAL CONSERVATION
JOB NO.: 053S245.09

DEPTH FT	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY ROD %	DESCRIPTION COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS	PID
35										WATER TABLE NOTED AT 30 FT.	
		S-1	SS	20 36 / 50/4	40%	BROWN	VERY DENSE	SILTY FINE SAND WITH INTERBEDDED MEDIUM SAND. TRACE GRAVEL. WET.	SW	S-1 SAMPLER PUSHING ROCK	0
40											
		S-2	SS	15 16 / 17 40	90%		DENSE			WATER ADDED TO BOREHOLE TO CONTROL RUNNING SAND.	0
45											
		S-3	SS	18 18 / 22 26	100%			BECOMING MEDIUM SAND.	SM		0
50											
		S-4	SS	15 17 / 18 30	100%			BECOMING MEDIUM FINE SAND.			0
55											
		S-5	SS	18 26 / 27 30	100%		VERY DENSE				0
60											
		S-6	SS	15 25 / 41 39	100%	GRAY				COMPOSITE SAMPLES 60-70' RETAINED FOR CHEMICAL & GEOTECHNICAL ANALYSIS.	0
65											
		S-7	SS	16 18 / 41 31	100%						0
		S-8	SS	17 20 / 40 40	100%						0
70								BORING TERMINATED AT 70 FT.			

COMMENTS BORING ADVANCED WITH MOBILE DRILL B-57 DRILL RIG & 4.25" ID HOLLOW STEM AUGER. 2" PVC MONITORING WELL INSTALLED TO 69 FT WITH 10 FT SCREEN

PROJECT NO. 053S245.09
BORING NO. GW-4D

1-3205A

YEC, INC.

Page 1 of 1 **Drilling Log**

Project Cedar street Dump Owner

Location Batavia, N.Y. W.O. Number A0043

Well Number MW-5 Total Depth 34' Diameter 4"

Surface Elevation 895.66' Water Level: Initial 24.5 ground 24-hrs 27.81' TOC

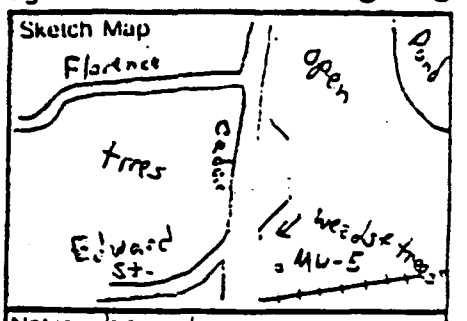
Screen: Dia. 2" Length 10' Slot Size 10

Casing: Dia. 2" Length 37' Type PVC

Drilling Company Buffalo Drilling Drilling Method 4¼ I.C. HSA.

Driller Larry Schroeder Log By BC Date Drilled 2-19-91

Sketch Map



Notes deepest down gradient

Depth (Feet)	Graphic Log	Well Construction	Sample Number	Blows to Sampler 6" 12" 18" 24"	Recovery	Description/Soil Classification (Color, Texture, Structures)
0						
2'						
4'						
6'			1	9 12 9 6	.5	4.5-6.5' Fill oily lt.brn-blk cinders, lt br/wht. cly dry-moist then wht. brn-blk sd + slt. brick at bottom Hnu <5
8'						
10'			2	3 4 9 6	.8	9.5-11.5' Fill brick (salt texture) then blk, wht&brn sndy loam (moist) dry lt. red weathered brick-pinkish dry sndy Fill. Hnu <5
12'						
14'						
16'			3	4 2 2 3	.5	14.5-16.5' Fill Hnu 10 units Fill dry-moist lt. br-lt red sndy loam w/ glass + cinders
18'						
20'			4	13 27 25 29	2	19.5-21.5' crs. grav. + crs sd slightly moist Tip - 7 units
22'						
24'						
26'			5	23 25 25 14	1.6	24.5-26.5' Wet Fn-crs. grav. some med.-crs sd ltgy/lt.brn, tr. slt. lt. red tip-5
28'			6	12 12 16 24	1.	26.5-28.5' Lt. Brn. strat. sd Fn at top w/ lt slt, Crs grvl to Fn-crs
30'			7	spoon refusal @ 30"	1.5	28.5-30' Brn Fn-crs. sd, tr. slt, ltl Fn-crs. grvl wet tip-5
32'			8	3 12 19 21	2	30-32': lt. brn Fn sd wet tip-9.8
34'			9	6 12 36 43	2'	32-34' mod-lt. brn Fn. sd wet + loose some blow in

Well construction Materials

2 bags #2 quartz sand

3/4 bucket bentonite

4 bags grout which was pumped in

URS CONSULTANTS, Inc.

TEST BORING LOG
BORING NO. GW-5D

PROJECT: CEDAR STREET DUMP, BATAVIA, NY
CLIENT: NYS DEPT OF ENVIRONMENTAL CONSERVATION
BORING CONTRACTOR: TECHNICAL DRILLING SERVICES

SHEET NO. 1 OF 2
JOB NO.: 0535245.09
BORING LOCATION: S SIDE OF EAST FILL AREA
GROUND ELEVATION: 896.26
DATE STARTED: 12/7/94
DATE FINISHED: 12/8/94
DRILLER: CARL RENGERT
GEOLOGIST: ANDRE LAPRES
REVIEWED BY: DUANE LENHARDT

GROUND WATER:					CAS.	SAMP	CORE	TUBE
DATE	TIME	LEV	TYPE	TYPE		SPLIT SPOON		
1/5/95		29.74'	BGS	DIA.		2"		
		866.52	AMSL	WT.		140#		
				FALL		30"		
				* POCKET PENETROMETER READING				

DEPTH FT	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY ROD %	DESCRIPTION COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS
5										REFER TO YEC DRILLING LOG MW-5 FOR DESCRIPTION 0-34 FT
10										
15										
20										
25										
30										
35										

COMMENTS

PROJECT NO. 0535245.09

URS CONSULTANTS, Inc.

TEST BORING LOG
BORING NO. GW-5D

PROJECT: CEDAR STREET DUMP, BATAVIA, NY
SHEET NO. 2 OF 2

CLIENT: NYS DEPT. OF ENVIRONMENTAL CONSERVATION
JOB NO.: 053S245.09

DEPTH FT	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY ROD %	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS	PID
35											
		S-1	SS	18 17 / 18 16	40%	BROWN	DENSE	FINE TO MEDIUM SAND. TRACE TO SOME GRAVEL & SILT. OCCURRENCE OF INTERBEDDED COARSE SAND.	SW		0
		S-2	SS	16 16 / 15 15	60%						0
40		S-3	SS	10 9	100%						0
		S-4	SS	10 11 / 11 11	80%		MEDIUM DENSE				0
		S-5	SS	13 14 / 15 15	80%						0
45		S-6	SS	14 16 / 18 18	80%		DENSE				0
										WATER ADDED TO BOREHOLE TO CONTROL RUNNING SAND	
50		S-7	SS	13 14 / 18 20	100%						0
55		S-8	SS	18 40 / 50/4	80%		VERY DENSE	INCREASED GRAVEL CONTENT			0
60		S-9	SS	18 20 / 31 29	100%					SAMPLE S-9 RETAINED FOR GEOTECHNICAL ANALYSIS	0
65		S-10	SS	32 45 / 42 38	100%					SAMPLE S-10 RETAINED FOR CHEMICAL ANALYSIS	0
70		S-11	SS	41 50/3	60%						0
								BORING TERMINATED AT 70.0 FT.			

205A

COMMENTS: BORING ADVANCED WITH MOBILE DRILL B-57 DRILL RIG & 4.25" ID HOLLOW STEM AUGER. 2" PVC MONITORING WELL INSTALLED TO 69 FT WITH 10 FT SCREEN

PROJECT NO. 053S245.09
BORING NO. GW-5D

URS CONSULTANTS, Inc.

TEST BORING LOG
BORING NO. GW-85ED

PROJECT: CEDAR STREET DUMP, BATAVIA, NY
CLIENT: NYS DEPT. OF ENVIRONMENTAL CONSERVATION
BORING CONTRACTOR: TECHNICAL DRILLING SERVICES
SHEET NO. 1 OF 2
JOB NO. : 05325245.09
BORING LOCATION: S OF WEST FILL AREA
GROUND ELEVATION: S-900.28 D-900.60
DATE STARTED: 12/13/94
DATE FINISHED: 12/16/94
DRILLER: CARL RENGERT
GEOLOGIST: ANDRE LAPRES
REVIEWED BY: DUANE LENHARDT

GROUND WATER:					CAS.	SAMP	CORE	TUBE
DATE	~~TIME~~	LEV	TYPE	TYPE		SPLIT SPOON		
1/5/95	S	32.50'	BGS	DIA.		2"		
		867.78	AMSL	WT.		140#		
1/5/95	D	33.44'	BGS	FALL		30"		
		867.16	AMSL	* POCKET PENETROMETER READING				

DEPTH FT	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY ROD %	DESCRIPTION COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS	PID
		S-1	SS	4 6 / 3 4	80%	DARK BROWN REDDISH BROWN	LOOSE DENSE	CLAYEY SANDY SILT. ORGANIC. MOIST .5'	ML	TOPSOIL	0
5								GRAVELLY CLAYEY SILT. GRADING TO GRAVELLY FINE TO MEDIUM SAND. WELL GRADED. MOIST.	SM	LOGGED FROM SHALLOW WELL BORING, TERMINATED AT 35.0 FT	
		S-2	SS	20 25 / 15 10	80%	BROWN			SW		0
10											
		S-3	SS	25 26 / 28 25	70%		VERY DENSE				0
15											
		S-4	SS	10 10 / 26 15	70%		DENSE				0
20											
		S-5	SS	14 17 / 16 14	80%						0
25											
		S-6	SS	23 17 / 20 20	80%					WATER TABLE NOTED ≈25 FT	0
30											
		S-7	SS	12 17 / 17 16	70%					COMPOSITE SAMPLE 30-35 FT RETAINED FOR GEOTECHNICAL AND CHEMICAL ANALYSIS.	0
35		S-8	SS	15 20 / 20 17	100%						0

LOG CONTINUED ON PAGE 2

COMMENTS BORINGS ADVANCED WITH MOBILE DRILL B-57 & 4.25" ID HOLLOW STEM AUGER. 2" PVC SHALLOW (35 FT) & DEEP (69 FT) WELL PAIR INSTALLED WITH 10 FT SCREENS

PROJECT NO. 05325245.09
BORING NO. GW-85ED

URS CONSULTANTS, Inc.

TEST BORING LOG
BORING NO. GW-8S&D

PROJECT: CEDAR STREET DUMP, BATAVIA, NY
SHEET NO. 1 OF 1

CLIENT: NYS DEPT. OF ENVIRONMENTAL CONSERVATION
JOB NO. : 0535245.09

DEPTH FT	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY ROD %	DESCRIPTION COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS	PID
35											
		S-1	SS	12 16 / 17 18	80%	BROWN	DENSE	MEDIUM TO FINE SAND. WET.	SP	LOGGED FROM DEEP WELL BORING 35 TO 70 FT.	0
40		S-2	SS	12 9 / 13 20	100%	GRAY	MEDIUM DENSE				0
45		S-3	SS	18 17 / 21 24	100%		DENSE			WATER ADDED TO BOREHOLE TO CONTROL RUNNING SAND	0
50		S-4	SS	12 14 / 13 17	100%		MEDIUM DENSE				0
55		S-5	SS	27 22 / 25 27	100%		DENSE			VERY DIFFICULT DRILLING DUE TO RUNNING SAND.	0
60		S-6	SS	15 17 / 21 20	80%					COMPOSITE SAMPLES 60-70 FT RETAINED FOR GEOTECHNICAL & CHEMICAL ANALYSIS INCLUDING MATRIX SPIKE(MS) & MATRIX SPIKE DUPLICATE	0
65		S-7	SS	20 30 / 30 20	100%		VERY DENSE	BECOMING GRAVELLY.	SW		0
	0										
	0	S-8	SS	15 16 / 20 50/4	100%		DENSE				0
70	0							BORING TERMINATED AT 70 FT			

A-3205A

COMMENTS BORINGS ADVANCED WITH MOBILE DRILL B-57 & 4.25" ID HOLLOW STEM AUGER. 2" PVC SHALLOW (35 FT) & DEEP (69 FT) WELL PAIR INSTALLED WITH 10 FT SCREENS.

PROJECT NO. 0535245.09
BORING NO. GW-8S&D

URS CONSULTANTS, Inc.

TEST BORING LOG
BORING NO. GW-9S & D

PROJECT: CEDAR STREET DUMP, BATAVIA, NY
SHEET NO. 1 OF 2
CLIENT: NYS DEPT. OF ENVIRONMENTAL CONSERVATION
JOB NO.: 05352245.09
BORING CONTRACTOR: TECHNICAL DRILLING SERVICES
BORING LOCATION: S EDGE OF WEST FILL AREA

GROUND WATER:				CAS.	SAMP	CORE	TUBE	GROUND ELEVATION: S-893.51 D-893.32
DATE	~~TIME~~	LEV	TYPE	TYPE		SPLIT SPOON		DATE STARTED: 12/19/94
1/5/95	S	26.03'	BGS	DIA.		2"		DATE FINISHED: 12/21/94
		867.48'	AMSL	WT.		140#		DRILLER: CARL RENGERT
1/5/95	D	25.58	BGS	FALL		30"		GEOLOGIST: ANDRE LAPRES
		867.74	AMSL	* POCKET PENETROMETER READING				REVIEWED BY: DUANE LENHARDT

DEPTH FT	STRATA	SAMPLE NO.	TYPE	BLOWS PER 6"	RECOVERY RQD %	COLOR	CONSISTENCY HARDNESS	DESCRIPTION MATERIAL DESCRIPTION	CLASS USCS	REMARKS	P I D
		S-1	SS	5 25 / 17 9	80%	DARK BROWN REDDISH BROWN	DENSE	CLAYEY SANDY SILT. ORGANIC. WET. TOPSOIL. .5'	ML	LOGGED FROM SHALLOW WELL	0
								GRAVELLY SANDY SILT. TRACE CLAY. MOIST. FILL COVER.	SM	BORING TERMINATED AT 35.0 FT.	
5		S-2	SS	22 17 / 17 14	80%			6.5'			0
						GRAY		SILTY FINE SAND. TRACE GRAVEL. MOIST. FILL.	SW		
10		S-3	SS	50/4	10%					SAMPLER PUSHING GRAVEL.	0
15		S-4	SS	15 10 / 15 7	50%	DARK GRAY & BLACK	MEDIUM DENSE	TRACE WOOD FRAGMENTS.		DISCOLORED SOIL.	4
20		S-5	SS	10 10 / 11 11	60%			TRACE BRICK FRAGMENTS. 21.5'			0
						GRAY		MEDIUM & FINE SAND. WET.	SM	WATER TABLE NOTED ≈ 25 FT	
25		S-6	SS	6 6 / 7 7	100%					SAMPLE S-6 RETAINED FOR CHEMICAL ANALYSIS. 2 SAMPLES FOR REQUIRED VOLUME.	0
30		S-7	SS	8 6 / 9 6	100%					SAMPLE S-7 RETAINED FOR GEOTECHNICAL ANALYSIS	0
35		S-8	SS	12 14 / 22 29	90%	LIGHT BROWN	DENSE	SHALLOW BORING TERMINATED 35 FT			0

A-3205

COMMENTS BORINGS ADVANCED WITH MOBILE DRILL B-57 & 4.25" ID HOLLOW STEM AUGER. 2" PVC SHALLOW (32 FT) & DEEP (64 FT) MONITORING WELL PAIR INSTALLED WITH 10 FT SCREENS

PROJECT NO. 05352245.09
BORING NO. GW-9S & D

URS CONSULTANTS, Inc.

TEST BORING LOG
BORING NO. GW-9S&D

PROJECT: Cedar Street Dump, Batavia, NY
SHEET NO. 2 OF 2

CLIENT: NYS Dept. of Environmental Conservation
JOB NO.: 0535245.09

DEPTH FT	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY RQD %	DESCRIPTION COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS	PID
35											
		S-1	SS	32 32 / 21 21	60%	Gray	Very Dense	Medium & Fine Sand. Wet.	SM	Logged from Deep Well Boring 35 to 65 ft.	0
40		S-2	SS	17 12 / 9 12	80%		Medium Dense				0
45		S-3	SS	7 9 / 17 27	100%						0
50		S-4	SS	27 50/4	100%		Very Dense				0
55		S-5	SS	24 37 / 41 34	100%					Sample S-5 retained for chemical analysis.	0
60		S-6	SS	15 12 / 20 24	100%		Dense	Becoming gravelly.	SW	Sample S-6 retained for Geotechnical Analysis	0
65		S-7	SS	50/0	0%			Deep Boring terminated 65 ft		Auger & sampler refusal on presumed bedrock at 65 ft.	
70											

COMMENTS Borings advanced with Mobile Drill B-57 & 4.25" Hollow Stem Auger. 2" PVC Shallow (32 ft) & Deep (64 ft) monitoring well pair installed with 10 ft screens

PROJECT NO. 0535245.09
BORING NO. GW-9S&D

A-320**

DRILLING SUMMARY

Geologist: ANDRE LAPRES

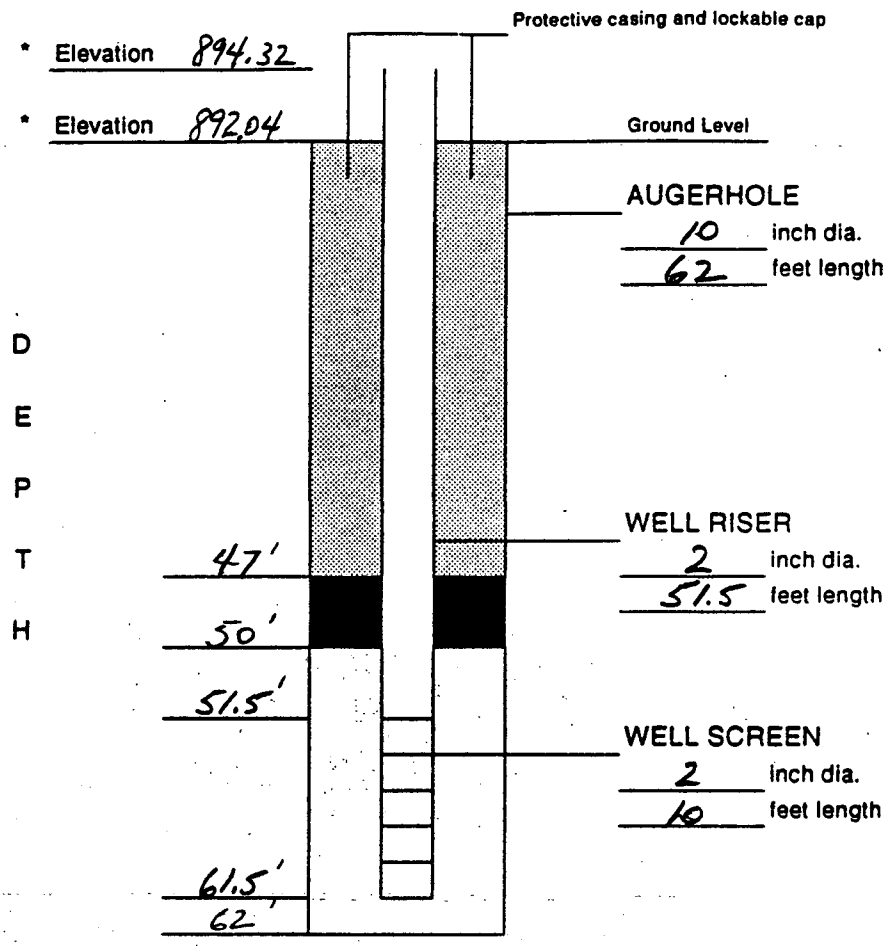
Drilling Company: TECHNICAL DRILLING

Driller: CARL RENGERT

Date: 12/19/94

GEOLOGIC LOG

depth(ft.)	lithology
0-35	GRAVELLY SAND
35-57	SAND
57-62	GRAVELLY SAND



* NOTES:

WELL DESIGN

CASING MATERIAL	SCREEN MATERIAL	SEAL MATERIAL
Surface: 4" STEEL PROTECTOR	Type: 2" SCH 40 PVC	Seal #1 Type: BENTONITE PELLET
		Setting: 47-50 FT
Monitor: 2" SCH 40 PVC	Slot Size: .010 INCH	Seal #2 Type: GROUT
		Setting: 0-47 FT

FILTER MATERIAL	ROCK CORING	LEGEND
Type: #0 SAND	Cored Interval: NA	Cement/Bentonite Grout
	Core Diameter:	Bentonite Seal
Setting: 50-62 FT	Reamed Diameter:	Silica Sandpack

Client: NYS DEPT. OF ENV. CON.	Project: CEDAR STREET DUMP	Project No.: 0535245.09
URS Consultants, Inc.	Monitoring Well Construction Details	Well Number: GW-2D

DRILLING SUMMARY

Geologist: ANDRE LAPRES

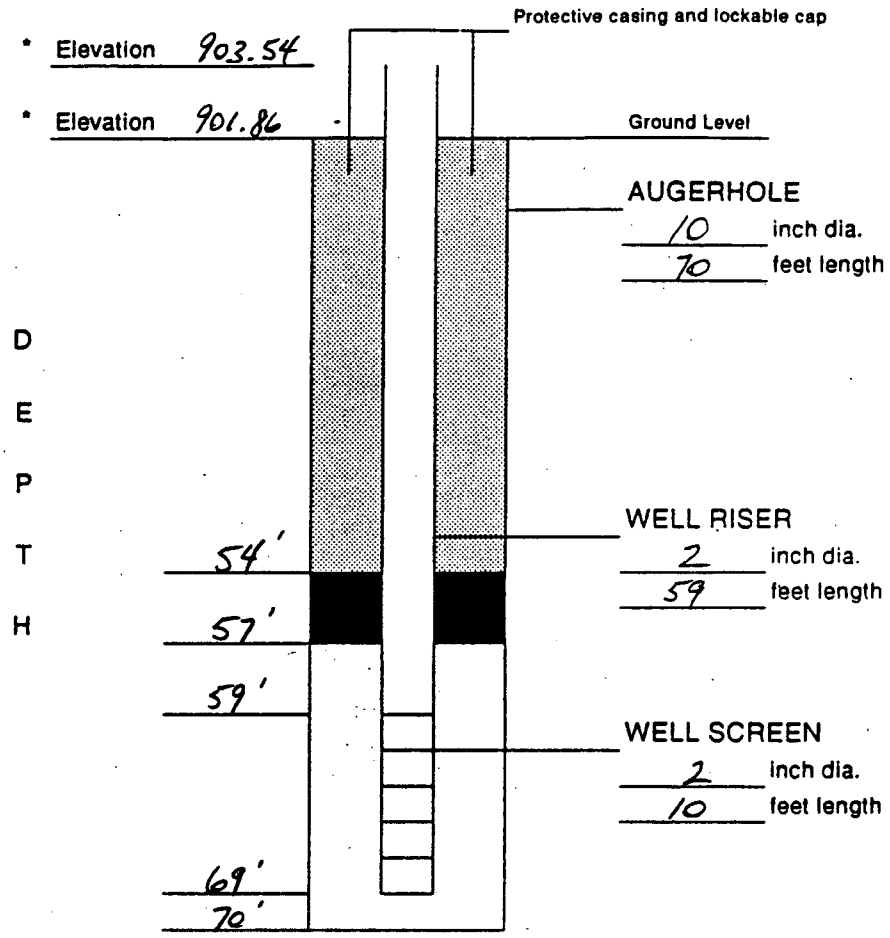
Drilling Company: TECHNICAL DRILLING

Driller: CARL RENGERT

Date: 12/15/94

GEOLOGIC LOG

depth(ft.)	lithology
0-70	GRAVELLY SAND



* NOTES:

WELL DESIGN

CASING MATERIAL	SCREEN MATERIAL	SEAL MATERIAL
Surface: 4" STEEL PROTECTOR	Type: 2" SCH 40 PVC	Seal #1 Type: BENTONITE PELLETS Setting: 54-57 FT
Monitor: 2" SCH 40 PVC	Slot Size: .010 INCH	Seal #2 Type: GROUT Setting: 0-54 FT

FILTER MATERIAL	ROCK CORING	LEGEND
Type: #0 SAND	Cored Interval: NA	Cement/Bentonite Grout
Setting: 57-70 FT	Core Diameter:	Bentonite Seal
	Reamed Diameter:	Silica Sandpack

Client: NYS DEPT OF ENV. CON.	Project: CEDAR STREET DUMP	Project No.: 05535245.09
URS Consultants, Inc.	Monitoring Well Construction Details	Well Number: GW-4D

DRILLING SUMMARY

Geologist: ANDRE LAPRES

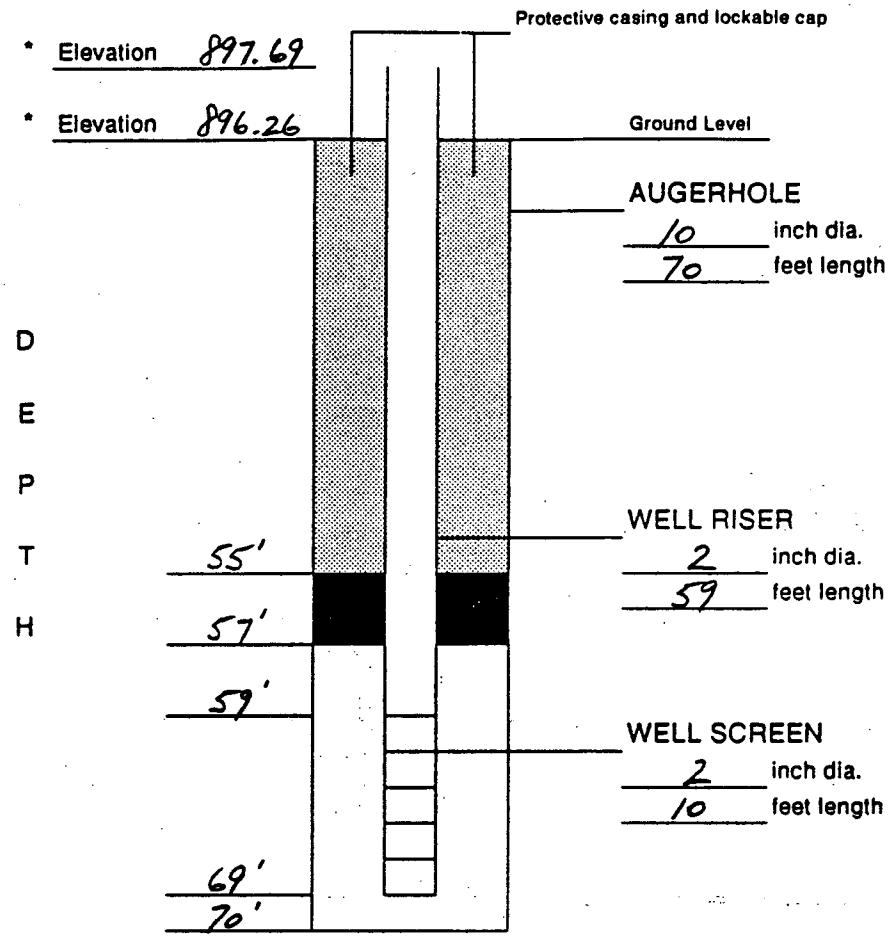
Drilling Company: TECHNICAL DRILLING

Driller: CARL RENGERT

Date: 12/9/94

GEOLOGIC LOG

depth(ft.)	lithology
0-19.5	FILL
19.5-70.0	GRAVELLY SAND



* NOTES:

WELL DESIGN

CASING MATERIAL	SCREEN MATERIAL	SEAL MATERIAL
Surface: 4" STEEL PROTECTOR	Type: 2" SCH 40 PVC	Seal #1 Type: BENTONITE PELLETS
		Setting: 55-57 FT
Monitor: 2" SCH 40 PVC	Slot Size: .010 INCH	Seal #2 Type: GROUT
		Setting: 0-55 FT

FILTER MATERIAL	ROCK CORING	LEGEND
Type: #0 SAND	Cored Interval: NA	Cement/Bentonite Grout
	Core Diameter:	Bentonite Seal
Setting: 57-70 FT	Reamed Diameter:	Silica Sandpack

Client: NYS DEPT OF ENV. CON.	Project: CEDAR STREET DUMP	Project No.: 0535245.09
URS Consultants, Inc.	Monitoring Well Construction Details	Well Number: GW-5D

DRILLING SUMMARY

Geologist: ANDRE LAPRES

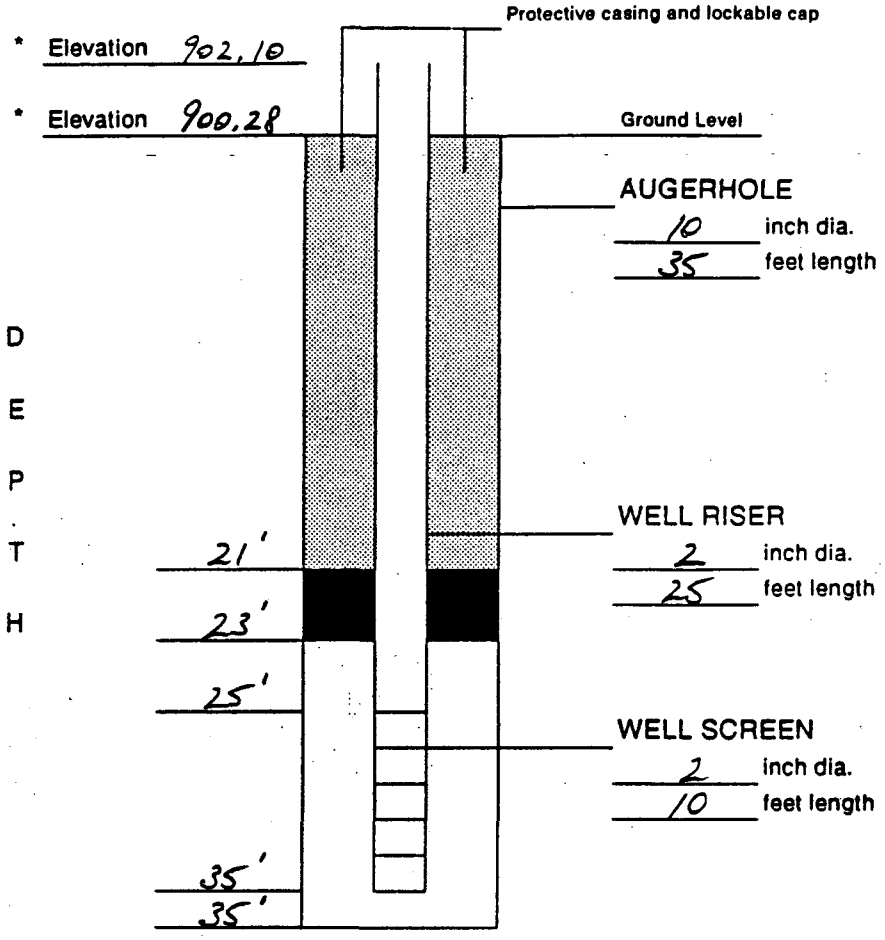
Drilling Company: TECHNICAL DRILLING

Driller: CARL RENGERT

Date: 12/16/94

GEOLOGIC LOG

depth(ft.)	lithology
0 - 35	GRAVELLY SAND



* NOTES:

WELL DESIGN

CASING MATERIAL	SCREEN MATERIAL	SEAL MATERIAL
Surface: 4" STEEL PROTECTOR	Type: 2" SCH 40 PVC	Seal #1 Type: BENTONITE PELLETS Setting: 21-23 FT
Monitor: 2" SCH 40 PVC	Slot Size: .010 INCH	Seal #2 Type: GROUT Setting: 0-21 FT

FILTER MATERIAL	ROCK CORING	LEGEND
Type: #0 SAND	Cored Interval: NA	Cement/Bentonite Grout
Setting: 23-35 FT	Core Diameter:	Bentonite Seal
	Reamed Diameter:	Silica Sandpack

Client: NYS DEPT OF ENV. CON.	Project: CEDAR STREET DUMP	Project No.: 0535245.09
URS Consultants, Inc.	Monitoring Well Construction Details	Well Number: GW-8S

DRILLING SUMMARY

Geologist: ANDRE LAPRES

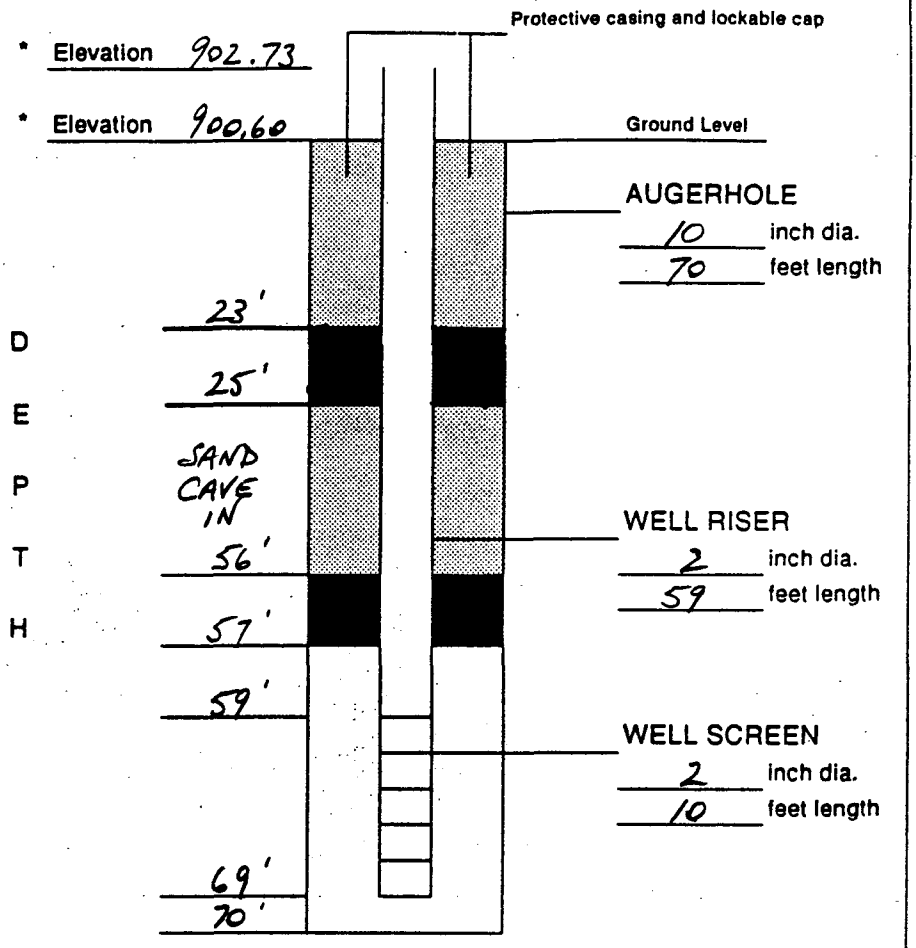
Drilling Company: TECHNICAL DRILLING

Driller: CARL RENGERT

Date: 12/16/94

GEOLOGIC LOG

depth(ft.)	lithology
0 - 35	GRAVELLY SAND
35 - 66	SAND
66 - 70	GRAVELLY SAND



* NOTES:

WELL DESIGN

CASING MATERIAL	SCREEN MATERIAL	SEAL MATERIAL
Surface: 4" STEEL PROTECTOR	Type: 2" SCH 40 PVC	Seal #1 Type: BENTONITE PELLETS
		Setting: 56-57 FT & 23-25 FT
Monitor: 2" SCH 40 PVC	Slot Size: .010 INCH	Seal #2 Type: GROUT
		Setting: 0-23 FT

FILTER MATERIAL	ROCK CORING	LEGEND
Type: #0 SAND	Cored Interval: NA	Cement/Bentonite Grout
	Core Diameter:	Bentonite Seal
Setting: 57-70 FT	Reamed Diameter:	Silica Sandpack

Client: NYS DEPT. OF ENV. CON.	Project: CEDAR STREET DUMP	Project No.: 0535245.09
URS Consultants, Inc.	Monitoring Well Construction Details	Well Number: GW-8D

DRILLING SUMMARY

Geologist: ANDRE LAPRES

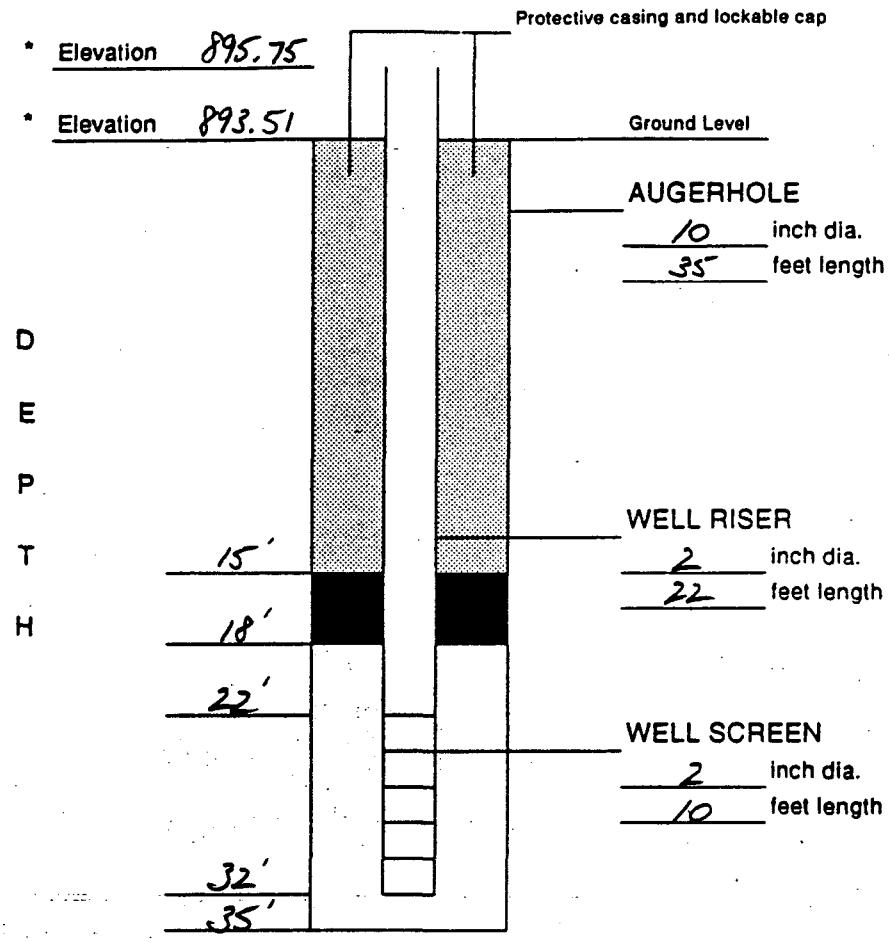
Drilling Company: TECHNICAL DRILLING

Driller: CARL RENGERT

Date: 12/19/94

GEOLOGIC LOG

depth(ft.)	lithology
0 - 21.5	FILL
21.5 - 35	SAND



* NOTES:

WELL DESIGN

CASING MATERIAL	*SCREEN MATERIAL*	*SEAL MATERIAL*
Surface: 4" STEEL PROTECTOR	Type: 2" SCH 40 PVC	Seal #1 Type: BENTONITE PELLETS Setting: 15 - 18 FT
Monitor: 2" SCH 40 PVC	Slot Size: .010 INCH	Seal #2 Type: GROUT Setting: 0 - 15 FT

FILTER MATERIAL	*ROCK CORING*	*LEGEND*
Type: #0 SAND & FORMATION SAND CAVE IN Setting: 18 - 35 FT	Cored Interval: NA Core Diameter: Reamed Diameter:	Cement/Bentonite Grout Bentonite Seal Silica Sandpack

Client: NYS DEPT. OF ENV. CON.	Project: CEDAR STREET DUMP	Project No.: 0535245.09
URS Consultants, Inc.	Monitoring Well Construction Details	Well Number: GW - 9S

DRILLING SUMMARY

Geologist: ANDRE LAPRES

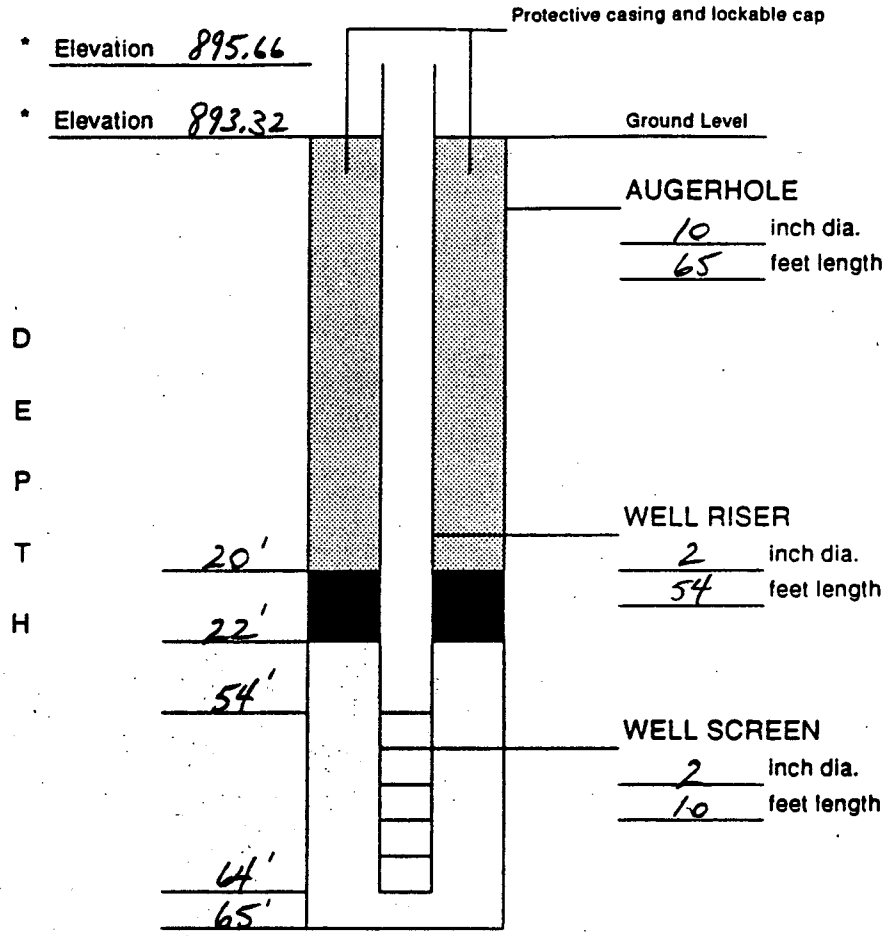
Drilling Company: TECHNICAL DRILLING

Driller: CARL RENGERT

Date: 12/21/95

GEOLOGIC LOG

depth(ft.)	lithology
0-21.5	FILL
21.5-61	SAND
61-65	GRAVELLY SAND



* NOTES:

WELL DESIGN

CASING MATERIAL	SCREEN MATERIAL	SEAL MATERIAL
Surface: 4" STEEL PROTECTOR	Type: 2" SCH 40 PVC	Seal #1 Type: BENTONITE PELLETS Setting: 20-22 FT
Monitor: 2" SCH 40 PVC	Slot Size: .010-INCH	Seal #2 Type: GROUT Setting: 0-20 FT

FILTER MATERIAL	ROCK CORING	LEGEND
Type: #0 SAND & FORMATION SAND CAVE IN Setting: 22-65 FT	Cored Interval: NA Core Diameter: Reamed Diameter:	Cement/Bentonite Grout Bentonite Seal Silica Sandpack

Client: NYS DEPT. OF ENV. CON.	Project: CEDAR STREET DUMP	Project No.: 0535245.09
URS Consultants, Inc.	Monitoring Well Construction Details	Well Number: GW-9D

URS CONSULTANTS, INC.

WELL DEVELOPMENT / PURGING LOG

PROJECT TITLE: NYS DEC PSA Cedar ST

PROJECT NO.: 35245.09

STAFF: C. ROKUTANDA T HARPER

DATE: 12/21/94

WELL NO.: GW2D

① TOTAL CASING AND SCREEN LENGTH (FT.):	63.99
② CASING INTERNAL DIAMETER (in.):	2"
③ WATER LEVEL BELOW TOP OF CASING (FT.)	21.25
④ VOLUME OF WATER IN CASING (GAL.)	7.27

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

$V = 0.0408 (②)^2 \times (① - ③) =$ 21.81 GAL. (3 casings)

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)										
	0	5	10	15	20	30	40	50	60	70	80
pH	8.60	8.20	7.85	7.65	7.56	7.51	7.55	7.50	7.47	7.47	7.43
Spec. Cond. (µmho)	439	730	757	744	811	872	882	954	916	961	1018
Turbidity (NTU)	36.0	>1000	>1000	>1000	>1000	>1000	>1000	>1000	>1000	>1000	1000
Temperature (°C)	13.7	12.3	12.2	12.3	12.1	12.1	12.1	12.1	12.0	11.9	12.0
APPEAR	CLEAR	TURBID LT BROWN	TURBID LT BROWN	TURBID LT BROWN	TURBID LT BROWN	TURBID LT BROWN	TURBID TAN	TURBID TAN	TURBID LT GRAY	TURBID LT GRAY	TURBID VERY LT GRAY

COMMENTS:
WELL DEVELOPED USING WATERRA PUMP W/ DEDICATED 5/8 HDPE TUBING + CHECK VALVE

A-2347

URS CONSULTANTS, INC.

WELL DEVELOPMENT / PURGING LOG

PROJECT TITLE: NYS DEC PSA Cedar ST

PROJECT NO.: 35245.09

STAFF: C. Rokutanda T. Harper

DATE: 12/21/94

WELL NO.: GW2D

① TOTAL CASING AND SCREEN LENGTH (FT.):	63.99
② CASING INTERNAL DIAMETER (in.):	2"
③ WATER LEVEL BELOW TOP OF CASING (FT.)	21.25
④ VOLUME OF WATER IN CASING (GAL.)	7.27

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

$V = 0.0408 (②)^2 \times (① - ③)$ = 21.81 GAL. (3 casings)

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)											
	90	100	110	120	130	140	150	160	170	180	190	200
pH	7.51	7.55	7.66	7.60	7.63	7.60	7.50	7.56	7.66	7.73	7.43	7.6
Spec. Cond. (µmho)	1030	1036	1034	1046	1046	1044	1023	1053	1060	1057	1054	105
Turbidity (NTU)	1000	991	383	682	97.1	815	83.3	98.5	70.0	29.8	18.6	41.
Temperature (°C)	12.1	11.9	12.0	12.1	12.1	12.1	12.2	12.1	12.1	12.2	12.2	12.
APPEAR	TURBID VERY LT GRAY	TURBID VERY LT GRAY	LT GRAY TINT HAZY	LT GRAY SLIGHT TURBID	CLEAR W/ VERY SLIGHT HAZE	LT GRAY TINT HAZE	VERY SLIGHT HAZE	VERY SLIGHT HAZE	VERY SLIGHT HAZE	CLEAR	CLEAR	CLEA

COMMENTS:

Well Developed using waterra pump w/ Dedicated 5/8 HDPE Tubing + Check valve

A-2347

URS CONSULTANTS, INC.

WELL DEVELOPMENT/PURGING LOG

PROJECT TITLE: NYS Dec PSA Cedar ST

PROJECT NO.: 35245.09

STAFF: T. HARPER A LaPres

DATE: 12/22/94

WELL NO.: GW4D

① TOTAL CASING AND SCREEN LENGTH (FT.):	70.11
② CASING INTERNAL DIAMETER (in.):	2"
③ WATER LEVEL BELOW TOP OF CASING (FT.)	30.90
④ VOLUME OF WATER IN CASING (GAL.)	6.67

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

$V = 0.0408 (②)^2 \times (① - ③)$ = 20.01 GAL. (3 casings)

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)										
	0	5	10	15	20	30	40	50	60	70	80
pH	8.56	8.27	7.52	7.49	7.53	7.62	7.50	7.42	7.36	7.74	7.69
Spec. Cond. (µmho)	585	786	742	808	1058	831	1031	1063	820	878	1114
Turbidity (NTU)	454	>1000	>1000	>1000	>1000	>1000	504	538	162	80.1	69.0
Temperature (°C)	7.9	9.8	10.3	10.6	10.6	10.5	10.4	10.3	10.4	10.4	10.5
APPEAR	Clear	DARK BROWN TURBID MANY SEDS	LT BROWN TURBID	LT BROWN TURBID	LT BROWN TURBID	LT BROWN TURBID	LT TAN W/SEDS	LT TAN TINT W/SEDS	CLEAR TAN TINT W/SEDS	Clear	clear

COMMENTS:

Well Developed USING Waterra pump w/ Dedicated 5/8 HDPE Tubing and Check valve

A-2347

URS CONSULTANTS, INC.

WELL DEVELOPMENT/PURGING LOG

PROJECT TITLE: NYS DEC PSA Cedar ST

PROJECT NO.: 35245.09

STAFF: T. Harper Alapres

DATE: 12/22/94

WELL NO.: GW4D

		WELL I.D.	VOL. GAL./FT.
① TOTAL CASING AND SCREEN LENGTH (FT.):	70.11	1"	0.04
② CASING INTERNAL DIAMETER (in.):	2"	2"	0.17
③ WATER LEVEL BELOW TOP OF CASING (FT.)	30.90	3"	0.38
④ VOLUME OF WATER IN CASING (GAL.)	6.67	4"	0.66
		5"	1.04
		6"	1.50
		8"	2.60

$V = 0.0408 (②)^2 \times (① - ③) =$ 20.01 GAL. (3 casings)

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)										
	90	100	110	120	130	140	150	160	170		
pH	7.45	7.48	7.64	7.61	7.52	7.58	7.50	7.62	7.60		
Spec. Cond. (µmho)	861	860	850	855	870	877	879	885	878		
Turbidity (NTU)	311	127	69.1	53.7	54.8	47.5	39.6	36.8	38.7		
Temperature (°C)	10.5	10.6	10.4	10.6	10.4	10.5	10.5	10.5	10.5		
APPEAR	TAN TINT W/ SEDS	CLEAR TINT W/ SEDS	Clear	Clear	Clear	clear	clear	Clear	Clear		

COMMENTS:

Well Developed using Waterra pump w/ Dedicated 5/8 HDPE Tubing + Check valve

A-2347

URS CONSULTANTS, INC.

WELL (DEVELOPMENT) / PURGING LOG

PROJECT TITLE: NYS DEC PSA Cedar ST

PROJECT NO.: 35245.09

STAFF: C. Rokutanda T Harper

DATE: 12/21/94

WELL NO.: GW5D

① TOTAL CASING AND SCREEN LENGTH (FT.):	70.58
② CASING INTERNAL DIAMETER (in.):	2"
③ WATER LEVEL BELOW TOP OF CASING (FT.)	29.34
④ VOLUME OF WATER IN CASING (GAL.)	7.01

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

$V = 0.0408 (②)^2 \times (① - ③)$ = 21.03 GAL. (3 casings)

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)										
	0	5	10	15	20	30	40	50	60	70	80
pH	7.77	6.91	7.34	7.36	7.33	7.18	7.13	7.16	7.07	7.01	7.11
Spec. Cond. (µmho)	479	1257	1168	1164	1190	1114	1116	1149	1117	839	1207
Turbidity (NTU)	>1000	>1000	>1000	>1000	>1000	>1000	>1000	>1000	>1000	>1000	>1000
Temperature (°C)	8.8	10.9	11.1	11.1	11.1	11.1	11.0	11.1	11.2	11.2	11.2
APPEAR	CLEAR	GRAY BROWN TURBID	LT GRAY BROWN TURBID	LT GRAY BROWN TURBID	LT GRAY BROWN TURBID	LT GRAY TURBID	LT GRAY TURBID	LT GRAY TURBID	LT GRAY TURBID	LT GRAY TURBID	VERY LT GRAY TURBID

COMMENTS:

Well Developed using Waterra Pump w/ Dedicated 5/8 HDPE Tubing & Check Valve

A-2347

URS CONSULTANTS, INC.

WELL DEVELOPMENT / PURGING LOG

PROJECT TITLE: NYS DEC PSA Cedar ST

PROJECT NO.: 35245.09

STAFF: C. Rokutanda T HARPER

DATE: 12/21/94

WELL NO.: GW5D

① TOTAL CASING AND SCREEN LENGTH (FT.):	70.58
② CASING INTERNAL DIAMETER (in.):	2"
③ WATER LEVEL BELOW TOP OF CASING (FT.)	29.34
④ VOLUME OF WATER IN CASING (GAL.)	7.01

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

$V = 0.0408 (②)^2 \times (① - ③) =$ 21.03 GAL. (3 casings)

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)										
	90	100	110	120	130	140	150	160	170	180	190*
pH	7.15	7.26	7.17	7.23	7.11	7.21	7.13	7.18	7.05	7.26	7.23
Spec. Cond. (µmho)	1229	881	1201	1208	1202	1207	1208	1208	1213	1210	1218
Turbidity (NTU)	>1000	>1000	>1000	565	298	208	156	142	103	84.4	75.1
Temperature (°C)	11.1	11.0	11.2	11.0	11.3	11.1	11.3	11.2	11.2	11.1	11.4
APPEAR	VERY LT GRAY TURBID	LT GRAY TURBID	LT GRAY TURBID	CLOUDY	CLOUDY	LT HAZY	LT HAZY	LT HAZY	SLIGHTLY HAZY	SLIGHTLY HAZY	SLIGHTLY HAZY

COMMENTS:

Well Developed using Waterra pump w/ Dedicated 5/8 HDPE Tubing + Check valve

*Well Developed for 2 Hours at this point

A-2347

URS CONSULTANTS, INC.

WELL DEVELOPMENT / PURGING LOG

PROJECT TITLE: NYS Dec PSA Cedar ST

PROJECT NO.: 35245.09

STAFF: C. Rokutanda T. Harper

DATE: 12/21/94

WELL NO.: GW8S

(1) TOTAL CASING AND SCREEN LENGTH (FT.):	37.75
(2) CASING INTERNAL DIAMETER (in.):	2"
(3) WATER LEVEL BELOW TOP OF CASING (FT.)	32.14
(4) VOLUME OF WATER IN CASING (GAL.)	0.95

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

$V = 0.0408 ((2)^2 \times ((1) - (3)) =$ 2.85 GAL. (3 casings)

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)											
	0	5	10	15	20	30	40	50	60	70	80	90
pH	7.65	7.45	7.40	7.41	7.42	7.69	7.55	7.60	7.64	7.58	7.49	7.4
Spec. Cond. (µmho)	794	874	814	820	876	891	889	858	890	868	882	874
Turbidity (NTU)	>1000	>1000	>1000	278	220	140	178	132	120	89.6	69.9	43.9
Temperature (°C)	11.5	11.4	11.6	11.7	11.6	11.6	11.4	11.4	11.3	11.1	11.1	11.0
APPEAR	DARK BROWN MANY SEDS	BROWN TURBID	BROWN TURBID	LT TAN MILD TURBID	LT TAN TINT MILD TURBID	LT TAN TINT MILD TURBID	LT TAN TINT MILD TURBID	LT TAN TINT	LT TAN TINT	CLEAR	CLEAR	CLEAR

COMMENTS:

Well Developed using Waterra pump w/ Dedicated 5/8 HDPE Tubing + Check valve

* Well Developed 2 hours at this point

A-2347

URS CONSULTANTS, INC.

WELL DEVELOPMENT/PURGING LOG

PROJECT TITLE: NYS DEC PSA Cedar ST

PROJECT NO.: 35245.09

STAFF: T. Harper A. LAPRES

DATE: 12/22/94

WELL NO.: GW8S

① TOTAL CASING AND SCREEN LENGTH (FT.):	37.75
② CASING INTERNAL DIAMETER (in.):	2"
③ WATER LEVEL BELOW TOP OF CASING (FT.)	32.10
④ VOLUME OF WATER IN CASING (GAL.)	0.96

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

$V = 0.0408 (②)^2 \times (① - ③) =$ 2.88 GAL. (3 casings)

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)										
	90	100	110	120	130	140	150	160			
pH	7.73	7.65	7.42	7.66	7.51	7.46	7.54	7.65			
Spec. Cond. (µmho)	1185	1140	1203	1202	1191	1173	1182	1178			
Turbidity (NTU)	215	138	78.5	73.6	49.7	47.5	37.7	39.9			
Temperature (°C)	11.7	11.8	11.8	11.7	11.7	11.7	11.7	11.7			
APPEAR	TAN TINT	CLEAR W/TAN TINT	CLEAR	CLEAR	Clear	Clear	Clear	clear			

COMMENTS:

Well Developed using WATERRA pump w/ dedicated 5/8 HDPE Tubing & Check valve

A-2347

URS CONSULTANTS, INC.

WELL DEVELOPMENT / PURGING LOG

PROJECT TITLE: NYS DEC PSA Cedar ST

PROJECT NO.: 35245.09

STAFF: C. Rokutanda T. Harper

DATE: 12/21/94

WELL NO.: GW8D

① TOTAL CASING AND SCREEN LENGTH (FT.):	70.32
② CASING INTERNAL DIAMETER (in.):	2"
③ WATER LEVEL BELOW TOP OF CASING (FT.)	30.15
④ VOLUME OF WATER IN CASING (GAL.)	6.83

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

$V = 0.0408 (②)^2 \times (① - ③) =$ 20.49 GAL. (3 casings)

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)										
	0	5	10	15	20	30	40	50	60	70	80
pH	9.30	8.60	7.99	7.76	7.63	7.63	7.53	7.55	7.47	7.47	7.48
Spec. Cond. (µmho)	439	669	828	909	941	952	986	1053	1072	1109	1111
Turbidity (NTU)	64.0	>1000	>1000	>1000	>1000	>1000	>1000	>1000	>1000	>1000	1000
Temperature (°C)	14.0	11.5	11.3	11.2	11.3	11.2	11.1	11.2	11.2	11.2	11.2
APPEAR	CLEAR	BROWN GRAY Turbid FINE SAND	BROWN GRAY Turbid FINE SAND	BROWN GRAY Turbid FINE SAND	BROWN GRAY Turbid FINE SAND	Turbid GRAY	LT GRAY TURBID	LT GRAY TURBID	LT GRAY TURBID	LT GRAY TURBID	LT GRAY TURBID

COMMENTS:

Well Developed using waterra pump w/ Dedicated 5/8 HDPE Tubing & Check Valve

A-2347

URS CONSULTANTS, INC.

WELL DEVELOPMENT / PURGING LOG

PROJECT TITLE: NYS DEC PSA Cedar ST

PROJECT NO.: 35245.09

STAFF: C Rokutanda T. Harper

DATE: 12/21/94

WELL NO.: GW8D

① TOTAL CASING AND SCREEN LENGTH (FT.):	70.32
② CASING INTERNAL DIAMETER (in.):	2"
③ WATER LEVEL BELOW TOP OF CASING (FT.)	30.15
④ VOLUME OF WATER IN CASING (GAL.)	6.83

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

$V = 0.0408 (②)^2 \times (① - ③) =$ 20.49 GAL. (3 casings)

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)										
	90	100	110	120	130	140	150	160	170	180	190
pH	7.45	7.41	7.58	7.47	7.60	7.59	7.62	7.65	7.63	7.60	7.64
Spec. Cond. (µmho)	1121	1124	1142	1147	1152	1150	1148	1155	1155	1170	1166
Turbidity (NTU)	1000	937	800	709	514	409	335	302	255	223	195
Temperature (°C)	11.2	11.2	11.2	11.3	11.3	11.3	11.2	11.4	11.3	11.3	11.4
APPEAR	LT GRAY TINT TURBID	LT GRAY TINT TURBID	LT GRAY TINT TURBID	LT GRAY TINT TURBID	LT GRAY TINT TURBID	SLIGHT GRAY TINT MILD TURBID	SLIGHT GRAY TINT MILD TURBID	SLIGHT GRAY TINT MILD TURBID	SLIGHT GRAY TINT MILD TURBID	SLIGHT GRAY TINT MILD TURBID	SLIGHT GRAY TINT MILD TURBID

COMMENTS:

Well Developed using waterra pump w/ Dedicated 5/8 HDPE Tubing + Check Valve

A-2347

URS CONSULTANTS, INC.

WELL DEVELOPMENT / PURGING LOG

PROJECT TITLE: NYS DEC PSA Cedar St

PROJECT NO.: 35245.09

STAFF: C. ROKUTANDA T. HARPER

DATE: 12/21/94

WELL NO.: GW-8D

		WELL I.D.	VOL. GAL./FT.
① TOTAL CASING AND SCREEN LENGTH (FT.):	70.32	1"	0.04
② CASING INTERNAL DIAMETER (in.):	2"	2"	0.17
		3"	0.38
③ WATER LEVEL BELOW TOP OF CASING (FT.)	30.15	4"	0.66
		5"	1.04
④ VOLUME OF WATER IN CASING (GAL.)	6.83	6"	1.50
		8"	2.60

$V = 0.0408 (②)^2 \times (① - ③) =$ 20.49 GAL. (3 casings)

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)										
	200	210	220	230	240 *						
pH	7.51	7.48	7.54	7.56	7.49						
Spec. Cond. (µmho)	1162	1158	1164	1179	1162						
Turbidity (NTU)	196	184	171	146	147						
Temperature (°C)	11.1	11.2	11.2	11.2	11.1						
APPEAR	SLIGHT GRAY TINT MILD TURBID	SLIGHT GRAY TINT MILD TURBID	SLIGHTLY CLOUDY	SLIGHTLY CLOUDY	SLIGHTLY CLOUDY						

COMMENTS:

Well Developed using Waterra pump w/ Dedicated 5/8 HDPE Tubing + Check valve

* Well Developed for 2 Hours at this point

A-2347

URS CONSULTANTS, INC.

WELL DEVELOPMENT / PURGING LOG

PROJECT TITLE: NYS DEC PSA Cedar St

PROJECT NO.: 35245.09

STAFF: T. HARPER A. LAPRES

DATE: 12/22/94

WELL NO.: GW8D

		WELL I.D.	VOL. GAL./FT.
① TOTAL CASING AND SCREEN LENGTH (FT.):	20.32	1"	0.04
② CASING INTERNAL DIAMETER (in.):	2	2"	0.17
③ WATER LEVEL BELOW TOP OF CASING (FT.)	30.12	3"	0.38
④ VOLUME OF WATER IN CASING (GAL.)	6.83	4"	0.66
		5"	1.04
		6"	1.50
		8"	2.60

$V = 0.0408 (②)^2 \times (① - ③) =$ 20.49 GAL. (3 casings)

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)										
	250	260	270	280	290	300	310	320	330	340	350
pH	7.32	7.57	7.48	7.50	7.60	7.50	7.50	7.48	7.50	7.46	7.45
Spec. Cond. (µmho)	1492	1523	1583	1460	1595	1581	1560	1581	15	1593	1564
Turbidity (NTU)	170	>1000	1000	812	546	328	240	200	184	164	119
Temperature (°C)	11.4	11.1	10.9	10.9	10.9	11.0	11.0	11.0	11.0	11.0	11.0
APPEAR	CLOUDY TAN TINT	DARK TAN TURBID	TAN TURBID	TAN	LT TAN	LT TAN	LT TAN	LT TAN	TAN TINT	CLEAR TAN TINT	CLEAR TAN TINT

COMMENTS:

Well Developed using Waterra pump w/ Dedicated 5/8 HDPE Tubing + Check Valve

A-2347

URS CONSULTANTS, INC.

WELL DEVELOPMENT / PURGING LOG

PROJECT TITLE: NYS DEC PSA Cedar ST

PROJECT NO.: 35245.09

STAFF: T. Harper A LaPres

DATE: 12/22/94

WELL NO.: GW9S

① TOTAL CASING AND SCREEN LENGTH (FT.):	33.02
② CASING INTERNAL DIAMETER (in.):	2"
③ WATER LEVEL BELOW TOP OF CASING (FT.)	25.67
④ VOLUME OF WATER IN CASING (GAL.)	1.25

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

$V = 0.0408 (②)^2 \times (① - ③) =$ 3.75 GAL. (3 casings)

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)										
	0	5	10	15	20	30	40	50	60	70	80
pH	6.68	7.04	7.06	7.09	7.28	7.29	7.32	7.22	7.34	7.25	7.35
Spec. Cond. (µmho)	1111	972	995	879	767	784	1284	1369	1400	1299	1022
Turbidity (NTU)	>1000	>1000	>1000	>1000	>1000	>1000	866	512	1000	33.0	74.1
Temperature (°C)	8.2	10.5	10.4	10.6	10.9	11.3	11.5	11.4	11.6	11.5	11.5
APPEAR	Dark Brown Turbid many seds	Dark Brown Turbid many seds	Dark Brown Turbid many seds	Dark Brown Turbid	Dark Brown Turbid	LT Brown Turbid	LT Brown Turbid	LT Brown Tint	LT Brown many seds	Clear	Clear w/ Sand

COMMENTS:

Well Developed using WATERRA pump w/ Dedicated 5/8 HDPE Tubing + Check VALVE

A-2347

URS CONSULTANTS, INC.

WELL DEVELOPMENT / PURGING LOG

PROJECT TITLE: NYS DEC PSA Cedar ST

PROJECT NO.: 35245.09

STAFF: T. Harper A LaPres

DATE: 12/22/94

WELL NO.: GW9S

		WELL I.D.	VOL. GAL./FT.
① TOTAL CASING AND SCREEN LENGTH (FT.):	33.02	1"	0.04
② CASING INTERNAL DIAMETER (in.):	2"	2"	0.17
③ WATER LEVEL BELOW TOP OF CASING (FT.)	25.67	3"	0.38
④ VOLUME OF WATER IN CASING (GAL.)	1.25	4"	0.66
		5"	1.04
		6"	1.50
		8"	2.60

$V = 0.0408 (②)^2 \times (① - ③) =$ 3.75 GAL. (3 casings)

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)										
	90	100	110	120	130	140	150	160			
pH	7.33	7.21	7.26	7.23	7.26	7.29	7.35	7.38			
Spec. Cond. (µmho)	1331	1146	1394	1338	1402	1302	1331	1314			
Turbidity (NTU)	61.9	270	95.0	49.3	39.7	48.7	49.6	42.7			
Temperature (°C)	11.6	11.4	11.2	11.2	11.4	11.	11.0	11.2			
APPEAR	Clear	Clear LT TAN TINT	Clear LT TINT	clear	clear	clear	clear	clear			

COMMENTS:

Well Developed using WATERRA pump w/ DEDICATED 5/8 HDPE Tubing + Check VALVE

A-2347

URS CONSULTANTS, INC.

WELL DEVELOPMENT / PURGING LOG

PROJECT TITLE: NYS DEC PSA Cedar ST

PROJECT NO.: 35245.09

STAFF: T. Harper A LaPres

DATE: 12/22/94

WELL NO.: GW9D

① TOTAL CASING AND SCREEN LENGTH (FT.):	64.04
② CASING INTERNAL DIAMETER (in.):	2"
③ WATER LEVEL BELOW TOP OF CASING (FT.)	24.99
④ VOLUME OF WATER IN CASING (GAL.)	6.64

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

$V = 0.0408 (②)^2 \times (① - ③)$ = 19.92 GAL. (3 casings)

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)										
	0	5	10	15	20	30	40	50	60	70	80
pH	8.15	8.37	8.26	8.19	7.90	7.75	7.90	8.06	7.76	7.77	7.77
Spec. Cond. (µmho)	584	826	834	1062	1040	1001	890	1037	967	1031	1055
Turbidity (NTU)	424	>1000	681	350	222	190	550	1000	256	173	109
Temperature (°C)	13.4	11.4	11.5	11.5	11.5	11.5	11.4	11.6	11.6	11.5	11.4
APPEAR	LT TAN Haze	Dark Brown Turbid	TAN many SEDS	TAN many SEDS	LT TAN Some Seds	Slight TAN TINT	TAN many SEDS	Dark TAN many SEDS	Light TAN Some SEDS	LT TAN	Slight TAN TINT

COMMENTS:

Well Developed using WaterRA Pump w/Dedicated 5/8 HDPE Tubing + Check valve

A-2347

URS CONSULTANTS, INC.

WELL (DEVELOPMENT) / PURGING LOG

PROJECT TITLE: NYS DEC PSA Cedar ST

PROJECT NO.: 35245.09

STAFF: T. Harper A LaPres

DATE: 12/22/94

WELL NO.: GW9D

① TOTAL CASING AND SCREEN LENGTH (FT.):	64.04
② CASING INTERNAL DIAMETER (in.):	2"
③ WATER LEVEL BELOW TOP OF CASING (FT.)	24.99
④ VOLUME OF WATER IN CASING (GAL.)	6.64

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

$V = 0.0408 (②)^2 \times (① - ③) =$ 19.92 GAL. (3 casings)

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)										
	90	100	110	120	130	140	150	160	170	180	190
pH	7.82	7.74	7.65	7.67	7.80	7.69	7.80	7.58	7.56	7.56	7.60
Spec. Cond. (µmho)	1008	1065	951	1082	1080	1087	1066	1132	1059	1054	1089
Turbidity (NTU)	137	128	123	105	92.3	89.6	75.5	74.2	66.9	40.3	43.2
Temperature (°C)	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.4	11.4
APPEAR	Slight TAN TINT	Slight TAN TINT	Slight TAN TINT	Clear TAN TINT	Clear TAN TINT	Clear	Clear	Clear	Clear	Clear	Clear

COMMENTS:

Well Developed using Waterra Pump w/ Dedicated 5/8 HDPE Tubing and Check valve

A-2347

URS CONSULTANTS, INC.

WELL DEVELOPMENT / PURGING LOG

PROJECT TITLE: NYS DEC PSA Cedar ST

PROJECT NO.: 35245.09

STAFF: T. Harper A LaPres

DATE: 12/22/94

WELL NO.: GW9D

① TOTAL CASING AND SCREEN LENGTH (FT.):	64.04
② CASING INTERNAL DIAMETER (in.):	2"
③ WATER LEVEL BELOW TOP OF CASING (FT.)	24.99
④ VOLUME OF WATER IN CASING (GAL.)	6.64

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

$V = 0.0408 (②)^2 \times (① - ③) =$ 19.92 GAL. (3 casings)

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)										
	200	210				-					
pH	7.62	7.63									
Spec. Cond. (µmho)	1163	1157									
Turbidity (NTU)	39.3	34.9									
Temperature (°C)	11.4	11.4									
APPEAR	Clear	clear									

COMMENTS:

Well Developed using WATERRA pump w/ Dedicated 5/8 HDPE Tubing and Check valve

A-2347

URS CONSULTANTS, INC.

WELL DEVELOPMENT (PURGING) LOG

PROJECT TITLE: NYS DEC PSA Cedar ST

PROJECT NO.: 35245.09

STAFF: C. Rokutanda T. Harper

DATE: Well Purge 1/5/95 Well Sample 1/6/95

WELL NO.: GW2D

		WELL I.D.	VOL. GAL./FT.
① TOTAL CASING AND SCREEN LENGTH (FT.):	63.72	1"	0.04
② CASING INTERNAL DIAMETER (in.):	2"	2"	0.17
		3"	0.38
		4"	0.66
③ WATER LEVEL BELOW TOP OF CASING (FT.)	21.50	5"	1.04
		6"	1.50
④ VOLUME OF WATER IN CASING (GAL.)	7.18	8"	2.60

$V = 0.0408 (②)^2 \times (① - ③) =$ 21.54 GAL. (3 casings)

START Purge 1433 END 1445

DTW 21.51
Time 1130

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)								Sampling		
	0	5	10	15	20	22					
pH	7.70	7.45	7.57	7.56	7.44	7.37			7.44		
Spec. Cond. (µmho)	1347	1470	1519	1479	1529	1563			1096		
Turbidity (NTU)	15.2	>1000	314	435	779	957			10.1		
Temperature (°C)	4.5	11.1	10.5	10.7	10.2	10.9			11.5		
APPEAR	Clear	LT Gray turbid	Hazy	Hazy	LT gray TURBID				Clear		

COMMENTS:

Well purged using Waterra Pump w/ Dedicated 5/8 HDPE Tubing + Check Valve
Well Sampled using Dedicated HDPE Bailer w/ NYLON CORD.

QC: None
parameters: TCL VOA, TCL Semi, TCL Pest/PCB, TAL Metals Cyanide

A-2347

URS CONSULTANTS, INC.

WELL DEVELOPMENT / PURGING LOG

PROJECT TITLE: NYS Dec PSA Cedar ST

PROJECT NO.: 35245.09

STAFF: C. RokuTanDA T. Harper

DATE: Well Purge 1/5/95 Well Sample 1/6/95

WELL NO.: GW41D

① TOTAL CASING AND SCREEN LENGTH (FT.):	70.82
② CASING INTERNAL DIAMETER (in.):	2"
③ WATER LEVEL BELOW TOP OF CASING (FT.)	32.13
④ VOLUME OF WATER IN CASING (GAL.)	6.58

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

$V = 0.0408 (②)^2 \times (① - ③) =$ 19.74 GAL. (3 casings)

DTW 32.13
Time 1100

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)								Sampling		
	0	5	10	15	20	-					
pH	7.69	7.55	7.52	7.44	7.40				7.86		
Spec. Cond. (µmho)	1178	1177	1168	1146	1135				642		
Turbidity (NTU)	26.6	164	278	115	53.6				18.1		
Temperature (°C)	5.9	9.5	9.5	9.7	9.7				8.4		
APPEAR	Clear	Slight TAN TINT	LT TAN TINT	CLOUDY	Clear				Clear		

COMMENTS:

Well purged using WaterRA pump w/ Dedicated 5/8 HDPE Tubing + Check valve

Well Sampled using Dedicated HDPE Bailer w/ NYLON cord

QC: NONE

Parameters: TCL VOA TCL Semi TCL Pest/PCB Tal metals Cyanide

A-2347

UBS CONSULTANTS, INC.

WELL DEVELOPMENT (PURGING) LOG

PROJECT TITLE: NYS Dec PSA Cedar St

PROJECT NO.: 35245.09

STAFF: C. Rokutanda T. Harper

DATE: Well Purge 1/5/95 Well Sample 1/6/95

WELL NO.: GW5D

		WELL I.D.	VOL. GAL./FT.
(1) TOTAL CASING AND SCREEN LENGTH (FT.):	70.32	1"	0.04
(2) CASING INTERNAL DIAMETER (in.):	2"	2"	0.17
(3) WATER LEVEL BELOW TOP OF CASING (FT.)	29.74	3"	0.38
(4) VOLUME OF WATER IN CASING (GAL.)	6.90	4"	0.66
		5"	1.04
		6"	1.50
		8"	2.60

$V = 0.0408 (②)^2 \times (① - ③) =$ 20.70 GAL. (3 casings)

Start Purge 1322 End 1343

DTW 29.73
Time 1015

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)								Sampling		
	0	5	10	15	21	-					
pH	7.68	7.06	7.06	7.09	7.43				8.19		
Spec. Cond. (µmho)	1587	1788	1736	1713	1729				600		
Turbidity (NTU)	20.8	>1000	585	415	376				21.6		
Temperature (°C)	7.9	9.7	9.9	8.3	8.3				9.2		
APPEAR	Clear	Cloudy	Cloudy	Cloudy	Hazy				Clear		

COMMENTS:

Well Purged using WaterRA pump w/ Dedicated 5/8 HDPE Tubing + Check Valve
Well Sampled using Dedicated HDPE Bailer w/ Nylon Cord
QC: NONE
Parameters TCL VOA, TCL Semi, TCL Pest/PCB, Tal Metals, Cyanide

A-2347

URS CONSULTANTS, INC.

WELL DEVELOPMENT / (PURGING) LOG

PROJECT TITLE: NYS DEC PSA Cedar ST

PROJECT NO.: 35245.09

STAFF: C. ROKUTANDA T. HARPER

DATE: Well Purge 1/5/95 Well Sample 1/6/95

WELL NO.: GW8S

		WELL I.D.	VOL. GAL./FT.
(1) TOTAL CASING AND SCREEN LENGTH (FT.):	36.80	1"	0.04
(2) CASING INTERNAL DIAMETER (in.):	2"	2"	0.17
		3"	0.38
		4"	0.66
(3) WATER LEVEL BELOW TOP OF CASING (FT.)	32.49	5"	1.04
		6"	1.50
(4) VOLUME OF WATER IN CASING (GAL.)	0.73	8"	2.60

$V = 0.0408 (②)^2 \times (① - ③) =$ 2.19 GAL. (3 casings)

START Purge 1302 END 1309

DTW 32.50
TIME 1000

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)								Sampling		
	0	3				-					
pH	7.50	7.43							7.19		
Spec. Cond. (µmho)	1212	1242							812		
Turbidity (NTU)	282	>1000							9.98		
Temperature (°C)	6.3	9.9							6.8		
APPEAR	Cloudy w/Black Particles	Turbid TAN							CLEAR		

COMMENTS:

Well Purged using WaterRA pump w/ Dedicated 5/8 HDPE Tubing + Check valve.

Well Sampled using Dedicated HDPE Bailer w/NYLON CORD.

QC: NONE

PARAMETERS: TCL VOA, TCL Semi, TCL Pest/PCB, Tal metals, Cyanide

A-2347

URS CONSULTANTS, INC.

WELL DEVELOPMENT / (PURGING) LOG

PROJECT TITLE: NYS Dec PSA Cedar ST

PROJECT NO.: 35245.09

STAFF: C. Rokutanda T. Harper

DATE: well purge 1/5/95 well Sample 1/6/95

WELL NO.: GW8D

		WELL I.D.	VOL. GAL./FT.
① TOTAL CASING AND SCREEN LENGTH (FT.):	71.53	1"	0.04
② CASING INTERNAL DIAMETER (in.):	2"	2"	0.17
		3"	0.38
③ WATER LEVEL BELOW TOP OF CASING (FT.)	33.45	4"	0.66
		5"	1.04
④ VOLUME OF WATER IN CASING (GAL.)	6.47	6"	1.50
		8"	2.60

$V = 0.0408 (②)^2 \times (① - ③) =$ 19.41 GAL. (3 casings)

Start Purge 1242 End 1300

DTW 33.47
Time 0930

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)								Sampling		
	0	5	10	15	20	-					
pH	8.72	7.62	7.32	7.31	7.22				6.50		
Spec. Cond. (µmho)	1679	1704	1691	1662	1667				1203		
Turbidity (NTU)	28.8	>1000	>1000	>1000	>1000				12.5		
Temperature (°C)	8.9	10.3	9.8	10.1	10.0				9.3		
APPEAR	Clear	Turbid Gray	Turbid LT Gray	Turbid LT Gray	Turbid LT Gray				Clear		

COMMENTS:

Well Purged using waterra pump w/ Dedicated 5/8 HDPE Tubing + Check valve

Well Sampled using Dedicated HDPE Bailer w/ NYLON Cord

QC: MS/MSD

Parameters: TCL VOA, TCL Semi, TCL Pest/PCB, TAL metals, Cyanide

A-2347

URS CONSULTANTS, INC.

WELL DEVELOPMENT / PURGING LOG

PROJECT TITLE: NYS DEC PSA Cedar ST

PROJECT NO.: 35245.09

STAFF: C. Rokutanda · T. Harper

DATE: Well Purge 1/5/95 Well Sample 1/6/95

WELL NO.: GW9S

		WELL I.D.	VOL. GAL./FT.
① TOTAL CASING AND SCREEN LENGTH (FT.):	33.66	1"	0.04
② CASING INTERNAL DIAMETER (in.):	2"	2"	0.17
③ WATER LEVEL BELOW TOP OF CASING (FT.)	26.03	3"	0.38
④ VOLUME OF WATER IN CASING (GAL.)	1.30	4"	0.66
		5"	1.04
		6"	1.50
		8"	2.60

$V = 0.0408 (②)^2 \times (① - ③) =$ 3.9 GAL. (3 casings)

START Purge 1351 END 1358 DTW 26.15 Time 10-15

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)								Sampling		
	0	4									
pH	7.49	7.14							7.39		
Spec. Cond. (µmho)	1427	1618							1559		
Turbidity (NTU)	407	>1000							23.3		
Temperature (°C)	8.2	9.1							8.6		
APPEAR	TAN Slight Hazy	Turbid Gray							Clear		

COMMENTS:

Well purged USING WaterRA pump w/ Dedicated 5/8 HDPE Tubing + Check VALVE

Well sampled using Dedicated HDPE Bailer w/ NYLON cord

QC: NONE

PARAMETERS: TCL VOA, TCL Semi, TCL PEST/PCB, TAL metals, CYANIDE

A-2347

URS CONSULTANTS, INC.

WELL DEVELOPMENT / (PURGING) LOG

PROJECT TITLE: NYS Dec PSA Cedar ST

PROJECT NO.: 35245.09

STAFF: C. Rokutanda T. Harper

DATE: Well Purge 1/5/95 Well Sample 1/6/95

WELL NO.: GW9D

① TOTAL CASING AND SCREEN LENGTH (FT.):	65.24
② CASING INTERNAL DIAMETER (in.):	2"
③ WATER LEVEL BELOW TOP OF CASING (FT.)	25.58
④ VOLUME OF WATER IN CASING (GAL.)	6.74

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

$V = 0.0408 (②)^2 \times (① - ③) =$ 20.20 GAL. (3 casings)

Start Purge 1359 END 1415

DTW 25.67
Time 1030

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)								Sampling		
	0	5	10	15	21	-					
pH	7.58	7.44	7.45	7.48	7.50				7.91		
Spec. Cond. (µmho)	1229	1306	1386	1336	1351				876		
Turbidity (NTU)	31.6	>1000	>1000	>1000	>1000				18.7		
Temperature (°C)	7.6	6.0	6.8	8.2	8.4				9.0		
APPEAR	Clear	Turbid gray	Turbid gray	Turbid gray	Turbid gray				Clear		

COMMENTS:

Well Purged using Waterra Pump w/ Dedicated 5/8 HDPE Tubing + Check valve
Well Sampled using Dedicated HDPE Bailer w/ NYLON CORD
QC: NONE
Parameters: TCL VOA, TCL Semi, TCL Pest/PCB, TAL metals Cyanide

A-2347

URS CONSULTANTS, INC.

WELL DEVELOPMENT / PURGING LOG

PROJECT TITLE: NYS Dec PSA Cedar ST

PROJECT NO.: 35245.09

STAFF: C. Rokutanda T. Harper

DATE: 1/6/95

WELL NO.: City Well A

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

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

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

10 Gallons Run to Waste From TAP

DTW NA

Time 0900

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)								Sampling		
	0					-					
pH									6.28		
Spec. Cond. (umho)									1435		
Turbidity (NTU)									4.68		
Temperature (°C)									8.3		
APPEAR									Clear		

COMMENTS:

Well Purged 10 gallons Run to WASTE

Sample Taken Direct From TAP

QC - NONE

PARAMETERS: TCL VOA TCL Semi, TCL Pest/PCB Tal metals Cyanide

A-2347

APPENDIX C
Geotechnical Testing Results

BUFFALO DRILLING COMPANY
INC.
10440 MAIN STREET
CLARENCE, NEW YORK
14031
(716) 759-7821
FAX (716) 759-7823

January 5, 1995

JOB NO.: 94-1262C

URS Consultants, Inc.
282 Delaware Avenue
Buffalo, New York 14202

ATTN: Mr. Gerald A. Sikora

RE: Grain Size Test Results
Cedar Street Dump Site
URS Project No. 35245.09
(P.O. No. BU-94-G1898)

Gentlemen:

The data summary in Table No. 1 and the individual grain size analysis graphs are enclosed for the above referenced project. This data represents the laboratory testing results for samples that were provided by URS Consultants, Inc. on December 22, 1994. A copy of the chain-of-custody record is also enclosed. The samples were tested in accordance with the following method:

- ASTM D422 Particle Size Analysis of Soils

The entire contents of each of the sample containers was used. Note that, due to the presence of gravel sized material, the dry weight of samples GW-2D and GW-5D was less than that required for grain size testing purposes.

Please call either James S. Barron, P.E. or the undersigned at your earliest convenience, if questions should arise.

Very truly yours,
BUFFALO DRILLING COMPANY, INC.

Carmen M. Panuccio

Carmen M. Panuccio
Geotechnical Engineer

encls.

JOB NO: 94-1262C

TABLE NO. 1

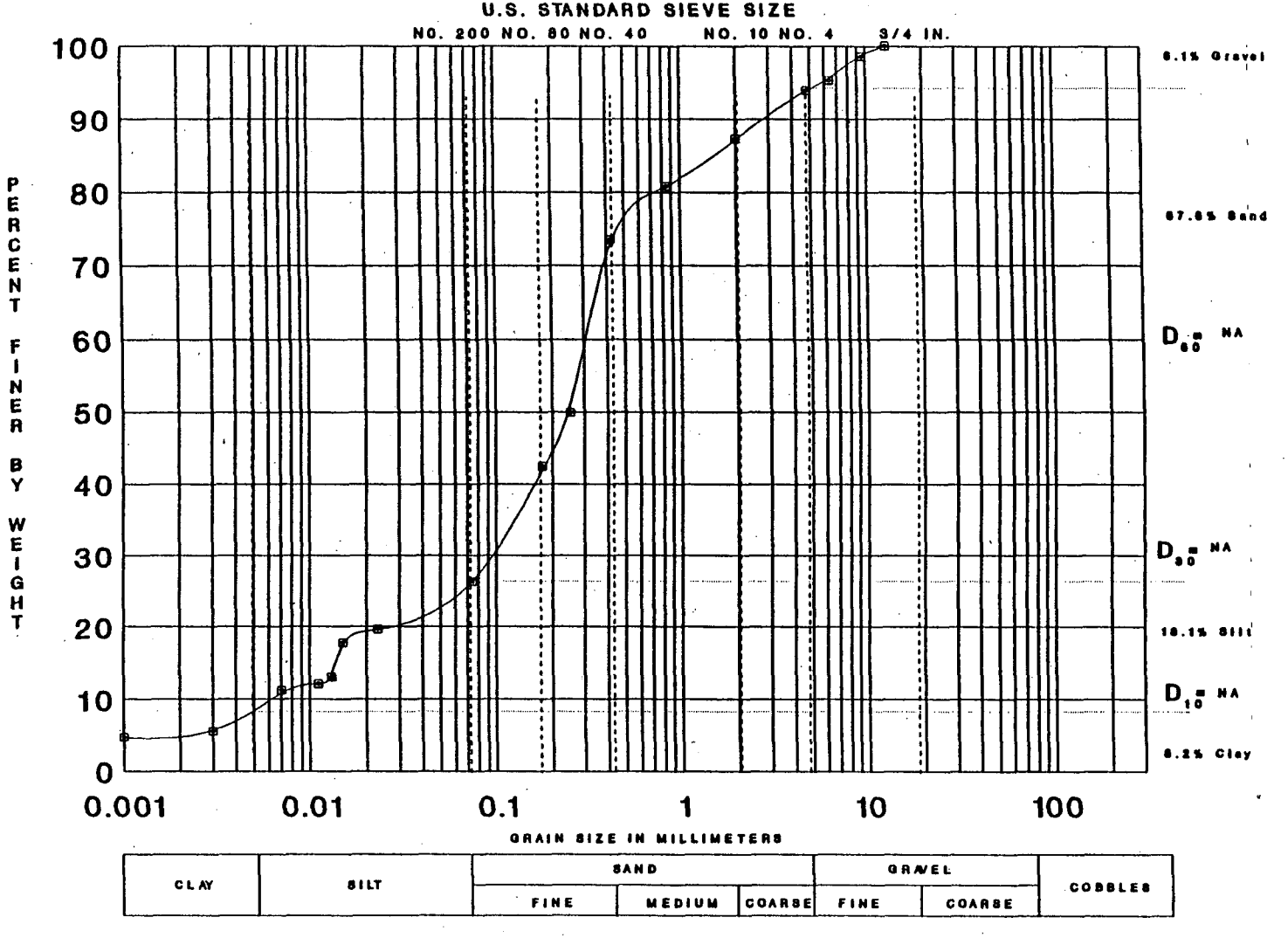
SUMMARY OF LABORATORY TEST RESULTS

STATION NO.	SAMPLE DEPTH (ft.)	USCS	GRAIN SIZE ANALYSIS			
			GRAVEL (%)	SAND (%)	SILT (%)	CLAY (%)
GW-2D	55-57	SM	6.1	67.6	18.1	8.2
GW-4D	60-70	SM	0.1	77.4	19.1	3.4
GW-5D	60-62	SM	5.1	80.3	10.1	4.5
GW-8S	30-35	ML	0.4	42.3	53.4	3.9
GW-8D	60-70	SP	0.1	95.6	3.8	0.5
GW-9S	30-32	SM	2.0	79.9	14.7	3.4
GW-9D	65-67	SM	0.0	70.3	28.1	1.6

GRAIN SIZE ANALYSIS

GW-2D 1/3/95 Job No: 94-1262C

C_c = NA C_u = NA LL = NA PL = NA PI = NA USCS = SM

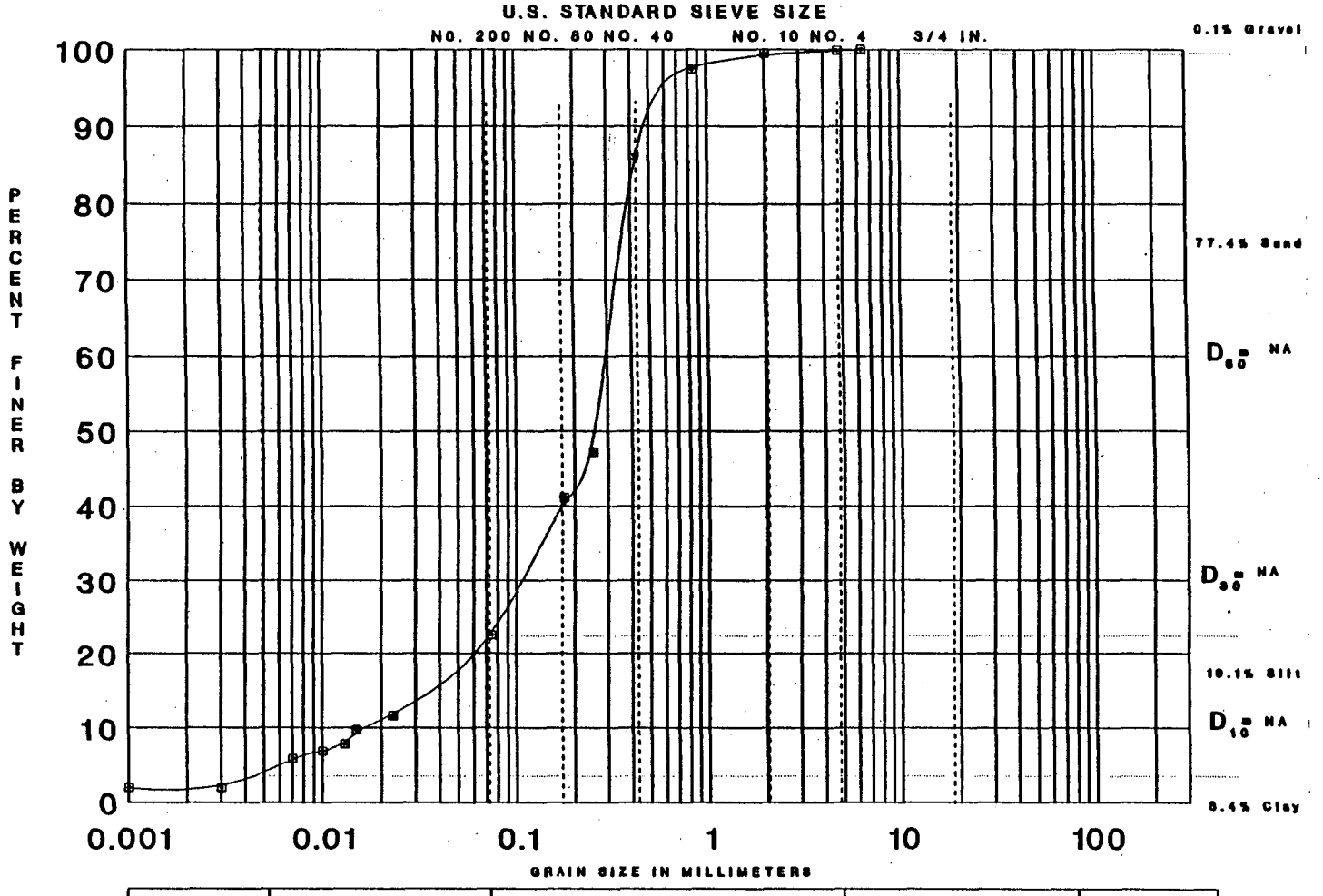


BUFFALO DRILLING COMPANY, INC.

GRAIN SIZE ANALYSIS

GW-4D 1/3/95 Job No: 94-1262C

C_c = NA C_u = NA LL = NA PL = NA PI = NA USCS = SM

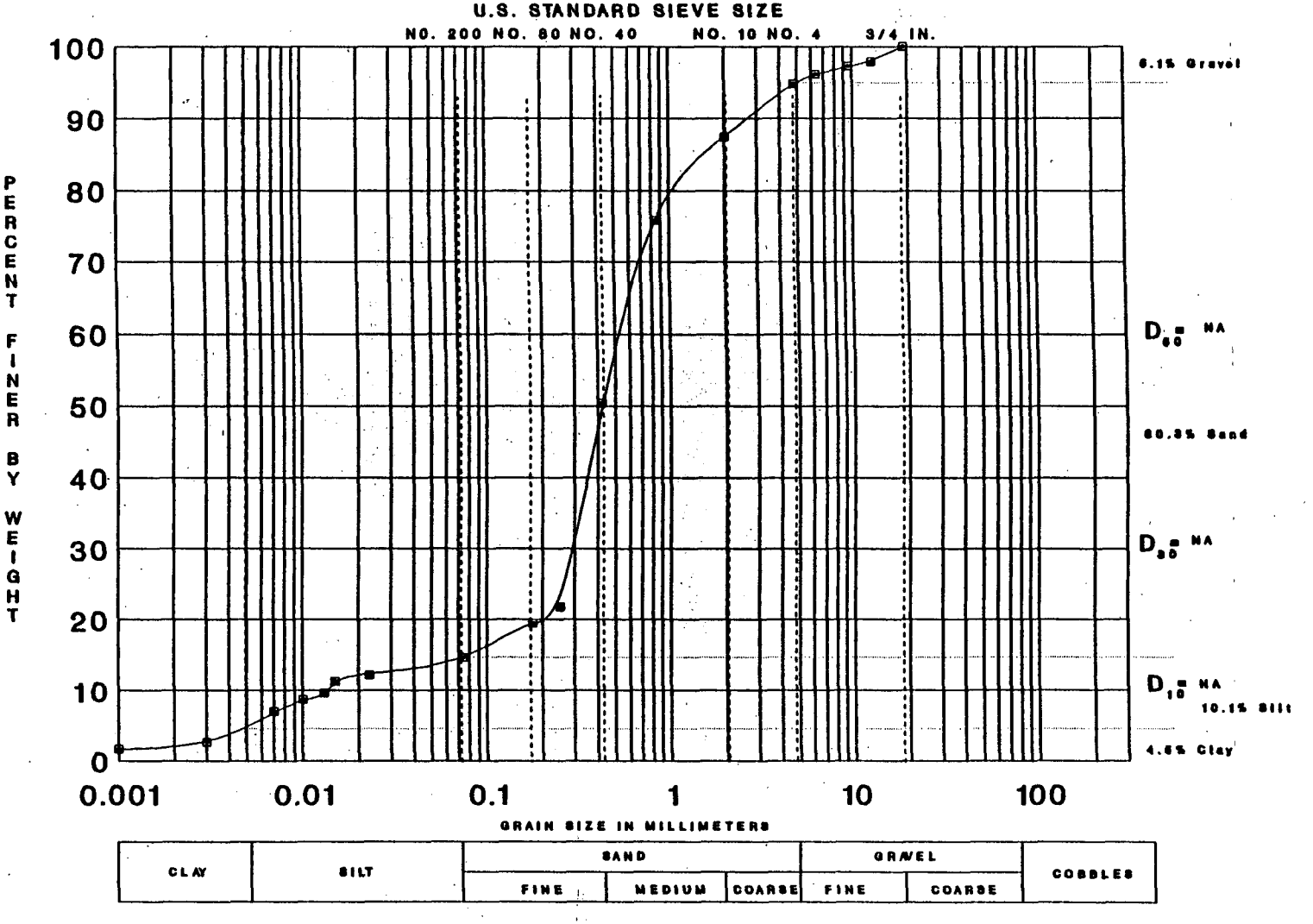


BUFFALO DRILLING COMPANY, INC.

GRAIN SIZE ANALYSIS

GW-5D 1/3/95 Job No: 94-1262C

C_C = NA C_U = NA LL = NA PL = NA PI = NA USCS = SM

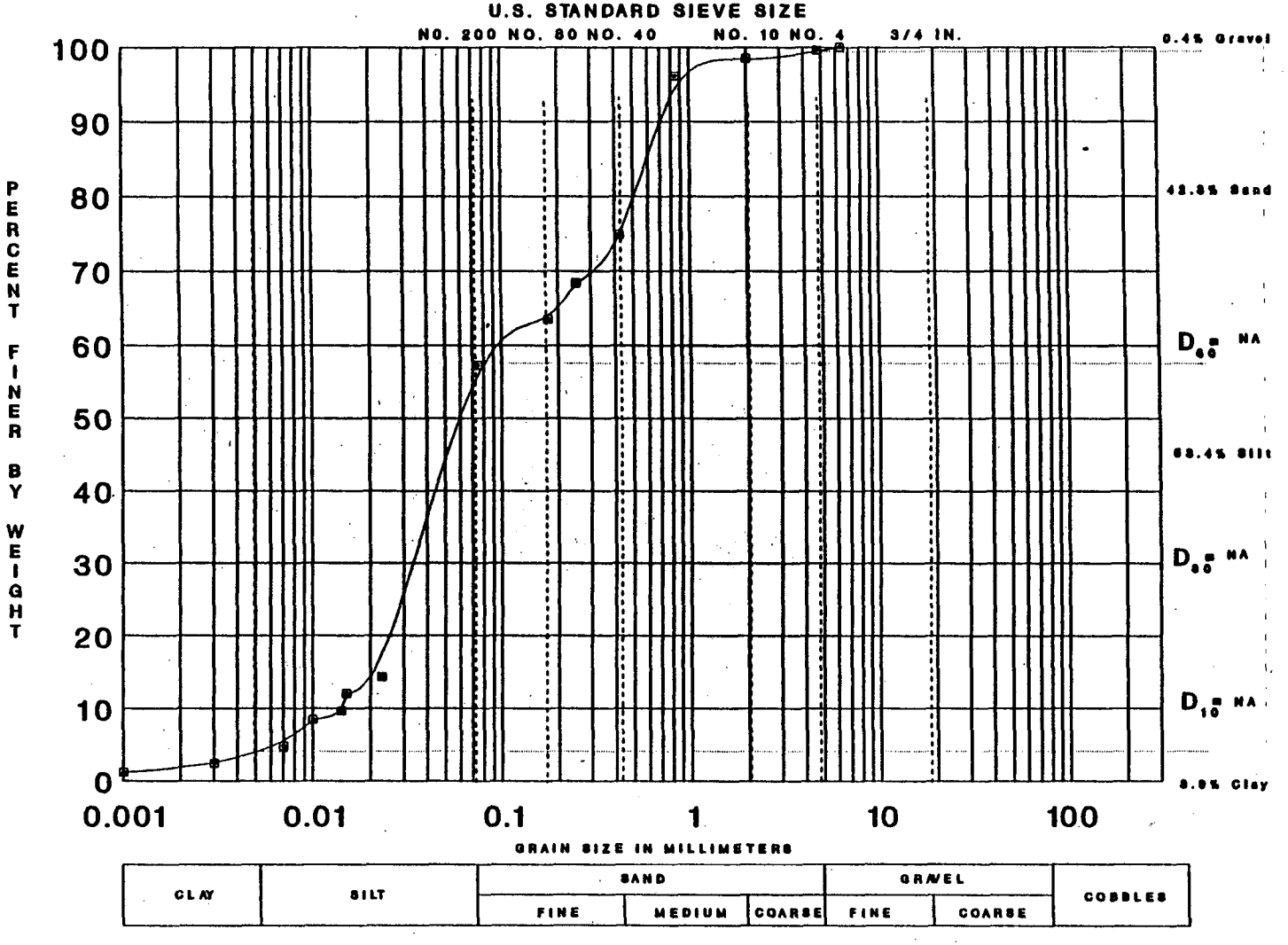


BUFFALO DRILLING COMPANY, INC.

GRAIN SIZE ANALYSIS

GW-8S 1/3/95 Job No: 94-1262C

C_c = NA C_u = NA LL = NA PL = NA PI = NA USCS = ML

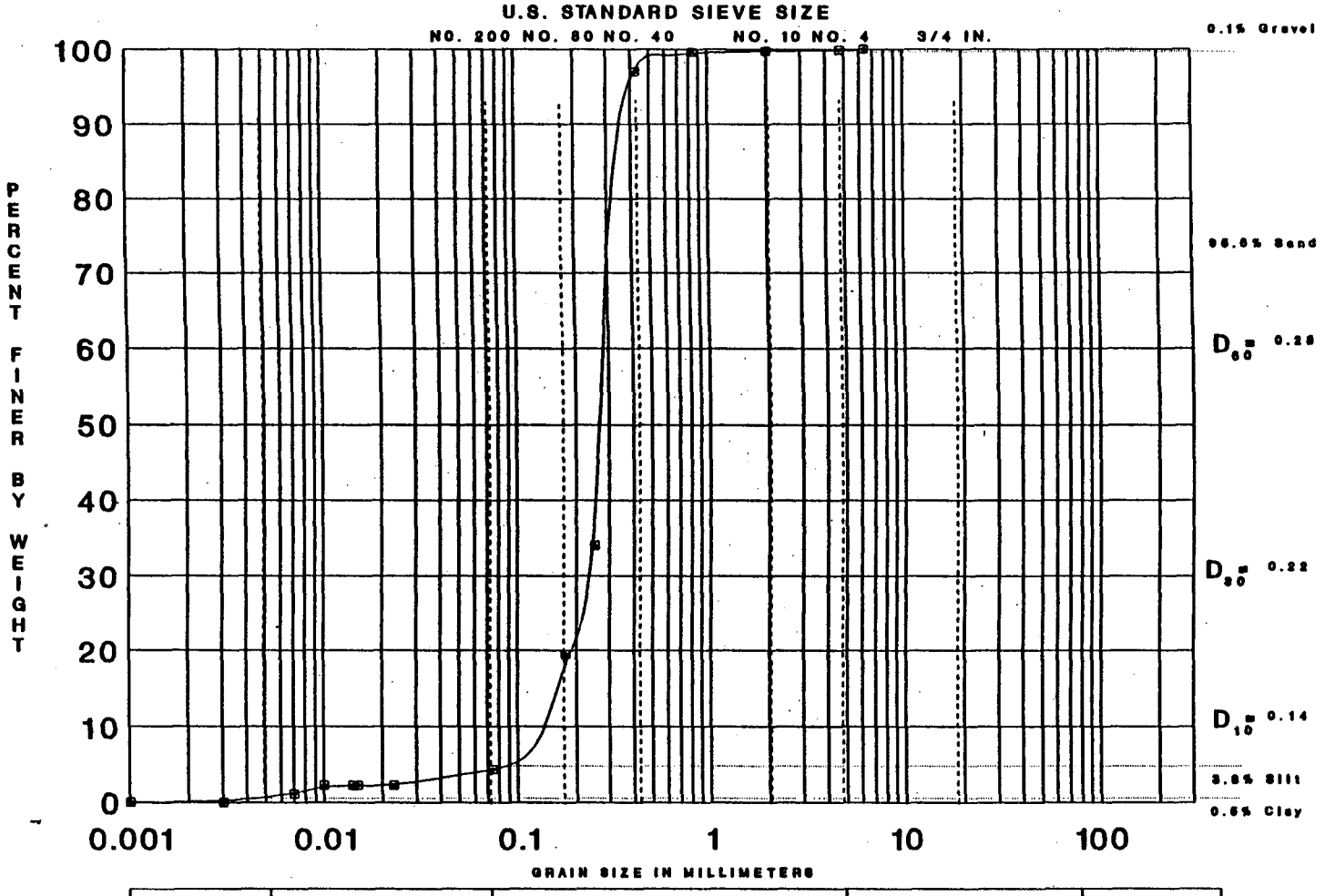


BUFFALO DRILLING COMPANY, INC.

GRAIN SIZE ANALYSIS

GW-8D 1/3/95 Job No: 94-1262C

C_c = 1.2 C_u = 2.0 LL = NA PL = NA PI = NA USCS = SP

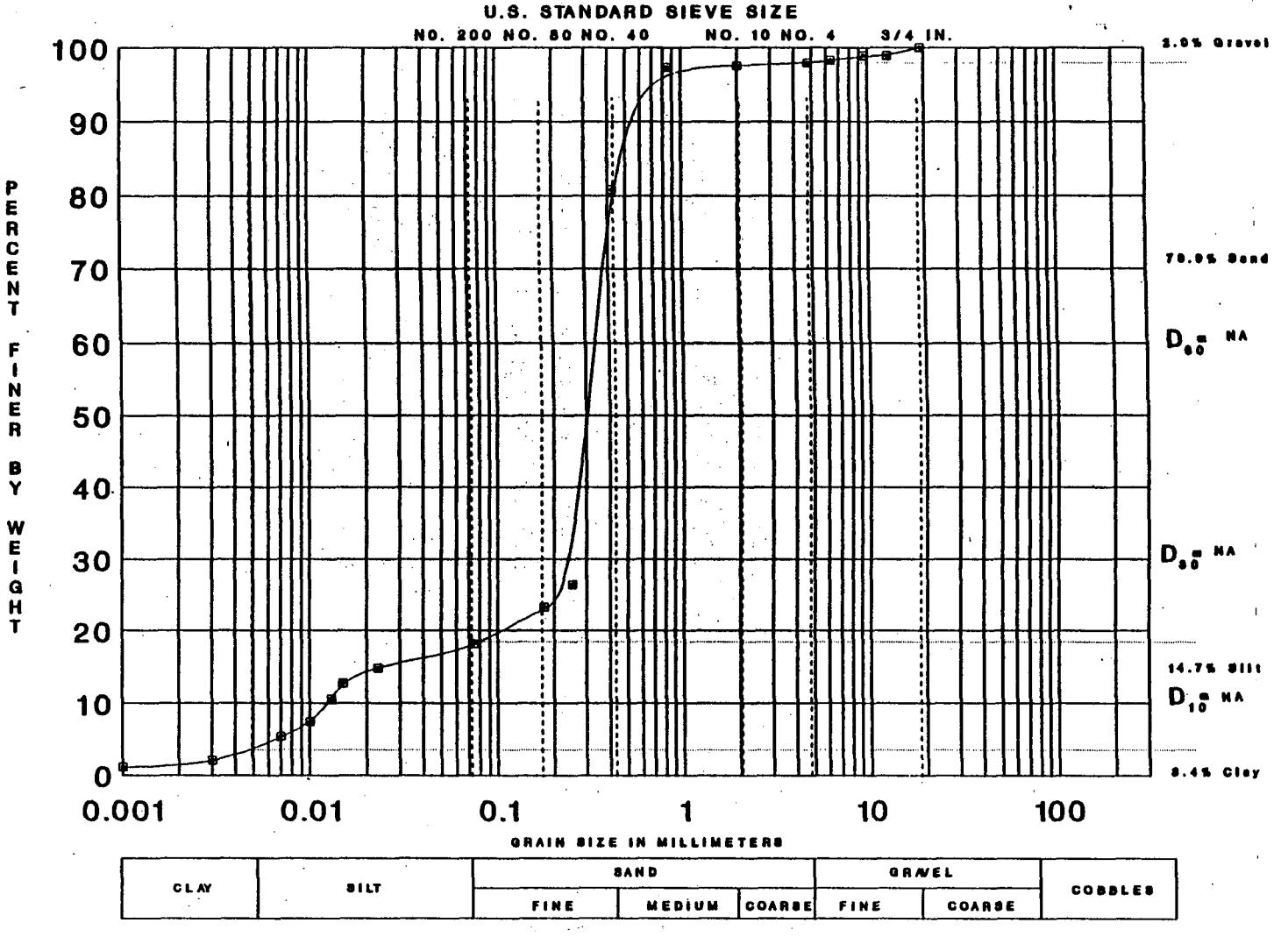


BUFFALO DRILLING COMPANY, INC.

GRAIN SIZE ANALYSIS

GW-9S 1/3/95 Job No: 94-1262C

C_c = NA C_u = NA LL = NA PL = NA PI = NA USCS = SM

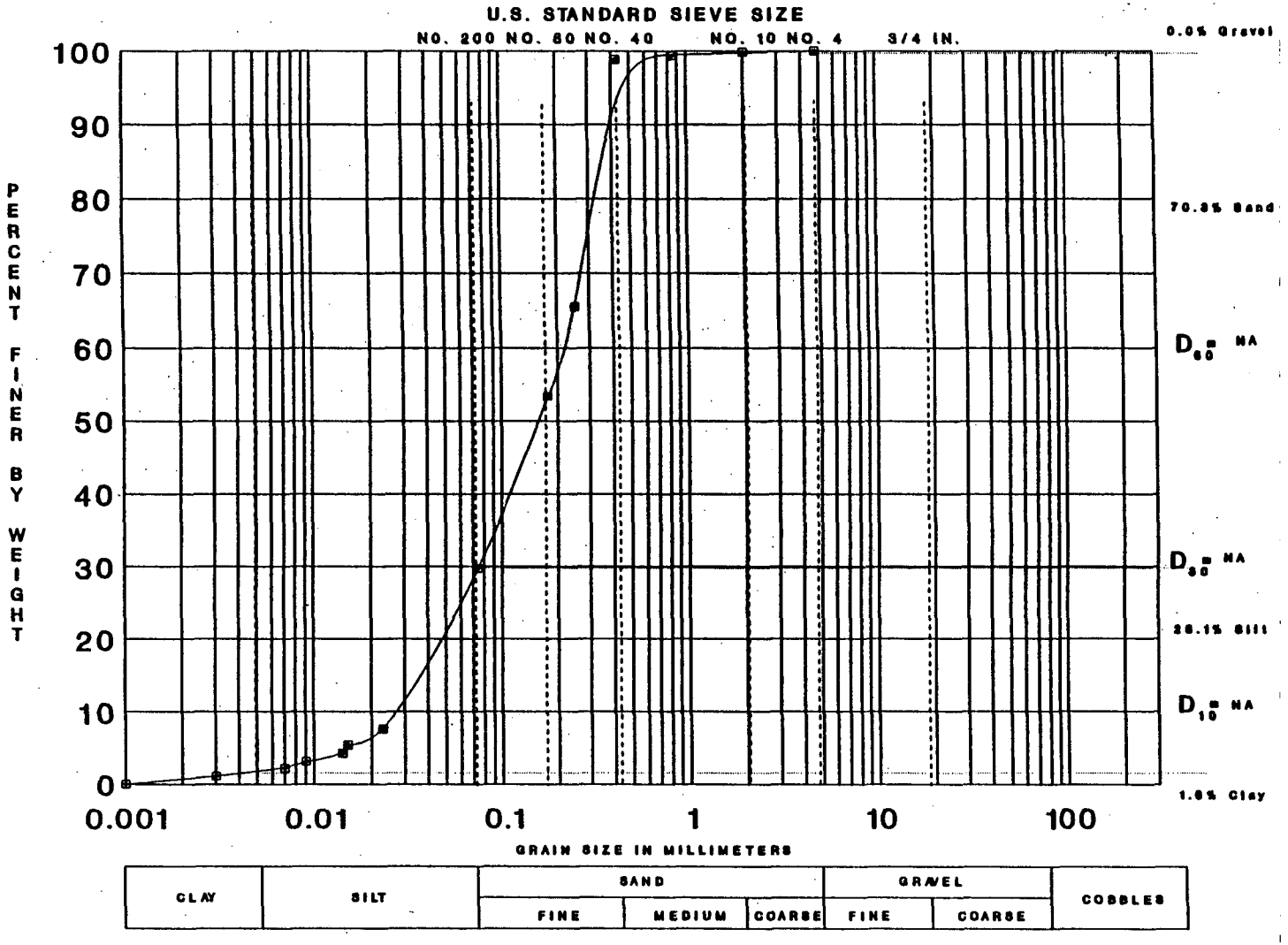


BUFFALO DRILLING COMPANY, INC.

GRAIN SIZE ANALYSIS

GW-9D 1/3/95 Job No: 94-1262C

C_C = NA C_U = NA LL = NA PL = NA PI = NA USCS = SM



BUFFALO DRILLING COMPANY, INC.

CHAIN OF CUSTODY RECORD

URS
CONSULTANTS, INC.

PROJECT NO.: 35245.09

SITE NAME: Coors St Dump

SAMPLERS (SIGNATURE): Andre Lapres

STATION NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	# OF CONTAINERS	GRAB 5,22 W.TA Hypercare	REMARKS
GW-2D	12/14/94		X		GW-2D 55-57Ft	1	X	No Known Hazards
GW-4D	12/9/94		X		GW-4D 68-70 Ft	1	X	
GW-5D	12/8/94		X		GW-5D 60-62Ft	1	X	
GW-8S	12/15/94		X		GW-8S 30-35Ft	1	X	
GW-8D	12/14/94		X		GW-8D 68-70 Ft	1	X	
GW-9S	12/19/94		X		GW-9S 30-32Ft	1	X	
GW-9D	12/21/94		X		GW-9D 65-67Ft	1	X	

RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED BY (SIGNATURE)	RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED BY (SIGNATURE)
Cindy L. Pulsen	12/22/94	9:30					
RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED BY (SIGNATURE)	RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED BY (SIGNATURE)
RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED FOR LABORATORY BY (SIGNATURE)	DATE	TIME	REMARKS	

Distribution: Original accompanies shipment, copy to coordinator field files

URSF-030/1 OF 1/ColCR

APPENDIX D
Data Useability Summary

EXPLANATION OF VALIDATION QUALIFIERS

The following provide definitions of the validation qualifiers assigned to results during the data review process.

ORGANIC QUALIFIERS

U - The analyte was analyzed for but was not detected.

J - Indicates an estimated concentration because results are either below the sample quantitation limit or quality control criteria was not met.

N - Indicates presumptive evidence at a compound.

R - The sample results are rejected due to the inability to meet holding time requirements and/or quality control criteria.

C - The compound identification has been confirmed by GC/MS.

D - The reported concentration was determined by a secondary dilution.

P - The percent difference between the two GC columns is greater than 25%; the lower of two values is reported.

INORGANIC QUALIFIERS

B - The sample result is less than the contract required detection limit but greater than or equal to the instrument detection limit.

U - The analyte was analyzed for but was not detected.

J - Indicates an estimated concentration because quality control criteria was not met.

S - The reported value was determined by the Method of Standard Additions (MSA).

NA - Not Applicable

APPENDIX D-1
VALIDATION SUMMARY TABLES
PRELIMINARY SITE ASSESSMENT
CEDAR STREET DUMP
SUBSURFACE SOIL (VOLATILE RESULTS)

Sample ID		GW-2D	GW-4D	GW-5D	GW-8D
Date Sampled		12/16/94	12/11/94	12/08/94	12/14/94
Date Received		12/17/94	12/12/94	12/09/94	12/15/94
Date Analyzed		12/22/94	12/16/94	12/13/94	12/21/94
Depth (ft)		60	60-70	65-67	60-70
% Moisture		10	11	10	16
Dilution Factor		1.0	1.0	1.0	1.0
Units		UG/KG	UG/KG	UG/KG	UG/KG
Parameters	Class				
Chloromethane	VOC	11 UJ	11 UJ	11 UJ	12 UJ
Bromomethane	VOC	11 U	11 U	11 U	12 U
Vinyl Chloride	VOC	11 UJ	11 UJ	11 U	12 UJ
Chloroethane	VOC	11 UJ	11 U	11 U	12 UJ
Methylene Chloride	VOC	11 U	11 U	3 J	2 J
Acetone	VOC	14 U	11 U	13 U	19 U
Carbon Disulfide	VOC	11 U	11 U	11 U	3 J
1,1-Dichloroethene	VOC	11 U	11 U	11 U	12 U
1,1-Dichloroethane	VOC	11 U	1 J	11 J	12 U
1,2-Dichloroethene (total)	VOC	11 U	2 J	7 J	12 U
Chloroform	VOC	11 U	11 U	11 U	0.6 J
1,2-Dichloroethane	VOC	11 U	11 U	11 U	12 U
2-Butanone	VOC	11 U	11 U	11 U	12 UJ
1,1,1-Trichloroethane	VOC	11 U	11 U	1 J	12 U
Carbon Tetrachloride	VOC	11 U	11 U	11 U	12 U
Bromodichloromethane	VOC	11 U	11 U	11 U	12 U
1,2-Dichloropropane	VOC	11 U	2 J	11 U	12 U
cis-1,3-Dichloropropene	VOC	11 U	11 U	11 U	12 U
Trichloroethene	VOC	11 U	10 J	3 J	12 U
Dibromochloromethane	VOC	11 U	11 U	11 U	12 U
1,1,2-Trichloroethane	VOC	11 U	11 U	11 U	12 U
Benzene	VOC	0.9 J	11 U	11 U	12 U
trans-1,3-Dichloropropene	VOC	11 U	11 U	11 U	12 U
Bromoform	VOC	11 U	11 U	11 U	12 UJ
4-Methyl-2-pentanone	VOC	11 U	11 U	11 UJ	12 UJ
2-Hexanone	VOC	11 U	11 U	11 UJ	12 UJ
Tetrachloroethene	VOC	11 U	4 J	11 U	12 U
1,1,2,2-Tetrachloroethane	VOC	11 U	11 U	11 U	12 U
Toluene	VOC	5 J	11 U	1 J	12 U
Chlorobenzene	VOC	11 U	11 U	11 U	12 U
Ethylbenzene	VOC	1 J	11 U	11 U	12 U
Styrene	VOC	11 U	11 U	11 U	12 U
Xylene (total)	VOC	7 J	11 U	1 J	0.8 J
Associated Method Blank	VOC	VBLKS22A	VBLKS161	VBLKS131	VBLKS21B
Associated Rinse Blank	VOC	RB1	RB1	RB1	RB1

APPENDIX D-1
VALIDATION SUMMARY TABLES
PRELIMINARY SITE ASSESSMENT
CEDAR STREET DUMP
SUBSURFACE SOIL (VOLATILE RESULTS)

Sample ID		GW-8S	GW-9D	GW-9S
Date Sampled		12/16/94	12/21/94	12/20/94
Date Received		12/17/94	12/22/94	12/21/94
Date Analyzed		12/22/94	12/27/94	12/27/94
Depth (ft)		30-35	55	25
% Moisture		19	16	16
Dilution Factor		1.0	1.0	1.0
Units		UG/KG	UG/KG	UG/KG
Parameters	Class			
Chloromethane	VOC	12 UJ	12 U	12 U
Bromomethane	VOC	12 U	12 U	12 U
Vinyl Chloride	VOC	12 UJ	12 U	12 U
Chloroethane	VOC	12 UJ	12 U	4 J
Methylene Chloride	VOC	12 U	12 U	12 U
Acetone	VOC	12 U	24 U	15 U
Carbon Disulfide	VOC	12 U	12 U	12 U
1,1-Dichloroethene	VOC	12 U	12 U	12 U
1,1-Dichloroethane	VOC	12 U	1 J	12 U
1,2-Dichloroethene (total)	VOC	12 U	12 U	12 U
Chloroform	VOC	12 U	12 U	12 U
1,2-Dichloroethane	VOC	12 U	12 U	12 U
2-Butanone	VOC	12 UJ	12 U	12 U
1,1,1-Trichloroethane	VOC	12 U	12 U	12 U
Carbon Tetrachloride	VOC	12 U	12 U	12 U
Bromodichloromethane	VOC	12 U	12 U	12 U
1,2-Dichloropropane	VOC	12 U	12 U	12 U
cis-1,3-Dichloropropene	VOC	12 U	12 U	12 U
Trichloroethene	VOC	3 J	12 U	12 U
Dibromochloromethane	VOC	12 U	12 U	12 U
1,1,2-Trichloroethane	VOC	12 U	12 U	12 U
Benzene	VOC	12 U	12 U	0.6 J
trans-1,3-Dichloropropene	VOC	12 U	12 U	12 U
Bromoform	VOC	12 U	12 U	12 U
4-Methyl-2-pentanone	VOC	12 U	12 U	12 U
2-Hexanone	VOC	12 U	12 U	12 U
Tetrachloroethene	VOC	12 U	12 U	12 U
1,1,2,2-Tetrachloroethane	VOC	12 U	12 U	12 U
Toluene	VOC	2 J	2 J	0.6 J
Chlorobenzene	VOC	12 U	12 U	12 U
Ethylbenzene	VOC	12 U	18	12 U
Styrene	VOC	12 U	12 U	12 U
Xylene (total)	VOC	0.9 J	93	2 J
Associated Method Blank	VOC	VBLKS22A	VBLKS27B	VBLKS27B
Associated Rinse Blank	VOC	RB1	RB1	RB1

APPENDIX D-1
VALIDATION SUMMARY TABLES
PRELIMINARY SITE ASSESSMENT
CEDAR STREET DUMP
SUBSURFACE SOIL (SEMIVOLATILE RESULTS)

Sample ID		GW-2D	GW-4D	GW-5D	GW-8D
Date Sampled		12/16/94	12/11/94	12/08/94	12/14/94
Date Received		12/17/94	12/12/94	12/09/94	12/15/94
Date Extracted		12/21/94	12/14/94	12/12/94	12/19/94
Date Analyzed		01/12/95	01/03/95	01/03/95	01/03/95
Depth (ft)		60	60-70	65-67	60-70
% Moisture		10	11	10	16
Dilution Factor		1.0	1.0	1.0	1.0
Units		UG/KG	UG/KG	UG/KG	UG/KG
Parameters	Class				
Phenol	SVOC	370 U	370 U	370 U	400 U
bis(2-Chloroethyl)ether	SVOC	370 U	370 U	370 U	400 U
2-Chlorophenol	SVOC	370 U	370 U	370 U	400 U
1,3-Dichlorobenzene	SVOC	370 U	370 U	370 U	400 U
1,4-Dichlorobenzene	SVOC	370 U	370 U	370 U	400 U
1,2-Dichlorobenzene	SVOC	370 U	370 U	370 U	400 U
2-Methylphenol	SVOC	370 U	370 U	370 U	400 U
bis(2-Chloroisopropyl)ether	SVOC	370 UJ	370 U	370 U	400 U
4-Methylphenol	SVOC	370 U	370 U	370 U	400 U
N-nitroso-di-n-propylamine	SVOC	370 U	370 U	370 U	400 U
Hexachloroethane	SVOC	370 U	370 U	370 U	400 U
Nitrobenzene	SVOC	370 U	370 U	370 U	400 U
Isophorone	SVOC	370 U	370 U	370 U	400 U
2-Nitrophenol	SVOC	370 U	370 U	370 U	400 U
2,4-Dimethylphenol	SVOC	370 U	370 U	370 U	400 U
bis(-2-Chloroethoxy)methane	SVOC	370 U	370 U	370 U	400 U
2,4-Dichlorophenol	SVOC	370 U	370 U	370 U	400 U
1,2,4-Trichlorobenzene	SVOC	370 U	370 U	370 U	400 U
Naphthalene	SVOC	370 U	370 U	370 U	400 U
4-Chloroaniline	SVOC	370 U	370 U	370 U	400 U
Hexachlorobutadiene	SVOC	370 U	370 U	370 U	400 U
4-Chloro-3-methylphenol	SVOC	370 U	370 U	370 U	400 U
2-Methylnaphthalene	SVOC	370 U	370 U	370 U	400 U
Hexachlorocyclopentadiene	SVOC	370 UJ	370 U	370 U	400 U
2,4,6-Trichlorophenol	SVOC	370 U	370 U	370 U	400 U
2,4,5-Trichlorophenol	SVOC	930 U	940 UJ	930 UJ	990 UJ
2-Chloronaphthalene	SVOC	370 U	370 U	370 U	400 U
2-Nitroaniline	SVOC	930 U	940 U	930 U	990 U
Dimethylphthalate	SVOC	370 U	370 U	370 U	400 U
Acenaphthylene	SVOC	370 U	370 U	370 U	400 U
2,6-Dinitroaniline	SVOC	370 U	370 U	370 U	400 U
3-Nitroaniline	SVOC	930 U	940 U	930 U	990 U
Acenaphthene	SVOC	370 U	370 U	370 U	400 U
Associated Method Blank	SVOC	SBLKS211	SBLKS142	SBLKS122	SBLKS191
Associated Rinse Blank	SVOC	RB1	RB1	RB1	RB1

APPENDIX D-1
VALIDATION SUMMARY TABLES
PRELIMINARY SITE ASSESSMENT
CEDAR STREET DUMP
SUBSURFACE SOIL (SEMIVOLATILE RESULTS)

Sample ID		GW-2D	GW-4D	GW-5D	GW-8D
Date Sampled		12/16/94	12/11/94	12/08/94	12/14/94
Date Received		12/17/94	12/12/94	12/09/94	12/15/94
Date Extracted		12/21/94	12/14/94	12/12/94	12/19/94
Date Analyzed		01/12/95	01/03/95	01/03/95	01/03/95
Depth (ft)		60	60-70	65-67	60-70
% Moisture		10	11	10	16
Dilution Factor		1.0	1.0	1.0	1.0
Units		UG/KG	UG/KG	UG/KG	UG/KG
Parameters	Class				
2,4-Dinitrophenol	SVOC	930 UJ	940 U	930 U	990 U
4-Nitrophenol	SVOC	930 UJ	940 U	930 U	990 U
Dibenzofuran	SVOC	370 U	370 U	370 U	400 U
2,4-Dinitrotoluene	SVOC	370 U	370 U	370 U	400 U
Diethylphthalate	SVOC	370 U	370 U	370 U	400 U
4-Chlorophenyl-phenylether	SVOC	370 U	370 U	370 U	400 U
Fluorene	SVOC	370 U	370 U	370 U	400 U
4-Nitroaniline	SVOC	930 UJ	940 U	930 U	990 U
4,6-Dinitro-2-methylphenol	SVOC	930 U	940 U	930 U	990 U
N-Nitrosodiphenylamine	SVOC	370 U	370 U	370 U	400 U
4-Bromophenyl-phenylether	SVOC	370 U	370 U	370 U	400 U
Hexachlorobenzene	SVOC	370 U	370 U	370 U	400 U
Pentachlorophenol	SVOC	930 UJ	940 U	930 U	990 U
Phenanthrene	SVOC	370 U	370 U	370 U	400 U
Anthracene	SVOC	370 U	370 U	370 U	400 U
Carbazole	SVOC	370 UJ	370 U	370 U	400 U
Di-n-butylphthalate	SVOC	370 U	370 U	370 U	1500 U
Fluoranthene	SVOC	370 U	370 U	30 J	400 U
Pyrene	SVOC	370 U	370 U	23 J	400 U
Butylbenzylphthalate	SVOC	370 U	370 U	370 U	400 U
3,3'-Dichlorobenzidine	SVOC	370 U	370 U	370 U	400 U
Benzo(a)anthracene	SVOC	370 U	370 U	370 U	400 U
Chrysene	SVOC	370 U	370 U	370 U	400 U
bis(2-Ethylhexyl)phthalate	SVOC	370 U	370 U	40 J	63 J
Di-n-octylphthalate	SVOC	370 UJ	370 U	370 U	400 U
Benzo(b)fluoranthene	SVOC	370 U	370 U	370 U	400 U
Benzo(k)fluoranthene	SVOC	370 U	370 U	370 U	400 U
Benzo(a)pyrene	SVOC	370 U	370 U	370 U	400 U
Indeno(1,2,3-cd)pyrene	SVOC	370 U	370 U	370 U	400 U
Dibenz(a,h)anthracene	SVOC	370 U	370 U	370 U	400 U
Benzo(g,h,i)perylene	SVOC	370 U	370 U	370 U	400 U
Associated Method Blank	SVOC	SBLKS211	SBLKS142	SBLKS122	SBLKS191
Associated Rinse Blank	SVOC	RB1	RB1	RB1	RB1

APPENDIX D-1
VALIDATION SUMMARY TABLES
PRELIMINARY SITE ASSESSMENT
CEDAR STREET DUMP
SUBSURFACE SOIL (SEMIVOLATILE RESULTS)

Sample ID		GW-8S	GW-9D	GW-9S
Date Sampled		12/16/94	12/21/94	12/20/94
Date Received		12/17/94	12/22/94	12/21/94
Date Extracted		12/21/94	12/22/94	12/22/94
Date Analyzed		01/12/95	01/14/95	01/11/95
Depth (ft)		30-35	55	25
% Moisture		19	16	16
Dilution Factor		1.0	1.0	1.0
Units		UG/KG	UG/KG	UG/KG
Parameters	Class			
Phenol	SVOC	410 U	790 U	400 U
bis(2-Chloroethyl)ether	SVOC	410 U	790 UJ	400 UJ
2-Chlorophenol	SVOC	410 U	790 U	400 U
1,3-Dichlorobenzene	SVOC	410 U	790 U	400 U
1,4-Dichlorobenzene	SVOC	410 U	790 U	400 U
1,2-Dichlorobenzene	SVOC	410 U	790 U	400 U
2-Methylphenol	SVOC	410 U	790 UJ	400 UJ
bis(2-Chloroisopropyl)ether	SVOC	410 UJ	790 UJ	400 UJ
4-Methylphenol	SVOC	410 U	790 UJ	400 UJ
N-nitroso-di-n-propylamine	SVOC	410 U	790 U	400 UJ
Hexachloroethane	SVOC	410 U	790 U	400 U
Nitrobenzene	SVOC	410 U	790 U	400 U
Isophorone	SVOC	410 U	790 U	400 U
2-Nitrophenol	SVOC	410 U	790 U	400 U
2,4-Dimethylphenol	SVOC	410 U	790 U	400 U
bis(-2-Chloroethoxy)methane	SVOC	410 U	790 U	400 U
2,4-Dichlorophenol	SVOC	410 U	790 U	400 U
1,2,4-Trichlorobenzene	SVOC	410 U	790 U	400 U
Naphthalene	SVOC	410 U	790 U	400 U
4-Chloroaniline	SVOC	410 U	790 UJ	400 UJ
Hexachlorobutadiene	SVOC	410 U	790 U	400 U
4-Chloro-3-methylphenol	SVOC	410 U	790 U	400 U
2-Methylnaphthalene	SVOC	410 U	790 U	400 U
Hexachlorocyclopentadiene	SVOC	410 UJ	790 U	400 UJ
2,4,6-Trichlorophenol	SVOC	410 U	790 U	400 U
2,4,5-Trichlorophenol	SVOC	1000 U	2000 U	990 U
2-Chloronaphthalene	SVOC	410 U	790 U	400 U
2-Nitroaniline	SVOC	1000 U	2000 U	990 U
Dimethylphthalate	SVOC	410 U	790 U	400 U
Acenaphthylene	SVOC	410 U	790 U	400 U
2,6-Dinitroaniline	SVOC	410 U	790 U	400 U
3-Nitroaniline	SVOC	1000 U	2000 U	990 U
Acenaphthene	SVOC	410 U	130 J	400 U
Associated Method Blank	SVOC	SBLKS211	SBLKS221	SBLKS221
Associated Rinse Blank	SVOC	RB1	RB1	RB1

APPENDIX D-1
VALIDATION SUMMARY TABLES
PRELIMINARY SITE ASSESSMENT
CEDAR STREET DUMP
SUBSURFACE SOIL (SEMIVOLATILE RESULTS)

Sample ID		GW-8S	GW-9D	GW-9S
Date Sampled		12/16/94	12/21/94	12/20/94
Date Received		12/17/94	12/22/94	12/21/94
Date Extracted		12/21/94	12/22/94	12/22/94
Date Analyzed		01/12/95	01/14/95	01/11/95
Depth (ft)		30-35	55	25
% Moisture		19	16	16
Dilution Factor		1.0	1.0	1.0
Units		UG/KG	UG/KG	UG/KG
Parameters	Class			
2,4-Dinitrophenol	SVOC	1000 UJ	2000 U	990 U
4-Nitrophenol	SVOC	1000 UJ	2000 UJ	990 UJ
Dibenzofuran	SVOC	410 U	120 J	400 U
2,4-Dinitrotoluene	SVOC	410 U	790 U	400 U
Diethylphthalate	SVOC	410 U	790 U	400 U
4-Chlorophenyl-phenylether	SVOC	410 U	790 U	400 U
Fluorene	SVOC	410 U	260 J	400 U
4-Nitroaniline	SVOC	1000 UJ	2000 UJ	990 UJ
4,6-Dinitro-2-methylphenol	SVOC	1000 U	2000 U	990 U
N-Nitrosodiphenylamine	SVOC	410 U	790 U	400 U
4-Bromophenyl-phenylether	SVOC	410 U	790 U	400 U
Hexachlorobenzene	SVOC	410 U	790 U	400 U
Pentachlorophenol	SVOC	1000 UJ	2000 U	990 UJ
Phenanthrene	SVOC	410 U	1100	400 U
Anthracene	SVOC	410 U	390 J	400 U
Carbazole	SVOC	410 UJ	290 J	400 UJ
Di-n-butylphthalate	SVOC	410 U	3100 U	1000 U
Fluoranthene	SVOC	410 U	1100	400 U
Pyrene	SVOC	410 U	720 J	400 U
Butylbenzylphthalate	SVOC	410 U	790 U	400 U
3,3'-Dichlorobenzidine	SVOC	410 U	790 U	400 U
Benzo(a)anthracene	SVOC	410 U	440 J	400 U
Chrysene	SVOC	410 U	440 J	400 U
bis(2-Ethylhexyl)phthalate	SVOC	410 U	790 U	400 U
Di-n-octylphthalate	SVOC	410 UJ	790 U	400 U
Benzo(b)fluoranthene	SVOC	410 U	440 J	400 U
Benzo(k)fluoranthene	SVOC	410 U	550 J	400 U
Benzo(a)pyrene	SVOC	410 U	520 J	400 U
Indeno(1,2,3-cd)pyrene	SVOC	410 U	250 J	400 U
Dibenz(a,h)anthracene	SVOC	410 U	160 J	400 U
Benzo(g,h,i)perylene	SVOC	410 U	270 J	400 U
Associated Method Blank	SVOC	SBLKS211	SBLKS221	SBLKS221
Associated Rinse Blank	SVOC	RB1	RB1	RB1

APPENDIX D-1
VALIDATION SUMMARY TABLES
PRELIMINARY SITE ASSESSMENT
CEDAR STREET DUMP
SUBSURFACE SOIL (PESTICIDE/PCB RESULTS)

Sample ID		GW-2D	GW-4D	GW-5D	GW-8D
Date Sampled		12/16/94	12/11/94	12/08/94	12/14/94
Date Received		12/17/94	12/12/94	12/09/94	12/15/94
Date Extracted		12/21/94	12/14/94	12/12/94	12/19/94
Date Analyzed		01/14/95	12/31/94	01/15/95	12/31/94
Depth (ft)		60	60-70	65-67	60-70
% Moisture		10	11	10	16
Dilution Factor		1.0	1.0	1.0	1.0
Units		UG/KG	UG/KG	UG/KG	UG/KG
Parameters	Class				
alpha-BHC	PEST	1.9 UJ	1.9 UJ	1.9 UJ	2.0 UJ
beta-BHC	PEST	1.9 U	1.9 U	1.9 U	2.0 U
delta-BHC	PEST	1.9 U	1.9 U	1.9 U	2.0 U
gamma-BHC (Lindane)	PEST	1.9 UJ	1.9 UJ	1.9 UJ	2.0 UJ
Heptachlor	PEST	1.9 U	1.9 UJ	1.9 UJ	2.0 UJ
Aldrin	PEST	1.9 U	1.9 U	1.9 UJ	2.0 U
Heptachlor Epoxide	PEST	1.9 U	1.9 U	1.9 U	2.0 U
Endosulfan I	PEST	1.9 U	1.9 U	0.26 R	2.0 U
Dieldrin	PEST	3.7 U	3.7 U	3.7 UJ	4.0 U
4,4'-DDE	PEST	3.7 U	3.7 U	3.7 U	4.0 U
Endrin	PEST	3.7 U	3.7 UJ	3.7 UJ	4.0 UJ
Endosulfan II	PEST	3.7 U	3.7 U	0.45 R	4.0 U
4,4'-DDD	PEST	3.7 U	3.7 U	3.7 U	4.0 U
Endosulfan Sulfate	PEST	3.7 U	3.7 U	3.7 U	4.0 U
4,4'-DDT	PEST	3.7 UJ	3.7 UJ	3.7 UJ	4.0 UJ
Methoxychlor	PEST	19 UJ	19 UJ	3.0 R	20 UJ
Endrin Ketone	PEST	0.58 JN	3.7 U	0.92 R	4.0 U
Endrin Aldehyde	PEST	3.7 U	3.7 U	0.43 R	4.0 U
alpha-Chlordane	PEST	1.9 U	1.9 U	0.26 J	2.0 U
gamma-Chlordane	PEST	1.9 U	1.9 U	1.9 U	2.0 U
Toxaphene	PEST	190 U	190 U	190 U	200 U
Aroclor-1016	PCB	37 U	37 U	37 U	40 U
Aroclor-1221	PCB	74 U	75 U	74 U	79 U
Aroclor-1232	PCB	37 U	37 U	37 U	40 U
Aroclor-1242	PCB	37 U	37 U	37 U	40 U
Aroclor-1248	PCB	37 U	37 U	37 U	40 U
Aroclor-1254	PCB	37 U	37 U	37 U	40 U
Aroclor-1260	PCB	37 U	37 U	37 U	40 U
Associated Method Blank	PEST/PCB	PBLK1221	PBLK1214	PBLK1212	PBLK1219
Associated Rinse Blank	PEST/PCB	RB1	RB1	RB1	RB1

APPENDIX D-1
VALIDATION SUMMARY TABLES
PRELIMINARY SITE ASSESSMENT
CEDAR STREET DUMP
SUBSURFACE SOIL (PESTICIDE/PCB RESULTS)

Sample ID		GW-8S	GW-9D	GW-9S
Date Sampled		12/16/94	12/21/94	12/20/94
Date Received		12/17/94	12/22/94	12/21/94
Date Extracted		12/21/94	12/23/94	12/23/94
Date Analyzed		01/14/95	01/15/95	01/15/95
Depth (ft)		30-35	55	25
% Moisture		19	16	16
Dilution Factor		1.0	1.0	1.0
Units		UG/KG	UG/KG	UG/KG
Parameters	Class			
alpha-BHC	PEST	2.1 UJ	2.0 UJ	2.0 UJ
beta-BHC	PEST	2.1 U	2.0 U	2.0 U
delta-BHC	PEST	2.1 U	2.0 U	2.0 U
gamma-BHC (Lindane)	PEST	2.1 UJ	2.0 UJ	2.0 UJ
Heptachlor	PEST	2.1 U	2.0 U	2.0 U
Aldrin	PEST	2.1 U	2.0 U	2.0 U
Heptachlor Epoxide	PEST	2.1 U	2.0 U	2.0 U
Endosulfan I	PEST	2.1 U	2.0 U	2.0 U
Dieldrin	PEST	4.1 U	1.8 JN	4.0 U
4,4'-DDE	PEST	4.1 U	4.0	0.41 JN
Endrin	PEST	4.1 U	3.1 JN	4.0 U
Endosulfan II	PEST	4.1 U	0.71 JN	4.0 U
4,4'-DDD	PEST	4.1 U	15	0.46 J
Endosulfan Sulfate	PEST	4.1 U	4.0 U	4.0 U
4,4'-DDT	PEST	4.1 UJ	32	4.0 UJ
Methoxychlor	PEST	21 UJ	20 UJ	20 UJ
Endrin Ketone	PEST	4.1 U	4.0 U	4.0 U
Endrin Aldehyde	PEST	4.1 U	4.0 U	4.0 U
alpha-Chlordane	PEST	2.1 U	5.8 JN	2.0 U
gamma-Chlordane	PEST	2.1 U	4.5	2.0 U
Toxaphene	PEST	210 U	200 U	200 U
Aroclor-1016	PCB	41 U	40 U	40 U
Aroclor-1221	PCB	82 U	79 U	79 U
Aroclor-1232	PCB	41 U	40 U	40 U
Aroclor-1242	PCB	41 U	40 U	40 U
Aroclor-1248	PCB	41 U	40 U	40 U
Aroclor-1254	PCB	41 U	40 U	40 U
Aroclor-1260	PCB	41 U	40 U	40 U
Associated Method Blank	PEST/PCB	PBLK1221	PBLK1223	PBLK1223
Associated Rinse Blank	PEST/PCB	RB1	RB1	RB1

APPENDIX D-1
VALIDATION SUMMARY TABLES
PRELIMINARY SITE ASSESSMENT
CEDAR STREET DUMP
SUBSURFACE SOIL (INORGANIC RESULTS)

Sample ID		GW-2D	GW-4D	GW-5D	GW-8D
Date Sampled		12/16/94	12/11/94	12/08/94	12/14/94
Date Received		12/17/94	12/12/94	12/09/94	12/15/94
Depth (ft)		60	60-70	65-67	60-70
% Moisture		10	11	10	16
Units		MG/KG	MG/KG	MG/KG	MG/KG
Parameters	Class				
Aluminum	METAL	1890 J	2860	3800	2000
Antimony	METAL	11.8 BJ	11.6 UJ	11.4 UJ	13.2 UJ
Arsenic	METAL	1.5 BJ	1.6 BJ	23.1 S	1.3 BJ
Barium	METAL	5.8 B	10.2 B	25 B	5.9 B
Beryllium	METAL	0.22 U	0.22 U	0.22 U	0.25 U
Cadmium	METAL	1 U	1 U	0.99 U	1.1 U
Calcium	METAL	196000	70500 J	92300 J	60000 J
Chromium	METAL	4	6.8	13.4	4.4
Cobalt	METAL	1.9 B	2.1 B	4.4 B	2.6 B
Copper	METAL	5.5	9.3	30.2 J	6.7
Iron	METAL	4640 J	7530 J	12600 J	5390 J
Lead	METAL	2.2	16.3 J	21.6 J	3.9 J
Magnesium	METAL	16900	20700 J	28700 J	18100 J
Manganese	METAL	173	245 J	257 J	183 J
Mercury	METAL	0.09 UJ	0.11 U	0.10 U	0.33 J
Nickel	METAL	4.5 B	7.8 B	11.4	3.4 B
Potassium	METAL	463 B	606 B	903 B	430 B
Selenium	METAL	1.2 U	0.23 UJ	0.23 UJ	0.27 U
Silver	METAL	1.4 U	1.4 U	1.4 U	1.6 U
Sodium	METAL	57.1 B	55.5 B	71 B	55.1 U
Thallium	METAL	0.36 UJ	0.35 UJ	0.35 UJ	0.41 UJ
Vanadium	METAL	5.5 B	9.5 B	9.9	5.4 B
Zinc	METAL	26.7	27.5	51.7	45.8
Cyanide	CN	1.9	0.54 U	0.56 U	0.6 U
Associated Rinse Blank	METAL	RB1	RB1	RB1	RB1

APPENDIX D-1
VALIDATION SUMMARY TABLES
PRELIMINARY SITE ASSESSMENT
CEDAR STREET DUMP
SUBSURFACE SOIL (INORGANIC RESULTS)

Sample ID		GW-8S	GW-9D	GW-9S
Date Sampled		12/16/94	12/21/94	12/20/94
Date Received		12/17/94	12/22/94	12/21/94
Depth (ft)		30-35	55	25
% Moisture		19	16	16
Units		MG/KG	MG/KG	MG/KG
Parameters	Class			
Aluminum	METAL	2630 J	3710 J	5180 J
Antimony	METAL	12.8 UJ	11.6 UJ	12.2 UJ
Arsenic	METAL	1.6 UJ	3 J	1.9 BJ
Barium	METAL	16.1 B	22.6 B	15.1 B
Beryllium	METAL	0.24 U	0.22 U	0.25 B
Cadmium	METAL	1.1 U	1 U	1.1 U
Calcium	METAL	50300	82200	81500
Chromium	METAL	4.3	7.5	9.7
Cobalt	METAL	3 B	3.8 B	4.6 B
Copper	METAL	10.1	26.8	11.7
Iron	METAL	6490 J	8560 J	8510 J
Lead	METAL	4.3	12.2	8.8
Magnesium	METAL	15800	27300	29000
Manganese	METAL	178	269	229
Mercury	METAL	0.12 UJ	0.17 J	0.12 UJ
Nickel	METAL	6.9 B	9	9
Potassium	METAL	532 B	967 B	1560
Selenium	METAL	0.27 U	0.24 U	0.25 U
Silver	METAL	1.6 U	1.4 U	1.5 U
Sodium	METAL	53.2 U	48.3 U	50.7 U
Thallium	METAL	0.41 UJ	1.8 UJ	1.9 UJ
Vanadium	METAL	6.6 B	9.4 B	11
Zinc	METAL	35.3	51.6	32.4
Cyanide	CN	4.9	0.49 U	0.56 U
Associated Rinse Blank	METAL	RB1	RB1	RB1

APPENDIX D-2
VALIDATION SUMMARY TABLES
PRELIMINARY SITE ASSESSMENT
CEDAR STREET DUMP
GROUNDWATER (VOLATILE)

Sample I.D.		CITY WELL A	GW-2D	GW-4D
Date Sampled		01/06/95	01/06/95	01/06/95
Date Received		01/07/95	01/07/95	01/07/95
Date Analyzed		01/11/95	01/11/95	01/11/95
Dilution Factor		1.0	1.0	1.0/50.0
Units		UG/L	UG/L	UG/L
Parameters	Class			
Chloromethane	VOC	10 UJ	10 UJ	10 UJ
Bromomethane	VOC	10 UJ	10 UJ	10 UJ
Vinyl Chloride	VOC	10 UJ	10 UJ	10 UJ
Chloroethane	VOC	10 UJ	10 UJ	10 UJ
Methylene Chloride	VOC	10 U	10 U	10 U
Acetone	VOC	10 UJ	85 J	2600 DJ
Carbon Disulfide	VOC	10 U	10 U	4 J
1,1-Dichloroethene	VOC	10 U	10 U	10 U
1,1-Dichloroethane	VOC	10 U	10 U	10 U
1,2-Dichloroethene (total)	VOC	10 U	10 U	10 U
Chloroform	VOC	10 U	10 U	10 U
1,2-Dichloroethane	VOC	10 U	10 U	10 U
2-Butanone	VOC	10 UJ	10 UJ	10 UJ
1,1,1-Trichloroethane	VOC	10 U	10 U	10 U
Carbon Tetrachloride	VOC	10 U	10 U	10 U
Bromodichloromethane	VOC	10 U	10 U	10 U
1,2-Dichloropropane	VOC	10 U	10 U	10 U
cis-1,3-Dichloropropene	VOC	10 U	10 U	10 U
Trichloroethene	VOC	10 U	10 U	10 U
Dibromochloromethane	VOC	10 U	10 U	10 U
1,1,2-Trichloroethane	VOC	10 U	10 U	10 U
Benzene	VOC	10 U	10 U	10 U
trans-1,3-Dichloropropene	VOC	10 U	10 U	10 U
Bromoform	VOC	10 U	10 U	10 U
4-Methyl-2-pentanone	VOC	10 U	10 U	10 U
2-Hexanone	VOC	10 U	10 U	10 U
Tetrachloroethene	VOC	10 U	10 U	10 U
1,1,2,2-Tetrachloroethane	VOC	10 U	10 U	10 U
Toluene	VOC	10 U	10 U	10 U
Chlorobenzene	VOC	10 U	10 U	10 U
Ethylbenzene	VOC	10 U	10 U	10 U
Styrene	VOC	10 U	10 U	10 U
Xylene (total)	VOC	10 U	10 U	10 U
Associated Method Blank	VOC	VBLK11W	VBLK11W	VBLK11W
Associated Trip Blank	VOC	GWTB-1	GWTB-1	GWTB-1
Associated Rinse Blank	VOC	NA	NA	NA

APPENDIX D-2
VALIDATION SUMMARY TABLES
PRELIMINARY SITE ASSESSMENT
CEDAR STREET DUMP
GROUNDWATER (VOLATILE)

Sample I.D.		GW-5D	GW-8D	GW-8S
Date Sampled		01/06/95	01/06/95	01/06/95
Date Received		01/07/94	01/07/95	01/07/95
Date Analyzed		01/11/95	01/11/95	01/12/95
Dilution Factor		1.0/5.0	1.0/10.0	1.0
Units		UG/L	UG/L	UG/L
Parameters	Class			
Chloromethane	VOC	10 UJ	10 UJ	10 UJ
Bromomethane	VOC	10 UJ	10 UJ	10 UJ
Vinyl Chloride	VOC	10 UJ	10 UJ	10 UJ
Chloroethane	VOC	10 UJ	10 UJ	10 UJ
Methylene Chloride	VOC	10 U	10 U	10 U
Acetone	VOC	500 DJ	940 DJ	10 UJ
Carbon Disulfide	VOC	10 U	10 U	10 UJ
1,1-Dichloroethene	VOC	10 U	10 U	10 U
1,1-Dichloroethane	VOC	10 U	10 U	10 U
1,2-Dichloroethene (total)	VOC	10 U	10 U	10 U
Chloroform	VOC	6 J	5 J	10 U
1,2-Dichloroethane	VOC	10 U	10 U	10 U
2-Butanone	VOC	10 UJ	10 UJ	10 UJ
1,1,1-Trichloroethane	VOC	10 U	10 U	3 J
Carbon Tetrachloride	VOC	10 U	10 U	10 U
Bromodichloromethane	VOC	10 J	2 J	10 U
1,2-Dichloropropane	VOC	10 U	10 U	10 U
cis-1,3-Dichloropropene	VOC	10 U	10 U	10 U
Trichloroethene	VOC	10 U	10 U	2 J
Dibromochloromethane	VOC	14	10 U	10 U
1,1,2-Trichloroethane	VOC	10 U	10 U	10 U
Benzene	VOC	10 U	10 U	10 U
trans-1,3-Dichloropropene	VOC	10 U	10 U	10 U
Bromoform	VOC	11	10 U	10 U
4-Methyl-2-pentanone	VOC	10 U	10 U	10 U
2-Hexanone	VOC	10 U	10 U	10 UJ
Tetrachloroethene	VOC	10 U	10 U	10 U
1,1,2,2-Tetrachloroethane	VOC	10 U	10 U	10 U
Toluene	VOC	15	47	10 U
Chlorobenzene	VOC	10 U	10 U	10 U
Ethylbenzene	VOC	1 J	1 J	10 U
Styrene	VOC	10 U	10 U	10 U
Xylene (total)	VOC	6 J	6 J	10 U
Associated Method Blank	VOC	VBLK11W	VBLK11W	VBLK12
Associated Trip Blank	VOC	GWTB-1	GWTB-1	GWTB-1
Associated Rinse Blank	VOC	NA	NA	NA

APPENDIX D-2
VALIDATION SUMMARY TABLES
PRELIMINARY SITE ASSESSMENT
CEDAR STREET DUMP
GROUNDWATER (VOLATILE)

Sample I.D.		GW-9D	GW-9S
Date Sampled		01/06/95	01/06/95
Date Received		01/07/95	01/07/95
Date Analyzed		01/11/95	01/11/95
Dilution Factor		1.0	1.0
Units		UG/L	UG/L
Parameters	Class		
Chloromethane	VOC	10 UJ	10 UJ
Bromomethane	VOC	10 UJ	10 UJ
Vinyl Chloride	VOC	10 UJ	10 UJ
Chloroethane	VOC	10 UJ	23 J
Methylene Chloride	VOC	10 U	10 U
Acetone	VOC	13 J	10 UJ
Carbon Disulfide	VOC	10 U	10 U
1,1-Dichloroethene	VOC	10 U	10 U
1,1-Dichloroethane	VOC	4 J	9 J
1,2-Dichloroethene (total)	VOC	10 U	10 U
Chloroform	VOC	10 U	10 U
1,2-Dichloroethane	VOC	10 U	10 U
2-Butanone	VOC	10 UJ	10 UJ
1,1,1-Trichloroethane	VOC	10 U	10 U
Carbon Tetrachloride	VOC	10 U	10 U
Bromodichloromethane	VOC	10 U	10 U
1,2-Dichloropropane	VOC	10 U	10 U
cis-1,3-Dichloropropene	VOC	10 U	10 U
Trichloroethene	VOC	10 U	10 U
Dibromochloromethane	VOC	10 U	10 U
1,1,2-Trichloroethane	VOC	10 U	10 U
Benzene	VOC	10 U	3 J
trans-1,3-Dichloropropene	VOC	10 U	10 U
Bromoform	VOC	10 U	10 U
4-Methyl-2-pentanone	VOC	10 U	10 U
2-Hexanone	VOC	10 U	10 U
Tetrachloroethene	VOC	10 U	10 U
1,1,2,2-Tetrachloroethane	VOC	10 U	10 U
Toluene	VOC	1 J	1 J
Chlorobenzene	VOC	10 U	10 U
Ethylbenzene	VOC	10 U	1 J
Styrene	VOC	10 U	10 U
Xylene (total)	VOC	1 J	8 J
Associated Method Blank	VOC	VBLK12	VBLK12
Associated Trip Blank	VOC	GWTB-1	GWTB-1
Associated Rinse Blank	VOC	NA	NA

APPENDIX D-2
VALIDATION SUMMARY TABLES
PRELIMINARY SITE ASSESSMENT
CEDAR STREET DUMP
GROUNDWATER (SEMIVOLATILE)

Sample I.D.		CITY WELL A	GW-2D	GW-4D
Date Sampled		01/06/95	01/06/95	01/06/95
Date Received		01/07/95	01/07/95	01/07/95
Date Extracted		01/10/95	01/10/95	01/10/95
Date Analyzed		02/08/95	02/08/95	02/08/95
Dilution Factor		1.0	1.0	1.0
Units		UG/L	UG/L	UG/L
Parameters	Class			
Phenol	SVOC	10 U	11 U	10 U
bis(2-Chloroethyl)ether	SVOC	10 U	11 U	10 U
2-Chlorophenol	SVOC	10 U	11 U	10 U
1,3-Dichlorobenzene	SVOC	10 U	11 U	10 U
1,4-Dichlorobenzene	SVOC	10 U	11 U	10 U
1,2-Dichlorobenzene	SVOC	10 U	11 U	10 U
2-Methylphenol	SVOC	10 U	11 U	10 U
bis(2-Chloroisopropyl)ether	SVOC	10 UJ	11 UJ	10 UJ
4-Methylphenol	SVOC	10 U	11 U	10 U
N-nitroso-di-n-propylamine	SVOC	10 U	11 U	10 U
Hexachloroethane	SVOC	10 U	11 U	10 U
Nitrobenzene	SVOC	10 U	11 U	10 U
Isophorone	SVOC	10 U	11 U	10 U
2-Nitrophenol	SVOC	10 U	11 U	10 U
2,4-Dimethylphenol	SVOC	10 U	11 U	10 U
bis(-2-Chloroethoxy)methane	SVOC	10 U	11 U	10 U
2,4-Dichlorophenol	SVOC	10 U	11 U	10 U
1,2,4-Trichlorobenzene	SVOC	10 U	11 U	10 U
Naphthalene	SVOC	10 U	11 U	10 U
4-Chloroaniline	SVOC	10 U	11 U	10 U
Hexachlorobutadiene	SVOC	10 U	11 U	10 U
4-Chloro-3-methylphenol	SVOC	10 U	11 U	10 U
2-Methylnaphthalene	SVOC	10 U	11 U	10 U
Hexachlorocyclopentadiene	SVOC	10 UJ	11 UJ	10 UJ
2,4,6-Trichlorophenol	SVOC	10 U	11 U	10 U
2,4,5-Trichlorophenol	SVOC	25 U	26 U	25 U
2-Chloronaphthalene	SVOC	10 U	11 U	10 U
2-Nitroaniline	SVOC	25 U	26 U	25 U
Dimethylphthalate	SVOC	10 U	11 U	10 U
Acenaphthylene	SVOC	10 U	11 U	10 U
2,6-Dinitroaniline	SVOC	10 U	11 U	10 U
3-Nitroaniline	SVOC	25 UJ	26 UJ	25 UJ
Associated Method Blank	SVOC	SBLK10	SBLK10	SBLK10
Associated Rinse Blank	SVOC	NA	NA	NA

APPENDIX D-2
VALIDATION SUMMARY TABLES
PRELIMINARY SITE ASSESSMENT
CEDAR STREET DUMP
GROUNDWATER (SEMIVOLATILE)

Sample I.D.		CITY WELL A	GW-2D	GW-4D
Date Sampled		01/06/95	01/06/95	01/06/95
Date Received		01/07/95	01/07/95	01/07/95
Date Extracted		01/10/95	01/10/95	01/10/95
Date Analyzed		02/08/95	02/08/95	02/08/95
Dilution Factor		1.0	1.0	1.0
Units		UG/L	UG/L	UG/L
Parameters	Class			
Acenaphthene	SVOC	10 U	11 U	10 U
2,4-Dinitrophenol	SVOC	25 UJ	26 UJ	25 UJ
4-Nitrophenol	SVOC	25 UJ	26 UJ	25 UJ
Dibenzofuran	SVOC	10 U	11 U	10 U
2,4-Dinitrotoluene	SVOC	10 U	11 U	10 U
Diethylphthalate	SVOC	10 U	11 U	10 U
4-Chlorophenyl-phenylether	SVOC	10 U	11 U	10 U
Fluorene	SVOC	10 U	11 U	10 U
4-Nitroaniline	SVOC	25 U	26 U	25 U
4,6-Dinitro-2-methylphenol	SVOC	25 UJ	26 UJ	25 UJ
N-Nitrosodiphenylamine	SVOC	10 U	11 U	10 U
4-Bromophenyl-phenylether	SVOC	10 U	11 U	10 U
Hexachlorobenzene	SVOC	10 U	11 U	10 U
Pentachlorophenol	SVOC	25 U	26 U	25 U
Phenanthrene	SVOC	10 U	11 U	10 U
Anthracene	SVOC	10 U	11 U	10 U
Carbazole	SVOC	10 U	11 U	10 U
Di-n-butylphthalate	SVOC	10 U	11 U	2 J
Fluoranthene	SVOC	10 U	11 U	10 U
Pyrene	SVOC	10 U	11 U	10 U
Butylbenzylphthalate	SVOC	10 U	11 U	10 U
3,3'-Dichlorobenzidine	SVOC	10 U	11 U	10 U
Benzo(a)anthracene	SVOC	10 U	11 U	10 U
Chrysene	SVOC	10 U	11 U	10 U
bis(2-Ethylhexyl)phthalate	SVOC	10 U	11 U	5 J
Di-n-octylphthalate	SVOC	10 U	11 U	10 U
Benzo(b)fluoranthene	SVOC	10 U	11 U	10 U
Benzo(k)fluoranthene	SVOC	10 U	11 U	10 U
Benzo(a)pyrene	SVOC	10 U	11 U	10 U
Indeno(1,2,3-cd)pyrene	SVOC	10 U	11 U	10 U
Dibenz(a,h)anthracene	SVOC	10 U	11 U	10 U
Benzo(g,h,i)perylene	SVOC	10 U	11 U	10 U
Associated Method Blank	SVOC	SBLK10	SBLK10	SBLK10
Associated Rinse Blank	SVOC	NA	NA	NA

APPENDIX D-2
VALIDATION SUMMARY TABLES
PRELIMINARY SITE ASSESSMENT
CEDAR STREET DUMP
GROUNDWATER (SEMIVOLATILE)

Sample I.D.		GW-5D	GW-8D	GW-8S
Date Sampled		01/06/95	01/06/95	01/06/95
Date Received		01/07/95	01/07/95	01/07/95
Date Extracted		01/10/95	01/10/95	01/10/95
Date Analyzed		02/08/95	02/09/95	02/09/95
Dilution Factor		1.0	1.0	1.0
Units		UG/L	UG/L	UG/L
Parameters	Class			
Phenol	SVOC	11 U	10 U	10 U
bis(2-Chloroethyl)ether	SVOC	11 U	10 U	10 U
2-Chlorophenol	SVOC	11 U	10 U	10 U
1,3-Dichlorobenzene	SVOC	11 U	10 U	10 U
1,4-Dichlorobenzene	SVOC	11 U	10 U	10 U
1,2-Dichlorobenzene	SVOC	11 U	10 U	10 U
2-Methylphenol	SVOC	11 U	10 U	10 U
bis(2-Chloroisopropyl)ether	SVOC	11 UJ	10 UJ	10 UJ
4-Methylphenol	SVOC	11 U	10 U	10 U
N-nitroso-di-n-propylamine	SVOC	11 U	10 U	10 U
Hexachloroethane	SVOC	11 U	10 U	10 U
Nitrobenzene	SVOC	11 U	10 U	10 U
Isophorone	SVOC	11 U	10 U	10 U
2-Nitrophenol	SVOC	11 U	10 U	10 U
2,4-Dimethylphenol	SVOC	11 U	10 U	10 U
bis(-2-Chloroethoxy)methane	SVOC	11 U	10 U	10 U
2,4-Dichlorophenol	SVOC	11 U	10 U	10 U
1,2,4-Trichlorobenzene	SVOC	11 U	10 U	10 U
Naphthalene	SVOC	11 U	10 U	10 U
4-Chloroaniline	SVOC	11 U	10 UJ	10 UJ
Hexachlorobutadiene	SVOC	11 U	10 U	10 U
4-Chloro-3-methylphenol	SVOC	11 U	10 U	10 U
2-Methylnaphthalene	SVOC	11 U	10 U	10 U
Hexachlorocyclopentadiene	SVOC	11 UJ	10 UJ	10 UJ
2,4,6-Trichlorophenol	SVOC	11 U	10 U	10 U
2,4,5-Trichlorophenol	SVOC	27 U	25 U	25 U
2-Chloronaphthalene	SVOC	11 U	10 U	10 U
2-Nitroaniline	SVOC	27 U	25 U	25 U
Dimethylphthalate	SVOC	11 U	10 U	10 U
Acenaphthylene	SVOC	11 U	10 U	10 U
2,6-Dinitroaniline	SVOC	11 U	10 U	10 U
3-Nitroaniline	SVOC	27 UJ	25 UJ	25 UJ
Associated Method Blank	SVOC	SBLK10	SBLK10	SBLK10
Associated Rinse Blank	SVOC	NA	NA	NA

APPENDIX D-2
VALIDATION SUMMARY TABLES
PRELIMINARY SITE ASSESSMENT
CEDAR STREET DUMP
GROUNDWATER (SEMIVOLATILE)

Sample I.D.		GW-5D	GW-8D	GW-8S
Date Sampled		01/06/95	01/06/95	01/06/95
Date Received		01/07/95	01/07/95	01/07/95
Date Extracted		01/10/95	01/10/95	01/10/95
Date Analyzed		02/08/95	02/09/95	02/09/95
Dilution Factor		1.0	1.0	1.0
Units		UG/L	UG/L	UG/L
Parameters	Class			
Acenaphthene	SVOC	11 U	10 U	10 U
2,4-Dinitrophenol	SVOC	27 UJ	25 UJ	25 UJ
4-Nitrophenol	SVOC	27 UJ	25 UJ	25 UJ
Dibenzofuran	SVOC	11 U	10 U	10 U
2,4-Dinitrotoluene	SVOC	11 U	10 U	10 U
Diethylphthalate	SVOC	2 J	10 U	10 U
4-Chlorophenyl-phenylether	SVOC	11 U	10 U	10 U
Fluorene	SVOC	11 U	10 U	10 U
4-Nitroaniline	SVOC	27 U	25 U	25 U
4,6-Dinitro-2-methylphenol	SVOC	27 UJ	25 UJ	25 UJ
N-Nitrosodiphenylamine	SVOC	11 U	10 U	10 U
4-Bromophenyl-phenylether	SVOC	11 U	10 U	10 U
Hexachlorobenzene	SVOC	11 U	10 U	10 U
Pentachlorophenol	SVOC	27 U	25 UJ	25 UJ
Phenanthrene	SVOC	11 U	10 U	10 U
Anthracene	SVOC	11 U	10 U	10 U
Carbazole	SVOC	11 U	10 U	10 U
Di-n-butylphthalate	SVOC	2 J	2 J	10 U
Fluoranthene	SVOC	11 U	10 U	10 U
Pyrene	SVOC	11 U	10 U	10 U
Butylbenzylphthalate	SVOC	11 U	10 U	10 U
3,3'-Dichlorobenzidine	SVOC	11 U	10 U	10 U
Benzo(a)anthracene	SVOC	11 U	10 U	10 U
Chrysene	SVOC	11 U	10 U	10 U
bis(2-Ethylhexyl)phthalate	SVOC	4 J	2 J	3 J
Di-n-octylphthalate	SVOC	11 U	10 U	10 U
Benzo(b)fluoranthene	SVOC	11 U	10 U	10 U
Benzo(k)fluoranthene	SVOC	11 U	10 U	10 U
Benzo(a)pyrene	SVOC	11 U	10 U	10 U
Indeno(1,2,3-cd)pyrene	SVOC	11 U	10 U	10 U
Dibenz(a,h)anthracene	SVOC	11 U	10 U	10 U
Benzo(g,h,i)perylene	SVOC	11 U	10 U	10 U
Associated Method Blank	SVOC	SBLK10	SBLK10	SBLK10
Associated Rinse Blank	SVOC	NA	NA	NA

APPENDIX D-2
VALIDATION SUMMARY TABLES
PRELIMINARY SITE ASSESSMENT
CEDAR STREET DUMP
GROUNDWATER (SEMIVOLATILE)

Sample I.D.		GW-9D	GW-9S
Date Sampled		01/06/95	01/06/95
Date Received		01/07/95	01/07/95
Date Extracted		01/10/95	01/10/95
Date Analyzed		02/09/95	02/09/95
Dilution Factor		1.0	1.0
Units		UG/L	UG/L
Parameters	Class		
Phenol	SVOC	10 U	10 U
bis(2-Chloroethyl)ether	SVOC	10 U	10 U
2-Chlorophenol	SVOC	10 U	10 U
1,3-Dichlorobenzene	SVOC	10 U	10 U
1,4-Dichlorobenzene	SVOC	10 U	10 U
1,2-Dichlorobenzene	SVOC	10 U	10 U
2-Methylphenol	SVOC	10 U	1 J
bis(2-Chloroisopropyl)ether	SVOC	10 UJ	10 UJ
4-Methylphenol	SVOC	10 U	12
N-nitroso-di-n-propylamine	SVOC	10 U	10 U
Hexachloroethane	SVOC	10 U	10 U
Nitrobenzene	SVOC	10 U	10 U
Isophorone	SVOC	10 U	10 U
2-Nitrophenol	SVOC	10 U	10 U
2,4-Dimethylphenol	SVOC	10 U	10 U
bis(-2-Chloroethoxy)methane	SVOC	10 U	10 U
2,4-Dichlorophenol	SVOC	10 U	10 U
1,2,4-Trichlorobenzene	SVOC	10 U	10 U
Naphthalene	SVOC	10 U	2 J
4-Chloroaniline	SVOC	10 UJ	10 UJ
Hexachlorobutadiene	SVOC	10 U	10 U
4-Chloro-3-methylphenol	SVOC	10 U	10 U
2-Methylnaphthalene	SVOC	10 U	1 J
Hexachlorocyclopentadiene	SVOC	10 UJ	10 UJ
2,4,6-Trichlorophenol	SVOC	10 U	10 U
2,4,5-Trichlorophenol	SVOC	25 U	25 U
2-Chloronaphthalene	SVOC	10 U	10 U
2-Nitroaniline	SVOC	25 U	25 U
Dimethylphthalate	SVOC	2 J	10 U
Acenaphthylene	SVOC	10 U	10 U
2,6-Dinitroaniline	SVOC	10 U	10 U
3-Nitroaniline	SVOC	25 UJ	25 UJ
Associated Method Blank	SVOC	SBLK10	SBLK10
Associated Rinse Blank	SVOC	NA	NA

APPENDIX D-2
VALIDATION SUMMARY TABLES
PRELIMINARY SITE ASSESSMENT
CEDAR STREET DUMP
GROUNDWATER (SEMIVOLATILE)

Sample I.D.		GW-9D	GW-9S
Date Sampled		01/06/95	01/06/95
Date Received		01/07/95	01/07/95
Date Extracted		01/10/95	01/10/95
Date Analyzed		02/09/95	02/09/95
Dilution Factor		1.0	1.0
Units		UG/L	UG/L
Parameters	Class		
Acenaphthene	SVOC	10 U	10 U
2,4-Dinitrophenol	SVOC	25 UJ	25 UJ
4-Nitrophenol	SVOC	25 UJ	25 UJ
Dibenzofuran	SVOC	10 U	10 U
2,4-Dinitrotoluene	SVOC	10 U	10 U
Diethylphthalate	SVOC	10 U	2 J
4-Chlorophenyl-phenylether	SVOC	10 U	10 U
Fluorene	SVOC	10 U	10 U
4-Nitroaniline	SVOC	25 U	25 U
4,6-Dinitro-2-methylphenol	SVOC	25 UJ	25 UJ
N-Nitrosodiphenylamine	SVOC	10 U	10 U
4-Bromophenyl-phenylether	SVOC	10 U	10 U
Hexachlorobenzene	SVOC	10 U	10 U
Pentachlorophenol	SVOC	25 UJ	25 UJ
Phenanthrene	SVOC	10 U	2 J
Anthracene	SVOC	10 U	10 U
Carbazole	SVOC	10 U	2 J
Di-n-butylphthalate	SVOC	10 U	10 U
Fluoranthene	SVOC	10 U	10 U
Pyrene	SVOC	10 U	10 U
Butylbenzylphthalate	SVOC	10 U	10 U
3,3'-Dichlorobenzidine	SVOC	10 U	10 U
Benzo(a)anthracene	SVOC	10 U	10 U
Chrysene	SVOC	10 U	10 U
bis(2-Ethylhexyl)phthalate	SVOC	2 J	2 J
Di-n-octylphthalate	SVOC	10 U	10 U
Benzo(b)fluoranthene	SVOC	10 U	10 U
Benzo(k)fluoranthene	SVOC	10 U	10 U
Benzo(a)pyrene	SVOC	10 U	10 U
Indeno(1,2,3-cd)pyrene	SVOC	10 U	10 U
Dibenz(a,h)anthracene	SVOC	10 U	10 U
Benzo(g,h,i)perylene	SVOC	10 U	10 U
Associated Method Blank	SVOC	SBLK10	SBLK10
Associated Rinse Blank	SVOC	NA	NA

APPENDIX D-2
VALIDATION SUMMARY TABLES
PRELIMINARY SITE ASSESSMENT
CEDAR STREET DUMP
GROUNDWATER (PESTICIDES / PCBs)

Sample I.D.		CITY WELL A	GW-2D	GW-4D	GW-5D
Date Sampled		01/06/95	01/06/95	01/06/95	01/06/95
Date Received		01/07/95	01/07/95	01/07/95	01/07/94
Date Extracted		01/10/95	01/10/95	01/10/95	01/10/95
Date Analyzed		01/15/95	01/15/95	01/15/95	01/15/95
Dilution Factor		1.0	1.0	1.0	1.0
Units		UG/L	UG/L	UG/L	UG/L
Parameters	Class				
alpha-BHC	PEST	0.05 U	0.05 UJ	0.05 U	0.05 UJ
beta-BHC	PEST	0.05 U	0.05 UJ	0.05 U	0.05 UJ
delta-BHC	PEST	0.05 U	0.05 UJ	0.05 U	0.05 UJ
gamma-BHC (Lindane)	PEST	0.05 U	0.05 UJ	0.05 U	0.05 UJ
Heptachlor	PEST	0.05 U	0.05 UJ	0.05 U	0.05 UJ
Aldrin	PEST	0.05 U	0.05 UJ	0.05 U	0.05 UJ
Heptachlor Epoxide	PEST	0.05 U	0.05 UJ	0.05 U	0.05 UJ
Endosulfan I	PEST	0.05 U	0.05 UJ	0.05 U	0.05 UJ
Dieldrin	PEST	0.1 U	0.1 UJ	0.1 U	0.1 UJ
4,4'-DDE	PEST	0.1 U	0.1 UJ	0.1 U	0.1 UJ
Endrin	PEST	0.1 U	0.1 UJ	0.1 U	0.1 UJ
Endosulfan II	PEST	0.1 U	0.1 UJ	0.1 U	0.1 UJ
4,4'-DDD	PEST	0.1 U	0.1 UJ	0.1 U	0.1 UJ
Endosulfan Sulfate	PEST	0.1 U	0.1 UJ	0.1 U	0.1 UJ
4,4'-DDT	PEST	0.1 U	0.1 UJ	0.1 U	0.1 UJ
Methoxychlor	PEST	0.5 U	0.5 UJ	0.5 U	0.5 UJ
Endrin Ketone	PEST	0.1 U	0.1 UJ	0.1 U	0.1 UJ
Endrin Aldehyde	PEST	0.1 U	0.1 UJ	0.1 U	0.1 UJ
alpha-Chlordane	PEST	0.05 U	0.05 UJ	0.05 U	0.05 UJ
gamma-Chlordane	PEST	0.05 U	0.05 UJ	0.05 U	0.05 UJ
Toxaphene	PEST	5 U	5 UJ	5 U	5 UJ
Aroclor-1016	PCB	1 U	1 UJ	1 U	1 UJ
Aroclor-1221	PCB	2 U	2 UJ	2 U	2 UJ
Aroclor-1232	PCB	1 U	1 UJ	1 U	1 UJ
Aroclor-1242	PCB	1 U	1 UJ	1 U	1 UJ
Aroclor-1248	PCB	1 U	1 UJ	1 U	1 UJ
Aroclor-1254	PCB	1 U	1 UJ	1 U	1 UJ
Aroclor-1260	PCB	1 U	1 UJ	1 U	1 UJ
Associated Method Blank	PEST/PCB	PBLK01	PBLK01	PBLK01	PBLK01
Associated Rinse Blank	PEST/PCB	NA	NA	NA	NA

APPENDIX D-2
VALIDATION SUMMARY TABLES
PRELIMINARY SITE ASSESSMENT
CEDAR STREET DUMP
GROUNDWATER (PESTICIDES / PCBs)

Sample I.D.		GW-8D	GW-8S	GW-9D	GW-9S
Date Sampled		01/06/95	01/06/95	01/06/95	01/06/95
Date Received		01/07/95	01/07/95	01/07/95	01/07/95
Date Extracted		01/10/95	01/10/95	01/10/95	01/10/95
Date Analyzed		01/15/95	01/15/95	01/15/95	01/15/95
Dilution Factor		1.0	1.0	1.0	1.0
Units		UG/L	UG/L	UG/L	UG/L
Parameters	Class				
alpha-BHC	PEST	0.05 U	0.05 U	0.05 U	0.05 UJ
beta-BHC	PEST	0.05 U	0.05 U	0.05 U	0.05 UJ
delta-BHC	PEST	0.05 U	0.05 U	0.05 U	0.05 UJ
gamma-BHC (Lindane)	PEST	0.05 U	0.05 U	0.05 U	0.05 UJ
Heptachlor	PEST	0.05 U	0.05 U	0.054 U	0.049 U
Aldrin	PEST	0.05 U	0.05 U	0.05 U	0.05 UJ
Heptachlor Epoxide	PEST	0.05 U	0.05 U	0.05 U	0.06 R
Endosulfan I	PEST	0.05 U	0.05 U	0.05 U	0.05 U
Dieldrin	PEST	0.1 U	0.1 U	0.1 U	0.1 U
4,4'-DDE	PEST	0.1 U	0.1 U	0.1 U	0.1 U
Endrin	PEST	0.1 U	0.1 U	0.1 U	0.1 U
Endosulfan II	PEST	0.1 U	0.1 U	0.1 U	0.1 U
4,4'-DDD	PEST	0.1 U	0.1 U	0.1 U	0.1 U
Endosulfan Sulfate	PEST	0.1 U	0.1 U	0.1 U	0.1 U
4,4'-DDT	PEST	0.1 U	0.1 U	0.1 U	0.1 U
Methoxychlor	PEST	0.5 U	0.5 U	0.5 U	0.5 U
Endrin Ketone	PEST	0.1 U	0.1 U	0.1 U	0.1 U
Endrin Aldehyde	PEST	0.1 U	0.1 U	0.1 U	0.1 U
alpha-Chlordane	PEST	0.05 U	0.05 U	0.05 U	0.05 U
gamma-Chlordane	PEST	0.05 U	0.05 U	0.05 U	0.05 U
Toxaphene	PEST	5 U	5 U	5 U	5 U
Aroclor-1016	PCB	1 U	1 U	1 U	1 U
Aroclor-1221	PCB	2 U	2 U	2 U	2 U
Aroclor-1232	PCB	1 U	1 U	1 U	5.0 JN
Aroclor-1242	PCB	1 U	1 U	1 U	1 U
Aroclor-1248	PCB	1 U	1 U	1 U	1.7
Aroclor-1254	PCB	1 U	1 U	1 U	1 U
Aroclor-1260	PCB	1 U	1 U	1 U	1 U
Associated Method Blank	PEST/PCB	PBLK01	PBLK01	PBLK01	PBLK01
Associated Rinse Blank	PEST/PCB	NA	NA	NA	NA

TABLE D-2
ANALYTICAL RESULTS
PRELIMINARY SITE ASSESSMENT
CEDAR STREET DUMP
GROUNDWATER (PCBs)

Sample I.D.		GW-9S	GW-9S
Date Sampled		14-Aug-95	14-Aug-95
Date Extracted		16-Aug-95	16-Aug-95
Date Analyzed		07-Sep-95	07-Sep-95
Dilution		1	1
Matrix		Water (Filtered)	Water (Unfiltered)
Units		UG/L	UG/L
Parameter	Class		
AROCLOR-1016	PCB	1 U	1 U
AROCLOR-1221	PCB	2 U	2 U
AROCLOR-1232	PCB	1 U	1 U
AROCLOR-1242	PCB	1 U	1 J
AROCLOR-1248	PCB	1 U	1 U
AROCLOR-1254	PCB	1 U	1 U
AROCLOR-1260	PCB	1 U	1 U

APPENDIX D-2
VALIDATION SUMMARY TABLES
PRELIMINARY SITE ASSESSMENT
CEDAR STREET DUMP
GROUNDWATER (INORGANIC)

Sample I.D.		CITY WELL A	GW2D	GW4D	GW5D
Date Sampled		01/06/95	01/06/95	01/06/95	01/06/95
Date Received		01/07/95	01/07/95	01/07/95	01/07/94
Units		UG/L	UG/L	UG/L	UG/L
Parameters	Class				
Aluminum	METAL	10.5 U	140 B	229	275
Antimony	METAL	1 U	1 U	1 U	1 U
Arsenic	METAL	1.6 U	1.6 U	1.6 U	1.6 U
Barium	METAL	207	76.4 B	29.6 B	22.7 B
Beryllium	METAL	0.1 U	0.1 U	0.1 U	0.1 U
Cadmium	METAL	0.2 U	0.2 U	0.2 U	0.2 U
Calcium	METAL	119000	127000	45000	22300
Chromium	METAL	0.3 U	0.3 U	0.3 U	0.3 U
Cobalt	METAL	0.8 U	0.8 U	0.8 U	0.8 U
Copper	METAL	4 B	2.9 B	6.3 B	10.3 B
Iron	METAL	22.7 B	292	920	461
Lead	METAL	0.9 U	0.9 U	0.9 U	1.4 B
Magnesium	METAL	34000	35200	21100	26600
Manganese	METAL	0.2 U	73.8	29.9	34.3
Mercury	METAL	0.1 U	0.1 U	0.1 U	0.1 U
Nickel	METAL	0.8 U	0.8 U	0.8 U	0.8 U
Potassium	METAL	7170	13200	12900	6890
Selenium	METAL	1.3 U	1.3 U	1.3 U	1.3 U
Silver	METAL	0.2 U	0.2 U	0.2 U	0.2 U
Sodium	METAL	72500	89600	50000	52000
Thallium	METAL	1.9 B	1.8 U	1.8 U	1.8 U
Vanadium	METAL	0.9 U	0.9 U	0.9 U	0.9 U
Zinc	METAL	17.9 B	15.4 B	54.3	22.6
Cyanide	CN	10 U	10 U	10 U	10 U
Associated Rinse Blank	METAL	NA	NA	NA	NA

APPENDIX D-2
VALIDATION SUMMARY TABLES
PRELIMINARY SITE ASSESSMENT
CEDAR STREET DUMP
GROUNDWATER (INORGANIC)

Sample I.D.		GW8D	GW8S	GW9D	GW9S
Date Sampled		01/06/95	01/06/95	01/06/95	01/06/95
Date Received		01/07/95	01/07/95	01/07/95	01/07/95
Units		UG/L	UG/L	UG/L	UG/L
Parameters	Class				
Aluminum	METAL	98.9 B	13400	1030	14200
Antimony	METAL	1 U	1 U	1 U	1 U
Arsenic	METAL	2 B	10.4	1.8 B	18.9
Barium	METAL	139 B	242	92.5 B	453
Beryllium	METAL	0.1 U	0.1 U	0.1 U	0.1 U
Cadmium	METAL	0.2 U	0.2 U	0.2 U	0.2 U
Calcium	METAL	167000	179000	67600	286000
Chromium	METAL	0.3 U	19.8	0.33 B	24.7
Cobalt	METAL	0.8 U	14.1 B	0.8 U	10.2 B
Copper	METAL	0.83 B	44.2	4.4 B	72.9
Iron	METAL	1590	23600	1080	46700
Lead	METAL	0.9 B	22.5	0.9 U	50.5
Magnesium	METAL	53300	54800	29600	96300
Manganese	METAL	166	583	43.3	936
Mercury	METAL	0.1 U	0.1 U	0.1 U	0.31
Nickel	METAL	0.8 U	21.3 B	1.2 B	30.8 B
Potassium	METAL	37500	18400	10700	39300
Selenium	METAL	1.3 U	3.9 B	1.3 U	1.3 U
Silver	METAL	0.2 U	0.2 U	0.2 U	0.2 U
Sodium	METAL	59400	48000	53700	48300
Thallium	METAL	1.8 U	1.8 U	1.8 U	1.8 U
Vanadium	METAL	0.9 U	24.7 B	1.3 B	23.6 B
Zinc	METAL	14.5 B	166	22.1	187
Cyanide	CN	10 U	10 U	10 U	10 U
Associated Rinse Blank	METAL	NA	NA	NA	NA

MADE BY SN DATE 03/10/95
CHKD BY [illegible] DATE 3-10-95

APPENDIX D-3
VALIDATION SUMMARY TABLES
PRELIMINARY SITE ASSESSMENT
CEDAR STREET DUMP
DRILLING WATER (VOLATILE RESULTS)

Sample ID		DRILLW
Date Sampled		12/08/94
Date Received		12/09/94
Date Analyzed		12/12/94
Units		UG/L
Parameter	Class	
Chloromethane	VOC	10 U
Bromomethane	VOC	10 U
Vinyl Chloride	VOC	10 U
Chloroethane	VOC	10 U
Methylene Chloride	VOC	10 U
Acetone	VOC	8 J
Carbon Disulfide	VOC	10 U
1,1-Dichloroethene	VOC	10 U
1,1-Dichloroethane	VOC	10 U
1,2-Dichloroethene (total)	VOC	10 U
Chloroform	VOC	6 J
1,2-Dichloroethane	VOC	10 U
2-Butanone	VOC	10 UJ
1,1,1-Trichloroethane	VOC	10 U
Carbon Tetrachloride	VOC	10 U
Bromodichloromethane	VOC	6 J
1,2-Dichloropropane	VOC	10 U
cis-1,3-Dichloropropene	VOC	10 U
Trichloroethene	VOC	10 U
Dibromochloromethane	VOC	11
1,1,2-Trichloroethane	VOC	10 U
Benzene	VOC	10 U
trans-1,3-Dichloropropene	VOC	10 U
Bromoform	VOC	13
4-Methyl-2-pentanone	VOC	10 UJ
2-Hexanone	VOC	10 UJ
Tetrachloroethene	VOC	10 UJ
1,1,2,2-Tetrachloroethane	VOC	10 U
Toluene	VOC	10 U
Chlorobenzene	VOC	10 U
Ethylbenzene	VOC	10 U
Styrene	VOC	10 U
Xylene (total)	VOC	10 U
Associated Method Blank	VOC	VBLKW12B

APPENDIX D-3
VALIDATION SUMMARY TABLES
PRELIMINARY SITE ASSESSMENT
CEDAR STREET DUMP
DRILLING WATER (SEMIVOLATILE RESULTS)

Sample ID		DRILLW
Date Sampled		12/08/94
Date Received		12/09/94
Date Extracted		12/11/94
Date Analyzed		01/03/95
Dilution Factor		1.0
Units		UG/L
Parameter	Class	
Phenol	SVOC	10 U
bis(2-Chloroethyl)ether	SVOC	10 U
2-Chlorophenol	SVOC	10 U
1,3-Dichlorobenzene	SVOC	10 U
1,4-Dichlorobenzene	SVOC	10 U
1,2-Dichlorobenzene	SVOC	10 U
2-Methylphenol	SVOC	10 U
bis(2-Chloroisopropyl)ether	SVOC	10 U
4-Methylphenol	SVOC	10 U
N-nitroso-di-n-propylamine	SVOC	10 U
Hexachloroethane	SVOC	10 U
Nitrobenzene	SVOC	10 U
Isophorone	SVOC	10 U
2-Nitrophenol	SVOC	10 U
2,4-Dimethylphenol	SVOC	10 U
bis(-2-Chloroethoxy)methane	SVOC	10 U
2,4-Dichlorophenol	SVOC	10 U
1,2,4-Trichlorobenzene	SVOC	10 U
Naphthalene	SVOC	10 U
4-Chloroaniline	SVOC	10 U
Hexachlorobutadiene	SVOC	10 U
4-Chloro-3-methylphenol	SVOC	10 U
2-Methylnaphthalene	SVOC	10 U
Hexachlorocyclopentadiene	SVOC	10 U
2,4,6-Trichlorophenol	SVOC	10 U
2,4,5-Trichlorophenol	SVOC	25 UJ
2-Chloronaphthalene	SVOC	10 U
2-Nitroaniline	SVOC	25 U
Dimethylphthalate	SVOC	10 U
Acenaphthylene	SVOC	10 U
2,6-Dinitroaniline	SVOC	10 U
3-Nitroaniline	SVOC	25 U
Acenaphthene	SVOC	10 U
Associated Method Blank	SVOC	SBLKW111

APPENDIX D-3
VALIDATION SUMMARY TABLES
PRELIMINARY SITE ASSESSMENT
CEDAR STREET DUMP
DRILLING WATER (SEMIVOLATILE RESULTS)

Sample ID		DRILLW
Date Sampled		12/08/94
Date Received		12/09/94
Date Extracted		12/11/94
Date Analyzed		01/03/95
Dilution Factor		1.0
Units		UG/L
Parameter	Class	
2,4-Dinitrophenol	SVOC	25 U
4-Nitrophenol	SVOC	25 U
Dibenzofuran	SVOC	10 U
2,4-Dinitrotoluene	SVOC	10 U
Diethylphthalate	SVOC	10 U
4-Chlorophenyl-phenylether	SVOC	10 U
Fluorene	SVOC	10 U
4-Nitroaniline	SVOC	25 U
4,6-Dinitro-2-methylphenol	SVOC	25 U
N-Nitrosodiphenylamine	SVOC	10 U
4-Bromophenyl-phenylether	SVOC	10 U
Hexachlorobenzene	SVOC	10 U
Pentachlorophenol	SVOC	25 U
Phenanthrene	SVOC	10 U
Anthracene	SVOC	10 U
Carbazole	SVOC	10 U
Di-n-butylphthalate	SVOC	10 U
Fluoranthene	SVOC	10 U
Pyrene	SVOC	10 U
Butylbenzylphthalate	SVOC	10 U
3,3'-Dichlorobenzidine	SVOC	10 U
Benzo(a)anthracene	SVOC	10 U
Chrysene	SVOC	10 U
bis(2-Ethylhexyl)phthalate	SVOC	4 J
Di-n-octylphthalate	SVOC	10
Benzo(b)fluoranthene	SVOC	10 U
Benzo(k)fluoranthene	SVOC	10 U
Benzo(a)pyrene	SVOC	10 U
Indeno(1,2,3-cd)pyrene	SVOC	10 U
Dibenz(a,h)anthracene	SVOC	10 U
Benzo(g,h,i)perylene	SVOC	10 U
Associated Method Blank	SVOC	SBLKW111

APPENDIX D-3
VALIDATION SUMMARY TABLES
PRELIMINARY SITE ASSESSMENT
CEDAR STREET DUMP
DRILLING WATER (PESTICIDE/PCB RESULTS)

Sample ID		DRILLW
Date Sampled		12/08/94
Date Received		12/09/94
Date Extracted		12/09/94
Date Analyzed		12/25/94
Dilution Factor		1.0
Units		UG/L
Parameter	Class	
alpha-BHC	PEST	0.05 UJ
beta-BHC	PEST	0.05 U
delta-BHC	PEST	0.05 U
gamma-BHC (Lindane)	PEST	0.05 UJ
Heptachlor	PEST	0.05 UJ
Aldrin	PEST	0.05 U
Heptachlor Epoxide	PEST	0.05 U
Endosulfan I	PEST	0.05 U
Dieldrin	PEST	0.1 U
4,4'-DDE	PEST	0.1 U
Endrin	PEST	0.1 UJ
Endosulfan II	PEST	0.1 U
4,4'-DDD	PEST	0.1 UJ
Endosulfan Sulfate	PEST	0.1 U
4,4'-DDT	PEST	0.1 UJ
Methoxychlor	PEST	0.5 UJ
Endrin Ketone	PEST	0.1 U
Endrin Aldehyde	PEST	0.1 U
alpha-Chlordane	PEST	0.05 U
gamma-Chlordane	PEST	0.05 U
Toxaphene	PEST	5.0 U
Aroclor-1016	PCB	1.0 U
Aroclor-1221	PCB	2.0 U
Aroclor-1232	PCB	1.0 U
Aroclor-1242	PCB	1.0 U
Aroclor-1248	PCB	1.0 U
Aroclor-1254	PCB	1.0 U
Aroclor-1260	PCB	1.0 U
Associated Method Blank	PEST/PCB	PBLK1209

APPENDIX D-3
VALIDATION SUMMARY TABLES
PRELIMINARY SITE ASSESSMENT
CEDAR STREET DUMP
DRILLING WATER (INORGANIC RESULTS)

Sample ID		DRILLW
Date Sampled		12/08/94
Date Received		12/09/94
Units		UG/L
Parameter	Class	
Aluminum	METAL	103 U
Antimony	METAL	80.1
Arsenic	METAL	1.7 U
Barium	METAL	14.0 B
Beryllium	METAL	1.1 U
Cadmium	METAL	5.0 U
Calcium	METAL	13600
Chromium	METAL	6.7 U
Cobalt	METAL	9.3 U
Copper	METAL	7.8 U
Iron	METAL	97 B
Lead	METAL	1.1 UJ
Magnesium	METAL	21600
Manganese	METAL	5.0 U
Mercury	METAL	0.20 U
Nickel	METAL	15.6 B
Potassium	METAL	3060 B
Selenium	METAL	1.2 U
Silver	METAL	7.2 U
Sodium	METAL	49300
Thallium	METAL	1.8 UJ
Vanadium	METAL	13.7 U
Zinc	METAL	23.4
Cyanide	CN	10 U

APPENDIX D-3
VALIDATION SUMMARY TABLES
PRELIMINARY SITE ASSESSMENT
CEDAR STREET DUMP
TRIP BLANK (VOLATILE RESULTS)

Sample ID		GWTB-1
Date Received		01/07/95
Date Analyzed		01/11/95
Dilution Factor		1.0
Units		UG/L
Parameters	Class	
Chloromethane	VOC	10 UJ
Bromomethane	VOC	10 UJ
Vinyl Chloride	VOC	10 UJ
Chloroethane	VOC	10 UJ
Methylene Chloride	VOC	10 U
Acetone	VOC	10 UJ
Carbon Disulfide	VOC	10 U
1,1-Dichloroethene	VOC	10 U
1,1-Dichloroethane	VOC	10 U
1,2-Dichloroethene (Total)	VOC	10 U
Chloroform	VOC	10 U
1,2-Dichloroethane	VOC	10 U
2-Butanone	VOC	10 UJ
1,1,1-Trichloroethane	VOC	10 U
Carbon Tetrachloride	VOC	10 U
Bromodichloromethane	VOC	10 U
1,2-Dichloropropane	VOC	10 U
cis-1,3-Dichloropropene	VOC	10 U
Trichloroethene	VOC	10 U
Dibromochloromethane	VOC	10 U
1,1,2-Trichloroethane	VOC	10 U
Benzene	VOC	10 U
trans-1,3-Dichloropropene	VOC	10 U
Bromoform	VOC	10 U
4-Methyl-2-Pentanone	VOC	10 U
2-Hexanone	VOC	10 U
Tetrachloroethene	VOC	10 U
1,1,2,2-Tetrachloroethane	VOC	10 U
Toluene	VOC	10 U
Chlorobenzene	VOC	10 U
Ethylbenzene	VOC	10 U
Styrene	VOC	10 U
Xylene (total)	VOC	10 U
Associated Method Blank	VOC	VBLK11W

APPENDIX D-3
VALIDATION SUMMARY TABLES
PRELIMINARY SITE ASSESSMENT
CEDAR STREET DUMP
RINSE BLANK (VOLATILE RESULTS)

Sample ID		RB1
Date Sampled		12/16/94
Date Received		12/17/94
Date Analyzed		12/22/94
Dilution Factor		1.0
Units		UG/L
Parameters	Class	
Chloromethane	VOC	10 UJ
Bromomethane	VOC	10 U
Vinyl Chloride	VOC	10 U
Chloroethane	VOC	10 U
Methylene Chloride	VOC	5 J
Acetone	VOC	8 J
Carbon Disulfide	VOC	10 U
1,1-Dichloroethene	VOC	10 U
1,1-Dichloroethane	VOC	10 U
1,2-Dichloroethene (Total)	VOC	10 U
Chloroform	VOC	10 U
1,2-Dichloroethane	VOC	10 U
2-Butanone	VOC	10 U
1,1,1-Trichloroethane	VOC	10 U
Carbon Tetrachloride	VOC	10 U
Bromodichloromethane	VOC	10 U
1,2-Dichloropropane	VOC	10 U
cis-1,3-Dichloropropene	VOC	10 U
Trichloroethene	VOC	10 U
Dibromochloromethane	VOC	10 U
1,1,2-Trichloroethane	VOC	10 U
Benzene	VOC	10 U
trans-1,3-Dichloropropene	VOC	10 U
Bromoform	VOC	10 U
4-Methyl-2-Pentanone	VOC	10 U
2-Hexanone	VOC	10 U
Tetrachloroethene	VOC	10 U
1,1,2,2-Tetrachloroethane	VOC	10 U
Toluene	VOC	10 U
Chlorobenzene	VOC	10 U
Ethylbenzene	VOC	10 U
Styrene	VOC	10 U
Xylene (total)	VOC	10 U
Associated Method Blank	VOC	VBLKW221

APPENDIX D-3
VALIDATION SUMMARY TABLES
PRELIMINARY SITE ASSESSMENT
CEDAR STREET DUMP
RINSE BLANK (SEMIVOLATILE RESULTS)

Sample ID		RB1
Date Sampled		12/16/94
Date Received		12/17/94
Date Extracted		12/20/94
Date Analyzed		01/12/95
Dilution Factor		1.0
Units		UG/L
Parameters	Class	
Phenol	SVOC	10 U
bis(2-Chloroethyl)ether	SVOC	10 U
2-Chlorophenol	SVOC	10 U
1,3-Dichlorobenzene	SVOC	10 U
1,4-Dichlorobenzene	SVOC	10 U
1,2-Dichlorobenzene	SVOC	10 U
2-Methylphenol	SVOC	10 U
2,2'-oxybis(1-Chloropropane)	SVOC	10 U
4-Methylphenol	SVOC	10 U
N-nitroso-di-n-propylamine	SVOC	10 U
Hexachloroethane	SVOC	10 U
Nitrobenzene	SVOC	10 U
Isophorone	SVOC	10 U
2-Nitrophenol	SVOC	10 U
2,4-Dimethylphenol	SVOC	10 U
bis(2-Chloroethoxy)methane	SVOC	10 U
2,4-Dichlorophenol	SVOC	10 U
1,2,4-Trichlorobenzene	SVOC	10 U
Naphthalene	SVOC	1 J
4-Chloroaniline	SVOC	10 U
Hexachlorobutadiene	SVOC	10 U
4-Chloro-3-Methyphenol	SVOC	10 U
2-Methylnaphthalene	SVOC	10 U
Hexachlorocyclopentadiene	SVOC	10 U
2,4,6-Trichlorophenol	SVOC	10 U
2,4,5-Trichlorophenol	SVOC	25 U
2-Chloronaphthalene	SVOC	10 U
2-Nitroaniline	SVOC	25 U
Dimethylphthalate	SVOC	10 U
Acenaphthylene	SVOC	10 U
2,6-Dinitrotoluene	SVOC	10 U
3-Nitroaniline	SVOC	25 U
Acenaphthene	SVOC	10 U
Associated Method Blank	SVOC	SBLKW202

APPENDIX D-3
VALIDATION SUMMARY TABLES
PRELIMINARY SITE ASSESSMENT
CEDAR STREET DUMP
RINSE BLANK (SEMIVOLATILE RESULTS)

Sample ID		RB1
Date Sampled		12/16/94
Date Received		12/17/94
Date Extracted		12/20/94
Date Analyzed		01/12/95
Dilution Factor		1.0
Units		UG/L
Parameters	Class	
2,4-Dinitrophenol	SVOC	25 U
4-Nitrophenol	SVOC	25 U
Dibenzofuran	SVOC	10 U
2,4-Dinitrotoluene	SVOC	10 U
Diethylphthalate	SVOC	10 U
4-Chlorophenyl-phenylether	SVOC	10 U
Fluorene	SVOC	10 U
4-Nitroaniline	SVOC	25 U
4,6-Dinitro-2-Methyphenol	SVOC	25 U
N-Nitrosodiphenylamine	SVOC	10 U
4-Bromophenyl-phenylether	SVOC	10 U
Hexachlorobenzene	SVOC	10 U
Pentachlorophenol	SVOC	25 U
Phenanthrene	SVOC	10 U
Anthracene	SVOC	10 U
Carbazole	SVOC	10 U
Di-n-butylphthalate	SVOC	1 J
Fluoranthene	SVOC	10 U
Pyrene	SVOC	10 U
Butylbenzylphthalate	SVOC	10 U
3,3'-Dichlorobenzidine	SVOC	10 U
Benzo(a)anthracene	SVOC	10 U
Chrysene	SVOC	10 U
bis(2-Ethylhexyl)phthalate	SVOC	2 J
Di-n-octylphthalate	SVOC	10 U
Benzo(b)fluoranthene	SVOC	10 U
Benzo(k)fluoranthene	SVOC	10 U
Benzo(a)pyrene	SVOC	10 U
Indeno(1,2,3-cd)pyrene	SVOC	10 U
Dibenz(a,h)anthracene	SVOC	10 U
Benzo(g,h,i)perylene	SVOC	10 U
Associated Method Blank	SVOC	SBLKW202

APPENDIX D-3
VALIDATION SUMMARY TABLES
PRELIMINARY SITE ASSESSMENT
CEDAR STREET DUMP
RINSE BLANK (PESTICIDE/PCB RESULTS)

Sample ID		RB1
Date Sampled		12/16/94
Date Received		12/17/94
Date Extracted		12/19/94
Date Analyzed		01/01/95
Dilution Factor		1.0
Units		UG/L
Parameters	Class	
alpha-BHC	PEST	0.05 UJ
beta-BHC	PEST	0.05 U
delta-BHC	PEST	0.05 U
gamma-BHC (Lindane)	PEST	0.05 UJ
Heptachlor	PEST	0.05 U
Aldrin	PEST	0.05 U
Heptachlor epoxide	PEST	0.05 U
Endosulfan I	PEST	0.05 U
Dieldrin	PEST	0.1 U
4,4'-DDE	PEST	0.1 U
Endrin	PEST	0.1 U
Endosulfan II	PEST	0.1 U
4,4'-DDD	PEST	0.1 U
Endosulfan sulfate	PEST	0.1 U
4,4'-DDT	PEST	0.1 UJ
Methoxychlor	PEST	0.5 UJ
Endrin ketone	PEST	0.1 U
Endrin Aldehyde	PEST	0.1 U
alpha-Chlordane	PEST	0.05 U
gamma-Chlordane	PEST	0.05 U
Toxaphene	PEST	5.0 U
Aroclor-1016	PCB	1.0 U
Aroclor-1221	PCB	2.0 U
Aroclor-1232	PCB	1.0 U
Aroclor-1242	PCB	1.0 U
Aroclor-1248	PCB	1.0 U
Aroclor-1254	PCB	1.0 U
Aroclor-1260	PCB	1.0 U
Associated Method Blank	PEST/PCB	PBLK1219

APPENDIX D-3
VALIDATION SUMMARY TABLES
PRELIMINARY SITE ASSESSMENT
CEDAR STREET DUMP
RINSE BLANK (INORGANIC RESULTS)

Sample ID		RB1
Date Sampled		12/16/94
Date Received		12/17/94
Units		UG/L
Parameters	Class	
Aluminum	METAL	103 U
Antimony	METAL	58 U
Arsenic	METAL	1.7 U
Barium	METAL	4.8 U
Beryllium	METAL	1.1 U
Cadmium	METAL	5 U
Calcium	METAL	147 B
Chromium	METAL	6.7 U
Cobalt	METAL	9.3 U
Copper	METAL	7.8 U
Iron	METAL	83.3 U
Lead	METAL	1.1 U
Magnesium	METAL	65 U
Manganese	METAL	5 U
Mercury	METAL	0.20 U
Nickel	METAL	9.4 U
Potassium	METAL	569 U
Selenium	METAL	1.2 U
Silver	METAL	7.2 U
Sodium	METAL	242 U
Thallium	METAL	1.8 U
Vanadium	METAL	13.7 U
Zinc	METAL	4.9 U
Cyanide	CN	10 U

APPENDIX D-3
VALIDATION SUMMARY TABLES
PRELIMINARY SITE ASSESSMENT
CEDAR STREET DUMP
METHOD BLANK (VOLATILE RESULTS)

Sample ID		VBLKS131	VBLKS161	VBLKS21B	VBLKW12B	VBLKS22A
Date Analyzed		12/13/94	12/16/94	12/21/94	12/12/94	12/22/94
Dilution Factor		1.0	1.0	1.0	1.0	1.0
Units		UG/KG	UG/KG	UG/KG	UG/L	UG/KG
Parameters	Class					
Chloromethane	VOC	10 UJ	10 UJ	10 UJ	10 U	10 UJ
Bromomethane	VOC	10 U	10 U	10 U	10 U	10 U
Vinyl Chloride	VOC	10 U	10 UJ	10 UJ	10 U	10 UJ
Chloroethane	VOC	10 U	10 U	10 UJ	10 U	10 UJ
Methylene Chloride	VOC	10 U	10 U	10 U	2 J	1 J
Acetone	VOC	26	11 J	15 J	10 U	29
Carbon Disulfide	VOC	10 U	10 U	10 U	10 U	2 J
1,1-Dichloroethene	VOC	10 U	10 U	10 U	10 U	10 U
1,1-Dichloroethane	VOC	10 U	10 U	10 U	10 U	10 U
1,2-Dichloroethene (total)	VOC	10 U	10 U	10 U	10 U	10 U
Chloroform	VOC	10 U	10 U	10 U	10 U	10 U
1,2-Dichloroethane	VOC	10 U	10 U	10 U	10 U	10 U
2-Butanone	VOC	10	10 U	10 J	10 UJ	18 J
1,1,1-Trichloroethane	VOC	10 U	10 U	10 U	10 U	10 U
Carbon Tetrachloride	VOC	10 U	10 U	10 U	10 U	10 U
Bromodichloromethane	VOC	10 U	10 U	10 U	10 U	10 U
1,2-Dichloropropane	VOC	10 U	10 U	10 U	10 U	10 U
cis-1,3-Dichloropropene	VOC	10 U	10 U	10 U	10 U	10 U
Trichloroethene	VOC	10 U	10 U	10 U	10 U	10 U
Dibromochloromethane	VOC	10 U	10 U	10 U	10 U	10 U
1,1,2-Trichloroethane	VOC	10 U	10 U	10 U	10 U	10 U
Benzene	VOC	10 U	10 U	10 U	10 U	10 U
trans-1,3-Dichloropropene	VOC	10 U	10 U	10 U	10 U	10 U
Bromoform	VOC	10 U	10 U	10 UJ	10 U	10 U
4-Methyl-2-pentanone	VOC	10 UJ	10 U	10 UJ	10 UJ	10 U
2-Hexanone	VOC	10 UJ	10 U	10 UJ	10 UJ	10 U
Tetrachloroethene	VOC	10 U	10 U	10 U	10 UJ	10 U
1,1,2,2-Tetrachloroethane	VOC	10 U	10 U	10 U	10 U	10 U
Toluene	VOC	10 U	10 U	10 U	10 U	10 U
Chlorobenzene	VOC	10 U	10 U	10 U	10 U	10 U
Ethylbenzene	VOC	10 U	10 U	10 U	10 U	10 U
Styrene	VOC	10 U	10 U	10 U	10 U	10 U
Xylene (total)	VOC	10 U	10 U	10 U	10 U	10 U

APPENDIX D-3
VALIDATION SUMMARY TABLES
PRELIMINARY SITE ASSESSMENT
CEDAR STREET DUMP
METHOD BLANK (VOLATILE RESULTS)

Sample ID		VBLKW221	VBLKS27B	VBLK11W	VBLK12
Date Analyzed		12/22/94	12/27/94	01/11/95	01/12/95
Dilution Factor		1.0	1.0	1.0	1.0
Units		UG/L	UG/KG	UG/L	UG/L
Parameters	Class				
Chloromethane	VOC	10 UJ	10 U	10 UJ	10 UJ
Bromomethane	VOC	10 U	10 U	10 UJ	10 UJ
Vinyl Chloride	VOC	10 U	10 U	10 UJ	10 UJ
Chloroethane	VOC	10 U	10 U	10 UJ	10 UJ
Methylene Chloride	VOC	10 U	2 J	10 U	10 U
Acetone	VOC	10 U	15	10 UJ	10 UJ
Carbon Disulfide	VOC	10 U	10 U	10 U	10 UJ
1,1-Dichloroethene	VOC	10 U	10 U	10 U	10 U
1,1-Dichloroethane	VOC	10 U	10 U	10 U	10 U
1,2-Dichloroethene (total)	VOC	10 U	10 U	10 U	10 U
Chloroform	VOC	10 U	10 U	10 U	10 U
1,2-Dichloroethane	VOC	10 U	10 U	10 U	10 U
2-Butanone	VOC	3 J	7 J	10 UJ	10 UJ
1,1,1-Trichloroethane	VOC	10 U	10 U	10 U	10 U
Carbon Tetrachloride	VOC	10 U	10 U	10 U	10 U
Bromodichloromethane	VOC	10 U	10 U	10 U	10 U
1,2-Dichloropropane	VOC	10 U	10 U	10 U	10 U
cis-1,3-Dichloropropene	VOC	10 U	10 U	10 U	10 U
Trichloroethene	VOC	10 U	10 U	10 U	10 U
Dibromochloromethane	VOC	10 U	10 U	10 U	10 U
1,1,2-Trichloroethane	VOC	10 U	10 U	10 U	10 U
Benzene	VOC	10 U	10 U	10 U	10 U
trans-1,3-Dichloropropene	VOC	10 U	10 U	10 U	10 U
Bromoform	VOC	10 U	10 U	10 U	10 U
4-Methyl-2-pentanone	VOC	10 U	10 U	10 U	10 U
2-Hexanone	VOC	10 U	10 U	10 U	10 UJ
Tetrachloroethene	VOC	10 U	10 U	10 U	10 U
1,1,2,2-Tetrachloroethane	VOC	10 U	10 U	10 U	10 U
Toluene	VOC	10 U	10 U	10 U	10 U
Chlorobenzene	VOC	10 U	10 U	10 U	10 U
Ethylbenzene	VOC	10 U	10 U	10 U	10 U
Styrene	VOC	10 U	10 U	10 U	10 U
Xylene (total)	VOC	10 U	10 U	10 U	10 U

APPENDIX D-3
VALIDATION SUMMARY TABLES
PRELIMINARY SITE ASSESSMENT
CEDAR STREET DUMP
METHOD BLANK (SEMIVOLATILE RESULTS)

Sample ID		SBLKW111	SBLKS122	SBLKS142	SBLKS191
Date Extracted		12/11/94	12/12/94	12/14/94	12/19/94
Date Analyzed		01/03/95	01/03/95	01/03/95	10/04/94
Dilution Factor		1.0	1.0	1.0	1.0
Units		UG/L	UG/KG	UG/KG	UG/KG
Parameters	Class				
Phenol	SVOC	10 U	330 U	330 U	330 U
bis(2-Chloroethyl)ether	SVOC	10 U	330 U	330 U	330 U
2-Chlorophenol	SVOC	10 U	330 U	330 U	330 U
1,3-Dichlorobenzene	SVOC	10 U	330 U	330 U	330 U
1,4-Dichlorobenzene	SVOC	10 U	330 U	330 U	330 U
1,2-Dichlorobenzene	SVOC	10 U	330 U	330 U	330 U
2-Methylphenol	SVOC	10 U	330 U	330 U	330 U
bis(2-Chloroisopropyl)ether	SVOC	10 U	330 U	330 U	330 U
4-Methylphenol	SVOC	10 U	330 U	330 U	330 U
N-nitroso-di-n-propylamine	SVOC	10 U	330 U	330 U	330 U
Hexachloroethane	SVOC	10 U	330 U	330 U	330 U
Nitrobenzene	SVOC	10 U	330 U	330 U	330 U
Isophorone	SVOC	10 U	330 U	330 U	330 U
2-Nitrophenol	SVOC	10 U	330 U	330 U	330 U
2,4-Dimethylphenol	SVOC	10 U	330 U	330 U	330 U
bis(-2-Chloroethoxy)methane	SVOC	10 U	330 U	330 U	330 U
2,4-Dichlorophenol	SVOC	10 U	330 U	330 U	330 U
1,2,4-Trichlorobenzene	SVOC	10 U	330 U	330 U	330 U
Naphthalene	SVOC	10 U	330 U	330 U	330 U
4-Chloroaniline	SVOC	10 U	330 U	330 U	330 U
Hexachlorobutadiene	SVOC	10 U	330 U	330 U	330 U
4-Chloro-3-methylphenol	SVOC	10 U	330 U	330 U	330 U
2-Methylnaphthalene	SVOC	10 U	330 U	330 U	330 U
Hexachlorocyclopentadiene	SVOC	10 U	330 U	330 U	330 U
2,4,6-Trichlorophenol	SVOC	10 U	330 U	330 U	330 U
2,4,5-Trichlorophenol	SVOC	25 UJ	830 UJ	830 UJ	830 UJ
2-Chloronaphthalene	SVOC	10 U	330 U	330 U	330 U
2-Nitroaniline	SVOC	25 U	830 U	830 U	830 U
Dimethylphthalate	SVOC	10 U	330 U	330 U	330 U
Acenaphthylene	SVOC	10 U	330 U	330 U	330 U
2,6-Dinitroaniline	SVOC	10 U	330 U	330 U	330 U
3-Nitroaniline	SVOC	25 U	830 U	830 U	830 U
Acenaphthene	SVOC	10 U	330 U	330 U	330 U

APPENDIX D-3
VALIDATION SUMMARY TABLES
PRELIMINARY SITE ASSESSMENT
CEDAR STREET DUMP
METHOD BLANK (SEMIVOLATILE RESULTS)

Sample ID		SBLKW111	SBLKS122	SBLKS142	SBLKS191
Date Extracted		12/11/94	12/12/94	12/14/94	12/19/94
Date Analyzed		01/03/95	01/03/95	01/03/95	10/04/94
Dilution Factor		1.0	1.0	1.0	1.0
Units		UG/L	UG/KG	UG/KG	UG/KG
Parameters	Class				
2,4-Dinitrophenol	SVOC	25 U	830 U	830 U	830 U
4-Nitrophenol	SVOC	25 U	830 U	830 U	830 U
Dibenzofuran	SVOC	10 U	330 U	330 U	330 U
2,4-Dinitrotoluene	SVOC	10 U	330 U	330 U	330 U
Diethylphthalate	SVOC	10 U	330 U	330 U	330 U
4-Chlorophenyl-phenylether	SVOC	10 U	330 U	330 U	330 U
Fluorene	SVOC	10 U	330 U	330 U	330 U
4-Nitroaniline	SVOC	25 U	830 U	830 U	830 U
2,6-Dinitro-2-methylphenol	SVOC	25 U	830 U	830 U	830 U
N-Nitrosodiphenylamine	SVOC	10 U	330 U	330 U	330 U
4-Bromophenyl-phenylether	SVOC	10 U	330 U	330 U	330 U
Hexachlorobenzene	SVOC	10 U	330 U	330 U	330 U
Pentachlorophenol	SVOC	25 U	830 U	830 U	830 U
Phenanthrene	SVOC	10 U	330 U	330 U	330 U
Anthracene	SVOC	10 U	330 U	330 U	330 U
Carbazole	SVOC	10 U	330 U	330 U	330 U
Di-n-butylphthalate	SVOC	1 J	43 J	350	940
Fluoranthene	SVOC	10 U	330 U	330 U	330 U
Pyrene	SVOC	10 U	330 U	330 U	330 U
Butylbenzylphthalate	SVOC	10 U	330 U	330 U	330 U
3,3'-Dichlorobenzidine	SVOC	10 U	330 U	330 U	330 U
Benzo(a)anthracene	SVOC	10 U	330 U	330 U	330 U
Chrysene	SVOC	10 U	330 U	330 U	330 U
bis(2-Ethylhexyl)phthalate	SVOC	10 U	330 U	330 U	330 U
Di-n-octylphthalate	SVOC	10 U	330 U	330 U	330 U
Benzo(b)fluoranthene	SVOC	10 U	330 U	330 U	330 U
Benzo(k)fluoranthene	SVOC	10 U	330 U	330 U	330 U
Benzo(a)pyrene	SVOC	10 U	330 U	330 U	330 U
Indeno(1,2,3-cd)pyrene	SVOC	10 U	330 U	330 U	330 U
Dibenz(a,h)anthracene	SVOC	10 U	330 U	330 U	330 U
Benzo(g,h,i)perylene	SVOC	10 U	330 U	330 U	330 U

APPENDIX D-3
VALIDATION SUMMARY TABLES
PRELIMINARY SITE ASSESSMENT
CEDAR STREET DUMP
METHOD BLANK (SEMIVOLATILE RESULTS)

Sample ID		SBLKW042	SBLKS221	SBLKS211	SBLKW202	SBLK10
Date Extracted		01/04/95	12/22/94	12/21/94	12/20/94	01/10/95
Date Analyzed		01/06/95	01/10/95	01/12/95	01/12/95	02/08/95
Dilution Factor		1.0	1.0	1.0	1.0	1.0
Units		UG/L	UG/KG	UG/KG	UG/L	UG/L
Parameters	Class					
Phenol	SVOC	10 U	330 U	330 U	10 U	10 U
bis(2-Chloroethyl)ether	SVOC	10 U	330 U	330 U	10 U	10 U
2-Chlorophenol	SVOC	10 U	330 U	330 U	10 U	10 U
1,3-Dichlorobenzene	SVOC	10 U	330 U	330 U	10 U	10 U
1,4-Dichlorobenzene	SVOC	10 U	330 U	330 U	10 U	10 U
1,2-Dichlorobenzene	SVOC	10 U	330 U	330 U	10 U	10 U
2-Methylphenol	SVOC	10 U	330 U	330 U	10 U	10 U
bis(2-Chloroisopropyl)ether	SVOC	10 U	330 U	330 UJ	10 UJ	10 UJ
4-Methylphenol	SVOC	10 U	330 U	330 U	10 U	10 U
N-nitroso-di-n-propylamine	SVOC	10 U	330 U	330 U	10 U	10 U
Hexachloroethane	SVOC	10 U	330 U	330 U	10 U	10 U
Nitrobenzene	SVOC	10 U	330 U	330 U	10 U	10 U
Isophorone	SVOC	10 U	330 U	330 U	10 U	10 U
2-Nitrophenol	SVOC	10 U	330 U	330 U	10 U	10 U
2,4-Dimethylphenol	SVOC	10 U	330 U	330 U	10 U	10 U
bis(-2-Chloroethoxy)methane	SVOC	10 U	330 U	330 U	10 U	10 U
2,4-Dichlorophenol	SVOC	10 U	330 U	330 U	10 U	10 U
1,2,4-Trichlorobenzene	SVOC	10 U	330 U	330 U	10 U	10 U
Naphthalene	SVOC	10 U	330 U	330 U	10 U	10 U
4-Chloroaniline	SVOC	10 U	330 U	330 U	10 U	10 U
Hexachlorobutadiene	SVOC	10 U	330 U	330 U	10 U	10 U
4-Chloro-3-methylphenol	SVOC	10 U	330 U	330 U	10 U	10 U
2-Methylnaphthalene	SVOC	10 U	330 U	330 U	10 U	10 U
Hexachlorocyclopentadiene	SVOC	10 U	330 U	330 UJ	10 UJ	10 UJ
2,4,6-Trichlorophenol	SVOC	10 U	330 U	330 U	10 U	10 U
2,4,5-Trichlorophenol	SVOC	25 U	830 U	830 U	25 U	25 U
2-Chloronaphthalene	SVOC	10 U	330 U	330 U	10 U	10 U
2-Nitroaniline	SVOC	25 U	830 U	830 U	25 U	25 U
Dimethylphthalate	SVOC	10 U	330 U	330 U	10 U	10 U
Acenaphthylene	SVOC	10 U	330 U	330 U	10 U	10 U
2,6-Dinitroaniline	SVOC	10 U	330 U	330 U	10 U	10 U
3-Nitroaniline	SVOC	25 UJ	830 U	830 U	25 U	25 UJ
Acenaphthene	SVOC	10 U	330 U	330 U	10 U	10 U

APPENDIX D-3
VALIDATION SUMMARY TABLES
PRELIMINARY SITE ASSESSMENT
CEDAR STREET DUMP
METHOD BLANK (SEMIVOLATILE RESULTS)

Sample ID		SBLKW042	SBLKS221	SBLKS211	SBLKW202	SBLK10
Date Extracted		01/04/95	12/22/94	12/21/94	12/20/94	01/10/95
Date Analyzed		01/06/95	01/10/95	01/12/95	01/12/95	02/08/95
Dilution Factor		1.0	1.0	1.0	1.0	1.0
Units		UG/L	UG/KG	UG/KG	UG/L	UG/L
Parameters	Class					
2,4-Dinitrophenol	SVOC	25 U	830 UJ	830 UJ	25 UJ	25 UJ
4-Nitrophenol	SVOC	25 U	830 UJ	830 UJ	25 UJ	25 UJ
Dibenzofuran	SVOC	10 U	330 U	330 U	10 U	10 U
2,4-Dinitrotoluene	SVOC	10 U	330 U	330 U	10 U	10 U
Diethylphthalate	SVOC	10 U	330 U	330 U	10 U	10 U
4-Chlorophenyl-phenylether	SVOC	10 U	330 U	330 U	10 U	10 U
Fluorene	SVOC	10 U	330 U	330 U	10 U	10 U
4-Nitroaniline	SVOC	25 UJ	830 U	830 UJ	25 UJ	25 U
2,6-Dinitro-2-methylphenol	SVOC	25 U	830 U	830 U	25 U	25 UJ
N-Nitrosodiphenylamine	SVOC	10 U	330 UJ	330 U	10 U	10 U
4-Bromophenyl-phenylether	SVOC	10 U	330 U	330 U	10 U	10 U
Hexachlorobenzene	SVOC	10 U	330 U	330 U	10 U	10 U
Pentachlorophenol	SVOC	25 U	830 UJ	830 UJ	25 UJ	25 U
Phenanthrene	SVOC	10 U	330 U	330 U	10 U	10 U
Anthracene	SVOC	10 U	330 U	330 U	10 U	10 U
Carbazole	SVOC	10 UJ	330 UJ	330 UJ	10 UJ	10 U
Di-n-butylphthalate	SVOC	10 U	2400	750	10 U	10 U
Fluoranthene	SVOC	10 U	330 U	330 U	10 U	10 U
Pyrene	SVOC	10 U	330 U	330 U	10 U	10 U
Butylbenzylphthalate	SVOC	10 U	56 J	330 U	10 U	10 U
3,3'-Dichlorobenzidine	SVOC	10 U	330 U	330 U	10 U	10 U
Benzo(a)anthracene	SVOC	10 U	330 U	330 U	10 U	10 U
Chrysene	SVOC	10 U	330 U	330 U	10 U	10 U
bis(2-Ethylhexyl)phthalate	SVOC	10 U	200 J	120 J	10 U	10 U
Di-n-octylphthalate	SVOC	10 U	330 U	330 UJ	10 UJ	10 U
Benzo(b)fluoranthene	SVOC	10 U	330 U	330 U	10 U	10 U
Benzo(k)fluoranthene	SVOC	10 U	330 U	330 U	10 U	10 U
Benzo(a)pyrene	SVOC	10 U	330 U	330 U	10 U	10 U
Indeno(1,2,3-cd)pyrene	SVOC	10 U	330 U	330 U	10 U	10 U
Dibenz(a,h)anthracene	SVOC	10 U	330 U	330 U	10 U	10 U
Benzo(g,h,i)perylene	SVOC	10 U	330 U	330 U	10 U	10 U

APPENDIX D-3
VALIDATION SUMMARY TABLES
PRELIMINARY SITE ASSESSMENT
CEDAR STREET DUMP
METHOD BLANK (PESTICIDE/PCB RESULTS)

Sample ID		PBLK1219	PBLK1221	PBLK1223	PBLK1209
Date Extracted		12/19/94	12/21/94	12/23/94	12/09/94
Date Analyzed		12/28/94	12/31/94	01/13/95	12/28/94
Dilution Factor		1.0	1.0	1.0	1.0
Units		UG/L	UG/KG	UG/KG	UG/L
Parameters	Class				
alpha-BHC	PEST	0.05 UJ	1.7 UJ	1.7 UJ	0.05 UJ
beta-BHC	PEST	0.05 U	1.7 U	1.7 U	0.05 U
delta-BHC	PEST	0.05 U	1.7 U	1.7 U	0.05 U
gamma-BHC (Lindane)	PEST	0.05 UJ	1.7 UJ	1.7 UJ	0.05 UJ
Heptachlor	PEST	0.05 U	1.7 U	1.7 U	0.05 UJ
Aldrin	PEST	0.05 U	1.7 U	1.7 U	0.05 U
Heptachlor Epoxide	PEST	0.05 U	1.7 U	1.7 U	0.05 U
Endosulfan I	PEST	0.05 U	1.7 U	1.7 U	0.05 U
Dieldrin	PEST	0.1 U	3.3 U	3.3 U	0.1 U
4,4'-DDE	PEST	0.1 U	3.3 U	3.3 U	0.1 U
Endrin	PEST	0.1 U	3.3 U	3.3 U	0.1 UJ
Endosulfan II	PEST	0.1 U	3.3 U	3.3 U	0.1 U
4,4'-DDD	PEST	0.1 U	3.3 U	3.3 U	0.1 U
Endosulfan Sulfate	PEST	0.1 U	3.3 U	3.3 U	0.1 U
4,4'-DDT	PEST	0.1 UJ	3.3 UJ	3.3 UJ	0.1 UJ
Methoxychlor	PEST	0.5 UJ	17 UJ	17 UJ	0.5 UJ
Endrin Ketone	PEST	0.1 U	3.3 U	3.3 U	0.1 U
Endrin Aldehyde	PEST	0.1 U	3.3 U	3.3 U	0.1 U
alpha-Chlordane	PEST	0.05 U	1.7 U	1.7 U	0.05 U
gamma-Chlordane	PEST	0.05 U	1.7 U	1.7 U	0.05 U
Toxaphene	PEST	5.0 U	170 U	170 U	5.0 U
Aroclor-1016	PCB	1.0 U	33 U	33 U	1.0 U
Aroclor-1221	PCB	2.0 U	67 U	67 U	2.0 U
Aroclor-1232	PCB	1.0 U	33 U	33 U	1.0 U
Aroclor-1242	PCB	1.0 U	33 U	33 U	1.0 U
Aroclor-1248	PCB	1.0 U	33 U	33 U	1.0 U
Aroclor-1254	PCB	1.0 U	33 U	33 U	1.0 U
Aroclor-1260	PCB	1.0 U	33 U	33 U	1.0 U

APPENDIX D-3
VALIDATION SUMMARY TABLES
PRELIMINARY SITE ASSESSMENT
CEDAR STREET DUMP
METHOD BLANK (PESTICIDE/PCB RESULTS)

Sample ID		PBLK1212	PBLK1214	PBLK1219	PBLK01
Date Extracted		12/12/94	12/05/94	12/19/94	12/09/94
Date Analyzed		12/21/94	12/13/94	12/31/94	12/28/94
Dilution Factor		1.0	1.0	1.0	1.0
Units		UG/KG	UG/KG	UG/KG	UG/L
Parameters	Class				
alpha-BHC	PEST	1.7 UJ	1.7 UJ	1.7 UJ	0.05 U
beta-BHC	PEST	1.7 U	1.7 UJ	1.7 U	0.05 U
delta-BHC	PEST	1.7 U	1.7 UJ	1.7 U	0.05 U
gamma-BHC (Lindane)	PEST	1.7 UJ	1.7 UJ	1.7 UJ	0.05 U
Heptachlor	PEST	1.7 UJ	1.7 UJ	1.7 UJ	0.022 J
Aldrin	PEST	1.7 U	1.7 UJ	1.7 U	0.05 U
Heptachlor Epoxide	PEST	1.7 UJ	1.7 UJ	1.7 U	0.05 U
Endosulfan I	PEST	1.7 U	1.7 UJ	1.7 U	0.05 U
Dieldrin	PEST	3.3 U	3.3 UJ	3.3 U	0.1 U
4,4'-DDE	PEST	3.3 U	3.3 UJ	3.3 U	0.1 U
Endrin	PEST	3.3 U	3.3 UJ	3.3 U	0.1 U
Endosulfan II	PEST	3.3 U	3.3 UJ	3.3 U	0.1 U
4,4'-DDD	PEST	3.3 U	3.3 UJ	3.3 U	0.1 U
Endosulfan Sulfate	PEST	3.3 U	3.3 UJ	3.3 U	0.1 U
4,4'-DDT	PEST	3.3 UJ	3.3 UJ	3.3 UJ	0.1 U
Methoxychlor	PEST	17 UJ	1 R	17 UJ	0.5 U
Endrin Ketone	PEST	3.3 U	3.3 UJ	3.3 U	0.1 U
Endrin Aldehyde	PEST	3.3 U	3.3 UJ	3.3 U	0.1 U
alpha-Chlordane	PEST	1.7 U	1.7 UJ	1.7 U	0.05 U
gamma-Chlordane	PEST	1.7 U	1.7 UJ	1.7 U	0.05 U
Toxaphene	PEST	170 U	170 UJ	170 U	5.0 U
Aroclor-1016	PCB	33 U	33 UJ	33 U	1.0 U
Aroclor-1221	PCB	67 U	67 UJ	67 U	2.0 U
Aroclor-1232	PCB	33 U	33 UJ	33 U	1.0 U
Aroclor-1242	PCB	33 U	33 UJ	33 U	1.0 U
Aroclor-1248	PCB	33 U	33 UJ	33 U	1.0 U
Aroclor-1254	PCB	33 U	33 UJ	33 U	1.0 U
Aroclor-1260	PCB	33 U	33 UJ	33 U	1.0 U

DEFINITION OF FOOTNOTES AND ABBREVIATIONS
PRELIMINARY SITE ASSESSMENT

SYMBOL	DEFINITION
1	Applies to each isomer individually
2	Applies to total phenols
3	Applies to total unchlorinated phenols
4	Applies to total chlorinated phenols
5	Applies to the sum of the isomers
6	Applies to the trans- isomer only
7	Applies to chlordane
8	Applies to total PCBs
9	Applies to the dissolved form
10	Beryllium standard is 11 ug/l when the hardness is 75 ppm or less, and 1,100 ug/l when hardness is greater than 75 ppm
11	Applies to acid-soluble form
12	Applies to ionic silver
13	As free cyanide, the sum of HCN and CN- expressed as CN
14	Applies to the sum of DDD, DDE, and DDT
15	Applies to the sum of Aldrin and Dieldrin
16	Applies to the sum of the isomers (1,2,3-, 1,2,4-, and 1,3,5-)
17	Applies to the sum of Heptachlor and Heptachlor Epoxide
18	Applies to Endosulfan
19	The sum of Fe and Mn should be less than 500 ug/l
[1]	NYSDEC Division of Water Technical and Operational Guidance Series (1.1.1), Ambient Water Quality Standards and Guidance Values, October 1993.
[2]	NYSDEC Division of Fish and Wildlife Division of Marine Resourses, Technical Guidance for Screening Contaminated Soil, November 1993.
[3]	NYSDEC, 6 NYCRR Part 371, Identification and Listing of Hazardous Waste, January 1995. (Toxicity Characteristic Leaching Procedure soil standards times twenty).
[11]	NYSDEC Technical and Administrative Guidance Memorandum (TAGM HWR - 94 - 4046), Determination of Soil Cleanup Objectives and Cleanup Levels, January 1994.
*	Human Health Bioaccumulation
**	Benthic Aquatic Life Chronic Toxicity

ABBREVIATION	DEFINITION
VOC	volatile organic compound
SVOC	semi-volatile organic compound
PEST	pesticide
HERB	herbicide
PCB	polychlorinated biphenyl
MET	metals
MISC	miscellaneous
CALC	calculated values
ND	not detected
N/A	not available

SUMMARY OF SCGs
CEDAR STREET DUMP

PARAMETER	SUBSURFACE SOIL SCG[1] (UG/KG)	GROUNDWATER SCG[1] (UG/L)
Chloromethane	—	5
Bromomethane	—	5
Vinyl Chloride	200	2
Chloroethane	1900	5
Methylene Chloride	100	5
Acetone	200	50
Carbon Disulfide	2700	50
1,1-Dichloroethene	400	5
1,1-Dichloroethane	200	5
1,2-Dichloroethene (total)	300 (6)	5 (1)
Chloroform	300	7
1,2-Dichloroethane	100	5
2-Butanone	300	50
1,1,1-Trichloroethane	800	5
Carbon Tetrachloride	600	5
Bromodichloromethane	—	50
1,2-Dichloropropane	—	5
cis-1,3-Dichloropropene	300 (5)	5
Trichloroethene	700	5
Dibromochloromethane	—	50
1,1,2-Trichloroethane	—	5
Benzene	60	0.7
trans-1,3-Dichloropropene	300 (5)	5
Bromoform	—	50
4-Methyl-2-pentanone	1000	50
2-Hexanone	—	50
Tetrachloroethene	1400	5
1,1,2,2-Tetrachloroethane	600	5
Toluene	1500	5
Chlorobenzene	1700	5
Ethylbenzene	5500	5
Styrene	—	5
Xylene (total)	1200	5 (5)

SUMMARY OF SCGs
CEDAR STREET DUMP

PARAMETER	SUBSURFACE SOIL SCG[II] (UG/KG)	GROUNDWATER SCG[I] (UG/L)
Phenol	30	1
bis(2-Chloroethyl)ether	—	1
2-Chlorophenol	800	1 (4)
1,3-Dichlorobenzene	1600	5
1,4-Dichlorobenzene	8500	4.7
1,2-Dichlorobenzene	7900	4.7
2-Methylphenol	100	1 (2)
bis(2-Chloroisopropyl)ether	—	5
4-Methylphenol	900	1 (2)
N-nitroso-di-n-propylamine	—	50
Hexachloroethane	—	5
Nitrobenzene	200	5
Isophorone	4400	50
2-Nitrophenol	330	1 (2)
2,4-Dimethylphenol	—	1 (2)
bis(-2-Chloroethoxy)methane	—	5
2,4-Dichlorophenol	400	1 (4)
1,2,4-Trichlorobenzene	3400	5
Naphthalene	13000	10
4-Chloroaniline	220	5
Hexachlorobutadiene	—	5
4-Chloro-3-methylphenol	240	1 (4)
2-Methylnaphthalene	36400	50
Hexachlorocyclopentadiene	—	5
2,4,6-Trichlorophenol	—	1 (4)
2,4,5-Trichlorophenol	100	1 (4)
2-Chloronaphthalene	—	10
2-Nitroaniline	430	5
Dimethylphthalate	2000	50
Acenaphthylene	41000	50
2,6-Dinitroaniline	1000	5
3-Nitroaniline	500	5
Acenaphthene	50000	20

SUMMARY OF SCGs
CEDAR STREET DUMP

PARAMETER	SUBSURFACE SOIL SCG[1] (UG/KG)	GROUNDWATER SCG[1] (UG/L)
2,4-Dinitrophenol	200	1
4-Nitrophenol	100	1
Dibenzofuran	6200	50
2,4-Dinitrotoluene	—	5
Diethylphthalate	7100	50
4-Chlorophenyl-phenylether	—	50
Fluorene	50000	50
4-Nitroaniline	—	5
4,6-Dinitro-2-methylphenol	—	1
N-Nitrosodiphenylamine	—	50
4-Bromophenyl-phenylether	—	50
Hexachlorobenzene	410	0.35
Pentachlorophenol	1000	1 (4)
Phenanthrene	50000	50
Anthracene	50000	50
Carbazole	—	50
Di-n-butylphthalate	8100	50
Fluoranthene	50000	50
Pyrene	50000	50
Butylbenzylphthalate	50000	50
3,3'-Dichlorobenzidine	—	5
Benzo(a)anthracene	224	0.002
Chrysene	400	0.002
bis(2-Ethylhexyl)phthalate	50000	50
Di-n-octylphthalate	50000	50
Benzo(b)fluoranthene	1100	0.002
Benzo(k)fluoranthene	1100	0.002
Benzo(a)pyrene	61	ND
Indeno(1,2,3-cd)pyrene	3200	0.002
Dibenz(a,h)anthracene	14	50
Benzo(g,h,i)perylene	50000	50

SUMMARY OF SCGs
CEDAR STREET DUMP

PARAMETER	SUBSURFACE SOIL SCG* (UG/KG)	GROUNDWATER SCG* (UG/L)
alpha-BHC	110	ND
beta-BHC	200	ND
delta-BHC	300	ND
gamma-BHC (Lindane)	60	ND
Heptachlor	100	ND
Aldrin	41	ND
Heptachlor Epoxide	20	ND
Endosulfan I	900	50
Dieldrin	44	ND
4,4'-DDE	2100	ND
Endrin	100	ND
Endosulfan II	900	50
4,4'-DDD	2900	ND
Endosulfan Sulfate	1000	50
4,4'-DDT	2100	ND
Methoxychlor	—	35
Endrin Ketone	—	5
Endrin Aldehyde	—	5
alpha-Chlordane	540 (7)	0.1 (7)
gamma-Chlordane	540	0.1 (7)
Toxaphene	—	ND
Aroclor-1016	10000	0.1
Aroclor-1221	10000	0.1
Aroclor-1232	10000	0.1
Aroclor-1242	10000	0.1
Aroclor-1248	10000	0.1
Aroclor-1254	10000	0.1
Aroclor-1260	10000	0.1

SUMMARY OF SCGs
CEDAR STREET DUMP

PARAMETER	SUBSURFACE SOIL SCG[1] (MG/KG)	GROUNDWATER SCG[1] (UG/L)
Aluminum	Site background N/A	—
Antimony	Site background N/A	3
Arsenic	7.5	25
Barium	300	1000
Beryllium	0.16	3
Cadmium	1	10
Calcium	Site background N/A	—
Chromium	10	50
Cobalt	30	—
Copper	25	200
Iron	2000	300 (19)
Lead	Site background N/A	15
Magnesium	Site background N/A	35000
Manganese	Site background N/A	300 (19)
Mercury	0.1	2
Nickel	13	—
Potassium	Site background N/A	—
Selenium	2	10
Silver	Site background N/A	50
Sodium	Site background N/A	20000
Thallium	Site background N/A	4
Vanadium	150	—
Zinc	20	300
Cyanide	Site background N/A	100

APPENDIX E
References

NUS CORPORATION

(1)

02-8808-05-SR
Rev. No. 0

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
EXECUTIVE SUMMARY

Cedar Street Landfill-West Site Site Name	NYD981185259 EPA Site ID Number
54 Cedar Street Batavia, New York 14020 Address	02-8808-05 TDD Number

SITE DESCRIPTION

The Cedar Street Landfill-West Site is located in the City of Batavia, Genesee County, New York. This approximately 7.5-acre site is situated on the edge of an industrial area in the southeast section of the city. Currently, this inactive landfill is owned by Soccio and Della Penna, Inc., a construction company.

The property was originally owned by the City of Batavia. Waste disposal began in the late 1950s when disposal activities ceased in the East Landfill, located on the east side of Cedar Street. During this time unrestricted dumping occurred. In 1967, the property was sold to a private concern; however, disposal activities had already ceased. Several years ago the property was leased to a contracting company. This company used the property to store used auto tires with the intent to reclaim oil from the tires. The company violated the lease agreement in 1985, and the property owner has been unable to contact this company since. Presently, there are thousands of used tires stored on the site.

Groundwater is a significant source of drinking water in the Batavia area. The glacial-outwash aquifer is an unconfined sand and gravel formation, which produces a superior water supply with yields of 1000 gallons per minute (gpm). The City of Batavia auxiliary supply wells are located 2,100 ~~feet~~ upgradient of the site, screened in the glacial-outwash aquifer. Water from these wells is mixed with water from Tonawanda Creek, and serves approximately 20,000 people in the Batavia area. In addition, private wells are scattered throughout the area.

Prepared by: Edward L. Leonard
of NUS Corporation

Date: 03/24/89

SITE DESCRIPTION (Continued)

On September 1, 1987, Region 2 FIT conducted a site inspection at the Cedar Street Landfill-West Site. Surface and subsurface soil samples were collected and analyzed for Hazardous Substance List parameters. Analytical results indicated the presence of volatiles, phthalates, polycyclic aromatic hydrocarbons (PAHs), pesticides, polychlorinated biphenyls (PCBs), and metals. In addition, aqueous samples were collected from the City of Batavia auxiliary supply wells during the Cedar Street Landfill-East Site site inspection conducted on September 2 and 3, 1987. Analysis detected a variety of naturally occurring inorganic compounds, at relatively low concentrations.

Based on the review of all information gathered during the site inspection, Cedar Street Landfill-West Site is recommended for further action as a high priority. The only route of concern is the groundwater migration route. As analytical results indicate, there appears to be no imminent threat to the municipal supply wells located 2,100 feet upgradient of the site. However, downgradient groundwater samples were not collected, and contaminants were detected on site. Further action should include the following:

- A downgradient groundwater investigation to determine whether contaminants are being released to the aquifer of concern.
- A determination as to whether hazardous wastes were deposited on site, and if so, the type and volume of waste deposited.

Prepared by: Edward L. Leonard
of NUS Corporation

Date: 03/24/89

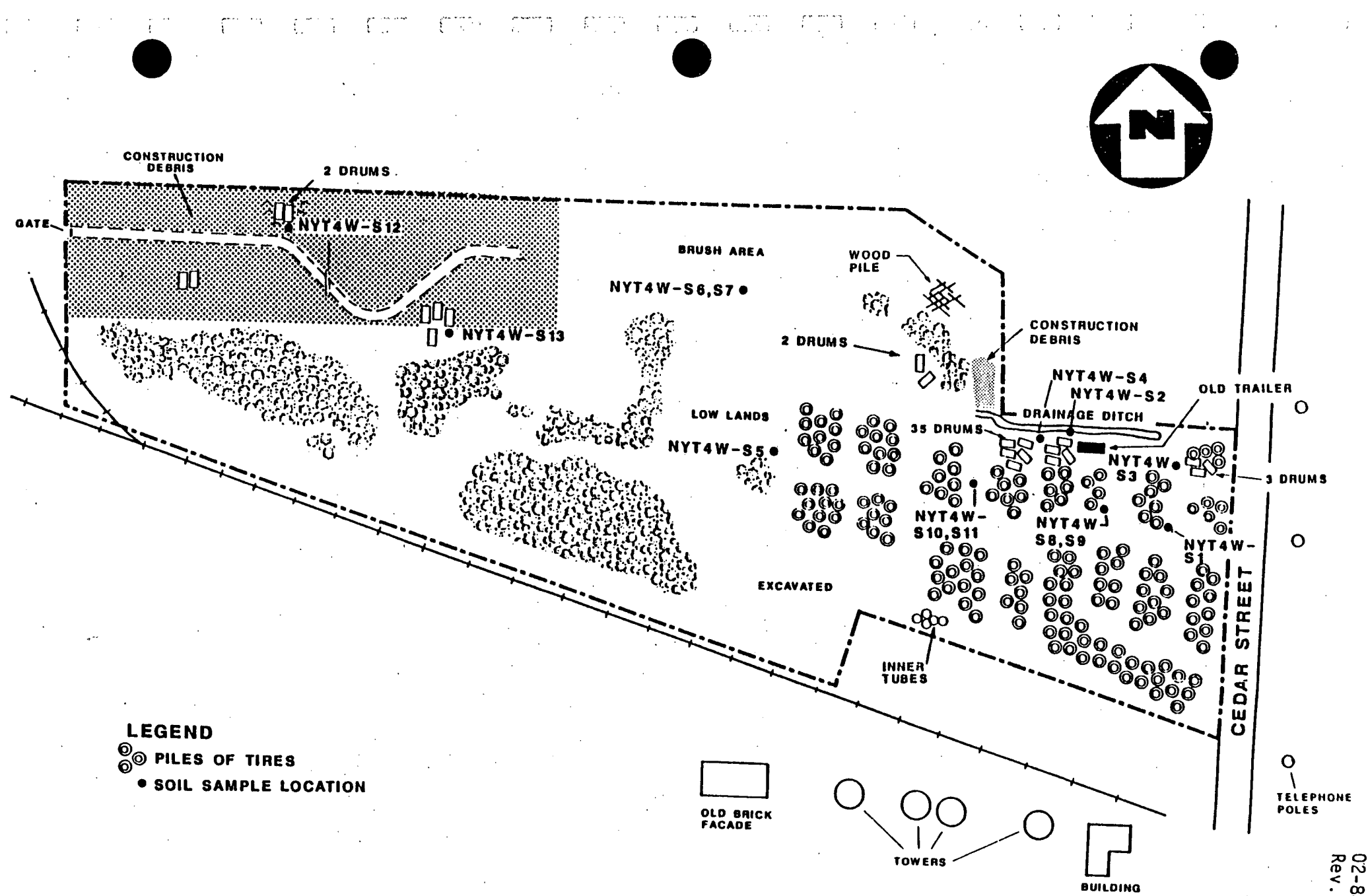


FIGURE 3

SAMPLE LOCATION MAP

CEDAR STREET LANDFILL-WEST SITE, BATAVIA, N.Y.

(NOT TO SCALE)

NUS CORPORATION

02-8808-05-SR
Rev. No. 0

City of Batavia
VOC History

Laboratory	DATE	Well A				Well B				Tonawanda Creek			
		1,1,2,2 TCE	1,1,1 TCA	1,1,2 TCE	1,1 DCA	1,1,2,2 TCE	1,1,1 TCA	1,1,2 TCE	Trichloro-fluoromethane	1,1,2,2 TCE	1,1,1 TCA	1,1,2 TCE	1,1 DCA
					*DCE								
Friend	3-8-88	–	1.0	–	..					..	0.7	..	..
Friend	5-12-88	-	2.0	–	–					–	0.8	–	–
C.T. Male	8-25-88	-	2.0	-	–								
C.T. Male	9-20-88	0.9	0.9	1.0	0.7								
C.T. Male	11-30-88	1.0	3.5	1.2	0.9	–	0.8	–	–				
C.T. Male	3-6-89	0.75	2.71	1.31	0.49								
C.T. Male	6-8-89	—	1.73	1.41	0.33								
YSDOH	8-9-89	-	2.0	1.0	1.0								
C.T. Male	9-19-89	0.61	1.55	1.40	–	–	–	–	2.98				
C.T. Male	1-25-90	1.07	4.25	1.27	..								
YSDOH	3-13-90	–	2.0	1.0	..								
Lancad / C.T. Male	5-8-90	-	1.20	1.37	..								
Lancad / C.T. Male	9-27-90	0.70	6.37	-	*3.16	–	0.54	–	–				
" " (201)	11-29-90	0.5	1.9	1.2	..								
" " (202)	11-29-90	0.5	1.9	1.1	..								
" " (203)	11-29-90	0.5	1.9	1.1	..								
" "	2-26-91	–	–	–	–								
" "	5-22-91	-	–	–	–								
" "	5-22-91					–	..	..	..				

(3)

COUNTY OF GENESEE
HEALTH DEPARTMENT

3837 West Main Street Road
Batavia, New York 14020-9406

TO: Frank Ricotta, NYSDEC

FROM: Eric Wohlers, GCHD

DATE: October 11, 1989

RE: Low-Level Groundwater Contamination
Cedar Street/Batavia (C)/Genesee (Co)

Due to the Federal Safe Drinking Water Act revisions, the City of Batavia began monitoring for certain volatile organic chemicals (VOC) in their drinking water sources in 1988. Since then, eight separate samples have identified low-level contamination representing four specific chemicals in City Well A. A subsequent survey round of sampling by this office and testing done privately by the O-AT-KA Milk Products Coop have confirmed similar concentrations of the same chemicals in other neighboring wells.

Initially, we suspected the inactive Cedar Street landfill site and a fill area adjacent to Well A as possible sources of the contamination. However, knowledge of groundwater flow direction and subsequent survey sampling have directed our suspicions toward the old Sylvania Plant, currently occupied by Chapin Manufacturing, Inc. Reportedly, an existing unlined non-contact cooling water pond at the facility may have been used for disposal of other wastewater streams or floor washings in past years.

Enclosed, you will find a location map indicating sampling points, a previous memo dated July 24, 1989, sampling history of Well A, and a set of the laboratory reports for the survey samples collected August 9, 1989.

I am hereby inquiring what assistance the DEC could provide in identifying the source(s) of contamination and additional sampling needs. Currently, John Schaefer, Superintendent of Water & Sewer for the City of Batavia, and I are looking into the history of activities, chemicals used, etc., at the former Sylvania Plant. We plan to meet in the near future to go over available data and develop a plan of action. Please let me know who from the DOW or Div. of Hazardous Waste Remediation I should coordinate with to schedule such a meeting.

Thank you for your assistance. Please call me if you have any questions at 344-2580, ext. 492.

(4)

IN THE STATE OF NEW YORK
PHASE I INVESTIGATIONS

CEDAR STREET DUMP
NYS SITE NUMBER 819008
CITY OF BATAVIA
GENESEE COUNTY
NEW YORK STATE

Prepared For

DIVISION OF SOLID AND HAZARDOUS WASTE
NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
50 WOLF ROAD
ALBANY, NEW YORK 12233-0001

Prepared By

ENGINEERING-SCIENCE
290 ELWOOD DAVIS ROAD
LIVERPOOL, NEW YORK 13088

In Association With

DAMES & MOORE
2996 BELGIUM ROAD
BALDWINSVILLE, NEW YORK 13027

DATE OF SUBMITTAL: SEPTEMBER, 1988

(4)

SECTION I
EXECUTIVE SUMMARY

This report, prepared for the New York State Department of Environmental Conservation (NYSDEC), presents the results of the Phase I investigation for the Cedar Street Dump site (New York Site Number 819008, No EPA Site Number Assigned), located in the City of Batavia, Genesee County, New York (see Figure I-1).

SITE BACKGROUND

The Cedar Street Dump site consists of two separate disposal areas that were used by the City of Batavia. The first disposal area, "Old" Cedar Street Dump, located at 108 Cedar Street, was used by the city during the mid to late 1940s (City Maps, 1945, 1948). It is assumed that the city used the site as a municipal landfill. No records are available to verify the type or quantity of waste disposed of at the site. The disposal site was owned by the Lehigh Valley Railroad during its operating period and was purchased by the City of Batavia in 1978.

The second disposal area, "New" Cedar Street Dump, located at 52, 54, and 56 Cedar Street, was used by the City of Batavia as a municipal landfill during the 1960s. The city purchased the 16-acre site from the New York Central Railroad in 1961. Between 1962 and 1968, the City of Batavia operated the municipal landfill (Gates, 1985). There are no records indicating the quantity of municipal waste disposed of at the site or whether any industries used the site for waste disposal (Gates, 1985). Presently the site is owned and/or occupied by several commercial interests including: Cummings and Bricker, Soccio & Della Penna, Campbell Dry Mix, and Agway. During a recent site inspection of the disposal area, approximately 15-20 55-gallon barrels of unknown content

(4)

were observed in an existing hardfill pile (ES Site Visit, 1985). Nine barrels, two with waste oil and seven empty, were subsequently removed by Agway (Knauf, 1986).

There are no records of surface water or groundwater monitoring being conducted at either of the Cedar Street Dump sites. In addition, there is no evidence of any air releases at the sites (ES Site Visit, 1985).

ASSESSMENT

In an attempt to quantify the risk associated with this site, the Hazard Ranking Scoring system (HRS) was applied as currently being used by the NYSDEC to evaluate abandoned hazardous waste sites in New York State. This system takes into account the types of wastes at the site, receptors, and transport routes to apply a numerical ranking of the site. As stated in 40 CFR Subpart H Section 300.61, the HRS scoring system was developed to be used in evaluating the relative potential of uncontrolled hazardous disposal substances to cause health or safety problems or ecological or environmental damage. It is assumed by the EPA that a uniform application of the ranking system in each state will permit EPA to identify those releases of hazardous substances that pose the greatest hazard to humans or the environment.

Under the HRS, three numerical scores are computed for each site, to express the relative risk or danger from the site; taking into account the population at risk; the hazardous potential of the substances at a facility; the potential for contamination of drinking water supplies; for direct human contact, and for destruction of sensitive ecological systems and other appropriate factors. The three scores are:

- S_M reflects the potential for harm to humans or the environment from migration of a hazardous substance away from the facility by routes involving groundwater, surface water or air. It is a

(4)

composite of separate scores for each of the three routes (S_{GW} = groundwater route score, S_{SW} = surface water route score, and S_A = air route score).

- S_{FE} reflects the potential for harm from substances that can explode or cause fires.

- S_{DC} reflects the potential for harm from direct contact with hazardous substances at the facility (i.e., no migration need be involved).

The preliminary HRS score was:

S_M	= 0	S_{GW}	= 0
S_{FE}	= 0	S_{SW}	= 0
S_{DC}	= 0	S_A	= 0

RECOMMENDATIONS

The following recommendations are made for the completion of Phase II:

- Geophysical study consisting of an electrical resistivity and magnetometer surveys.

- Based on the results of the geophysical survey, groundwater monitoring system consisting of 1 upgradient well at each site and 6 downgradient wells at the new site and two downgradient wells at the old site.

- Waste sampling consisting of 3 samples collected from the intact partially full 55-gallon drums observed on-site.

- Analyses to include Hazard Substance List (HSL) organics and metals.

(5)

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

CEDAR STREET DUMP SITE
BATAVIA, GENESEE COUNTY, NEW YORK
NYSDEC I.D. NO.819008

PREPARED FOR

DIVISION OF HAZARDOUS WASTE REMEDIATION
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
50 WOLF ROAD
ALBANY, NEW YORK 12233-0001

PREPARED BY

YEC, INC.
Clarkstown Executive Park
612 Corporate Way
Valley Cottage, New York 10989

In Association With

Engineering-Science
290 Elwood Davis Road, Suite 312
Liverpool, NY 13008

March, 1992

SECTION 1

EXECUTIVE SUMMARY

SITE BACKGROUND

The Cedar Street Dump site is located in the City of Batavia, Genesee County, New York. The site consists of approximately 24 acres of commercial/industrial property. It is located between New York State Routes 5 and 33 to the north and Route 63 on the south which merge about one mile west of the site. Railroad tracks owned by Conrail cut through the southern portion of the property. Florence Street adjoins on the north. The property is bordered on the north and east by residential and industrial areas, on the east by ponds and wetlands, and on the south by industrial, residential and railroad property. The site location is shown on the U.S.G.S. Batavia South, New York 7 1/2 minute quadrangle. (Figure 1-1).

The Dump site (Figure 1-2) is divided by Cedar Street into two parts; an east section of 8 acres owned largely by Genesee - Leroy Stone Corp. and Conrail, and a west section of sixteen acres owned by Soccio and Della Penna Corp., Agway, Graham Manufacturing, American Stone Mix, Inc. and Eastern Moulding Inc. The site was used as a municipal waste landfill from the 1940's to the late 1960's (HRS ref. 5). The east site received waste during the 1940's and 50's while the west site was used for dumping during the sixties. A Phase I investigation was conducted by Engineering-Science in 1988 (Appendix A, ref. 1) and a Preliminary Inspection Report was prepared by NUS Corporation for the USEPA during 1989 (HRS ref. 5). The Preliminary Inspection Report recommended further investigative action based upon their findings of volatiles, phthalates, polynuclear aromatic hydrocarbons, pesticides, PCBs, and metals (HRS ref. 5).

PHASE II INVESTIGATION

The Phase II field investigation included an electrmagnetic survey to identify the presence of buried steel drums. Seven ground water monitoring wells were installed. Surface water, ground water, sediment and waste were sampled and analyzed for complete TCL. Air monitoring was conducted to measure the ambient levels of any

hazardous substances which might be present at the Cedar Street Dump site. No stratigraphic horizons were identified within the report and no contaminant plumes were identified.

SITE ASSESSMENT

The geologic stratigraphy of the site can be summarized as Pleistocene-aged outwash sands and gravels with occasional minor silt and clay layers. These continue to a depth of about 58 feet where cemented sands and tills are encountered. The aquifer of concern is an unconfined surface aquifer in the outwash deposits. It supplies about one-half of the water needs of 19,000 people. The depth to water in monitoring wells at the site varies from thirteen to twenty-seven feet. Regional ground water flow is supposed to be to the northeast (Appendix A, ref. 2). According to the water levels measured during this investigation (Appendix C), the onsite flow is to the southeast, in the direction of the City of Batavia wellfield located 0.3 miles away. The removal of about 1.5 million gallons per day due to pumping may explain the change of flow direction. This is probably a localized effect. The city wells have a documented history of contamination with volatile organics (Appendix A, ref. 4). The contaminants are similar to those found in monitoring wells in this study (Table 1-2).

Summary of Ground Water Sampling and Analysis Results

Seven ground water samples were collected at the Cedar Street Dump site and were analyzed for Target Compound List (TCL) organic compounds including volatiles, semivolatiles, pesticides/PCB's, as well as, Target Analyte List (TAL) metals and cyanide. Table 1-2 lists the TAL metals and organic compounds which were detected in the ground water samples from the wells. These substance concentrations were compared with Class GA Standards for drinking water because the aquifer of concern is a source for the public drinking water for the City of Batavia. The metals cadmium, chromium, copper, iron, lead, magnesium, manganese, sodium and zinc were all detected at levels above NYS Standards/Guidance limits. The volatile organic chemicals 1,1-dichloroethane, 1,1,1-trichloroethane, 1,2-dichloropropane and trichloroethene were detected at concentrations the same as or above Class GA Standards. The presence of 1,1,1-trichlorethane, barium, calcium, manganese, sodium, and zinc is potentially attributable to the site, as these chemicals were all detected in downgradient wells at three or more times the upgradient concentrations.

The Phase II monitoring wells were screened in an aquifer that is used as a drinking water supply. The analytical results suggest that the water quality of the aquifer has been compromised. The identification of organic compounds in the monitoring wells adds to findings of similar compounds detected in wells located 0.3 to 0.5 miles to the east (Appendix A, Ref. 4).

Summary of Surface Water Sampling and Analysis Results

One surface water sample (SW-1) was collected along the west bank of the pond east of MW-7 in the southeastern part of the site. The pond is an unclassified NYS water body. It was analyzed for TCL organic compounds, including volatiles, semi-volatiles, pesticides/PCBs; TAL metals; and cyanide. Aluminum and iron were detected at levels which contravened accepted standards. Table 1-3 lists the nine metals which were detected of which aluminum and iron contravened NYS Class C stream standards.

Summary of Sediment Sampling and Analysis Results

One sediment sample (SD-1) was collected at the surface water sample location and analyzed for TCL organic compounds, including volatiles, semivolatiles, pesticides/PCBs; TAL metals; and cyanide. Table 1-4 lists the organic compounds and metals which were detected at each of the sampling locations. Magnesium was the only metal which was detected above the expected value for New York State soils. Nine TCL substances were detected in the soil sample of which six were not attributable to sampling or laboratory contamination. These are: phenanthrene, fluoranthrene, pyrene, 4,4'-DDE, 4,4'-DDD, and 4,4'-DDT. They are all semivolatiles with various industrial and agricultural uses.

Summary of Surface Soil Sampling and Analysis Results

Two split-spoon samples were collected from the wells MW-5 and MW-6. These samples were analyzed for TCL organic compounds, including volatiles, semivolatiles, pesticides/ PCBs; TAL metal; and cyanide. Table 1-5 lists the organic compounds and metals which were detected at each of the sampling locations. Only magnesium was detected at a higher-than-acceptable level in the samples.

Additionally, a surface soil sample (SS-1) was taken from an area where dilapidated drums are piled. The drums once contained soil fumigants using

dichloropropane as an active ingredient (Appendix F, photo 1). The sample was analyzed for TCL organic compounds, but none were detected.

Summary of Waste Sampling and Analysis Results

One waste sample was collected from a pile containing foundry sand and C&D debris and analyzed for EP - Toxicity parameters. The results are found in Table 1-6. No unacceptable levels of hazardous materials were detected.

Summary of Air Quality Monitoring Results

The air quality monitoring conducted during the site investigation using a Photovac photoionization detector did not detect volatile organic chemicals in the air or soils at concentrations above background levels.

Contamination Assessment Summary

Ground water has been adversely impacted by the site. The presence of several metals and 1,1,1-trichlorethane is potentially attributable to the site. The 1,1,1-trichlorethane and other organics detected in the nearby municipal well field may have originated at the site. A number of metals were found to exceed NYS Class GA standards or guidance values. Of lesser concern is the low-level contamination detected in sediment and soil samples.

HAZARD RANKING SYSTEM SCORE

In an attempt to establish the relative risk associated with this site, the Hazard Ranking System (HRS) was applied. As currently used by the NYSDEC, the HRS is employed to aid the evaluation of inactive hazardous waste sites in New York State. This system takes into account the types of waste at the site, receptors, and transport routes to calculate a numerical score for the site. As stated in 40 CFR Subpart H Section 300.81, the HRS was developed for evaluating the relative potential of uncontrolled hazardous waste disposal facilities to cause human health or safety problems or ecological and environmental damage. It is assumed by the EPA that a uniform application of the ranking system in each state will permit EPA to identify releases of hazardous substances that pose the greatest hazard to human health and/or the environment.

Under the HRS, three numerical scores are computed to express the relative risk or danger from site. These scores take into account the population at risk, the potential for contamination of drinking water supplies, for direct human contact, for destruction of sensitive ecological systems and other appropriate factors. The three scores are:

- S_M- reflects the potential for harm to humans or the environment from migration of a hazardous substance away from the facility by routes involving ground water, surface water and air. It is a composite of separate scores for each of the three routes (S_{GW} = ground water route score, S_{SW} = surface water route score, and S_A = air route score).

- S_{FE}-reflects the potential for human harm from substances that can explode or cause fire.

- S_{DC}-reflects the potential for human harm from direct contact with hazardous substances at the facility(i.e.,no migration need be involved).

Based on the results of this and previous studies, the HRS scores for the Cedar Street Dump site have been calculated as follows:

S_M = 42.11
S_{GW} = 72.21
S_{SW} = 9.70
S_{FE} = 30.63
S_{DC} = 50.00
S_A = 0.00

RECOMMENDATIONS

The Phase II investigation at the Cedar Street Dump site was intended to determine whether the former dump areas or barrel contents were contaminating and adversely impacting ground water and surface water quality in the site vicinity. In general, the scope of the Phase II investigation at the Cedar Street Dump site was adequate to provide a site contamination assessment. There is sufficient evidence of contamination on-site to warrant additional investigation and possible remediation to prevent the nearby City of Batavia water supply from being further contaminated.

There are no records of any hazardous waste being dumped at the site, however, fifty-seven drums in poor condition have been found on the site surface which originally

contained soil fumigants containing dichloropropane and dichloropropene. One of the drums was found to be more than one-half full and another one-quarter full. These drums should be sampled to determine if the contents are a remainder of the original materials shipped in the containers. If they are, they could be construed as hazardous waste according to 6 NYCRR 371.

The presence of the volatile organic compounds identified from the ground water samples has been established in wells 2000 feet away which supply drinking water to the local populace. These compounds have specific gravities greater than that of water and thus would sink through the aquifer. Therefore, the monitoring wells may be too shallow a depth to intercept the maximum concentrations of contaminants. It may be prudent to advance borings to the bottom of the aquifer in order to accurately assess the levels of contaminants present. The depth of the borings should be about sixty feet. Additionally, relatively high concentrations of cadmium, chromium, copper, iron, lead, magnesium, manganese, sodium, zinc and organic compounds have been identified in the ground water. Because of the proximity of public water supplies the source of the heavy metals merits further study. These metals could be attributable to the solids present in the highly turbid samples. Therefore, it might be advisable to resample using filters to clear the water. Also, a more comprehensive sampling program would be advisable. This program could include but not be limited to: the site wells, the City of Batavia wells, Tonawanda Creek, local industries with wells, and possibly additional on-site monitoring wells. More soil sampling on the south side of the site east of MW-4 might be helpful.

New York State Department of Environmental Conservation
6274 East Avon-Lima Road, Avon, NY 14414

Mekta
FYI
file

Thomas C. Jorling
Commissioner

January 4, 1994

William Reemsten
City Administrator
City of Batavia
10 West Main Street
Batavia, NY 14020

Dear Mr. Reemsten:

Re: Cedar Street Dump - Site No. 819008
Batavia (C), Genesee (C)

Regional Director Peter Bush has requested that I respond to your December 14, 1993 letter to him regarding the above-referenced site.

The Cedar Street Dump is listed on the New York State Registry of Inactive Hazardous Waste Disposal Sites. This site currently has a 2a classification, which is a temporary classification assigned to sites that have inadequate and/or insufficient data for inclusion in any of the other registry classifications. A Phase II investigation was conducted on this site during 1991. The March 1992 report generated from this investigation recommended that additional investigative work be performed at this site. Specifically, the additional work recommended includes the installation and monitoring of groundwater monitoring wells and collection of additional soil samples. Since the Phase II report, the Department sampled one remaining drum at the site. Analytical data showed that this drum did not contain hazardous waste.

The Department is carefully considering what additional investigative work, beyond the Phase II, needs to be conducted. This site is sensitive because of its proximity (2000') to the City of Batavia wellfield. For this reason, this Department continues to work closely with the New York State Department of Health (NYSDOH), who agrees with the Phase II conclusion that deeper groundwater wells are needed to help adequately assess the site.

Both trichloroethane (TCA) and trichloroethene (TCE), which are common industrial degreasers, have been detected at the municipal water supply; TCA has been detected in two wells located at the Cedar Street Dump. The monitoring array used for the Phase II investigation may be too shallow to intercept the maximum concentrations of contaminants. Compounds detected at the wellfield have characteristics that lend themselves to sink through the aquifer. Therefore, it can be reasoned that the deeper wells would be in a more representative position to detect environmental impact. The presence of various heavy metals in the groundwater is also of concern and warrants further consideration.

It is estimated that the additional deeper wells can be installed and sampled by the Summer of 1994. Soil samples would also be collected at that time. In the meantime, the Department will continue to investigate other sources of TCA and TCE in the area. It is hopeful that information generated from this additional work will be sufficient to (1) determine a permanent classification or (2) delist the site.

Thank you for your interest in this matter. If you have any questions or want to discuss this further, please do not hesitate to contact me.

Very truly yours,

Mary Jane Peachey

Mary Jane Peachey, P. E.
Regional Hazardous Waste
Remediation Engineer
Division of Hazardous
Waste Remediation

db

cc: P. Bush
T. Reamon w/incoming
A. Carlson w/incoming
Genesee County Health Department

(7)

New York State Department of Environmental Conservation
274 East Avon-Lima Road, Avon, NY 14414

Thomas C. Jorling
Commissioner

January 4, 1994

Rocco Della Penna, President
Soccio and Della Penna, Inc.
40 Ellicott Street
Batavia, NY 14020

Dear Mr. Della Penna:

Re: **Cedar Street Dump - Site No. 819008**
Batavia (C), Genesee (C)

This letter is offered in response to your November 29, 1993 inquiry to Commissioner Jorling regarding the above-referenced site.

The Cedar Street Dump is listed on the New York State Registry of Inactive Hazardous Waste Disposal Sites. It currently has a 2a classification, which is a temporary classification assigned to sites that have inadequate and/or insufficient data for inclusion in any of the other registry classifications.

The Phase II investigation report dated March 1992 recommended additional investigative work be performed at this site to more adequately assess its impact to human health and the environment. This Department, in conjunction with the New York State Department of Health, is currently considering exactly what additional work should be conducted. The proximity of this site to the City of Batavia wellfield (approximately 2,000 feet separate the two locations) warrants a thorough investigation.

The monitoring array used for the Phase II investigation may be too shallow to intercept the maximum concentrations of contaminants and provide valuable information on groundwater flow in the deeper zones. Information from the Phase II investigation shows that groundwater flow in the shallow zone is generally from the Cedar Street Dump toward the wellfield. Several heavy metals were detected in the groundwater during the Phase II investigation; this is of concern and warrants further consideration.

(7)

At this time, it is estimated that the deeper wells can be installed and sampled by the Summer of 1994. Soil samples recommended by the Phase II investigation will likely be collected at that time. It is hopeful that information generated from this additional work will be sufficient to (1) determine a permanent site classification or (2) delist the site.

I trust this information addresses the issues raised in your letter to Commissioner Jorling. If you have any questions or would like to discuss this further, please do not hesitate to contact me at (716)226-2466.

Very truly yours,

Mary Jane Peachey

Mary Jane Peachey, P. E.
Regional Hazardous Waste
Remediation Engineer
Division of Hazardous
Waste Remediation

db

cc: Commissioner Jorling
Peter Bush
A. Carlson, New York State Health Department w/incoming
Genesee County Health Department w/incoming

XC. T. Pearson 5-17-94

CITY OF BATAVIA

(8)

10 West Main Street
Batavia, New York 14020
(716) 343-8180
FAX: (716) 343-9221

December 14, 1993

NYS Department of
Environmental Conservation
Mr. Peter Bush
6274 East Avon-Lima Road
Avon, NY 14414

RE: Cedar Street Dump Site (City of Batavia)
Site No. 819008

Dear Mr. Peter Bush:

I have written this letter on behalf of Soccio and Della Penna, Inc. owners of property on Cedar Street in the City of Batavia where the former Cedar Street dump is located. A potential buyer has expressed interest in the property, however, the questions of how NYS Department of Environmental Conservation has this property listed and what course of action, if any, NYSDEC plans to take with regard to the former dump has stalled negotiations.

In March of 1992 NYSDEC issued a Phase II investigation report on the site, but to the best of my knowledge NYSDEC has taken no further action. Please advise what NYSDEC's intentions are with this site. Can the site be unlisted because it presents no significant health hazard? I would appreciate your reply at your earliest convenience.

Very truly yours,

William Reemtsen
City Administrator

WR/df

Established 1939
DBE

Phone: (716) 343-2440
Fax: (716) 344-4772

(9.)

SOCCIO AND DELLA PENNA INC.

Excavating and Paving Contractors
P.O. Box 433
Batavia, N.Y. 14021-0433

APR 2 1 1994

April 19. 1994

New York State
Department of Environmental Conservation
Mr. Thomas Reamon
Western Investigation Section
Division of Hazardarous Waste Remediation
50 Wolf Road
Albany. New York 12233

Re: 54 Cedar Street. Batavia

Dear Mr. Reamon

A few years ago we rented this land to a local businessman who had permits from the City of Batavia to store used tires on the site. After he put in excess of 100.000 tires on the property. the city did a reversal and required him to remove the tires. He filed bankruptcy and left the area.

The city then forced the DEC to have us move the tires. We were given an estimate of $60.000.00 to move the tires.

So we entered into a consent order to remove the tires.. When the cost rose to $150.000.00. the city nor the state would back off. We were forced into compliance. even though it almost broke the company.(The comments of the city administrator "We don't need Soccio and Della Penna". He was quoted in the news paper"pull their bond")

The hazardous material on this property was put there by the city. We want them to clean the property so that we can use it. But now that the shoe is on the other foot the city does not want to make a move until they are forced to. They are not willing to sign a consent order as we were. So now we can not use or sell the land until a third party forces them to.

We cannot bring the city into court until you do a study and indicate what the clean up must consist of. We cannot afford to make the study ourselves. since we used all our money to move tires.

Please correspond with me and let me know your schedule to investigate this property. We are very anxious to bring this matter to a swift conclusion. The actions of the City of Batavia have put us under a great financial hardship and we request that you give our site priority status on your list.

Thank you
Soccio and Della Penna. Inc.

Rocco Della Penna.
President

cc D. Saleh. Esq.
T. Jorling
M. J. Peachey
Sen. Rath

(10)

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

Langdon Marsh
Acting Commissioner

MAY 20 1994

Mr. Rocco Della Penna
Soccio and Della Penna Inc.
P.O. Box 433
Batavia, N.Y. 14021-0433

Re: Cedar Street Dump
Site Code # 819009

Dear Mr. Della Penna:

Thank you for your letter dated April 19, 1994. I apologize for the delay in getting back to you. You have requested a schedule pertaining to the supplementary investigation of the Cedar Street Dump. Allow me to explain why such supplementary investigation is needed and then discuss its scheduling.

Documentation establishing the disposal of organic compounds at the Cedar Street Landfill is inconclusive. Such disposal documentation is required prior to classifying a landfill as a hazardous waste site. Your letter referred to "hazardous material" being put onsite by the City. Please forward to me by return mail specifics relating to what was disposed.

Additional deeper wells will be installed to help explain whether volatile organic compounds identified in the City of Batavia's wellfield originated at the Cedar Street Landfill. Until this additional work is approved, a project schedule is premature. As soon as a work schedule is available it will be provided to you.

Feel free to contact the project manager, Mr. Carl Hoffman, P.E., of my staff, with any questions at (518) 457-9538, or in writing at the above address.

Sincerely,

Thomas A. Reamon, P.E.
Chief
Western Investigation Section
Bureau of Hazardous Site Control
Div. of Hazardous Waste Remediation

bcc: A. Carlson
M. J. Peachey
T. Reamon (file)
C. Hoffman

APPENDIX F
PA-Score

OMB Approval Number: 2050-0095
Approved for Use Through: 4/95

POTENTIAL HAZARDOUS WASTE SITE PRELIMINARY ASSESSMENT FORM	IDENTIFICATION	
	State: NY	CERCLIS Number: NYD981187024
	CERCLIS Discovery Date: 01/10/86	

1. General Site Information

Name:		Street Address:			
Cedar Street Dump		115,139, &141 Cedar Street			
City:	State:	Zip Code:	County:	Co. Code:	Cong. Dist:
Batavia	NY	14020	Genesse	037	30
Latitude: 42° 59' 15.0"	Longitude: 78° 10' 0.0"	Approx. Area of Site: 24 acres		Status of Site: Inactive	

2. Owner/Operator Information

Owner:			Operator:		
Multiple Owners			City of Batavia		
Street Address: see attached sheet			Street Address: Main Street		
City:			City: Batavia		
State:	Zip Code:	Telephone:	State: NY	Zip Code: 14020	Telephone:
Type of Ownership: Other Private/public			How Initially Identified: Citizen Complaint		

PA-Score
Multiple Site Owners for the Cedar Street Dump

	Tax Map #'s
Soccio and Della Penna, Inc. P.O. Box 433 40 Ellicott Street Batavia, New York Phone #716-343-1450	084.20.10
Agway, Inc. P.O. Box 4933 Syracuse, New York 13221 Phone # 716-343-3365	084.20.1.7
American Stone Mix, Inc. 8320 Bellona Avenue Towson, MD 21204 Phone # 716-343-4741	084.20.1.14
Eastern Moulding International Elizabeth Street Batavia, New York 14020 Phone # 716-344-0220	084.20.1.24
Graham Manufacturing, Inc. 20 Florence Avenue Batavia, New York 14020 Phone # 716-343-2216	084.16.1.36
Genesee County County Building 1 Batavia, New York 14020 Phone # 716-344-2550	085.17.1.1
Genesee-Leroy Stone Products 6869 Ellicott Street Pavillion, NY 14525 Phone # 716-343-1868	085.17.1.4

POTENTIAL HAZARDOUS WASTE SITE PRELIMINARY ASSESSMENT FORM	IDENTIFICATION	
	State: NY	CERCLIS Number: NYD981187024
	CERCLIS Discovery Date: 01/10/86	

3. Site Evaluator Information

Name of Evaluator:	Agency/Organization:	Date Prepared:
Phyllis Rettke	URS Consultants, Inc.	10/26/95

Street Address:	City:	State:
282 Delaware Ave	Buffalo	NY

Name of EPA or State Agency Contact:	Telephone:
Carl Hoffman, NYSDEC	518-458-9538

Street Address:	City:	State:
50 Wolf Road	Albany	NY

4. Site Disposition (for EPA use only)

Emergency Response/Removal Assessment Recommendation: No	CERCLIS Recommendation: Higher Priority SI	Signature:
Date:	Date:	Name:
		Position:

POTENTIAL HAZARDOUS

WASTE SITE

PRELIMINARY ASSESSMENT FORM

IDENTIFICATION	
State: NY	CERCLIS Number: NYD981187024
CERCLIS Discovery Date: 01/10/86	

5. General Site Characteristics

Predominant Land Uses Within 1 Mile of Site:	Site Setting:	Years of Operation:
Industrial Residential	Urban	Beginning Year: 1940 Ending Year: 1968

Type of Site Operations:	Waste Generated:
Municipal Landfill	Offsite
	Waste Deposition Authorized By: Former Owner
	Waste Accessible to the Public: Yes
	Distance to Nearest Dwelling, School, or Workplace: 200 Feet

6. Waste Characteristics Information

Source Type	Quantity	Tier
Landfill	2.40e+01 acres	A

Tier Legend
C = Constituent W = Wastestream
V = Volume A = Area

General Types of Waste:
Construction/Demolition Waste
Municipal Waste

Physical State of Waste as Deposited
Solid
Liquid
Sludge

POTENTIAL HAZARDOUS WASTE SITE PRELIMINARY ASSESSMENT FORM	IDENTIFICATION	
	State: NY	CERCLIS Number: NYD981187024
	CERCLIS Discovery Date: 01/10/86	

7. Ground Water Pathway

Is Ground Water Used for Drinking Water Within 4 Miles: Yes Type of Ground Water Wells Within 4 Miles: Municipal	Is There a Suspected Release to Ground Water: Yes Have Primary Target Drinking Water Wells Been Identified: Yes Primary Target Population: 4000	List Secondary Target Population Served by Ground Water Withdrawn From: 0 - 1/4 Mile: 0 >1/4 - 1/2 Mile: 4000 >1/2 - 1 Mile: 0 >1 - 2 Miles: 0 >2 - 3 Miles: 0 >3 - 4 Miles: 0 Total: 4000
Depth to Shallowest Aquifer: 25 Feet Karst Terrain/Aquifer Present: No	Nearest Designated Wellhead Protection Area: Underlies Site	

POTENTIAL HAZARDOUS WASTE SITE PRELIMINARY ASSESSMENT FORM	IDENTIFICATION	
	State: NY	CERCLIS Number: NYD981187024
	CERCLIS Discovery Date: 01/10/86	

8. Surface Water Pathway — Part 1 of 4

Type of Surface Water Draining Site and 15 Miles Downstream:	Shortest Overland Distance From Any Source to Surface Water:
Stream	4000 Feet 0.8 Miles
Is there a Suspected Release to Surface Water: No	Site is Located in: >100 yr - 500 yr floodpla

8. Surface Water Pathway — Part 2 of 4

Drinking Water Intakes Along the Surface Water Migration Path: Yes

Have Primary Target Drinking Water Intakes Been Identified: No

Secondary Target Drinking Water Intakes:

Name	Water Body/Flow(cfs)		Population Served
Tonawanda Creek	moderate-large stream/	>100-1000	8000
	Total Within 15 Miles:		8000

POTENTIAL HAZARDOUS WASTE SITE PRELIMINARY ASSESSMENT FORM	IDENTIFICATION	
	State: NY	CERCLIS Number: NYD981187024
	CERCLIS Discovery Date: 01/10/86	

8. Surface Water Pathway — Part 3 of 4

Fisheries Located Along the Surface Water Migration Path: Yes

Have Primary Target Fisheries Been Identified: No

Secondary Target Fisheries:

Fishery Name	Water Body Type/Flow(cfs)
Tonawanda Creek	moderate-large stream/ >100-1000

8. Surface Water Pathway — Part 4 of 4

Wetlands Located Along the Surface Water Migration Path? (y/n) Yes

Have Primary Target Wetlands Been Identified? (y/n) No

Secondary Target Wetlands:
None

Other Sensitive Environments Along the Surface Water Migration Path: Yes

Have Primary Target Sensitive Environments Been Identified: No

Secondary Target Sensitive Environments:

Water Body/Flow(cfs)	Sensitive Environment Type
large stream/river/ >1000-10000	Habitat for Federally designated endanger

POTENTIAL HAZARDOUS WASTE SITE PRELIMINARY ASSESSMENT FORM	IDENTIFICATION	
	State: NY	CERCLIS Number: NYD981187024
	CERCLIS Discovery Date: 01/10/86	

9. Soil Exposure Pathway

Are People Occupying Residences or Attending School or Daycare on or Within 200 Feet of Areas of Known or Suspected Contamination: No	Number of Workers Onsite: None

Have Terrestrial Sensitive Environments Been Identified on or Within 200 Feet of Areas of Known or Suspected Contamination: No

10. Air Pathway

Total Population on or Within:	Is There a Suspected Release to Air: No
Onsite 0	
0 - 1/4 Mile 0	Wetlands Located Within 4 Miles of the Site: No
>1/4 - 1/2 Mile 0	
>1/2 - 1 Mile 0	
>1 - 2 Miles 0	
>2 - 3 Miles 0	Other Sensitive Environments Located Within 4 Miles of the Site: No
>3 - 4 Miles 0	
Total 0	

Sensitive Environments Within 1/2 Mile of the Site:
None

OMB Approval Number: 2050-0095
Approved for Use Through: 4/95

PA-Score

PA Scoresheets

Site Name: Cedar Street Dump
CERCLIS ID No.: NYD981187024
Street Address: 115,139, &141 Cedar Street
City/State/Zip: Batavia, NY 14020

Investigator: Phyllis Rettke
Agency/Organization: URS Consultants, Inc.
Street Address: 282 Delaware Ave
City/State: Buffalo, NY

Date: 10/26/95

WASTE CHARACTERISTICS

Waste Characteristics (WC) Calculations:

1 Contaminated Soil	Landfill	Ref: 1	WQ value	maximum
Area	2.40E+01 acres		3.08E+02	3.08E+02

The area used for the waste calculation was the 24 acres. This numbe r was the sum of the 2 landfill areas, 16 acrea + 8 acres.
Ref: 1

** Only First WC Page Is Printed ** | Waste Characteristics Score: WC = 32

Ground Water Pathway Criteria List
Suspected Release

Are sources poorly contained? (y/n/u)	Y
Is the source a type likely to contribute to ground water contamination (e.g., wet lagoon)? (y/n/u)	Y
Is waste quantity particularly large? (y/n/u)	Y
Is precipitation heavy? (y/n/u)	N
Is the infiltration rate high? (y/n/u)	Y
Is the site located in an area of karst terrain? (y/n)	N
Is the subsurface highly permeable or conductive? (y/n/u)	Y
Is drinking water drawn from a shallow aquifer? (y/n/u)	Y
Are suspected contaminants highly mobile in ground water? (y/n/u)	Y
Does analytical or circumstantial evidence suggest ground water contamination? (y/n/u)	Y

Other criteria? (y/n) N

SUSPECTED RELEASE? (y/n) Y

Summarize the rationale for Suspected Release:

Contaminants have been detected in the groundwater sampled from the onsite monitoring wells. These contaminats have not yet been detected in the City of Batavia Wells.

Ref: 2,8

Ground Water Pathway Criteria List
Primary Targets

Is any drinking water well nearby? (y/n/u)	Y
Has any nearby drinking water well been closed? (y/n/u)	N
Has any nearby drinking water well user reported foul-testing or foul-smelling water? (y/n/u)	N
Does any nearby well have a large drawdown/high production rate? (y/n/u)	Y
Is any drinking water well located between the site and other wells that are suspected to be exposed to a hazardous substance? (y/n/u)	N
Does analytical or circumstantial evidence suggest contamination at a drinking water well? (y/n/u)	N
Does any drinking water well warrant sampling? (y/n/u)	Y

Other criteria? (y/n) **N**

PRIMARY TARGET(S) IDENTIFIED? (y/n) Y

Summarize the rationale for Primary Targets:

VOCs have been detected in the City of Batavia Water Supply wells which are located 2000 feet south and downgradient from the site. Analytical results from the testing of the groundwater from monitoring wells installed as part of the Phase II and PSA investigations of the Cedar Street Dumps site show some groundwater contamination. The contaminants detected, however, are not those considered to be contaminants of concern in the City of Batavia Wells.

Ref: 1,8

GROUND WATER PATHWAY SCORESHEETS

Pathway Characteristics		Ref.
Do you suspect a release? (y/n)	Yes	
Is the site located in karst terrain? (y/n)	No	
Depth to aquifer (feet):	25	1
Distance to the nearest drinking water well (feet):	2000	1

LIKELIHOOD OF RELEASE	Suspected Release	No Suspected Release	References
1. SUSPECTED RELEASE	550		
2. NO SUSPECTED RELEASE		0	
LR =	550	0	

Targets

TARGETS	Suspected Release	No Suspected Release	References
3. PRIMARY TARGET POPULATION 4000 person(s)	40000		
4. SECONDARY TARGET POPULATION Are any wells part of a blended system? (y/n) Y	323	0	
5. NEAREST WELL	50	0	
6. WELLHEAD PROTECTION AREA Underlies Site	20	0	
7. RESOURCES	5	0	
T =	40398	0	

WASTE CHARACTERISTICS

WC =	32	0

GROUND WATER PATHWAY SCORE:	100

Ground Water Target Populations

Primary Target Population Drinking Water Well ID	Dist. (miles)	Population Served	Reference	Value
1 City of Batavia Well A	0.40	4000	1	40000
None				

*** Note : Maximum of 5 Wells Are Printed *** Total 40000

Secondary Target Population Distance Categories	Population Served	Reference	Value
0 to 1/4 mile	0		0
Greater than 1/4 to 1/2 mile	4000	8	323
Greater than 1/2 to 1 mile	0		0
Greater than 1 to 2 miles	0		0
Greater than 2 to 3 miles	0		0
Greater than 3 to 4 miles	0		0
		Total	323

Apportionment Documentation for a Blended System

The City of Batavia Municipal water supply is a blended supply consisting of 2 municipal wells, located less than 2000 feet from the site, and Tonawanda Creek. These 2 wells supply approximately 50% of the total, with each contributing 25%. 50% of the supply is from Tonawanda Creek.

Ref: 1

Surface Water Pathway Criteria List
Suspected Release

Is surface water nearby? (y/n/u)	N
Is waste quantity particularly large? (y/n/u)	Y
Is the drainage area large? (y/n/u)	N
Is rainfall heavy? (y/n/u)	N
Is the infiltration rate low? (y/n/u)	N
Are sources poorly contained or prone to runoff or flooding? (y/n/u)	U
Is a runoff route well defined(e.g.ditch/channel to surf.water)? (y/n/u)	N
Is vegetation stressed along the probable runoff path? (y/n/u)	N
Are sediments or water unnaturally discolored? (y/n/u)	N
Is wildlife unnaturally absent? (y/n/u)	N
Has deposition of waste into surface water been observed? (y/n/u)	N
Is ground water discharge to surface water likely? (y/n/u)	Y
Does analytical/circumstantial evidence suggest S.W. contam? (y/n/u)	U

Other criteria? (y/n) N

SUSPECTED RELEASE? (y/n) N

Summarize the rationale for Suspected Release:

Surface Water Pathway Criteria List
Primary Targets

Is any target nearby? (y/n/u) If yes: Y
- Y Drinking water intake
- Y Fishery
- N Sensitive environment

Has any intake, fishery, or recreational area been closed? (y/n/u) N

Does analytical or circumstantial evidence suggest surface water contamination at or downstream of a target? (y/n/u) N

Does any target warrant sampling? (y/n/u) If yes: N
- N Drinking water intake
- N Fishery
- N Sensitive environment

Other criteria? (y/n) N

PRIMARY INTAKE(S) IDENTIFIED? (y/n) N

Summarize the rationale for Primary Intakes:

continued -------

continued -------

Other criteria? (y/n) N

PRIMARY FISHERY(IES) IDENTIFIED? (y/n) N

Summarize the rationale for Primary Fisheries:

Other criteria? (y/n) N

PRIMARY SENSITIVE ENVIRONMENT(S) IDENTIFIED? (y/n) N

Summarize the rationale for Primary Sensitive Environments:

SURFACE WATER PATHWAY SCORESHEETS

Pathway Characteristics		Ref.
Do you suspect a release? (y/n)	No	
Distance to surface water (feet):	4000	7
Flood frequency (years):	500	5
What is the downstream distance (miles) to:		
a. the nearest drinking water intake?	1.6	7
b. the nearest fishery?	1.6	7
c. the nearest sensitive environment?	1.6	7

LIKELIHOOD OF RELEASE	Suspected Release	No Suspected Release	References
1. SUSPECTED RELEASE	0		
2. NO SUSPECTED RELEASE		300	
LR =	0	300	

Drinking Water Threat Targets

TARGETS	Suspected Release	No Suspected Release	References
3. Determine the water body type, flow (if applicable), and number of people served by each drinking water intake.			
4. PRIMARY TARGET POPULATION 0 person(s)	0		
5. SECONDARY TARGET POPULATION Are any intakes part of a blended system? (y/n): N	0	5	
6. NEAREST INTAKE	0	1	
7. RESOURCES	0	5	
T =	0	11	

Drinking Water Threat Target Populations

Intake Name	Primary (y/n)	Water Body Type/Flow	Population Served	Ref.	Value
1 Tonawanda Creek	N	>100-1000 cfs	8000	2,3	0

Total Primary Target Population Value	0
Total Secondary Target Population Value	0

*** Note : Maximum of 6 Intakes Are Printed ***

Apportionment Documentation for a Blended System

The City of Batavia Municipal water system consists of 2 municipal wells and surface water intakes on Tonawanda Creek. Approximately 8000 people, or 50% of the population is supplied with water from Tonawanda Creek. The rest of the supply is from the two wells which are located less than 0.5 miles south of the project area.

Ref: 1

Human Food Chain Threat Targets

TARGETS	Suspected Release	No Suspected Release	References
8. Determine the water body type and flow for each fishery within the target limit.			
9. PRIMARY FISHERIES	0		
10. SECONDARY FISHERIES	0	12	
T =	0	12	

Human Food Chain Threat Targets

Fishery Name	Primary (y/n)	Water Body Type/Flow	Ref.	Value
1 Tonawanda Creek	N	>100-1000 cfs	3	12

Total Primary Fisheries Value 0
Total Secondary Fisheries Value 0

*** Note : Maximum of 6 Fisheries Are Printed ***

Environmental Threat Targets

TARGETS	Suspected Release	No Suspected Release	References
11. Determine the water body type and flow (if applicable) for each sensitive environment.			
12. PRIMARY SENSITIVE ENVIRONMENTS	0		
13. SECONDARY SENSITIVE ENVIRONS.	0	10	
T =	0	10	

Environmental Threat Targets

Sensitive Environment Name	Primary (y/n)	Water Body Type/Flow	Ref.	Value
1 Tonawanda Creek	N	>1000-10000 cfs	3,7	0

Total Primary Sensitive Environments Value 0
Total Secondary Sensitive Environments Value 0

*** Note: Maximum of 6 Sensitive Environments Are Printed ***

Surface Water Pathway Threat Scores

Threat	Likelihood of Release (LR) Score	Targets (T) Score	Pathway Waste Characteristics (WC) Score	Threat Score LR x T x WC / 82,500
Drinking Water	300	11	32	1
Human Food Chain	300	12	32	1
Environmental	300	10	32	1

SURFACE WATER PATHWAY SCORE:	4

Soil Exposure Pathway Criteria List
Resident Population

Is any residence, school, or daycare facility on or within 200 feet of an area of suspected contamination? (y/n/u)	N
Is any residence, school, or daycare facility located on adjacent land previously owned or leased by the site owner/operator? (y/n/u)	N
Is there a migration route that might spread hazardous substances near residences, schools, or daycare facilities? (y/n/u)	N
Have onsite or adjacent residents or students reported adverse health effects, exclusive of apparent drinking water or air contamination problems? (y/n/u)	N
Does any neighboring property warrant sampling? (y/n/u)	N
Other criteria? (y/n)	N
RESIDENT POPULATION IDENTIFIED? (y/n)	N

Summarize the rationale for Resident Population:

SOIL EXPOSURE PATHWAY SCORESHEETS

Pathway Characteristics		Ref.
Do any people live on or within 200 ft of areas of suspected contamination? (y/n)	No	1
Do any people attend school or daycare on or within 200 ft of areas of suspected contamination? (y/n)	No	1
Is the facility active? (y/n):	No	1

LIKELIHOOD OF EXPOSURE	Suspected Contamination	References
1. SUSPECTED CONTAMINATION LE =	550	

Targets

2. RESIDENT POPULATION 0 resident(s) 0 school/daycare student(s)	0	
3. RESIDENT INDIVIDUAL	0	
4. WORKERS None	0	
5. TERRES. SENSITIVE ENVIRONMENTS	0	
6. RESOURCES	5	
T =	5	

WASTE CHARACTERISTICS

WC = 32

RESIDENT POPULATION THREAT SCORE: 1

NEARBY POPULATION THREAT SCORE: 2

Population Within 1 Mile: 10,001 - 50,000

SOIL EXPOSURE PATHWAY SCORE: 3

Soil Exposure Pathway Terrestrial Sensitive Environments

Terrestrial Sensitive Environment Name	Reference	Value
None		

Total Terrestrial Sensitive Environments Value

*** Note : Maximum of 7 Sensitive Environments Are Printed ***

Air Pathway Criteria List
Suspected Release

Are odors currently reported? (y/n/u)	N
Has release of a hazardous substance to the air been directly observed? (y/n/u)	N
Are there reports of adverse health effects (e.g., headaches, nausea, dizziness) potentially resulting from migration of hazardous substances through the air? (y/n/u)	N
Does analytical/circumstantial evidence suggest release to air? (y/n/u)	N
Other criteria? (y/n)	N
SUSPECTED RELEASE? (y/n)	N

Summarize the rationale for Suspected Release:

AIR PATHWAY SCORESHEETS

Pathway Characteristics

		Ref.
Do you suspect a release? (y/n)	No	
Distance to the nearest individual (feet):	0	1

LIKELIHOOD OF RELEASE	Suspected Release	No Suspected Release	References
1. SUSPECTED RELEASE	0		
2. NO SUSPECTED RELEASE		500	
LR =	0	500	

Targets

TARGETS	Suspected Release	No Suspected Release	References
3. PRIMARY TARGET POPULATION 0 person(s)	0		
4. SECONDARY TARGET POPULATION	0	0	
5. NEAREST INDIVIDUAL	0	0	
6. PRIMARY SENSITIVE ENVIRONS.	0		
7. SECONDARY SENSITIVE ENVIRONS.	0	0	
8. RESOURCES	0	5	
T =	0	5	

WASTE CHARACTERISTICS

WC =	0	32

AIR PATHWAY SCORE:	1

Air Pathway Secondary Target Populations

Distance Categories	Population	References	Value
Onsite	0		0
Greater than 0 to 1/4 mile	0		0
Greater than 1/4 to 1/2 mile	0		0
Greater than 1/2 to 1 mile	0		0
Greater than 1 to 2 miles	0		0
Greater than 2 to 3 miles	0		0
Greater than 3 to 4 miles	0		0
		Total Secondary Population Value	0

Air Pathway Primary Sensitive Environments

Sensitive Environment Name	Reference	Value
None		
	Total Primary Sensitive Environments Value	

*** Note : Maximum of 7 Sensitive Environments Are Printed***

Air Pathway Secondary Sensitive Environments

Sensitive Environment Name	Distance	Reference	Value
None			
		Total Secondary Sensitive Environments Value	

SITE SCORE CALCULATION	SCORE
GROUND WATER PATHWAY SCORE:	100
SURFACE WATER PATHWAY SCORE:	4
SOIL EXPOSURE PATHWAY SCORE:	3
AIR PATHWAY SCORE:	1
SITE SCORE:	50

SUMMARY

1. Is there a high possibility of a threat to any nearby drinking water well(s) by migration of a hazardous substance in ground water? No

   If yes, identify the well(s).

   If yes, how many people are served by the threatened well(s)? 0

2. Is there a high possibility of a threat to any of the following by hazardous substance migration in surface water?
   A. Drinking water intake No
   B. Fishery No
   C. Sensitive environment (wetland, critical habitat, others) No

   If yes, identity the target(s).

3. Is there a high possibility of an area of surficial contamination within 200 feet of any residence, school, or daycare facility? No

   If yes, identify the properties and estimate the associated population(s)

4. Are there public health concerns at this site that are not addressed by PA scoring considerations? No

   If yes, explain:

REFERENCE LIST

1. YEC, Inc., 1992. Engineering Investigations at Inactive Hazardous Waste Sites, Phase II Investigation of the Cedar Street Dump Site.

2. NYSDOH, 1982. Atlas of Community Water Systems

3. USGS, 1989. Water Resources Data, New York Water Year 1989; Volume 3. Western New York. USGS Water-Data Report NY-89-3.

4. USGS, 1988. Potential Yields of Wells in Unconsolidated Aquifers in Upstate New York - Niagara Sheet by Todd S. Miller. WRI Report 88-4076.

5. FEMA, 1982. Flood Insurance Rate Map for the City of Batavia, New York, Genesee County - Panel Number 360279-0001B. Effective Sept. 16,1982.

6. USDA, 1967. Soil Survey of Genesee County, New York.

7. USGS Topographic Maps, Batavia North 1950, photorevised 1978; Batavia South 1950, photorevised 1978.

8. URS Consultants, 1995. Field Investigation and Analytical Results of the Cedar Street Dump PSA.

APPENDIX G
Contaminant Migration Calculations

EXHIBIT 5.5-2

URS Consultants, Inc.
CALCULATION COVER SHEET

Client: NYSDEC Project Name: Cedar Street Dump
Project/Calculation Number: 05352 45.09
Title: Evaluation of utility of Proposed well
Total number of pages (including cover sheet): 8
Total number of computer runs: 0
Prepared by: Marek Ostrowski Date: 11/16/95
Checked by: _____ Date: _____

Description and Purpose: To evaluate the utility of placing a well in the vicinity of GW-7, in order to detect the advance of contaminants within the aquifer

Design bases/references/assumptions: Travel time of contaminants to the location of proposed well estimated and compared to the period of source activity.
See calcs for details

Remarks/conclusions: It appears that the mobile compounds have already advanced past the location of proposed well. The less mobil compounds may take 100's or 1000's of years to advance. Or, if the org. carbon content is very low, they may take only 10's to 100's of years.

Calculation Approved by: _____
Project Manager/Date

Revision No.:	Description of Revision:	Approved by:

Project Manager/Date

PROJECT: Cedar Street Dump MADE BY: M.O. DATE: 11/16/95
SUBJECT: Evaluation of Utility of Proposed Well CHKD. BY: DRL DATE: 11/16/95

1. PURPOSE

The purpose of this calculation is to evaluate the utility of placing a GW monitoring well in the vicinity of the well GW-7, with respect to its effectiveness in detecting the possible movement of dissolved contaminants towards the nearby water supply wells.

2. METHODOLOGY

The velocity at which the dissolved contaminants are migrating within the aquifer will be estimated. This estimate will be used to determine the time of arrival of the contaminants at the location of the proposed well. The utility of the well will be evaluated by determining whether the well will be able to detect the arrival of the advancing contaminants.
Note that this approach relies on the estimate of the advection effects only. The effects of dispersion are neglected. However, since the aquifer is composed of a very high permeability material, the velocity of the groundwater is high and the advection is probably a dominant process. Also, it is assumed that the contaminants do not undergo degradation processes.
The travel velocity will be calculated as :

$$v_d = v_{pw} / R_d \qquad \text{(Ref 1, Eq 3-18)}$$

$$v_{pw} = v / P_e \qquad \text{(Ref 1, Eq 3-10)}$$

$$v = K_s\, i \qquad \text{(Ref 1, Eq 3-9)}$$

$$R_d = 1 + (\beta * K_d) / p_t \qquad \text{(Ref 1, Eq 3-17)}$$

$$K_d = K_{oc}\, f_{oc} \qquad \text{(Ref 1, Eq 3-19)}$$

Where:

- v_d - velocity of contaminant, [ft/d]
- v_{pw} - velocity of groundwater, [ft/d]
- R_d - retardation factor, [-]
- v - Darcy velocity of water, [ft/d]
- P_e - effective porosity, [-]
- K_s - hydraulic conductivity, [ft/d]
- i - hydraulic gradient, [-]
- β - bulk density, [g/ml]

K_d - distribution factor, [ml/g]
p_t - total porosity, [-]
K_{oc} - partition coefficient for organic carbon, [ml/g]
f_{oc} - fraction of organic carbon in soil, [-]

The time of arrival at the proposed location of the well will be estimated as:

$$t_a = L / v_d$$

Where:
t_a - Time of arrival, [d]
L - Distance between the site and well, [ft]

3. PARAMETERS

* **Selection of indicator contaminants:**

The indicator contaminants will be those detected in groundwater and in soil in excess of their SCG values. Only the organic compounds will be considered. Those are (Ref 2, Table 3-1 and 3-2):

Contaminant	Medium	K_{oc}
Acetone	GW	2
Toluene	GW	300
Xylene	GW	240
Chloroethane	GW	37
1,1-Dichloroethane	GW	30
Benzene	GW	83
4-Methylphenol	GW	17
Aroclor-1232	GW	NOT FOUND
Aroclor-1248	GW	440,000
1,1,1-Trichloroethane	GW	152
1,2-Dichloropropane	GW	51
Trichloroethene	GW	126
Benzo(a)anthracene	SOIL	1,380,000
Chrysene	SOIL	200,000
Benzo(a)pyrene	SOIL	5,500,000
Dibenz(a,h)anthracene	SOIL	33,000,000

The K_{oc} values are from the NYCDEC memorandum HWR-92-4046. From this, it can be said that two basic groups of contaminants can be identified: relatively mobile compounds (K_{oc} of 2 to 300) and relatively immobile compounds (K_{oc} of 200,000 to 33,000,000).

* **Hydraulic conductivity**

A pump test performed at the nearby production well field yielded values of aquifer transmissivity of 1,000,000 to 1,860,000 gpd/ft (133,000 to 248,000 ft^2/d). See Ref 3. Based on Ref 4, p 4-7, the average thickness of the aquifer can be assumed as 55 ft. From this, the hydraulic conductivity can be estimated as:

K_s = 133,000/55 to 248,000/55
K_s = 2,400 to 4,500 ft/d

Use:

$$K_s = (2,400 + 4,500)/ 2 = 3,500 \text{ ft/d}$$

* **Hydraulic gradient**

Based on Ref 4, p 4-7, the hydraulic gradient across the site is between 10 and 22 feet per mile. Use an average value of:

$$i = 16 / 5280 = 0.003$$

* **Porosity, effective porosity and bulk density of soil**

Based on Ref 5, Fig 5-4, the typical values of total porosity for sandy/gravelly material are 0.3 to 0.5. Use an average value of :

$$p_t = 0.4$$

From the same source, values of specific yield (approximately equal to the effective porosity) are between 0.25 and 0.35. Use an average value of:

$$P_e = 0.3$$

From Ref 6, Table 9.6, the typical values of bulk density for the sandy material are between 90 and 116 lb/ft^3. Use a typical value of:

$$\beta = 105 \text{ lb/ft}^3 = 1.7 \text{ g/ml}$$

* **Organic carbon fraction of soil**

Assume:

$$f_{oc} = 0.01$$

* **Distance to the proposed location of monitoring well**

Use a distance between the center of the eastern part of the site and well GW-7. From Ref 2, Fig 3-3:

$$L = 500 \text{ ft}$$

* **Time of source activity**

From Ref 2, Section 1.1, it appears that the waste was deposited in 1940s to 1960s. Use a period between 1950 and present:

$$t_a = 1995 - 1950 = 45 \text{ years} = 17,000 \text{ d}$$

4. CALCULATIONS

Using the above parameters, the contaminant-specific migration velocities can be estimated as follows:

$$K_d = K_{oc}\ f_{oc}$$
$$K_d = K_{oc} * 0.01 = 0.01\ K_{oc}\ [ml/g]$$

$$R_d = 1 + (\beta * K_d)/p_t$$
$$R_d = 1 + (1.7 * 0.01 K_{oc})/0.4$$
$$R_d = 1 + 0.043\ K_{oc}\ [-]$$

$$v = K_s\ i$$
$$v = 3{,}500 * 0.003 = 10.5\ [ft/d]$$

$$v_{pw} = v\ /\ P_e$$
$$v_{pw} = 10.5/0.3 = 35\ [ft/d]$$

$$v_d = v_{pw}\ /\ R_d$$
$$v_d = 35/[1 + 0.043\ K_{oc}]\ [ft/d]$$

The travel times to the proposed location of the well are:

$$t_a = L\ /\ v_d$$
$$t_a = 500\ /\ \{35/[1 + 0.043\ K_{oc}]\}$$
$$t_a = 14.3\ [1 + 0.043\ K_{oc}]\ [days]$$
$$t_a = 14.3\ [1 + 0.043\ K_{oc}]/\ 365\ [years]$$
$$t_a = 0.04\ [1 + 0.043\ K_{oc}]\ [years]$$

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Contaminant	K_{oc}	t_a [years]
Acetone	2	< 1
Toluene	300	< 1
Xylene	240	< 1
Chloroethane	37	< 1
1,1-Dichloroethane	30	< 1
Benzene	83	< 1
4-Methylphenol	17	< 1
Aroclor-1248	440,000	760
1,1,1-Trichloroethane	152	< 1
1,2-Dichloropropane	51	< 1
Trichloroethene	126	< 1
Benzo(a)anthracene	1,380,000	2,400
Chrysene	200,000	340
Benzo(a)pyrene	5,500,000	9,500
Dibenz(a,h)anthracene	33,000,000	57,000

Sensitivity analysis:
It appears that several parameters will have very little effect on the outcome. Those are: porosities, bulk density, time of source activity and hydraulic gradient. Their possible variations are relatively small. Parameters with the widest possible ranges of values are the hydraulic conductivity and the organic carbon fraction of the soil. The hydraulic conductivity has been determined by means of pump tests and; therefore, is probably quite reliable. The organic carbon fraction of soils; however, is not known. Since this parameter governs the retardation of the contaminants within the aquifer, it has a significant influence on the results. In gravelly soils, the f_{oc} can be quite low. Assume that it is 100 times less than the default value of 1% (i.e. $f_{oc} = 0.0001$).

$$K_d = K_{oc}\, f_{oc}$$
$$K_d = K_{oc} * 0.0001 = 0.0001\, K_{oc}\ [ml/g]$$

$$R_d = 1 + (\beta * K_d)/p_t$$
$$R_d = 1 + (1.7 * 0.0001 K_{oc})/0.4$$
$$R_d = 1 + 0.00043\, K_{oc}\ [-]$$

$$v = K_s\, i$$
$$v = 3{,}500 * 0.003 = 10.5\ [ft/d]$$

$$v_{pw} = v / P_e$$
$$v_{pw} = 10.5/0.3 = 35 \text{ [ft/d]}$$

$$v_d = v_{pw} / R_d$$
$$v_d = 35/[1 + 0.00043 K_{oc}] \text{ [ft/d]}$$

The travel times to the proposed location of the well are:

$$t_a = L / v_d$$
$$t_a = 500 / \{35/[1 + 0.00043 K_{oc}]\}$$
$$t_a = 14.3 [1 + 0.00043 K_{oc}] \text{ [days]}$$
$$t_a = 14.3 [1 + 0.00043 K_{oc}]/ 365 \text{ [years]}$$
$$t_a = 0.04 [1 + 0.00043 K_{oc}] \text{ [years]}$$

Consider less mobile compounds:

Contaminant	K_{oc}	t_a [years]
Aroclor-1248	440,000	8
Benzo(a)anthracene	1,380,000	24
Chrysene	200,000	3
Benzo(a)pyrene	5,500,000	95
Dibenz(a,h)anthracene	33,000,000	570

5. CONCLUSIONS

It appears that the organic compounds detected in excess of SCGs can be divided into two groups: mobile and relatively immobile contaminants. The mobile compounds, with low values of K_{oc} (i.e. with high water solubility and low affinity for soils) are moving at relatively high velocities. The fronts of those contaminants have most probably already passed the location of the proposed well. A well would; therefore, not detect the advancing front. Instead, it will indicate a more or less steady state concentrations of those compounds in groundwater downgradient of the site. The relatively immobile contaminants are moving extremely slowly, due to the retardation effects caused by their low solubility in water and high affinity for soils. It appears that, for typical values of K_{oc} , it will take several hundred or thousand years for them to reach the location of the proposed well. Therefore, their advancing movement probably would not be detected by monitoring the quality of water at the proposed location. However, the above conclusions are arrived at using

values of parameters that were largely assumed. Especially, the organic carbon content of the soil, if determined to be much different than assumed here, may change the results of the above calculations. If the organic carbon content in the aquifer is extremely low, which is possible in gravelly soils, the migration velocity may be much higher and some of the slow moving compounds may reach the proposed location of the well much sooner than indicated above. In that case, their advancing fronts may be detected by monitoring the quality of water at the proposed location.

6. REFERENCES

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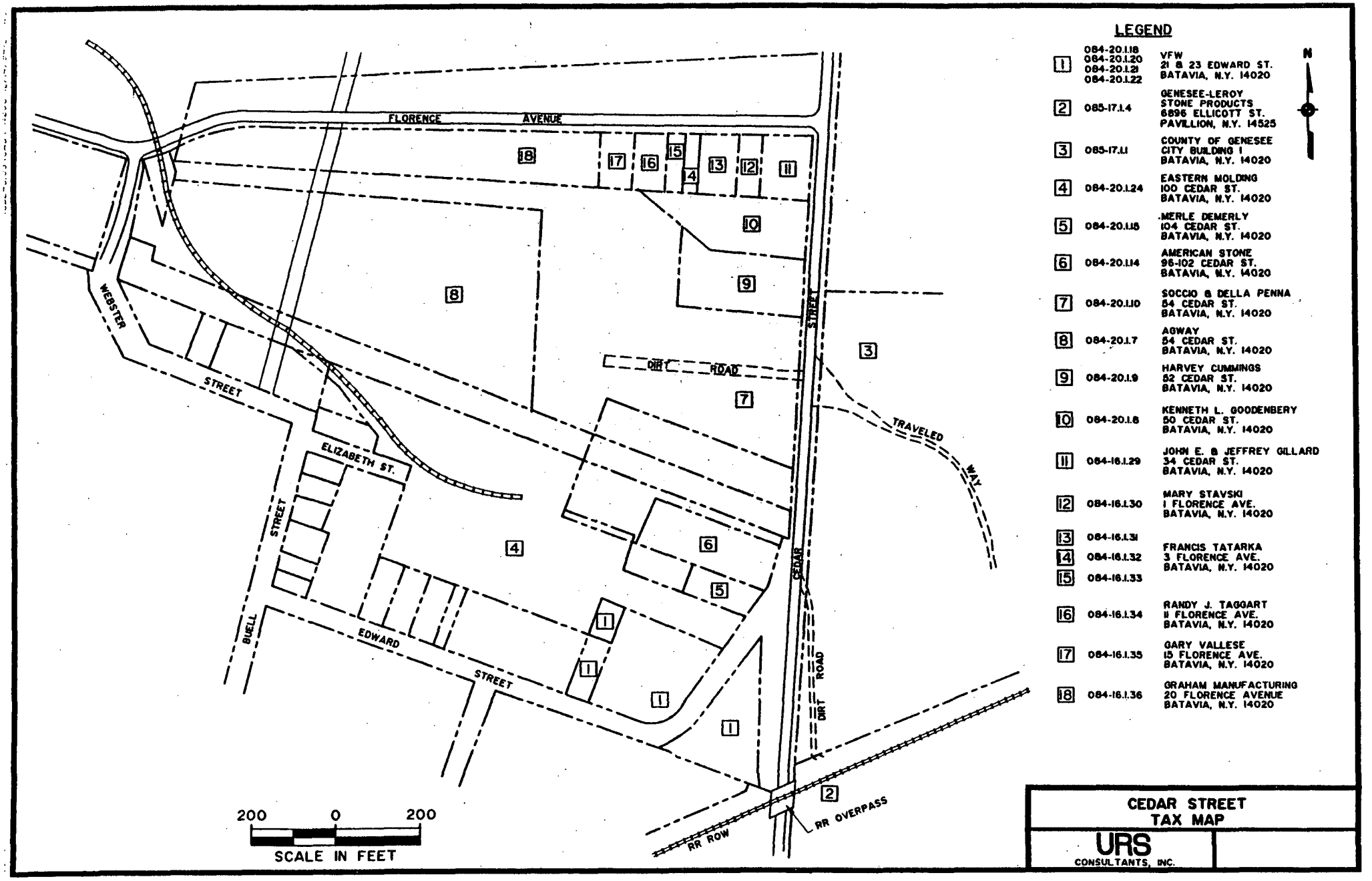
APPENDIX H
Site Property Boundary Map (Tax Map)



LEGEND

1	084-20.1.18 084-20.1.20 084-20.1.21 084-20.1.22	VFW 21 & 23 EDWARD ST. BATAVIA, N.Y. 14020
2	085-17.1.4	GENESEE-LEROY STONE PRODUCTS 6896 ELLICOTT ST. PAVILLION, N.Y. 14525
3	085-17.1.1	COUNTY OF GENESEE CITY BUILDING 1 BATAVIA, N.Y. 14020
4	084-20.1.24	EASTERN MOLDING 100 CEDAR ST. BATAVIA, N.Y. 14020
5	084-20.1.15	MERLE DEMERLY 104 CEDAR ST. BATAVIA, N.Y. 14020
6	084-20.1.14	AMERICAN STONE 96-102 CEDAR ST. BATAVIA, N.Y. 14020
7	084-20.1.10	SOCCIO & DELLA PENNA 54 CEDAR ST. BATAVIA, N.Y. 14020
8	084-20.1.7	AGWAY 54 CEDAR ST. BATAVIA, N.Y. 14020
9	084-20.1.9	HARVEY CUMMINGS 52 CEDAR ST. BATAVIA, N.Y. 14020
10	084-20.1.8	KENNETH L. GOODENBERY 50 CEDAR ST. BATAVIA, N.Y. 14020
11	084-16.1.29	JOHN E. & JEFFREY GILLARD 34 CEDAR ST. BATAVIA, N.Y. 14020
12	084-16.1.30	MARY STAVSKI 1 FLORENCE AVE. BATAVIA, N.Y. 14020
13	084-16.1.31	
14	084-16.1.32	FRANCIS TATARKA 3 FLORENCE AVE. BATAVIA, N.Y. 14020
15	084-16.1.33	
16	084-16.1.34	RANDY J. TAGGART 11 FLORENCE AVE. BATAVIA, N.Y. 14020
17	084-16.1.35	GARY VALLESE 15 FLORENCE AVE. BATAVIA, N.Y. 14020
18	084-16.1.36	GRAHAM MANUFACTURING 20 FLORENCE AVENUE BATAVIA, N.Y. 14020

CEDAR STREET TAX MAP

URS CONSULTANTS, INC.